

Traffic Impact Study

Parklands Village 1

Aurora, Colorado

Prepared for:

NL Parklands V4 Land Co., LLC

Kimley»Horn

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

Parklands Village 1

Aurora, Colorado

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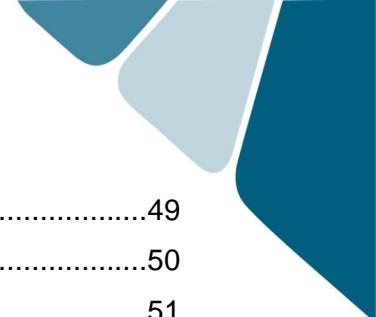


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1.0 EXECUTIVE SUMMARY

Parklands Village 1 is a proposed residential and commercial project to be bordered by Jewell Avenue to the south, Harvest Road to the west, Powhaton Road to the east, and Coal Creek to the north in Aurora, Colorado. Full buildout of the development is expected to consist of approximately 902 single-family detached dwelling units, 504 single-family attached dwelling units, 566 mid-rise multifamily housing dwelling units, approximately 21.1 acres of park uses, 22,000 square feet of a recreational community center, approximately 677 elementary and 321 middle school students in a K-8 school, 60,000 square feet of office uses, and 181,000 square feet of retail uses.

It is anticipated that Parklands Village 1 will be constructed in a total of five (5) filings. Filing 1 is anticipated to be composed of the entire western portion of the development area between Jewell Avenue and Mississippi Avenue along the east side of Harvest Road. However, Filing 1 is planned to be developed in two phases, with Filing 1 residential uses located to the north and Filing 2 retail/residential uses located to the south. Filing 3 is anticipated to be located on the south portion of the project along Jewell Avenue to the east of Filing 2 and to the west of Powhaton Road, with Filing 4 located on the north side of the project to the east of Filing 1. Filing 5 is located to the north of Filing 3, while Filing 6 would be the final phase of construction, located to the north of Filing 5 and to the east of Filing 4. Although the exact timing of each development is uncertain at this time, per coordination with the project team and for purposes of this analysis, the following provides a summary of the anticipated development in each of the five (5) filings analyzed in this study:

- Filing 1: 195 single-family detached dwelling units (DU), 188 single-family attached DU, and approximately 2.5 acres of parks – estimated completion in 2026.
- Filing 2: 174 single-family attached DU; 566 multifamily mid-rise housing DU; approximately 3.0 acres of parks; 60,000 square feet of general office uses; and 181,000 square feet of retail uses – estimated completion in 2027.
- Filing 3: 242 single-family detached DU and a 3.5-acre park – estimated completion in 2028.
- Filing 4: 89 single-family detached DU; 78 single-family attached DU; 5.1 acres of park uses; and a 22,000 square foot recreational community center – estimated completion in 2029.

- Filing 5: 225 single-family detached DU – estimated completion in 2031.
- Filing 6: 151 single-family detached DU; 134 single-family attached DU; 7.0 acres of park uses; and a K-8 school estimated to include approximately 677 elementary school students and 321 middle school students – estimated completion in 2033.

The *Parklands Development Master Traffic Study*, which includes development area of Parklands Village 1, was finalized in October 2022 and was utilized as a basis in this traffic study. The Parklands master traffic study provided a thorough long-term 2040 analysis of major intersections internal to Parklands Village 1 and accesses to the external arterial street system. Therefore, the requested City of Aurora scope for this traffic study includes analysis for each filing horizon and not a long-term 2040 horizon. Further, the current proposal of Parklands Village 1 is calculated to generate less traffic than evaluated in the master traffic study. However, there are five external street intersections included in this study that were not analyzed in the master study, four of which are located along Harvest Road. These intersections along Harvest Road would include two located in between Louisiana Parkway and Flat Rock Trail and two located in between Flat Rock Trail and Jewell Avenue. The fifth intersection not included in the original study is a proposed right-in/right-out intersection roughly evenly spaced between the future signals along Jewell Avenue at Kewaunee Street and Louisiana Parkway. As such, at the request of the City of Aurora staff, analysis was conducted in the 2040 horizon for these intersections. For detailed analysis of all study area intersections besides the aforementioned intersections, the Parklands Development Master Traffic Study should be referenced.

The purpose of this traffic study is to identify project traffic generation characteristics to determine potential project traffic related impacts on the local street system and to develop the necessary mitigation measures required for the identified traffic impacts. The following intersections were incorporated into this traffic study based on the City of Aurora requested scope:

- Alameda Avenue & Harvest Road (Intersection #1)
- Alameda Avenue & Powhaton Road (#2)
- Mississippi Avenue & Harvest Road (#3)
- Louisiana Parkway & Harvest Road (#4)
- Flat Rock Trail & Harvest Road (#5)
- Jewell Avenue & Harvest Road (#6)
- Jewell Avenue & Powhaton Road (#7)

In addition, the proposed public street connections to Harvest Road and Jewell Avenue, as well as other future major external and internal street intersections were evaluated (Intersections #8-18).

Regional access to Parklands Village 1 will be provided by Jewell Avenue, Gun Club Road (State Highway 30), E-470, and Interstate 70 (I-70). Primary access will be provided by Jewell Avenue, Alameda Avenue, Mississippi Avenue, Harvest Road, and Powhatan Road. Direct access to full buildout of the development is anticipated to occur from future east legs at the Louisiana Parkway & Harvest Road (#4) and the Flat Rock Trail & Harvest Road (#5) intersections, and two new accesses along the north side of Jewell Avenue between Harvest Road and Powhatan Road (Intersections #16 and #18) at the future Kewaunee Street and Louisiana Parkway intersections, located at approximately 1,750-foot spacing or greater in between each of these existing intersections. One new right-in/right-out access (#10) and one full movement 'T'-intersection (#11) between Louisiana Parkway and Flat Rock Trail are also proposed, approximately 660 feet or greater between intersections. Finally, two new full movement 'T'-intersections (#12 & #15) between Flat Rock Trail and Jewell Avenue are proposed, each at 660-foot spacing or greater between each of these existing intersections. The right-in/right-out access proposed along Jewell Avenue (#17) is proposed roughly evenly spaced between Kewaunee Street (#16) and Louisiana Parkway (#18), with approximately 800 feet or greater of spacing between each of these proposed future intersections.

Accounting for internal capture, the overall Parklands Village 1 development is expected to generate approximately 18,812 weekday daily trips, with 1,201 of these trips occurring during the morning peak hour and 1,806 of these trips occurring during the afternoon peak hour. The master study had projected 21,409 weekday daily trips, 1,445 morning peak hour trips, and 2,164 afternoon peak hour trips, after accounting for internal capture. As such, the current proposal is anticipated to generate 2,597 fewer weekday daily trips, 243 fewer trips are expected in the morning peak hour and 357 fewer afternoon peak hour trips are expected when compared to the original master study (summarized in the table below). Because analysis is conducted for the morning and afternoon peak periods and the traffic generated in this proposal is less than that proposed in the master study, the 2040 results and recommendations from that study should accommodate full buildout of Parklands Village 1 development. A summary of the trip generation comparison is shown in the table below.


Overall Site Trip Generation Comparison Summary

Development Program	Weekday Vehicle Trips		
	Daily	AM Peak Hour	PM Peak Hour
		Total	Total
Master Traffic Study w/ Internal Capture	21,409	1,445	2,164
Proposed Development w/ Internal Capture	18,812	1,201	1,806
Project Trip Differential	-2,597	-244	-358

Based on the analysis presented in this report, Kimley-Horn believes Parklands Village 1 will be successfully incorporated into the existing and future roadway network. Analysis of the existing street network, the proposed project development, and expected traffic volumes resulted in the following recommendations:

2026 Recommendations (Filing 1)

- With Filing 1 construction of this development, several new accesses and intersections are proposed to be constructed. At Filing 1, an east leg to the Louisiana Parkway & Harvest Road (#4) and an east leg to the Flat Rock Trail & Harvest Road (#5) intersections. Additionally, two new accesses roughly evenly spaced between Louisiana Parkway and Flat Rock Trail, at future Wyoming Place (Intersection #10) and future Idaho Avenue (#11). Wyoming Place is proposed to be restricted to right-in/right-out movements only. A new intersection along Jewell Avenue to the east of Harvest Road is also anticipated to be constructed (Intersection #16), with the north leg being future Kewaunee Street.
- Alameda Avenue & Harvest Road (#1) is anticipated to be improved by others in this horizon with a new south leg at the intersection and R1-1 “STOP” signs posted on the northbound and southbound Harvest Road approaches to the intersection. The eastbound, westbound, and northbound approaches are anticipated to operate well with one lane for shared turning movements while the southbound approach can use the existing pavement width to provide a southbound left turn lane and a shared through/right turn lane.
- The Alameda Avenue & Powhatan Road (#2) is not anticipated to require any improvements in this horizon. The Mississippi Avenue & Harvest Road (#3) intersection is also not expected to require improvement in this horizon as there is no measurable intersection delay.
- With the new east legs at Louisiana Parkway & Harvest Road (#4) and at Flat Rock Trail & Harvest Road (#5), these legs are recommended to operate with R1-1 “STOP” signs posted



on the westbound approach to Harvest Road, while southbound left turn lanes 150 feet in length with a 160-foot taper are recommended to be installed. With these southbound left turn lanes placed at these intersections, it is also recommended northbound left turn lanes of the same length be constructed. The westbound approaches at each of these intersections are anticipated to operate well with one lane for shared left/through/right turning movements.

- The southbound Harvest Road approach at Jewell Avenue (#6) is recommended to provide separate left, through, and right turn lanes, with the left and right turn lanes each providing 275 feet in length with a 160-foot taper.
- The Jewell Avenue & Powhatan Road (#7) intersection is recommended to provide a 225-foot eastbound left turn lane with a 140-foot taper as well as separate southbound left and right turn lanes. For purposes of this analysis, the southbound left turn lane is recommended to provide 275 feet in length with a 160-foot taper while the right turn lane is recommended to be a continuous turn lane. The eastbound left turn lane is recommended to be improved to provide 225 feet in length and a 140-foot taper. With a new south leg at the intersection anticipated to be provided by others, the northbound approach is recommended to operate with a 150-foot left turn lane with a 160-foot taper and a shared through/right turn lane, while the eastbound approach should provide a continuous forced right-turn lane and the westbound approach should provide a 225-foot left and right turn lane with a 140-foot taper.
- The two new accesses along Harvest Road at Wyoming Place (#10) and Idaho Avenue (#11), are each recommended to operate with R1-1 “STOP” signs on the westbound approach to Harvest Road. A southbound left turn lane with a length of 150 feet and a taper of 160-feet should be provided at the Idaho Avenue (#11) access.
- A new access along Jewell Avenue at future Kewaunee Street (#16) is proposed to the east of Harvest Road. In this horizon, it is expected to operate well as a stop-controlled T-intersection with an R1-1 “STOP” sign on the southbound approach to the intersection. An eastbound left turn lane with 225 feet in length and a 140-foot taper is recommended to be provided. The southbound approach is recommended to provide separate left and right turn lanes, with the left turn lane 100 feet in length with a 100-foot taper and the right turn lane being a continuous turn lane.

2027 Recommendations (Filing 2)

- With construction Filing 2 two additional new accesses roughly evenly spaced between Flat Rock Trail and Jewell Avenue, being called in this study “D Street” (#12) and “E Street” (#15) are anticipated to be constructed. At the E Street & Harvest Road (#15) intersection, a northbound right turn lane and separate westbound left and right turn lanes should also be provided 150 feet in length with a 160-foot taper, as this will serve both the residential and the commercial development along this roadway. Each of these intersections are anticipated to operate well with stop control and posted R1-1 “STOP” signs where applicable.
- Separate left turn lanes are recommended to be provided on all four approaches of the Alameda Avenue & Harvest Road (#1) intersection. The eastbound and westbound left turn lanes can be constructed to a length of 150 feet with a 100-foot taper while the northbound left turn lane is recommended to provide a length of 275 feet with a 160-foot taper.

2028 Recommendations (Filing 3)

- The Alameda Avenue & Harvest Road (#1) intersection is anticipated to operate acceptably with the improvements recommended in the 2027 horizon. Therefore, no additional intersection improvements are anticipated to be needed with Filing 3.
- The Alameda Avenue & Powhatan Road (#2) intersection is also recommended to provide left turn lanes in each direction by this horizon, which would consist of new eastbound and westbound left turn lanes, each with 150 feet in length and a 100-foot taper. A southbound right turn lane is also anticipated to be provided with 150 feet in length and a 140-foot taper.
- The Jewell Avenue & Harvest Road (#6) intersection is anticipated to require signalization based on vehicular volume warrants with Filing 3. A westbound right turn lane with 225 feet in length plus a 140-foot taper is also recommended at this intersection.
- With a free right turn lane proposed to the east at Jewell Avenue & Powhatan Road (#7) that will have an acceleration lane, it is recommended that this lane continue as a second westbound through lane that will carry through this intersection by this horizon.
- While it is not known at what point the intersection will be realigned further to the east, it would be most feasible that the Jewell Avenue & Powhatan Road (#7) intersection be realigned when signalization is required to maintain acceptable operations, which is anticipated to occur by approximately this horizon year. It is also recommended to provide a westbound right turn lane 225 feet in length with a 140-foot taper. The previously recommended southbound right

turn lane is now also proposed to operate with free turning movement and an acceleration lane.

- With the southbound right turn lane acceleration lane at Jewell Avenue & Powhatan Road (#7), the Jewell Avenue & future Kewaunee Street (#16) intersection east of Harvest Road is also recommended to provide a second westbound through lane. It is also believed a south leg will be constructed at the Jewell Avenue & Kewaunee Street (#16) intersection by this horizon and it would be recommended to be signalized at this time. The northbound approach should provide a left-turn lane and shared through/right-turn lane while a westbound left-turn lane and a second eastbound through lane along Jewell Avenue would also be expected to be constructed from Harvest Road through Powhatan Road at this horizon.
- With Filing 3 construction, two additional accesses are proposed into the development along Jewell Avenue. A right-in/right-out access (#17) is proposed to the east of Kewaunee Street and should operate with an R1-1 “STOP” sign on the southbound approach to Jewell Avenue. A full movement access is proposed to align with a proposed future south leg at Jewell Avenue & Louisiana Parkway (#18). In this horizon, it is not expected to need or warrant a signal operationally and should operate well with R1-1 “STOP” signs posted on the northbound and southbound approaches to the intersection, with these approaches operating with a left-turn lane and shared through/right-turn lane while the eastbound and westbound approaches should each provide a left-turn lane, one through lane, and a shared through/right-turn lane.


2029 Recommendations (Filing 4)

- The intersections of Alameda Avenue & Harvest Road (#1) and Alameda Avenue & Powhatan Road (#2) are anticipated to require signalization for acceptable operations.
- The Flat Rock Trail & Harvest Road (#5) intersection is recommended to provide a northbound right turn lane 150 feet in length with a 160-foot taper.
- The Jewell Avenue & Harvest Road (#6) intersection is recommended to provide a second eastbound through lane and with this improvement, the eastbound right turn lane should provide 225 feet in length and a 140-foot taper.
- Jewell Avenue & Powhatan Road (#7) is recommended to provide a second eastbound left turn lane, which could be a continuous forced-left turn lane which would stem from the second eastbound through lane that would exist to the west of this intersection. If Powhatan Road does not provide two through lanes in each direction with the initial construction associated with the realignment at the intersection with Jewell Avenue, two receiving lanes on the north

leg of Powhaton Road would need to be provided coinciding with these eastbound dual left turn lanes along Jewell Avenue.

2031 Recommendations (Filing 5)

- By this horizon, the Harvest Road connection between Mississippi Avenue and Alameda Avenue is anticipated to be constructed. With this connection, several improvements along Harvest Road are anticipated to occur.
- The Mississippi Avenue & Harvest Road (West) (#3) intersection is anticipated to have a new north leg with construction of the Harvest Road connection to Alameda Avenue. This intersection is recommended to be signalized to provide acceptable operations. With this connection, the intersection is recommended to provide separate eastbound left and right turn lanes, each of which will be continuous turn lanes from the two through lanes to the west of this intersection along Mississippi Avenue. The northbound approach is recommended to provide a left turn lane 275 feet in length with a 160-foot taper with two through lanes, while the southbound approach is recommended to provide one through lane and a right turn lane 275 feet in length with a 160-foot taper.
- The Louisiana Parkway & Harvest Road (#4) intersection is anticipated to require signalization for acceptable operations once the Harvest Road connection is complete to Alameda Avenue. With signalization, separate eastbound and westbound left turn lanes are recommended to be constructed, each with 100 feet in length and 100-foot tapers. Two through lanes in each direction along Harvest Road are also recommended with the southbound right turning movement occurring from within the outer through lane and the northbound right turning movements from within a recommended right turn lane with 150 feet in length and a 160-foot taper.
- Flat Rock Trail & Harvest Road (#5) is recommended to be signalized in this horizon because of the Harvest Road connection to Alameda Avenue. Similar to the Louisiana Parkway intersection (#4), separate eastbound and westbound left turn lanes with 100 feet in length and 100-foot tapers are recommended. Additionally, two through lanes in each direction northbound and southbound are recommended, with the southbound right turning movements occurring within the outside through lane and the northbound right turn lane being reconstructed.
- The Jewell Avenue & Harvest Road (#6) intersection is recommended to be provided with dual eastbound left turn lanes by this horizon. For purposes of this analysis, it is assumed that



Jewell Avenue to the west of Harvest Road will provide three through lanes in each direction by this horizon, and the inner through lane could be dropped as the second eastbound left turn lane at this intersection. The southbound right turn lane at this intersection can now stem from the second through lane to the north of this intersection and be a forced-right turn lane—this turn lane is also recommended to operate with free right turning movement and its acceleration lane can become a third westbound through lane along Jewell Avenue to the west of this intersection.

- As two through lanes in each direction are proposed along Powhatan Road by this horizon year, the southbound approach to Jewell Avenue & Powhatan Road (#7) would be recommended for the southbound left turn lane to become a continuous turn lane from within the second southbound through lane to the north of this intersection.
- A new intersection along Harvest Road at Mississippi Avenue (East) (#8) would be recommended to be constructed, which would be done by Parklands Village 2 development. By this horizon, the intersection is anticipated to require signalization for acceptable operations. It is recommended the westbound approach provide separate left and right turn lanes with the left turn lane being a continuous turn lane and the right turn lane providing 150 feet in length with a 100-foot taper.
- The Mississippi Avenue & Powhatan Road (#9) intersection by this horizon is anticipated to be a four-leg intersection that will require signalization for acceptable operations. The eastbound and westbound approaches should provide left turn lanes 150 feet in length with a 100-foot taper and a shared through/right turn lane in each direction. The northbound and southbound approaches should each provide a left turn lane, two through lanes, and a right turn lane, with these turn lanes measuring 150 feet in length with a 100-foot taper.
- Two through lanes are recommended to be provided along Harvest Road between Mississippi Avenue and Jewell Avenue. At the Wyoming Place & Harvest Road (#10) intersection as well as at the Idaho Avenue & Harvest Road (#11) intersection.
- A new internal 'T'-intersection is proposed in this horizon at Road 1 & Kewaunee Street (#13), with westbound Road 1 having an R1-1 'STOP' sign with one lane for shared left/right turning movements while the northbound approach would operate well with a shared through/right-turn lane and the southbound approach should provide a 100-foot turn lane with a 100-foot taper.
- An additional new internal 'T'-intersection at Road 1 & Louisiana Parkway (#14) is proposed. In this horizon, it would be recommended to provide an R1-1 "STOP" sign posted on the

northbound approach. Each of the approaches to the intersection are anticipated to operate well with one lane in each direction for shared turning movements.

- A signal is anticipated to be warranted at the Jewell Avenue & Louisiana Parkway (#18) intersection and is recommended to be provided in this horizon.

2033 Recommendations (Filing 6)

- The Alameda Avenue & Harvest Road (#1) intersection is recommended to provide northbound and southbound right turn lanes each with 275 feet in length with a taper of 160 feet. Two through lanes northbound and southbound should also be provided at this intersection.
- If not provided previously, two through lanes in each direction along the remainder of Harvest Road within the study area, such as at Mississippi Avenue & Harvest Road (West) (#3) and at Mississippi Avenue & Harvest Road (East) (#8) should be provided. The northbound right turn lane at Mississippi Avenue & Harvest Road (East) (#8) should provide 275 feet in length with a 160-foot taper.
- The Jewell Avenue & Powhatan Road (#7) intersection should provide two through lanes eastbound and westbound while the inner eastbound left turn should then provide 225 feet in length with a 140-foot taper.
- The Road 1 & Louisiana Parkway (#14) intersection is anticipated to become a four-leg intersection with Filing 6 construction. With this change, the eastbound and westbound approaches would be recommended to operate with stop control and posted R1-1 'STOP' signs while Louisiana Parkway would become free movement. All four approaches would operate well with one lane in each direction for shared left/through/right-turning movements.
- If not provided previously, a westbound right-turn lane 225 feet in length with a 140-foot taper could be provided at the Jewell Avenue & Louisiana Parkway (#18) intersection.

2040 Recommendations

- The five intersections proposed in this project that were not studied in the Parklands Master Study include Wyoming Place & Harvest Road (#10), Idaho Avenue & Harvest Road (#11), D Street & Harvest Road (#12), E Street & Harvest Road (#15), and the Jewell Avenue & Road 2 (#17) access. By the 2040 horizon, each of these intersections are anticipated to continue operating at an acceptable level of service with full turning movements permitted, and none are anticipated to require additional improvements that were not shown previously.

- Any additional improvements at other study area intersections by this horizon should be found in the Parklands Master Traffic Impact Study that was previously conducted, as that study conducted a thorough analysis of the study area intersections with projected turning movements and recommended intersection geometry and control.

General Notes and Recommendations

- The roadway geometry and control recommendations provided in this study are evaluated based on the anticipated needs at the study area intersections during the 2026, 2027, 2028, 2029, 2031, and 2033 horizon years based on the projected buildout of the project in Filings 1a and 1b, 2, 3, 4, and 5 during each of these horizon years, respectively. As such, the recommended intersection configuration and control provided in this study are based on the needs for each of these horizon years based on anticipated development rather than aligning with the roadway geometry provided in the Parklands Village Master Traffic Study, as this would result in overbuilding the roadway for the needs anticipated by these horizon years. It should be noted that additional roadway improvements and intersection control may be needed at the external intersections as development continues to occur in this area—for which the Parklands Village Master Traffic Study can be referenced. The recommendations for the 2040 horizon— with the exception of the four aforementioned intersections that were studied in 2040—should be found in the Parklands Village Master Traffic Study. The recommendations found in that study should be appropriate for each of the intersections included in this study, as the Parklands Village 1 traffic generation in this study during the morning and afternoon studied peak hours is less than the traffic generated by the Parklands Village 1 development area that was analyzed in the master study.
- Any onsite or offsite improvements should be incorporated into the Civil Drawings and conform to standards of the City of Aurora and the Manual on Uniform Traffic Control Devices (MUTCD) – 2009 Edition.

2.0 INTRODUCTION

Kimley-Horn and Associates, Inc. has prepared this report to document the results of a Traffic Impact Study for Parklands Village 1 residential and commercial project proposed to be bordered by Jewell Avenue to the south, Harvest Road to the west, Powhaton Road to the east, and Coal Creek to the north in Aurora, Colorado. A vicinity map illustrating the Parklands Village 1 development location is shown in **Figure 1**. A conceptual site plan is attached in **Appendix H**.

Full buildout of the development is expected to consist of approximately 902 single-family detached dwelling units, 504 single-family attached dwelling units, 566 mid-rise multifamily housing dwelling units, approximately 21.1 acres of park uses, 22,000 square feet of a recreational community center, approximately 677 elementary and 321 middle school students in a K-8 school, 60,000 square feet of office uses, and 181,000 square feet of retail uses. A land use comparison of the currently proposed land use to the previously assessed land uses is included in **Appendix C**.

It is anticipated that Parklands Village 1 will be constructed in a total of five (5) filings. Filing 1 is anticipated to be composed of the entire western portion of the development area between Jewell Avenue and Mississippi Avenue along the east side of Harvest Road. However, Filing 1 is planned to be developed in two phases, with Filing 1 residential uses located to the north and Filing 2 retail/residential uses located to the south. Filing 3 is anticipated to be located on the south portion of the project along Jewell Avenue to the east of Filing 2 and to the west of Powhaton Road, with Filing 4 located on the north side of the project to the east of Filing 1. Filing 5 is located to the north of Filing 3, while Filing 6 would be the final phase of construction, located to the north of Filing 5 and to the east of Filing 4. Although the exact timing of each development is uncertain at this time, per coordination with the project team and for purposes of this analysis, the following provides a summary of the anticipated development in each of the five (5) filings analyzed in this study:

- Filing 1: 195 single-family detached dwelling units (DU), 188 single-family attached DU, and approximately 2.5 acres of parks – estimated completion in 2026.
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- Filing 3: 242 single-family detached DU and a 3.5-acre park – estimated completion in 2028.
- Filing 4: 89 single-family detached DU; 78 single-family attached DU; 5.1 acres of park uses; and a 22,000 square foot recreational community center – estimated completion in 2029.
- Filing 5: 225 single-family detached DU – estimated completion in 2031.
- Filing 6: 151 single-family detached DU; 134 single-family attached DU; 7.0 acres of park uses; and a K-8 school estimated to include approximately 677 elementary school students and 321 middle school students – estimated completion in 2033.

The *Parklands Development Master Traffic Study*, which includes development area of Parklands Village 1, was finalized in October 2022 and was utilized as a basis in this traffic study. The Parklands master traffic study provided a thorough long-term 2040 analysis of major intersections internal to Parklands Village 1 and accesses to the external arterial street system. Therefore, the requested City of Aurora scope for this traffic study includes analysis for each filing horizon and not a long-term 2040 horizon. Further, the current proposal of Parklands Village 1 is calculated to generate less traffic than evaluated in the master traffic study. However, there are five external street intersections included in this study that were not analyzed in the master study, four of which are located along Harvest Road. These intersections along Harvest Road would include two located in between Louisiana Parkway and Flat Rock Trail and two located in between Flat Rock Trail and Jewell Avenue. The fifth intersection not included in the original study is a proposed right-in/right-out intersection roughly evenly spaced between the future signals along Jewell Avenue at Kewaunee Street and Louisiana Parkway. As such, at the request of the City of Aurora staff, analysis was conducted in the 2040 horizon for these intersections. For detailed analysis of all study area intersections besides the aforementioned intersections, the Parklands Development Master Traffic Study should be referenced.

The purpose of this traffic study is to identify project traffic generation characteristics to determine potential project traffic related impacts on the local street system and to develop the necessary mitigation measures required for the identified traffic impacts. The following intersections were incorporated into this traffic study based on the City of Aurora requested scope:

- Alameda Avenue & Harvest Road (Intersection #1)
- Alameda Avenue & Powhaton Road (#2)

- Mississippi Avenue & Harvest Road (#3)
- Louisiana Parkway & Harvest Road (#4)
- Flat Rock Trail & Harvest Road (#5)
- Jewell Avenue & Harvest Road (#6)
- Jewell Avenue & Powhatan Road (#7)

In addition, the proposed public street connections to Harvest Road and Jewell Avenue, as well as other future major external and internal street intersections were evaluated (Intersections #8-18).

Regional access to Parklands Village 1 will be provided by Jewell Avenue, Gun Club Road (State Highway 30), E-470, and Interstate 70 (I-70). Primary access will be provided by Jewell Avenue, Alameda Avenue, Mississippi Avenue, Harvest Road, and Powhatan Road. Direct access to full buildout of the development is anticipated to occur from future east legs at the Louisiana Parkway & Harvest Road (#4) and the Flat Rock Trail & Harvest Road (#5) intersections, and two new accesses along the north side of Jewell Avenue between Harvest Road and Powhatan Road (Intersections #16 and #18) at the future Kewaunee Street and Louisiana Parkway intersections, located at approximately 1,750-foot spacing or greater in between each of these existing intersections. One new right-in/right-out access (#10) and one full movement 'T'-intersection (#11) between Louisiana Parkway and Flat Rock Trail are also proposed, approximately 660 feet or greater between intersections. Finally, two new full movement 'T'-intersections (#12 & #15) between Flat Rock Trail and Jewell Avenue are proposed, each at 660-foot spacing or greater between each of these existing intersections. The right-in/right-out access proposed along Jewell Avenue (#17) is proposed roughly evenly spaced between Kewaunee Street (#16) and Louisiana Parkway (#18), with approximately 800 feet or greater of spacing between each of these proposed future intersections.



FIGURE 1
PARKLANDS VILLAGE 1
AURORA, COLORADO
VICINITY MAP

3.0 EXISTING AND FUTURE CONDITIONS

3.1 Existing Study Area


The existing site is comprised primarily of vacant land, with some existing small structures onsite that are anticipated to be removed with project construction. Directly to the north of the site is Coal Creek while to the north of that is the proposed Parklands Village 2 site. To the west of the site is primarily single-family homes as part of the Murphy Creek development, with a golf course, a fire station, and a K-8 school.

3.2 Existing and Future Roadway Network

Alameda Avenue extends east/west with one through lane in each direction. Sidewalks exist on the north side of Alameda Avenue fronting the newer single-family constructed homes. The posted speed limit west of Harvest Road is 35 miles per hour, while east of Harvest Road has a posted speed limit of 30 miles per hour. Based on the City of Aurora Northeast Area Transportation Study Refresh (NEATS), Alameda Avenue between Gun Club Road and Harvest Road is anticipated to continue to provide one through lane in each direction as a collector roadway while Alameda Avenue to the east of Harvest Road through Watkins Road is ultimately planned to provide two through lanes in each direction as a minor arterial.

Harvest Road currently only extends northbound and southbound with two through lanes of travel between 6th Avenue and Alameda Avenue. However, Harvest Road is a two-lane roadway between Jewell Avenue and Mississippi Avenue. The roadway provides a raised median separating opposing travel lanes and sidewalks on the east and west side. The posted speed limit is 45 miles per hour. Based on NEATS projections, Harvest Road is anticipated to connect between 6th Avenue and Jewell Avenue with one through lane in each direction by approximately 2030, while it is ultimately planned to provide three through lanes in each direction at full buildout.

Powhaton Road is primarily a two-lane roadway in the study area with the exception of where the roadway widens to four lanes with a raised median near its intersection with Alameda Avenue. The posted speed limit is 40 miles per hour with sidewalks along the four-lane section on the east and west side to the north of Alameda Avenue while the speed limit increases to 45 miles per hour as the roadway approaches Jewell Avenue. No sidewalk currently exists along Powhaton Road to the south of Alameda Avenue but is anticipated to be included as development occurs.



Powhaton Road is projected with one through lane in each direction to the south of Alameda Avenue and two through lanes to the north of Alameda Avenue by 2030, while it is anticipated to provide two through lanes along its entire length at full buildout.

Mississippi Avenue extends east/west as a two-lane roadway between Gun Club Road and Duquesne Street/Coolidge Street and widens to four-lanes until the roadway currently terminates at Harvest Road. Sidewalk is provided on the south side of Mississippi Avenue and some sections along the north side. The posted speed limit is 30 miles per hour.

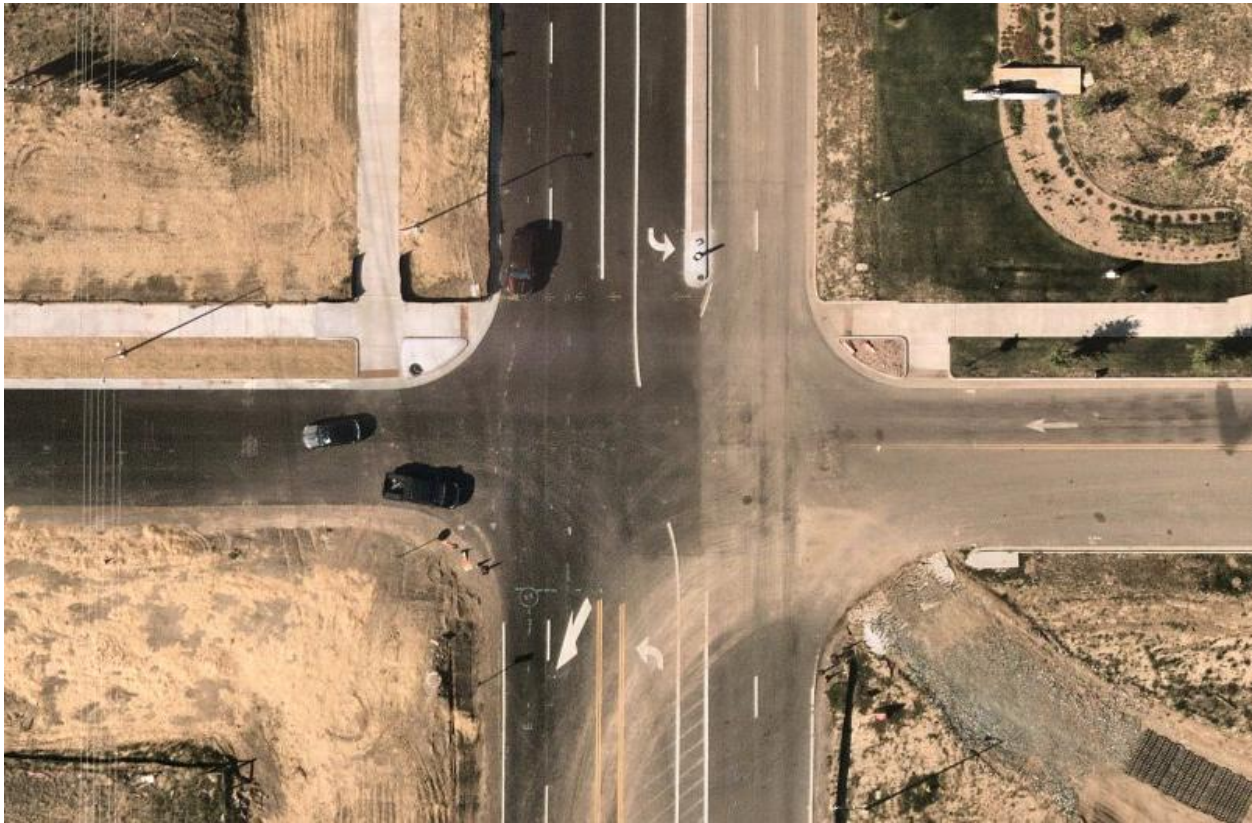
Jewell Avenue is currently undergoing roadway expansion to the west of Harvest Road, where two to three lanes in each direction are provided. Approaching Harvest Road, Jewell Avenue decreases to one through lane in each direction. The posted speed limit along Jewell Avenue is 40 miles per hour. By 2030, Jewell Avenue is projected to provide three through lanes to the west of Harvest Road, two through lanes between Harvest Road and Powhaton Road, and then drop to one through lane in each direction just after Powhaton Road. Based on the City of Aurora projections, at full buildout Jewell Avenue is anticipated to provide three through lanes in each direction to the west of Monaghan Road and two through lanes to the east of Monaghan Road.

The T-intersection of Alameda Avenue and Harvest Road (#1) is unsignalized and operates with stop control on the southbound approach of Harvest Road. The eastbound approach of Alameda Avenue provides a single lane for shared left and through movements. The westbound approach of Alameda Avenue provides a shared through/right turn lane. The southbound approach provides a separate left and right turn lane. An aerial photo of the existing intersection configuration is below (north is up - typical).



Alameda Avenue and Harvest Road (#1)

The unsignalized intersection of Alameda Avenue and Powhatan Road (#2) operates with stop control on the eastbound and westbound approaches of Alameda Avenue. The northbound and southbound approaches of Powhatan Road provide a separate left turn lane, a through lane, and a shared through/right turn lane. The eastbound and westbound approaches provide a single lane for shared movements. An aerial photo of the existing intersection configuration is below.



Alameda Avenue and Powhatan Road (#2)

The unsignalized intersection of Mississippi Avenue and Harvest Road (#3) does not provide intersection control and currently only has two legs with a 90-degree bend. Harvest Road transitions into Mississippi Avenue northbound and Mississippi Avenue transitions into Harvest Road eastbound. Because of this existing configuration, there is no existing measurable vehicle delay. An aerial photo of the existing intersection configuration is below.



Mississippi Avenue and Harvest Road (#3)

The unsignalized 'T'-intersection of Louisiana Parkway and Harvest Road (#4) operates with stop control on the eastbound Louisiana Parkway approach to the intersection. Each approach to the intersection currently provides one lane in each direction for shared turning movements. An aerial photo of the existing intersection configuration is below.



Louisiana Parkway & Harvest Road (#4)

The unsignalized 'T'-intersection of Flat Rock Trail and Harvest Road (#5) operates with stop control on the eastbound Flat Rock Trail approach to the intersection. Each approach to the intersection currently provides one lane in each direction for shared turning movements. An aerial photo of the existing intersection configuration is below.



Flat Rock Trail & Harvest Road (#5)

The unsignalized 'T'-intersection of Jewell Avenue and Harvest Road (#6) operates with stop control on the southbound Harvest Road approach to the intersection. The eastbound Jewell Avenue approach provides a left turn lane and a through lane while the westbound Jewell Avenue and southbound Harvest Road approaches each provide one lane for shared turning movements. An aerial photo of the existing intersection configuration is below.



Jewell Avenue & Harvest Road (#6)

The unsignalized 'T'-intersection of Jewell Avenue and Powhatan Road (#7) operates with stop control on the southbound Powhatan Road approach to the intersection. Each approach to the intersection provides one lane in each direction for shared turning movements. An aerial photo of the existing intersection configuration is below. It is understood that this intersection will eventually be realigned further to the east to allow for future expansion of the intersection as it becomes necessary.



Jewell Avenue & Powhatan Road (#7)

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

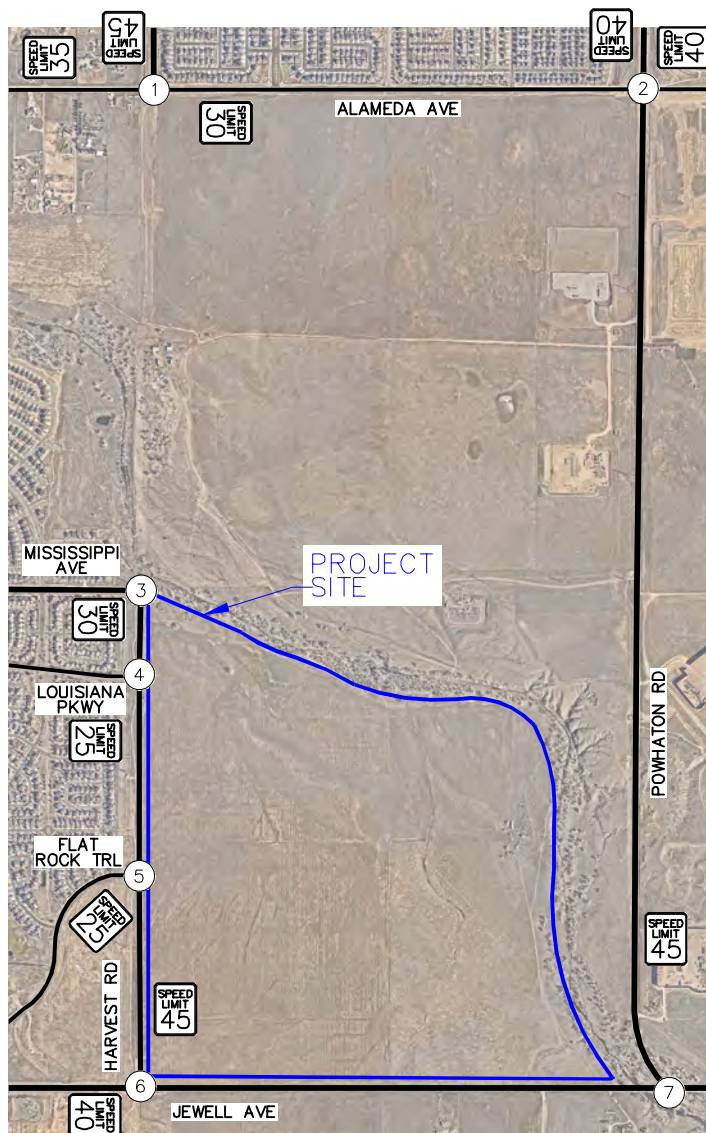
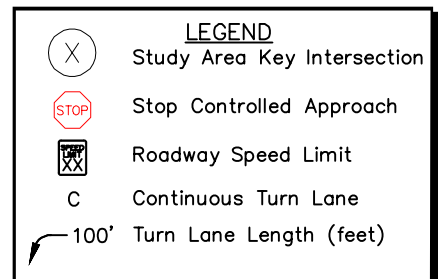
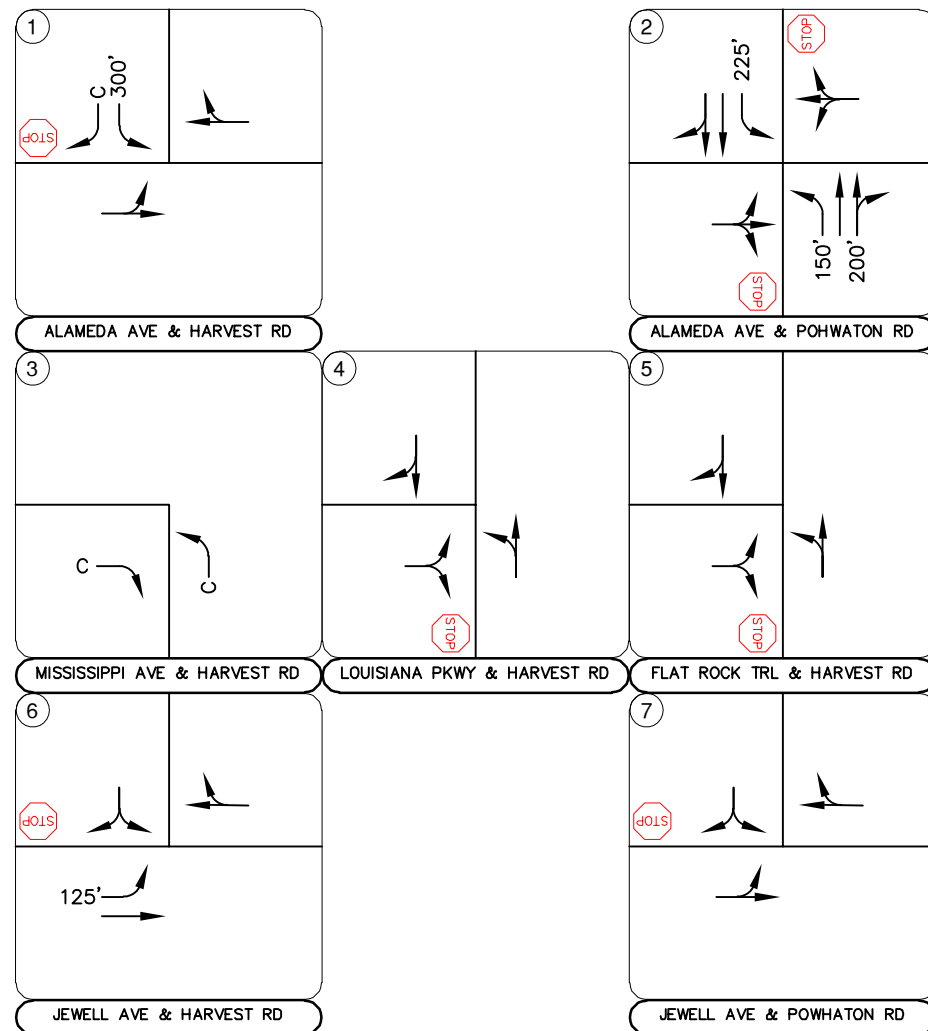


FIGURE 2
PARKLANDS VILLAGE 1
AURORA, COLORADO
EXISTING GEOMETRY AND CONTROL



3.3 Existing Traffic Volumes

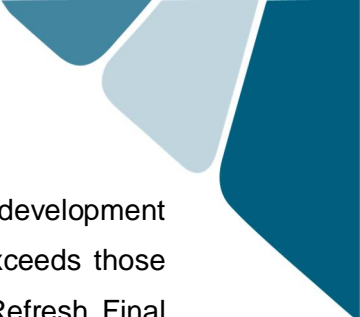
Existing turning movement counts were conducted at the study intersections in June 2021 during the weekday morning and afternoon peak hours for the *Parklands Master Traffic Study* updated October 2022 study. Per previous coordination with City of Aurora staff, these counts were authorized to be used in this study. However, new counts were collected at the Jewell Avenue & Harvest Road (#6) and the Jewell Avenue & Powhaton Road (#7) intersections on Tuesday, May 9, 2023, as the Jewell Avenue & Powhaton Road (#7) intersection was not included in the traffic counts in the original master study. The counts were conducted during the morning and afternoon peak hours of adjacent street traffic in 15-minute intervals from 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM on these count dates.

The existing year intersection traffic volumes are shown in **Figure 3**. The intersections whose counts were collected in 2021 were grown by the standard Aurora two (2) percent annual growth to estimate 2023 traffic volumes. In addition, the intersection of Alameda Avenue & Powhaton Road (#2) was under construction during year 2021. Therefore, the inherent increase in traffic volumes at that intersection have been accounted for with the adjusted 2023 volumes. The 2023 adjusted traffic volumes are shown in **Figure 4**. The existing intersection traffic volume count sheets provided in **Appendix A**.

3.4 Unspecified Development Traffic Growth

According to information provided on the CDOT website, the 20-year growth factor along State Highway 30 in this area is approximately 1.48. This growth factor equates to an annual growth rate of 1.96 percent. Traffic information from the CDOT Online Transportation Information System (OTIS) website is provided in **Appendix B**. This aligns well with the City of Aurora typical standard of 2.0 percent annual traffic growth. However, there are several traffic studies in the area that are anticipated to be constructed in coming years that make up the background traffic volumes for the study area, including:

- Parklands Village 2, June 2023
- Murphy Creek Filings 17-18, December 2020
- Murphy Creek Filing 7, September 2019
- Murphy Creek East, March 2019
- Villages at Murphy Creek, December 2005




As directed by the City and County, the background developments and the proposed development with two (2) percent annual growth rate over projects the traffic volumes and exceeds those identified in the City of Aurora Northeast Area Transportation Study (NEATS) Refresh Final Report 2030 Daily Traffic Volumes. Therefore, removing the project and the surrounding background developments it was determined a half percent (0.5%) annual growth rate appropriately estimates the background traffic volumes.

Additionally, to align with the procedure followed in the Parklands Development Master Traffic Study prepared in October 2022, the City of Aurora Northeast Area Transportation Study (NEATS) Refresh Final Report 2030 Daily Traffic Volumes were used as a *basis* to form future background plus project traffic volumes at the study area intersections. However, as mentioned in the Parklands Village 2 traffic study, this procedure was not followed at the Alameda Avenue & Harvest Road (#1) intersection, because the volumes shown in the 2030 NEATS document along Alameda Avenue do not reflect the traffic volumes seen today, with an estimated 700 ADT on the west leg of Alameda Avenue in 2030 NEATS while there is estimated to be approximately 3,900 ADT there today. Although it is recognized that this volume may decrease or plateau slightly over time as additional roadway connections are created in the area, the existing volumes seen at this intersection were used as a basis to form the future estimated traffic volumes rather than the 2030 NEATS volumes, with a slight reduction in volume on this west leg accounted for when the Harvest Road extension between Mississippi Avenue and Alameda Avenue is completed.

Applicable documents from adjacent traffic studies, the master study, and the NEATS projections are also included in **Appendix B**. Of note, for the intersections that were analyzed in the 2040 horizon because they were not assessed in the Parklands master study, the adjacent intersections' north/south volumes that were analyzed in the original study—including Louisiana Parkway & Harvest Road (#4), Flat Rock Trail & Harvest Road (#5), Jewell Avenue & Harvest Road (#6), Jewell Avenue & Kewaunee Street (#16) and Jewell Avenue & Louisiana Parkway (#18)—were used as a basis to form the north/south volumes at these intersections along Harvest Road and the east/west volumes at the right-in/right-out access on Jewell Avenue.

Based on discussion with the project team, the Parklands Village 2 and Parklands Village 1 developments are anticipated to be constructed somewhat concurrently, with Filing 1 of Parklands Village 2 being constructed first, and then Filing 1 of Parklands Village 1, and this process is



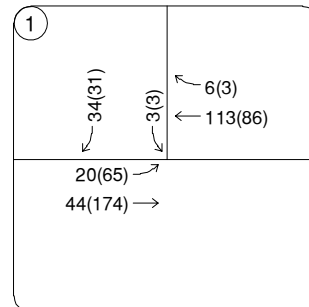
understood to generally be anticipated to occur successively for each filing of these developments until both development areas are fully built out. As such, the buildout years of each filing of this project is projected to occur in an alternating fashion with Parklands Village 2 with an assumed full buildout year of this project complete by approximately 2033. Additionally, because only 2030 and 2040 horizons are provided for the NEATS projections, the filing horizon years that do not fall in these years were provided an assumed background growth from year to year to account for other developments in the area that would use these roadways that would allow for the 2030 and 2040 horizon years used in NEATS to align more closely to the traffic volume analyzed in this study.

Although there is some additional planned future development in the area—such as Parklands Village 3—whose background traffic was not directly added to this project from a previously conducted traffic study, because the NEATS projections were used, the accompanying traffic from these other future developments are understood to be included the traffic volume projections used in this study.

The calculated background traffic volumes for 2026 (Filing 1), 2027 (Filing 2), 2028 (Filing 3), 2029 (Filing 4), 2031 (Filing 5), and 2033 (Filing 6—full buildout) are shown in **Figures 5** through **10**, respectively.

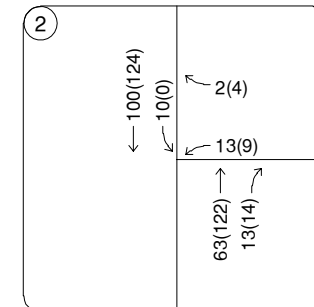


FIGURE 3
PARKLANDS VILLAGE 1
AURORA, COLORADO
EXISTING TRAFFIC VOLUMES



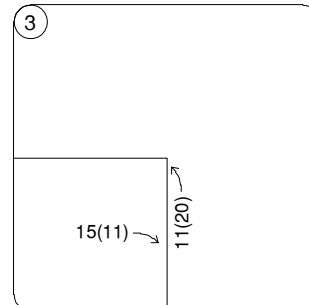
ALAMEDA AVE & HARVEST RD

Wednesday, June 23, 2021
7:15 to 8:15 AM (5:00 to 6:00 PM)



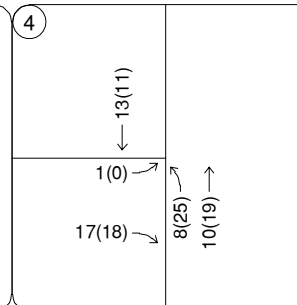
ALAMEDA AVE & POWHATON RD

Wednesday, June 23, 2021
7:15 to 8:15 AM (4:15 to 5:15 PM)



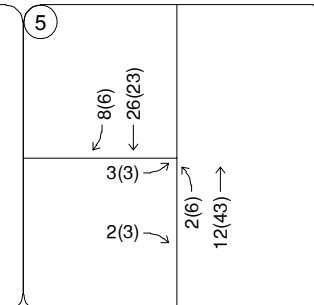
MISSISSIPPI AVE & HARVEST RD

Wednesday, June 23, 2021
7:45 to 8:45 AM (4:45 to 5:45 PM)



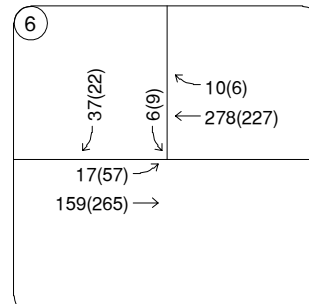
LOUISIANA PKWY & HARVEST RD

Wednesday, June 23, 2021
7:00 to 8:00 AM (4:45 to 5:45 PM)



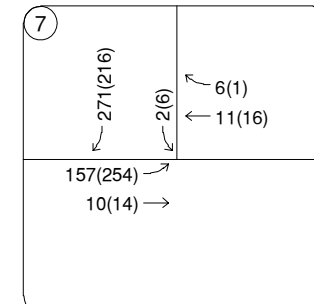
FLAT ROCK TRL & HARVEST RD

Wednesday, June 23, 2021
7:45 to 8:45 AM (4:45 to 5:45 PM)



JEWELL AVE & HARVEST RD

Tuesday, May 9, 2023
7:00 to 8:00 AM (4:30 to 5:30 PM)



JEWELL AVE & POWHATON RD

Tuesday, May 9, 2023
7:00 to 8:00 AM (4:30 to 5:30 PM)

LEGEND

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

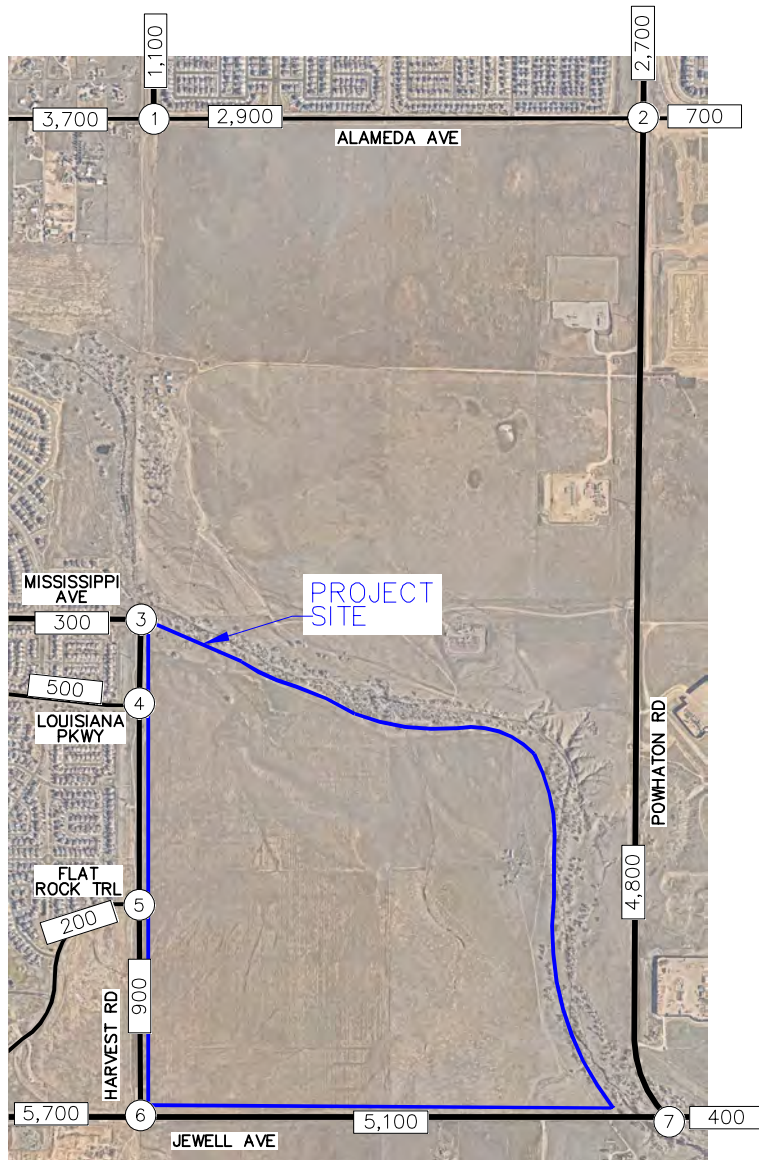
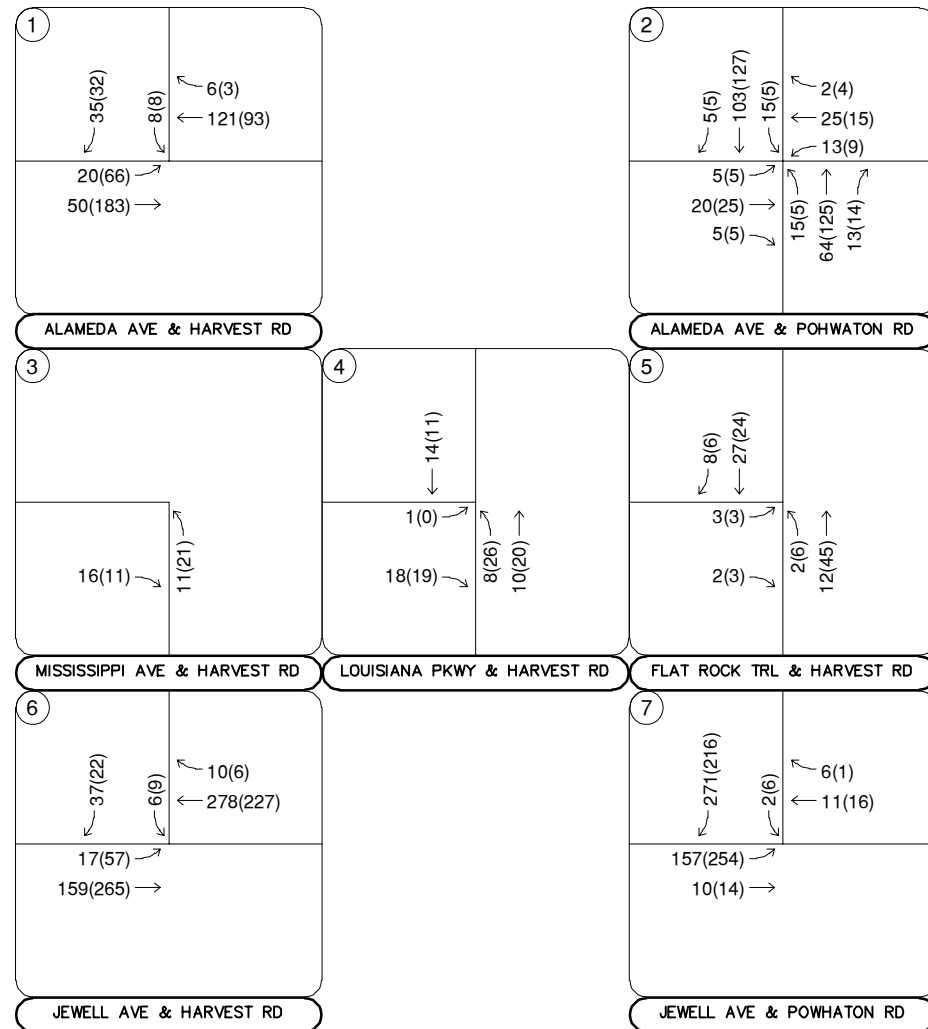


FIGURE 4
PARKLANDS VILLAGE 1
AURORA, COLORADO
2023 ADJUSTED TRAFFIC VOLUMES



LEGEND	
(X)	Study Area Key Intersection
xxx(XXX)	Weekday AM(PM)
	Peak Hour Traffic Volumes
xx,x00	Estimated Daily Traffic Volume

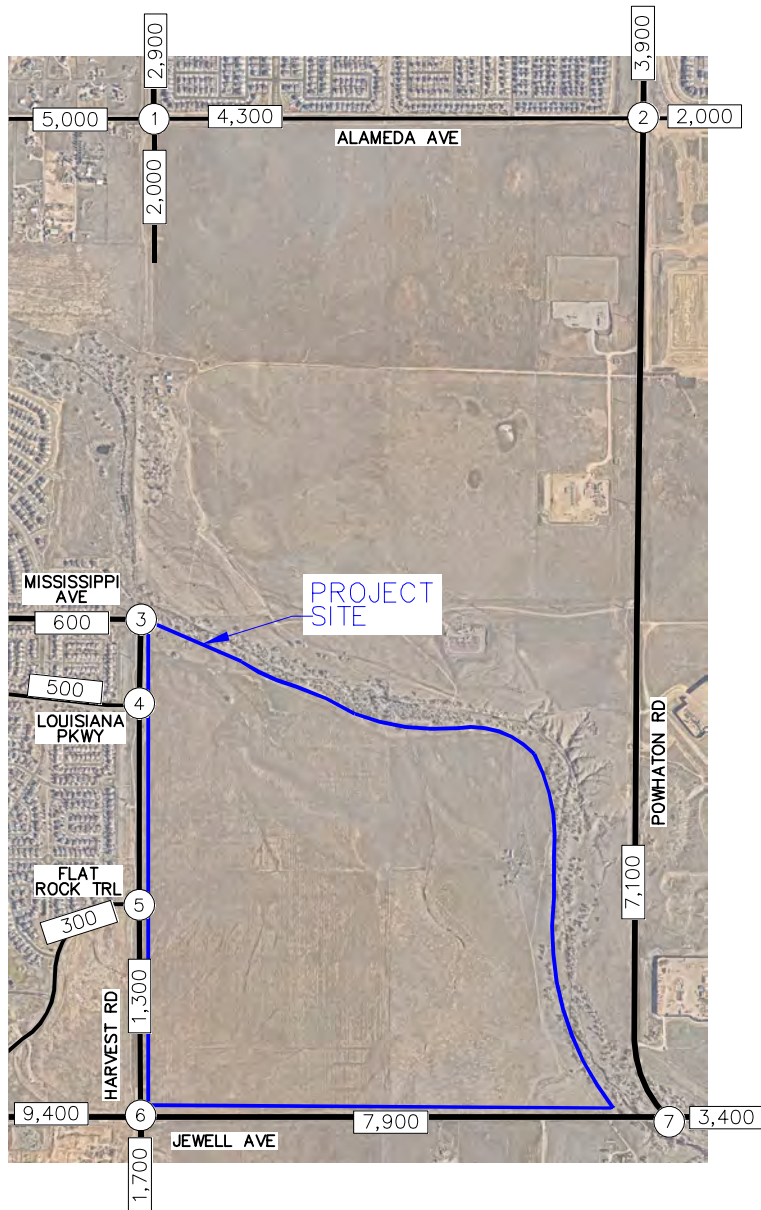


FIGURE 5
PARKLANDS VILLAGE 1
AURORA, COLORADO
2026 BACKGROUND TRAFFIC VOLUMES

1	<div> <div> <div>37(33)</div> <div>23(70)</div> <div>21(69)</div> <div>63(221)</div> <div>12(36)</div> </div> <div> <div>20(44)</div> <div>9(12)</div> <div>30(23)</div> <div>59(45)</div> <div>13(10)</div> </div> </div>	<div> <div>36(26)</div> <div>152(116)</div> </div>
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ALAMEDA AVE & HARVEST RD

3	<div> <div>23(30)</div> <div>16(27)</div> </div>	
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MISSISSIPPI AVE & HARVEST RD

6	<div> <div>48(40)</div> <div>11(32)</div> <div>32(68)</div> <div>221(425)</div> <div>19(55)</div> </div> <div> <div>14(12)</div> <div>20(11)</div> <div>412(320)</div> <div>17(10)</div> <div>33(32)</div> <div>25(28)</div> <div>11(8)</div> </div>	
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JEWELL AVE & HARVEST RD

4	<div> <div>1(1)</div> <div>22(35)</div> <div>2(1)</div> <div>19(20)</div> </div> <div> <div>11(29)</div> <div>16(27)</div> </div>	
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LOUISIANA PKWY & HARVEST RD

2	<div> <div>19(42)</div> <div>105(129)</div> <div>64(52)</div> <div>35(73)</div> <div>39(55)</div> </div> <div> <div>32(29)</div> <div>30(65)</div> <div>13(9)</div> <div>22(28)</div> <div>65(127)</div> <div>13(14)</div> </div>	
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ALAMEDA AVE & POWHATON RD

5	<div> <div>8(7)</div> <div>39(54)</div> <div>4(4)</div> <div>3(5)</div> </div> <div> <div>4(11)</div> <div>24(58)</div> </div>	
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FLAT ROCK TRL & HARVEST RD

7	<div> <div>327(265)</div> <div>19(77)</div> <div>187(310)</div> <div>58(137)</div> </div> <div> <div>27(53)</div> <div>113(76)</div> </div>	
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JEWELL AVE & POWHATON RD



LEGEND

- (X) Study Area Key Intersection
- xxx(xxx) Weekday AM(PM)
- Peak Hour Traffic Volumes
- xx,x00 Estimated Daily Traffic Volume

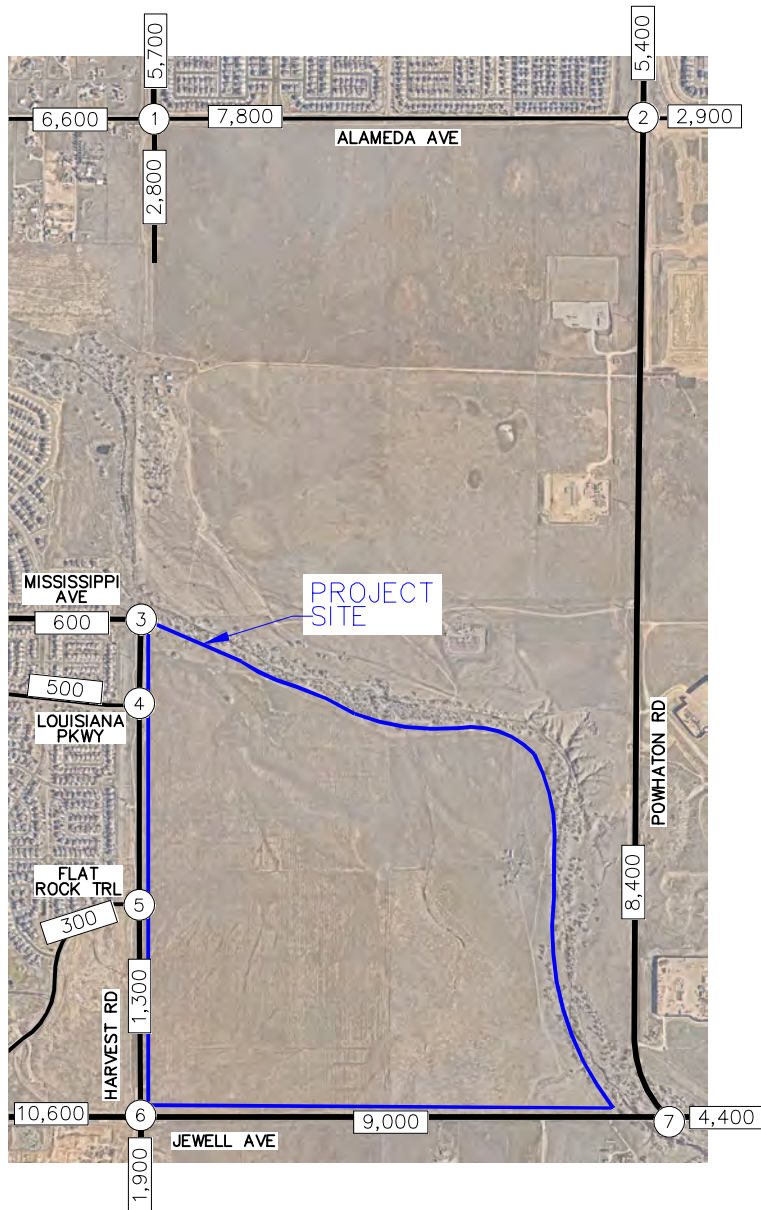


FIGURE 6
 PARKLANDS VILLAGE 1
 AURORA, COLORADO
 2027 BACKGROUND TRAFFIC VOLUMES

1	<div> <div> <div>38(34)</div> <div>22(70)</div> <div>94(287)</div> <div>19(56)</div> </div> <div> <div>33(100)</div> <div>50(35)</div> <div>88(63)</div> <div>14(11)</div> </div> <div> <div>76(164)</div> <div>10(13)</div> <div>111(135)</div> <div>198(173)</div> </div> </div>
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ALAMEDA AVE & HARVEST RD

3	<div> <div>24(32)</div> <div>17(28)</div> </div>
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MISSISSIPPI AVE & HARVEST RD

6	<div> <div>49(41)</div> <div>32(68)</div> <div>247(476)</div> <div>24(63)</div> </div> <div> <div>14(35)</div> <div>36(40)</div> <div>28(31)</div> <div>13(9)</div> </div> <div> <div>15(13)</div> <div>23(14)</div> <div>464(372)</div> <div>22(13)</div> </div>
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JEWELL AVE & HARVEST RD

4	<div> <div>2(2)</div> <div>3(2)</div> <div>20(21)</div> <div>12(30)</div> <div>16(28)</div> </div> <div> <div>23(37)</div> </div>
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LOUISIANA PKWY & HARVEST RD

2	<div> <div>50(97)</div> <div>94(105)</div> <div>43(108)</div> <div>48(62)</div> </div> <div> <div>108(140)</div> <div>35(30)</div> <div>37(34)</div> <div>57(94)</div> <div>13(9)</div> </div>
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ALAMEDA AVE & POWHATON RD

5	<div> <div>8(8)</div> <div>5(5)</div> <div>4(6)</div> </div> <div> <div>41(55)</div> <div>5(12)</div> <div>25(58)</div> </div>
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FLAT ROCK TRL & HARVEST RD

7	<div> <div>367(313)</div> <div>212(361)</div> <div>75(162)</div> </div> <div> <div>23(100)</div> <div>32(68)</div> <div>146(110)</div> </div>
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JEWELL AVE & POWHATON RD



LEGEND	
(X)	Study Area Key Intersection
xxx(xxx)	Weekday AM(PM) Peak Hour Traffic Volumes
xx,x00	Estimated Daily Traffic Volume

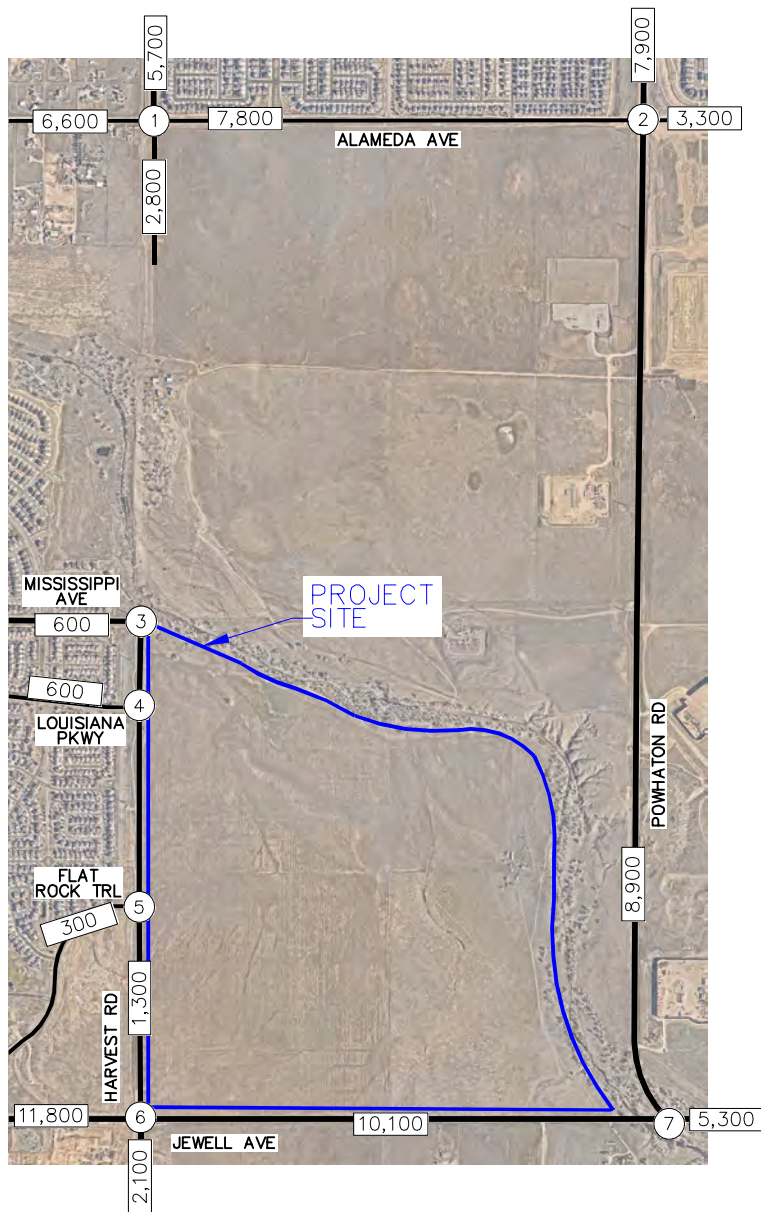


FIGURE 7
PARKLANDS VILLAGE 1
AURORA, COLORADO
2028 BACKGROUND TRAFFIC VOLUMES

1	<div> <div>39(34)</div> <div>33(99)</div> <div>75(163)</div> <div>24(72)</div> <div>94(288)</div> <div>19(55)</div> </div> <div> <div>110(134)</div> <div>199(173)</div> <div>10(13)</div> <div>49(35)</div> <div>87(63)</div> <div>14(11)</div> </div>
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ALAMEDA AVE & HARVEST RD

3	<div>25(34)</div> <div>17(30)</div>
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MISSISSIPPI AVE & HARVEST RD

6	<div> <div>50(42)</div> <div>16(37)</div> <div>16(13)</div> <div>37(68)</div> <div>273(528)</div> <div>29(70)</div> </div> <div> <div>25(16)</div> <div>515(423)</div> <div>27(15)</div> <div>38(47)</div> <div>30(33)</div> <div>15(10)</div> </div>
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JEWELL AVE & HARVEST RD

2	<div> <div>52(97)</div> <div>244(240)</div> <div>49(51)</div> <div>94(105)</div> <div>44(110)</div> <div>50(57)</div> </div> <div> <div>42(39)</div> <div>67(96)</div> <div>24(9)</div> <div>38(52)</div> <div>201(259)</div> <div>20(29)</div> </div>
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ALAMEDA AVE & POWHATON RD

4	<div> <div>2(2)</div> <div>23(38)</div> <div>3(2)</div> <div>20(21)</div> </div> <div> <div>12(30)</div> <div>16(29)</div> </div>
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LOUISIANA PKWY & HARVEST RD

5	<div> <div>8(8)</div> <div>41(56)</div> <div>5(5)</div> <div>4(6)</div> </div> <div> <div>5(12)</div> <div>25(58)</div> </div>
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FLAT ROCK TRL & HARVEST RD

7	<div> <div>384(321)</div> <div>25(120)</div> <div>34(78)</div> <div>179(144)</div> </div> <div> <div>218(369)</div> <div>91(187)</div> </div>
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JEWELL AVE & POWHATON RD



LEGEND	
(X)	Study Area Key Intersection
xxx(xxx)	Weekday AM(PM) Peak Hour Traffic Volumes
xx,x00	Estimated Daily Traffic Volume

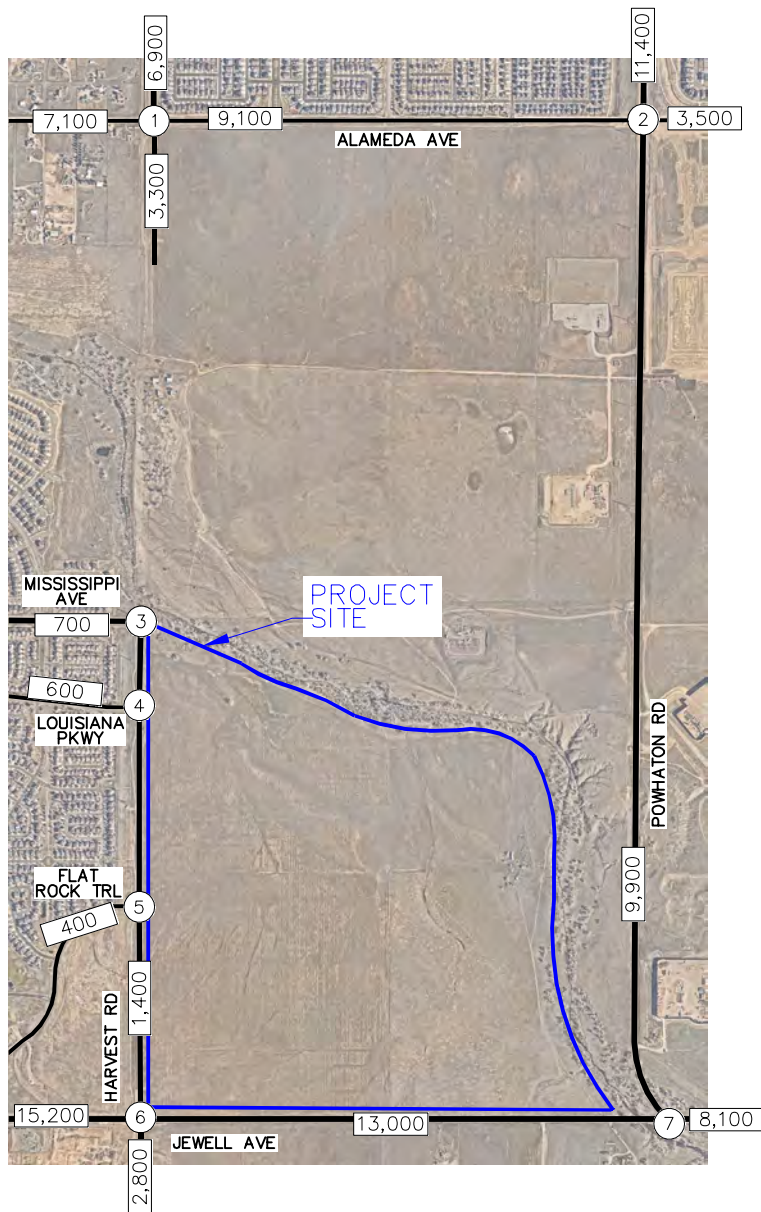


FIGURE 8
 PARKLANDS VILLAGE 1
 AURORA, COLORADO
 2029 BACKGROUND TRAFFIC VOLUMES

1	<div> <div>41(37) ↓ 25(73) 100(310) 22(65)</div> <div> <div>39(120) ↓ 11(14) 58(41) 104(75) 15(12)</div> <div> <div>153(166) ← 217(187) 11(14) 58(41) 104(75) 15(12)</div> </div> </div> </div>
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ALAMEDA AVE & HARVEST RD

3	<div>27(36) ↓ 18(31)</div>
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MISSISSIPPI AVE & HARVEST RD

6	<div> <div>55(45) ↓ 43(69) 464(669) 44(105)</div> <div> <div>21(42) ↓ 48(67) 35(38) 17(11)</div> <div> <div>21(14) ↓ 35(21) 711(564) 42(20)</div> </div> </div> </div>
---	--

JEWELL AVE & HARVEST RD

4	<div> <div>3(3) ↓ 4(3) 22(23)</div> <div> <div>24(39) ↓ 13(31) 16(29)</div> </div> </div>
---	---

LOUISIANA PKWY & HARVEST RD

2	<div> <div>60(119) ↓ 118(126) 44(109) 61(85)</div> <div> <div>381(395) ↓ 77(84) 346(398) 18(20)</div> <div> <div>54(51) ← 84(116) 24(9) 77(84) 346(398) 18(20)</div> </div> </div> </div>
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ALAMEDA AVE & POWHATON RD

5	<div> <div>8(9) ↓ 6(6) 5(7)</div> <div> <div>42(68) ↓ 6(14) 27(59)</div> </div> </div>
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FLAT ROCK TRL & HARVEST RD

7	<div> <div>404(352) ↓ 253(398) 259(306)</div> <div> <div>36(139) ↓ 50(103) 385(262)</div> </div> </div>
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JEWELL AVE & POWHATON RD



LEGEND	
(X)	Study Area Key Intersection
xxx(xxx)	Weekday AM(PM) Peak Hour Traffic Volumes
xx,x00	Estimated Daily Traffic Volume



FIGURE 9
PARKLANDS VILLAGE 1
AURORA, COLORADO
2031 BACKGROUND TRAFFIC VOLUMES

1	<div> <div>53(55)</div> <div>246(199)</div> <div>73(156)</div> </div> <div> <div>131(124)</div> <div>83(69)</div> <div>96(70)</div> </div>
2	<div> <div>26(74)</div> <div>53(178)</div> <div>31(8)</div> </div> <div> <div>59(28)</div> <div>358(323)</div> <div>67(81)</div> </div>

ALAMEDA AVE & HARVEST RD

3	<div> <div>273(255)</div> <div>371(259)</div> </div> <div> <div>175(344)</div> <div>43(29)</div> </div>
4	<div> <div>19(18)</div> <div>389(262)</div> </div> <div> <div>8(25)</div> <div>23(24)</div> </div>

MISSISSIPPI AVE & HARVEST RD

6	<div> <div>238(191)</div> <div>76(82)</div> <div>85(36)</div> </div> <div> <div>168(127)</div> <div>799(613)</div> <div>52(25)</div> </div>
7	<div> <div>129(157)</div> <div>545(842)</div> <div>59(130)</div> </div> <div> <div>68(87)</div> <div>85(98)</div> <div>20(13)</div> </div>

JEWELL AVE & HARVEST RD

2	<div> <div>73(101)</div> <div>553(650)</div> <div>56(65)</div> </div> <div> <div>47(49)</div> <div>91(79)</div> <div>45(13)</div> </div>
5	<div> <div>131(137)</div> <div>49(94)</div> <div>25(41)</div> </div> <div> <div>42(39)</div> <div>495(540)</div> <div>20(25)</div> </div>

ALAMEDA AVE & POWHATON RD

5	<div> <div>8(14)</div> <div>399(288)</div> </div> <div> <div>7(13)</div> <div>11(12)</div> </div>
7	<div> <div>7(16)</div> <div>341(371)</div> </div>

FLAT ROCK TRL & HARVEST RD

7	<div> <div>457(395)</div> <div>51(164)</div> </div> <div> <div>70(137)</div> <div>563(420)</div> </div>
6	<div> <div>285(419)</div> <div>355(521)</div> </div>

JEWELL AVE & POWHATON RD



LEGEND	
(X)	Study Area Key Intersection
xxx(xxx)	Weekday AM(PM)
	Peak Hour Traffic Volumes
xx,x00	Estimated Daily Traffic Volume





1	<div> <div>64(66)</div> <div>306(264)</div> <div>76(159)</div> </div> <div> <div>29(76)</div> <div>55(182)</div> <div>33(20)</div> </div> <div> <div>133(126)</div> <div>89(75)</div> <div>102(75)</div> </div> <div> <div>69(30)</div> <div>433(383)</div> <div>73(106)</div> </div>
---	---

ALAMEDA AVE & HARVEST RD

3	<div> <div>278(320)</div> <div>427(334)</div> </div> <div> <div>195(384)</div> <div>53(30)</div> </div> <div> <div>56(32)</div> <div>429(493)</div> </div>
---	--

MISSISSIPPI AVE & HARVEST RD

6	<div> <div>258(196)</div> <div>106(137)</div> <div>105(46)</div> </div> <div> <div>154(188)</div> <div>667(885)</div> <div>79(155)</div> </div> <div> <div>219(172)</div> <div>947(754)</div> <div>77(30)</div> </div> <div> <div>88(117)</div> <div>100(113)</div> <div>25(15)</div> </div>
---	--

JEWELL AVE & HARVEST RD

4	<div> <div>20(22)</div> <div>454(334)</div> </div> <div> <div>11(35)</div> <div>25(25)</div> </div> <div> <div>15(32)</div> <div>460(470)</div> </div>
---	--

LOUISIANA PKWY & HARVEST RD

2	<div> <div>83(101)</div> <div>565(661)</div> <div>61(70)</div> </div> <div> <div>136(142)</div> <div>53(98)</div> <div>28(44)</div> </div> <div> <div>50(52)</div> <div>94(82)</div> <div>48(13)</div> </div> <div> <div>44(41)</div> <div>505(551)</div> <div>22(27)</div> </div>
---	--

ALAMEDA AVE & POWHATON RD

5	<div> <div>8(16)</div> <div>466(358)</div> </div> <div> <div>8(18)</div> <div>13(13)</div> </div> <div> <div>7(16)</div> <div>461(469)</div> </div>
---	---

FLAT ROCK TRL & HARVEST RD

7	<div> <div>510(442)</div> <div>71(194)</div> </div> <div> <div>312(452)</div> <div>535(565)</div> </div> <div> <div>100(182)</div> <div>744(505)</div> </div>
---	---

JEWELL AVE & POWHATON RD



FIGURE 10
PARKLANDS VILLAGE 1
AURORA, COLORADO
2033 BACKGROUND TRAFFIC VOLUMES

LEGEND	
(X)	Study Area Key Intersection
xxx(xxx)	Weekday AM(PM) Peak Hour Traffic Volumes
xx,x00	Estimated Daily Traffic Volume

4.0 PROJECT TRAFFIC CHARACTERISTICS

4.1 Trip Generation

Site-generated traffic estimates are determined through a process known as trip generation. Rates and equations are applied to the proposed land use to estimate traffic generated by the development during a specific time interval. The acknowledged source for trip generation rates is the *Trip Generation Manual*¹ published by the Institute of Transportation Engineers (ITE). ITE has established trip rates in nationwide studies of similar land uses. For this study, Kimley-Horn used the ITE Trip Generation Report average rates that apply to Single-Family Detached Housing (ITE Land Use Code 210), Single-Family Attached Housing (ITE 215), Multifamily Mid-Rise Housing (ITE 221), Recreational Community Center (ITE 495), Elementary School (ITE 520), Middle School (ITE 522), General Office Building (ITE 710), and Shopping Center (ITE 820) and fitted-curve equations for the daily and afternoon peak hours for Public Park (ITE 411), for traffic associated with the development.

Since the full buildout of Parklands Village 1 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 based on the internal capture rates provided in the previously approved Parklands Development Master Traffic Study prepared in an updated October 2022 study. Based on the figures and trip generation tables provided in that study, 25 percent of residential trips, 30 percent of commercial trips, and 90 percent of school trips were assumed to be internal to the overall Parklands Development area. However, because Parklands Village 1 development is smaller than the overall Parklands development area, a residential internal capture rate of 15 percent was used instead of 25 percent. The volumes captured internal to the site were added to the internal study area intersections.

Accounting for internal capture, the overall Parklands Village 1 development is expected to generate approximately 18,812 weekday daily trips, with 1,201 of these trips occurring during the morning peak hour and 1,806 of these trips occurring during the afternoon peak hour. Calculations

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

were based on the procedure and information provided in the ITE *Trip Generation Manual*, 11th Edition – Volume 1: User's Guide and Handbook, 2021. **Table 1** summarizes the estimated trip generation for Parklands Village 1. The trip generation worksheets are included in **Appendix C**. The master study had projected 21,409 weekday daily trips, 1,445 morning peak hour trips, and 2,164 afternoon peak hour trips, after its accounting for internal capture. As such, the current proposal is anticipated to generate 2,597 fewer weekday daily trips, 243 fewer trips are expected in the morning peak hour and 357 fewer afternoon peak hour trips are expected when compared to the original master study. Because analysis is conducted for the morning and afternoon peak periods and the traffic generated in this proposal is less than that proposed in the master study, the 2040 results and recommendations from that study should accommodate full buildout of Parklands Village 1 development.

Table 1 – Parklands Village 1 Traffic Generation

Land Use and Size (ITE Code)		ITE Rate/Equ.	Internal/ External Capture Adjust	Weekday Vehicle Trips						
				Daily	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
Parklands Village 1 - Filing 1										
Single-Family Detached Housing - 195 DU	(ITE 210)	Rate	0.85	1,840	36	101	137	115	68	183
Single-Family Attached Housing - 118 DU	(ITE 215)	Rate	0.85	850	15	42	57	38	29	67
Public Park - 2.5 Acres	(ITE 411)	Equation ¹	0.85	90	0	0	0	13	10	23
Filing 1 Total Project Trips				2,780	51	143	194	166	107	273
Filing 1 Total External Project Trips (including Internal Capture)				2,366	46	122	164	142	94	234
Parklands Village 1 - Filing 2										
Single-Family Attached Housing - 174 DU	(ITE 215)	Rate	0.85	1,254	22	62	84	57	42	99
Multifamily Mid-Rise Housing - 566 DU	(ITE 221)	Rate	0.85	2,570	48	161	209	135	86	221
Public Park - 3.0 Acres	(ITE 411)	Equation ¹	0.85	90	0	0	0	13	10	23
General Office Building - 60,000 Square Feet	(ITE 710)	Rate	0.70	652	80	11	91	15	71	86
Shopping Center - 181,000 Square Feet	(ITE 820)	Rate	0.70	6,698	94	58	152	295	320	615
Filing 2 Total Project Trips				11,264	244	292	536	515	529	1,044
Filing 2 Total External Project Trips (including Internal Capture)				8,476	182	239	421	392	392	784

Land Use and Size (ITE Code)		ITE Rate/Equ.	Internal/ External Capture Adjust	Weekday Vehicle Trips						
				Daily	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
Parklands Village 1 - Filing 3										
Single-Family Detached Housing - 242 DU	(ITE 210)	Rate	0.85	2,284	44	125	169	143	84	227
Public Park - 3.5 Acres	(ITE 411)	Equation ¹	0.85	92	0	0	0	13	10	23
Filing 3 Total Project Trips				2,376	44	125	169	156	94	250
Filing 3 Total External Project Trips (including Internal Capture)				2,020	37	106	143	133	80	213
Parklands Village 1 - Filing 4										
Single-Family Detached Housing - 89 DU	(ITE 210)	Rate	0.85	840	16	46	62	53	31	84
Single-Family Attached Housing - 78 DU	(ITE 215)	Rate	0.85	562	10	27	37	25	19	44
Public Park - 5.1 Acres	(ITE 411)	Equation ¹	0.85	92	0	0	0	13	10	23
Recreational Community Center - 22,000 Square Feet	(ITE 495)	Rate	0.85	636	28	14	42	26	29	55
Filing 4 Total Project Trips				2,130	54	87	141	117	89	206
Filing 4 Total External Project Trips (including Internal Capture)				1,812	47	74	121	99	76	175
Parklands Village 1 - Filing 5										
Single-Family Detached Housing - 225 DU	(ITE 210)	Rate	0.85	2,122	41	117	158	134	78	212
Filing 5 Total Project Trips				2,122	41	117	158	134	78	212
Filing 5 Total External Project Trips (including Internal Capture)				1,804	35	99	134	114	66	180
Parklands Village 1 - Filing 6										
Single-Family Detached Housing - 151 DU	(ITE 210)	Rate	0.85	1,424	28	78	106	89	53	142
Single-Family Attached Housing - 134 DU	(ITE 215)	Rate	0.85	966	17	47	64	44	32	76
Public Park - 7.0 Acres	(ITE 411)	Equation ¹	0.85	94	0	0	0	13	10	23
Elementary School - 677 Students	(ITE 520)	Rate	0.10	1,538	271	230	501	50	58	108
Middle/Junior High School - 321 Students	(ITE 522)	Rate	0.10	676	116	99	215	23	25	48
Filing 6 Total Project Trips				4,698	432	454	886	219	178	397
Filing 6 Total External Project Trips (including Internal Capture)				2,334	77	139	216	131	90	221
Total Project Trips				25,370	866	1,218	2,084	1,307	1,075	2,382
Total External Project Trips (including Internal Capture)				18,812	424	779	1,199	1,011	798	1,807

¹The fitted curve equation for the afternoon and weekday peak hour was requested to be used by the City of Aurora. However, the morning peak hour does not provide an equation so the rate was used instead.

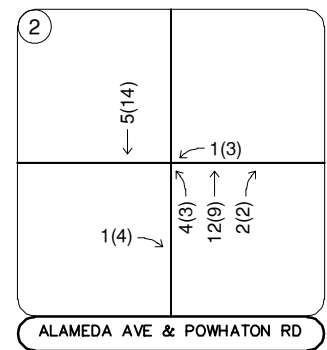
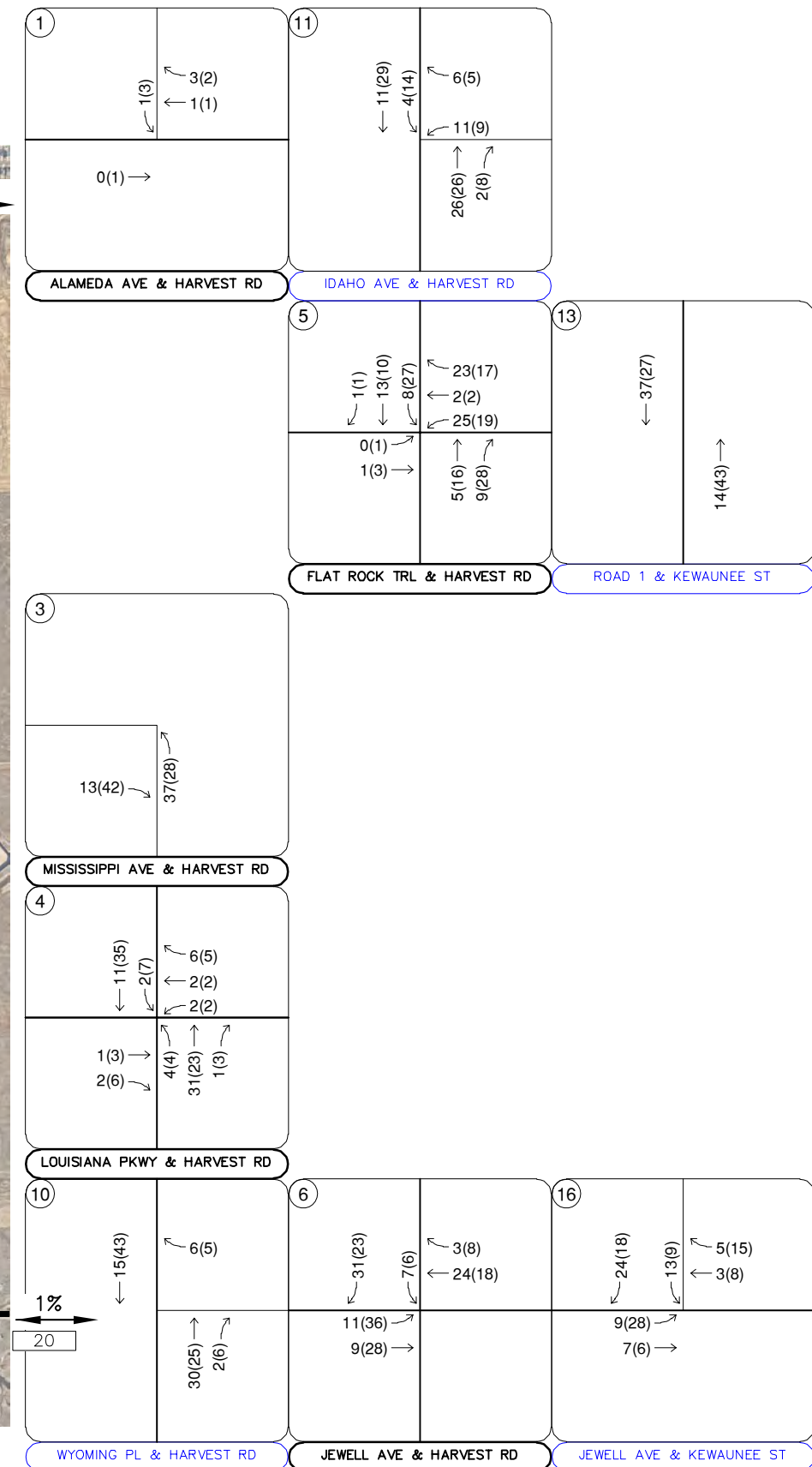
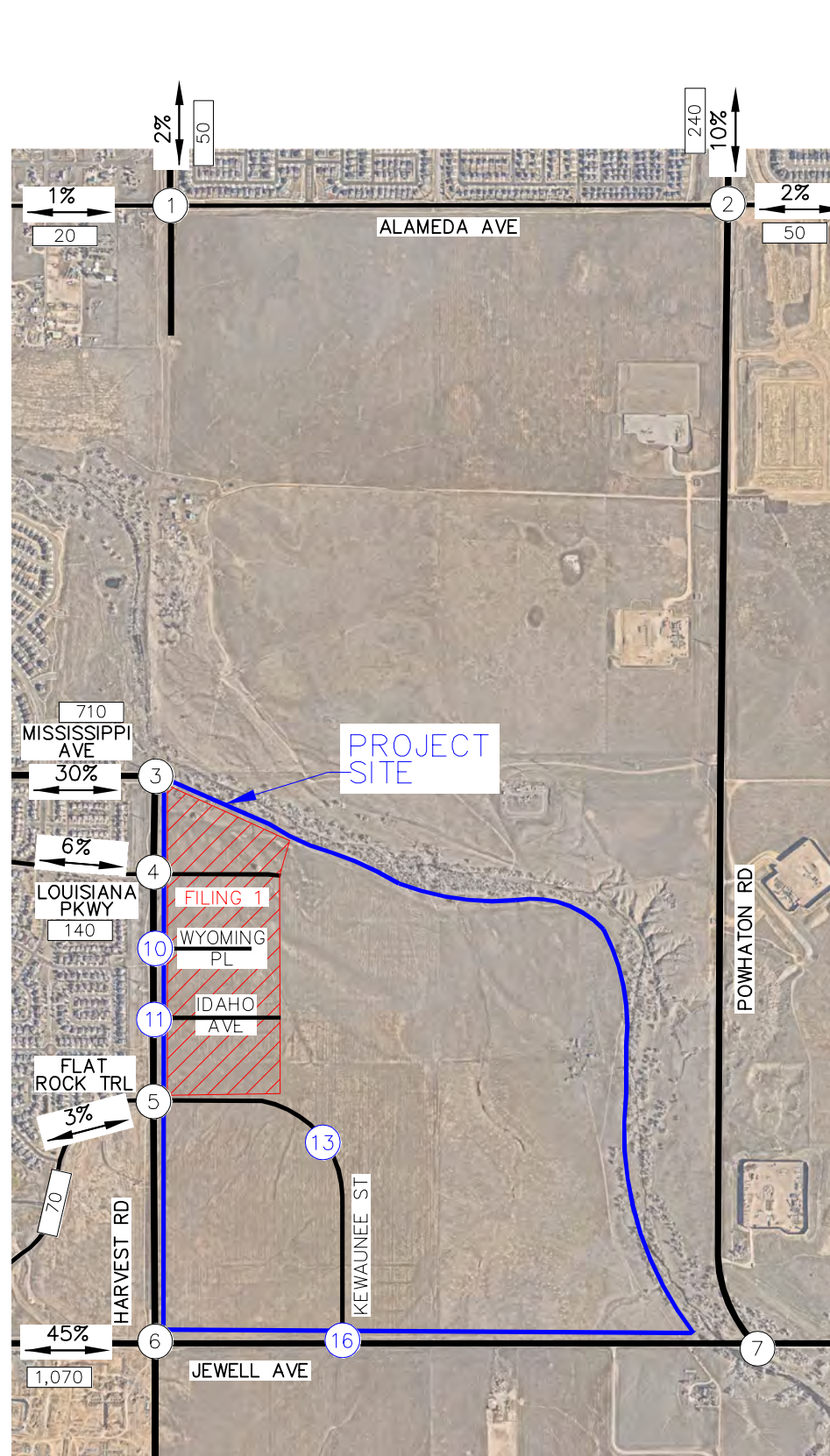
4.2 Trip Distribution and Traffic Assignment

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, and the proposed phased access system for the project. The directional distribution of traffic is a means to quantify the percentage of site-generated traffic that approaches the site from a given direction and departs the site back to the original source. Parklands Village 1 traffic assignment was obtained by applying the project trip distribution to the estimated traffic generation of the development shown in **Table 1**.

The external trip distribution and intersection by intersection traffic assignment volumes are shown for each of the five filings in **Figures 11** through **16**, while **Figure 17** shows the 2033 full buildout external trip distribution and traffic assignment volumes for all filings together. Of note, these figures show only the trip distribution and traffic assignment specific to that filing (i.e., Filing 3 in **Figure 13** does not show Filing 1 plus Filing 3 traffic assignment, it is only Filing 3 traffic assignment). Detailed trip distribution figures by intersection for each individual filing are attached in **Appendix D**. Additionally, the trip distribution primarily aligned with the master traffic impact study (which included Parklands Village 2 & 3 in addition to Parklands Village 1) where a majority of trips are distributed to and from the west and minimal trips are distributed to the east. Because the full buildout of the project will provide several additional roadway connections that were not in place during some filings, the final overall project trip distribution differs from that of each individual filing.

4.3 Total (Background Plus Project) Traffic

Site traffic volumes were added to the background volumes to represent estimated traffic conditions for the 2026, 2027, 2028, 2029, 2031, and 2033 horizons for each filing year. Of note, because of several surrounding developments anticipated to be constructed in coming years and because some vehicles from these developments may enter through the study area intersections included in this study, it is expected there will be some induced traffic passing through some of these intersections as the area continues to develop. The total traffic volumes for the study area are illustrated for the each of these horizon years in **Figures 18** through **23**, respectively.



Note:
15% of total residential project trips are assumed to be internal to Parklands. The external trip distributions shown in this figure are applied to External Project Trips only.

LEGEND

- (X) Study Area Key Intersection
- (X) Future Proposed Intersection
- Realigned Roadway/Intersection
- XX,X00 Estimated Daily Traffic Volume
- XX% External Trip Distribution Percentage
- xxx(xxx) Weekday AM(PM)
- Peak Hour Traffic Volumes

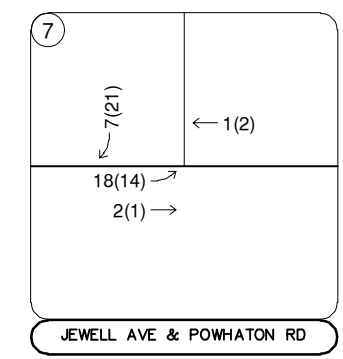
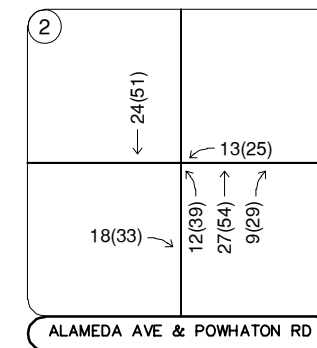
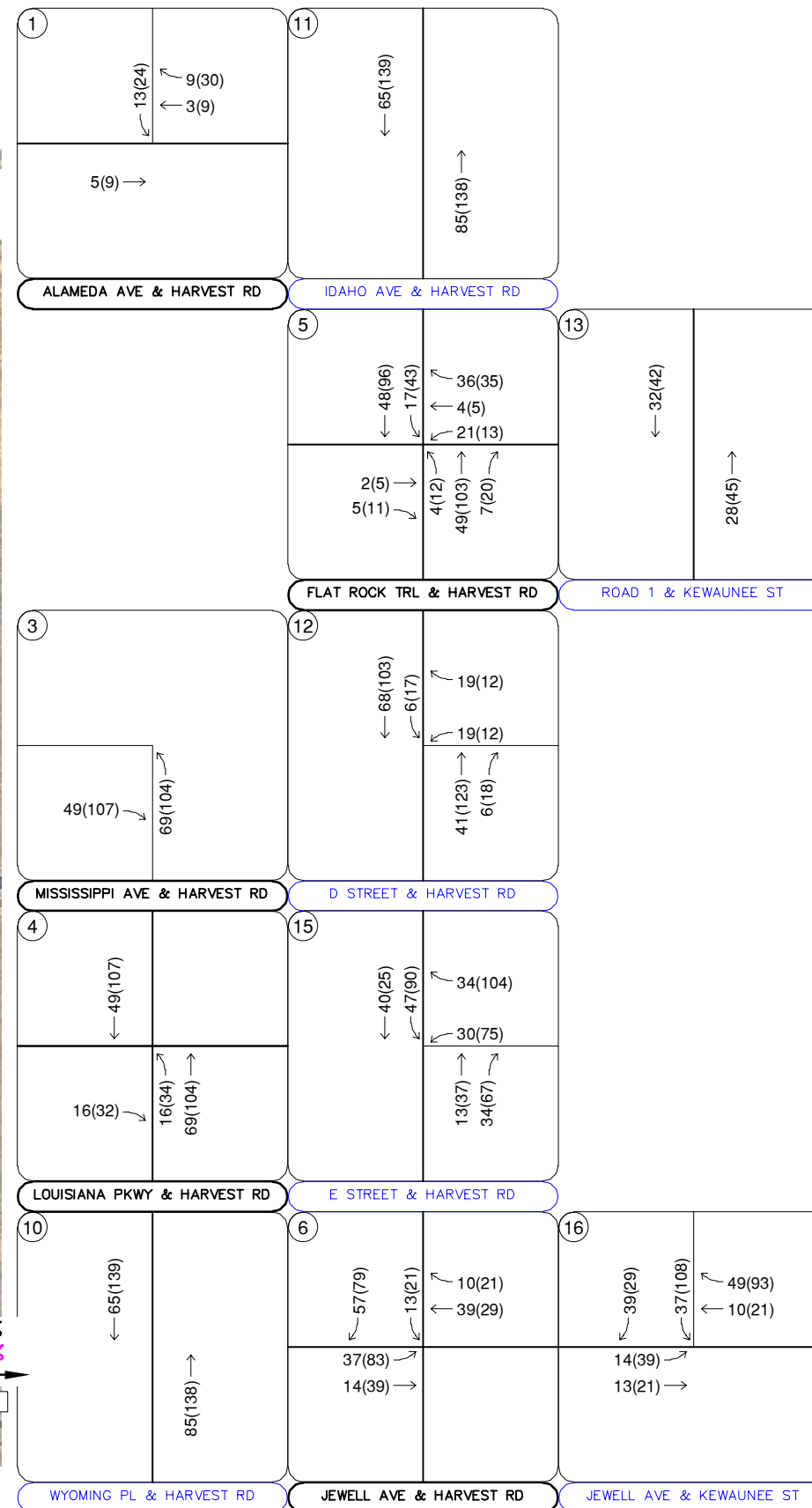
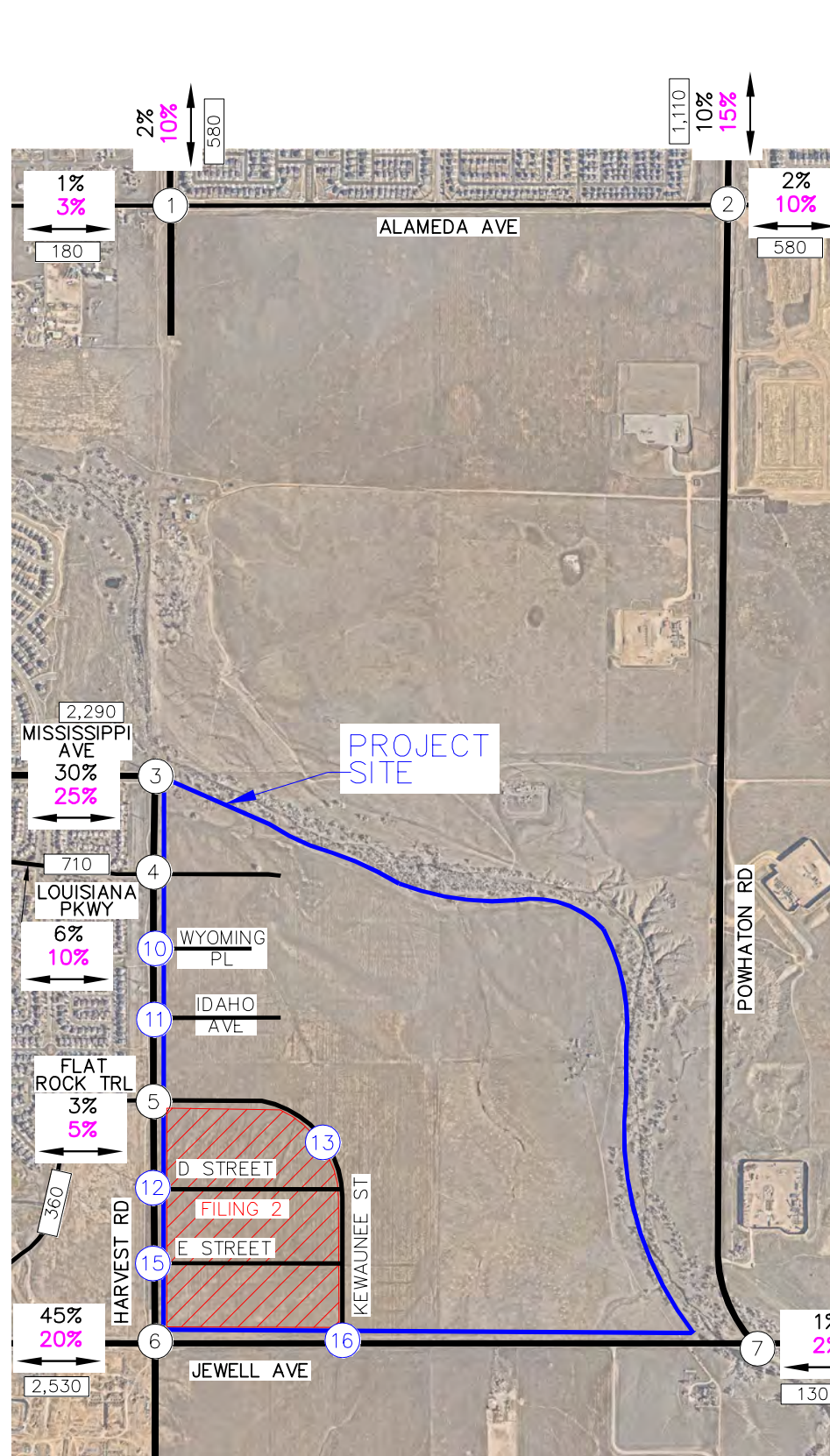


FIGURE 11
PARKLANDS VILLAGE 1
AURORA, COLORADO
FILING 1 EXTERNAL TRIP DISTRIBUTION AND TRAFFIC ASSIGNMENT



Note:
 15% Residential
 30% Commercial
 of total project trips are assumed to be internal to Parklands. The external trip distributions shown in this figure are applied to External Project Trips only.

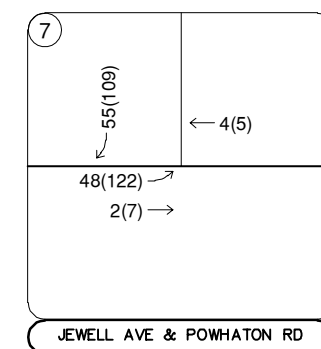
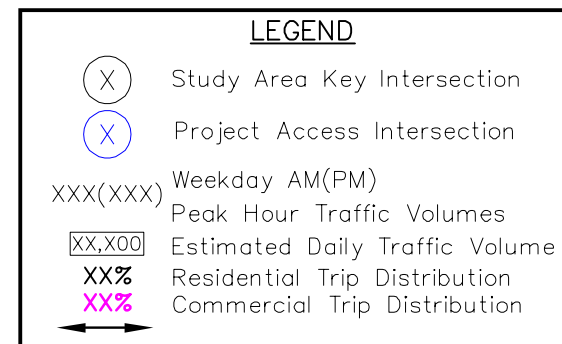


FIGURE 12
 PARKLANDS VILLAGE 1
 AURORA, COLORADO
 FILING 2 EXTERNAL TRIP DISTRIBUTION AND TRAFFIC ASSIGNMENT



FIGURE 13
 PARKLANDS VILLAGE 1
 AURORA, COLORADO
 FILING 3 EXTERNAL TRIP DISTRIBUTION AND TRAFFIC ASSIGNMENT

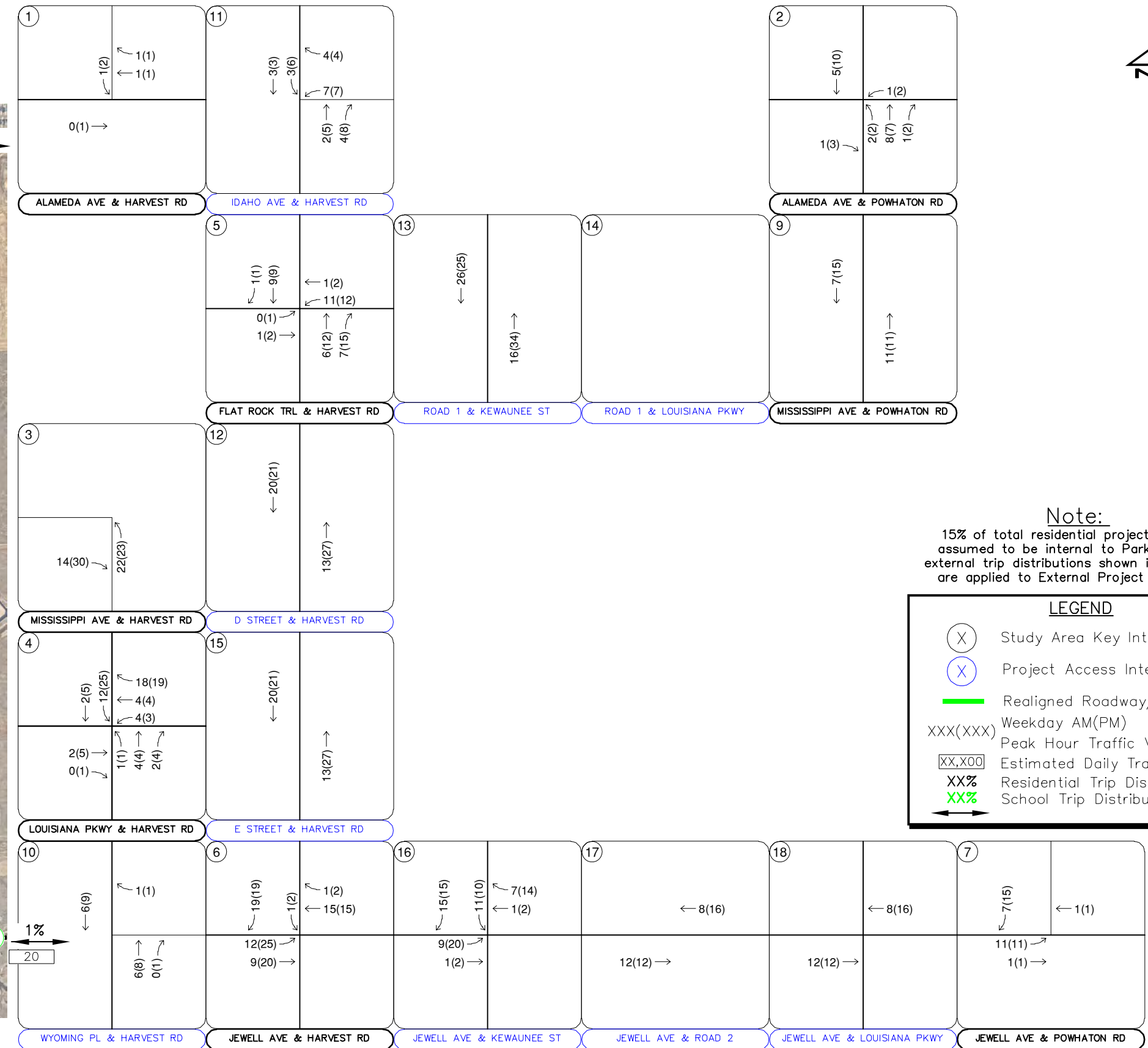
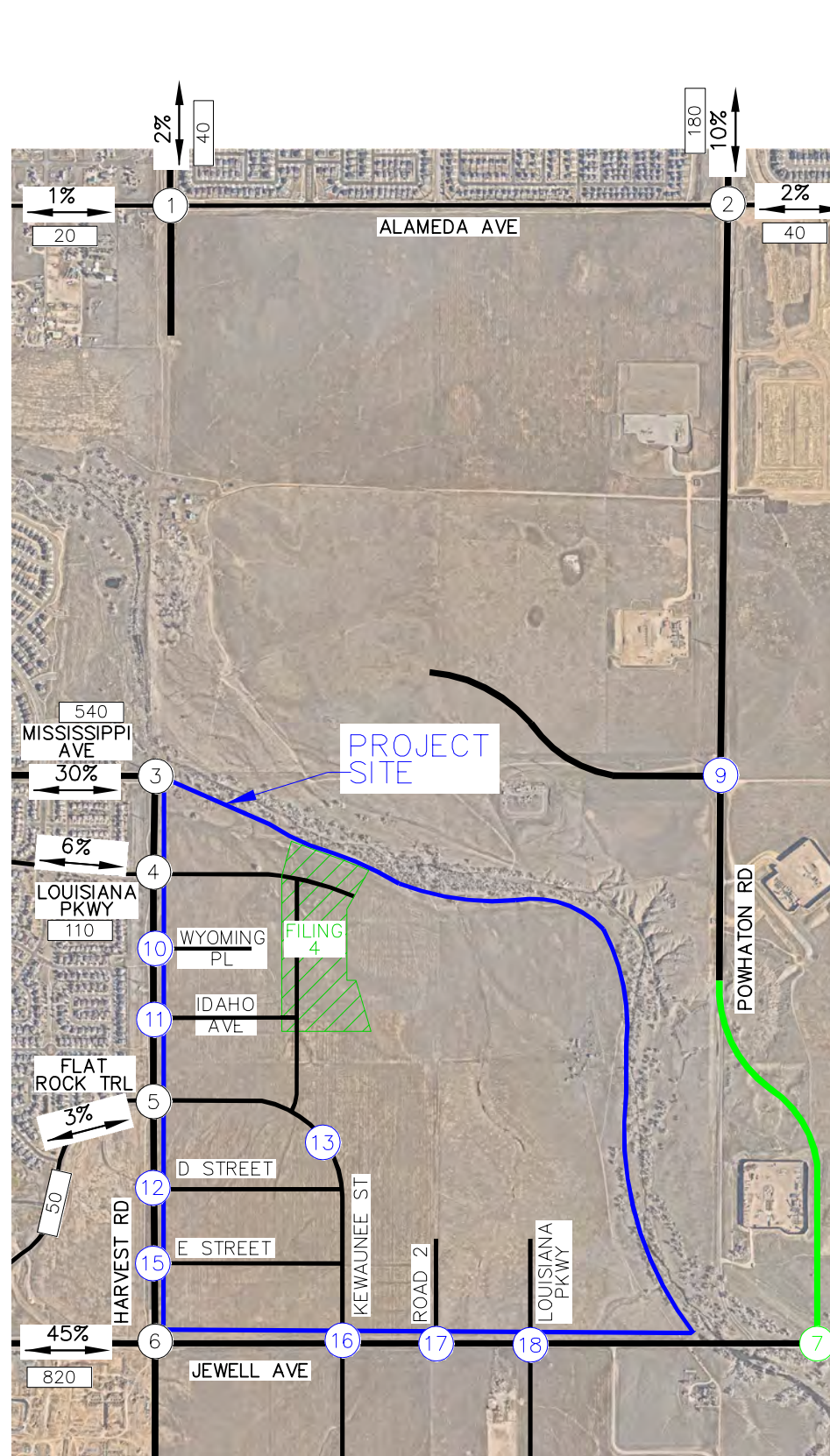
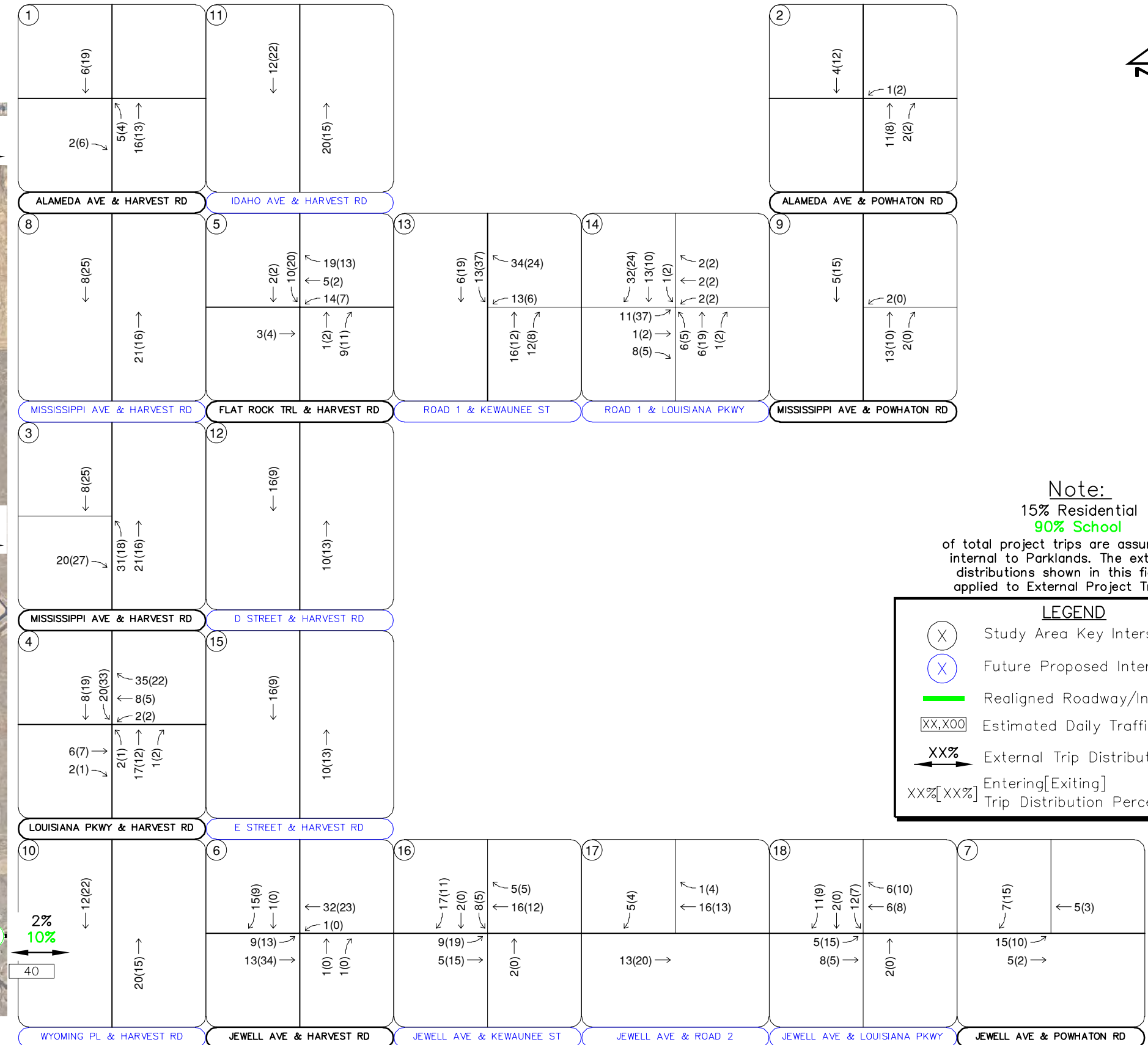
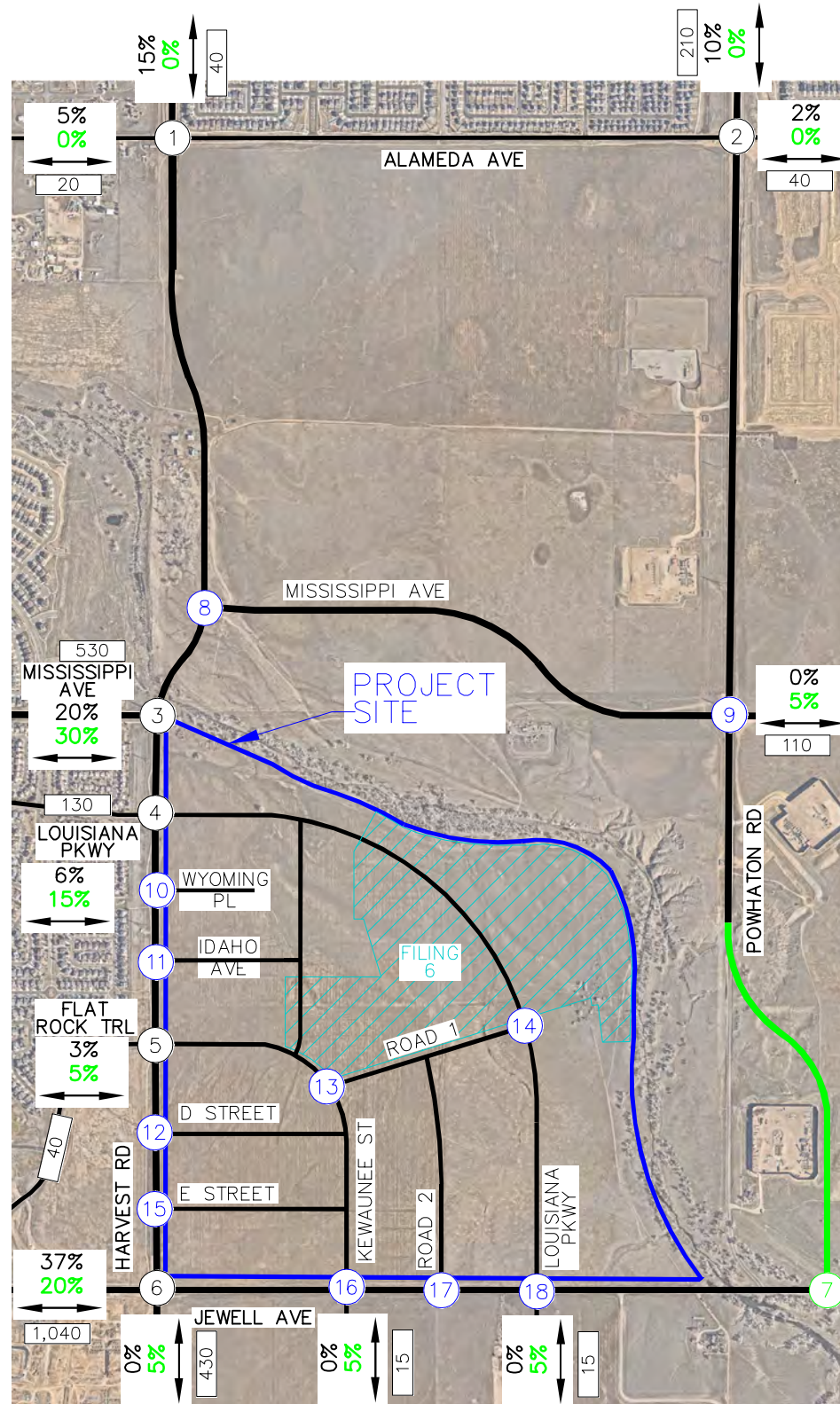


FIGURE 14
PARKLANDS VILLAGE 1
AURORA, COLORADO
FILING 4 EXTERNAL TRIP DISTRIBUTION AND TRAFFIC ASSIGNMENT



FIGURE 15
PARKLANDS VILLAGE 1
AURORA, COLORADO
FILING 5 EXTERNAL TRIP DISTRIBUTION AND TRAFFIC ASSIGNMENT

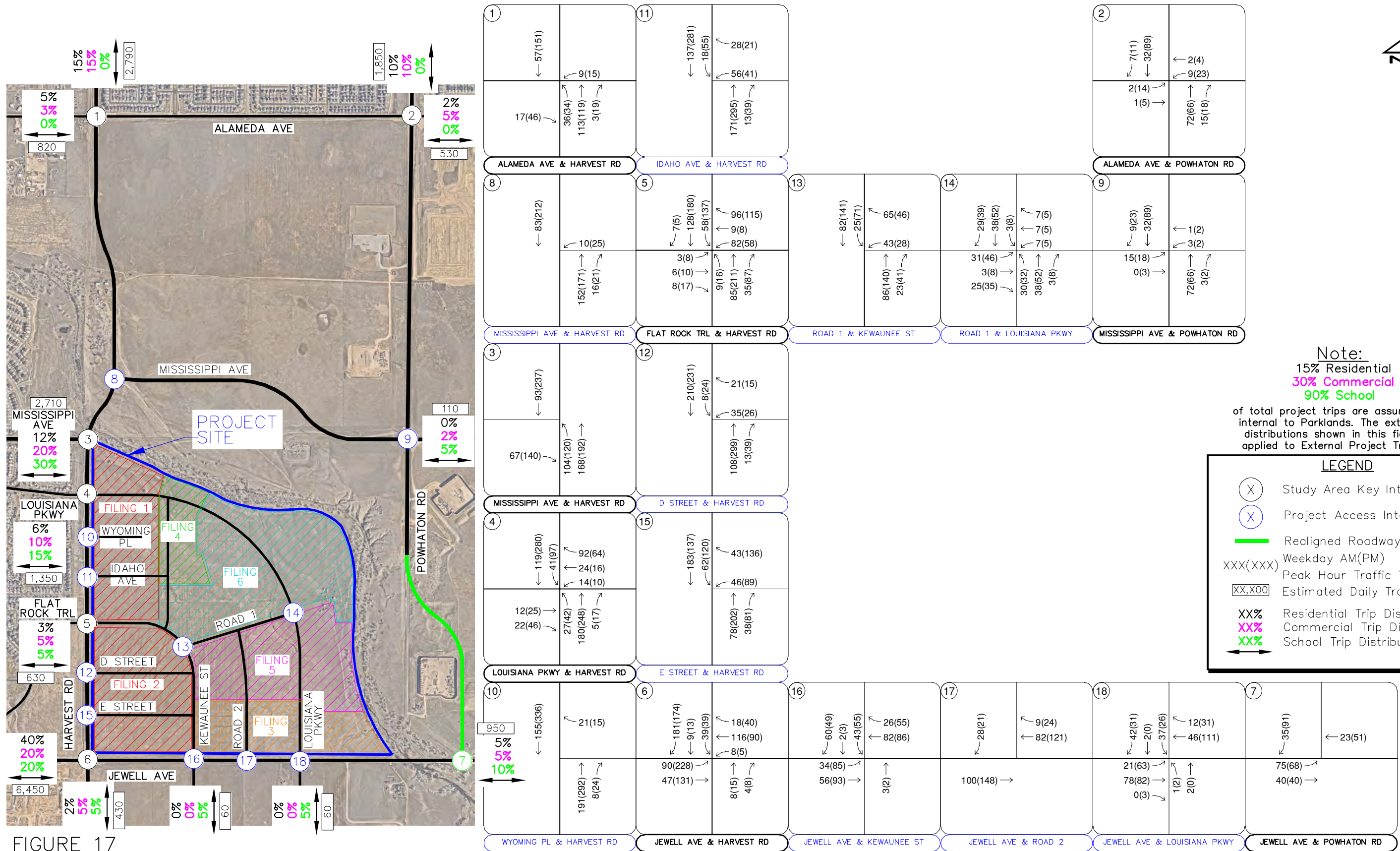


Note:
15% Residential
90% School
of total project trips are assumed to be internal to Parklands. The external trip distributions shown in this figure are applied to External Project Trips only.

LEGEND

- (X) Study Area Key Intersection
- (X) Future Proposed Intersection
- Redlined Roadway/Intersection
- XX,X00 Estimated Daily Traffic Volume
- XX% External Trip Distribution Percentage
- XX%[XX%] Entering[Exiting] Trip Distribution Percentage

FIGURE 16
PARKLANDS VILLAGE 1
AURORA, COLORADO
FILING 6 EXTERNAL TRIP DISTRIBUTION AND TRAFFIC ASSIGNMENT



Note:
 15% Residential
 30% Commercial
 90% School

of total project trips are assumed to be internal to Parklands. The external trip distributions shown in this figure are applied to External Project Trips only.

LEGEND

- (X) Study Area Key Intersection
- (X) Project Access Intersection
- Realigned Roadway/Intersection
- Weekday AM(PM)
- XXX(XXX) Peak Hour Traffic Volumes
- XX,X00 Estimated Daily Traffic Volume
- XX% Residential Trip Distribution
- XX% Commercial Trip Distribution
- XX% School Trip Distribution

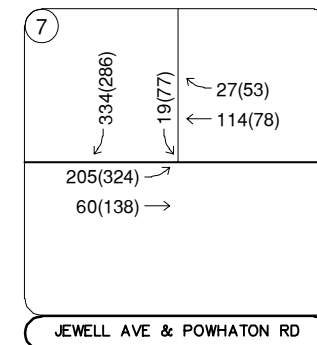
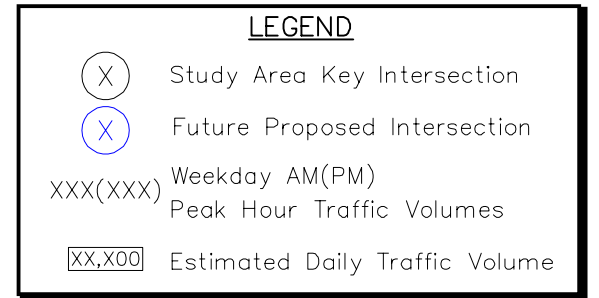
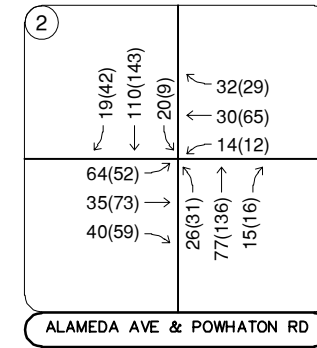
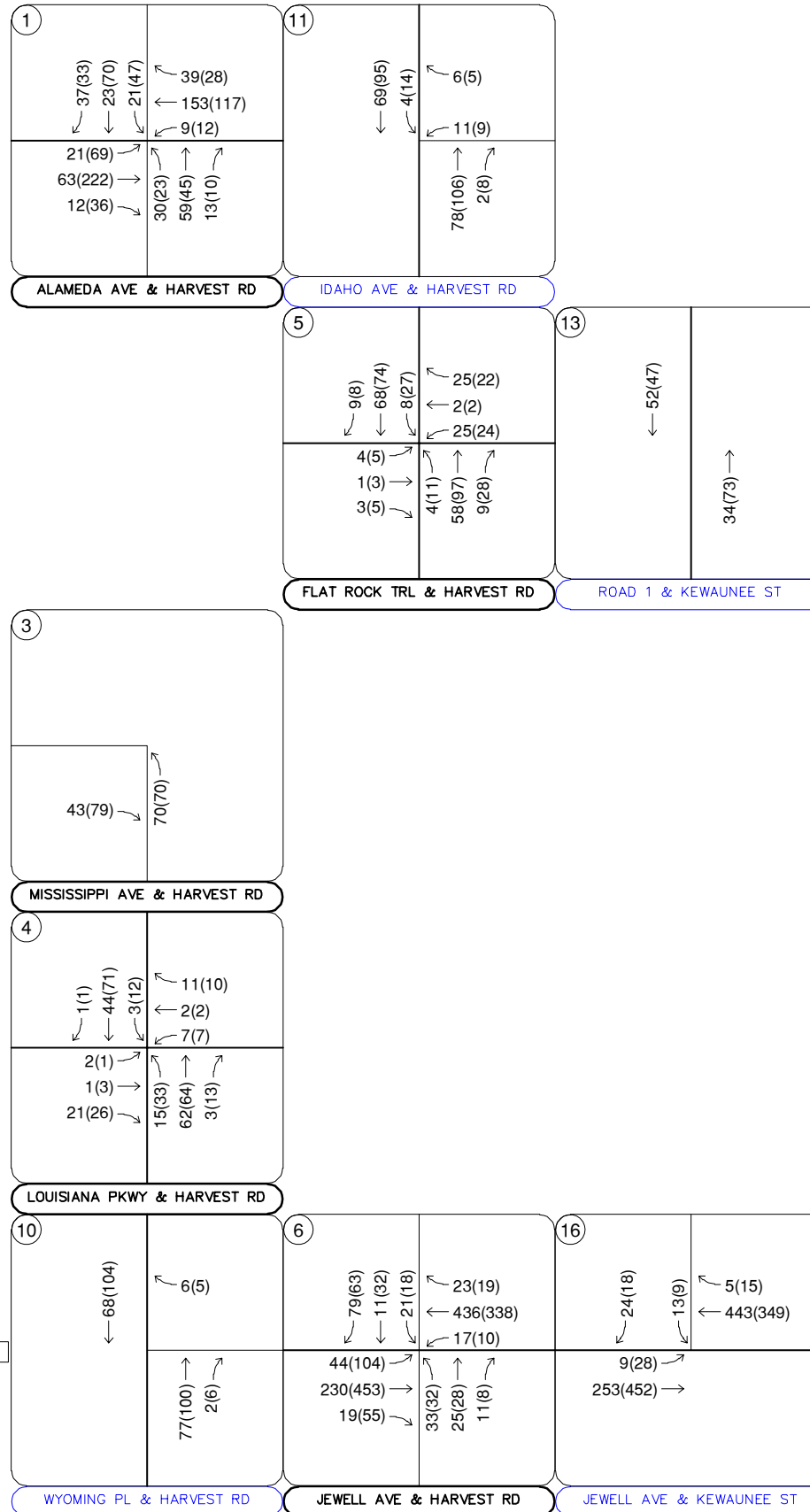
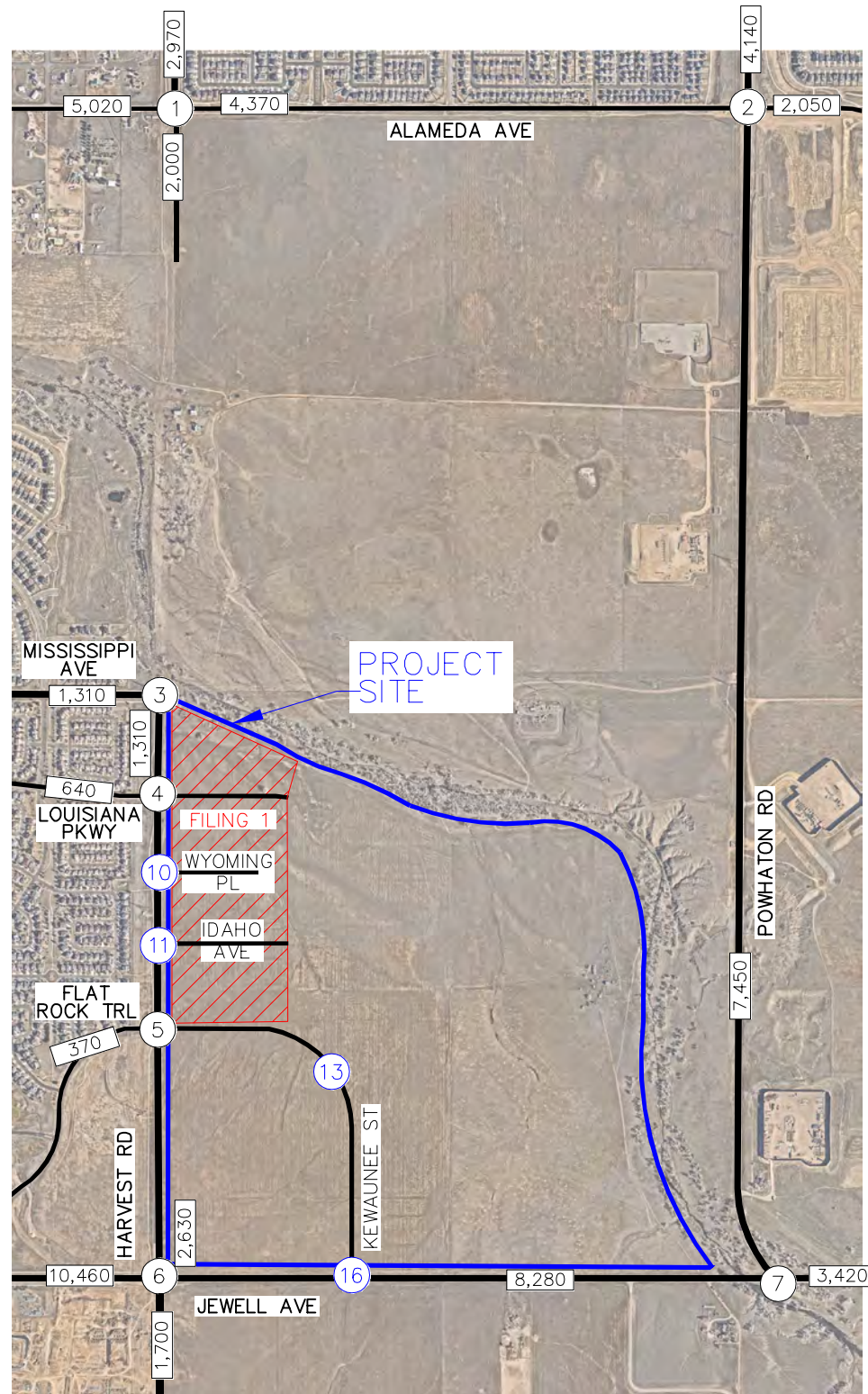
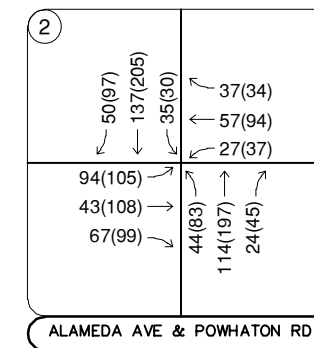
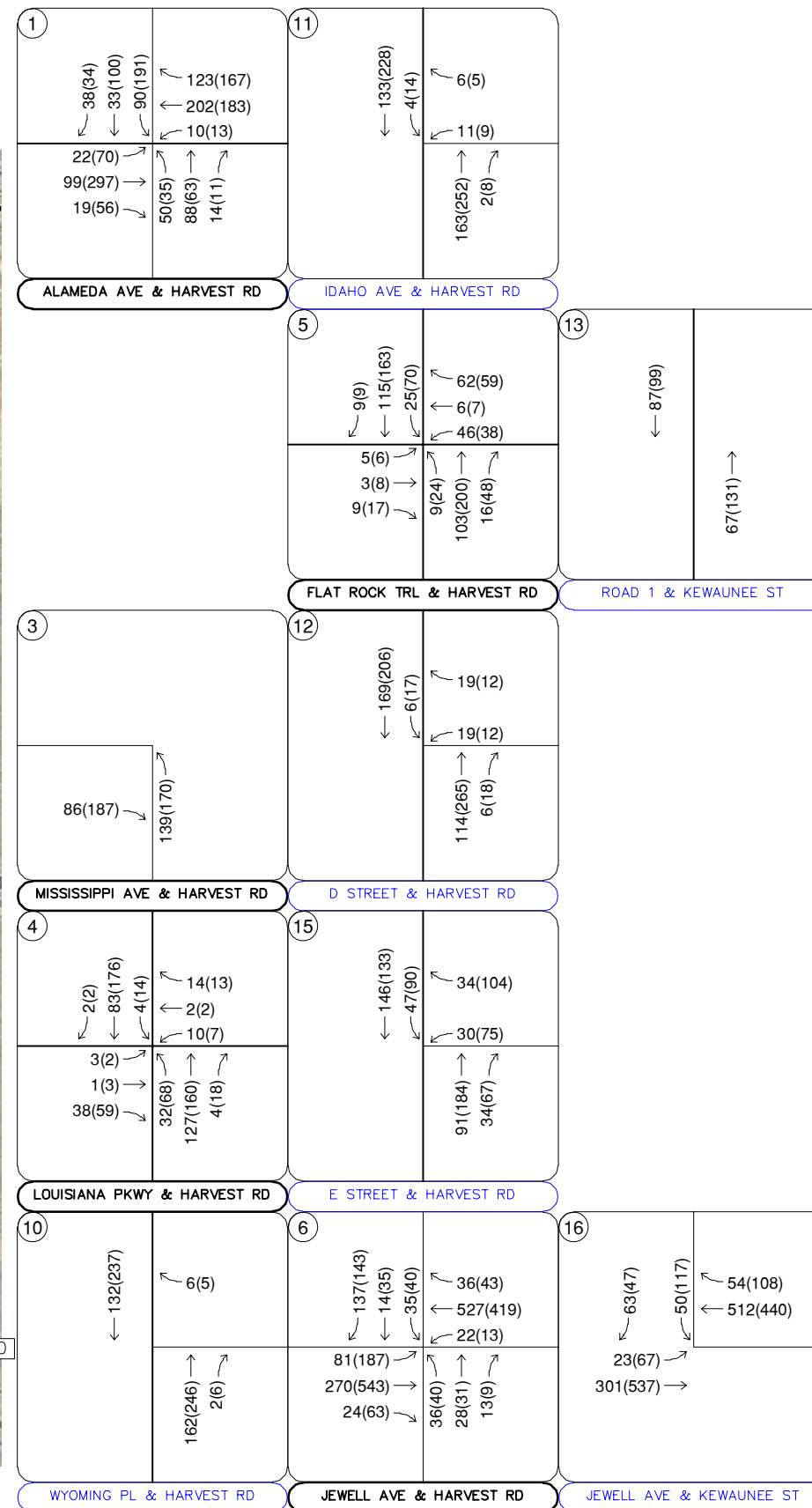
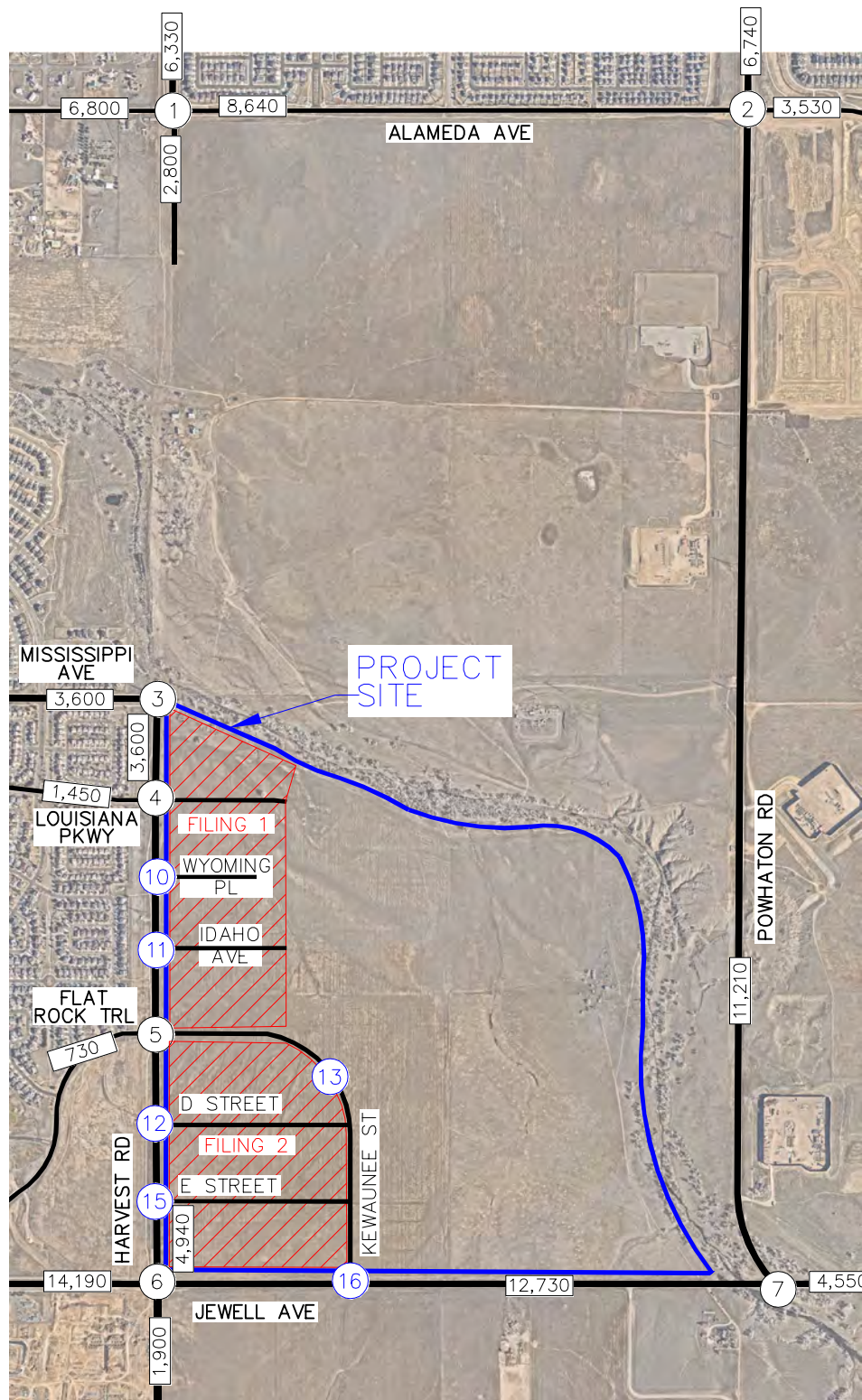


FIGURE 18
PARKLANDS VILLAGE 1
AURORA, COLORADO
2026 TOTAL TRAFFIC VOLUMES



LEGEND

(X) Study Area Key Intersection

(X) Future Proposed Intersection

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

[XX,X00] Estimated Daily Traffic Volume

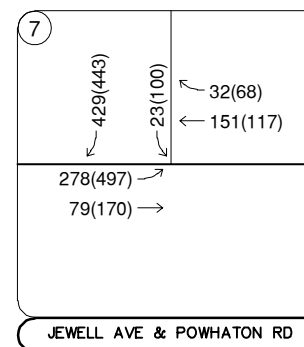
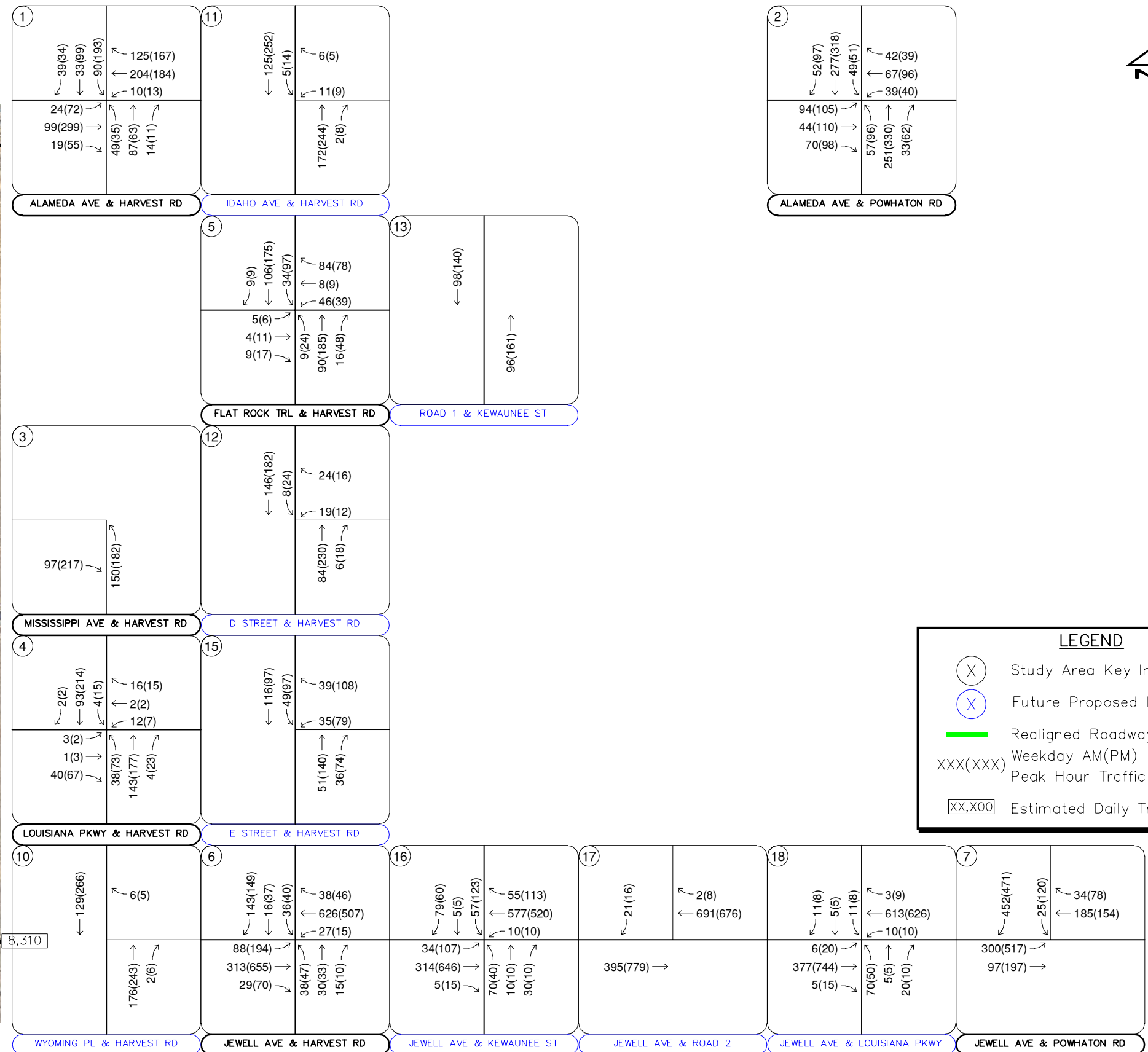
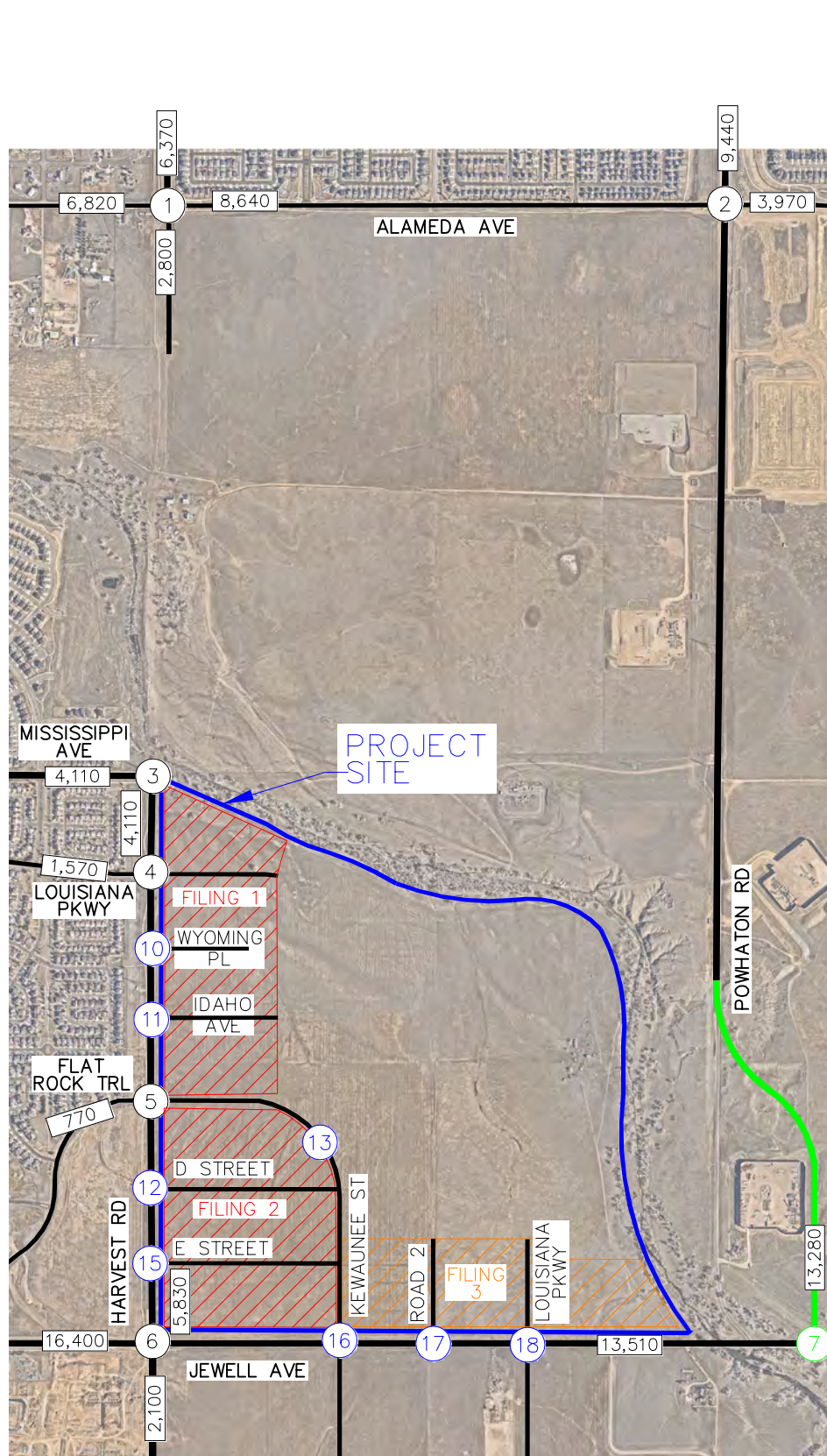


FIGURE 19
PARKLANDS VILLAGE 1
AURORA, COLORADO
2027 TOTAL TRAFFIC VOLUMES

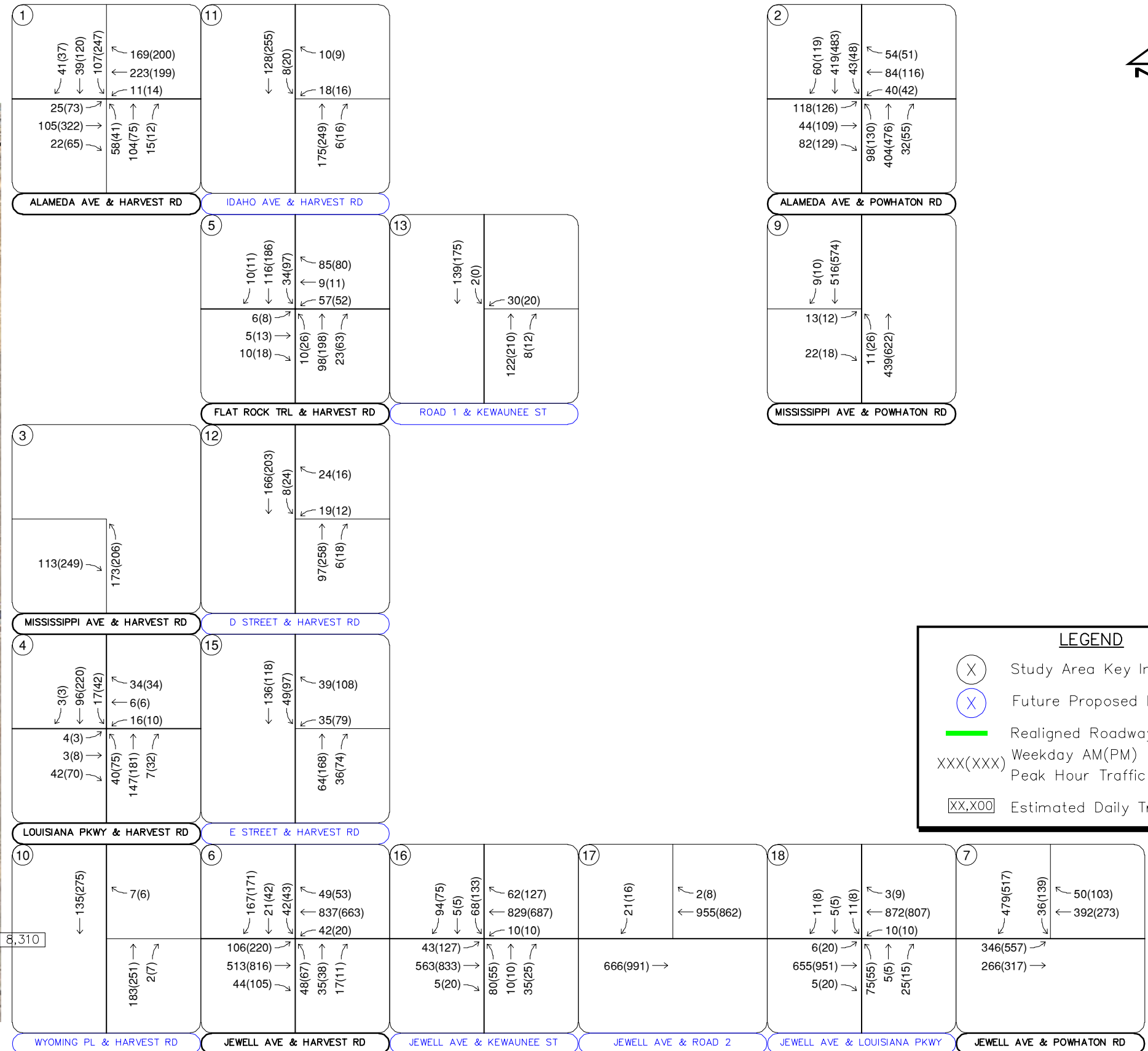
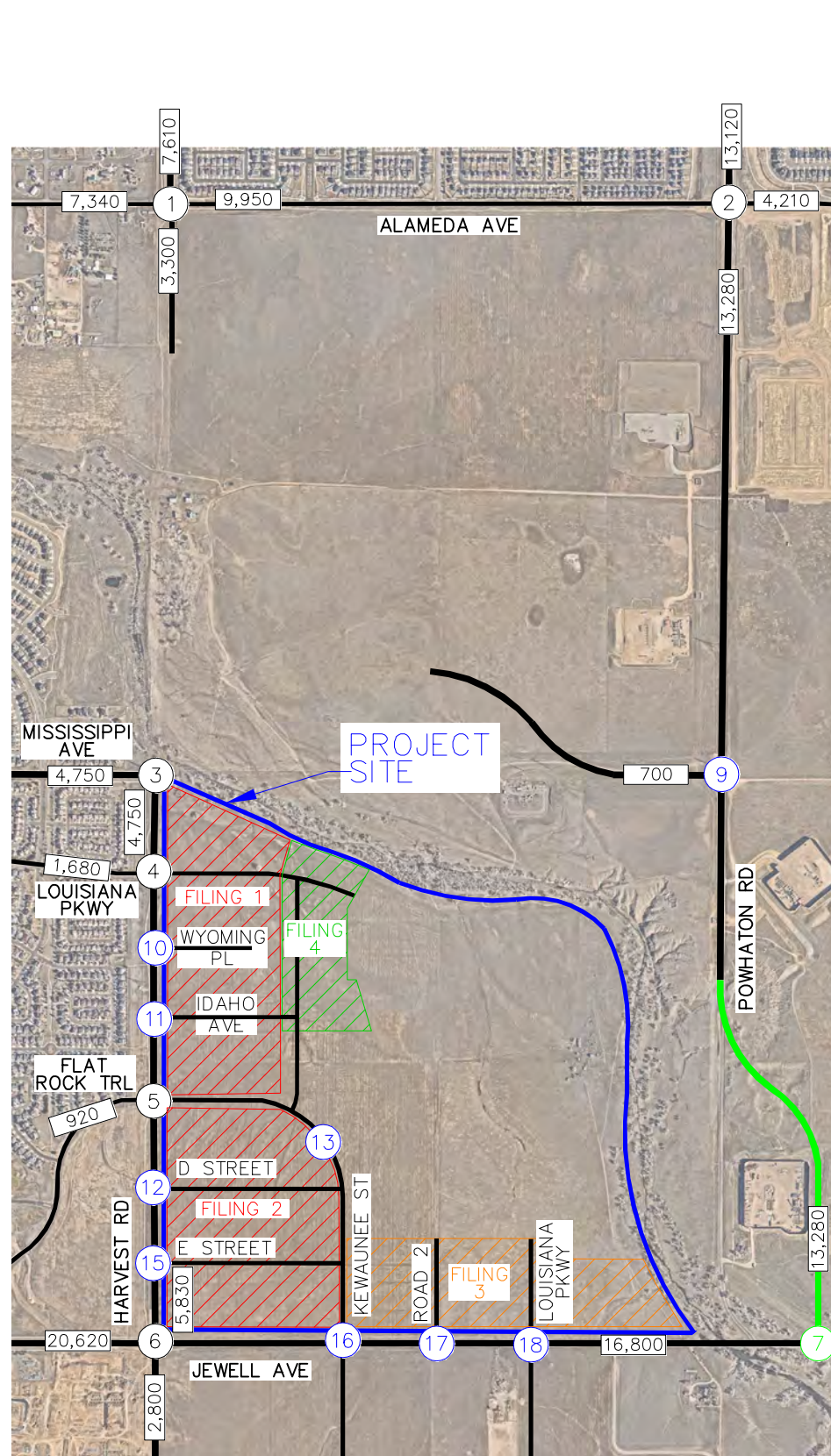


LEGEND

- (X) Study Area Key Intersection
- (X) Future Proposed Intersection
- Realigned Roadway/Intersection
- Weekday AM(PM)
- Peak Hour Traffic Volumes
- Estimated Daily Traffic Volume



FIGURE 20
PARKLANDS VILLAGE 1
AURORA, COLORADO
2028 TOTAL TRAFFIC VOLUMES



LEGEND

- (X) Study Area Key Intersection
- (X) Future Proposed Intersection
- Realigned Roadway/Intersection
- xxx(xxx) Weekday AM(PM)
- Peak Hour Traffic Volumes
- xx,x00 Estimated Daily Traffic Volume

FIGURE 21
PARKLANDS VILLAGE 1
AURORA, COLORADO
2029 TOTAL TRAFFIC VOLUMES

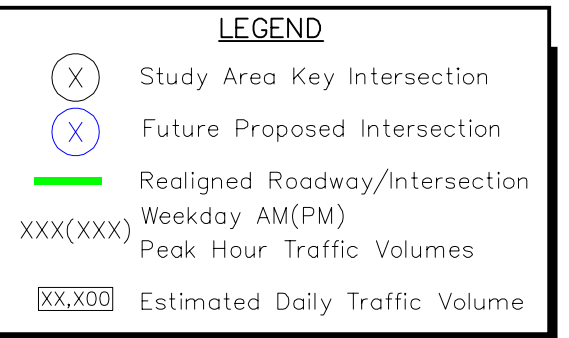
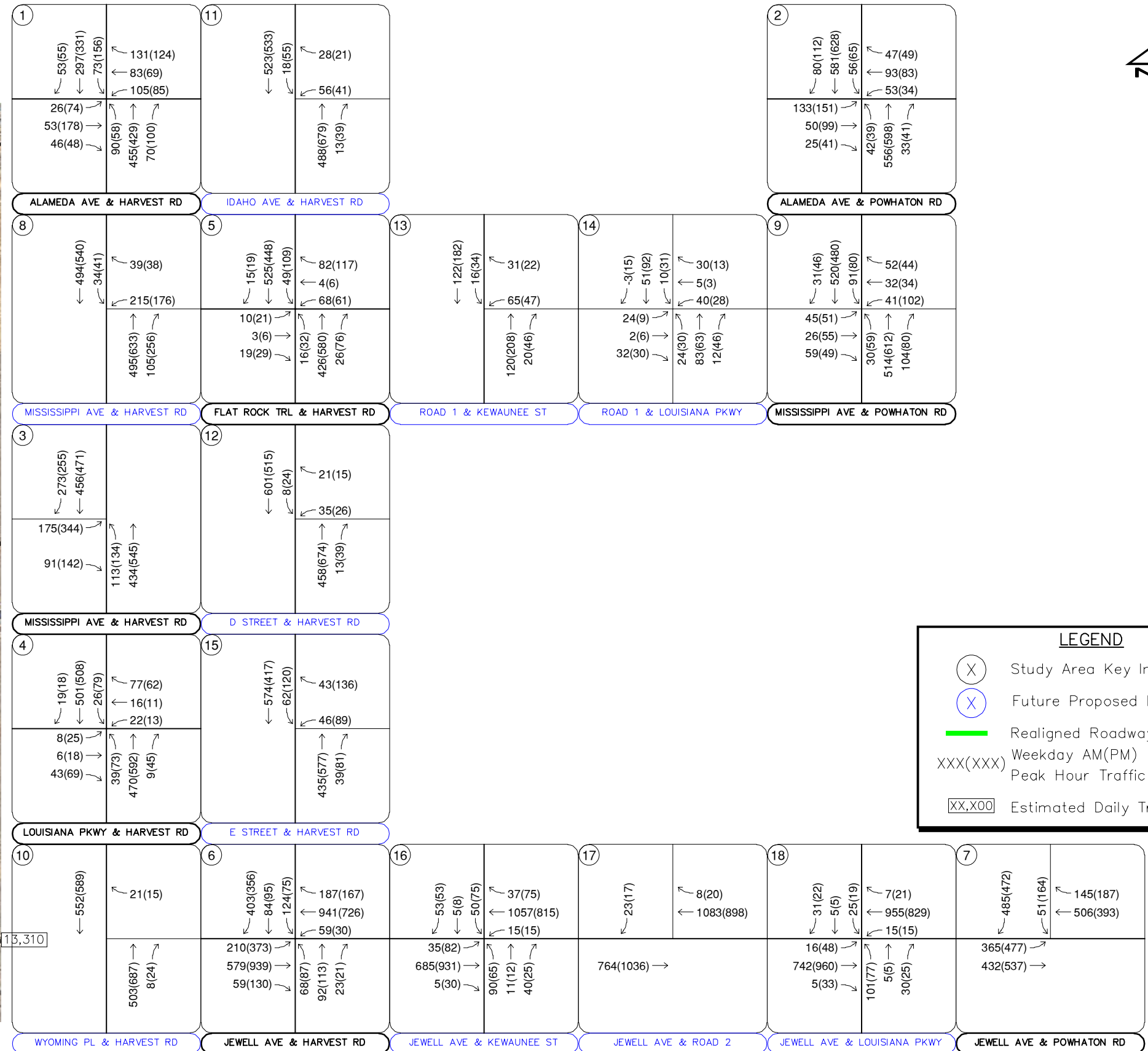
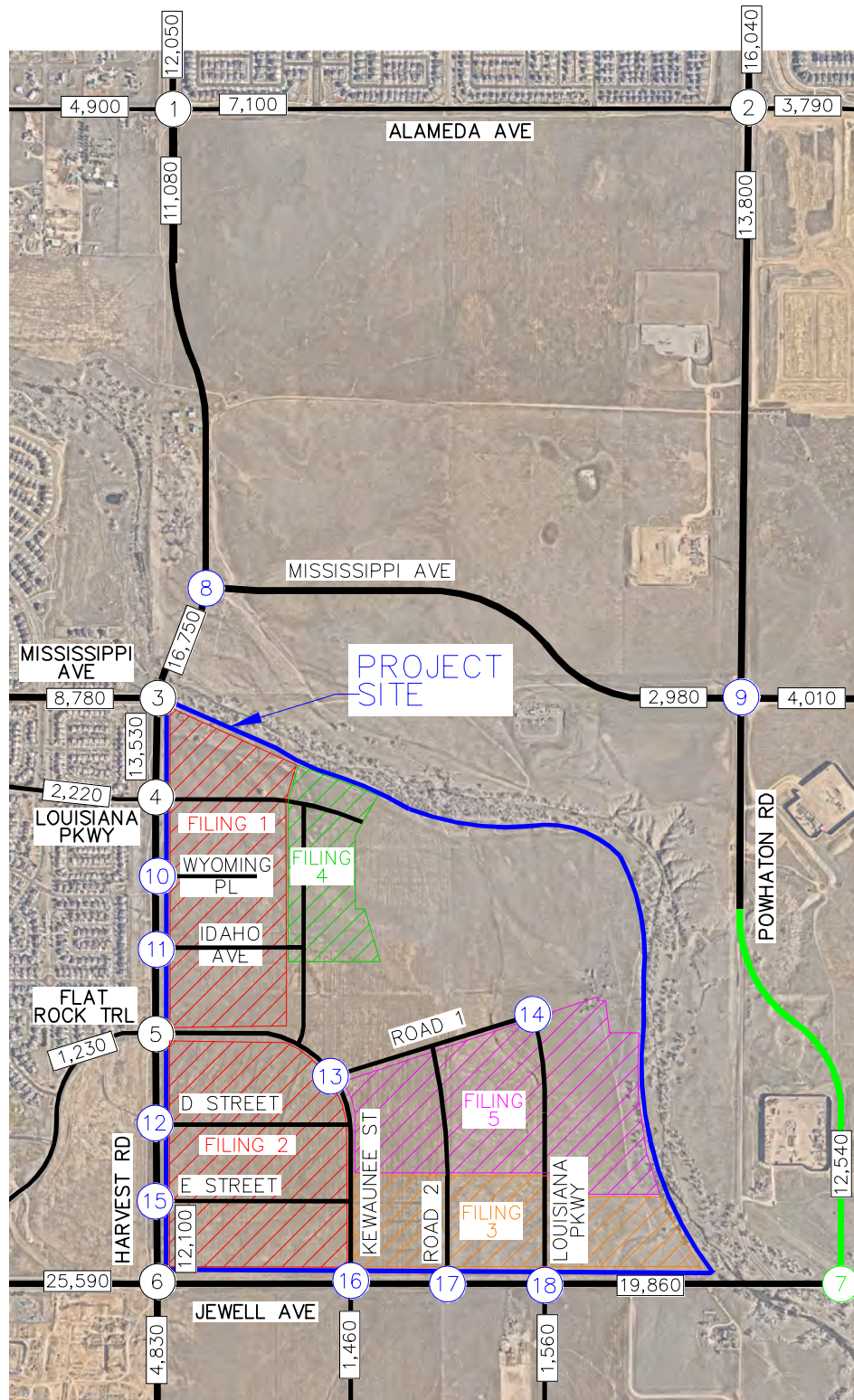
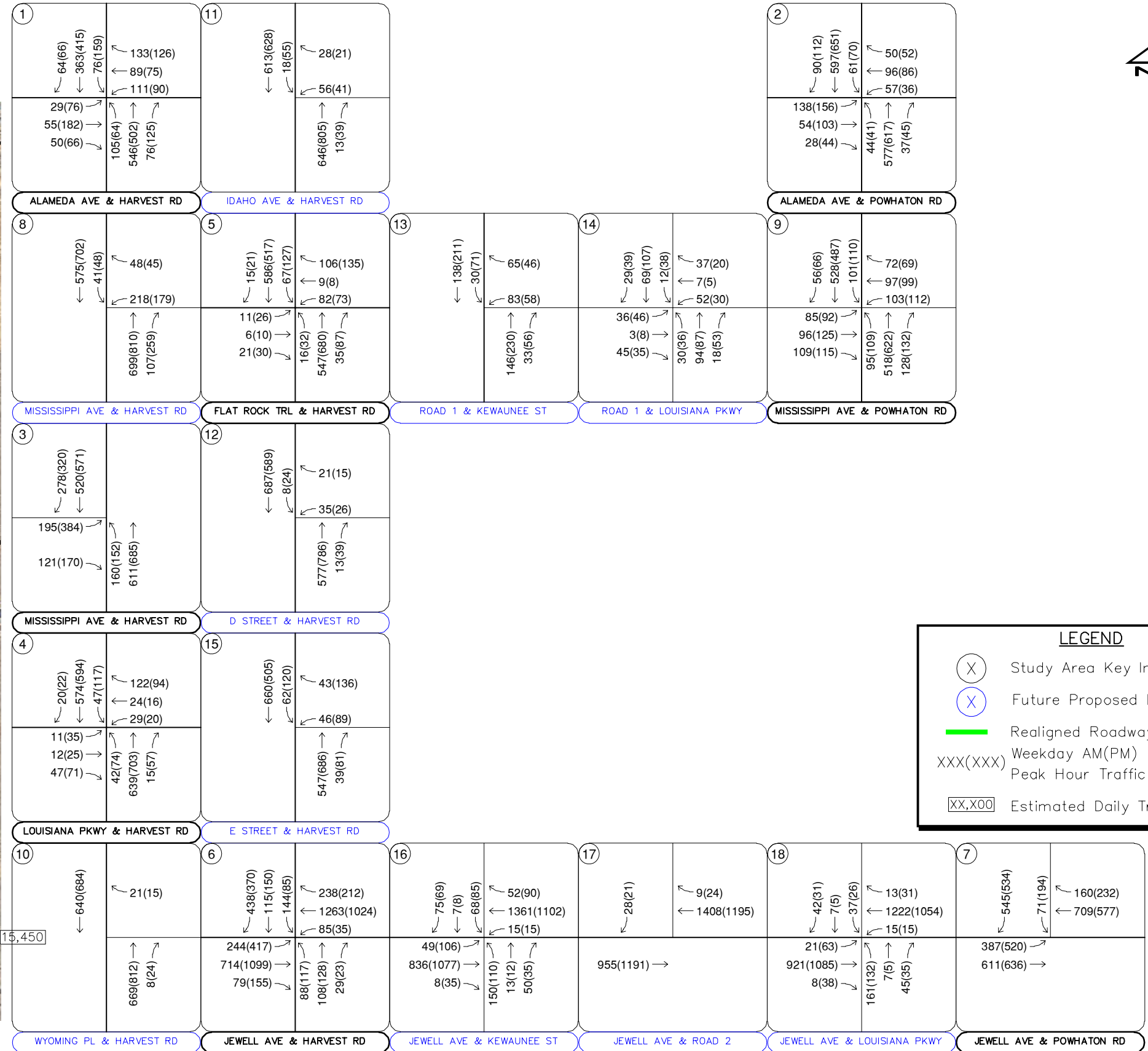
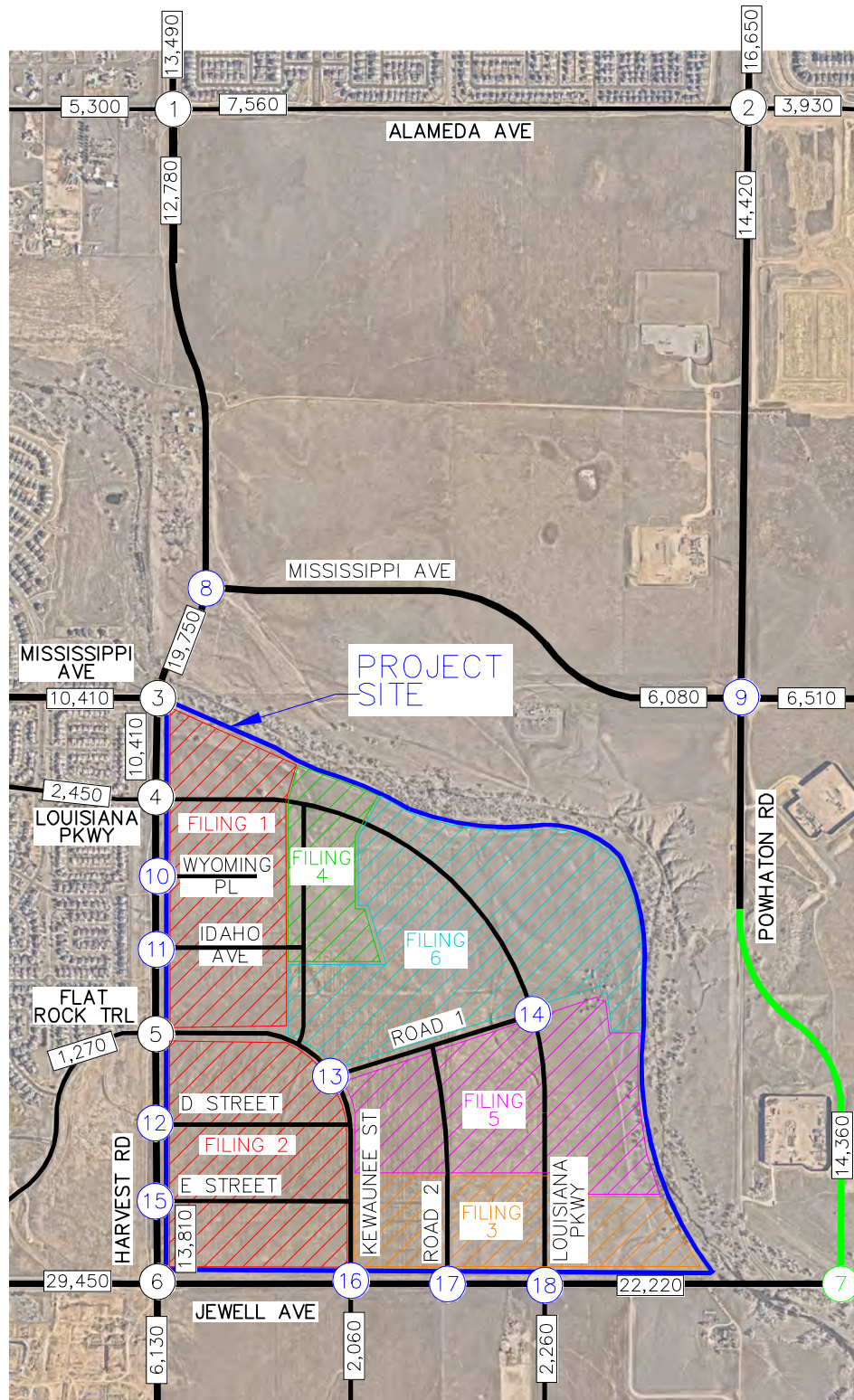


FIGURE 22
PARKLANDS VILLAGE 1
AURORA, COLORADO
2031 TOTAL TRAFFIC VOLUMES



LEGEND

- (X) Study Area Key Intersection
- (X) Future Proposed Intersection
- Realigned Roadway/Intersection
- xxx(xxx) Weekday AM(PM) Peak Hour Traffic Volumes
- [xx,x00] Estimated Daily Traffic Volume

FIGURE 23
PARKLANDS VILLAGE 1
AURORA, COLORADO
2033 TOTAL TRAFFIC VOLUMES

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, 2028, 2029, 2031, and 2033 development horizons at the identified key intersections. The acknowledged source for determining overall capacity is the *Highway Capacity Manual (HCM)*².

5.1 Analysis Methodology

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

Table 2 – Level of Service Definitions

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

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

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

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

5.2 Key Intersection Operational Analysis

Calculations for the operational level of service at the key intersections for the study area are provided in **Appendix E**. The existing year analysis is based on the lane geometry and intersection control shown in **Figure 2**. Existing peak hour factors were utilized in the existing horizon while the HCM urban standard of 0.92 was used for the future horizon years. The existing heavy vehicle percentages obtained from the turning movement counts were also used in the existing horizon analysis year, while a five (5) percent heavy vehicle percentage was used for future horizon analysis years rather than the industry standard of two (2) percent heavy vehicles. This was assumed to provide a conservative analysis and because of the understanding that there will be ongoing construction and heavy vehicles entering and exiting the surrounding area for years to come as this area continues to develop. Synchro traffic analysis software was used to analyze the signalized and unsignalized key intersections for HCM level of service.

Of note, because it is not known specifically when certain improvements are anticipated to be completed, the recommended geometry and control shown in this study is based on operational need and meeting warrants for turn lanes that will be warranted both during each filing and at full buildout. It should be recognized that as development occurs in the area, it is possible that additional improvements—such as additional through lanes—will be provided by a specific horizon year when this study does not show it to be needed yet operationally. This study generally shows the minimum recommended geometry to achieve safe and efficient operations, and if additional improvements are made on top of these recommendations, it is understood that the intersection will continue to operate as well, if not better, than the results shown in this study.

Alameda Avenue & Harvest Road (#1)

The intersection of Alameda Avenue & Harvest Road (#1) is unsignalized and operates with stop control on the southbound Harvest Road approach. The intersection movements operate acceptably at LOS B or better during both peak hours under existing conditions. Of note, a south leg is anticipated to be constructed at this intersection before the 2026 Filing 1 horizon in this study, although Harvest Road will not yet connect to this project during Filing 1 and b. The northbound approach is anticipated to operate acceptably as a single lane, shared with all movements in the 2026 Filing 1 horizon. In addition, left and right turn lanes along Alameda Avenue are not needed operationally. In the 2026 horizon, it was assumed that the northbound and southbound Harvest Road approaches would be stop-controlled.

Prior to the 2027 horizon, left turn lanes in each direction are anticipated to be constructed without construction of this project. However, by 2029, this intersection is anticipated to operate at a failing level of service without signalization. As such, by 2029, a signal is anticipated to be provided at this intersection. Of note, by 2030, Harvest Road is anticipated to connect from Jewell Avenue up to Alameda Avenue over Coal Creek. By approximately 2033 at full buildout of Parklands Village 1 development and with additional cut through volume north/south on Harvest Road, while it may still operate acceptably, queues would begin to grow at this intersection. As such, it would be beneficial to provide two through lanes in each direction along Harvest Road by approximately the buildout 2033 horizon if anticipated traffic volumes are achieved. **Table 3** provides the results of the LOS analysis conducted at this intersection.

Table 3 – Alameda Avenue & Harvest Road (#1) LOS Results

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
2023 Existing				
Eastbound Left	7.6	A	7.6	A
Southbound Left	10.1	B	12.1	B
Southbound Right	9.2	A	9.0	A
2026 Background¹				
Northbound Approach	12.5	B	17.1	C
Eastbound Left	7.7	A	7.7	A
Westbound Left	7.4	A	7.8	A
Southbound Left	12.3	B	17.3	C
Southbound Through/Right	10.5	B	15.0	C
2026 Background Plus Project¹				
Northbound Approach	12.6	B	17.2	C
Eastbound Left	7.8	A	7.7	A
Westbound Left	7.4	A	7.8	A
Southbound Left	12.3	B	17.5	C
Southbound Through/Right	10.5	B	15.0	C
2027 Background¹				
Northbound Approach	17.2	C	34.0	D
Eastbound Left	8.1	A	8.2	A
Westbound Left	7.5	A	8.1	A
Southbound Left	17.3	C	74.9	F
Southbound Through/Right	12.0	B	23.7	C
2027 Background Plus Project²				
Northbound Left	13.5	B	19.2	C
Northbound Through/Right	13.7	B	17.2	C
Eastbound Left	8.1	A	8.4	A
Westbound Left	7.5	A	8.1	A
Southbound Left	14.7	B	36.8	E
Southbound Through/Right	11.6	B	18.0	C

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
2028 Background²				
Northbound Left	13.4	B	18.7	C
Northbound Through/Right	13.6	B	16.7	C
Eastbound Left	8.0	A	8.2	A
Westbound Left	7.5	A	8.1	A
Southbound Left	14.1	B	29.4	D
Southbound Through/Right	11.5	B	17.5	C
2028 Background Plus Project²				
Northbound Left	12.7	B	18.1	C
Northbound Through/Right	13.8	B	17.5	C
Eastbound Left	8.1	A	8.3	A
Westbound Left	7.5	A	8.1	A
Southbound Left	14.7	B	35.6	E
Southbound Through/Right	11.6	B	18.1	D
2029 Background²				
Northbound Left	14.5	B	21.5	C
Northbound Through/Right	15.0	C	18.6	C
Eastbound Left	8.2	A	8.3	A
Westbound Left	7.5	A	8.2	A
Southbound Left	15.7	C	54.9	F
Southbound Through/Right	12.1	B	20.3	C
2029 Background Plus Project³ – Overall	27.4	C	23.4	C
Eastbound Approach	27.3	C	28.8	C
Westbound Approach	34.3	C	29.0	C
Northbound Approach	22.1	C	17.4	B
Southbound Approach	17.7	B	13.6	B
2031 Background³ – Overall	18.3	B	23.0	C
Eastbound Approach	34.6	C	35.4	D
Westbound Approach	38.8	D	36.4	D
Northbound Approach	9.4	A	21.0	C
Southbound Approach	8.1	A	8.7	A
2031 Background Plus Project³ – Overall	24.4	C	24.5	C
Eastbound Approach	36.1	D	34.8	C
Westbound Approach	39.6	D	35.2	D
Northbound Approach	24.2	C	25.8	C
Southbound Approach	12.4	B	13.4	B
2033 Background³ – Overall	18.6	B	24.0	C
Eastbound Approach	34.3	C	35.7	D
Westbound Approach	39.4	D	36.6	D
Northbound Approach	10.8	B	24.1	C
Southbound Approach	9.4	A	10.2	B
2033 Background Plus Project⁴ – Overall	23.4	C	22.4	C
Eastbound Approach	35.3	D	33.1	C
Westbound Approach	38.2	D	34.1	C
Northbound Approach	22.3	C	20.3	C
Southbound Approach	13.9	B	15.5	B

¹New stop-controlled south leg; ²Note 1 + left turn lanes on all approaches; ³Note 2 + signalization; ⁴Note 3 + two through lanes NB and SB on Harvest Road

Alameda Avenue & Powhaton Road (#2)

The unsignalized intersection of Alameda Avenue & Powhaton Road (#2) operates with stop control on the eastbound and westbound approaches of Alameda Avenue. The intersection movements operate acceptably at LOS B or better during both peak hours under existing conditions. The intersection movements are anticipated to operate acceptably with the Filing 1 project traffic in year 2026 without intersection improvements.

Prior to the 2028 horizon, left turn lanes in each direction are anticipated to constructed without construction of this project as well as a southbound right turn lane. By the 2029 horizon, the intersection is anticipated to require signalization to be able to continue operating with an acceptable level of service. With signalization and this configuration, the intersection is anticipated to continue operating at an acceptable level of service through the 2033 horizon with full project buildout. **Table 4** provides the results of the LOS analysis conducted at this intersection.

Table 4 – Alameda Avenue & Powhaton Road (#2) LOS Results

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
2023 Existing				
Northbound Left	7.5	A	7.5	A
Eastbound Approach	10.7	B	10.9	B
Westbound Approach	11.1	B	11.1	B
Southbound Left	7.5	A	7.6	A
2026 Background				
Northbound Left	7.6	A	7.7	A
Eastbound Approach	11.9	B	14.0	B
Westbound Approach	10.7	B	12.8	B
Southbound Left	7.5	A	7.6	A
2026 Background Plus Project				
Northbound Left	7.6	A	7.7	A
Eastbound Approach	11.7	B	13.4	B
Westbound Approach	10.7	B	12.5	B
Southbound Left	7.5	A	7.6	A
2027 Background				
Northbound Left	7.7	A	7.9	A
Eastbound Approach	14.8	B	28.8	D
Westbound Approach	12.3	B	16.7	C
Southbound Left	7.5	A	7.7	A
2027 Background Plus Project				
Northbound Left	7.8	A	8.2	A
Eastbound Approach	14.9	B	36.7	E
Westbound Approach	13.2	B	22.1	C
Southbound Left	7.6	A	7.9	A

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
2028 Background¹				
Northbound Left	8.1	A	8.2	A
Eastbound Left	25.2	D	21.8	C
Eastbound Through/Right	14.1	B	17.7	C
Westbound Left	17.6	C	17.1	C
Westbound Through/Right	17.0	C	18.3	C
Southbound Left	7.9	A	8.1	A
2028 Background Plus Project¹				
Northbound Left	8.2	A	8.7	A
Eastbound Left	20.5	C	36.5	E
Eastbound Through/Right	13.3	B	25.0	D
Westbound Left	17.0	C	27.8	D
Westbound Through/Right	15.9	C	25.7	D
Southbound Left	8.1	A	8.4	A
2029 Background² – Overall	15.8	B	17.0	B
Eastbound Approach	35.3	D	33.8	C
Westbound Approach	31.8	C	30.0	C
Northbound Approach	8.1	A	9.6	A
Southbound Approach	8.5	A	9.9	A
2029 Background Plus Project² – Overall	23.6	C	24.3	C
Eastbound Approach	35.1	D	34.1	C
Westbound Approach	32.2	C	31.5	C
Northbound Approach	18.2	B	19.0	B
Southbound Approach	20.9	C	21.8	C
2031 Background² – Overall	15.0	B	15.1	B
Eastbound Approach	35.6	D	34.5	C
Westbound Approach	31.0	C	30.6	C
Northbound Approach	9.5	A	10.0	B
Southbound Approach	9.0	A	9.0	A
2031 Background Plus Project² – Overall	22.2	C	22.3	C
Eastbound Approach	36.2	D	34.4	C
Westbound Approach	31.5	C	30.8	C
Northbound Approach	20.0	B	20.7	C
Southbound Approach	18.0	B	17.8	B
2033 Background² – Overall	15.3	B	15.4	B
Eastbound Approach	35.1	D	34.1	C
Westbound Approach	30.5	C	30.1	C
Northbound Approach	10.0	B	10.5	B
Southbound Approach	9.5	A	9.4	A
2033 Background Plus Project² – Overall	22.3	C	19.1	B
Eastbound Approach	35.7	D	34.0	C
Westbound Approach	31.1	C	30.0	C
Northbound Approach	20.3	C	11.6	B
Southbound Approach	18.2	B	18.3	B

¹EB and WB left turn lanes; ²Note 1 + Signalization

Mississippi Avenue & Harvest Road (#3)

The unsignalized intersection of Mississippi Avenue & Harvest Road (#3) does not have intersection control, as there are only eastbound right and northbound left turning movements. As such, there is no current measurable intersection delay. However, once a north leg is constructed at this intersection with completion of a bridge over Coal Creek, Harvest Road will connect from Jewell Avenue through Alameda Avenue. For purposes of this study, this improvement is anticipated to be completed after the 2029 horizon and prior to the 2031 horizon and is anticipated to provide a signal without construction of this project. The eastbound Mississippi Avenue approach is anticipated to provide separate, continuous left and right turn lanes while the northbound Harvest Road approach is anticipated to provide a left turn lane and a through lane while the southbound approach is expected to provide a through lane and a separate right turn lane. With the addition of project traffic, two through lanes northbound are recommended to be provided. By 2033 at full buildout of this project and with surrounding developments being constructed, two through lanes in each direction are recommended to be provided along Harvest Road. With this proposed configuration, the intersection is anticipated to operate well with the addition of project traffic through the 2033 horizon. **Table 5** provides the results of the LOS analysis conducted at this intersection. Of note, the intersection may perform better in some scenarios than others because of optimization and coordination with nearby signals.

Table 5 – Mississippi Avenue & Harvest Road (#3) LOS Results

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
2031 Background – Overall	10.8	B	16.2	B
Eastbound Approach	42.5	D	38.1	D
Northbound Approach	3.5	A	7.6	A
Southbound Approach	3.6	A	6.9	A
2031 Background Plus Project¹ – Overall	8.2	A	13.6	B
Eastbound Approach	42.0	D	39.7	D
Northbound Approach	0.9	A	2.4	A
Southbound Approach	1.4	A	6.8	A
2033 Background¹ – Overall	10.8	B	17.3	B
Eastbound Approach	41.7	D	40.5	D
Northbound Approach	4.6	A	9.9	A
Southbound Approach	4.2	A	8.5	A
2033 Background Plus Project² – Overall	7.5	A	16.4	B
Eastbound Approach	40.9	D	36.4	D
Northbound Approach	1.0	A	2.2	A
Southbound Approach	0.4	A	17.3	B

¹Two NB through lanes; ²Note 1 + Two SB through lanes

Louisiana Parkway & Harvest Road (#4)

The unsignalized 'T'-intersection of Louisiana Parkway & Harvest Road (#4) operates with stop control on the eastbound Louisiana Parkway approach to the intersection. The intersection movements operate acceptably at LOS A during both peak hours under existing conditions. A future east leg will be provided at the Louisiana Parkway and Harvest Road intersection with Filing 1 of this project to provide direct public street access to the development. The intersection movements are anticipated to operate acceptably through the 2029 horizon with one lane eastbound and westbound along Louisiana Parkway for shared turning movements in stop-controlled conditions with posted R1-1 "STOP" signs, while northbound and southbound left turn lanes should be provided when this east leg is constructed.

By the 2031 horizon with Harvest Road being connected from Jewell Avenue to Alameda Avenue, a signal is anticipated to be required at this intersection continue operating at an acceptable level of service. With signalization and with increased volume, two through lanes northbound and southbound are recommended to be provided, in addition to a northbound right turn lane and separate eastbound and westbound left turn lanes. This configuration is anticipated to operate well through the 2033 horizon with the addition of project traffic. **Table 6** provides the results of the LOS analysis conducted at this intersection.

Table 6 – Louisiana Parkway & Harvest Road (#4) LOS Results

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
2023 Existing				
Northbound Left	7.5	A	7.3	A
Eastbound Approach	8.5	A	8.5	A
2026 Background				
Northbound Left	7.5	A	7.3	A
Eastbound Approach	8.5	A	8.6	A
2026 Background Plus Project¹				
Northbound Left	7.6	A	7.4	A
Eastbound Approach	8.8	A	9.1	A
Westbound Approach	9.3	A	9.6	A
Southbound Left	7.4	A	7.4	A
2027 Background				
Northbound Left	7.5	A	7.3	A
Eastbound Approach	8.6	A	8.7	A

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
2027 Background Plus Project¹				
Northbound Left	7.7	A	7.8	A
Eastbound Approach	9.1	A	9.9	A
Westbound Approach	10.0	B	10.9	B
Southbound Left	7.5	A	7.6	A
2028 Background				
Northbound Left	7.3	A	7.4	A
Eastbound Approach	8.6	A	8.7	A
2028 Background Plus Project¹				
Northbound Left	7.5	A	7.9	A
Eastbound Approach	9.2	A	10.3	B
Westbound Approach	10.2	B	11.2	B
Southbound Left	7.6	A	7.7	A
2029 Background				
Northbound Left	7.3	A	7.4	A
Eastbound Approach	8.6	A	8.7	A
2029 Background Plus Project¹				
Northbound Left	7.5	A	7.9	A
Eastbound Approach	9.5	A	10.9	B
Westbound Approach	10.5	B	11.6	B
Southbound Left	7.6	A	7.8	A
2031 Background				
Northbound Left	8.3	A	8.0	A
Eastbound Approach	12.6	B	13.4	B
2031 Background Plus Project² – Overall	12.5	B	21.2	C
Eastbound Approach	39.6	D	41.3	D
Westbound Approach	44.7	D	41.8	D
Northbound Approach	2.2	A	25.2	C
Southbound Approach	13.9	B	10.6	B
2033 Background				
Northbound Left	8.5	A	8.2	A
Eastbound Approach	14.8	B	17.2	C
2033 Background Plus Project² – Overall	5.1	A	10.1	B
Eastbound Approach	39.5	D	40.4	D
Westbound Approach	43.5	D	40.6	D
Northbound Approach	0.2	A	12.0	B
Southbound Approach	0.3	A	0.8	A

¹New stop-controlled east leg with NB and SB left turn lanes; ²Signalization with two NB and SB through lanes, EB and WB left turn lanes, NB and SB left turn lanes, and NB right turn lane

Flat Rock Trail & Harvest Road (#5)

The unsignalized 'T'-intersection of Flat Rock Trail & Harvest Road (#5) operates with stop control on the eastbound Flat Rock Trail approach to the intersection. The intersection movements operate acceptably at LOS A during both peak hours under existing conditions. A future east leg will be provided at the Flat Rock Trail and Harvest Road intersection with Filing 1 of this project to provide direct public street access to the development. The intersection movements are anticipated to operate acceptably through the 2029 horizon with one lane eastbound and westbound along Flat Rock Trail for shared turning movements in stop-controlled conditions with posted R1-1 "STOP" signs, while northbound and southbound left turn lanes should be provided when this east leg is constructed. A northbound right turn lane is anticipated to be warranted and should be provided by approximately the 2029 horizon.

By the 2031 horizon with Harvest Road being connected from Jewell Avenue to Alameda Avenue, a signal is anticipated to be required at this intersection continue operating at an acceptable level of service. With signalization and with increased volume, two through lanes northbound and southbound are recommended to be provided, in addition to a northbound right turn lane and separate eastbound and westbound left turn lanes. This configuration is anticipated to operate well through the 2033 horizon with the addition of project traffic. **Table 7** provides the results of the LOS analysis conducted at this intersection.

Table 7 – Flat Rock Trail & Harvest Road (#5) LOS Results

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
2023 Existing				
Northbound Left	7.5	A	7.3	A
Eastbound Approach	8.8	A	8.8	A
2026 Background				
Northbound Left	7.5	A	7.4	A
Eastbound Approach	8.8	A	9.0	A
2026 Background Plus Project¹				
Northbound Left	7.6	A	7.4	A
Eastbound Approach	9.5	A	9.9	A
Westbound Approach	9.5	A	9.9	A
Southbound Left	7.4	A	7.6	A
2027 Background				
Northbound Left	7.5	A	7.4	A
Eastbound Approach	8.8	A	9.0	A

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
2027 Background Plus Project¹				
Northbound Left	7.7	A	7.6	A
Eastbound Approach	9.9	A	11.3	B
Westbound Approach	10.3	B	11.9	B
Southbound Left	7.5	A	7.9	A
2028 Background				
Northbound Left	7.4	A	7.4	A
Eastbound Approach	8.8	A	9.0	A
2028 Background Plus Project¹				
Northbound Left	7.5	A	7.7	A
Eastbound Approach	10.1	B	12.2	B
Westbound Approach	10.5	B	12.6	B
Southbound Left	7.5	A	8.0	A
2029 Background				
Northbound Left	7.4	A	7.4	A
Eastbound Approach	8.9	A	9.1	A
2029 Background Plus Project²				
Northbound Left	7.5	A	7.7	A
Eastbound Approach	10.3	B	12.6	B
Westbound Approach	10.9	B	13.7	B
Southbound Left	7.6	A	8.1	A
2031 Background				
Northbound Left	8.3	A	8.0	A
Eastbound Approach	13.1	B	13.0	B
2031 Background Plus Project³ – Overall	15.5	B	27.0	C
Eastbound Approach	39.4	D	40.3	D
Westbound Approach	41.4	D	42.3	D
Northbound Approach	24.6	C	26.8	C
Southbound Approach	2.6	A	22.5	C
2033 Background				
Northbound Left	8.5	A	8.2	A
Eastbound Approach	15.0	C	15.7	C
2033 Background Plus Project³ – Overall	10.4	B	16.4	B
Eastbound Approach	38.4	D	40.1	D
Westbound Approach	40.8	D	41.2	D
Northbound Approach	0.3	A	16.2	B
Southbound Approach	11.3	B	8.7	A

¹New stop-controlled east leg with NB and SB left turn lanes; ²Note 1 + NB right turn lane; ³Signalization with two NB and SB through lanes, EB and WB left turn lanes, and NB right turn lane

Jewell Avenue & Harvest Road (#6)

The unsignalized 'T'-intersection of Jewell Avenue & Harvest Road (#6) operates with stop control on the southbound Harvest Road approach to the intersection. The intersection movements operate acceptably at LOS B or better during both peak hours under existing conditions. By the 2026 horizon without construction of this project, a new south leg at this intersection is anticipated to be constructed. With this improvement, an eastbound right turn lane is anticipated to be warranted and left turn lanes in each direction are recommended to be provided in each direction without project construction. With the addition of project traffic in the 2026 horizon, a southbound right turn lane is recommended and warranted. Vehicle movements may experience LOS E during the afternoon peak hour in 2026 and then LOS F during the peak hours in 2027; however signal control is not expected to be warranted until 2028.

Of note, signal is anticipated to be needed at this intersection to continue providing acceptable operations. It is understood that a signal does not yet meet warrants until year 2028, however the volumes for the following buildout year meets warrants and the current buildout year does not operate acceptably under stop control. Therefore, the City may desire to signalize the intersection prior to meeting warrants. Additionally, by the 2028 horizon, two westbound through lanes and a westbound right turn lane are recommended to be provided at this intersection. With or without project traffic, by 2029 is it also recommended that two through lanes be provided in the eastbound direction. If projected traffic volumes are realized, by 2031 dual eastbound left turn lanes would be recommended to be provided, while the previously recommended southbound right turn lane would be recommended to be improved to provide free turning movement. This configuration is anticipated to operate well through the 2033 horizon with the addition of project traffic. **Table 8** provides the results of the LOS analysis conducted at this intersection.

Table 8 – Jewell Avenue & Harvest Road (#6) LOS Results

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
2023 Existing				
Eastbound Left	8.0	A	8.0	A
Southbound Approach	11.0	B	11.5	B
2026 Background¹				
Northbound Left	21.5	C	32.6	D
Northbound Through/Right	16.0	C	21.0	C
Eastbound Left	8.4	A	8.3	A
Westbound Left	7.8	A	8.5	A
	20.2	C	27.1	D

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
Southbound Left Southbound Through/Right	13.2	B	18.6	C
2026 Background Plus Project¹⁺				
Northbound Left	25.5	D	47.4	E
Northbound Through/Right	17.1	C	25.5	D
Eastbound Left	8.5	A	8.5	A
Westbound Left	7.8	A	8.6	A
Southbound Left	22.9	C	36.4	E
Southbound Through	19.2	C	31.5	D
Southbound Right	12.3	B	11.0	B
2026 Background Plus Project² – Overall	12.9	B	11.8	B
Eastbound Approach	6.5	A	7.8	A
Westbound Approach	12.6	B	12.1	B
Northbound Approach	27.3	C	27.6	C
Southbound Approach	27.4	C	27.2	C
2027 Background¹				
Northbound Left	26.7	D	46.5	E
Northbound Through/Right	17.6	C	24.8	C
Eastbound Left	8.6	A	8.5	A
Westbound Left	7.9	A	8.7	A
Southbound Left	23.4	C	34.0	D
Southbound Through/Right	14.6	B	22.3	C
2027 Background Plus Project¹⁺				
Northbound Left	54.4	F	384.4	F
Northbound Through/Right	23.5	C	54.9	F
Eastbound Left	9.1	A	9.3	A
Westbound Left	8.0	A	8.9	A
Southbound Left	41.7	E	202.8	F
Southbound Through	26.8	D	74.9	F
Southbound Right	15.1	C	13.3	B
2027 Background Plus Project² – Overall	13.8	B	13.0	B
Eastbound Approach	6.3	A	7.9	A
Westbound Approach	13.6	B	13.5	B
Northbound Approach	29.2	C	29.6	C
Southbound Approach	30.0	C	30.0	C
2028 Background¹				
Northbound Left	34.0	D	76.2	F
Northbound Through/Right	20.0	C	30.0	D
Eastbound Left	8.8	A	8.6	A
Westbound Left	8.0	A	9.0	A
Southbound Left	28.7	D	44.1	E
Southbound Through/Right	16.5	C	27.8	D
2028 Background Plus Project³ – Overall	9.2	A	12.0	B
Eastbound Approach	14.8	B	14.0	B
Westbound Approach	1.0	A	0.8	A
Northbound Approach	25.2	C	31.0	C
Southbound Approach	25.9	C	31.3	C
2029 Background⁴ – Overall	11.1	B	12.1	B

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
Eastbound Approach	8.3	A	10.4	B
Westbound Approach	9.4	A	10.3	B
Northbound Approach	25.9	C	24.3	C
Southbound Approach	25.3	C	23.0	C
2029 Background Plus Project⁵ – Overall	7.9	A	10.8	B
Eastbound Approach	9.6	A	12.0	B
Westbound Approach	1.0	A	0.9	A
Northbound Approach	28.2	C	30.2	C
Southbound Approach	29.2	C	30.1	C
2031 Background⁴ – Overall	17.3	B	15.3	B
Eastbound Approach	10.2	B	10.6	B
Westbound Approach	10.0	A	9.5	A
Northbound Approach	36.4	D	34.3	C
Southbound Approach	40.7	D	34.3	C
2031 Background Plus Project⁶ – Overall	12.3	B	15.4	B
Eastbound Approach	18.9	B	19.6	B
Westbound Approach	1.6	A	2.0	A
Northbound Approach	31.5	C	34.0	C
Southbound Approach	29.6	C	28.3	C
2033 Background⁴ – Overall	21.2	C	18.5	B
Eastbound Approach	13.2	B	13.4	B
Westbound Approach	10.5	B	11.0	B
Northbound Approach	53.5	D	44.0	D
Southbound Approach	50.2	D	37.4	D
2033 Background Plus Project⁶ – Overall	14.3	B	16.4	B
Eastbound Approach	20.2	C	21.0	C
Westbound Approach	2.5	A	3.3	A
Northbound Approach	34.1	C	37.8	D
Southbound Approach	45.6	D	30.0	C

¹New south leg, EB right turn lane, WB, NB, and SB left turn lanes; ¹⁺ SB right turn lane; ²Note 1 + signalization;

³Note 2 + two WB through lanes and a WB right turn lane; ⁴Note 2 + Two EB and WB through lanes; ⁵Note 3 + two EB through lanes; ⁶Note 5 + Dual EB left turn lanes and SB right turn lane becomes free movement

Jewell Avenue & Powhaton Road (#7)

The unsignalized 'T'-intersection of Jewell Avenue & Powhaton Road (#7) operates with stop control on the southbound Powhaton Road approach to the intersection. The intersection movements operate acceptably at LOS A during both peak hours under existing conditions. It is understood that this intersection is planned to eventually be shifted further to the east, however, the date at which this occurs is not known. As such, the improvements recommended in this study are based on operational need and does not specify a time in which the intersection may need to be shifted. It is recognized, though, that the intersection may need to be shifted to the east when the intersection requires roadway widening and signalization.

By the 2026 horizon with the addition of project traffic, an eastbound left turn lane and separate southbound left and right turn lanes are recommended to be constructed. Prior to the 2028 horizon, a separate westbound right turn lane is anticipated to be warranted if these projected volumes are realized and this is assumed to be included in the background of this horizon and this project will not contribute traffic to that movement. With the addition of project traffic in 2028, a signal is anticipated to be warranted at this intersection.

In 2029 with project traffic, dual left turn lanes are anticipated to be required, which will necessitate two receiving lanes on Powhaton Road, which could taper down to one northbound through lane further to the north of this intersection if two through lanes along Powhaton Road are not yet provided by this horizon. The inner eastbound left turn lane can be a forced-left turn lane from the proposed second eastbound through lane to the west of this intersection, and only one eastbound through lane will continue to the east of the intersection during this horizon. Also, during this horizon, the southbound right turn lane is recommended to be improved to free right turning movement, and the second westbound through lane to the west of this intersection can stem from the acceleration lane from this turning movement. This configuration is anticipated to operate well through the 2031 horizon, while in 2033 it would be recommended that two through lanes eastbound and westbound would be provided. **Table 9** provides the results of the LOS analysis conducted at this intersection.

Table 9 – Jewell Avenue & Powhatan Road (#7) LOS Results

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
2023 Existing				
Eastbound Left	7.6	A	7.8	A
Southbound Approach	9.9	A	9.7	A
2026 Background				
Eastbound Left	7.9	A	8.4	A
Southbound Approach	12.6	B	25.4	D
2026 Background Plus Project¹				
Eastbound Left	8.0	A	8.4	A
Southbound Left	13.1	B	20.1	C
Southbound Right	11.6	B	10.7	B
2027 Background				
Eastbound Left	8.1	A	8.8	A
Southbound Approach	14.8	B	102.4	F
2027 Background Plus Project¹				
Eastbound Left	8.4	A	9.5	A
Southbound Left	15.5	C	44.9	E
Southbound Right	14.1	B	14.0	B
2028 Background²				
Eastbound Left	8.3	A	9.0	A
Southbound Left	18.2	C	104.4	F
Southbound Right	13.5	B	11.7	B
2028 Background Plus Project³ – Overall	16.8	B	16.8	B
Eastbound Approach	13.6	B	13.1	B
Westbound Approach	22.4	C	24.0	C
Southbound Approach	18.8	B	25.4	C
2029 Background³ – Overall	20.7	C	18.8	B
Eastbound Approach	9.6	A	10.4	B
Westbound Approach	17.4	B	19.2	B
Southbound Approach	41.8	D	33.5	C
2029 Background Plus Project⁴ – Overall	29.8	C	23.8	C
Eastbound Approach	35.8	D	23.1	C
Westbound Approach	22.1	C	24.9	C
Southbound Approach	23.2	C	25.1	C
2031 Background³ – Overall	22.0	C	20.0	C
Eastbound Approach	11.1	B	11.6	B
Westbound Approach	19.4	B	18.6	B
Southbound Approach	48.0	D	41.2	D
2031 Background Plus Project⁴ – Overall	17.0	B	17.1	B
Eastbound Approach	12.4	B	10.2	B
Westbound Approach	21.5	C	23.6	C
Southbound Approach	30.7	C	36.3	D
2033 Background³ – Overall	34.5	C	28.3	C
Eastbound Approach	19.2	B	15.1	B
Westbound Approach	26.5	C	19.1	B
Southbound Approach	86.3	F	69.0	E

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
2033 Background Plus Project⁵ – Overall	15.2	B	18.1	B
Eastbound Approach	13.4	B	14.3	B
Westbound Approach	16.0	B	19.7	B
Southbound Approach	30.0	C	33.7	C

¹EB left turn lane, separate SB left and right turn lanes; ²Note 1 + WB right turn lane; ³Note 2 + Signalization; ⁴Note 3 + dual EB left turn lanes and free SB right turn lane; ⁵Note 4 + two EB and WB through lanes

Proposed Future Intersections and Accesses

The following summarizes the operational level of service results and recommendations for lane configuration and intersection control at the proposed future intersections and accesses that are anticipated to be constructed in association with this project and other nearby developments, with level of service results for each of these intersections shown in **Table 10**. MUTCD signal warrants with minor street half-right volumes included, where applicable, are included in **Appendix G**. Of note, the four hour peak periods (7-9 am and 4-6 pm) were calculated based on the peak hour and 90 percent factor for the second hour. However, it was anticipated for some intersections that the shoulder hours (3-4 pm and 6-7 pm) will meet volume warrants. Therefore, the 3-4 pm volume was calculated with a 0.89 factor and the 6-7 pm volumes was calculated a 0.81 factor from the peak hour volume.

2026 (Filing 1) Results

With construction of Parklands Village 1, Filing 1 in 2026 is planned to provide access at an east leg at both the Louisiana Parkway & Harvest Road (#4) and Flat Rock Trail & Harvest Road (#5) intersections. Additionally, two new accesses are proposed and evenly spaced between Louisiana Parkway and Flat Rock Trail, at future Wyoming Place (Intersection #10) and future Idaho Avenue (#11). Wyoming Place is proposed to be restricted to right-in/right-out movements only. A new intersection along Jewell Avenue to the east of Harvest Road is also anticipated to be constructed (Intersection #16), with the north leg being future Kewaunee Street. Each of these intersections are anticipated to operate well with stop control and posted R1-1 “STOP” signs where applicable, which would be along the east legs of the intersections (#10 & #11) along Harvest Road and the north leg at the Jewell Avenue & future Kewaunee Street (#16) intersection. A southbound left turn lane should be provided at the Idaho Avenue (#11) access. Additionally, at the Jewell Avenue & future Kewaunee Street (#16) intersection, a separate southbound left and right turn lane and an eastbound left turn lane should be provided.

2027 (Filing 2) Results

With construction of Parklands Village 1, Filing 2 in 2027 is planned to provide two new accesses roughly evenly spaced between Flat Rock Trail and Jewell Avenue, being called in this study “D Street” (#12) and “E Street” (#15) are anticipated to be constructed. At the E Street & Harvest Road (#15) intersection, a northbound right turn lane and separate westbound left and right turn lanes should also be provided, as this will serve both the residential and the commercial development along this roadway. Each of these intersections are anticipated to operate well with stop control and posted R1-1 “STOP” signs where applicable.

2028 (Filing 3) Results

By the 2028 horizon, it is anticipated that Filing 3 of this development may be completed. With Filing 3 construction, a right-in/right-out access on Jewell Avenue (#17) between Kewaunee Street and Louisiana Parkway is proposed in addition to a full movement intersection at Jewell Avenue & Louisiana Parkway (#18). In this horizon, the Alameda Avenue & Powhaton Road (#2) intersection should provide separate eastbound westbound left-turn lanes and a southbound right-turn lane. The Jewell Avenue & Powhaton Road (#7) intersection is anticipated to require signalization to maintain acceptable operations while a free southbound right-turn lane should be provided, which would become a second westbound through lane along Jewell Avenue. The Jewell Avenue & Kewaunee Street (#16) intersection is also recommended for signalization in this horizon, as a south leg is anticipated to be constructed to align to Kewaunee Street assumed to be complete by this horizon. Along with the aforementioned second westbound through lane, the south leg construction would provide a northbound left turn lane with a shared through/right-turn lane, a westbound left-turn lane, a second eastbound through lane with the outer lane being a shared through/right-turn lane, and the southbound through movement occurring as a shared through/right-turn lane. A westbound right-turn lane is not anticipated to be needed at the Jewell Avenue right-in/right-out access (#17). The Jewell Avenue & Louisiana Parkway (#18) is anticipated to become a four-leg intersection by this horizon as well, with south leg construction by others. This intersection is not anticipated to require signalization to maintain acceptable operations in this horizon. The northbound and southbound approaches should each provide a left-turn lane and a shared through/right-turn lane operating under stop control, while the eastbound and westbound Jewell Avenue approaches should each provide a left-turn lane, one through lane, and one shared through/right-turn lane.

2029 (Filing 4) Results

When Filing 4 is constructed, it is assumed that the Harvest Road connection between Alameda Avenue and Mississippi Avenue will still not yet be completed. Regardless, the future proposed intersections in the study area are anticipated to operate well without this connection through this horizon year. No new project-related intersections are proposed in this horizon. If not constructed as such in the 2028 horizon, Jewell Avenue & Harvest Road (#6) intersection should be converted to a second continuous eastbound through lane and a separate designated eastbound right-turn lane. A second eastbound left-turn lane should be provided at Jewell Avenue & Powhatan Road (#7), while a signal should be provided at both the Alameda Avenue & Harvest Road (#1) and the Alameda Avenue & Powhatan Road (#2) intersections. A new intersection at Mississippi Avenue & Powhatan Road (#9) is anticipated to be constructed by Parklands Village 2 development by this horizon, though traffic associated with Parklands Village 1 is not anticipated to travel onto Mississippi Avenue at this time because a connection would not yet be complete into this project.

2031 (Filing 5) Results

By this horizon year, the Harvest Road connection between Alameda Avenue and Mississippi Avenue is anticipated to be complete. Because of this, Harvest Road is anticipated to become a more major north/south corridor in the area, which will result in additional traffic volume along this roadway. In association with nearby development, a new intersection of Mississippi Avenue & Harvest Road East (#8) is anticipated to be constructed. By this horizon, it is possible this intersection will require signalization—this intersection was identified in the Parklands Village 2 study as one that may need signalization by approximately this horizon year. The northbound approach is recommended to provide separate through and right turn lanes, the southbound Harvest Road approach should provide separate left and through lanes, and the westbound approach should provide separate left and right turn lanes. At this point, the Mississippi Avenue & Powhatan Road (#9) intersection is anticipated to be a four-leg signalized intersection. With this intersection control, the eastbound and westbound Mississippi Avenue approaches should each provide a left turn lane and a shared through/right turn lane while the northbound and southbound Harvest Road approaches should each provide a left turn lane, two through lanes, and a right turn lane in each direction. Additionally, the Jewell Avenue & Louisiana Parkway (#18) intersection should be signalized based on warrants.

Because of the connection of Harvest Road through Mississippi Avenue to Alameda Avenue, two through lanes in each direction along Harvest Road from Jewell Avenue through Mississippi Avenue are recommended to be provided. Signalization would thus also be recommended and are anticipated to be needed operationally at Mississippi Avenue & Harvest Road (#3), Louisiana Parkway & Harvest Road (#4), and Flat Rock Trail & Harvest Road (#5). With signalization at Mississippi Avenue & Harvest Road (#3), the intersection should provide separate eastbound left and right-turn lanes, a northbound left-turn lane and two through lanes, and one southbound through lane and a southbound right-turn lane. Separate eastbound and westbound left-turn lanes should be provided at Louisiana Parkway & Harvest Road (#4) and Flat Rock Trail & Harvest Road (#5), in addition to northbound right-turn lanes.

The Road 1 & Kewaunee Street (#13) internal 'T'-intersection is expected to be constructed with an east leg in this horizon. The westbound Road 1 approach should be stop-controlled with one lane for shared left/right turning movements while the northbound approach should operate well with a through/right-turn lane and the southbound approach should provide a separate left-turn lane. The Road 1 & Louisiana Parkway (#14) internal intersection is also anticipated to be constructed as a 'T'-intersection in this horizon and as such, stop control should be provided on the northbound Louisiana Parkway approach. Each approach to the intersection should operate well with one lane in each direction for all applicable turning movements.

2033 (Filing 6 – Full Buildout) Results

At the Mississippi Avenue & Harvest Road East (#8) intersection, two through lanes northbound and southbound should be provided at this horizon year if not previously provided. In like manner, if two through lanes in the northbound and southbound direction along Harvest Road were not provided previously at Alameda Avenue (#1) and Mississippi Avenue (#3), two through lanes should be provided by this horizon, while the Alameda Avenue & Harvest Road (#1) intersection should also provide separate northbound and southbound right-turn lanes. Two through lanes eastbound and westbound through the Jewell Avenue & Powhaton Road (#7) intersection are also recommended by this horizon, while a separate westbound right-turn lane at Jewell Avenue & Louisiana Parkway (#18) should be provided.

The internal Road 1 & Louisiana Parkway (#14) intersection is anticipated to be constructed with a north leg in Filing 6 construction. When this occurs, it would be recommended to convert the

stop control to occur on the eastbound and westbound Road 1 approaches while northbound and southbound Louisiana Parkway would operate with free movement. All four approaches to the intersection are anticipated to operate well with one lane for shared left/through/right-turning movements in each direction.

Table 10 – Future Proposed Intersections and Project Accesses LOS Results

Control	Intersection Movement	2026 Total				2027 Total				2028 Total				2029 Total				2031 Total				2033 Total			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Mississippi Ave & Harvest Rd East (#8)																									
Signalized	Overall	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10.5	B	8.3	A	10.1	B	6.2	A
	Westbound Approach	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	41.8	D	43.6	D	40.9	D	42.4	D
	Northbound Approach	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.0	A	2.3	A	4.3	A	0.4	A
	Southbound Approach	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.1	A	4.4	A	4.2	A	3.5	A
Mississippi Ave & Powhatan Rd (#9)																									
TWSC	Northbound Left	-	-	-	-	-	-	-	-	-	-	-	-	8.7	A	9.0	A	-	-	-	-	-	-	-	-
	Eastbound Approach	-	-	-	-	-	-	-	-	-	-	-	-	16.1	C	20.6	C	-	-	-	-	-	-	-	-
Signalized	Overall	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22.1	C	22.5	C	16.8	B	23.2	B
	Eastbound Approach	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	45.1	D	44.0	C	32.2	C	30.3	C
	Westbound Approach	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	45.2	D	44.5	D	33.3	C	32.0	C
	Northbound Approach	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.7	A	10.9	B	10.5	B	21.2	C
	Southbound Approach	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25.4	C	25.0	C	10.6	B	18.4	B
Wyoming PI & Harvest Rd (#10)																									
TWSC	Westbound Approach	8.7	A	8.9	A	9.2	A	9.7	A	9.3	A	9.7	A	9.4	A	9.8	A	10.2	B	11.1	B	11.0	B	11.8	B
Idaho Ave & Harvest Rd (#11)																									
TWSC	Westbound Approach	9.2	A	9.4	A	9.7	A	10.5	B	9.8	A	10.7	B	10.0	A	11.0	B	11.2	B	12.3	B	12.1	B	13.0	B
	Southbound Left	7.4	A	7.4	A	7.5	A	7.8	A	7.6	A	7.8	A	7.6	A	7.9	A	8.2	A	8.9	A	8.6	A	9.2	A
D Street & Harvest Rd (#12)																									
TWSC	Westbound Right	-	-	-	-	9.6	A	10.3	B	9.5	A	10.2	B	9.6	A	10.5	B	10.9	B	12.0	B	10.9	B	12.2	B
	Southbound Left	-	-	-	-	7.5	A	7.8	A	7.4	A	7.8	A	7.5	A	7.9	A	8.0	A	8.8	A	8.3	A	9.0	A
Road 1 & Kewaunee St (#13)																									
TWSC	Westbound Approach	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10.8	B	12.4	B	11.4	B	13.7	B
	Southbound Left	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.6	A	7.9	A	7.7	A	8.1	A
Road 1 & Louisiana Pkwy (#14)																									
TWSC	Northbound Approach/Left	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.1	A	9.0	A	7.5	A	7.6	A
	Eastbound Approach	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	A	0.0	A	10.4	B	11.9	B
	Westbound Approach/Left	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.4	A	7.4	A	10.9	B	11.7	B
	Southbound Left	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.5	A	7.6	A
E Street & Harvest Rd (#15)																									
TWSC	Westbound Left	-	-	-	-	10.8	B	12.6	B	10.6	B	12.4	B	10.8	B	12.7	B	12.2	B	16.0	C	12.6	B	16.6	C
	Westbound Right	-	-	-	-	8.8	A	9.4	A	8.7	A	9.4	A	8.7	A	9.6	A	8.9	A	9.6	A	9.1	A	9.9	A
	Southbound Left	-	-	-	-	7.6	A	8.0	A	7.5	A	7.9	A	7.5	A	8.0	A	8.3	A	9.1	A	8.5	A	9.3	A

Control	Intersection Movement	2026 Total				2027 Total				2028 Total				2029 Total				2031 Total				2033 Total			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Jewell Ave & Kewaunee St (#16)																									
TWSC	Eastbound Left	8.4	A	8.2	A	8.8	A	9.0	A					-	-	-	-	-	-	-	-	-	-	-	-
	Southbound Left	12.8	B	13.7	B	15.0	C	24.6	C					-	-	-	-	-	-	-	-	-	-	-	-
	Southbound Right	11.5	B	10.6	B	12.8	B	11.7	B					-	-	-	-	-	-	-	-	-	-	-	-
Signalized	Overall	-	-	-	-					13.9	B	12.2	B	5.9	A	10.9	B	4.1	A	7.7	A	13.5	B	15.1	B
	Eastbound Approach	-	-	-	-					1.7	A	2.9	A	1.4	A	3.1	A	1.3	A	2.4	A	2.4	A	3.6	A
	Westbound Approach	-	-	-	-					15.7	B	18.0	B	1.1	A	13.7	B	1.4	A	9.3	A	16.6	B	23.2	C
	Northbound Approach	-	-	-	-					27.1	C	24.9	C	31.0	C	27.3	C	29.0	C	27.7	C	32.7	C	31.2	C
	Southbound Approach	-	-	-	-					25.9	C	26.1	C	29.2	C	28.7	C	30.4	C	30.0	C	31.3	C	31.8	C
Jewell Ave & RIRO A (#17)																									
TW SC	Southbound Right	-	-	-	-	-	-	-	-	9.2	A	9.0	A	9.5	A	9.4	A	13.6	B	12.3	B	10.6	B	10.0	B
Jewell Ave & Louisiana Pkwy (#18)																									
TWSC	Northbound Left	-	-	-	-	-	-	-	-	13.0	B	17.1	C	15.8	C	20.5	C	-	-	-	-	-	-	-	-
	Northbound Through/Right	-	-	-	-	-	-	-	-	10.0	A	12.1	B	10.7	B	12.6	B	-	-	-	-	-	-	-	-
	Eastbound Left	-	-	-	-	-	-	-	-	8.3	A	8.4	A	9.0	A	8.9	A	-	-	-	-	-	-	-	-
	Westbound Left	-	-	-	-	-	-	-	-	7.9	A	8.8	A	8.5	A	9.4	A	-	-	-	-	-	-	-	-
	Southbound Left	-	-	-	-	-	-	-	-	13.2	B	14.2	B	15.7	C	16.2	C	-	-	-	-	-	-	-	-
	Southbound Through/Right	-	-	-	-	-	-	-	-	10.8	B	12.4	B	12.2	B	14.3	B	-	-	-	-	-	-	-	-
Signalized	Overall	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12.9	B	9.0	A	15.1	B	16.2	B
	Eastbound Approach	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23.3	C	12.3	B	2.2	A	3.5	A
	Westbound Approach	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.6	A	1.5	A	21.3	C	26.9	C
	Northbound Approach	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	29.7	C	29.3	C	33.7	C	32.9	C
	Southbound Approach	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	26.9	C	27.3	C	27.8	C	28.2	C

5.3 Turn Bay Length Analysis

The City of Aurora generally defaults to the Colorado Department of Transportation (CDOT) State Highway Access Code guidelines to determine if turn lanes are warranted at key intersections and accesses. CDOT classifies their state highways based on roadway types. The Non-Rural Arterial Category NR-C (low to moderate travel speeds and moderate volumes) was assigned to Alameda Avenue and Mississippi Avenue, based on matching the characteristics of the CDOT roadways. The Non-Rural Arterial Category NR-B (moderate travel speed and moderate traffic volumes) was assigned to Jewell Avenue, Harvest Road, and Powhaton Road based on matching the characteristics of the CDOT roadways. All other roadways are based on a minimum recommended 100-foot turn lanes with 100-foot tapers where turn lanes are determined to be needed or recommended operationally. Of note, although a turn lane may be warranted at an intersection, that does not necessarily mean a turn lane should be provided. Careful consideration should be taken to assess provision of turn lanes to prevent overbuilding roadways and thus decreasing safety for drivers, pedestrians, bicyclists, and all other road users.

According to the State Highway Access Code for category NR-B and NR-C roadways the following thresholds apply for an auxiliary lane:

- A left turn lane with storage length plus taper is required for any access with a projected peak hour left ingress turning volume greater than 25 vehicles per hour (vph). If the posted speed limit is greater than 40 miles per hour, a deceleration lane and taper is required for any access with a projected peak hour left ingress turning volume greater than 10 vph. The taper length will be included within the deceleration length.
- A right turn lane with storage length plus taper is required for any access with a projected peak hour right ingress turning volume greater than 50 vehicles per hour (vph). If the posted speed limit is greater than 40 miles per hour, a right turn lane deceleration lane and taper is required for any access with a project peak hour right ingress turning volume greater than 25 vehicles per hour.

Table 11 summarizes if auxiliary turn lanes are warranted along these external roadways where project traffic contributes to the turning movement and if so, the turn lane length requirements are generally based on CDOT State Highway Access Code guidelines. Of note, in some cases where queues are anticipated to remain much smaller than the CDOT recommended lengths at less major intersections, a minimum length of 150 feet was used along the arterial roadways.

Table 11 – Turn Lane Warrant and Length Summary

Movement	2026			2027			2028			2029			2031			2033		
	Volume	Met?	Length	Vol.	Met?	Length	Vol.	Met?	Length	Vol.	Met?	Length	Vol.	Met?	Length	Vol.	Met?	Length
Alameda Ave & Harvest Rd (#1)																		
Eastbound Right	36	N		56	X		55	X		65	X		48	X		66	X	
Westbound Left	12	N		13	X	150'+ 100'T		Y			Y			Y			Y	
Westbound Right	39	N		167	X		167	X		200	X		131	X		133	X	
Northbound Left	30	X		50	Y	275'+ 160'T		Y			Y			Y			Y	
Northbound Right	13	N		14	N		14	N		15	N		100	X		125	Y	275'+ 160'T
Southbound Left	47	Y	300'		Y			Y			Y			Y			Y	
Alameda Ave & Powhatan Rd (#2)																		
Eastbound Left	64	X		105	X		105	Y	150'+ 100'T		Y			Y			Y	
Eastbound Right	59	X		99	X		98	X		129	X		41	N		44	N	
Westbound Left	14	N		37	X		40	Y	150'+ 100'T		Y			Y			Y	
Northbound Left	31	Y	150'		Y			Y			Y			Y			Y	
Northbound Right	16	N		45	N		62	X		55	X		41	N		45	N	
Southbound Right	42	N		97	X		97	Y	150'+ 140'T		Y			Y			Y	

Movement	2026			2027			2028			2029			2031			2033		
	Volume	Met?	Length	Vol.	Met?	Length	Vol.	Met?	Length	Vol.	Met?	Length	Vol.	Met?	Length	Vol.	Met?	Length
Mississippi Ave & Harvest Rd West (#3)																		
Northbound Left	70	Y	C		Y			Y			Y			Y	275'+ 160'T		Y	
Eastbound Right	79	Y	C		Y			Y			Y			Y			Y	
Louisiana Pkwy & Harvest Rd (#4)																		
Northbound Left	33	Y	150'+ 160'T		Y			Y			Y			Y			Y	
Northbound Right	13	N		18	N		23	N		32	X		45	Y	150'+ 160'T		Y	
Southbound Left	12	X	150'+ 160'T		Y			Y			Y			Y			Y	
Southbound Right	1	N		2	N		2	N		3	N		19	N		22	N	
Flat Rock Trail & Harvest Rd (#5)																		
Northbound Left	11	X	150'+ 160'T		Y			Y			Y			Y			Y	
Northbound Right	28	N		48	X		48	X		63	X		76	Y	150'+ 160'T		Y	
Southbound Left	27	Y	150'+ 160'T		Y			Y			Y			Y			Y	
Southbound Right	9	N		9	N		9	N		11	N		19	N		21	N	
Jewell Ave & Harvest Rd (#6)																		
Eastbound Left	104	Y	225'+ 140'T		Y			Y			Y			Y			Y	
Westbound Right	23	N		43	X		46	Y	225'+ 140'T		Y			Y			Y	
Northbound Right	11	N		13	N		15	N		17	N		23	N		29	N	
Southbound Left	21	Y	275'+ 160'T		Y			Y			Y			Y			Y	

Movement	2026			2027			2028			2029			2031			2033		
	Volume	Met?	Length	Vol.	Met?	Length	Vol.	Met?	Length	Vol.	Met?	Length	Vol.	Met?	Length	Vol.	Met?	Length
Southbound Right	79	Y	275'+ 160'T		Y			Y			Y			Y			Y	
Jewell Ave & Powhatan Rd (#7)																		
Eastbound Left	324	Y	225'+ 140'T		Y			Y			Y			Y			Y	
Southbound Right	334	Y	275'+ 160'T		Y			Y			Y			Y			Y	
Mississippi Ave & Harvest Rd East (#8)																		
Westbound Left	-			-			-			-			215	Y	C		Y	
Northbound Right	-			-			-			-			256	Y	C		Y	275'+ 160'T
Mississippi Ave & Powhatan Rd (#9)																		
Eastbound Left	-			-			-			-			51	Y	150'+ 100'T		Y	
Westbound Left	-			-			-			-			102	Y	150'+ 100'T		Y	
Northbound Right	-			-			-			-			104	Y	150'+ 140'T		Y	
Southbound Right	-			-			-			-			46	X	150'+ 140'T		Y	
Wyoming PI & Harvest Rd (#10)																		
Northbound Right	6	N		6	N		6	N		7	N		24	N		24	N	

Movement	2026			2027			2028			2029			2031			2033		
	Volume	Met?	Length	Vol.	Met?	Length	Vol.	Met?	Length	Vol.	Met?	Length	Vol.	Met?	Length	Vol.	Met?	Length
Idaho Ave & Harvest Rd (#11)																		
Northbound Right	8	N		8	N		8	N		16	N		39	N		39	N	
Southbound Left	14	X	150'+ 160'T	-	Y			Y			Y			Y			Y	
D Street & Harvest Rd (#12)																		
Northbound Right	-			18	N		18	N		18	N		39	N		39	N	
Southbound Left	-			17	X	150'+ 160'T		Y			Y			Y			Y	
E Street & Harvest Rd (#15)																		
Northbound Right	-			67	Y	150'+ 160'T		Y			Y			Y			Y	
Southbound Left	-			90	Y	275'+ 160'T		Y						Y			Y	
Jewell Ave & Kewaunee St (#16)																		
Eastbound Left	28	Y	225'+ 140'T		Y			Y			Y			Y			Y	
Westbound Right	15	X	225'+ 140'T		Y			Y			Y			Y			Y	
Jewell Ave & Road 2 (#17)																		
Westbound Right	-	-	-	-	-	-	-	-	-	-	-	-	20	N		24	N	
Jewell Ave & Louisiana Pkwy (#18)																		
Eastbound Left	-			-			-			-			48	Y	225'+ 140'T		Y	
Westbound Right	-			-			-			-			21	N		31	Y	225'+ 140'T

Y = Yes; N = No; X = Explanation Provided Below

2026 (Filing 1) Turn Lane Evaluation

- Alameda Avenue & Harvest Road (#1): westbound right turn lane not provided because the westbound through volumes are low and the higher volume in this horizon is not a permanent condition. It is also not needed operationally.
- Alameda Avenue & Powhaton Road (#2): eastbound right turn lane not provided because the eastbound through volumes are low and the higher volume in this horizon is not a permanent condition. It is also not needed operationally.
- Flat Rock Trail & Harvest Road (#5): northbound right turn lane not yet provided because the northbound through volumes are fairly low and it is not needed operationally.
- Jewell Avenue & Harvest Road (#6): westbound right turn lane not yet shown because it is not needed operationally. However, it is anticipated to be provided by 2028, so it could be implemented immediately upon completion of Filing 1 development.

2027 (Filing 2) Turn Lane Evaluation

- Alameda Avenue & Harvest Road (#1): eastbound right, westbound left, and westbound right turn lanes not needed operationally, but westbound left-turn lane will be provided.
- Alameda Avenue & Powhaton Road (#2): eastbound left, eastbound right, westbound left, and southbound right-turn lanes not needed operationally. Some of these volumes are only this high for temporary horizon until Harvest Road extension is built, while the eastbound left and westbound left-turn lanes will be provided in future years.
- Flat Rock Trail & Harvest Road (#5): northbound right-turn lane not needed operationally but is provided in the 2029 horizon.
- Jewell Avenue & Harvest Road (#6): westbound right turn lane not yet shown because it is not needed operationally. However, it is anticipated to be provided by 2028, so it could be implemented immediately upon completion of Filing 1 development.
- D Street & Harvest Road (#12): southbound left-turn lane not yet warranted but will be in future years and is recommended with Filing 2 construction.

2028 (Filing 3) Turn Lane Evaluation

- Alameda Avenue & Harvest Road (#1): eastbound and westbound right turn lanes not provided because the eastbound and westbound through volumes are low and the higher volume in this horizon is not a permanent condition. It is also not needed operationally.
- Alameda Avenue & Powhatan Road (#2): eastbound right turn lane not provided because the eastbound through volumes are low and the higher volume in this horizon is not a permanent condition. It is also not needed operationally. Northbound right turn lane not provided for this same reason.
- Flat Rock Trail & Harvest Road (#5): northbound right turn lane not yet provided because the northbound through volumes are fairly low and it is not needed operationally.

2029 (Filing 4) Turn Lane Evaluation

- Alameda Avenue & Harvest Road (#1): westbound right turn lane not provided because the westbound through volumes are low and the higher volume in this horizon is not a permanent condition. It is also not needed operationally.
- Alameda Avenue & Powhatan Road (#2): eastbound right turn lane not provided because the eastbound through volumes are low and the higher volume in this horizon is not a permanent condition. It is also not needed operationally. Northbound right turn lane not provided for this same reason.
- Louisiana Parkway & Harvest Road (#4): northbound right turn lane not yet provided because the northbound through volumes are fairly low and it is not needed operationally.
- Flat Rock Trail & Harvest Road (#5): northbound right turn lane not yet provided because the northbound through volumes are fairly low and it is not needed operationally.

2031 (Filing 5) Turn Lane Evaluation

- Alameda Avenue & Harvest Road (#1): eastbound right turn lane not provided because of anticipated right-of-way constraints, and it is not needed operationally. Westbound right turn lane not provided because the westbound through volume is low and it is not needed operationally. Northbound right turn lane not yet provided because it is not needed operationally.
- Mississippi Avenue & Powhatan Road (#9): southbound right-turn lane provided although slightly below thresholds as it would likely be needed soon after this horizon year.

2033 (Filing 6) Turn Lane Evaluation

- Alameda Avenue & Harvest Road (#1): eastbound right turn lane not provided because of anticipated right-of-way constraints, and it is not needed operationally. Westbound right turn lane not provided because the westbound through volume is low and it is not needed operationally.

5.4 Vehicle Queuing Analysis

A vehicle queuing analysis was conducted for the study area intersections. The queuing analysis was performed using Synchro presenting the results of the 95th percentile queue lengths. Results are shown in the following **Table 12** with calculations provided within the level of service operational sheets of **Appendix E** for unsignalized intersections and **Appendix F** for signalized intersections. Turn lane and taper lengths are generally based on CDOT standard with a minimum recommended turn lane length of 150 feet along external roadways and 100 feet for internal roadways with recommended taper lengths based on CDOT standard for external roadways in conjunction with the speed limit along each roadway with a minimum of a 100-foot taper.

Table 12 – Turn Lane Queuing Analysis Results

Intersection Turn Lane	Existing Turn Lane Length (feet)	2026 Calculated Queue (feet)	2026 Recommended Length (feet)	2027 Calc. Queue (feet)	2027 Rec. Length (feet)	2028 Calc. Queue (feet)	2028 Rec. Length (feet)	2029 Calc. Queue (feet)	2029 Rec. Length (feet)	2031 Calc. Queue (feet)	2031 Rec. Length (feet)	2033 Calc. Queue (feet)	2033 Rec. Length (feet)
Alameda & Harvest (#1)													
Eastbound Left	DNE	-	-	-	150+120 T	25	150+120 T	84	150+120 T	88	150+120 T	81	150+120 T
Westbound Left	DNE	-	-	-	150+120 T	25	150+120 T	25	150+120 T	126	150+120 T	111	150+120 T
Northbound Left	DNE	-	-	-	275+160 T	25	275+160 T	40	275+160 T	25	275+160 T	25	275+160 T
Northbound Right	-	-	-	-	-	-	-	-	-	-	-	25	275+160 T
Southbound Left	300	25	300	125	300	125	300	139	300	80	300	92	300
Southbound Right	DNE	-	-	-	-	-	-	-	-	-	-	25	275+160 T
Alameda & Powhaton (#2)													
Eastbound Left	DNE	-	-	-	-	75	150+100 T	117	150+100 T	137	150+100 T	162	150+100 T
Westbound Left	DNE	-	-	-	-	25	150+100 T	51	150+100 T	57	150+100 T	59	150+100 T
Northbound Left	150	25	150	25	150	25	150	25	150	25	150	25	150
Southbound Left	225	25	225	25	225	25	225	25	225	32	225	47	225
Southbound Right	DNE	-	-	-	-	0	150+140 T	30	150+140 T	27	150+140 T	28	150+140 T
Mississippi & Harvest West (#3)													
Eastbound Left	DNE	-	-	-	-	-	-	-	-	275	C	282	C
Eastbound Right	DNE	-	-	-	-	-	-	-	-	40	C	43	C
Northbound Left	DNE	-	-	-	-	-	-	-	-	29	275+160 T	53	275+160 T
Southbound Right	DNE	-	-	-	-	-	-	-	-	25	275+160 T	25	275+160 T
Louisiana & Harvest (#4)													
Eastbound Left	DNE	-	-	-	-	-	-	-	-	39	100+100 T	51	100+100 T
Westbound Left	DNE	-	-	-	-	-	-	-	-	36	100+100 T	42	100+100 T
Northbound Left	DNE	25	150+160 T	25	150+160 T	25	150+160 T	25	150+160 T	25	150+160 T	25	150+160 T
Northbound Right	DNE	-	-	-	-	-	-	-	-	25	150+160 T	25	150+160 T
Southbound Left	DNE	25	150+160 T	25	150+160 T	25	150+160 T	25	150+160 T	25	150+160 T	25	150+160 T
Flat Rock & Harvest (#5)													
Eastbound Left	DNE	-	-	-	-	-	-	-	-	34	100+100 T	39	100+100 T
Westbound Left	DNE	-	-	-	-	-	-	-	-	73	100+100 T	88	100+100 T
Northbound Left	DNE	25	150+160 T	25	150+160 T	25	150+160 T	25	150+160 T	25	150+160 T	25	150+160 T
Northbound Right	DNE	-	-	-	-	-	-	25	150+160 T	25	150+160 T	25	150+160 T
Southbound Left	DNE	25	150+160 T	25	150+160 T	25	150+160 T	25	150+160 T	25	150+160 T	25	150+160 T
Jewell & Harvest (#6)													
Eastbound Left	125	39	225+140 T	61	225+140 T	87	225+140 T	106	225+140 T	151	DL C / 225 + 140 T	176	DL C / 225 + 140 T
Eastbound Right	DNE	25	C	25	C	25	C	25	225+140 T	25	225+140 T	25	225+140 T
Westbound Left	DNE	25	225+140 T	25	225+140 T	25	225+140 T	25	225+140 T	25	225+140 T	25	225+140 T
Westbound Right	DNE	-	-	-	-	25	225+140 T	25	225+140 T	25	225+140 T	25	225+140 T
Northbound Left	DNE	41	150+100 T	48	150+100 T	56	150+100 T	72	150+100 T	92	150+100 T	125	150+100 T
Southbound Left	DNE	30	275+160 T	48	275+160 T	49	275+160 T	51	275+160 T	124	275+160 T	121	275+160 T
Southbound Right	DNE	36	275+160 T	49	275+160 T	50	275+160 T	52	275+160 T	25	C FREE	25	C FREE
Jewell & Powhaton (#7)													
Eastbound Left	DNE	25	225+140 T	50	225+140 T	155	225+140 T	123	DL C / 225+140 T	204	DL C / 225+140 T	150	DL 225+140 T
Westbound Right	DNE	-	-	-	-	37	225+140 T	38	225+140 T	41	225+140 T	51	225+140 T
Southbound Left	DNE	25	275+160 T	75	275+160 T	103	275+160 T	62	275+160 T	173	C	163	C
Southbound Right	DNE	50	C	100	C	76	C FREE	110	C FREE	135	C FREE	254	C FREE
Mississippi & Harvest East (#8)													
Westbound Left	DNE	-	-	-	-	-	-	-	-	177	C	193	C
Westbound Right	DNE	-	-	-	-	-	-	-	-	28	150+100 T	30	150+100 T
Northbound Right	DNE	-	-	-	-	-	-	-	-	25	C	34	275+160 T
Southbound Left	DNE	-	-	-	-	-	-	-	-	25	275+160 T	25	275+160 T

Intersection Turn Lane	Existing Turn Lane Length (feet)	2026 Calculated Queue (feet)	2026 Recommended Length (feet)	2027 Calc. Queue (feet)	2027 Rec. Length (feet)	2028 Calc. Queue (feet)	2028 Rec. Length (feet)	2029 Calc. Queue (feet)	2029 Rec. Length (feet)	2031 Calc. Queue (feet)	2031 Rec. Length (feet)	2033 Calc. Queue (feet)	2033 Rec. Length (feet)
Mississippi & Powhaton (#9)													
Eastbound Left	DNE	-	-	-	-	-	-	-	-	65	150+100 T	85	150+100 T
Westbound Left	DNE	-	-	-	-	-	-	-	-	107	150+100 T	141	150+100 T
Northbound Left	DNE	-	-	-	-	-	-	25	150+140 T	25	150+140 T	25	150+140 T
Northbound Right	DNE	-	-	-	-	-	-	-	-	25	150+140 T	25	150+140 T
Southbound Left	DNE	-	-	-	-	-	-	-	-	33	150+140 T	25	150+140 T
Southbound Right	DNE	-	-	-	-	-	-	-	-	25	150+140 T	25	150+140 T
Idaho Ave & Harvest (#11)													
Southbound Left	DNE	25	150+160 T	25	150+160 T	25	150+160 T	25	150+160 T	25	150+160 T	25	150+160 T
D Street & Harvest (#12)													
Southbound Left	DNE	-	-	25	150+160 T	25	150+160 T	25	150+160 T	25	150+160 T	25	150+160 T
E Street & Harvest (#15)													
Westbound Left	DNE	-	-	25	C	25	C	50	C	25	C	25	C
Westbound Right	DNE	-	-	25	100+100 T	25	100+100 T	25	100+100 T	25	100+100 T	25	100+100 T
Southbound Left	DNE	-	-	25	275+160 T	25	275+160 T	25	275+160 T	25	275+160 T	25	275+160 T
Kewaunee St & Road 1 (#13)													
Southbound Left	DNE	-	DNE	-	DNE	-	DNE	25	100+100 T	25	100+100 T	25	100+100 T
Jewell & Kewaunee St (#16)													
Eastbound Left	DNE	25	225+140 T	25	225+140 T	31	225+140 T	31	225+140 T	25	225+140 T	27	225+140 T
Westbound Left	DNE	-	-	-	-	25	225+140 T	25	225+140 T	25	225+140 T	25	225+140 T
Westbound Right	DNE	-	-	25	225+140 T	25	225+140 T	25	225+140 T	25	225+140 T	25	225+140 T
Northbound Left	DNE	-	-	-	-	69	150+100 T	82	150+100 T	93	150+100 T	151	150+100 T
Southbound Left	DNE	25	100+100 T	50	100+100 T	110	100+100 T	121	100+100 T	88	100+100 T	99	100+100 T
Southbound Right	DNE	25	C	25	-	-	-	-	-	-	-	-	-
Jewell & Louisiana (#18)													
Eastbound Left	DNE	-	-	-	-	25	225+140 T	25	225+140 T	25	225+140 T	25	225+140 T
Westbound Left	DNE	-	-	-	-	25	225+140 T	25	225+140 T	25	225+140 T	25	225+140 T
Westbound Right	DNE	-	-	-	-	-	-	-	-	-	-	25	225+140 T
Northbound Left	DNE	-	-	-	-	50	150+100 T	78	150+100 T	99	150+100 T	155	150+100 T
Southbound Left	DNE	-	-	-	-	25	100+100 T	25	100+100 T	36	100+100 T	46	100+100 T

DNE = Does Not Exist; C = Continuous Turn Lane; T = Taper Length; DL = Dual Left Turn Lanes; FREE = Free Right Turn Lane; Blue Text = Recommendation

Vehicle queues are all anticipated to remain within the existing or recommended turn lane lengths through the 2033 horizon at full buildout of the project.

5.5 Pedestrian Connectivity/Safety and Traffic Calming

Sidewalks will be provided along the project's frontage on Jewell Avenue, Harvest Road, and Powhatan Road. In addition, sidewalks will be constructed within the development along public and local roadways to connect the residential to the retail/school uses and vice versa. The major internal intersections should be constructed with ADA ramps and crosswalk pavement markings. A proposed K-8 School along the northeast corner of the Road 1 & Flat Rock Trail (#13) intersection will provide additional school zone signs and warnings. S1-1 School Advance Warning signs could be placed prior to all approaches of this intersection. In addition, a school speed limit assembly could be placed along the school's frontage roads to warn vehicles of a lower speed limit when school is in session. A S4-3 SCHOOL sign with a R2-1 SPEED LIMIT 15/20 and a S4-1 School Times are typically placed near schools. Additional midblock crossings may be needed west of the school along Road 1, Flat Rock Trail internal to the site, and other roadways as appropriate. Pedestrian crosswalk pavement markings and the S1-1 and a W16-7p downward diagonal arrow should be placed near these midblock crossings.

Speed cushions, chicanes, lane narrowing, and compact roundabouts are not expected to be necessary internal to the project site.

The Federal Highway Administration (FHWA) Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations should be used as guidance during design implementation of uncontrolled locations. Uncontrolled pedestrian crossing locations occur where sidewalks or designated walkways intersect a roadway at a location where no traffic control is present. Uncontrolled pedestrian crossing locations correspond to higher pedestrian crash rates, often due to inadequate pedestrian crossing accommodations. Safe Transportation for Every Pedestrian (STEP) program promotes the following six effective and lower-cost countermeasures that communities can deploy based on their specific needs:

- Crosswalk visibility enhancements (i.e., high-visibility crosswalk markings, parking restriction on crosswalk approach, improved lighting, advance Yield Here To [Stop Here

For] Pedestrians sign and yield [stop] line, In- Street Pedestrian Crossing sign, and curb extension).

- Raised crosswalk.
- Pedestrian refuge island.
- Pedestrian Hybrid Beacon (PHB).
- Road Diet.
- Rectangular Rapid-Flashing Beacon (RRFB).

As identified previously, near the school, crosswalk visibility will need to be enhanced to provide a safe and comfortable connection from the surrounding residential homes to the school for the students. It is not believed raised crosswalks, refuge islands, PHB, RRFB, or road diets will be needed near the school or on the internal intersections. These recommendations are consistent with the surrounding residential developments to the north and east.

5.6 Improvement Summary

Based on the results of the intersection operational and vehicle queuing analysis, the key intersection recommended improvements and control are shown in **Figure 24** through **29** for the 2026, 2027, 2028, 2029, 2031, and 2033 horizon years, respectively.

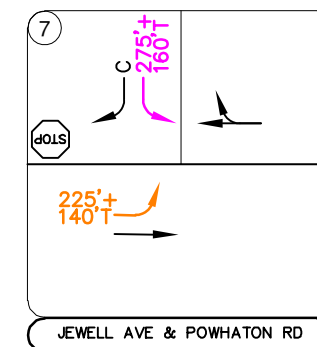
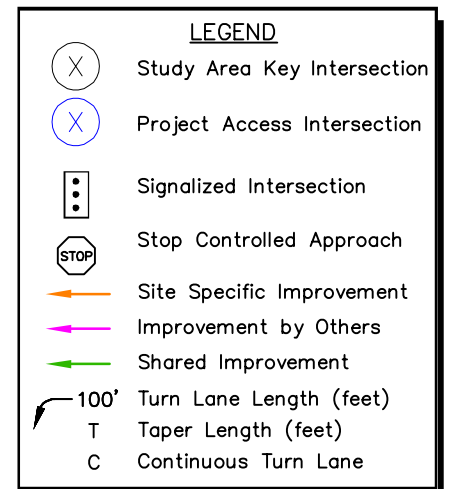
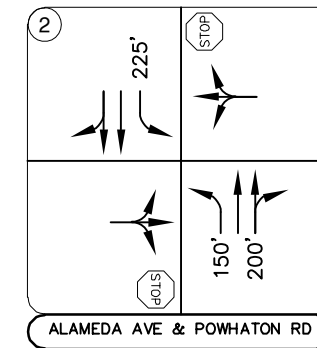
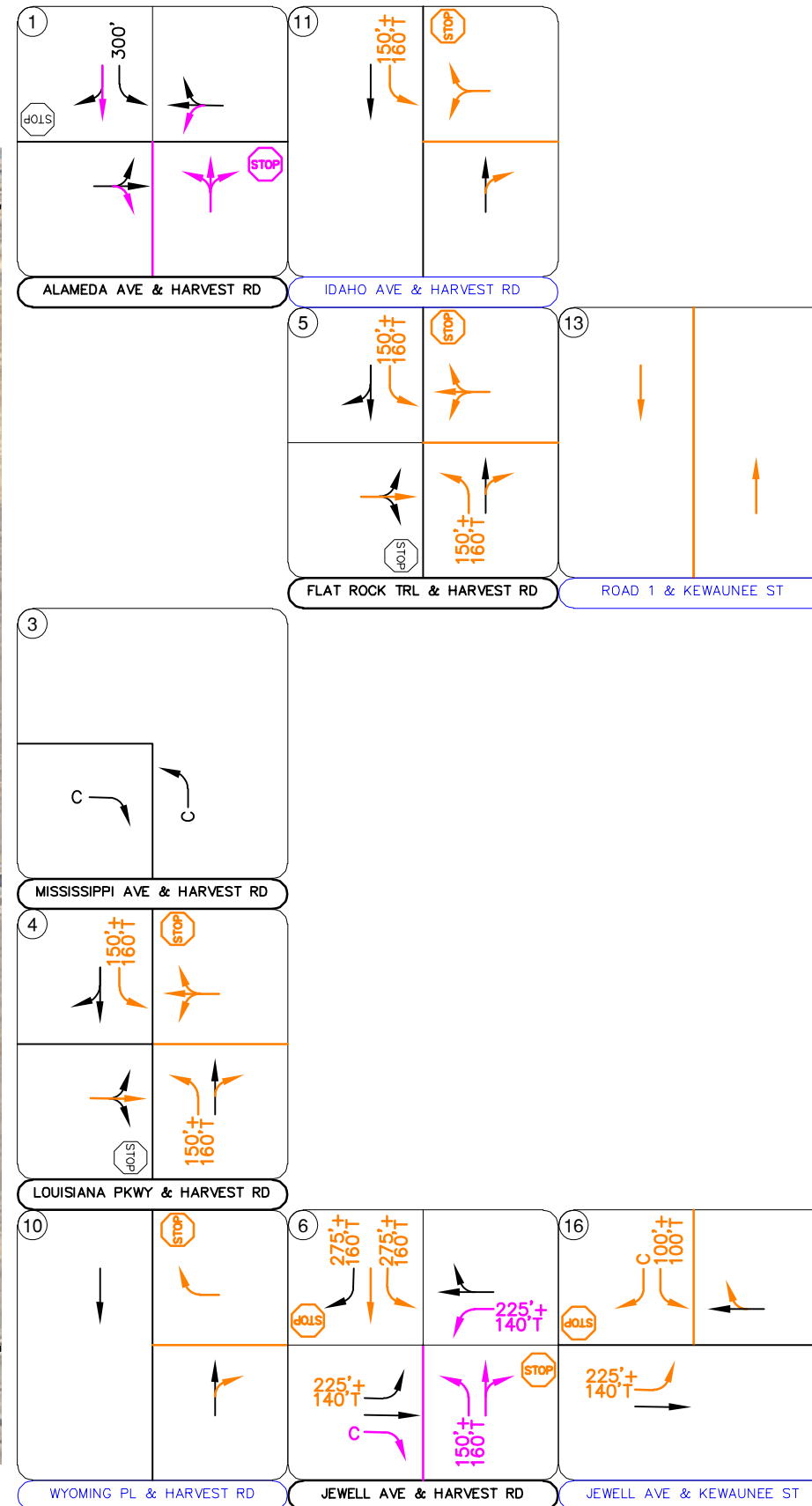
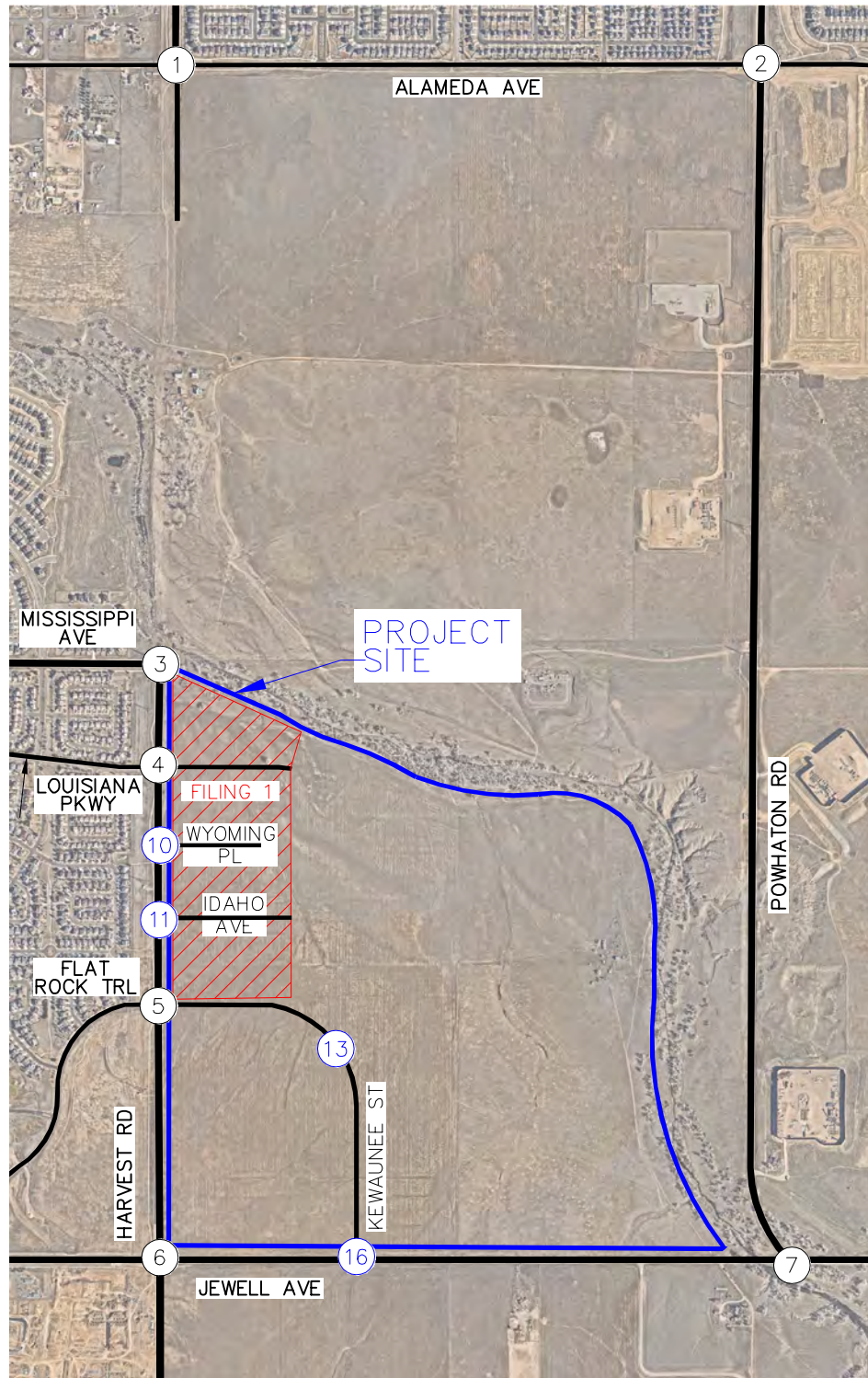
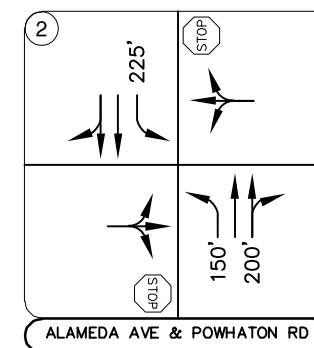
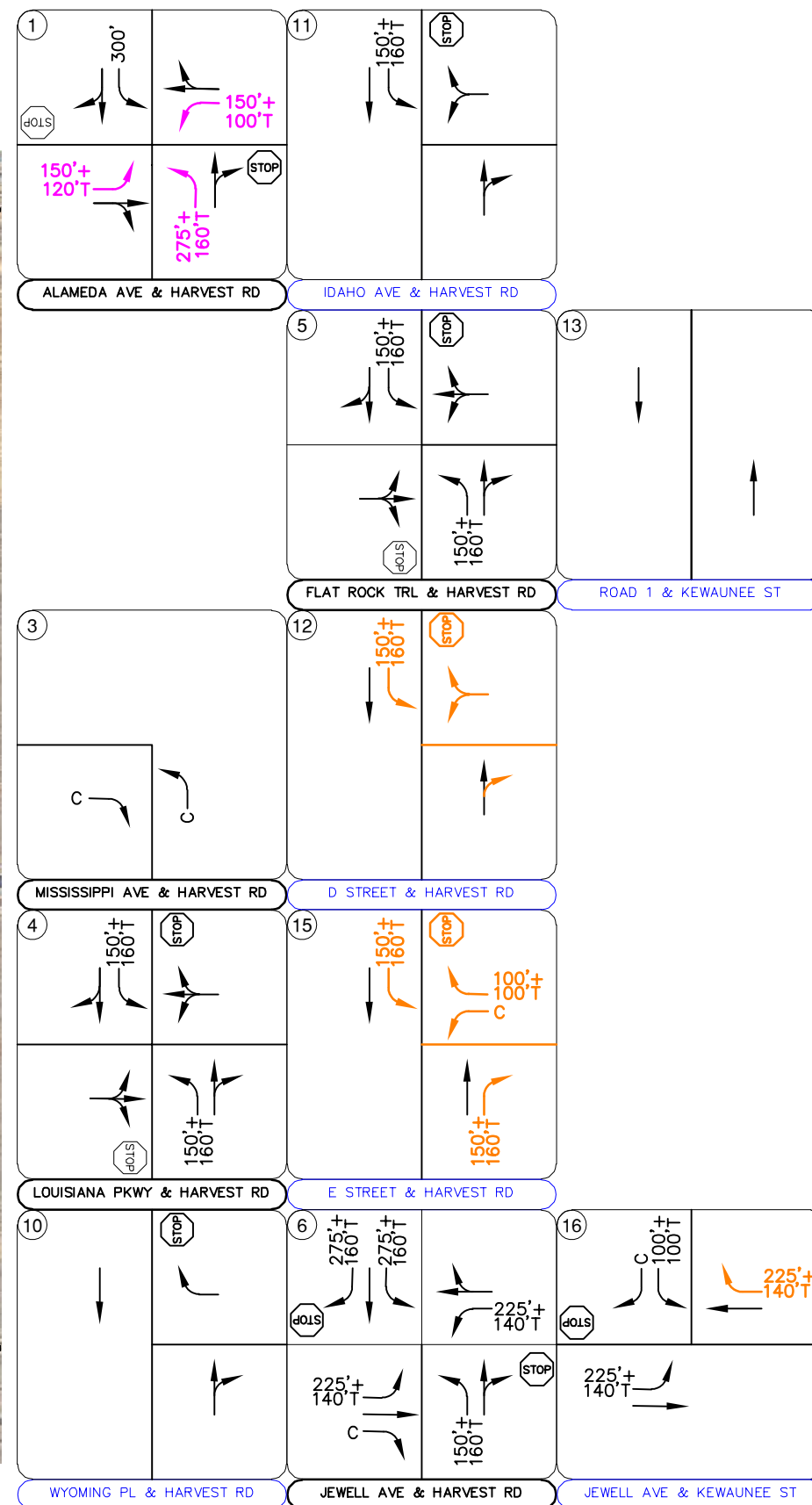
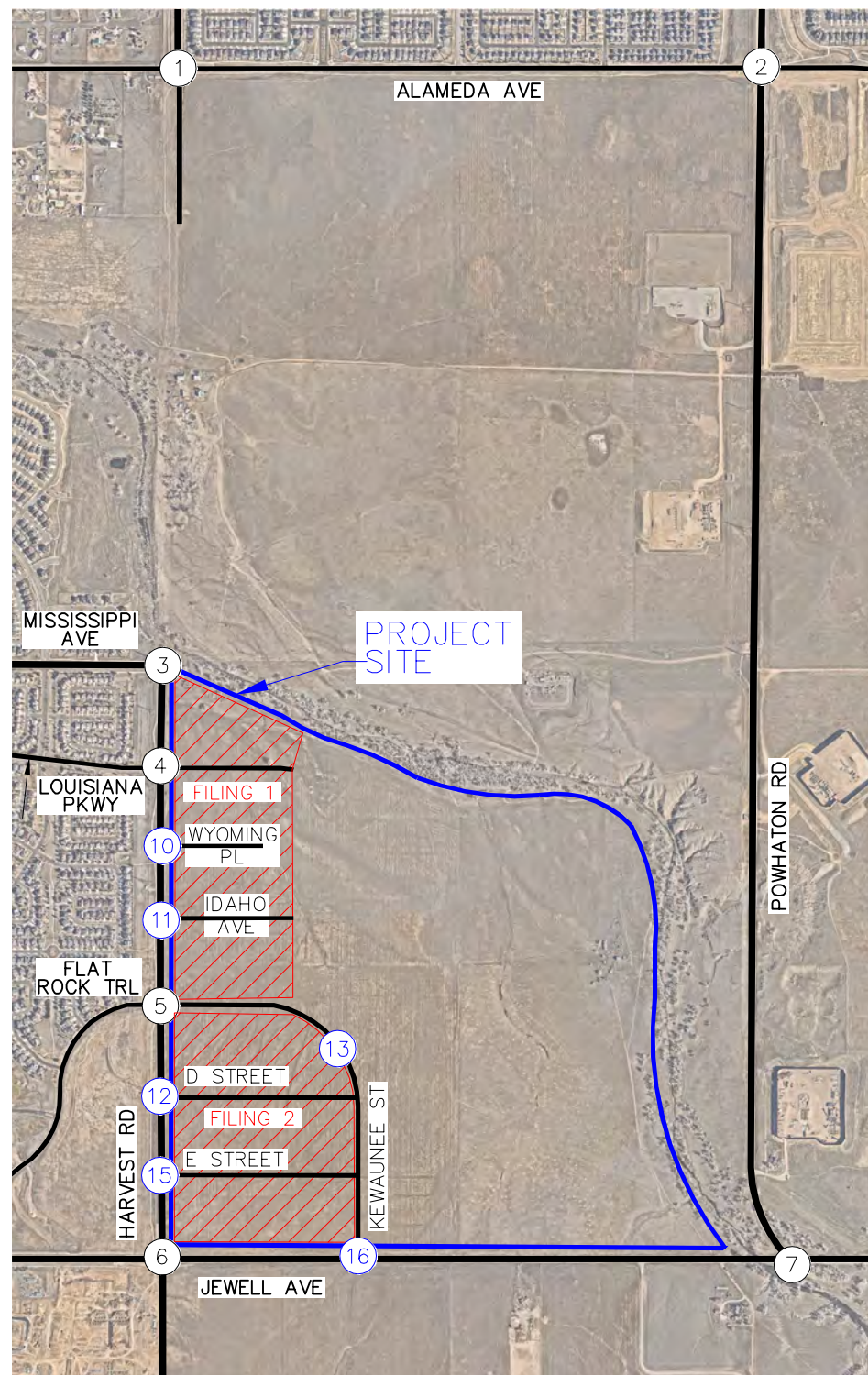


FIGURE 24
PARKLANDS VILLAGE 1
AURORA, COLORADO
2026 RECOMMENDED GEOMETRY AND CONTROL



LEGEND	
(X)	Study Area Key Intersection
(X)	Project Access Intersection
[Signalized Symbol]	Signalized Intersection
[Stop Sign]	Stop Controlled Approach
[Orange Arrow]	Site Specific Improvement
[Pink Arrow]	Improvement by Others
[Green Arrow]	Shared Improvement
100'	Turn Lane Length (feet)
T	Taper Length (feet)
C	Continuous Turn Lane

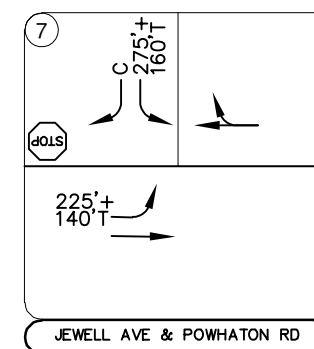
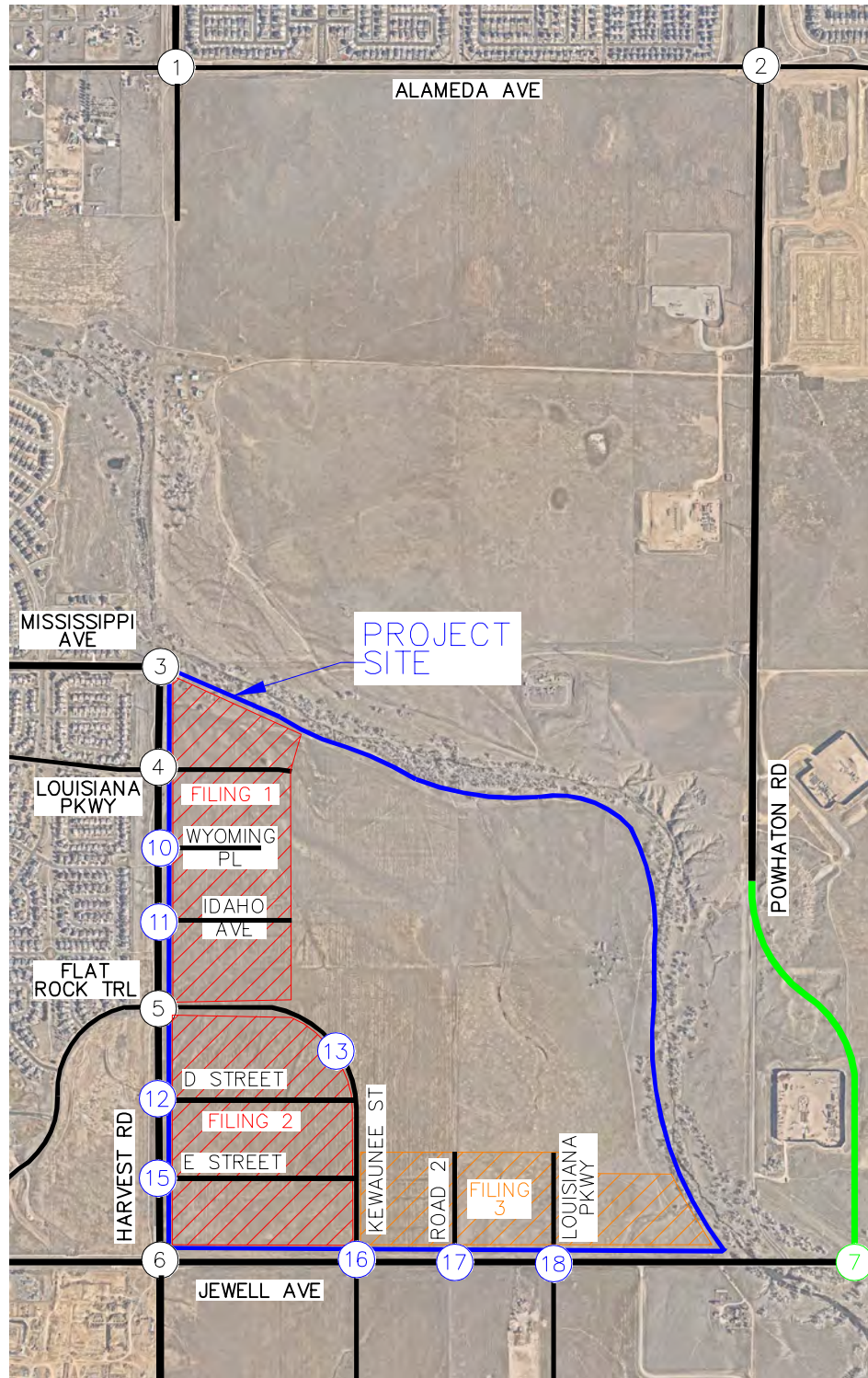


FIGURE 25
PARKLANDS VILLAGE 1
AURORA, COLORADO
2027 RECOMMENDED GEOMETRY AND CONTROL



Legend:

- (X) Study Area
- (X) Project Area
- [Signalized] Signalized Intersection
- [STOP] Stop Control
- [Orange Arrow] Site Specific Improvement
- [Pink Arrow] Improvement
- [Green Arrow] Shared Improvement
- 100' Turn Lane
- T Taper Length
- C Continuous

Intersection Diagrams:

- ALAMEDA AVE & HARVEST RD**: 150' + 120' T, 275' + 160' T, 150' + 100' T, 300'.
- ALAMEDA AVE & POWHATON RD**: 150' + 140' T, 225', 150' + 100' T, 150' + 100' T, 150' + 200'.
- MISSISSIPPI AVE & HARVEST RD**: C, C.
- LOUISIANA PKWY & HARVEST RD**: 150' + 160' T, 150' + 160' T, 150' + 160' T, 150' + 160' T.
- IDAHO AVE & HARVEST RD**: 150' + 160' T, 150' + 160' T, 150' + 160' T, 150' + 160' T.
- JEWELL AVE & HARVEST RD**: 275' + 160' T, 275' + 160' T, 225' + 140' T, 150' + 160' T.
- JEWELL AVE & KAWAUNEE ST**: 225' + 140' T, 225' + 140' T, 150' + 100' T, 150' + 100' T.
- JEWELL AVE & ROAD 2**: 225' + 140' T, 225' + 140' T, 150' + 100' T, 150' + 100' T.
- JEWELL AVE & LOUISIANA PKWY**: 225' + 140' T, 225' + 140' T, 150' + 100' T, 150' + 100' T.
- JEWELL AVE & POWHATON RD**: 225' + 140' T, 225' + 140' T, 150' + 160' T, 150' + 160' T.
- FLAT ROCK TRL & HARVEST RD**: 150' + 160' T, 150' + 160' T, 150' + 160' T, 150' + 160' T.
- D STREET & HARVEST RD**: 150' + 160' T, 150' + 160' T, 150' + 160' T, 150' + 160' T.
- E STREET & HARVEST RD**: 150' + 160' T, 150' + 160' T, 150' + 160' T, 150' + 160' T.
- ROAD 1 & KAWAUNEE ST**: 150' + 160' T, 150' + 160' T, 150' + 160' T, 150' + 160' T.

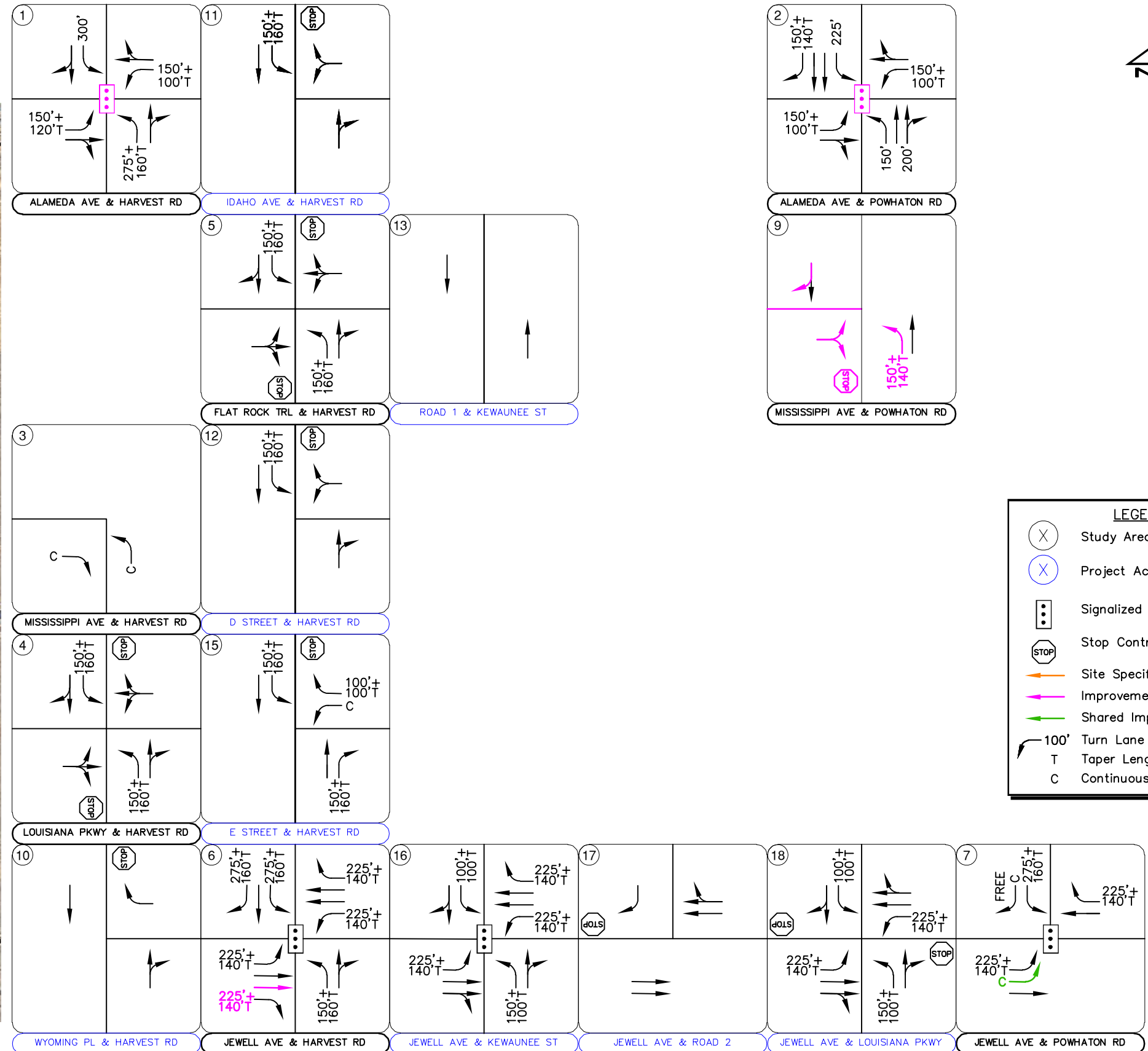
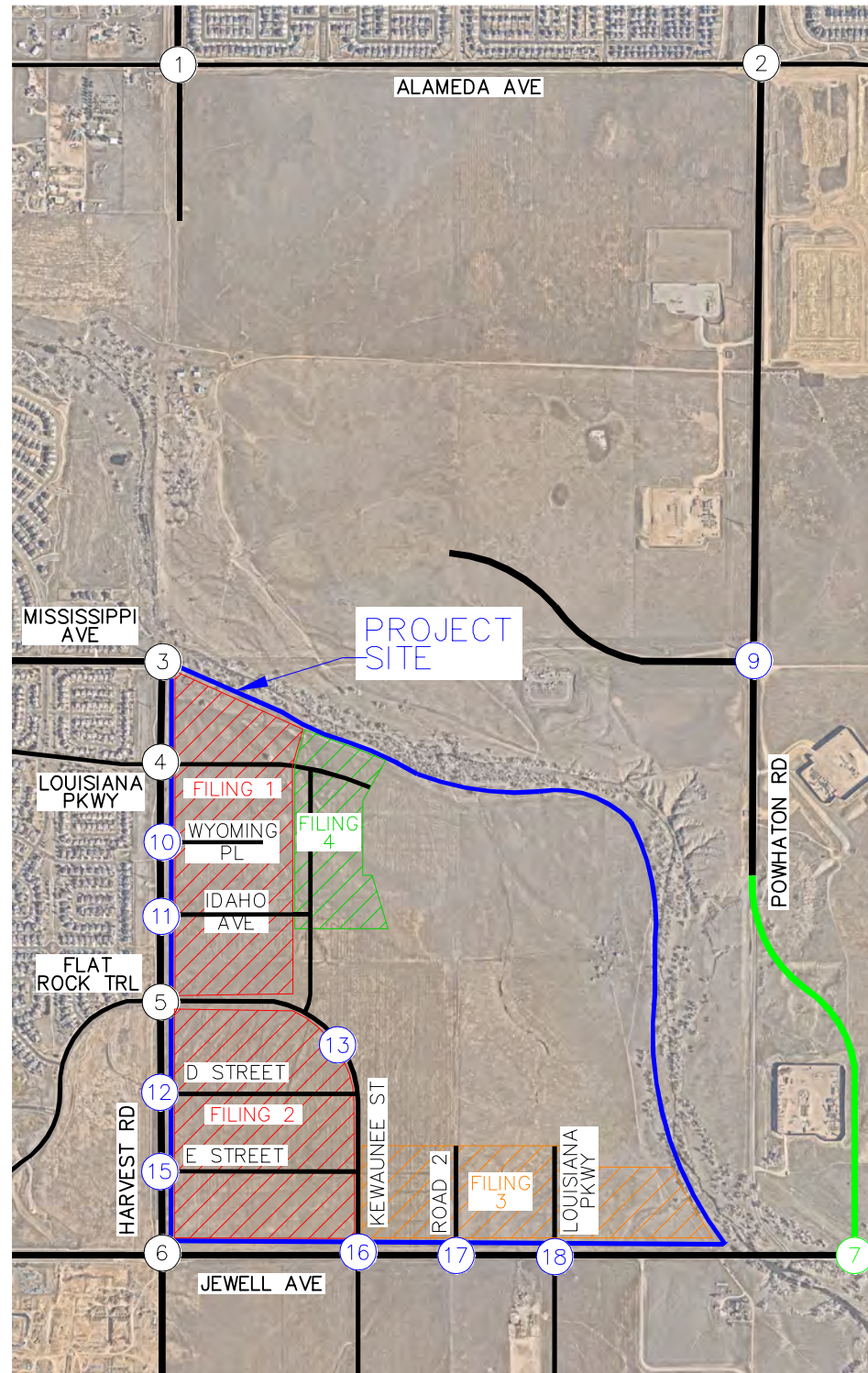


FIGURE 27
PARKLANDS VILLAGE 1
AURORA, COLORADO
2029 RECOMMENDED GEOMETRY AND CONTROL

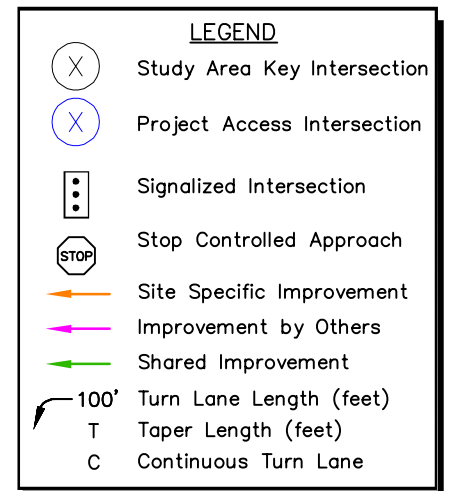
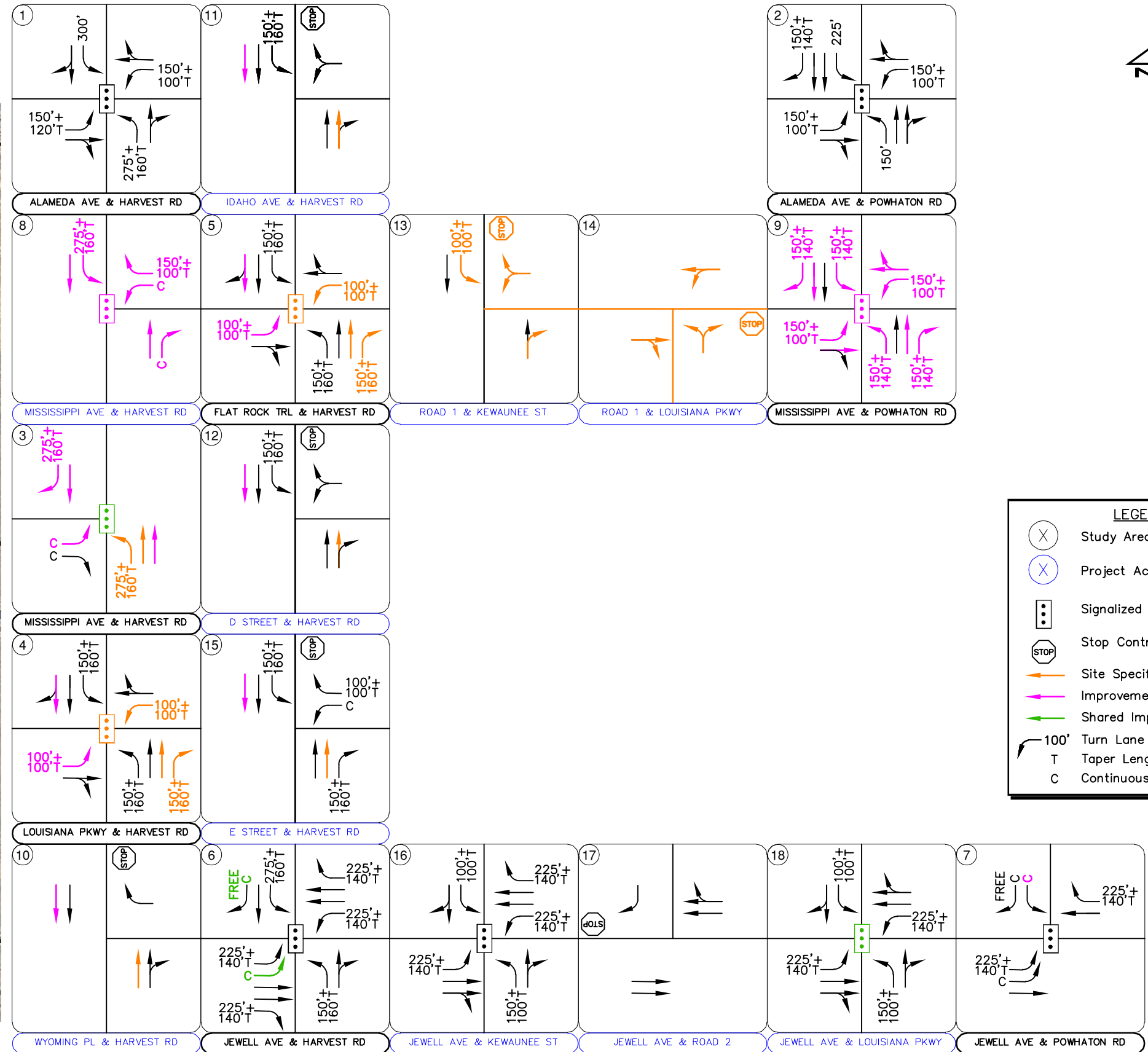
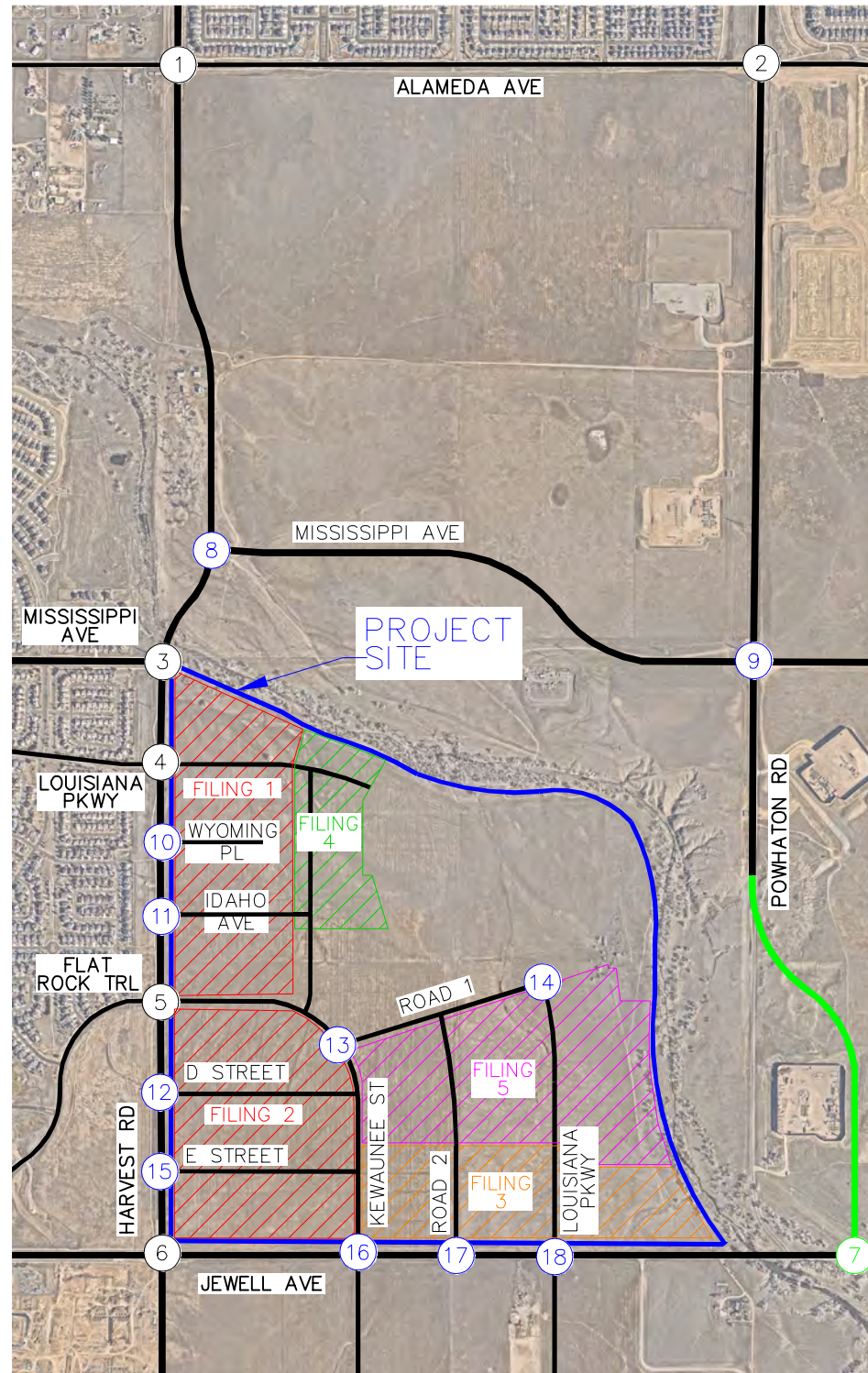


FIGURE 28
PARKLANDS VILLAGE 1
AURORA, COLORADO
2031 RECOMMENDED GEOMETRY AND CONTROL

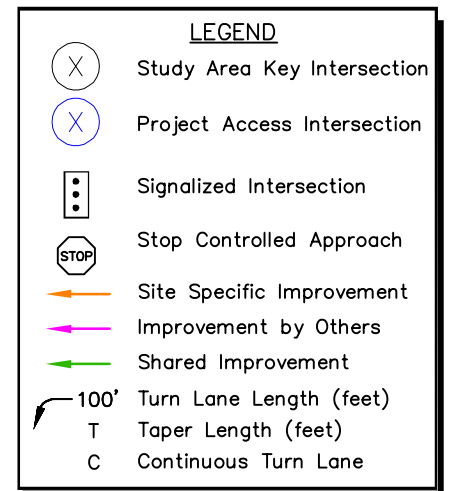
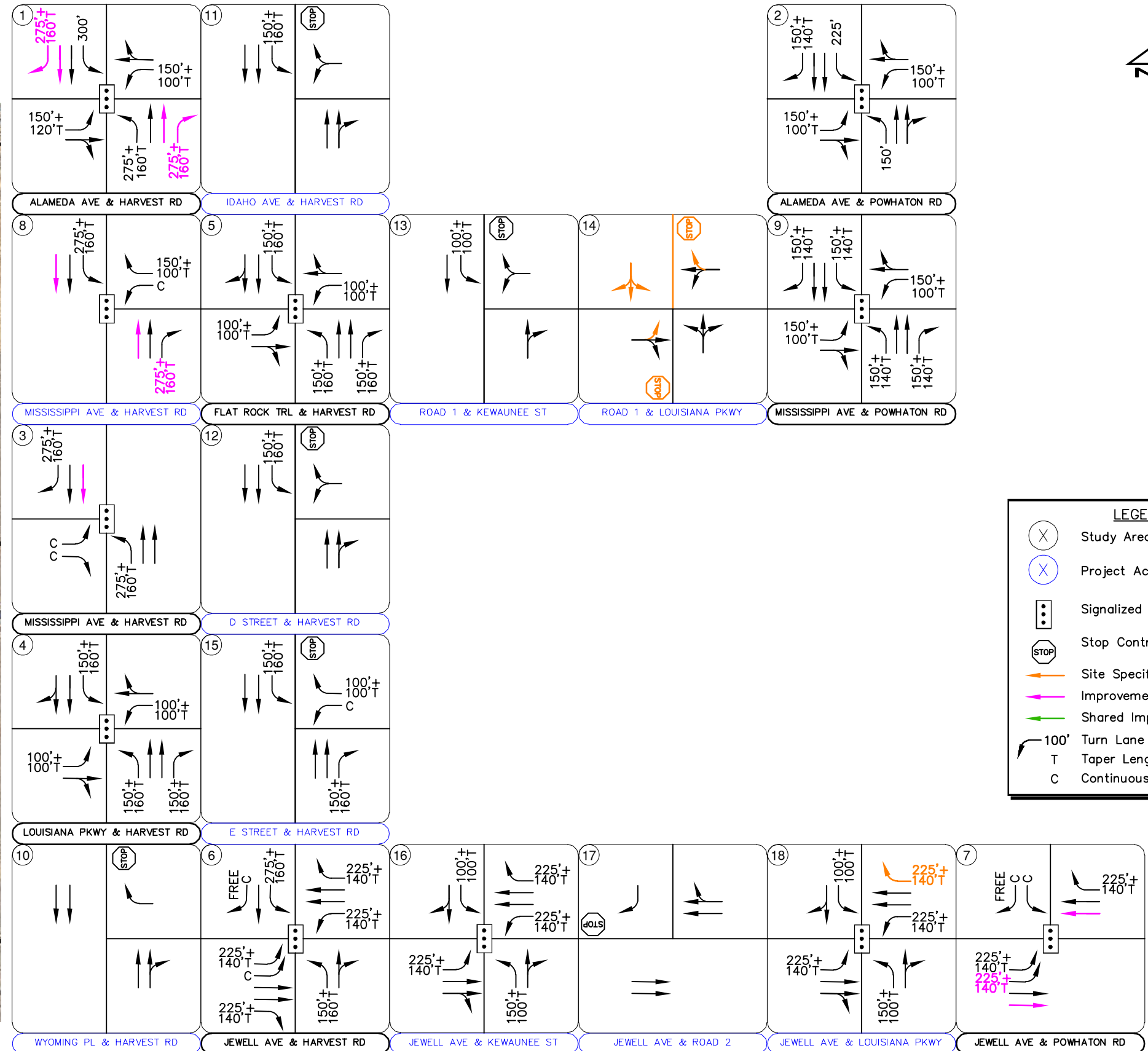
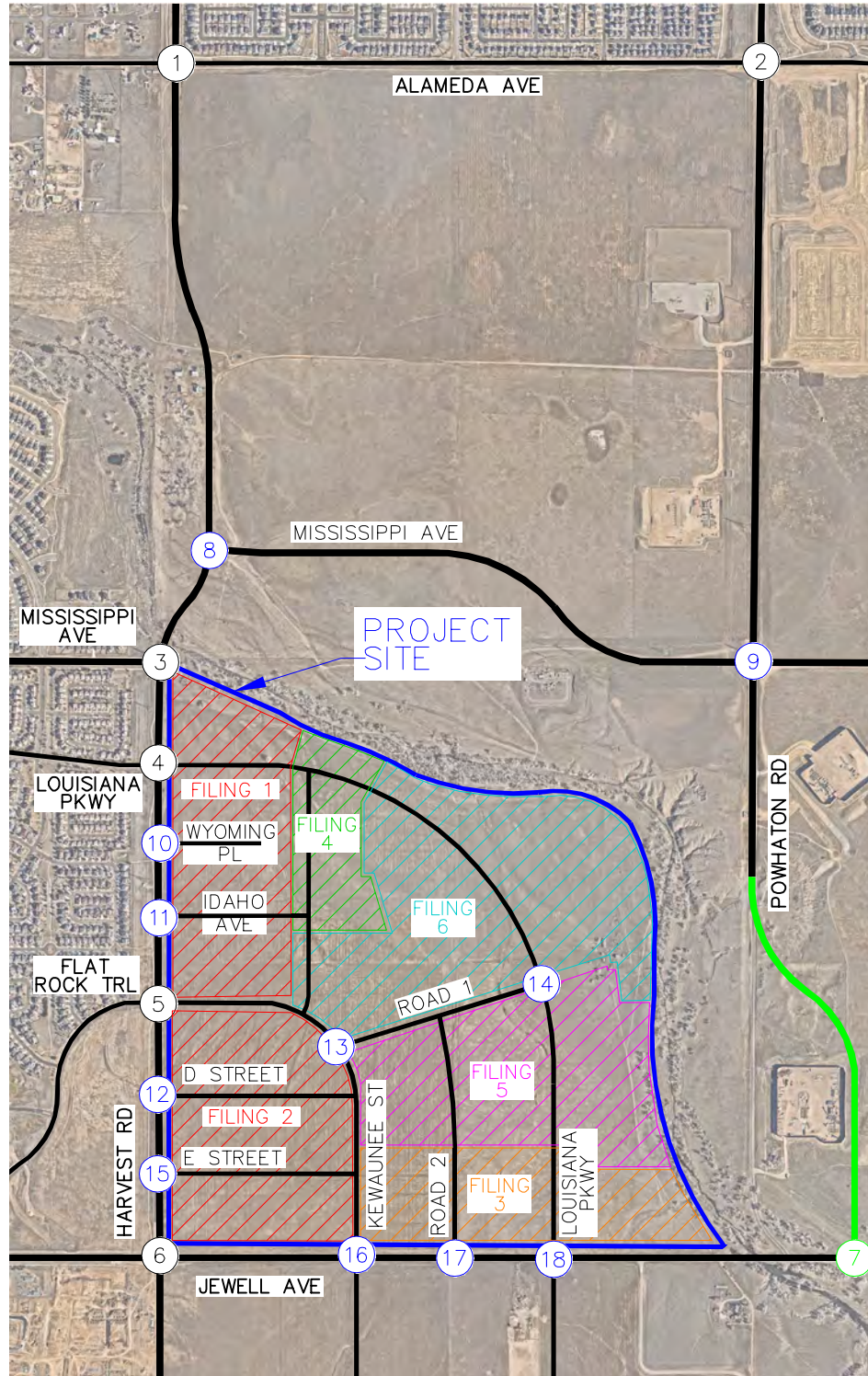


FIGURE 29
PARKLANDS VILLAGE 1
AURORA, COLORADO
2033 RECOMMENDED GEOMETRY AND CONTROL

6.0 SUPPLEMENTAL ANALYSIS

Per discussion with City of Aurora staff, 2040 twenty-year planning horizon analysis would be required for any external intersections that were not originally included in the Parklands Master Traffic Study completed in October 2022. There are five intersections that were not assessed in the master study, which include the following:

- Wyoming Place & Harvest Road (#10) to the north of Flat Rock Trail
- Idaho Avenue & Harvest Road (#11) to the north of Flat Rock Trail
- D Street & Harvest Road (#12) to the south of Flat Rock Trail
- E Street & Harvest Road (#15) to the north of Jewell Avenue
- Jewell Avenue & Road 2 (#17) between Kewaunee Street and Louisiana Parkway

Each of these intersections are roughly evenly spaced with 660 feet or more between each proposed intersection. Because these intersections were not studied in the master study, they are included for analysis in the 2040 long-term horizon.

Traffic volumes for these intersections were generated based on the anticipated 2040 background plus project traffic volumes shown in the Parklands Master Traffic Study at the adjacent intersections of Louisiana Parkway & Harvest Road (#4), Flat Rock Trail & Harvest Road (#5), Jewell Avenue & Harvest Road (#6), Jewell Avenue & Kewaunee Street (#16) and Jewell Avenue & Louisiana Parkway (#18). For the Harvest Road intersections, because there are no additional planned intersections along Harvest Road or Powhatan Road between these intersections on Harvest Road, the northbound and southbound through volumes would be consistent with the volumes seen to occur at these proposed four intersections. The right-in/right-out access on Jewell Avenue is also anticipated to be the only intersection on the north side of Jewell Avenue through the 2040 horizon. Each of these intersections is anticipated to remain stop-controlled T-intersections through the 2040 horizon with stop control on the westbound approaches to Harvest Road at each intersection and the southbound approach to Jewell Avenue.

Because the main roadway network serving Parklands Village 1 will be in place by the 2033 horizon, no trip distribution changes were made for the 2040 horizon analysis. **Figure 30** displays the anticipated 2040 traffic volumes in addition to the 2040 recommended geometry and control for each of these proposed intersections. Calculations for the operational level of service at these

intersections are provided in **Appendix E. Table 13** provides the results of the LOS analysis conducted at these intersections.

Table 13 – 2040 Future Proposed Intersections Level of Service Results

Intersection	Intersection Control	2040 Total			
		AM Peak Hour		PM Peak Hour	
		Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
Wyoming Ln & Harvest Rd (#10) Westbound Approach	TWSC	12.6	B	13.9	B
Idaho Ave & Harvest Rd (#11) Westbound Approach Southbound Left	TWSC	14.6	B	16.0	C
		9.5	A	10.6	B
D Street & Harvest Rd (#12) Westbound Approach Southbound Left	TWSC	14.6	B	13.8	B
		9.0	A	9.8	A
E Street & Harvest Rd (#15) Westbound Left Westbound Right Eastbound Approach	TWSC	18.9	C	20.8	C
		9.4	A	10.4	B
		9.4	A	10.4	B
Jewell Ave & Road 2 (#17) Southbound Right	TWSC	13.7	B	11.3	B

As shown in **Table 13**, each of these intersections is anticipated to continue operating at LOS C or better through the 2040 horizon, at which point the surrounding area is anticipated to be nearly fully built out. Additionally, the anticipated turn lane queues (where applicable) at these intersections are all expected to remain at 75 feet or less through the 2040 horizon. As such, the previously recommended turn lane lengths provided in the 2033 horizon will adequately accommodate expected queues through the 2040 horizon at these intersections with the addition of project traffic.

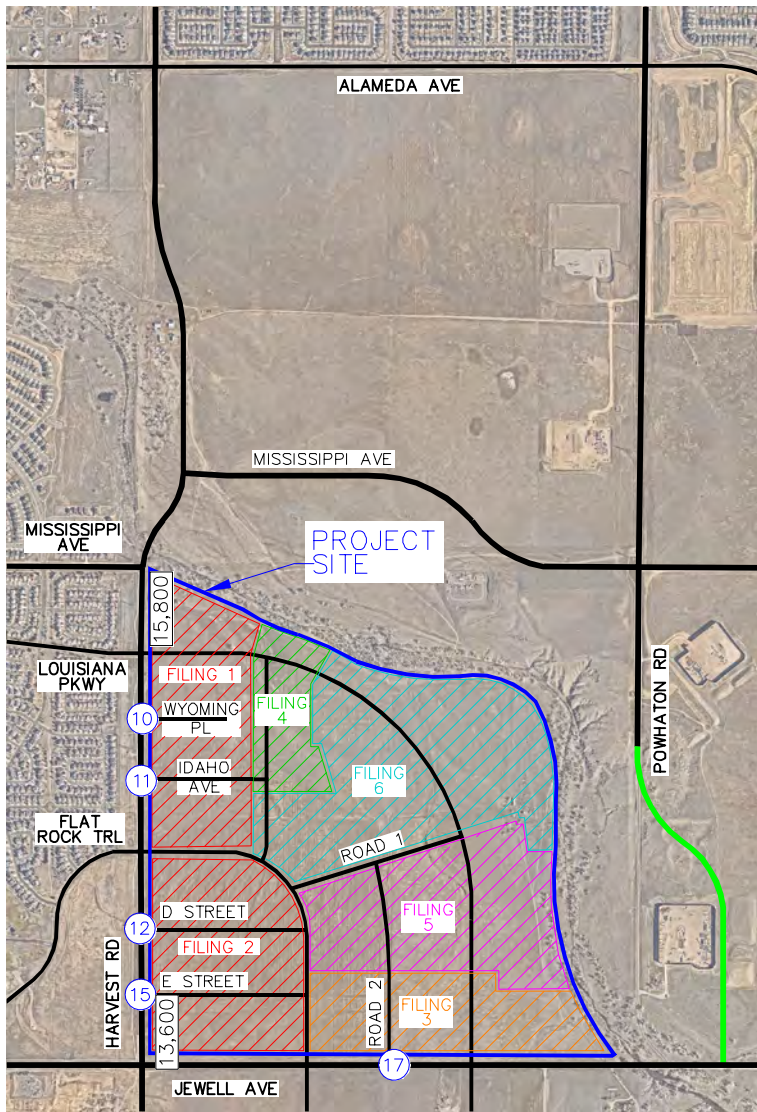
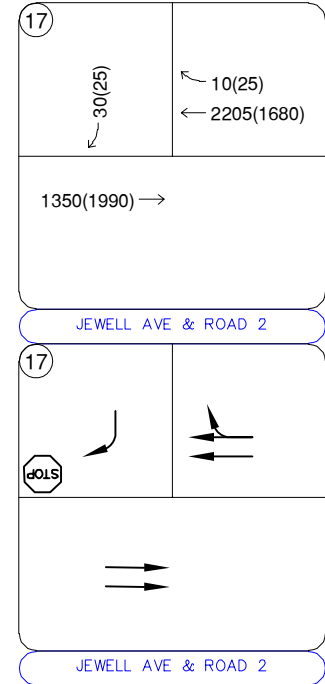
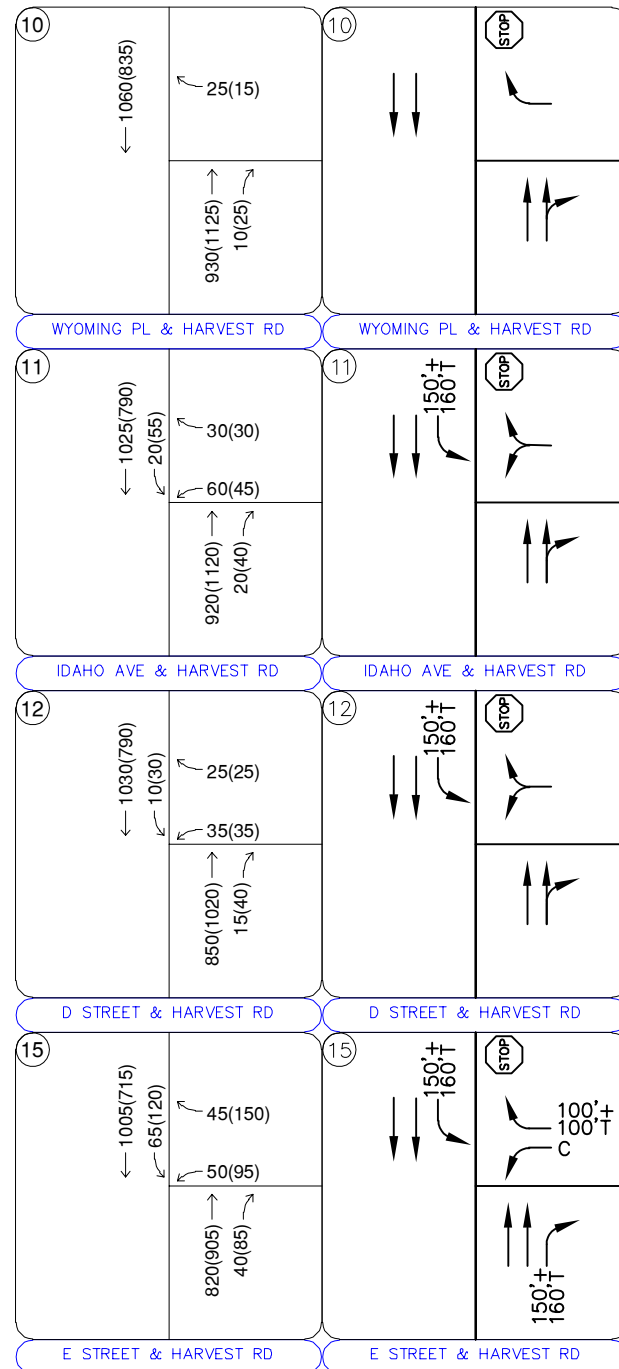


FIGURE 30
PARKLANDS VILLAGE 1
AURORA, COLORADO
2040 TOTAL TRAFFIC VOLUMES
AND GEOMETRY AND CONTROL



LEGEND

- (X) Project Access Intersection
- XXX(XXX) Weekday AM(PM)
- XX,X00 Estimated Daily Traffic Volume
- STOP Stop Controlled Approach
- Realigned Roadway
- 100' Turn Lane Length (feet)

7.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the analysis presented in this report, Kimley-Horn believes Parklands Village 1 will be successfully incorporated into the existing and future roadway network. Analysis of the existing street network, the proposed project development, and expected traffic volumes resulted in the following recommendations:

2026 Recommendations (Filing 1)

- With Filing 1 construction of this development, several new accesses and intersections are proposed to be constructed. At Filing 1, an east leg to the Louisiana Parkway & Harvest Road (#4) and an east leg to the Flat Rock Trail & Harvest Road (#5) intersections. Additionally, two new accesses roughly evenly spaced between Louisiana Parkway and Flat Rock Trail, at future Wyoming Place (Intersection #10) and future Idaho Avenue (#11). Wyoming Place is proposed to be restricted to right-in/right-out movements only. A new intersection along Jewell Avenue to the east of Harvest Road is also anticipated to be constructed (Intersection #16), with the north leg being future Kewaunee Street.
- Alameda Avenue & Harvest Road (#1) is anticipated to be improved by others in this horizon with a new south leg at the intersection and R1-1 “STOP” signs posted on the northbound and southbound Harvest Road approaches to the intersection. The eastbound, westbound, and northbound approaches are anticipated to operate well with one lane for shared turning movements while the southbound approach can use the existing pavement width to provide a southbound left turn lane and a shared through/right turn lane.
- The Alameda Avenue & Powhaton Road (#2) is not anticipated to require any improvements in this horizon. The Mississippi Avenue & Harvest Road (#3) intersection is also not expected to require improvement in this horizon as there is no measurable intersection delay.
- With the new east legs at Louisiana Parkway & Harvest Road (#4) and at Flat Rock Trail & Harvest Road (#5), these legs are recommended to operate with R1-1 “STOP” signs posted on the westbound approach to Harvest Road, while southbound left turn lanes 150 feet in length with a 160-foot taper are recommended to be installed. With these southbound left turn lanes placed at these intersections, it is also recommended northbound left turn lanes of the same length be constructed. The westbound approaches at each of these intersections are anticipated to operate well with one lane for shared left/through/right turning movements.

- The southbound Harvest Road approach at Jewell Avenue (#6) is recommended to provide separate left, through, and right turn lanes, with the left and right turn lanes each providing 275 feet in length with a 160-foot taper.
- The Jewell Avenue & Powhaton Road (#7) intersection is recommended to provide a 225-foot eastbound left turn lane with a 140-foot taper as well as separate southbound left and right turn lanes. For purposes of this analysis, the southbound left turn lane is recommended to provide 275 feet in length with a 160-foot taper while the right turn lane is recommended to be a continuous turn lane. The eastbound left turn lane is recommended to be improved to provide 225 feet in length and a 140-foot taper. With a new south leg at the intersection anticipated to be provided by others, the northbound approach is recommended to operate with a 150-foot left turn lane with a 160-foot taper and a shared through/right turn lane, while the eastbound approach should provide a continuous forced right-turn lane and the westbound approach should provide a 225-foot left and right turn lane with a 140-foot taper.
- The two new accesses along Harvest Road at Wyoming Place (#10) and Idaho Avenue (#11), are each recommended to operate with R1-1 “STOP” signs on the westbound approach to Harvest Road. A southbound left turn lane with a length of 150 feet and a taper of 160-feet should be provided at the Idaho Avenue (#11) access.
- A new access along Jewell Avenue at future Kewaunee Street (#16) is proposed to the east of Harvest Road. In this horizon, it is expected to operate well as a stop-controlled T-intersection with an R1-1 “STOP” sign on the southbound approach to the intersection. An eastbound left turn lane with 225 feet in length and a 140-foot taper is recommended to be provided. The southbound approach is recommended to provide separate left and right turn lanes, with the left turn lane 100 feet in length with a 100-foot taper and the right turn lane being a continuous turn lane.

2027 Recommendations (Filing 2)

- With construction Filing 2 two additional new accesses roughly evenly spaced between Flat Rock Trail and Jewell Avenue, being called in this study “D Street” (#12) and “E Street” (#15) are anticipated to be constructed. At the E Street & Harvest Road (#15) intersection, a northbound right turn lane and separate westbound left and right turn lanes should also be provided 150 feet in length with a 160-foot taper, as this will serve both the residential and the commercial development along this roadway. Each of these intersections are anticipated to operate well with stop control and posted R1-1 “STOP” signs where applicable.

- Separate left turn lanes are recommended to be provided on all four approaches of the Alameda Avenue & Harvest Road (#1) intersection. The eastbound and westbound left turn lanes can be constructed to a length of 150 feet with a 100-foot taper while the northbound left turn lane is recommended to provide a length of 275 feet with a 160-foot taper.

2028 Recommendations (Filing 3)

- The Alameda Avenue & Harvest Road (#1) intersection is anticipated to operate acceptably with the improvements recommended in the 2027 horizon. Therefore, no additional intersection improvements are anticipated to be needed with Filing 3.
- The Alameda Avenue & Powhatan Road (#2) intersection is also recommended to provide left turn lanes in each direction by this horizon, which would consist of new eastbound and westbound left turn lanes, each with 150 feet in length and a 100-foot taper. A southbound right turn lane is also anticipated to be provided with 150 feet in length and a 140-foot taper.
- The Jewell Avenue & Harvest Road (#6) intersection is anticipated to require signalization based on vehicular volume warrants with Filing 3. A westbound right turn lane with 225 feet in length plus a 140-foot taper is also recommended at this intersection.
- With a free right turn lane proposed to the east at Jewell Avenue & Powhatan Road (#7) that will have an acceleration lane, it is recommended that this lane continue as a second westbound through lane that will carry through this intersection by this horizon.
- While it is not known at what point the intersection will be realigned further to the east, it would be most feasible that the Jewell Avenue & Powhatan Road (#7) intersection be realigned when signalization is required to maintain acceptable operations, which is anticipated to occur by approximately this horizon year. It is also recommended to provide a westbound right turn lane 225 feet in length with a 140-foot taper. The previously recommended southbound right turn lane is now also proposed to operate with free turning movement and an acceleration lane.
- With the southbound right turn lane acceleration lane at Jewell Avenue & Powhatan Road (#7), the Jewell Avenue & future Kewaunee Street (#16) intersection east of Harvest Road is also recommended to provide a second westbound through lane. It is also believed a south leg will be constructed at the Jewell Avenue & Kewaunee Street (#16) intersection by this horizon and it would be recommended to be signalized at this time. The northbound approach should provide a left-turn lane and shared through/right-turn lane while a westbound left-turn

lane and a second eastbound through lane along Jewell Avenue would also be expected to be constructed from Harvest Road through Powhatan Road at this horizon.


- With Filing 3 construction, two additional accesses are proposed into the development along Jewell Avenue. A right-in/right-out access (#17) is proposed to the east of Kewaunee Street and should operate with an R1-1 “STOP” sign on the southbound approach to Jewell Avenue. A full movement access is proposed to align with a proposed future south leg at Jewell Avenue & Louisiana Parkway (#18). In this horizon, it is not expected to need or warrant a signal operationally and should operate well with R1-1 “STOP” signs posted on the northbound and southbound approaches to the intersection, with these approaches operating with a left-turn lane and shared through/right-turn lane while the eastbound and westbound approaches should each provide a left-turn lane, one through lane, and a shared through/right-turn lane.

2029 Recommendations (Filing 4)

- The intersections of Alameda Avenue & Harvest Road (#1) and Alameda Avenue & Powhatan Road (#2) are anticipated to require signalization for acceptable operations.
- The Flat Rock Trail & Harvest Road (#5) intersection is recommended to provide a northbound right turn lane 150 feet in length with a 160-foot taper.
- The Jewell Avenue & Harvest Road (#6) intersection is recommended to provide a second eastbound through lane and with this improvement, the eastbound right turn lane should provide 225 feet in length and a 140-foot taper.
- Jewell Avenue & Powhatan Road (#7) is recommended to provide a second eastbound left turn lane, which could be a continuous forced-left turn lane which would stem from the second eastbound through lane that would exist to the west of this intersection. If Powhatan Road does not provide two through lanes in each direction with the initial construction associated with the realignment at the intersection with Jewell Avenue, two receiving lanes on the north leg of Powhatan Road would need to be provided coinciding with these eastbound dual left turn lanes along Jewell Avenue.

2031 Recommendations (Filing 5)

- By this horizon, the Harvest Road connection between Mississippi Avenue and Alameda Avenue is anticipated to be constructed. With this connection, several improvements along Harvest Road are anticipated to occur.
- The Mississippi Avenue & Harvest Road (West) (#3) intersection is anticipated to have a new north leg with construction of the Harvest Road connection to Alameda Avenue. This intersection is recommended to be signalized to provide acceptable operations. With this connection, the intersection is recommended to provide separate eastbound left and right turn lanes, each of which will be continuous turn lanes from the two through lanes to the west of this intersection along Mississippi Avenue. The northbound approach is recommended to provide a left turn lane 275 feet in length with a 160-foot taper with two through lanes, while the southbound approach is recommended to provide one through lane and a right turn lane 275 feet in length with a 160-foot taper.
- The Louisiana Parkway & Harvest Road (#4) intersection is anticipated to require signalization for acceptable operations once the Harvest Road connection is complete to Alameda Avenue. With signalization, separate eastbound and westbound left turn lanes are recommended to be constructed, each with 100 feet in length and 100-foot tapers. Two through lanes in each direction along Harvest Road are also recommended with the southbound right turning movement occurring from within the outer through lane and the northbound right turning movements from within a recommended right turn lane with 150 feet in length and a 160-foot taper.
- Flat Rock Trail & Harvest Road (#5) is recommended to be signalized in this horizon because of the Harvest Road connection to Alameda Avenue. Similar to the Louisiana Parkway intersection (#4), separate eastbound and westbound left turn lanes with 100 feet in length and 100-foot tapers are recommended. Additionally, two through lanes in each direction northbound and southbound are recommended, with the southbound right turning movements occurring within the outside through lane and the northbound right turn lane being reconstructed.
- The Jewell Avenue & Harvest Road (#6) intersection is recommended to be provided with dual eastbound left turn lanes by this horizon. For purposes of this analysis, it is assumed that Jewell Avenue to the west of Harvest Road will provide three through lanes in each direction by this horizon, and the inner through lane could be dropped as the second eastbound left turn lane at this intersection. The southbound right turn lane at this intersection can now stem



from the second through lane to the north of this intersection and be a forced-right turn lane—this turn lane is also recommended to operate with free right turning movement and its acceleration lane can become a third westbound through lane along Jewell Avenue to the west of this intersection.

- As two through lanes in each direction are proposed along Powhaton Road by this horizon year, the southbound approach to Jewell Avenue & Powhaton Road (#7) would be recommended for the southbound left turn lane to become a continuous turn lane from within the second southbound through lane to the north of this intersection.
- A new intersection along Harvest Road at Mississippi Avenue (East) (#8) would be recommended to be constructed, which would be done by Parklands Village 2 development. By this horizon, the intersection is anticipated to require signalization for acceptable operations. It is recommended the westbound approach provide separate left and right turn lanes with the left turn lane being a continuous turn lane and the right turn lane providing 150 feet in length with a 100-foot taper.
- The Mississippi Avenue & Powhaton Road (#9) intersection by this horizon is anticipated to be a four-leg intersection that will require signalization for acceptable operations. The eastbound and westbound approaches should provide left turn lanes 150 feet in length with a 100-foot taper and a shared through/right turn lane in each direction. The northbound and southbound approaches should each provide a left turn lane, two through lanes, and a right turn lane, with these turn lanes measuring 150 feet in length with a 100-foot taper.
- Two through lanes are recommended to be provided along Harvest Road between Mississippi Avenue and Jewell Avenue. At the Wyoming Place & Harvest Road (#10) intersection as well as at the Idaho Avenue & Harvest Road (#11) intersection.
- A new internal 'T'-intersection is proposed in this horizon at Road 1 & Kewaunee Street (#13), with westbound Road 1 having an R1-1 'STOP' sign with one lane for shared left/right turning movements while the northbound approach would operate well with a shared through/right-turn lane and the southbound approach should provide a 100-foot turn lane with a 100-foot taper.
- An additional new internal 'T'-intersection at Road 1 & Louisiana Parkway (#14) is proposed. In this horizon, it would be recommended to provide an R1-1 "STOP" sign posted on the northbound approach. Each of the approaches to the intersection are anticipated to operate well with one lane in each direction for shared turning movements.

- A signal is anticipated to be warranted at the Jewell Avenue & Louisiana Parkway (#18) intersection and is recommended to be provided in this horizon.

2033 Recommendations (Filing 6)

- The Alameda Avenue & Harvest Road (#1) intersection is recommended to provide northbound and southbound right turn lanes each with 275 feet in length with a taper of 160 feet. Two through lanes northbound and southbound should also be provided at this intersection.
- If not provided previously, two through lanes in each direction along the remainder of Harvest Road within the study area, such as at Mississippi Avenue & Harvest Road (West) (#3) and at Mississippi Avenue & Harvest Road (East) (#8) should be provided. The northbound right turn lane at Mississippi Avenue & Harvest Road (East) (#8) should provide 275 feet in length with a 160-foot taper.
- The Jewell Avenue & Powhatan Road (#7) intersection should provide two through lanes eastbound and westbound while the inner eastbound left turn should then provide 225 feet in length with a 140-foot taper.
- The Road 1 & Louisiana Parkway (#14) intersection is anticipated to become a four-leg intersection with Filing 6 construction. With this change, the eastbound and westbound approaches would be recommended to operate with stop control and posted R1-1 'STOP' signs while Louisiana Parkway would become free movement. All four approaches would operate well with one lane in each direction for shared left/through/right-turning movements.
- If not provided previously, a westbound right-turn lane 225 feet in length with a 140-foot taper could be provided at the Jewell Avenue & Louisiana Parkway (#18) intersection.

2040 Recommendations

- The five intersections proposed in this project that were not studied in the Parklands Master Study include Wyoming Place & Harvest Road (#10), Idaho Avenue & Harvest Road (#11), D Street & Harvest Road (#12), E Street & Harvest Road (#15), and the Jewell Avenue & Road 2 (#17) access. By the 2040 horizon, each of these intersections are anticipated to continue operating at an acceptable level of service with full turning movements permitted, and none are anticipated to require additional improvements that were not shown previously.
- Any additional improvements at other study area intersections by this horizon should be found in the Parklands Master Traffic Impact Study that was previously conducted, as that study

conducted a thorough analysis of the study area intersections with projected turning movements and recommended intersection geometry and control.

General Notes and Recommendations

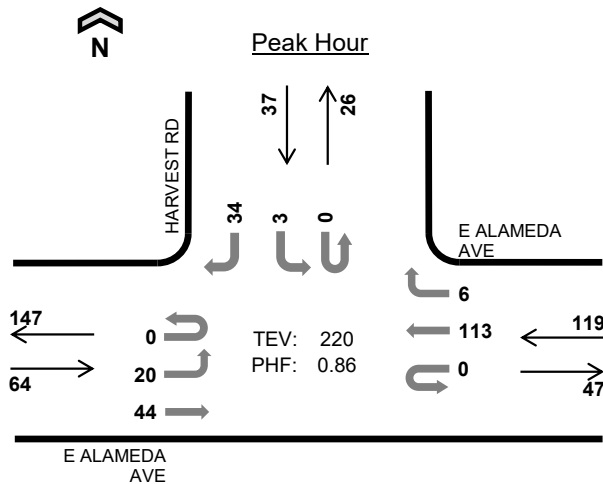
- The roadway geometry and control recommendations provided in this study are evaluated based on the anticipated needs at the study area intersections during the 2026, 2027, 2028, 2029, 2031, and 2033 horizon years based on the projected buildout of the project in Filings 1a and 1b, 2, 3, 4, and 5 during each of these horizon years, respectively. As such, the recommended intersection configuration and control provided in this study are based on the needs for each of these horizon years based on anticipated development rather than aligning with the roadway geometry provided in the Parklands Village Master Traffic Study, as this would result in overbuilding the roadway for the needs anticipated by these horizon years. It should be noted that additional roadway improvements and intersection control may be needed at the external intersections as development continues to occur in this area—for which the Parklands Village Master Traffic Study can be referenced. The recommendations for the 2040 horizon— with the exception of the four aforementioned intersections that were studied in 2040—should be found in the Parklands Village Master Traffic Study. The recommendations found in that study should be appropriate for each of the intersections included in this study, as the Parklands Village 1 traffic generation in this study during the morning and afternoon studied peak hours is less than the traffic generated by the Parklands Village 1 development area that was analyzed in the master study.
- Any onsite or offsite improvements should be incorporated into the Civil Drawings and conform to standards of the City of Aurora and the Manual on Uniform Traffic Control Devices (MUTCD) – 2009 Edition.

APPENDICES

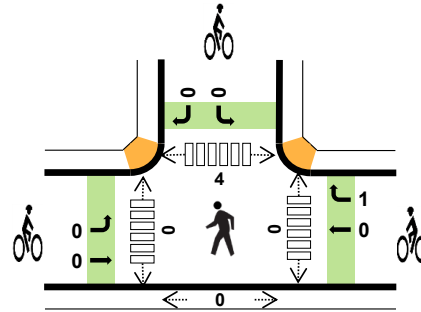
APPENDIX A

Intersection Count Sheets

HARVEST RD E ALAMEDA AVE



Date: Wed, Jun 23, 2021
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:15 AM to 8:15 AM



	HV %:	PHF
EB	7.8%	0.89
WB	6.7%	0.83
NB	-	-
SB	5.4%	0.84
TOTAL	6.8%	0.86

Two-Hour Count Summaries

Interval Start		E ALAMEDA AVE				E ALAMEDA AVE				0				HARVEST 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	3	8	0	0	0	22	0	0	0	0	0	0	0	0	7	40	0
7:15 AM		0	6	11	0	0	0	36	0	0	0	0	0	0	0	0	11	64	0
7:30 AM		0	6	12	0	0	0	25	0	0	0	0	0	0	0	0	10	53	0
7:45 AM		0	4	9	0	0	0	23	3	0	0	0	0	0	1	0	4	44	201
8:00 AM		0	4	12	0	0	0	29	3	0	0	0	0	0	2	0	9	59	220
8:15 AM		0	3	11	0	0	0	31	2	0	0	0	0	1	1	0	11	60	216
8:30 AM		0	4	9	0	0	0	22	0	0	0	0	0	0	2	0	14	51	214
8:45 AM		0	5	11	0	0	0	23	2	0	0	0	0	0	0	0	4	45	215
Count Total		0	35	83	0	0	0	211	10	0	0	0	0	1	6	0	70	416	0
Peak Hour	All	0	20	44	0	0	0	113	6	0	0	0	0	0	3	0	34	220	0
	HV	0	0	5	0	0	0	4	4	0	0	0	0	0	2	0	0	15	0
	HV%	-	0%	11%	-	-	-	4%	67%	-	-	-	-	-	67%	-	0%	7%	0

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

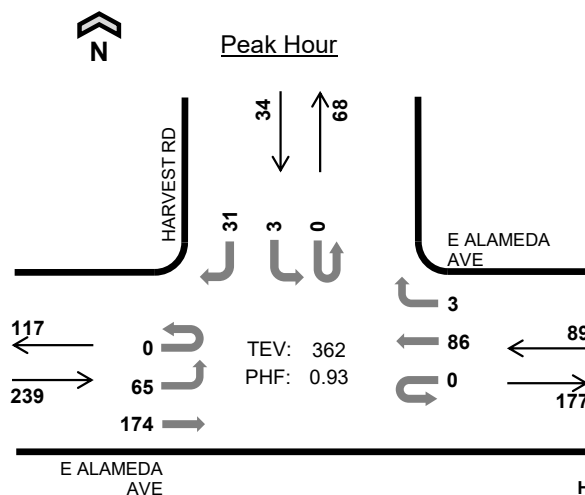
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0
7:15 AM	1	2	0	0	3	0	0	0	0	0	0	0	0	0	0
7:30 AM	2	1	0	0	3	0	0	0	0	0	0	0	2	0	2
7:45 AM	2	3	0	0	5	0	1	0	0	1	0	0	1	0	1
8:00 AM	0	2	0	2	4	0	0	0	0	0	0	0	1	0	1
8:15 AM	2	3	0	0	5	0	0	0	0	0	0	0	1	0	1
8:30 AM	0	1	0	2	3	0	0	0	0	0	0	0	0	0	0
8:45 AM	1	4	0	2	7	0	0	0	0	0	0	0	0	0	0
Count Total	9	17	0	6	32	0	1	0	0	1	0	0	5	0	5
Peak Hr	5	8	0	2	15	0	1	0	0	1	0	0	4	0	4

Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	E ALAMEDA AVE				E ALAMEDA AVE				0				HARVEST 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	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0
7:15 AM	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	3	0
7:30 AM	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	3	0
7:45 AM	0	0	2	0	0	0	0	3	0	0	0	0	0	0	0	0	5	13
8:00 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2	0	4	15
8:15 AM	0	1	1	0	0	0	1	2	0	0	0	0	0	0	0	0	5	17
8:30 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0	3	17
8:45 AM	0	1	0	0	0	0	2	2	0	0	0	0	0	0	0	0	7	19
Count Total	0	2	7	0	0	0	9	8	0	0	0	0	0	4	0	2	32	0
Peak Hour	0	0	5	0	0	0	4	4	0	0	0	0	0	2	0	0	15	0

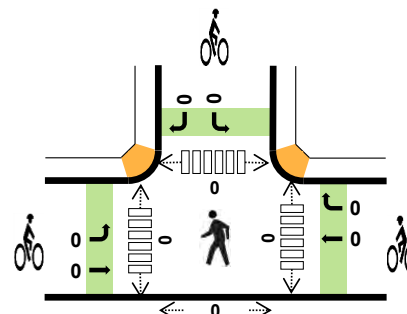
Two-Hour Count Summaries - Bikes																		
Interval Start	E ALAMEDA AVE			E ALAMEDA AVE			0			HARVEST RD			15-min Total	Rolling One Hour				
	Eastbound			Westbound			Northbound			Southbound								
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT						
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
7:45 AM	0	0	0	0	0	1	0	0	0	0	0	0	1	1	1			
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1			
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1			
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1			
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Count Total	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0			
Peak Hour	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0			

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

HARVEST RD E ALAMEDA AVE



Date: Wed, Jun 23, 2021
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 5:00 PM to 6:00 PM



	HV %:	PHF
EB	0.8%	0.89
WB	1.1%	0.86
NB	-	-
SB	0.0%	0.85
TOTAL	0.8%	0.93

Two-Hour Count Summaries

Interval Start		E ALAMEDA AVE				E ALAMEDA AVE				0				HARVEST 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	14	27	0	0	0	25	3	0	0	0	0	0	0	0	8	77	0
4:15 PM		0	16	43	0	0	0	27	1	0	0	0	0	0	1	0	10	98	0
4:30 PM		0	16	27	0	0	0	19	0	0	0	0	0	0	0	0	9	71	0
4:45 PM		0	14	31	0	0	0	15	0	0	0	0	0	0	0	0	11	71	317
5:00 PM		0	17	37	0	0	0	20	0	0	0	0	0	0	0	0	5	79	319
5:15 PM		0	15	38	0	0	0	26	0	0	0	0	0	0	0	0	10	89	310
5:30 PM		0	15	52	0	0	0	20	1	0	0	0	0	0	1	0	8	97	336
5:45 PM		0	18	47	0	0	0	20	2	0	0	0	0	0	2	0	8	97	362
Count Total		0	125	302	0	0	0	172	7	0	0	0	0	0	4	0	69	679	0
Peak Hour	All	0	65	174	0	0	0	86	3	0	0	0	0	0	3	0	31	362	0
	HV	0	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	3	0
	HV%	-	3%	0%	-	-	-	1%	0%	-	-	-	-	-	0%	-	0%	1%	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	2	0	0	3	0	0	0	0	0	0	0	0	0	0
4:15 PM	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0
4:30 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
4:45 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
5:00 PM	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	6	4	0	0	10	0	0	0	0	0	0	0	0	0	0
Peak Hr	2	1	0	0	3	0	0	0	0	0	0	0	0	0	0

Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	E ALAMEDA AVE				E ALAMEDA AVE				0				HARVEST 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	1	0	0	0	2	0	0	0	0	0	0	0	0	0	3	0
4:15 PM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0
4:30 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
4:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	7
5:00 PM	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2	6
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
5:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Count Total	0	3	3	0	0	0	4	0	0	0	0	0	0	0	0	0	10	0
Peak Hour	0	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	3	0

Two-Hour Count Summaries - Bikes																		
Interval Start	E ALAMEDA AVE			E ALAMEDA AVE			0			HARVEST RD			15-min Total	Rolling One Hour				
	Eastbound			Westbound			Northbound			Southbound								
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT						
4:00 PM	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				
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0				

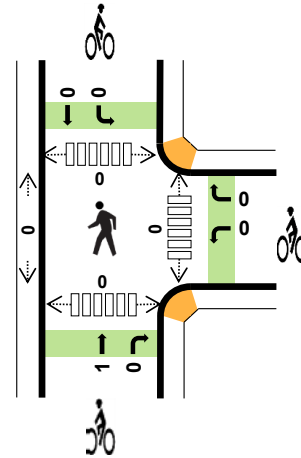
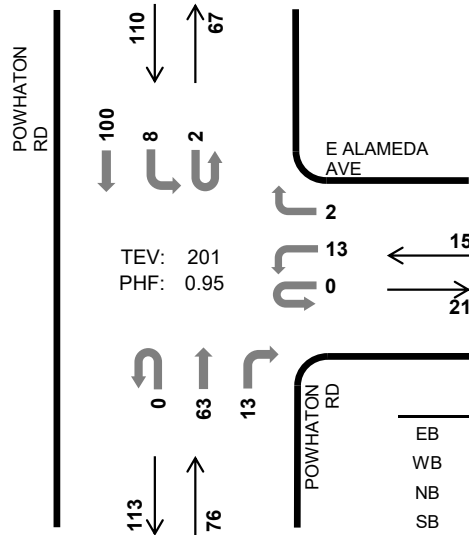
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

POWHATON RD E ALAMEDA AVE



Peak Hour

Date: Wed, Jun 23, 2021
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:15 AM to 8:15 AM



	HV %:	PHF
EB	-	-
WB	6.7%	0.75
NB	3.9%	0.86
SB	6.4%	0.89
TOTAL	5.5%	0.95

Two-Hour Count Summaries

Interval Start		0				E ALAMEDA AVE				POWHATON RD				POWHATON 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	0	0	0	0	2	0	0	0	0	19	0	0	0	27	0	48	0
7:15 AM		0	0	0	0	0	2	0	0	0	0	11	3	1	1	29	0	47	0
7:30 AM		0	0	0	0	0	4	0	0	0	0	20	2	0	2	25	0	53	0
7:45 AM		0	0	0	0	0	3	0	1	0	0	19	3	0	1	22	0	49	197
8:00 AM		0	0	0	0	0	4	0	1	0	0	13	5	1	4	24	0	52	201
8:15 AM		0	0	0	0	0	1	0	1	0	0	14	3	0	0	25	0	44	198
8:30 AM		0	0	0	0	0	3	0	1	0	0	10	2	0	1	20	0	37	182
8:45 AM		0	0	0	0	0	2	0	0	0	0	13	3	0	0	24	0	42	175
Count Total		0	0	0	0	0	21	0	4	0	0	119	21	2	9	196	0	372	0
Peak Hour	All	0	0	0	0	0	13	0	2	0	0	63	13	2	8	100	0	201	0
	HV	0	0	0	0	0	1	0	0	0	0	2	1	1	2	4	0	11	0
	HV%	-	-	-	-	-	8%	-	0%	-	-	3%	8%	50%	25%	4%	-	5%	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	1	0	1	2	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	1	3	4	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	1	4	5	0	0	1	0	1	0	0	0	0	0
8:15 AM	0	0	1	4	5	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	1	4	5	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	1	5	6	0	0	0	0	0	0	0	0	0	0
Count Total	0	2	6	21	29	0	0	1	0	1	0	0	0	0	0
Peak Hr	0	1	3	7	11	0	0	1	0	1	0	0	0	0	0

Two-Hour Count Summaries - Heavy Vehicles																				
Interval Start	0				E ALAMEDA AVE				POWHATON RD				POWHATON 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	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	2	0	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2	0	4	0
7:30 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	8
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	2	0	5	11	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	4	0	5	12	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	3	0	5	16	
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	5	0	6	21	
Count Total	0	0	0	0	0	2	0	0	0	0	0	5	1	1	3	17	0	29	0	
Peak Hour	0	0	0	0	0	1	0	0	0	0	0	2	1	1	2	4	0	11	0	

Two-Hour Count Summaries - Bikes																			
Interval Start	0			E ALAMEDA AVE			POWHATON RD			POWHATON RD			15-min Total	Rolling One Hour					
	Eastbound			Westbound			Northbound			Southbound									
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT							
7:00 AM	0	0	0	0	0	0	0	0	0	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	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Count Total	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0

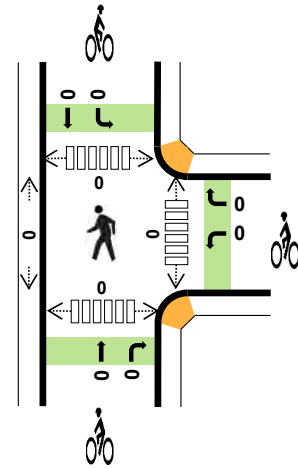
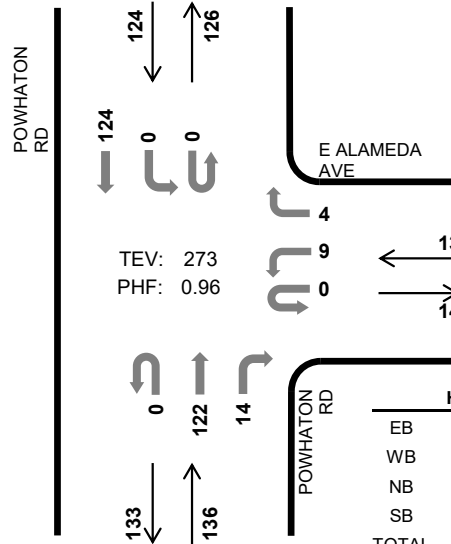
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

POWHATON RD E ALAMEDA AVE



Peak Hour

Date: Wed, Jun 23, 2021
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:15 PM to 5:15 PM



	HV %:	PHF
EB	-	-
WB	7.7%	0.54
NB	1.5%	0.92
SB	5.6%	0.94
TOTAL	3.7%	0.96

Two-Hour Count Summaries

Interval Start		0				E ALAMEDA AVE				POWHATON RD				POWHATON 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	0	0	0	4	0	2	0	0	24	7	0	0	25	0	62	0
4:15 PM		0	0	0	0	0	3	0	3	0	0	30	4	0	0	31	0	71	0
4:30 PM		0	0	0	0	0	2	0	1	0	0	32	4	0	0	30	0	69	0
4:45 PM		0	0	0	0	0	3	0	0	0	0	23	6	0	0	33	0	65	267
5:00 PM		0	0	0	0	0	1	0	0	0	0	37	0	0	0	30	0	68	273
5:15 PM		0	0	0	0	0	7	0	3	0	0	30	4	0	0	20	0	64	266
5:30 PM		0	0	0	0	0	7	0	4	0	0	30	2	0	1	30	0	74	271
5:45 PM		0	0	0	0	0	3	0	3	0	0	44	2	0	1	10	0	63	269
Count Total		0	0	0	0	0	30	0	16	0	0	250	29	0	2	209	0	536	0
Peak Hour	All	0	0	0	0	0	9	0	4	0	0	122	14	0	0	124	0	273	0
	HV	0	0	0	0	0	1	0	0	0	0	1	1	0	0	7	0	10	0
	HV%	-	-	-	-	-	11%	-	0%	-	-	1%	7%	-	-	6%	-	4%	0

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

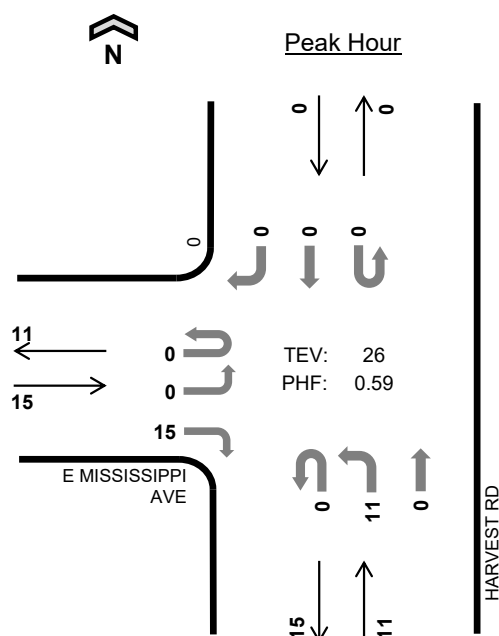
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	1	4	5	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	1	1	1	3	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	2	1	0	3	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	3	0	1	4	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	8	3	8	19	0	0	0	0	0	0	0	0	0	0
Peak Hr	0	1	2	7	10	0	0	0	0	0	0	0	0	0	0

Two-Hour Count Summaries - Heavy Vehicles																			
Interval Start	0				E ALAMEDA AVE				POWHATON RD				POWHATON 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	0	0	0	1	0	1	0	0	0	0	0	0	0	0	2	0	
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	4	0	5	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
5:00 PM	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	1	0	3	10
5:15 PM	0	0	0	0	0	2	0	0	0	0	0	1	0	0	0	0	0	3	8
5:30 PM	0	0	0	0	0	1	0	2	0	0	0	0	0	0	0	1	0	4	10
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
Count Total	0	0	0	0	0	5	0	3	0	0	2	1	0	0	0	8	0	19	0
Peak Hour	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	7	0	10	0

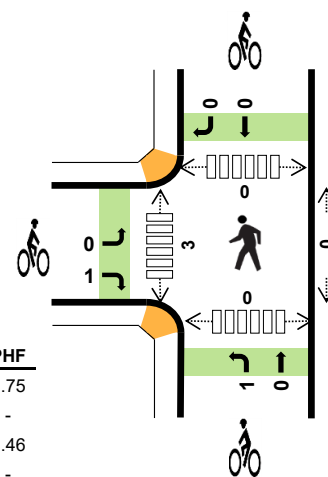
Two-Hour Count Summaries - Bikes																	
Interval Start	0			E ALAMEDA AVE			POWHATON RD			POWHATON RD			15-min Total	Rolling One Hour			
	Eastbound			Westbound			Northbound			Southbound							
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT					
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

HARVEST RD E MISSISSIPPI AVE



Date: Wed, Jun 23, 2021
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:45 AM to 8:45 AM



	HV %:	PHF
EB	40.0%	0.75
WB	-	-
NB	45.5%	0.46
SB	-	-
TOTAL	42.3%	0.59

Two-Hour Count Summaries

Interval Start		E MISSISSIPPI AVE				0				HARVEST RD				0				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	0	4	0	0	0	0	0	4	0	0	0	0	0	0	0	8	0
7:15 AM		0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0
7:30 AM		0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0
7:45 AM		0	0	0	5	0	0	0	0	0	6	0	0	0	0	0	0	0	11	24
8:00 AM		0	0	0	3	0	0	0	0	0	1	0	0	0	0	0	0	0	4	20
8:15 AM		0	0	0	5	0	0	0	0	0	2	0	0	0	0	0	0	0	7	24
8:30 AM		0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	0	0	4	26
8:45 AM		0	0	0	3	0	0	0	0	0	2	0	0	0	0	0	0	0	5	20
Count Total		0	0	0	26	0	0	0	0	0	18	0	0	0	0	0	0	0	44	0
Peak Hour	All	0	0	0	15	0	0	0	0	0	11	0	0	0	0	0	0	0	26	0
	HV	0	0	0	6	0	0	0	0	0	5	0	0	0	0	0	0	0	11	0
	HV%	-	-	-	40%	-	-	-	-	-	45%	-	-	-	-	-	-	-	42%	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	1	0	1	0	2	0	0	0	0	0	0	1	0	0	1
7:15 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	1	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	2	0	3	0	5	0	0	1	0	1	0	1	0	0	1
8:00 AM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0
8:15 AM	2	0	2	0	4	0	0	0	0	0	0	1	0	0	1
8:30 AM	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1
8:45 AM	2	0	1	0	3	0	0	0	0	0	0	0	0	0	0
Count Total	10	0	7	0	17	1	0	1	0	2	0	4	0	1	5
Peak Hr	6	0	5	0	11	1	0	1	0	2	0	3	0	0	3

Two-Hour Count Summaries - Heavy Vehicles																			
Interval Start	E MISSISSIPPI AVE				0				HARVEST RD				0				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	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0
7:15 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	2	0	0	0	0	0	0	3	0	0	0	0	0	0	5	8
8:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	7
8:15 AM	0	0	0	2	0	0	0	0	0	0	2	0	0	0	0	0	0	4	10
8:30 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	11
8:45 AM	0	0	0	2	0	0	0	0	0	0	1	0	0	0	0	0	0	3	9
Count Total	0	0	0	10	0	0	0	0	0	0	7	0	0	0	0	0	0	17	0
Peak Hour	0	0	0	6	0	0	0	0	0	0	5	0	0	0	0	0	0	11	0

Two-Hour Count Summaries - Bikes																			
Interval Start	E MISSISSIPPI AVE				0				HARVEST RD				0				15-min Total	Rolling One Hour	
	Eastbound				Westbound				Northbound				Southbound						
	LT	TH	RT		LT	TH	RT		LT	TH	RT		LT	TH	RT				
7:00 AM	0	0	0		0	0	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	0	0		0	0	0		0	0	0		0	0	0		0	0	0
7:45 AM	0	0	0		0	0	0		1	0	0		0	0	0		1	1	1
8:00 AM	0	0	1		0	0	0		0	0	0		0	0	0		1	2	2
8:15 AM	0	0	0		0	0	0		0	0	0		0	0	0		0	0	2
8:30 AM	0	0	0		0	0	0		0	0	0		0	0	0		0	0	2
8:45 AM	0	0	0		0	0	0		0	0	0		0	0	0		0	0	1
Count Total	0	0	1		0	0	0		1	0	0		0	0	0		2	0	0
Peak Hour	0	0	1		0	0	0		1	0	0		0	0	0		2	0	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

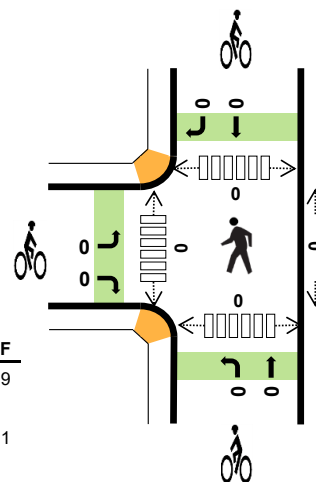
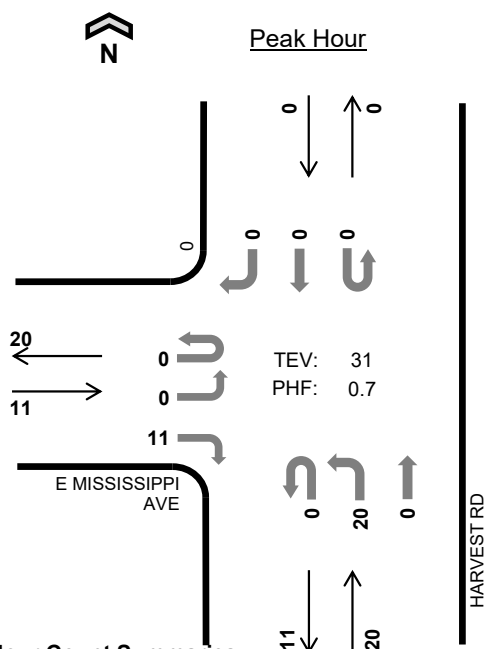
HARVEST RD E MISSISSIPPI AVE



Date: Wed, Jun 23, 2021

Count Period: 4:00 PM to 6:00 PM

Peak Hour: 4:45 PM to 5:45 PM



	HV %:	PHF
EB	27.3%	0.69
WB	-	-
NB	5.0%	0.71
SB	-	-
TOTAL	12.9%	0.70

Two-Hour Count Summaries

Interval Start		E MISSISSIPPI AVE				0				HARVEST RD				0				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	0	4	0	0	0	0	0	3	0	0	0	0	0	0	0	7	0
4:15 PM		0	0	0	3	0	0	0	0	0	4	0	0	0	0	0	0	0	7	0
4:30 PM		0	0	0	5	0	0	0	0	0	4	0	0	0	0	0	0	0	9	0
4:45 PM		0	0	0	2	0	0	0	0	0	4	0	0	0	0	0	0	0	6	29
5:00 PM		0	0	0	3	0	0	0	0	0	5	0	0	0	0	0	0	0	8	30
5:15 PM		0	0	0	2	0	0	0	0	0	4	0	0	0	0	0	0	0	6	29
5:30 PM		0	0	0	4	0	0	0	0	0	7	0	0	0	0	0	0	0	11	31
5:45 PM		0	0	0	1	0	0	0	0	0	3	0	0	0	0	0	0	0	4	29
Count Total		0	0	0	24	0	0	0	0	0	34	0	0	0	0	0	0	0	58	0
Peak Hour	All	0	0	0	11	0	0	0	0	0	20	0	0	0	0	0	0	0	31	0
	HV	0	0	0	3	0	0	0	0	0	1	0	0	0	0	0	0	0	4	0
	HV%	-	-	-	27%	-	-	-	-	-	5%	-	-	-	-	-	-	-	13%	0

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

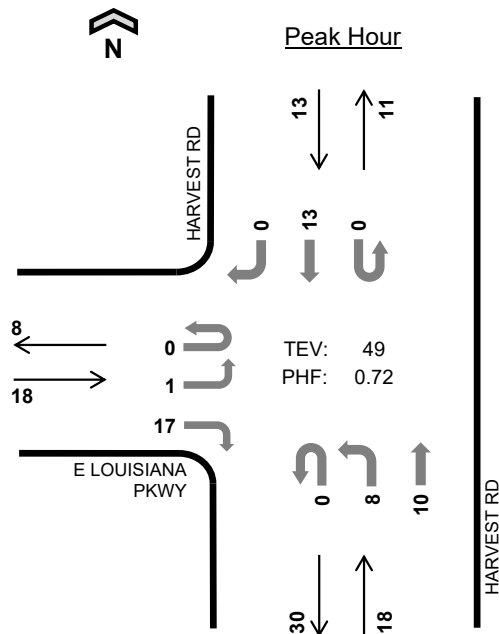
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	1	0	1	0	0	0	0	0	0	3	0	0	3
4:30 PM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0
4:45 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0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

Two-Hour Count Summaries - Heavy Vehicles																			
Interval Start	E MISSISSIPPI AVE				0				HARVEST RD				0				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	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0
4:15 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0
4:30 PM	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
4:45 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5
5:00 PM	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	2	6
5:15 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	6
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Count Total	0	0	0	5	0	0	0	0	0	3	0	0	0	0	0	0	0	8	0
Peak Hour	0	0	0	3	0	0	0	0	0	1	0	0	0	0	0	0	0	4	0

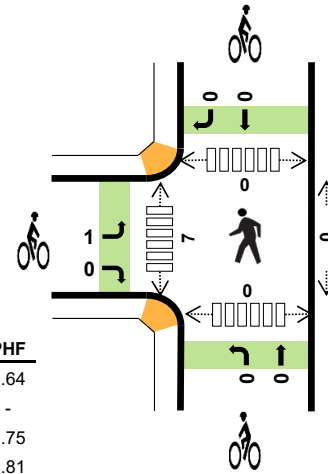
Two-Hour Count Summaries - Bikes														
Interval Start	E MISSISSIPPI AVE			0			HARVEST RD			0			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

HARVEST RD E LOUISIANA PKWY



Date: Wed, Jun 23, 2021
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:00 AM to 8:00 AM



	HV %:	PHF
EB	0.0%	0.64
WB	-	-
NB	27.8%	0.75
SB	30.8%	0.81
TOTAL	18.4%	0.72

Two-Hour Count Summaries

Interval Start		E LOUISIANA PKWY				0				HARVEST RD				HARVEST 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	0	0	2	0	0	0	0	0	2	4	0	0	0	4	0	12	0
7:15 AM		0	0	0	5	0	0	0	0	0	2	0	0	0	0	3	0	10	0
7:30 AM		0	0	0	4	0	0	0	0	0	3	1	0	0	0	2	0	10	0
7:45 AM		0	1	0	6	0	0	0	0	0	1	5	0	0	0	4	0	17	49
8:00 AM		0	0	0	5	0	0	0	0	0	1	1	0	0	0	2	1	10	47
8:15 AM		0	0	0	4	0	0	0	0	0	0	2	0	0	0	5	0	11	48
8:30 AM		0	0	0	4	0	0	0	0	0	3	2	0	0	0	2	0	11	49
8:45 AM		0	0	0	2	0	0	0	0	0	2	2	0	0	0	3	0	9	41
Count Total		0	1	0	32	0	0	0	0	0	14	17	0	0	0	25	1	90	0
Peak Hour	All	0	1	0	17	0	0	0	0	0	8	10	0	0	0	13	0	49	0
	HV	0	0	0	0	0	0	0	0	0	1	4	0	0	0	4	0	9	0
	HV%	-	0%	-	0%	-	-	-	-	-	13%	40%	-	-	-	31%	-	18%	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	3	1	4	0	0	0	0	0	0	1	0	0	1
7:15 AM	0	0	0	1	1	0	0	0	0	0	0	1	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3
7:45 AM	0	0	2	2	4	1	0	0	0	1	0	2	0	0	2
8:00 AM	0	0	0	1	1	0	0	0	1	1	0	2	0	0	2
8:15 AM	0	0	2	3	5	0	0	0	0	0	0	2	0	0	2
8:30 AM	0	0	0	1	1	0	0	0	0	0	0	2	0	0	2
8:45 AM	0	0	1	1	2	0	0	0	0	0	0	3	0	0	3
Count Total	0	0	8	10	18	1	0	0	1	2	0	16	0	0	16
Peak Hr	0	0	5	4	9	1	0	0	0	1	0	7	0	0	7

Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	E LOUISIANA PKWY				0				HARVEST RD				HARVEST 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	0	0	0	0	0	0	0	0	1	2	0	0	0	1	0	4	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	4	9
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	6
8:15 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	3	0	5	10
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	11
8:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	9
Count Total	0	0	0	0	0	0	0	0	0	1	7	0	0	0	10	0	18	0
Peak Hour	0	0	0	0	0	0	0	0	0	1	4	0	0	0	4	0	9	0

Two-Hour Count Summaries - Bikes																		
Interval Start	E LOUISIANA PKWY			0			HARVEST RD			HARVEST RD			15-min Total	Rolling One Hour				
	Eastbound			Westbound			Northbound			Southbound								
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT						
7:00 AM	0	0	0	0	0	0	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	0		
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
7:45 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
Count Total	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	
Peak Hour	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

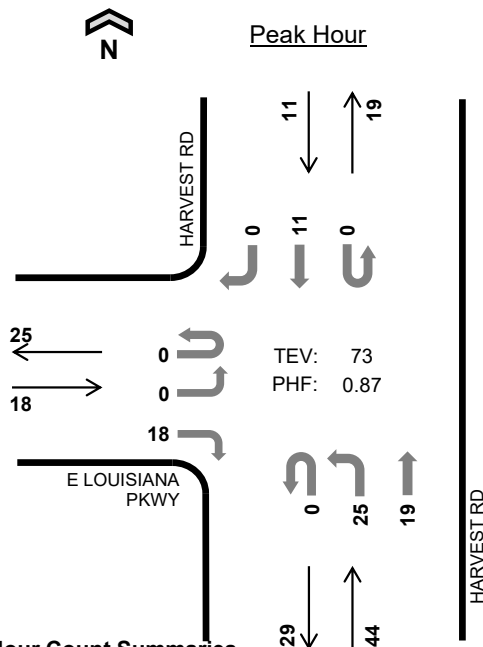
HARVEST RD E LOUISIANA PKWY



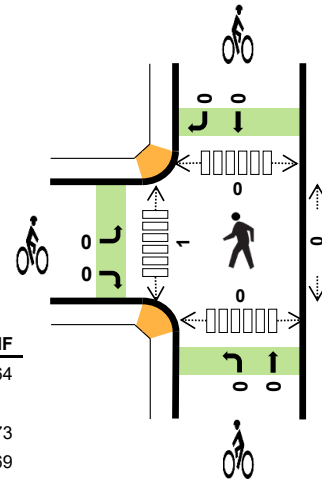
Date: Wed, Jun 23, 2021

Count Period: 4:00 PM to 6:00 PM

Peak Hour: 4:45 PM to 5:45 PM



	HV %:	PHF
EB	0.0%	0.64
WB	-	-
NB	2.3%	0.73
SB	27.3%	0.69
TOTAL	5.5%	0.87



Two-Hour Count Summaries

Interval Start		E LOUISIANA PKWY				0				HARVEST RD				HARVEST 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	1	0	4	0	0	0	0	0	9	2	0	0	0	3	1	20	0
4:15 PM		0	1	0	0	0	0	0	0	0	4	3	0	0	0	3	0	11	0
4:30 PM		0	0	0	1	0	0	0	0	0	5	5	0	0	0	5	0	16	0
4:45 PM		0	0	0	7	0	0	0	0	0	7	3	0	0	0	2	0	19	66
5:00 PM		0	0	0	4	0	0	0	0	0	4	5	0	0	0	3	0	16	62
5:15 PM		0	0	0	5	0	0	0	0	0	6	4	0	0	0	2	0	17	68
5:30 PM		0	0	0	2	0	0	0	0	0	8	7	0	0	0	4	0	21	73
5:45 PM		0	0	0	8	0	0	0	0	0	6	3	0	0	0	1	0	18	72
Count Total		0	2	0	31	0	0	0	0	0	49	32	0	0	0	23	1	138	0
Peak Hour	All	0	0	0	18	0	0	0	0	0	25	19	0	0	0	11	0	73	0
	HV	0	0	0	0	0	0	0	0	0	0	1	0	0	0	3	0	4	0
	HV%	-	-	-	0%	-	-	-	-	-	0%	5%	-	-	-	27%	-	5%	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	1	0	1	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	1	1	2	0	0	0	0	0	0	1	0	0	1
5:15 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
Count Total	0	0	3	5	8	0	0	0	0	0	0	3	0	0	3
Peak Hr	0	0	1	3	4	0	0	0	0	0	0	1	0	0	1

Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	E LOUISIANA PKWY				0				HARVEST RD				HARVEST 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	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	5
5:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	6
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	5
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Count Total	0	0	0	0	0	0	0	0	0	0	3	0	0	0	5	0	8	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	1	0	0	0	3	0	4	0

Two-Hour Count Summaries - Bikes																		
Interval Start	E LOUISIANA PKWY				0				HARVEST RD				HARVEST RD				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	LT	TH	RT		LT	TH	RT		LT	TH	RT		LT	TH	RT			
4:00 PM	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
4:30 PM	0	0	0		0	0	0		0	0	0		0	0	0		0	0
4:45 PM	0	0	0		0	0	0		0	0	0		0	0	0		0	0
5:00 PM	0	0	0		0	0	0		0	0	0		0	0	0		0	0
5:15 PM	0	0	0		0	0	0		0	0	0		0	0	0		0	0
5:30 PM	0	0	0		0	0	0		0	0	0		0	0	0		0	0
5:45 PM	0	0	0		0	0	0		0	0	0		0	0	0		0	0
Count Total	0	0	0		0	0	0		0	0	0		0	0	0		0	0
Peak Hour	0	0	0		0	0	0		0	0	0		0	0	0		0	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

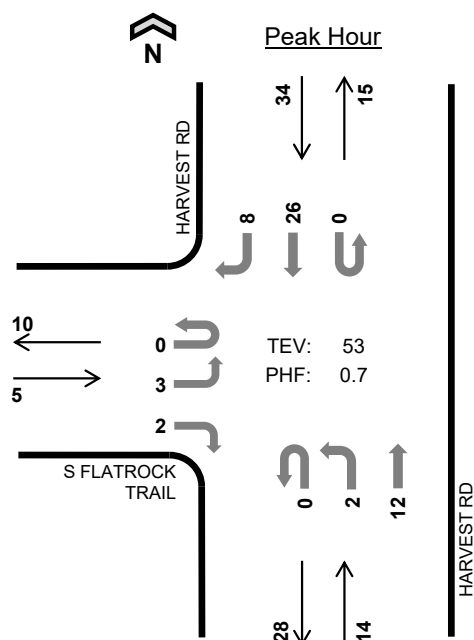
HARVEST RD S FLATROCK TRAIL



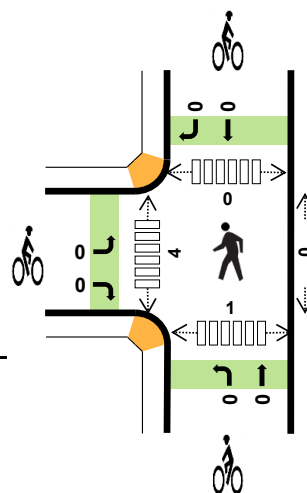
Date: Wed, Jun 23, 2021

Count Period: 7:00 AM to 9:00 AM

Peak Hour: 7:45 AM to 8:45 AM



	HV %:	PHF
EB	0.0%	0.31
WB	-	-
NB	21.4%	0.70
SB	20.6%	0.71
TOTAL	18.9%	0.70



Two-Hour Count Summaries

Interval Start		S FLATROCK TRAIL				0				HARVEST RD				HARVEST 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	0	0	0	0	0	0	0	0	0	6	0	0	0	6	0	12	0
7:15 AM		0	0	0	1	0	0	0	0	0	0	2	0	0	0	7	2	12	0
7:30 AM		0	0	0	1	0	0	0	0	0	0	4	0	0	0	3	0	8	0
7:45 AM		0	2	0	2	0	0	0	0	0	0	3	0	0	0	9	3	19	51
8:00 AM		0	1	0	0	0	0	0	0	0	1	2	0	0	0	6	1	11	50
8:15 AM		0	0	0	0	0	0	0	0	0	1	2	0	0	0	5	3	11	49
8:30 AM		0	0	0	0	0	0	0	0	0	0	5	0	0	0	6	1	12	53
8:45 AM		0	0	0	2	0	0	0	0	1	0	4	0	0	0	4	1	12	46
Count Total		0	3	0	6	0	0	0	0	1	2	28	0	0	0	46	11	97	0
Peak Hour	All	0	3	0	2	0	0	0	0	0	2	12	0	0	0	26	8	53	0
	HV	0	0	0	0	0	0	0	0	0	0	3	0	0	0	7	0	10	0
	HV%	-	0%	-	0%	-	-	-	-	-	0%	25%	-	-	-	27%	0%	19%	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	2	2	4	0	0	0	0	0	0	1	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
7:30 AM	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	1	2	3	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	2	2	0	0	0	0	0	0	1	0	0	1
8:15 AM	0	0	2	1	3	0	0	0	0	0	0	2	0	0	2
8:30 AM	0	0	0	2	2	0	0	0	0	0	0	1	0	1	2
8:45 AM	0	0	2	1	3	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	9	10	19	0	0	0	0	0	0	6	0	1	7
Peak Hr	0	0	3	7	10	0	0	0	0	0	0	4	0	1	5

Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	S FLATROCK TRAIL				0				HARVEST RD				HARVEST 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	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	4	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	3	9
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	7
8:15 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	3	10
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	10
8:45 AM	0	0	0	0	0	0	0	0	1	0	1	0	0	0	1	0	3	10
Count Total	0	0	0	0	0	0	0	0	1	0	8	0	0	0	10	0	19	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	3	0	0	0	7	0	10	0

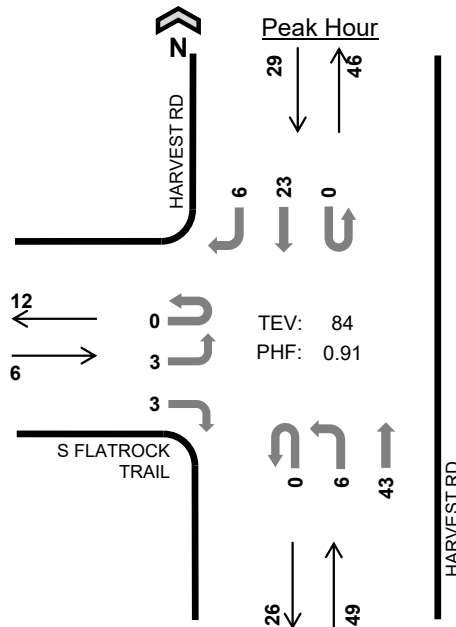
Two-Hour Count Summaries - Bikes																		
Interval Start	S FLATROCK TRAIL			0			HARVEST RD			HARVEST RD						15-min Total	Rolling One Hour	
	Eastbound			Westbound			Northbound			Southbound								
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT			
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	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	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

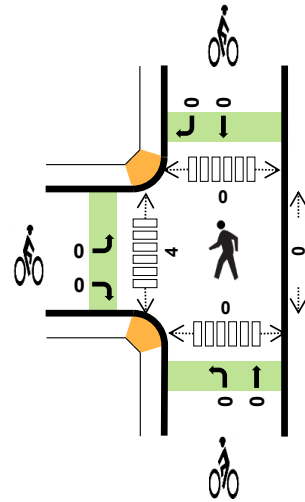
HARVEST RD S FLATROCK TRAIL



Date: Wed, Jun 23, 2021
 Count Period: 4:00 PM to 6:00 PM
 Peak Hour: 4:45 PM to 5:45 PM



	HV %:	PHF
EB	0.0%	0.50
WB	-	-
NB	2.0%	0.88
SB	10.3%	0.81
TOTAL	4.8%	0.91



Two-Hour Count Summaries

Interval Start		S FLATROCK TRAIL				0				HARVEST RD				HARVEST 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	0	0	0	0	0	0	0	1	10	0	0	0	6	2	19	0
4:15 PM		0	0	0	1	0	0	0	0	0	2	8	0	0	0	2	1	14	0
4:30 PM		0	0	0	1	0	0	0	0	0	1	9	0	0	0	5	1	17	0
4:45 PM		0	1	0	2	0	0	0	0	0	2	10	0	0	0	6	1	22	72
5:00 PM		0	1	0	1	0	0	0	0	0	1	8	0	0	0	7	0	18	71
5:15 PM		0	0	0	0	0	0	0	0	0	3	11	0	0	0	6	3	23	80
5:30 PM		0	1	0	0	0	0	0	0	0	0	14	0	0	0	4	2	21	84
5:45 PM		0	1	0	0	0	0	0	0	0	1	7	0	0	0	8	0	17	79
Count Total		0	4	0	5	0	0	0	0	0	11	77	0	0	0	44	10	151	0
Peak Hour	All	0	3	0	3	0	0	0	0	0	6	43	0	0	0	23	6	84	0
	HV	0	0	0	0	0	0	0	0	0	0	1	0	0	0	3	0	4	0
	HV%	-	0%	-	0%	-	-	-	-	-	0%	2%	-	-	-	13%	0%	5%	0

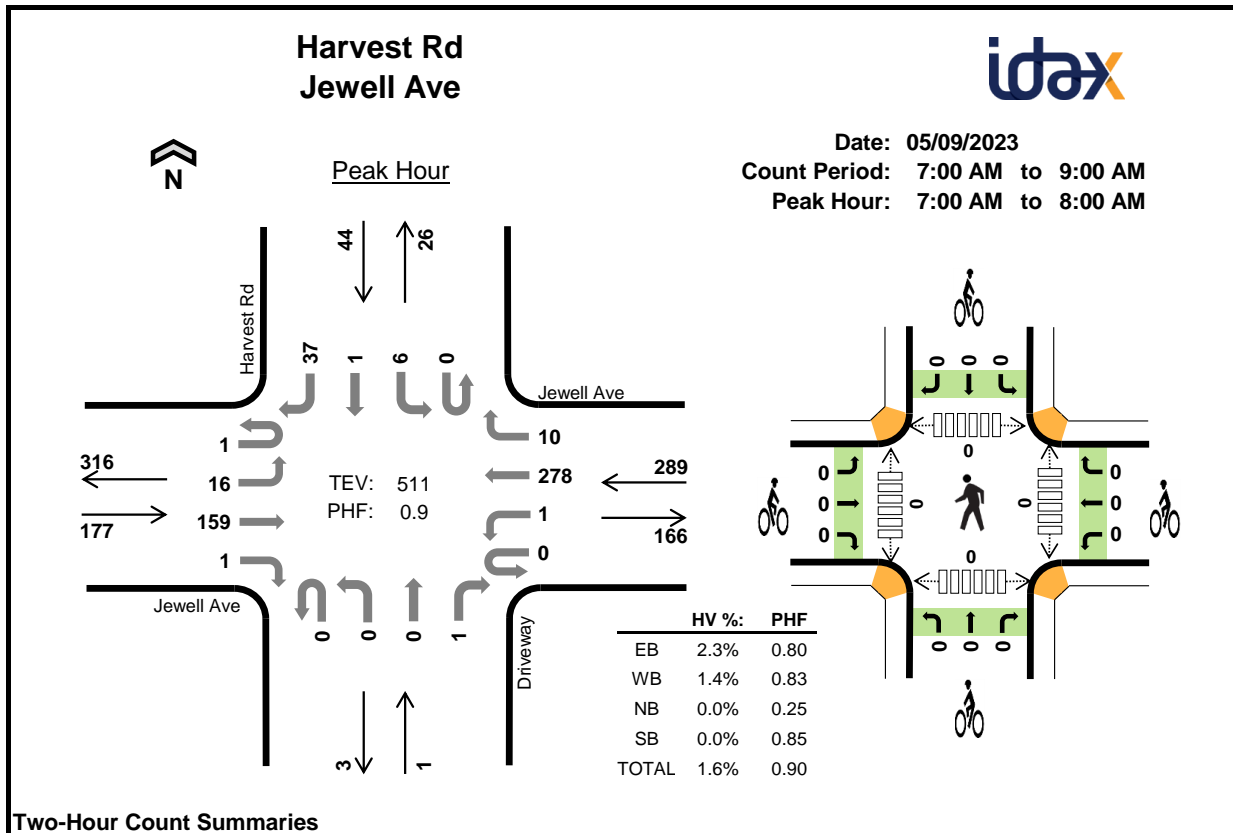
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

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	1	1	2	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	1	1	0	0	0	0	0	0	1	0	0	1
4:45 PM	0	0	0	1	1	0	0	0	0	0	0	1	0	0	1
5:00 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	1	1	2	0	0	0	0	0	0	2	0	0	2
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	3	5	8	0	0	0	0	0	0	5	0	0	5
Peak Hr	0	0	1	3	4	0	0	0	0	0	0	4	0	0	4

Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	S FLATROCK TRAIL				0				HARVEST RD				HARVEST 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	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	5
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	4
5:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	5
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Count Total	0	0	0	0	0	0	0	0	0	0	3	0	0	0	5	0	8	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	1	0	0	0	3	0	4	0

Two-Hour Count Summaries - Bikes																		
Interval Start	S FLATROCK TRAIL			0			HARVEST RD			HARVEST RD			15-min Total	Rolling One Hour				
	Eastbound			Westbound			Northbound			Southbound								
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT						
4:00 PM	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				
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0				

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

**Two-Hour Count Summaries**

Interval Start		Jewell Ave				Jewell Ave				Driveway				Harvest 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	6	48	1	0	0	58	3	0	0	0	0	0	1	1	7	125	0
7:15 AM		1	5	42	0	0	0	69	1	0	0	0	1	0	1	0	12	132	0
7:30 AM		0	4	38	0	0	0	85	2	0	0	0	0	0	2	0	11	142	0
7:45 AM		0	1	31	0	0	1	66	4	0	0	0	0	0	2	0	7	112	511
8:00 AM		0	4	34	1	0	1	37	1	0	0	0	0	0	1	0	11	90	476
8:15 AM		0	7	35	1	0	0	44	0	0	0	1	1	0	2	0	10	101	445
8:30 AM		1	4	38	0	0	0	50	4	0	0	1	1	0	0	1	11	111	414
8:45 AM		0	11	24	1	0	0	51	0	0	0	2	0	0	0	0	5	94	396
Count Total		2	42	290	4	0	2	460	15	0	0	4	3	0	9	2	74	907	0
Peak Hour	All	1	16	159	1	0	1	278	10	0	0	0	1	0	6	1	37	511	0
	HV	0	0	4	0	0	0	3	1	0	0	0	0	0	0	0	0	8	0
	HV%	0%	0%	3%	0%	-	0%	1%	10%	-	-	-	0%	-	0%	0%	0%	2%	0

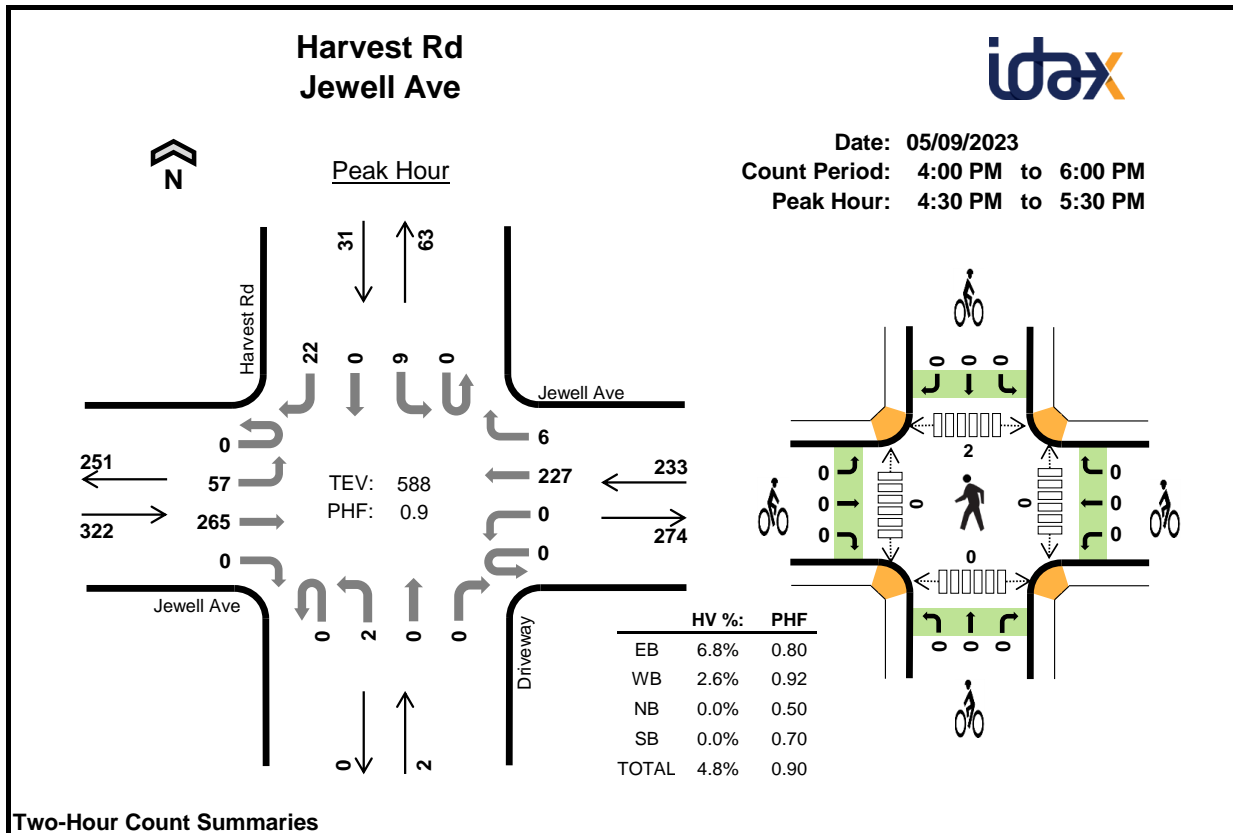
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

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	1	1	0	0	2	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	1	3	0	0	4	0	0	0	0	0	0	0	0	0	0
7:45 AM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0
8:00 AM	5	1	0	0	6	0	0	0	0	0	2	0	0	2	4
8:15 AM	10	11	1	2	24	0	0	0	0	0	0	0	0	1	1
8:30 AM	9	13	1	0	23	0	0	0	0	0	1	0	1	1	3
8:45 AM	6	20	1	0	27	0	0	0	0	0	0	0	0	4	4
Count Total	34	49	3	2	88	0	0	0	0	0	3	0	1	8	12
Peak Hour	4	4	0	0	8	0	0	0	0	0	0	0	0	0	0

Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	Jewell Ave				Jewell Ave				Driveway				Harvest 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	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	2	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	1	0	0	0	3	0	0	0	0	0	0	0	0	0	4	0
7:45 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	8
8:00 AM	0	0	4	1	0	0	1	0	0	0	0	0	0	0	0	0	6	12
8:15 AM	0	0	9	1	0	0	11	0	0	0	1	0	0	0	0	2	24	36
8:30 AM	0	0	9	0	0	0	13	0	0	0	1	0	0	0	0	0	23	55
8:45 AM	0	0	5	1	0	0	20	0	0	0	1	0	0	0	0	0	27	80
Count Total	0	0	31	3	0	0	48	1	0	0	3	0	0	0	0	2	88	0
Peak Hour	0	0	4	0	0	0	3	1	0	0	0	0	0	0	0	0	8	0

Two-Hour Count Summaries - Bikes																	
Interval Start	Jewell Ave			Jewell Ave			Driveway			Harvest Rd			15-min Total	Rolling One Hour			
	Eastbound			Westbound			Northbound			Southbound							
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT					
7:00 AM	0	0	0	0	0	0	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	0	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:15 AM	0	0	0	0	0	0	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	0	
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

**Two-Hour Count Summaries**

Interval Start		Jewell Ave				Jewell Ave				Driveway				Harvest 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	15	62	0	0	0	46	5	0	1	0	0	0	0	0	8	137	0
4:15 PM		0	12	56	0	0	0	67	0	0	1	0	0	0	3	0	9	148	0
4:30 PM		0	15	60	0	0	0	62	1	0	0	0	0	0	2	0	6	146	0
4:45 PM		0	11	64	0	0	0	59	2	0	1	0	0	0	0	0	7	144	575
5:00 PM		0	8	63	0	0	0	58	1	0	0	0	0	0	5	0	0	135	573
5:15 PM		0	23	78	0	0	0	48	2	0	1	0	0	0	2	0	9	163	588
5:30 PM		0	18	55	0	0	0	34	2	0	2	0	0	0	1	0	5	117	559
5:45 PM		0	13	56	0	0	0	32	1	0	0	1	0	0	3	0	10	116	531
Count Total		0	115	494	0	0	0	406	14	0	6	1	0	0	16	0	54	1,106	0
Peak Hour	All	0	57	265	0	0	0	227	6	0	2	0	0	0	9	0	22	588	0
	HV	0	2	20	0	0	0	6	0	0	0	0	0	0	0	0	0	28	0
	HV%	-	4%	8%	-	-	-	3%	0%	-	0%	-	-	-	0%	-	0%	5%	0

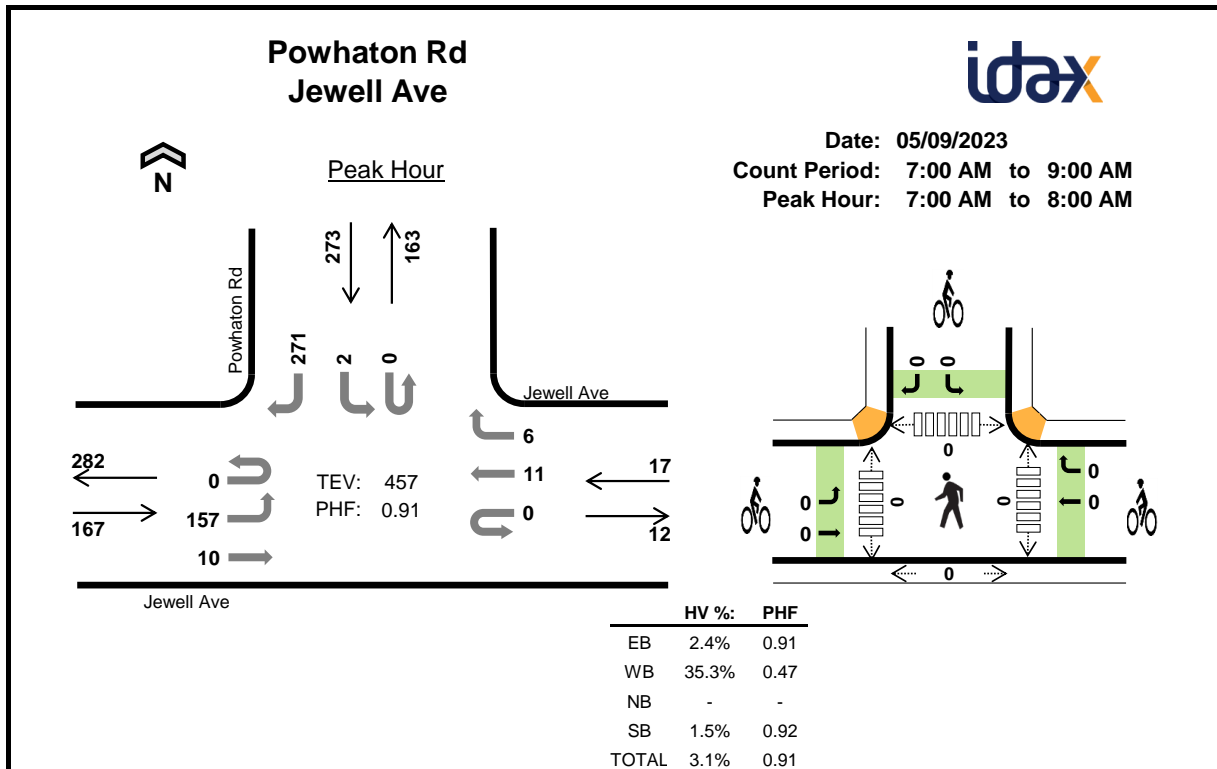
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

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	6	3	0	0	9	0	0	0	0	0	0	0	0	0	0
4:15 PM	4	2	0	0	6	0	0	0	0	0	0	0	0	0	0
4:30 PM	7	2	0	0	9	0	0	0	0	0	0	0	2	0	2
4:45 PM	8	2	0	0	10	0	0	0	0	0	0	0	0	0	0
5:00 PM	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0
5:15 PM	2	2	0	0	4	0	0	0	0	0	0	0	0	0	0
5:30 PM	6	1	0	0	7	0	0	0	0	0	0	0	0	0	0
5:45 PM	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0
Count Total	41	12	0	0	53	0	0	0	0	0	0	0	2	0	2
Peak Hour	22	6	0	0	28	0	0	0	0	0	0	0	2	0	2

Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	Jewell Ave				Jewell Ave				Driveway				Harvest 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	1	5	0	0	0	3	0	0	0	0	0	0	0	0	0	9	0
4:15 PM	0	0	4	0	0	0	2	0	0	0	0	0	0	0	0	0	6	0
4:30 PM	0	2	5	0	0	0	2	0	0	0	0	0	0	0	0	0	9	0
4:45 PM	0	0	8	0	0	0	2	0	0	0	0	0	0	0	0	0	10	34
5:00 PM	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	5	30
5:15 PM	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	4	28
5:30 PM	0	0	6	0	0	0	1	0	0	0	0	0	0	0	0	0	7	26
5:45 PM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	19
Count Total	0	3	38	0	0	0	12	0	0	0	0	0	0	0	0	0	53	0
Peak Hour	0	2	20	0	0	0	6	0	0	0	0	0	0	0	0	0	28	0

Two-Hour Count Summaries - Bikes																
Interval Start	Jewell Ave			Jewell Ave			Driveway			Harvest Rd			15-min Total	Rolling One Hour		
	Eastbound			Westbound			Northbound			Southbound						
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT				
4:00 PM	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		
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0		

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

**Two-Hour Count Summaries**

Interval Start		Jewell Ave				Jewell Ave				N/A				Powhatan 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	45	1	0	0	0	1	1	0	0	0	0	0	0	0	58	106	0
7:15 AM		0	40	1	0	0	0	2	0	0	0	0	0	0	0	0	73	116	0
7:30 AM		0	38	4	0	0	0	7	2	0	0	0	0	0	0	0	74	125	0
7:45 AM		0	34	4	0	0	0	1	3	0	0	0	0	0	2	0	66	110	457
8:00 AM		0	29	2	0	0	0	3	2	0	0	0	0	0	0	0	37	73	424
8:15 AM		0	37	4	0	0	0	3	1	0	0	0	0	0	2	0	48	95	403
8:30 AM		0	32	6	0	0	0	2	0	0	0	0	0	0	2	0	38	80	358
8:45 AM		0	23	4	0	0	0	1	0	0	0	0	0	0	2	0	55	85	333
Count Total		0	278	26	0	0	0	20	9	0	0	0	0	0	8	0	449	790	0
Peak Hour	All	0	157	10	0	0	0	11	6	0	0	0	0	0	2	0	271	457	0
	HV	0	3	1	0	0	0	2	4	0	0	0	0	0	0	0	4	14	0
	HV%	-	2%	10%	-	-	-	18%	67%	-	-	-	-	-	0%	-	1%	3%	0

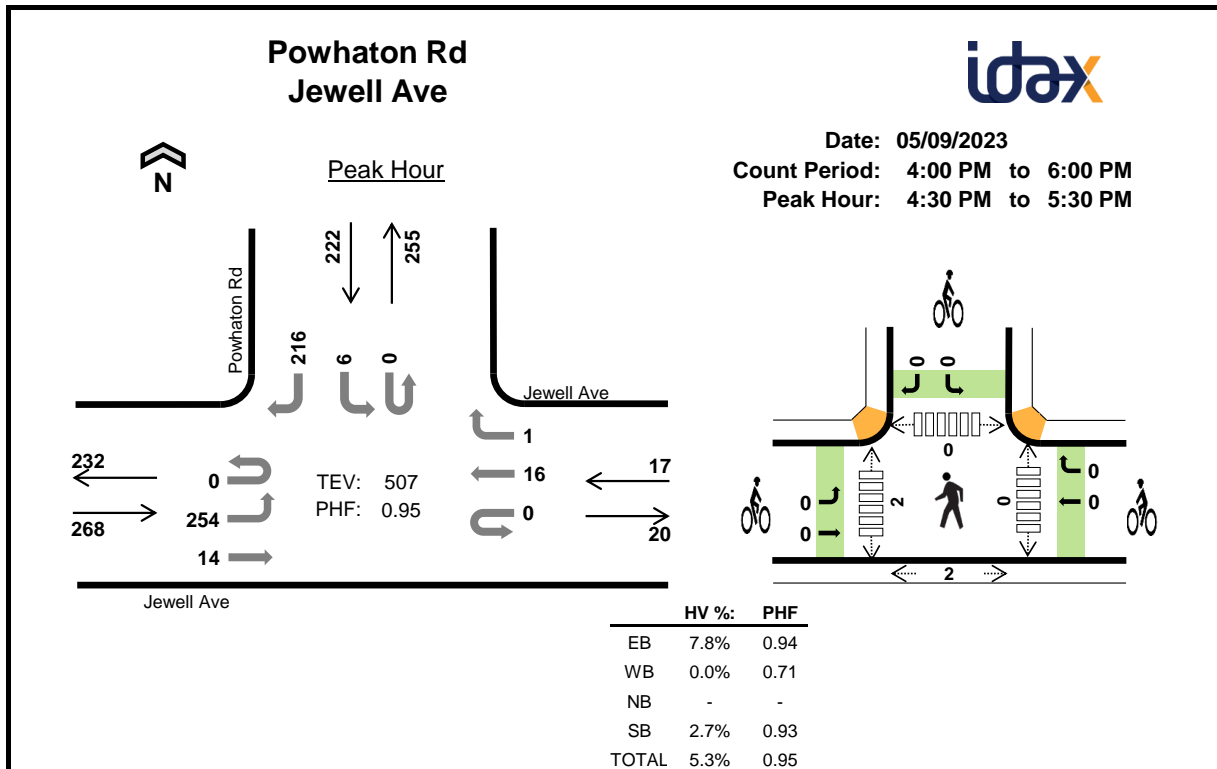
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

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	1	1	0	1	3	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	3	0	3	6	0	0	0	0	0	0	0	0	0	0
7:45 AM	3	2	0	0	5	0	0	0	0	0	0	0	0	0	0
8:00 AM	3	2	0	1	6	0	0	0	0	0	0	0	0	0	0
8:15 AM	9	1	0	13	23	0	0	0	0	0	0	0	0	0	0
8:30 AM	9	1	0	11	21	0	0	0	0	0	0	0	0	0	0
8:45 AM	6	0	0	22	28	0	0	0	0	0	0	0	0	0	0
Count Total	31	10	0	51	92	0	0	0	0	0	0	0	0	0	0
Peak Hr	4	6	0	4	14	0	0	0	0	0	0	0	0	0	0

Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	Jewell Ave				Jewell Ave				N/A				Powhatan 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	1	0	0	0	0	1	0	0	0	0	0	0	0	0	1	3	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	3	6	0
7:45 AM	0	2	1	0	0	0	0	2	0	0	0	0	0	0	0	0	5	14
8:00 AM	0	3	0	0	0	0	1	1	0	0	0	0	0	0	0	1	6	17
8:15 AM	0	9	0	0	0	0	0	1	0	0	0	0	0	2	0	11	23	40
8:30 AM	0	8	1	0	0	0	1	0	0	0	0	0	0	2	0	9	21	55
8:45 AM	0	5	1	0	0	0	0	0	0	0	0	0	0	1	0	21	28	78
Count Total	0	28	3	0	0	0	4	6	0	0	0	0	0	5	0	46	92	0
Peak Hour	0	3	1	0	0	0	2	4	0	0	0	0	0	0	0	4	14	0

Two-Hour Count Summaries - Bikes																	
Interval Start	Jewell Ave			Jewell Ave			N/A			Powhatan Rd			15-min Total	Rolling One Hour			
	Eastbound			Westbound			Northbound			Southbound							
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT					
7:00 AM	0	0	0	0	0	0	0	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	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	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	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

**Two-Hour Count Summaries**

Interval Start		Jewell Ave				Jewell Ave				N/A				Powhatan 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	64	4	0	0	0	0	0	0	0	0	0	0	0	0	59	127	0
4:15 PM		0	53	4	0	0	0	2	0	0	0	0	0	0	0	0	58	117	0
4:30 PM		0	56	4	0	0	0	5	1	0	0	0	0	0	1	0	55	122	0
4:45 PM		0	68	2	0	0	0	3	0	0	0	0	0	0	3	0	57	133	499
5:00 PM		0	62	5	0	0	0	4	0	0	0	0	0	0	1	0	53	125	497
5:15 PM		0	68	3	0	0	0	4	0	0	0	0	0	0	1	0	51	127	507
5:30 PM		0	53	3	0	0	0	1	0	0	0	0	0	0	0	0	35	92	477
5:45 PM		0	56	9	0	0	0	1	0	0	0	0	0	0	0	0	28	94	438
Count Total		0	480	34	0	0	0	20	1	0	0	0	0	0	6	0	396	937	0
Peak Hour	All	0	254	14	0	0	0	16	1	0	0	0	0	0	6	0	216	507	0
	HV	0	20	1	0	0	0	0	0	0	0	0	0	0	0	0	6	27	0
	HV%	-	8%	7%	-	-	-	0%	0%	-	-	-	-	-	0%	-	3%	5%	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	5	0	0	3	8	0	0	0	0	0	0	0	0	0	0
4:15 PM	3	0	0	2	5	0	0	0	0	0	0	0	0	0	0
4:30 PM	6	0	0	2	8	0	0	0	0	0	0	2	0	0	2
4:45 PM	10	0	0	2	12	0	0	0	0	0	0	0	0	2	2
5:00 PM	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0
5:15 PM	2	0	0	2	4	0	0	0	0	0	0	0	0	0	0
5:30 PM	5	0	0	1	6	0	0	0	0	0	0	0	0	0	0
5:45 PM	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0
Count Total	38	0	0	12	50	0	0	0	0	0	0	2	0	2	4
Peak Hr	21	0	0	6	27	0	0	0	0	0	0	2	0	2	4

Two-Hour Count Summaries - Heavy Vehicles																			
Interval Start	Jewell Ave				Jewell Ave				N/A				Powhatan 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	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	8	0
4:15 PM	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	5	0
4:30 PM	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	8	0
4:45 PM	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	12	33
5:00 PM	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	28
5:15 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	4	27
5:30 PM	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	6	25
5:45 PM	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	17
Count Total	0	36	2	0	0	0	0	0	0	0	0	0	0	0	0	0	12	50	0
Peak Hour	0	20	1	0	0	0	0	0	0	0	0	0	0	0	0	0	6	27	0

Two-Hour Count Summaries - Bikes																			
Interval Start	Jewell Ave			Jewell Ave			N/A			Powhatan Rd			15-min Total	Rolling One Hour					
	Eastbound			Westbound			Northbound			Southbound									
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT							
4:00 PM	0	0	0	0	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	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.



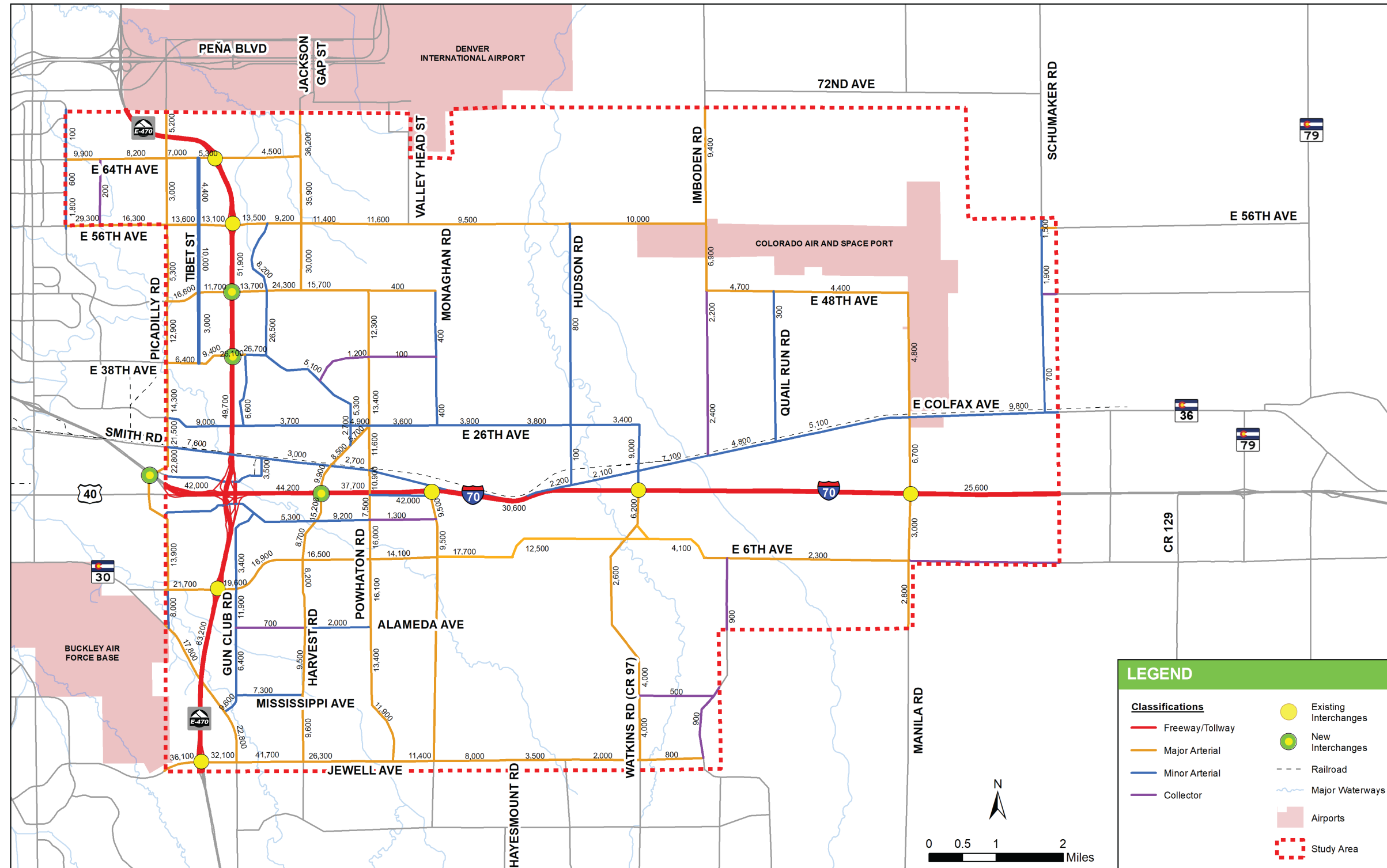
APPENDIX B

Future Traffic Projections,
NEATS Projections, and
Adjacent Traffic Studies

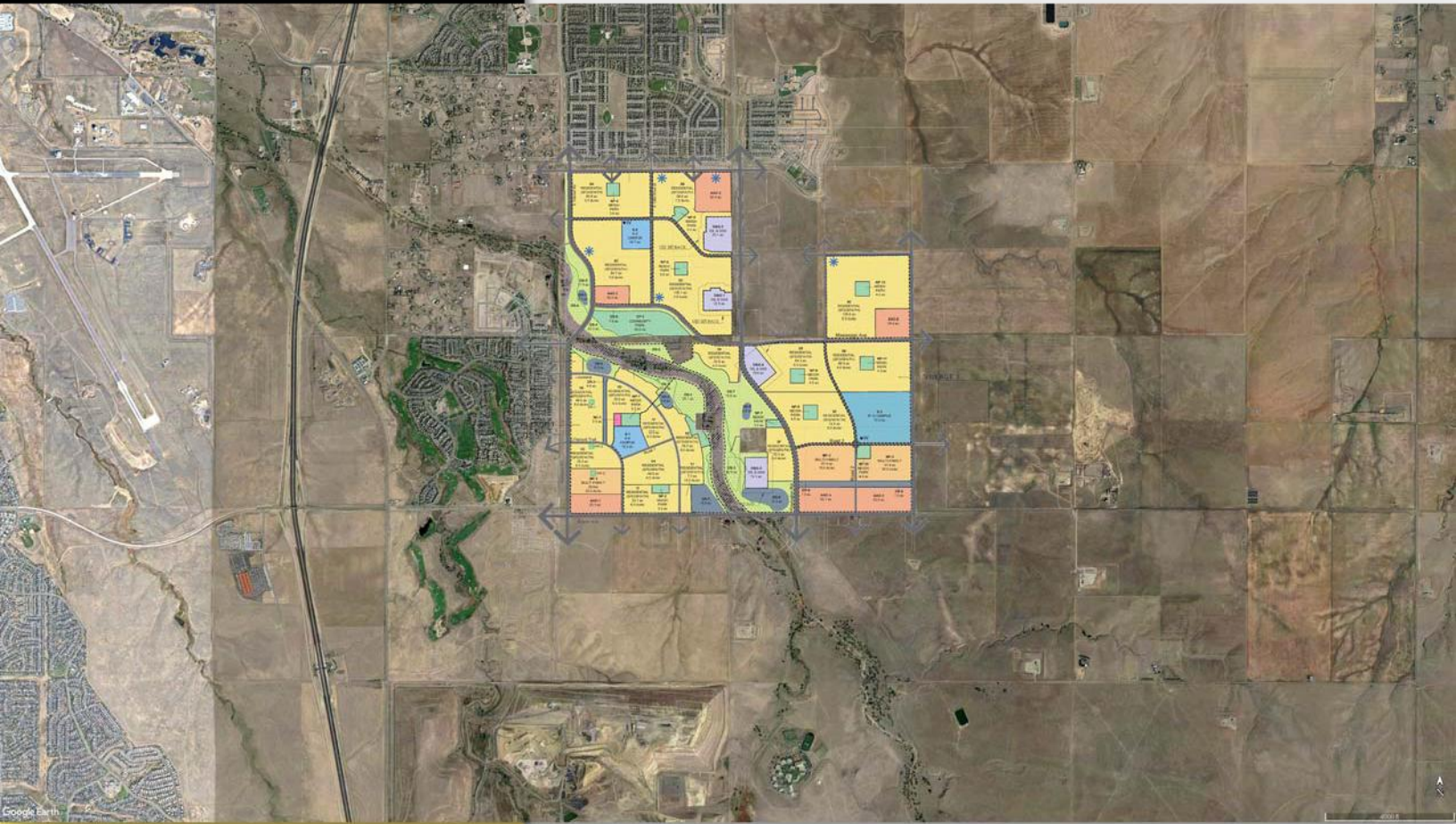
ROUTE	REFPT	ENDREFPT	AADT	AADTYR	OFFPKTRK	YR20FACTOR	GROWTHRATE	DHV	LOCATION
030A	12.585	15.036	9300	2021	6.4	1.42	1.80%	11.5	ON SH 30 6TH AVE W/O PICCADILLY RD AURORA
030A	15.036	19.293	19000	2021	4.9	1.53	2.10%	10.5	ON SH 30 S/O JEWELL AVE AURORA
Average						1.475	1.96%		

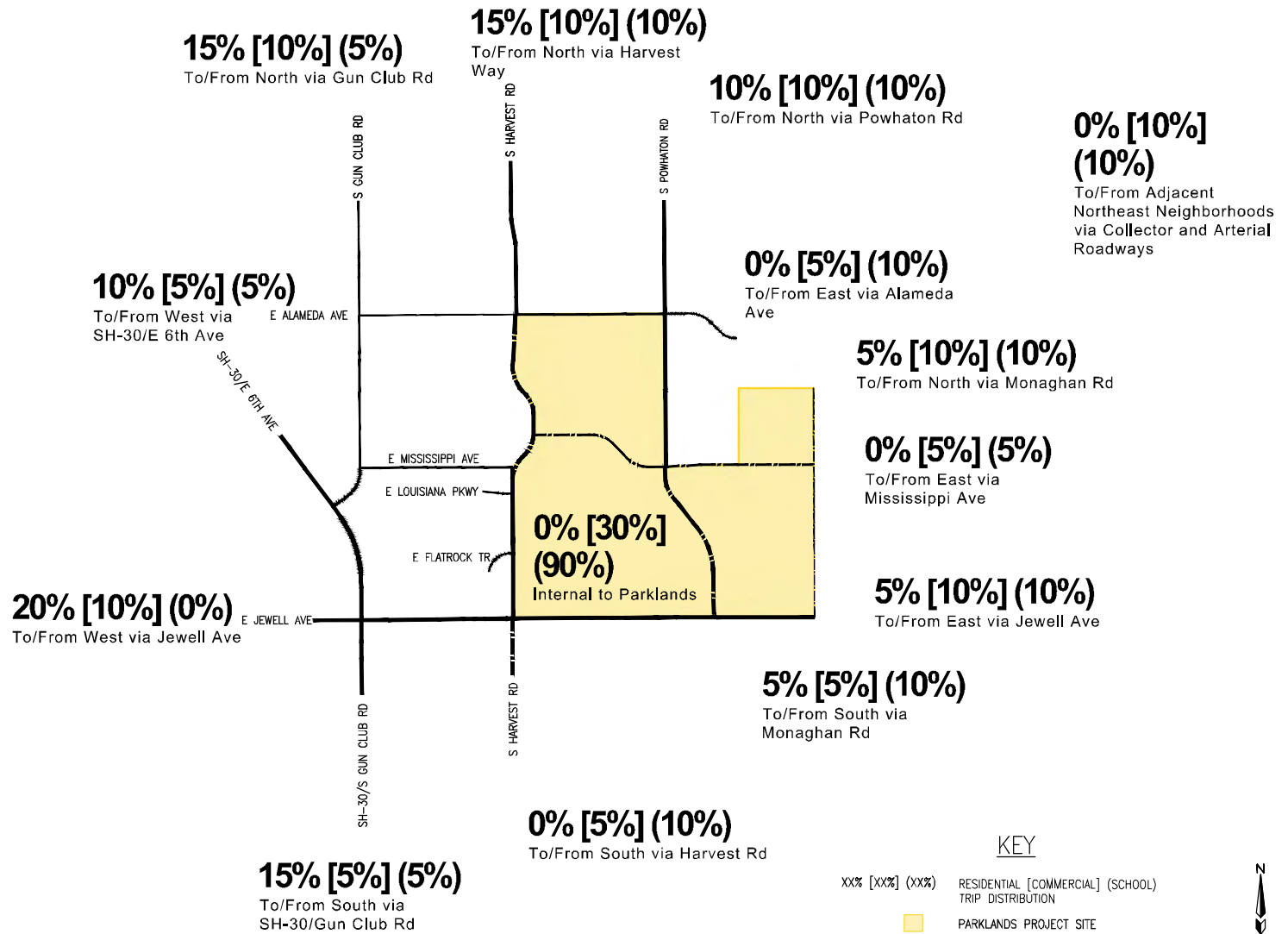


Figure 12.
2030 Daily Traffic Volumes



Parklands Development Master Traffic Study



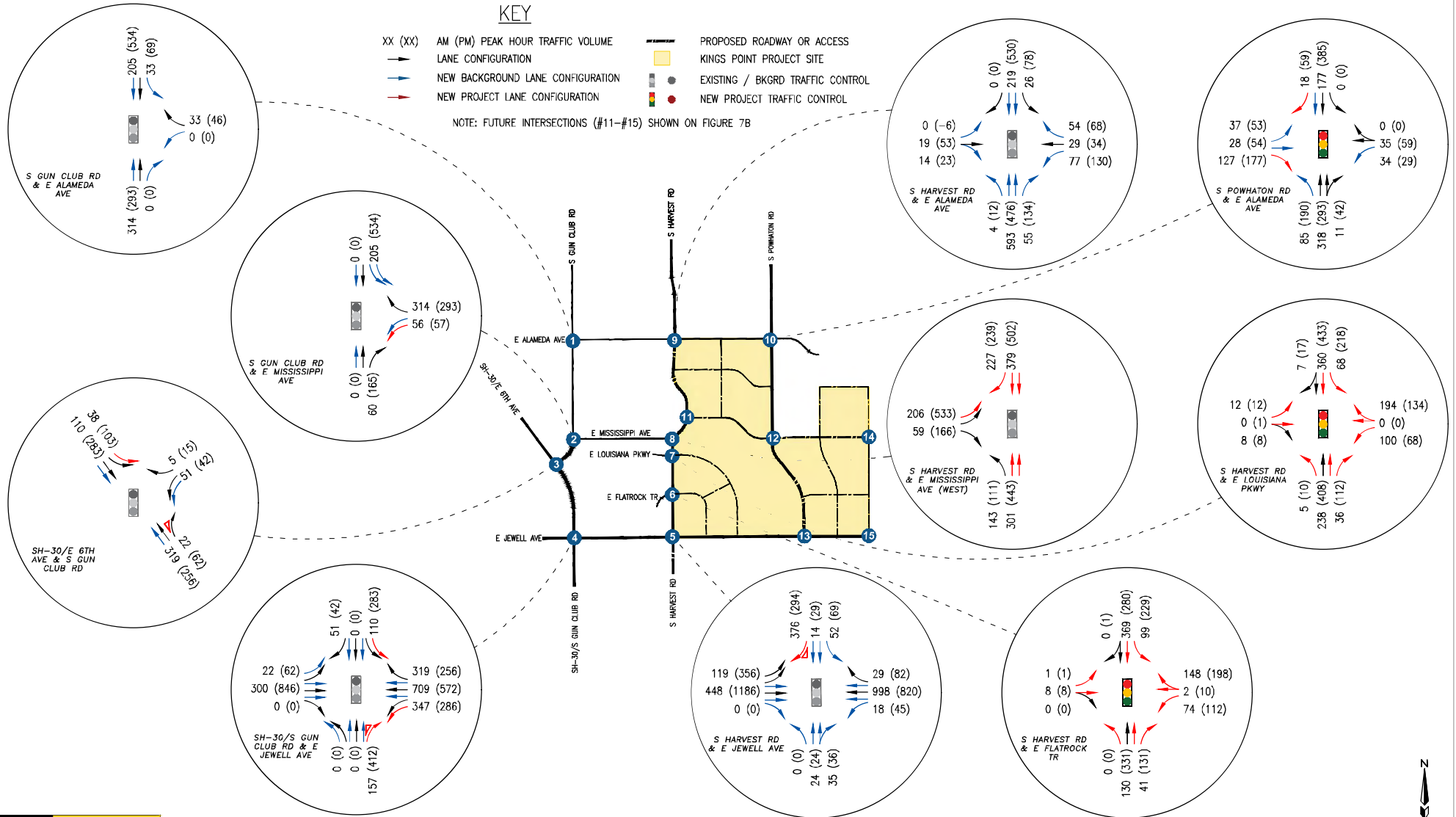


KEY

XX (XX) AM (PM) PEAK HOUR TRAFFIC VOLUME
 → LANE CONFIGURATION
 → NEW BACKGROUND LANE CONFIGURATION
 → NEW PROJECT LANE CONFIGURATION

PROPOSED ROADWAY OR ACCESS
 KINGS POINT PROJECT SITE
 EXISTING / BKGRD TRAFFIC CONTROL
 NEW PROJECT TRAFFIC CONTROL

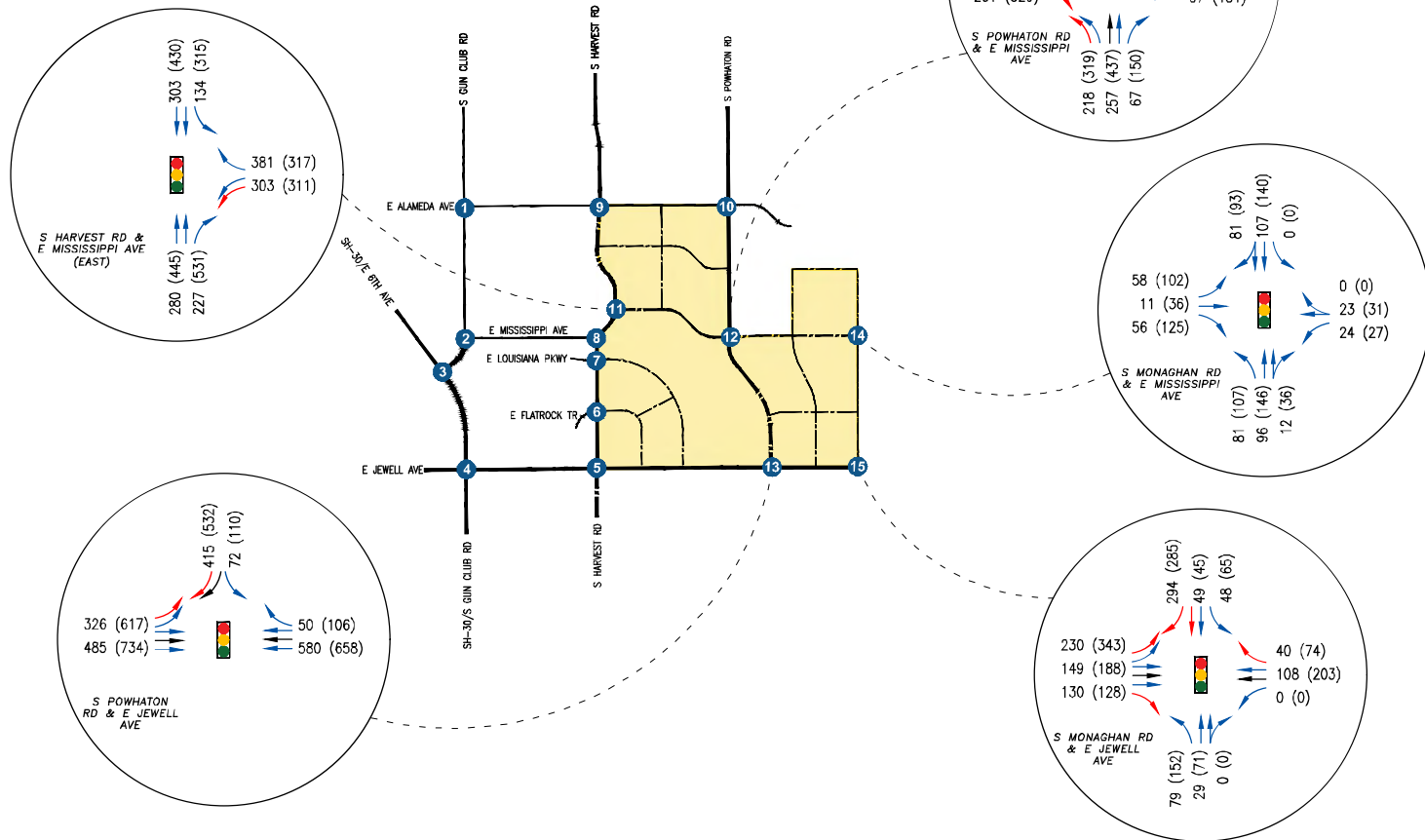
NOTE: FUTURE INTERSECTIONS (#11-#15) SHOWN ON FIGURE 7B

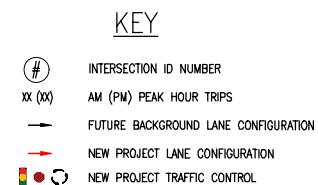
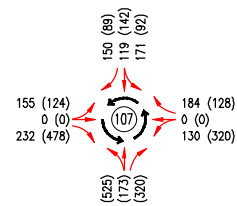


KEY

- XX (XX) AM (PM) PEAK HOUR TRAFFIC VOLUME
- LANE CONFIGURATION
- NEW BACKGROUND LANE CONFIGURATION
- NEW PROJECT LANE CONFIGURATION
- PROPOSED ROADWAY OR ACCESS
- KINGS POINT PROJECT SITE
- EXISTING / BKGRD TRAFFIC CONTROL
- NEW PROJECT TRAFFIC CONTROL

NOTE: EXISTING INTERSECTIONS (#1-#10) SHOWN ON FIGURE 7A





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

Parklands Village 2 – Filings 2-4

Aurora, Colorado

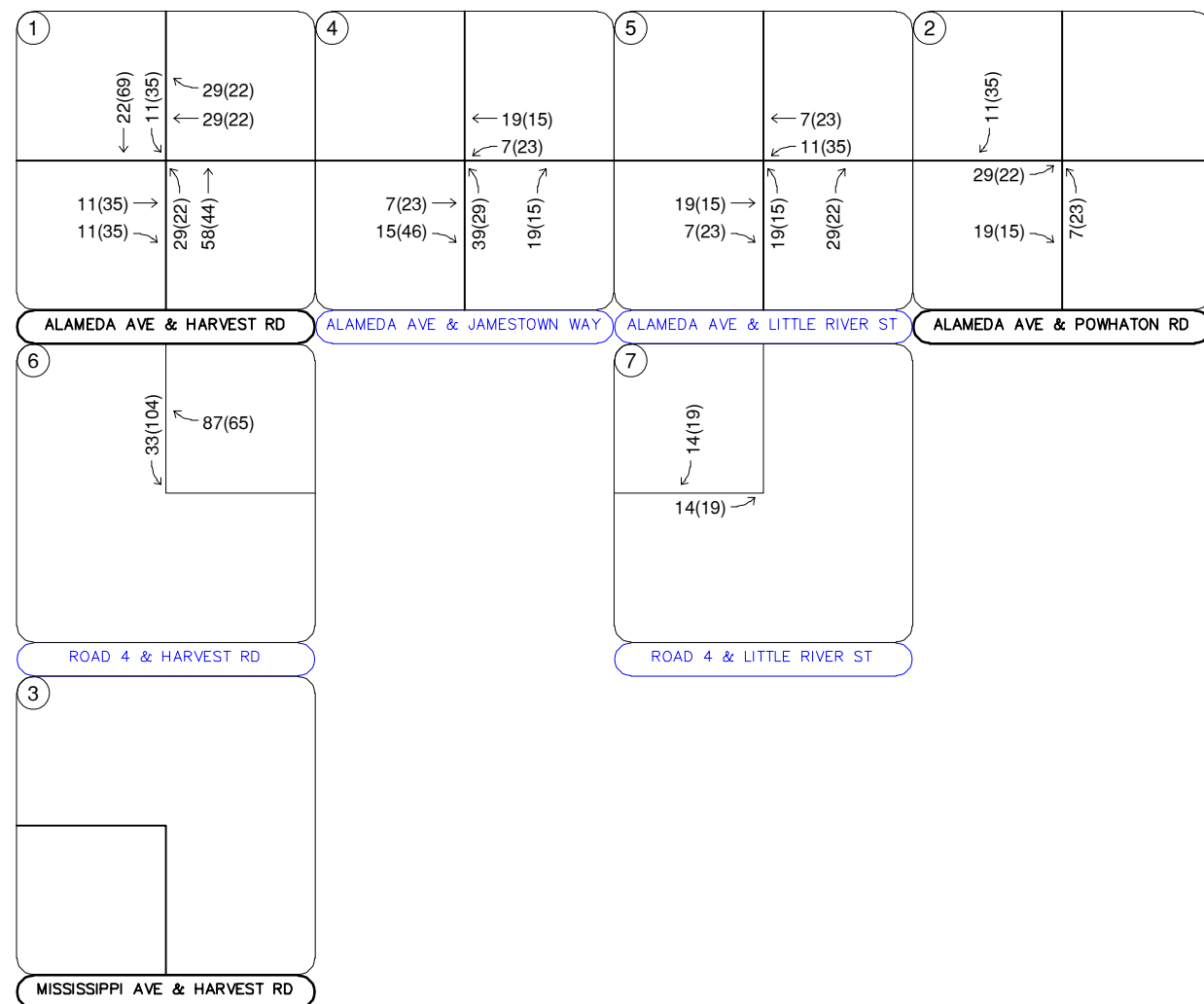
Prepared for
NL Parklands 4 Land CO, LLC
8678 Concord Center Drive
Suite 200
Englewood, Colorado 80112

Prepared by
Kimley-Horn and Associates, Inc.
6200 South Syracuse Way
Suite 300
Greenwood Village, Colorado 80111
(303) 228-2300



June 2023

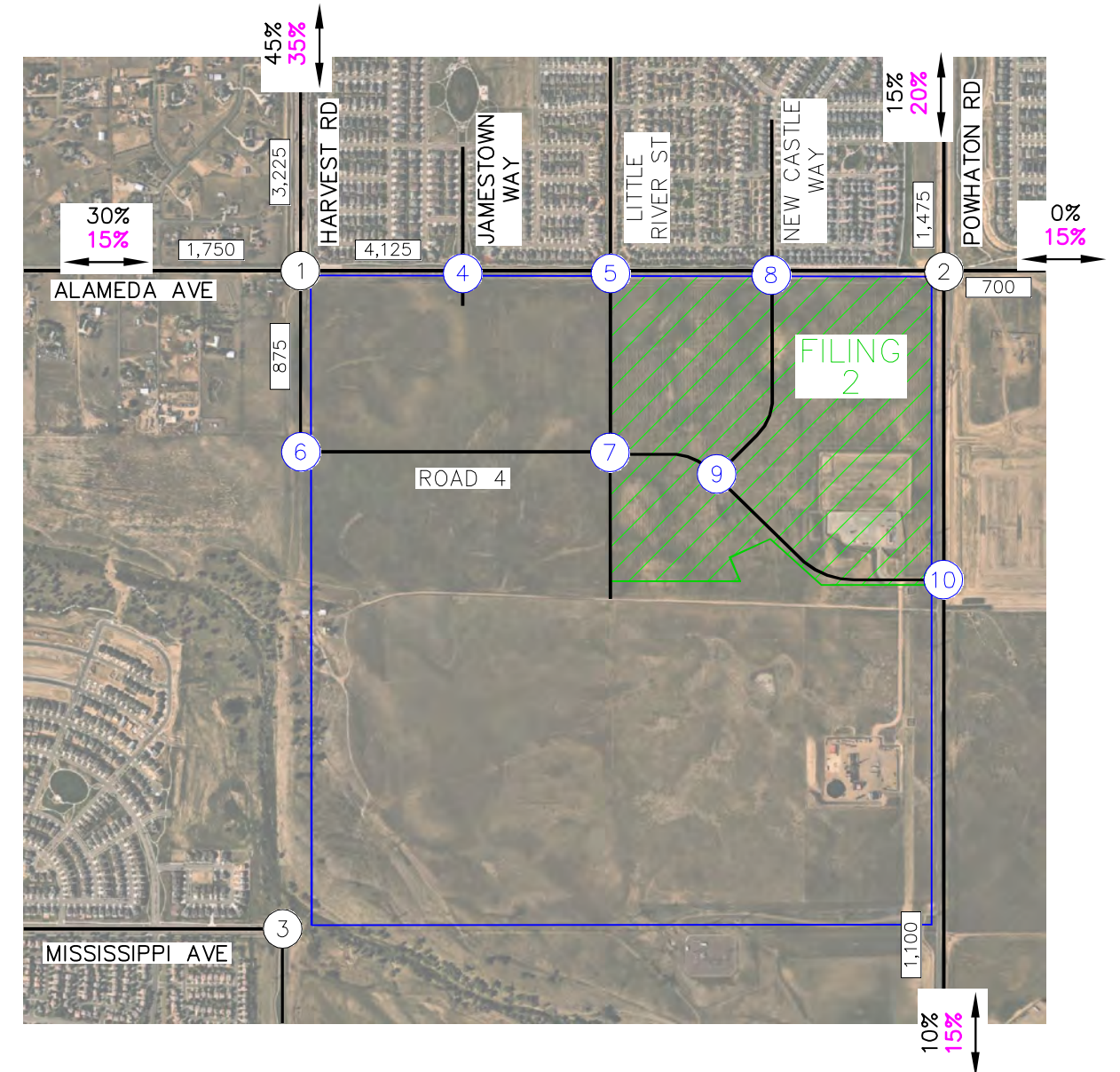
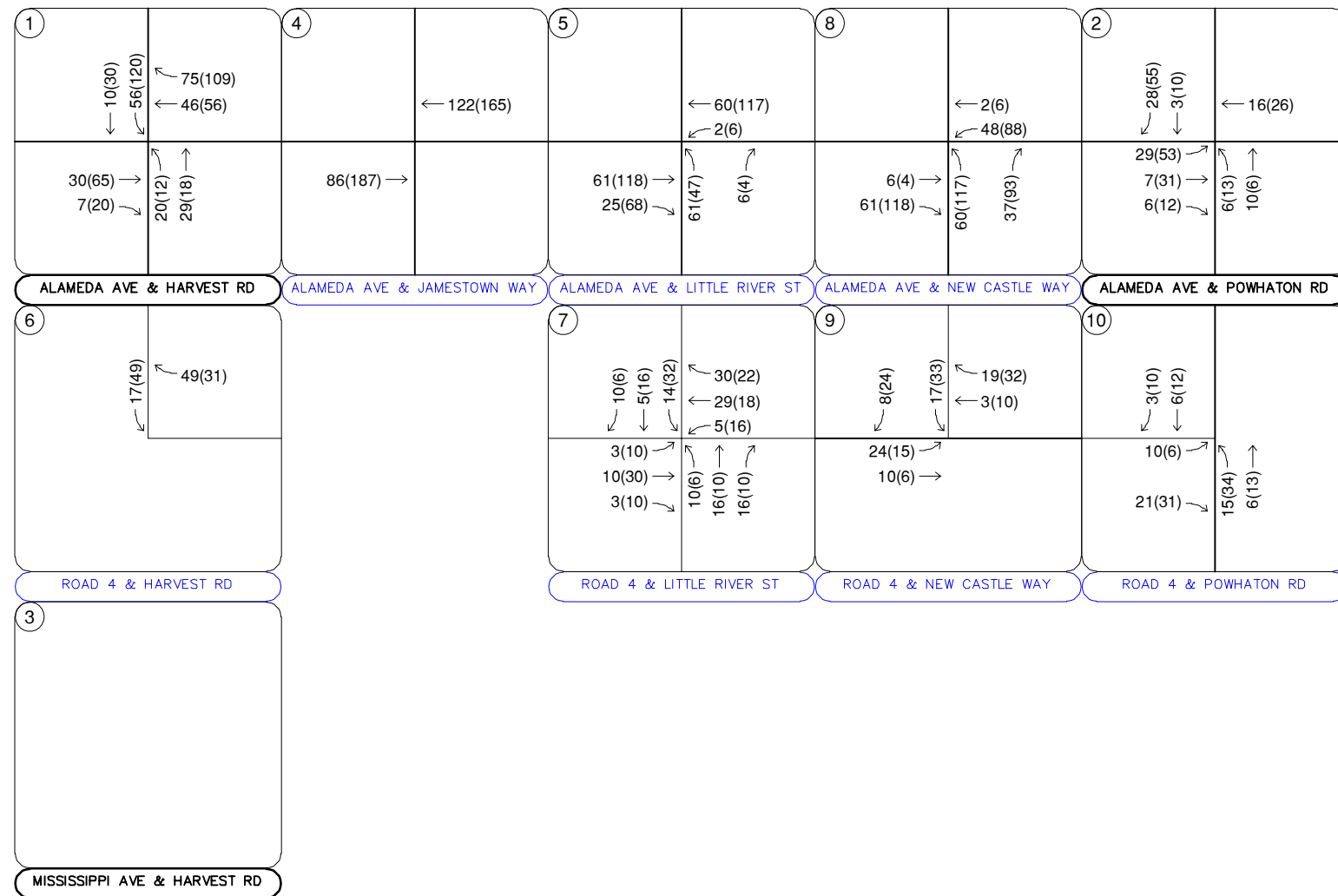
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates,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



LEGEND

- (X) Study Area Key Intersection
- (X) Project Access Intersection
- xxx(xxx) Weekday AM(PM)
- Peak Hour Traffic Volumes
- xx,x00 Estimated Daily Traffic Volume
- xx% External Trip Distribution Percentage

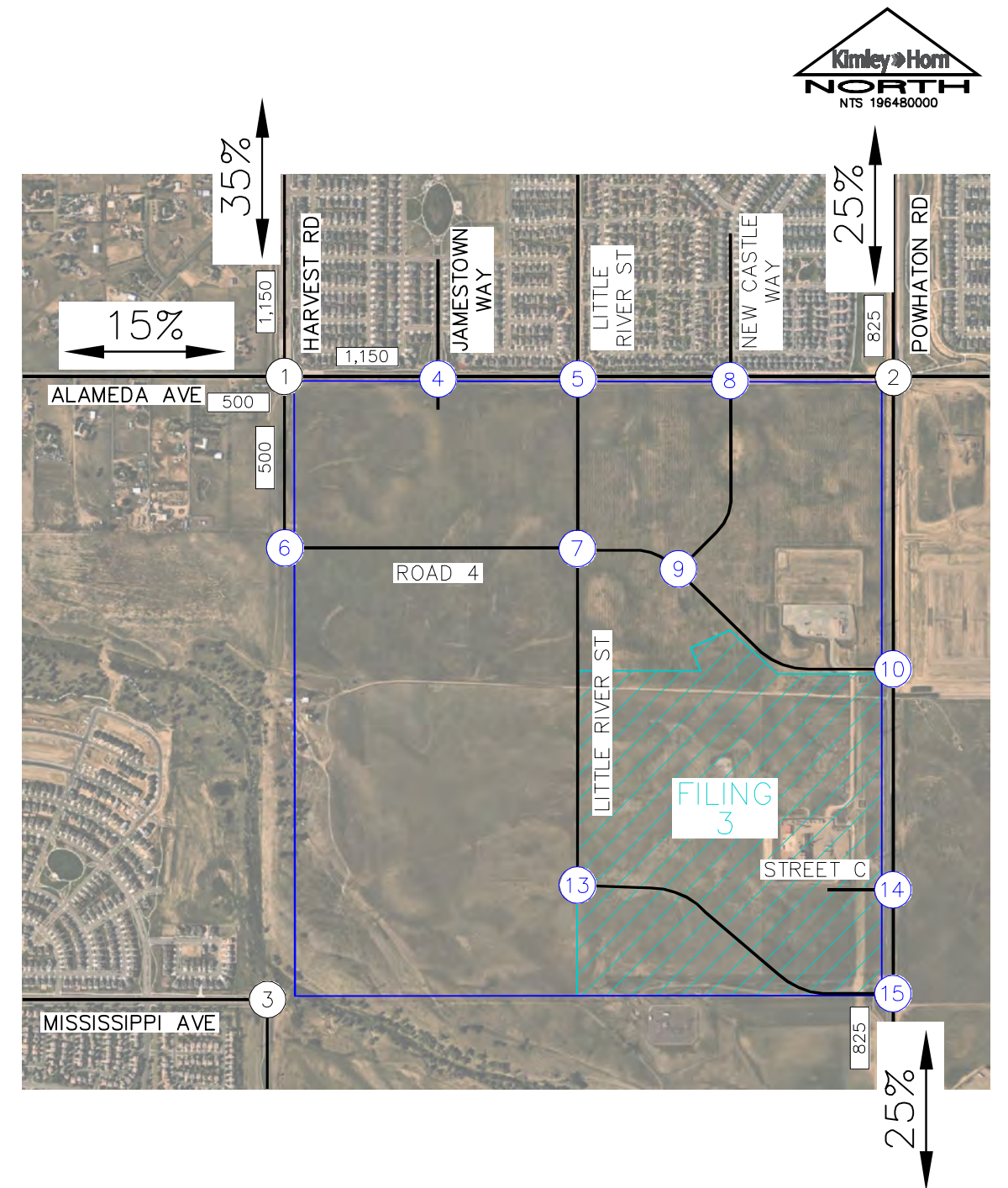
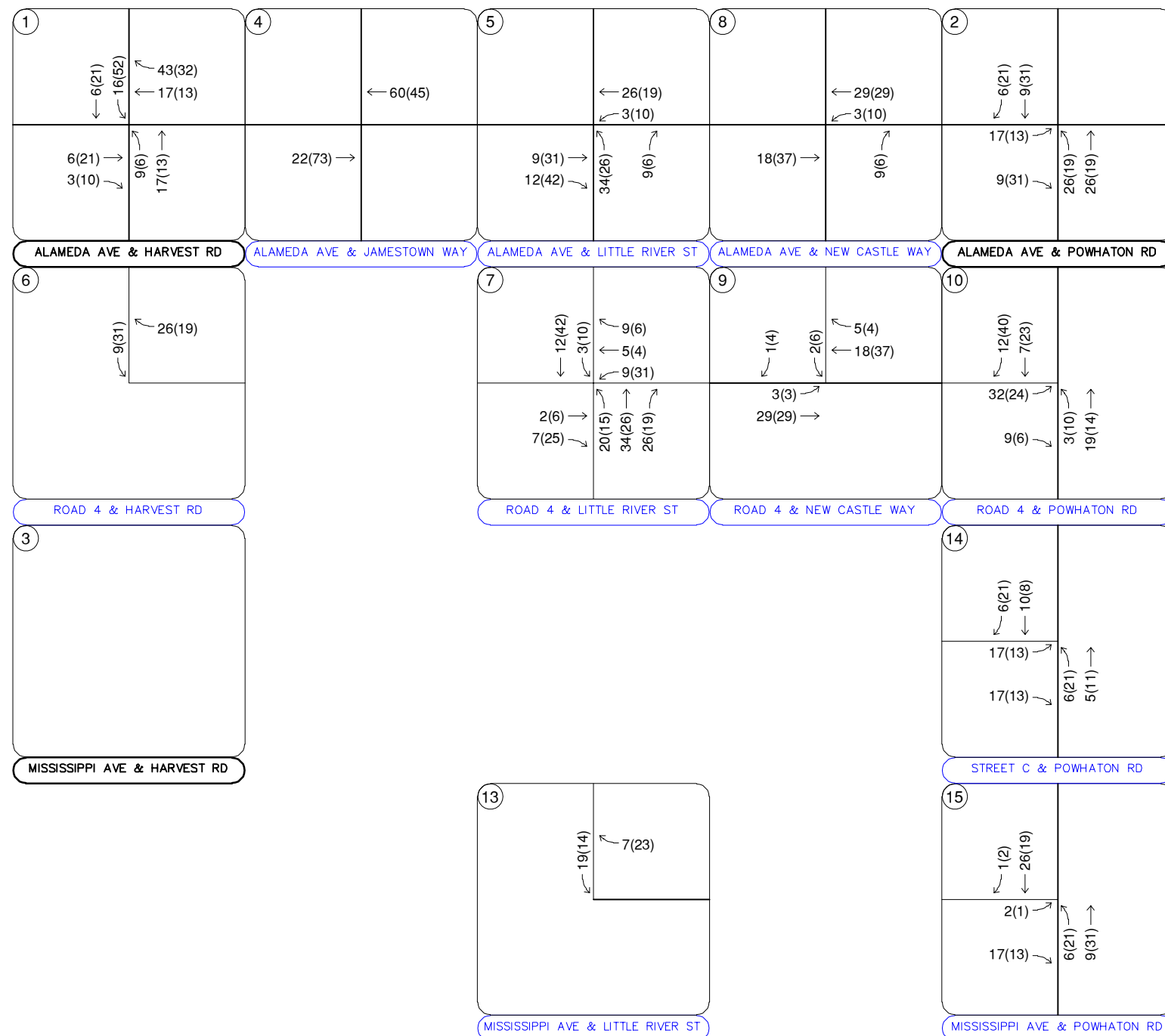
FIGURE 9
PARKLANDS VILLAGE 2
AURORA, COLORADO
FILING 1 EXTERNAL TRIP DISTRIBUTION AND TRAFFIC ASSIGNMENT



Note:
15% Residential
30% Commercial
of total project trips are assumed to be internal to Parklands. The external trip distributions shown in this figure are applied to External Project Trips only.

LEGEND	
(X)	Study Area Key Intersection
(X)	Project Access Intersection
xxx(xxx)	Weekday AM(PM)
	Peak Hour Traffic Volumes
xx,x00	Estimated Daily Traffic Volume
xx%	Residential Trip Distribution
xx%	Commercial Trip Distribution

FIGURE 10
PARKLANDS VILLAGE 2
AURORA, COLORADO
FILING 2 EXTERNAL TRIP DISTRIBUTION AND TRAFFIC ASSIGNMENT



Note:
15% of total project residential trips are assumed to be internal to Parklands. The external trip distributions shown in this figure are applied to External Project Residential Trips only—85% of the total project residential trips.

LEGEND	
(X)	Study Area Key Intersection
(X)	Project Access Intersection
xxx(xxx)	Weekday AM(PM)
xx,x00	Peak Hour Traffic Volumes
xx,x00	Estimated Daily Traffic Volume
xx%	External Trip Distribution Percentage

FIGURE 11
PARKLANDS VILLAGE 2
AURORA, COLORADO
FILING 3 EXTERNAL TRIP DISTRIBUTION AND TRAFFIC ASSIGNMENT

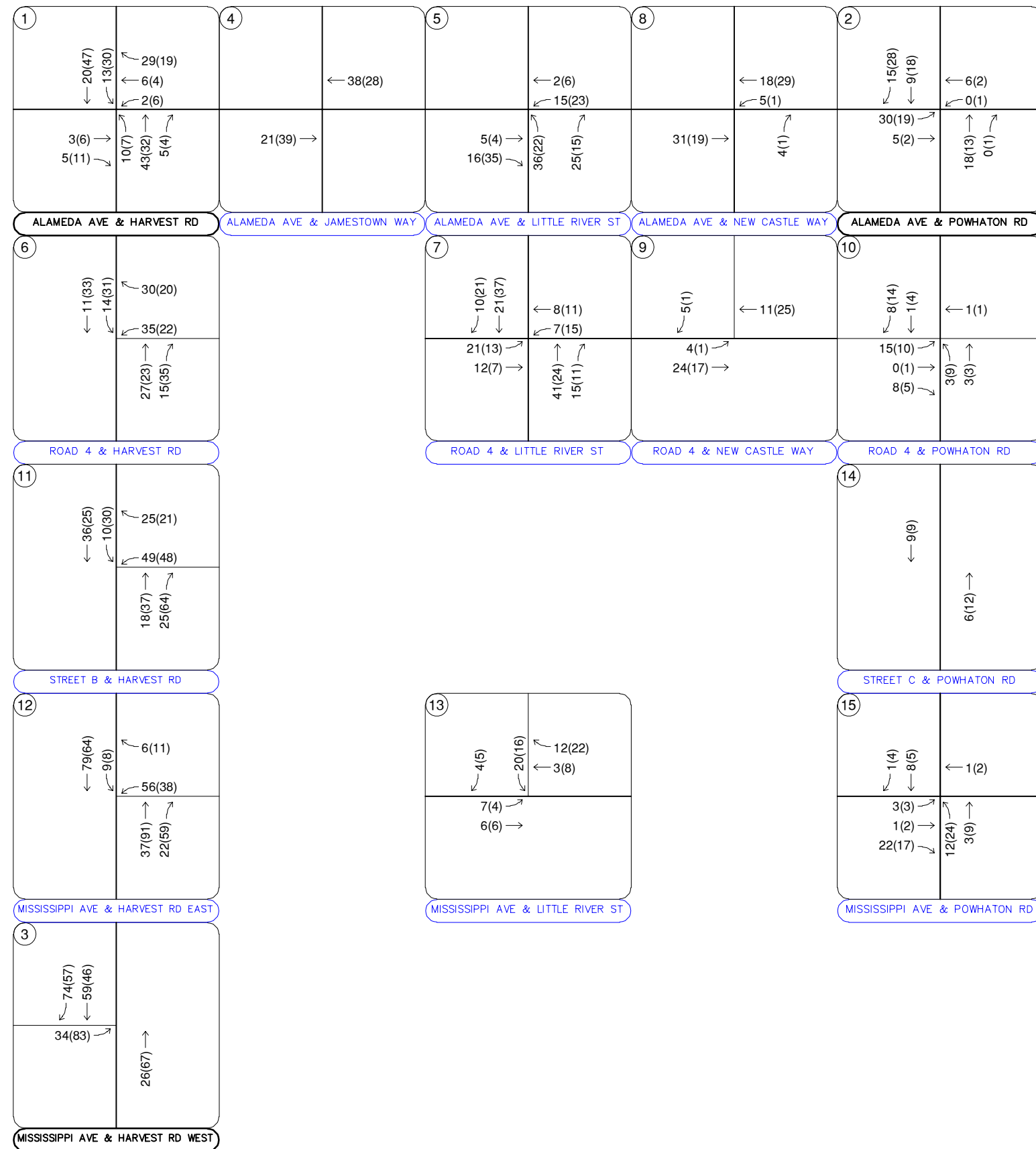
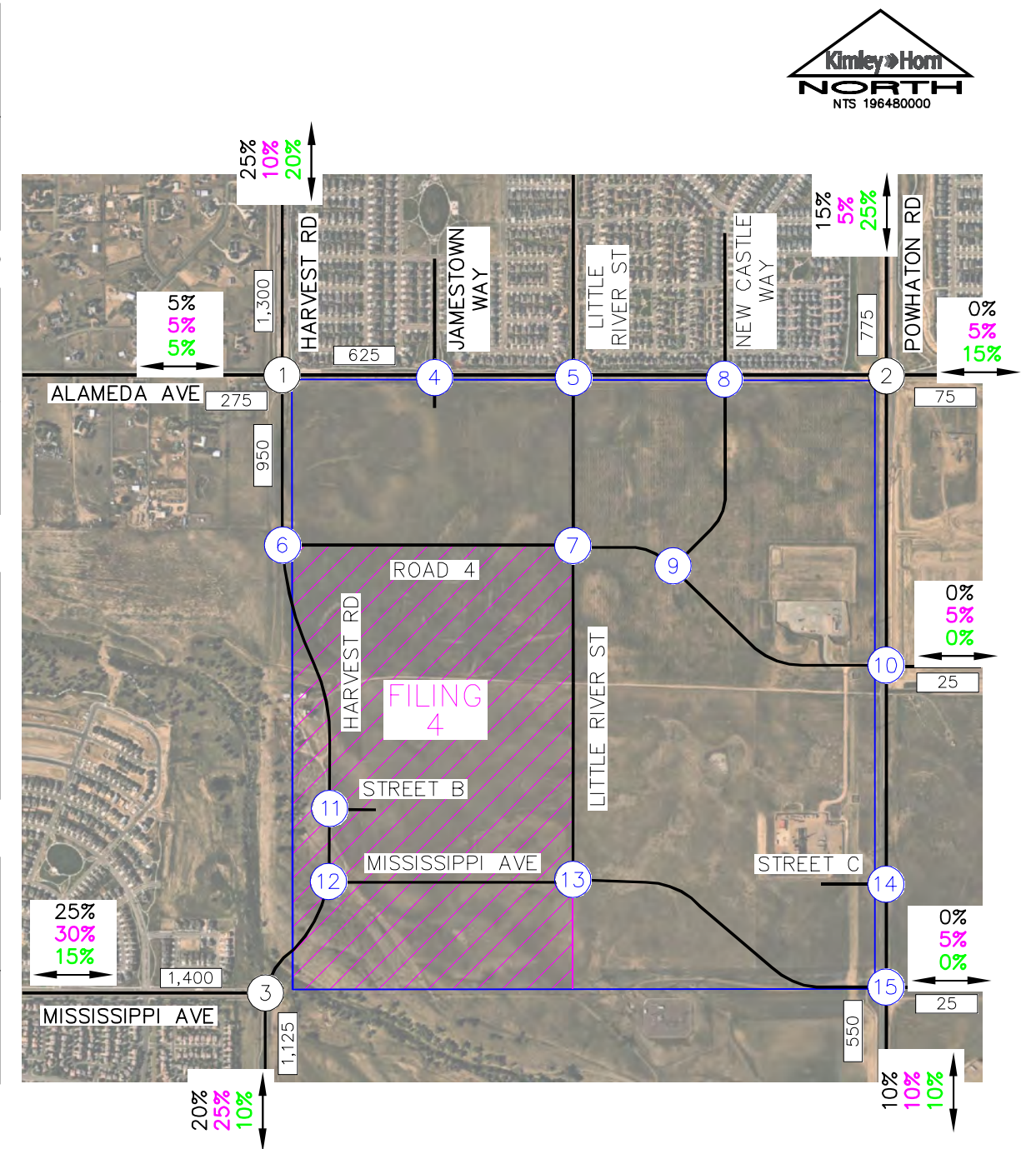


FIGURE 12
PARKLANDS VILLAGE 2
AURORA, COLORADO
FILING 4 EXTERNAL TRIP DISTRIBUTION AND TRAFFIC ASSIGNMENT



Note:
15% Residential
30% Commercial
90% School
of total project trips are assumed to be internal to Parklands. The external trip distributions shown in this figure are applied to External Project Trips only.

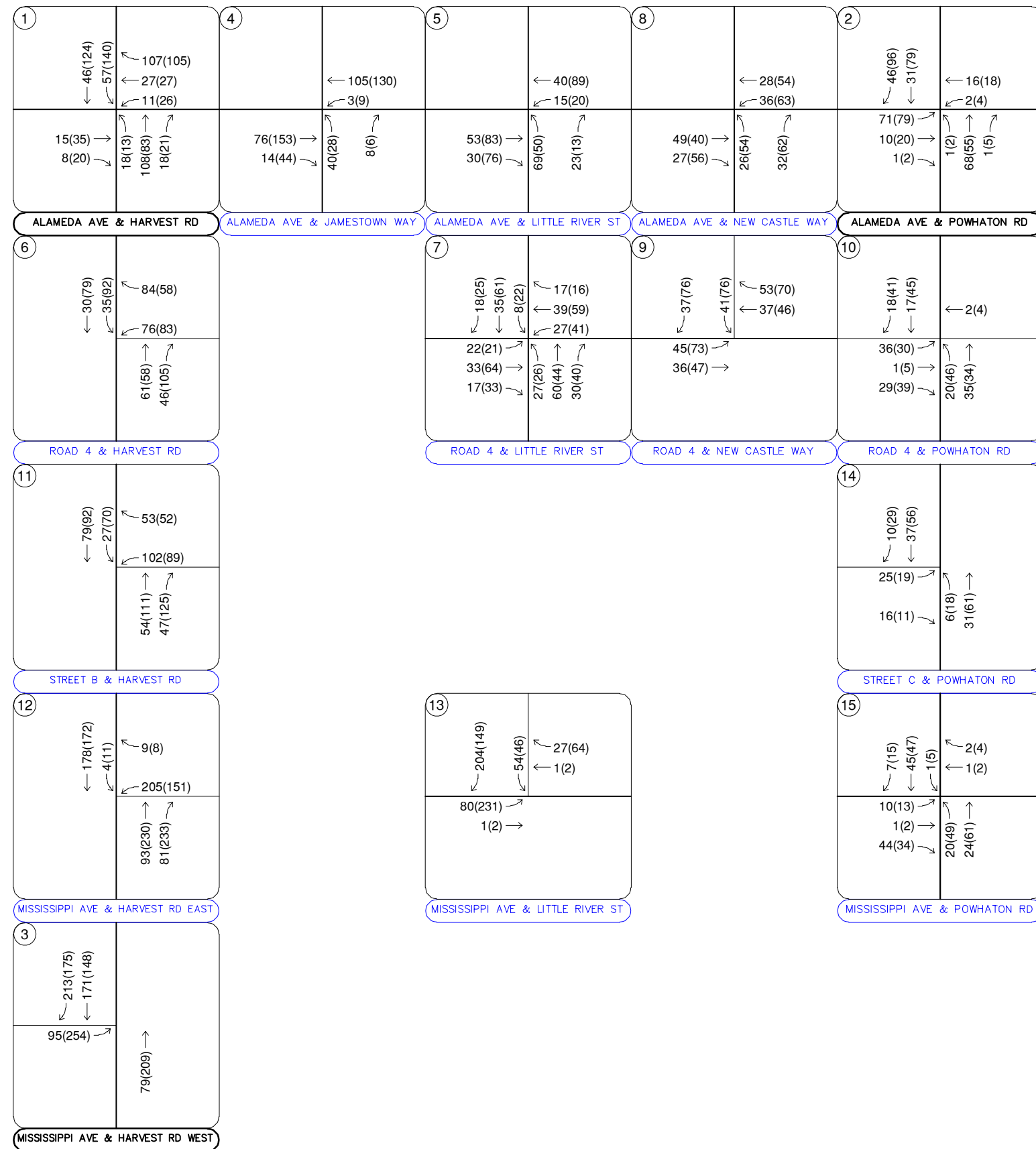


FIGURE 13
PARKLANDS VILLAGE 2
AURORA, COLORADO
2031 FULL BUILDOUT EXTERNAL TRIP DISTRIBUTION AND TRAFFIC ASSIGNMENT



Note:
15% Residential
30% Commercial
90% School
of total project trips are assumed to be internal to Parklands. The external trip distributions shown in this figure are applied to External Project Trips only.



SM ROCHA, LLC

TRAFFIC AND TRANSPORTATION CONSULTANTS

December 3, 2020

Todd Lyon
Proof Civil
600 Grant Street, Suite 210
Denver, Colorado 80203

**RE: Murphy Creek Filings 17 & 18 / Traffic Generation Comparison and Impact Analysis
Aurora, Colorado**

Dear Mr. Todd Lyon,

SM ROCHA, LLC is pleased to provide traffic generation information and impact analyses for the development entitled Murphy Creek Filings 17 & 18. This development is on both the north and south sides of E Jewell Avenue, between S Old Tomlin Morris Road and S Flatrock Trail, in Aurora, Colorado.

This traffic generation analysis has been revised to address City review comments dated 10/23/20 regarding future access restrictions, the addition of a queue length table, and additional review comments throughout.

The intent of this analysis is to present traffic volumes likely generated by the proposed development, provide a traffic volume comparison to previous land use assumptions approved for the development site, provide an impact analysis for proposed site accesses, and consider potential impacts to the adjacent roadway network. This analysis is also provided to address City Staff concerns regarding intersection operations and safety of the proposed full-movement site accesses, as stated in the project's pre-application notes dated 04/19/19.

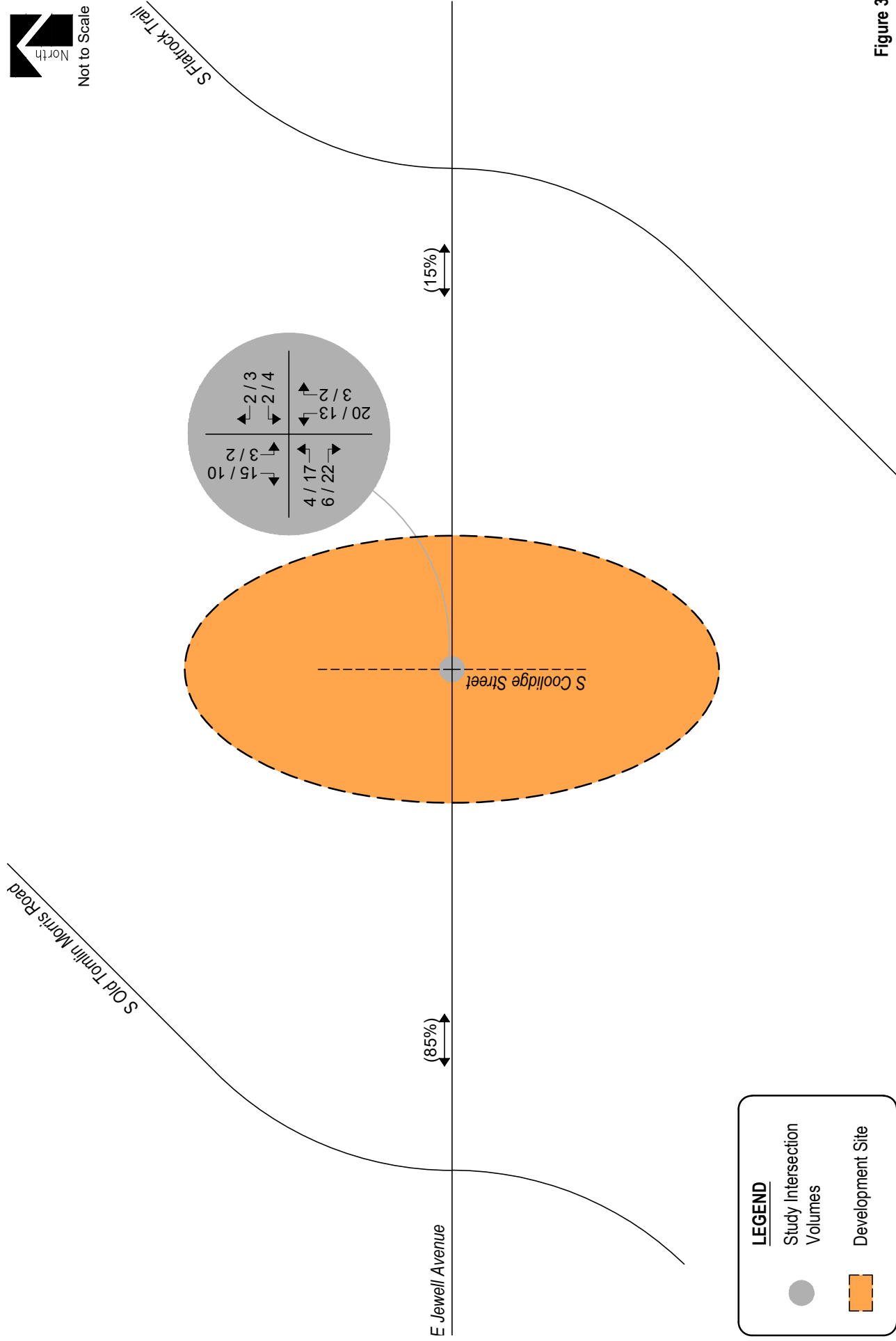
The following is a summary of analysis results.

Site Description and Access

Land for the development is currently vacant and surrounded by a mix of open space, residential, and recreational land uses. The proposed development is understood to entail the new construction of 73 single-family detached dwelling units with 33 dwelling units north of E Jewell and 40 dwelling units south of E Jewell Avenue.



Not to Scale





Not to Scale

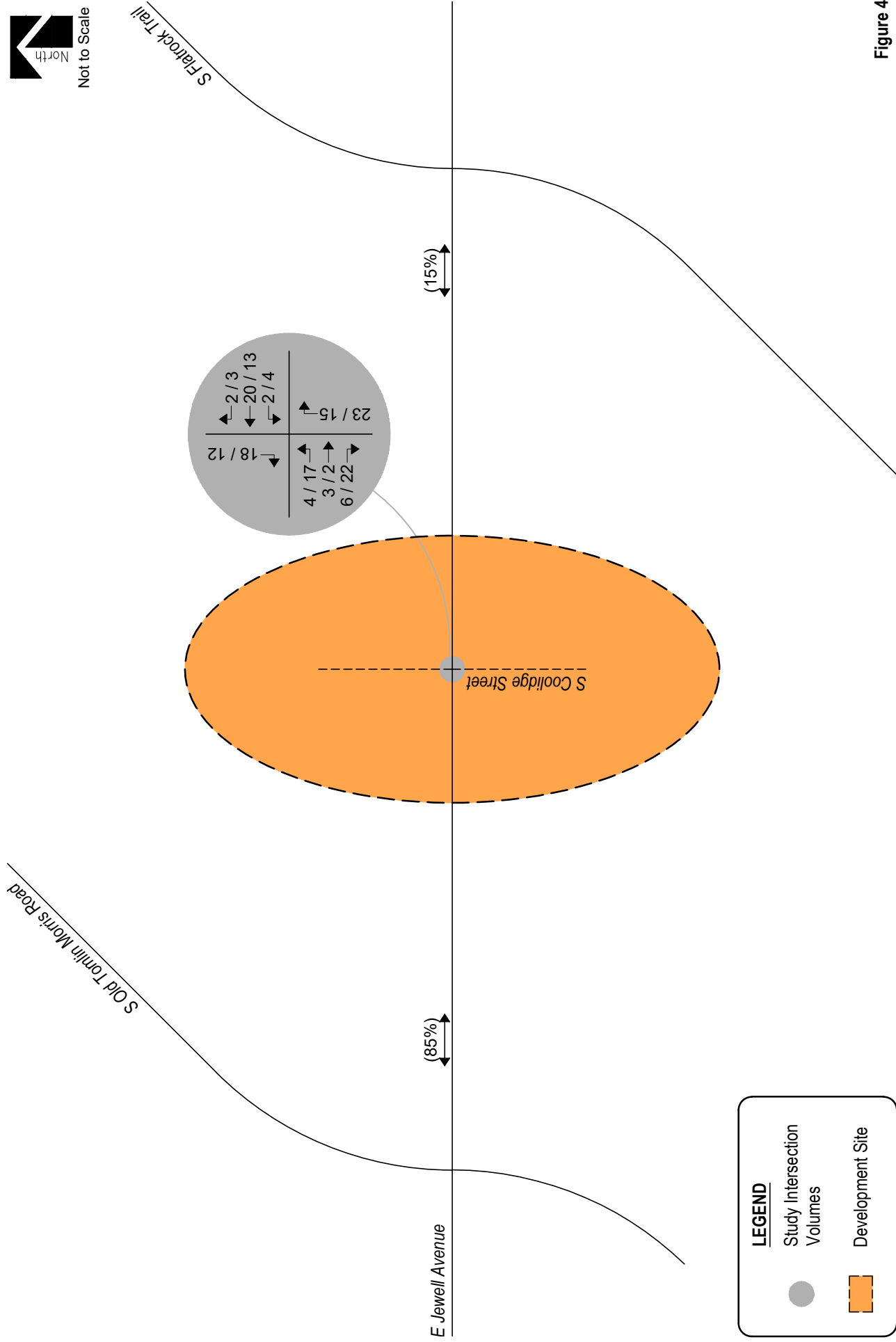


Figure 4

SITE DEVELOPMENT DISTRIBUTION - YEAR 2040
(%) : Overall

SITE-GENERATED
AM / PM Peak Hour

MURPHY CREEK FILINGS 17 & 18
Traffic Generation and Impact Analysis



SM ROCHA, LLC

Traffic and Transportation Consultants



LSC TRANSPORTATION CONSULTANTS, INC.

1889 York Street
Denver, CO 80206
(303) 333-1105
FAX (303) 333-1107
E-mail: lsc@lscdenver.com

March 19, 2019

Mr. Joseph Huey
Lennar
9193 S. Jamaica Street, 4th Floor
Englewood, CO 80112

Re: Murphy Creek East
Aurora, CO
LSC #181110

Dear Mr. Huey:

In response to your request, LSC Transportation Consultants, Inc. has prepared this updated traffic impact analysis for the proposed Murphy Creek East development to address City comments. As shown on Figure 1, the site is located south of E. Jewell Avenue and west of Harvest Road in the City of Aurora, Colorado.

REPORT CONTENTS

The report contains the following: the existing roadway and traffic conditions in the vicinity of the site including the lane geometries, traffic controls, posted speed limits, etc.; the existing weekday peak-hour traffic volumes; the existing daily traffic volumes in the area; the typical weekday site-generated traffic volume projections for the site; the assignment of the projected traffic volumes to the area roadways; the proposed pedestrian and trail connectivity; the projected short-term and long-term background and resulting total traffic volumes on the area roadways; the site's projected traffic impacts; and any recommended roadway improvements to mitigate the site's traffic impacts.

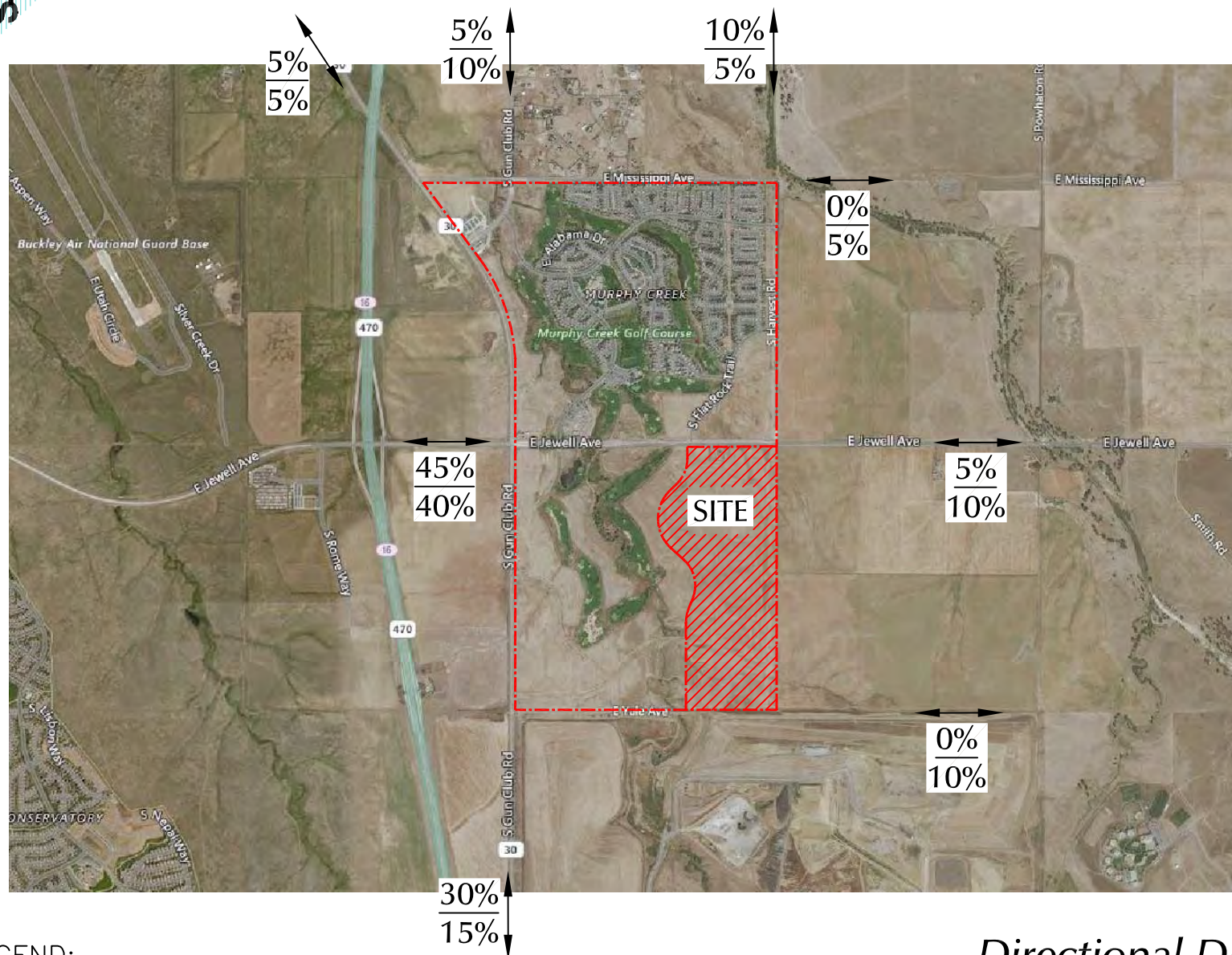
LAND USE AND ACCESS

The site is proposed to include about 538 single-family dwelling units, about 269 multi-family dwelling units, and a Pre-K through 8 public school with about 700 students. Figure 2 shows the conceptual site plan and the traffic analysis zones. The details for the school site are not yet available so the school trips were loaded to S. Flat Rock Trail south of Intersection #10.

ROADWAY AND TRAFFIC CONDITIONS

Area Roadways

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



Approximate Scale
Scale: 1"=3,000'

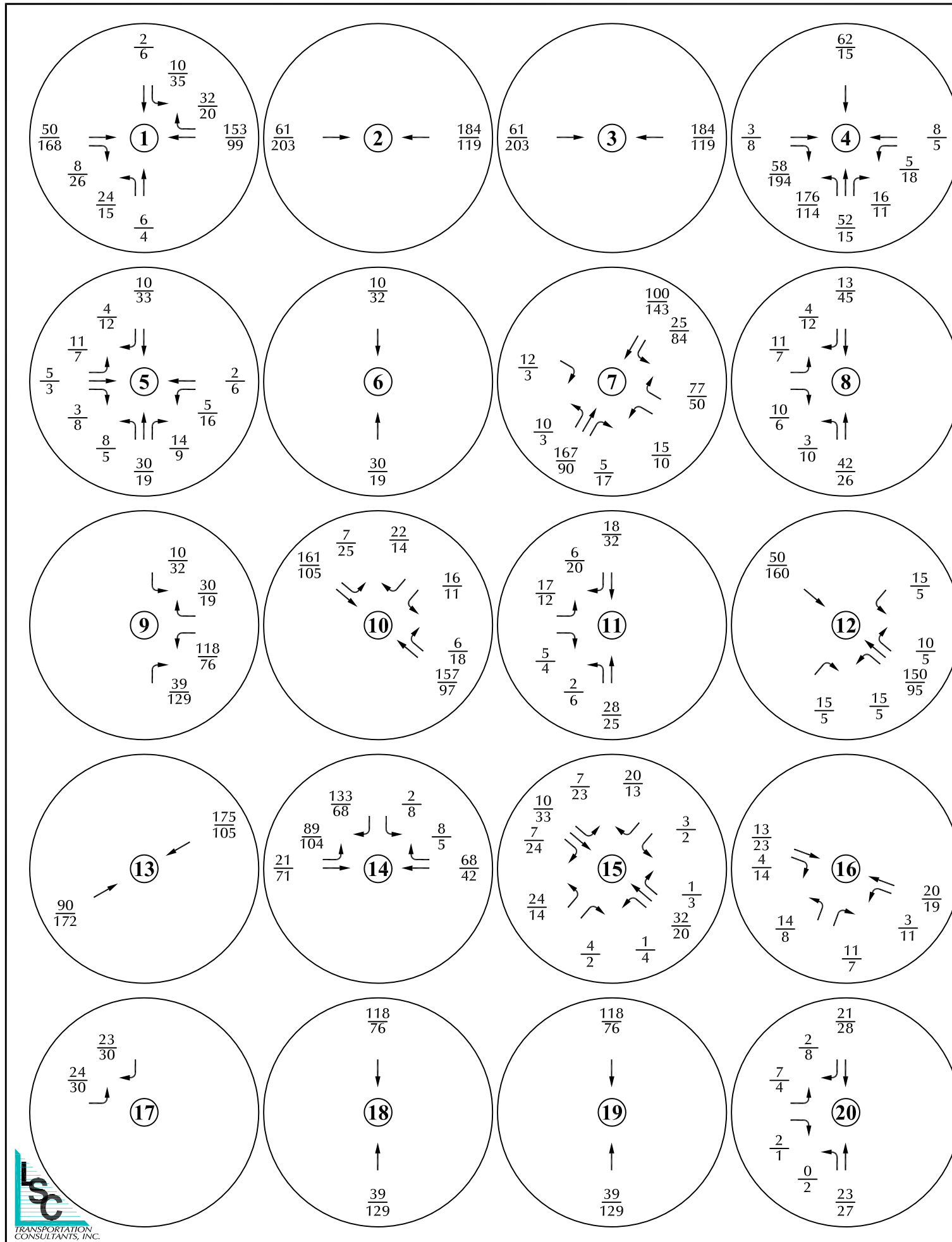
LEGEND:

$\frac{5\%}{5\%}$ = $\frac{\text{Residential Percent Directional Distribution}}{\text{Commercial Percent Directional Distribution}}$

Directional Distribution of Site-Generated Traffic

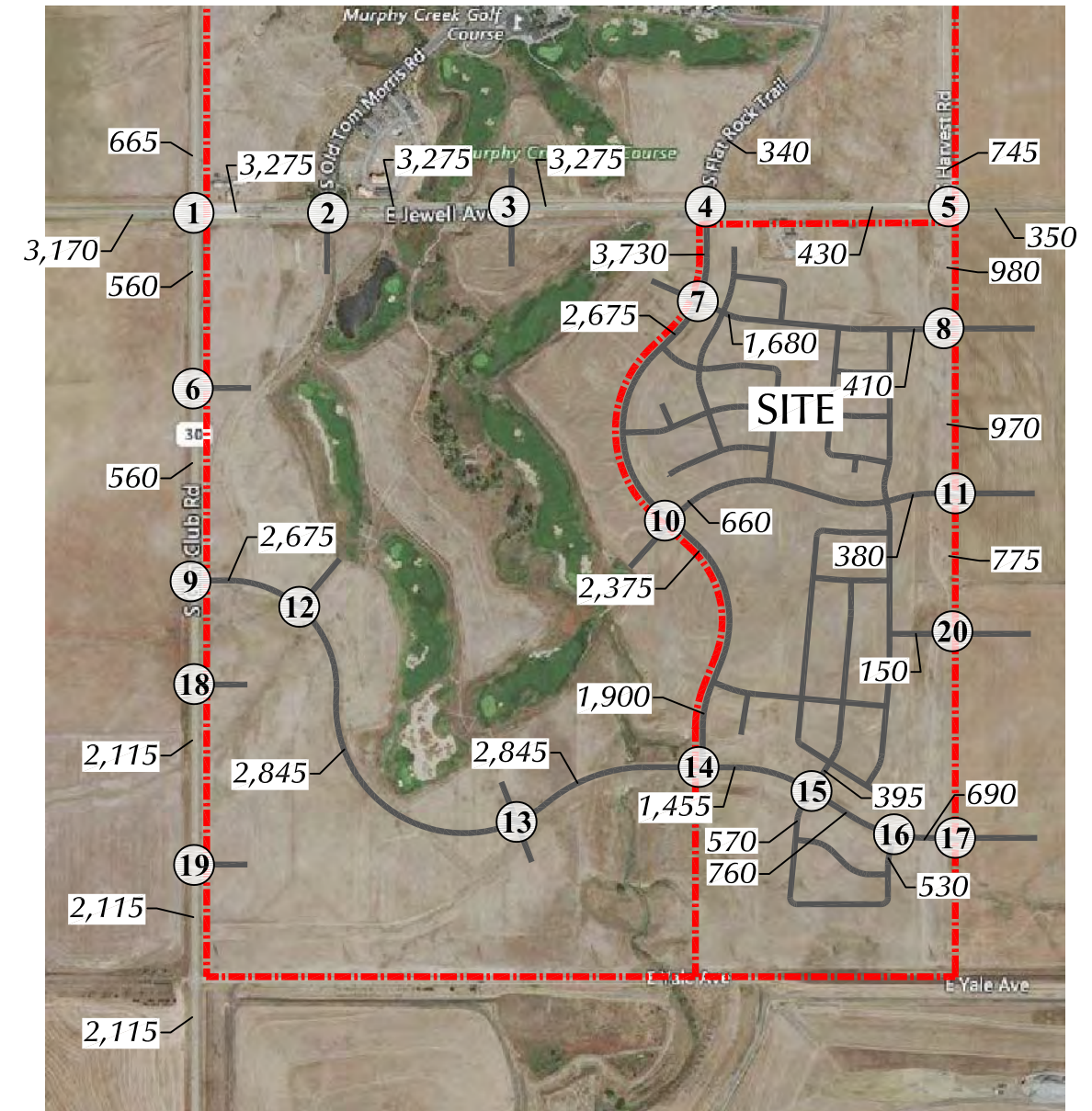
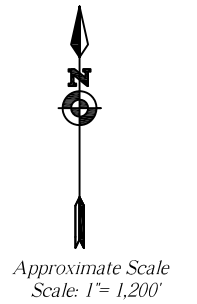
Murphy Creek East (LSC #181110)

Figure 6



LEGEND:

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



Note: The proposed school site does not have a site plan so trips were loaded to S. Flat Rock Trail south of intersection #10

Figure 7b

Assignment of 2040 Buildout Site-Generated Traffic

Murphy Creek East (LSC #181110)

VILLAGES AT MURPHY CREEK
TRAFFIC IMPACT STUDY

Prepared for:

Villages at Murphy Creek, LLC
9145 E. Kenyon Avenue, #100
Denver, CO 80237

Prepared by:

Felsburg Holt & Ullevig
6300 South Syracuse Way, Suite 600
Centennial, CO 80111
303/721-1440

Project Manager: Christopher J. Fasching, P.E.
Project Engineer: Kenneth A. Ryan, E.I.

FHU Reference No. 05-130

December, 2005

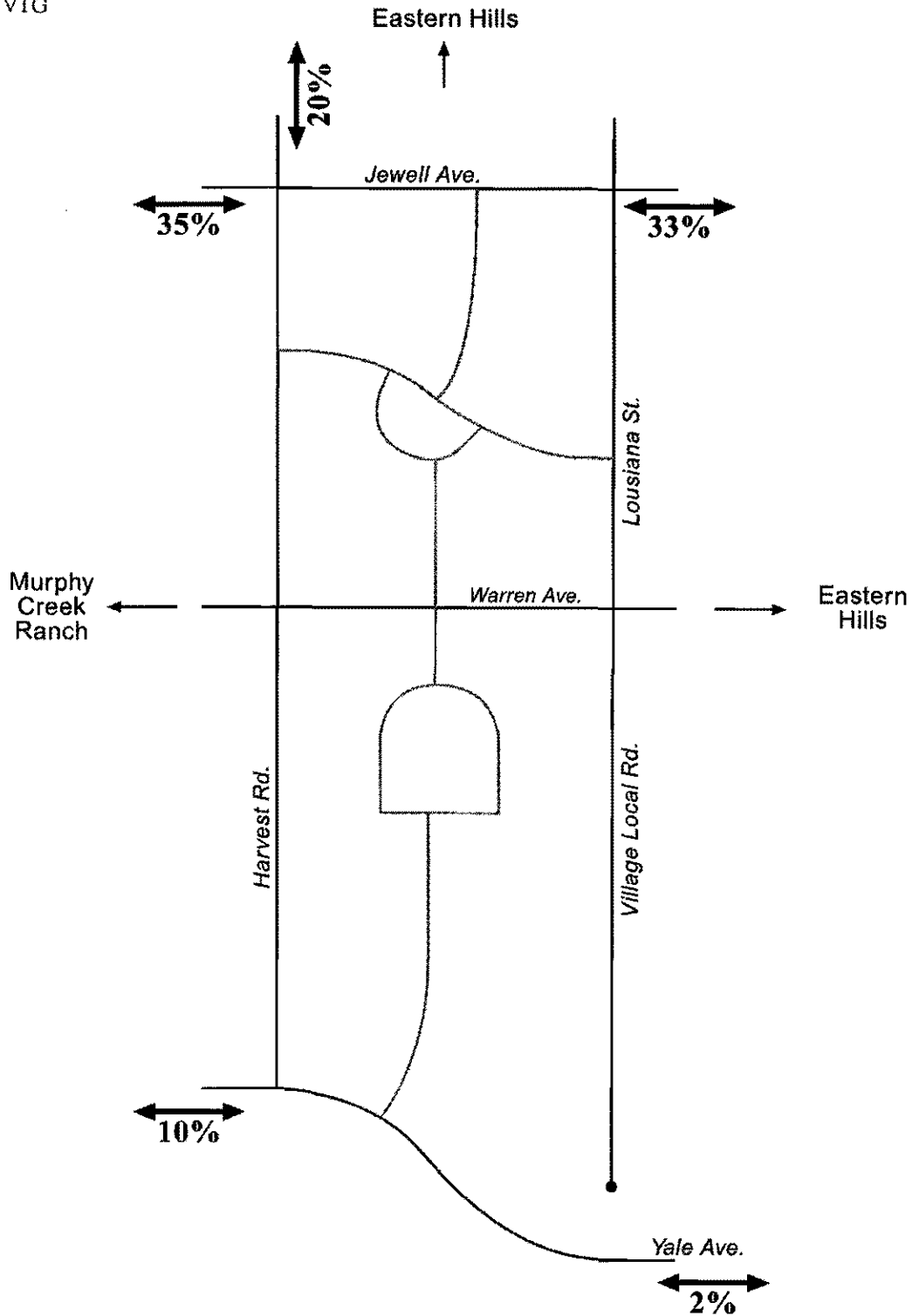
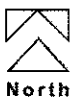


Figure 3
Trip Distribution



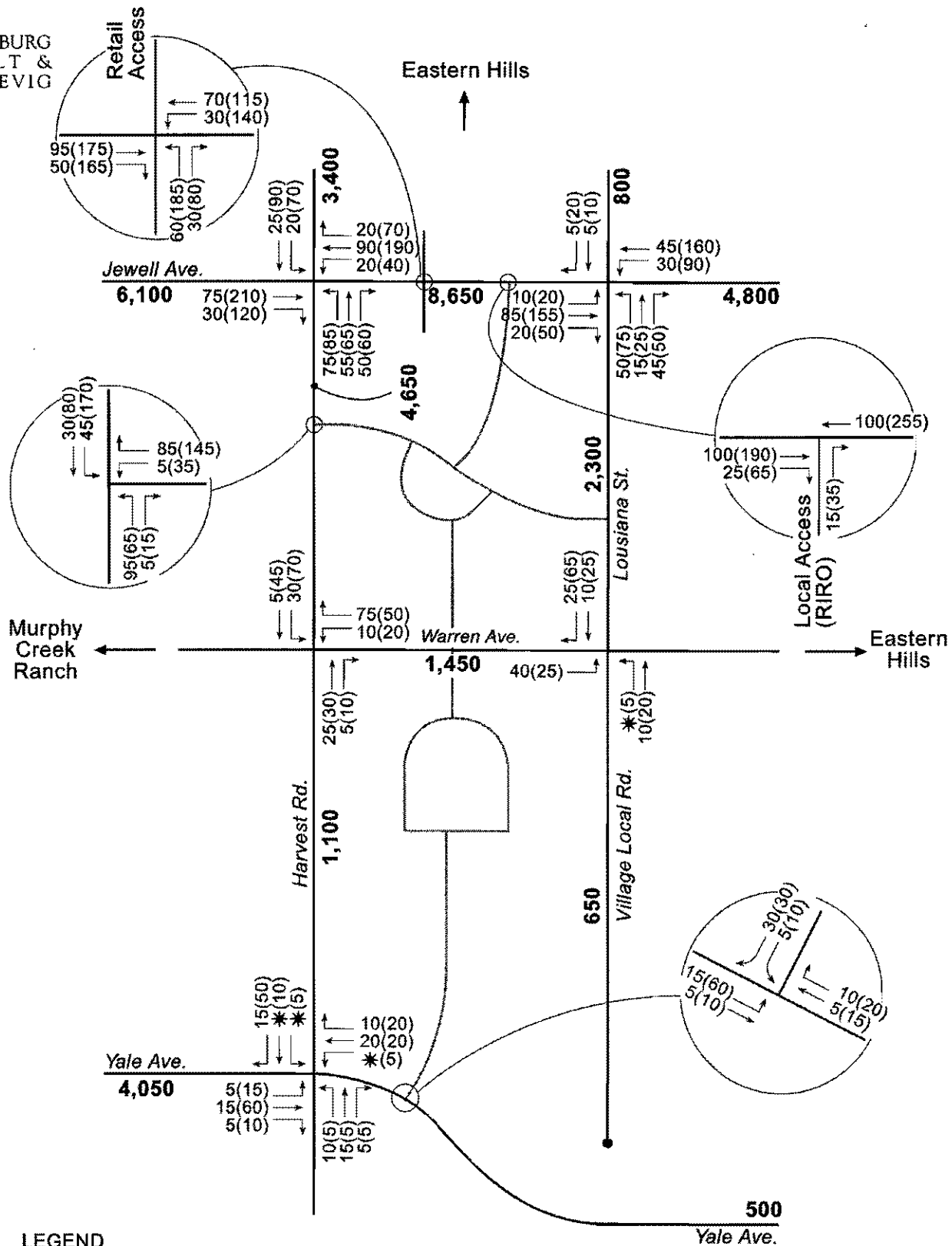


Figure 4
Site Generated Traffic





APPENDIX C

Trip Generation Worksheets and Land Use Comparison

Project Parklands Village 1 - Filing 1
 Subject Trip Generation for Single-Family Detached Housing
 Designed by TJD Date May 28, 2024 Job No. 196480001
 Checked by _____ Date _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 11th Edition, Average Rate Equations

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

Independent Variable - Dwelling Units (X)

$$X = 195$$

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (200 Series Page 220)

Average Weekday	Directional Distribution:	26% ent.	74% exit.
(T) = 0.70(X)	T = 137	Average Vehicle Trip Ends	
(T) = 0.70 * (195.0)	36 entering	101 exiting	
	36 + 101 = 137		

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (200 Series Page 221)

Average Weekday	Directional Distribution:	63% ent.	37% exit.
(T) = 0.94(X)	T = 183	Average Vehicle Trip Ends	
(T) = 0.94 * (195.0)	115 entering	68 exiting	
	115 + 68 = 183		

Weekday (200 Series Page 219)

Average Weekday	Directional Distribution:	50% entering, 50% exiting
(T) = 9.43(X)	T = 1840	Average Vehicle Trip Ends
(T) = 9.43 * (195.0)	920 entering	920 exiting
	920 + 920 = 1840	

Project Parklands Village 1 - Filing 1
 Subject Trip Generation for Single-Family Attached Housing
 Designed by TJD Date May 28, 2024 Job No. 196480001
 Checked by _____ Date _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 11th Edition, Average Rate Equations

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

Independent Variable - Dwelling Units (X)

$$X = 118$$

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (200 Series Page 239)

Average Weekday	Directional Distribution:	26% ent.	74% exit.
(T) = 0.48(X)	T = 57	Average Vehicle Trip Ends	
(T) = 0.48 * (118.0)	15 entering	42 exiting	
	15 + 42 = 57		

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (200 Series Page 240)

Average Weekday	Directional Distribution:	57% ent.	43% exit.
(T) = 0.57 (X)	T = 67	Average Vehicle Trip Ends	
(T) = 0.57 * (118.0)	38 entering	29 exiting	
	38 + 29 = 67		

Weekday (200 Series Page 238)

Average Weekday	Directional Distribution:	50% ent.	50% exit.
(T) = 7.20 (X)	T = 850	Average Vehicle Trip Ends	
(T) = 7.20 * (118.0)	425 entering	425 exiting	
	425 + 425 = 850		

Project Parklands Village 1 - Filing 1
 Subject Trip Generation - Public Park
 Designed by TJD Date May 28, 2024 Job No. 196480001
 Checked by _____ Date _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 11th Edition, Fitted Curve Equations
 Land Use Code - Public Park (411)
 Independent Variable - Acres (X)

Acres 2.5

X = 2.5

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 * (2.5)
 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) = 0.06 (X) + 22.60
 (T) = 0.06 * (2.5) + 22.60
 T = 23
 Average Vehicle Trip Ends
 13 entering 10 exiting
 13 + 10 = 23

Weekday (400 Series page 2)

Average Weekday
 T = 0.64 * (X) + 88.46
 T = 0.64 * (2.5) + 88.46
 Directional Distribution: 50% entering, 50% exiting
 T = 90
 Average Vehicle Trip Ends
 45 entering 45 exiting
 45 + 45 = 90

Project Parklands Village 1 - Filing 2
 Subject Trip Generation for Single-Family Attached Housing
 Designed by TJD Date May 28, 2024 Job No. 196480001
 Checked by _____ Date _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 11th Edition, Average Rate Equations

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

Independent Variable - Dwelling Units (X)

$$X = 174$$

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (200 Series Page 239)

Average Weekday	Directional Distribution:	26% ent.	74% exit.
(T) = 0.48(X)	T = 84	Average Vehicle Trip Ends	
(T) = 0.48 * (174.0)	22 entering	62 exiting	
	22 + 62 = 84		

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (200 Series Page 240)

Average Weekday	Directional Distribution:	57% ent.	43% exit.
(T) = 0.57 (X)	T = 99	Average Vehicle Trip Ends	
(T) = 0.57 * (174.0)	57 entering	42 exiting	
	57 + 42 = 99		

Weekday (200 Series Page 238)

Average Weekday	Directional Distribution:	50% ent.	50% exit.
(T) = 7.20 (X)	T = 1254	Average Vehicle Trip Ends	
(T) = 7.20 * (174.0)	627 entering	627 exiting	
	627 + 627 = 1254		

Project Parklands Village 1 - Filing 2
 Subject Trip Generation for Multifamily Housing (Mid-Rise)
 Designed by TJD Date May 28, 2024 Job No. 196480001
 Checked by _____ Date _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 11th Edition, Average Rate Equations

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

Independent Variable - Dwelling Units (X)

$$X = 566$$

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (200 Series Page 275)

Average Weekday	Directional Distribution:	23% ent.	77% exit.
(T) = 0.37 (X)	T = 209	Average Vehicle Trip Ends	
(T) = 0.37 * (566.0)	48 entering	161 exiting	
	48 + 161 = 209		

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (200 Series Page 276)

Average Weekday	Directional Distribution:	61% ent.	39% exit.
(T) = 0.39(X)	T = 221	Average Vehicle Trip Ends	
(T) = 0.39 * (566.0)	135 entering	86 exiting	
	135 + 86 = 221		

Weekday (200 Series Page 274)

Average Weekday	Directional Distribution:	50% entering, 50% exiting
(T) = 4.54 (X)	T = 2570	Average Vehicle Trip Ends
(T) = 4.54 * (566.0)	1285 entering	1285 exiting
	1285 + 1285 = 2570	

Project Parklands Village 1 - Filing 2
 Subject Trip Generation - Public Park
 Designed by TJD Date May 28, 2024 Job No. 196480001
 Checked by _____ Date _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 11th Edition, Fitted Curve Equations
 Land Use Code - Public Park (411)
 Independent Variable - Acres (X)

Acres 3.0

X = 3.0

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 * (3.0)
 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) = 0.06 (X) + 22.60
 (T) = 0.06 * (3.0) + 22.60
 T = 23
 Average Vehicle Trip Ends
 13 entering 10 exiting
 13 + 10 = 23

Weekday (400 Series page 2)

Average Weekday
 T = 0.64 * (X) + 88.46
 T = 0.64 * (3.0) + 88.46
 Directional Distribution: 50% entering, 50% exiting
 T = 90
 Average Vehicle Trip Ends
 45 entering 45 exiting
 45 + 45 = 90

Project Parklands Village 1 - Filing 2
 Subject Trip Generation for General Office Building
 Designed by TJD Date May 28, 2024 Job No. 196480001
 Checked by _____ Date _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 11th Edition, Average Rates

Land Use Code - General Office Building (710)

Independent Variable - 1000 Square Feet (X)

SF = 60,000

X = 60.000

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (700 Series Page 710)

(T) = 1.52 (X)		Directional Distribution:	88% ent.	12% exit.
(T) = 1.52 *	(60.0)	T = 91	Average Vehicle Trip Ends	
		80 entering	11 exiting	
		80 + 11 = 91		

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (700 Series Page 711)

(T) = 1.44 (X)		Directional Distribution:	17% ent.	83% exit.
(T) = 1.44 *	(60.0)	T = 86	Average Vehicle Trip Ends	
		15 entering	71 exiting	
		15 + 71 = 86		

Weekday (700 Series Page 709)

(T) = 10.84 (X)		Directional Distribution:	50% ent.	50% exit.
(T) = 10.84 *	(60.0)	T = 652	Average Vehicle Trip Ends	
		326 entering	326 exiting	
		326 + 326 = 652		

Project Parklands Village 1 - Filing 2
 Subject Trip Generation for Shopping Center (>150k)
 Designed by TJD Date May 28, 2024 Job No. 196480001
 Checked by _____ Date _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 11th Edition, Average Rate Equations

Land Use Code - Shopping Center (>150k) (820)

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

Gross Leasable Area = 181,000 Square Feet

X = 181.000

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (800 Series Page 178)

Average Weekday	Directional Distribution:	62% ent.	38% exit.
T = 0.84 * (X)	T = 152	Average Vehicle Trip Ends	
T = 0.84 *	94 entering	58 exiting	
181			
	94 + 58 = 152		

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (800 Series page 179)

Average Weekday	Directional Distribution:	48% ent.	52% exit.
T = 3.40 * (X)	T = 615	Average Vehicle Trip Ends	
T = 3.40 *	295 entering	320 exiting	
181			
	295 + 320 = 615		

Weekday (800 Series page 177)

Average Weekday	Directional Distribution:	50% entering, 50% exiting
T = 37.01 * (X)	T = 6698	Average Vehicle Trip Ends
T = 37.01 *	3349 entering	3349 exiting
181		
	3349 + 3349 = 6698	

Non Pass-By Trip Volumes (Between 150 and 300k) (Per ITE Trip Generation Manual, 11th Edition)

AM Peak Hour = 71% Non-Pass By	PM Peak Hour = 71% Non-Pass By
IN Out Total	
AM Peak 67 41 108	PM Peak Hour Rate Applied to AM Peak Hour
PM Peak 209 227 437	
Daily 2378 2378 4756	PM Peak Hour Rate Applied to Daily

Pass-By Trip Volumes (Between 150 and 300k) (Per ITE Trip Generation Manual, 11th Edition)

AM Peak Hour = 29% Pass By	PM Peak Hour = 29% Pass By
IN Out Total	
AM Peak 27 17 45	PM Peak Hour Rate Applied to AM Peak Hour
PM Peak 86 93 178	
Daily 971 971 1942	PM Peak Hour Rate Applied to Daily

Non Pass-By Trip Volumes (Between 300 and 900k) (Per ITE Trip Generation Manual, 11th Edition)

AM Peak Hour = 81% Non-Pass By	PM Peak Hour = 81% Non-Pass By
IN Out Total	
AM Peak 76 47 123	PM Peak Hour Rate Applied to AM Peak Hour
PM Peak 239 259 499	
Daily 2713 2713 5426	PM Peak Hour Rate Applied to Daily

Pass-By Trip Volumes (Between 300 and 900k) (Per ITE Trip Generation Manual, 11th Edition)

AM Peak Hour = 19% Pass By	PM Peak Hour = 19% Pass By
IN Out Total	
AM Peak 18 11 29	PM Peak Hour Rate Applied to AM Peak Hour
PM Peak 56 61 117	
Daily 636 636 1272	PM Peak Hour Rate Applied to Daily

Project Parklands Village 1 - Filing 3
 Subject Trip Generation for Single-Family Detached Housing
 Designed by TJD Date May 28, 2024 Job No. 196480001
 Checked by _____ Date _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 11th Edition, Average Rate Equations

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

Independent Variable - Dwelling Units (X)

$$X = 242$$

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (200 Series Page 220)

Average Weekday	Directional Distribution:	26% ent.	74% exit.
(T) = 0.70(X)	T = 169	Average Vehicle Trip Ends	
(T) = 0.70 * (242.0)	44 entering	125 exiting	
	44 + 125 = 169		

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (200 Series Page 221)

Average Weekday	Directional Distribution:	63% ent.	37% exit.
(T) = 0.94(X)	T = 227	Average Vehicle Trip Ends	
(T) = 0.94 * (242.0)	143 entering	84 exiting	
	143 + 84 = 227		

Weekday (200 Series Page 219)

Average Weekday	Directional Distribution:	50% entering, 50% exiting
(T) = 9.43(X)	T = 2284	Average Vehicle Trip Ends
(T) = 9.43 * (242.0)	1142 entering	1142 exiting
	1142 + 1142 = 2284	

Project Parklands Village 1 - Filing 3
 Subject Trip Generation - Public Park
 Designed by TJD Date May 28, 2024 Job No. 196480001
 Checked by _____ Date _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 11th Edition, Fitted Curve Equations
 Land Use Code - Public Park (411)
 Independent Variable - Acres (X)

Acres 3.5

$X = 3.5$

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.
 $(T) = 0.02 (X)$
 $(T) = 0.02 * (3.5)$
 $T = 0$ 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.
 $(T) = 0.06 (X) + 22.60$
 $(T) = 0.06 * (3.5) + 22.60$
 $T = 23$ Average Vehicle Trip Ends
 13 entering 10 exiting
 13 + 10 = 23

Weekday (400 Series page 2)

Average Weekday
 $T = 0.64 * (X) + 88.46$
 $T = 0.64 * (3.5) + 88.46$
 Directional Distribution: 50% entering, 50% exiting
 $T = 92$ Average Vehicle Trip Ends
 46 entering 46 exiting
 46 + 46 = 92

Project Parklands Village 1 - Filing 4
 Subject Trip Generation for Single-Family Detached Housing
 Designed by TJD Date May 28, 2024 Job No. 196480001
 Checked by _____ Date _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 11th Edition, Average Rate Equations

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

Independent Variable - Dwelling Units (X)

$$X = 89$$

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (200 Series Page 220)

Average Weekday	Directional Distribution:	26% ent.	74% exit.
(T) = 0.70(X)	T = 62	Average Vehicle Trip Ends	
(T) = 0.70 * (89.0)	16 entering	46 exiting	
	16 + 46 = 62		

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (200 Series Page 221)

Average Weekday	Directional Distribution:	63% ent.	37% exit.
(T) = 0.94(X)	T = 84	Average Vehicle Trip Ends	
(T) = 0.94 * (89.0)	53 entering	31 exiting	
	53 + 31 = 84		

Weekday (200 Series Page 219)

Average Weekday	Directional Distribution:	50% entering, 50% exiting
(T) = 9.43(X)	T = 840	Average Vehicle Trip Ends
(T) = 9.43 * (89.0)	420 entering	420 exiting
	420 + 420 = 840	

Project Parklands Village 1 - Filing 4
 Subject Trip Generation for Single-Family Attached Housing
 Designed by TJD Date May 28, 2024 Job No. 196480001
 Checked by _____ Date _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 11th Edition, Average Rate Equations

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

Independent Variable - Dwelling Units (X)

$$X = 78$$

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (200 Series Page 239)

Average Weekday	Directional Distribution:	26% ent.	74% exit.
(T) = 0.48(X)	T = 37	Average Vehicle Trip Ends	
(T) = 0.48 * (78.0)	10 entering	27 exiting	
	10 + 27 = 37		

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (200 Series Page 240)

Average Weekday	Directional Distribution:	57% ent.	43% exit.
(T) = 0.57 (X)	T = 44	Average Vehicle Trip Ends	
(T) = 0.57 * (78.0)	25 entering	19 exiting	
	25 + 19 = 44		

Weekday (200 Series Page 238)

Average Weekday	Directional Distribution:	50% ent.	50% exit.
(T) = 7.20 (X)	T = 562	Average Vehicle Trip Ends	
(T) = 7.20 * (78.0)	281 entering	281 exiting	
	281 + 281 = 562		

Project Parklands Village 1 - Filing 4
 Subject Trip Generation - Public Park
 Designed by TJD Date May 28, 2024 Job No. 196480000
 Checked by _____ Date _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 11th Edition, Fitted Curve Equations
 Land Use Code - Public Park (411)
 Independent Variable - Acres (X)

Acres 5.1

$X = 5.1$

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.
 $(T) = 0.02 (X)$
 $(T) = 0.02 * (5.1)$
 $T = 0$ 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.
 $(T) = 0.06 (X) + 22.60$
 $(T) = 0.06 * (5.1) + 22.60$
 $T = 23$ Average Vehicle Trip Ends
 13 entering 10 exiting
 13 + 10 = 23

Weekday (400 Series page 2)

Average Weekday
 $T = 0.64 * (X) + 88.46$
 $T = 0.64 * (5.1) + 88.46$
 Directional Distribution: 50% entering, 50% exiting
 $T = 92$ Average Vehicle Trip Ends
 46 entering 46 exiting
 46 + 46 = 92

Project Parklands Village 1 - Filing 4
 Subject Trip Generation - Recreational Community Center
 Designed by TJD Date May 28, 2024 Job No. 196480001
 Checked by _____ Date _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 11th Edition, Average Rate Equations

Land Use Code - Recreational Community Center (495)

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

Gross Leasable Area = 22,000 Square Feet

X = 22.000

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (400 Series Page 284)

Directional Distribution: 66% ent. 34% exit.
 (T) = 1.91 (X) T = 42 Average Vehicle Trip Ends
 (T) = 1.91 * (22.0) 28 entering 14 exiting
 28 + 14 = 42

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (400 Series Page 285)

Directional Distribution: 47% ent. 53% exit.
 (T) = 2.50 (X) T = 55 Average Vehicle Trip Ends
 (T) = 2.50 * (22.0) 26 entering 29 exiting
 26 + 29 = 55

Weekday (400 Series Page 307)

Directional Distribution: 50% ent. 50% exit.
 Daily Weekday (T) = 28.82 (X) T = 636 Average Vehicle Trip Ends
 (T) = 28.82 * (22.0) 318 entering 318 exiting
 318 + 318 = 636

Project Parklands Village 1 - Filing 5
 Subject Trip Generation for Single-Family Detached Housing
 Designed by TJD Date May 28, 2024 Job No. 196480001
 Checked by _____ Date _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 11th Edition, Average Rate Equations

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

Independent Variable - Dwelling Units (X)

$$X = 225$$

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (200 Series Page 220)

Average Weekday	Directional Distribution:	26% ent.	74% exit.
(T) = 0.70(X)	T = 158	Average Vehicle Trip Ends	
(T) = 0.70 * (225.0)	41 entering	117 exiting	
	41 + 117 = 158		

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (200 Series Page 221)

Average Weekday	Directional Distribution:	63% ent.	37% exit.
(T) = 0.94(X)	T = 212	Average Vehicle Trip Ends	
(T) = 0.94 * (225.0)	134 entering	78 exiting	
	134 + 78 = 212		

Weekday (200 Series Page 219)

Average Weekday	Directional Distribution:	50% entering, 50% exiting
(T) = 9.43(X)	T = 2122	Average Vehicle Trip Ends
(T) = 9.43 * (225.0)	1061 entering	1061 exiting
	1061 + 1061 = 2122	

Project Parklands Village 1 - Filing 6
 Subject Trip Generation for Single-Family Detached Housing
 Designed by TJD Date May 28, 2024 Job No. 196480001
 Checked by _____ Date _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 11th Edition, Average Rate Equations

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

Independent Variable - Dwelling Units (X)

$$X = 151$$

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (200 Series Page 220)

Average Weekday	Directional Distribution:	26% ent.	74% exit.
(T) = 0.70(X)	T = 106	Average Vehicle Trip Ends	
(T) = 0.70 * (151.0)	28 entering	78 exiting	
	28 + 78 = 106		

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (200 Series Page 221)

Average Weekday	Directional Distribution:	63% ent.	37% exit.
(T) = 0.94(X)	T = 142	Average Vehicle Trip Ends	
(T) = 0.94 * (151.0)	89 entering	53 exiting	
	89 + 53 = 142		

Weekday (200 Series Page 219)

Average Weekday	Directional Distribution:	50% entering, 50% exiting
(T) = 9.43(X)	T = 1424	Average Vehicle Trip Ends
(T) = 9.43 * (151.0)	712 entering	712 exiting
	712 + 712 = 1424	

Project Parklands Village 1 - Filing 6
 Subject Trip Generation for Single-Family Attached Housing
 Designed by TJD Date May 28, 2024 Job No. 196480001
 Checked by _____ Date _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 11th Edition, Average Rate Equations

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

Independent Variable - Dwelling Units (X)

$$X = 134$$

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (200 Series Page 239)

Average Weekday	Directional Distribution:	26% ent.	74% exit.
(T) = 0.48(X)	T = 64	Average Vehicle Trip Ends	
(T) = 0.48 * (134.0)	17 entering	47 exiting	
	17 + 47 = 64		

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (200 Series Page 240)

Average Weekday	Directional Distribution:	57% ent.	43% exit.
(T) = 0.57 (X)	T = 76	Average Vehicle Trip Ends	
(T) = 0.57 * (134.0)	44 entering	32 exiting	
	44 + 32 = 76		

Weekday (200 Series Page 238)

Average Weekday	Directional Distribution:	50% ent.	50% exit.
(T) = 7.20 (X)	T = 966	Average Vehicle Trip Ends	
(T) = 7.20 * (134.0)	483 entering	483 exiting	
	483 + 483 = 966		

Project Parklands Village 1 - Filing 6
 Subject Trip Generation - Public Park
 Designed by TJD Date May 28, 2024 Job No. 196480001
 Checked by _____ Date _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 11th Edition, Fitted Curve Equations
 Land Use Code - Public Park (411)
 Independent Variable - Acres (X)

Acres 7.0

X = 7.0

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 * (7.0)
 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) = 0.06 (X) + 22.60
 (T) = 0.06 * (7.0) + 22.60
 T = 23 Average Vehicle Trip Ends
 13 entering 10 exiting
 13 + 10 = 23

Weekday (400 Series page 2)

Average Weekday
 T = 0.64 * (X) + 88.46
 T = 0.64 * (7.0) + 88.46
 Directional Distribution: 50% entering, 50% exiting
 T = 94 Average Vehicle Trip Ends
 47 entering 47 exiting
 47 + 47 = 94

Project Parklands Village 1 - Filing 6
 Subject Trip Generation for Elementary School
 Designed by TJD Date May 28, 2024 Job No. 196480001
 Checked by _____ Date _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 11th Edition, Average Rate Equations

Land Use Code - Elementary School (520)

Independent Variable - Students (X)

$$X = 677$$

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (500 Series Page 327)

Average Weekday	Directional Distribution:	54% ent.	46% exit.
(T) = 0.74 (X)	T = 501	Average Vehicle Trip Ends	
(T) = 0.74 * (677.0)	271 entering	230	exiting
	271 + 230 = 501		

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (500 Series Page 328)

Average Weekday	Directional Distribution:	46% ent.	54% exit.
(T) = 0.16(X)	T = 108	Average Vehicle Trip Ends	
(T) = 0.16 * (677.0)	50 entering	58	exiting
	50 + 58 = 108		

Weekday (500 Series Page 326)

Average Weekday	Directional Distribution:	50% entering, 50% exiting
(T) = 2.27 (X)	T = 1538	Average Vehicle Trip Ends
(T) = 2.27 * (677.0)	769 entering	769 exiting
	769 + 769 = 1538	

Project Parklands Village 1 - Filing 6
 Subject Trip Generation for Middle School/Junior High School
 Designed by TJD Date May 28, 2024 Job No. 196480001
 Checked by _____ Date _____ Sheet No. _____ of _____

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 11th Edition, Average Rate Equations

Land Use Code - Middle School/Junior High School (522)

Independent Variable - Students (X)

$$X = 321$$

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (500 Series Page 342)

Average Weekday	Directional Distribution:	54% ent.	46% exit.
(T) = 0.67 (X)	T = 215	Average Vehicle Trip Ends	
(T) = 0.67 * (321.0)	116 entering	99	exiting
	116 + 99 = 215		

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (500 Series Page 343)

Average Weekday	Directional Distribution:	48% ent.	52% exit.
(T) = 0.15(X)	T = 48	Average Vehicle Trip Ends	
(T) = 0.15 * (321.0)	23 entering	25	exiting
	23 + 25 = 48		

Weekday (500 Series Page 341)

Average Weekday	Directional Distribution:	50% entering, 50% exiting
(T) = 2.10 (X)	T = 676	Average Vehicle Trip Ends
(T) = 2.10 * (321.0)	338 entering	338 exiting
	338 + 338 = 676	

Parklands Village 1 Comparison of Land Uses and Intensities

Land Use	Master Study	Current Study
Single-Family Detached (ITE 210)	1,858 Units	902 Units
Single-Family Attached (ITE 215)	0 Units	504 Units
Mid-Rise Multifamily Housing (ITE 221)	600 Units	566 Units
Public Park (ITE 411)	~19.5 Acres	21.1 Acres
Recreational Community Center (ITE 495)	22,000 SF	22,000 SF
Elementary School (ITE 520)	677 Students	677 Students
Middle School/Junior High School (ITE 522)	321 Students	321 Students
General Office Building (ITE 710)	60,000 SF	60,000 SF
Shopping Center (ITE 820)	181,000 SF	181,000 SF

APPENDIX D

Trip Distribution by Intersection Figures

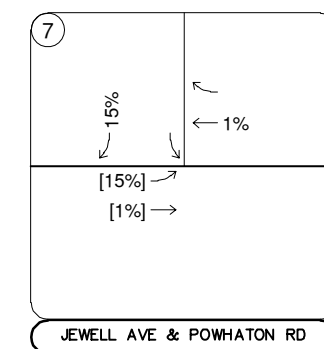
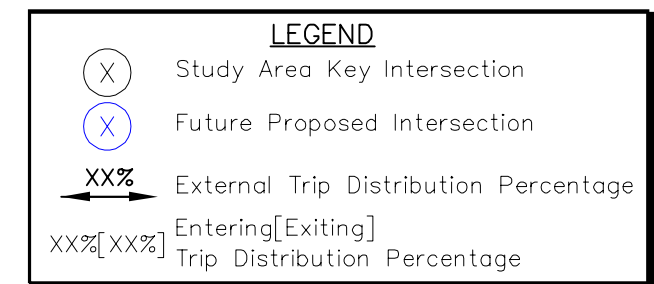
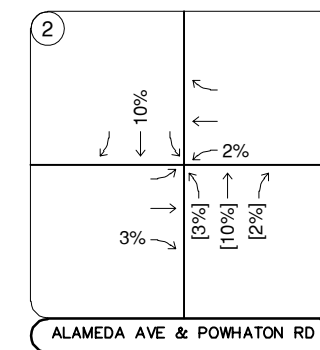
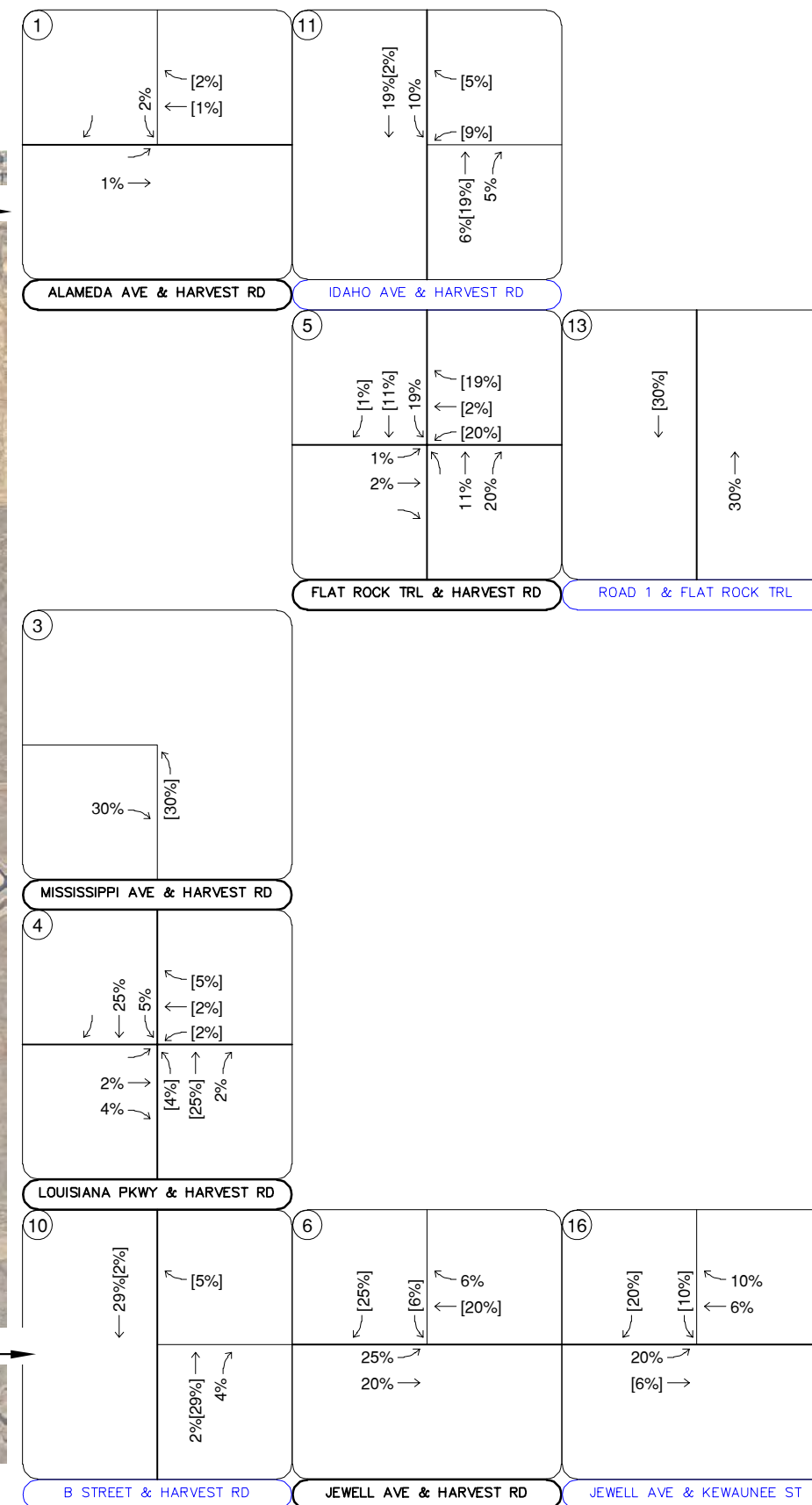
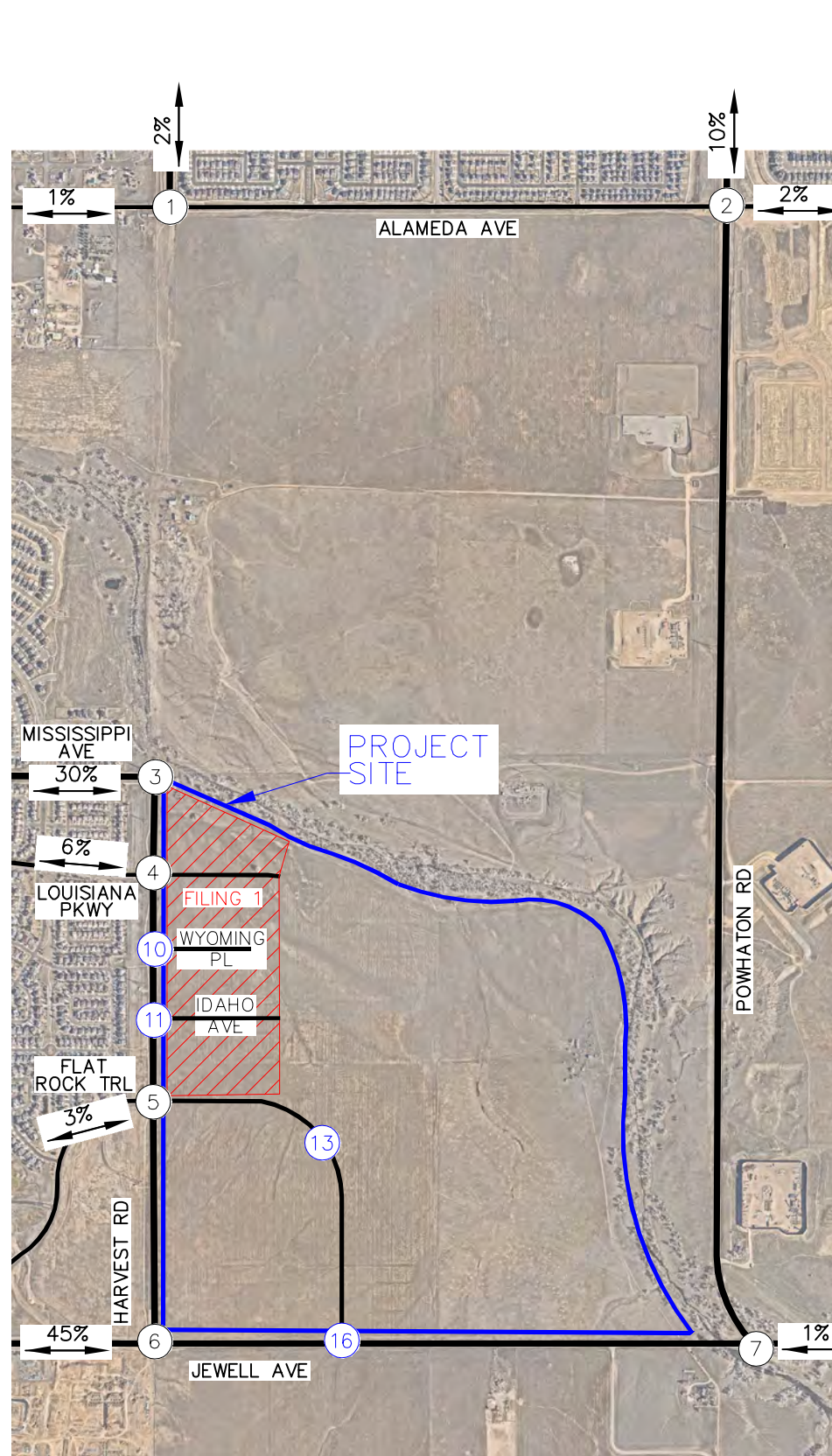
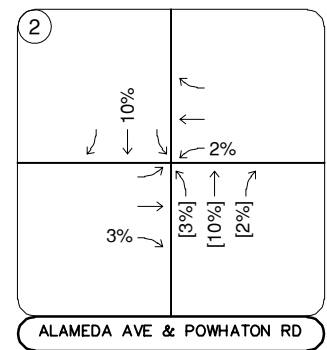
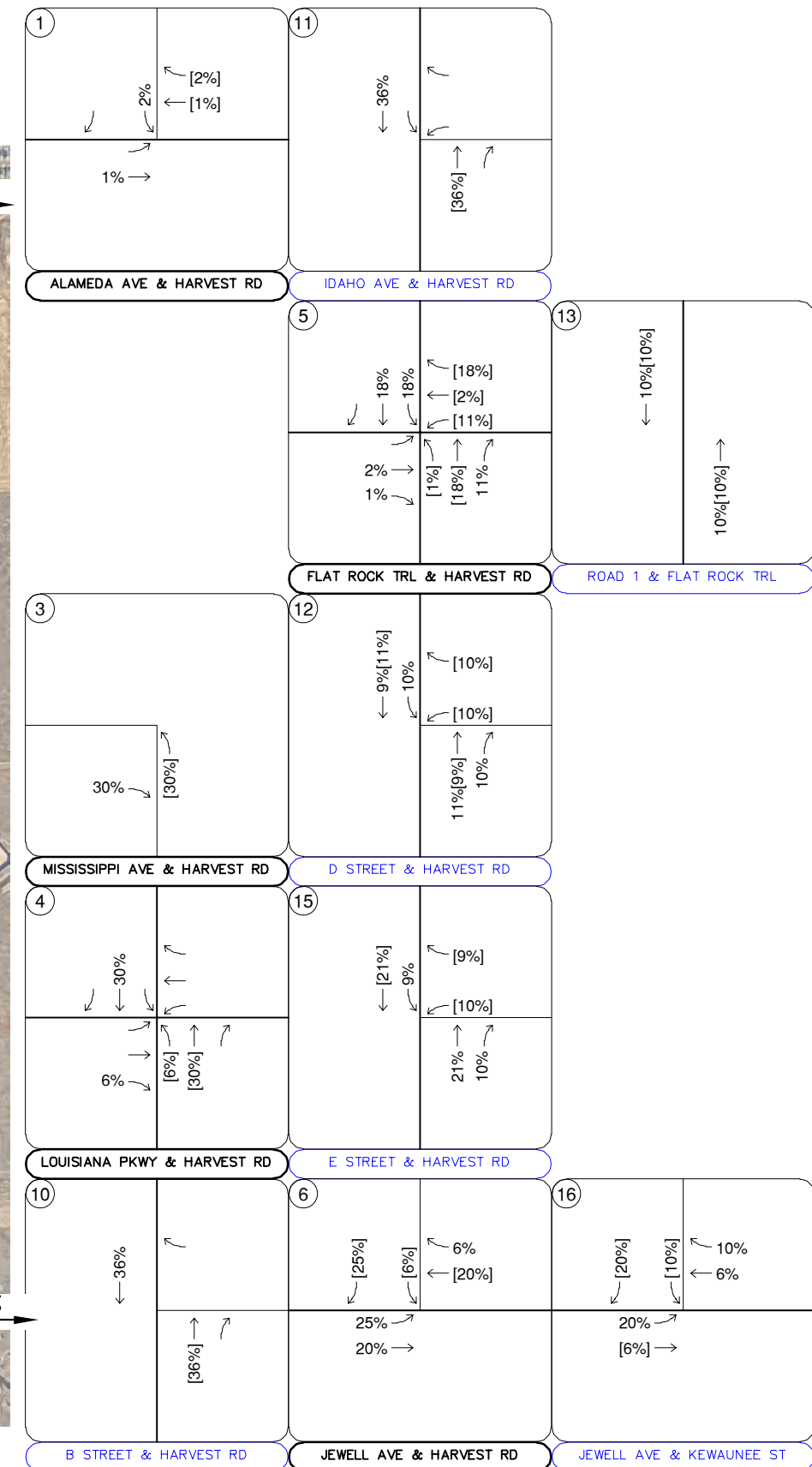
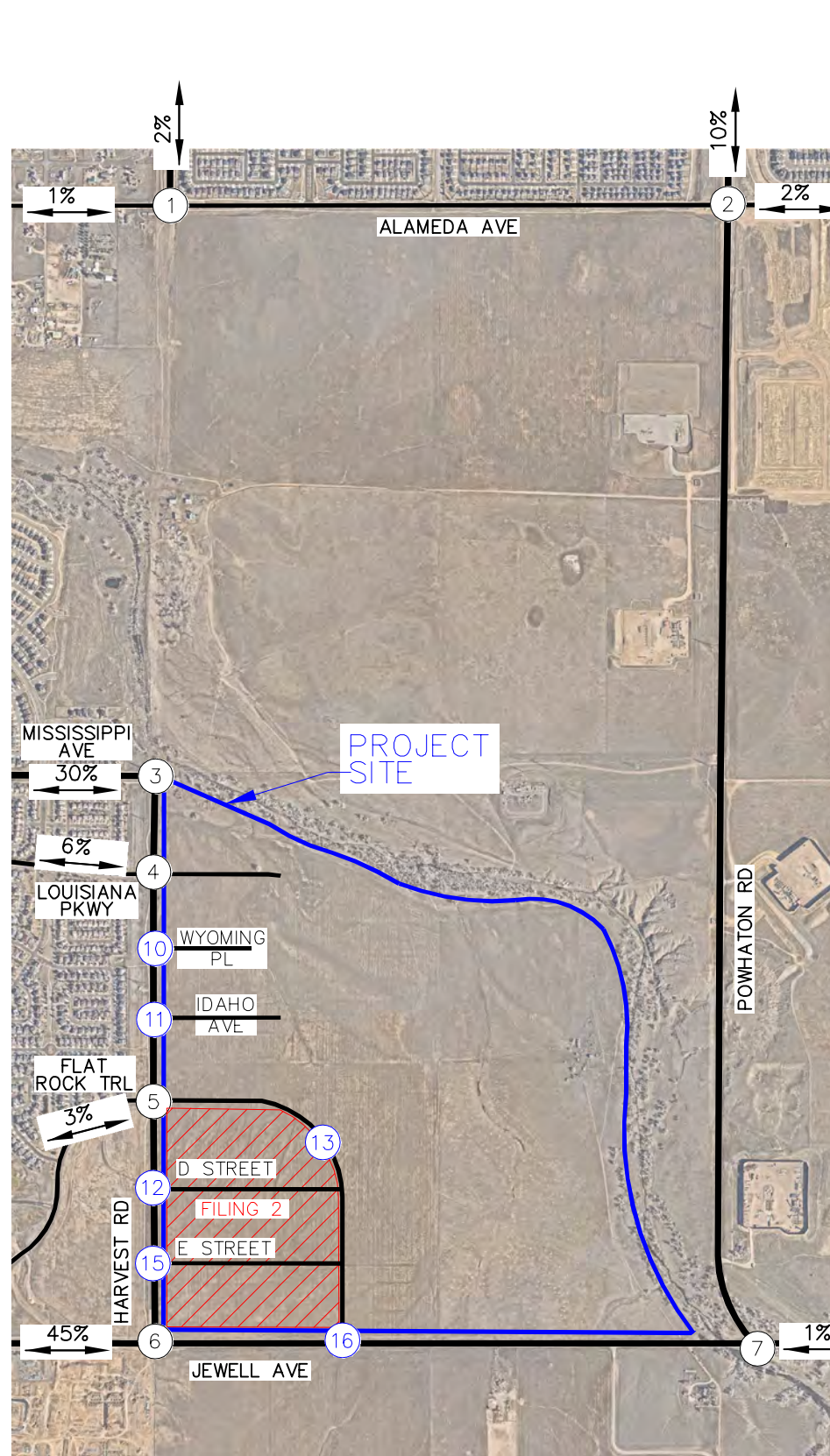


FIGURE D1
PARKLANDS VILLAGE 1
AURORA, COLORADO
TRIP DISTRIBUTION (RESIDENTIAL) – FILING 1



LEGEND

(X) Study Area Key Intersection

(X) Future Proposed Intersection

XX% External Trip Distribution Percentage

XX%[XX%] Entering[Exiting] Trip Distribution Percentage

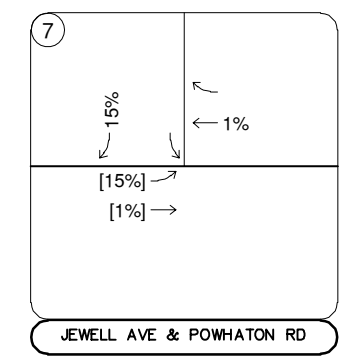
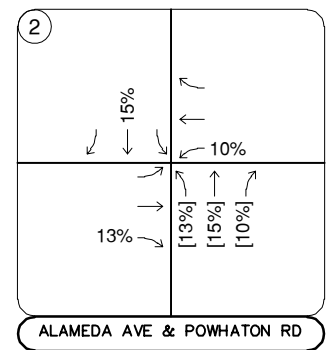
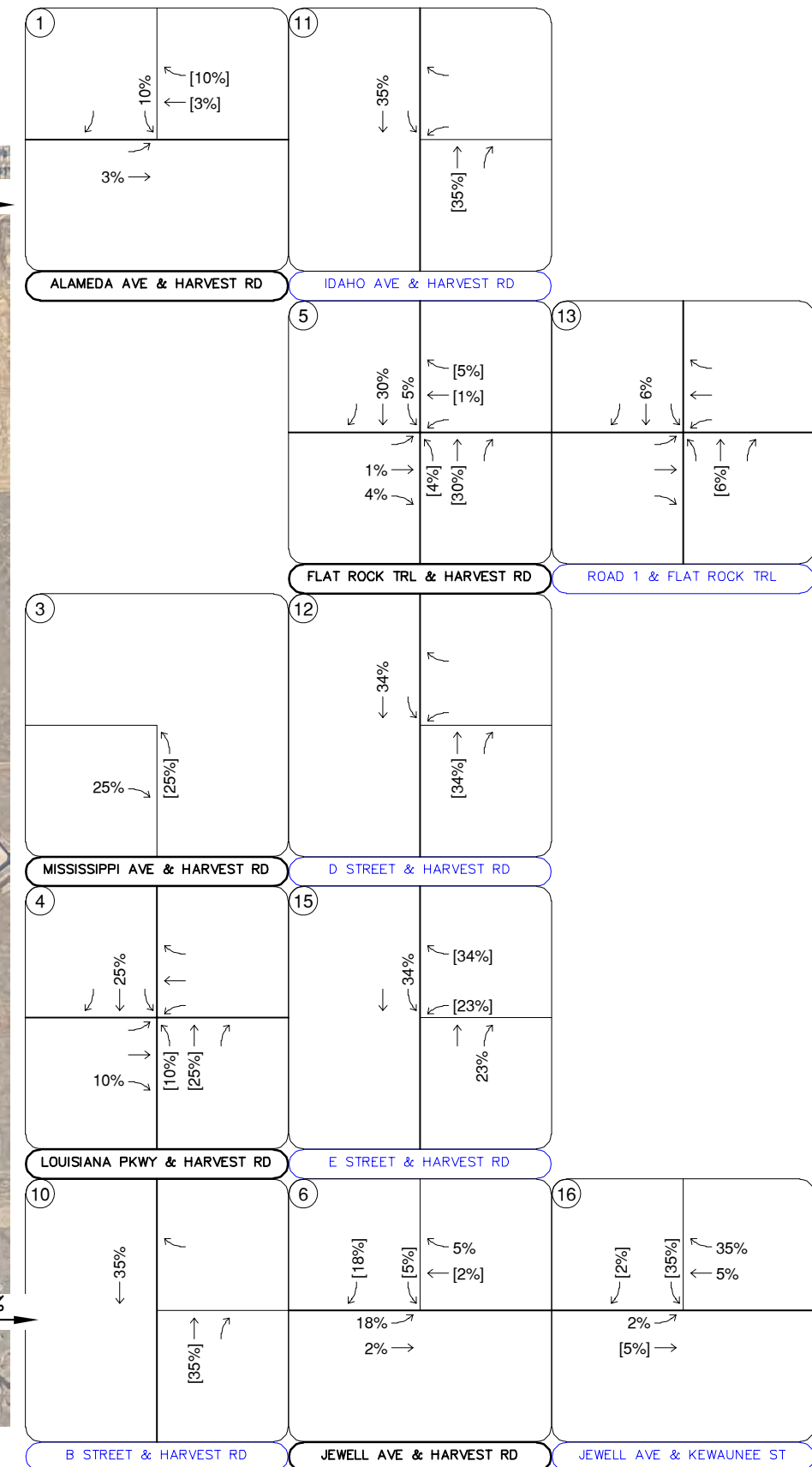
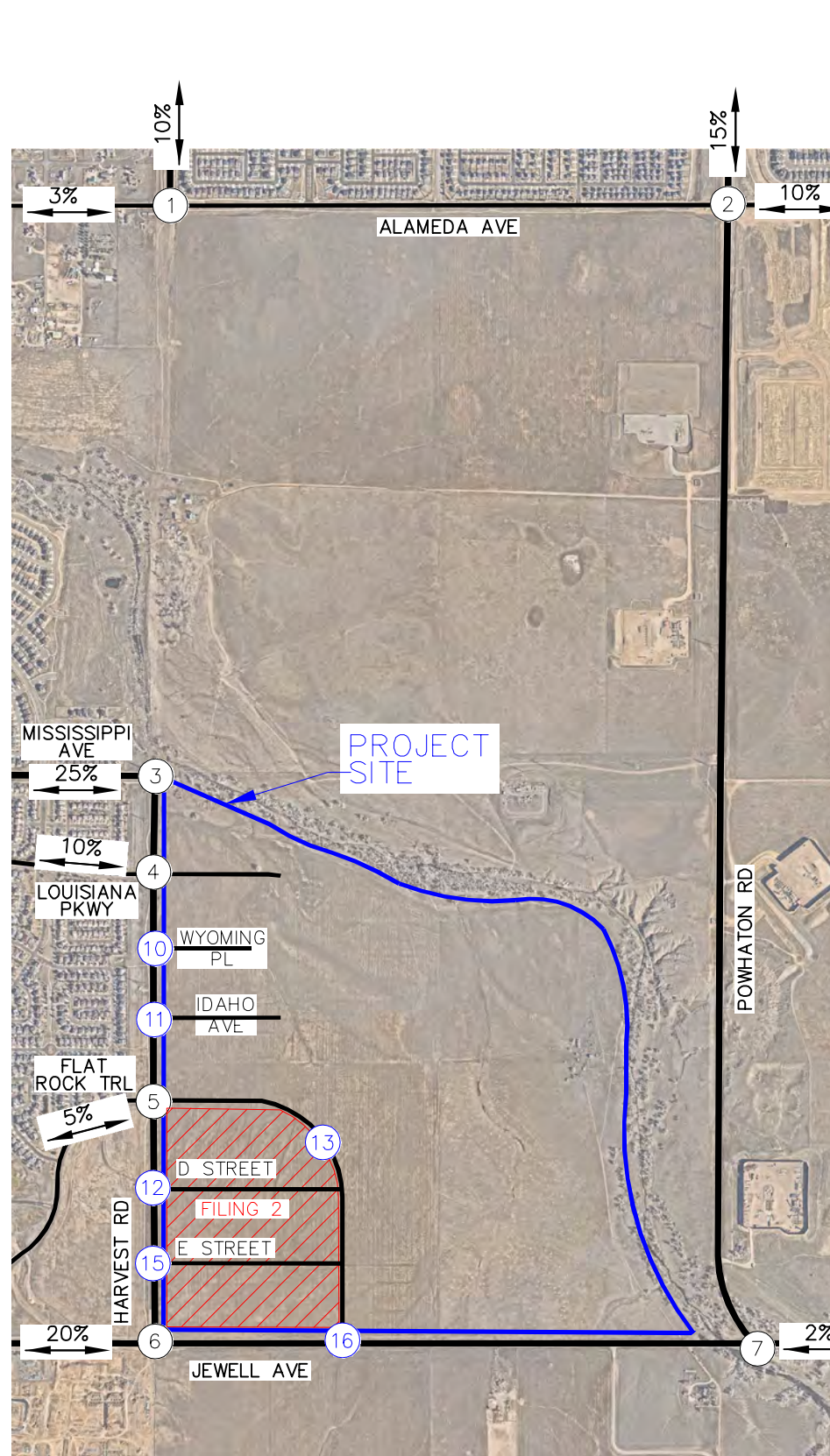


FIGURE D2
PARKLANDS VILLAGE 1
AURORA, COLORADO
TRIP DISTRIBUTION (RESIDENTIAL) – FILING 2



LEGEND

(X) Study Area Key Intersection

(X) Future Proposed Intersection

XX% External Trip Distribution Percentage

XX%[XX%] Entering[Exiting] Trip Distribution Percentage

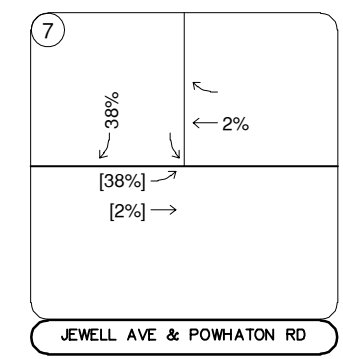


FIGURE D3
PARKLANDS VILLAGE 1
AURORA, COLORADO
TRIP DISTRIBUTION (COMMERCIAL) – FILING 2

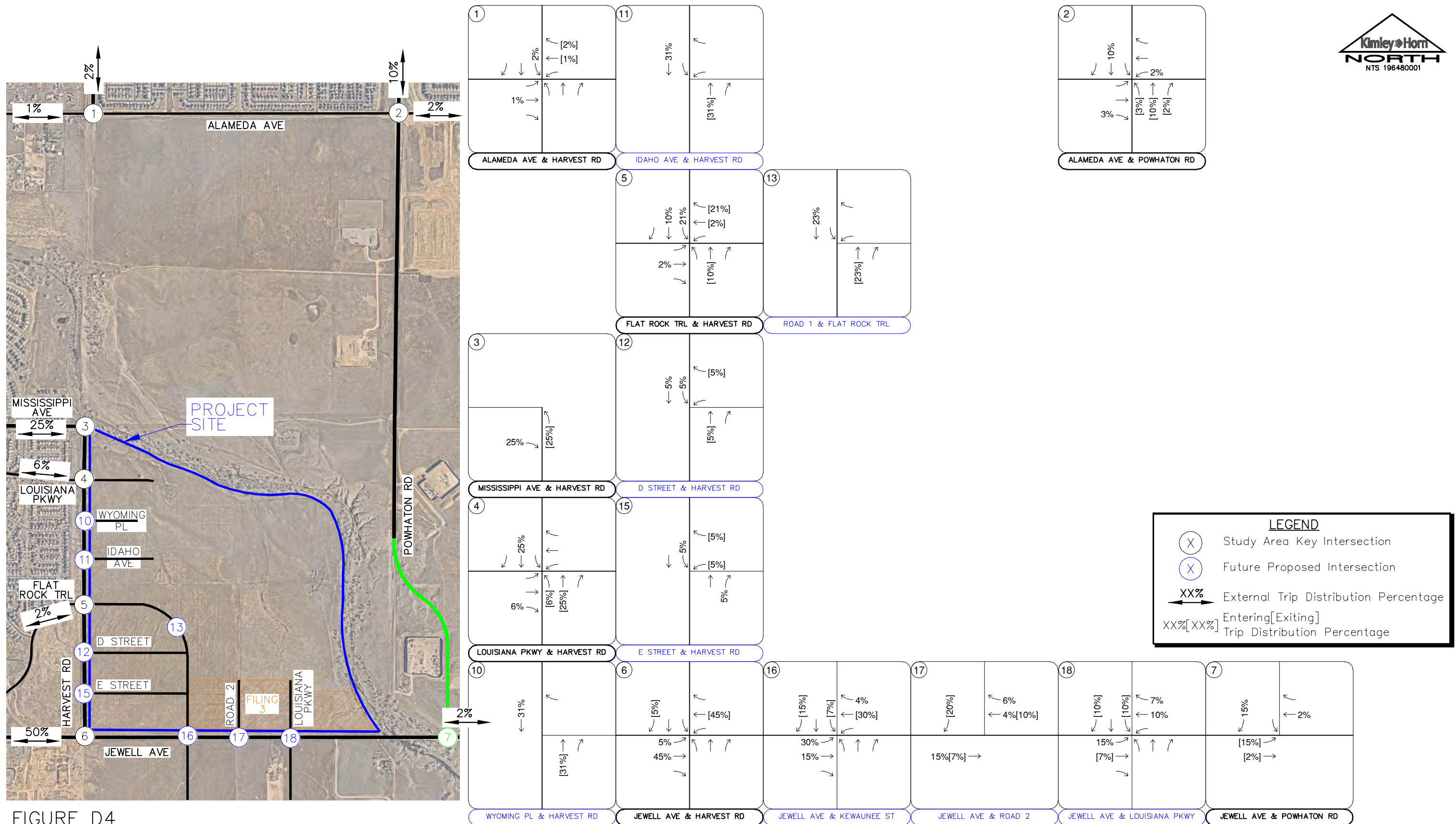


FIGURE D4
 PARKLANDS VILLAGE 1
 AURORA, COLORADO
 TRIP DISTRIBUTION – FILING 3

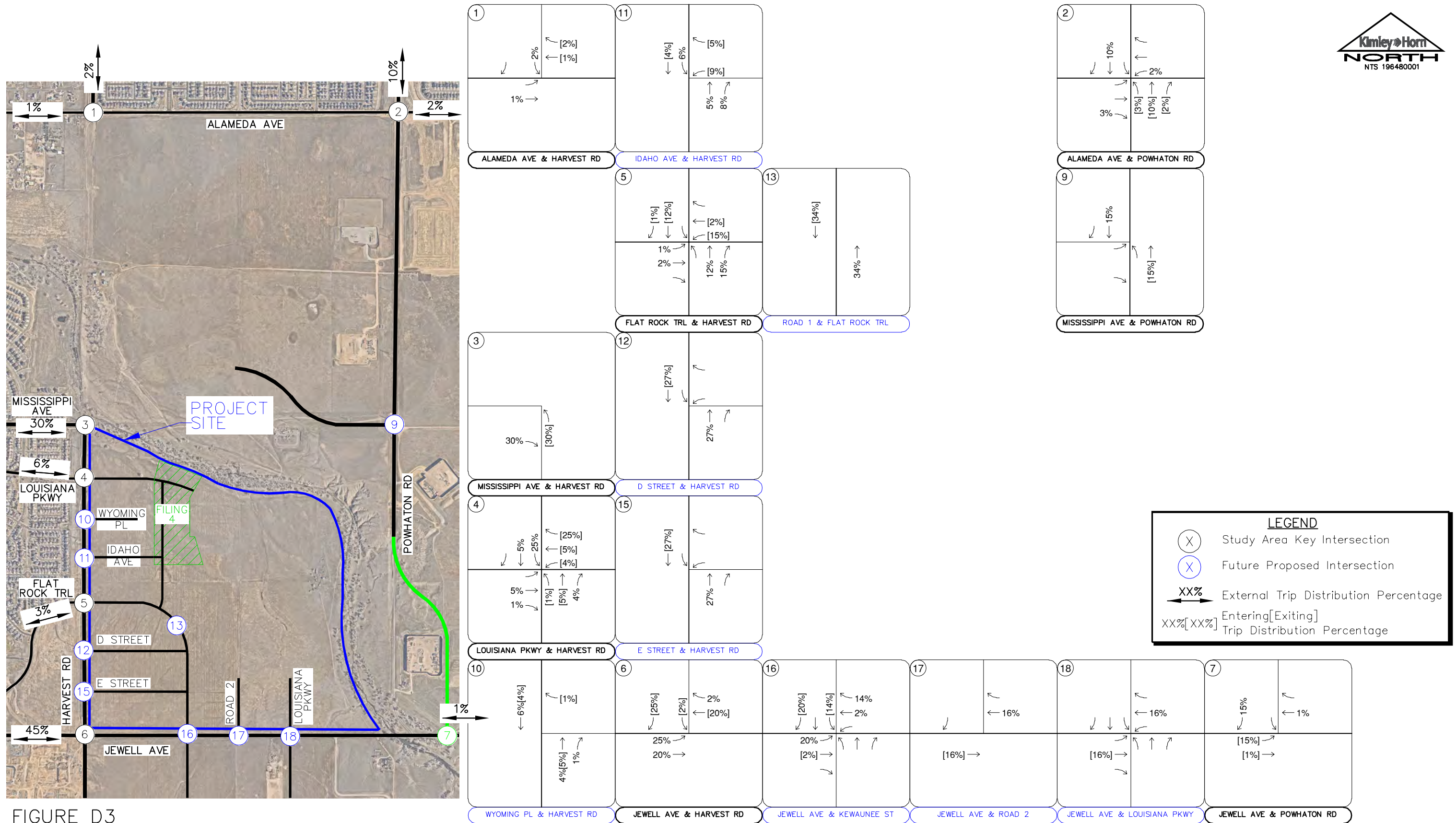


FIGURE D3
PARKLANDS VILLAGE 1
AURORA, COLORADO
TRIP DISTRIBUTION – FILING 4

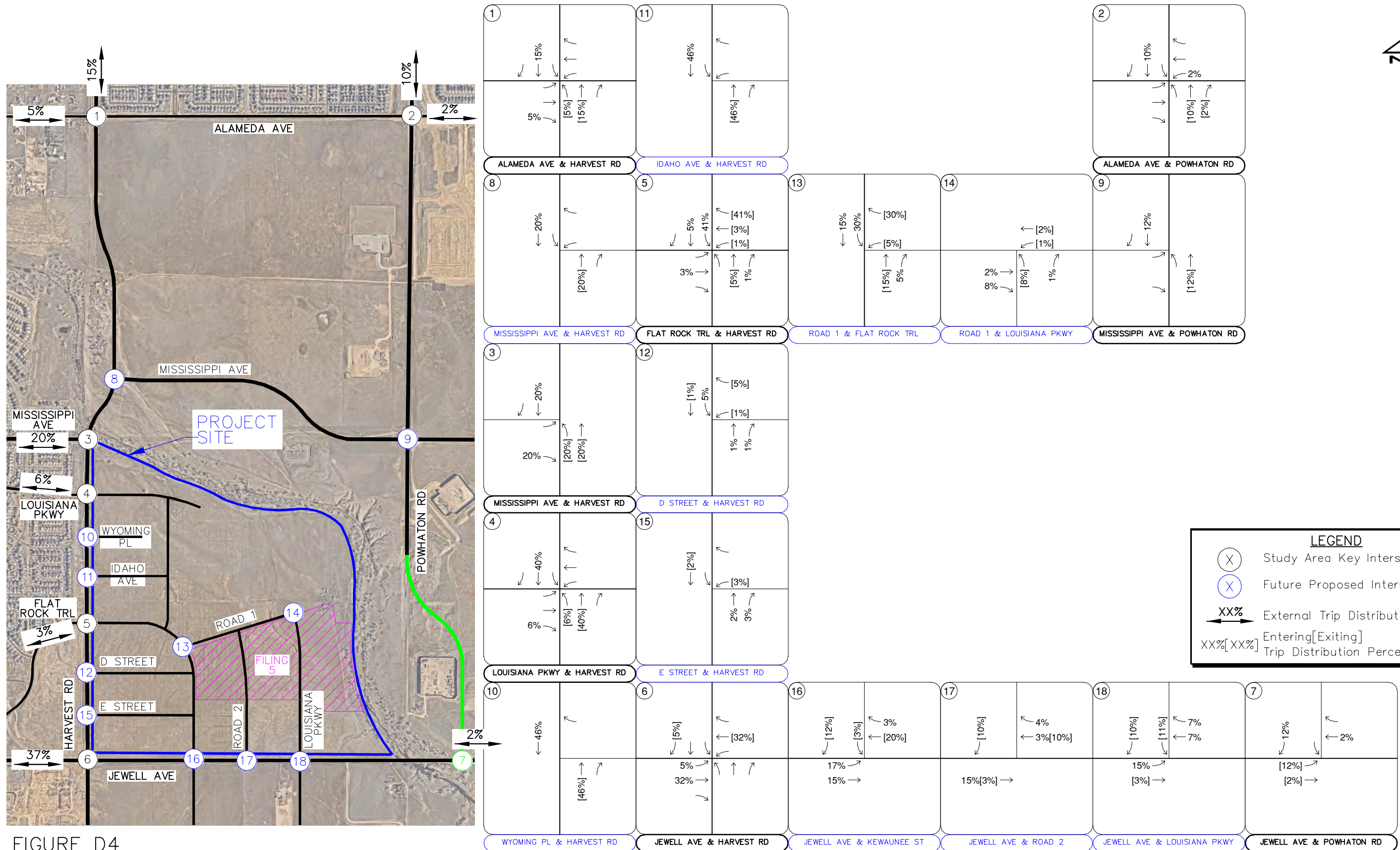


FIGURE D4
PARKLANDS VILLAGE 1
AURORA, COLORADO
TRIP DISTRIBUTION – FILING 5

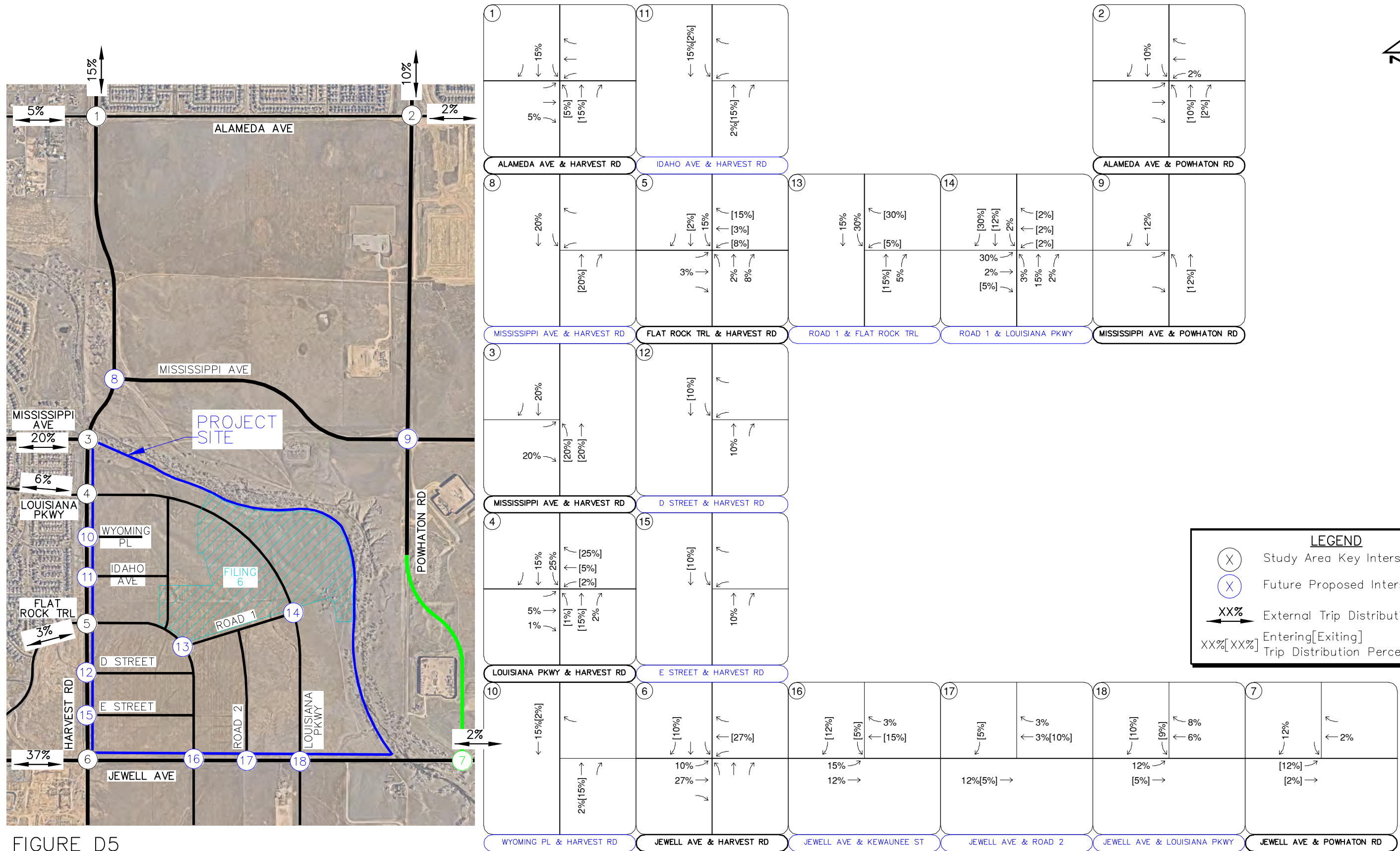


FIGURE D5
PARKLANDS VILLAGE 1
AURORA, COLORADO
TRIP DISTRIBUTION (RESIDENTIAL) – FILING 6

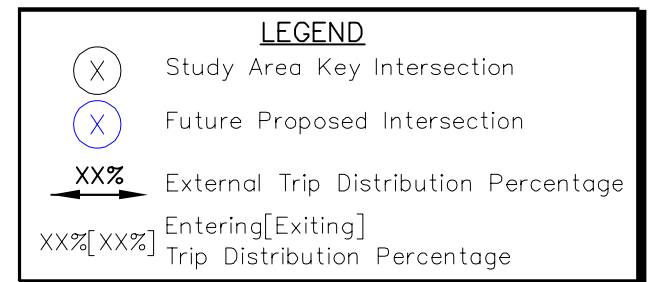
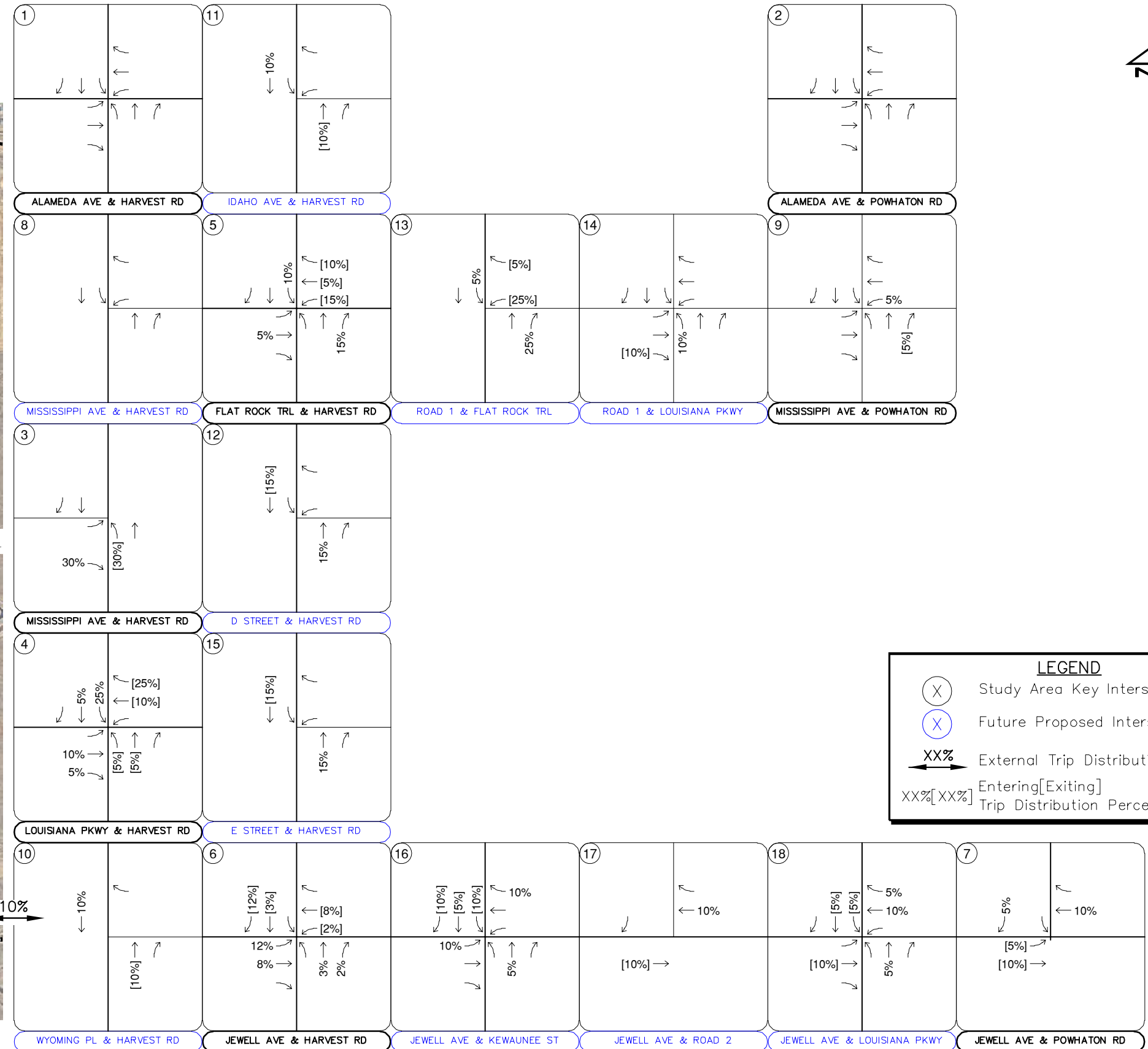
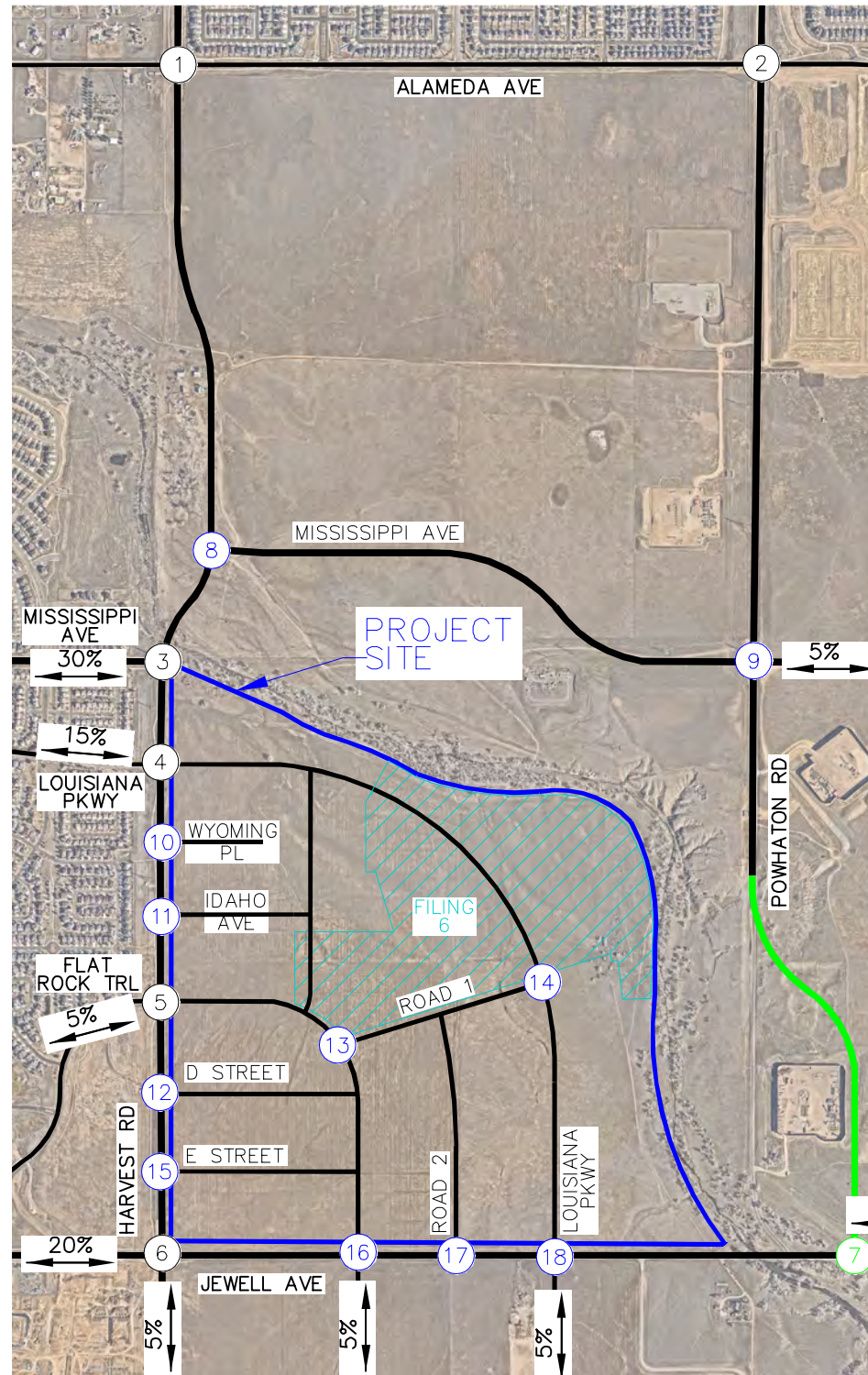


FIGURE D5
PARKLANDS VILLAGE 1
AURORA, COLORADO
TRIP DISTRIBUTION (SCHOOL) – FILING 6

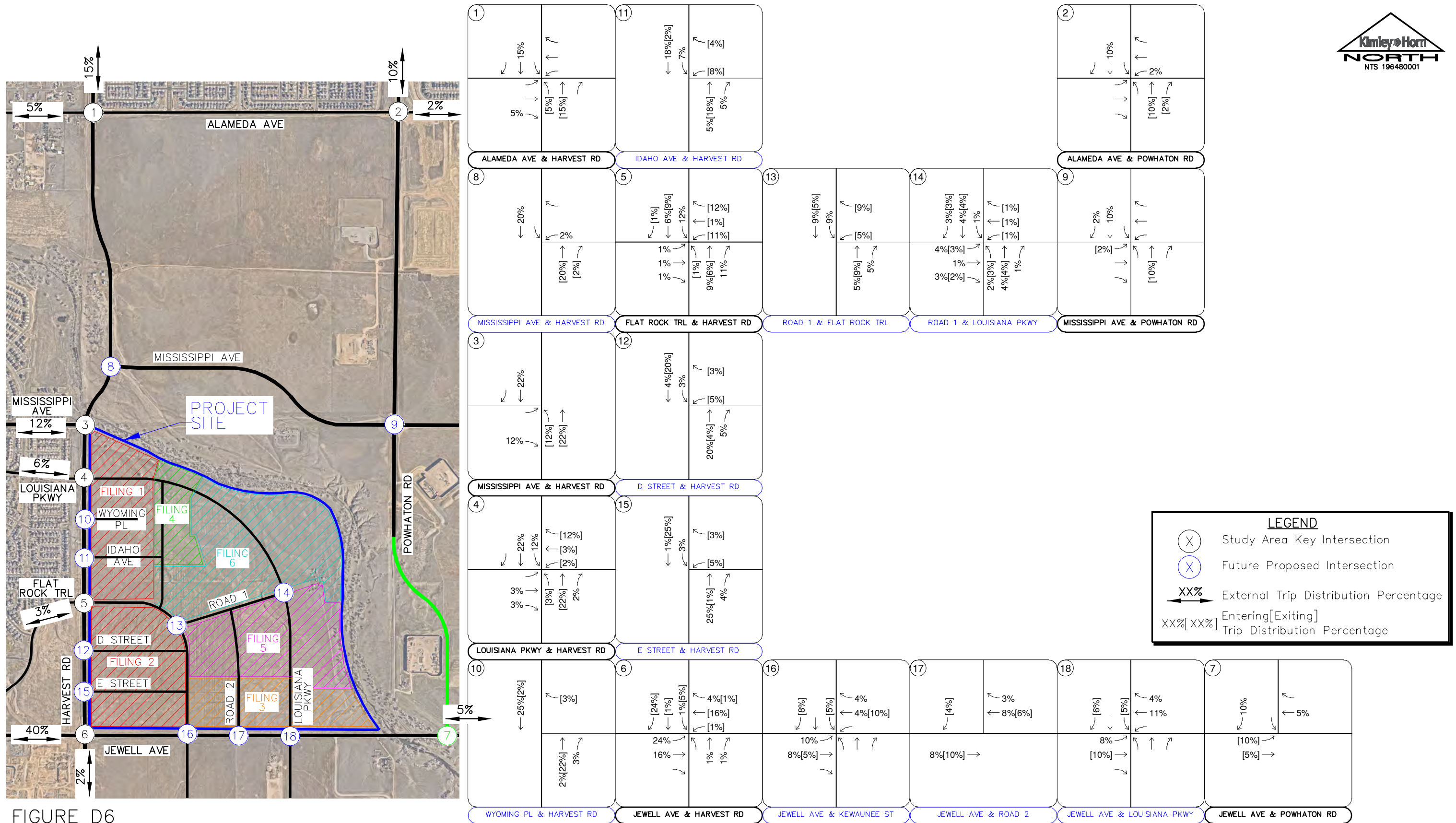


FIGURE D6
PARKLANDS VILLAGE 1
AURORA, COLORADO
FULL BUILDOUT TRIP DISTRIBUTION – RESIDENTIAL

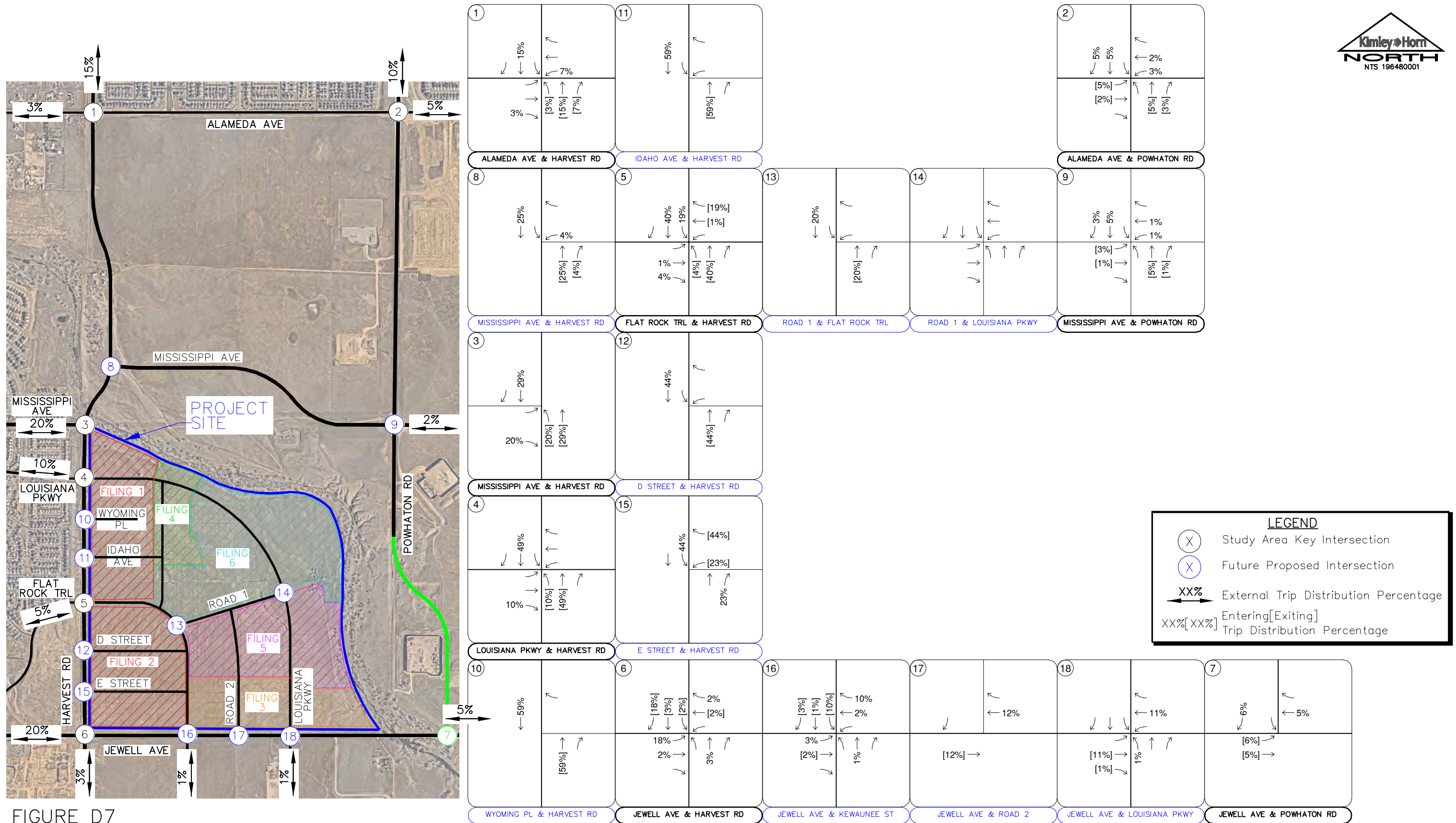
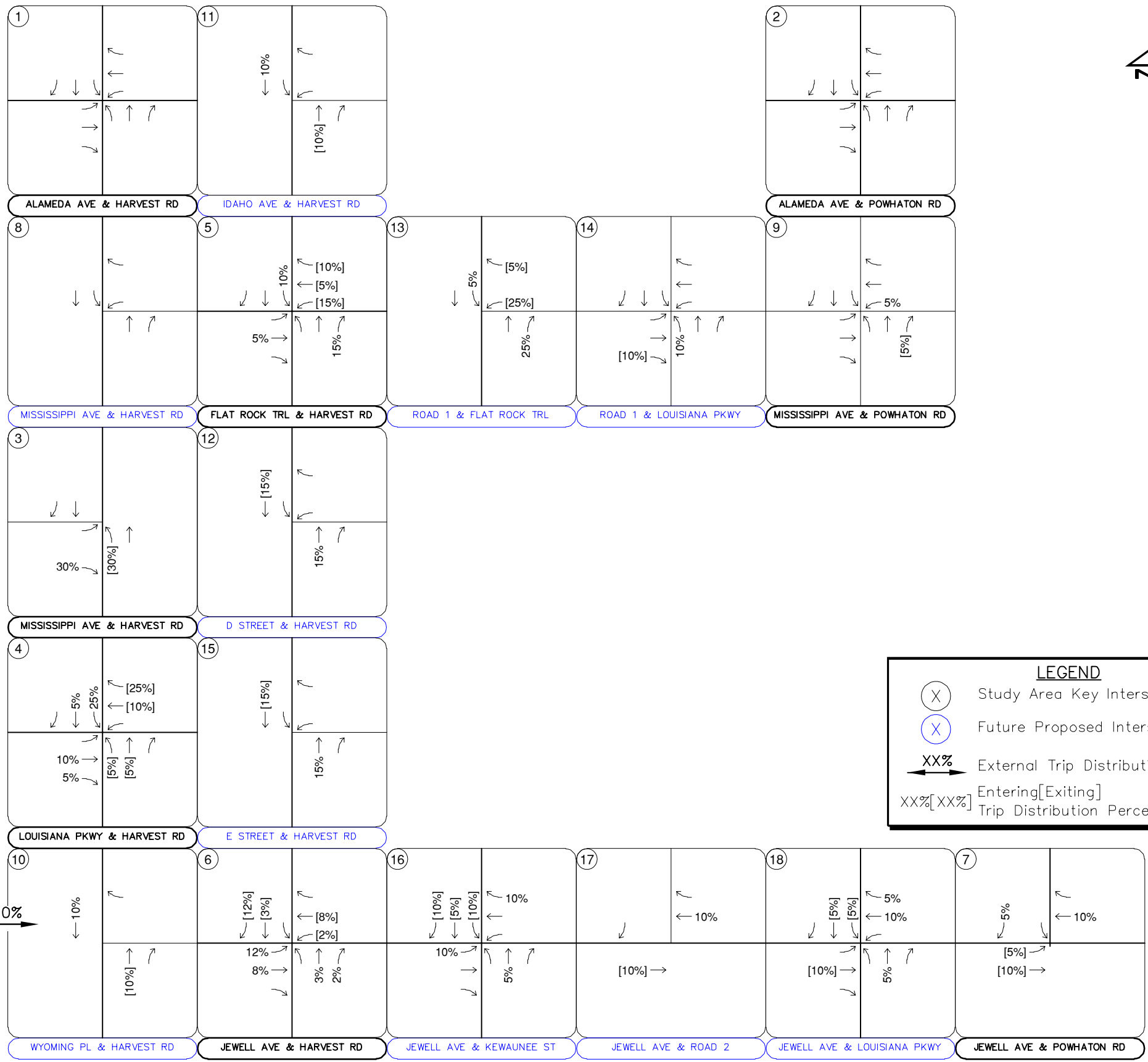
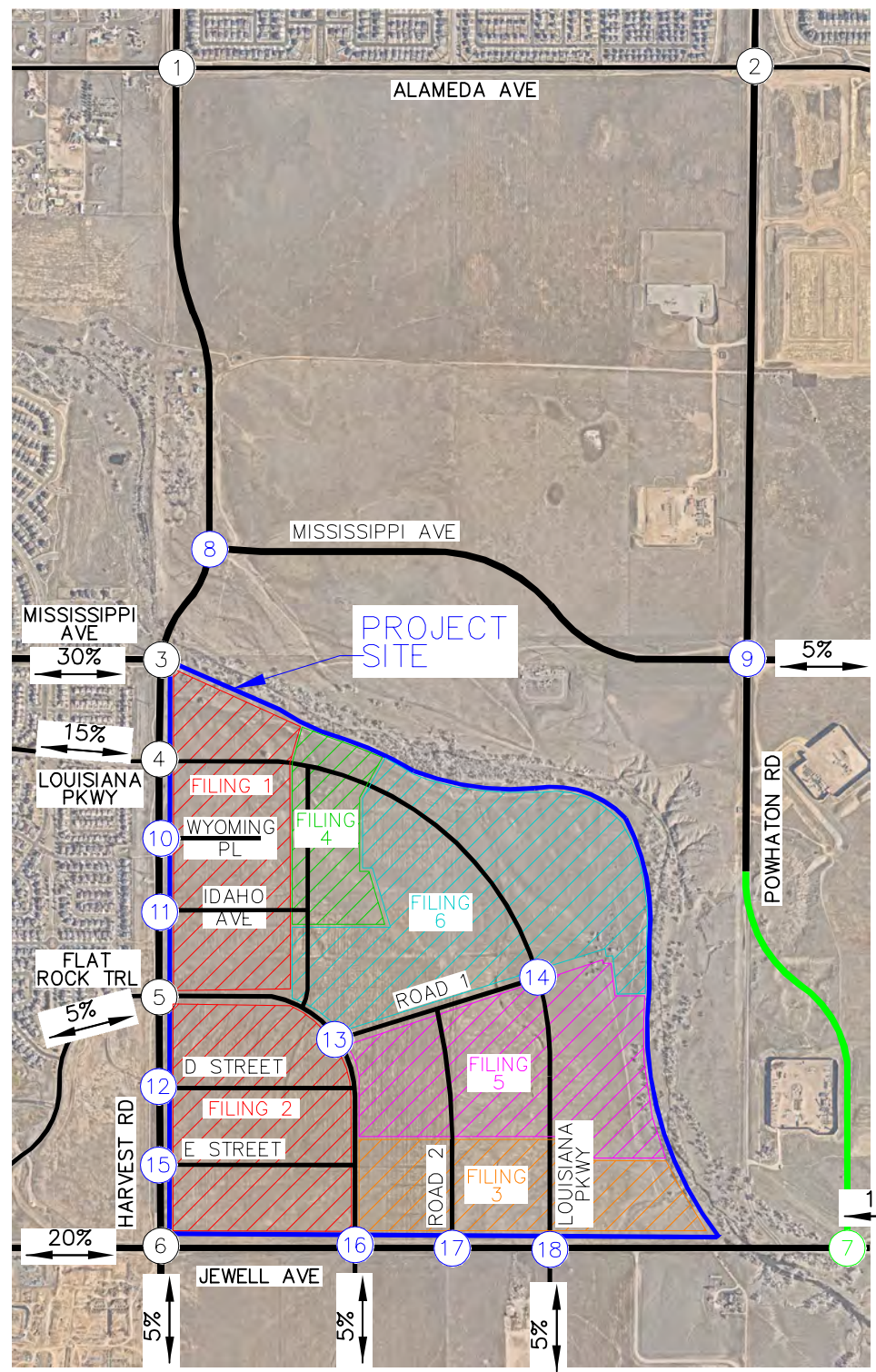


FIGURE D7
PARKLANDS VILLAGE 1
AURORA, COLORADO
FULL BUILDOUT TRIP DISTRIBUTION – COMMERCIAL



LEGEND

- (X) Study Area Key Intersection
- (X) Future Proposed Intersection
- XX% External Trip Distribution Percentage
- XX%[XX%] Entering[Exiting] Trip Distribution Percentage





FIGURE D10
PARKLANDS VILLAGE 1
AURORA, COLORADO
FULL BUILDOUT TRIP DISTRIBUTION – SCHOOL

APPENDIX E

Intersection Analysis Worksheets

Intersection

Int Delay, s/veh 2.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	20	50	121	6	8	35
Future Vol, veh/h	20	50	121	6	8	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	300	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	83	83	84	84
Heavy Vehicles, %	8	8	7	7	5	5
Mvmt Flow	22	56	146	7	10	42





Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	153	0	0 250 150
Stage 1	-	-	- 150 -
Stage 2	-	-	- 100 -
Critical Hdwy	4.18	-	- 6.45 6.25
Critical Hdwy Stg 1	-	-	- 5.45 -
Critical Hdwy Stg 2	-	-	- 5.45 -
Follow-up Hdwy	2.272	-	- 3.545 3.345
Pot Cap-1 Maneuver	1392	-	- 732 889
Stage 1	-	-	- 870 -
Stage 2	-	-	- 917 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1392	-	- 720 889
Mov Cap-2 Maneuver	-	-	- 720 -
Stage 1	-	-	- 856 -
Stage 2	-	-	- 917 -

Approach	EB	WB	SB
HCM Control Delay, s	2.2	0	9.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1392	-	-	-	720	889
HCM Lane V/C Ratio	0.016	-	-	-	0.013	0.047
HCM Control Delay (s)	7.6	0	-	-	10.1	9.2
HCM Lane LOS	A	A	-	-	B	A
HCM 95th %tile Q(veh)	0	-	-	-	0	0.1

Intersection

Int Delay, s/veh 2.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	66	183	93	3	8	32
Future Vol, veh/h	66	183	93	3	8	32
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	300	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	86	86	85	85
Heavy Vehicles, %	8	8	7	7	5	5
Mvmt Flow	74	206	108	3	9	38

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	111	0	0 464 110
Stage 1	-	-	- 110 -
Stage 2	-	-	- 354 -
Critical Hdwy	4.18	-	- 6.45 6.25
Critical Hdwy Stg 1	-	-	- 5.45 -
Critical Hdwy Stg 2	-	-	- 5.45 -
Follow-up Hdwy	2.272	-	- 3.545 3.345
Pot Cap-1 Maneuver	1442	-	- 551 935
Stage 1	-	-	- 907 -
Stage 2	-	-	- 704 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1442	-	- 519 935
Mov Cap-2 Maneuver	-	-	- 519 -
Stage 1	-	-	- 854 -
Stage 2	-	-	- 704 -

Approach	EB	WB	SB
HCM Control Delay, s	2	0	9.6
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1442	-	-	-	519	935
HCM Lane V/C Ratio	0.051	-	-	-	0.018	0.04
HCM Control Delay (s)	7.6	0	-	-	12.1	9
HCM Lane LOS	A	A	-	-	B	A
HCM 95th %tile Q(veh)	0.2	-	-	-	0.1	0.1

Intersection												
Int Delay, s/veh	5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕		↕	↕	
Traffic Vol, veh/h	21	63	12	9	152	36	30	59	13	20	23	37
Future Vol, veh/h	21	63	12	9	152	36	30	59	13	20	23	37
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	-	-	-	-	-	-	-	-	-	300	-	-
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, %	8	8	2	2	7	7	2	2	2	5	2	5
Mvmt Flow	23	68	13	10	165	39	33	64	14	22	25	40

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	204	0	0	81	0	0	358	345	75	365	332	185
Stage 1	-	-	-	-	-	-	121	121	-	205	205	-
Stage 2	-	-	-	-	-	-	237	224	-	160	127	-
Critical Hdwy	4.18	-	-	4.12	-	-	7.12	6.52	6.22	7.15	6.52	6.25
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.15	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.15	5.52	-
Follow-up Hdwy	2.272	-	-	2.218	-	-	3.518	4.018	3.318	3.545	4.018	3.345
Pot Cap-1 Maneuver	1333	-	-	1517	-	-	597	578	986	586	588	850
Stage 1	-	-	-	-	-	-	883	796	-	790	732	-
Stage 2	-	-	-	-	-	-	766	718	-	835	791	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1333	-	-	1517	-	-	540	564	986	517	573	850
Mov Cap-2 Maneuver	-	-	-	-	-	-	540	564	-	517	573	-
Stage 1	-	-	-	-	-	-	867	782	-	776	727	-
Stage 2	-	-	-	-	-	-	700	713	-	742	777	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.7			0.3			12.5			11		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	588	1333	-	-	1517	-	-	517	717
HCM Lane V/C Ratio	0.189	0.017	-	-	0.006	-	-	0.042	0.091
HCM Control Delay (s)	12.5	7.7	0	-	7.4	0	-	12.3	10.5
HCM Lane LOS	B	A	A	-	A	A	-	B	B
HCM 95th %tile Q(veh)	0.7	0.1	-	-	0	-	-	0.1	0.3






Intersection												
Int Delay, s/veh	6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕		↕	↕	
Traffic Vol, veh/h	69	221	36	12	116	26	23	45	10	44	70	33
Future Vol, veh/h	69	221	36	12	116	26	23	45	10	44	70	33
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	-	-	-	-	-	-	-	-	-	300	-	-
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, %	8	8	2	2	7	7	2	2	2	5	2	5
Mvmt Flow	75	240	39	13	126	28	25	49	11	48	76	36
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	154	0	0	279	0	0	632	590	260	606	595	140
Stage 1	-	-	-	-	-	-	410	410	-	166	166	-
Stage 2	-	-	-	-	-	-	222	180	-	440	429	-
Critical Hdwy	4.18	-	-	4.12	-	-	7.12	6.52	6.22	7.15	6.52	6.25
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.15	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.15	5.52	-
Follow-up Hdwy	2.272	-	-	2.218	-	-	3.518	4.018	3.318	3.545	4.018	3.345
Pot Cap-1 Maneuver	1391	-	-	1284	-	-	393	420	779	405	417	900
Stage 1	-	-	-	-	-	-	619	595	-	829	761	-
Stage 2	-	-	-	-	-	-	780	750	-	590	584	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1391	-	-	1284	-	-	303	389	779	341	386	900
Mov Cap-2 Maneuver	-	-	-	-	-	-	303	389	-	341	386	-
Stage 1	-	-	-	-	-	-	579	557	-	776	753	-
Stage 2	-	-	-	-	-	-	666	742	-	497	547	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.6			0.6			17.1			15.7		
HCM LOS							C			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2			
Capacity (veh/h)	382	1391	-	-	1284	-	-	341	472			
HCM Lane V/C Ratio	0.222	0.054	-	-	0.01	-	-	0.14	0.237			
HCM Control Delay (s)	17.1	7.7	0	-	7.8	0	-	17.3	15			
HCM Lane LOS	C	A	A	-	A	A	-	C	C			
HCM 95th %tile Q(veh)	0.8	0.2	-	-	0	-	-	0.5	0.9			

Intersection												
Int Delay, s/veh	5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔		↗	↘	
Traffic Vol, veh/h	21	63	12	9	153	39	30	59	13	21	23	37
Future Vol, veh/h	21	63	12	9	153	39	30	59	13	21	23	37
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	-	-	-	-	-	-	-	-	-	300	-	-
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, %	8	8	2	2	7	7	2	2	2	5	2	5
Mvmt Flow	23	68	13	10	166	42	33	64	14	23	25	40

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	208	0	0	81	0	0	361	349	75	367	334	187
Stage 1	-	-	-	-	-	-	121	121	-	207	207	-
Stage 2	-	-	-	-	-	-	240	228	-	160	127	-
Critical Hdwy	4.18	-	-	4.12	-	-	7.12	6.52	6.22	7.15	6.52	6.25
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.15	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.15	5.52	-
Follow-up Hdwy	2.272	-	-	2.218	-	-	3.518	4.018	3.318	3.545	4.018	3.345
Pot Cap-1 Maneuver	1328	-	-	1517	-	-	595	575	986	584	586	847
Stage 1	-	-	-	-	-	-	883	796	-	788	731	-
Stage 2	-	-	-	-	-	-	763	715	-	835	791	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1328	-	-	1517	-	-	537	561	986	516	571	847
Mov Cap-2 Maneuver	-	-	-	-	-	-	537	561	-	516	571	-
Stage 1	-	-	-	-	-	-	867	782	-	774	726	-
Stage 2	-	-	-	-	-	-	697	710	-	742	777	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	1.7			0.3			12.6			11		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	585	1328	-	-	1517	-	-	516	715
HCM Lane V/C Ratio	0.19	0.017	-	-	0.006	-	-	0.044	0.091
HCM Control Delay (s/veh)	12.6	7.8	0	-	7.4	0	-	12.3	10.5
HCM Lane LOS	B	A	A	-	A	A	-	B	B
HCM 95th %tile Q (veh)	0.7	0.1	-	-	0	-	-	0.1	0.3

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	69	222	36	12	117	28	23	45	10	47	70	33
Future Vol, veh/h	69	222	36	12	117	28	23	45	10	47	70	33
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	-	-	-	-	-	-	-	-	-	300	-	-
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, %	8	8	2	2	7	7	2	2	2	5	2	5
Mvmt Flow	75	241	39	13	127	30	25	49	11	51	76	36

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	157	0	0	280	0	0	635	594	261	609	598	142
Stage 1	-	-	-	-	-	-	411	411	-	168	168	-
Stage 2	-	-	-	-	-	-	224	183	-	441	430	-
Critical Hdwy	4.18	-	-	4.12	-	-	7.12	6.52	6.22	7.15	6.52	6.25
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.15	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.15	5.52	-
Follow-up Hdwy	2.272	-	-	2.218	-	-	3.518	4.018	3.318	3.545	4.018	3.345
Pot Cap-1 Maneuver	1387	-	-	1283	-	-	391	418	778	403	416	898
Stage 1	-	-	-	-	-	-	618	595	-	827	759	-
Stage 2	-	-	-	-	-	-	779	748	-	589	583	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1387	-	-	1283	-	-	301	387	778	339	385	898
Mov Cap-2 Maneuver	-	-	-	-	-	-	301	387	-	339	385	-
Stage 1	-	-	-	-	-	-	578	557	-	774	751	-
Stage 2	-	-	-	-	-	-	665	740	-	496	546	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	1.6			0.6			17.2			15.8		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	379	1387	-	-	1283	-	-	339	471
HCM Lane V/C Ratio	0.224	0.054	-	-	0.01	-	-	0.151	0.238
HCM Control Delay (s/veh)	17.2	7.7	0	-	7.8	0	-	17.5	15
HCM Lane LOS	C	A	A	-	A	A	-	C	C
HCM 95th %tile Q (veh)	0.8	0.2	-	-	0	-	-	0.5	0.9









Intersection												
Int Delay, s/veh	6.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕		↕	↕	
Traffic Vol, veh/h	22	94	19	10	198	111	50	88	14	76	33	38
Future Vol, veh/h	22	94	19	10	198	111	50	88	14	76	33	38
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	-	-	-	-	-	-	-	-	-	300	-	-
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, %	8	8	2	2	7	7	2	2	2	5	2	5
Mvmt Flow	24	102	21	11	215	121	54	96	15	83	36	41
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	336	0	0	123	0	0	497	519	113	514	469	276
Stage 1	-	-	-	-	-	-	161	161	-	298	298	-
Stage 2	-	-	-	-	-	-	336	358	-	216	171	-
Critical Hdwy	4.18	-	-	4.12	-	-	7.12	6.52	6.22	7.15	6.52	6.25
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.15	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.15	5.52	-
Follow-up Hdwy	2.272	-	-	2.218	-	-	3.518	4.018	3.318	3.545	4.018	3.345
Pot Cap-1 Maneuver	1190	-	-	1464	-	-	483	461	940	466	492	756
Stage 1	-	-	-	-	-	-	841	765	-	704	667	-
Stage 2	-	-	-	-	-	-	678	628	-	779	757	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1190	-	-	1464	-	-	420	447	940	374	477	756
Mov Cap-2 Maneuver	-	-	-	-	-	-	420	447	-	374	477	-
Stage 1	-	-	-	-	-	-	822	748	-	689	661	-
Stage 2	-	-	-	-	-	-	601	622	-	654	740	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.3			0.2			17.2			14.7		
HCM LOS							C			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2			
Capacity (veh/h)	459	1190	-	-	1464	-	-	374	594			
HCM Lane V/C Ratio	0.36	0.02	-	-	0.007	-	-	0.221	0.13			
HCM Control Delay (s)	17.2	8.1	0	-	7.5	0	-	17.3	12			
HCM Lane LOS	C	A	A	-	A	A	-	C	B			
HCM 95th %tile Q(veh)	1.6	0.1	-	-	0	-	-	0.8	0.4			









Intersection												
Int Delay, s/veh	17.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕		↕	↕	
Traffic Vol, veh/h	70	287	56	13	173	135	35	63	11	164	100	34
Future Vol, veh/h	70	287	56	13	173	135	35	63	11	164	100	34
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	-	-	-	-	-	-	-	-	-	300	-	-
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, %	8	8	2	2	7	7	2	2	2	5	2	5
Mvmt Flow	76	312	61	14	188	147	38	68	12	178	109	37









Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	335	0	0	373	0	0	858	858	343	825	815	262
Stage 1	-	-	-	-	-	-	495	495	-	290	290	-
Stage 2	-	-	-	-	-	-	363	363	-	535	525	-
Critical Hdwy	4.18	-	-	4.12	-	-	7.12	6.52	6.22	7.15	6.52	6.25
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.15	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.15	5.52	-
Follow-up Hdwy	2.272	-	-	2.218	-	-	3.518	4.018	3.318	3.545	4.018	3.345
Pot Cap-1 Maneuver	1191	-	-	1185	-	-	277	294	700	288	312	769
Stage 1	-	-	-	-	-	-	556	546	-	711	672	-
Stage 2	-	-	-	-	-	-	656	625	-	524	529	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1191	-	-	1185	-	-	172	266	700	211	282	769
Mov Cap-2 Maneuver	-	-	-	-	-	-	172	266	-	211	282	-
Stage 1	-	-	-	-	-	-	511	502	-	653	662	-
Stage 2	-	-	-	-	-	-	514	616	-	409	486	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.4			0.3			34			51.9		
HCM LOS							D			F		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	239	1191	-	-	1185	-	-	211	336
HCM Lane V/C Ratio	0.496	0.064	-	-	0.012	-	-	0.845	0.433
HCM Control Delay (s)	34	8.2	0	-	8.1	0	-	74.9	23.7
HCM Lane LOS	D	A	A	-	A	A	-	F	C
HCM 95th %tile Q(veh)	2.5	0.2	-	-	0	-	-	6.4	2.1

Intersection												
Int Delay, s/veh	5.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	22	99	19	10	202	123	50	88	14	90	33	38
Future Vol, veh/h	22	99	19	10	202	123	50	88	14	90	33	38
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	0	-	-	300	-	-
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, %	8	8	2	2	7	7	2	2	2	5	2	5
Mvmt Flow	24	108	21	11	220	134	54	96	15	98	36	41
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	354	0	0	129	0	0	515	543	119	531	486	287
Stage 1	-	-	-	-	-	-	167	167	-	309	309	-
Stage 2	-	-	-	-	-	-	348	376	-	222	177	-
Critical Hdwy	4.18	-	-	4.12	-	-	7.12	6.52	6.22	7.15	6.52	6.25
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.15	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.15	5.52	-
Follow-up Hdwy	2.272	-	-	2.218	-	-	3.518	4.018	3.318	3.545	4.018	3.345
Pot Cap-1 Maneuver	1172	-	-	1457	-	-	470	447	933	454	481	745
Stage 1	-	-	-	-	-	-	835	760	-	695	660	-
Stage 2	-	-	-	-	-	-	668	616	-	774	753	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1172	-	-	1457	-	-	412	434	933	372	468	745
Mov Cap-2 Maneuver	-	-	-	-	-	-	479	490	-	470	526	-
Stage 1	-	-	-	-	-	-	818	745	-	681	655	-
Stage 2	-	-	-	-	-	-	592	611	-	650	738	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	1.3			0.2			13.6			13.3		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1 NBLn2		EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2		
Capacity (veh/h)	479	524	1172	-	-	1457	-	-	470	624		
HCM Lane V/C Ratio	0.113	0.212	0.02	-	-	0.007	-	-	0.208	0.124		
HCM Control Delay (s/veh)	13.5	13.7	8.1	-	-	7.5	-	-	14.7	11.6		
HCM Lane LOS	B	B	A	-	-	A	-	-	B	B		
HCM 95th %tile Q (veh)	0.4	0.8	0.1	-	-	0	-	-	0.8	0.4		









Intersection												
Int Delay, s/veh	9.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	70	297	56	13	183	167	35	63	11	191	100	34
Future Vol, veh/h	70	297	56	13	183	167	35	63	11	191	100	34
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	0	-	-	300	-	-
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, %	8	8	2	2	7	7	2	2	2	5	2	5
Mvmt Flow	76	323	61	14	199	182	38	68	12	208	109	37
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	381	0	0	384	0	0	897	915	354	864	854	290
Stage 1	-	-	-	-	-	-	506	506	-	318	318	-
Stage 2	-	-	-	-	-	-	391	409	-	546	536	-
Critical Hdwy	4.18	-	-	4.12	-	-	7.12	6.52	6.22	7.15	6.52	6.25
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.15	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.15	5.52	-
Follow-up Hdwy	2.272	-	-	2.218	-	-	3.518	4.018	3.318	3.545	4.018	3.345
Pot Cap-1 Maneuver	1145	-	-	1174	-	-	261	273	690	271	296	742
Stage 1	-	-	-	-	-	-	549	540	-	687	654	-
Stage 2	-	-	-	-	-	-	633	596	-	517	523	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1145	-	-	1174	-	-	181	252	690	213	273	742
Mov Cap-2 Maneuver	-	-	-	-	-	-	291	347	-	312	368	-
Stage 1	-	-	-	-	-	-	513	504	-	642	646	-
Stage 2	-	-	-	-	-	-	494	589	-	410	488	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	1.4			0.3			17.8			29		
HCM LOS							C			D		
Minor Lane/Major Mvmt	NBLn1		NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2	
Capacity (veh/h)	291		375	1145	-	-	1174	-	-	312	422	
HCM Lane V/C Ratio	0.131		0.214	0.066	-	-	0.012	-	-	0.665	0.345	
HCM Control Delay (s/veh)	19.2		17.2	8.4	-	-	8.1	-	-	36.8	18	
HCM Lane LOS	C		C	A	-	-	A	-	-	E	C	
HCM 95th %tile Q (veh)	0.4		0.8	0.2	-	-	0	-	-	4.4	1.5	









Intersection												
Int Delay, s/veh	5.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	24	94	19	10	199	110	49	87	14	75	33	39
Future Vol, veh/h	24	94	19	10	199	110	49	87	14	75	33	39
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	150	-	-	275	-	-	300	-	-
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, %	5	5	5	5	5	5	5	5	5	5	5	5
Mvmt Flow	26	102	21	11	216	120	53	95	15	82	36	42

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	336	0	0	123	0	0	502	523	113	518	473	276
Stage 1	-	-	-	-	-	-	165	165	-	298	298	-
Stage 2	-	-	-	-	-	-	337	358	-	220	175	-
Critical Hdwy	4.15	-	-	4.15	-	-	7.15	6.55	6.25	7.15	6.55	6.25
Critical Hdwy Stg 1	-	-	-	-	-	-	6.15	5.55	-	6.15	5.55	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.15	5.55	-	6.15	5.55	-
Follow-up Hdwy	2.245	-	-	2.245	-	-	3.545	4.045	3.345	3.545	4.045	3.345
Pot Cap-1 Maneuver	1207	-	-	1446	-	-	475	454	932	463	485	756
Stage 1	-	-	-	-	-	-	830	756	-	704	662	-
Stage 2	-	-	-	-	-	-	671	622	-	776	749	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1207	-	-	1446	-	-	416	440	932	380	470	756
Mov Cap-2 Maneuver	-	-	-	-	-	-	480	493	-	476	527	-
Stage 1	-	-	-	-	-	-	812	739	-	689	657	-
Stage 2	-	-	-	-	-	-	594	617	-	651	733	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.4			0.2			13.5			12.8		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	480	527	1207	-	-	1446	-	-	476	630
HCM Lane V/C Ratio	0.111	0.208	0.022	-	-	0.008	-	-	0.171	0.124
HCM Control Delay (s)	13.4	13.6	8	-	-	7.5	-	-	14.1	11.5
HCM Lane LOS	B	B	A	-	-	A	-	-	B	B
HCM 95th %tile Q(veh)	0.4	0.8	0.1	-	-	0	-	-	0.6	0.4









Intersection												
Int Delay, s/veh	8.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	72	288	55	13	173	134	35	63	11	163	99	34
Future Vol, veh/h	72	288	55	13	173	134	35	63	11	163	99	34
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	150	-	-	150	-	-	275	-	-	300	-	-
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, %	5	5	5	5	5	5	5	5	5	5	5	5
Mvmt Flow	78	313	60	14	188	146	38	68	12	177	108	37
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	334	0	0	373	0	0	861	861	343	828	818	261
Stage 1	-	-	-	-	-	-	499	499	-	289	289	-
Stage 2	-	-	-	-	-	-	362	362	-	539	529	-
Critical Hdwy	4.15	-	-	4.15	-	-	7.15	6.55	6.25	7.15	6.55	6.25
Critical Hdwy Stg 1	-	-	-	-	-	-	6.15	5.55	-	6.15	5.55	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.15	5.55	-	6.15	5.55	-
Follow-up Hdwy	2.245	-	-	2.245	-	-	3.545	4.045	3.345	3.545	4.045	3.345
Pot Cap-1 Maneuver	1209	-	-	1169	-	-	272	290	693	287	307	770
Stage 1	-	-	-	-	-	-	548	539	-	712	668	-
Stage 2	-	-	-	-	-	-	650	620	-	521	522	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1209	-	-	1169	-	-	190	268	693	227	284	770
Mov Cap-2 Maneuver	-	-	-	-	-	-	300	359	-	320	374	-
Stage 1	-	-	-	-	-	-	512	504	-	666	660	-
Stage 2	-	-	-	-	-	-	512	613	-	414	488	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.4			0.3			17.3			24.1		
HCM LOS							C			C		
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2		
Capacity (veh/h)	300	387	1209	-	-	1169	-	-	320	431		
HCM Lane V/C Ratio	0.127	0.208	0.065	-	-	0.012	-	-	0.554	0.335		
HCM Control Delay (s)	18.7	16.7	8.2	-	-	8.1	-	-	29.4	17.5		
HCM Lane LOS	C	C	A	-	-	A	-	-	D	C		
HCM 95th %tile Q(veh)	0.4	0.8	0.2	-	-	0	-	-	3.2	1.5		

Intersection												
Int Delay, s/veh	5.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	24	99	19	10	204	125	49	87	14	90	33	39
Future Vol, veh/h	24	99	19	10	204	125	49	87	14	90	33	39
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	150	-	-	150	-	-	300	-	-
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, %	5	5	5	5	5	5	5	5	5	5	5	5
Mvmt Flow	26	108	21	11	222	136	53	95	15	98	36	42

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	358	0	0	128	0	0	432	549	118	518	492	290
Stage 1	-	-	-	-	-	-	170	170	-	311	311	-
Stage 2	-	-	-	-	-	-	261	379	-	207	180	-
Critical Hdwy	4.15	-	-	4.15	-	-	7.15	6.55	6.25	7.15	6.55	6.25
Critical Hdwy Stg 1	-	-	-	-	-	-	6.15	5.55	-	6.15	5.55	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.15	5.55	-	6.15	5.55	-
Follow-up Hdwy	2.245	-	-	2.245	-	-	3.545	4.045	3.345	3.545	4.045	3.345
Pot Cap-1 Maneuver	1185	-	-	1439	-	-	529	439	926	463	473	742
Stage 1	-	-	-	-	-	-	825	752	-	693	653	-
Stage 2	-	-	-	-	-	-	737	609	-	788	744	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1185	-	-	1439	-	-	452	426	926	357	459	742
Mov Cap-2 Maneuver	-	-	-	-	-	-	519	482	-	468	519	-
Stage 1	-	-	-	-	-	-	807	736	-	687	648	-
Stage 2	-	-	-	-	-	-	651	604	-	661	728	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	1.37			0.22			13.48			13.35		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	519	516	1185	-	-	1439	-	-	468	620
HCM Lane V/C Ratio	0.103	0.213	0.022	-	-	0.008	-	-	0.209	0.126
HCM Control Delay (s/veh)	12.7	13.8	8.1	-	-	7.5	-	-	14.7	11.6
HCM Lane LOS	B	B	A	-	-	A	-	-	B	B
HCM 95th %tile Q(veh)	0.3	0.8	0.1	-	-	0	-	-	0.8	0.4









Intersection												
Int Delay, s/veh	9.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	72	299	55	13	184	167	35	63	11	193	99	34
Future Vol, veh/h	72	299	55	13	184	167	35	63	11	193	99	34
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	150	-	-	150	-	-	150	-	-	300	-	-
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, %	5	5	5	5	5	5	5	5	5	5	5	5
Mvmt Flow	78	325	60	14	200	182	38	68	12	210	108	37









Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	382	0	0	385	0	0	793	921	355	835	860	291
Stage 1	-	-	-	-	-	-	511	511	-	319	319	-
Stage 2	-	-	-	-	-	-	282	410	-	516	541	-
Critical Hdwy	4.15	-	-	4.15	-	-	7.15	6.55	6.25	7.15	6.55	6.25
Critical Hdwy Stg 1	-	-	-	-	-	-	6.15	5.55	-	6.15	5.55	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.15	5.55	-	6.15	5.55	-
Follow-up Hdwy	2.245	-	-	2.245	-	-	3.545	4.045	3.345	3.545	4.045	3.345
Pot Cap-1 Maneuver	1161	-	-	1157	-	-	303	267	682	284	290	741
Stage 1	-	-	-	-	-	-	540	532	-	686	648	-
Stage 2	-	-	-	-	-	-	718	590	-	537	516	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1161	-	-	1157	-	-	191	246	682	~ 209	267	741
Mov Cap-2 Maneuver	-	-	-	-	-	-	312	341	-	319	363	-
Stage 1	-	-	-	-	-	-	503	496	-	678	640	-
Stage 2	-	-	-	-	-	-	561	583	-	424	481	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	1.41			0.29			17.7			28.47		
HCM LOS							C			D		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	312	368	1161	-	-	1157	-	-	319	417
HCM Lane V/C Ratio	0.122	0.218	0.067	-	-	0.012	-	-	0.658	0.347
HCM Control Delay (s/veh)	18.1	17.5	8.3	-	-	8.1	-	-	35.6	18.1
HCM Lane LOS	C	C	A	-	-	A	-	-	E	C
HCM 95th %tile Q(veh)	0.4	0.8	0.2	-	-	0	-	-	4.4	1.5

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

Intersection												
Int Delay, s/veh	6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	25	100	22	11	217	153	58	104	15	91	39	41
Future Vol, veh/h	25	100	22	11	217	153	58	104	15	91	39	41
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	150	-	-	275	-	-	300	-	-
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, %	5	5	5	5	5	5	5	5	5	5	5	5
Mvmt Flow	27	109	24	12	236	166	63	113	16	99	42	45
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	402	0	0	133	0	0	562	601	121	583	530	319
Stage 1	-	-	-	-	-	-	175	175	-	343	343	-
Stage 2	-	-	-	-	-	-	387	426	-	240	187	-
Critical Hdwy	4.15	-	-	4.15	-	-	7.15	6.55	6.25	7.15	6.55	6.25
Critical Hdwy Stg 1	-	-	-	-	-	-	6.15	5.55	-	6.15	5.55	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.15	5.55	-	6.15	5.55	-
Follow-up Hdwy	2.245	-	-	2.245	-	-	3.545	4.045	3.345	3.545	4.045	3.345
Pot Cap-1 Maneuver	1141	-	-	1433	-	-	433	410	922	419	450	715
Stage 1	-	-	-	-	-	-	820	749	-	666	632	-
Stage 2	-	-	-	-	-	-	631	581	-	757	740	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1141	-	-	1433	-	-	371	397	922	326	436	715
Mov Cap-2 Maneuver	-	-	-	-	-	-	440	458	-	434	501	-
Stage 1	-	-	-	-	-	-	800	731	-	650	627	-
Stage 2	-	-	-	-	-	-	547	576	-	614	722	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.4			0.2			14.8			14		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2		
Capacity (veh/h)	440	489	1141	-	-	1433	-	-	434	592		
HCM Lane V/C Ratio	0.143	0.265	0.024	-	-	0.008	-	-	0.228	0.147		
HCM Control Delay (s)	14.5	15	8.2	-	-	7.5	-	-	15.7	12.1		
HCM Lane LOS	B	C	A	-	-	A	-	-	C	B		
HCM 95th %tile Q(veh)	0.5	1.1	0.1	-	-	0	-	-	0.9	0.5		

Intersection												
Int Delay, s/veh	13.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	73	310	65	14	187	166	41	75	12	215	120	37
Future Vol, veh/h	73	310	65	14	187	166	41	75	12	215	120	37
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	150	-	-	150	-	-	275	-	-	300	-	-
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, %	5	5	5	5	5	5	5	5	5	5	5	5
Mvmt Flow	79	337	71	15	203	180	45	82	13	234	130	40
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	383	0	0	408	0	0	939	944	373	901	889	293
Stage 1	-	-	-	-	-	-	531	531	-	323	323	-
Stage 2	-	-	-	-	-	-	408	413	-	578	566	-
Critical Hdwy	4.15	-	-	4.15	-	-	7.15	6.55	6.25	7.15	6.55	6.25
Critical Hdwy Stg 1	-	-	-	-	-	-	6.15	5.55	-	6.15	5.55	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.15	5.55	-	6.15	5.55	-
Follow-up Hdwy	2.245	-	-	2.245	-	-	3.545	4.045	3.345	3.545	4.045	3.345
Pot Cap-1 Maneuver	1159	-	-	1135	-	-	241	259	666	256	279	739
Stage 1	-	-	-	-	-	-	526	521	-	683	645	-
Stage 2	-	-	-	-	-	-	614	588	-	496	503	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1159	-	-	1135	-	-	153	238	666 ~ 192	257	739	
Mov Cap-2 Maneuver	-	-	-	-	-	-	262	334	-	288	353	-
Stage 1	-	-	-	-	-	-	490	486	-	637	637	-
Stage 2	-	-	-	-	-	-	456	580	-	377	469	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.4			0.3			19.5			40.3		
HCM LOS							C			E		
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2		
Capacity (veh/h)	262	359	1159	-	-	1135	-	-	288	403		
HCM Lane V/C Ratio	0.17	0.263	0.068	-	-	0.013	-	-	0.811	0.423		
HCM Control Delay (s)	21.5	18.6	8.3	-	-	8.2	-	-	54.9	20.3		
HCM Lane LOS	C	C	A	-	-	A	-	-	F	C		
HCM 95th %tile Q(veh)	0.6	1	0.2	-	-	0	-	-	6.6	2.1		
Notes												
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon												

Timings

1: Alameda Ave & Harvest Rd

2029 Total AM

09/20/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	25	105	11	223	58	104	107	39
Future Volume (vph)	25	105	11	223	58	104	107	39
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA
Protected Phases		4		8	5	2	1	6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	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
Minimum Split (s)	22.5	22.5	22.5	22.5	9.5	22.5	9.5	22.5
Total Split (s)	48.0	48.0	48.0	48.0	11.0	29.0	13.0	31.0
Total Split (%)	53.3%	53.3%	53.3%	53.3%	12.2%	32.2%	14.4%	34.4%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag					Lag	Lead	Lag	Lead
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 40 (44%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Splits and Phases: 1: Alameda Ave & Harvest Rd





















	Ø2 (R)		Ø1		Ø4
29 s		13 s		48 s	
	Ø6 (R)		Ø5		Ø8
31 s		11 s		48 s	

HCM 7th Signalized Intersection Summary

2029 Total AM

1: Alameda Ave & Harvest Rd

09/20/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	105	22	11	223	169	58	104	15	107	39	41
Future Volume (veh/h)	25	105	22	11	223	169	58	104	15	107	39	41
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	27	114	24	12	242	184	63	113	16	116	42	45
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	135	432	91	368	284	216	831	426	60	837	237	254
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.26	0.27	0.27	0.28	0.29	0.29
Sat Flow, veh/h	939	1463	308	1221	962	732	1739	1565	222	1739	806	864
Grp Volume(v), veh/h	27	0	138	12	0	426	63	0	129	116	0	87
Grp Sat Flow(s),veh/h/ln	939	0	1770	1221	0	1694	1739	0	1786	1739	0	1670
Q Serve(g_s), s	2.5	0.0	5.4	0.7	0.0	21.3	0.0	0.0	5.1	0.0	0.0	3.5
Cycle Q Clear(g_c), s	23.8	0.0	5.4	6.0	0.0	21.3	0.0	0.0	5.1	0.0	0.0	3.5
Prop In Lane	1.00		0.17	1.00		0.43	1.00		0.12	1.00		0.52
Lane Grp Cap(c), veh/h	135	0	523	368	0	500	831	0	486	837	0	492
V/C Ratio(X)	0.20	0.00	0.26	0.03	0.00	0.85	0.08	0.00	0.27	0.14	0.00	0.18
Avail Cap(c_a), veh/h	311	0	856	598	0	819	831	0	486	837	0	492
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	0.97	0.00	0.97	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.1	0.0	24.2	26.5	0.0	29.9	12.1	0.0	25.7	12.5	0.0	23.6
Incr Delay (d2), s/veh	0.7	0.0	0.3	0.0	0.0	4.6	0.0	0.0	1.3	0.1	0.0	0.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	2.2	0.2	0.0	9.0	0.7	0.0	2.3	1.2	0.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	41.8	0.0	24.5	26.6	0.0	34.5	12.2	0.0	27.0	12.6	0.0	24.4
LnGrp LOS	D		C	C		C	B		C	B		C
Approach Vol, veh/h	165			438			192			203		
Approach Delay, s/veh	27.3			34.3			22.1			17.7		
Approach LOS	C			C			C			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	29.9	29.0		31.1	27.9	31.0		31.1				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	8.5	24.5		43.5	6.5	26.5		43.5				
Max Q Clear Time (g_c+I1), s	2.0	7.1		25.8	2.0	5.5		23.3				
Green Ext Time (p_c), s	0.1	0.6		0.8	0.0	0.3		2.8				
Intersection Summary												
HCM 7th Control Delay, s/veh				27.4								
HCM 7th LOS				C								

Timings

1: Alameda Ave & Harvest Rd

2029 Total PM

09/20/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	73	322	14	199	41	75	246	120
Future Volume (vph)	73	322	14	199	41	75	246	120
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA
Protected Phases		4		8	5	2	1	6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	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
Minimum Split (s)	22.5	22.5	22.5	22.5	9.5	22.5	9.5	22.5
Total Split (s)	42.0	42.0	42.0	42.0	10.0	26.0	22.0	38.0
Total Split (%)	46.7%	46.7%	46.7%	46.7%	11.1%	28.9%	24.4%	42.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max

Intersection Summary

Cycle Length: 90

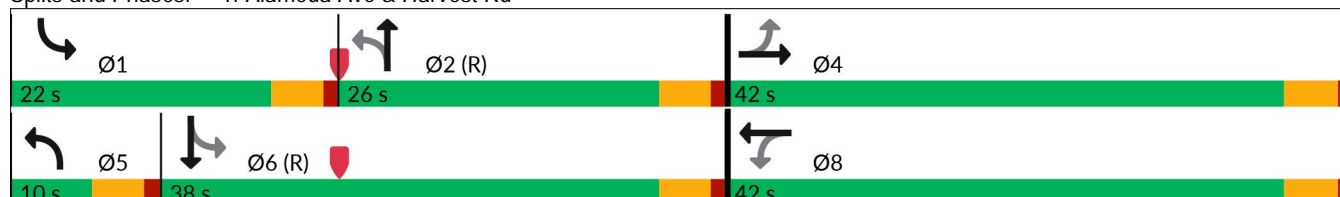
Actuated Cycle Length: 90

Offset: 41 (46%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 55

Control Type: Actuated-Coordinated

Splits and Phases: 1: Alameda Ave & Harvest Rd























HCM 7th Signalized Intersection Summary

2029 Total PM

1: Alameda Ave & Harvest Rd

09/20/2024

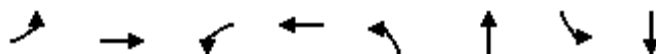
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	322	65	14	199	200	41	75	12	246	120	37
Future Volume (veh/h)	73	322	65	14	199	200	41	75	12	246	120	37
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	79	350	71	15	216	217	45	82	13	267	130	40
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	196	517	105	220	293	294	602	593	94	723	619	190
Arrive On Green	0.35	0.35	0.35	0.35	0.35	0.35	0.04	0.39	0.39	0.11	0.46	0.46
Sat Flow, veh/h	933	1473	299	943	835	839	1739	1538	244	1739	1340	412
Grp Volume(v), veh/h	79	0	421	15	0	433	45	0	95	267	0	170
Grp Sat Flow(s),veh/h/ln	933	0	1772	943	0	1675	1739	0	1782	1739	0	1752
Q Serve(g_s), s	7.3	0.0	18.2	1.2	0.0	20.4	1.4	0.0	3.1	7.8	0.0	5.2
Cycle Q Clear(g_c), s	27.7	0.0	18.2	19.4	0.0	20.4	1.4	0.0	3.1	7.8	0.0	5.2
Prop In Lane	1.00		0.17	1.00		0.50	1.00		0.14	1.00		0.24
Lane Grp Cap(c), veh/h	196	0	622	220	0	587	602	0	687	723	0	809
V/C Ratio(X)	0.40	0.00	0.68	0.07	0.00	0.74	0.07	0.00	0.14	0.37	0.00	0.21
Avail Cap(c_a), veh/h	257	0	738	282	0	698	643	0	687	863	0	809
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	0.96	0.00	0.96	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.7	0.0	24.9	33.2	0.0	25.6	15.4	0.0	18.0	12.4	0.0	14.4
Incr Delay (d2), s/veh	1.3	0.0	2.0	0.1	0.0	3.3	0.1	0.0	0.4	0.3	0.0	0.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	7.7	0.3	0.0	8.3	0.5	0.0	1.3	2.7	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	39.0	0.0	26.8	33.3	0.0	28.8	15.4	0.0	18.4	12.7	0.0	15.0
LnGrp LOS	D		C	C		C	B		B	B		B
Approach Vol, veh/h	500			448			140			437		
Approach Delay, s/veh	28.8			29.0			17.4			13.6		
Approach LOS	C			C			B			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.8	39.2		36.1	7.9	46.1		36.1				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	17.5	21.5		37.5	5.5	33.5		37.5				
Max Q Clear Time (g_c+I1), s	9.8	5.1		29.7	3.4	7.2		22.4				
Green Ext Time (p_c), s	0.5	0.4		1.9	0.0	0.8		2.6				
Intersection Summary												
HCM 7th Control Delay, s/veh				23.4								
HCM 7th LOS				C								

Timings

2031 Background AM

1: Alameda Ave & Harvest Rd

01/24/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	26	53	96	83	59	358	73	246
Future Volume (vph)	26	53	96	83	59	358	73	246
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA
Protected Phases		4		8	5	2	1	6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	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
Minimum Split (s)	22.5	22.5	22.5	22.5	9.5	22.5	9.5	22.5
Total Split (s)	29.0	29.0	29.0	29.0	10.2	49.0	12.0	50.8
Total Split (%)	32.2%	32.2%	32.2%	32.2%	11.3%	54.4%	13.3%	56.4%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 43 (48%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Splits and Phases: 1: Alameda Ave & Harvest Rd



HCM 6th Signalized Intersection Summary

2031 Background AM

1: Alameda Ave & Harvest Rd

01/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	53	31	96	83	131	59	358	67	73	246	53
Future Volume (veh/h)	26	53	31	96	83	131	59	358	67	73	246	53
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	28	58	34	104	90	142	64	389	73	79	267	58
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	136	198	116	255	117	185	710	924	173	603	904	196
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.04	0.62	0.62	0.05	0.62	0.62
Sat Flow, veh/h	1121	1079	633	1273	638	1007	1739	1495	281	1739	1453	316
Grp Volume(v), veh/h	28	0	92	104	0	232	64	0	462	79	0	325
Grp Sat Flow(s),veh/h/ln	1121	0	1712	1273	0	1645	1739	0	1775	1739	0	1769
Q Serve(g_s), s	2.2	0.0	4.2	6.9	0.0	12.1	1.2	0.0	12.1	1.4	0.0	7.7
Cycle Q Clear(g_c), s	14.3	0.0	4.2	11.1	0.0	12.1	1.2	0.0	12.1	1.4	0.0	7.7
Prop In Lane	1.00		0.37	1.00		0.61	1.00		0.16	1.00		0.18
Lane Grp Cap(c), veh/h	136	0	315	255	0	302	710	0	1098	603	0	1100
V/C Ratio(X)	0.21	0.00	0.29	0.41	0.00	0.77	0.09	0.00	0.42	0.13	0.00	0.30
Avail Cap(c_a), veh/h	235	0	466	368	0	448	743	0	1098	664	0	1100
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.97	0.00	0.97	0.93	0.00	0.93	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.7	0.0	31.7	36.5	0.0	34.9	5.6	0.0	8.9	6.1	0.0	7.9
Incr Delay (d2), s/veh	0.7	0.0	0.5	1.0	0.0	4.5	0.1	0.0	1.1	0.1	0.0	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	0.6	0.0	1.7	2.2	0.0	5.1	0.4	0.0	4.5	0.4	0.0	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.4	0.0	32.2	37.5	0.0	39.4	5.7	0.0	10.0	6.2	0.0	8.6
LnGrp LOS	D	A	C	D	A	D	A	A	A	A	A	A
Approach Vol, veh/h	120			336			526			404		
Approach Delay, s/veh	34.6			38.8			9.4			8.1		
Approach LOS	C			D			A			A		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.8	60.1		21.0	8.5	60.5		21.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	7.5	44.5		24.5	5.7	46.3		24.5				
Max Q Clear Time (g_c+I1), s	3.4	14.1		16.3	3.2	9.7		14.1				
Green Ext Time (p_c), s	0.0	3.3		0.3	0.0	1.9		1.3				

Intersection Summary

HCM 6th Ctrl Delay 18.3

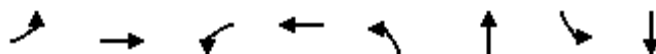
HCM 6th LOS B

Timings

2031 Background PM

1: Alameda Ave & Harvest Rd

01/24/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	74	178	70	69	28	323	156	199
Future Volume (vph)	74	178	70	69	28	323	156	199
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA
Protected Phases		4		8	5	2	1	6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	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
Minimum Split (s)	22.5	22.5	22.5	22.5	9.5	22.5	22.5	22.5
Total Split (s)	24.0	24.0	24.0	24.0	10.0	43.0	23.0	56.0
Total Split (%)	26.7%	26.7%	26.7%	26.7%	11.1%	47.8%	25.6%	62.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	Max	C-Max

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 44 (49%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 70

Control Type: Actuated-Coordinated

Splits and Phases: 1: Alameda Ave & Harvest Rd























HCM 6th Signalized Intersection Summary

2031 Background PM

1: Alameda Ave & Harvest Rd

01/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	74	178	8	70	69	124	28	323	81	156	199	55
Future Volume (veh/h)	74	178	8	70	69	124	28	323	81	156	199	55
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	80	193	9	76	75	135	30	351	88	170	216	60
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	185	361	17	206	122	219	601	614	154	668	842	234
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.03	0.44	0.44	0.21	0.61	0.61
Sat Flow, veh/h	1144	1731	81	1152	584	1052	1739	1409	353	1739	1375	382
Grp Volume(v), veh/h	80	0	202	76	0	210	30	0	439	170	0	276
Grp Sat Flow(s),veh/h/ln	1144	0	1811	1152	0	1637	1739	0	1762	1739	0	1757
Q Serve(g_s), s	6.1	0.0	8.9	5.7	0.0	10.5	0.8	0.0	16.8	3.3	0.0	6.5
Cycle Q Clear(g_c), s	16.6	0.0	8.9	14.6	0.0	10.5	0.8	0.0	16.8	3.3	0.0	6.5
Prop In Lane	1.00		0.04	1.00		0.64	1.00		0.20	1.00		0.22
Lane Grp Cap(c), veh/h	185	0	378	206	0	341	601	0	768	668	0	1076
V/C Ratio(X)	0.43	0.00	0.53	0.37	0.00	0.62	0.05	0.00	0.57	0.25	0.00	0.26
Avail Cap(c_a), veh/h	195	0	392	215	0	355	656	0	768	668	0	1076
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	0.98	0.00	0.98	0.81	0.00	0.81	1.00	0.00	1.00
Uniform Delay (d), s/veh	39.9	0.0	31.7	38.2	0.0	32.3	13.1	0.0	19.1	8.1	0.0	8.0
Incr Delay (d2), s/veh	1.6	0.0	1.3	1.1	0.0	2.9	0.0	0.0	2.5	0.9	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.0	4.0	1.6	0.0	4.3	0.3	0.0	7.1	1.1	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.5	0.0	33.0	39.3	0.0	35.3	13.1	0.0	21.6	9.0	0.0	8.6
LnGrp LOS	D	A	C	D	A	D	B	A	C	A	A	A
Approach Vol, veh/h	282			286			469			446		
Approach Delay, s/veh	35.4			36.4			21.0			8.7		
Approach LOS	D			D			C			A		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	23.0	43.7		23.3	7.1	59.6		23.3				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	18.5	38.5		19.5	5.5	51.5		19.5				
Max Q Clear Time (g_c+I1), s	5.3	18.8		18.6	2.8	8.5		16.6				
Green Ext Time (p_c), s	0.3	2.7		0.1	0.0	1.6		0.4				
Intersection Summary												
HCM 6th Ctrl Delay	23.0											
HCM 6th LOS	C											

Timings 1: Harvest Rd & Alameda Ave

2031 Total AM
09/20/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	26	53	105	83	90	455	73	297
Future Volume (vph)	26	53	105	83	90	455	73	297
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA
Protected Phases		4		8	5	2	1	6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	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
Minimum Split (s)	22.5	22.5	22.5	22.5	9.5	22.5	22.5	22.5
Total Split (s)	23.0	23.0	23.0	23.0	10.6	44.4	22.6	56.4
Total Split (%)	25.6%	25.6%	25.6%	25.6%	11.8%	49.3%	25.1%	62.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag					Lag	Lead	Lag	Lead
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	Max	C-Max

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 84 (93%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Splits and Phases: 1: Harvest Rd & Alameda Ave























HCM 7th Signalized Intersection Summary

2031 Total AM

1: Harvest Rd & Alameda Ave

09/20/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	53	46	105	83	131	90	455	70	73	297	53
Future Volume (veh/h)	26	53	46	105	83	131	90	455	70	73	297	53
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	28	58	23	114	90	88	98	495	76	79	323	58
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	146	194	77	228	133	130	604	685	105	646	869	156
Arrive On Green	0.16	0.16	0.16	0.16	0.16	0.16	0.12	0.44	0.44	0.25	0.58	0.58
Sat Flow, veh/h	1178	1244	493	1286	848	829	1739	1546	237	1739	1507	271
Grp Volume(v), veh/h	28	0	81	114	0	178	98	0	571	79	0	381
Grp Sat Flow(s),veh/h/ln	1178	0	1737	1286	0	1677	1739	0	1783	1739	0	1777
Q Serve(g_s), s	2.1	0.0	3.7	7.7	0.0	9.0	0.0	0.0	23.6	0.0	0.0	10.4
Cycle Q Clear(g_c), s	11.1	0.0	3.7	11.5	0.0	9.0	0.0	0.0	23.6	0.0	0.0	10.4
Prop In Lane	1.00		0.28	1.00		0.49	1.00		0.13	1.00		0.15
Lane Grp Cap(c), veh/h	146	0	272	228	0	262	604	0	791	646	0	1025
V/C Ratio(X)	0.19	0.00	0.30	0.50	0.00	0.68	0.16	0.00	0.72	0.12	0.00	0.37
Avail Cap(c_a), veh/h	204	0	357	291	0	345	604	0	791	646	0	1025
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	0.97	0.00	0.97	0.90	0.00	0.90	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.1	0.0	33.6	38.7	0.0	35.8	15.4	0.0	20.5	17.4	0.0	10.3
Incr Delay (d2), s/veh	0.6	0.0	0.6	1.6	0.0	3.3	0.1	0.0	5.1	0.4	0.0	1.0
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	0.0	1.6	2.5	0.0	3.9	1.2	0.0	10.4	1.0	0.0	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	41.7	0.0	34.2	40.3	0.0	39.2	15.5	0.0	25.6	17.8	0.0	11.3
LnGrp LOS	D		C	D		D	B		C	B		B
Approach Vol, veh/h	109			292			669			460		
Approach Delay, s/veh	36.1			39.6			24.2			12.4		
Approach LOS	D			D			C			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	27.0	44.4		18.6	15.0	56.4		18.6				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	18.1	39.9		18.5	6.1	51.9		18.5				
Max Q Clear Time (g_c+I1), s	2.0	25.6		13.1	2.0	12.4		13.5				
Green Ext Time (p_c), s	0.1	3.3		0.2	0.1	2.3		0.6				
Intersection Summary												
HCM 7th Control Delay, s/veh	24.4											
HCM 7th LOS	C											

Timings

1: Harvest Rd & Alameda Ave

2031 Total PM

09/20/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	74	178	85	69	58	429	156	331
Future Volume (vph)	74	178	85	69	58	429	156	331
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA
Protected Phases		4		8	5	2	1	6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	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
Minimum Split (s)	22.5	22.5	22.5	22.5	9.5	22.5	22.5	22.5
Total Split (s)	24.0	24.0	24.0	24.0	9.8	43.4	22.6	56.2
Total Split (%)	26.7%	26.7%	26.7%	26.7%	10.9%	48.2%	25.1%	62.4%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag					Lag	Lag	Lead	Lead
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	Max	C-Max

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 5 (6%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Splits and Phases: 1: Harvest Rd & Alameda Ave























HCM 7th Signalized Intersection Summary

2031 Total PM

1: Harvest Rd & Alameda Ave

09/20/2024

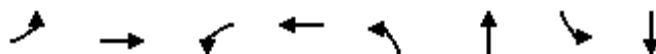
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	74	178	48	85	69	124	58	429	100	156	331	55
Future Volume (veh/h)	74	178	48	85	69	124	58	429	100	156	331	55
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	80	193	25	92	75	81	63	466	109	170	360	60
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	237	335	43	196	170	183	476	626	146	472	876	146
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.06	0.44	0.44	0.20	0.57	0.57
Sat Flow, veh/h	1201	1584	205	1136	803	867	1739	1431	335	1739	1526	254
Grp Volume(v), veh/h	80	0	218	92	0	156	63	0	575	170	0	420
Grp Sat Flow(s),veh/h/ln	1201	0	1789	1136	0	1670	1739	0	1766	1739	0	1780
Q Serve(g_s), s	5.6	0.0	9.8	7.1	0.0	7.3	0.0	0.0	24.5	4.4	0.0	11.8
Cycle Q Clear(g_c), s	12.9	0.0	9.8	17.0	0.0	7.3	0.0	0.0	24.5	4.4	0.0	11.8
Prop In Lane	1.00		0.11	1.00		0.52	1.00		0.19	1.00		0.14
Lane Grp Cap(c), veh/h	237	0	378	196	0	353	476	0	772	472	0	1023
V/C Ratio(X)	0.34	0.00	0.58	0.47	0.00	0.44	0.13	0.00	0.74	0.36	0.00	0.41
Avail Cap(c_a), veh/h	243	0	388	202	0	362	476	0	772	472	0	1023
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	0.98	0.00	0.98	0.82	0.00	0.82	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.5	0.0	31.9	39.5	0.0	30.9	19.4	0.0	21.1	15.0	0.0	10.7
Incr Delay (d2), s/veh	0.8	0.0	2.0	1.7	0.0	0.9	0.1	0.0	5.3	2.1	0.0	1.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	4.4	2.1	0.0	3.0	0.9	0.0	10.7	1.7	0.0	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	37.3	0.0	33.9	41.2	0.0	31.7	19.5	0.0	26.5	17.2	0.0	11.9
LnGrp LOS	D		C	D		C	B		C	B		B
Approach Vol, veh/h	298			248			638			590		
Approach Delay, s/veh	34.8			35.2			25.8			13.4		
Approach LOS	C			D			C			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	22.6	43.9		23.5	10.3	56.2		23.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	18.1	38.9		19.5	5.3	51.7		19.5				
Max Q Clear Time (g_c+I1), s	6.4	26.5		14.9	2.0	13.8		19.0				
Green Ext Time (p_c), s	0.3	3.1		0.6	0.0	2.6		0.1				
Intersection Summary												
HCM 7th Control Delay, s/veh	24.5											
HCM 7th LOS	C											

Timings

2033 Background AM

1: Alameda Ave & Harvest Rd

01/24/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	29	55	102	89	69	433	76	306
Future Volume (vph)	29	55	102	89	69	433	76	306
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA
Protected Phases		4		8	5	2	1	6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	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
Minimum Split (s)	22.5	22.5	22.5	22.5	9.5	22.5	9.5	22.5
Total Split (s)	27.0	27.0	27.0	27.0	10.2	51.8	11.2	52.8
Total Split (%)	30.0%	30.0%	30.0%	30.0%	11.3%	57.6%	12.4%	58.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 41 (46%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Splits and Phases: 1: Alameda Ave & Harvest Rd























HCM 6th Signalized Intersection Summary

2033 Background AM

1: Alameda Ave & Harvest Rd

01/24/2024

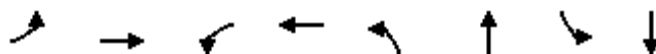
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	29	55	33	102	89	133	69	433	73	76	306	64
Future Volume (veh/h)	29	55	33	102	89	133	69	433	73	76	306	64
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		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	32	60	36	111	97	145	75	471	79	83	333	70
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	139	205	123	263	127	190	638	929	156	528	894	188
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.05	0.61	0.61	0.05	0.61	0.61
Sat Flow, veh/h	1111	1069	641	1269	661	988	1739	1524	256	1739	1463	308
Grp Volume(v), veh/h	32	0	96	111	0	242	75	0	550	83	0	403
Grp Sat Flow(s),veh/h/ln	1111	0	1710	1269	0	1648	1739	0	1780	1739	0	1771
Q Serve(g_s), s	2.5	0.0	4.3	7.4	0.0	12.5	1.4	0.0	15.7	1.5	0.0	10.3
Cycle Q Clear(g_c), s	15.0	0.0	4.3	11.7	0.0	12.5	1.4	0.0	15.7	1.5	0.0	10.3
Prop In Lane	1.00		0.38	1.00		0.60	1.00		0.14	1.00		0.17
Lane Grp Cap(c), veh/h	139	0	328	263	0	316	638	0	1085	528	0	1082
V/C Ratio(X)	0.23	0.00	0.29	0.42	0.00	0.76	0.12	0.00	0.51	0.16	0.00	0.37
Avail Cap(c_a), veh/h	203	0	428	336	0	412	666	0	1085	573	0	1082
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	0.97	0.00	0.97	0.89	0.00	0.89	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.6	0.0	31.1	36.1	0.0	34.4	6.2	0.0	9.9	7.0	0.0	8.8
Incr Delay (d2), s/veh	0.8	0.0	0.5	1.0	0.0	6.0	0.1	0.0	1.5	0.1	0.0	1.0
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	0.0	1.8	2.3	0.0	5.4	0.5	0.0	5.9	0.5	0.0	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.4	0.0	31.6	37.2	0.0	40.4	6.2	0.0	11.4	7.2	0.0	9.8
LnGrp LOS	D	A	C	D	A	D	A	A	B	A	A	A
Approach Vol, veh/h	128			353			625			486		
Approach Delay, s/veh	34.3			39.4			10.8			9.4		
Approach LOS	C			D			B			A		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.9	59.4		21.8	8.7	59.5		21.8				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	6.7	47.3		22.5	5.7	48.3		22.5				
Max Q Clear Time (g_c+I1), s	3.5	17.7		17.0	3.4	12.3		14.5				
Green Ext Time (p_c), s	0.0	4.1		0.2	0.0	2.4		1.1				
Intersection Summary												
HCM 6th Ctrl Delay	18.6											
HCM 6th LOS	B											

Timings

2033 Background PM

1: Alameda Ave & Harvest Rd

01/24/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	76	182	75	75	30	383	159	264
Future Volume (vph)	76	182	75	75	30	383	159	264
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA
Protected Phases		4		8	5	2	1	6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	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
Minimum Split (s)	22.5	22.5	22.5	22.5	9.5	22.5	22.5	22.5
Total Split (s)	24.0	24.0	24.0	24.0	9.6	43.2	22.8	56.4
Total Split (%)	26.7%	26.7%	26.7%	26.7%	10.7%	48.0%	25.3%	62.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	Max	C-Max

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 52 (58%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

Splits and Phases: 1: Alameda Ave & Harvest Rd

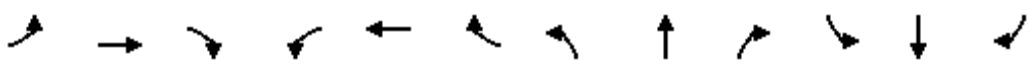










HCM 6th Signalized Intersection Summary

2033 Background PM





















1: Alameda Ave & Harvest Rd

01/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	182	20	75	75	126	30	383	106	159	264	66
Future Volume (veh/h)	76	182	20	75	75	126	30	383	106	159	264	66
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	83	198	22	82	82	137	33	416	115	173	287	72
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	187	347	39	199	132	221	565	594	164	592	851	213
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.03	0.43	0.43	0.20	0.60	0.60
Sat Flow, veh/h	1134	1614	179	1133	614	1027	1739	1377	381	1739	1409	353
Grp Volume(v), veh/h	83	0	220	82	0	219	33	0	531	173	0	359
Grp Sat Flow(s),veh/h/ln	1134	0	1794	1133	0	1641	1739	0	1757	1739	0	1762
Q Serve(g_s), s	6.4	0.0	9.9	6.3	0.0	10.9	0.9	0.0	22.1	3.4	0.0	9.1
Cycle Q Clear(g_c), s	17.3	0.0	9.9	16.2	0.0	10.9	0.9	0.0	22.1	3.4	0.0	9.1
Prop In Lane	1.00		0.10	1.00		0.63	1.00		0.22	1.00		0.20
Lane Grp Cap(c), veh/h	187	0	386	199	0	353	565	0	759	592	0	1064
V/C Ratio(X)	0.44	0.00	0.57	0.41	0.00	0.62	0.06	0.00	0.70	0.29	0.00	0.34
Avail Cap(c_a), veh/h	189	0	389	201	0	356	609	0	759	592	0	1064
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	0.98	0.00	0.98	0.74	0.00	0.74	1.00	0.00	1.00
Uniform Delay (d), s/veh	39.8	0.0	31.6	38.8	0.0	32.0	13.2	0.0	20.8	9.9	0.0	8.9
Incr Delay (d2), s/veh	1.7	0.0	2.0	1.3	0.0	3.2	0.0	0.0	4.0	1.3	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.0	4.4	1.8	0.0	4.5	0.4	0.0	9.5	1.2	0.0	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.5	0.0	33.6	40.2	0.0	35.2	13.3	0.0	24.8	11.2	0.0	9.7
LnGrp LOS	D	A	C	D	A	D	B	A	C	B	A	A
Approach Vol, veh/h	303			301			564			532		
Approach Delay, s/veh	35.7			36.6			24.1			10.2		
Approach LOS	D			D			C			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	22.8	43.4		23.8	7.3	58.8		23.8				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	18.3	38.7		19.5	5.1	51.9		19.5				
Max Q Clear Time (g_c+I1), s	5.4	24.1		19.3	2.9	11.1		18.2				
Green Ext Time (p_c), s	0.3	3.1		0.0	0.0	2.1		0.2				
Intersection Summary												
HCM 6th Ctrl Delay	24.0											
HCM 6th LOS	C											

Timings 1: Harvest Rd & Alameda Ave

2033 Total AM
09/20/2024

										
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	29	55	111	89	105	546	76	76	363	64
Future Volume (vph)	29	55	111	89	105	546	76	76	363	64
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		8	5	2		1	6	
Permitted Phases	4		8		2		2	6		6
Detector Phase	4	4	8	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	9.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	30.0	30.0	30.0	30.0	13.0	36.0	36.0	24.0	47.0	47.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	14.4%	40.0%	40.0%	26.7%	52.2%	52.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	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)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag					Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	Max	C-Max	C-Max

Intersection Summary

Cycle Length: 90

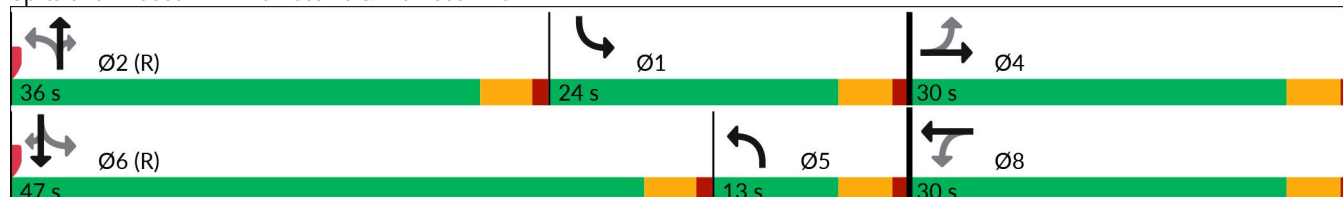
Actuated Cycle Length: 90

Offset: 52 (58%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 70

Control Type: Actuated-Coordinated

Splits and Phases: 1: Harvest Rd & Alameda Ave

























HCM 7th Signalized Intersection Summary

1: Harvest Rd & Alameda Ave

2033 Total AM

09/20/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	29	55	50	111	89	133	105	546	76	76	363	64
Future Volume (veh/h)	29	55	50	111	89	133	105	546	76	76	363	64
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	32	60	27	121	97	91	114	593	83	83	395	70
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	156	203	91	241	147	138	714	1214	542	798	1638	731
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.21	0.35	0.35	0.33	0.47	0.47
Sat Flow, veh/h	1167	1193	537	1279	867	813	1739	3469	1547	1739	3469	1547
Grp Volume(v), veh/h	32	0	87	121	0	188	114	593	83	83	395	70
Grp Sat Flow(s),veh/h/ln	1167	0	1729	1279	0	1680	1739	1735	1547	1739	1735	1547
Q Serve(g_s), s	2.4	0.0	4.0	8.2	0.0	9.4	0.0	12.1	3.3	0.0	6.1	2.3
Cycle Q Clear(g_c), s	11.8	0.0	4.0	12.2	0.0	9.4	0.0	12.1	3.3	0.0	6.1	2.3
Prop In Lane	1.00		0.31	1.00		0.48	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	156	0	294	241	0	286	714	1214	542	798	1638	731
V/C Ratio(X)	0.20	0.00	0.30	0.50	0.00	0.66	0.16	0.49	0.15	0.10	0.24	0.10
Avail Cap(c_a), veh/h	289	0	490	386	0	476	714	1214	542	798	1638	731
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	0.97	0.00	0.97	0.95	0.95	0.95	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.4	0.0	32.6	38.0	0.0	34.9	13.3	22.9	20.1	11.5	14.1	13.1
Incr Delay (d2), s/veh	0.6	0.0	0.6	1.6	0.0	2.5	0.1	1.3	0.6	0.3	0.3	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	0.7	0.0	1.7	2.6	0.0	4.0	1.3	5.0	1.3	0.8	2.2	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	41.1	0.0	33.2	39.5	0.0	37.4	13.4	24.3	20.7	11.7	14.5	13.4
LnGrp LOS	D		C	D		D	B	C	C	B	B	B
Approach Vol, veh/h	119			309			790			548		
Approach Delay, s/veh	35.3			38.2			22.3			13.9		
Approach LOS	D			D			C			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	34.2	36.0		19.8	23.2	47.0		19.8				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	19.5	31.5		25.5	8.5	42.5		25.5				
Max Q Clear Time (g_c+I1), s	2.0	14.1		13.8	2.0	8.1		14.2				
Green Ext Time (p_c), s	0.1	4.1		0.4	0.1	2.7		1.1				
Intersection Summary												
HCM 7th Control Delay, s/veh	23.4											
HCM 7th LOS	C											

Timings

1: Harvest Rd & Alameda Ave

2033 Total PM

09/20/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	76	182	90	75	64	502	125	159	415	66
Future Volume (vph)	76	182	90	75	64	502	125	159	415	66
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		8	5	2		1	6	
Permitted Phases	4		8		2		2	6		6
Detector Phase	4	4	8	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	9.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	32.0	32.0	32.0	32.0	11.0	33.0	33.0	25.0	47.0	47.0
Total Split (%)	35.6%	35.6%	35.6%	35.6%	12.2%	36.7%	36.7%	27.8%	52.2%	52.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	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)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag					Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	Max	C-Max	C-Max

Intersection Summary

Cycle Length: 90

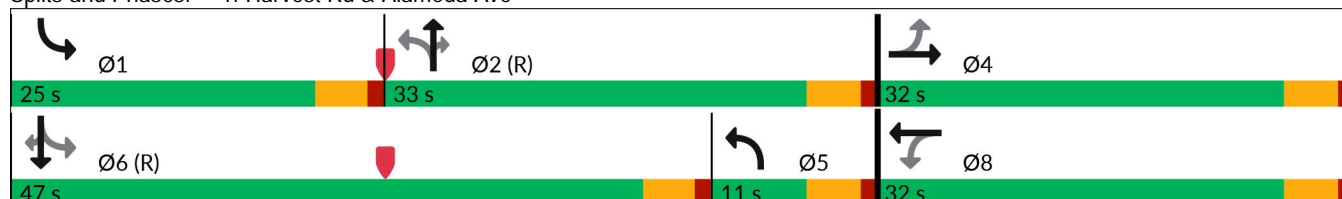
Actuated Cycle Length: 90

Offset: 34 (38%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 70

Control Type: Actuated-Coordinated

Splits and Phases: 1: Harvest Rd & Alameda Ave

























HCM 7th Signalized Intersection Summary

2033 Total PM

1: Harvest Rd & Alameda Ave

09/20/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	182	66	90	75	126	64	502	125	159	415	66
Future Volume (veh/h)	76	182	66	90	75	126	64	502	125	159	415	66
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	83	198	29	98	82	83	70	546	136	173	451	72
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	251	355	52	210	190	192	489	1369	610	536	1638	731
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.15	0.39	0.39	0.23	0.47	0.47
Sat Flow, veh/h	1192	1557	228	1126	832	842	1739	3469	1547	1739	3469	1547
Grp Volume(v), veh/h	83	0	227	98	0	165	70	546	136	173	451	72
Grp Sat Flow(s),veh/h/ln	1192	0	1785	1126	0	1674	1739	1735	1547	1739	1735	1547
Q Serve(g_s), s	5.8	0.0	10.1	7.6	0.0	7.6	0.0	10.2	5.3	5.5	7.1	2.3
Cycle Q Clear(g_c), s	13.4	0.0	10.1	17.7	0.0	7.6	0.0	10.2	5.3	5.5	7.1	2.3
Prop In Lane	1.00		0.13	1.00		0.50	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	251	0	406	210	0	381	489	1369	610	536	1638	731
V/C Ratio(X)	0.33	0.00	0.56	0.47	0.00	0.43	0.14	0.40	0.22	0.32	0.28	0.10
Avail Cap(c_a), veh/h	344	0	545	297	0	512	489	1369	610	536	1638	731
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	0.98	0.00	0.98	0.93	0.93	0.93	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.5	0.0	30.7	38.6	0.0	29.8	22.5	19.6	18.1	16.5	14.4	13.1
Incr Delay (d2), s/veh	0.8	0.0	1.2	1.6	0.0	0.8	0.1	0.8	0.8	1.6	0.4	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	4.4	2.2	0.0	3.1	1.1	4.1	2.0	2.2	2.6	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	36.3	0.0	32.0	40.2	0.0	30.5	22.6	20.4	18.9	18.1	14.8	13.4
LnGrp LOS	D		C	D		C	C	C	B	B	B	B
Approach Vol, veh/h	310			263			752			696		
Approach Delay, s/veh	33.1			34.1			20.3			15.5		
Approach LOS	C			C			C			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	25.0	40.0		25.0	18.0	47.0		25.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	20.5	28.5		27.5	6.5	42.5		27.5				
Max Q Clear Time (g_c+I1), s	7.5	12.2		15.4	2.0	9.1		19.7				
Green Ext Time (p_c), s	0.3	3.8		1.2	0.0	3.1		0.8				
Intersection Summary												
HCM 7th Control Delay, s/veh				22.4								
HCM 7th LOS				C								

Intersection												
Int Delay, s/veh	3.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↙	↕		↙	↕	
Traffic Vol, veh/h	5	20	5	13	25	2	15	64	13	15	103	5
Future Vol, veh/h	5	20	5	13	25	2	15	64	13	15	103	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	-	-	-	-	-	-	150	-	200	225	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	75	75	75	86	86	86	89	89	89
Heavy Vehicles, %	2	2	2	7	7	7	4	4	4	6	6	6
Mvmt Flow	5	22	5	17	33	3	17	74	15	17	116	6
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	241	276	61	219	272	45	122	0	0	89	0	0
Stage 1	153	153	-	116	116	-	-	-	-	-	-	-
Stage 2	88	123	-	103	156	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.64	6.64	7.04	4.18	-	-	4.22	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.64	5.64	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.64	5.64	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.57	4.07	3.37	2.24	-	-	2.26	-	-
Pot Cap-1 Maneuver	693	630	991	705	622	999	1448	-	-	1476	-	-
Stage 1	834	770	-	862	787	-	-	-	-	-	-	-
Stage 2	910	793	-	877	756	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	651	615	991	670	607	999	1448	-	-	1476	-	-
Mov Cap-2 Maneuver	651	615	-	670	607	-	-	-	-	-	-	-
Stage 1	824	761	-	852	778	-	-	-	-	-	-	-
Stage 2	858	783	-	838	747	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	10.7		11.1		1.2		0.9					
HCM LOS	B		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1448	-	-	663	639	1476	-	-				
HCM Lane V/C Ratio	0.012	-	-	0.049	0.083	0.011	-	-				
HCM Control Delay (s)	7.5	-	-	10.7	11.1	7.5	-	-				
HCM Lane LOS	A	-	-	B	B	A	-	-				
HCM 95th %tile Q(veh)	0	-	-	0.2	0.3	0	-	-				

Intersection												
Int Delay, s/veh	2.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↙	↕		↙	↕	
Traffic Vol, veh/h	5	25	5	9	15	4	5	125	14	5	127	5
Future Vol, veh/h	5	25	5	9	15	4	5	125	14	5	127	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	-	-	-	-	-	-	150	-	200	225	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	54	54	54	92	92	92	94	94	94
Heavy Vehicles, %	2	2	2	8	8	8	2	2	2	6	6	6
Mvmt Flow	5	27	5	17	28	7	5	136	15	5	135	5

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	240	309	70	245	304	76	140	0	0	151	0	0
Stage 1	148	148	-	154	154	-	-	-	-	-	-	-
Stage 2	92	161	-	91	150	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.66	6.66	7.06	4.14	-	-	4.22	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.66	5.66	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.66	5.66	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.58	4.08	3.38	2.22	-	-	2.26	-	-
Pot Cap-1 Maneuver	694	604	978	673	594	951	1441	-	-	1399	-	-
Stage 1	840	774	-	816	755	-	-	-	-	-	-	-
Stage 2	905	764	-	889	758	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	660	600	978	643	590	951	1441	-	-	1399	-	-
Mov Cap-2 Maneuver	660	600	-	643	590	-	-	-	-	-	-	-
Stage 1	837	771	-	814	753	-	-	-	-	-	-	-
Stage 2	862	762	-	850	755	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	10.9		11.1		0.3		0.3	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1441	-	-	644	642	1399	-
HCM Lane V/C Ratio	0.004	-	-	0.059	0.081	0.004	-
HCM Control Delay (s)	7.5	-	-	10.9	11.1	7.6	-
HCM Lane LOS	A	-	-	B	B	A	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.3	0	-

Intersection												
Int Delay, s/veh	6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↙	↕		↙	↕	
Traffic Vol, veh/h	64	35	39	13	30	32	22	65	13	20	105	19
Future Vol, veh/h	64	35	39	13	30	32	22	65	13	20	105	19
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	-	-	-	-	-	-	150	-	200	225	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	7	7	7	4	4	4	6	6	6
Mvmt Flow	70	38	42	14	33	35	24	71	14	22	114	21

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	269	302	68	246	305	43	135	0	0	85	0	0
Stage 1	169	169	-	126	126	-	-	-	-	-	-	-
Stage 2	100	133	-	120	179	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.64	6.64	7.04	4.18	-	-	4.22	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.64	5.64	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.64	5.64	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.57	4.07	3.37	2.24	-	-	2.26	-	-
Pot Cap-1 Maneuver	662	610	981	674	596	1002	1432	-	-	1481	-	-
Stage 1	816	758	-	850	779	-	-	-	-	-	-	-
Stage 2	895	785	-	857	738	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	597	590	981	599	577	1002	1432	-	-	1481	-	-
Mov Cap-2 Maneuver	597	590	-	599	577	-	-	-	-	-	-	-
Stage 1	802	747	-	836	766	-	-	-	-	-	-	-
Stage 2	813	772	-	767	727	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	11.9		10.7		1.7		1	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1432	-	-	669	710	1481	-
HCM Lane V/C Ratio	0.017	-	-	0.224	0.115	0.015	-
HCM Control Delay (s)	7.6	-	-	11.9	10.7	7.5	-
HCM Lane LOS	A	-	-	B	B	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.9	0.4	0	-

Intersection												
Int Delay, s/veh	6.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	52	73	55	9	65	29	28	127	14	9	129	42
Future Vol, veh/h	52	73	55	9	65	29	28	127	14	9	129	42
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	-	-	-	-	-	-	150	-	200	225	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	8	8	8	2	2	2	6	6	6
Mvmt Flow	57	79	60	10	71	32	30	138	15	10	140	46

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	348	396	93	336	412	77	186	0	0	153	0	0
Stage 1	183	183	-	206	206	-	-	-	-	-	-	-
Stage 2	165	213	-	130	206	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.66	6.66	7.06	4.14	-	-	4.22	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.66	5.66	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.66	5.66	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.58	4.08	3.38	2.22	-	-	2.26	-	-
Pot Cap-1 Maneuver	582	540	946	579	515	949	1386	-	-	1396	-	-
Stage 1	801	747	-	760	716	-	-	-	-	-	-	-
Stage 2	821	725	-	843	716	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	491	524	946	469	500	949	1386	-	-	1396	-	-
Mov Cap-2 Maneuver	491	524	-	469	500	-	-	-	-	-	-	-
Stage 1	783	742	-	743	700	-	-	-	-	-	-	-
Stage 2	698	709	-	700	711	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	14		12.8		1.3		0.4	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1386	-	-	593	573	1396	-
HCM Lane V/C Ratio	0.022	-	-	0.33	0.195	0.007	-
HCM Control Delay (s)	7.7	-	-	14	12.8	7.6	-
HCM Lane LOS	A	-	-	B	B	A	-
HCM 95th %tile Q(veh)	0.1	-	-	1.4	0.7	0	-

Intersection												
Int Delay, s/veh	5.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↙	↕		↙	↕	
Traffic Vol, veh/h	64	35	40	14	30	32	26	77	15	20	110	19
Future Vol, veh/h	64	35	40	14	30	32	26	77	15	20	110	19
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	-	-	-	-	-	-	150	-	200	225	-	-
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	7	7	7	4	4	4	6	6	6
Mvmt Flow	70	38	43	15	33	35	28	84	16	22	120	21

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	290	331	71	271	333	50	141	0	0	100	0	0
Stage 1	175	175	-	148	148	-	-	-	-	-	-	-
Stage 2	115	156	-	123	185	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.64	6.64	7.04	4.18	-	-	4.22	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.64	5.64	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.64	5.64	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.57	4.07	3.37	2.24	-	-	2.26	-	-
Pot Cap-1 Maneuver	640	587	977	647	574	992	1425	-	-	1462	-	-
Stage 1	810	753	-	825	762	-	-	-	-	-	-	-
Stage 2	877	768	-	854	734	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	575	566	977	573	554	992	1425	-	-	1462	-	-
Mov Cap-2 Maneuver	619	594	-	611	580	-	-	-	-	-	-	-
Stage 1	794	742	-	809	747	-	-	-	-	-	-	-
Stage 2	793	753	-	763	723	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s/v	11.7		10.7		1.7		1	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1425	-	-	684	711	1462	-
HCM Lane V/C Ratio	0.02	-	-	0.221	0.116	0.015	-
HCM Control Delay (s/veh)	7.6	-	-	11.7	10.7	7.5	-
HCM Lane LOS	A	-	-	B	B	A	-
HCM 95th %tile Q (veh)	0.1	-	-	0.8	0.4	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	52	73	59	12	65	29	31	136	16	9	143	42
Future Vol, veh/h	52	73	59	12	65	29	31	136	16	9	143	42
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	-	-	-	-	-	-	150	-	200	225	-	-
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	8	8	8	2	2	2	6	6	6
Mvmt Flow	57	79	64	13	71	32	34	148	17	10	155	46

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	376	431	101	362	446	83	201	0	0	165	0	0
Stage 1	198	198	-	225	225	-	-	-	-	-	-	-
Stage 2	178	233	-	137	221	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.66	6.66	7.06	4.14	-	-	4.22	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.66	5.66	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.66	5.66	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.58	4.08	3.38	2.22	-	-	2.26	-	-
Pot Cap-1 Maneuver	556	516	935	554	493	941	1368	-	-	1382	-	-
Stage 1	785	736	-	740	702	-	-	-	-	-	-	-
Stage 2	806	711	-	835	705	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	470	499	935	448	477	941	1368	-	-	1382	-	-
Mov Cap-2 Maneuver	538	549	-	516	526	-	-	-	-	-	-	-
Stage 1	765	731	-	722	684	-	-	-	-	-	-	-
Stage 2	681	693	-	688	700	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s/v	13.4		12.5		1.3		0.4	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1368	-	-	629	597	1382	-
HCM Lane V/C Ratio	0.025	-	-	0.318	0.193	0.007	-
HCM Control Delay (s/veh)	7.7	-	-	13.4	12.5	7.6	-
HCM Lane LOS	A	-	-	B	B	A	-
HCM 95th %tile Q (veh)	0.1	-	-	1.4	0.7	0	-

Intersection												
Int Delay, s/veh	7.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	94	43	48	13	57	37	28	75	13	35	108	50
Future Vol, veh/h	94	43	48	13	57	37	28	75	13	35	108	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	-	-	-	-	-	-	150	-	200	225	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	7	7	7	4	4	4	6	6	6
Mvmt Flow	102	47	52	14	62	40	30	82	14	38	117	54
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	352	376	86	307	396	48	171	0	0	96	0	0
Stage 1	220	220	-	149	149	-	-	-	-	-	-	-
Stage 2	132	156	-	158	247	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.64	6.64	7.04	4.18	-	-	4.22	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.64	5.64	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.64	5.64	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.57	4.07	3.37	2.24	-	-	2.26	-	-
Pot Cap-1 Maneuver	578	554	956	610	529	995	1389	-	-	1467	-	-
Stage 1	762	720	-	824	761	-	-	-	-	-	-	-
Stage 2	858	768	-	814	688	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	485	528	956	519	504	995	1389	-	-	1467	-	-
Mov Cap-2 Maneuver	485	528	-	519	504	-	-	-	-	-	-	-
Stage 1	745	701	-	806	744	-	-	-	-	-	-	-
Stage 2	738	751	-	700	670	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	14.8		12.3		1.8		1.4					
HCM LOS	B		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1389	-	-	568	610	1467	-	-				
HCM Lane V/C Ratio	0.022	-	-	0.354	0.191	0.026	-	-				
HCM Control Delay (s)	7.7	-	-	14.8	12.3	7.5	-	-				
HCM Lane LOS	A	-	-	B	B	A	-	-				
HCM 95th %tile Q(veh)	0.1	-	-	1.6	0.7	0.1	-	-				

Intersection												
Int Delay, s/veh	12.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	105	108	62	9	94	34	41	134	14	30	140	97
Future Vol, veh/h	105	108	62	9	94	34	41	134	14	30	140	97
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	-	-	-	-	-	-	150	-	200	225	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	8	8	8	2	2	2	6	6	6
Mvmt Flow	114	117	67	10	102	37	45	146	15	33	152	105

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	485	522	129	445	567	81	257	0	0	161	0	0
Stage 1	271	271	-	244	244	-	-	-	-	-	-	-
Stage 2	214	251	-	201	323	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.66	6.66	7.06	4.14	-	-	4.22	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.66	5.66	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.66	5.66	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.58	4.08	3.38	2.22	-	-	2.26	-	-
Pot Cap-1 Maneuver	465	458	897	483	419	944	1305	-	-	1387	-	-
Stage 1	712	684	-	721	688	-	-	-	-	-	-	-
Stage 2	768	698	-	765	634	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	343	432	897	338	395	944	1305	-	-	1387	-	-
Mov Cap-2 Maneuver	343	432	-	338	395	-	-	-	-	-	-	-
Stage 1	688	668	-	696	665	-	-	-	-	-	-	-
Stage 2	603	674	-	569	619	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	28.8		16.7		1.7		0.9	
HCM LOS	D		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1305	-	-	440	456	1387	-
HCM Lane V/C Ratio	0.034	-	-	0.679	0.327	0.024	-
HCM Control Delay (s)	7.9	-	-	28.8	16.7	7.7	-
HCM Lane LOS	A	-	-	D	C	A	-
HCM 95th %tile Q(veh)	0.1	-	-	5	1.4	0.1	-

Intersection												
Int Delay, s/veh	7.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↙	↕		↙	↕	
Traffic Vol, veh/h	94	43	67	27	57	37	44	114	24	35	137	50
Future Vol, veh/h	94	43	67	27	57	37	44	114	24	35	137	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	-	-	-	-	-	-	150	-	200	225	-	-
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	7	7	7	4	4	4	6	6	6
Mvmt Flow	102	47	73	29	62	40	48	124	26	38	149	54

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	441	498	102	407	512	75	203	0	0	150	0	0
Stage 1	252	252	-	233	233	-	-	-	-	-	-	-
Stage 2	189	246	-	174	279	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.64	6.64	7.04	4.18	-	-	4.22	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.64	5.64	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.64	5.64	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.57	4.07	3.37	2.24	-	-	2.26	-	-
Pot Cap-1 Maneuver	500	472	933	517	453	955	1352	-	-	1400	-	-
Stage 1	730	697	-	735	698	-	-	-	-	-	-	-
Stage 2	795	701	-	796	666	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	412	443	933	422	425	955	1352	-	-	1400	-	-
Mov Cap-2 Maneuver	490	502	-	491	482	-	-	-	-	-	-	-
Stage 1	704	678	-	709	673	-	-	-	-	-	-	-
Stage 2	667	676	-	665	648	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s/v	14.9		13.2		1.9		1.2	
HCM LOS	B		B					










Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1352	-	-	584	571	1400	-
HCM Lane V/C Ratio	0.035	-	-	0.38	0.23	0.027	-
HCM Control Delay (s/veh)	7.8	-	-	14.9	13.2	7.6	-
HCM Lane LOS	A	-	-	B	B	A	-
HCM 95th %tile Q (veh)	0.1	-	-	1.8	0.9	0.1	-

Intersection												
Int Delay, s/veh	14.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↙	↕		↙	↕	
Traffic Vol, veh/h	105	108	99	37	94	34	83	197	45	30	205	97
Future Vol, veh/h	105	108	99	37	94	34	83	197	45	30	205	97
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	-	-	-	-	-	-	150	-	200	225	-	-
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	8	8	8	2	2	2	6	6	6
Mvmt Flow	114	117	108	40	102	37	90	214	49	33	223	105

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	680	785	164	655	813	132	328	0	0	263	0	0
Stage 1	342	342	-	419	419	-	-	-	-	-	-	-
Stage 2	338	443	-	236	394	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.66	6.66	7.06	4.14	-	-	4.22	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.66	5.66	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.66	5.66	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.58	4.08	3.38	2.22	-	-	2.26	-	-
Pot Cap-1 Maneuver	337	323	852	340	300	874	1228	-	-	1270	-	-
Stage 1	646	637	-	566	574	-	-	-	-	-	-	-
Stage 2	650	574	-	729	589	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	233	292	852	210	271	874	1228	-	-	1270	-	-
Mov Cap-2 Maneuver	331	382	-	304	354	-	-	-	-	-	-	-
Stage 1	599	620	-	525	532	-	-	-	-	-	-	-
Stage 2	466	532	-	503	574	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s/v	36.7		22.1		2.1		0.7	
HCM LOS	E		C					










Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1228	-	-	436	387	1270	-
HCM Lane V/C Ratio	0.073	-	-	0.778	0.463	0.026	-
HCM Control Delay (s/veh)	8.2	-	-	36.7	22.1	7.9	-
HCM Lane LOS	A	-	-	E	C	A	-
HCM 95th %tile Q (veh)	0.2	-	-	6.7	2.4	0.1	-

Intersection												
Int Delay, s/veh	7.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	94	44	50	24	67	42	38	201	20	49	244	52
Future Vol, veh/h	94	44	50	24	67	42	38	201	20	49	244	52
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	150	-	-	150	-	-	150	-	200	225	-	150
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	102	48	54	26	73	46	41	218	22	53	265	57

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	599	693	133	574	739	120	322	0	0	240	0	0
Stage 1	371	371	-	311	311	-	-	-	-	-	-	-
Stage 2	228	322	-	263	428	-	-	-	-	-	-	-
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	379	359	882	395	338	899	1213	-	-	1302	-	-
Stage 1	613	611	-	666	649	-	-	-	-	-	-	-
Stage 2	745	642	-	711	576	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	279	332	882	312	313	899	1213	-	-	1302	-	-
Mov Cap-2 Maneuver	279	332	-	312	313	-	-	-	-	-	-	-
Stage 1	592	586	-	643	627	-	-	-	-	-	-	-
Stage 2	604	620	-	588	552	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	19.7		17.1		1.2		1.1	
HCM LOS	C		C					










Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1213	-	-	279	497	312	418	1302	-	-
HCM Lane V/C Ratio	0.034	-	-	0.366	0.206	0.084	0.283	0.041	-	-
HCM Control Delay (s)	8.1	-	-	25.2	14.1	17.6	17	7.9	-	-
HCM Lane LOS	A	-	-	D	B	C	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	1.6	0.8	0.3	1.2	0.1	-	-

Intersection												
Int Delay, s/veh	7.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	105	110	57	9	96	39	52	259	29	51	240	97
Future Vol, veh/h	105	110	57	9	96	39	52	259	29	51	240	97
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	150	-	-	150	-	-	150	-	200	225	-	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, %	5	5	5	5	5	5	5	5	5	5	5	5
Mvmt Flow	114	120	62	10	104	42	57	282	32	55	261	105

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	678	799	131	713	888	157	366	0	0	314	0	0
Stage 1	371	371	-	412	412	-	-	-	-	-	-	-
Stage 2	307	428	-	301	476	-	-	-	-	-	-	-
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	332	311	885	313	276	851	1168	-	-	1222	-	-
Stage 1	613	611	-	580	585	-	-	-	-	-	-	-
Stage 2	669	576	-	675	547	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	225	282	885	204	251	851	1168	-	-	1222	-	-
Mov Cap-2 Maneuver	327	371	-	308	344	-	-	-	-	-	-	-
Stage 1	583	584	-	552	556	-	-	-	-	-	-	-
Stage 2	491	548	-	477	522	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	19.3		18.2		1.3		1.1	
HCM LOS	C		C					










Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1168	-	-	327	463	308	416	1222	-	-
HCM Lane V/C Ratio	0.048	-	-	0.349	0.392	0.032	0.353	0.045	-	-
HCM Control Delay (s)	8.2	-	-	21.8	17.7	17.1	18.3	8.1	-	-
HCM Lane LOS	A	-	-	C	C	C	C	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	1.5	1.8	0.1	1.6	0.1	-	-

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	94	44	70	39	67	42	57	251	33	49	277	52
Future Vol, veh/h	94	44	70	39	67	42	57	251	33	49	277	52
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	150	-	-	150	-	-	150	-	200	225	-	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, %	5	5	5	5	5	5	5	5	5	5	5	5
Mvmt Flow	102	48	76	42	73	46	62	273	36	53	301	57

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	704	840	151	696	879	154	358	0	0	309	0	0
Stage 1	408	408	-	415	415	-	-	-	-	-	-	-
Stage 2	297	433	-	281	464	-	-	-	-	-	-	-
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	318	294	859	323	279	855	1176	-	-	1227	-	-
Stage 1	583	588	-	578	584	-	-	-	-	-	-	-
Stage 2	679	573	-	694	554	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	220	267	859	234	253	855	1176	-	-	1227	-	-
Mov Cap-2 Maneuver	333	359	-	343	345	-	-	-	-	-	-	-
Stage 1	558	562	-	547	553	-	-	-	-	-	-	-
Stage 2	529	543	-	553	530	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s/v16.53			16.18		1.38		1.05	
HCM LOS	C		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1176	-	-	333	559	343	448	1227	-	-
HCM Lane V/C Ratio	0.053	-	-	0.306	0.222	0.124	0.264	0.043	-	-
HCM Control Delay (s/veh)	8.2	-	-	20.5	13.3	17	15.9	8.1	-	-
HCM Lane LOS	A	-	-	C	B	C	C	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	1.3	0.8	0.4	1.1	0.1	-	-

Intersection												
Int Delay, s/veh	10.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	105	110	98	40	96	39	96	330	62	51	318	97
Future Vol, veh/h	105	110	98	40	96	39	96	330	62	51	318	97
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	150	-	-	150	-	-	150	-	200	225	-	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, %	5	5	5	5	5	5	5	5	5	5	5	5
Mvmt Flow	114	120	107	43	104	42	104	359	67	55	346	105

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	897	1091	173	945	1163	213	451	0	0	426	0	0
Stage 1	457	457	-	601	601	-	-	-	-	-	-	-
Stage 2	440	635	-	343	562	-	-	-	-	-	-	-
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	230	209	831	212	189	783	1085	-	-	1109	-	-
Stage 1	545	559	-	447	480	-	-	-	-	-	-	-
Stage 2	558	463	-	637	500	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	117	179	831	95	162	783	1085	-	-	1109	-	-
Mov Cap-2 Maneuver	225	274	-	201	256	-	-	-	-	-	-	-
Stage 1	518	531	-	404	434	-	-	-	-	-	-	-
Stage 2	362	419	-	409	475	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v28.89		26.19	1.71	0.92
HCM LOS	D	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1085	-	-	225	400	201	318	1109	-	-
HCM Lane V/C Ratio	0.096	-	-	0.508	0.565	0.217	0.462	0.05	-	-
HCM Control Delay (s/veh)	8.7	-	-	36.5	25	27.8	25.7	8.4	-	-
HCM Lane LOS	A	-	-	E	D	D	D	A	-	-
HCM 95th %tile Q(veh)	0.3	-	-	2.6	3.4	0.8	2.3	0.2	-	-

Timings

2: Alameda Ave & Powhaton Rd

2029 Background AM

01/24/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	118	44	24	84	77	346	43	381	60
Future Volume (vph)	118	44	24	84	77	346	43	381	60
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA	Perm
Protected Phases		4		8	5	2	1	6	
Permitted Phases	4		8		2		6		6
Detector Phase	4	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)	22.5	22.5	22.5	22.5	9.5	22.5	9.5	22.5	22.5
Total Split (s)	36.0	36.0	36.0	36.0	17.0	41.0	13.0	37.0	37.0
Total Split (%)	40.0%	40.0%	40.0%	40.0%	18.9%	45.6%	14.4%	41.1%	41.1%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	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)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag					Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max	C-Max

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

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

Natural Cycle: 55






















Control Type: Actuated-Coordinated

Splits and Phases: 2: Alameda Ave & Powhaton Rd

Ø1	Ø2 (R)	Ø4
13 s	41 s	36 s
Ø5	Ø6 (R)	Ø8
17 s	37 s	36 s

2029 Background AM

01/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	118	44	61	24	84	54	77	346	18	43	381	60
Future Volume (veh/h)	118	44	61	24	84	54	77	346	18	43	381	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	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	128	48	66	26	91	59	84	376	20	47	414	65
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	243	147	202	270	218	141	643	2014	107	678	2049	914
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.05	0.60	0.60	0.04	0.59	0.59
Sat Flow, veh/h	1208	696	957	1248	1034	671	1739	3351	178	1739	3469	1547
Grp Volume(v), veh/h	128	0	114	26	0	150	84	194	202	47	414	65
Grp Sat Flow(s),veh/h/ln	1208	0	1654	1248	0	1705	1739	1735	1794	1739	1735	1547
Q Serve(g_s), s	9.2	0.0	5.3	1.6	0.0	6.9	1.6	4.5	4.6	0.9	5.0	1.6
Cycle Q Clear(g_c), s	16.1	0.0	5.3	6.9	0.0	6.9	1.6	4.5	4.6	0.9	5.0	1.6
Prop In Lane	1.00		0.58	1.00		0.39	1.00		0.10	1.00		1.00
Lane Grp Cap(c), veh/h	243	0	348	270	0	359	643	1042	1078	678	2049	914
V/C Ratio(X)	0.53	0.00	0.33	0.10	0.00	0.42	0.13	0.19	0.19	0.07	0.20	0.07
Avail Cap(c_a), veh/h	411	0	579	444	0	597	800	1042	1078	775	2049	914
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	37.7	0.0	30.1	33.0	0.0	30.7	6.3	8.1	8.1	6.4	8.6	7.9
Incr Delay (d2), s/veh	1.8	0.0	0.5	0.2	0.0	0.8	0.1	0.4	0.4	0.0	0.2	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	2.8	0.0	2.1	0.5	0.0	2.8	0.5	1.6	1.6	0.3	1.7	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.5	0.0	30.7	33.2	0.0	31.5	6.4	8.5	8.5	6.5	8.8	8.0
LnGrp LOS	D	A	C	C	A	C	A	A	A	A	A	A
Approach Vol, veh/h		242			176			480			526	
Approach Delay, s/veh		35.3			31.8			8.1			8.5	
Approach LOS		D			C			A			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.0	58.6		23.5	8.9	57.7		23.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	8.5	36.5		31.5	12.5	32.5		31.5				
Max Q Clear Time (g_c+I1), s	2.9	6.6		18.1	3.6	7.0		8.9				
Green Ext Time (p_c), s	0.0	2.2		0.9	0.1	2.8		0.9				
Intersection Summary												
HCM 6th Ctrl Delay			15.8									
HCM 6th LOS			B									

Timings

2: Alameda Ave & Powhaton Rd

2029 Background PM

01/24/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	126	109	9	116	84	398	48	395	119
Future Volume (vph)	126	109	9	116	84	398	48	395	119
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA	Perm
Protected Phases		4		8	5	2	1	6	
Permitted Phases	4		8		2		6		6
Detector Phase	4	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)	22.5	22.5	22.5	22.5	9.5	22.5	9.5	22.5	22.5
Total Split (s)	38.0	38.0	38.0	38.0	16.0	37.0	15.0	36.0	36.0
Total Split (%)	42.2%	42.2%	42.2%	42.2%	17.8%	41.1%	16.7%	40.0%	40.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	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)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag					Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max	C-Max

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

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

Natural Cycle: 55

Control Type: Actuated-Coordinated

Splits and Phases: 2: Alameda Ave & Powhaton Rd






















	Ø1		Ø2 (R)		Ø4
15 s		37 s			38 s
	Ø5		Ø6 (R)		Ø8
16 s		36 s			38 s

HCM 6th Signalized Intersection Summary

2029 Background PM

2: Alameda Ave & Powhaton Rd

01/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	126	109	85	9	116	51	84	398	20	48	395	119
Future Volume (veh/h)	126	109	85	9	116	51	84	398	20	48	395	119
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	137	118	92	10	126	55	91	433	22	52	429	129
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	257	228	178	231	289	126	581	1916	97	613	1945	868
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.05	0.57	0.57	0.04	0.56	0.56
Sat Flow, veh/h	1174	951	741	1144	1205	526	1739	3360	170	1739	3469	1547
Grp Volume(v), veh/h	137	0	210	10	0	181	91	223	232	52	429	129
Grp Sat Flow(s),veh/h/ln	1174	0	1692	1144	0	1731	1739	1735	1795	1739	1735	1547
Q Serve(g_s), s	10.1	0.0	9.7	0.7	0.0	8.0	1.9	5.7	5.7	1.1	5.6	3.6
Cycle Q Clear(g_c), s	18.1	0.0	9.7	10.4	0.0	8.0	1.9	5.7	5.7	1.1	5.6	3.6
Prop In Lane	1.00		0.44	1.00		0.30	1.00		0.09	1.00		1.00
Lane Grp Cap(c), veh/h	257	0	405	231	0	414	581	989	1024	613	1945	868
V/C Ratio(X)	0.53	0.00	0.52	0.04	0.00	0.44	0.16	0.23	0.23	0.08	0.22	0.15
Avail Cap(c_a), veh/h	413	0	630	383	0	644	717	989	1024	746	1945	868
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	36.8	0.0	29.7	34.2	0.0	29.1	7.4	9.5	9.5	7.5	9.9	9.5
Incr Delay (d2), s/veh	1.7	0.0	1.0	0.1	0.0	0.7	0.1	0.5	0.5	0.1	0.3	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	0.0	4.0	0.2	0.0	3.3	0.6	2.0	2.1	0.4	1.9	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.5	0.0	30.7	34.3	0.0	29.8	7.5	10.1	10.1	7.6	10.2	9.8
LnGrp LOS	D	A	C	C	A	C	A	B	B	A	B	A
Approach Vol, veh/h	347			191			546			610		
Approach Delay, s/veh	33.8			30.0			9.6			9.9		
Approach LOS	C			C			A			A		
Timer - Assigned Phs	1	2	4		5	6	8					
Phs Duration (G+Y+Rc), s	8.1	55.8	26.0		9.0	55.0	26.0					
Change Period (Y+Rc), s	4.5	4.5	4.5		4.5	4.5	4.5					
Max Green Setting (Gmax), s	10.5	32.5	33.5		11.5	31.5	33.5					
Max Q Clear Time (g_c+I1), s	3.1	7.7	20.1		3.9	7.6	12.4					
Green Ext Time (p_c), s	0.0	2.5	1.5		0.1	3.1	1.0					
Intersection Summary												
HCM 6th Ctrl Delay	17.0											
HCM 6th LOS	B											

Timings 2: Powhaton Rd & Alameda Ave

2029 Total AM
09/20/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	118	44	40	84	98	404	43	419	60
Future Volume (vph)	118	44	40	84	98	404	43	419	60
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA	Perm
Protected Phases		4		8	5	2	1	6	
Permitted Phases	4		8		2		6		6
Detector Phase	4	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)	22.5	22.5	22.5	22.5	9.5	22.5	9.5	22.5	22.5
Total Split (s)	36.0	36.0	36.0	36.0	17.0	41.0	13.0	37.0	37.0
Total Split (%)	40.0%	40.0%	40.0%	40.0%	18.9%	45.6%	14.4%	41.1%	41.1%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	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)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag					Lag	Lead	Lag	Lead	Lead
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max	C-Max

Intersection Summary

Cycle Length: 90

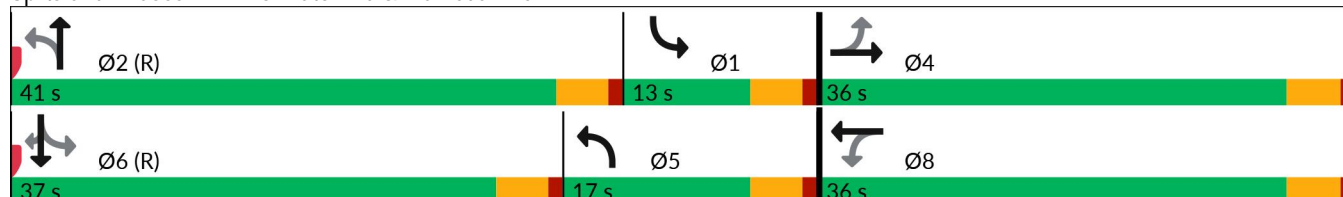
Actuated Cycle Length: 90

Offset: 82 (91%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 55

Control Type: Actuated-Coordinated






















Splits and Phases: 2: Powhaton Rd & Alameda Ave



HCM 7th Signalized Intersection Summary

2: Powhaton Rd & Alameda Ave

2029 Total AM
09/20/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	118	44	82	40	84	54	98	404	32	43	419	60
Future Volume (veh/h)	118	44	82	40	84	54	98	404	32	43	419	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	128	48	89	43	91	59	107	439	35	47	455	65
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	244	121	225	251	219	142	775	1320	105	725	1253	559
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.28	0.41	0.41	0.23	0.36	0.36
Sat Flow, veh/h	1208	573	1062	1222	1034	671	1739	3255	259	1739	3469	1547
Grp Volume(v), veh/h	128	0	137	43	0	150	107	233	241	47	455	65
Grp Sat Flow(s),veh/h/ln	1208	0	1635	1222	0	1705	1739	1735	1779	1739	1735	1547
Q Serve(g_s), s	9.2	0.0	6.5	2.8	0.0	6.8	0.0	8.3	8.4	0.0	8.7	2.5
Cycle Q Clear(g_c), s	16.1	0.0	6.5	9.3	0.0	6.8	0.0	8.3	8.4	0.0	8.7	2.5
Prop In Lane	1.00		0.65	1.00		0.39	1.00		0.15	1.00		1.00
Lane Grp Cap(c), veh/h	244	0	346	251	0	361	775	703	722	725	1253	559
V/C Ratio(X)	0.52	0.00	0.40	0.17	0.00	0.42	0.14	0.33	0.33	0.06	0.36	0.12
Avail Cap(c_a), veh/h	411	0	572	420	0	597	775	703	722	725	1253	559
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)	0.99	0.00	0.99	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.6	0.0	30.5	34.5	0.0	30.6	11.6	18.4	18.4	11.8	21.1	19.2
Incr Delay (d2), s/veh	1.7	0.0	0.7	0.3	0.0	0.8	0.1	1.3	1.2	0.0	0.8	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	2.8	0.0	2.6	0.9	0.0	2.8	1.1	3.3	3.4	0.5	3.4	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	39.3	0.0	31.2	34.8	0.0	31.4	11.7	19.6	19.6	11.9	22.0	19.6
LnGrp LOS	D		C	C		C	B	B	B	B	C	B
Approach Vol, veh/h	265			193			581			567		
Approach Delay, s/veh	35.1			32.2			18.2			20.9		
Approach LOS	D			C			B			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	25.4	41.0		23.6	29.4	37.0		23.6				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	8.5	36.5		31.5	12.5	32.5		31.5				
Max Q Clear Time (g_c+I1), s	2.0	10.4		18.1	2.0	10.7		11.3				
Green Ext Time (p_c), s	0.0	2.7		1.0	0.2	3.0		0.9				
Intersection Summary												
HCM 7th Control Delay, s/veh				23.6								
HCM 7th LOS				C								

Timings 2: Powhaton Rd & Alameda Ave

2029 Total PM
09/20/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	126	109	41	116	130	475	48	482	119
Future Volume (vph)	126	109	41	116	130	475	48	482	119
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA	Perm
Protected Phases		4		8	5	2	1	6	
Permitted Phases	4		8		2		6		6
Detector Phase	4	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)	22.5	22.5	22.5	22.5	9.5	22.5	9.5	22.5	22.5
Total Split (s)	35.0	35.0	35.0	35.0	18.0	42.0	13.0	37.0	37.0
Total Split (%)	38.9%	38.9%	38.9%	38.9%	20.0%	46.7%	14.4%	41.1%	41.1%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	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)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag					Lag	Lead	Lag	Lead	Lead
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max	C-Max

Intersection Summary

Cycle Length: 90

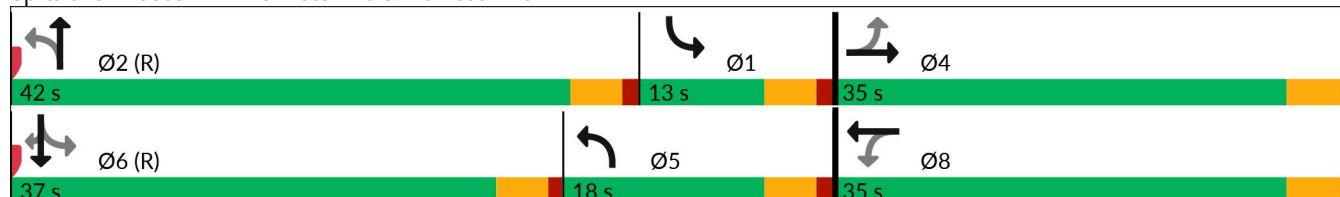
Actuated Cycle Length: 90

Offset: 47 (52%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 55

Control Type: Actuated-Coordinated























Splits and Phases: 2: Powhaton Rd & Alameda Ave



HCM 7th Signalized Intersection Summary

2: Powhaton Rd & Alameda Ave

2029 Total PM
09/20/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	126	109	128	41	116	51	130	475	54	48	482	119
Future Volume (veh/h)	126	109	128	41	116	51	130	475	54	48	482	119
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	137	118	139	45	126	55	141	516	59	52	524	129
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	258	183	216	191	289	126	684	1308	149	617	1253	559
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.25	0.42	0.42	0.19	0.36	0.36
Sat Flow, veh/h	1174	764	900	1096	1205	526	1739	3138	358	1739	3469	1547
Grp Volume(v), veh/h	137	0	257	45	0	181	141	284	291	52	524	129
Grp Sat Flow(s),veh/h/ln	1174	0	1664	1096	0	1731	1739	1735	1762	1739	1735	1547
Q Serve(g_s), s	10.1	0.0	12.5	3.5	0.0	8.0	0.0	10.3	10.4	0.0	10.2	5.2
Cycle Q Clear(g_c), s	18.1	0.0	12.5	16.0	0.0	8.0	0.0	10.3	10.4	0.0	10.2	5.2
Prop In Lane	1.00		0.54	1.00		0.30	1.00		0.20	1.00		1.00
Lane Grp Cap(c), veh/h	258	0	400	191	0	416	684	723	734	617	1253	559
V/C Ratio(X)	0.53	0.00	0.64	0.24	0.00	0.44	0.21	0.39	0.40	0.08	0.42	0.23
Avail Cap(c_a), veh/h	374	0	564	299	0	587	684	723	734	617	1253	559
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)	0.75	0.00	0.75	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.7	0.0	30.7	37.9	0.0	29.0	15.3	18.3	18.3	15.1	21.6	20.0
Incr Delay (d2), s/veh	1.3	0.0	1.3	0.6	0.0	0.7	0.1	1.6	1.6	0.1	1.0	1.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	0.0	5.0	1.0	0.0	3.3	1.7	4.1	4.2	0.6	4.1	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	38.0	0.0	32.0	38.5	0.0	29.7	15.4	19.9	19.9	15.2	22.7	21.0
LnGrp LOS	D		C	D		C	B	B	B	B	C	C
Approach Vol, veh/h	394			226			716			705		
Approach Delay, s/veh	34.1			31.5			19.0			21.8		
Approach LOS	C			C			B			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	21.9	42.0		26.1	26.9	37.0		26.1				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	8.5	37.5		30.5	13.5	32.5		30.5				
Max Q Clear Time (g_c+I1), s	2.0	12.4		20.1	2.0	12.2		18.0				
Green Ext Time (p_c), s	0.0	3.3		1.5	0.2	3.6		0.9				
Intersection Summary												
HCM 7th Control Delay, s/veh				24.3								
HCM 7th LOS				C								

Timings

2: Alameda Ave & Powhaton Rd

2031 Background AM

01/24/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	131	49	45	91	42	495	56	553	73
Future Volume (vph)	131	49	45	91	42	495	56	553	73
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA	Perm
Protected Phases		4		8	5	2	1	6	
Permitted Phases	4		8		2		6		6
Detector Phase	4	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)	22.5	22.5	22.5	22.5	9.5	22.5	9.5	22.5	22.5
Total Split (s)	36.0	36.0	36.0	36.0	12.0	40.0	14.0	42.0	42.0
Total Split (%)	40.0%	40.0%	40.0%	40.0%	13.3%	44.4%	15.6%	46.7%	46.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	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)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag					Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max	C-Max

Intersection Summary

Cycle Length: 90

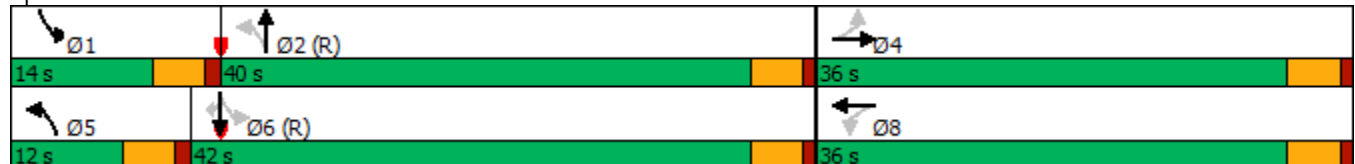
Actuated Cycle Length: 90

Offset: 29 (32%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 55

Control Type: Actuated-Coordinated






















Splits and Phases: 2: Alameda Ave & Powhaton Rd



HCM 6th Signalized Intersection Summary 2: Alameda Ave & Powhatan Rd

2031 Background AM

01/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	131	49	25	45	91	47	42	495	20	56	553	73
Future Volume (veh/h)	131	49	25	45	91	47	42	495	20	56	553	73
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	142	53	27	49	99	51	46	538	22	61	601	79
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	254	249	127	313	248	128	523	1997	82	579	2058	918
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.04	0.59	0.59	0.04	0.59	0.59
Sat Flow, veh/h	1208	1140	581	1287	1136	585	1739	3397	139	1739	3469	1547
Grp Volume(v), veh/h	142	0	80	49	0	150	46	274	286	61	601	79
Grp Sat Flow(s),veh/h/ln	1208	0	1721	1287	0	1721	1739	1735	1801	1739	1735	1547
Q Serve(g_s), s	10.3	0.0	3.4	2.9	0.0	6.7	0.9	7.0	7.0	1.2	7.7	2.0
Cycle Q Clear(g_c), s	17.0	0.0	3.4	6.3	0.0	6.7	0.9	7.0	7.0	1.2	7.7	2.0
Prop In Lane	1.00		0.34	1.00		0.34	1.00		0.08	1.00		1.00
Lane Grp Cap(c), veh/h	254	0	377	313	0	376	523	1020	1059	579	2058	918
V/C Ratio(X)	0.56	0.00	0.21	0.16	0.00	0.40	0.09	0.27	0.27	0.11	0.29	0.09
Avail Cap(c_a), veh/h	413	0	602	482	0	602	602	1020	1059	687	2058	918
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)	0.98	0.00	0.98	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.4	0.0	28.8	31.4	0.0	30.1	6.8	9.1	9.1	6.6	9.0	7.8
Incr Delay (d2), s/veh	1.9	0.0	0.3	0.2	0.0	0.7	0.1	0.6	0.6	0.1	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	3.1	0.0	1.4	0.9	0.0	2.8	0.3	2.4	2.5	0.4	2.6	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.2	0.0	29.1	31.6	0.0	30.8	6.9	9.7	9.7	6.7	9.4	8.0
LnGrp LOS	D	A	C	C	A	C	A	A	A	A	A	A
Approach Vol, veh/h	222			199			606			741		
Approach Delay, s/veh	35.6			31.0			9.5			9.0		
Approach LOS	D			C			A			A		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.4	57.4		24.2	7.9	57.9		24.2				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	9.5	35.5		31.5	7.5	37.5		31.5				
Max Q Clear Time (g_c+I1), s	3.2	9.0		19.0	2.9	9.7		8.7				
Green Ext Time (p_c), s	0.0	3.2		0.7	0.0	4.3		1.0				
Intersection Summary												
HCM 6th Ctrl Delay	15.0											
HCM 6th LOS	B											

Timings

2: Alameda Ave & Powhaton Rd

2031 Background PM

01/24/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	137	94	13	79	39	540	65	550	101
Future Volume (vph)	137	94	13	79	39	540	65	550	101
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA	Perm
Protected Phases		4		8	5	2	1	6	
Permitted Phases	4		8		2		6		6
Detector Phase	4	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)	22.5	22.5	22.5	22.5	9.5	22.5	9.5	22.5	22.5
Total Split (s)	35.0	35.0	35.0	35.0	12.0	41.0	14.0	43.0	43.0
Total Split (%)	38.9%	38.9%	38.9%	38.9%	13.3%	45.6%	15.6%	47.8%	47.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	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)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag					Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max	C-Max

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 80 (89%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 55

Control Type: Actuated-Coordinated

Splits and Phases: 2: Alameda Ave & Powhaton Rd
























HCM 6th Signalized Intersection Summary

2: Alameda Ave & Powhatan Rd

2031 Background PM

01/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	137	94	41	13	79	49	39	540	25	65	550	101
Future Volume (veh/h)	137	94	41	13	79	49	39	540	25	65	550	101
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	149	102	45	14	86	53	42	587	27	71	598	110
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	265	265	117	260	233	144	510	1969	90	551	2058	918
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.04	0.58	0.58	0.05	0.59	0.59
Sat Flow, veh/h	1220	1201	530	1211	1057	651	1739	3377	155	1739	3469	1547
Grp Volume(v), veh/h	149	0	147	14	0	139	42	301	313	71	598	110
Grp Sat Flow(s),veh/h/ln	1220	0	1731	1211	0	1709	1739	1735	1798	1739	1735	1547
Q Serve(g_s), s	10.6	0.0	6.5	0.9	0.0	6.2	0.8	7.9	7.9	1.4	7.6	2.8
Cycle Q Clear(g_c), s	16.8	0.0	6.5	7.4	0.0	6.2	0.8	7.9	7.9	1.4	7.6	2.8
Prop In Lane	1.00		0.31	1.00		0.38	1.00		0.09	1.00		1.00
Lane Grp Cap(c), veh/h	265	0	382	260	0	377	510	1012	1048	551	2058	918
V/C Ratio(X)	0.56	0.00	0.38	0.05	0.00	0.37	0.08	0.30	0.30	0.13	0.29	0.12
Avail Cap(c_a), veh/h	409	0	586	403	0	579	592	1012	1048	654	2058	918
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)	0.88	0.00	0.88	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.9	0.0	29.9	33.0	0.0	29.7	7.0	9.5	9.5	6.8	9.0	8.0
Incr Delay (d2), s/veh	1.6	0.0	0.6	0.1	0.0	0.6	0.1	0.8	0.7	0.1	0.4	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	0.0	2.7	0.3	0.0	2.6	0.3	2.8	2.9	0.5	2.6	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.5	0.0	30.4	33.1	0.0	30.3	7.0	10.2	10.2	6.9	9.4	8.3
LnGrp LOS	D	A	C	C	A	C	A	B	B	A	A	A
Approach Vol, veh/h		296			153			656			779	
Approach Delay, s/veh		34.5			30.6			10.0			9.0	
Approach LOS		C			C			B			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.7	57.0		24.4	7.8	57.9		24.4				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	9.5	36.5		30.5	7.5	38.5		30.5				
Max Q Clear Time (g_c+I1), s	3.4	9.9		18.8	2.8	9.6		9.4				
Green Ext Time (p_c), s	0.1	3.6		1.0	0.0	4.5		0.8				
Intersection Summary												
HCM 6th Ctrl Delay			15.1									
HCM 6th LOS			B									

Timings 2: Alameda Ave & Powhatan Rd

2031 Total AM
09/20/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	133	50	53	93	42	556	56	581	80
Future Volume (vph)	133	50	53	93	42	556	56	581	80
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA	Perm
Protected Phases		4		8	5	2	1	6	
Permitted Phases	4		8		2		6		6
Detector Phase	4	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)	22.5	22.5	22.5	22.5	9.5	22.5	9.5	22.5	22.5
Total Split (s)	35.0	35.0	35.0	35.0	12.0	42.0	13.0	43.0	43.0
Total Split (%)	38.9%	38.9%	38.9%	38.9%	13.3%	46.7%	14.4%	47.8%	47.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	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)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag					Lag	Lead	Lag	Lead	Lead
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max	C-Max

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 68 (76%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 55

Control Type: Actuated-Coordinated






















Splits and Phases: 2: Alameda Ave & Powhatan Rd

	Ø2 (R)		Ø1		Ø4
42 s		13 s		35 s	
	Ø6 (R)		Ø5		Ø8
43 s		12 s		35 s	

HCM 7th Signalized Intersection Summary

2: Alameda Ave & Powhatan Rd

2031 Total AM
09/20/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	133	50	25	53	93	47	42	556	33	56	581	80
Future Volume (veh/h)	133	50	25	53	93	47	42	556	33	56	581	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	145	54	16	58	101	29	46	604	36	61	632	87
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	257	280	83	306	283	81	661	1386	83	694	1484	662
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.42	0.42	0.23	0.43	0.43
Sat Flow, veh/h	1230	1353	401	1299	1364	392	1739	3327	198	1739	3469	1547
Grp Volume(v), veh/h	145	0	70	58	0	130	46	315	325	61	632	87
Grp Sat Flow(s),veh/h/ln	1230	0	1754	1299	0	1755	1739	1735	1790	1739	1735	1547
Q Serve(g_s), s	10.3	0.0	3.0	3.5	0.0	5.7	0.0	11.6	11.7	0.0	11.5	3.1
Cycle Q Clear(g_c), s	16.0	0.0	3.0	6.4	0.0	5.7	0.0	11.6	11.7	0.0	11.5	3.1
Prop In Lane	1.00		0.23	1.00		0.22	1.00		0.11	1.00		1.00
Lane Grp Cap(c), veh/h	257	0	364	306	0	364	661	723	746	694	1484	662
V/C Ratio(X)	0.56	0.00	0.19	0.19	0.00	0.36	0.07	0.44	0.44	0.09	0.43	0.13
Avail Cap(c_a), veh/h	419	0	594	477	0	595	661	723	746	694	1484	662
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)	0.97	0.00	0.97	1.00	0.00	1.00	0.97	0.97	0.97	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.4	0.0	29.5	32.1	0.0	30.5	11.8	18.7	18.7	11.6	18.0	15.6
Incr Delay (d2), s/veh	1.9	0.0	0.2	0.3	0.0	0.6	0.0	1.8	1.8	0.1	0.9	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	3.2	0.0	1.3	1.1	0.0	2.4	0.5	4.7	4.8	0.6	4.4	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	39.3	0.0	29.7	32.4	0.0	31.1	11.9	20.6	20.5	11.6	18.9	16.0
LnGrp LOS	D		C	C		C	B	C	C	B	B	B
Approach Vol, veh/h	215			188			686			780		
Approach Delay, s/veh	36.2			31.5			20.0			18.0		
Approach LOS	D			C			B			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	24.8	42.0		23.2	23.8	43.0		23.2				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	8.5	37.5		30.5	7.5	38.5		30.5				
Max Q Clear Time (g_c+I1), s	2.0	13.7		18.0	2.0	13.5		8.4				
Green Ext Time (p_c), s	0.0	3.7		0.7	0.0	4.5		0.8				
Intersection Summary												
HCM 7th Control Delay, s/veh				22.2								
HCM 7th LOS				C								

Timings 2: Alameda Ave & Powhatan Rd

2031 Total PM
09/20/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	151	99	34	83	39	598	65	628	112
Future Volume (vph)	151	99	34	83	39	598	65	628	112
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA	Perm
Protected Phases		4		8	5	2	1	6	
Permitted Phases	4		8		2		6		6
Detector Phase	4	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)	22.5	22.5	22.5	22.5	9.5	22.5	9.5	22.5	22.5
Total Split (s)	35.0	35.0	35.0	35.0	11.0	42.0	13.0	44.0	44.0
Total Split (%)	38.9%	38.9%	38.9%	38.9%	12.2%	46.7%	14.4%	48.9%	48.9%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	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)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag					Lag	Lead	Lag	Lead	Lead
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max	C-Max

Intersection Summary

Cycle Length: 90

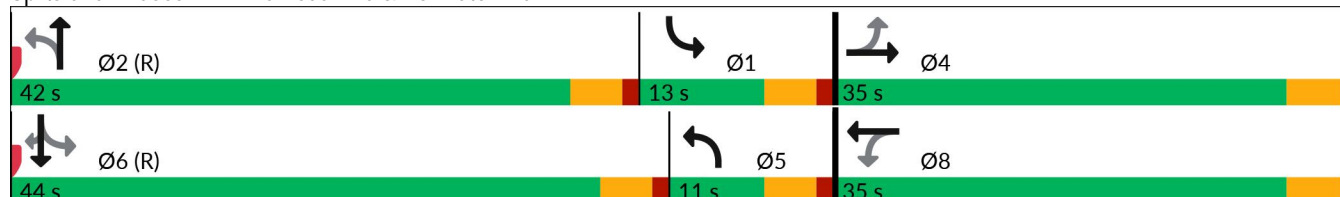
Actuated Cycle Length: 90

Offset: 64 (71%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 55

Control Type: Actuated-Coordinated






















Splits and Phases: 2: Alameda Ave & Powhatan Rd



HCM 7th Signalized Intersection Summary

2: Alameda Ave & Powhatan Rd

2031 Total PM
09/20/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	151	99	41	34	83	49	39	598	41	65	628	112
Future Volume (veh/h)	151	99	41	34	83	49	39	598	41	65	628	112
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	164	108	34	37	90	31	42	650	45	71	683	122
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	280	293	92	264	285	98	597	1372	95	651	1523	679
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.19	0.42	0.42	0.21	0.44	0.44
Sat Flow, veh/h	1240	1331	419	1217	1298	447	1739	3292	228	1739	3469	1547
Grp Volume(v), veh/h	164	0	142	37	0	121	42	342	353	71	683	122
Grp Sat Flow(s),veh/h/ln	1240	0	1750	1217	0	1745	1739	1735	1785	1739	1735	1547
Q Serve(g_s), s	11.5	0.0	6.2	2.4	0.0	5.2	0.0	12.9	12.9	0.0	12.4	4.3
Cycle Q Clear(g_c), s	16.7	0.0	6.2	8.6	0.0	5.2	0.0	12.9	12.9	0.0	12.4	4.3
Prop In Lane	1.00		0.24	1.00		0.26	1.00		0.13	1.00		1.00
Lane Grp Cap(c), veh/h	280	0	385	264	0	384	597	723	744	651	1523	679
V/C Ratio(X)	0.58	0.00	0.37	0.14	0.00	0.32	0.07	0.47	0.47	0.11	0.45	0.18
Avail Cap(c_a), veh/h	428	0	593	409	0	591	597	723	744	651	1523	679
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)	0.79	0.00	0.79	1.00	0.00	1.00	0.94	0.94	0.94	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.4	0.0	29.8	33.5	0.0	29.4	13.5	19.1	19.1	13.1	17.6	15.4
Incr Delay (d2), s/veh	1.5	0.0	0.5	0.2	0.0	0.5	0.0	2.1	2.0	0.1	1.0	0.6
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	3.5	0.0	2.6	0.7	0.0	2.2	0.5	5.2	5.3	0.8	4.7	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	38.0	0.0	30.3	33.7	0.0	29.9	13.5	21.2	21.1	13.2	18.6	16.0
LnGrp LOS	D		C	C		C	B	C	C	B	B	B
Approach Vol, veh/h	306			158			737			876		
Approach Delay, s/veh	34.4			30.8			20.7			17.8		
Approach LOS	C			C			C			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	23.7	42.0		24.3	21.7	44.0		24.3				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	8.5	37.5		30.5	6.5	39.5		30.5				
Max Q Clear Time (g_c+I1), s	2.0	14.9		18.7	2.0	14.4		10.6				
Green Ext Time (p_c), s	0.1	4.1		1.1	0.0	5.1		0.7				
Intersection Summary												
HCM 7th Control Delay, s/veh	22.3											
HCM 7th LOS	C											

Timings

2: Alameda Ave & Powhaton Rd

2033 Background AM

01/24/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	136	53	48	94	44	505	61	565	83
Future Volume (vph)	136	53	48	94	44	505	61	565	83
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA	Perm
Protected Phases		4		8	5	2	1	6	
Permitted Phases	4		8		2		6		6
Detector Phase	4	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)	22.5	22.5	22.5	22.5	9.5	22.5	9.5	22.5	22.5
Total Split (s)	36.0	36.0	36.0	36.0	12.0	40.0	14.0	42.0	42.0
Total Split (%)	40.0%	40.0%	40.0%	40.0%	13.3%	44.4%	15.6%	46.7%	46.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	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)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag					Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max	C-Max

Intersection Summary

Cycle Length: 90

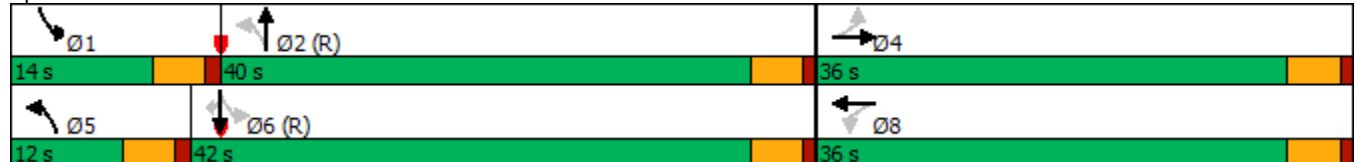
Actuated Cycle Length: 90

Offset: 28 (31%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 55

Control Type: Actuated-Coordinated

Splits and Phases: 2: Alameda Ave & Powhaton Rd
























HCM 6th Signalized Intersection Summary

2: Alameda Ave & Powhaton Rd

2033 Background AM

01/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	136	53	28	48	94	50	44	505	22	61	565	83
Future Volume (veh/h)	136	53	28	48	94	50	44	505	22	61	565	83
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	148	58	30	52	102	54	48	549	24	66	614	90
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	260	258	133	317	255	135	506	1957	85	565	2026	904
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.04	0.58	0.58	0.04	0.58	0.58
Sat Flow, veh/h	1201	1134	586	1278	1124	595	1739	3386	148	1739	3469	1547
Grp Volume(v), veh/h	148	0	88	52	0	156	48	281	292	66	614	90
Grp Sat Flow(s),veh/h/ln	1201	0	1720	1278	0	1719	1739	1735	1799	1739	1735	1547
Q Serve(g_s), s	10.7	0.0	3.7	3.1	0.0	6.9	1.0	7.3	7.4	1.3	8.1	2.3
Cycle Q Clear(g_c), s	17.7	0.0	3.7	6.9	0.0	6.9	1.0	7.3	7.4	1.3	8.1	2.3
Prop In Lane	1.00		0.34	1.00		0.35	1.00		0.08	1.00		1.00
Lane Grp Cap(c), veh/h	260	0	391	317	0	390	506	1003	1040	565	2026	904
V/C Ratio(X)	0.57	0.00	0.23	0.16	0.00	0.40	0.09	0.28	0.28	0.12	0.30	0.10
Avail Cap(c_a), veh/h	408	0	602	474	0	602	584	1003	1040	670	2026	904
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)	0.98	0.00	0.98	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.1	0.0	28.3	31.1	0.0	29.6	7.1	9.6	9.6	7.0	9.5	8.3
Incr Delay (d2), s/veh	1.9	0.0	0.3	0.2	0.0	0.7	0.1	0.7	0.7	0.1	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	3.2	0.0	1.6	1.0	0.0	2.9	0.3	2.6	2.7	0.4	2.7	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.0	0.0	28.6	31.4	0.0	30.2	7.2	10.3	10.2	7.1	9.8	8.5
LnGrp LOS	D	A	C	C	A	C	A	B	B	A	A	A
Approach Vol, veh/h	236			208			621			770		
Approach Delay, s/veh	35.1			30.5			10.0			9.4		
Approach LOS	D			C			B			A		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.5	56.5		24.9	8.0	57.1		24.9				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	9.5	35.5		31.5	7.5	37.5		31.5				
Max Q Clear Time (g_c+I1), s	3.3	9.4		19.7	3.0	10.1		8.9				
Green Ext Time (p_c), s	0.1	3.3		0.8	0.0	4.5		1.0				
Intersection Summary												
HCM 6th Ctrl Delay	15.3											
HCM 6th LOS	B											

Timings

2: Alameda Ave & Powhaton Rd

2033 Background PM

01/24/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	142	98	13	82	41	551	70	561	101
Future Volume (vph)	142	98	13	82	41	551	70	561	101
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA	Perm
Protected Phases		4		8	5	2	1	6	
Permitted Phases	4		8		2		6		6
Detector Phase	4	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)	22.5	22.5	22.5	22.5	9.5	22.5	9.5	22.5	22.5
Total Split (s)	35.0	35.0	35.0	35.0	12.0	41.0	14.0	43.0	43.0
Total Split (%)	38.9%	38.9%	38.9%	38.9%	13.3%	45.6%	15.6%	47.8%	47.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	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)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag					Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max	C-Max

Intersection Summary

Cycle Length: 90

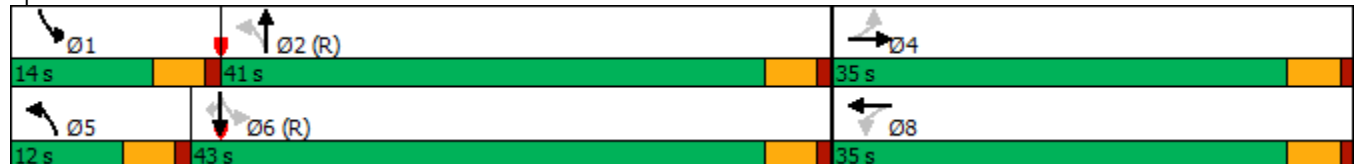
Actuated Cycle Length: 90

Offset: 89 (99%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 55

Control Type: Actuated-Coordinated

Splits and Phases: 2: Alameda Ave & Powhaton Rd
























HCM 6th Signalized Intersection Summary

2: Alameda Ave & Powhaton Rd

2033 Background PM

01/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	142	98	44	13	82	52	41	551	27	70	561	101
Future Volume (veh/h)	142	98	44	13	82	52	41	551	27	70	561	101
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	154	107	48	14	89	57	45	599	29	76	610	110
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	270	273	123	264	238	152	499	1933	93	537	2025	903
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.04	0.57	0.57	0.05	0.58	0.58
Sat Flow, veh/h	1212	1194	536	1203	1040	666	1739	3368	163	1739	3469	1547
Grp Volume(v), veh/h	154	0	155	14	0	146	45	308	320	76	610	110
Grp Sat Flow(s),veh/h/ln	1212	0	1729	1203	0	1706	1739	1735	1797	1739	1735	1547
Q Serve(g_s), s	11.0	0.0	6.8	0.9	0.0	6.5	0.9	8.3	8.3	1.6	8.0	2.9
Cycle Q Clear(g_c), s	17.5	0.0	6.8	7.7	0.0	6.5	0.9	8.3	8.3	1.6	8.0	2.9
Prop In Lane	1.00		0.31	1.00		0.39	1.00		0.09	1.00		1.00
Lane Grp Cap(c), veh/h	270	0	396	264	0	390	499	995	1031	537	2025	903
V/C Ratio(X)	0.57	0.00	0.39	0.05	0.00	0.37	0.09	0.31	0.31	0.14	0.30	0.12
Avail Cap(c_a), veh/h	403	0	586	396	0	578	579	995	1031	639	2025	903
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)	0.85	0.00	0.85	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.7	0.0	29.4	32.7	0.0	29.3	7.3	9.9	9.9	7.2	9.5	8.4
Incr Delay (d2), s/veh	1.6	0.0	0.5	0.1	0.0	0.6	0.1	0.8	0.8	0.1	0.4	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	0.0	2.9	0.3	0.0	2.7	0.3	3.0	3.1	0.5	2.7	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.3	0.0	29.9	32.7	0.0	29.9	7.4	10.7	10.7	7.3	9.9	8.7
LnGrp LOS	D	A	C	C	A	C	A	B	B	A	A	A
Approach Vol, veh/h	309			160			673			796		
Approach Delay, s/veh	34.1			30.1			10.5			9.4		
Approach LOS	C			C			B			A		
Timer - Assigned Phs	1	2	4		5	6	8					
Phs Duration (G+Y+Rc), s	8.8	56.1	25.1		7.9	57.0	25.1					
Change Period (Y+Rc), s	4.5	4.5	4.5		4.5	4.5	4.5					
Max Green Setting (Gmax), s	9.5	36.5	30.5		7.5	38.5	30.5					
Max Q Clear Time (g_c+I1), s	3.6	10.3	19.5		2.9	10.0	9.7					
Green Ext Time (p_c), s	0.1	3.7	1.1		0.0	4.5	0.8					
Intersection Summary												
HCM 6th Ctrl Delay	15.4											
HCM 6th LOS	B											

Timings 2: Alameda Ave & Powhatan Rd

2033 Total AM
09/20/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	138	54	57	96	44	577	61	597	90
Future Volume (vph)	138	54	57	96	44	577	61	597	90
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA	Perm
Protected Phases		4		8	5	2	1	6	
Permitted Phases	4		8		2		6		6
Detector Phase	4	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)	22.5	22.5	22.5	22.5	9.5	22.5	9.5	22.5	22.5
Total Split (s)	35.0	35.0	35.0	35.0	12.0	42.0	13.0	43.0	43.0
Total Split (%)	38.9%	38.9%	38.9%	38.9%	13.3%	46.7%	14.4%	47.8%	47.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	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)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag					Lag	Lead	Lag	Lead	Lead
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max	C-Max

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 17 (19%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 55

Control Type: Actuated-Coordinated






















Splits and Phases: 2: Alameda Ave & Powhatan Rd

	Ø2 (R)		Ø1		Ø4
42 s		13 s		35 s	
	Ø6 (R)		Ø5		Ø8
43 s		12 s		35 s	

HCM 7th Signalized Intersection Summary

2: Alameda Ave & Powhatan Rd

2033 Total AM
09/20/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	138	54	28	57	96	50	44	577	37	61	597	90
Future Volume (veh/h)	138	54	28	57	96	50	44	577	37	61	597	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	150	59	19	62	104	32	48	627	40	66	649	98
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	262	284	92	310	288	89	639	1380	88	670	1484	662
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.42	0.42	0.22	0.43	0.43
Sat Flow, veh/h	1223	1323	426	1290	1340	412	1739	3311	211	1739	3469	1547
Grp Volume(v), veh/h	150	0	78	62	0	136	48	328	339	66	649	98
Grp Sat Flow(s),veh/h/ln	1223	0	1749	1290	0	1752	1739	1735	1788	1739	1735	1547
Q Serve(g_s), s	10.7	0.0	3.3	3.7	0.0	5.9	0.0	12.2	12.3	0.0	11.9	3.5
Cycle Q Clear(g_c), s	16.7	0.0	3.3	7.0	0.0	5.9	0.0	12.2	12.3	0.0	11.9	3.5
Prop In Lane	1.00		0.24	1.00		0.24	1.00		0.12	1.00		1.00
Lane Grp Cap(c), veh/h	262	0	376	310	0	377	639	723	745	670	1484	662
V/C Ratio(X)	0.57	0.00	0.21	0.20	0.00	0.36	0.08	0.45	0.45	0.10	0.44	0.15
Avail Cap(c_a), veh/h	414	0	593	470	0	594	639	723	745	670	1484	662
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)	0.99	0.00	0.99	1.00	0.00	1.00	0.96	0.96	0.96	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.2	0.0	29.0	31.9	0.0	30.1	12.5	18.9	18.9	12.4	18.1	15.7
Incr Delay (d2), s/veh	1.9	0.0	0.3	0.3	0.0	0.6	0.0	2.0	1.9	0.1	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	3.3	0.0	1.4	1.2	0.0	2.5	0.5	4.9	5.1	0.7	4.6	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	39.1	0.0	29.3	32.2	0.0	30.6	12.5	20.9	20.8	12.5	19.1	16.2
LnGrp LOS	D		C	C		C	B	C	C	B	B	B
Approach Vol, veh/h	228			198			715			813		
Approach Delay, s/veh	35.7			31.1			20.3			18.2		
Approach LOS	D			C			C			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	24.2	42.0		23.8	23.2	43.0		23.8				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	8.5	37.5		30.5	7.5	38.5		30.5				
Max Q Clear Time (g_c+I1), s	2.0	14.3		18.7	2.0	13.9		9.0				
Green Ext Time (p_c), s	0.1	3.9		0.7	0.0	4.7		0.9				
Intersection Summary												
HCM 7th Control Delay, s/veh	22.3											
HCM 7th LOS	C											

Timings 2: Alameda Ave & Powhatan Rd

2033 Total PM
09/20/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	156	103	36	86	41	617	70	651	112
Future Volume (vph)	156	103	36	86	41	617	70	651	112
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA	Perm
Protected Phases		4		8	5	2	1	6	
Permitted Phases	4		8		2		6		6
Detector Phase	4	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)	22.5	22.5	22.5	22.5	9.5	22.5	9.5	22.5	22.5
Total Split (s)	35.0	35.0	35.0	35.0	11.0	42.0	13.0	44.0	44.0
Total Split (%)	38.9%	38.9%	38.9%	38.9%	12.2%	46.7%	14.4%	48.9%	48.9%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	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)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag					Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max	C-Max

Intersection Summary

Cycle Length: 90

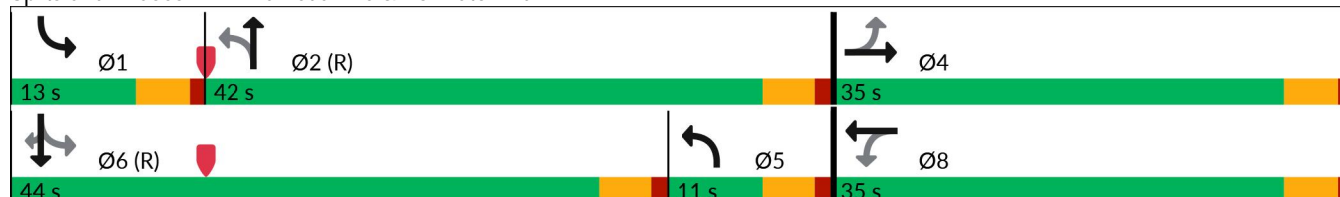
Actuated Cycle Length: 90

Offset: 76 (84%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 55

Control Type: Actuated-Coordinated






















Splits and Phases: 2: Alameda Ave & Powhatan Rd



HCM 7th Signalized Intersection Summary

2: Alameda Ave & Powhatan Rd

2033 Total PM
09/20/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	156	103	44	36	86	52	41	617	45	70	651	112
Future Volume (veh/h)	156	103	44	36	86	52	41	617	45	70	651	112
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	170	112	32	39	93	41	45	671	49	76	708	122
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	286	317	91	279	279	123	567	1871	136	327	1523	679
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.18	0.57	0.57	0.05	0.44	0.44
Sat Flow, veh/h	1226	1366	390	1215	1201	530	1739	3278	239	1739	3469	1547
Grp Volume(v), veh/h	170	0	144	39	0	134	45	355	365	76	708	122
Grp Sat Flow(s),veh/h/ln	1226	0	1756	1215	0	1731	1739	1735	1783	1739	1735	1547
Q Serve(g_s), s	12.1	0.0	6.2	2.5	0.0	5.8	0.0	9.9	10.0	2.4	12.9	4.3
Cycle Q Clear(g_c), s	17.9	0.0	6.2	8.7	0.0	5.8	0.0	9.9	10.0	2.4	12.9	4.3
Prop In Lane	1.00		0.22	1.00		0.31	1.00		0.13	1.00		1.00
Lane Grp Cap(c), veh/h	286	0	408	279	0	402	567	990	1017	327	1523	679
V/C Ratio(X)	0.60	0.00	0.35	0.14	0.00	0.33	0.08	0.36	0.36	0.23	0.46	0.18
Avail Cap(c_a), veh/h	416	0	595	408	0	586	567	990	1017	409	1523	679
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)	0.88	0.00	0.88	1.00	0.00	1.00	0.93	0.93	0.93	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.2	0.0	28.9	32.5	0.0	28.8	14.5	10.4	10.4	17.2	17.8	15.4
Incr Delay (d2), s/veh	1.7	0.0	0.5	0.2	0.0	0.5	0.1	0.9	0.9	0.4	1.0	0.6
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	3.7	0.0	2.6	0.7	0.0	2.4	0.5	3.6	3.7	0.9	5.0	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	37.9	0.0	29.4	32.8	0.0	29.2	14.6	11.4	11.4	17.6	18.8	16.0
LnGrp LOS	D		C	C		C	B	B	B	B	B	B
Approach Vol, veh/h	314			173			765			906		
Approach Delay, s/veh	34.0			30.0			11.6			18.3		
Approach LOS	C			C			B			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.8	55.9		25.4	20.6	44.0		25.4				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	8.5	37.5		30.5	6.5	39.5		30.5				
Max Q Clear Time (g_c+I1), s	4.4	12.0		19.9	2.0	14.9		10.7				
Green Ext Time (p_c), s	0.0	4.4		1.0	0.0	5.2		0.8				
Intersection Summary												
HCM 7th Control Delay, s/veh				19.1								
HCM 7th LOS				B								

Timings 3: Harvest Rd & Mississippi Ave

2031 Background AM
01/24/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	175	43	40	279	371	273
Future Volume (vph)	175	43	40	279	371	273
Turn Type	Prot	Perm	Perm	NA	NA	Perm
Protected Phases	4			2	6	
Permitted Phases		4	2			6
Detector Phase	4	4	2	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	35.0	35.0	55.0	55.0	55.0	55.0
Total Split (%)	38.9%	38.9%	61.1%	61.1%	61.1%	61.1%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	C-Max	C-Max	C-Max	C-Max

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 53 (59%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 45
Control Type: Actuated-Coordinated

Splits and Phases: 3: Harvest Rd & Mississippi Ave









HCM 6th Signalized Intersection Summary

3: Harvest Rd & Mississippi Ave

2031 Background AM

01/24/2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	175	43	40	279	371	273
Future Volume (veh/h)	175	43	40	279	371	273
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	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	190	47	43	303	403	297
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	5	5	5	5	5
Cap, veh/h	235	209	589	1397	1397	1184
Arrive On Green	0.14	0.14	0.76	0.76	0.76	0.76
Sat Flow, veh/h	1739	1547	728	1826	1826	1547
Grp Volume(v), veh/h	190	47	43	303	403	297
Grp Sat Flow(s),veh/h/ln	1739	1547	728	1826	1826	1547
Q Serve(g_s), s	9.5	2.4	1.7	4.2	6.0	5.0
Cycle Q Clear(g_c), s	9.5	2.4	7.7	4.2	6.0	5.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	235	209	589	1397	1397	1184
V/C Ratio(X)	0.81	0.22	0.07	0.22	0.29	0.25
Avail Cap(c_a), veh/h	589	524	589	1397	1397	1184
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.95	0.95
Uniform Delay (d), s/veh	37.8	34.7	4.4	3.0	3.2	3.1
Incr Delay (d2), s/veh	6.5	0.5	0.2	0.4	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	0.9	0.2	1.0	1.7	1.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	44.3	35.3	4.6	3.3	3.7	3.6
LnGrp LOS	D	D	A	A	A	A
Approach Vol, veh/h	237			346	700	
Approach Delay, s/veh	42.5			3.5	3.6	
Approach LOS	D			A	A	
Timer - Assigned Phs	2		4		6	
Phs Duration (G+Y+Rc), s	73.3		16.7		73.3	
Change Period (Y+Rc), s	4.5		4.5		4.5	
Max Green Setting (Gmax), s	50.5		30.5		50.5	
Max Q Clear Time (g_c+I1), s	9.7		11.5		8.0	
Green Ext Time (p_c), s	2.1		0.6		4.0	
Intersection Summary						
HCM 6th Ctrl Delay			10.8			
HCM 6th LOS			B			

Timings 3: Harvest Rd & Mississippi Ave

2031 Background PM

01/24/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	344	29	32	369	259	255
Future Volume (vph)	344	29	32	369	259	255
Turn Type	Prot	Perm	Perm	NA	NA	Perm
Protected Phases	4			2	6	
Permitted Phases		4	2			6
Detector Phase	4	4	2	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	44.0	44.0	46.0	46.0	46.0	46.0
Total Split (%)	48.9%	48.9%	51.1%	51.1%	51.1%	51.1%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	C-Max	C-Max	C-Max	C-Max

Intersection Summary

Cycle Length: 90

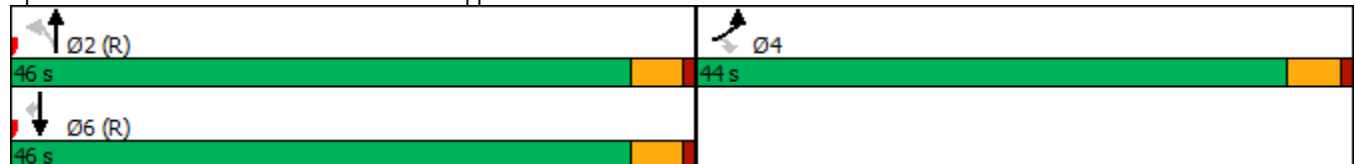
Actuated Cycle Length: 90

Offset: 57 (63%), Referenced to phase 2:NBTL and 6:SBT, Start of Green

Natural Cycle: 45

Control Type: Actuated-Coordinated

Splits and Phases: 3: Harvest Rd & Mississippi Ave









HCM 6th Signalized Intersection Summary

3: Harvest Rd & Mississippi Ave

2031 Background PM

01/24/2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	344	29	32	369	259	255
Future Volume (veh/h)	344	29	32	369	259	255
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	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	374	32	35	401	282	277
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	5	5	5	5	5
Cap, veh/h	423	376	717	1200	1200	1017
Arrive On Green	0.24	0.24	0.66	0.66	0.66	0.66
Sat Flow, veh/h	1739	1547	1071	1826	1826	1547
Grp Volume(v), veh/h	374	32	35	401	282	277
Grp Sat Flow(s),veh/h/ln	1739	1547	1071	1826	1826	1547
Q Serve(g_s), s	18.7	1.4	1.2	8.7	5.6	6.7
Cycle Q Clear(g_c), s	18.7	1.4	6.9	8.7	5.6	6.7
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	423	376	717	1200	1200	1017
V/C Ratio(X)	0.88	0.09	0.05	0.33	0.24	0.27
Avail Cap(c_a), veh/h	763	679	717	1200	1200	1017
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.96	0.96
Uniform Delay (d), s/veh	32.8	26.3	7.7	6.8	6.3	6.5
Incr Delay (d2), s/veh	6.3	0.1	0.1	0.8	0.4	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.4	0.5	0.3	2.8	2.0	2.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	39.2	26.4	7.8	7.5	6.7	7.1
LnGrp LOS	D	C	A	A	A	A
Approach Vol, veh/h	406			436	559	
Approach Delay, s/veh	38.1			7.6	6.9	
Approach LOS	D			A	A	
Timer - Assigned Phs	2		4		6	
Phs Duration (G+Y+Rc), s	63.6		26.4		63.6	
Change Period (Y+Rc), s	4.5		4.5		4.5	
Max Green Setting (Gmax), s	41.5		39.5		41.5	
Max Q Clear Time (g_c+l1), s	10.7		20.7		8.7	
Green Ext Time (p_c), s	2.5		1.2		2.8	
Intersection Summary						
HCM 6th Ctrl Delay			16.2			
HCM 6th LOS			B			

Timings 3: Harvest Rd & Mississippi Ave

2031 Total AM
09/20/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	175	91	113	434	456	273
Future Volume (vph)	175	91	113	434	456	273
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)	22.5	22.5	9.5	22.5	22.5	22.5
Total Split (s)	26.0	26.0	12.0	64.0	52.0	52.0
Total Split (%)	28.9%	28.9%	13.3%	71.1%	57.8%	57.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag			Lag		Lead	Lead
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	C-Max

Intersection Summary

Cycle Length: 90

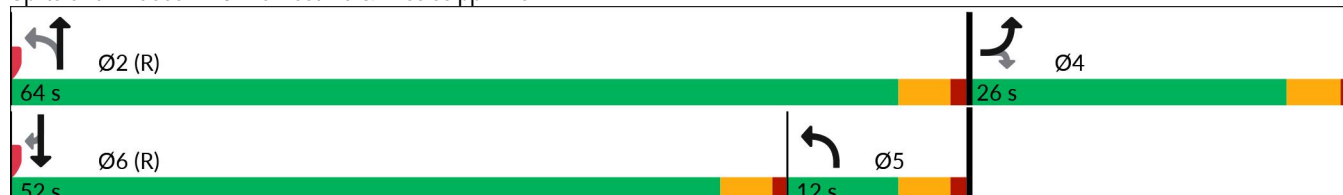
Actuated Cycle Length: 90

Offset: 78 (87%), Referenced to phase 2:NBTL and 6:SBT, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Splits and Phases: 3: Harvest Rd & Mississippi Ave



HCM 7th Signalized Intersection Summary 3: Harvest Rd & Mississippi Ave

2031 Total AM
09/20/2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰	↱	↰	↗	↗	↱
Traffic Volume (veh/h)	175	91	113	434	456	273
Future Volume (veh/h)	175	91	113	434	456	273
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
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	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	190	99	123	472	496	297
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	5	5	5	5	5
Cap, veh/h	235	209	743	2653	964	817
Arrive On Green	0.14	0.14	0.37	1.00	1.00	1.00
Sat Flow, veh/h	1739	1547	1739	3561	1826	1547
Grp Volume(v), veh/h	190	99	123	472	496	297
Grp Sat Flow(s),veh/h/ln	1739	1547	1739	1735	1826	1547
Q Serve(g_s), s	9.5	5.3	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	9.5	5.3	0.0	0.0	0.0	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	235	209	743	2653	964	817
V/C Ratio(X)	0.81	0.47	0.17	0.18	0.51	0.36
Avail Cap(c_a), veh/h	415	370	743	2653	964	817
HCM Platoon Ratio	1.00	1.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	0.99	0.99	0.85	0.85
Uniform Delay (d), s/veh	37.8	36.0	3.8	0.0	0.0	0.0
Incr Delay (d2), s/veh	6.5	1.7	0.1	0.1	1.7	1.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	4.7	0.5	0.1	0.4	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	44.3	37.6	3.9	0.1	1.7	1.1
LnGrp LOS	D	D	A	A	A	A
Approach Vol, veh/h	289			595	793	
Approach Delay, s/veh	42.0			0.9	1.4	
Approach LOS	D			A	A	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		73.3		16.7	21.3	52.0
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		59.5		21.5	7.5	47.5
Max Q Clear Time (g_c+I1), s		2.0		11.5	2.0	2.0
Green Ext Time (p_c), s		3.1		0.6	0.1	4.9
Intersection Summary						
HCM 7th Control Delay, s/veh			8.2			
HCM 7th LOS			A			

Timings 3: Harvest Rd & Mississippi Ave

2031 Total PM
09/20/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	344	142	134	545	471	255
Future Volume (vph)	344	142	134	545	471	255
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)	22.5	22.5	9.5	22.5	22.5	22.5
Total Split (s)	35.0	35.0	11.6	55.0	43.4	43.4
Total Split (%)	38.9%	38.9%	12.9%	61.1%	48.2%	48.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag			Lag		Lead	Lead
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	C-Max

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 84 (93%), Referenced to phase 2:NBTL and 6:SBT, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Splits and Phases: 3: Harvest Rd & Mississippi Ave



HCM 7th Signalized Intersection Summary

3: Harvest Rd & Mississippi Ave

2031 Total PM
09/20/2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰	↱	↰	↗	↗	↰
Traffic Volume (veh/h)	344	142	134	545	471	255
Future Volume (veh/h)	344	142	134	545	471	255
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
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	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	374	154	146	592	512	277
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	5	5	5	5	5
Cap, veh/h	424	377	599	2276	789	669
Arrive On Green	0.24	0.24	0.35	1.00	0.86	0.86
Sat Flow, veh/h	1739	1547	1739	3561	1826	1547
Grp Volume(v), veh/h	374	154	146	592	512	277
Grp Sat Flow(s),veh/h/ln	1739	1547	1739	1735	1826	1547
Q Serve(g_s), s	18.6	7.5	0.0	0.0	7.8	3.4
Cycle Q Clear(g_c), s	18.6	7.5	0.0	0.0	7.8	3.4
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	424	377	599	2276	789	669
V/C Ratio(X)	0.88	0.41	0.24	0.26	0.65	0.41
Avail Cap(c_a), veh/h	589	524	599	2276	789	669
HCM Platoon Ratio	1.00	1.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	0.98	0.98	0.86	0.86
Uniform Delay (d), s/veh	32.8	28.6	10.8	0.0	4.0	3.7
Incr Delay (d2), s/veh	11.2	0.7	0.2	0.3	3.5	1.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.0	6.8	1.3	0.1	2.3	1.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	43.9	29.3	11.0	0.3	7.5	5.3
LnGrp LOS	D	C	B	A	A	A
Approach Vol, veh/h	528			738	789	
Approach Delay, s/veh	39.7			2.4	6.8	
Approach LOS	D			A	A	
Timer - Assigned Phs	2			4	5	6
Phs Duration (G+Y+Rc), s	63.5			26.5	20.1	43.4
Change Period (Y+Rc), s	4.5			4.5	4.5	4.5
Max Green Setting (Gmax), s	50.5			30.5	7.1	38.9
Max Q Clear Time (g_c+I1), s	2.0			20.6	2.0	9.8
Green Ext Time (p_c), s	4.1			1.3	0.1	4.7
Intersection Summary						
HCM 7th Control Delay, s/veh			13.6			
HCM 7th LOS			B			

Timings 3: Harvest Rd & Mississippi Ave

2033 Background AM

01/24/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	195	53	56	429	427	278
Future Volume (vph)	195	53	56	429	427	278
Turn Type	Prot	Perm	Perm	NA	NA	Perm
Protected Phases	4			2	6	
Permitted Phases		4	2			6
Detector Phase	4	4	2	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	33.0	33.0	57.0	57.0	57.0	57.0
Total Split (%)	36.7%	36.7%	63.3%	63.3%	63.3%	63.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	C-Max	C-Max	C-Max	C-Max

Intersection Summary

Cycle Length: 90

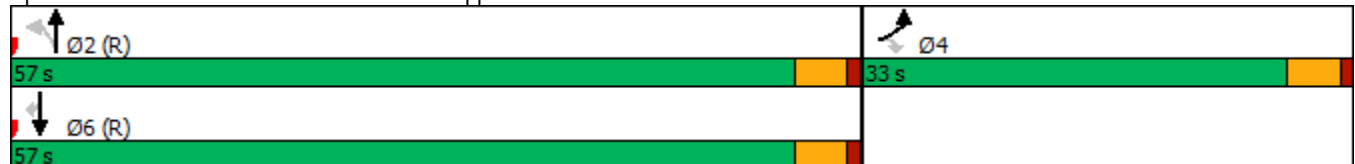
Actuated Cycle Length: 90

Offset: 44 (49%), Referenced to phase 2:NBTL and 6:SBT, Start of Green

Natural Cycle: 45

Control Type: Actuated-Coordinated

Splits and Phases: 3: Harvest Rd & Mississippi Ave









HCM 6th Signalized Intersection Summary

3: Harvest Rd & Mississippi Ave

2033 Background AM

01/24/2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	195	53	56	429	427	278
Future Volume (veh/h)	195	53	56	429	427	278
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	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	212	58	61	466	464	302
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	5	5	5	5	5
Cap, veh/h	258	229	537	1373	1373	1163
Arrive On Green	0.15	0.15	0.75	0.75	0.75	0.75
Sat Flow, veh/h	1739	1547	685	1826	1826	1547
Grp Volume(v), veh/h	212	58	61	466	464	302
Grp Sat Flow(s),veh/h/ln	1739	1547	685	1826	1826	1547
Q Serve(g_s), s	10.6	3.0	2.9	7.7	7.6	5.4
Cycle Q Clear(g_c), s	10.6	3.0	10.5	7.7	7.6	5.4
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	258	229	537	1373	1373	1163
V/C Ratio(X)	0.82	0.25	0.11	0.34	0.34	0.26
Avail Cap(c_a), veh/h	551	490	537	1373	1373	1163
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.92	0.92
Uniform Delay (d), s/veh	37.2	33.9	5.5	3.7	3.7	3.4
Incr Delay (d2), s/veh	6.5	0.6	0.4	0.7	0.6	0.5
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	1.1	0.4	1.9	2.3	1.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	43.7	34.5	5.9	4.4	4.3	3.9
LnGrp LOS	D	C	A	A	A	A
Approach Vol, veh/h	270			527	766	
Approach Delay, s/veh	41.7			4.6	4.2	
Approach LOS	D			A	A	
Timer - Assigned Phs	2			4		6
Phs Duration (G+Y+Rc), s	72.2			17.8		72.2
Change Period (Y+Rc), s	4.5			4.5		4.5
Max Green Setting (Gmax), s	52.5			28.5		52.5
Max Q Clear Time (g_c+I1), s	12.5			12.6		9.6
Green Ext Time (p_c), s	3.5			0.7		4.6
Intersection Summary						
HCM 6th Ctrl Delay			10.8			
HCM 6th LOS			B			

Timings 3: Harvest Rd & Mississippi Ave

2033 Background PM

01/24/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	384	30	32	493	334	320
Future Volume (vph)	384	30	32	493	334	320
Turn Type	Prot	Perm	Perm	NA	NA	Perm
Protected Phases	4			2	6	
Permitted Phases		4	2			6
Detector Phase	4	4	2	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	41.0	41.0	49.0	49.0	49.0	49.0
Total Split (%)	45.6%	45.6%	54.4%	54.4%	54.4%	54.4%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	C-Max	C-Max	C-Max	C-Max

Intersection Summary

Cycle Length: 90

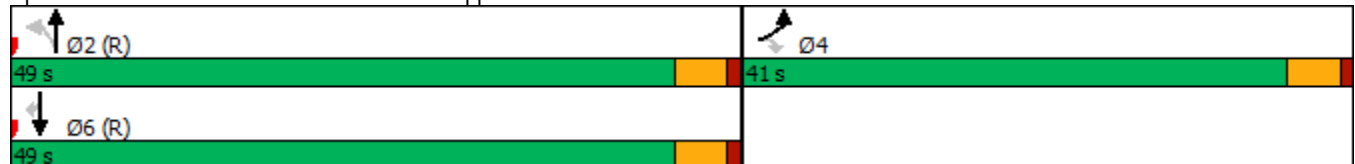
Actuated Cycle Length: 90

Offset: 57 (63%), Referenced to phase 2:NBTL and 6:SBT, Start of Green

Natural Cycle: 55

Control Type: Actuated-Coordinated

Splits and Phases: 3: Harvest Rd & Mississippi Ave









HCM 6th Signalized Intersection Summary

3: Harvest Rd & Mississippi Ave

2033 Background PM

01/24/2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	384	30	32	493	334	320
Future Volume (veh/h)	384	30	32	493	334	320
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	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	417	33	35	536	363	348
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	5	5	5	5	5
Cap, veh/h	465	414	619	1155	1155	979
Arrive On Green	0.27	0.27	0.63	0.63	0.63	0.63
Sat Flow, veh/h	1739	1547	995	1826	1826	1547
Grp Volume(v), veh/h	417	33	35	536	363	348
Grp Sat Flow(s),veh/h/ln	1739	1547	995	1826	1826	1547
Q Serve(g_s), s	20.8	1.4	1.5	13.7	8.2	9.6
Cycle Q Clear(g_c), s	20.8	1.4	9.7	13.7	8.2	9.6
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	465	414	619	1155	1155	979
V/C Ratio(X)	0.90	0.08	0.06	0.46	0.31	0.36
Avail Cap(c_a), veh/h	705	628	619	1155	1155	979
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.93	0.93
Uniform Delay (d), s/veh	31.8	24.7	9.8	8.6	7.6	7.8
Incr Delay (d2), s/veh	10.0	0.1	0.2	1.3	0.7	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.8	0.5	0.3	4.7	3.1	3.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	41.8	24.8	10.0	9.9	8.2	8.8
LnGrp LOS	D	C	A	A	A	A
Approach Vol, veh/h	450			571	711	
Approach Delay, s/veh	40.5			9.9	8.5	
Approach LOS	D			A	A	
Timer - Assigned Phs	2		4		6	
Phs Duration (G+Y+Rc), s	61.4		28.6		61.4	
Change Period (Y+Rc), s	4.5		4.5		4.5	
Max Green Setting (Gmax), s	44.5		36.5		44.5	
Max Q Clear Time (g_c+I1), s	15.7		22.8		11.6	
Green Ext Time (p_c), s	3.5		1.2		3.8	
Intersection Summary						
HCM 6th Ctrl Delay			17.3			
HCM 6th LOS			B			

Timings 3: Harvest Rd & Mississippi Ave

2033 Total AM
09/20/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	195	121	160	611	520	278
Future Volume (vph)	195	121	160	611	520	278
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)	22.5	22.5	9.5	22.5	22.5	22.5
Total Split (s)	32.0	32.0	20.0	58.0	38.0	38.0
Total Split (%)	35.6%	35.6%	22.2%	64.4%	42.2%	42.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	C-Max

Intersection Summary

Cycle Length: 90

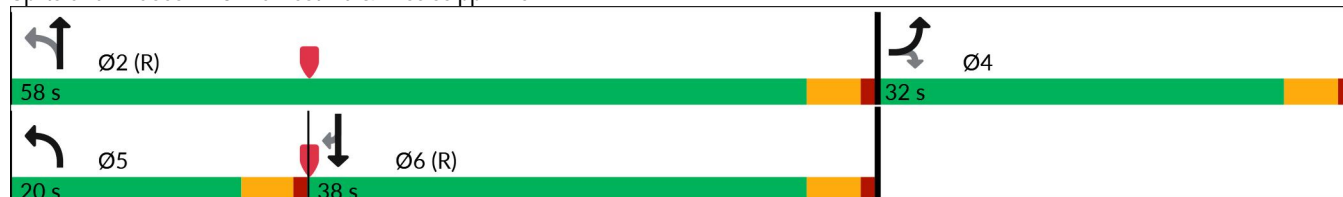
Actuated Cycle Length: 90

Offset: 58 (64%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 55

Control Type: Actuated-Coordinated

Splits and Phases: 3: Harvest Rd & Mississippi Ave



HCM 7th Signalized Intersection Summary 3: Harvest Rd & Mississippi Ave

2033 Total AM
09/20/2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↶	↷	↶	↗↗	↗↗	↷
Traffic Volume (veh/h)	195	121	160	611	520	278
Future Volume (veh/h)	195	121	160	611	520	278
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
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	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	212	132	174	664	565	302
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	5	5	5	5	5
Cap, veh/h	262	233	580	2600	2227	993
Arrive On Green	0.15	0.15	0.12	1.00	1.00	1.00
Sat Flow, veh/h	1739	1547	1739	3561	3561	1547
Grp Volume(v), veh/h	212	132	174	664	565	302
Grp Sat Flow(s),veh/h/ln	1739	1547	1739	1735	1735	1547
Q Serve(g_s), s	10.6	7.1	2.9	0.0	0.0	0.0
Cycle Q Clear(g_c), s	10.6	7.1	2.9	0.0	0.0	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	262	233	580	2600	2227	993
V/C Ratio(X)	0.81	0.57	0.30	0.26	0.25	0.30
Avail Cap(c_a), veh/h	531	473	780	2600	2227	993
HCM Platoon Ratio	1.00	1.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	0.98	0.98	0.93	0.93
Uniform Delay (d), s/veh	37.0	35.5	3.7	0.0	0.0	0.0
Incr Delay (d2), s/veh	5.9	2.2	0.3	0.2	0.3	0.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	6.2	0.7	0.1	0.1	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	42.9	37.7	4.0	0.2	0.3	0.7
LnGrp LOS	D	D	A	A	A	A
Approach Vol, veh/h	344			838	867	
Approach Delay, s/veh	40.9			1.0	0.4	
Approach LOS	D			A	A	
Timer - Assigned Phs	2		4		5	6
Phs Duration (G+Y+Rc), s	72.0		18.0		9.7	62.3
Change Period (Y+Rc), s	4.5		4.5		4.5	4.5
Max Green Setting (Gmax), s	53.5		27.5		15.5	33.5
Max Q Clear Time (g_c+l1), s	2.0		12.6		4.9	2.0
Green Ext Time (p_c), s	4.7		0.9		0.3	5.5
Intersection Summary						
HCM 7th Control Delay, s/veh			7.5			
HCM 7th LOS			A			

Timings 3: Harvest Rd & Mississippi Ave

2033 Total PM
09/20/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	384	170	152	685	571	320
Future Volume (vph)	384	170	152	685	571	320
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)	22.5	22.5	9.5	22.5	22.5	22.5
Total Split (s)	41.0	41.0	16.0	49.0	33.0	33.0
Total Split (%)	45.6%	45.6%	17.8%	54.4%	36.7%	36.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag			Lag		Lead	Lead
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	C-Max

Intersection Summary

Cycle Length: 90

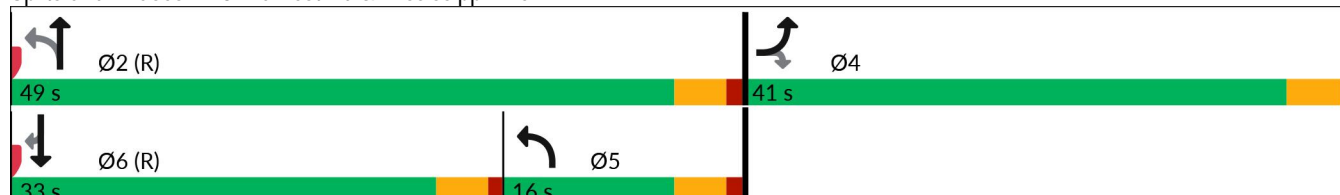
Actuated Cycle Length: 90

Offset: 20 (22%), Referenced to phase 2:NBTL and 6:SBT, Start of Green

Natural Cycle: 55

Control Type: Actuated-Coordinated

Splits and Phases: 3: Harvest Rd & Mississippi Ave






HCM 7th Signalized Intersection Summary

3: Harvest Rd & Mississippi Ave

2033 Total PM
09/20/2024






Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰	↱	↰	↗	↗	↱
Traffic Volume (veh/h)	384	170	152	685	571	320
Future Volume (veh/h)	384	170	152	685	571	320
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
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	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	417	185	165	745	621	348
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	5	5	5	5	5
Cap, veh/h	472	420	686	2180	1099	490
Arrive On Green	0.27	0.27	0.52	1.00	0.63	0.63
Sat Flow, veh/h	1739	1547	1739	3561	3561	1547
Grp Volume(v), veh/h	417	185	165	745	621	348
Grp Sat Flow(s),veh/h/ln	1739	1547	1739	1735	1735	1547
Q Serve(g_s), s	20.7	8.9	0.0	0.0	9.2	13.5
Cycle Q Clear(g_c), s	20.7	8.9	0.0	0.0	9.2	13.5
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	472	420	686	2180	1099	490
V/C Ratio(X)	0.88	0.44	0.24	0.34	0.57	0.71
Avail Cap(c_a), veh/h	705	628	686	2180	1099	490
HCM Platoon Ratio	1.00	1.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	0.97	0.97	0.93	0.93
Uniform Delay (d), s/veh	31.4	27.1	10.0	0.0	13.0	13.7
Incr Delay (d2), s/veh	8.9	0.7	0.2	0.4	2.0	7.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.6	8.1	1.3	0.1	2.9	4.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	40.3	27.8	10.2	0.4	14.9	21.6
LnGrp LOS	D	C	B	A	B	C
Approach Vol, veh/h	602			910	969	
Approach Delay, s/veh	36.4			2.2	17.3	
Approach LOS	D			A	B	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		61.1		28.9	28.1	33.0
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		44.5		36.5	11.5	28.5
Max Q Clear Time (g_c+I1), s		2.0		22.7	2.0	15.5
Green Ext Time (p_c), s		5.4		1.8	0.3	4.6
Intersection Summary						
HCM 7th Control Delay, s/veh			16.4			
HCM 7th LOS			B			

Intersection						
Int Delay, s/veh	4.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	18	8	10	14	0
Future Vol, veh/h	1	18	8	10	14	0
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	64	64	75	75	81	81
Heavy Vehicles, %	2	2	28	28	31	31
Mvmt Flow	2	28	11	13	17	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	52	17	17	0	-	0
Stage 1	17	-	-	-	-	-
Stage 2	35	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.38	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.452	-	-	-
Pot Cap-1 Maneuver	957	1062	1446	-	-	-
Stage 1	1006	-	-	-	-	-
Stage 2	987	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	949	1062	1446	-	-	-
Mov Cap-2 Maneuver	949	-	-	-	-	-
Stage 1	998	-	-	-	-	-
Stage 2	987	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	8.5	3.3		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1446	-	1055	-	-	
HCM Lane V/C Ratio	0.007	-	0.028	-	-	
HCM Control Delay (s)	7.5	0	8.5	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0.1	-	-	

Intersection




Int Delay, s/veh 4.7




Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	19	26	20	11	0
Future Vol, veh/h	0	19	26	20	11	0
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	64	64	73	73	69	69
Heavy Vehicles, %	2	2	2	2	27	27
Mvmt Flow	0	30	36	27	16	0

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	115	16	0
Stage 1	16	-	-
Stage 2	99	-	-
Critical Hdwy	6.42	6.22	4.12
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	2.218
Pot Cap-1 Maneuver	881	1063	1602
Stage 1	1007	-	-
Stage 2	925	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	861	1063	1602
Mov Cap-2 Maneuver	861	-	-
Stage 1	984	-	-
Stage 2	925	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.5	4.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1602	-	1063	-	-
HCM Lane V/C Ratio	0.022	-	0.028	-	-
HCM Control Delay (s)	7.3	0	8.5	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Intersection						
Int Delay, s/veh	3.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	19	11	16	22	1
Future Vol, veh/h	2	19	11	16	22	1
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	28	28	31	31
Mvmt Flow	2	21	12	17	24	1
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	66	25	25	0	-	0
Stage 1	25	-	-	-	-	-
Stage 2	41	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.38	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.452	-	-	-
Pot Cap-1 Maneuver	939	1051	1436	-	-	-
Stage 1	998	-	-	-	-	-
Stage 2	981	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	931	1051	1436	-	-	-
Mov Cap-2 Maneuver	931	-	-	-	-	-
Stage 1	990	-	-	-	-	-
Stage 2	981	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	8.5	3.1		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1436	-	1038	-	-	
HCM Lane V/C Ratio	0.008	-	0.022	-	-	
HCM Control Delay (s)	7.5	0	8.5	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0.1	-	-	

Intersection						
Int Delay, s/veh	3.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	20	29	27	35	1
Future Vol, veh/h	1	20	29	27	35	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	27	27
Mvmt Flow	1	22	32	29	38	1
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	132	39	39	0	-	0
Stage 1	39	-	-	-	-	-
Stage 2	93	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	862	1033	1571	-	-	-
Stage 1	983	-	-	-	-	-
Stage 2	931	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	844	1033	1571	-	-	-
Mov Cap-2 Maneuver	844	-	-	-	-	-
Stage 1	962	-	-	-	-	-
Stage 2	931	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	8.6	3.8		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1571	-	1022	-	-	
HCM Lane V/C Ratio	0.02	-	0.022	-	-	
HCM Control Delay (s)	7.3	0	8.6	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-	

Intersection												
Int Delay, s/veh	3.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↵	↵		↵	↵	
Traffic Vol, veh/h	2	1	21	7	2	11	15	62	3	3	44	1
Future Vol, veh/h	2	1	21	7	2	11	15	62	3	3	44	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	-	-	-	-	-	-	275	-	-	275	-	-
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	28	28	2	2	31	31
Mvmt Flow	2	1	23	8	2	12	16	67	3	3	48	1

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	163	157	49	168	156	69	49	0	0	70	0	0
Stage 1	55	55	-	101	101	-	-	-	-	-	-	-
Stage 2	108	102	-	67	55	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.38	-	-	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	2.452	-	-	2.218	-	-
Pot Cap-1 Maneuver	802	735	1020	796	736	994	1406	-	-	1531	-	-
Stage 1	957	849	-	905	811	-	-	-	-	-	-	-
Stage 2	897	811	-	943	849	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	783	725	1020	770	726	994	1406	-	-	1531	-	-
Mov Cap-2 Maneuver	767	704	-	762	703	-	-	-	-	-	-	-
Stage 1	946	847	-	895	802	-	-	-	-	-	-	-
Stage 2	874	802	-	919	847	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s/v	8.8		9.3		1.4		0.5	
HCM LOS	A		A					




Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1406	-	-	975	866	1531	-
HCM Lane V/C Ratio	0.012	-	-	0.027	0.025	0.002	-
HCM Control Delay (s/veh)	7.6	-	-	8.8	9.3	7.4	-
HCM Lane LOS	A	-	-	A	A	A	-
HCM 95th %tile Q (veh)	0	-	-	0.1	0.1	0	-




Intersection												
Int Delay, s/veh	3.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↖		↗	↖	
Traffic Vol, veh/h	1	3	26	7	2	10	33	64	13	12	71	1
Future Vol, veh/h	1	3	26	7	2	10	33	64	13	12	71	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	-	-	-	-	-	-	275	-	-	275	-	-
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	27	27
Mvmt Flow	1	3	28	8	2	11	36	70	14	13	77	1

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	260	260	78	268	253	77	78	0	0	84	0	0
Stage 1	104	104	-	149	149	-	-	-	-	-	-	-
Stage 2	156	156	-	119	104	-	-	-	-	-	-	-
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	693	645	983	685	650	984	1520	-	-	1513	-	-
Stage 1	902	809	-	854	774	-	-	-	-	-	-	-
Stage 2	846	769	-	885	809	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	667	624	983	647	629	984	1520	-	-	1513	-	-
Mov Cap-2 Maneuver	684	633	-	671	634	-	-	-	-	-	-	-
Stage 1	880	802	-	834	755	-	-	-	-	-	-	-
Stage 2	814	751	-	849	802	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s/v	9.1		9.6		2.2		1.1	
HCM LOS	A		A					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1520	-	-	919	800	1513	-
HCM Lane V/C Ratio	0.024	-	-	0.035	0.026	0.009	-
HCM Control Delay (s/veh)	7.4	-	-	9.1	9.6	7.4	-
HCM Lane LOS	A	-	-	A	A	A	-
HCM 95th %tile Q (veh)	0.1	-	-	0.1	0.1	0	-

Intersection						
Int Delay, s/veh	3.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	20	12	16	23	2
Future Vol, veh/h	3	20	12	16	23	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	28	28	31	31
Mvmt Flow	3	22	13	17	25	2
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	69	26	27	0	-	0
Stage 1	26	-	-	-	-	-
Stage 2	43	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.38	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.452	-	-	-
Pot Cap-1 Maneuver	936	1050	1434	-	-	-
Stage 1	997	-	-	-	-	-
Stage 2	979	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	928	1050	1434	-	-	-
Mov Cap-2 Maneuver	928	-	-	-	-	-
Stage 1	988	-	-	-	-	-
Stage 2	979	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	8.6	3.2		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1434	-	1032	-	-	
HCM Lane V/C Ratio	0.009	-	0.024	-	-	
HCM Control Delay (s)	7.5	0	8.6	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0.1	-	-	

Intersection						
Int Delay, s/veh	3.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	21	30	28	37	2
Future Vol, veh/h	2	21	30	28	37	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	27	27
Mvmt Flow	2	23	33	30	40	2
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	137	41	42	0	-	0
Stage 1	41	-	-	-	-	-
Stage 2	96	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	856	1030	1567	-	-	-
Stage 1	981	-	-	-	-	-
Stage 2	928	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	838	1030	1567	-	-	-
Mov Cap-2 Maneuver	838	-	-	-	-	-
Stage 1	960	-	-	-	-	-
Stage 2	928	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	8.7	3.8		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1567	-	1010	-	-	
HCM Lane V/C Ratio	0.021	-	0.025	-	-	
HCM Control Delay (s)	7.3	0	8.7	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-	

Intersection												
Int Delay, s/veh	2.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		+			+		+	+		+	+	
Traffic Vol, veh/h	3	1	38	10	2	14	32	127	4	4	83	2
Future Vol, veh/h	3	1	38	10	2	14	32	127	4	4	83	2
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	-	-	-	-	-	-	275	-	-	275	-	-
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	28	28	2	2	31	31
Mvmt Flow	3	1	41	11	2	15	35	138	4	4	90	2

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	318	311	91	330	310	140	92	0	0	142	0	0
Stage 1	99	99	-	210	210	-	-	-	-	-	-	-
Stage 2	219	212	-	120	100	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.38	-	-	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	2.452	-	-	2.218	-	-
Pot Cap-1 Maneuver	635	604	967	623	605	908	1354	-	-	1441	-	-
Stage 1	907	813	-	792	728	-	-	-	-	-	-	-
Stage 2	783	727	-	884	812	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	609	586	967	583	587	908	1354	-	-	1441	-	-
Mov Cap-2 Maneuver	638	606	-	626	603	-	-	-	-	-	-	-
Stage 1	883	811	-	771	709	-	-	-	-	-	-	-
Stage 2	748	708	-	843	810	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s/v	9.1		10		1.5		0.3	
HCM LOS	A		B					




Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1354	-	-	920	749	1441	-
HCM Lane V/C Ratio	0.026	-	-	0.05	0.038	0.003	-
HCM Control Delay (s/veh)	7.7	-	-	9.1	10	7.5	-
HCM Lane LOS	A	-	-	A	B	A	-
HCM 95th %tile Q (veh)	0.1	-	-	0.2	0.1	0	-




Intersection												
Int Delay, s/veh	2.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↖		↗	↖	
Traffic Vol, veh/h	2	3	59	7	2	13	68	160	18	14	176	2
Future Vol, veh/h	2	3	59	7	2	13	68	160	18	14	176	2
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	-	-	-	-	-	-	275	-	-	275	-	-
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	27	27
Mvmt Flow	2	3	64	8	2	14	74	174	20	15	191	2

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	562	564	192	588	555	184	193	0	0	194	0	0
Stage 1	222	222	-	332	332	-	-	-	-	-	-	-
Stage 2	340	342	-	256	223	-	-	-	-	-	-	-
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	438	435	850	421	440	858	1380	-	-	1379	-	-
Stage 1	780	720	-	681	644	-	-	-	-	-	-	-
Stage 2	675	638	-	749	719	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	408	407	850	368	412	858	1380	-	-	1379	-	-
Mov Cap-2 Maneuver	487	476	-	453	472	-	-	-	-	-	-	-
Stage 1	738	712	-	644	609	-	-	-	-	-	-	-
Stage 2	626	604	-	682	711	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s/v	9.9		10.9		2.1		0.6	
HCM LOS	A		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1380	-	-	802	631	1379	-
HCM Lane V/C Ratio	0.054	-	-	0.087	0.038	0.011	-
HCM Control Delay (s/veh)	7.8	-	-	9.9	10.9	7.6	-
HCM Lane LOS	A	-	-	A	B	A	-
HCM 95th %tile Q (veh)	0.2	-	-	0.3	0.1	0	-

Intersection						
Int Delay, s/veh	3.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	20	12	16	23	2
Future Vol, veh/h	3	20	12	16	23	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	3	22	13	17	25	2
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	69	26	27	0	-	0
Stage 1	26	-	-	-	-	-
Stage 2	43	-	-	-	-	-
Critical Hdwy	6.45	6.25	4.15	-	-	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	2.245	-	-	-
Pot Cap-1 Maneuver	928	1041	1568	-	-	-
Stage 1	989	-	-	-	-	-
Stage 2	972	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	921	1041	1568	-	-	-
Mov Cap-2 Maneuver	921	-	-	-	-	-
Stage 1	981	-	-	-	-	-
Stage 2	972	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	8.6	3.1		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1568	-	1024	-	-	
HCM Lane V/C Ratio	0.008	-	0.024	-	-	
HCM Control Delay (s)	7.3	0	8.6	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0.1	-	-	

Intersection						
Int Delay, s/veh	3.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	21	30	29	38	2
Future Vol, veh/h	2	21	30	29	38	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	2	23	33	32	41	2
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	140	42	43	0	-	0
Stage 1	42	-	-	-	-	-
Stage 2	98	-	-	-	-	-
Critical Hdwy	6.45	6.25	4.15	-	-	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	2.245	-	-	-
Pot Cap-1 Maneuver	846	1020	1547	-	-	-
Stage 1	973	-	-	-	-	-
Stage 2	918	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	827	1020	1547	-	-	-
Mov Cap-2 Maneuver	827	-	-	-	-	-
Stage 1	952	-	-	-	-	-
Stage 2	918	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	8.7	3.8		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1547	-	1000	-	-	
HCM Lane V/C Ratio	0.021	-	0.025	-	-	
HCM Control Delay (s)	7.4	0	8.7	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-	

HCM 7th TWSC
4: Harvest Rd & Louisiana Pkwy

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Intersection												
Int Delay, s/veh	2.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↖		↗	↖	
Traffic Vol, veh/h	3	1	40	12	2	16	38	143	4	4	93	2
Future Vol, veh/h	3	1	40	12	2	16	38	143	4	4	93	2
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	-	-	-	-	-	-	275	-	-	275	-	-
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, %	5	5	5	5	5	5	5	5	5	5	5	5
Mvmt Flow	3	1	43	13	2	17	41	155	4	4	101	2

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	350	353	102	351	352	158	103	0	0	160	0	0
Stage 1	111	111	-	240	240	-	-	-	-	-	-	-
Stage 2	239	242	-	110	112	-	-	-	-	-	-	-
Critical Hdwy	7.15	6.55	6.25	7.15	6.55	6.25	4.15	-	-	4.15	-	-
Critical Hdwy Stg 1	6.15	5.55	-	6.15	5.55	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.15	5.55	-	6.15	5.55	-	-	-	-	-	-	-
Follow-up Hdwy	3.545	4.045	3.345	3.545	4.045	3.345	2.245	-	-	2.245	-	-
Pot Cap-1 Maneuver	599	567	945	599	568	880	1470	-	-	1401	-	-
Stage 1	887	798	-	757	701	-	-	-	-	-	-	-
Stage 2	758	700	-	888	797	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	567	549	945	552	550	880	1470	-	-	1401	-	-
Mov Cap-2 Maneuver	610	578	-	600	575	-	-	-	-	-	-	-
Stage 1	884	795	-	735	681	-	-	-	-	-	-	-
Stage 2	719	680	-	843	795	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s/v	9.23		10.23		1.54		0.31	
HCM LOS	A		B					




Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1470	-	-	898	720	1401	-
HCM Lane V/C Ratio	0.028	-	-	0.053	0.045	0.003	-
HCM Control Delay (s/veh)	7.5	-	-	9.2	10.2	7.6	-
HCM Lane LOS	A	-	-	A	B	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.2	0.1	0	-




Intersection												
Int Delay, s/veh	2.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↖		↗	↖	
Traffic Vol, veh/h	2	3	67	7	2	15	73	177	23	15	214	2
Future Vol, veh/h	2	3	67	7	2	15	73	177	23	15	214	2
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	-	-	-	-	-	-	275	-	-	275	-	-
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, %	5	5	5	5	5	5	5	5	5	5	5	5
Mvmt Flow	2	3	73	8	2	16	79	192	25	16	233	2

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	618	642	234	630	631	205	235	0	0	217	0	0
Stage 1	266	266	-	364	364	-	-	-	-	-	-	-
Stage 2	352	376	-	267	267	-	-	-	-	-	-	-
Critical Hdwy	7.15	6.55	6.25	7.15	6.55	6.25	4.15	-	-	4.15	-	-
Critical Hdwy Stg 1	6.15	5.55	-	6.15	5.55	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.15	5.55	-	6.15	5.55	-	-	-	-	-	-	-
Follow-up Hdwy	3.545	4.045	3.345	3.545	4.045	3.345	2.245	-	-	2.245	-	-
Pot Cap-1 Maneuver	397	388	798	390	394	828	1315	-	-	1335	-	-
Stage 1	733	683	-	649	619	-	-	-	-	-	-	-
Stage 2	658	611	-	732	682	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	360	360	798	326	366	828	1315	-	-	1335	-	-
Mov Cap-2 Maneuver	456	440	-	419	435	-	-	-	-	-	-	-
Stage 1	724	675	-	610	582	-	-	-	-	-	-	-
Stage 2	604	574	-	654	674	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v10.31		11.18	2.12	0.5
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1315	-	-	757 609	1335	-	-
HCM Lane V/C Ratio	0.06	-	-	0.103 0.043	0.012	-	-
HCM Control Delay (s/veh)	7.9	-	-	10.3 11.2	7.7	-	-
HCM Lane LOS	A	-	-	B B	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.3 0.1	0	-	-

Intersection						
Int Delay, s/veh	3.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	22	13	16	24	3
Future Vol, veh/h	4	22	13	16	24	3
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, %	5	5	5	5	5	5
Mvmt Flow	4	24	14	17	26	3
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	73	28	29	0	-	0
Stage 1	28	-	-	-	-	-
Stage 2	45	-	-	-	-	-
Critical Hdwy	6.45	6.25	4.15	-	-	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	2.245	-	-	-
Pot Cap-1 Maneuver	923	1039	1565	-	-	-
Stage 1	987	-	-	-	-	-
Stage 2	970	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	915	1039	1565	-	-	-
Mov Cap-2 Maneuver	915	-	-	-	-	-
Stage 1	978	-	-	-	-	-
Stage 2	970	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	8.6	3.3		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1565	-	1018	-	-	
HCM Lane V/C Ratio	0.009	-	0.028	-	-	
HCM Control Delay (s)	7.3	0	8.6	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0.1	-	-	

Intersection						
Int Delay, s/veh	3.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	23	31	29	39	3
Future Vol, veh/h	3	23	31	29	39	3
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, %	5	5	5	5	5	5
Mvmt Flow	3	25	34	32	42	3
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	144	44	45	0	-	0
Stage 1	44	-	-	-	-	-
Stage 2	100	-	-	-	-	-
Critical Hdwy	6.45	6.25	4.15	-	-	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	2.245	-	-	-
Pot Cap-1 Maneuver	842	1018	1544	-	-	-
Stage 1	971	-	-	-	-	-
Stage 2	917	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	823	1018	1544	-	-	-
Mov Cap-2 Maneuver	823	-	-	-	-	-
Stage 1	950	-	-	-	-	-
Stage 2	917	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	8.7	3.8		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1544	-	991	-	-	
HCM Lane V/C Ratio	0.022	-	0.029	-	-	
HCM Control Delay (s)	7.4	0	8.7	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-	

Intersection												
Int Delay, s/veh	3.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↖	↗		↖	↗	
Traffic Vol, veh/h	4	3	42	16	6	34	40	147	7	17	96	3
Future Vol, veh/h	4	3	42	16	6	34	40	147	7	17	96	3
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	-	-	-	-	-	-	275	-	-	275	-	-
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, %	5	5	5	5	5	5	5	5	5	5	5	5
Mvmt Flow	4	3	46	17	7	37	43	160	8	18	104	3

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	393	397	106	393	395	164	108	0	0	167	0	0
Stage 1	143	143	-	251	251	-	-	-	-	-	-	-
Stage 2	250	254	-	143	145	-	-	-	-	-	-	-
Critical Hdwy	7.15	6.55	6.25	7.15	6.55	6.25	4.15	-	-	4.15	-	-
Critical Hdwy Stg 1	6.15	5.55	-	6.15	5.55	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.15	5.55	-	6.15	5.55	-	-	-	-	-	-	-
Follow-up Hdwy	3.545	4.045	3.345	3.545	4.045	3.345	2.245	-	-	2.245	-	-
Pot Cap-1 Maneuver	561	536	940	561	537	873	1465	-	-	1392	-	-
Stage 1	853	773	-	747	694	-	-	-	-	-	-	-
Stage 2	747	691	-	853	772	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	509	513	940	508	514	873	1465	-	-	1392	-	-
Mov Cap-2 Maneuver	563	550	-	569	551	-	-	-	-	-	-	-
Stage 1	841	763	-	725	673	-	-	-	-	-	-	-
Stage 2	688	671	-	797	761	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s/v	9.48		10.47		1.55		1.12	
HCM LOS	A		B					




Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1465	-	-	856	718	1392	-
HCM Lane V/C Ratio	0.03	-	-	0.062	0.085	0.013	-
HCM Control Delay (s/veh)	7.5	-	-	9.5	10.5	7.6	-
HCM Lane LOS	A	-	-	A	B	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.2	0.3	0	-




Intersection												
Int Delay, s/veh	3.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↖		↗	↖	
Traffic Vol, veh/h	3	8	69	10	6	34	74	178	32	42	215	3
Future Vol, veh/h	3	8	69	10	6	34	74	178	32	42	215	3
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	-	-	-	-	-	-	275	-	-	275	-	-
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, %	5	5	5	5	5	5	5	5	5	5	5	5
Mvmt Flow	3	9	75	11	7	37	80	193	35	46	234	3

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	684	716	235	701	700	211	237	0	0	228	0	0
Stage 1	327	327	-	372	372	-	-	-	-	-	-	-
Stage 2	358	389	-	329	328	-	-	-	-	-	-	-
Critical Hdwy	7.15	6.55	6.25	7.15	6.55	6.25	4.15	-	-	4.15	-	-
Critical Hdwy Stg 1	6.15	5.55	-	6.15	5.55	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.15	5.55	-	6.15	5.55	-	-	-	-	-	-	-
Follow-up Hdwy	3.545	4.045	3.345	3.545	4.045	3.345	2.245	-	-	2.245	-	-
Pot Cap-1 Maneuver	359	352	796	349	360	822	1313	-	-	1322	-	-
Stage 1	680	643	-	643	614	-	-	-	-	-	-	-
Stage 2	654	603	-	677	642	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	306	319	796	281	326	822	1313	-	-	1322	-	-
Mov Cap-2 Maneuver	405	401	-	377	403	-	-	-	-	-	-	-
Stage 1	656	620	-	603	576	-	-	-	-	-	-	-
Stage 2	580	566	-	584	619	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v10.85		11.55	2.06	1.26
HCM LOS	B	B		



















Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1313	-	-	702	604	1322	-
HCM Lane V/C Ratio	0.061	-	-	0.124	0.09	0.035	-
HCM Control Delay (s/veh)	7.9	-	-	10.9	11.6	7.8	-
HCM Lane LOS	A	-	-	B	B	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.4	0.3	0.1	-

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	8	23	14	314	389	19
Future Vol, veh/h	8	23	14	314	389	19
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, %	5	5	5	5	5	5
Mvmt Flow	9	25	15	341	423	21
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	805	434	444	0	-	0
Stage 1	434	-	-	-	-	-
Stage 2	371	-	-	-	-	-
Critical Hdwy	6.45	6.25	4.15	-	-	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	2.245	-	-	-
Pot Cap-1 Maneuver	348	616	1100	-	-	-
Stage 1	647	-	-	-	-	-
Stage 2	691	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	342	616	1100	-	-	-
Mov Cap-2 Maneuver	342	-	-	-	-	-
Stage 1	636	-	-	-	-	-
Stage 2	691	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	12.6	0.4		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1100	-	510	-	-	
HCM Lane V/C Ratio	0.014	-	0.066	-	-	
HCM Control Delay (s)	8.3	0	12.6	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0	-	0.2	-	-	

Intersection						
Int Delay, s/veh	1.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	25	24	32	356	262	18
Future Vol, veh/h	25	24	32	356	262	18
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, %	5	5	5	5	5	5
Mvmt Flow	27	26	35	387	285	20
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	752	295	305	0	-	0
Stage 1	295	-	-	-	-	-
Stage 2	457	-	-	-	-	-
Critical Hdwy	6.45	6.25	4.15	-	-	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	2.245	-	-	-
Pot Cap-1 Maneuver	374	737	1239	-	-	-
Stage 1	749	-	-	-	-	-
Stage 2	631	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	361	737	1239	-	-	-
Mov Cap-2 Maneuver	361	-	-	-	-	-
Stage 1	722	-	-	-	-	-
Stage 2	631	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	13.4	0.7		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1239	-	481	-	-	
HCM Lane V/C Ratio	0.028	-	0.111	-	-	
HCM Control Delay (s)	8	0	13.4	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.4	-	-	

Timings
4: Harvest Rd & Louisiana Pkwy

2031 Total AM
09/20/2024

									
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	8	6	22	16	39	470	9	26	501
Future Volume (vph)	8	6	22	16	39	470	9	26	501
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	Perm	pm+pt	NA
Protected Phases		4		8	5	2		1	6
Permitted Phases	4		8		2		2	6	
Detector Phase	4	4	8	8	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5
Total Split (s)	29.0	29.0	29.0	29.0	16.0	48.0	48.0	13.0	45.0
Total Split (%)	32.2%	32.2%	32.2%	32.2%	17.8%	53.3%	53.3%	14.4%	50.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	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)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag					Lead	Lead	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 7 (8%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 55

Control Type: Actuated-Coordinated























Splits and Phases: 4: Harvest Rd & Louisiana Pkwy



HCM 7th Signalized Intersection Summary

4: Harvest Rd & Louisiana Pkwy

2031 Total AM
09/20/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	6	43	22	16	77	39	470	9	26	501	19
Future Volume (veh/h)	8	6	43	22	16	77	39	470	9	26	501	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	9	7	20	24	17	84	42	511	10	28	545	21
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	116	38	108	181	24	119	364	1677	748	883	2464	95
Arrive On Green	0.09	0.09	0.09	0.09	0.09	0.09	0.07	0.97	0.97	0.09	0.24	0.24
Sat Flow, veh/h	1263	418	1193	1350	267	1321	1739	3469	1547	1739	3406	131
Grp Volume(v), veh/h	9	0	27	24	0	101	42	511	10	28	277	289
Grp Sat Flow(s),veh/h/ln	1263	0	1611	1350	0	1588	1739	1735	1547	1739	1735	1802
Q Serve(g_s), s	0.6	0.0	1.4	1.5	0.0	5.6	1.2	0.6	0.0	0.0	11.6	11.6
Cycle Q Clear(g_c), s	6.2	0.0	1.4	2.9	0.0	5.6	1.2	0.6	0.0	0.0	11.6	11.6
Prop In Lane	1.00		0.74	1.00		0.83	1.00		1.00	1.00		0.07
Lane Grp Cap(c), veh/h	116	0	145	181	0	143	364	1677	748	883	1255	1304
V/C Ratio(X)	0.08	0.00	0.19	0.13	0.00	0.70	0.12	0.30	0.01	0.03	0.22	0.22
Avail Cap(c_a), veh/h	346	0	439	427	0	432	524	1677	748	883	1255	1304
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(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Uniform Delay (d), s/veh	42.8	0.0	37.9	39.2	0.0	39.8	14.2	0.8	0.8	7.2	13.9	13.9
Incr Delay (d2), s/veh	0.3	0.0	0.6	0.3	0.0	6.2	0.1	0.5	0.0	0.0	0.4	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	0.2	0.0	0.6	0.5	0.0	2.4	0.4	0.3	0.0	0.2	4.7	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	43.1	0.0	38.5	39.5	0.0	45.9	14.3	1.3	0.8	7.2	14.2	14.2
LnGrp LOS	D		D	D		D	B	A	A	A	B	B
Approach Vol, veh/h	36			125			563			594		
Approach Delay, s/veh	39.6			44.7			2.2			13.9		
Approach LOS	D			D			A			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	29.4	48.0		12.6	7.8	69.6		12.6				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	8.5	43.5		24.5	11.5	40.5		24.5				
Max Q Clear Time (g_c+I1), s	2.0	2.6		8.2	3.2	13.6		7.6				
Green Ext Time (p_c), s	0.0	3.4		0.1	0.0	3.2		0.5				
Intersection Summary												
HCM 7th Control Delay, s/veh				12.5								
HCM 7th LOS				B								

Timings 4: Harvest Rd & Louisiana Pkwy

2031 Total PM
09/20/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	25	18	13	11	73	592	45	79	508
Future Volume (vph)	25	18	13	11	73	592	45	79	508
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	Perm	pm+pt	NA
Protected Phases		4		8	5	2		1	6
Permitted Phases	4		8		2		2	6	
Detector Phase	4	4	8	8	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5
Total Split (s)	28.0	28.0	28.0	28.0	15.0	46.0	46.0	16.0	47.0
Total Split (%)	31.1%	31.1%	31.1%	31.1%	16.7%	51.1%	51.1%	17.8%	52.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	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)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag					Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max

Intersection Summary

Cycle Length: 90

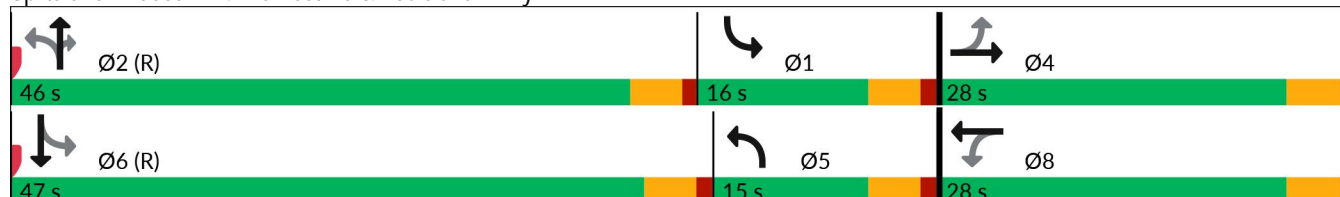
Actuated Cycle Length: 90

Offset: 4 (4%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 55

Control Type: Actuated-Coordinated























Splits and Phases: 4: Harvest Rd & Louisiana Pkwy









HCM 7th Signalized Intersection Summary

4: Harvest Rd & Louisiana Pkwy

2031 Total PM
09/20/2024



















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	18	69	13	11	62	73	592	45	79	508	18
Future Volume (veh/h)	25	18	69	13	11	62	73	592	45	79	508	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	27	20	48	14	12	67	79	643	49	86	552	20
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	139	44	106	149	22	125	890	1600	714	810	1612	58
Arrive On Green	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.15	0.15	0.39	0.63	0.63
Sat Flow, veh/h	1288	476	1144	1301	241	1343	1739	3469	1547	1739	3415	124
Grp Volume(v), veh/h	27	0	68	14	0	79	79	643	49	86	280	292
Grp Sat Flow(s),veh/h/ln	1288	0	1620	1301	0	1584	1739	1735	1547	1739	1735	1804
Q Serve(g_s), s	1.8	0.0	3.6	0.9	0.0	4.3	0.0	15.1	2.4	0.0	6.9	6.9
Cycle Q Clear(g_c), s	6.1	0.0	3.6	4.5	0.0	4.3	0.0	15.1	2.4	0.0	6.9	6.9
Prop In Lane	1.00		0.71	1.00		0.85	1.00		1.00	1.00		0.07
Lane Grp Cap(c), veh/h	139	0	151	149	0	147	890	1600	714	810	819	852
V/C Ratio(X)	0.19	0.00	0.45	0.09	0.00	0.54	0.09	0.40	0.07	0.11	0.34	0.34
Avail Cap(c_a), veh/h	355	0	423	368	0	414	890	1600	714	810	819	852
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.86	0.86	0.86
Uniform Delay (d), s/veh	41.9	0.0	38.6	40.8	0.0	39.0	7.1	26.9	21.6	7.3	10.1	10.1
Incr Delay (d2), s/veh	0.7	0.0	2.1	0.3	0.0	3.0	0.0	0.8	0.2	0.0	1.0	0.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	1.5	0.3	0.0	1.8	0.5	7.0	0.8	0.6	2.4	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	42.6	0.0	40.7	41.0	0.0	42.0	7.2	27.7	21.8	7.3	11.1	11.1
LnGrp LOS	D		D	D		D	A	C	C	A	B	B
Approach Vol, veh/h	95			93			771			658		
Approach Delay, s/veh	41.3			41.8			25.2			10.6		
Approach LOS	D			D			C			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	31.1	46.0		12.9	30.1	47.0		12.9				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	11.5	41.5		23.5	10.5	42.5		23.5				
Max Q Clear Time (g_c+I1), s	2.0	17.1		8.1	2.0	8.9		6.5				
Green Ext Time (p_c), s	0.1	4.3		0.3	0.1	3.3		0.4				
Intersection Summary												
HCM 7th Control Delay, s/veh				21.2								
HCM 7th LOS				C								

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	11	25	15	460	454	20
Future Vol, veh/h	11	25	15	460	454	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	12	27	16	500	493	22
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1036	504	515	0	-	0
Stage 1	504	-	-	-	-	-
Stage 2	532	-	-	-	-	-
Critical Hdwy	6.45	6.25	4.15	-	-	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	2.245	-	-	-
Pot Cap-1 Maneuver	253	562	1035	-	-	-
Stage 1	601	-	-	-	-	-
Stage 2	583	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	248	562	1035	-	-	-
Mov Cap-2 Maneuver	248	-	-	-	-	-
Stage 1	588	-	-	-	-	-
Stage 2	583	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	14.8	0.3		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1035	-	405	-	-	
HCM Lane V/C Ratio	0.016	-	0.097	-	-	
HCM Control Delay (s)	8.5	0	14.8	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0	-	0.3	-	-	

Intersection						
Int Delay, s/veh	1.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	35	25	32	470	334	22
Future Vol, veh/h	35	25	32	470	334	22
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, %	5	5	5	5	5	5
Mvmt Flow	38	27	35	511	363	24
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	956	375	387	0	-	0
Stage 1	375	-	-	-	-	-
Stage 2	581	-	-	-	-	-
Critical Hdwy	6.45	6.25	4.15	-	-	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	2.245	-	-	-
Pot Cap-1 Maneuver	283	665	1155	-	-	-
Stage 1	688	-	-	-	-	-
Stage 2	553	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	271	665	1155	-	-	-
Mov Cap-2 Maneuver	271	-	-	-	-	-
Stage 1	659	-	-	-	-	-
Stage 2	553	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	17.2	0.5		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1155	-	360	-	-	
HCM Lane V/C Ratio	0.03	-	0.181	-	-	
HCM Control Delay (s)	8.2	0	17.2	-	-	
HCM Lane LOS	A	A	C	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.7	-	-	

Timings 4: Harvest Rd & Louisiana Pkwy

2033 Total AM
09/20/2024

									
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	11	12	29	24	42	639	15	47	574
Future Volume (vph)	11	12	29	24	42	639	15	47	574
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	Perm	NA
Protected Phases		4		8		2			6
Permitted Phases	4		8		2		2	6	
Detector Phase	4	4	8	8	2	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	35.0	35.0	35.0	35.0	55.0	55.0	55.0	55.0	55.0
Total Split (%)	38.9%	38.9%	38.9%	38.9%	61.1%	61.1%	61.1%	61.1%	61.1%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	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)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max

Intersection Summary

Cycle Length: 90

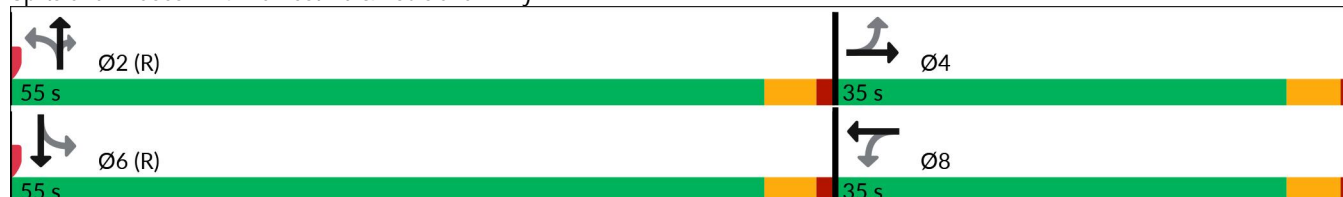
Actuated Cycle Length: 90

Offset: 48 (53%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 45

Control Type: Actuated-Coordinated






















Splits and Phases: 4: Harvest Rd & Louisiana Pkwy



HCM 7th Signalized Intersection Summary

4: Harvest Rd & Louisiana Pkwy

2033 Total AM
09/20/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	12	47	29	24	122	42	639	15	47	574	20
Future Volume (veh/h)	11	12	47	29	24	122	42	639	15	47	574	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	12	13	24	32	26	79	46	695	16	51	624	22
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	121	55	101	180	38	116	696	2790	1245	660	2750	97
Arrive On Green	0.10	0.10	0.10	0.10	0.10	0.10	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	1258	574	1061	1338	398	1210	766	3469	1547	721	3418	120
Grp Volume(v), veh/h	12	0	37	32	0	105	46	695	16	51	316	330
Grp Sat Flow(s),veh/h/ln	1258	0	1635	1338	0	1608	766	1735	1547	721	1735	1804
Q Serve(g_s), s	0.8	0.0	1.9	2.0	0.0	5.7	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	6.5	0.0	1.9	3.9	0.0	5.7	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.65	1.00		0.75	1.00		1.00	1.00		0.07
Lane Grp Cap(c), veh/h	121	0	156	180	0	154	696	2790	1245	660	1395	1451
V/C Ratio(X)	0.10	0.00	0.24	0.18	0.00	0.68	0.07	0.25	0.01	0.08	0.23	0.23
Avail Cap(c_a), veh/h	427	0	554	506	0	545	696	2790	1245	660	1395	1451
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.96	0.96	0.96
Uniform Delay (d), s/veh	42.5	0.0	37.7	39.5	0.0	39.4	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.0	0.8	0.5	0.0	5.2	0.2	0.2	0.0	0.2	0.4	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.8	0.7	0.0	2.4	0.0	0.1	0.0	0.0	0.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	42.9	0.0	38.4	39.9	0.0	44.6	0.2	0.2	0.0	0.2	0.4	0.3
LnGrp LOS	D		D	D		D	A	A	A	A	A	A
Approach Vol, veh/h	49			137			757			697		
Approach Delay, s/veh	39.5			43.5			0.2			0.3		
Approach LOS	D			D			A			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	76.9			13.1			76.9			13.1		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	50.5			30.5			50.5			30.5		
Max Q Clear Time (g_c+I1), s	2.0			8.5			2.0			7.7		
Green Ext Time (p_c), s	5.4			0.2			4.4			0.6		
Intersection Summary												
HCM 7th Control Delay, s/veh	5.1											
HCM 7th LOS	A											

Timings

4: Harvest Rd & Louisiana Pkwy

2033 Total PM

09/20/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	35	25	20	16	74	703	57	117	594
Future Volume (vph)	35	25	20	16	74	703	57	117	594
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	Perm	NA
Protected Phases		4		8		2			6
Permitted Phases	4		8		2		2	6	
Detector Phase	4	4	8	8	2	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	28.0	28.0	28.0	28.0	62.0	62.0	62.0	62.0	62.0
Total Split (%)	31.1%	31.1%	31.1%	31.1%	68.9%	68.9%	68.9%	68.9%	68.9%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	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)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max

Intersection Summary

Cycle Length: 90

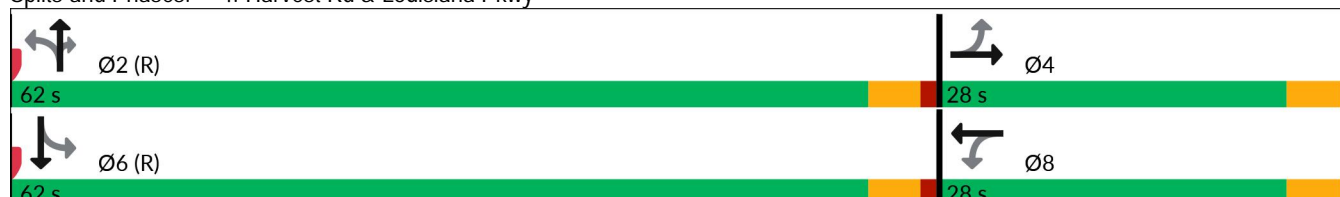
Actuated Cycle Length: 90

Offset: 25 (28%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 50

Control Type: Actuated-Coordinated





















Splits and Phases: 4: Harvest Rd & Louisiana Pkwy









HCM 7th Signalized Intersection Summary




4: Harvest Rd & Louisiana Pkwy




2033 Total PM
09/20/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	25	71	20	16	94	74	703	57	117	594	22
Future Volume (veh/h)	35	25	71	20	16	94	74	703	57	117	594	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	38	27	23	22	17	59	80	764	62	127	646	24
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	89	76	173	35	122	681	2783	1241	511	2736	102
Arrive On Green	0.10	0.10	0.10	0.10	0.10	0.10	0.26	0.26	0.26	1.00	1.00	1.00
Sat Flow, veh/h	1292	911	776	1323	358	1244	749	3469	1547	686	3411	127
Grp Volume(v), veh/h	38	0	50	22	0	76	80	764	62	127	328	342
Grp Sat Flow(s),veh/h/ln	1292	0	1686	1323	0	1602	749	1735	1547	686	1735	1803
Q Serve(g_s), s	2.6	0.0	2.5	1.4	0.0	4.0	7.3	15.7	2.7	4.7	0.0	0.0
Cycle Q Clear(g_c), s	6.6	0.0	2.5	3.9	0.0	4.0	7.3	15.7	2.7	20.4	0.0	0.0
Prop In Lane	1.00		0.46	1.00		0.78	1.00		1.00	1.00		0.07
Lane Grp Cap(c), veh/h	148	0	165	173	0	157	681	2783	1241	511	1391	1446
V/C Ratio(X)	0.26	0.00	0.30	0.13	0.00	0.49	0.12	0.27	0.05	0.25	0.24	0.24
Avail Cap(c_a), veh/h	359	0	440	389	0	418	681	2783	1241	511	1391	1446
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.92	0.92	0.92
Uniform Delay (d), s/veh	41.6	0.0	37.7	39.6	0.0	38.5	9.2	12.3	7.5	2.2	0.0	0.0
Incr Delay (d2), s/veh	0.9	0.0	1.0	0.3	0.0	2.3	0.4	0.2	0.1	1.1	0.4	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	0.9	0.0	1.1	0.5	0.0	1.7	0.8	7.2	0.4	0.3	0.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	42.5	0.0	38.8	39.9	0.0	40.8	9.6	12.6	7.6	3.3	0.4	0.4
LnGrp LOS	D		D	D		D	A	B	A	A	A	A
Approach Vol, veh/h	88			98			906			797		
Approach Delay, s/veh	40.4			40.6			12.0			0.8		
Approach LOS	D			D			B			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	76.7			13.3			76.7			13.3		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	57.5			23.5			57.5			23.5		
Max Q Clear Time (g_c+I1), s	17.7			8.6			22.4			6.0		
Green Ext Time (p_c), s	6.5			0.3			5.3			0.4		
Intersection Summary												
HCM 7th Control Delay, s/veh	10.1											
HCM 7th LOS	B											

Intersection						
Int Delay, s/veh	1.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	2	2	12	27	8
Future Vol, veh/h	3	2	2	12	27	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	31	31	70	70	71	71
Heavy Vehicles, %	2	2	21	21	21	21
Mvmt Flow	10	6	3	17	38	11
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	67	44	49	0	-	0
Stage 1	44	-	-	-	-	-
Stage 2	23	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.31	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.389	-	-	-
Pot Cap-1 Maneuver	938	1026	1444	-	-	-
Stage 1	978	-	-	-	-	-
Stage 2	1000	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	936	1026	1444	-	-	-
Mov Cap-2 Maneuver	936	-	-	-	-	-
Stage 1	976	-	-	-	-	-
Stage 2	1000	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	8.8	1.1		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1444	-	970	-	-	
HCM Lane V/C Ratio	0.002	-	0.017	-	-	
HCM Control Delay (s)	7.5	0	8.8	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0.1	-	-	

Intersection						
Int Delay, s/veh	1.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	3	6	45	24	6
Future Vol, veh/h	3	3	6	45	24	6
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	50	50	88	88	81	81
Heavy Vehicles, %	2	2	2	2	10	10
Mvmt Flow	6	6	7	51	30	7
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	99	34	37	0	-	0
Stage 1	34	-	-	-	-	-
Stage 2	65	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	900	1039	1574	-	-	-
Stage 1	988	-	-	-	-	-
Stage 2	958	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	896	1039	1574	-	-	-
Mov Cap-2 Maneuver	896	-	-	-	-	-
Stage 1	983	-	-	-	-	-
Stage 2	958	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	8.8	0.9		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1574	-	962	-	-	
HCM Lane V/C Ratio	0.004	-	0.012	-	-	
HCM Control Delay (s)	7.3	0	8.8	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

Intersection						
Int Delay, s/veh	1.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	3	4	24	39	8
Future Vol, veh/h	4	3	4	24	39	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	21	21	21	21
Mvmt Flow	4	3	4	26	42	9
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	81	47	51	0	-	0
Stage 1	47	-	-	-	-	-
Stage 2	34	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.31	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.389	-	-	-
Pot Cap-1 Maneuver	921	1022	1442	-	-	-
Stage 1	975	-	-	-	-	-
Stage 2	988	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	918	1022	1442	-	-	-
Mov Cap-2 Maneuver	918	-	-	-	-	-
Stage 1	972	-	-	-	-	-
Stage 2	988	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	8.8	1.1		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1442	-	960	-	-	
HCM Lane V/C Ratio	0.003	-	0.008	-	-	
HCM Control Delay (s)	7.5	0	8.8	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

Intersection						
Int Delay, s/veh	1.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	5	11	58	54	7
Future Vol, veh/h	4	5	11	58	54	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	10	10
Mvmt Flow	4	5	12	63	59	8
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	150	63	67	0	-	0
Stage 1	63	-	-	-	-	-
Stage 2	87	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	842	1002	1535	-	-	-
Stage 1	960	-	-	-	-	-
Stage 2	936	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	835	1002	1535	-	-	-
Mov Cap-2 Maneuver	835	-	-	-	-	-
Stage 1	952	-	-	-	-	-
Stage 2	936	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9	1.2		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1535	-	920	-	-	
HCM Lane V/C Ratio	0.008	-	0.011	-	-	
HCM Control Delay (s)	7.4	0	9	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

Intersection												
Int Delay, s/veh	3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↔	↔		↔	↔	
Traffic Vol, veh/h	4	1	3	25	2	25	4	58	9	8	68	9
Future Vol, veh/h	4	1	3	25	2	25	4	58	9	8	68	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	-	-	-	-	-	-	275	-	-	275	-	-
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	21	21	2	2	21	21
Mvmt Flow	4	1	3	27	2	27	4	63	10	9	74	10

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	188	178	79	175	178	68	84	0	0	73	0	0
Stage 1	97	97	-	76	76	-	-	-	-	-	-	-
Stage 2	91	81	-	99	102	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.31	-	-	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	2.389	-	-	2.218	-	-
Pot Cap-1 Maneuver	777	719	981	792	719	1001	1401	-	-	1529	-	-
Stage 1	910	815	-	937	834	-	-	-	-	-	-	-
Stage 2	920	830	-	907	811	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	749	712	981	783	712	1001	1401	-	-	1529	-	-
Mov Cap-2 Maneuver	749	696	-	773	697	-	-	-	-	-	-	-
Stage 1	907	810	-	934	831	-	-	-	-	-	-	-
Stage 2	890	827	-	897	806	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s/v	9.5		9.5		0.4		0.7	
HCM LOS	A		A					




Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1401	-	-	813	864	1529	-
HCM Lane V/C Ratio	0.003	-	-	0.011	0.065	0.006	-
HCM Control Delay (s/veh)	7.6	-	-	9.5	9.5	7.4	-
HCM Lane LOS	A	-	-	A	A	A	-
HCM 95th %tile Q (veh)	0	-	-	0	0.2	0	-




Intersection												
Int Delay, s/veh	2.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↵	↵		↵	↵	
Traffic Vol, veh/h	5	3	5	24	2	22	11	97	28	27	74	8
Future Vol, veh/h	5	3	5	24	2	22	11	97	28	27	74	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	275	-	-	275	-	-
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	10	10
Mvmt Flow	5	3	5	26	2	24	12	105	30	29	80	9

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	300	302	85	291	291	120	89	0	0	135	0	0
Stage 1	143	143	-	144	144	-	-	-	-	-	-	-
Stage 2	157	159	-	147	147	-	-	-	-	-	-	-
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	674	625	974	683	633	960	1506	-	-	1459	-	-
Stage 1	860	779	-	882	789	-	-	-	-	-	-	-
Stage 2	867	777	-	856	775	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	641	607	974	663	616	960	1506	-	-	1459	-	-
Mov Cap-2 Maneuver	670	620	-	687	630	-	-	-	-	-	-	-
Stage 1	853	763	-	875	783	-	-	-	-	-	-	-
Stage 2	836	770	-	831	760	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s/v	9.9		9.9		0.6		1.9	
HCM LOS	A		A					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1506	-	-	746	787	1459	-
HCM Lane V/C Ratio	0.008	-	-	0.019	0.066	0.02	-
HCM Control Delay (s/veh)	7.4	-	-	9.9	9.9	7.5	-
HCM Lane LOS	A	-	-	A	A	A	-
HCM 95th %tile Q (veh)	0	-	-	0.1	0.2	0.1	-

Intersection						
Int Delay, s/veh	1.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	4	5	25	41	8
Future Vol, veh/h	5	4	5	25	41	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	21	21	21	21
Mvmt Flow	5	4	5	27	45	9
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	87	50	54	0	-	0
Stage 1	50	-	-	-	-	-
Stage 2	37	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.31	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.389	-	-	-
Pot Cap-1 Maneuver	914	1018	1438	-	-	-
Stage 1	972	-	-	-	-	-
Stage 2	985	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	910	1018	1438	-	-	-
Mov Cap-2 Maneuver	910	-	-	-	-	-
Stage 1	968	-	-	-	-	-
Stage 2	985	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	8.8	1.3		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1438	-	955	-	-	
HCM Lane V/C Ratio	0.004	-	0.01	-	-	
HCM Control Delay (s)	7.5	0	8.8	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

Intersection						
Int Delay, s/veh	1.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	6	12	58	55	8
Future Vol, veh/h	5	6	12	58	55	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	10	10
Mvmt Flow	5	7	13	63	60	9
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	154	65	69	0	-	0
Stage 1	65	-	-	-	-	-
Stage 2	89	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	838	999	1532	-	-	-
Stage 1	958	-	-	-	-	-
Stage 2	934	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	830	999	1532	-	-	-
Mov Cap-2 Maneuver	830	-	-	-	-	-
Stage 1	949	-	-	-	-	-
Stage 2	934	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9	1.3		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1532	-	914	-	-	
HCM Lane V/C Ratio	0.009	-	0.013	-	-	
HCM Control Delay (s)	7.4	0	9	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

Intersection												
Int Delay, s/veh	3.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	5	3	9	46	6	62	9	103	16	25	115	9
Future Vol, veh/h	5	3	9	46	6	62	9	103	16	25	115	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	-	-	-	-	-	-	275	-	-	275	-	-
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	21	21	2	2	21	21
Mvmt Flow	5	3	10	50	7	67	10	112	17	27	125	10

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	362	333	130	332	330	121	135	0	0	129	0	0
Stage 1	184	184	-	141	141	-	-	-	-	-	-	-
Stage 2	178	149	-	191	189	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.31	-	-	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	2.389	-	-	2.218	-	-
Pot Cap-1 Maneuver	628	611	920	659	614	987	1340	-	-	1477	-	-
Stage 1	818	747	-	908	802	-	-	-	-	-	-	-
Stage 2	865	795	-	811	744	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	569	595	920	637	598	987	1340	-	-	1477	-	-
Mov Cap-2 Maneuver	619	612	-	664	615	-	-	-	-	-	-	-
Stage 1	812	734	-	901	796	-	-	-	-	-	-	-
Stage 2	793	789	-	784	731	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s/v	9.9		10.3		0.5		1.3	
HCM LOS	A		B					




Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1340	-	-	747	804	1477	-
HCM Lane V/C Ratio	0.007	-	-	0.025	0.154	0.018	-
HCM Control Delay (s/veh)	7.7	-	-	9.9	10.3	7.5	-
HCM Lane LOS	A	-	-	A	B	A	-
HCM 95th %tile Q (veh)	0	-	-	0.1	0.5	0.1	-




Intersection												
Int Delay, s/veh	3.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↰	↱		↰	↱	
Traffic Vol, veh/h	6	8	17	38	7	59	24	200	48	70	163	9
Future Vol, veh/h	6	8	17	38	7	59	24	200	48	70	163	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	-	-	-	-	-	-	275	-	-	275	-	-
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	10	10
Mvmt Flow	7	9	18	41	8	64	26	217	52	76	177	10

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	665	655	182	643	634	243	187	0	0	269	0	0
Stage 1	334	334	-	295	295	-	-	-	-	-	-	-
Stage 2	331	321	-	348	339	-	-	-	-	-	-	-
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	394	397	861	410	409	882	1387	-	-	1315	-	-
Stage 1	680	643	-	775	697	-	-	-	-	-	-	-
Stage 2	737	676	-	668	640	-	-	-	-	-	-	-
Platoon blocked, %	1	1		1	1	1		-	-	1	-	-
Mov Cap-1 Maneuver	340	367	861	372	378	882	1387	-	-	1315	-	-
Mov Cap-2 Maneuver	439	440	-	464	455	-	-	-	-	-	-	-
Stage 1	667	606	-	760	684	-	-	-	-	-	-	-
Stage 2	663	663	-	607	603	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s/v	11.3		11.9		0.7		2.3	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1387	-	-	601	633	1315	-
HCM Lane V/C Ratio	0.019	-	-	0.056	0.179	0.058	-
HCM Control Delay (s/veh)	7.6	-	-	11.3	11.9	7.9	-
HCM Lane LOS	A	-	-	B	B	A	-
HCM 95th %tile Q (veh)	0.1	-	-	0.2	0.6	0.2	-

Intersection						
Int Delay, s/veh	1.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	4	5	25	41	8
Future Vol, veh/h	5	4	5	25	41	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	5	4	5	27	45	9
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	87	50	54	0	-	0
Stage 1	50	-	-	-	-	-
Stage 2	37	-	-	-	-	-
Critical Hdwy	6.45	6.25	4.15	-	-	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	2.245	-	-	-
Pot Cap-1 Maneuver	907	1010	1532	-	-	-
Stage 1	965	-	-	-	-	-
Stage 2	978	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	904	1010	1532	-	-	-
Mov Cap-2 Maneuver	904	-	-	-	-	-
Stage 1	962	-	-	-	-	-
Stage 2	978	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	8.8	1.2		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1532	-	948	-	-	
HCM Lane V/C Ratio	0.004	-	0.01	-	-	
HCM Control Delay (s)	7.4	0	8.8	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

Intersection						
Int Delay, s/veh	1.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	6	12	58	56	8
Future Vol, veh/h	5	6	12	58	56	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	5	7	13	63	61	9
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	155	66	70	0	-	0
Stage 1	66	-	-	-	-	-
Stage 2	89	-	-	-	-	-
Critical Hdwy	6.45	6.25	4.15	-	-	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	2.245	-	-	-
Pot Cap-1 Maneuver	829	989	1512	-	-	-
Stage 1	949	-	-	-	-	-
Stage 2	927	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	822	989	1512	-	-	-
Mov Cap-2 Maneuver	822	-	-	-	-	-
Stage 1	940	-	-	-	-	-
Stage 2	927	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9	1.3		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1512	-	905	-	-	
HCM Lane V/C Ratio	0.009	-	0.013	-	-	
HCM Control Delay (s)	7.4	0	9	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

Intersection												
Int Delay, s/veh	4.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↵	↵		↵	↵	
Traffic Vol, veh/h	5	4	9	46	8	84	9	90	16	34	106	9
Future Vol, veh/h	5	4	9	46	8	84	9	90	16	34	106	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	-	-	-	-	-	-	275	-	-	275	-	-
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, %	5	5	5	5	5	5	5	5	5	5	5	5
Mvmt Flow	5	4	10	50	9	91	10	98	17	37	115	10

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	316	329	120	317	325	107	125	0	0	115	0	0
Stage 1	194	194	-	126	126	-	-	-	-	-	-	-
Stage 2	122	135	-	191	199	-	-	-	-	-	-	-
Critical Hdwy	7.15	6.55	6.25	7.15	6.55	6.25	4.15	-	-	4.15	-	-
Critical Hdwy Stg 1	6.15	5.55	-	6.15	5.55	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.15	5.55	-	6.15	5.55	-	-	-	-	-	-	-
Follow-up Hdwy	3.545	4.045	3.345	3.545	4.045	3.345	2.245	-	-	2.245	-	-
Pot Cap-1 Maneuver	645	593	923	643	596	959	1443	-	-	1462	-	-
Stage 1	801	734	-	887	794	-	-	-	-	-	-	-
Stage 2	892	787	-	804	731	-	-	-	-	-	-	-
Platoon blocked, %	0	0		0	0	0		-	-	0	-	-
Mov Cap-1 Maneuver	557	574	923	612	577	959	1443	-	-	1462	-	-
Mov Cap-2 Maneuver	604	595	-	646	599	-	-	-	-	-	-	-
Stage 1	781	716	-	881	788	-	-	-	-	-	-	-
Stage 2	792	781	-	770	712	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v10.09		10.52	0.59	1.72
HCM LOS	B	B		




Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1443	-	-	727 802	1462	-	-
HCM Lane V/C Ratio	0.007	-	-	0.027 0.187	0.025	-	-
HCM Control Delay (s/veh)	7.5	-	-	10.1 10.5	7.5	-	-
HCM Lane LOS	A	-	-	B B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1 0.7	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	6	11	17	39	9	78	24	185	48	97	175	9
Future Vol, veh/h	6	11	17	39	9	78	24	185	48	97	175	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	-	-	-	-	-	-	275	-	-	275	-	-
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, %	5	5	5	5	5	5	5	5	5	5	5	5
Mvmt Flow	7	12	18	42	10	85	26	201	52	105	190	10

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	664	711	195	686	690	227	200	0	0	253	0	0
Stage 1	406	406	-	279	279	-	-	-	-	-	-	-
Stage 2	258	305	-	407	411	-	-	-	-	-	-	-
Critical Hdwy	7.15	6.55	6.25	7.15	6.55	6.25	4.15	-	-	4.15	-	-
Critical Hdwy Stg 1	6.15	5.55	-	6.15	5.55	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.15	5.55	-	6.15	5.55	-	-	-	-	-	-	-
Follow-up Hdwy	3.545	4.045	3.345	3.545	4.045	3.345	2.245	-	-	2.245	-	-
Pot Cap-1 Maneuver	382	358	839	368	369	861	1354	-	-	1308	-	-
Stage 1	616	593	-	761	692	-	-	-	-	-	-	-
Stage 2	783	673	-	615	590	-	-	-	-	-	-	-
Platoon blocked, %	0	0		0	0	0		-	-	0	-	-
Mov Cap-1 Maneuver	304	322	839	316	332	861	1354	-	-	1308	-	-
Mov Cap-2 Maneuver	400	398	-	413	413	-	-	-	-	-	-	-
Stage 1	566	545	-	747	679	-	-	-	-	-	-	-
Stage 2	683	660	-	541	542	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v12.15		12.62	0.72	2.76
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1354	-	-	540 609	1308	-	-
HCM Lane V/C Ratio	0.019	-	-	0.068 0.225	0.081	-	-
HCM Control Delay (s/veh)	7.7	-	-	12.2 12.6	8	-	-
HCM Lane LOS	A	-	-	B B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.2 0.9	0.3	-	-

Intersection						
Int Delay, s/veh	1.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	5	6	27	42	8
Future Vol, veh/h	6	5	6	27	42	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	7	5	7	29	46	9
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	94	51	55	0	-	0
Stage 1	51	-	-	-	-	-
Stage 2	43	-	-	-	-	-
Critical Hdwy	6.45	6.25	4.15	-	-	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	2.245	-	-	-
Pot Cap-1 Maneuver	898	1009	1531	-	-	-
Stage 1	964	-	-	-	-	-
Stage 2	972	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	894	1009	1531	-	-	-
Mov Cap-2 Maneuver	894	-	-	-	-	-
Stage 1	959	-	-	-	-	-
Stage 2	972	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	8.9	1.3		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1531	-	943	-	-	
HCM Lane V/C Ratio	0.004	-	0.013	-	-	
HCM Control Delay (s)	7.4	0	8.9	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

Intersection						
Int Delay, s/veh	1.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	7	14	59	58	9
Future Vol, veh/h	6	7	14	59	58	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	7	8	15	64	63	10
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	162	68	73	0	-	0
Stage 1	68	-	-	-	-	-
Stage 2	94	-	-	-	-	-
Critical Hdwy	6.45	6.25	4.15	-	-	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	2.245	-	-	-
Pot Cap-1 Maneuver	822	987	1508	-	-	-
Stage 1	947	-	-	-	-	-
Stage 2	922	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	814	987	1508	-	-	-
Mov Cap-2 Maneuver	814	-	-	-	-	-
Stage 1	938	-	-	-	-	-
Stage 2	922	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9.1	1.4		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1508	-	899	-	-	
HCM Lane V/C Ratio	0.01	-	0.016	-	-	
HCM Control Delay (s)	7.4	0	9.1	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

Intersection												
Int Delay, s/veh	4.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↵	↵		↵	↵	
Traffic Vol, veh/h	6	5	10	57	9	85	10	98	23	34	116	10
Future Vol, veh/h	6	5	10	57	9	85	10	98	23	34	116	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	-	-	-	-	-	-	275	-	-	275	-	-
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, %	5	5	5	5	5	5	5	5	5	5	5	5
Mvmt Flow	7	5	11	62	10	92	11	107	25	37	126	11

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	339	359	132	343	352	119	137	0	0	132	0	0
Stage 1	205	205	-	141	141	-	-	-	-	-	-	-
Stage 2	133	153	-	203	211	-	-	-	-	-	-	-
Critical Hdwy	7.15	6.55	6.25	7.15	6.55	6.25	4.15	-	-	4.15	-	-
Critical Hdwy Stg 1	6.15	5.55	-	6.15	5.55	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.15	5.55	-	6.15	5.55	-	-	-	-	-	-	-
Follow-up Hdwy	3.545	4.045	3.345	3.545	4.045	3.345	2.245	-	-	2.245	-	-
Pot Cap-1 Maneuver	622	570	910	617	576	944	1429	-	-	1442	-	-
Stage 1	790	726	-	870	782	-	-	-	-	-	-	-
Stage 2	879	772	-	792	722	-	-	-	-	-	-	-
Platoon blocked, %	0	0		0	0	0		-	-	0	-	-
Mov Cap-1 Maneuver	534	551	910	585	557	944	1429	-	-	1442	-	-
Mov Cap-2 Maneuver	588	579	-	627	585	-	-	-	-	-	-	-
Stage 1	769	707	-	864	776	-	-	-	-	-	-	-
Stage 2	777	766	-	757	704	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v10.29		10.95	0.58	1.61
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1429	-	-	704	769	1442	-
HCM Lane V/C Ratio	0.008	-	-	0.032	0.213	0.026	-
HCM Control Delay (s/veh)	7.5	-	-	10.3	10.9	7.6	-
HCM Lane LOS	A	-	-	B	B	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.8	0.1	-

HCM 7th TWSC
5: Harvest Rd & Flat Rock Trl/Kewaunee St




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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	8	12	18	52	10	77	26	197	63	94	185	11
Future Vol, veh/h	8	12	18	52	10	77	26	197	63	94	185	11
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	-	-	-	-	-	-	275	-	-	275	-	-
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, %	5	5	5	5	5	5	5	5	5	5	5	5
Mvmt Flow	9	13	20	57	11	84	28	214	68	102	201	12

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	688	751	207	717	722	248	213	0	0	283	0	0
Stage 1	411	411	-	305	305	-	-	-	-	-	-	-
Stage 2	276	339	-	412	417	-	-	-	-	-	-	-
Critical Hdwy	7.15	6.55	6.25	7.15	6.55	6.25	4.15	-	-	4.15	-	-
Critical Hdwy Stg 1	6.15	5.55	-	6.15	5.55	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.15	5.55	-	6.15	5.55	-	-	-	-	-	-	-
Follow-up Hdwy	3.545	4.045	3.345	3.545	4.045	3.345	2.245	-	-	2.245	-	-
Pot Cap-1 Maneuver	368	338	826	350	352	835	1340	-	-	1273	-	-
Stage 1	612	589	-	735	673	-	-	-	-	-	-	-
Stage 2	765	648	-	611	586	-	-	-	-	-	-	-
Platoon blocked, %	0	0		0	0	0		-	-	0	-	-
Mov Cap-1 Maneuver	291	304	826	298	317	835	1340	-	-	1273	-	-
Mov Cap-2 Maneuver	389	384	-	400	402	-	-	-	-	-	-	-
Stage 1	562	542	-	720	659	-	-	-	-	-	-	-
Stage 2	662	635	-	536	539	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v12.58		13.73	0.7	2.62
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1340	-	-	516 562	1273	-	-
HCM Lane V/C Ratio	0.021	-	-	0.08 0.269	0.08	-	-
HCM Control Delay (s/veh)	7.7	-	-	12.6 13.7	8.1	-	-
HCM Lane LOS	A	-	-	B B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.3 1.1	0.3	-	-

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	11	7	341	399	8
Future Vol, veh/h	7	11	7	341	399	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	8	12	8	371	434	9
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	826	439	443	0	-	0
Stage 1	439	-	-	-	-	-
Stage 2	387	-	-	-	-	-
Critical Hdwy	6.45	6.25	4.15	-	-	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	2.245	-	-	-
Pot Cap-1 Maneuver	338	612	1101	-	-	-
Stage 1	644	-	-	-	-	-
Stage 2	680	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	335	612	1101	-	-	-
Mov Cap-2 Maneuver	335	-	-	-	-	-
Stage 1	638	-	-	-	-	-
Stage 2	680	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	13.1	0.2		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1101	-	463	-	-	
HCM Lane V/C Ratio	0.007	-	0.042	-	-	
HCM Control Delay (s)	8.3	0	13.1	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0	-	0.1	-	-	

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	13	12	16	371	288	14
Future Vol, veh/h	13	12	16	371	288	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	14	13	17	403	313	15
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	758	321	328	0	-	0
Stage 1	321	-	-	-	-	-
Stage 2	437	-	-	-	-	-
Critical Hdwy	6.45	6.25	4.15	-	-	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	2.245	-	-	-
Pot Cap-1 Maneuver	371	713	1215	-	-	-
Stage 1	729	-	-	-	-	-
Stage 2	645	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	364	713	1215	-	-	-
Mov Cap-2 Maneuver	364	-	-	-	-	-
Stage 1	716	-	-	-	-	-
Stage 2	645	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	13	0.3		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1215	-	476	-	-	
HCM Lane V/C Ratio	0.014	-	0.057	-	-	
HCM Control Delay (s)	8	0	13	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0	-	0.2	-	-	

Timings

5: Harvest Rd & Flat Rock Trl/Kewaunee St

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Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	10	3	68	4	16	426	26	49	525
Future Volume (vph)	10	3	68	4	16	426	26	49	525
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	Perm	pm+pt	NA
Protected Phases		4		8	5	2		1	6
Permitted Phases	4		8		2		2	6	
Detector Phase	4	4	8	8	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5
Total Split (s)	30.0	30.0	30.0	30.0	13.0	46.0	46.0	14.0	47.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	14.4%	51.1%	51.1%	15.6%	52.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	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)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag					Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 51 (57%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 55

Control Type: Actuated-Coordinated























Splits and Phases: 5: Harvest Rd & Flat Rock Trl/Kewaunee St

	Ø2 (R)	46 s		Ø1	14 s		Ø4	30 s
	Ø6 (R)	47 s		Ø5	13 s		Ø8	30 s

HCM 7th Signalized Intersection Summary

5: Harvest Rd & Flat Rock Trl/Kewaunee St

2031 Total AM
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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	3	19	68	4	82	16	426	26	49	525	15
Future Volume (veh/h)	10	3	19	68	4	82	16	426	26	49	525	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	3	10	74	4	41	17	463	28	53	571	16
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	156	31	104	185	12	120	952	1600	714	913	1628	46
Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.10	0.15	0.15	0.61	0.94	0.94
Sat Flow, veh/h	1329	370	1234	1368	139	1429	1739	3469	1547	1739	3447	97
Grp Volume(v), veh/h	11	0	13	74	0	45	17	463	28	53	287	300
Grp Sat Flow(s),veh/h/ln	1329	0	1604	1368	0	1569	1739	1735	1547	1739	1735	1809
Q Serve(g_s), s	0.7	0.0	0.7	4.8	0.0	2.4	0.0	10.7	1.4	0.0	1.2	1.2
Cycle Q Clear(g_c), s	3.1	0.0	0.7	5.4	0.0	2.4	0.0	10.7	1.4	0.0	1.2	1.2
Prop In Lane	1.00		0.77	1.00		0.91	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	156	0	135	185	0	132	952	1600	714	913	819	854
V/C Ratio(X)	0.07	0.00	0.10	0.40	0.00	0.34	0.02	0.29	0.04	0.06	0.35	0.35
Avail Cap(c_a), veh/h	421	0	454	457	0	444	952	1600	714	913	819	854
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	2.00	2.00	2.00
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	40.3	0.0	38.1	40.6	0.0	38.9	4.0	25.1	21.1	3.3	1.4	1.4
Incr Delay (d2), s/veh	0.2	0.0	0.3	1.4	0.0	1.5	0.0	0.5	0.1	0.0	1.2	1.1
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	0.2	0.0	0.3	1.7	0.0	1.0	0.1	4.7	0.5	0.2	0.6	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	40.5	0.0	38.4	42.0	0.0	40.4	4.0	25.5	21.3	3.3	2.5	2.5
LnGrp LOS	D		D	D		D	A	C	C	A	A	A
Approach Vol, veh/h	24			119			508			640		
Approach Delay, s/veh	39.4			41.4			24.6			2.6		
Approach LOS	D			D			C			A		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	31.9	46.0		12.1	30.9	47.0		12.1				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	9.5	41.5		25.5	8.5	42.5		25.5				
Max Q Clear Time (g_c+I1), s	2.0	12.7		5.1	2.0	3.2		7.4				
Green Ext Time (p_c), s	0.0	3.0		0.0	0.0	3.4		0.4				
Intersection Summary												
HCM 7th Control Delay, s/veh	15.5											
HCM 7th LOS	B											

Timings

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2031 Total PM

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Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	21	6	61	6	32	580	76	109	448
Future Volume (vph)	21	6	61	6	32	580	76	109	448
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	Perm	pm+pt	NA
Protected Phases		4		8	5	2		1	6
Permitted Phases	4		8		2		2	6	
Detector Phase	4	4	8	8	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5
Total Split (s)	29.0	29.0	29.0	29.0	12.0	45.0	45.0	16.0	49.0
Total Split (%)	32.2%	32.2%	32.2%	32.2%	13.3%	50.0%	50.0%	17.8%	54.4%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	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)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag					Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 56 (62%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 55

Control Type: Actuated-Coordinated

Splits and Phases: 5: Harvest Rd & Flat Rock Trl/Kewaunee St












	Ø2 (R)	45 s		Ø1	16 s		Ø4	29 s
	Ø6 (R)	49 s		Ø5	12 s		Ø8	29 s




HCM 7th Signalized Intersection Summary




5: Harvest Rd & Flat Rock Trl/Kewaunee St

2031 Total PM

09/20/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	6	29	61	6	117	32	580	76	109	448	19
Future Volume (veh/h)	21	6	29	61	6	117	32	580	76	109	448	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	23	7	21	66	7	79	35	630	83	118	487	21
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	132	38	113	184	12	134	818	1561	696	807	1675	72
Arrive On Green	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.15	0.15	0.10	0.16	0.16
Sat Flow, veh/h	1280	402	1207	1349	128	1439	1739	3469	1547	1739	3388	146
Grp Volume(v), veh/h	23	0	28	66	0	86	35	630	83	118	249	259
Grp Sat Flow(s),veh/h/ln	1280	0	1609	1349	0	1567	1739	1735	1547	1739	1735	1800
Q Serve(g_s), s	1.6	0.0	1.4	4.3	0.0	4.7	0.0	14.8	4.2	0.0	11.3	11.4
Cycle Q Clear(g_c), s	6.3	0.0	1.4	5.7	0.0	4.7	0.0	14.8	4.2	0.0	11.3	11.4
Prop In Lane	1.00		0.75	1.00		0.92	1.00		1.00	1.00		0.08
Lane Grp Cap(c), veh/h	132	0	150	184	0	146	818	1561	696	807	858	890
V/C Ratio(X)	0.17	0.00	0.19	0.36	0.00	0.59	0.04	0.40	0.12	0.15	0.29	0.29
Avail Cap(c_a), veh/h	361	0	438	426	0	427	818	1561	696	807	858	890
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	0.33	0.33	0.33
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	42.2	0.0	37.7	40.3	0.0	39.1	10.1	27.4	22.9	13.3	23.8	23.8
Incr Delay (d2), s/veh	0.6	0.0	0.6	1.2	0.0	3.7	0.0	0.8	0.3	0.1	0.9	0.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.6	1.5	0.0	2.0	0.3	6.9	1.5	1.4	5.1	5.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	42.8	0.0	38.2	41.5	0.0	42.9	10.1	28.2	23.2	13.4	24.6	24.6
LnGrp LOS	D		D	D		D	B	C	C	B	C	C
Approach Vol, veh/h	51			152			748			626		
Approach Delay, s/veh	40.3			42.3			26.8			22.5		
Approach LOS	D			D			C			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	32.1	45.0		12.9	28.1	49.0		12.9				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	11.5	40.5		24.5	7.5	44.5		24.5				
Max Q Clear Time (g_c+I1), s	2.0	16.8		8.3	2.0	13.4		7.7				
Green Ext Time (p_c), s	0.2	4.3		0.1	0.0	2.8		0.6				
Intersection Summary												
HCM 7th Control Delay, s/veh	27.0											
HCM 7th LOS	C											

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	8	13	7	461	466	8
Future Vol, veh/h	8	13	7	461	466	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	9	14	8	501	507	9
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1029	512	516	0	-	0
Stage 1	512	-	-	-	-	-
Stage 2	517	-	-	-	-	-
Critical Hdwy	6.45	6.25	4.15	-	-	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	2.245	-	-	-
Pot Cap-1 Maneuver	256	556	1035	-	-	-
Stage 1	596	-	-	-	-	-
Stage 2	592	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	253	556	1035	-	-	-
Mov Cap-2 Maneuver	253	-	-	-	-	-
Stage 1	589	-	-	-	-	-
Stage 2	592	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	15	0.1		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1035	-	382	-	-	
HCM Lane V/C Ratio	0.007	-	0.06	-	-	
HCM Control Delay (s)	8.5	0	15	-	-	
HCM Lane LOS	A	A	C	-	-	
HCM 95th %tile Q(veh)	0	-	0.2	-	-	

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	18	13	16	469	358	16
Future Vol, veh/h	18	13	16	469	358	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	20	14	17	510	389	17
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	942	398	406	0	-	0
Stage 1	398	-	-	-	-	-
Stage 2	544	-	-	-	-	-
Critical Hdwy	6.45	6.25	4.15	-	-	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	2.245	-	-	-
Pot Cap-1 Maneuver	288	645	1137	-	-	-
Stage 1	672	-	-	-	-	-
Stage 2	576	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	282	645	1137	-	-	-
Mov Cap-2 Maneuver	282	-	-	-	-	-
Stage 1	658	-	-	-	-	-
Stage 2	576	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	15.7	0.3		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1137	-	369	-	-	
HCM Lane V/C Ratio	0.015	-	0.091	-	-	
HCM Control Delay (s)	8.2	0	15.7	-	-	
HCM Lane LOS	A	A	C	-	-	
HCM 95th %tile Q(veh)	0	-	0.3	-	-	

Timings

5: Harvest Rd & Flat Rock Trl/Kewaunee St

2033 Total AM

09/20/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	11	6	82	9	16	547	35	67	586
Future Volume (vph)	11	6	82	9	16	547	35	67	586
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	Perm	pm+pt	NA
Protected Phases		4		8	5	2		1	6
Permitted Phases	4		8		2		2	6	
Detector Phase	4	4	8	8	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5
Total Split (s)	30.0	30.0	30.0	30.0	12.0	45.0	45.0	15.0	48.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	13.3%	50.0%	50.0%	16.7%	53.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	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)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag					Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 4 (4%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 55

Control Type: Actuated-Coordinated












Splits and Phases: 5: Harvest Rd & Flat Rock Trl/Kewaunee St



HCM 7th Signalized Intersection Summary

5: Harvest Rd & Flat Rock Trl/Kewaunee St

2033 Total AM
09/20/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	6	21	82	9	106	16	547	35	67	586	15
Future Volume (veh/h)	11	6	21	82	9	106	16	547	35	67	586	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	12	7	12	89	10	67	17	595	38	73	637	16
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	152	62	106	204	21	140	818	2433	1085	461	1671	42
Arrive On Green	0.10	0.10	0.10	0.10	0.10	0.10	0.53	1.00	1.00	0.06	0.64	0.64
Sat Flow, veh/h	1291	604	1035	1360	205	1374	1739	3469	1547	1739	3458	87
Grp Volume(v), veh/h	12	0	19	89	0	77	17	595	38	73	319	334
Grp Sat Flow(s),veh/h/ln	1291	0	1640	1360	0	1579	1739	1735	1547	1739	1735	1810
Q Serve(g_s), s	0.8	0.0	0.9	5.7	0.0	4.1	0.0	0.0	0.0	2.1	7.8	7.8
Cycle Q Clear(g_c), s	4.9	0.0	0.9	6.7	0.0	4.1	0.0	0.0	0.0	2.1	7.8	7.8
Prop In Lane	1.00		0.63	1.00		0.87	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	152	0	167	204	0	161	818	2433	1085	461	838	875
V/C Ratio(X)	0.08	0.00	0.11	0.44	0.00	0.48	0.02	0.24	0.04	0.16	0.38	0.38
Avail Cap(c_a), veh/h	386	0	465	451	0	447	818	2433	1085	583	838	875
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.33	1.33	1.33
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	40.5	0.0	36.7	39.7	0.0	38.1	4.0	0.0	0.0	13.7	9.7	9.7
Incr Delay (d2), s/veh	0.2	0.0	0.3	1.5	0.0	2.2	0.0	0.2	0.1	0.2	1.3	1.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.4	2.0	0.0	1.7	0.1	0.1	0.0	0.8	2.7	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	40.7	0.0	37.0	41.2	0.0	40.3	4.0	0.2	0.1	13.9	11.0	11.0
LnGrp LOS	D		D	D		D	A	A	A	B	B	B
Approach Vol, veh/h	31			166			650			726		
Approach Delay, s/veh	38.4			40.8			0.3			11.3		
Approach LOS	D			D			A			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.7	67.6		13.7	28.3	48.0		13.7				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	10.5	40.5		25.5	7.5	43.5		25.5				
Max Q Clear Time (g_c+I1), s	4.1	2.0		6.9	2.0	9.8		8.7				
Green Ext Time (p_c), s	0.1	4.2		0.1	0.0	3.9		0.6				
Intersection Summary												
HCM 7th Control Delay, s/veh	10.4											
HCM 7th LOS	B											

Timings

5: Harvest Rd & Flat Rock Trl/Kewaunee St

2033 Total PM

09/20/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	26	10	73	8	32	680	87	127	517
Future Volume (vph)	26	10	73	8	32	680	87	127	517
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	Perm	pm+pt	NA
Protected Phases		4		8	5	2		1	6
Permitted Phases	4		8		2		2	6	
Detector Phase	4	4	8	8	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5
Total Split (s)	27.0	27.0	27.0	27.0	12.0	45.0	45.0	18.0	51.0
Total Split (%)	30.0%	30.0%	30.0%	30.0%	13.3%	50.0%	50.0%	20.0%	56.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	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)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag					Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max

Intersection Summary

Cycle Length: 90

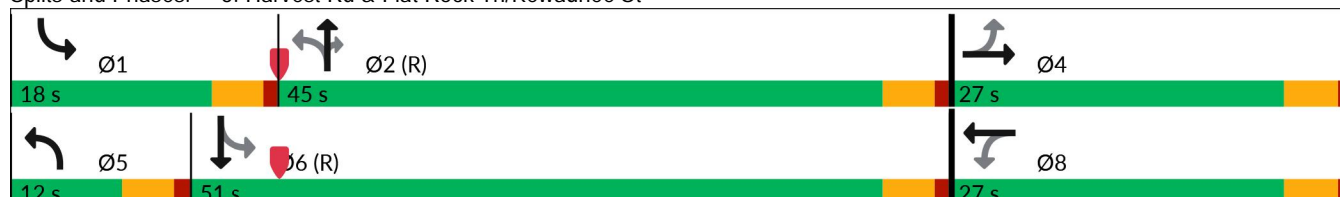
Actuated Cycle Length: 90

Offset: 80 (89%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 55

Control Type: Actuated-Coordinated

Splits and Phases: 5: Harvest Rd & Flat Rock Trl/Kewaunee St


















HCM 7th Signalized Intersection Summary

5: Harvest Rd & Flat Rock Trl/Kewaunee St

2033 Total PM

09/20/2024






												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	10	30	73	8	135	32	680	87	127	517	21
Future Volume (veh/h)	26	10	30	73	8	135	32	680	87	127	517	21
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	28	11	11	79	9	93	35	739	95	138	562	23
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	136	89	89	209	15	153	633	2392	1067	533	2414	99
Arrive On Green	0.11	0.11	0.11	0.11	0.11	0.11	0.01	0.23	0.23	0.04	0.48	0.48
Sat Flow, veh/h	1262	838	838	1357	138	1430	1739	3469	1547	1739	3397	139
Grp Volume(v), veh/h	28	0	22	79	0	102	35	739	95	138	287	298
Grp Sat Flow(s),veh/h/ln	1262	0	1675	1357	0	1568	1739	1735	1547	1739	1735	1801
Q Serve(g_s), s	2.0	0.0	1.1	5.0	0.0	5.6	0.5	15.9	4.4	2.0	8.8	8.8
Cycle Q Clear(g_c), s	7.5	0.0	1.1	6.1	0.0	5.6	0.5	15.9	4.4	2.0	8.8	8.8
Prop In Lane	1.00		0.50	1.00		0.91	1.00		1.00	1.00		0.08
Lane Grp Cap(c), veh/h	136	0	179	209	0	167	633	2392	1067	533	1233	1280
V/C Ratio(X)	0.21	0.00	0.12	0.38	0.00	0.61	0.06	0.31	0.09	0.26	0.23	0.23
Avail Cap(c_a), veh/h	317	0	419	403	0	392	722	2392	1067	701	1233	1280
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	0.67	0.67	0.67
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	42.0	0.0	36.4	39.1	0.0	38.4	3.9	16.9	12.5	5.1	9.1	9.1
Incr Delay (d2), s/veh	0.7	0.0	0.3	1.1	0.0	3.5	0.0	0.3	0.2	0.3	0.4	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	0.6	0.0	0.5	1.7	0.0	2.3	0.1	7.3	1.2	0.5	2.9	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	42.7	0.0	36.7	40.3	0.0	41.9	3.9	17.3	12.6	5.3	9.6	9.5
LnGrp LOS	D		D	D		D	A	B	B	A	A	A
Approach Vol, veh/h	50			181			869			723		
Approach Delay, s/veh	40.1			41.2			16.2			8.7		
Approach LOS	D			D			B			A		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.3	66.5		14.1	7.4	68.5		14.1				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	13.5	40.5		22.5	7.5	46.5		22.5				
Max Q Clear Time (g_c+I1), s	4.0	17.9		9.5	2.5	10.8		8.1				
Green Ext Time (p_c), s	0.2	5.1		0.1	0.0	3.4		0.6				
Intersection Summary												
HCM 7th Control Delay, s/veh	16.4											
HCM 7th LOS	B											










Intersection						
Int Delay, s/veh	1.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	17	159	278	10	6	37
Future Vol, veh/h	17	159	278	10	6	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	125	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	80	80	83	83	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	21	199	335	12	7	44










Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	347	0	0 582 341
Stage 1	-	-	- - 341 -
Stage 2	-	-	- - 241 -
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	1212	-	- - 475 702
Stage 1	-	-	- - 720 -
Stage 2	-	-	- - 799 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1212	-	- - 467 702
Mov Cap-2 Maneuver	-	-	- - 467 -
Stage 1	-	-	- - 708 -
Stage 2	-	-	- - 799 -

Approach	EB	WB	SB
HCM Control Delay, s/v	0.77	0	10.95
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1212	-	-	-	656
HCM Lane V/C Ratio	0.018	-	-	-	0.077
HCM Control Delay (s/veh)	8	-	-	-	11
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.3





















Intersection						
Int Delay, s/veh	1.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	57	265	227	6	9	22
Future Vol, veh/h	57	265	227	6	9	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	125	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	80	80	92	92	70	70
Heavy Vehicles, %	7	7	3	3	2	2
Mvmt Flow	71	331	247	7	13	31
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	254	0	-	0	724	251
Stage 1	-	-	-	-	251	-
Stage 2	-	-	-	-	473	-
Critical Hdwy	4.17	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.263	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1282	-	-	-	393	788
Stage 1	-	-	-	-	791	-
Stage 2	-	-	-	-	627	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1282	-	-	-	371	788
Mov Cap-2 Maneuver	-	-	-	-	371	-
Stage 1	-	-	-	-	747	-
Stage 2	-	-	-	-	627	-
Approach	EB	WB		SB		
HCM Control Delay, s	1.4	0		11.5		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1282	-	-	-	594	
HCM Lane V/C Ratio	0.056	-	-	-	0.075	
HCM Control Delay (s)	8	-	-	-	11.5	
HCM Lane LOS	A	-	-	-	B	
HCM 95th %tile Q(veh)	0.2	-	-	-	0.2	

Intersection												
Int Delay, s/veh	3.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	32	221	19	17	412	20	33	25	11	14	11	48
Future Vol, veh/h	32	221	19	17	412	20	33	25	11	14	11	48
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	125	-	-	150	-	-	150	-	-	275	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	35	240	21	18	448	22	36	27	12	15	12	52
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	470	0	0	261	0	0	801	816	240	819	826	459
Stage 1	-	-	-	-	-	-	310	310	-	496	496	-
Stage 2	-	-	-	-	-	-	491	507	-	323	330	-
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	1092	-	-	1304	-	-	303	311	799	294	307	602
Stage 1	-	-	-	-	-	-	700	659	-	556	546	-
Stage 2	-	-	-	-	-	-	559	539	-	689	645	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1092	-	-	1304	-	-	254	297	799	252	293	602
Mov Cap-2 Maneuver	-	-	-	-	-	-	254	297	-	252	293	-
Stage 1	-	-	-	-	-	-	678	638	-	548	538	-
Stage 2	-	-	-	-	-	-	492	532	-	629	625	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	0.99			0.3			18.61			14.53		
HCM LOS							C			B		
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2		
Capacity (veh/h)	254	368	1092	-	-	1304	-	-	252	503		
HCM Lane V/C Ratio	0.141	0.106	0.032	-	-	0.014	-	-	0.06	0.127		
HCM Control Delay (s/veh)	21.5	16	8.4	-	-	7.8	-	-	20.2	13.2		
HCM Lane LOS	C	C	A	-	-	A	-	-	C	B		
HCM 95th %tile Q(veh)	0.5	0.4	0.1	-	-	0	-	-	0.2	0.4		

Intersection												
Int Delay, s/veh	3.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	68	425	55	10	320	11	32	28	8	12	32	40
Future Vol, veh/h	68	425	55	10	320	11	32	28	8	12	32	40
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	125	-	-	150	-	-	150	-	-	275	-	-
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, %	7	7	2	2	3	3	2	2	2	2	2	2
Mvmt Flow	74	462	60	11	348	12	35	30	9	13	35	43
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	360	0	0	522	0	0	1025	992	462	1036	1046	354
Stage 1	-	-	-	-	-	-	610	610	-	376	376	-
Stage 2	-	-	-	-	-	-	415	382	-	660	670	-
Critical Hdwy	4.17	-	-	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	2.263	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1171	-	-	1044	-	-	213	246	600	210	228	690
Stage 1	-	-	-	-	-	-	482	485	-	645	616	-
Stage 2	-	-	-	-	-	-	615	613	-	452	455	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1171	-	-	1044	-	-	165	228	600	176	211	690
Mov Cap-2 Maneuver	-	-	-	-	-	-	165	228	-	176	211	-
Stage 1	-	-	-	-	-	-	452	454	-	604	609	-
Stage 2	-	-	-	-	-	-	538	606	-	389	426	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1			0.2			26.5			19.8		
HCM LOS							D			C		
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2		
Capacity (veh/h)	165	264	1171	-	-	1044	-	-	176	343		
HCM Lane V/C Ratio	0.211	0.148	0.063	-	-	0.01	-	-	0.074	0.228		
HCM Control Delay (s)	32.6	21	8.3	-	-	8.5	-	-	27.1	18.6		
HCM Lane LOS	D	C	A	-	-	A	-	-	D	C		
HCM 95th %tile Q(veh)	0.8	0.5	0.2	-	-	0	-	-	0.2	0.9		

Timings
6: Jewell Ave & Harvest Rd

2026 Total AM
09/23/2024

										
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	43	230	19	17	436	33	25	21	11	79
Future Volume (vph)	43	230	19	17	436	33	25	21	11	79
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases	7	4			8		2		6	
Permitted Phases	4		4	8		2		6		6
Detector Phase	7	4	4	8	8	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
Minimum Split (s)	9.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	11.0	64.0	64.0	53.0	53.0	26.0	26.0	26.0	26.0	26.0
Total Split (%)	12.2%	71.1%	71.1%	58.9%	58.9%	28.9%	28.9%	28.9%	28.9%	28.9%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	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)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead			Lag		Lag				
Lead-Lag Optimize?	Yes			Yes		Yes				
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	Max	Max	Max	Max	Max

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated






















Splits and Phases: 6: Jewell Ave & Harvest Rd



HCM 7th Signalized Intersection Summary





















6: Jewell Ave & Harvest Rd

2026 Total AM
09/23/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	230	19	17	436	23	33	25	11	21	11	79
Future Volume (veh/h)	43	230	19	17	436	23	33	25	11	21	11	79
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	47	250	21	18	474	25	36	27	12	23	12	43
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	2	2	2	2	2
Cap, veh/h	522	1237	1048	715	1008	53	396	293	130	383	447	379
Arrive On Green	0.04	0.66	0.66	0.57	0.57	0.57	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1781	1870	1585	1108	1761	93	1349	1227	545	1368	1870	1585
Grp Volume(v), veh/h	47	250	21	18	0	499	36	0	39	23	12	43
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1108	0	1854	1349	0	1772	1368	1870	1585
Q Serve(g_s), s	0.9	4.7	0.4	0.6	0.0	14.2	1.9	0.0	1.5	1.2	0.4	1.9
Cycle Q Clear(g_c), s	0.9	4.7	0.4	0.6	0.0	14.2	2.3	0.0	1.5	2.7	0.4	1.9
Prop In Lane	1.00		1.00	1.00		0.05	1.00		0.31	1.00		1.00
Lane Grp Cap(c), veh/h	522	1237	1048	715	0	1062	396	0	423	383	447	379
V/C Ratio(X)	0.09	0.20	0.02	0.03	0.00	0.47	0.09	0.00	0.09	0.06	0.03	0.11
Avail Cap(c_a), veh/h	582	1237	1048	715	0	1062	396	0	423	383	447	379
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.7	6.0	5.2	8.4	0.0	11.2	27.1	0.0	26.7	27.7	26.2	26.8
Incr Delay (d2), s/veh	0.1	0.4	0.0	0.1	0.0	1.5	0.5	0.0	0.4	0.3	0.1	0.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.5	0.1	0.1	0.0	5.3	0.7	0.0	0.7	0.4	0.2	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	7.8	6.3	5.3	8.4	0.0	12.7	27.6	0.0	27.1	28.0	26.3	27.4
LnGrp LOS	A	A	A	A		B	C		C	C	C	C
Approach Vol, veh/h	318			517			75			78		
Approach Delay, s/veh	6.5			12.6			27.3			27.4		
Approach LOS	A			B			C			C		
Timer - Assigned Phs	2			4			6			7		
Phs Duration (G+Y+Rc), s	26.0			64.0			26.0			8.0		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	21.5			59.5			21.5			6.5		
Max Q Clear Time (g_c+I1), s	4.3			6.7			4.7			2.9		
Green Ext Time (p_c), s	0.2			1.4			0.2			0.0		
Intersection Summary												
HCM 7th Control Delay, s/veh	12.9											
HCM 7th LOS	B											

Timings 6: Jewell Ave & Harvest Rd

2026 Total PM
05/31/2024

										
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	104	453	55	10	338	32	28	18	32	63
Future Volume (vph)	104	453	55	10	338	32	28	18	32	63
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases	7	4			8		2		6	
Permitted Phases	4		4	8		2		6		6
Detector Phase	7	4	4	8	8	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
Minimum Split (s)	9.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	15.0	64.0	64.0	49.0	49.0	26.0	26.0	26.0	26.0	26.0
Total Split (%)	16.7%	71.1%	71.1%	54.4%	54.4%	28.9%	28.9%	28.9%	28.9%	28.9%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	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)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead			Lag	Lag					
Lead-Lag Optimize?	Yes			Yes	Yes					
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	Max	Max	Max	Max	Max

Intersection Summary

Cycle Length: 90

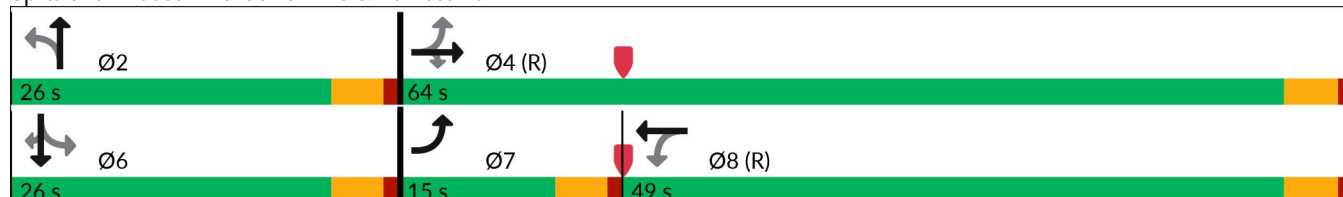
Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green

Natural Cycle: 55

Control Type: Actuated-Coordinated






















Splits and Phases: 6: Jewell Ave & Harvest Rd















HCM 7th Signalized Intersection Summary

6: Jewell Ave & Harvest Rd

2026 Total PM
05/31/2024











												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	104	453	55	10	338	19	32	28	8	18	32	63
Future Volume (veh/h)	104	453	55	10	338	19	32	28	8	18	32	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1796	1796	1870	1870	1856	1856	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	113	492	60	11	367	21	35	30	9	20	35	35
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, %	7	7	2	2	3	3	2	2	2	2	2	2
Cap, veh/h	591	1188	1048	562	971	56	388	330	99	384	447	379
Arrive On Green	0.05	0.66	0.66	0.56	0.56	0.56	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1711	1796	1585	905	1738	99	1373	1381	414	1368	1870	1585
Grp Volume(v), veh/h	113	492	60	11	0	388	35	0	39	20	35	35
Grp Sat Flow(s),veh/h/ln	1711	1796	1585	905	0	1838	1373	0	1796	1368	1870	1585
Q Serve(g_s), s	2.3	11.5	1.2	0.5	0.0	10.6	1.8	0.0	1.5	1.0	1.3	1.5
Cycle Q Clear(g_c), s	2.3	11.5	1.2	2.8	0.0	10.6	3.1	0.0	1.5	2.6	1.3	1.5
Prop In Lane	1.00		1.00	1.00		0.05	1.00		0.23	1.00		1.00
Lane Grp Cap(c), veh/h	591	1188	1048	562	0	1027	388	0	429	384	447	379
V/C Ratio(X)	0.19	0.41	0.06	0.02	0.00	0.38	0.09	0.00	0.09	0.05	0.08	0.09
Avail Cap(c_a), veh/h	701	1188	1048	562	0	1027	388	0	429	384	447	379
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.5	7.1	5.4	9.9	0.0	11.1	27.8	0.0	26.6	27.6	26.6	26.7
Incr Delay (d2), s/veh	0.2	1.1	0.1	0.1	0.0	1.1	0.5	0.0	0.4	0.3	0.3	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	0.7	3.7	0.3	0.1	0.0	4.0	0.6	0.0	0.7	0.3	0.6	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	7.6	8.2	5.5	10.0	0.0	12.2	28.2	0.0	27.1	27.9	26.9	27.1
LnGrp LOS	A	A	A	A		B	C		C	C	C	C
Approach Vol, veh/h	665			399			74			90		
Approach Delay, s/veh	7.8			12.1			27.6			27.2		
Approach LOS	A			B			C			C		
Timer - Assigned Phs	2			4			6			7		
Phs Duration (G+Y+Rc), s	26.0			64.0			26.0			9.2		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	21.5			59.5			21.5			10.5		
Max Q Clear Time (g_c+I1), s	5.1			13.5			4.6			4.3		
Green Ext Time (p_c), s	0.2			3.3			0.2			0.1		
Intersection Summary												
HCM 7th Control Delay, s/veh	11.8											
HCM 7th LOS	B											

Intersection												
Int Delay, s/veh	3.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	44	230	19	17	436	23	33	25	11	21	11	79
Future Vol, veh/h	44	230	19	17	436	23	33	25	11	21	11	79
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	125	-	-	150	-	-	150	-	-	275	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	48	250	21	18	474	25	36	27	12	23	12	86

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	499	0	0	271	0	0	863	882	250	883	890	486
Stage 1	-	-	-	-	-	-	346	346	-	523	523	-
Stage 2	-	-	-	-	-	-	517	536	-	359	366	-
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	1065	-	-	1293	-	-	275	285	789	267	282	581
Stage 1	-	-	-	-	-	-	670	636	-	537	530	-
Stage 2	-	-	-	-	-	-	541	523	-	659	622	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1065	-	-	1293	-	-	211	269	789	223	266	581
Mov Cap-2 Maneuver	-	-	-	-	-	-	211	269	-	223	266	-
Stage 1	-	-	-	-	-	-	640	607	-	529	523	-
Stage 2	-	-	-	-	-	-	444	516	-	592	595	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	1.28			0.28			21.12			14.97		
HCM LOS							C			B		










Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2	SBLn3
Capacity (veh/h)	211	336	1065	-	-	1293	-	-	223	266	581
HCM Lane V/C Ratio	0.17	0.116	0.045	-	-	0.014	-	-	0.102	0.045	0.148
HCM Control Delay (s/veh)	25.5	17.1	8.5	-	-	7.8	-	-	22.9	19.2	12.3
HCM Lane LOS	D	C	A	-	-	A	-	-	C	C	B
HCM 95th %tile Q(veh)	0.6	0.4	0.1	-	-	0	-	-	0.3	0.1	0.5

Intersection												
Int Delay, s/veh	5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	104	453	55	10	338	19	32	28	8	18	32	63
Future Vol, veh/h	104	453	55	10	338	19	32	28	8	18	32	63
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	125	-	-	150	-	-	150	-	-	275	-	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, %	7	7	2	2	3	3	2	2	2	2	2	2
Mvmt Flow	113	492	60	11	367	21	35	30	9	20	35	68

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	388	0	0	552	0	0	1125	1128	492	1133	1178	378
Stage 1	-	-	-	-	-	-	718	718	-	399	399	-
Stage 2	-	-	-	-	-	-	407	410	-	734	778	-
Critical Hdwy	4.17	-	-	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	2.263	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1144	-	-	1018	-	-	182	204	576	180	191	669
Stage 1	-	-	-	-	-	-	420	433	-	627	602	-
Stage 2	-	-	-	-	-	-	621	596	-	412	407	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1144	-	-	1018	-	-	119	182	576	134	170	669
Mov Cap-2 Maneuver	-	-	-	-	-	-	119	182	-	134	170	-
Stage 1	-	-	-	-	-	-	378	390	-	620	595	-
Stage 2	-	-	-	-	-	-	519	589	-	337	366	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	1.44			0.23			35.81			20.85		
HCM LOS							E			C		










Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2	SBLn3
Capacity (veh/h)	119	215	1144	-	-	1018	-	-	134	170	669
HCM Lane V/C Ratio	0.293	0.182	0.099	-	-	0.011	-	-	0.146	0.204	0.102
HCM Control Delay (s/veh)	47.4	25.5	8.5	-	-	8.6	-	-	36.4	31.5	11
HCM Lane LOS	E	D	A	-	-	A	-	-	E	D	B
HCM 95th %tile Q(veh)	1.1	0.6	0.3	-	-	0	-	-	0.5	0.7	0.3

Intersection												
Int Delay, s/veh	3.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	32	247	24	22	464	23	36	28	13	15	14	49
Future Vol, veh/h	32	247	24	22	464	23	36	28	13	15	14	49
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	125	-	-	150	-	-	150	-	-	275	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	35	268	26	24	504	25	39	30	14	16	15	53

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	529	0	0	295	0	0	898	915	268	918	929	517
Stage 1	-	-	-	-	-	-	338	338	-	565	565	-
Stage 2	-	-	-	-	-	-	560	577	-	353	364	-
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	1038	-	-	1267	-	-	260	273	770	252	268	558
Stage 1	-	-	-	-	-	-	676	641	-	510	508	-
Stage 2	-	-	-	-	-	-	513	502	-	664	624	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1038	-	-	1267	-	-	211	258	770	208	254	558
Mov Cap-2 Maneuver	-	-	-	-	-	-	211	258	-	208	254	-
Stage 1	-	-	-	-	-	-	654	619	-	500	499	-
Stage 2	-	-	-	-	-	-	441	492	-	599	603	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	0.91			0.34			21.57			16.41		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	211	327	1038	-	-	1267	-	-	208	441
HCM Lane V/C Ratio	0.186	0.136	0.034	-	-	0.019	-	-	0.078	0.155
HCM Control Delay (s/veh)	26	17.7	8.6	-	-	7.9	-	-	23.7	14.7
HCM Lane LOS	D	C	A	-	-	A	-	-	C	B
HCM 95th %tile Q(veh)	0.7	0.5	0.1	-	-	0.1	-	-	0.3	0.5

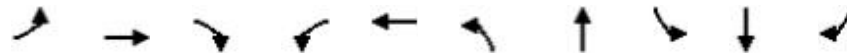
Intersection												
Int Delay, s/veh	4.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	68	476	63	13	372	14	40	31	9	13	35	41
Future Vol, veh/h	68	476	63	13	372	14	40	31	9	13	35	41
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	125	-	-	150	-	-	150	-	-	275	-	-
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, %	7	7	2	2	3	3	2	2	2	2	2	2
Mvmt Flow	74	517	68	14	404	15	43	34	10	14	38	45
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	419	0	0	585	0	0	1146	1112	517	1161	1173	412
Stage 1	-	-	-	-	-	-	665	665	-	440	440	-
Stage 2	-	-	-	-	-	-	481	447	-	721	733	-
Critical Hdwy	4.17	-	-	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	2.263	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1114	-	-	990	-	-	176	209	558	172	192	640
Stage 1	-	-	-	-	-	-	449	458	-	596	578	-
Stage 2	-	-	-	-	-	-	566	573	-	419	426	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1114	-	-	990	-	-	129	192	558	138	177	640
Mov Cap-2 Maneuver	-	-	-	-	-	-	129	192	-	138	177	-
Stage 1	-	-	-	-	-	-	419	428	-	557	570	-
Stage 2	-	-	-	-	-	-	484	565	-	354	398	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.9			0.3			35.7			24		
HCM LOS							E			C		
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2		
Capacity (veh/h)	129	225	1114	-	-	990	-	-	138	290		
HCM Lane V/C Ratio	0.337	0.193	0.066	-	-	0.014	-	-	0.102	0.285		
HCM Control Delay (s)	46.5	24.8	8.5	-	-	8.7	-	-	34	22.3		
HCM Lane LOS	E	C	A	-	-	A	-	-	D	C		
HCM 95th %tile Q(veh)	1.4	0.7	0.2	-	-	0	-	-	0.3	1.1		

Timings

6: Jewell Ave & Harvest Rd

2027 Total AM

09/23/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	80	270	24	22	527	36	28	35	14	137
Future Volume (vph)	80	270	24	22	527	36	28	35	14	137
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases	7	4			8		2		6	
Permitted Phases	4		4	8		2		6		6
Detector Phase	7	4	4	8	8	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
Minimum Split (s)	9.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	11.1	66.0	66.0	54.9	54.9	24.0	24.0	24.0	24.0	24.0
Total Split (%)	12.3%	73.3%	73.3%	61.0%	61.0%	26.7%	26.7%	26.7%	26.7%	26.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	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)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead			Lag	Lag					
Lead-Lag Optimize?	Yes			Yes	Yes					
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	Max	Max	Max	Max	Max

Intersection Summary

Cycle Length: 90

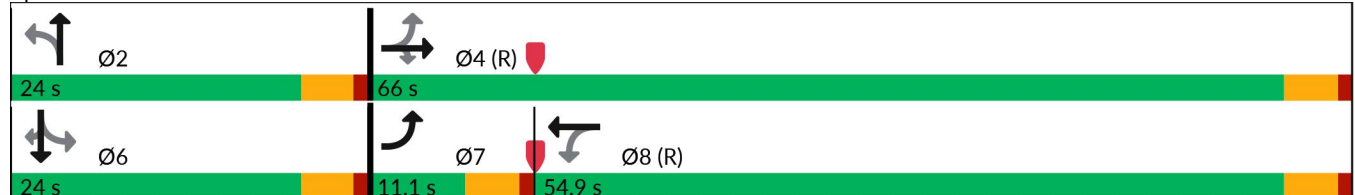
Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated






















Splits and Phases: 6: Jewell Ave & Harvest Rd



HCM 7th Signalized Intersection Summary





















6: Jewell Ave & Harvest Rd

2027 Total AM
09/23/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	270	24	22	527	36	36	28	13	35	14	137
Future Volume (veh/h)	80	270	24	22	527	36	36	28	13	35	14	137
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	87	293	26	24	573	39	39	30	14	38	15	67
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	2	2	2	2	2
Cap, veh/h	474	1278	1083	700	1011	69	357	261	122	348	405	343
Arrive On Green	0.05	0.68	0.68	0.58	0.58	0.58	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	1781	1870	1585	1061	1731	118	1316	1206	563	1362	1870	1585
Grp Volume(v), veh/h	87	293	26	24	0	612	39	0	44	38	15	67
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1061	0	1849	1316	0	1769	1362	1870	1585
Q Serve(g_s), s	1.6	5.3	0.5	0.9	0.0	18.5	2.2	0.0	1.8	2.1	0.6	3.1
Cycle Q Clear(g_c), s	1.6	5.3	0.5	0.9	0.0	18.5	2.7	0.0	1.8	3.9	0.6	3.1
Prop In Lane	1.00		1.00	1.00		0.06	1.00		0.32	1.00		1.00
Lane Grp Cap(c), veh/h	474	1278	1083	700	0	1080	357	0	383	348	405	343
V/C Ratio(X)	0.18	0.23	0.02	0.03	0.00	0.57	0.11	0.00	0.11	0.11	0.04	0.20
Avail Cap(c_a), veh/h	517	1278	1083	700	0	1080	357	0	383	348	405	343
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.2	5.4	4.6	8.0	0.0	11.6	28.9	0.0	28.3	29.9	27.8	28.8
Incr Delay (d2), s/veh	0.2	0.4	0.0	0.1	0.0	2.2	0.6	0.0	0.6	0.6	0.2	1.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.7	0.1	0.2	0.0	6.9	0.7	0.0	0.8	0.7	0.3	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	8.4	5.8	4.6	8.1	0.0	13.8	29.5	0.0	28.9	30.5	28.0	30.1
LnGrp LOS	A	A	A	A		B	C		C	C	C	C
Approach Vol, veh/h	406			636			83			120		
Approach Delay, s/veh	6.3			13.6			29.2			30.0		
Approach LOS	A			B			C			C		
Timer - Assigned Phs	2			4			6			7		
Phs Duration (G+Y+Rc), s	24.0			66.0			24.0			8.9		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	19.5			61.5			19.5			6.6		
Max Q Clear Time (g_c+I1), s	4.7			7.3			5.9			3.6		
Green Ext Time (p_c), s	0.2			1.7			0.2			0.0		
Intersection Summary												
HCM 7th Control Delay, s/veh	13.8											
HCM 7th LOS	B											

Timings 6: Jewell Ave & Harvest Rd

2027 Total PM
05/31/2024

										
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	187	543	63	13	419	40	31	40	35	143
Future Volume (vph)	187	543	63	13	419	40	31	40	35	143
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases	7	4			8		2		6	
Permitted Phases	4		4	8		2		6		6
Detector Phase	7	4	4	8	8	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
Minimum Split (s)	9.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	17.0	66.0	66.0	49.0	49.0	24.0	24.0	24.0	24.0	24.0
Total Split (%)	18.9%	73.3%	73.3%	54.4%	54.4%	26.7%	26.7%	26.7%	26.7%	26.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	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)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead			Lag		Lag				
Lead-Lag Optimize?	Yes			Yes		Yes				
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	Max	Max	Max	Max	Max

Intersection Summary

Cycle Length: 90

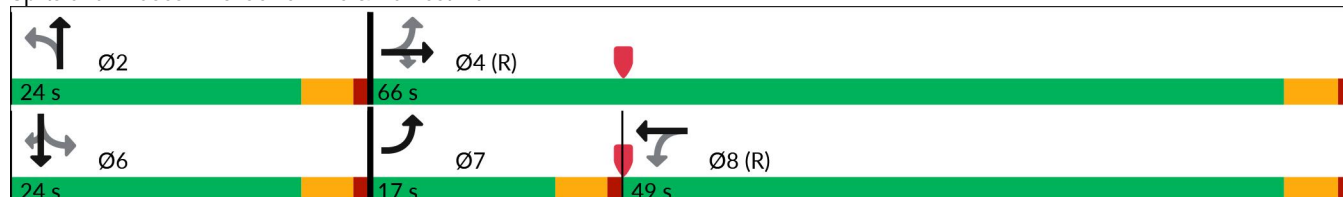
Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated






















Splits and Phases: 6: Jewell Ave & Harvest Rd















HCM 7th Signalized Intersection Summary

6: Jewell Ave & Harvest Rd

2027 Total PM
05/31/2024











												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	187	543	63	13	419	43	40	31	9	40	35	143
Future Volume (veh/h)	187	543	63	13	419	43	40	31	9	40	35	143
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1796	1796	1870	1870	1856	1856	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	203	590	68	14	455	47	43	34	10	43	38	73
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, %	7	7	2	2	3	3	2	2	2	2	2	2
Cap, veh/h	543	1227	1083	517	930	96	355	301	88	348	405	343
Arrive On Green	0.07	0.68	0.68	0.56	0.56	0.56	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	1711	1796	1585	826	1654	171	1370	1388	408	1362	1870	1585
Grp Volume(v), veh/h	203	590	68	14	0	502	43	0	44	43	38	73
Grp Sat Flow(s),veh/h/ln	1711	1796	1585	826	0	1825	1370	0	1797	1362	1870	1585
Q Serve(g_s), s	4.2	13.9	1.3	0.7	0.0	15.0	2.3	0.0	1.8	2.4	1.5	3.4
Cycle Q Clear(g_c), s	4.2	13.9	1.3	3.8	0.0	15.0	3.8	0.0	1.8	4.1	1.5	3.4
Prop In Lane	1.00		1.00	1.00		0.09	1.00		0.23	1.00		1.00
Lane Grp Cap(c), veh/h	543	1227	1083	517	0	1026	355	0	389	348	405	343
V/C Ratio(X)	0.37	0.48	0.06	0.03	0.00	0.49	0.12	0.00	0.11	0.12	0.09	0.21
Avail Cap(c_a), veh/h	658	1227	1083	517	0	1026	355	0	389	348	405	343
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.1	6.7	4.7	10.2	0.0	11.9	29.7	0.0	28.3	30.0	28.2	28.9
Incr Delay (d2), s/veh	0.4	1.3	0.1	0.1	0.0	1.7	0.7	0.0	0.6	0.7	0.5	1.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	4.3	0.3	0.1	0.0	5.6	0.8	0.0	0.8	0.8	0.7	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	8.6	8.1	4.8	10.3	0.0	13.6	30.4	0.0	28.9	30.7	28.6	30.4
LnGrp LOS	A	A	A	B		B	C		C	C	C	C
Approach Vol, veh/h	861			516			87			154		
Approach Delay, s/veh	7.9			13.5			29.6			30.0		
Approach LOS	A			B			C			C		
Timer - Assigned Phs	2			4			6			7		
Phs Duration (G+Y+Rc), s	24.0			66.0			24.0			10.9		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	19.5			61.5			19.5			12.5		
Max Q Clear Time (g_c+I1), s	5.8			15.9			6.1			6.2		
Green Ext Time (p_c), s	0.2			4.2			0.4			0.3		
Intersection Summary												
HCM 7th Control Delay, s/veh				13.0								
HCM 7th LOS				B								

Intersection												
Int Delay, s/veh	6.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	81	270	24	22	527	36	36	28	13	35	14	137
Future Vol, veh/h	81	270	24	22	527	36	36	28	13	35	14	137
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	125	-	-	150	-	-	150	-	-	275	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	88	293	26	24	573	39	39	30	14	38	15	149

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	612	0	0	320	0	0	1098	1129	293	1125	1136	592
Stage 1	-	-	-	-	-	-	470	470	-	640	640	-
Stage 2	-	-	-	-	-	-	628	660	-	485	496	-
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	967	-	-	1240	-	-	190	204	746	182	202	506
Stage 1	-	-	-	-	-	-	574	560	-	464	470	-
Stage 2	-	-	-	-	-	-	471	460	-	564	546	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	967	-	-	1240	-	-	111	182	746	135	180	506
Mov Cap-2 Maneuver	-	-	-	-	-	-	111	182	-	135	180	-
Stage 1	-	-	-	-	-	-	522	509	-	455	461	-
Stage 2	-	-	-	-	-	-	315	451	-	472	496	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	1.96			0.3			37.93			20.96		
HCM LOS							E			C		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2	SBLn3
Capacity (veh/h)	111	239	967	-	-	1240	-	-	135	180	506
HCM Lane V/C Ratio	0.354	0.186	0.091	-	-	0.019	-	-	0.281	0.084	0.294
HCM Control Delay (s/veh)	54.4	23.5	9.1	-	-	8	-	-	41.7	26.8	15.1
HCM Lane LOS	F	C	A	-	-	A	-	-	E	D	C
HCM 95th %tile Q(veh)	1.4	0.7	0.3	-	-	0.1	-	-	1.1	0.3	1.2













Intersection												
Int Delay, s/veh	20.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	187	543	63	13	419	43	40	31	9	40	35	143
Future Vol, veh/h	187	543	63	13	419	43	40	31	9	40	35	143
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	125	-	-	150	-	-	150	-	-	275	-	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, %	7	7	2	2	3	3	2	2	2	2	2	2
Mvmt Flow	203	590	68	14	455	47	43	34	10	43	38	155

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	502	0	0	659	0	0	1499	1527	590	1521	1572	479
Stage 1	-	-	-	-	-	-	997	997	-	507	507	-
Stage 2	-	-	-	-	-	-	503	530	-	1014	1065	-
Critical Hdwy	4.17	-	-	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	2.263	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1037	-	-	929	-	-	100	117	507	97	110	587
Stage 1	-	-	-	-	-	-	294	322	-	548	539	-
Stage 2	-	-	-	-	-	-	551	526	-	288	299	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1037	-	-	929	-	-	~ 36	93	507	52	87	587
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 36	93	-	52	87	-
Stage 1	-	-	-	-	-	-	236	259	-	540	531	-
Stage 2	-	-	-	-	-	-	370	518	-	197	240	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	2.2	0.24	219.67	57.99
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2	SBLn3
Capacity (veh/h)	36	114	1037	-	-	929	-	-	52	87	587
HCM Lane V/C Ratio	1.198	0.382	0.196	-	-	0.015	-	-	0.836	0.436	0.265
HCM Control Delay (s/veh)	\$ 384.4	54.9	9.3	-	-	8.9	-	-	202.8	74.9	13.3
HCM Lane LOS	F	F	A	-	-	A	-	-	F	F	B
HCM 95th %tile Q(veh)	4.5	1.6	0.7	-	-	0	-	-	3.5	1.8	1.1










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

Intersection												
Int Delay, s/veh	4.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	37	273	29	27	515	25	38	30	15	16	16	50
Future Vol, veh/h	37	273	29	27	515	25	38	30	15	16	16	50
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	125	-	-	150	-	-	150	-	-	275	-	-
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	40	297	32	29	560	27	41	33	16	17	17	54

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	587	0	0	329	0	0	1044	1022	297	1050	1041	574
Stage 1	-	-	-	-	-	-	377	377	-	632	632	-
Stage 2	-	-	-	-	-	-	667	645	-	418	409	-
Critical Hdwy	4.15	-	-	4.15	-	-	7.15	6.55	6.25	7.15	6.55	6.25
Critical Hdwy Stg 1	-	-	-	-	-	-	6.15	5.55	-	6.15	5.55	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.15	5.55	-	6.15	5.55	-
Follow-up Hdwy	2.245	-	-	2.245	-	-	3.545	4.045	3.345	3.545	4.045	3.345
Pot Cap-1 Maneuver	973	-	-	1214	-	-	204	233	735	202	227	513
Stage 1	-	-	-	-	-	-	638	611	-	463	469	-
Stage 2	-	-	-	-	-	-	443	463	-	607	591	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	973	-	-	1214	-	-	163	218	735	166	212	513
Mov Cap-2 Maneuver	-	-	-	-	-	-	163	218	-	166	212	-
Stage 1	-	-	-	-	-	-	612	586	-	444	458	-
Stage 2	-	-	-	-	-	-	372	452	-	537	567	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	1			0.4			26.7			19.1		
HCM LOS							D			C		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	163	285	973	-	-	1214	-	-	166	382
HCM Lane V/C Ratio	0.253	0.172	0.041	-	-	0.024	-	-	0.105	0.188
HCM Control Delay (s/veh)	34.4	20.2	8.9	-	-	8	-	-	29.2	16.6
HCM Lane LOS	D	C	A	-	-	A	-	-	D	C
HCM 95th %tile Q (veh)	1	0.6	0.1	-	-	0.1	-	-	0.3	0.7























Intersection												
Int Delay, s/veh	6.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	68	528	70	15	423	16	47	33	10	13	37	42
Future Vol, veh/h	68	528	70	15	423	16	47	33	10	13	37	42
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	125	-	-	150	-	-	150	-	-	275	-	-
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	74	574	76	16	460	17	51	36	11	14	40	46
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	477	0	0	650	0	0	1266	1231	574	1285	1299	469
Stage 1	-	-	-	-	-	-	722	722	-	501	501	-
Stage 2	-	-	-	-	-	-	544	509	-	784	798	-
Critical Hdwy	4.15	-	-	4.15	-	-	7.15	6.55	6.25	7.15	6.55	6.25
Critical Hdwy Stg 1	-	-	-	-	-	-	6.15	5.55	-	6.15	5.55	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.15	5.55	-	6.15	5.55	-
Follow-up Hdwy	2.245	-	-	2.245	-	-	3.545	4.045	3.345	3.545	4.045	3.345
Pot Cap-1 Maneuver	1070	-	-	922	-	-	144	175	513	139	159	588
Stage 1	-	-	-	-	-	-	413	427	-	547	538	-
Stage 2	-	-	-	-	-	-	518	533	-	382	394	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1070	-	-	922	-	-	98	160	513	106	145	588
Mov Cap-2 Maneuver	-	-	-	-	-	-	98	160	-	106	145	-
Stage 1	-	-	-	-	-	-	385	398	-	509	529	-
Stage 2	-	-	-	-	-	-	434	524	-	317	367	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.9			0.3			54.1			30.1		
HCM LOS							F			D		
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2		
Capacity (veh/h)	98	190	1070	-	-	922	-	-	106	242		
HCM Lane V/C Ratio	0.521	0.246	0.069	-	-	0.018	-	-	0.133	0.355		
HCM Control Delay (s)	76.2	30	8.6	-	-	9	-	-	44.1	27.8		
HCM Lane LOS	F	D	A	-	-	A	-	-	E	D		
HCM 95th %tile Q(veh)	2.3	0.9	0.2	-	-	0.1	-	-	0.4	1.5		

Timings

6: Jewell Ave & Harvest Rd

2028 Total AM

09/20/2024

											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	88	313	29	27	626	38	38	30	36	16	143
Future Volume (vph)	88	313	29	27	626	38	38	30	36	16	143
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	7	4		3	8			2		6	
Permitted Phases	4		4	8		8	2		6		6
Detector Phase	7	4	4	3	8	8	2	2	6	6	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	16.0	49.0	49.0	12.0	45.0	45.0	29.0	29.0	29.0	29.0	29.0
Total Split (%)	17.8%	54.4%	54.4%	13.3%	50.0%	50.0%	32.2%	32.2%	32.2%	32.2%	32.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	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	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	Max	Max	Max	Max	Max

Intersection Summary

Cycle Length: 90

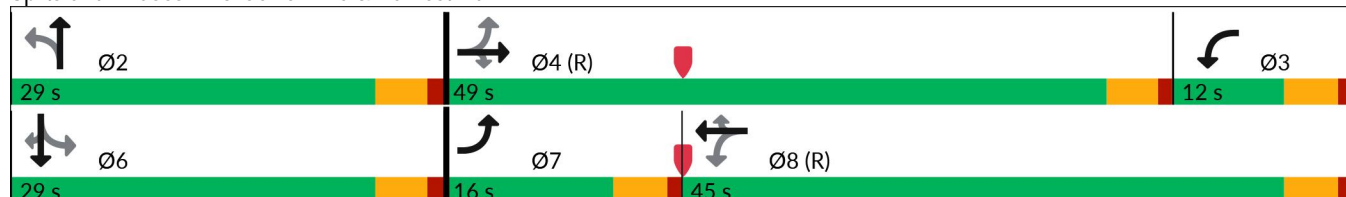
Actuated Cycle Length: 90

Offset: 14 (16%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green

Natural Cycle: 55

Control Type: Actuated-Coordinated























Splits and Phases: 6: Jewell Ave & Harvest Rd



HCM 7th Signalized Intersection Summary

6: Jewell Ave & Harvest Rd

2028 Total AM
09/20/2024























												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	88	313	29	27	626	38	38	30	15	36	16	143
Future Volume (veh/h)	88	313	29	27	626	38	38	30	15	36	16	143
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	96	340	32	29	680	41	41	33	16	39	17	73
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	449	903	765	577	1829	816	419	316	153	412	497	421
Arrive On Green	0.05	0.49	0.49	0.17	1.00	1.00	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	1739	1826	1547	1739	3469	1547	1276	1161	563	1324	1826	1547
Grp Volume(v), veh/h	96	340	32	29	680	41	41	0	49	39	17	73
Grp Sat Flow(s),veh/h/ln	1739	1826	1547	1739	1735	1547	1276	0	1725	1324	1826	1547
Q Serve(g_s), s	2.8	10.4	1.0	0.0	0.0	0.0	2.2	0.0	1.9	2.0	0.6	3.2
Cycle Q Clear(g_c), s	2.8	10.4	1.0	0.0	0.0	0.0	2.8	0.0	1.9	4.0	0.6	3.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.33	1.00		1.00
Lane Grp Cap(c), veh/h	449	903	765	577	1829	816	419	0	469	412	497	421
V/C Ratio(X)	0.21	0.38	0.04	0.05	0.37	0.05	0.10	0.00	0.10	0.09	0.03	0.17
Avail Cap(c_a), veh/h	584	903	765	577	1829	816	419	0	469	412	497	421
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.6	14.1	11.7	13.2	0.0	0.0	25.1	0.0	24.5	26.0	24.1	25.0
Incr Delay (d2), s/veh	0.2	1.2	0.1	0.0	0.6	0.1	0.5	0.0	0.4	0.5	0.1	0.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	4.1	0.3	0.3	0.1	0.0	0.7	0.0	0.8	0.7	0.3	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	13.8	15.3	11.8	13.2	0.6	0.1	25.6	0.0	25.0	26.5	24.2	25.9
LnGrp LOS	B	B	B	B	A	A	C		C	C	C	C
Approach Vol, veh/h	468			750			90			129		
Approach Delay, s/veh	14.8			1.0			25.2			25.9		
Approach LOS	B			A			C			C		
Timer - Assigned Phs	2		3	4		6	7	8				
Phs Duration (G+Y+Rc), s	29.0		12.0	49.0		29.0	9.0	52.0				
Change Period (Y+Rc), s	4.5		4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s	24.5		7.5	44.5		24.5	11.5	40.5				
Max Q Clear Time (g_c+I1), s	4.8		2.0	12.4		6.0	4.8	2.0				
Green Ext Time (p_c), s	0.3		0.0	2.0		0.3	0.1	4.9				
Intersection Summary												
HCM 7th Control Delay, s/veh	9.2											
HCM 7th LOS	A											

Timings

6: Jewell Ave & Harvest Rd

2028 Total PM

09/20/2024

											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	194	655	70	15	507	46	47	33	40	37	149
Future Volume (vph)	194	655	70	15	507	46	47	33	40	37	149
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	7	4		3	8			2		6	
Permitted Phases	4		4	8		8	2		6		6
Detector Phase	7	4	4	3	8	8	2	2	6	6	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	15.0	57.5	57.5	9.5	52.0	52.0	23.0	23.0	23.0	23.0	23.0
Total Split (%)	16.7%	63.9%	63.9%	10.6%	57.8%	57.8%	25.6%	25.6%	25.6%	25.6%	25.6%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	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	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	Max	Max	Max	Max	Max

Intersection Summary

Cycle Length: 90

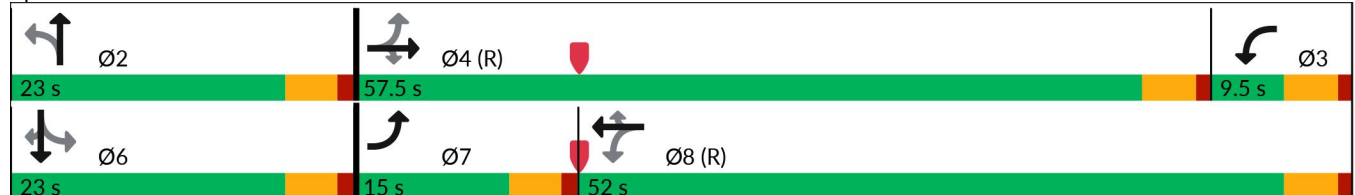
Actuated Cycle Length: 90

Offset: 46 (51%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green

Natural Cycle: 65

Control Type: Actuated-Coordinated























Splits and Phases: 6: Jewell Ave & Harvest Rd



HCM 7th Signalized Intersection Summary



















6: Jewell Ave & Harvest Rd

2028 Total PM
09/20/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	194	655	70	15	507	46	47	33	10	40	37	149
Future Volume (veh/h)	194	655	70	15	507	46	47	33	10	40	37	149
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	211	712	76	16	551	50	51	36	11	43	40	80
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	590	1075	911	381	1944	867	313	276	84	324	375	318
Arrive On Green	0.08	0.59	0.59	0.11	1.00	1.00	0.21	0.21	0.21	0.21	0.21	0.21
Sat Flow, veh/h	1739	1826	1547	1739	3469	1547	1241	1342	410	1326	1826	1547
Grp Volume(v), veh/h	211	712	76	16	551	50	51	0	47	43	40	80
Grp Sat Flow(s),veh/h/ln	1739	1826	1547	1739	1735	1547	1241	0	1752	1326	1826	1547
Q Serve(g_s), s	5.5	23.7	1.9	0.0	0.0	0.0	3.1	0.0	2.0	2.5	1.6	3.9
Cycle Q Clear(g_c), s	5.5	23.7	1.9	0.0	0.0	0.0	4.7	0.0	2.0	4.4	1.6	3.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.23	1.00		1.00
Lane Grp Cap(c), veh/h	590	1075	911	381	1944	867	313	0	360	324	375	318
V/C Ratio(X)	0.36	0.66	0.08	0.04	0.28	0.06	0.16	0.00	0.13	0.13	0.11	0.25
Avail Cap(c_a), veh/h	646	1075	911	381	1944	867	313	0	360	324	375	318
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.9	12.5	8.0	17.8	0.0	0.0	31.0	0.0	29.2	31.0	29.0	29.9
Incr Delay (d2), s/veh	0.4	3.2	0.2	0.0	0.3	0.1	1.1	0.0	0.7	0.9	0.6	1.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	8.8	0.6	0.2	0.1	0.0	1.0	0.0	0.9	0.8	0.7	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	10.3	15.7	8.2	17.8	0.3	0.1	32.1	0.0	29.9	31.8	29.6	31.8
LnGrp LOS	B	B	A	B	A	A	C		C	C	C	C
Approach Vol, veh/h	999				617			98			163	
Approach Delay, s/veh	14.0				0.8			31.0			31.3	
Approach LOS	B				A			C			C	
Timer - Assigned Phs												
	2		3	4	6		7	8				
Phs Duration (G+Y+Rc), s	23.0		9.5	57.5	23.0		12.1	54.9				
Change Period (Y+Rc), s	4.5		4.5	4.5	4.5		4.5	4.5				
Max Green Setting (Gmax), s	18.5		5.0	53.0	18.5		10.5	47.5				
Max Q Clear Time (g_c+I1), s	6.7		2.0	25.7	6.4		7.5	2.0				
Green Ext Time (p_c), s	0.2		0.0	5.1	0.4		0.2	3.9				
Intersection Summary												
HCM 7th Control Delay, s/veh	12.0											
HCM 7th LOS	B											

Timings 6: Jewell Ave & Harvest Rd

2029 Background AM
09/23/2024

									
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	43	464	44	42	711	48	35	21	21
Future Volume (vph)	43	464	44	42	711	48	35	21	21
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4			8		2		6
Permitted Phases	4		4	8		2		6	
Detector Phase	4	4	4	8	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	60.0	60.0	60.0	60.0	60.0	30.0	30.0	30.0	30.0
Total Split (%)	66.7%	66.7%	66.7%	66.7%	66.7%	33.3%	33.3%	33.3%	33.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	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)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max	Max	Max	Max	Max

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 32 (36%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green
Natural Cycle: 45
Control Type: Actuated-Coordinated






















Splits and Phases: 6: Jewell Ave & Harvest Rd



HCM 6th Signalized Intersection Summary 6: Jewell Ave & Harvest Rd

2029 Background AM



















09/23/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	464	44	42	711	35	48	35	17	21	21	55
Future Volume (veh/h)	43	464	44	42	711	35	48	35	17	21	21	55
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	47	504	48	46	773	38	52	38	18	23	23	60
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	410	2139	954	541	2075	102	394	332	157	421	127	331
Arrive On Green	0.62	0.62	0.62	0.62	0.62	0.62	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	657	3469	1547	836	3365	165	1284	1171	555	1316	448	1168
Grp Volume(v), veh/h	47	504	48	46	398	413	52	0	56	23	0	83
Grp Sat Flow(s),veh/h/ln	657	1735	1547	836	1735	1796	1284	0	1726	1316	0	1616
Q Serve(g_s), s	3.5	5.9	1.1	2.4	10.3	10.3	2.9	0.0	2.2	1.2	0.0	3.5
Cycle Q Clear(g_c), s	13.7	5.9	1.1	8.2	10.3	10.3	6.4	0.0	2.2	3.3	0.0	3.5
Prop In Lane	1.00		1.00	1.00		0.09	1.00		0.32	1.00		0.72
Lane Grp Cap(c), veh/h	410	2139	954	541	1070	1108	394	0	489	421	0	458
V/C Ratio(X)	0.11	0.24	0.05	0.09	0.37	0.37	0.13	0.00	0.11	0.05	0.00	0.18
Avail Cap(c_a), veh/h	410	2139	954	541	1070	1108	394	0	489	421	0	458
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	0.81	0.81	0.81	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.0	7.7	6.8	9.6	8.6	8.6	26.8	0.0	23.9	25.1	0.0	24.4
Incr Delay (d2), s/veh	0.6	0.3	0.1	0.3	0.8	0.8	0.7	0.0	0.5	0.2	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.8	0.3	0.4	3.3	3.4	0.9	0.0	0.9	0.4	0.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.6	8.0	6.9	9.8	9.4	9.4	27.5	0.0	24.4	25.4	0.0	25.2
LnGrp LOS	B	A	A	A	A	A	C	A	C	C	A	C
Approach Vol, veh/h	599				857				108			
Approach Delay, s/veh	8.3				9.4				25.9			
Approach LOS	A				A				C			
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	30.0			60.0			30.0			60.0		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	25.5			55.5			25.5			55.5		
Max Q Clear Time (g_c+I1), s	8.4			15.7			5.5			12.3		
Green Ext Time (p_c), s	0.3			4.0			0.4			5.6		
Intersection Summary												
HCM 6th Ctrl Delay	11.1											
HCM 6th LOS	B											

Timings 6: Jewell Ave & Harvest Rd

2029 Background PM

01/24/2024

									
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	69	669	105	20	564	67	38	14	42
Future Volume (vph)	69	669	105	20	564	67	38	14	42
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4			8		2		6
Permitted Phases	4		4	8		2		6	
Detector Phase	4	4	4	8	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	57.0	57.0	57.0	57.0	57.0	33.0	33.0	33.0	33.0
Total Split (%)	63.3%	63.3%	63.3%	63.3%	63.3%	36.7%	36.7%	36.7%	36.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	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)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max	Max	Max	Max	Max

Intersection Summary

Cycle Length: 90

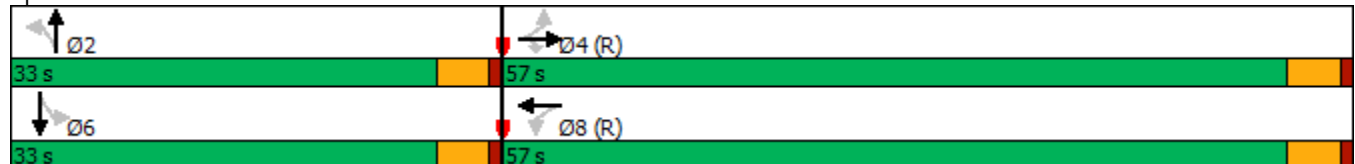
Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green

Natural Cycle: 45

Control Type: Actuated-Coordinated






















Splits and Phases: 6: Jewell Ave & Harvest Rd



HCM 6th Signalized Intersection Summary 6: Jewell Ave & Harvest Rd























2029 Background PM

01/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	69	669	105	20	564	21	67	38	11	14	42	45
Future Volume (veh/h)	69	669	105	20	564	21	67	38	11	14	42	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	75	727	114	22	613	23	73	41	12	15	46	49
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	460	2024	903	416	1989	75	430	430	126	470	256	273
Arrive On Green	0.58	0.58	0.58	0.58	0.58	0.58	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	773	3469	1547	710	3410	128	1270	1357	397	1319	809	862
Grp Volume(v), veh/h	75	727	114	22	312	324	73	0	53	15	0	95
Grp Sat Flow(s),veh/h/ln	773	1735	1547	710	1735	1803	1270	0	1754	1319	0	1671
Q Serve(g_s), s	4.9	9.9	3.0	1.5	8.2	8.2	4.0	0.0	1.9	0.7	0.0	3.7
Cycle Q Clear(g_c), s	13.1	9.9	3.0	11.5	8.2	8.2	7.7	0.0	1.9	2.6	0.0	3.7
Prop In Lane	1.00		1.00	1.00		0.07	1.00		0.23	1.00		0.52
Lane Grp Cap(c), veh/h	460	2024	903	416	1012	1052	430	0	556	470	0	529
V/C Ratio(X)	0.16	0.36	0.13	0.05	0.31	0.31	0.17	0.00	0.10	0.03	0.00	0.18
Avail Cap(c_a), veh/h	460	2024	903	416	1012	1052	430	0	556	470	0	529
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	0.87	0.87	0.87	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.9	9.9	8.4	12.9	9.5	9.5	25.1	0.0	21.7	22.6	0.0	22.3
Incr Delay (d2), s/veh	0.8	0.5	0.3	0.2	0.7	0.7	0.9	0.0	0.3	0.1	0.0	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	0.9	3.3	0.9	0.2	2.8	2.9	1.3	0.0	0.8	0.2	0.0	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.6	10.4	8.7	13.1	10.2	10.2	25.9	0.0	22.0	22.7	0.0	23.0
LnGrp LOS	B	B	A	B	B	B	C	A	C	C	A	C
Approach Vol, veh/h		916			658			126			110	
Approach Delay, s/veh		10.4			10.3			24.3			23.0	
Approach LOS		B			B			C			C	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		33.0		57.0		33.0		57.0				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		28.5		52.5		28.5		52.5				
Max Q Clear Time (g_c+I1), s		9.7		15.1		5.7		13.5				
Green Ext Time (p_c), s		0.4		6.3		0.4		4.0				
Intersection Summary												
HCM 6th Ctrl Delay				12.1								
HCM 6th LOS				B								

Timings 6: Jewell Ave & Harvest Rd

2029 Total AM
09/20/2024

											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	106	513	44	42	837	49	48	35	42	21	167
Future Volume (vph)	106	513	44	42	837	49	48	35	42	21	167
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	7	4		3	8			2		6	
Permitted Phases	4		4	8		8	2		6		6
Detector Phase	7	4	4	3	8	8	2	2	6	6	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	16.0	53.0	53.0	11.0	48.0	48.0	26.0	26.0	26.0	26.0	26.0
Total Split (%)	17.8%	58.9%	58.9%	12.2%	53.3%	53.3%	28.9%	28.9%	28.9%	28.9%	28.9%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	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	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	Max	Max	Max	Max	Max

Intersection Summary

Cycle Length: 90

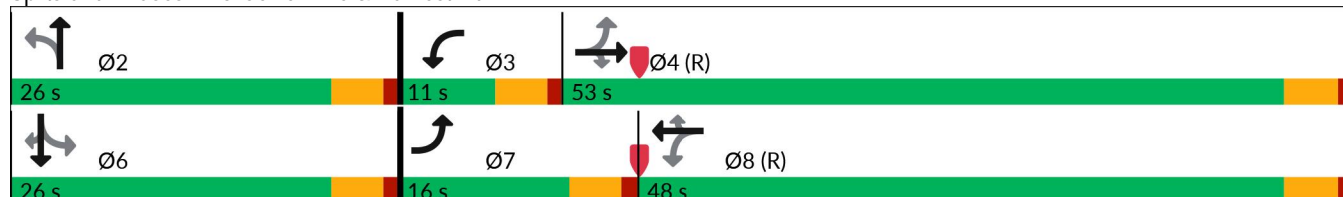
Actuated Cycle Length: 90

Offset: 6 (7%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated























Splits and Phases: 6: Jewell Ave & Harvest Rd



HCM 7th Signalized Intersection Summary

6: Jewell Ave & Harvest Rd

2029 Total AM
09/20/2024























													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	106	513	44	42	837	49	48	35	17	42	21	167	
Future Volume (veh/h)	106	513	44	42	837	49	48	35	17	42	21	167	
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Lane Width 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	
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	115	558	48	46	910	53	52	38	18	46	23	100	
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	489	1988	887	537	1938	865	364	280	133	361	436	370	
Arrive On Green	0.05	0.57	0.57	0.08	1.00	1.00	0.24	0.24	0.24	0.24	0.24	0.24	
Sat Flow, veh/h	1739	3469	1547	1739	3469	1547	1238	1171	555	1316	1826	1547	
Grp Volume(v), veh/h	115	558	48	46	910	53	52	0	56	46	23	100	
Grp Sat Flow(s),veh/h/ln	1739	1735	1547	1739	1735	1547	1238	0	1726	1316	1826	1547	
Q Serve(g_s), s	2.5	7.4	1.2	1.0	0.0	0.0	3.0	0.0	2.3	2.6	0.9	4.7	
Cycle Q Clear(g_c), s	2.5	7.4	1.2	1.0	0.0	0.0	3.9	0.0	2.3	4.9	0.9	4.7	
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.32	1.00		1.00	
Lane Grp Cap(c), veh/h	489	1988	887	537	1938	865	364	0	412	361	436	370	
V/C Ratio(X)	0.24	0.28	0.05	0.09	0.47	0.06	0.14	0.00	0.14	0.13	0.05	0.27	
Avail Cap(c_a), veh/h	620	1988	887	596	1938	865	364	0	412	361	436	370	
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	0.90	0.90	0.90	1.00	0.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	7.3	9.8	8.5	7.4	0.0	0.0	27.9	0.0	26.9	28.9	26.4	27.9	
Incr Delay (d2), s/veh	0.2	0.4	0.1	0.1	0.7	0.1	0.8	0.0	0.7	0.7	0.2	1.8	
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	0.8	2.5	0.4	0.3	0.2	0.0	1.0	0.0	1.0	0.8	0.4	1.8	
Unsig. Movement Delay, s/veh													
LnGrp Delay(d), s/veh	7.5	10.1	8.6	7.5	0.7	0.1	28.7	0.0	27.6	29.6	26.6	29.7	
LnGrp LOS	A	B	A	A	A	A	C		C	C	C	C	
Approach Vol, veh/h	721				1009				108				169
Approach Delay, s/veh	9.6				1.0				28.2				29.2
Approach LOS	A				A				C				C
Timer - Assigned Phs		2	3	4		6	7	8					
Phs Duration (G+Y+Rc), s		26.0	7.9	56.1		26.0	9.2	54.8					
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5					
Max Green Setting (Gmax), s		21.5	6.5	48.5		21.5	11.5	43.5					
Max Q Clear Time (g_c+I1), s		5.9	3.0	9.4		6.9	4.5	2.0					
Green Ext Time (p_c), s		0.3	0.0	3.9		0.4	0.1	7.2					
Intersection Summary													
HCM 7th Control Delay, s/veh			7.9										
HCM 7th LOS			A										

Timings

6: Jewell Ave & Harvest Rd

2029 Total PM

09/20/2024

											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	219	808	105	20	658	52	67	38	43	42	170
Future Volume (vph)	219	808	105	20	658	52	67	38	43	42	170
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases	7	4		3	8			2		6	
Permitted Phases	4		4	8		8	2		6		6
Detector Phase	7	4	4	3	8	8	2	2	6	6	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	25.0	55.0	55.0	10.0	40.0	40.0	25.0	25.0	25.0	25.0	25.0
Total Split (%)	27.8%	61.1%	61.1%	11.1%	44.4%	44.4%	27.8%	27.8%	27.8%	27.8%	27.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	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	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	Max	Max	Max	Max	Max

Intersection Summary

Cycle Length: 90

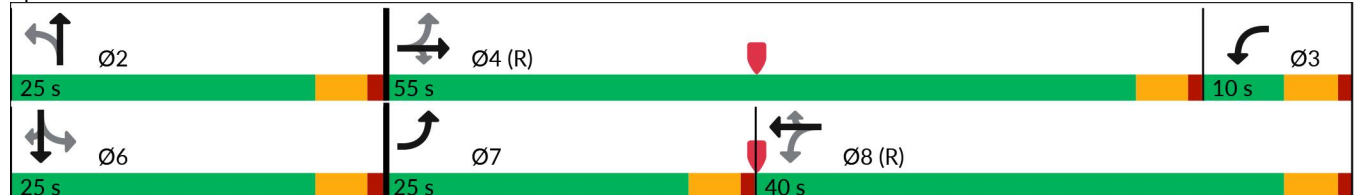
Actuated Cycle Length: 90

Offset: 4 (4%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated























Splits and Phases: 6: Jewell Ave & Harvest Rd



HCM 7th Signalized Intersection Summary

6: Jewell Ave & Harvest Rd



















2029 Total PM
09/20/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	219	808	105	20	658	52	67	38	11	43	42	170
Future Volume (veh/h)	219	808	105	20	658	52	67	38	11	43	42	170
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	238	878	114	22	715	57	73	41	12	47	46	103
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	535	1947	868	401	1807	806	331	309	90	349	416	352
Arrive On Green	0.10	0.56	0.56	0.12	1.00	1.00	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	1739	3469	1547	1739	3469	1547	1209	1357	397	1319	1826	1547
Grp Volume(v), veh/h	238	878	114	22	715	57	73	0	53	47	46	103
Grp Sat Flow(s),veh/h/ln	1739	1735	1547	1739	1735	1547	1209	0	1754	1319	1826	1547
Q Serve(g_s), s	6.7	13.4	3.1	0.0	0.0	0.0	4.6	0.0	2.2	2.6	1.8	5.0
Cycle Q Clear(g_c), s	6.7	13.4	3.1	0.0	0.0	0.0	6.4	0.0	2.2	4.8	1.8	5.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.23	1.00		1.00
Lane Grp Cap(c), veh/h	535	1947	868	401	1807	806	331	0	400	349	416	352
V/C Ratio(X)	0.44	0.45	0.13	0.05	0.40	0.07	0.22	0.00	0.13	0.13	0.11	0.29
Avail Cap(c_a), veh/h	755	1947	868	401	1807	806	331	0	400	349	416	352
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.88	0.88	0.88	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.4	11.6	9.4	13.3	0.0	0.0	30.1	0.0	27.7	29.6	27.5	28.7
Incr Delay (d2), s/veh	0.6	0.8	0.3	0.0	0.6	0.1	1.5	0.0	0.7	0.8	0.5	2.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	4.6	1.0	0.2	0.1	0.0	1.5	0.0	1.0	0.9	0.8	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	12.0	12.4	9.7	13.3	0.6	0.1	31.6	0.0	28.4	30.4	28.1	30.8
LnGrp LOS	B	B	A	B	A	A	C		C	C	C	C
Approach Vol, veh/h	1230			794			126			196		
Approach Delay, s/veh	12.0			0.9			30.2			30.1		
Approach LOS	B			A			C			C		
Timer - Assigned Phs	2		3	4		6	7	8				
Phs Duration (G+Y+Rc), s	25.0		10.0	55.0		25.0	13.6	51.4				
Change Period (Y+Rc), s	4.5		4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s	20.5		5.5	50.5		20.5	20.5	35.5				
Max Q Clear Time (g_c+I1), s	8.4		2.0	15.4		7.0	8.7	2.0				
Green Ext Time (p_c), s	0.3		0.0	7.0		0.5	0.5	5.2				
Intersection Summary												
HCM 7th Control Delay, s/veh	10.8											
HCM 7th LOS	B											

Timings 6: Jewell Ave & Harvest Rd

2031 Background AM

09/23/2024

									
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	129	545	59	52	799	68	85	85	76
Future Volume (vph)	129	545	59	52	799	68	85	85	76
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4			8		2		6
Permitted Phases	4		4	8		2		6	
Detector Phase	4	4	4	8	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	61.0	61.0	61.0	61.0	61.0	29.0	29.0	29.0	29.0
Total Split (%)	67.8%	67.8%	67.8%	67.8%	67.8%	32.2%	32.2%	32.2%	32.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	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)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max	Max	Max	Max	Max

Intersection Summary

Cycle Length: 90

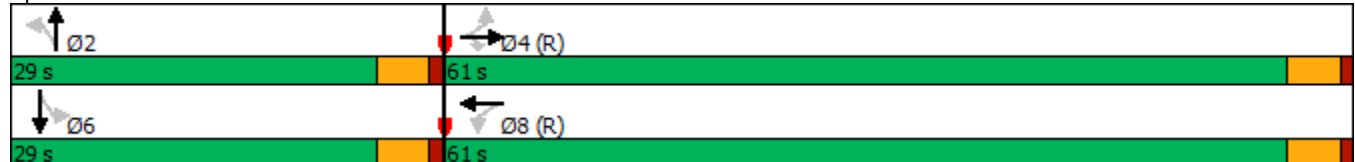
Actuated Cycle Length: 90

Offset: 84 (93%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated






















Splits and Phases: 6: Jewell Ave & Harvest Rd



HCM 6th Signalized Intersection Summary 6: Jewell Ave & Harvest Rd



















2031 Background AM

09/23/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	129	545	59	52	799	168	68	85	20	85	76	238
Future Volume (veh/h)	129	545	59	52	799	168	68	85	20	85	76	238
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	140	592	64	57	868	183	74	92	22	92	83	259
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	324	2178	971	498	1790	377	156	388	93	357	106	331
Arrive On Green	0.63	0.63	0.63	0.63	0.63	0.63	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	524	3469	1547	759	2851	601	1014	1424	341	1248	390	1217
Grp Volume(v), veh/h	140	592	64	57	528	523	74	0	114	92	0	342
Grp Sat Flow(s),veh/h/ln	524	1735	1547	759	1735	1718	1014	0	1765	1248	0	1607
Q Serve(g_s), s	17.6	6.9	1.4	3.3	14.7	14.7	6.6	0.0	4.5	5.6	0.0	17.7
Cycle Q Clear(g_c), s	32.2	6.9	1.4	10.2	14.7	14.7	24.3	0.0	4.5	10.1	0.0	17.7
Prop In Lane	1.00		1.00	1.00		0.35	1.00		0.19	1.00		0.76
Lane Grp Cap(c), veh/h	324	2178	971	498	1089	1078	156	0	480	357	0	437
V/C Ratio(X)	0.43	0.27	0.07	0.11	0.48	0.49	0.47	0.00	0.24	0.26	0.00	0.78
Avail Cap(c_a), veh/h	324	2178	971	498	1089	1078	156	0	480	357	0	437
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	0.63	0.63	0.63	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.6	7.5	6.5	9.8	9.0	9.0	41.5	0.0	25.5	29.4	0.0	30.3
Incr Delay (d2), s/veh	4.2	0.3	0.1	0.3	1.0	1.0	9.9	0.0	1.2	1.7	0.0	13.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	2.1	0.4	0.5	4.6	4.6	2.0	0.0	2.0	1.8	0.0	7.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.8	7.8	6.6	10.1	9.9	10.0	51.4	0.0	26.6	31.1	0.0	43.3
LnGrp LOS	C	A	A	B	A	A	D	A	C	C	A	D
Approach Vol, veh/h		796			1108			188			434	
Approach Delay, s/veh		10.2			10.0			36.4			40.7	
Approach LOS		B			A			D			D	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		29.0		61.0		29.0		61.0				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		24.5		56.5		24.5		56.5				
Max Q Clear Time (g_c+I1), s		26.3		34.2		19.7		16.7				
Green Ext Time (p_c), s		0.0		5.7		1.0		8.2				
Intersection Summary												
HCM 6th Ctrl Delay				17.3								
HCM 6th LOS				B								

Timings 6: Jewell Ave & Harvest Rd

2031 Background PM
01/24/2024

									
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	157	842	130	25	613	87	98	36	82
Future Volume (vph)	157	842	130	25	613	87	98	36	82
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4			8		2		6
Permitted Phases	4		4	8		2		6	
Detector Phase	4	4	4	8	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	60.0	60.0	60.0	60.0	60.0	30.0	30.0	30.0	30.0
Total Split (%)	66.7%	66.7%	66.7%	66.7%	66.7%	33.3%	33.3%	33.3%	33.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	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)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max	Max	Max	Max	Max

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 76 (84%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Splits and Phases: 6: Jewell Ave & Harvest Rd
























HCM 6th Signalized Intersection Summary

6: Jewell Ave & Harvest Rd

2031 Background PM

01/24/2024























												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	157	842	130	25	613	127	87	98	13	36	82	191
Future Volume (veh/h)	157	842	130	25	613	127	87	98	13	36	82	191
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	171	915	141	27	666	138	95	107	14	39	89	208
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	411	2139	954	366	1765	365	210	448	59	367	138	322
Arrive On Green	0.62	0.62	0.62	0.62	0.62	0.62	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	661	3469	1547	596	2862	592	1057	1582	207	1240	486	1136
Grp Volume(v), veh/h	171	915	141	27	403	401	95	0	121	39	0	297
Grp Sat Flow(s),veh/h/ln	661	1735	1547	596	1735	1719	1057	0	1789	1240	0	1621
Q Serve(g_s), s	15.7	12.4	3.5	2.2	10.5	10.5	7.8	0.0	4.7	2.2	0.0	14.5
Cycle Q Clear(g_c), s	26.2	12.4	3.5	14.6	10.5	10.5	22.3	0.0	4.7	6.9	0.0	14.5
Prop In Lane	1.00		1.00	1.00		0.34	1.00		0.12	1.00		0.70
Lane Grp Cap(c), veh/h	411	2139	954	366	1070	1060	210	0	507	367	0	459
V/C Ratio(X)	0.42	0.43	0.15	0.07	0.38	0.38	0.45	0.00	0.24	0.11	0.00	0.65
Avail Cap(c_a), veh/h	411	2139	954	366	1070	1060	210	0	507	367	0	459
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	0.76	0.76	0.76	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	15.2	9.0	7.3	12.8	8.6	8.6	38.1	0.0	24.8	27.5	0.0	28.3
Incr Delay (d2), s/veh	3.1	0.6	0.3	0.3	0.8	0.8	6.9	0.0	1.1	0.6	0.0	6.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	3.9	1.0	0.3	3.4	3.4	2.4	0.0	2.1	0.7	0.0	6.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.3	9.6	7.6	13.1	9.4	9.4	45.0	0.0	25.9	28.0	0.0	35.2
LnGrp LOS	B	A	A	B	A	A	D	A	C	C	A	D
Approach Vol, veh/h	1227				831				216			
Approach Delay, s/veh	10.6				9.5				34.3			
Approach LOS	B				A				C			
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	30.0			60.0			30.0			60.0		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	25.5			55.5			25.5			55.5		
Max Q Clear Time (g_c+I1), s	24.3			28.2			16.5			16.6		
Green Ext Time (p_c), s	0.1			9.0			1.2			5.6		
Intersection Summary												
HCM 6th Ctrl Delay	15.3											
HCM 6th LOS	B											

Timings

6: Jewell Ave & Harvest Rd

2031 Total AM

09/20/2024

											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	210	579	59	59	941	187	68	92	124	84	403
Future Volume (vph)	210	579	59	59	941	187	68	92	124	84	403
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	NA	Free
Protected Phases	7	4		3	8			2		6	
Permitted Phases			4	8		8	2		6		Free
Detector Phase	7	4	4	3	8	8	2	2	6	6	
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	22.5	22.5	22.5	22.5	
Total Split (s)	17.0	55.0	55.0	10.0	48.0	48.0	25.0	25.0	25.0	25.0	
Total Split (%)	18.9%	61.1%	61.1%	11.1%	53.3%	53.3%	27.8%	27.8%	27.8%	27.8%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	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)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	Max	Max	Max	Max	

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 41 (46%), Referenced to phase 4:EBT and 8:WBTL, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated























Splits and Phases: 6: Jewell Ave & Harvest Rd



HCM 7th Signalized Intersection Summary

6: Jewell Ave & Harvest Rd

2031 Total AM
09/20/2024























												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	210	579	59	59	941	187	68	92	23	124	84	403
Future Volume (veh/h)	210	579	59	59	941	187	68	92	23	124	84	403
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	228	629	64	64	1023	203	74	100	25	135	91	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, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	307	1947	868	478	1843	822	327	321	80	289	416	
Arrive On Green	0.09	0.56	0.56	0.12	1.00	1.00	0.23	0.23	0.23	0.38	0.38	0.00
Sat Flow, veh/h	3374	3469	1547	1739	3469	1547	1274	1410	352	1236	1826	1547
Grp Volume(v), veh/h	228	629	64	64	1023	203	74	0	125	135	91	0
Grp Sat Flow(s),veh/h/ln	1687	1735	1547	1739	1735	1547	1274	0	1762	1236	1826	1547
Q Serve(g_s), s	5.9	8.7	1.7	0.0	0.0	0.0	4.5	0.0	5.3	8.6	3.0	0.0
Cycle Q Clear(g_c), s	5.9	8.7	1.7	0.0	0.0	0.0	7.5	0.0	5.3	13.9	3.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.20	1.00		1.00
Lane Grp Cap(c), veh/h	307	1947	868	478	1843	822	327	0	401	289	416	
V/C Ratio(X)	0.74	0.32	0.07	0.13	0.56	0.25	0.23	0.00	0.31	0.47	0.22	
Avail Cap(c_a), veh/h	469	1947	868	478	1843	822	327	0	401	289	416	
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.67	1.67	1.67
Upstream Filter(I)	1.00	1.00	1.00	0.83	0.83	0.83	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	39.9	10.6	9.0	13.4	0.0	0.0	31.0	0.0	28.9	28.2	22.5	0.0
Incr Delay (d2), s/veh	3.5	0.4	0.2	0.1	1.0	0.6	1.6	0.0	2.0	5.4	1.2	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	2.5	3.0	0.5	0.7	0.3	0.1	1.5	0.0	2.4	2.5	1.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	43.4	11.0	9.2	13.5	1.0	0.6	32.6	0.0	30.9	33.5	23.7	0.0
LnGrp LOS	D	B	A	B	A	A	C		C	C	C	
Approach Vol, veh/h	921		1290				199		226			
Approach Delay, s/veh	18.9		1.6				31.5		29.6			
Approach LOS	B		A				C		C			
Timer - Assigned Phs		2	3	4	6		7	8				
Phs Duration (G+Y+Rc), s		25.0	10.0	55.0	25.0		12.7	52.3				
Change Period (Y+Rc), s		4.5	4.5	4.5	4.5		4.5	4.5				
Max Green Setting (Gmax), s		20.5	5.5	50.5	20.5		12.5	43.5				
Max Q Clear Time (g_c+I1), s		9.5	2.0	10.7	15.9		7.9	2.0				
Green Ext Time (p_c), s		0.6	0.0	4.5	0.3		0.3	9.2				
Intersection Summary												
HCM 7th Control Delay, s/veh			12.3									
HCM 7th LOS			B									
Notes												
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.												

Timings

6: Jewell Ave & Harvest Rd

2031 Total PM

09/20/2024

											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	373	939	130	30	726	167	87	113	75	95	356
Future Volume (vph)	373	939	130	30	726	167	87	113	75	95	356
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	NA	Free
Protected Phases	7	4		3	8			2		6	
Permitted Phases			4	8		8	2		6		Free
Detector Phase	7	4	4	3	8	8	2	2	6	6	
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	22.5	22.5	22.5	22.5	
Total Split (s)	25.0	56.0	56.0	10.0	41.0	41.0	24.0	24.0	24.0	24.0	
Total Split (%)	27.8%	62.2%	62.2%	11.1%	45.6%	45.6%	26.7%	26.7%	26.7%	26.7%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	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)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	Max	Max	Max	Max	

Intersection Summary

Cycle Length: 90

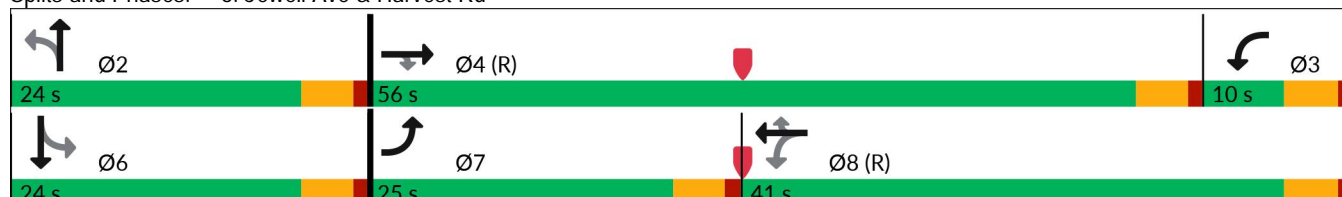
Actuated Cycle Length: 90

Offset: 45 (50%), Referenced to phase 4:EBT and 8:WBTL, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated























Splits and Phases: 6: Jewell Ave & Harvest Rd



HCM 7th Signalized Intersection Summary

6: Jewell Ave & Harvest Rd



















2031 Total PM
09/20/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	373	939	130	30	726	167	87	113	21	75	95	356
Future Volume (veh/h)	373	939	130	30	726	167	87	113	21	75	95	356
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	405	1021	141	33	789	182	95	123	23	82	103	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, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	501	1985	885	352	1682	750	303	324	61	258	396	
Arrive On Green	0.15	0.57	0.57	0.12	0.97	0.97	0.22	0.22	0.22	0.36	0.36	0.00
Sat Flow, veh/h	3374	3469	1547	1739	3469	1547	1261	1496	280	1212	1826	1547
Grp Volume(v), veh/h	405	1021	141	33	789	182	95	0	146	82	103	0
Grp Sat Flow(s),veh/h/ln	1687	1735	1547	1739	1735	1547	1261	0	1776	1212	1826	1547
Q Serve(g_s), s	10.5	16.1	3.9	0.0	1.1	0.4	6.0	0.0	6.3	5.2	3.6	0.0
Cycle Q Clear(g_c), s	10.5	16.1	3.9	0.0	1.1	0.4	9.6	0.0	6.3	11.5	3.6	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.16	1.00		1.00
Lane Grp Cap(c), veh/h	501	1985	885	352	1682	750	303	0	385	258	396	
V/C Ratio(X)	0.81	0.51	0.16	0.09	0.47	0.24	0.31	0.00	0.38	0.32	0.26	
Avail Cap(c_a), veh/h	768	1985	885	352	1682	750	303	0	385	258	396	
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.67	1.67	1.67
Upstream Filter(I)	1.00	1.00	1.00	0.89	0.89	0.89	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	37.1	11.7	9.1	15.5	0.7	0.7	33.0	0.0	30.1	28.9	23.6	0.0
Incr Delay (d2), s/veh	3.7	1.0	0.4	0.1	0.8	0.7	2.7	0.0	2.8	3.2	1.6	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	4.3	5.4	1.2	0.4	0.4	0.2	2.0	0.0	3.0	1.5	1.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	40.8	12.6	9.4	15.6	1.6	1.4	35.7	0.0	32.9	32.1	25.2	0.0
LnGrp LOS	D	B	A	B	A	A	D		C	C	C	
Approach Vol, veh/h	1567			1004			241			185		
Approach Delay, s/veh	19.6			2.0			34.0			28.3		
Approach LOS	B			A			C			C		
Timer - Assigned Phs												
	2		3	4		6	7	8				
Phs Duration (G+Y+Rc), s	24.0		10.0	56.0		24.0	17.9	48.1				
Change Period (Y+Rc), s	4.5		4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s	19.5		5.5	51.5		19.5	20.5	36.5				
Max Q Clear Time (g_c+I1), s	11.6		2.0	18.1		13.5	12.5	3.1				
Green Ext Time (p_c), s	0.6		0.0	8.5		0.3	0.9	6.3				
Intersection Summary												
HCM 7th Control Delay, s/veh	15.4											
HCM 7th LOS	B											
Notes												
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.												

Timings 6: Jewell Ave & Harvest Rd

2033 Background AM

09/23/2024

									
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	154	667	79	77	947	88	100	105	106
Future Volume (vph)	154	667	79	77	947	88	100	105	106
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4			8		2		6
Permitted Phases	4		4	8		2		6	
Detector Phase	4	4	4	8	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	61.0	61.0	61.0	61.0	61.0	29.0	29.0	29.0	29.0
Total Split (%)	67.8%	67.8%	67.8%	67.8%	67.8%	32.2%	32.2%	32.2%	32.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	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)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max	Max	Max	Max	Max

Intersection Summary

Cycle Length: 90

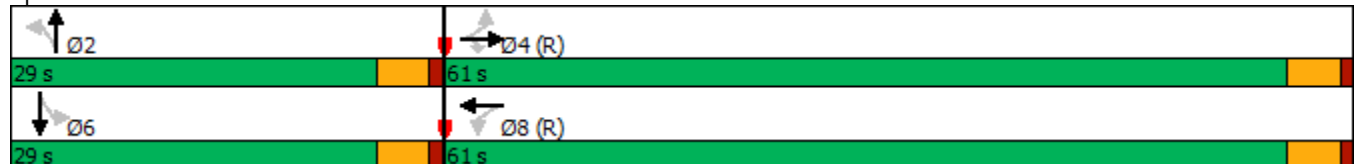
Actuated Cycle Length: 90

Offset: 85 (94%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green

Natural Cycle: 70

Control Type: Actuated-Coordinated

Splits and Phases: 6: Jewell Ave & Harvest Rd
























HCM 6th Signalized Intersection Summary

6: Jewell Ave & Harvest Rd

2033 Background AM



















09/23/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	154	667	79	77	947	219	88	100	25	105	106	258
Future Volume (veh/h)	154	667	79	77	947	219	88	100	25	105	106	258
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	167	725	86	84	1029	238	96	109	27	114	115	280
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	255	2178	971	428	1757	405	116	385	95	339	128	312
Arrive On Green	0.63	0.63	0.63	0.63	0.63	0.63	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	427	3469	1547	657	2799	645	966	1413	350	1223	471	1148
Grp Volume(v), veh/h	167	725	86	84	636	631	96	0	136	114	0	395
Grp Sat Flow(s),veh/h/ln	427	1735	1547	657	1735	1710	966	0	1763	1223	0	1619
Q Serve(g_s), s	34.1	8.9	2.0	6.2	19.4	19.6	3.4	0.0	5.5	7.3	0.0	21.1
Cycle Q Clear(g_c), s	53.7	8.9	2.0	15.1	19.4	19.6	24.5	0.0	5.5	12.8	0.0	21.1
Prop In Lane	1.00		1.00	1.00		0.38	1.00		0.20	1.00		0.71
Lane Grp Cap(c), veh/h	255	2178	971	428	1089	1073	116	0	480	339	0	441
V/C Ratio(X)	0.65	0.33	0.09	0.20	0.58	0.59	0.83	0.00	0.28	0.34	0.00	0.90
Avail Cap(c_a), veh/h	255	2178	971	428	1089	1073	116	0	480	339	0	441
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	0.26	0.26	0.26	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.7	7.9	6.6	11.4	9.8	9.9	44.4	0.0	25.8	30.9	0.0	31.5
Incr Delay (d2), s/veh	12.4	0.4	0.2	0.3	0.6	0.6	46.4	0.0	1.5	2.7	0.0	23.5
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	3.9	2.8	0.6	0.8	5.9	5.9	3.6	0.0	2.5	2.3	0.0	10.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.1	8.3	6.8	11.7	10.4	10.5	90.7	0.0	27.3	33.5	0.0	55.0
LnGrp LOS	D	A	A	B	B	B	F	A	C	C	A	D
Approach Vol, veh/h	978			1351			232			509		
Approach Delay, s/veh	13.2			10.5			53.5			50.2		
Approach LOS	B			B			D			D		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	29.0			61.0			29.0			61.0		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	24.5			56.5			24.5			56.5		
Max Q Clear Time (g_c+I1), s	26.5			55.7			23.1			21.6		
Green Ext Time (p_c), s	0.0			0.5			0.4			11.1		
Intersection Summary												
HCM 6th Ctrl Delay				21.2								
HCM 6th LOS				C								

Timings 6: Jewell Ave & Harvest Rd

2033 Background PM

01/24/2024

									
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	188	885	155	30	754	117	113	46	137
Future Volume (vph)	188	885	155	30	754	117	113	46	137
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4			8		2		6
Permitted Phases	4		4	8		2		6	
Detector Phase	4	4	4	8	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	59.0	59.0	59.0	59.0	59.0	31.0	31.0	31.0	31.0
Total Split (%)	65.6%	65.6%	65.6%	65.6%	65.6%	34.4%	34.4%	34.4%	34.4%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	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)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max	Max	Max	Max	Max

Intersection Summary

Cycle Length: 90

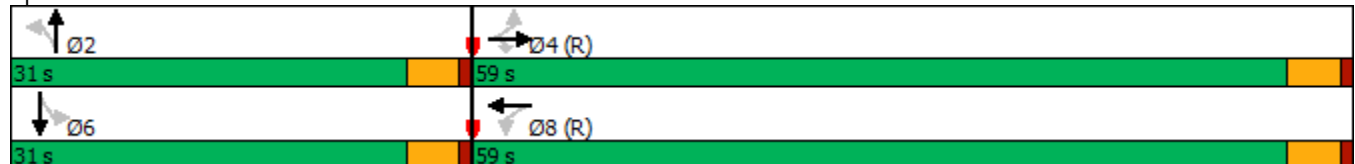
Actuated Cycle Length: 90

Offset: 78 (87%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green

Natural Cycle: 65

Control Type: Actuated-Coordinated

Splits and Phases: 6: Jewell Ave & Harvest Rd
























HCM 6th Signalized Intersection Summary

6: Jewell Ave & Harvest Rd

2033 Background PM

01/24/2024























												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	188	885	155	30	754	172	117	113	15	46	137	196
Future Volume (veh/h)	188	885	155	30	754	172	117	113	15	46	137	196
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	204	962	168	33	820	187	127	123	16	50	149	213
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	322	2101	937	339	1699	387	176	466	61	367	200	286
Arrive On Green	0.61	0.61	0.61	0.61	0.61	0.61	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	546	3469	1547	570	2806	640	995	1583	206	1220	680	971
Grp Volume(v), veh/h	204	962	168	33	507	500	127	0	139	50	0	362
Grp Sat Flow(s),veh/h/ln	546	1735	1547	570	1735	1711	995	0	1789	1220	0	1651
Q Serve(g_s), s	29.9	13.6	4.3	3.0	14.7	14.7	8.7	0.0	5.3	2.9	0.0	17.8
Cycle Q Clear(g_c), s	44.6	13.6	4.3	16.6	14.7	14.7	26.5	0.0	5.3	8.3	0.0	17.8
Prop In Lane	1.00		1.00	1.00		0.37	1.00		0.12	1.00		0.59
Lane Grp Cap(c), veh/h	322	2101	937	339	1050	1036	176	0	527	367	0	486
V/C Ratio(X)	0.63	0.46	0.18	0.10	0.48	0.48	0.72	0.00	0.26	0.14	0.00	0.74
Avail Cap(c_a), veh/h	322	2101	937	339	1050	1036	176	0	527	367	0	486
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	0.64	0.64	0.64	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	22.3	9.7	7.9	14.2	9.9	9.9	41.7	0.0	24.3	27.5	0.0	28.7
Incr Delay (d2), s/veh	9.2	0.7	0.4	0.4	1.0	1.0	22.5	0.0	1.2	0.8	0.0	9.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	4.4	1.3	0.4	4.8	4.7	3.9	0.0	2.4	0.9	0.0	7.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.5	10.4	8.3	14.6	10.9	10.9	64.3	0.0	25.5	28.2	0.0	38.6
LnGrp LOS	C	B	A	B	B	B	E	A	C	C	A	D
Approach Vol, veh/h	1334			1040			266			412		
Approach Delay, s/veh	13.4			11.0			44.0			37.4		
Approach LOS	B			B			D			D		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	31.0			59.0			31.0			59.0		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	26.5			54.5			26.5			54.5		
Max Q Clear Time (g_c+I1), s	28.5			46.6			19.8			18.6		
Green Ext Time (p_c), s	0.0			5.0			1.2			7.5		
Intersection Summary												
HCM 6th Ctrl Delay	18.5											
HCM 6th LOS	B											

Timings

6: Jewell Ave & Harvest Rd

2033 Total AM

09/20/2024

											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	244	714	79	85	1263	238	88	108	144	115	438
Future Volume (vph)	244	714	79	85	1263	238	88	108	144	115	438
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	NA	Free
Protected Phases	7	4		3	8			2		6	
Permitted Phases			4	8		8	2		6		Free
Detector Phase	7	4	4	3	8	8	2	2	6	6	
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	22.5	22.5	22.5	22.5	
Total Split (s)	15.0	54.8	54.8	10.2	50.0	50.0	25.0	25.0	25.0	25.0	
Total Split (%)	16.7%	60.9%	60.9%	11.3%	55.6%	55.6%	27.8%	27.8%	27.8%	27.8%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	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)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	Max	Max	Max	Max	

Intersection Summary

Cycle Length: 90

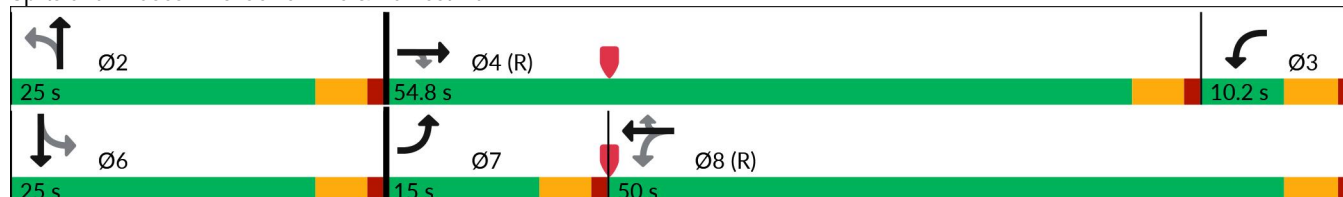
Actuated Cycle Length: 90

Offset: 43 (48%), Referenced to phase 4:EBT and 8:WBTL, Start of Green

Natural Cycle: 70

Control Type: Actuated-Coordinated























Splits and Phases: 6: Jewell Ave & Harvest Rd



HCM 7th Signalized Intersection Summary

6: Jewell Ave & Harvest Rd

2033 Total AM
09/20/2024























												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	244	714	79	85	1263	238	88	108	29	144	115	438
Future Volume (veh/h)	244	714	79	85	1263	238	88	108	29	144	115	438
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	265	776	86	92	1373	259	96	117	32	157	125	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, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	339	1939	865	432	1810	807	281	314	86	269	416	
Arrive On Green	0.10	0.56	0.56	0.13	1.00	1.00	0.23	0.23	0.23	0.08	0.08	0.00
Sat Flow, veh/h	3374	3469	1547	1739	3469	1547	1236	1380	378	1209	1826	1547
Grp Volume(v), veh/h	265	776	86	92	1373	259	96	0	149	157	125	0
Grp Sat Flow(s),veh/h/ln	1687	1735	1547	1739	1735	1547	1236	0	1758	1209	1826	1547
Q Serve(g_s), s	6.9	11.4	2.3	0.0	0.0	0.0	6.3	0.0	6.4	11.6	5.8	0.0
Cycle Q Clear(g_c), s	6.9	11.4	2.3	0.0	0.0	0.0	12.2	0.0	6.4	18.0	5.8	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.21	1.00		1.00
Lane Grp Cap(c), veh/h	339	1939	865	432	1810	807	281	0	400	269	416	
V/C Ratio(X)	0.78	0.40	0.10	0.21	0.76	0.32	0.34	0.00	0.37	0.58	0.30	
Avail Cap(c_a), veh/h	394	1939	865	432	1810	807	281	0	400	269	416	
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	0.67	0.67	0.67	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	39.5	11.3	9.3	14.7	0.0	0.0	34.2	0.0	29.3	43.7	34.8	0.0
Incr Delay (d2), s/veh	8.6	0.6	0.2	0.2	2.1	0.7	3.3	0.0	2.6	9.0	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	3.1	3.9	0.7	1.0	0.5	0.2	2.1	0.0	3.0	4.4	2.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	48.1	11.9	9.5	14.9	2.1	0.7	37.5	0.0	32.0	52.6	36.7	0.0
LnGrp LOS	D	B	A	B	A	A	D		C	D	D	
Approach Vol, veh/h	1127		1724				245		282			
Approach Delay, s/veh	20.2		2.5				34.1		45.6			
Approach LOS	C		A				C		D			
Timer - Assigned Phs	2		3	4		6	7	8				
Phs Duration (G+Y+Rc), s	25.0		10.2	54.8		25.0	13.5	51.5				
Change Period (Y+Rc), s	4.5		4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s	20.5		5.7	50.3		20.5	10.5	45.5				
Max Q Clear Time (g_c+I1), s	14.2		2.0	13.4		20.0	8.9	2.0				
Green Ext Time (p_c), s	0.6		0.1	5.9		0.1	0.1	14.7				
Intersection Summary												
HCM 7th Control Delay, s/veh			14.3									
HCM 7th LOS			B									
Notes												
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.												

Timings

6: Jewell Ave & Harvest Rd

2033 Total PM

09/20/2024

											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	417	1099	155	35	1024	212	117	128	85	150	370
Future Volume (vph)	417	1099	155	35	1024	212	117	128	85	150	370
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	NA	Free
Protected Phases	7	4		3	8			2		6	
Permitted Phases			4	8		8	2		6		Free
Detector Phase	7	4	4	3	8	8	2	2	6	6	
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	22.5	22.5	22.5	22.5	
Total Split (s)	22.0	56.5	56.5	9.5	44.0	44.0	24.0	24.0	24.0	24.0	
Total Split (%)	24.4%	62.8%	62.8%	10.6%	48.9%	48.9%	26.7%	26.7%	26.7%	26.7%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	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)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes					
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	Max	Max	Max	Max	

Intersection Summary

Cycle Length: 90

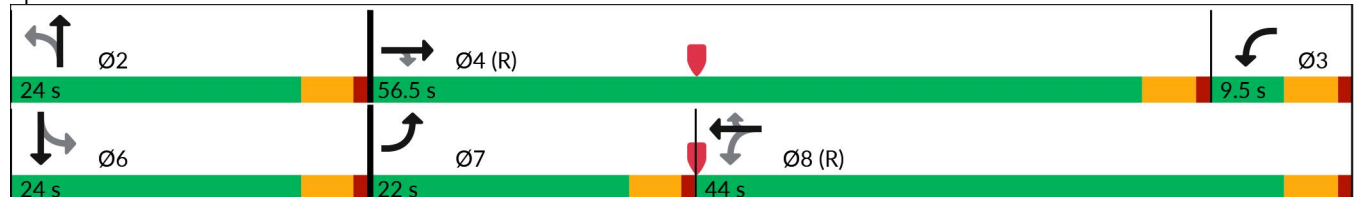
Actuated Cycle Length: 90

Offset: 66 (73%), Referenced to phase 4:EBT and 8:WBTL, Start of Green

Natural Cycle: 70

Control Type: Actuated-Coordinated























Splits and Phases: 6: Jewell Ave & Harvest Rd






HCM 7th Signalized Intersection Summary

6: Jewell Ave & Harvest Rd




2033 Total PM
09/20/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	417	1099	155	35	1024	212	117	128	23	85	150	370
Future Volume (veh/h)	417	1099	155	35	1024	212	117	128	23	85	150	370
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	453	1195	168	38	1113	230	127	139	25	92	163	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, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	538	2004	894	329	1644	733	259	326	59	243	396	
Arrive On Green	0.16	0.58	0.58	0.11	0.95	0.95	0.22	0.22	0.22	0.36	0.36	0.00
Sat Flow, veh/h	3374	3469	1547	1739	3469	1547	1194	1506	271	1193	1826	1547
Grp Volume(v), veh/h	453	1195	168	38	1113	230	127	0	164	92	163	0
Grp Sat Flow(s),veh/h/ln	1687	1735	1547	1739	1735	1547	1194	0	1777	1193	1826	1547
Q Serve(g_s), s	11.7	20.0	4.6	0.0	4.2	1.0	9.1	0.0	7.2	6.1	6.0	0.0
Cycle Q Clear(g_c), s	11.7	20.0	4.6	0.0	4.2	1.0	15.1	0.0	7.2	13.3	6.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.15	1.00		1.00
Lane Grp Cap(c), veh/h	538	2004	894	329	1644	733	259	0	385	243	396	
V/C Ratio(X)	0.84	0.60	0.19	0.12	0.68	0.31	0.49	0.00	0.43	0.38	0.41	
Avail Cap(c_a), veh/h	656	2004	894	329	1644	733	259	0	385	243	396	
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.67	1.67	1.67
Upstream Filter(I)	1.00	1.00	1.00	0.76	0.76	0.76	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	36.7	12.2	9.0	17.1	1.4	1.3	36.4	0.0	30.4	29.9	24.4	0.0
Incr Delay (d2), s/veh	8.2	1.3	0.5	0.1	1.7	0.9	6.5	0.0	3.4	4.4	3.2	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	5.2	6.7	1.4	0.5	0.9	0.4	3.1	0.0	3.4	1.7	2.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	44.9	13.6	9.5	17.3	3.1	2.1	42.9	0.0	33.8	34.3	27.6	0.0
LnGrp LOS	D	B	A	B	A	A	D		C	C	C	
Approach Vol, veh/h	1816			1381			291			255		
Approach Delay, s/veh	21.0			3.3			37.8			30.0		
Approach LOS	C			A			D			C		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	24.0			9.5			24.0			18.9		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	19.5			5.0			19.5			17.5		
Max Q Clear Time (g_c+I1), s	17.1			2.0			15.3			13.7		
Green Ext Time (p_c), s	0.3			0.0			0.4			0.6		
Intersection Summary												
HCM 7th Control Delay, s/veh	16.4											
HCM 7th LOS	B											
Notes												
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.												

Intersection						
Int Delay, s/veh	8.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	157	10	11	6	2	271
Future Vol, veh/h	157	10	11	6	2	271
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	47	47	92	92
Heavy Vehicles, %	2	2	35	35	3	3
Mvmt Flow	173	11	23	13	2	295
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	36	0	-	0	387	30
Stage 1	-	-	-	-	30	-
Stage 2	-	-	-	-	357	-
Critical Hdwy	4.12	-	-	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.218	-	-	-	3.527	3.327
Pot Cap-1 Maneuver	1575	-	-	-	614	1042
Stage 1	-	-	-	-	990	-
Stage 2	-	-	-	-	706	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1575	-	-	-	546	1042
Mov Cap-2 Maneuver	-	-	-	-	546	-
Stage 1	-	-	-	-	880	-
Stage 2	-	-	-	-	706	-
Approach	EB	WB		SB		
HCM Control Delay, s	7.1	0		9.9		
HCM LOS				A		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1575	-	-	-	1035	
HCM Lane V/C Ratio	0.11	-	-	-	0.287	
HCM Control Delay (s)	7.6	0	-	-	9.9	
HCM Lane LOS	A	A	-	-	A	
HCM 95th %tile Q(veh)	0.4	-	-	-	1.2	

Intersection




Int Delay, s/veh 8.1




Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	254	14	16	1	6	216
Future Vol, veh/h	254	14	16	1	6	216
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	71	71	93	93
Heavy Vehicles, %	8	8	35	35	3	3
Mvmt Flow	270	15	23	1	6	232






Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	24	0	0 579 24
Stage 1	-	-	- 24 -
Stage 2	-	-	- 555 -
Critical Hdwy	4.18	-	- 6.43 6.23
Critical Hdwy Stg 1	-	-	- 5.43 -
Critical Hdwy Stg 2	-	-	- 5.43 -
Follow-up Hdwy	2.272	-	- 3.527 3.327
Pot Cap-1 Maneuver	1553	-	- 475 1050
Stage 1	-	-	- 996 -
Stage 2	-	-	- 573 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1553	-	- 392 1050
Mov Cap-2 Maneuver	-	-	- 392 -
Stage 1	-	-	- 822 -
Stage 2	-	-	- 573 -

Approach	EB	WB	SB
HCM Control Delay, s	7.4	0	9.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1553	-	-	-	1004
HCM Lane V/C Ratio	0.174	-	-	-	0.238
HCM Control Delay (s)	7.8	0	-	-	9.7
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.6	-	-	-	0.9






Intersection						
Int Delay, s/veh	8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	187	58	113	27	19	327
Future Vol, veh/h	187	58	113	27	19	327
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	35	35	3	3
Mvmt Flow	203	63	123	29	21	355
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	152	0	-	0	607	138
Stage 1	-	-	-	-	138	-
Stage 2	-	-	-	-	469	-
Critical Hdwy	4.12	-	-	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.218	-	-	-	3.527	3.327
Pot Cap-1 Maneuver	1429	-	-	-	458	908
Stage 1	-	-	-	-	886	-
Stage 2	-	-	-	-	628	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1429	-	-	-	391	908
Mov Cap-2 Maneuver	-	-	-	-	391	-
Stage 1	-	-	-	-	756	-
Stage 2	-	-	-	-	628	-
Approach	EB	WB		SB		
HCM Control Delay, s	6.1	0		12.6		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1429	-	-	-	847	
HCM Lane V/C Ratio	0.142	-	-	-	0.444	
HCM Control Delay (s)	7.9	0	-	-	12.6	
HCM Lane LOS	A	A	-	-	B	
HCM 95th %tile Q(veh)	0.5	-	-	-	2.3	

Intersection						
Int Delay, s/veh	12.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	310	137	76	53	77	265
Future Vol, veh/h	310	137	76	53	77	265
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	8	8	35	35	3	3
Mvmt Flow	337	149	83	58	84	288
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	141	0	-	0	935	112
Stage 1	-	-	-	-	112	-
Stage 2	-	-	-	-	823	-
Critical Hdwy	4.18	-	-	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.272	-	-	-	3.527	3.327
Pot Cap-1 Maneuver	1406	-	-	-	293	938
Stage 1	-	-	-	-	910	-
Stage 2	-	-	-	-	430	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1406	-	-	-	217	938
Mov Cap-2 Maneuver	-	-	-	-	217	-
Stage 1	-	-	-	-	672	-
Stage 2	-	-	-	-	430	-
Approach	EB	WB		SB		
HCM Control Delay, s	5.8	0		25.4		
HCM LOS				D		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1406	-	-	-	537	
HCM Lane V/C Ratio	0.24	-	-	-	0.692	
HCM Control Delay (s)	8.4	0	-	-	25.4	
HCM Lane LOS	A	A	-	-	D	
HCM 95th %tile Q(veh)	0.9	-	-	-	5.4	

Intersection						
Int Delay, s/veh	7.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	205	60	114	27	19	334
Future Vol, veh/h	205	60	114	27	19	334
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	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	35	35	3	3
Mvmt Flow	223	65	124	29	21	363
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	153	0	-	0	650	139
Stage 1	-	-	-	-	139	-
Stage 2	-	-	-	-	511	-
Critical Hdwy	4.12	-	-	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.218	-	-	-	3.527	3.327
Pot Cap-1 Maneuver	1428	-	-	-	432	907
Stage 1	-	-	-	-	885	-
Stage 2	-	-	-	-	600	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1428	-	-	-	365	907
Mov Cap-2 Maneuver	-	-	-	-	466	-
Stage 1	-	-	-	-	747	-
Stage 2	-	-	-	-	600	-
Approach	EB	WB		SB		
HCM Control Delay, s/v	6.2	0		11.7		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1428	-	-	-	466	907
HCM Lane V/C Ratio	0.156	-	-	-	0.044	0.4
HCM Control Delay (s/veh)	8	-	-	-	13.1	11.6
HCM Lane LOS	A	-	-	-	B	B
HCM 95th %tile Q (veh)	0.6	-	-	-	0.1	1.9

Intersection




Int Delay, s/veh 7.7




Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	324	138	78	53	77	286
Future Vol, veh/h	324	138	78	53	77	286
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	150	0
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	8	8	35	35	3	3
Mvmt Flow	352	150	85	58	84	311






Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	143	0	0 968 114
Stage 1	-	-	- 114 -
Stage 2	-	-	- 854 -
Critical Hdwy	4.18	-	- 6.43 6.23
Critical Hdwy Stg 1	-	-	- 5.43 -
Critical Hdwy Stg 2	-	-	- 5.43 -
Follow-up Hdwy	2.272	-	- 3.527 3.327
Pot Cap-1 Maneuver	1404	-	- 280 936
Stage 1	-	-	- 908 -
Stage 2	-	-	- 415 -
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	1404	-	- 210 936
Mov Cap-2 Maneuver	-	-	- 322 -
Stage 1	-	-	- 680 -
Stage 2	-	-	- 415 -

Approach	EB	WB	SB
HCM Control Delay, s/v	5.9	0	12.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1404	-	-	-	322	936
HCM Lane V/C Ratio	0.251	-	-	-	0.26	0.332
HCM Control Delay (s/veh)	8.4	-	-	-	20.1	10.7
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q (veh)	1	-	-	-	1	1.5

Intersection						
Int Delay, s/veh	8.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	212	75	146	32	23	367
Future Vol, veh/h	212	75	146	32	23	367
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	35	35	3	3
Mvmt Flow	230	82	159	35	25	399
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	194	0	-	0	719	177
Stage 1	-	-	-	-	177	-
Stage 2	-	-	-	-	542	-
Critical Hdwy	4.12	-	-	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.218	-	-	-	3.527	3.327
Pot Cap-1 Maneuver	1379	-	-	-	394	863
Stage 1	-	-	-	-	851	-
Stage 2	-	-	-	-	581	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1379	-	-	-	325	863
Mov Cap-2 Maneuver	-	-	-	-	325	-
Stage 1	-	-	-	-	702	-
Stage 2	-	-	-	-	581	-
Approach	EB	WB		SB		
HCM Control Delay, s	6	0		14.8		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1379	-	-	-	786	
HCM Lane V/C Ratio	0.167	-	-	-	0.539	
HCM Control Delay (s)	8.1	0	-	-	14.8	
HCM Lane LOS	A	A	-	-	B	
HCM 95th %tile Q(veh)	0.6	-	-	-	3.3	






Intersection						
Int Delay, s/veh	40.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	361	162	110	68	100	313
Future Vol, veh/h	361	162	110	68	100	313
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	8	8	35	35	3	3
Mvmt Flow	392	176	120	74	109	340
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	194	0	-	0	1117	157
Stage 1	-	-	-	-	157	-
Stage 2	-	-	-	-	960	-
Critical Hdwy	4.18	-	-	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.272	-	-	-	3.527	3.327
Pot Cap-1 Maneuver	1344	-	-	-	228	886
Stage 1	-	-	-	-	869	-
Stage 2	-	-	-	-	370	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1344	-	-	-	154	886
Mov Cap-2 Maneuver	-	-	-	-	154	-
Stage 1	-	-	-	-	588	-
Stage 2	-	-	-	-	370	-
Approach	EB	WB		SB		
HCM Control Delay, s	6.1	0		102.4		
HCM LOS				F		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1344	-	-	-	412	
HCM Lane V/C Ratio	0.292	-	-	-	1.09	
HCM Control Delay (s)	8.8	0	-	-	102.4	
HCM Lane LOS	A	A	-	-	F	
HCM 95th %tile Q(veh)	1.2	-	-	-	15.5	

Intersection						
Int Delay, s/veh	8.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	278	79	151	32	23	429
Future Vol, veh/h	278	79	151	32	23	429
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	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	35	35	3	3
Mvmt Flow	302	86	164	35	25	466

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	199	0	-	0	872
Stage 1	-	-	-	-	182
Stage 2	-	-	-	-	690
Critical Hdwy	4.12	-	-	-	6.43
Critical Hdwy Stg 1	-	-	-	-	5.43
Critical Hdwy Stg 2	-	-	-	-	5.43
Follow-up Hdwy	2.218	-	-	-	3.527
Pot Cap-1 Maneuver	1373	-	-	-	320
Stage 1	-	-	-	-	847
Stage 2	-	-	-	-	496
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1373	-	-	-	250
Mov Cap-2 Maneuver	-	-	-	-	369
Stage 1	-	-	-	-	661
Stage 2	-	-	-	-	496

Approach	EB	WB	SB
HCM Control Delay, s/v	6.5	0	14.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1373	-	-	-	369	858
HCM Lane V/C Ratio	0.22	-	-	-	0.068	0.543
HCM Control Delay (s/veh)	8.4	-	-	-	15.5	14.1
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q (veh)	0.8	-	-	-	0.2	3.3







Intersection						
Int Delay, s/veh	11.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	497	170	117	68	100	443
Future Vol, veh/h	497	170	117	68	100	443
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	150	0
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	8	8	35	35	3	3
Mvmt Flow	540	185	127	74	109	482







Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	201	0	-	0	1429
Stage 1	-	-	-	-	164
Stage 2	-	-	-	-	1265
Critical Hdwy	4.18	-	-	-	6.43
Critical Hdwy Stg 1	-	-	-	-	5.43
Critical Hdwy Stg 2	-	-	-	-	5.43
Follow-up Hdwy	2.272	-	-	-	3.527
Pot Cap-1 Maneuver	1336	-	-	-	148
Stage 1	-	-	-	-	863
Stage 2	-	-	-	-	264
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1336	-	-	-	~ 88
Mov Cap-2 Maneuver	-	-	-	-	194
Stage 1	-	-	-	-	514
Stage 2	-	-	-	-	264

Approach	EB	WB	SB
HCM Control Delay, s/v	7.1	0	19.7
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1336	-	-	-	194	878
HCM Lane V/C Ratio	0.404	-	-	-	0.56	0.548
HCM Control Delay (s/veh)	9.5	-	-	-	44.9	14
HCM Lane LOS	A	-	-	-	E	B
HCM 95th %tile Q (veh)	2	-	-	-	3	3.4

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

Intersection						
Int Delay, s/veh	8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	218	91	179	34	25	384
Future Vol, veh/h	218	91	179	34	25	384
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	150	150	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	237	99	195	37	27	417
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	232	0	-	0	768	195
Stage 1	-	-	-	-	195	-
Stage 2	-	-	-	-	573	-
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	1318	-	-	-	366	839
Stage 1	-	-	-	-	831	-
Stage 2	-	-	-	-	558	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1318	-	-	-	300	839
Mov Cap-2 Maneuver	-	-	-	-	300	-
Stage 1	-	-	-	-	681	-
Stage 2	-	-	-	-	558	-
Approach	EB	WB		SB		
HCM Control Delay, s	5.9	0		13.8		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1318	-	-	-	300	839
HCM Lane V/C Ratio	0.18	-	-	-	0.091	0.497
HCM Control Delay (s)	8.3	-	-	-	18.2	13.5
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q(veh)	0.7	-	-	-	0.3	2.8

Intersection						
Int Delay, s/veh	16.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	369	187	144	78	120	321
Future Vol, veh/h	369	187	144	78	120	321
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	150	150	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	401	203	157	85	130	349
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	242	0	-	0	1162	157
Stage 1	-	-	-	-	157	-
Stage 2	-	-	-	-	1005	-
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	1307	-	-	-	213	881
Stage 1	-	-	-	-	864	-
Stage 2	-	-	-	-	349	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1307	-	-	-	148	881
Mov Cap-2 Maneuver	-	-	-	-	148	-
Stage 1	-	-	-	-	599	-
Stage 2	-	-	-	-	349	-
Approach	EB	WB		SB		
HCM Control Delay, s	6	0		36.9		
HCM LOS	E					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1307	-	-	-	148	881
HCM Lane V/C Ratio	0.307	-	-	-	0.881	0.396
HCM Control Delay (s)	9	-	-	-	104.4	11.7
HCM Lane LOS	A	-	-	-	F	B
HCM 95th %tile Q(veh)	1.3	-	-	-	6	1.9

Timings 7: Jewell Ave & Powhatan Rd

2028 Total AM
09/20/2024



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	300	97	185	34	25	452
Future Volume (vph)	300	97	185	34	25	452
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Detector Phase	7	4	8	8	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	25.0	53.0	28.0	28.0	37.0	37.0
Total Split (%)	27.8%	58.9%	31.1%	31.1%	41.1%	41.1%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max

Intersection Summary

Cycle Length: 90

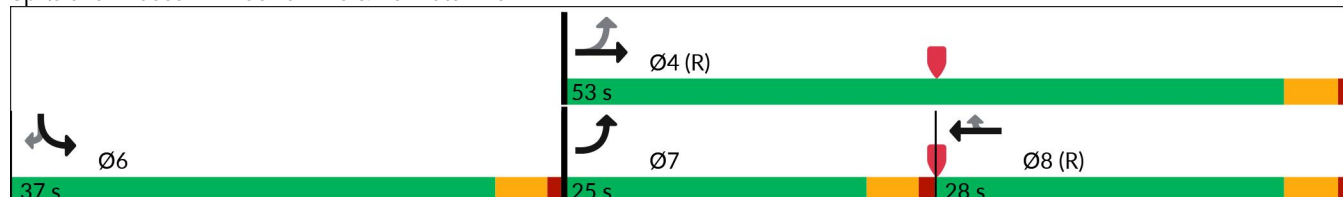
Actuated Cycle Length: 90

Offset: 14 (16%), Referenced to phase 4:EBTL and 8:WBT, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

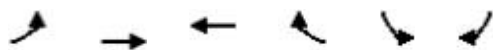
Splits and Phases: 7: Jewell Ave & Powhatan Rd









HCM 7th Signalized Intersection Summary

7: Jewell Ave & Powhatan Rd

2028 Total AM
09/20/2024



Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations							
Traffic Volume (veh/h)	300	97	185	34	25	452	
Future Volume (veh/h)	300	97	185	34	25	452	
Initial Q (Qb), veh	0	0	0	0	0	0	
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	
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	1826	1826	1826	1826	1826	1826	
Adj Flow Rate, veh/h	326	105	201	37	27	0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Percent Heavy Veh, %	5	5	5	5	5	5	
Cap, veh/h	624	984	634	537	628		
Arrive On Green	0.14	0.54	0.35	0.35	0.36	0.00	
Sat Flow, veh/h	1739	1826	1826	1547	1739	1547	
Grp Volume(v), veh/h	326	105	201	37	27	0	
Grp Sat Flow(s),veh/h/ln	1739	1826	1826	1547	1739	1547	
Q Serve(g_s), s	10.2	2.5	7.3	1.4	0.9	0.0	
Cycle Q Clear(g_c), s	10.2	2.5	7.3	1.4	0.9	0.0	
Prop In Lane	1.00			1.00	1.00	1.00	
Lane Grp Cap(c), veh/h	624	984	634	537	628		
V/C Ratio(X)	0.52	0.11	0.32	0.07	0.04		
Avail Cap(c_a), veh/h	773	984	634	537	628		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	
Uniform Delay (d), s/veh	13.9	10.2	21.6	19.7	18.7	0.0	
Incr Delay (d2), s/veh	0.7	0.2	1.3	0.2	0.1	0.0	
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	3.6	0.9	3.1	0.5	0.4	0.0	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d), s/veh	14.6	10.4	22.9	19.9	18.8	0.0	
LnGrp LOS	B	B	C	B	B		
Approach Vol, veh/h		431	238		27		
Approach Delay, s/veh		13.6	22.4		18.8		
Approach LOS		B	C		B		
Timer - Assigned Phs				4	6	7	8
Phs Duration (G+Y+Rc), s				53.0	37.0	17.3	35.7
Change Period (Y+Rc), s				4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s				48.5	32.5	20.5	23.5
Max Q Clear Time (g_c+I1), s				4.5	2.9	12.2	9.3
Green Ext Time (p_c), s				0.5	0.0	0.6	0.9
Intersection Summary							
HCM 7th Control Delay, s/veh			16.8				
HCM 7th LOS			B				
Notes							
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.							

Timings

7: Jewell Ave & Powhatan Rd

2028 Total PM

09/20/2024



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	517	197	154	78	120	471
Future Volume (vph)	517	197	154	78	120	471
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Detector Phase	7	4	8	8	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	35.0	59.0	24.0	24.0	31.0	31.0
Total Split (%)	38.9%	65.6%	26.7%	26.7%	34.4%	34.4%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max

Intersection Summary

Cycle Length: 90

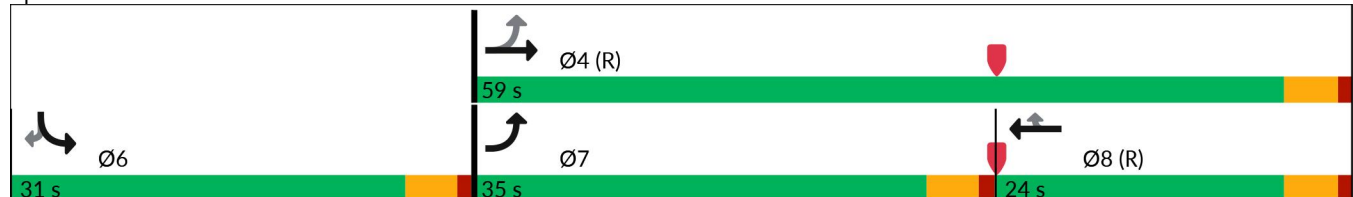
Actuated Cycle Length: 90

Offset: 56 (62%), Referenced to phase 4:EBTL and 8:WBT, Start of Green

Natural Cycle: 65

Control Type: Actuated-Coordinated

Splits and Phases: 7: Jewell Ave & Powhatan Rd



HCM 7th Signalized Intersection Summary

7: Jewell Ave & Powhatan Rd

2028 Total PM
09/20/2024



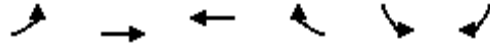
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	517	197	154	78	120	471
Future Volume (veh/h)	517	197	154	78	120	471
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	562	214	167	85	130	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	5	5	5	5	5
Cap, veh/h	769	1106	577	489	512	
Arrive On Green	0.24	0.61	0.32	0.32	0.29	0.00
Sat Flow, veh/h	1739	1826	1826	1547	1739	1547
Grp Volume(v), veh/h	562	214	167	85	130	0
Grp Sat Flow(s),veh/h/ln	1739	1826	1826	1547	1739	1547
Q Serve(g_s), s	18.1	4.7	6.2	3.6	5.1	0.0
Cycle Q Clear(g_c), s	18.1	4.7	6.2	3.6	5.1	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	769	1106	577	489	512	
V/C Ratio(X)	0.73	0.19	0.29	0.17	0.25	
Avail Cap(c_a), veh/h	941	1106	577	489	512	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	12.6	7.9	23.2	22.3	24.2	0.0
Incr Delay (d2), s/veh	2.3	0.4	1.3	0.8	1.2	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.3	1.6	2.7	1.3	2.1	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	14.9	8.3	24.4	23.0	25.4	0.0
LnGrp LOS	B	A	C	C	C	
Approach Vol, veh/h		776	252		130	
Approach Delay, s/veh		13.1	24.0		25.4	
Approach LOS		B	C		C	
Timer - Assigned Phs			4		6	7
Phs Duration (G+Y+Rc), s			59.0		31.0	26.1
Change Period (Y+Rc), s			4.5		4.5	4.5
Max Green Setting (Gmax), s			54.5		26.5	30.5
Max Q Clear Time (g_c+I1), s			6.7		7.1	20.1
Green Ext Time (p_c), s			1.2		0.3	1.4
0.8						
Intersection Summary						
HCM 7th Control Delay, s/veh			16.8			
HCM 7th LOS			B			
Notes						
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.						

Timings

2029 Background AM

7: Jewell Ave & Powhatan Rd

01/24/2024



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	253	259	385	50	36	404
Future Volume (vph)	253	259	385	50	36	404
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Detector Phase	7	4	8	8	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	20.0	61.0	41.0	41.0	29.0	29.0
Total Split (%)	22.2%	67.8%	45.6%	45.6%	32.2%	32.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Splits and Phases: 7: Jewell Ave & Powhatan Rd

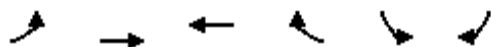








HCM 6th Signalized Intersection Summary

2029 Background AM

01/24/2024

7: Jewell Ave & Powhatan Rd



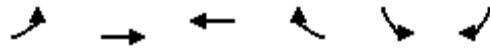
Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations							
Traffic Volume (veh/h)	253	259	385	50	36	404	
Future Volume (veh/h)	253	259	385	50	36	404	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No	No		No		
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	
Adj Flow Rate, veh/h	275	282	418	54	39	330	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Percent Heavy Veh, %	5	5	5	5	5	5	
Cap, veh/h	545	1146	869	736	473	421	
Arrive On Green	0.10	0.63	0.48	0.48	0.27	0.27	
Sat Flow, veh/h	1739	1826	1826	1547	1739	1547	
Grp Volume(v), veh/h	275	282	418	54	39	330	
Grp Sat Flow(s),veh/h/ln	1739	1826	1826	1547	1739	1547	
Q Serve(g_s), s	6.8	6.1	14.0	1.7	1.5	17.8	
Cycle Q Clear(g_c), s	6.8	6.1	14.0	1.7	1.5	17.8	
Prop In Lane	1.00			1.00	1.00	1.00	
Lane Grp Cap(c), veh/h	545	1146	869	736	473	421	
V/C Ratio(X)	0.50	0.25	0.48	0.07	0.08	0.78	
Avail Cap(c_a), veh/h	667	1146	869	736	473	421	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	0.98	0.98	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	10.6	7.4	16.0	12.8	24.4	30.3	
Incr Delay (d2), s/veh	0.7	0.5	1.9	0.2	0.3	13.6	
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	2.1	5.6	0.6	0.6	15.8	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	11.3	7.9	18.0	13.0	24.7	43.9	
LnGrp LOS	B	A	B	B	C	D	
Approach Vol, veh/h		557	472		369		
Approach Delay, s/veh		9.6	17.4		41.8		
Approach LOS		A	B		D		
Timer - Assigned Phs				4	6	7	8
Phs Duration (G+Y+Rc), s				61.0	29.0	13.7	47.3
Change Period (Y+Rc), s				4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s				56.5	24.5	15.5	36.5
Max Q Clear Time (g_c+I1), s				8.1	19.8	8.8	16.0
Green Ext Time (p_c), s				1.6	0.6	0.4	2.4
Intersection Summary							
HCM 6th Ctrl Delay			20.7				
HCM 6th LOS			C				

Timings

2029 Background PM

7: Jewell Ave & Powhatan Rd

01/24/2024



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	←	→	←	→	←	→
Traffic Volume (vph)	398	306	262	103	139	352
Future Volume (vph)	398	306	262	103	139	352
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Detector Phase	7	4	8	8	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	30.0	61.0	31.0	31.0	29.0	29.0
Total Split (%)	33.3%	67.8%	34.4%	34.4%	32.2%	32.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max

Intersection Summary

Cycle Length: 90

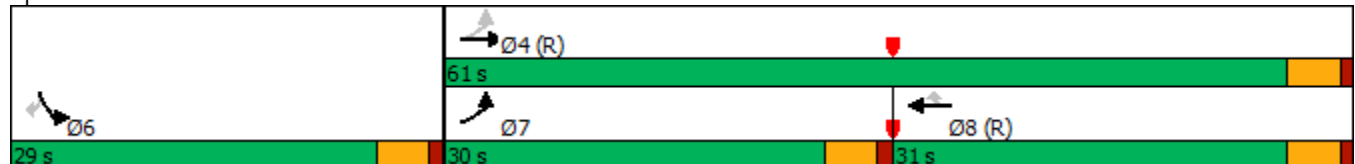
Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBT, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Splits and Phases: 7: Jewell Ave & Powhatan Rd

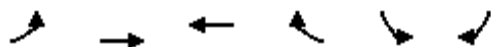


HCM 6th Signalized Intersection Summary

2029 Background PM

01/24/2024

7: Jewell Ave & Powhatan Rd



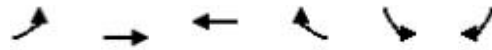
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	398	306	262	103	139	352
Future Volume (veh/h)	398	306	262	103	139	352
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	433	333	285	112	151	274
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	5	5	5	5	5
Cap, veh/h	661	1146	751	636	473	421
Arrive On Green	0.17	0.63	0.41	0.41	0.27	0.27
Sat Flow, veh/h	1739	1826	1826	1547	1739	1547
Grp Volume(v), veh/h	433	333	285	112	151	274
Grp Sat Flow(s),veh/h/ln	1739	1826	1826	1547	1739	1547
Q Serve(g_s), s	11.9	7.5	9.8	4.1	6.2	14.1
Cycle Q Clear(g_c), s	11.9	7.5	9.8	4.1	6.2	14.1
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	661	1146	751	636	473	421
V/C Ratio(X)	0.65	0.29	0.38	0.18	0.32	0.65
Avail Cap(c_a), veh/h	864	1146	751	636	473	421
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.94	0.94	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.0	7.6	18.5	16.8	26.1	29.0
Incr Delay (d2), s/veh	1.1	0.6	1.5	0.6	1.8	7.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	2.5	4.1	1.5	2.7	12.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	12.0	8.2	19.9	17.4	27.9	36.6
LnGrp LOS	B	A	B	B	C	D
Approach Vol, veh/h		766	397		425	
Approach Delay, s/veh		10.4	19.2		33.5	
Approach LOS		B	B		C	
Timer - Assigned Phs			4		6	7
Phs Duration (G+Y+Rc), s			61.0		29.0	19.5
Change Period (Y+Rc), s			4.5		4.5	4.5
Max Green Setting (Gmax), s			56.5		24.5	25.5
Max Q Clear Time (g_c+I1), s			9.5		16.1	13.9
Green Ext Time (p_c), s			1.9		0.9	1.1
Intersection Summary						
HCM 6th Ctrl Delay			18.8			
HCM 6th LOS			B			

Timings

7: Jewell Ave & Powhatan Rd

2029 Total AM

09/20/2024



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↰↰	↱	↰	↱	↰	↱
Traffic Volume (vph)	346	266	392	50	36	479
Future Volume (vph)	346	266	392	50	36	479
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Detector Phase	7	4	8	8	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	20.0	59.0	39.0	39.0	31.0	31.0
Total Split (%)	22.2%	65.6%	43.3%	43.3%	34.4%	34.4%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max

Intersection Summary

Cycle Length: 90

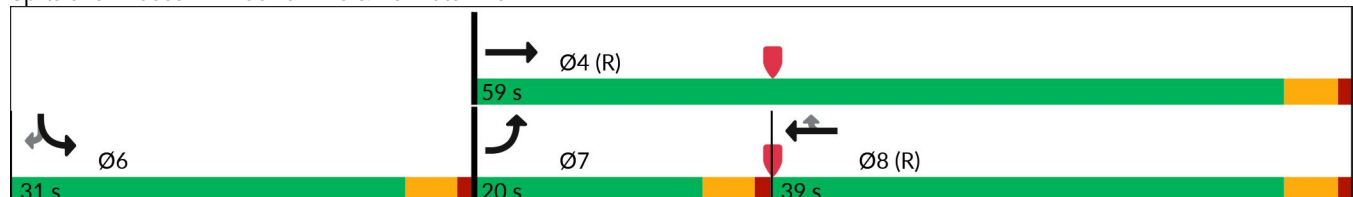
Actuated Cycle Length: 90

Offset: 12 (13%), Referenced to phase 4:EBT and 8:WBT, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Splits and Phases: 7: Jewell Ave & Powhatan Rd



HCM 7th Signalized Intersection Summary

7: Jewell Ave & Powhatan Rd

2029 Total AM
09/20/2024



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	←←	→	←	→	←	→
Traffic Volume (veh/h)	346	266	392	50	36	479
Future Volume (veh/h)	346	266	392	50	36	479
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
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	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	376	289	426	54	39	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	5	5	5	5	5
Cap, veh/h	465	1106	763	646	512	
Arrive On Green	0.05	0.20	0.42	0.42	0.29	0.00
Sat Flow, veh/h	3374	1826	1826	1547	1739	1547
Grp Volume(v), veh/h	376	289	426	54	39	0
Grp Sat Flow(s),veh/h/ln	1687	1826	1826	1547	1739	1547
Q Serve(g_s), s	9.9	12.0	15.9	1.9	1.5	0.0
Cycle Q Clear(g_c), s	9.9	12.0	15.9	1.9	1.5	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	465	1106	763	646	512	
V/C Ratio(X)	0.81	0.26	0.56	0.08	0.08	
Avail Cap(c_a), veh/h	581	1106	763	646	512	
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.96	0.96	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	41.8	19.0	19.9	15.8	22.9	0.0
Incr Delay (d2), s/veh	6.5	0.6	2.9	0.3	0.3	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	5.6	6.7	0.7	0.6	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	48.3	19.6	22.8	16.1	23.2	0.0
LnGrp LOS	D	B	C	B	C	
Approach Vol, veh/h		665	480		39	
Approach Delay, s/veh		35.8	22.1		23.2	
Approach LOS		D	C		C	
Timer - Assigned Phs				4	6	7
Phs Duration (G+Y+Rc), s				59.0	31.0	16.9
Change Period (Y+Rc), s				4.5	4.5	4.5
Max Green Setting (Gmax), s				54.5	26.5	15.5
Max Q Clear Time (g_c+I1), s				14.0	3.5	11.9
Green Ext Time (p_c), s				1.6	0.1	0.5
2.3						
Intersection Summary						
HCM 7th Control Delay, s/veh			29.8			
HCM 7th LOS			C			
Notes						
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.						

Timings

7: Jewell Ave & Powhatan Rd

2029 Total PM

09/20/2024



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↰↰	↱	↰	↱	↰	↱
Traffic Volume (vph)	556	316	272	103	139	514
Future Volume (vph)	556	316	272	103	139	514
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Detector Phase	7	4	8	8	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	28.0	58.0	30.0	30.0	32.0	32.0
Total Split (%)	31.1%	64.4%	33.3%	33.3%	35.6%	35.6%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max

Intersection Summary

Cycle Length: 90

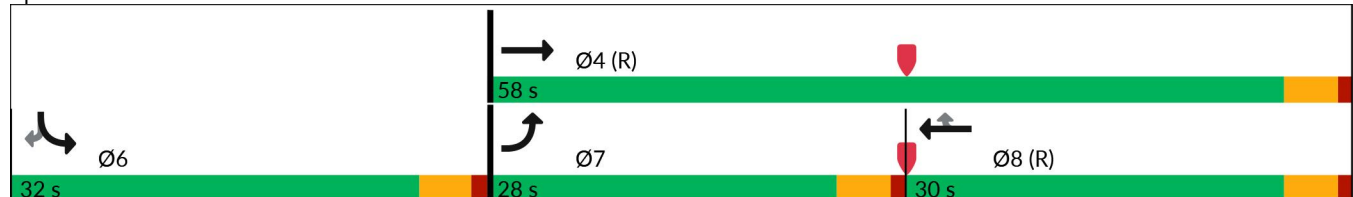
Actuated Cycle Length: 90

Offset: 88 (98%), Referenced to phase 4:EBT and 8:WBT, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

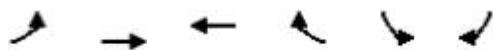
Splits and Phases: 7: Jewell Ave & Powhatan Rd



HCM 7th Signalized Intersection Summary

7: Jewell Ave & Powhatan Rd

2029 Total PM
09/20/2024

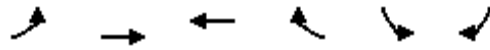


Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	←←	↑	↑	↑	↑	↑
Traffic Volume (veh/h)	556	316	272	103	139	514
Future Volume (veh/h)	556	316	272	103	139	514
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	604	343	296	112	151	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	5	5	5	5	5
Cap, veh/h	690	1085	620	526	531	
Arrive On Green	0.34	0.99	0.34	0.34	0.31	0.00
Sat Flow, veh/h	3374	1826	1826	1547	1739	1547
Grp Volume(v), veh/h	604	343	296	112	151	0
Grp Sat Flow(s),veh/h/ln	1687	1826	1826	1547	1739	1547
Q Serve(g_s), s	15.1	0.2	11.5	4.6	5.9	0.0
Cycle Q Clear(g_c), s	15.1	0.2	11.5	4.6	5.9	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	690	1085	620	526	531	
V/C Ratio(X)	0.87	0.32	0.48	0.21	0.28	
Avail Cap(c_a), veh/h	881	1085	620	526	531	
HCM Platoon Ratio	1.67	1.67	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	28.5	0.1	23.4	21.1	23.8	0.0
Incr Delay (d2), s/veh	7.2	0.7	2.6	0.9	1.3	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.5	0.2	5.0	1.7	2.5	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	35.8	0.8	26.0	22.1	25.1	0.0
LnGrp LOS	D	A	C	C	C	
Approach Vol, veh/h		947	408		151	
Approach Delay, s/veh		23.1	24.9		25.1	
Approach LOS		C	C		C	
Timer - Assigned Phs			4		6	7
Phs Duration (G+Y+Rc), s			58.0		32.0	22.9
Change Period (Y+Rc), s			4.5		4.5	4.5
Max Green Setting (Gmax), s			53.5		27.5	23.5
Max Q Clear Time (g_c+I1), s			2.2		7.9	17.1
Green Ext Time (p_c), s			2.0		0.3	1.3
Intersection Summary						
HCM 7th Control Delay, s/veh			23.8			
HCM 7th LOS			C			
Notes						
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.						

Timings 7: Jewell Ave & Powhatan Rd

2031 Background AM

01/24/2024



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	285	355	563	70	51	457
Future Volume (vph)	285	355	563	70	51	457
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Detector Phase	7	4	8	8	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	18.0	64.0	46.0	46.0	26.0	26.0
Total Split (%)	20.0%	71.1%	51.1%	51.1%	28.9%	28.9%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max

Intersection Summary

Cycle Length: 90

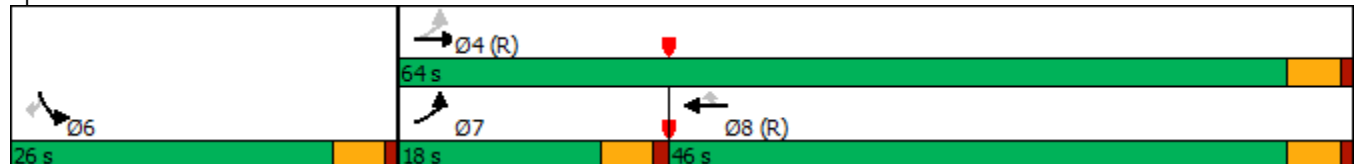
Actuated Cycle Length: 90

Offset: 4 (4%), Referenced to phase 4:EBTL and 8:WBT, Start of Green

Natural Cycle: 70

Control Type: Actuated-Coordinated

Splits and Phases: 7: Jewell Ave & Powhatan Rd

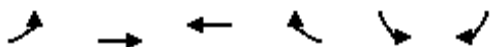








HCM 6th Signalized Intersection Summary

7: Jewell Ave & Powhatan Rd

2031 Background AM

01/24/2024

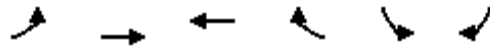


Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations							
Traffic Volume (veh/h)	285	355	563	70	51	457	
Future Volume (veh/h)	285	355	563	70	51	457	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach		No	No		No		
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	
Adj Flow Rate, veh/h	310	386	612	76	55	307	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Percent Heavy Veh, %	5	5	5	5	5	5	
Cap, veh/h	453	1207	922	782	415	370	
Arrive On Green	0.11	0.66	0.51	0.51	0.24	0.24	
Sat Flow, veh/h	1739	1826	1826	1547	1739	1547	
Grp Volume(v), veh/h	310	386	612	76	55	307	
Grp Sat Flow(s),veh/h/ln	1739	1826	1826	1547	1739	1547	
Q Serve(g_s), s	7.2	8.2	22.5	2.3	2.2	17.0	
Cycle Q Clear(g_c), s	7.2	8.2	22.5	2.3	2.2	17.0	
Prop In Lane	1.00			1.00	1.00	1.00	
Lane Grp Cap(c), veh/h	453	1207	922	782	415	370	
V/C Ratio(X)	0.69	0.32	0.66	0.10	0.13	0.83	
Avail Cap(c_a), veh/h	529	1207	922	782	415	370	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	0.97	0.97	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	13.1	6.6	16.6	11.6	26.9	32.5	
Incr Delay (d2), s/veh	2.9	0.7	3.8	0.2	0.7	19.1	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	2.5	2.6	9.1	0.8	1.0	15.5	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	16.0	7.2	20.3	11.8	27.6	51.6	
LnGrp LOS	B	A	C	B	C	D	
Approach Vol, veh/h		696	688		362		
Approach Delay, s/veh		11.1	19.4		48.0		
Approach LOS		B	B		D		
Timer - Assigned Phs				4	6	7	8
Phs Duration (G+Y+Rc), s				64.0	26.0	14.0	50.0
Change Period (Y+Rc), s				4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s				59.5	21.5	13.5	41.5
Max Q Clear Time (g_c+I1), s				10.2	19.0	9.2	24.5
Green Ext Time (p_c), s				2.3	0.3	0.4	3.7
Intersection Summary							
HCM 6th Ctrl Delay			22.0				
HCM 6th LOS			C				

Timings 7: Jewell Ave & Powhatan Rd

2031 Background PM

01/24/2024



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	419	521	420	137	164	395
Future Volume (vph)	419	521	420	137	164	395
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Detector Phase	7	4	8	8	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	27.0	65.0	38.0	38.0	25.0	25.0
Total Split (%)	30.0%	72.2%	42.2%	42.2%	27.8%	27.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max

Intersection Summary

Cycle Length: 90

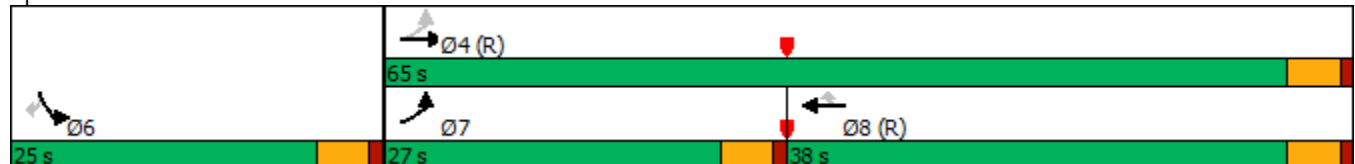
Actuated Cycle Length: 90

Offset: 3 (3%), Referenced to phase 4:EBTL and 8:WBT, Start of Green

Natural Cycle: 70

Control Type: Actuated-Coordinated

Splits and Phases: 7: Jewell Ave & Powhatan Rd

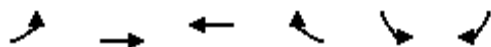


HCM 6th Signalized Intersection Summary

7: Jewell Ave & Powhatan Rd

2031 Background PM

01/24/2024



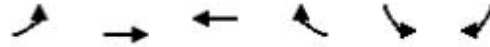
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	419	521	420	137	164	395
Future Volume (veh/h)	419	521	420	137	164	395
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	455	566	457	149	178	266
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	5	5	5	5	5
Cap, veh/h	583	1227	845	716	396	352
Arrive On Green	0.16	0.67	0.46	0.46	0.23	0.23
Sat Flow, veh/h	1739	1826	1826	1547	1739	1547
Grp Volume(v), veh/h	455	566	457	149	178	266
Grp Sat Flow(s),veh/h/ln	1739	1826	1826	1547	1739	1547
Q Serve(g_s), s	11.3	13.3	16.1	5.2	7.9	14.4
Cycle Q Clear(g_c), s	11.3	13.3	16.1	5.2	7.9	14.4
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	583	1227	845	716	396	352
V/C Ratio(X)	0.78	0.46	0.54	0.21	0.45	0.75
Avail Cap(c_a), veh/h	740	1227	845	716	396	352
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.91	0.91	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.0	7.0	17.3	14.4	29.9	32.4
Incr Delay (d2), s/veh	3.8	1.1	2.5	0.7	3.7	13.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	4.2	6.6	1.8	3.5	13.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	15.8	8.1	19.8	15.0	33.5	46.4
LnGrp LOS	B	A	B	B	C	D
Approach Vol, veh/h		1021	606		444	
Approach Delay, s/veh		11.6	18.6		41.2	
Approach LOS		B	B		D	
Timer - Assigned Phs			4		6	7
Phs Duration (G+Y+Rc), s			65.0		25.0	18.9
Change Period (Y+Rc), s			4.5		4.5	4.5
Max Green Setting (Gmax), s			60.5		20.5	22.5
Max Q Clear Time (g_c+I1), s			15.3		16.4	13.3
Green Ext Time (p_c), s			3.7		0.6	1.0
Intersection Summary						
HCM 6th Ctrl Delay			20.0			
HCM 6th LOS			B			

Timings

7: Jewell Ave & Powhatan Rd

2031 Total AM

09/20/2024



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↰↱	↑	↑	↰	↰	↰
Traffic Volume (vph)	365	432	506	145	51	485
Future Volume (vph)	365	432	506	145	51	485
Turn Type	Prot	NA	NA	Perm	Prot	Free
Protected Phases	7	4	8		6	
Permitted Phases				8		Free
Detector Phase	7	4	8	8	6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.5	22.5	22.5	22.5	22.5	
Total Split (s)	22.0	67.5	45.5	45.5	22.5	
Total Split (%)	24.4%	75.0%	50.6%	50.6%	25.0%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lag		Lead	Lead		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 29 (32%), Referenced to phase 4:EBT and 8:WBT, Start of Green

Natural Cycle: 65

Control Type: Actuated-Coordinated

Splits and Phases: 7: Jewell Ave & Powhatan Rd



HCM 7th Signalized Intersection Summary

7: Jewell Ave & Powhatan Rd

2031 Total AM
09/20/2024



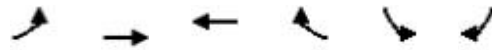
Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations	↰↱	↱	↱	↰↱	↰	↰↱	
Traffic Volume (veh/h)	365	432	506	145	51	485	
Future Volume (veh/h)	365	432	506	145	51	485	
Initial Q (Qb), veh	0	0	0	0	0	0	
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00	
Parking Bus, Adj	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	1826	1826	1826	1826	1826	1826	
Adj Flow Rate, veh/h	397	470	550	158	55	0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Percent Heavy Veh, %	5	5	5	5	5	5	
Cap, veh/h	656	1278	832	705	348		
Arrive On Green	0.39	1.00	0.46	0.46	0.20	0.00	
Sat Flow, veh/h	3374	1826	1826	1547	1739	1547	
Grp Volume(v), veh/h	397	470	550	158	55	0	
Grp Sat Flow(s),veh/h/ln	1687	1826	1826	1547	1739	1547	
Q Serve(g_s), s	8.5	0.0	21.1	5.6	2.4	0.0	
Cycle Q Clear(g_c), s	8.5	0.0	21.1	5.6	2.4	0.0	
Prop In Lane	1.00			1.00	1.00	1.00	
Lane Grp Cap(c), veh/h	656	1278	832	705	348		
V/C Ratio(X)	0.61	0.37	0.66	0.22	0.16		
Avail Cap(c_a), veh/h	656	1278	832	705	348		
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	0.94	0.94	1.00	1.00	0.98	0.00	
Uniform Delay (d), s/veh	24.7	0.0	19.1	14.9	29.7	0.0	
Incr Delay (d2), s/veh	1.5	0.8	4.1	0.7	1.0	0.0	
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	2.9	0.3	8.9	1.9	1.0	0.0	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d), s/veh	26.2	0.8	23.2	15.6	30.7	0.0	
LnGrp LOS	C	A	C	B	C		
Approach Vol, veh/h		867	708		55		
Approach Delay, s/veh		12.4	21.5		30.7		
Approach LOS		B	C		C		
Timer - Assigned Phs				4	6	7	8
Phs Duration (G+Y+Rc), s				67.5	22.5	22.0	45.5
Change Period (Y+Rc), s				4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s				63.0	18.0	17.5	41.0
Max Q Clear Time (g_c+I1), s				2.0	4.4	10.5	23.1
Green Ext Time (p_c), s				2.9	0.1	0.8	3.5
Intersection Summary							
HCM 7th Control Delay, s/veh			17.0				
HCM 7th LOS			B				
Notes							
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.							

Timings

7: Jewell Ave & Powhatan Rd

2031 Total PM

09/20/2024



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↰↱	↱	↱	↰	↰	↰
Traffic Volume (vph)	477	537	393	187	164	472
Future Volume (vph)	477	537	393	187	164	472
Turn Type	Prot	NA	NA	Perm	Prot	Free
Protected Phases	7	4	8		6	
Permitted Phases				8		Free
Detector Phase	7	4	8	8	6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.5	22.5	22.5	22.5	22.5	
Total Split (s)	27.0	67.0	40.0	40.0	23.0	
Total Split (%)	30.0%	74.4%	44.4%	44.4%	25.6%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lag		Lead	Lead		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	

Intersection Summary

Cycle Length: 90

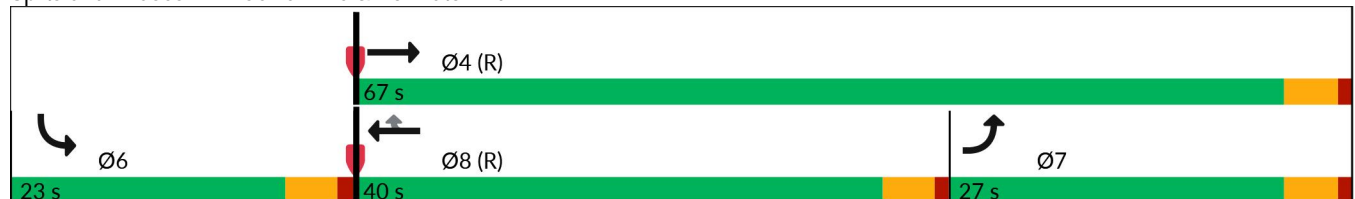
Actuated Cycle Length: 90

Offset: 26 (29%), Referenced to phase 4:EBT and 8:WBT, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Splits and Phases: 7: Jewell Ave & Powhatan Rd



HCM 7th Signalized Intersection Summary

7: Jewell Ave & Powhatan Rd

2031 Total PM
09/20/2024

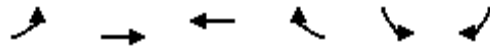


Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations	↖↖	↗	↗	↖↖	↖	↖	
Traffic Volume (veh/h)	477	537	393	187	164	472	
Future Volume (veh/h)	477	537	393	187	164	472	
Initial Q (Qb), veh	0	0	0	0	0	0	
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00	
Parking Bus, Adj	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	1826	1826	1826	1826	1826	1826	
Adj Flow Rate, veh/h	518	584	427	203	178	0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Percent Heavy Veh, %	5	5	5	5	5	5	
Cap, veh/h	843	1268	720	610	357		
Arrive On Green	0.50	1.00	0.39	0.39	0.21	0.00	
Sat Flow, veh/h	3374	1826	1826	1547	1739	1547	
Grp Volume(v), veh/h	518	584	427	203	178	0	
Grp Sat Flow(s),veh/h/ln	1687	1826	1826	1547	1739	1547	
Q Serve(g_s), s	10.0	0.0	16.6	8.2	8.2	0.0	
Cycle Q Clear(g_c), s	10.0	0.0	16.6	8.2	8.2	0.0	
Prop In Lane	1.00			1.00	1.00	1.00	
Lane Grp Cap(c), veh/h	843	1268	720	610	357		
V/C Ratio(X)	0.61	0.46	0.59	0.33	0.50		
Avail Cap(c_a), veh/h	843	1268	720	610	357		
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	0.87	0.87	1.00	1.00	0.95	0.00	
Uniform Delay (d), s/veh	19.4	0.0	21.5	19.0	31.6	0.0	
Incr Delay (d2), s/veh	1.2	1.0	3.6	1.5	4.6	0.0	
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	0.4	7.2	2.9	3.7	0.0	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d), s/veh	20.5	1.0	25.1	20.5	36.3	0.0	
LnGrp LOS	C	A	C	C	D		
Approach Vol, veh/h		1102	630		178		
Approach Delay, s/veh		10.2	23.6		36.3		
Approach LOS		B	C		D		
Timer - Assigned Phs				4	6	7	8
Phs Duration (G+Y+Rc), s				67.0	23.0	27.0	40.0
Change Period (Y+Rc), s				4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s				62.5	18.5	22.5	35.5
Max Q Clear Time (g_c+I1), s				2.0	10.2	12.0	18.6
Green Ext Time (p_c), s				3.9	0.3	1.4	2.8
Intersection Summary							
HCM 7th Control Delay, s/veh			17.1				
HCM 7th LOS			B				
Notes							
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.							

Timings
7: Jewell Ave & Powhatan Rd

2033 Background AM

01/24/2024



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	312	535	744	100	71	510
Future Volume (vph)	312	535	744	100	71	510
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Detector Phase	7	4	8	8	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	19.0	66.8	47.8	47.8	23.2	23.2
Total Split (%)	21.1%	74.2%	53.1%	53.1%	25.8%	25.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max

Intersection Summary

Cycle Length: 90

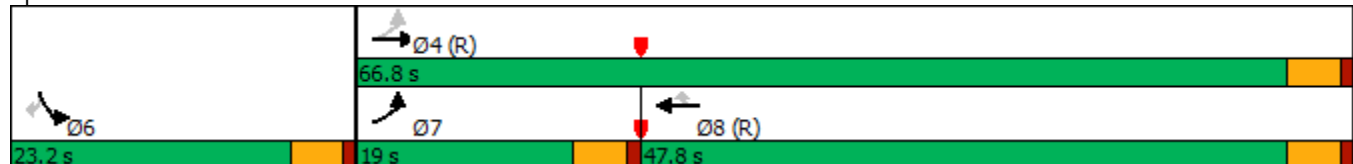
Actuated Cycle Length: 90

Offset: 4 (4%), Referenced to phase 4:EBTL and 8:WBT, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Splits and Phases: 7: Jewell Ave & Powhatan Rd

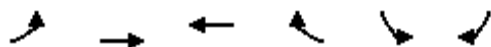


HCM 6th Signalized Intersection Summary

7: Jewell Ave & Powhatan Rd

2033 Background AM

01/24/2024

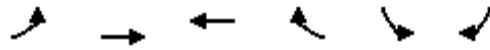


Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	312	535	744	100	71	510
Future Volume (veh/h)	312	535	744	100	71	510
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	339	582	809	109	77	337
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	5	5	5	5	5
Cap, veh/h	376	1264	946	802	361	322
Arrive On Green	0.12	0.69	0.52	0.52	0.21	0.21
Sat Flow, veh/h	1739	1826	1826	1547	1739	1547
Grp Volume(v), veh/h	339	582	809	109	77	337
Grp Sat Flow(s),veh/h/ln	1739	1826	1826	1547	1739	1547
Q Serve(g_s), s	8.8	13.0	34.5	3.3	3.3	18.7
Cycle Q Clear(g_c), s	8.8	13.0	34.5	3.3	3.3	18.7
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	376	1264	946	802	361	322
V/C Ratio(X)	0.90	0.46	0.86	0.14	0.21	1.05
Avail Cap(c_a), veh/h	440	1264	946	802	361	322
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.95	0.95	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.6	6.3	18.8	11.2	29.6	35.6
Incr Delay (d2), s/veh	18.8	1.1	9.8	0.4	1.3	63.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	3.9	14.9	1.1	1.4	20.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	39.4	7.4	28.5	11.6	30.9	99.0
LnGrp LOS	D	A	C	B	C	F
Approach Vol, veh/h		921	918		414	
Approach Delay, s/veh		19.2	26.5		86.3	
Approach LOS		B	C		F	
Timer - Assigned Phs			4		6	7
Phs Duration (G+Y+Rc), s			66.8		23.2	15.7
Change Period (Y+Rc), s			4.5		4.5	4.5
Max Green Setting (Gmax), s			62.3		18.7	14.5
Max Q Clear Time (g_c+l1), s			15.0		20.7	10.8
Green Ext Time (p_c), s			3.9		0.0	0.4
Intersection Summary						
HCM 6th Ctrl Delay			34.5			
HCM 6th LOS			C			

Timings
7: Jewell Ave & Powhatan Rd

2033 Background PM

01/24/2024



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	452	565	505	182	194	442
Future Volume (vph)	452	565	505	182	194	442
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Detector Phase	7	4	8	8	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	28.0	67.2	39.2	39.2	22.8	22.8
Total Split (%)	31.1%	74.7%	43.6%	43.6%	25.3%	25.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max

Intersection Summary

Cycle Length: 90

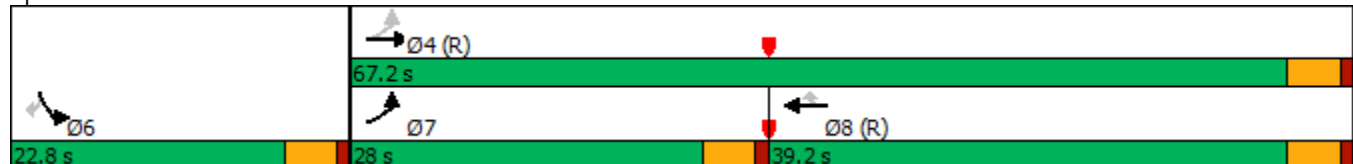
Actuated Cycle Length: 90

Offset: 7 (8%), Referenced to phase 4:EBTL and 8:WBT, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Splits and Phases: 7: Jewell Ave & Powhatan Rd

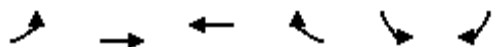








HCM 6th Signalized Intersection Summary

7: Jewell Ave & Powhatan Rd

2033 Background PM

01/24/2024



Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations							
Traffic Volume (veh/h)	452	565	505	182	194	442	
Future Volume (veh/h)	452	565	505	182	194	442	
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	1826	1826	1826	1826	1826	1826	
Adj Flow Rate, veh/h	491	614	549	198	211	317	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Percent Heavy Veh, %	5	5	5	5	5	5	
Cap, veh/h	548	1272	879	745	354	315	
Arrive On Green	0.17	0.70	0.48	0.48	0.20	0.20	
Sat Flow, veh/h	1739	1826	1826	1547	1739	1547	
Grp Volume(v), veh/h	491	614	549	198	211	317	
Grp Sat Flow(s),veh/h/ln	1739	1826	1826	1547	1739	1547	
Q Serve(g_s), s	11.7	13.8	20.1	6.8	9.9	18.3	
Cycle Q Clear(g_c), s	11.7	13.8	20.1	6.8	9.9	18.3	
Prop In Lane	1.00			1.00	1.00	1.00	
Lane Grp Cap(c), veh/h	548	1272	879	745	354	315	
V/C Ratio(X)	0.90	0.48	0.62	0.27	0.60	1.01	
Avail Cap(c_a), veh/h	714	1272	879	745	354	315	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(l)	0.90	0.90	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	14.0	6.2	17.3	13.9	32.5	35.8	
Incr Delay (d2), s/veh	10.7	1.2	3.3	0.9	7.2	52.7	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	5.9	4.1	8.2	2.3	4.6	18.7	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	24.7	7.4	20.7	14.8	39.7	88.5	
LnGrp LOS	C	A	C	B	D	F	
Approach Vol, veh/h		1105	747		528		
Approach Delay, s/veh		15.1	19.1		69.0		
Approach LOS		B	B		E		
Timer - Assigned Phs				4	6	7	8
Phs Duration (G+Y+Rc), s				67.2	22.8	19.4	47.8
Change Period (Y+Rc), s				4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s				62.7	18.3	23.5	34.7
Max Q Clear Time (g_c+11), s				15.8	20.3	13.7	22.1
Green Ext Time (p_c), s				4.2	0.0	1.2	3.2
Intersection Summary							
HCM 6th Ctrl Delay			28.3				
HCM 6th LOS			C				

Timings

7: Jewell Ave & Powhatan Rd

2033 Total AM

09/20/2024



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↰↰	↱↱	↰↰	↱	↰	↱↱
Traffic Volume (vph)	387	611	709	160	71	545
Future Volume (vph)	387	611	709	160	71	545
Turn Type	Prot	NA	NA	Perm	Prot	Free
Protected Phases	7	4	8		6	
Permitted Phases				8		Free
Detector Phase	7	4	8	8	6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.5	22.5	22.5	22.5	22.5	
Total Split (s)	26.0	66.0	40.0	40.0	24.0	
Total Split (%)	28.9%	73.3%	44.4%	44.4%	26.7%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 57 (63%), Referenced to phase 4:EBT and 8:WBT, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Splits and Phases: 7: Jewell Ave & Powhatan Rd



HCM 7th Signalized Intersection Summary

7: Jewell Ave & Powhatan Rd

2033 Total AM
09/20/2024



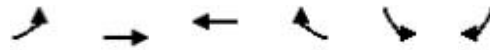
Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations	↔↔	↑↑	↑↑	↗	↖	↗	
Traffic Volume (veh/h)	387	611	709	160	71	545	
Future Volume (veh/h)	387	611	709	160	71	545	
Initial Q (Qb), veh	0	0	0	0	0	0	
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00	
Parking Bus, Adj	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	1826	1826	1826	1826	1826	1826	
Adj Flow Rate, veh/h	421	664	771	174	77	0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Percent Heavy Veh, %	5	5	5	5	5	5	
Cap, veh/h	506	2371	1677	748	377		
Arrive On Green	0.30	1.00	0.48	0.48	0.22	0.00	
Sat Flow, veh/h	3374	3561	3561	1547	1739	1547	
Grp Volume(v), veh/h	421	664	771	174	77	0	
Grp Sat Flow(s),veh/h/ln	1687	1735	1735	1547	1739	1547	
Q Serve(g_s), s	10.5	0.0	13.3	5.9	3.3	0.0	
Cycle Q Clear(g_c), s	10.5	0.0	13.3	5.9	3.3	0.0	
Prop In Lane	1.00			1.00	1.00	1.00	
Lane Grp Cap(c), veh/h	506	2371	1677	748	377		
V/C Ratio(X)	0.83	0.28	0.46	0.23	0.20		
Avail Cap(c_a), veh/h	806	2371	1677	748	377		
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	0.89	0.89	1.00	1.00	0.93	0.00	
Uniform Delay (d), s/veh	30.4	0.0	15.4	13.5	28.9	0.0	
Incr Delay (d2), s/veh	3.8	0.3	0.9	0.7	1.1	0.0	
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	3.7	0.1	4.8	2.0	1.4	0.0	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d), s/veh	34.2	0.3	16.4	14.3	30.0	0.0	
LnGrp LOS	C	A	B	B	C		
Approach Vol, veh/h		1085	945		77		
Approach Delay, s/veh		13.4	16.0		30.0		
Approach LOS		B	B		C		
Timer - Assigned Phs				4	6	7	8
Phs Duration (G+Y+Rc), s				66.0	24.0	18.0	48.0
Change Period (Y+Rc), s				4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s				61.5	19.5	21.5	35.5
Max Q Clear Time (g_c+I1), s				2.0	5.3	12.5	15.3
Green Ext Time (p_c), s				4.7	0.1	1.0	5.4
Intersection Summary							
HCM 7th Control Delay, s/veh			15.2				
HCM 7th LOS			B				
Notes							
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.							

Timings

7: Jewell Ave & Powhatan Rd

2033 Total PM

09/20/2024



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↰↰	↱↱	↰↰	↱	↰	↱
Traffic Volume (vph)	520	636	577	232	194	534
Future Volume (vph)	520	636	577	232	194	534
Turn Type	Prot	NA	NA	Perm	Prot	Free
Protected Phases	7	4	8		6	
Permitted Phases				8		Free
Detector Phase	7	4	8	8	6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.5	22.5	22.5	22.5	22.5	
Total Split (s)	30.0	64.0	34.0	34.0	26.0	
Total Split (%)	33.3%	71.1%	37.8%	37.8%	28.9%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 48 (53%), Referenced to phase 4:EBT and 8:WBT, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Splits and Phases: 7: Jewell Ave & Powhatan Rd



HCM 7th Signalized Intersection Summary

7: Jewell Ave & Powhatan Rd

2033 Total PM
09/20/2024



Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations	↗↘	↑↑	↑↑	↗	↘	↗	
Traffic Volume (veh/h)	520	636	577	232	194	534	
Future Volume (veh/h)	520	636	577	232	194	534	
Initial Q (Qb), veh	0	0	0	0	0	0	
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	
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	1826	1826	1826	1826	1826	1826	
Adj Flow Rate, veh/h	565	691	627	252	211	0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Percent Heavy Veh, %	5	5	5	5	5	5	
Cap, veh/h	652	2294	1449	646	415		
Arrive On Green	0.39	1.00	0.42	0.42	0.24	0.00	
Sat Flow, veh/h	3374	3561	3561	1547	1739	1547	
Grp Volume(v), veh/h	565	691	627	252	211	0	
Grp Sat Flow(s),veh/h/ln	1687	1735	1735	1547	1739	1547	
Q Serve(g_s), s	13.9	0.0	11.6	10.2	9.5	0.0	
Cycle Q Clear(g_c), s	13.9	0.0	11.6	10.2	9.5	0.0	
Prop In Lane	1.00			1.00	1.00	1.00	
Lane Grp Cap(c), veh/h	652	2294	1449	646	415		
V/C Ratio(X)	0.87	0.30	0.43	0.39	0.51		
Avail Cap(c_a), veh/h	956	2294	1449	646	415		
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	0.83	0.83	1.00	1.00	0.92	0.00	
Uniform Delay (d), s/veh	26.5	0.0	18.6	18.2	29.7	0.0	
Incr Delay (d2), s/veh	4.9	0.3	0.9	1.8	4.0	0.0	
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	4.5	0.1	4.4	3.6	4.2	0.0	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d), s/veh	31.4	0.3	19.6	20.0	33.7	0.0	
LnGrp LOS	C	A	B	B	C		
Approach Vol, veh/h		1256	879		211		
Approach Delay, s/veh		14.3	19.7		33.7		
Approach LOS		B	B		C		
Timer - Assigned Phs				4	6	7	8
Phs Duration (G+Y+Rc), s				64.0	26.0	21.9	42.1
Change Period (Y+Rc), s				4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s				59.5	21.5	25.5	29.5
Max Q Clear Time (g_c+I1), s				2.0	11.5	15.9	13.6
Green Ext Time (p_c), s				4.9	0.4	1.5	4.3
Intersection Summary							
HCM 7th Control Delay, s/veh			18.1				
HCM 7th LOS			B				
Notes							
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.							

Timings 8: Harvest Rd & Mississippi Ave

2031 Total AM
09/20/2024

	↖	↗	↑	↘	↙	↓
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖	↗	↑	↘	↙	↓
Traffic Volume (vph)	215	39	495	105	34	494
Future Volume (vph)	215	39	495	105	34	494
Turn Type	Prot	Perm	NA	Perm	pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2	6	
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	9.5	22.5
Total Split (s)	29.0	29.0	51.0	51.0	10.0	61.0
Total Split (%)	32.2%	32.2%	56.7%	56.7%	11.1%	67.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag			Lead	Lead	Lag	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	C-Max	C-Max	None	C-Max

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 76 (84%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Natural Cycle: 60








Control Type: Actuated-Coordinated

Splits and Phases: 8: Harvest Rd & Mississippi Ave



HCM 7th Signalized Intersection Summary 8: Harvest Rd & Mississippi Ave

2031 Total AM
09/20/2024

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	215	39	495	105	34	494
Future Volume (veh/h)	215	39	495	105	34	494
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
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	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	234	42	538	114	37	537
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	5	5	5	5	5
Cap, veh/h	277	247	943	799	759	1352
Arrive On Green	0.16	0.16	1.00	1.00	0.17	0.74
Sat Flow, veh/h	1739	1547	1826	1547	1739	1826
Grp Volume(v), veh/h	234	42	538	114	37	537
Grp Sat Flow(s),veh/h/ln	1739	1547	1826	1547	1739	1826
Q Serve(g_s), s	11.8	2.1	0.0	0.0	0.0	9.7
Cycle Q Clear(g_c), s	11.8	2.1	0.0	0.0	0.0	9.7
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	277	247	943	799	759	1352
V/C Ratio(X)	0.84	0.17	0.57	0.14	0.05	0.40
Avail Cap(c_a), veh/h	473	421	943	799	759	1352
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.97	0.97	0.96	0.96	0.92	0.92
Uniform Delay (d), s/veh	36.7	32.7	0.0	0.0	5.2	4.3
Incr Delay (d2), s/veh	6.7	0.3	2.4	0.4	0.0	0.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	0.8	0.6	0.1	0.2	3.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	43.4	33.0	2.4	0.4	5.2	5.1
LnGrp LOS	D	C	A	A	A	A
Approach Vol, veh/h	276		652			574
Approach Delay, s/veh	41.8		2.0			5.1
Approach LOS	D		A			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	20.1	51.0			71.1	18.9
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	5.5	46.5			56.5	24.5
Max Q Clear Time (g_c+I1), s	2.0	2.0			11.7	13.8
Green Ext Time (p_c), s	0.0	4.5			4.1	0.6
Intersection Summary						
HCM 7th Control Delay, s/veh			10.5			
HCM 7th LOS			B			

Timings 8: Harvest Rd & Mississippi Ave

2031 Total PM
09/20/2024

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	176	38	633	256	41	540
Future Volume (vph)	176	38	633	256	41	540
Turn Type	Prot	Perm	NA	Perm	pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2	6	
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	9.5	22.5
Total Split (s)	24.0	24.0	56.0	56.0	10.0	66.0
Total Split (%)	26.7%	26.7%	62.2%	62.2%	11.1%	73.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag			Lead	Lead	Lag	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	C-Max	C-Max	None	C-Max

Intersection Summary

Cycle Length: 90

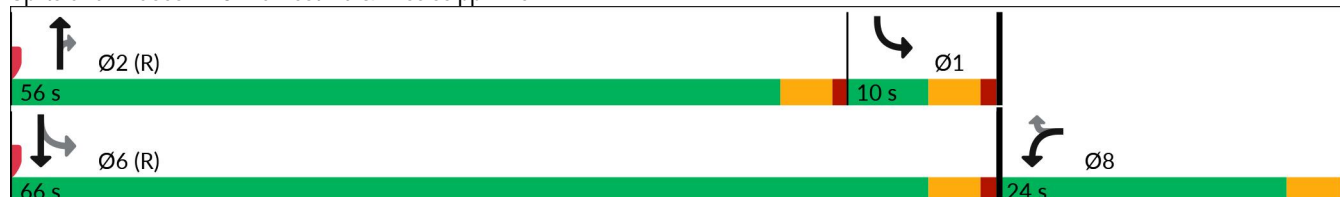
Actuated Cycle Length: 90

Offset: 72 (80%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Natural Cycle: 65













Control Type: Actuated-Coordinated

Splits and Phases: 8: Harvest Rd & Mississippi Ave















HCM 7th Signalized Intersection Summary 8: Harvest Rd & Mississippi Ave

2031 Total PM
09/20/2024

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	176	38	633	256	41	540
Future Volume (veh/h)	176	38	633	256	41	540
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
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	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	191	41	688	278	45	587
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	5	5	5	5	5
Cap, veh/h	232	206	1045	885	644	1400
Arrive On Green	0.13	0.13	1.00	1.00	0.14	0.77
Sat Flow, veh/h	1739	1547	1826	1547	1739	1826
Grp Volume(v), veh/h	191	41	688	278	45	587
Grp Sat Flow(s),veh/h/ln	1739	1547	1826	1547	1739	1826
Q Serve(g_s), s	9.6	2.1	0.0	0.0	0.0	9.9
Cycle Q Clear(g_c), s	9.6	2.1	0.0	0.0	0.0	9.9
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	232	206	1045	885	644	1400
V/C Ratio(X)	0.82	0.20	0.66	0.31	0.07	0.42
Avail Cap(c_a), veh/h	377	335	1045	885	644	1400
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.99	0.99	0.87	0.87	0.89	0.89
Uniform Delay (d), s/veh	38.0	34.7	0.0	0.0	4.6	3.6
Incr Delay (d2), s/veh	7.5	0.5	2.8	0.8	0.0	0.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	0.8	0.8	0.2	0.2	2.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	45.4	35.2	2.8	0.8	4.6	4.4
LnGrp LOS	D	D	A	A	A	A
Approach Vol, veh/h	232		966		632	
Approach Delay, s/veh	43.6		2.3		4.4	
Approach LOS	D		A		A	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	17.5	56.0			73.5	16.5
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	5.5	51.5			61.5	19.5
Max Q Clear Time (g_c+I1), s	2.0	2.0			11.9	11.6
Green Ext Time (p_c), s	0.0	7.1			4.6	0.4
Intersection Summary						
HCM 7th Control Delay, s/veh			8.3			
HCM 7th LOS			A			

Timings 8: Harvest Rd & Mississippi Ave

2033 Total AM
09/20/2024

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	218	48	699	107	41	575
Future Volume (vph)	218	48	699	107	41	575
Turn Type	Prot	Perm	NA	Perm	pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2	6	
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	9.5	22.5
Total Split (s)	34.0	34.0	44.0	44.0	12.0	56.0
Total Split (%)	37.8%	37.8%	48.9%	48.9%	13.3%	62.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag			Lead	Lead	Lag	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	C-Max	C-Max	None	C-Max

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 36 (40%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Natural Cycle: 55








Control Type: Actuated-Coordinated

Splits and Phases: 8: Harvest Rd & Mississippi Ave










HCM 7th Signalized Intersection Summary 8: Harvest Rd & Mississippi Ave

2033 Total AM
09/20/2024

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	218	48	699	107	41	575
Future Volume (veh/h)	218	48	699	107	41	575
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
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	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	237	52	760	116	45	625
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	5	5	5	5	5
Cap, veh/h	283	252	1523	679	740	2558
Arrive On Green	0.16	0.16	0.88	0.88	0.25	0.74
Sat Flow, veh/h	1739	1547	3561	1547	1739	3561
Grp Volume(v), veh/h	237	52	760	116	45	625
Grp Sat Flow(s),veh/h/ln	1739	1547	1735	1547	1739	1735
Q Serve(g_s), s	11.9	2.6	4.3	1.0	0.0	5.2
Cycle Q Clear(g_c), s	11.9	2.6	4.3	1.0	0.0	5.2
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	283	252	1523	679	740	2558
V/C Ratio(X)	0.84	0.21	0.50	0.17	0.06	0.24
Avail Cap(c_a), veh/h	570	507	1523	679	740	2558
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.94	0.94	0.94	0.94	0.97	0.97
Uniform Delay (d), s/veh	36.5	32.6	3.3	3.1	7.1	3.8
Incr Delay (d2), s/veh	6.2	0.4	1.1	0.5	0.0	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	5.4	1.0	1.2	0.4	0.3	1.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	42.7	33.0	4.5	3.7	7.1	4.0
LnGrp LOS	D	C	A	A	A	A
Approach Vol, veh/h	289		876			670
Approach Delay, s/veh	40.9		4.3			4.2
Approach LOS	D		A			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	26.9	44.0			70.9	19.1
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	7.5	39.5			51.5	29.5
Max Q Clear Time (g_c+I1), s	2.0	6.3			7.2	13.9
Green Ext Time (p_c), s	0.0	6.6			5.0	0.8
Intersection Summary						
HCM 7th Control Delay, s/veh			10.1			
HCM 7th LOS			B			

Timings 8: Harvest Rd & Mississippi Ave

2033 Total PM
09/20/2024

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	179	45	810	259	48	702
Future Volume (vph)	179	45	810	259	48	702
Turn Type	Prot	Perm	NA	Perm	pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases		8		2	6	
Detector Phase	8	8	2	2	1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	9.5	22.5
Total Split (s)	29.0	29.0	49.0	49.0	12.0	61.0
Total Split (%)	32.2%	32.2%	54.4%	54.4%	13.3%	67.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None	None	C-Max	C-Max	None	C-Max

Intersection Summary

Cycle Length: 90

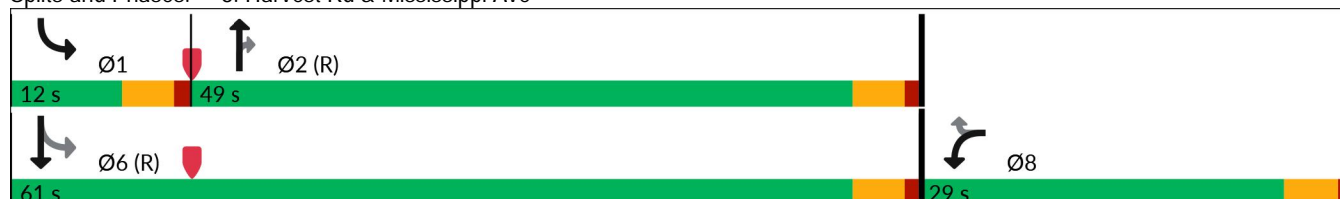
Actuated Cycle Length: 90

Offset: 22 (24%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Natural Cycle: 55








Control Type: Actuated-Coordinated






Splits and Phases: 8: Harvest Rd & Mississippi Ave



HCM 7th Signalized Intersection Summary 8: Harvest Rd & Mississippi Ave

2033 Total PM
09/20/2024






						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	179	45	810	259	48	702
Future Volume (veh/h)	179	45	810	259	48	702
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
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	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	195	49	880	282	52	763
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	5	5	5	5	5
Cap, veh/h	239	212	2333	1040	564	2646
Arrive On Green	0.14	0.14	1.00	1.00	0.04	0.76
Sat Flow, veh/h	1739	1547	3561	1547	1739	3561
Grp Volume(v), veh/h	195	49	880	282	52	763
Grp Sat Flow(s),veh/h/ln	1739	1547	1735	1547	1739	1735
Q Serve(g_s), s	9.8	2.5	0.0	0.0	0.7	6.0
Cycle Q Clear(g_c), s	9.8	2.5	0.0	0.0	0.7	6.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	239	212	2333	1040	564	2646
V/C Ratio(X)	0.82	0.23	0.38	0.27	0.09	0.29
Avail Cap(c_a), veh/h	473	421	2333	1040	639	2646
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.96	0.96	0.84	0.84	0.96	0.96
Uniform Delay (d), s/veh	37.7	34.6	0.0	0.0	3.3	3.2
Incr Delay (d2), s/veh	6.5	0.5	0.4	0.5	0.1	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	1.0	0.1	0.2	0.2	1.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	44.2	35.1	0.4	0.5	3.3	3.5
LnGrp LOS	D	D	A	A	A	A
Approach Vol, veh/h	244		1162			815
Approach Delay, s/veh	42.4		0.4			3.5
Approach LOS	D		A			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	8.1	65.0			73.2	16.8
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	7.5	44.5			56.5	24.5
Max Q Clear Time (g_c+I1), s	2.7	2.0			8.0	11.8
Green Ext Time (p_c), s	0.0	9.2			6.5	0.6
Intersection Summary						
HCM 7th Control Delay, s/veh			6.2			
HCM 7th LOS			A			

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	13	22	11	439	516	9
Future Vol, veh/h	13	22	11	439	516	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	150	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	14	24	12	477	561	10

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1067	566	571	0	-	0
Stage 1	566	-	-	-	-	-
Stage 2	501	-	-	-	-	-
Critical Hdwy	6.45	6.25	4.15	-	-	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	2.245	-	-	-
Pot Cap-1 Maneuver	243	518	987	-	-	-
Stage 1	562	-	-	-	-	-
Stage 2	603	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	240	518	987	-	-	-
Mov Cap-2 Maneuver	240	-	-	-	-	-
Stage 1	556	-	-	-	-	-
Stage 2	603	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v16.11		0.21	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	987	-	362	-	-
HCM Lane V/C Ratio	0.012	-	0.105	-	-
HCM Control Delay (s/veh)	8.7	-	16.1	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	12	18	26	621	571	10
Future Vol, veh/h	12	18	26	621	571	10
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, %	5	5	5	5	5	5
Mvmt Flow	13	20	28	675	621	11





















Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1358	626	632	0	-	0
Stage 1	626	-	-	-	-	-
Stage 2	732	-	-	-	-	-
Critical Hdwy	6.45	6.25	4.15	-	-	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	2.245	-	-	-
Pot Cap-1 Maneuver	162	479	937	-	-	-
Stage 1	527	-	-	-	-	-
Stage 2	471	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	157	479	937	-	-	-
Mov Cap-2 Maneuver	157	-	-	-	-	-
Stage 1	511	-	-	-	-	-
Stage 2	471	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v20.62		0.36	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	937	-	263	-	-
HCM Lane V/C Ratio	0.03	-	0.124	-	-
HCM Control Delay (s/veh)	9	-	20.6	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.4	-	-

Timings
9: Powhaton Rd & Mississippi Ave

2031 Total AM
09/20/2024

										
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	45	26	41	32	30	514	104	91	520	31
Future Volume (vph)	45	26	41	32	30	514	104	91	520	31
Turn Type	Split	NA	Perm	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	4	4		8	5	2		1	6	
Permitted Phases			8		2		2	6		6
Detector Phase	4	4	8	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	23.0	23.0	23.0	23.0	10.0	30.0	30.0	14.0	34.0	34.0
Total Split (%)	25.6%	25.6%	25.6%	25.6%	11.1%	33.3%	33.3%	15.6%	37.8%	37.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	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)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag					Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary

Cycle Length: 90

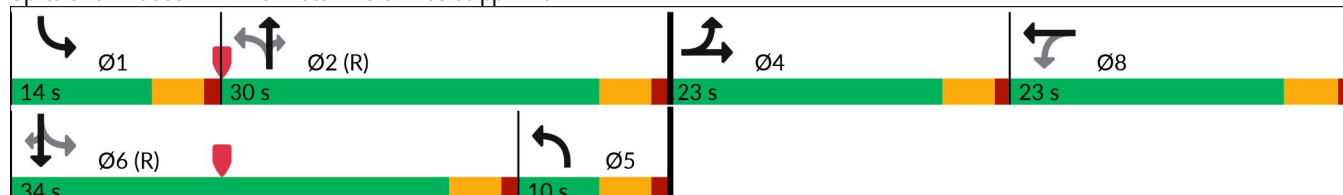
Actuated Cycle Length: 90

Offset: 76 (84%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 80












Control Type: Actuated-Coordinated

Splits and Phases: 9: Powhaton Rd & Mississippi Ave



HCM 7th Signalized Intersection Summary 9: Powhatan Rd & Mississippi Ave

2031 Total AM
09/20/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	26	59	41	32	52	30	514	104	91	520	31
Future Volume (veh/h)	45	26	59	41	32	52	30	514	104	91	520	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	49	28	64	45	35	57	33	559	113	99	565	34
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	139	39	90	137	49	80	765	2018	900	287	1137	507
Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.31	0.58	0.58	0.06	0.33	0.33
Sat Flow, veh/h	1739	494	1129	1739	625	1018	1739	3469	1547	1739	3469	1547
Grp Volume(v), veh/h	49	0	92	45	0	92	33	559	113	99	565	34
Grp Sat Flow(s),veh/h/ln	1739	0	1623	1739	0	1643	1739	1735	1547	1739	1735	1547
Q Serve(g_s), s	2.4	0.0	5.0	2.2	0.0	4.9	0.0	7.2	3.0	3.8	11.8	1.4
Cycle Q Clear(g_c), s	2.4	0.0	5.0	2.2	0.0	4.9	0.0	7.2	3.0	3.8	11.8	1.4
Prop In Lane	1.00		0.70	1.00		0.62	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	139	0	129	137	0	129	765	2018	900	287	1137	507
V/C Ratio(X)	0.35	0.00	0.71	0.33	0.00	0.71	0.04	0.28	0.13	0.35	0.50	0.07
Avail Cap(c_a), veh/h	357	0	334	357	0	338	765	2018	900	367	1137	507
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	0.86	0.86	0.86	0.97	0.97	0.97
Uniform Delay (d), s/veh	39.2	0.0	40.4	39.2	0.0	40.5	12.3	9.4	8.5	23.9	24.3	20.8
Incr Delay (d2), s/veh	1.5	0.0	7.0	1.4	0.0	7.0	0.0	0.3	0.2	0.7	1.5	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	1.1	0.0	2.2	1.0	0.0	2.2	0.3	2.4	0.9	1.5	4.8	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	40.7	0.0	47.4	40.6	0.0	47.5	12.3	9.7	8.7	24.6	25.8	21.0
LnGrp LOS	D		D	D		D	B	A	A	C	C	C
Approach Vol, veh/h	141			137			705			698		
Approach Delay, s/veh	45.1			45.2			9.7			25.4		
Approach LOS	D			D			A			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.9	56.9		11.7	32.7	34.0		11.6				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	9.5	25.5		18.5	5.5	29.5		18.5				
Max Q Clear Time (g_c+I1), s	5.8	9.2		7.0	2.0	13.8		6.9				
Green Ext Time (p_c), s	0.1	3.4		0.4	0.0	3.3		0.4				
Intersection Summary												
HCM 7th Control Delay, s/veh				22.1								
HCM 7th LOS				C								

Timings 9: Powhaton Rd & Mississippi Ave

2031 Total PM
09/23/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	51	55	102	34	59	612	80	80	480	46
Future Volume (vph)	51	55	102	34	59	612	80	80	480	46
Turn Type	Split	NA	Perm	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	4	4		8	5	2		1	6	
Permitted Phases			8		2		2	6		6
Detector Phase	4	4	8	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	23.0	23.0	23.0	23.0	10.1	32.4	32.4	11.6	33.9	33.9
Total Split (%)	25.6%	25.6%	25.6%	25.6%	11.2%	36.0%	36.0%	12.9%	37.7%	37.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	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)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag					Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary

Cycle Length: 90

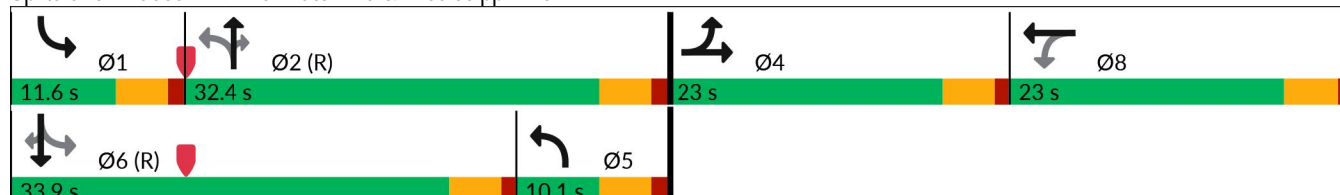
Actuated Cycle Length: 90

Offset: 59 (66%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated























Splits and Phases: 9: Powhaton Rd & Mississippi Ave



HCM 7th Signalized Intersection Summary





















9: Powhatan Rd & Mississippi Ave

2031 Total PM
09/23/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	51	55	49	102	34	44	59	612	80	80	480	46
Future Volume (veh/h)	51	55	49	102	34	44	59	612	80	80	480	46
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	55	60	53	111	37	48	64	665	87	87	522	50
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	160	82	72	156	65	84	740	1963	876	256	1133	505
Arrive On Green	0.09	0.09	0.09	0.09	0.09	0.09	0.29	0.57	0.57	0.05	0.33	0.33
Sat Flow, veh/h	1739	894	790	1739	721	936	1739	3469	1547	1739	3469	1547
Grp Volume(v), veh/h	55	0	113	111	0	85	64	665	87	87	522	50
Grp Sat Flow(s),veh/h/ln	1739	0	1684	1739	0	1657	1739	1735	1547	1739	1735	1547
Q Serve(g_s), s	2.7	0.0	5.9	5.6	0.0	4.4	0.0	9.3	2.3	3.3	10.7	2.0
Cycle Q Clear(g_c), s	2.7	0.0	5.9	5.6	0.0	4.4	0.0	9.3	2.3	3.3	10.7	2.0
Prop In Lane	1.00		0.47	1.00		0.56	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	160	0	155	156	0	148	740	1963	876	256	1133	505
V/C Ratio(X)	0.34	0.00	0.73	0.71	0.00	0.57	0.09	0.34	0.10	0.34	0.46	0.10
Avail Cap(c_a), veh/h	357	0	346	357	0	341	740	1963	876	301	1133	505
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)	0.98	0.00	0.98	1.00	0.00	1.00	0.84	0.84	0.84	0.96	0.96	0.96
Uniform Delay (d), s/veh	38.3	0.0	39.8	39.8	0.0	39.3	13.3	10.5	9.0	24.1	24.0	21.1
Incr Delay (d2), s/veh	1.3	0.0	6.4	5.9	0.0	3.4	0.0	0.4	0.2	0.8	1.3	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	2.7	2.6	0.0	1.9	0.7	3.1	0.7	1.3	4.3	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	39.6	0.0	46.2	45.8	0.0	42.8	13.4	10.9	9.2	24.8	25.3	21.5
LnGrp LOS	D		D	D		D	B	B	A	C	C	C
Approach Vol, veh/h	168			196			816			659		
Approach Delay, s/veh	44.0			44.5			10.9			25.0		
Approach LOS	D			D			B			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.2	55.4		12.8	30.8	33.9		12.6				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	7.1	27.9		18.5	5.6	29.4		18.5				
Max Q Clear Time (g_c+I1), s	5.3	11.3		7.9	2.0	12.7		7.6				
Green Ext Time (p_c), s	0.0	4.0		0.5	0.0	3.1		0.5				
Intersection Summary												
HCM 7th Control Delay, s/veh	22.5											
HCM 7th LOS	C											

Timings
9: Powhatan Rd & Mississippi Ave

2033 Total AM
09/20/2024

										
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	85	96	103	97	95	518	128	101	528	56
Future Volume (vph)	85	96	103	97	95	518	128	101	528	56
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		8	5	2		1	6	
Permitted Phases	4		8		2		2	6		6
Detector Phase	4	4	8	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	35.0	35.0	35.0	35.0	15.0	39.0	39.0	16.0	40.0	40.0
Total Split (%)	38.9%	38.9%	38.9%	38.9%	16.7%	43.3%	43.3%	17.8%	44.4%	44.4%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	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)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag					Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary

Cycle Length: 90

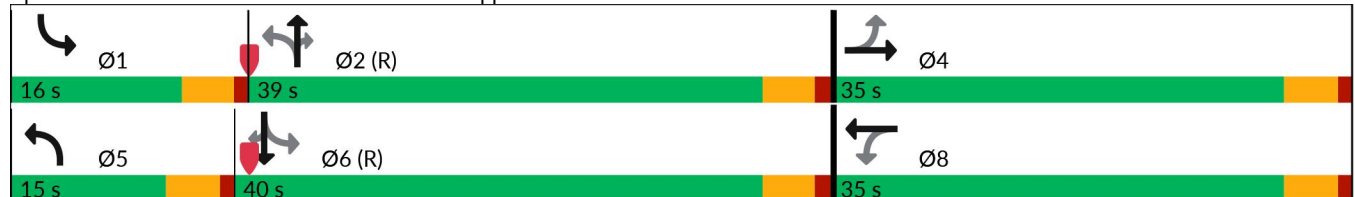
Actuated Cycle Length: 90

Offset: 11 (12%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 55

Control Type: Actuated-Coordinated












Splits and Phases: 9: Powhatan Rd & Mississippi Ave



HCM 7th Signalized Intersection Summary





















9: Powhatan Rd & Mississippi Ave

2033 Total AM
09/20/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	96	109	103	97	72	95	518	128	101	528	56
Future Volume (veh/h)	85	96	109	103	97	72	95	518	128	101	528	56
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	92	104	118	112	105	78	103	563	139	110	574	61
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	260	191	217	226	239	177	529	1918	855	509	1920	856
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.05	0.55	0.55	0.05	0.55	0.55
Sat Flow, veh/h	1172	781	886	1131	973	723	1739	3469	1547	1739	3469	1547
Grp Volume(v), veh/h	92	0	222	112	0	183	103	563	139	110	574	61
Grp Sat Flow(s),veh/h/ln	1172	0	1666	1131	0	1696	1739	1735	1547	1739	1735	1547
Q Serve(g_s), s	6.5	0.0	10.4	8.6	0.0	8.2	2.2	7.8	4.0	2.4	8.0	1.6
Cycle Q Clear(g_c), s	14.7	0.0	10.4	19.1	0.0	8.2	2.2	7.8	4.0	2.4	8.0	1.6
Prop In Lane	1.00		0.53	1.00		0.43	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	260	0	409	226	0	416	529	1918	855	509	1920	856
V/C Ratio(X)	0.35	0.00	0.54	0.50	0.00	0.44	0.19	0.29	0.16	0.22	0.30	0.07
Avail Cap(c_a), veh/h	370	0	565	332	0	575	643	1918	855	641	1920	856
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	0.82	0.82	0.82	0.97	0.97	0.97
Uniform Delay (d), s/veh	35.0	0.0	29.6	37.9	0.0	28.7	7.9	10.7	9.9	7.9	10.7	9.3
Incr Delay (d2), s/veh	0.8	0.0	1.1	1.7	0.0	0.7	0.1	0.3	0.3	0.2	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	1.9	0.0	4.2	2.5	0.0	3.4	0.7	2.6	1.2	0.8	2.8	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	35.8	0.0	30.7	39.6	0.0	29.5	8.0	11.1	10.2	8.1	11.1	9.5
LnGrp LOS	D		C	D		C	A	B	B	A	B	A
Approach Vol, veh/h	314			295			805			745		
Approach Delay, s/veh	32.2			33.3			10.5			10.6		
Approach LOS	C			C			B			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.2	54.3		26.6	9.1	54.3		26.6				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	11.5	34.5		30.5	10.5	35.5		30.5				
Max Q Clear Time (g_c+I1), s	4.4	9.8		16.7	4.2	10.0		21.1				
Green Ext Time (p_c), s	0.1	4.0		1.4	0.1	4.0		1.0				
Intersection Summary												
HCM 7th Control Delay, s/veh	16.8											
HCM 7th LOS	B											

Timings
9: Powhaton Rd & Mississippi Ave

2033 Total PM
09/20/2024

										
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	92	125	112	99	109	622	132	110	487	66
Future Volume (vph)	92	125	112	99	109	622	132	110	487	66
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		8	5	2		1	6	
Permitted Phases	4		8		2		2	6		6
Detector Phase	4	4	8	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	35.0	35.0	35.0	35.0	13.0	39.0	39.0	16.0	42.0	42.0
Total Split (%)	38.9%	38.9%	38.9%	38.9%	14.4%	43.3%	43.3%	17.8%	46.7%	46.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	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)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag					Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 86 (96%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 55

Control Type: Actuated-Coordinated























Splits and Phases: 9: Powhaton Rd & Mississippi Ave






HCM 7th Signalized Intersection Summary

9: Powhatan Rd & Mississippi Ave

2033 Total PM
09/20/2024




												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	92	125	115	112	99	69	109	622	132	110	487	66
Future Volume (veh/h)	92	125	115	112	99	69	109	622	132	110	487	66
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	100	136	125	122	108	75	118	676	143	120	529	72
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	298	239	220	233	274	191	596	1330	593	586	1446	645
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.16	0.38	0.38	0.19	0.42	0.42
Sat Flow, veh/h	1172	876	805	1092	1004	697	1739	3469	1547	1739	3469	1547
Grp Volume(v), veh/h	100	0	261	122	0	183	118	676	143	120	529	72
Grp Sat Flow(s),veh/h/ln	1172	0	1681	1092	0	1700	1739	1735	1547	1739	1735	1547
Q Serve(g_s), s	6.8	0.0	12.0	9.7	0.0	7.9	0.0	13.4	5.7	0.0	9.4	2.6
Cycle Q Clear(g_c), s	14.7	0.0	12.0	21.8	0.0	7.9	0.0	13.4	5.7	0.0	9.4	2.6
Prop In Lane	1.00		0.48	1.00		0.41	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	298	0	460	233	0	465	596	1330	593	586	1446	645
V/C Ratio(X)	0.34	0.00	0.57	0.52	0.00	0.39	0.20	0.51	0.24	0.20	0.37	0.11
Avail Cap(c_a), veh/h	375	0	570	304	0	576	596	1330	593	586	1446	645
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)	0.98	0.00	0.98	1.00	0.00	1.00	0.75	0.75	0.75	0.96	0.96	0.96
Uniform Delay (d), s/veh	32.6	0.0	28.1	37.5	0.0	26.6	16.5	21.3	18.9	17.9	18.1	16.1
Incr Delay (d2), s/veh	0.6	0.0	1.1	1.8	0.0	0.5	0.1	1.0	0.7	0.2	0.7	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	2.0	0.0	4.9	2.7	0.0	3.2	1.5	5.2	2.0	1.7	3.8	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	33.3	0.0	29.2	39.3	0.0	27.2	16.6	22.3	19.6	18.1	18.8	16.4
LnGrp LOS	C		C	D		C	B	C	B	B	B	B
Approach Vol, veh/h	361			305			937			721		
Approach Delay, s/veh	30.3			32.0			21.2			18.4		
Approach LOS	C			C			C			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	21.9	39.0		29.1	18.9	42.0		29.1				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	11.5	34.5		30.5	8.5	37.5		30.5				
Max Q Clear Time (g_c+I1), s	2.0	15.4		16.7	2.0	11.4		23.8				
Green Ext Time (p_c), s	0.2	4.5		1.7	0.1	4.0		0.8				
Intersection Summary												
HCM 7th Control Delay, s/veh				23.2								
HCM 7th LOS				C								

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	6	77	2	0	68
Future Vol, veh/h	0	6	77	2	0	68
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	7	84	2	0	74

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	85	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	6.22	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.318	-
Pot Cap-1 Maneuver	0	974	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	974	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	8.7	0	0
HCM LOS	A		




Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	974
HCM Lane V/C Ratio	-	-	0.007
HCM Control Delay (s/veh)	-	-	8.7
HCM Lane LOS	-	-	A
HCM 95th %tile Q (veh)	-	-	0




Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	5	100	6	0	104
Future Vol, veh/h	0	5	100	6	0	104
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	5	109	7	0	113

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	113	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	6.22	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.318	-
Pot Cap-1 Maneuver	0	940	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	940	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	8.9	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	940
HCM Lane V/C Ratio	-	-	0.006
HCM Control Delay (s/veh)	-	-	8.9
HCM Lane LOS	-	-	A
HCM 95th %tile Q (veh)	-	-	0




Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	6	162	2	0	132
Future Vol, veh/h	0	6	162	2	0	132
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	7	176	2	0	143
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	177	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.318	-	-	-	-
Pot Cap-1 Maneuver	0	866	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	866	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s/v	9.2	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBT		
Capacity (veh/h)	-	866		-		
HCM Lane V/C Ratio	-	0.008		-		
HCM Control Delay (s/veh)	-	9.2		-		
HCM Lane LOS	-	A		-		
HCM 95th %tile Q (veh)	-	0		-		

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	5	246	6	0	237
Future Vol, veh/h	0	5	246	6	0	237
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	5	267	7	0	258

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	271	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	6.22	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.318	-
Pot Cap-1 Maneuver	0	768	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	-	768	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	9.7	0	0
HCM LOS	A		




Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	768
HCM Lane V/C Ratio	-	-	0.007
HCM Control Delay (s/veh)	-	-	9.7
HCM Lane LOS	-	-	A
HCM 95th %tile Q (veh)	-	-	0

Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	6	176	2	0	129
Future Vol, veh/h	0	6	176	2	0	129
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, %	5	5	5	5	5	5
Mvmt Flow	0	7	191	2	0	140

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	192	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	6.25	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.345	-
Pot Cap-1 Maneuver	0	842	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	842	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	9.31	0	0
HCM LOS	A		




Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	842
HCM Lane V/C Ratio	-	-	0.008
HCM Control Delay (s/veh)	-	-	9.3
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	0

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	5	243	6	0	266
Future Vol, veh/h	0	5	243	6	0	266
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, %	5	5	5	5	5	5
Mvmt Flow	0	5	264	7	0	289

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	267	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	6.25	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.345	-
Pot Cap-1 Maneuver	0	764	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	-	764	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	9.75	0	0
HCM LOS	A		




Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	764
HCM Lane V/C Ratio	-	-	0.007
HCM Control Delay (s/veh)	-	-	9.7
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	0

Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	7	183	2	0	135
Future Vol, veh/h	0	7	183	2	0	135
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, %	5	5	5	5	5	5
Mvmt Flow	0	8	199	2	0	147

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	200	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	6.25	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.345	-
Pot Cap-1 Maneuver	0	833	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	833	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	9.36	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	833	-
HCM Lane V/C Ratio	-	0.009	-
HCM Control Delay (s/veh)	-	9.4	-
HCM Lane LOS	-	A	-
HCM 95th %tile Q(veh)	-	0	-

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	6	247	7	0	270
Future Vol, veh/h	0	6	247	7	0	270
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, %	5	5	5	5	5	5
Mvmt Flow	0	7	268	8	0	293

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	272	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	6.25	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.345	-
Pot Cap-1 Maneuver	0	759	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	759	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	9.78	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	759
HCM Lane V/C Ratio	-	-	0.009
HCM Control Delay (s/veh)	-	-	9.8
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	0

Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕			↕
Traffic Vol, veh/h	0	21	503	8	0	552
Future Vol, veh/h	0	21	503	8	0	552
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, %	5	5	5	5	5	5
Mvmt Flow	0	23	547	9	0	600

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	278	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	7	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.35	-
Pot Cap-1 Maneuver	0	711	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	-	711	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v10.23		0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	711
HCM Lane V/C Ratio	-	-	0.032
HCM Control Delay (s/veh)	-	-	10.2
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	15	687	24	0	589
Future Vol, veh/h	0	15	687	24	0	589
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, %	5	5	5	5	5	5
Mvmt Flow	0	16	747	26	0	640

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	386	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	7	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.35	-
Pot Cap-1 Maneuver	0	604	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	604	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v11.13		0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	604
HCM Lane V/C Ratio	-	-	0.027
HCM Control Delay (s/veh)	-	-	11.1
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0.1

Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕			↕
Traffic Vol, veh/h	0	21	669	8	0	640
Future Vol, veh/h	0	21	669	8	0	640
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, %	5	5	5	5	5	5
Mvmt Flow	0	23	727	9	0	696
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	-	368	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.35	-	-	-	-
Pot Cap-1 Maneuver	0	621	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	621	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s/v11.02		0	0			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT			
Capacity (veh/h)	-	-	621	-		
HCM Lane V/C Ratio	-	-	0.037	-		
HCM Control Delay (s/veh)	-	-	11	-		
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	15	812	24	0	684
Future Vol, veh/h	0	15	812	24	0	684
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, %	5	5	5	5	5	5
Mvmt Flow	0	16	883	26	0	743

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	454	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	7	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.35	-
Pot Cap-1 Maneuver	0	545	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	545	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v11.81		0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	545	-
HCM Lane V/C Ratio	-	0.03	-
HCM Control Delay (s/veh)	-	11.8	-
HCM Lane LOS	-	B	-
HCM 95th %tile Q(veh)	-	0.1	-

Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕			↕
Traffic Vol, veh/h	0	25	930	10	0	1060
Future Vol, veh/h	0	25	930	10	0	1060
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, %	5	5	5	5	5	5
Mvmt Flow	0	27	1011	11	0	1152

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	511	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	7	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.35	-
Pot Cap-1 Maneuver	0	500	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	-	500	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v12.61		0	0
HCM LOS	B		





Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	500	-
HCM Lane V/C Ratio	-	0.054	-
HCM Control Delay (s/veh)	-	12.6	-
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	15	1125	25	0	835
Future Vol, veh/h	0	15	1125	25	0	835
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, %	5	5	5	5	5	5
Mvmt Flow	0	16	1223	27	0	908

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	625	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	7	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.35	-
Pot Cap-1 Maneuver	0	420	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	420	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v13.91		0	0
HCM LOS	B		





Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	420
HCM Lane V/C Ratio	-	-	0.039
HCM Control Delay (s/veh)	-	-	13.9
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0.1

Intersection						
Int Delay, s/veh	1.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	11	6	78	2	4	69
Future Vol, veh/h	11	6	78	2	4	69
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	-	-	-	275	-
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	2	2	2
Mvmt Flow	12	7	85	2	4	75

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	169	86	0	0	87
Stage 1	86	-	-	-	-
Stage 2	83	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	846	1005	-	-	1521
Stage 1	955	-	-	-	-
Stage 2	940	-	-	-	-
Platoon blocked, %	1	1	-	-	1
Mov Cap-1 Maneuver	843	1005	-	-	1521
Mov Cap-2 Maneuver	816	-	-	-	-
Stage 1	955	-	-	-	-
Stage 2	937	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	9.2	0	0.4
HCM LOS	A		





Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	874	1521
HCM Lane V/C Ratio	-	-	0.021	0.003
HCM Control Delay (s/veh)	-	-	9.2	7.4
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q (veh)	-	-	0.1	0

Intersection						
Int Delay, s/veh	1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	9	5	106	8	14	95
Future Vol, veh/h	9	5	106	8	14	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	0	-	-	-	275	-
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	2	2	2
Mvmt Flow	10	5	115	9	15	103

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	253	120	0
Stage 1	120	-	-
Stage 2	133	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	776	991	-
Stage 1	938	-	-
Stage 2	893	-	-
Platoon blocked, %	1	1	-
Mov Cap-1 Maneuver	768	991	-
Mov Cap-2 Maneuver	764	-	-
Stage 1	938	-	-
Stage 2	884	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	9.4	0	1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	832	1485
HCM Lane V/C Ratio	-	-	0.018	0.01
HCM Control Delay (s/veh)	-	-	9.4	7.4
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q (veh)	-	-	0.1	0

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	11	6	163	2	4	133
Future Vol, veh/h	11	6	163	2	4	133
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	275	-
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	2	2	2
Mvmt Flow	12	7	177	2	4	145

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	331	178	0	0	179
Stage 1	178	-	-	-	-
Stage 2	153	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	709	939	-	-	1422
Stage 1	892	-	-	-	-
Stage 2	875	-	-	-	-
Platoon blocked, %	1	1	-	-	1
Mov Cap-1 Maneuver	707	939	-	-	1422
Mov Cap-2 Maneuver	725	-	-	-	-
Stage 1	892	-	-	-	-
Stage 2	872	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	9.7	0	0.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	788	1422
HCM Lane V/C Ratio	-	-	0.023	0.003
HCM Control Delay (s/veh)	-	-	9.7	7.5
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q (veh)	-	-	0.1	0

Intersection						
Int Delay, s/veh	0.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	9	5	252	8	14	228
Future Vol, veh/h	9	5	252	8	14	228
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	-	-	-	275	-
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	2	2	2
Mvmt Flow	10	5	274	9	15	248

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	557	279	0
Stage 1	279	-	-
Stage 2	278	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	527	868	-
Stage 1	825	-	-
Stage 2	769	-	-
Platoon blocked, %	1	1	-
Mov Cap-1 Maneuver	521	868	-
Mov Cap-2 Maneuver	598	-	-
Stage 1	825	-	-
Stage 2	761	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	10.5	0	0.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	673	1309
HCM Lane V/C Ratio	-	-	0.023	0.012
HCM Control Delay (s/veh)	-	-	10.5	7.8
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q (veh)	-	-	0.1	0

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T		T	T
Traffic Vol, veh/h	11	6	172	2	5	125
Future Vol, veh/h	11	6	172	2	5	125
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	-	-	-	275	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	12	7	187	2	5	136

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	335	188	0	0	189
Stage 1	188	-	-	-	-
Stage 2	147	-	-	-	-
Critical Hdwy	6.45	6.25	-	-	4.15
Critical Hdwy Stg 1	5.45	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-
Follow-up Hdwy	3.545	3.345	-	-	2.245
Pot Cap-1 Maneuver	683	892	-	-	1381
Stage 1	861	-	-	-	-
Stage 2	873	-	-	-	-
Platoon blocked, %	0	0	-	-	0
Mov Cap-1 Maneuver	680	892	-	-	1381
Mov Cap-2 Maneuver	705	-	-	-	-
Stage 1	861	-	-	-	-
Stage 2	870	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	9.84	0	0.29
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	762	1381
HCM Lane V/C Ratio	-	-	0.024	0.004
HCM Control Delay (s/veh)	-	-	9.8	7.6
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0

Intersection						
Int Delay, s/veh	0.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T		T	T
Traffic Vol, veh/h	9	5	244	8	14	252
Future Vol, veh/h	9	5	244	8	14	252
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	-	-	-	275	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	10	5	265	9	15	274

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	574	270	0	0	274
Stage 1	270	-	-	-	-
Stage 2	304	-	-	-	-
Critical Hdwy	6.45	6.25	-	-	4.15
Critical Hdwy Stg 1	5.45	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-
Follow-up Hdwy	3.545	3.345	-	-	2.245
Pot Cap-1 Maneuver	494	825	-	-	1288
Stage 1	802	-	-	-	-
Stage 2	741	-	-	-	-
Platoon blocked, %	0	0	-	-	0
Mov Cap-1 Maneuver	488	825	-	-	1288
Mov Cap-2 Maneuver	571	-	-	-	-
Stage 1	802	-	-	-	-
Stage 2	733	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v10.75		0	0.41
HCM LOS	B		





Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	641	1288
HCM Lane V/C Ratio	-	-	0.024	0.012
HCM Control Delay (s/veh)	-	-	10.7	7.8
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0

Intersection						
Int Delay, s/veh	1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T		T	T
Traffic Vol, veh/h	18	10	175	6	8	128
Future Vol, veh/h	18	10	175	6	8	128
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	-	-	-	275	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	20	11	190	7	9	139

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	350	193	0	0	197
Stage 1	193	-	-	-	-
Stage 2	157	-	-	-	-
Critical Hdwy	6.45	6.25	-	-	4.15
Critical Hdwy Stg 1	5.45	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-
Follow-up Hdwy	3.545	3.345	-	-	2.245
Pot Cap-1 Maneuver	668	885	-	-	1372
Stage 1	856	-	-	-	-
Stage 2	865	-	-	-	-
Platoon blocked, %	0	0	-	-	0
Mov Cap-1 Maneuver	664	885	-	-	1372
Mov Cap-2 Maneuver	694	-	-	-	-
Stage 1	856	-	-	-	-
Stage 2	859	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	9.99	0	0.45
HCM LOS	A		





Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	752	1372
HCM Lane V/C Ratio	-	-	0.04	0.006
HCM Control Delay (s/veh)	-	-	10	7.6
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0

Intersection						
Int Delay, s/veh	0.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	16	9	245	16	20	250
Future Vol, veh/h	16	9	245	16	20	250
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	-	-	-	275	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	17	10	266	17	22	272

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	590	275	0
Stage 1	275	-	-
Stage 2	315	-	-
Critical Hdwy	6.45	6.25	-
Critical Hdwy Stg 1	5.45	-	-
Critical Hdwy Stg 2	5.45	-	-
Follow-up Hdwy	3.545	3.345	-
Pot Cap-1 Maneuver	482	819	-
Stage 1	797	-	-
Stage 2	733	-	-
Platoon blocked, %	0	0	-
Mov Cap-1 Maneuver	473	819	-
Mov Cap-2 Maneuver	560	-	-
Stage 1	797	-	-
Stage 2	721	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v10.95		0	0.58
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	632	1276
HCM Lane V/C Ratio	-	-	0.043	0.017
HCM Control Delay (s/veh)	-	-	11	7.9
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0.1

Intersection						
Int Delay, s/veh	1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	56	28	488	13	18	523
Future Vol, veh/h	56	28	488	13	18	523
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	-	-	-	275	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	61	30	530	14	20	568
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	861	272	0	0	545	0
Stage 1	538	-	-	-	-	-
Stage 2	323	-	-	-	-	-
Critical Hdwy	6.9	7	-	-	4.2	-
Critical Hdwy Stg 1	5.9	-	-	-	-	-
Critical Hdwy Stg 2	5.9	-	-	-	-	-
Follow-up Hdwy	3.55	3.35	-	-	2.25	-
Pot Cap-1 Maneuver	*574	*967	-	-	1140	-
Stage 1	*672	-	-	-	-	-
Stage 2	*879	-	-	-	-	-
Platoon blocked, %	0	0	-	-	0	-
Mov Cap-1 Maneuver	*564	*967	-	-	1140	-
Mov Cap-2 Maneuver	*587	-	-	-	-	-
Stage 1	*672	-	-	-	-	-
Stage 2	*864	-	-	-	-	-
Approach	WB		NB		SB	
HCM Control Delay, s/v11.16			0		0.27	
HCM LOS	B					
Minor Lane/Major Mvmt	NBT		NBRWBLn1		SBL	SBT
Capacity (veh/h)	-		-		676	1140
HCM Lane V/C Ratio	-		-		0.135	0.017
HCM Control Delay (s/veh)	-		-		11.2	8.2
HCM Lane LOS	-		-		B	A
HCM 95th %tile Q(veh)	-		-		0.5	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	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		↑↑		W	↑↑
Traffic Vol, veh/h	41	21	679	39	55	533
Future Vol, veh/h	41	21	679	39	55	533
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	-	-	-	275	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	45	23	738	42	60	579

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1168	390	0	0	780
Stage 1	759	-	-	-	-
Stage 2	409	-	-	-	-
Critical Hdwy	6.9	7	-	-	4.2
Critical Hdwy Stg 1	5.9	-	-	-	-
Critical Hdwy Stg 2	5.9	-	-	-	-
Follow-up Hdwy	3.55	3.35	-	-	2.25
Pot Cap-1 Maneuver	393	*906	-	-	984
Stage 1	575	-	-	-	-
Stage 2	867	-	-	-	-
Platoon blocked, %	0	0	-	-	0
Mov Cap-1 Maneuver	369	*906	-	-	984
Mov Cap-2 Maneuver	465	-	-	-	-
Stage 1	575	-	-	-	-
Stage 2	814	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v12.35		0	0.83
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	557	984
HCM Lane V/C Ratio	-	-	0.121	0.061
HCM Control Delay (s/veh)	-	-	12.3	8.9
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	0.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	56	28	646	13	18	613
Future Vol, veh/h	56	28	646	13	18	613
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	-	-	-	275	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	61	30	702	14	20	666
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1082	358	0	0	716	0
Stage 1	709	-	-	-	-	-
Stage 2	372	-	-	-	-	-
Critical Hdwy	6.9	7	-	-	4.2	-
Critical Hdwy Stg 1	5.9	-	-	-	-	-
Critical Hdwy Stg 2	5.9	-	-	-	-	-
Follow-up Hdwy	3.55	3.35	-	-	2.25	-
Pot Cap-1 Maneuver	*474	*926	-	-	1020	-
Stage 1	*588	-	-	-	-	-
Stage 2	*858	-	-	-	-	-
Platoon blocked, %	0	0	-	-	0	-
Mov Cap-1 Maneuver	*465	*926	-	-	1020	-
Mov Cap-2 Maneuver	*509	-	-	-	-	-
Stage 1	*588	-	-	-	-	-
Stage 2	*841	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s/v12.09	0		0.25			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	599	1020	-	
HCM Lane V/C Ratio	-	-	0.153	0.019	-	
HCM Control Delay (s/veh)	-	-	12.1	8.6	-	
HCM Lane LOS	-	-	B	A	-	
HCM 95th %tile Q(veh)	-	-	0.5	0.1	-	
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	W		↑↑		W	↑↑
Traffic Vol, veh/h	41	21	805	39	55	628
Future Vol, veh/h	41	21	805	39	55	628
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	-	-	-	275	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	45	23	875	42	60	683





Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1357	459	0	0	917
Stage 1	896	-	-	-	-
Stage 2	461	-	-	-	-
Critical Hdwy	6.9	7	-	-	4.2
Critical Hdwy Stg 1	5.9	-	-	-	-
Critical Hdwy Stg 2	5.9	-	-	-	-
Follow-up Hdwy	3.55	3.35	-	-	2.25
Pot Cap-1 Maneuver	*352	*856	-	-	914
Stage 1	*532	-	-	-	-
Stage 2	*852	-	-	-	-
Platoon blocked, %	0	0	-	-	0
Mov Cap-1 Maneuver	*329	*856	-	-	914
Mov Cap-2 Maneuver	*429	-	-	-	-
Stage 1	*532	-	-	-	-
Stage 2	*797	-	-	-	-





Approach	WB	NB	SB
HCM Control Delay, s/v13.01		0	0.74
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	517	914
HCM Lane V/C Ratio	-	-	0.13	0.065
HCM Control Delay (s/veh)	-	-	13	9.2
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	0.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	60	30	920	20	20	1025
Future Vol, veh/h	60	30	920	20	20	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	-	-	-	275	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	65	33	1000	22	22	1114
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1611	511	0	0	1022	0
Stage 1	1011	-	-	-	-	-
Stage 2	601	-	-	-	-	-
Critical Hdwy	6.9	7	-	-	4.2	-
Critical Hdwy Stg 1	5.9	-	-	-	-	-
Critical Hdwy Stg 2	5.9	-	-	-	-	-
Follow-up Hdwy	3.55	3.35	-	-	2.25	-
Pot Cap-1 Maneuver	*321	*844	-	-	830	-
Stage 1	*462	-	-	-	-	-
Stage 2	*749	-	-	-	-	-
Platoon blocked, %	0	0	-	-	0	-
Mov Cap-1 Maneuver	*312	*844	-	-	830	-
Mov Cap-2 Maneuver	*386	-	-	-	-	-
Stage 1	*462	-	-	-	-	-
Stage 2	*729	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s/v	14.64	0		0.18		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	471	830	-	
HCM Lane V/C Ratio	-	-	0.208	0.026	-	
HCM Control Delay (s/veh)	-	-	14.6	9.5	-	
HCM Lane LOS	-	-	B	A	-	
HCM 95th %tile Q(veh)	-	-	0.8	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	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	45	30	1120	40	55	790
Future Vol, veh/h	45	30	1120	40	55	790
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	-	-	-	275	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	49	33	1217	43	60	859
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1788	630	0	0	1261	0
Stage 1	1239	-	-	-	-	-
Stage 2	549	-	-	-	-	-
Critical Hdwy	6.9	7	-	-	4.2	-
Critical Hdwy Stg 1	5.9	-	-	-	-	-
Critical Hdwy Stg 2	5.9	-	-	-	-	-
Follow-up Hdwy	3.55	3.35	-	-	2.25	-
Pot Cap-1 Maneuver	*213	*762	-	-	707	-
Stage 1	*393	-	-	-	-	-
Stage 2	*808	-	-	-	-	-
Platoon blocked, %	0	0	-	-	0	-
Mov Cap-1 Maneuver	*195	*762	-	-	707	-
Mov Cap-2 Maneuver	*311	-	-	-	-	-
Stage 1	*393	-	-	-	-	-
Stage 2	*740	-	-	-	-	-
Approach	WB		NB		SB	
HCM Control Delay, s/v16.04			0		0.69	
HCM LOS	C					
Minor Lane/Major Mvmt	NBT		NBRWBLn1		SBL	SBT
Capacity (veh/h)	-		-		407	707
HCM Lane V/C Ratio	-		-		0.2	0.085
HCM Control Delay (s/veh)	-		-		16	10.6
HCM Lane LOS	-		-		C	B
HCM 95th %tile Q(veh)	-		-		0.7	0.3
Notes						
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon						





Intersection						
Int Delay, s/veh	1.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	19	19	114	6	6	169
Future Vol, veh/h	19	19	114	6	6	169
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	-	-	-	275	-
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	2	2	2
Mvmt Flow	21	21	124	7	7	184

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	326	128	0	0	131
Stage 1	128	-	-	-	-
Stage 2	198	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	697	977	-	-	1475
Stage 1	927	-	-	-	-
Stage 2	835	-	-	-	-
Platoon blocked, %	1	1	-	-	1
Mov Cap-1 Maneuver	694	977	-	-	1475
Mov Cap-2 Maneuver	712	-	-	-	-
Stage 1	927	-	-	-	-
Stage 2	831	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	9.6	0	0.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	824	1475
HCM Lane V/C Ratio	-	-	0.05	0.004
HCM Control Delay (s/veh)	-	-	9.6	7.5
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q (veh)	-	-	0.2	0

Intersection						
Int Delay, s/veh	0.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	12	12	265	18	17	206
Future Vol, veh/h	12	12	265	18	17	206
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	-	-	-	275	-
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	2	2	2
Mvmt Flow	13	13	288	20	18	224
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	558	298	0	0	308	0
Stage 1	298	-	-	-	-	-
Stage 2	260	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	*537	*865	-	-	1288	-
Stage 1	*816	-	-	-	-	-
Stage 2	*783	-	-	-	-	-
Platoon blocked, %	1	1	-	-	1	-
Mov Cap-1 Maneuver	*530	*865	-	-	1288	-
Mov Cap-2 Maneuver	*603	-	-	-	-	-
Stage 1	*816	-	-	-	-	-
Stage 2	*772	-	-	-	-	-
Approach	WB		NB		SB	
HCM Control Delay, s/v	10.3		0		0.6	
HCM LOS	B					
Minor Lane/Major Mvmt	NBT		NBRWBLn1		SBL	SBT
Capacity (veh/h)	-		-		711	1288
HCM Lane V/C Ratio	-		-		0.037	0.014
HCM Control Delay (s/veh)	-		-		10.3	7.8
HCM Lane LOS	-		-		B	A
HCM 95th %tile Q (veh)	-		-		0.1	0
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Intersection						
Int Delay, s/veh	1.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	19	24	84	6	8	146
Future Vol, veh/h	19	24	84	6	8	146
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	-	-	-	275	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	21	26	91	7	9	159

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	271	95	0	0	98
Stage 1	95	-	-	-	-
Stage 2	176	-	-	-	-
Critical Hdwy	6.45	6.25	-	-	4.15
Critical Hdwy Stg 1	5.45	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-
Follow-up Hdwy	3.545	3.345	-	-	2.245
Pot Cap-1 Maneuver	724	974	-	-	1484
Stage 1	933	-	-	-	-
Stage 2	847	-	-	-	-
Platoon blocked, %	0	0	-	-	0
Mov Cap-1 Maneuver	720	974	-	-	1484
Mov Cap-2 Maneuver	728	-	-	-	-
Stage 1	933	-	-	-	-
Stage 2	842	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	9.49	0	0.39
HCM LOS	A		





Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	848	1484
HCM Lane V/C Ratio	-	-	0.055	0.006
HCM Control Delay (s/veh)	-	-	9.5	7.4
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0

Intersection						
Int Delay, s/veh	1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	12	16	230	18	24	182
Future Vol, veh/h	12	16	230	18	24	182
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	-	-	-	275	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	13	17	250	20	26	198

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	510	260	0	0	270
Stage 1	260	-	-	-	-
Stage 2	250	-	-	-	-
Critical Hdwy	6.45	6.25	-	-	4.15
Critical Hdwy Stg 1	5.45	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-
Follow-up Hdwy	3.545	3.345	-	-	2.245
Pot Cap-1 Maneuver	543	837	-	-	1293
Stage 1	811	-	-	-	-
Stage 2	785	-	-	-	-
Platoon blocked, %	0	0	-	-	0
Mov Cap-1 Maneuver	532	837	-	-	1293
Mov Cap-2 Maneuver	603	-	-	-	-
Stage 1	811	-	-	-	-
Stage 2	769	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v10.24		0	0.91
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	718	1293
HCM Lane V/C Ratio	-	-	0.042	0.02
HCM Control Delay (s/veh)	-	-	10.2	7.8
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0.1

Intersection						
Int Delay, s/veh	1.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	19	24	97	6	8	166
Future Vol, veh/h	19	24	97	6	8	166
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	-	-	-	275	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	21	26	105	7	9	180

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	307	109	0
Stage 1	109	-	-
Stage 2	198	-	-
Critical Hdwy	6.45	6.25	-
Critical Hdwy Stg 1	5.45	-	-
Critical Hdwy Stg 2	5.45	-	-
Follow-up Hdwy	3.545	3.345	-
Pot Cap-1 Maneuver	690	957	-
Stage 1	919	-	-
Stage 2	828	-	-
Platoon blocked, %	0	0	-
Mov Cap-1 Maneuver	686	957	-
Mov Cap-2 Maneuver	705	-	-
Stage 1	919	-	-
Stage 2	823	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	9.62	0	0.34
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	826	1466
HCM Lane V/C Ratio	-	-	0.057	0.006
HCM Control Delay (s/veh)	-	-	9.6	7.5
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0

Intersection						
Int Delay, s/veh	0.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	12	16	258	18	23	202
Future Vol, veh/h	12	16	258	18	23	202
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	-	-	-	275	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	13	17	280	20	25	220
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	560	290	0	0	300	0
Stage 1	290	-	-	-	-	-
Stage 2	270	-	-	-	-	-
Critical Hdwy	6.45	6.25	-	-	4.15	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	-	-	2.245	-
Pot Cap-1 Maneuver	504	801	-	-	1256	-
Stage 1	783	-	-	-	-	-
Stage 2	769	-	-	-	-	-
Platoon blocked, %	0	0	-	-	0	-
Mov Cap-1 Maneuver	494	801	-	-	1256	-
Mov Cap-2 Maneuver	576	-	-	-	-	-
Stage 1	783	-	-	-	-	-
Stage 2	754	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s/v10.49		0	0.81			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	686	1256	-	
HCM Lane V/C Ratio	-	-	0.044	0.02	-	
HCM Control Delay (s/veh)	-	-	10.5	7.9	-	
HCM Lane LOS	-	-	B	A	-	
HCM 95th %tile Q(veh)	-	-	0.1	0.1	-	

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		↑↑		Y	↑↑
Traffic Vol, veh/h	35	21	458	13	8	601
Future Vol, veh/h	35	21	458	13	8	601
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	-	-	-	275	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	38	23	498	14	9	653

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	849	256	0	0	512	0
Stage 1	505	-	-	-	-	-
Stage 2	344	-	-	-	-	-
Critical Hdwy	6.9	7	-	-	4.2	-
Critical Hdwy Stg 1	5.9	-	-	-	-	-
Critical Hdwy Stg 2	5.9	-	-	-	-	-
Follow-up Hdwy	3.55	3.35	-	-	2.25	-
Pot Cap-1 Maneuver	*475	*955	-	-	1198	-
Stage 1	*722	-	-	-	-	-
Stage 2	*858	-	-	-	-	-
Platoon blocked, %	0	0	-	-	0	-
Mov Cap-1 Maneuver	*471	*955	-	-	1198	-
Mov Cap-2 Maneuver	*568	-	-	-	-	-
Stage 1	*722	-	-	-	-	-
Stage 2	*851	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v10.91		0	0.11
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	670	1198
HCM Lane V/C Ratio	-	-	0.091	0.007
HCM Control Delay (s/veh)	-	-	10.9	8
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.3	0

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

Intersection						
Int Delay, s/veh	0.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		↑↑		W	↑↑
Traffic Vol, veh/h	26	15	674	39	24	515
Future Vol, veh/h	26	15	674	39	24	515
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	-	-	-	275	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	28	16	733	42	26	560

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1086	388	0	0	775
Stage 1	754	-	-	-	-
Stage 2	332	-	-	-	-
Critical Hdwy	6.9	7	-	-	4.2
Critical Hdwy Stg 1	5.9	-	-	-	-
Critical Hdwy Stg 2	5.9	-	-	-	-
Follow-up Hdwy	3.55	3.35	-	-	2.25
Pot Cap-1 Maneuver	*343	*909	-	-	985
Stage 1	*575	-	-	-	-
Stage 2	*901	-	-	-	-
Platoon blocked, %	0	0	-	-	0
Mov Cap-1 Maneuver	*334	*909	-	-	985
Mov Cap-2 Maneuver	*458	-	-	-	-
Stage 1	*575	-	-	-	-
Stage 2	*877	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	12	0	0.39
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	559	985
HCM Lane V/C Ratio	-	-	0.08	0.026
HCM Control Delay (s/veh)	-	-	12	8.8
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.3	0.1

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

Intersection						
Int Delay, s/veh	0.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		W		W	W
Traffic Vol, veh/h	35	21	577	13	8	687
Future Vol, veh/h	35	21	577	13	8	687
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	-	-	-	275	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	38	23	627	14	9	747

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1025	321	0	0	641
Stage 1	634	-	-	-	-
Stage 2	391	-	-	-	-
Critical Hdwy	6.9	7	-	-	4.2
Critical Hdwy Stg 1	5.9	-	-	-	-
Critical Hdwy Stg 2	5.9	-	-	-	-
Follow-up Hdwy	3.55	3.35	-	-	2.25
Pot Cap-1 Maneuver	*571	*932	-	-	1091
Stage 1	*642	-	-	-	-
Stage 2	*836	-	-	-	-
Platoon blocked, %	0	0	-	-	0
Mov Cap-1 Maneuver	*566	*932	-	-	1091
Mov Cap-2 Maneuver	*571	-	-	-	-
Stage 1	*642	-	-	-	-
Stage 2	*829	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v10.93		0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	668	1091
HCM Lane V/C Ratio	-	-	0.091	0.008
HCM Control Delay (s/veh)	-	-	10.9	8.3
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.3	0

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





Intersection						
Int Delay, s/veh	0.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		↑↑		W	↑↑
Traffic Vol, veh/h	26	15	786	39	24	589
Future Vol, veh/h	26	15	786	39	24	589
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	-	-	-	275	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	28	16	854	42	26	640

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1248	448	0	0	897
Stage 1	876	-	-	-	-
Stage 2	372	-	-	-	-
Critical Hdwy	6.9	7	-	-	4.2
Critical Hdwy Stg 1	5.9	-	-	-	-
Critical Hdwy Stg 2	5.9	-	-	-	-
Follow-up Hdwy	3.55	3.35	-	-	2.25
Pot Cap-1 Maneuver	*359	*856	-	-	935
Stage 1	*549	-	-	-	-
Stage 2	*875	-	-	-	-
Platoon blocked, %	0	0	-	-	0
Mov Cap-1 Maneuver	*349	*856	-	-	935
Mov Cap-2 Maneuver	*449	-	-	-	-
Stage 1	*549	-	-	-	-
Stage 2	*850	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v12.22		0	0.35
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	543	935
HCM Lane V/C Ratio	-	-	0.082	0.028
HCM Control Delay (s/veh)	-	-	12.2	9
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.3	0.1

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

Intersection						
Int Delay, s/veh	0.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	35	25	850	15	10	1030
Future Vol, veh/h	35	25	850	15	10	1030
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	-	-	-	275	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	38	27	924	16	11	1120
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1514	470	0	0	940	0
Stage 1	932	-	-	-	-	-
Stage 2	582	-	-	-	-	-
Critical Hdwy	6.9	7	-	-	4.2	-
Critical Hdwy Stg 1	5.9	-	-	-	-	-
Critical Hdwy Stg 2	5.9	-	-	-	-	-
Follow-up Hdwy	3.55	3.35	-	-	2.25	-
Pot Cap-1 Maneuver	*107	*841	-	-	912	-
Stage 1	*524	-	-	-	-	-
Stage 2	*749	-	-	-	-	-
Platoon blocked, %		0	-	-	0	-
Mov Cap-1 Maneuver	*106	*841	-	-	912	-
Mov Cap-2 Maneuver	*327	-	-	-	-	-
Stage 1	*524	-	-	-	-	-
Stage 2	*740	-	-	-	-	-
Approach	WB		NB		SB	
HCM Control Delay, s/v	14.64		0		0.09	
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	438	912	-	
HCM Lane V/C Ratio	-	-	0.149	0.012	-	
HCM Control Delay (s/veh)	-	-	14.6	9	-	
HCM Lane LOS	-	-	B	A	-	
HCM 95th %tile Q(veh)	-	-	0.5	0	-	
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon





Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		↑↑		W	↑↑
Traffic Vol, veh/h	35	25	1020	40	30	790
Future Vol, veh/h	35	25	1020	40	30	790
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	-	-	-	275	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	38	27	1109	43	33	859

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1625	576	0	0	1152
Stage 1	1130	-	-	-	-
Stage 2	495	-	-	-	-
Critical Hdwy	6.9	7	-	-	4.2
Critical Hdwy Stg 1	5.9	-	-	-	-
Critical Hdwy Stg 2	5.9	-	-	-	-
Follow-up Hdwy	3.55	3.35	-	-	2.25
Pot Cap-1 Maneuver	*303	*786	-	-	778
Stage 1	*443	-	-	-	-
Stage 2	*808	-	-	-	-
Platoon blocked, %	0	0	-	-	0
Mov Cap-1 Maneuver	*290	*786	-	-	778
Mov Cap-2 Maneuver	*371	-	-	-	-
Stage 1	*443	-	-	-	-
Stage 2	*774	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v13.78		0	0.36
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	475	778
HCM Lane V/C Ratio	-	-	0.137	0.042
HCM Control Delay (s/veh)	-	-	13.8	9.8
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.5	0.1

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

Intersection						
Int Delay, s/veh	3.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	65	31	120	20	16	122
Future Vol, veh/h	65	31	120	20	16	122
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	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	71	34	130	22	17	133

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	309	141	0
Stage 1	141	-	-
Stage 2	167	-	-
Critical Hdwy	6.45	6.25	-
Critical Hdwy Stg 1	5.45	-	-
Critical Hdwy Stg 2	5.45	-	-
Follow-up Hdwy	3.545	3.345	-
Pot Cap-1 Maneuver	677	899	-
Stage 1	878	-	-
Stage 2	855	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	669	899	-
Mov Cap-2 Maneuver	669	-	-
Stage 1	878	-	-
Stage 2	844	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v10.76		0	0.88
HCM LOS	B		





Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	729	1410
HCM Lane V/C Ratio	-	-	0.143	0.012
HCM Control Delay (s/veh)	-	-	10.8	7.6
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.5	0

Intersection						
Int Delay, s/veh	2.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T		T	T
Traffic Vol, veh/h	47	22	208	46	34	182
Future Vol, veh/h	47	22	208	46	34	182
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	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	51	24	226	50	37	198

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	523	251	0	0	276
Stage 1	251	-	-	-	-
Stage 2	272	-	-	-	-
Critical Hdwy	6.45	6.25	-	-	4.15
Critical Hdwy Stg 1	5.45	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-
Follow-up Hdwy	3.545	3.345	-	-	2.245
Pot Cap-1 Maneuver	509	780	-	-	1270
Stage 1	784	-	-	-	-
Stage 2	767	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	494	780	-	-	1270
Mov Cap-2 Maneuver	494	-	-	-	-
Stage 1	784	-	-	-	-
Stage 2	745	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	12.42	0	1.25
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	560	1270
HCM Lane V/C Ratio	-	-	0.134	0.029
HCM Control Delay (s/veh)	-	-	12.4	7.9
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.5	0.1

Intersection						
Int Delay, s/veh	3.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	83	65	146	33	30	138
Future Vol, veh/h	83	65	146	33	30	138
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	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	90	71	159	36	33	150





Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	392	177	0	0	195
Stage 1	177	-	-	-	-
Stage 2	215	-	-	-	-
Critical Hdwy	6.45	6.25	-	-	4.15
Critical Hdwy Stg 1	5.45	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-
Follow-up Hdwy	3.545	3.345	-	-	2.245
Pot Cap-1 Maneuver	633	909	-	-	1376
Stage 1	874	-	-	-	-
Stage 2	815	-	-	-	-
Platoon blocked, %	0	0	-	-	0
Mov Cap-1 Maneuver	618	909	-	-	1376
Mov Cap-2 Maneuver	618	-	-	-	-
Stage 1	874	-	-	-	-
Stage 2	796	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v11.44		0	1.37
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	719	1376
HCM Lane V/C Ratio	-	-	0.224	0.024
HCM Control Delay (s/veh)	-	-	11.4	7.7
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.9	0.1

Intersection




Int Delay, s/veh 3




Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	58	46	230	56	71	211
Future Vol, veh/h	58	46	230	56	71	211
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	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	63	50	250	61	77	229

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	664	280	0
Stage 1	280	-	-
Stage 2	384	-	-
Critical Hdwy	6.45	6.25	-
Critical Hdwy Stg 1	5.45	-	-
Critical Hdwy Stg 2	5.45	-	-
Follow-up Hdwy	3.545	3.345	-
Pot Cap-1 Maneuver	435	816	-
Stage 1	793	-	-
Stage 2	686	-	-
Platoon blocked, %	0	0	-
Mov Cap-1 Maneuver	408	816	-
Mov Cap-2 Maneuver	408	-	-
Stage 1	793	-	-
Stage 2	643	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v13.75		0	2.04
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	524	1244
HCM Lane V/C Ratio	-	-	0.216	0.062
HCM Control Delay (s/veh)	-	-	13.7	8.1
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.8	0.2

Intersection						
Int Delay, s/veh	5.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	2	32	40	5	24	12
Future Vol, veh/h	2	32	40	5	24	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	2	35	43	5	26	13
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	37	0	112	20
Stage 1	-	-	-	-	20	-
Stage 2	-	-	-	-	92	-
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	-	-	1554	-	878	1050
Stage 1	-	-	-	-	995	-
Stage 2	-	-	-	-	924	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1554	-	853	1050
Mov Cap-2 Maneuver	-	-	-	-	853	-
Stage 1	-	-	-	-	995	-
Stage 2	-	-	-	-	898	-
Approach	EB		WB		NB	
HCM Control Delay, s/v	0		6.56		9.13	
HCM LOS	A					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	910	-	-	1550	-	
HCM Lane V/C Ratio	0.043	-	-	0.028	-	
HCM Control Delay (s/veh)	9.1	-	-	7.4	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-	

Intersection						
Int Delay, s/veh	6.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	6	30	28	3	30	46
Future Vol, veh/h	6	30	28	3	30	46
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	7	33	30	3	33	50
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	39	0	87	23
Stage 1	-	-	-	-	23	-
Stage 2	-	-	-	-	64	-
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	-	-	1552	-	907	1045
Stage 1	-	-	-	-	992	-
Stage 2	-	-	-	-	951	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1552	-	889	1045
Mov Cap-2 Maneuver	-	-	-	-	889	-
Stage 1	-	-	-	-	992	-
Stage 2	-	-	-	-	932	-
Approach	EB		WB		NB	
HCM Control Delay, s/v	0		6.65		9.02	
HCM LOS	A					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	977	-	-	1549	-	
HCM Lane V/C Ratio	0.085	-	-	0.02	-	
HCM Control Delay (s/veh)	9	-	-	7.4	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-	

Intersection												
Int Delay, s/veh	5.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	36	3	45	52	7	37	30	94	18	12	69	29
Future Vol, veh/h	36	3	45	52	7	37	30	94	18	12	69	29
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
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	39	3	49	57	8	40	33	102	20	13	75	32

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	288	304	91	280	310	112	107	0	0	122	0	0
Stage 1	117	117	-	177	177	-	-	-	-	-	-	-
Stage 2	171	187	-	103	133	-	-	-	-	-	-	-
Critical Hdwy	7.15	6.55	6.25	7.15	6.55	6.25	4.15	-	-	4.15	-	-
Critical Hdwy Stg 1	6.15	5.55	-	6.15	5.55	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.15	5.55	-	6.15	5.55	-	-	-	-	-	-	-
Follow-up Hdwy	3.545	4.045	3.345	3.545	4.045	3.345	2.245	-	-	2.245	-	-
Pot Cap-1 Maneuver	675	614	959	683	609	955	1466	-	-	1455	-	-
Stage 1	881	793	-	833	754	-	-	-	-	-	-	-
Stage 2	839	747	-	896	781	-	-	-	-	-	-	-
Platoon blocked, %	0	0		0	0	0		-	-	0	-	-
Mov Cap-1 Maneuver	617	594	959	624	589	955	1466	-	-	1455	-	-
Mov Cap-2 Maneuver	617	594	-	624	589	-	-	-	-	-	-	-
Stage 1	872	786	-	813	736	-	-	-	-	-	-	-
Stage 2	777	729	-	839	773	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v10.37		10.88	1.59	0.82
HCM LOS	B	B		







Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	368	-	-	761	716	185	-
HCM Lane V/C Ratio	0.022	-	-	0.12	0.146	0.009	-
HCM Control Delay (s/veh)	7.5	0	-	10.4	10.9	7.5	0
HCM Lane LOS	A	A	-	B	B	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.4	0.5	0	-







Intersection												
Int Delay, s/veh	4.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	46	8	35	30	5	20	36	87	53	38	107	39
Future Vol, veh/h	46	8	35	30	5	20	36	87	53	38	107	39
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
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	50	9	38	33	5	22	39	95	58	41	116	42







Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	396	451	138	405	443	123	159	0	0	152	0	0
Stage 1	220	220	-	202	202	-	-	-	-	-	-	-
Stage 2	176	230	-	203	241	-	-	-	-	-	-	-
Critical Hdwy	7.15	6.55	6.25	7.15	6.55	6.25	4.15	-	-	4.15	-	-
Critical Hdwy Stg 1	6.15	5.55	-	6.15	5.55	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.15	5.55	-	6.15	5.55	-	-	-	-	-	-	-
Follow-up Hdwy	3.545	4.045	3.345	3.545	4.045	3.345	2.245	-	-	2.245	-	-
Pot Cap-1 Maneuver	570	505	903	562	510	940	1403	-	-	1417	-	-
Stage 1	776	716	-	808	735	-	-	-	-	-	-	-
Stage 2	835	714	-	792	700	-	-	-	-	-	-	-
Platoon blocked, %	0	0		0	0	0		-	-	0	-	-
Mov Cap-1 Maneuver	517	474	903	496	479	940	1403	-	-	1417	-	-
Mov Cap-2 Maneuver	517	474	-	496	479	-	-	-	-	-	-	-
Stage 1	751	693	-	783	713	-	-	-	-	-	-	-
Stage 2	784	692	-	725	678	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v11.94		11.7	1.56	1.57
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	342	-	-	615	597	353	-
HCM Lane V/C Ratio	0.028	-	-	0.157	0.1	0.029	-
HCM Control Delay (s/veh)	7.6	0	-	11.9	11.7	7.6	0
HCM Lane LOS	A	A	-	B	B	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.6	0.3	0.1	-

Intersection						
Int Delay, s/veh	2.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	30	34	91	34	47	146
Future Vol, veh/h	30	34	91	34	47	146
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	100	-	275	275	-
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	2	2	2
Mvmt Flow	33	37	99	37	51	159
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	360	99	0	0	136	0
Stage 1	99	-	-	-	-	-
Stage 2	261	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	653	987	-	-	1457	-
Stage 1	941	-	-	-	-	-
Stage 2	783	-	-	-	-	-
Platoon blocked, %	1	1	-	-	1	-
Mov Cap-1 Maneuver	630	987	-	-	1457	-
Mov Cap-2 Maneuver	657	-	-	-	-	-
Stage 1	941	-	-	-	-	-
Stage 2	756	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s/v	9.7	0	1.8			
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 657 987 1457	-	-		
HCM Lane V/C Ratio	-	- 0.05 0.037 0.035	-	-		
HCM Control Delay (s/veh)	-	- 10.8 8.8 7.6	-	-		
HCM Lane LOS	-	- B A A	-	-		
HCM 95th %tile Q (veh)	-	- 0.2 0.1 0.1	-	-		







Intersection						
Int Delay, s/veh	4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	75	104	184	67	90	133
Future Vol, veh/h	75	104	184	67	90	133
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	100	-	275	275	-
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	2	2	2
Mvmt Flow	82	113	200	73	98	145
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	541	200	0	0	273	0
Stage 1	200	-	-	-	-	-
Stage 2	341	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	*530	*935	-	-	1312	-
Stage 1	*881	-	-	-	-	-
Stage 2	*720	-	-	-	-	-
Platoon blocked, %	1	1	-	-	1	-
Mov Cap-1 Maneuver	*491	*935	-	-	1312	-
Mov Cap-2 Maneuver	*558	-	-	-	-	-
Stage 1	*881	-	-	-	-	-
Stage 2	*666	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s/v	10.7	0		3.2		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	558	935	1312	-
HCM Lane V/C Ratio	-	-	0.146	0.121	0.075	-
HCM Control Delay (s/veh)	-	-	12.6	9.4	8	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q (veh)	-	-	0.5	0.4	0.2	-
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Intersection						
Int Delay, s/veh	3.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	35	39	51	36	49	116
Future Vol, veh/h	35	39	51	36	49	116
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	100	-	275	275	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	38	42	55	39	53	126

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	288	55	0
Stage 1	55	-	-
Stage 2	233	-	-
Critical Hdwy	6.45	6.25	-
Critical Hdwy Stg 1	5.45	-	-
Critical Hdwy Stg 2	5.45	-	-
Follow-up Hdwy	3.545	3.345	-
Pot Cap-1 Maneuver	698	1006	-
Stage 1	961	-	-
Stage 2	799	-	-
Platoon blocked, %	0	0	-
Mov Cap-1 Maneuver	673	1006	-
Mov Cap-2 Maneuver	681	-	-
Stage 1	961	-	-
Stage 2	770	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	9.62	0	2.23
HCM LOS	A		







Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT
Capacity (veh/h)	-	-	681	1006
HCM Lane V/C Ratio	-	-	0.056	0.042
HCM Control Delay (s/veh)	-	-	10.6	8.7
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1

Intersection						
Int Delay, s/veh	4.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	79	108	140	74	97	97
Future Vol, veh/h	79	108	140	74	97	97
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	100	-	275	275	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	86	117	152	80	105	105

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	468	152	0	0	233	0
Stage 1	152	-	-	-	-	-
Stage 2	316	-	-	-	-	-
Critical Hdwy	6.45	6.25	-	-	4.15	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	-	-	2.245	-
Pot Cap-1 Maneuver	564	937	-	-	1328	-
Stage 1	896	-	-	-	-	-
Stage 2	732	-	-	-	-	-
Platoon blocked, %	0	0	-	-	0	-
Mov Cap-1 Maneuver	520	937	-	-	1328	-
Mov Cap-2 Maneuver	574	-	-	-	-	-
Stage 1	896	-	-	-	-	-
Stage 2	674	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v10.65		0	3.97
HCM LOS	B		







Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT
Capacity (veh/h)	-	- 574 937 1328	-	-
HCM Lane V/C Ratio	-	- 0.15 0.125 0.079	-	-
HCM Control Delay (s/veh)	-	- 12.4 9.4 7.9	-	-
HCM Lane LOS	-	- B A A	-	-
HCM 95th %tile Q(veh)	-	- 0.5 0.4 0.3	-	-

Intersection						
Int Delay, s/veh	3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	35	39	64	36	49	136
Future Vol, veh/h	35	39	64	36	49	136
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	100	-	275	275	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	38	42	70	39	53	148

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	324	70	0	0	109
Stage 1	70	-	-	-	-
Stage 2	254	-	-	-	-
Critical Hdwy	6.45	6.25	-	-	4.15
Critical Hdwy Stg 1	5.45	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-
Follow-up Hdwy	3.545	3.345	-	-	2.245
Pot Cap-1 Maneuver	674	1007	-	-	1470
Stage 1	958	-	-	-	-
Stage 2	781	-	-	-	-
Platoon blocked, %	0	0	-	-	0
Mov Cap-1 Maneuver	649	1007	-	-	1470
Mov Cap-2 Maneuver	663	-	-	-	-
Stage 1	958	-	-	-	-
Stage 2	753	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	9.69	0	2
HCM LOS	A		







Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT
Capacity (veh/h)	-	- 663 1007	1470	-
HCM Lane V/C Ratio	-	- 0.057 0.042	0.036	-
HCM Control Delay (s/veh)	-	- 10.8 8.7	7.5	-
HCM Lane LOS	-	- B A	A	-
HCM 95th %tile Q(veh)	-	- 0.2 0.1	0.1	-







Intersection						
Int Delay, s/veh	4.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	79	108	168	73	96	118
Future Vol, veh/h	79	108	168	73	96	118
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	100	-	275	275	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	86	117	183	79	104	128







Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	520	183	0	0	262
Stage 1	183	-	-	-	-
Stage 2	337	-	-	-	-
Critical Hdwy	6.45	6.25	-	-	4.15
Critical Hdwy Stg 1	5.45	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-
Follow-up Hdwy	3.545	3.345	-	-	2.245
Pot Cap-1 Maneuver	525	899	-	-	1293
Stage 1	866	-	-	-	-
Stage 2	716	-	-	-	-
Platoon blocked, %	0	0	-	-	0
Mov Cap-1 Maneuver	482	899	-	-	1293
Mov Cap-2 Maneuver	551	-	-	-	-
Stage 1	866	-	-	-	-
Stage 2	659	-	-	-	-







Approach	WB	NB	SB
HCM Control Delay, s/v10.93		0	3.6
HCM LOS	B		







Minor Lane/Major Mvmt	NBT	NBRWBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	551	899	1293
HCM Lane V/C Ratio	-	-	0.156	0.131	0.081
HCM Control Delay (s/veh)	-	-	12.7	9.6	8
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.5	0.4	0.3







Intersection						
Int Delay, s/veh	1.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	46	43	435	39	62	574
Future Vol, veh/h	46	43	435	39	62	574
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	100	-	275	275	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	50	47	473	42	67	624
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	920	236	0	0	515	0
Stage 1	473	-	-	-	-	-
Stage 2	447	-	-	-	-	-
Critical Hdwy	6.9	7	-	-	4.2	-
Critical Hdwy Stg 1	5.9	-	-	-	-	-
Critical Hdwy Stg 2	5.9	-	-	-	-	-
Follow-up Hdwy	3.55	3.35	-	-	2.25	-
Pot Cap-1 Maneuver	495	*978	-	-	1155	-
Stage 1	713	-	-	-	-	-
Stage 2	825	-	-	-	-	-
Platoon blocked, %	0	0	-	-	0	-
Mov Cap-1 Maneuver	466	*978	-	-	1155	-
Mov Cap-2 Maneuver	551	-	-	-	-	-
Stage 1	713	-	-	-	-	-
Stage 2	777	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s/v10.58			0	0.81		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	551	978	1155	-
HCM Lane V/C Ratio	-	-	0.091	0.048	0.058	-
HCM Control Delay (s/veh)	-	-	12.2	8.9	8.3	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0.3	0.2	0.2	-
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Intersection						
Int Delay, s/veh	2.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	89	136	577	81	120	417
Future Vol, veh/h	89	136	577	81	120	417
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	100	-	275	275	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	97	148	627	88	130	453
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1115	314	0	0	715	0
Stage 1	627	-	-	-	-	-
Stage 2	488	-	-	-	-	-
Critical Hdwy	6.9	7	-	-	4.2	-
Critical Hdwy Stg 1	5.9	-	-	-	-	-
Critical Hdwy Stg 2	5.9	-	-	-	-	-
Follow-up Hdwy	3.55	3.35	-	-	2.25	-
Pot Cap-1 Maneuver	343	*932	-	-	1013	-
Stage 1	648	-	-	-	-	-
Stage 2	700	-	-	-	-	-
Platoon blocked, %	0	0	-	-	0	-
Mov Cap-1 Maneuver	299	*932	-	-	1013	-
Mov Cap-2 Maneuver	423	-	-	-	-	-
Stage 1	648	-	-	-	-	-
Stage 2	610	-	-	-	-	-
Approach	WB		NB		SB	
HCM Control Delay, s/v12.13			0		2.03	
HCM LOS	B					
Minor Lane/Major Mvmt		NBT	NBRWBLn1	WBLn2	SBL	SBT
Capacity (veh/h)		-	-	423 932	1013	-
HCM Lane V/C Ratio		-	-	0.229 0.159	0.129	-
HCM Control Delay (s/veh)		-	-	16 9.6	9.1	-
HCM Lane LOS		-	-	C A	A	-
HCM 95th %tile Q(veh)		-	-	0.9 0.6	0.4	-
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Intersection						
Int Delay, s/veh	1.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	46	43	547	39	62	660
Future Vol, veh/h	46	43	547	39	62	660
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	100	-	275	275	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	50	47	595	42	67	717
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1088	297	0	0	637	0
Stage 1	595	-	-	-	-	-
Stage 2	493	-	-	-	-	-
Critical Hdwy	6.9	7	-	-	4.2	-
Critical Hdwy Stg 1	5.9	-	-	-	-	-
Critical Hdwy Stg 2	5.9	-	-	-	-	-
Follow-up Hdwy	3.55	3.35	-	-	2.25	-
Pot Cap-1 Maneuver	458	*932	-	-	1096	-
Stage 1	677	-	-	-	-	-
Stage 2	823	-	-	-	-	-
Platoon blocked, %	0	0	-	-	0	-
Mov Cap-1 Maneuver	430	*932	-	-	1096	-
Mov Cap-2 Maneuver	523	-	-	-	-	-
Stage 1	677	-	-	-	-	-
Stage 2	772	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s/v	10.9	0		0.73		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	523	932	1096	-
HCM Lane V/C Ratio	-	-	0.096	0.05	0.062	-
HCM Control Delay (s/veh)	-	-	12.6	9.1	8.5	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0.3	0.2	0.2	-
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon






Intersection						
Int Delay, s/veh	2.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	89	136	686	81	120	505
Future Vol, veh/h	89	136	686	81	120	505
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	100	-	275	275	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	97	148	746	88	130	549
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1281	373	0	0	834	0
Stage 1	746	-	-	-	-	-
Stage 2	535	-	-	-	-	-
Critical Hdwy	6.9	7	-	-	4.2	-
Critical Hdwy Stg 1	5.9	-	-	-	-	-
Critical Hdwy Stg 2	5.9	-	-	-	-	-
Follow-up Hdwy	3.55	3.35	-	-	2.25	-
Pot Cap-1 Maneuver	320	*880	-	-	966	-
Stage 1	624	-	-	-	-	-
Stage 2	701	-	-	-	-	-
Platoon blocked, %	0	0	-	-	0	-
Mov Cap-1 Maneuver	276	*880	-	-	966	-
Mov Cap-2 Maneuver	407	-	-	-	-	-
Stage 1	624	-	-	-	-	-
Stage 2	607	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s/v12.55		0		1.79		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	WBLn2	SBL	SBT	
Capacity (veh/h)	-	-	407 880	966	-	
HCM Lane V/C Ratio	-	-	0.238 0.168	0.135	-	
HCM Control Delay (s/veh)	-	-	16.6 9.9	9.3	-	
HCM Lane LOS	-	-	C A	A	-	
HCM 95th %tile Q(veh)	-	-	0.9 0.6	0.5	-	
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Intersection						
Int Delay, s/veh	1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	50	45	820	40	65	1005
Future Vol, veh/h	50	45	820	40	65	1005
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	100	-	275	275	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	54	49	891	43	71	1092
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1579	446	0	0	935	0
Stage 1	891	-	-	-	-	-
Stage 2	688	-	-	-	-	-
Critical Hdwy	6.9	7	-	-	4.2	-
Critical Hdwy Stg 1	5.9	-	-	-	-	-
Critical Hdwy Stg 2	5.9	-	-	-	-	-
Follow-up Hdwy	3.55	3.35	-	-	2.25	-
Pot Cap-1 Maneuver	*97	*862	-	-	890	-
Stage 1	*528	-	-	-	-	-
Stage 2	*749	-	-	-	-	-
Platoon blocked, %		0	-	-	0	-
Mov Cap-1 Maneuver	*89	*862	-	-	890	-
Mov Cap-2 Maneuver	*313	-	-	-	-	-
Stage 1	*528	-	-	-	-	-
Stage 2	*690	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s/v14.41		0		0.57		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	313	862	890	-
HCM Lane V/C Ratio	-	-	0.174	0.057	0.079	-
HCM Control Delay (s/veh)	-	-	18.9	9.4	9.4	-
HCM Lane LOS	-	-	C	A	A	-
HCM 95th %tile Q(veh)	-	-	0.6	0.2	0.3	-
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	95	150	905	85	120	715
Future Vol, veh/h	95	150	905	85	120	715
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	100	-	275	275	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	103	163	984	92	130	777
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1633	492	0	0	1076	0
Stage 1	984	-	-	-	-	-
Stage 2	649	-	-	-	-	-
Critical Hdwy	6.9	7	-	-	4.2	-
Critical Hdwy Stg 1	5.9	-	-	-	-	-
Critical Hdwy Stg 2	5.9	-	-	-	-	-
Follow-up Hdwy	3.55	3.35	-	-	2.25	-
Pot Cap-1 Maneuver	219	*833	-	-	793	-
Stage 1	495	-	-	-	-	-
Stage 2	716	-	-	-	-	-
Platoon blocked, %	0	0	-	-	0	-
Mov Cap-1 Maneuver	183	*833	-	-	793	-
Mov Cap-2 Maneuver	329	-	-	-	-	-
Stage 1	495	-	-	-	-	-
Stage 2	598	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s/v14.43		0		1.5		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	329	833	793	-
HCM Lane V/C Ratio	-	-	0.313	0.196	0.164	-
HCM Control Delay (s/veh)	-	-	20.8	10.4	10.4	-
HCM Lane LOS	-	-	C	B	B	-
HCM 95th %tile Q(veh)	-	-	1.3	0.7	0.6	-
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Intersection

Int Delay, s/veh 0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	9	253	443	5	13	24
Future Vol, veh/h	9	253	443	5	13	24
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	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	10	275	482	5	14	26






Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	487	0	0 780 485
Stage 1	-	-	- - 485 -
Stage 2	-	-	- - 295 -
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	1076	-	- - 368 582
Stage 1	-	-	- - 619 -
Stage 2	-	-	- - 806 -
Platoon blocked, %		-	- - 1
Mov Cap-1 Maneuver	1076	-	- - 365 582
Mov Cap-2 Maneuver	-	-	- - 478 -
Stage 1	-	-	- - 613 -
Stage 2	-	-	- - 806 -

Approach	EB	WB	SB
HCM Control Delay, s/v	0.3	0	12
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1076	-	-	-	478	582
HCM Lane V/C Ratio	0.009	-	-	-	0.03	0.045
HCM Control Delay (s/veh)	8.4	-	-	-	12.8	11.5
HCM Lane LOS	A	-	-	-	B	B
HCM 95th %tile Q (veh)	0	-	-	-	0.1	0.1

Intersection







Int Delay, s/veh 0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	28	452	349	15	9	18
Future Vol, veh/h	28	452	349	15	9	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	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	30	491	379	16	10	20

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	395	0	0 938 387
Stage 1	-	-	- - 387 -
Stage 2	-	-	- - 551 -
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	1164	-	- - 286 661
Stage 1	-	-	- - 686 -
Stage 2	-	-	- - 630 -
Platoon blocked, %		-	- - 1
Mov Cap-1 Maneuver	1164	-	- - 279 661
Mov Cap-2 Maneuver	-	-	- - 423 -
Stage 1	-	-	- - 668 -
Stage 2	-	-	- - 630 -







Approach	EB	WB	SB
HCM Control Delay, s/v	0.5	0	11.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1164	-	-	-	423	661
HCM Lane V/C Ratio	0.026	-	-	-	0.023	0.03
HCM Control Delay (s/veh)	8.2	-	-	-	13.7	10.6
HCM Lane LOS	A	-	-	-	B	B
HCM 95th %tile Q (veh)	0.1	-	-	-	0.1	0.1

Intersection						
Int Delay, s/veh	1.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	23	301	512	54	50	63
Future Vol, veh/h	23	301	512	54	50	63
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	150	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	25	327	557	59	54	68
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	616	0	-	0	934	557
Stage 1	-	-	-	-	557	-
Stage 2	-	-	-	-	377	-
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	964	-	-	-	286	530
Stage 1	-	-	-	-	574	-
Stage 2	-	-	-	-	754	-
Platoon blocked, %		-	-	-	1	
Mov Cap-1 Maneuver	964	-	-	-	279	530
Mov Cap-2 Maneuver	-	-	-	-	415	-
Stage 1	-	-	-	-	559	-
Stage 2	-	-	-	-	754	-
Approach	EB	WB		SB		
HCM Control Delay, s/v	0.6	0		13.8		
HCM LOS	B					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	964	-	-	-	415	530
HCM Lane V/C Ratio	0.026	-	-	-	0.131	0.129
HCM Control Delay (s/veh)	8.8	-	-	-	15	12.8
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q (veh)	0.1	-	-	-	0.4	0.4

Intersection

Int Delay, s/veh 3.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	67	537	440	108	117	47
Future Vol, veh/h	67	537	440	108	117	47
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	150	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	73	584	478	117	127	51



















Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	595	0	0 1208 478
Stage 1	-	-	- 478 -
Stage 2	-	-	- 730 -
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	981	-	- 159 587
Stage 1	-	-	- 624 -
Stage 2	-	-	- 490 -
Platoon blocked, %	-	-	- 1
Mov Cap-1 Maneuver	981	-	- 148 587
Mov Cap-2 Maneuver	-	-	- 309 -
Stage 1	-	-	- 578 -
Stage 2	-	-	- 490 -

Approach	EB	WB	SB
HCM Control Delay, s/v	1	0	20.9
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	981	-	-	-	309	587
HCM Lane V/C Ratio	0.074	-	-	-	0.412	0.087
HCM Control Delay (s/veh)	9	-	-	-	24.6	11.7
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q (veh)	0.2	-	-	-	1.9	0.3

Timings
16: Jewell Ave & Kewaunee St

2028 Total AM
09/20/2024

									
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	34	314	10	577	55	70	10	57	5
Future Volume (vph)	34	314	10	577	55	70	10	57	5
Turn Type	pm+pt	NA	pm+pt	NA	Perm	Perm	NA	Perm	NA
Protected Phases	7	4	3	8			2		6
Permitted Phases	4		8		8	2		6	
Detector Phase	7	4	3	8	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	9.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	13.0	47.0	13.0	47.0	47.0	30.0	30.0	30.0	30.0
Total Split (%)	14.4%	52.2%	14.4%	52.2%	52.2%	33.3%	33.3%	33.3%	33.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	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)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lag	Lag	Lead	Lead	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Max	None	C-Max	C-Max	Max	Max	Max	Max

Intersection Summary

Cycle Length: 90

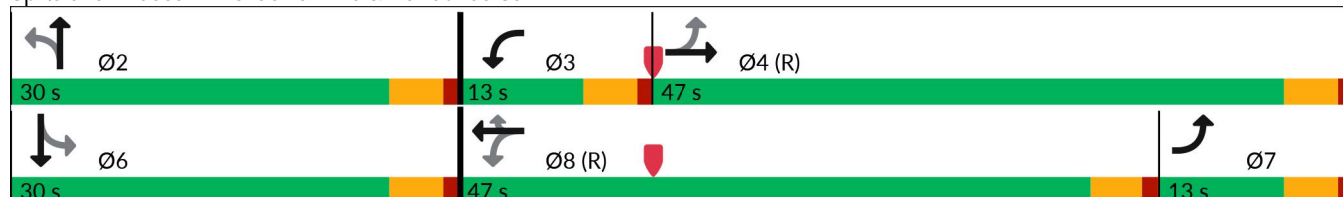
Actuated Cycle Length: 90

Offset: 8 (9%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green

Natural Cycle: 55

Control Type: Actuated-Coordinated





















Splits and Phases: 16: Jewell Ave & Kewaunee St



HCM 7th Signalized Intersection Summary



















16: Jewell Ave & Kewaunee St

2028 Total AM
09/20/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	314	5	10	577	55	70	10	30	57	5	79
Future Volume (veh/h)	34	314	5	10	577	55	70	10	30	57	5	79
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	37	341	5	11	627	60	76	11	33	62	5	86
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	490	1937	28	516	1638	731	385	114	342	430	24	418
Arrive On Green	0.19	1.00	1.00	0.01	0.47	0.47	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	1739	3500	51	1739	3469	1547	1274	402	1207	1330	86	1475
Grp Volume(v), veh/h	37	169	177	11	627	60	76	0	44	62	0	91
Grp Sat Flow(s),veh/h/ln	1739	1735	1817	1739	1735	1547	1274	0	1609	1330	0	1560
Q Serve(g_s), s	0.0	0.0	0.0	0.3	10.5	1.9	4.3	0.0	1.8	3.2	0.0	4.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.3	10.5	1.9	8.3	0.0	1.8	5.1	0.0	4.0
Prop In Lane	1.00		0.03	1.00		1.00	1.00		0.75	1.00		0.95
Lane Grp Cap(c), veh/h	490	960	1005	516	1638	731	385	0	456	430	0	442
V/C Ratio(X)	0.08	0.18	0.18	0.02	0.38	0.08	0.20	0.00	0.10	0.14	0.00	0.21
Avail Cap(c_a), veh/h	490	960	1005	657	1638	731	385	0	456	430	0	442
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)	0.96	0.96	0.96	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.8	0.0	0.0	14.0	15.3	13.0	27.7	0.0	23.8	25.6	0.0	24.5
Incr Delay (d2), s/veh	0.1	0.4	0.4	0.0	0.7	0.2	1.1	0.0	0.4	0.7	0.0	1.1
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	0.1	0.1	0.1	3.8	0.6	1.4	0.0	0.7	1.1	0.0	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	13.9	0.4	0.4	14.0	16.0	13.3	28.9	0.0	24.2	26.3	0.0	25.6
LnGrp LOS	B	A	A	B	B	B	C		C	C		C
Approach Vol, veh/h	383			698			120			153		
Approach Delay, s/veh	1.7			15.7			27.1			25.9		
Approach LOS	A			B			C			C		
Timer - Assigned Phs	2		3	4		6	7	8				
Phs Duration (G+Y+Rc), s	30.0		5.7	54.3		30.0	13.0	47.0				
Change Period (Y+Rc), s	4.5		4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s	25.5		8.5	42.5		25.5	8.5	42.5				
Max Q Clear Time (g_c+I1), s	10.3		2.3	2.0		7.1	2.0	12.5				
Green Ext Time (p_c), s	0.4		0.0	1.9		0.6	0.0	4.4				
Intersection Summary												
HCM 7th Control Delay, s/veh	13.9											
HCM 7th LOS	B											

Timings
16: Jewell Ave & Kewaunee St

2028 Total PM
09/20/2024

									
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	107	646	10	520	113	40	10	123	5
Future Volume (vph)	107	646	10	520	113	40	10	123	5
Turn Type	pm+pt	NA	pm+pt	NA	Perm	Perm	NA	Perm	NA
Protected Phases	7	4	3	8			2		6
Permitted Phases	4		8		8	2		6	
Detector Phase	7	4	3	8	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	9.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	16.0	47.0	12.0	43.0	43.0	31.0	31.0	31.0	31.0
Total Split (%)	17.8%	52.2%	13.3%	47.8%	47.8%	34.4%	34.4%	34.4%	34.4%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	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)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lag	Lag	Lead	Lead	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Max	None	C-Max	C-Max	Max	Max	Max	Max

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 48 (53%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green

Natural Cycle: 55






















Control Type: Actuated-Coordinated

Splits and Phases: 16: Jewell Ave & Kewaunee St





















HCM 7th Signalized Intersection Summary
16: Jewell Ave & Kewaunee St

2028 Total PM
09/20/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	107	646	15	10	520	113	40	10	10	123	5	60
Future Volume (veh/h)	107	646	15	10	520	113	40	10	10	123	5	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	116	702	16	11	565	123	43	11	11	134	5	65
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	519	1880	43	364	1484	662	420	247	247	467	33	428
Arrive On Green	0.26	1.00	1.00	0.01	0.43	0.43	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	1739	3467	79	1739	3469	1547	1299	838	838	1357	112	1453
Grp Volume(v), veh/h	116	351	367	11	565	123	43	0	22	134	0	70
Grp Sat Flow(s),veh/h/ln	1739	1735	1812	1739	1735	1547	1299	0	1675	1357	0	1564
Q Serve(g_s), s	0.0	0.0	0.0	0.3	10.0	4.4	2.3	0.0	0.8	7.1	0.0	3.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.3	10.0	4.4	5.3	0.0	0.8	7.9	0.0	3.0
Prop In Lane	1.00		0.04	1.00		1.00	1.00		0.50	1.00		0.93
Lane Grp Cap(c), veh/h	519	941	982	364	1484	662	420	0	493	467	0	461
V/C Ratio(X)	0.22	0.37	0.37	0.03	0.38	0.19	0.10	0.00	0.04	0.29	0.00	0.15
Avail Cap(c_a), veh/h	519	941	982	486	1484	662	420	0	493	467	0	461
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)	0.81	0.81	0.81	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.8	0.0	0.0	16.3	17.6	16.0	25.4	0.0	22.7	25.5	0.0	23.5
Incr Delay (d2), s/veh	0.2	0.9	0.9	0.0	0.7	0.6	0.5	0.0	0.2	1.5	0.0	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	1.3	0.2	0.2	0.1	3.8	1.5	0.7	0.0	0.4	2.4	0.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	15.0	0.9	0.9	16.4	18.3	16.6	25.9	0.0	22.9	27.1	0.0	24.1
LnGrp LOS	B	A	A	B	B	B	C		C	C		C
Approach Vol, veh/h	834			699			65			204		
Approach Delay, s/veh	2.9			18.0			24.9			26.1		
Approach LOS	A			B			C			C		
Timer - Assigned Phs	2		3	4		6	7	8				
Phs Duration (G+Y+Rc), s	31.0		5.7	53.3		31.0	16.0	43.0				
Change Period (Y+Rc), s	4.5		4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s	26.5		7.5	42.5		26.5	11.5	38.5				
Max Q Clear Time (g_c+I1), s	7.3		2.3	2.0		9.9	2.0	12.0				
Green Ext Time (p_c), s	0.2		0.0	4.4		0.7	0.2	4.0				
Intersection Summary												
HCM 7th Control Delay, s/veh				12.2								
HCM 7th LOS				B								

Timings
16: Jewell Ave & Kewaunee St

2029 Total AM
09/20/2024

									
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	43	563	10	829	62	80	10	68	5
Future Volume (vph)	43	563	10	829	62	80	10	68	5
Turn Type	pm+pt	NA	pm+pt	NA	Perm	Perm	NA	Perm	NA
Protected Phases	7	4	3	8			2		6
Permitted Phases	4		8		8	2		6	
Detector Phase	7	4	3	8	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	9.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	12.0	52.0	11.0	51.0	51.0	27.0	27.0	27.0	27.0
Total Split (%)	13.3%	57.8%	12.2%	56.7%	56.7%	30.0%	30.0%	30.0%	30.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	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)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lag	Lag	Lead	Lead	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Max	None	C-Max	C-Max	Max	Max	Max	Max

Intersection Summary

Cycle Length: 90

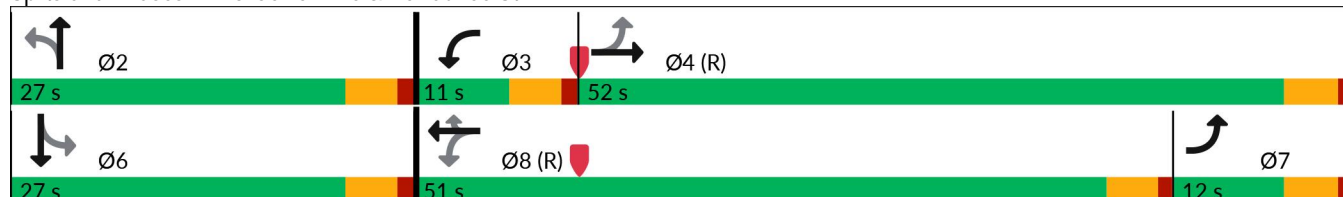
Actuated Cycle Length: 90

Offset: 89 (99%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green

Natural Cycle: 55






















Control Type: Actuated-Coordinated

Splits and Phases: 16: Jewell Ave & Kewaunee St





















HCM 7th Signalized Intersection Summary 16: Jewell Ave & Kewaunee St

2029 Total AM
09/20/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	563	5	10	829	62	80	10	35	68	5	94
Future Volume (veh/h)	43	563	5	10	829	62	80	10	35	68	5	94
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	47	612	5	11	901	67	87	11	38	74	5	102
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	469	2069	17	460	1792	799	325	90	311	380	18	371
Arrive On Green	0.17	1.00	1.00	0.03	1.00	1.00	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	1739	3527	29	1739	3469	1547	1256	360	1243	1324	73	1486
Grp Volume(v), veh/h	47	301	316	11	901	67	87	0	49	74	0	107
Grp Sat Flow(s),veh/h/ln	1739	1735	1821	1739	1735	1547	1256	0	1602	1324	0	1558
Q Serve(g_s), s	0.0	0.0	0.0	0.3	0.0	0.0	5.4	0.0	2.1	4.1	0.0	5.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.3	0.0	0.0	10.4	0.0	2.1	6.3	0.0	5.0
Prop In Lane	1.00		0.02	1.00		1.00	1.00		0.78	1.00		0.95
Lane Grp Cap(c), veh/h	469	1018	1068	460	1792	799	325	0	401	380	0	390
V/C Ratio(X)	0.10	0.30	0.30	0.02	0.50	0.08	0.27	0.00	0.12	0.19	0.00	0.27
Avail Cap(c_a), veh/h	469	1018	1068	562	1792	799	325	0	401	380	0	390
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.97	0.97	0.97	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.4	0.0	0.0	11.7	0.0	0.0	31.4	0.0	26.1	28.5	0.0	27.2
Incr Delay (d2), s/veh	0.1	0.7	0.7	0.0	1.0	0.2	2.0	0.0	0.6	1.1	0.0	1.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.2	0.2	0.1	0.3	0.0	1.8	0.0	0.9	1.4	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	10.5	0.7	0.7	11.7	1.0	0.2	33.4	0.0	26.7	29.7	0.0	28.9
LnGrp LOS	B	A	A	B	A	A	C		C	C		C
Approach Vol, veh/h	664			979			136			181		
Approach Delay, s/veh	1.4			1.1			31.0			29.2		
Approach LOS	A			A			C			C		
Timer - Assigned Phs	2		3	4		6	7	8				
Phs Duration (G+Y+Rc), s	27.0		5.7	57.3		27.0	12.0	51.0				
Change Period (Y+Rc), s	4.5		4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s	22.5		6.5	47.5		22.5	7.5	46.5				
Max Q Clear Time (g_c+I1), s	12.4		2.3	2.0		8.3	2.0	2.0				
Green Ext Time (p_c), s	0.3		0.0	3.7		0.7	0.0	7.2				
Intersection Summary												
HCM 7th Control Delay, s/veh				5.9								
HCM 7th LOS				A								

Timings
16: Jewell Ave & Kewaunee St

2029 Total PM
09/20/2024

									
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	122	830	10	683	127	55	10	132	5
Future Volume (vph)	122	830	10	683	127	55	10	132	5
Turn Type	pm+pt	NA	pm+pt	NA	Perm	Perm	NA	Perm	NA
Protected Phases	7	4	3	8			2		6
Permitted Phases	4		8		8	2		6	
Detector Phase	7	4	3	8	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	9.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	17.0	50.0	11.0	44.0	44.0	29.0	29.0	29.0	29.0
Total Split (%)	18.9%	55.6%	12.2%	48.9%	48.9%	32.2%	32.2%	32.2%	32.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	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)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lag	Lag	Lead	Lead	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Max	None	C-Max	C-Max	Max	Max	Max	Max

Intersection Summary

Cycle Length: 90

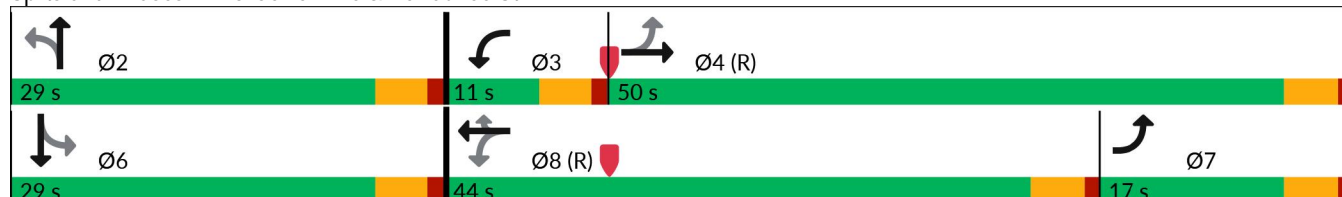
Actuated Cycle Length: 90

Offset: 83 (92%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated





















Splits and Phases: 16: Jewell Ave & Kewaunee St



HCM 7th Signalized Intersection Summary



















16: Jewell Ave & Kewaunee St

2029 Total PM
09/20/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	122	830	20	10	683	127	55	10	25	132	5	73
Future Volume (veh/h)	122	830	20	10	683	127	55	10	25	132	5	73
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	133	902	22	11	742	138	60	11	27	143	5	79
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	501	1953	48	325	1523	679	376	128	313	421	25	400
Arrive On Green	0.28	1.00	1.00	0.02	0.58	0.58	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	1739	3461	84	1739	3469	1547	1283	469	1150	1337	93	1469
Grp Volume(v), veh/h	133	452	472	11	742	138	60	0	38	143	0	84
Grp Sat Flow(s),veh/h/ln	1739	1735	1811	1739	1735	1547	1283	0	1619	1337	0	1562
Q Serve(g_s), s	0.0	0.0	0.0	0.3	11.2	3.8	3.4	0.0	1.6	8.0	0.0	3.7
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.3	11.2	3.8	7.1	0.0	1.6	9.6	0.0	3.7
Prop In Lane	1.00		0.05	1.00		1.00	1.00		0.71	1.00		0.94
Lane Grp Cap(c), veh/h	501	979	1022	325	1523	679	376	0	441	421	0	425
V/C Ratio(X)	0.27	0.46	0.46	0.03	0.49	0.20	0.16	0.00	0.09	0.34	0.00	0.20
Avail Cap(c_a), veh/h	501	979	1022	427	1523	679	376	0	441	421	0	425
HCM Platoon Ratio	2.00	2.00	2.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.92	0.92	0.92	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.9	0.0	0.0	15.7	12.8	11.3	27.9	0.0	24.4	28.0	0.0	25.2
Incr Delay (d2), s/veh	0.3	1.4	1.4	0.0	1.1	0.7	0.9	0.0	0.4	2.2	0.0	1.0
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	0.4	0.4	0.1	3.7	1.3	1.1	0.0	0.6	2.8	0.0	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	15.2	1.4	1.4	15.7	14.0	12.0	28.8	0.0	24.8	30.2	0.0	26.2
LnGrp LOS	B	A	A	B	B	B	C		C	C		C
Approach Vol, veh/h	1057			891			98			227		
Approach Delay, s/veh	3.1			13.7			27.3			28.7		
Approach LOS	A			B			C			C		
Timer - Assigned Phs		2	3	4	6		7	8				
Phs Duration (G+Y+Rc), s		29.0	5.7	55.3	29.0		17.0	44.0				
Change Period (Y+Rc), s		4.5	4.5	4.5	4.5		4.5	4.5				
Max Green Setting (Gmax), s		24.5	6.5	45.5	24.5		12.5	39.5				
Max Q Clear Time (g_c+I1), s		9.1	2.3	2.0	11.6		2.0	13.2				
Green Ext Time (p_c), s		0.3	0.0	6.2	0.7		0.2	5.5				
Intersection Summary												
HCM 7th Control Delay, s/veh			10.9									
HCM 7th LOS			B									

Timings
16: Jewell Ave & Kewaunee St

2031 Total AM
09/20/2024

									
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	35	685	15	1057	37	90	11	50	5
Future Volume (vph)	35	685	15	1057	37	90	11	50	5
Turn Type	pm+pt	NA	pm+pt	NA	Perm	Perm	NA	Perm	NA
Protected Phases	7	4	3	8			2		6
Permitted Phases	4		8		8	2		6	
Detector Phase	7	4	3	8	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	9.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	10.0	55.0	10.0	55.0	55.0	25.0	25.0	25.0	25.0
Total Split (%)	11.1%	61.1%	11.1%	61.1%	61.1%	27.8%	27.8%	27.8%	27.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	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)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lag	Lag	Lead	Lead	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Max	None	C-Max	C-Max	None	None	Max	Max

Intersection Summary

Cycle Length: 90

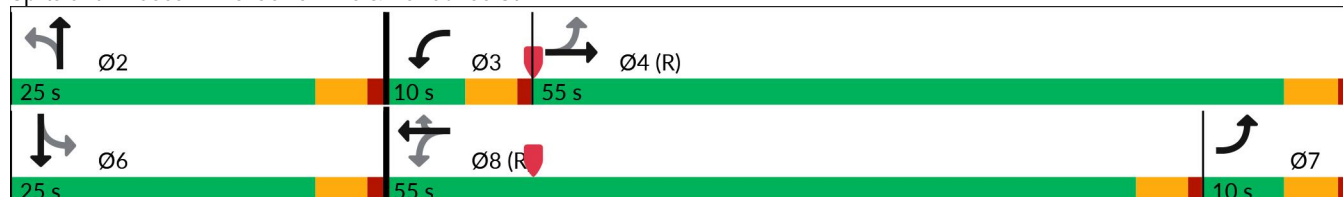
Actuated Cycle Length: 90

Offset: 32 (36%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green

Natural Cycle: 60





















Control Type: Actuated-Coordinated

Splits and Phases: 16: Jewell Ave & Kewaunee St





















HCM 7th Signalized Intersection Summary
16: Jewell Ave & Kewaunee St

2031 Total AM
09/20/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	685	5	15	1057	37	90	11	40	50	5	53
Future Volume (veh/h)	35	685	5	15	1057	37	90	11	40	50	5	53
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	38	745	5	16	1149	40	98	12	43	54	5	4
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	403	2133	14	454	1947	868	387	80	285	344	214	171
Arrive On Green	0.12	1.00	1.00	0.04	1.00	1.00	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	1739	3533	24	1739	3469	1547	1373	349	1251	1317	939	751
Grp Volume(v), veh/h	38	366	384	16	1149	40	98	0	55	54	0	9
Grp Sat Flow(s),veh/h/ln	1739	1735	1822	1739	1735	1547	1373	0	1601	1317	0	1691
Q Serve(g_s), s	0.0	0.0	0.0	0.4	0.0	0.0	5.4	0.0	2.5	3.1	0.0	0.4
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.4	0.0	0.0	5.7	0.0	2.5	5.6	0.0	0.4
Prop In Lane	1.00		0.01	1.00		1.00	1.00		0.78	1.00		0.44
Lane Grp Cap(c), veh/h	403	1048	1100	454	1947	868	387	0	365	344	0	385
V/C Ratio(X)	0.09	0.35	0.35	0.04	0.59	0.05	0.25	0.00	0.15	0.16	0.00	0.02
Avail Cap(c_a), veh/h	403	1048	1100	529	1947	868	387	0	365	344	0	385
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.0	0.0	0.0	9.7	0.0	0.0	29.2	0.0	27.8	30.0	0.0	27.0
Incr Delay (d2), s/veh	0.1	0.9	0.8	0.0	1.3	0.1	0.3	0.0	0.2	1.0	0.0	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.3	0.3	0.1	0.4	0.0	1.8	0.0	1.0	1.1	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	10.1	0.9	0.8	9.8	1.3	0.1	29.5	0.0	28.0	31.0	0.0	27.1
LnGrp LOS	B	A	A	A	A	A	C		C	C		C
Approach Vol, veh/h	788			1205			153			63		
Approach Delay, s/veh	1.3			1.4			29.0			30.4		
Approach LOS	A			A			C			C		
Timer - Assigned Phs	2		3	4		6	7	8				
Phs Duration (G+Y+Rc), s	25.0		6.1	58.9		25.0	10.0	55.0				
Change Period (Y+Rc), s	4.5		4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s	20.5		5.5	50.5		20.5	5.5	50.5				
Max Q Clear Time (g_c+I1), s	7.7		2.4	2.0		7.6	2.0	2.0				
Green Ext Time (p_c), s	0.4		0.0	4.7		0.1	0.0	10.1				
Intersection Summary												
HCM 7th Control Delay, s/veh				4.1								
HCM 7th LOS				A								

Timings
16: Jewell Ave & Kewaunee St

2031 Total PM
09/20/2024

									
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	82	931	15	815	75	65	12	75	8
Future Volume (vph)	82	931	15	815	75	65	12	75	8
Turn Type	pm+pt	NA	pm+pt	NA	Perm	Perm	NA	Perm	NA
Protected Phases	7	4	3	8			2		6
Permitted Phases	4		8		8	2		6	
Detector Phase	7	4	3	8	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	9.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	13.0	53.0	11.0	51.0	51.0	26.0	26.0	26.0	26.0
Total Split (%)	14.4%	58.9%	12.2%	56.7%	56.7%	28.9%	28.9%	28.9%	28.9%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	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)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lag	Lag	Lead	Lead	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Max	None	C-Max	C-Max	None	None	Max	Max

Intersection Summary

Cycle Length: 90

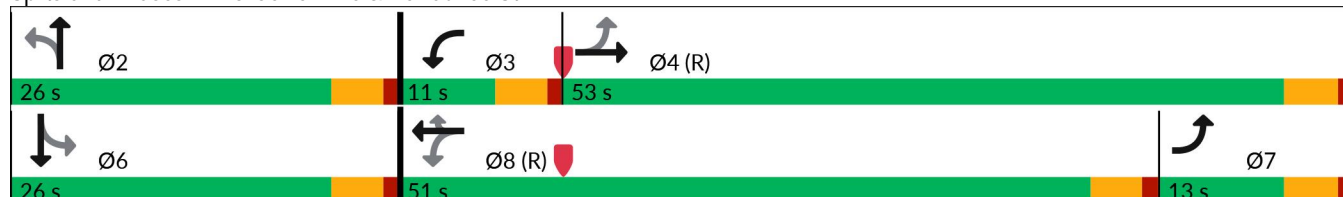
Actuated Cycle Length: 90

Offset: 36 (40%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green

Natural Cycle: 60






















Control Type: Actuated-Coordinated

Splits and Phases: 16: Jewell Ave & Kewaunee St



HCM 7th Signalized Intersection Summary
16: Jewell Ave & Kewaunee St

2031 Total PM
09/20/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	82	931	30	15	815	75	65	12	25	75	8	53
Future Volume (veh/h)	82	931	30	15	815	75	65	12	25	75	8	53
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	89	1012	33	16	886	82	71	13	27	82	9	4
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	456	2032	66	348	1792	799	399	126	263	373	286	127
Arrive On Green	0.19	1.00	1.00	0.02	0.69	0.69	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1739	3429	112	1739	3469	1547	1368	529	1099	1335	1198	532
Grp Volume(v), veh/h	89	512	533	16	886	82	71	0	40	82	0	13
Grp Sat Flow(s),veh/h/ln	1739	1735	1806	1739	1735	1547	1368	0	1628	1335	0	1730
Q Serve(g_s), s	0.0	0.0	0.0	0.4	10.9	1.6	3.8	0.0	1.7	4.6	0.0	0.5
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.4	10.9	1.6	4.3	0.0	1.7	6.3	0.0	0.5
Prop In Lane	1.00		0.06	1.00		1.00	1.00		0.68	1.00		0.31
Lane Grp Cap(c), veh/h	456	1028	1070	348	1792	799	399	0	389	373	0	413
V/C Ratio(X)	0.20	0.50	0.50	0.05	0.49	0.10	0.18	0.00	0.10	0.22	0.00	0.03
Avail Cap(c_a), veh/h	456	1028	1070	442	1792	799	399	0	389	373	0	413
HCM Platoon Ratio	2.00	2.00	2.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	0.88	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.3	0.0	0.0	11.8	8.5	7.1	27.9	0.0	26.7	29.2	0.0	26.3
Incr Delay (d2), s/veh	0.2	1.5	1.5	0.1	1.0	0.3	0.2	0.0	0.1	1.4	0.0	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.4	0.4	0.2	3.2	0.5	1.2	0.0	0.7	1.6	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	13.5	1.5	1.5	11.9	9.5	7.3	28.1	0.0	26.8	30.5	0.0	26.4
LnGrp LOS	B	A	A	B	A	A	C		C	C		C
Approach Vol, veh/h	1134			984			111			95		
Approach Delay, s/veh	2.4			9.3			27.7			30.0		
Approach LOS	A			A			C			C		
Timer - Assigned Phs	2		3	4		6	7	8				
Phs Duration (G+Y+Rc), s	26.0		6.1	57.9		26.0	13.0	51.0				
Change Period (Y+Rc), s	4.5		4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s	21.5		6.5	48.5		21.5	8.5	46.5				
Max Q Clear Time (g_c+I1), s	6.3		2.4	2.0		8.3	2.0	12.9				
Green Ext Time (p_c), s	0.3		0.0	7.5		0.2	0.1	6.8				
Intersection Summary												
HCM 7th Control Delay, s/veh				7.7								
HCM 7th LOS				A								

Timings
16: Jewell Ave & Kewaunee St

2033 Total AM
09/20/2024



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	49	836	15	1361	52	150	13	68	7
Future Volume (vph)	49	836	15	1361	52	150	13	68	7
Turn Type	pm+pt	NA	pm+pt	NA	Perm	Perm	NA	Perm	NA
Protected Phases	7	4	3	8			2		6
Permitted Phases	4		8		8	2		6	
Detector Phase	7	4	3	8	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	9.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	10.0	56.5	9.5	56.0	56.0	24.0	24.0	24.0	24.0
Total Split (%)	11.1%	62.8%	10.6%	62.2%	62.2%	26.7%	26.7%	26.7%	26.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	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)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lag	Lag	Lead	Lead	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Max	None	C-Max	C-Max	None	None	Max	Max

Intersection Summary

Cycle Length: 90

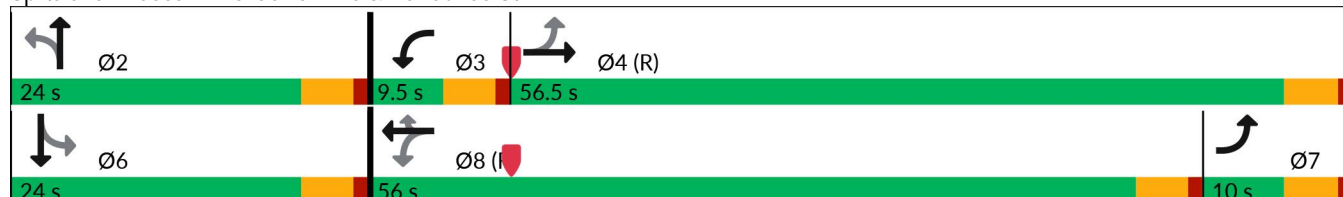
Actuated Cycle Length: 90

Offset: 40 (44%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green

Natural Cycle: 70






















Control Type: Actuated-Coordinated

Splits and Phases: 16: Jewell Ave & Kewaunee St





















HCM 7th Signalized Intersection Summary
16: Jewell Ave & Kewaunee St

2033 Total AM
09/20/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	49	836	8	15	1361	52	150	13	50	68	7	75
Future Volume (veh/h)	49	836	8	15	1361	52	150	13	50	68	7	75
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	53	909	9	16	1479	57	163	14	32	74	8	28
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	263	2164	21	411	1985	885	346	107	245	337	77	270
Arrive On Green	0.12	1.00	1.00	0.02	0.57	0.57	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	1739	3519	35	1739	3469	1547	1340	494	1129	1327	356	1246
Grp Volume(v), veh/h	53	448	470	16	1479	57	163	0	46	74	0	36
Grp Sat Flow(s),veh/h/ln	1739	1735	1820	1739	1735	1547	1340	0	1623	1327	0	1602
Q Serve(g_s), s	0.0	0.0	0.0	0.4	28.6	1.5	10.0	0.0	2.1	4.3	0.0	1.6
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.4	28.6	1.5	11.6	0.0	2.1	6.3	0.0	1.6
Prop In Lane	1.00		0.02	1.00		1.00	1.00		0.70	1.00		0.78
Lane Grp Cap(c), veh/h	263	1067	1119	411	1985	885	346	0	352	337	0	347
V/C Ratio(X)	0.20	0.42	0.42	0.04	0.75	0.06	0.47	0.00	0.13	0.22	0.00	0.10
Avail Cap(c_a), veh/h	263	1067	1119	476	1985	885	346	0	352	337	0	347
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)	0.91	0.91	0.91	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	24.7	0.0	0.0	9.4	14.4	8.5	32.9	0.0	28.4	31.0	0.0	28.2
Incr Delay (d2), s/veh	0.3	1.1	1.1	0.0	2.6	0.1	1.0	0.0	0.2	1.5	0.0	0.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.3	0.3	0.1	9.9	0.5	3.3	0.0	0.8	1.5	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	25.1	1.1	1.1	9.5	16.9	8.7	33.9	0.0	28.6	32.5	0.0	28.8
LnGrp LOS	C	A	A	A	B	A	C		C	C		C
Approach Vol, veh/h	971			1552			209			110		
Approach Delay, s/veh	2.4			16.6			32.7			31.3		
Approach LOS	A			B			C			C		
Timer - Assigned Phs	2		3	4		6	7	8				
Phs Duration (G+Y+Rc), s	24.0		6.1	59.9		24.0	10.0	56.0				
Change Period (Y+Rc), s	4.5		4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s	19.5		5.0	52.0		19.5	5.5	51.5				
Max Q Clear Time (g_c+I1), s	13.6		2.4	2.0		8.3	2.0	30.6				
Green Ext Time (p_c), s	0.3		0.0	6.2		0.2	0.0	11.0				
Intersection Summary												
HCM 7th Control Delay, s/veh	13.5											
HCM 7th LOS	B											

Timings
16: Jewell Ave & Kewaunee St

2033 Total PM
09/20/2024

									
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	106	1077	15	1102	90	110	12	85	8
Future Volume (vph)	106	1077	15	1102	90	110	12	85	8
Turn Type	pm+pt	NA	pm+pt	NA	Perm	Perm	NA	Perm	NA
Protected Phases	7	4	3	8			2		6
Permitted Phases	4		8		8	2		6	
Detector Phase	7	4	3	8	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	9.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	14.0	56.0	10.0	52.0	52.0	24.0	24.0	24.0	24.0
Total Split (%)	15.6%	62.2%	11.1%	57.8%	57.8%	26.7%	26.7%	26.7%	26.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	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)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lag	Lag	Lead	Lead	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Max	None	C-Max	C-Max	None	None	Max	Max

Intersection Summary

Cycle Length: 90

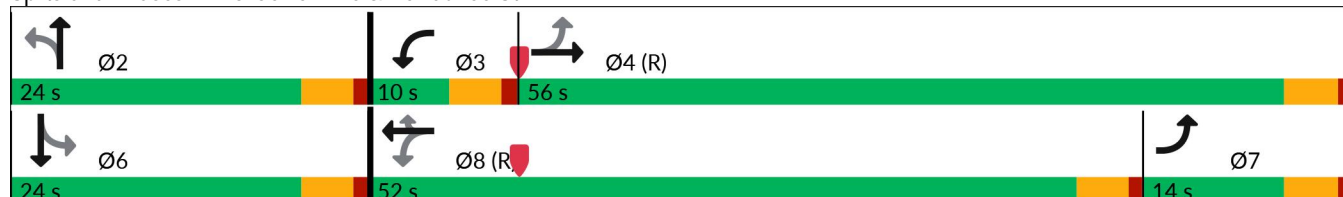
Actuated Cycle Length: 90

Offset: 56 (62%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green

Natural Cycle: 60





















Control Type: Actuated-Coordinated

Splits and Phases: 16: Jewell Ave & Kewaunee St



HCM 7th Signalized Intersection Summary
16: Jewell Ave & Kewaunee St

2033 Total PM
09/20/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	106	1077	35	15	1102	90	110	12	35	85	8	69
Future Volume (veh/h)	106	1077	35	15	1102	90	110	12	35	85	8	69
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	115	1171	38	16	1198	98	120	13	22	92	9	21
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	362	2109	68	319	1831	817	352	132	223	348	105	246
Arrive On Green	0.21	1.00	1.00	0.01	0.35	0.35	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	1739	3429	111	1739	3469	1547	1347	609	1031	1341	486	1135
Grp Volume(v), veh/h	115	592	617	16	1198	98	120	0	35	92	0	30
Grp Sat Flow(s),veh/h/ln	1739	1735	1806	1739	1735	1547	1347	0	1640	1341	0	1622
Q Serve(g_s), s	0.0	0.0	0.0	0.4	26.1	3.8	7.0	0.0	1.5	5.3	0.0	1.3
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.4	26.1	3.8	8.4	0.0	1.5	6.8	0.0	1.3
Prop In Lane	1.00		0.06	1.00		1.00	1.00		0.63	1.00		0.70
Lane Grp Cap(c), veh/h	362	1067	1111	319	1831	817	352	0	355	348	0	351
V/C Ratio(X)	0.32	0.56	0.56	0.05	0.65	0.12	0.34	0.00	0.10	0.26	0.00	0.09
Avail Cap(c_a), veh/h	362	1067	1111	394	1831	817	352	0	355	348	0	351
HCM Platoon Ratio	2.00	2.00	2.00	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.82	0.82	0.82	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.6	0.0	0.0	11.4	22.2	15.0	31.5	0.0	28.2	31.0	0.0	28.1
Incr Delay (d2), s/veh	0.4	1.7	1.6	0.1	1.8	0.3	0.6	0.0	0.1	1.9	0.0	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	1.9	0.5	0.5	0.2	11.6	1.4	2.3	0.0	0.6	1.9	0.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	24.0	1.7	1.6	11.5	24.0	15.3	32.0	0.0	28.3	32.8	0.0	28.6
LnGrp LOS	C	A	A	B	C	B	C		C	C		C
Approach Vol, veh/h	1324			1312			155			122		
Approach Delay, s/veh	3.6			23.2			31.2			31.8		
Approach LOS	A			C			C			C		
Timer - Assigned Phs	2		3	4	6		7	8				
Phs Duration (G+Y+Rc), s	24.0		6.1	59.9		24.0	14.0	52.0				
Change Period (Y+Rc), s	4.5		4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s	19.5		5.5	51.5		19.5	9.5	47.5				
Max Q Clear Time (g_c+I1), s	10.4		2.4	2.0		8.8	2.0	28.1				
Green Ext Time (p_c), s	0.3		0.0	11.3		0.3	0.1	9.3				
Intersection Summary												
HCM 7th Control Delay, s/veh				15.1								
HCM 7th LOS				B								

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↗
Traffic Vol, veh/h	0	395	691	2	0	21
Future Vol, veh/h	0	395	691	2	0	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	0	429	751	2	0	23
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	-	0	-	0	-	377
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.35
Pot Cap-1 Maneuver	0	-	-	-	0	*886
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		0
Mov Cap-1 Maneuver	-	-	-	-	-	*886
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB		SB		
HCM Control Delay, s/v	0	0		9.17		
HCM LOS	A					
Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1		
Capacity (veh/h)	-	-	-	886		
HCM Lane V/C Ratio	-	-	-	0.026		
HCM Control Delay (s/veh)	-	-	-	9.2		
HCM Lane LOS	-	-	-	A		
HCM 95th %tile Q(veh)	-	-	-	0.1		
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↗
Traffic Vol, veh/h	0	779	676	8	0	16
Future Vol, veh/h	0	779	676	8	0	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	0	847	735	9	0	17
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	-	0	-	0	-	372
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.35
Pot Cap-1 Maneuver	0	-	-	-	0	*909
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-	0
Mov Cap-1 Maneuver	-	-	-	-	-	*909
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB		SB		
HCM Control Delay, s/v	0	0		9.04		
HCM LOS	A					
Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1		
Capacity (veh/h)	-	-	-	909		
HCM Lane V/C Ratio	-	-	-	0.019		
HCM Control Delay (s/veh)	-	-	-	9		
HCM Lane LOS	-	-	-	A		
HCM 95th %tile Q(veh)	-	-	-	0.1		
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↗
Traffic Vol, veh/h	0	666	955	2	0	21
Future Vol, veh/h	0	666	955	2	0	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	0	724	1038	2	0	23
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	-	0	-	0	-	520
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.35
Pot Cap-1 Maneuver	0	-	-	-	0	*817
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		0
Mov Cap-1 Maneuver	-	-	-	-	-	*817
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB		SB		
HCM Control Delay, s/v	0	0		9.53		
HCM LOS	A					
Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1		
Capacity (veh/h)	-	-	-	817		
HCM Lane V/C Ratio	-	-	-	0.028		
HCM Control Delay (s/veh)	-	-	-	9.5		
HCM Lane LOS	-	-	-	A		
HCM 95th %tile Q(veh)	-	-	-	0.1		
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↗
Traffic Vol, veh/h	0	987	861	7	0	14
Future Vol, veh/h	0	987	861	7	0	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	0	1073	936	8	0	15
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	-	0	-	0	-	472
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.35
Pot Cap-1 Maneuver	0	-	-	-	0	*840
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		0
Mov Cap-1 Maneuver	-	-	-	-	-	*840
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB		SB		
HCM Control Delay, s/v	0	0		9.37		
HCM LOS				A		
Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1		
Capacity (veh/h)	-	-	-	840		
HCM Lane V/C Ratio	-	-	-	0.018		
HCM Control Delay (s/veh)	-	-	-	9.4		
HCM Lane LOS	-	-	-	A		
HCM 95th %tile Q(veh)	-	-	-	0.1		
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	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↗
Traffic Vol, veh/h	0	764	1083	8	0	23
Future Vol, veh/h	0	764	1083	8	0	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	0	830	1177	9	0	25
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	-	0	-	0	-	593
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.35
Pot Cap-1 Maneuver	0	-	-	-	0	441
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	441
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB		SB		
HCM Control Delay, s/v	0	0		13.64		
HCM LOS	B					
Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1		
Capacity (veh/h)	-	-	-	441		
HCM Lane V/C Ratio	-	-	-	0.057		
HCM Control Delay (s/veh)	-	-	-	13.6		
HCM Lane LOS	-	-	-	B		
HCM 95th %tile Q(veh)	-	-	-	0.2		

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Vol, veh/h	0	1036	898	20	0	17
Future Vol, veh/h	0	1036	898	20	0	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	0	1126	976	22	0	18

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	-	0	- 0 - 499
Stage 1	-	-	- - -
Stage 2	-	-	- - -
Critical Hdwy	-	-	- - 7
Critical Hdwy Stg 1	-	-	- - -
Critical Hdwy Stg 2	-	-	- - -
Follow-up Hdwy	-	-	- - 3.35
Pot Cap-1 Maneuver	0	-	- 0 509
Stage 1	0	-	- 0 -
Stage 2	0	-	- 0 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	- - 509
Mov Cap-2 Maneuver	-	-	- - -
Stage 1	-	-	- - -
Stage 2	-	-	- - -

Approach	EB	WB	SB
HCM Control Delay, s/v	0	0	12.34
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	509
HCM Lane V/C Ratio	-	-	-	0.036
HCM Control Delay (s/veh)	-	-	-	12.3
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.1

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↗
Traffic Vol, veh/h	0	955	1408	9	0	28
Future Vol, veh/h	0	955	1408	9	0	28
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	0	1038	1530	10	0	30
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	-	0	-	0	-	770
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.35
Pot Cap-1 Maneuver	0	-	-	-	0	*679
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		0
Mov Cap-1 Maneuver	-	-	-	-	-	*679
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB		SB		
HCM Control Delay, s/v	0	0		10.55		
HCM LOS				B		
Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1		
Capacity (veh/h)	-	-	-	679		
HCM Lane V/C Ratio	-	-	-	0.045		
HCM Control Delay (s/veh)	-	-	-	10.6		
HCM Lane LOS	-	-	-	B		
HCM 95th %tile Q(veh)	-	-	-	0.1		
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↗
Traffic Vol, veh/h	0	1191	1195	24	0	21
Future Vol, veh/h	0	1191	1195	24	0	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	0	1295	1299	26	0	23
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	-	0	-	0	-	663
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.35
Pot Cap-1 Maneuver	0	-	-	-	0	*739
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		0
Mov Cap-1 Maneuver	-	-	-	-	-	*739
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB		SB		
HCM Control Delay, s/v	0	0		10.03		
HCM LOS				B		
Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1		
Capacity (veh/h)	-	-	-	739		
HCM Lane V/C Ratio	-	-	-	0.031		
HCM Control Delay (s/veh)	-	-	-	10		
HCM Lane LOS	-	-	-	B		
HCM 95th %tile Q(veh)	-	-	-	0.1		
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↗
Traffic Vol, veh/h	0	1350	2205	10	0	30
Future Vol, veh/h	0	1350	2205	10	0	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	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	0	1467	2397	11	0	33
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	-	0	-	0	-	1204
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.35
Pot Cap-1 Maneuver	0	-	-	-	0	*448
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		1
Mov Cap-1 Maneuver	-	-	-	-	-	*448
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB		SB		
HCM Control Delay, s/v	0	0		13.66		
HCM LOS				B		
Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1		
Capacity (veh/h)	-	-	-	448		
HCM Lane V/C Ratio	-	-	-	0.073		
HCM Control Delay (s/veh)	-	-	-	13.7		
HCM Lane LOS	-	-	-	B		
HCM 95th %tile Q(veh)	-	-	-	0.2		
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↗
Traffic Vol, veh/h	0	1990	1680	25	0	25
Future Vol, veh/h	0	1990	1680	25	0	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	0	2163	1826	27	0	27
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	927
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.35
Pot Cap-1 Maneuver	0	-	-	-	0	*598
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		0
Mov Cap-1 Maneuver	-	-	-	-	-	*598
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB		SB		
HCM Control Delay, s/v	0	0		11.31		
HCM LOS	B					
Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1		
Capacity (veh/h)	-	-	-	598		
HCM Lane V/C Ratio	-	-	-	0.045		
HCM Control Delay (s/veh)	-	-	-	11.3		
HCM Lane LOS	-	-	-	B		
HCM 95th %tile Q(veh)	-	-	-	0.1		
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Intersection												
Int Delay, s/veh	1.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱↰		↰	↱↰		↰	↱		↰	↱	
Traffic Vol, veh/h	6	377	5	10	613	3	70	5	20	11	5	11
Future Vol, veh/h	6	377	5	10	613	3	70	5	20	11	5	11
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	225	-	-	225	-	-	150	-	-	150	-	-
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, %	5	5	5	5	5	5	5	5	5	5	5	5
Mvmt Flow	7	410	5	11	666	3	76	5	22	12	5	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	670	0	0	415	0	0	783	1117	208	910	1118	335
Stage 1	-	-	-	-	-	-	426	426	-	690	690	-
Stage 2	-	-	-	-	-	-	358	691	-	221	428	-
Critical Hdwy	4.2	-	-	4.2	-	-	7.6	6.6	7	7.6	6.6	7
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	2.25	-	-	2.25	-	-	3.55	4.05	3.35	3.55	4.05	3.35
Pot Cap-1 Maneuver	1097	-	-	1270	-	-	*396	248	*978	*312	248	*909
Stage 1	-	-	-	-	-	-	*733	681	-	*597	574	-
Stage 2	-	-	-	-	-	-	*858	573	-	*923	679	-
Platoon blocked, %	0	-	-	0	-	-	0	0	0	0	0	0
Mov Cap-1 Maneuver	1097	-	-	1270	-	-	*380	245	*978	*296	244	*909
Mov Cap-2 Maneuver	-	-	-	-	-	-	*525	390	-	*449	390	-
Stage 1	-	-	-	-	-	-	*728	677	-	*592	569	-
Stage 2	-	-	-	-	-	-	*831	568	-	*890	675	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.13	0.13	12.21	11.77
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	525	752	1097	-	-	1270	-	-	449	642
HCM Lane V/C Ratio	0.145	0.036	0.006	-	-	0.009	-	-	0.027	0.027
HCM Control Delay (s/veh)	13	10	8.3	-	-	7.9	-	-	13.2	10.8
HCM Lane LOS	B	A	A	-	-	A	-	-	B	B
HCM 95th %tile Q(veh)	0.5	0.1	0	-	-	0	-	-	0.1	0.1

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

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	20	744	15	10	626	9	50	5	10	8	5	8
Future Vol, veh/h	20	744	15	10	626	9	50	5	10	8	5	8
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	225	-	-	225	-	-	150	-	-	150	-	-
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, %	5	5	5	5	5	5	5	5	5	5	5	5
Mvmt Flow	22	809	16	11	680	10	54	5	11	9	5	9

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	690	0	0	825	0	0	1225	1572	413	1158	1576	345
Stage 1	-	-	-	-	-	-	860	860	-	707	707	-
Stage 2	-	-	-	-	-	-	365	712	-	451	868	-
Critical Hdwy	4.2	-	-	4.2	-	-	7.6	6.6	7	7.6	6.6	7
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	2.25	-	-	2.25	-	-	3.55	4.05	3.35	3.55	4.05	3.35
Pot Cap-1 Maneuver	1074	-	-	966	-	-	*207	135	*886	*237	134	*909
Stage 1	-	-	-	-	-	-	*483	486	-	*580	562	-
Stage 2	-	-	-	-	-	-	*858	558	-	*836	481	-
Platoon blocked, %	0	-	-	0	-	-	0	0	0	0	0	0
Mov Cap-1 Maneuver	1074	-	-	966	-	-	*195	131	*886	*223	130	*909
Mov Cap-2 Maneuver	-	-	-	-	-	-	*353	288	-	*401	288	-
Stage 1	-	-	-	-	-	-	*473	476	-	*574	555	-
Stage 2	-	-	-	-	-	-	*832	552	-	*800	472	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.22	0.14	15.91	13.11
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	353	524	1074	-	-	966	-	-	401	497
HCM Lane V/C Ratio	0.154	0.031	0.02	-	-	0.011	-	-	0.022	0.028
HCM Control Delay (s/veh)	17.1	12.1	8.4	-	-	8.8	-	-	14.2	12.4
HCM Lane LOS	C	B	A	-	-	A	-	-	B	B
HCM 95th %tile Q(veh)	0.5	0.1	0.1	-	-	0	-	-	0.1	0.1

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	6	655	5	10	872	3	75	5	25	11	5	11
Future Vol, veh/h	6	655	5	10	872	3	75	5	25	11	5	11
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	225	-	-	225	-	-	150	-	-	150	-	-
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, %	5	5	5	5	5	5	5	5	5	5	5	5
Mvmt Flow	7	712	5	11	948	3	82	5	27	12	5	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	951	0	0	717	0	0	1226	1701	359	1343	1702	476
Stage 1	-	-	-	-	-	-	728	728	-	971	971	-
Stage 2	-	-	-	-	-	-	498	973	-	372	730	-
Critical Hdwy	4.2	-	-	4.2	-	-	7.6	6.6	7	7.6	6.6	7
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	2.25	-	-	2.25	-	-	3.55	4.05	3.35	3.55	4.05	3.35
Pot Cap-1 Maneuver	903	-	-	1045	-	-	*294	128	*909	*225	128	*840
Stage 1	-	-	-	-	-	-	*561	548	-	*458	461	-
Stage 2	-	-	-	-	-	-	*792	460	-	*858	546	-
Platoon blocked, %	0	-	-	0	-	-	0	0	0	0	0	0
Mov Cap-1 Maneuver	903	-	-	1045	-	-	*280	126	*909	*211	126	*840
Mov Cap-2 Maneuver	-	-	-	-	-	-	*416	281	-	*350	281	-
Stage 1	-	-	-	-	-	-	*557	544	-	*453	456	-
Stage 2	-	-	-	-	-	-	*764	455	-	*818	542	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.08	0.1	14.32	13.6
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	416	663	903	-	-	1045	-	-	350	518
HCM Lane V/C Ratio	0.196	0.049	0.007	-	-	0.01	-	-	0.034	0.034
HCM Control Delay (s/veh)	15.8	10.7	9	-	-	8.5	-	-	15.7	12.2
HCM Lane LOS	C	B	A	-	-	A	-	-	C	B
HCM 95th %tile Q(veh)	0.7	0.2	0	-	-	0	-	-	0.1	0.1

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

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	17	950	20	10	806	8	55	5	15	7	5	7
Future Vol, veh/h	17	950	20	10	806	8	55	5	15	7	5	7
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	225	-	-	225	-	-	150	-	-	150	-	-
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, %	5	5	5	5	5	5	5	5	5	5	5	5
Mvmt Flow	18	1033	22	11	876	9	60	5	16	8	5	8
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	885	0	0	1054	0	0	1543	1987	527	1458	1993	442
Stage 1	-	-	-	-	-	-	1080	1080	-	902	902	-
Stage 2	-	-	-	-	-	-	463	907	-	556	1091	-
Critical Hdwy	4.2	-	-	4.2	-	-	7.6	6.6	7	7.6	6.6	7
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	2.25	-	-	2.25	-	-	3.55	4.05	3.35	3.55	4.05	3.35
Pot Cap-1 Maneuver	938	-	-	832	-	-	*142	74	*817	*173	73	*863
Stage 1	-	-	-	-	-	-	*404	417	-	*482	482	-
Stage 2	-	-	-	-	-	-	*814	479	-	*771	411	-
Platoon blocked, %	0	-	-	0	-	-	0	0	0	0	0	0
Mov Cap-1 Maneuver	938	-	-	832	-	-	*133	71	*817	*160	70	*863
Mov Cap-2 Maneuver	-	-	-	-	-	-	*291	229	-	*330	228	-
Stage 1	-	-	-	-	-	-	*396	409	-	*475	476	-
Stage 2	-	-	-	-	-	-	*787	473	-	*731	403	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	0.15			0.11			18.4			15		
HCM LOS							C			B		
Minor Lane/Major Mvmt	NBLn1 NBLn2		EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2		
Capacity (veh/h)	291	497	938	-	-	832	-	-	330	399		
HCM Lane V/C Ratio	0.205	0.044	0.02	-	-	0.013	-	-	0.023	0.033		
HCM Control Delay (s/veh)	20.5	12.6	8.9	-	-	9.4	-	-	16.2	14.3		
HCM Lane LOS	C	B	A	-	-	A	-	-	C	B		
HCM 95th %tile Q(veh)	0.8	0.1	0.1	-	-	0	-	-	0.1	0.1		
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s			+: Computation Not Defined				*: All major volume in platoon			









Intersection												
Int Delay, s/veh	1.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↱		↰	↱	
Traffic Vol, veh/h	16	742	5	15	955	7	101	5	30	25	5	31
Future Vol, veh/h	16	742	5	15	955	7	101	5	30	25	5	31
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	225	-	-	225	-	-	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, %	5	5	5	5	5	5	5	5	5	5	5	5
Mvmt Flow	17	807	5	16	1038	8	110	5	33	27	5	34

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1046	0	0	812	0	0	1398	1922	406	1515	1921	523
Stage 1	-	-	-	-	-	-	844	844	-	1074	1074	-
Stage 2	-	-	-	-	-	-	554	1078	-	441	847	-
Critical Hdwy	4.2	-	-	4.2	-	-	7.6	6.6	7	7.6	6.6	7
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	2.25	-	-	2.25	-	-	3.55	4.05	3.35	3.55	4.05	3.35
Pot Cap-1 Maneuver	850	-	-	989	-	-	*236	90	*880	*177	90	*809
Stage 1	-	-	-	-	-	-	*505	502	-	*418	427	-
Stage 2	-	-	-	-	-	-	*764	424	-	*830	500	-
Platoon blocked, %	0	-	-	0	-	-	0	0	0	0	0	0
Mov Cap-1 Maneuver	850	-	-	989	-	-	*213	86	*880	*161	87	*809
Mov Cap-2 Maneuver	-	-	-	-	-	-	*356	240	-	*308	242	-
Stage 1	-	-	-	-	-	-	*495	492	-	*411	420	-
Stage 2	-	-	-	-	-	-	*711	417	-	*774	490	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	0.2			0.13			17.34			13.97		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	356	637	850	-	-	989	-	-	308	611
HCM Lane V/C Ratio	0.308	0.06	0.02	-	-	0.016	-	-	0.088	0.064
HCM Control Delay (s/veh)	19.5	11	9.3	-	-	8.7	-	-	17.8	11.3
HCM Lane LOS	C	B	A	-	-	A	-	-	C	B
HCM 95th %tile Q(veh)	1.3	0.2	0.1	-	-	0.1	-	-	0.3	0.2

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

Intersection												
Int Delay, s/veh	1.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	48	960	33	15	829	21	77	5	25	19	5	22
Future Vol, veh/h	48	960	33	15	829	21	77	5	25	19	5	22
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	225	-	-	225	-	-	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, %	5	5	5	5	5	5	5	5	5	5	5	5
Mvmt Flow	52	1043	36	16	901	23	84	5	27	21	5	24
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	924	0	0	1079	0	0	1652	2122	540	1574	2129	462
Stage 1	-	-	-	-	-	-	1166	1166	-	945	945	-
Stage 2	-	-	-	-	-	-	486	957	-	629	1184	-
Critical Hdwy	4.2	-	-	4.2	-	-	7.6	6.6	7	7.6	6.6	7
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	2.25	-	-	2.25	-	-	3.55	4.05	3.35	3.55	4.05	3.35
Pot Cap-1 Maneuver	908	-	-	818	-	-	*104	55	*809	*124	54	*856
Stage 1	-	-	-	-	-	-	*354	376	-	*456	462	-
Stage 2	-	-	-	-	-	-	*808	455	-	*764	367	-
Platoon blocked, %	0	-	-	0	-	-	0	0	0	0	0	0
Mov Cap-1 Maneuver	908	-	-	818	-	-	*91	51	*809	*108	50	*856
Mov Cap-2 Maneuver	-	-	-	-	-	-	*242	193	-	*291	196	-
Stage 1	-	-	-	-	-	-	*333	354	-	*447	453	-
Stage 2	-	-	-	-	-	-	*761	446	-	*685	345	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	0.42			0.16			23.26			14.73		
HCM LOS							C			B		
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2		
Capacity (veh/h)	242	529	908	-	-	818	-	-	291	528		
HCM Lane V/C Ratio	0.346	0.062	0.057	-	-	0.02	-	-	0.071	0.056		
HCM Control Delay (s/veh)	27.5	12.3	9.2	-	-	9.5	-	-	18.3	12.2		
HCM Lane LOS	D	B	A	-	-	A	-	-	C	B		
HCM 95th %tile Q(veh)	1.5	0.2	0.2	-	-	0.1	-	-	0.2	0.2		
Notes												
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon												

Timings 18: Jewell Ave & Louisiana Pkwy

2031 Total AM
09/20/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	16	742	15	955	101	5	25	5
Future Volume (vph)	16	742	15	955	101	5	25	5
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	9.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	11.0	52.0	11.0	52.0	27.0	27.0	27.0	27.0
Total Split (%)	12.2%	57.8%	12.2%	57.8%	30.0%	30.0%	30.0%	30.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Max	None	C-Max	Max	Max	Max	Max

Intersection Summary

Cycle Length: 90

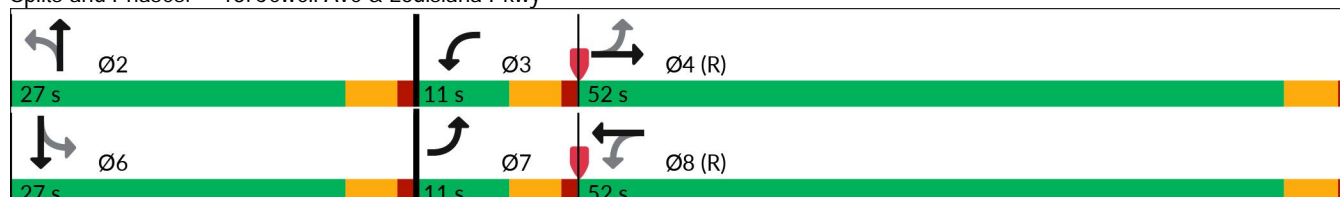
Actuated Cycle Length: 90

Offset: 89 (99%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green

Natural Cycle: 60




















Control Type: Actuated-Coordinated

Splits and Phases: 18: Jewell Ave & Louisiana Pkwy



HCM 7th Signalized Intersection Summary
18: Jewell Ave & Louisiana Pkwy

2031 Total AM
09/20/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	742	5	15	955	7	101	5	30	25	5	31
Future Volume (veh/h)	16	742	5	15	955	7	101	5	30	25	5	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	17	807	5	16	1038	8	110	5	33	27	5	34
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	419	2056	13	363	2049	16	389	52	343	390	51	344
Arrive On Green	0.01	0.19	0.19	0.04	1.00	1.00	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	1739	3535	22	1739	3528	27	1336	208	1371	1337	202	1376
Grp Volume(v), veh/h	17	396	416	16	510	536	110	0	38	27	0	39
Grp Sat Flow(s),veh/h/ln	1739	1735	1822	1739	1735	1821	1336	0	1579	1337	0	1578
Q Serve(g_s), s	0.4	18.0	18.0	0.3	0.0	0.0	6.2	0.0	1.7	1.4	0.0	1.7
Cycle Q Clear(g_c), s	0.4	18.0	18.0	0.3	0.0	0.0	7.9	0.0	1.7	3.1	0.0	1.7
Prop In Lane	1.00		0.01	1.00		0.01	1.00		0.87	1.00		0.87
Lane Grp Cap(c), veh/h	419	1009	1060	363	1007	1058	389	0	395	390	0	395
V/C Ratio(X)	0.04	0.39	0.39	0.04	0.51	0.51	0.28	0.00	0.10	0.07	0.00	0.10
Avail Cap(c_a), veh/h	511	1009	1060	456	1007	1058	389	0	395	390	0	395
HCM Platoon Ratio	0.33	0.33	0.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.85	0.85	0.85	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	7.4	22.5	22.5	8.9	0.0	0.0	29.0	0.0	25.9	27.1	0.0	26.0
Incr Delay (d2), s/veh	0.0	1.1	1.1	0.0	1.5	1.5	1.8	0.0	0.5	0.3	0.0	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	0.1	8.6	9.0	0.1	0.4	0.4	2.2	0.0	0.7	0.5	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	7.4	23.6	23.6	9.0	1.5	1.5	30.8	0.0	26.4	27.5	0.0	26.5
LnGrp LOS	A	C	C	A	A	A	C		C	C		C
Approach Vol, veh/h	829			1062			148			66		
Approach Delay, s/veh	23.3			1.6			29.7			26.9		
Approach LOS	C			A			C			C		
Timer - Assigned Phs	2		3	4		6	7	8				
Phs Duration (G+Y+Rc), s	27.0		6.1	56.9		27.0	6.2	56.8				
Change Period (Y+Rc), s	4.5		4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s	22.5		6.5	47.5		22.5	6.5	47.5				
Max Q Clear Time (g_c+I1), s	9.9		2.3	20.0		5.1	2.4	2.0				
Green Ext Time (p_c), s	0.4		0.0	5.7		0.2	0.0	8.8				
Intersection Summary												
HCM 7th Control Delay, s/veh				12.9								
HCM 7th LOS				B								

Timings
18: Jewell Ave & Louisiana Pkwy

2031 Total PM
09/20/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	48	960	15	829	77	5	19	5
Future Volume (vph)	48	960	15	829	77	5	19	5
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	9.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	12.0	53.0	11.0	52.0	26.0	26.0	26.0	26.0
Total Split (%)	13.3%	58.9%	12.2%	57.8%	28.9%	28.9%	28.9%	28.9%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Max	None	C-Max	Max	Max	Max	Max

Intersection Summary

Cycle Length: 90

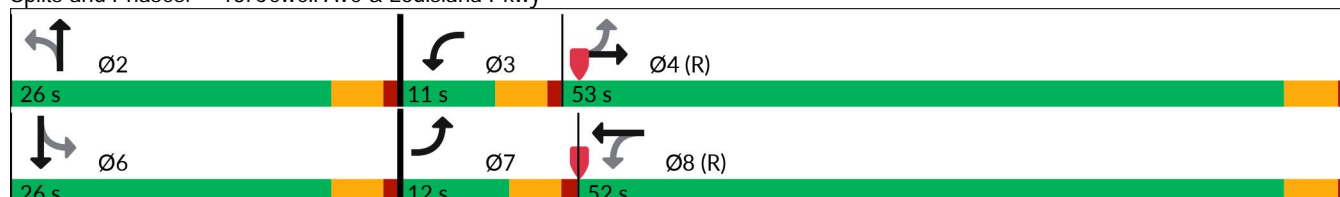
Actuated Cycle Length: 90

Offset: 88 (98%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green

Natural Cycle: 60





















Control Type: Actuated-Coordinated

Splits and Phases: 18: Jewell Ave & Louisiana Pkwy





















HCM 7th Signalized Intersection Summary
18: Jewell Ave & Louisiana Pkwy

2031 Total PM
09/20/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	960	33	15	829	21	77	5	25	19	5	22
Future Volume (veh/h)	48	960	33	15	829	21	77	5	25	19	5	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	52	1043	36	16	901	23	84	5	27	21	5	24
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	487	2028	70	323	1973	50	383	59	320	380	65	314
Arrive On Green	0.04	0.59	0.59	0.04	1.00	1.00	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1739	3421	118	1739	3456	88	1348	248	1337	1344	274	1315
Grp Volume(v), veh/h	52	529	550	16	452	472	84	0	32	21	0	29
Grp Sat Flow(s),veh/h/ln	1739	1735	1805	1739	1735	1810	1348	0	1585	1344	0	1589
Q Serve(g_s), s	1.1	16.1	16.1	0.3	0.0	0.0	4.6	0.0	1.4	1.1	0.0	1.3
Cycle Q Clear(g_c), s	1.1	16.1	16.1	0.3	0.0	0.0	5.9	0.0	1.4	2.5	0.0	1.3
Prop In Lane	1.00		0.07	1.00		0.05	1.00		0.84	1.00		0.83
Lane Grp Cap(c), veh/h	487	1028	1070	323	990	1033	383	0	379	380	0	380
V/C Ratio(X)	0.11	0.51	0.51	0.05	0.46	0.46	0.22	0.00	0.08	0.06	0.00	0.08
Avail Cap(c_a), veh/h	562	1028	1070	417	990	1033	383	0	379	380	0	380
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.89	0.89	0.89	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	7.0	10.7	10.7	8.6	0.0	0.0	28.8	0.0	26.6	27.6	0.0	26.6
Incr Delay (d2), s/veh	0.1	1.8	1.8	0.1	1.4	1.3	1.3	0.0	0.4	0.3	0.0	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	0.4	6.1	6.3	0.1	0.4	0.4	1.6	0.0	0.6	0.4	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	7.1	12.6	12.5	8.7	1.4	1.3	30.2	0.0	27.0	27.9	0.0	26.9
LnGrp LOS	A	B	B	A	A	A	C		C	C		C
Approach Vol, veh/h	1131			940			116			50		
Approach Delay, s/veh	12.3			1.5			29.3			27.3		
Approach LOS	B			A			C			C		
Timer - Assigned Phs	2		3	4		6	7	8				
Phs Duration (G+Y+Rc), s	26.0		6.1	57.9		26.0	8.1	55.9				
Change Period (Y+Rc), s	4.5		4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s	21.5		6.5	48.5		21.5	7.5	47.5				
Max Q Clear Time (g_c+I1), s	7.9		2.3	18.1		4.5	3.1	2.0				
Green Ext Time (p_c), s	0.3		0.0	8.6		0.1	0.0	7.3				
Intersection Summary												
HCM 7th Control Delay, s/veh				9.0								
HCM 7th LOS				A								

Timings
18: Jewell Ave & Louisiana Pkwy

2033 Total AM
09/20/2024

									
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	21	921	15	1222	13	161	7	37	7
Future Volume (vph)	21	921	15	1222	13	161	7	37	7
Turn Type	pm+pt	NA	pm+pt	NA	Perm	Perm	NA	Perm	NA
Protected Phases	7	4	3	8			2		6
Permitted Phases	4		8		8	2		6	
Detector Phase	7	4	3	8	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	9.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	9.6	54.1	9.6	54.1	54.1	26.3	26.3	26.3	26.3
Total Split (%)	10.7%	60.1%	10.7%	60.1%	60.1%	29.2%	29.2%	29.2%	29.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	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)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lead	Lag	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Max	None	C-Max	C-Max	Max	Max	Max	Max

Intersection Summary

Cycle Length: 90

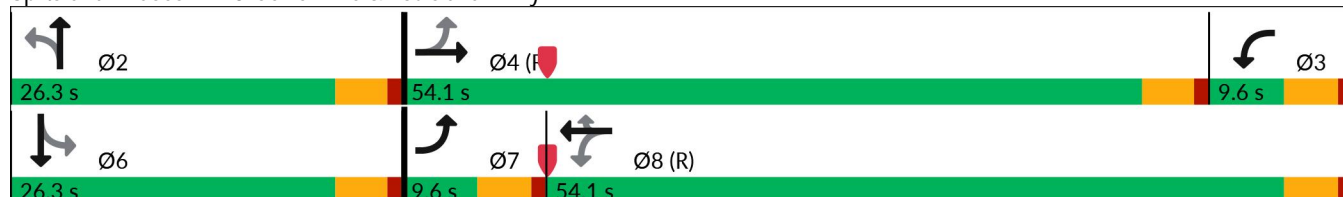
Actuated Cycle Length: 90

Offset: 5 (6%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green

Natural Cycle: 65






















Control Type: Actuated-Coordinated

Splits and Phases: 18: Jewell Ave & Louisiana Pkwy





















HCM 7th Signalized Intersection Summary
18: Jewell Ave & Louisiana Pkwy

2033 Total AM
09/20/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	921	8	15	1222	13	161	7	45	37	7	42
Future Volume (veh/h)	21	921	8	15	1222	13	161	7	45	37	7	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	23	1001	9	16	1328	14	175	8	33	40	8	30
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	188	1942	17	426	2024	903	379	75	311	376	82	306
Arrive On Green	0.05	1.00	1.00	0.04	0.39	0.39	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1739	3523	32	1739	3469	1547	1337	311	1284	1334	337	1262
Grp Volume(v), veh/h	23	493	517	16	1328	14	175	0	41	40	0	38
Grp Sat Flow(s),veh/h/ln	1739	1735	1820	1739	1735	1547	1337	0	1595	1334	0	1599
Q Serve(g_s), s	0.6	0.0	0.0	0.0	28.2	0.5	10.5	0.0	1.8	2.2	0.0	1.7
Cycle Q Clear(g_c), s	0.6	0.0	0.0	0.0	28.2	0.5	12.2	0.0	1.8	4.0	0.0	1.7
Prop In Lane	1.00		0.02	1.00		1.00	1.00		0.80	1.00		0.79
Lane Grp Cap(c), veh/h	188	956	1003	426	2024	903	379	0	386	376	0	387
V/C Ratio(X)	0.12	0.52	0.52	0.04	0.66	0.02	0.46	0.00	0.11	0.11	0.00	0.10
Avail Cap(c_a), veh/h	244	956	1003	426	2024	903	379	0	386	376	0	387
HCM Platoon Ratio	2.00	2.00	2.00	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.89	0.89	0.89	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	15.3	0.0	0.0	11.3	20.0	11.6	31.2	0.0	26.5	28.1	0.0	26.5
Incr Delay (d2), s/veh	0.3	2.0	1.9	0.0	1.5	0.0	4.0	0.0	0.6	0.6	0.0	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	0.2	0.5	0.5	0.2	12.3	0.2	3.7	0.0	0.7	0.7	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	15.6	2.0	1.9	11.3	21.5	11.6	35.2	0.0	27.1	28.6	0.0	27.0
LnGrp LOS	B	A	A	B	C	B	D		C	C		C
Approach Vol, veh/h	1033			1358			216			78		
Approach Delay, s/veh	2.2			21.3			33.7			27.8		
Approach LOS	A			C			C			C		
Timer - Assigned Phs	2		3	4		6	7	8				
Phs Duration (G+Y+Rc), s	26.3		9.6	54.1		26.3	6.7	57.0				
Change Period (Y+Rc), s	4.5		4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s	21.8		5.1	49.6		21.8	5.1	49.6				
Max Q Clear Time (g_c+I1), s	14.2		2.0	2.0		6.0	2.6	30.2				
Green Ext Time (p_c), s	0.4		0.0	8.4		0.2	0.0	10.1				
Intersection Summary												
HCM 7th Control Delay, s/veh	15.1											
HCM 7th LOS	B											

Timings
18: Jewell Ave & Louisiana Pkwy

2033 Total PM
09/20/2024

									
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	63	1085	15	1054	31	132	5	26	5
Future Volume (vph)	63	1085	15	1054	31	132	5	26	5
Turn Type	pm+pt	NA	pm+pt	NA	Perm	Perm	NA	Perm	NA
Protected Phases	7	4	3	8			2		6
Permitted Phases	4		8		8	2		6	
Detector Phase	7	4	3	8	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	9.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	11.0	55.0	10.0	54.0	54.0	25.0	25.0	25.0	25.0
Total Split (%)	12.2%	61.1%	11.1%	60.0%	60.0%	27.8%	27.8%	27.8%	27.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	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)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lead	Lag	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Max	None	C-Max	C-Max	Max	Max	Max	Max

Intersection Summary

Cycle Length: 90

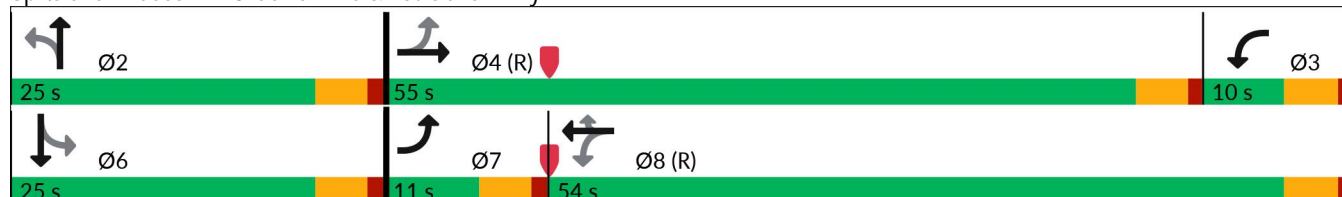
Actuated Cycle Length: 90

Offset: 4 (4%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated





















Splits and Phases: 18: Jewell Ave & Louisiana Pkwy



HCM 7th Signalized Intersection Summary

18: Jewell Ave & Louisiana Pkwy

2033 Total PM
09/20/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	1085	38	15	1054	31	132	5	35	26	5	31
Future Volume (veh/h)	63	1085	38	15	1054	31	132	5	35	26	5	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	68	1179	41	16	1146	34	143	5	22	28	5	18
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	236	1919	67	384	2001	893	373	67	296	370	79	285
Arrive On Green	0.09	1.00	1.00	0.02	0.19	0.19	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	1739	3420	119	1739	3469	1547	1355	295	1297	1350	348	1253
Grp Volume(v), veh/h	68	598	622	16	1146	34	143	0	27	28	0	23
Grp Sat Flow(s),veh/h/ln	1739	1735	1804	1739	1735	1547	1355	0	1592	1350	0	1600
Q Serve(g_s), s	1.7	0.0	0.0	0.0	27.0	1.6	8.3	0.0	1.2	1.5	0.0	1.0
Cycle Q Clear(g_c), s	1.7	0.0	0.0	0.0	27.0	1.6	9.3	0.0	1.2	2.7	0.0	1.0
Prop In Lane	1.00		0.07	1.00		1.00	1.00		0.81	1.00		0.78
Lane Grp Cap(c), veh/h	236	973	1013	384	2001	893	373	0	363	370	0	365
V/C Ratio(X)	0.29	0.61	0.61	0.04	0.57	0.04	0.38	0.00	0.07	0.08	0.00	0.06
Avail Cap(c_a), veh/h	282	973	1013	384	2001	893	373	0	363	370	0	365
HCM Platoon Ratio	2.00	2.00	2.00	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	1.00	0.91	0.91	0.91	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.9	0.0	0.0	12.0	26.4	16.1	30.9	0.0	27.3	28.4	0.0	27.2
Incr Delay (d2), s/veh	0.7	2.9	2.8	0.0	1.1	0.1	3.0	0.0	0.4	0.4	0.0	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	0.6	0.8	0.8	0.2	12.7	0.5	3.0	0.0	0.5	0.5	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	15.6	2.9	2.8	12.0	27.4	16.1	33.8	0.0	27.7	28.8	0.0	27.6
LnGrp LOS	B	A	A	B	C	B	C		C	C		C
Approach Vol, veh/h	1288			1196			170			51		
Approach Delay, s/veh	3.5			26.9			32.9			28.2		
Approach LOS	A			C			C			C		
Timer - Assigned Phs	2		3	4		6	7	8				
Phs Duration (G+Y+Rc), s	25.0		10.0	55.0		25.0	8.6	56.4				
Change Period (Y+Rc), s	4.5		4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s	20.5		5.5	50.5		20.5	6.5	49.5				
Max Q Clear Time (g_c+I1), s	11.3		2.0	2.0		4.7	3.7	29.0				
Green Ext Time (p_c), s	0.3		0.0	9.6		0.1	0.0	8.8				
Intersection Summary												
HCM 7th Control Delay, s/veh	16.2											
HCM 7th LOS	B											

APPENDIX F

Queue Analysis Worksheets

Queues

2029 Total AM

1: Alameda Ave & Harvest Rd

09/20/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	27	138	12	426	63	129	116	87
v/c Ratio	0.22	0.26	0.03	0.78	0.09	0.15	0.15	0.10
Control Delay (s/veh)	25.1	20.3	14.2	29.9	10.6	15.8	10.6	9.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	25.1	20.3	14.2	29.9	10.6	15.8	10.6	9.3
Queue Length 50th (ft)	12	52	5	161	13	38	26	12
Queue Length 95th (ft)	29	81	11	194	40	89	65	46
Internal Link Dist (ft)		454		5125		595		1308
Turn Bay Length (ft)	150		150		150		300	
Base Capacity (vph)	196	859	568	848	749	878	785	873
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.16	0.02	0.50	0.08	0.15	0.15	0.10

Intersection Summary

Queues

2029 Total PM

1: Alameda Ave & Harvest Rd

09/20/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	79	421	15	433	45	95	267	170
v/c Ratio	0.66	0.78	0.12	0.78	0.08	0.13	0.35	0.18
Control Delay (s/veh)	52.0	37.3	17.4	28.1	11.1	20.2	11.5	13.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	52.0	37.3	17.4	28.1	11.1	20.2	11.5	13.9
Queue Length 50th (ft)	39	209	6	143	10	30	67	47
Queue Length 95th (ft)	84	273	m15	210	30	81	139	105
Internal Link Dist (ft)		454		5125		595		1308
Turn Bay Length (ft)	150		150		150		300	
Base Capacity (vph)	165	743	177	737	600	726	789	922
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.57	0.08	0.59	0.08	0.13	0.34	0.18

Intersection Summary

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

Queues

2031 Total AM

1: Harvest Rd & Alameda Ave

09/20/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	28	108	114	232	98	571	79	381
v/c Ratio	0.34	0.37	0.63	0.74	0.18	0.64	0.12	0.33
Control Delay (s/veh)	43.4	24.1	47.4	34.6	3.1	11.5	5.0	8.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	43.4	24.1	47.4	34.6	3.1	11.5	5.0	8.8
Queue Length 50th (ft)	14	33	54	60	6	62	10	88
Queue Length 95th (ft)	39	76	113	160	17	122	25	161
Internal Link Dist (ft)		454		5125		4554		1308
Turn Bay Length (ft)	150		150		150		300	
Base Capacity (vph)	114	380	248	400	554	888	635	1163
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.28	0.46	0.58	0.18	0.64	0.12	0.33

Intersection Summary

Queues

2031 Total PM

09/20/2024

1: Harvest Rd & Alameda Ave



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	80	245	92	210	63	575	170	420
v/c Ratio	0.58	0.75	0.83	0.57	0.14	0.75	0.34	0.37
Control Delay (s/veh)	49.9	47.0	82.0	21.9	6.3	15.9	10.7	10.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	49.9	47.0	82.0	21.9	6.3	15.9	10.7	10.0
Queue Length 50th (ft)	41	124	41	42	10	209	39	109
Queue Length 95th (ft)	88	199	#126	100	m13	293	80	182
Internal Link Dist (ft)		454		5125		4554		1308
Turn Bay Length (ft)	150		150		150		300	
Base Capacity (vph)	166	390	134	426	450	769	506	1126
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.63	0.69	0.49	0.14	0.75	0.34	0.37

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

2033 Total AM

1: Harvest Rd & Alameda Ave

09/20/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	32	114	121	242	114	593	83	83	395	70
v/c Ratio	0.35	0.36	0.63	0.72	0.19	0.37	0.11	0.11	0.18	0.07
Control Delay (s/veh)	41.8	21.5	44.1	30.5	2.8	7.4	0.6	5.3	9.2	2.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	41.8	21.5	44.1	30.5	2.8	7.4	0.6	5.3	9.2	2.9
Queue Length 50th (ft)	16	32	67	89	4	17	0	11	49	0
Queue Length 95th (ft)	41	72	105	140	17	58	0	31	90	19
Internal Link Dist (ft)		454		5125		4554			1308	
Turn Bay Length (ft)	150		150		275		275	300		275
Base Capacity (vph)	159	512	336	526	603	1617	790	725	2136	983
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	0.20	0.22	0.36	0.46	0.19	0.37	0.11	0.11	0.18	0.07

Intersection Summary

Queues

2033 Total PM

1: Harvest Rd & Alameda Ave

09/20/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	83	270	98	219	70	546	136	173	451	72
v/c Ratio	0.51	0.73	0.80	0.53	0.21	0.50	0.23	0.26	0.22	0.08
Control Delay (s/veh)	41.6	41.5	72.3	19.1	14.7	16.4	2.9	11.3	10.3	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	41.6	41.5	72.3	19.1	14.7	16.4	2.9	11.3	10.3	3.2
Queue Length 50th (ft)	42	133	57	69	10	91	4	43	61	0
Queue Length 95th (ft)	81	196	#111	119	25	67	11	92	106	21
Internal Link Dist (ft)		454		5125		4554			1308	
Turn Bay Length (ft)	150		150		275		275	300		275
Base Capacity (vph)	242	545	183	567	341	1088	579	673	2053	948
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	0.34	0.50	0.54	0.39	0.21	0.50	0.23	0.26	0.22	0.08

Intersection Summary

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

Queue shown is maximum after two cycles.

Queues

2029 Total AM

2: Powhaton Rd & Alameda Ave

09/20/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	128	137	43	150	107	474	47	455	65
v/c Ratio	0.74	0.39	0.23	0.47	0.15	0.21	0.07	0.22	0.07
Control Delay (s/veh)	54.0	13.5	33.0	27.8	2.2	2.6	5.4	9.9	2.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	54.0	13.5	33.0	27.8	2.2	2.6	5.4	9.9	2.8
Queue Length 50th (ft)	58	1	21	56	5	17	6	62	0
Queue Length 95th (ft)	113	69	47	103	m10	27	20	107	18
Internal Link Dist (ft)		5125		737		4494		610	
Turn Bay Length (ft)	150		150		150		225		150
Base Capacity (vph)	356	629	378	622	802	2252	687	2105	970
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	0.36	0.22	0.11	0.24	0.13	0.21	0.07	0.22	0.07

Intersection Summary

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

Queues

2029 Total PM

2: Powhaton Rd & Alameda Ave

09/20/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	137	257	45	181	141	575	52	524	129
v/c Ratio	0.79	0.69	0.40	0.52	0.22	0.26	0.10	0.27	0.14
Control Delay (s/veh)	55.8	27.3	39.9	31.9	1.6	1.5	6.6	12.2	3.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	55.8	27.3	39.9	31.9	1.6	1.5	6.6	12.2	3.1
Queue Length 50th (ft)	59	47	23	80	4	11	7	78	0
Queue Length 95th (ft)	117	90	51	128	m7	16	24	137	30
Internal Link Dist (ft)		5125		737		4494		610	
Turn Bay Length (ft)	150		150		150		225		150
Base Capacity (vph)	310	610	203	602	738	2177	584	1936	922
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	0.44	0.42	0.22	0.30	0.19	0.26	0.09	0.27	0.14

Intersection Summary

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

Queues

2031 Total AM

2: Alameda Ave & Powhaton Rd

09/20/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	145	81	58	152	46	640	61	632	87
v/c Ratio	0.76	0.24	0.25	0.44	0.09	0.30	0.11	0.28	0.08
Control Delay (s/veh)	51.8	16.2	31.5	28.4	1.8	3.0	6.1	9.0	2.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	51.8	16.2	31.5	28.4	1.8	3.0	6.1	9.0	2.7
Queue Length 50th (ft)	79	24	28	61	0	12	9	84	0
Queue Length 95th (ft)	m123	m30	57	106	5	27	26	144	22
Internal Link Dist (ft)		5125		737		4955		610	
Turn Bay Length (ft)	150		150		150		225		150
Base Capacity (vph)	349	600	431	603	577	2111	599	2224	1025
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	0.42	0.14	0.13	0.25	0.08	0.30	0.10	0.28	0.08

Intersection Summary

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

Queues

2031 Total PM

2: Alameda Ave & Powhaton Rd

09/20/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	164	153	37	143	42	695	71	683	122
v/c Ratio	0.76	0.42	0.18	0.39	0.08	0.34	0.14	0.31	0.12
Control Delay (s/veh)	52.6	28.8	28.9	24.5	3.8	5.9	7.0	10.0	2.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	52.6	28.8	28.9	24.5	3.8	5.9	7.0	10.0	2.6
Queue Length 50th (ft)	87	66	18	52	5	53	11	96	0
Queue Length 95th (ft)	m137	m106	39	93	11	263	32	166	27
Internal Link Dist (ft)		5125		737		4955		610	
Turn Bay Length (ft)	150		150		150		225		150
Base Capacity (vph)	369	602	355	602	512	2034	556	2172	1016
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	0.44	0.25	0.10	0.24	0.08	0.34	0.13	0.31	0.12

Intersection Summary

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

Queues

2033 Total AM

2: Alameda Ave & Powhatan Rd

09/20/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	150	89	62	158	48	667	66	649	98
v/c Ratio	0.78	0.25	0.26	0.45	0.09	0.32	0.12	0.29	0.10
Control Delay (s/veh)	55.5	18.0	31.2	28.2	3.2	4.9	6.5	9.4	2.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	55.5	18.0	31.2	28.2	3.2	4.9	6.5	9.4	2.7
Queue Length 50th (ft)	84	14	30	64	6	47	10	88	0
Queue Length 95th (ft)	114	47	59	109	18	101	29	151	23
Internal Link Dist (ft)	5125		737		4955		610		
Turn Bay Length (ft)	150		150		150		225		150
Base Capacity (vph)	343	601	428	602	563	2088	579	2203	1020
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	0.44	0.15	0.14	0.26	0.09	0.32	0.11	0.29	0.10

Intersection Summary

Queues

2033 Total PM

2: Alameda Ave & Powhatan Rd

09/20/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	170	160	39	150	45	720	76	708	122
v/c Ratio	0.77	0.42	0.18	0.39	0.10	0.36	0.18	0.33	0.12
Control Delay (s/veh)	51.6	24.5	28.6	24.3	5.9	5.4	11.2	10.8	2.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	51.6	24.5	28.6	24.3	5.9	5.4	11.2	10.8	2.8
Queue Length 50th (ft)	101	64	19	55	6	56	18	105	0
Queue Length 95th (ft)	162	108	41	96	15	68	47	180	28
Internal Link Dist (ft)	5125		737		4955		610		
Turn Bay Length (ft)	150		150		150		225		150
Base Capacity (vph)	362	602	349	602	477	1989	448	2130	999
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	0.47	0.27	0.11	0.25	0.09	0.36	0.17	0.33	0.12

Intersection Summary

Queues

2031 Total AM

3: Harvest Rd & Mississippi Ave

09/20/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	190	99	123	472	496	297
v/c Ratio	0.66	0.29	0.20	0.19	0.46	0.29
Control Delay (s/veh)	45.4	8.8	2.3	1.7	9.1	1.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	45.4	8.8	2.3	1.7	9.1	1.6
Queue Length 50th (ft)	102	0	10	21	130	10
Queue Length 95th (ft)	160	39	15	23	202	24
Internal Link Dist (ft)	1149			836	617	
Turn Bay Length (ft)			275			275
Base Capacity (vph)	410	442	619	2515	1083	1039
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	0.46	0.22	0.20	0.19	0.46	0.29
Intersection Summary						

Queues

2031 Total PM

3: Harvest Rd & Mississippi Ave

09/20/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	374	154	146	592	512	277
v/c Ratio	0.81	0.29	0.30	0.27	0.57	0.31
Control Delay (s/veh)	43.9	5.3	5.9	4.2	14.1	2.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	43.9	5.3	5.9	4.2	14.1	2.0
Queue Length 50th (ft)	196	0	13	26	135	9
Queue Length 95th (ft)	275	40	29	48	273	20
Internal Link Dist (ft)	1149			836	617	
Turn Bay Length (ft)			275			275
Base Capacity (vph)	582	623	481	2164	906	908
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	0.64	0.25	0.30	0.27	0.57	0.31
Intersection Summary						

Queues

2033 Total AM

3: Harvest Rd & Mississippi Ave

09/20/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	212	132	174	664	565	302
v/c Ratio	0.68	0.34	0.29	0.27	0.29	0.30
Control Delay (s/veh)	44.8	7.9	4.6	3.1	9.3	2.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	44.8	7.9	4.6	3.1	9.3	2.7
Queue Length 50th (ft)	114	0	13	26	64	16
Queue Length 95th (ft)	172	43	34	59	122	25
Internal Link Dist (ft)	1149			836	617	
Turn Bay Length (ft)			275			275
Base Capacity (vph)	525	561	671	2467	1968	1009
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	0.40	0.24	0.26	0.27	0.29	0.30
Intersection Summary						

Queues

2033 Total PM

3: Harvest Rd & Mississippi Ave

09/20/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	417	185	165	745	621	348
v/c Ratio	0.79	0.31	0.32	0.37	0.43	0.41
Control Delay (s/veh)	39.4	4.4	8.5	6.0	14.0	2.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	39.4	4.4	8.5	6.0	14.0	2.1
Queue Length 50th (ft)	216	0	19	45	91	4
Queue Length 95th (ft)	282	39	53	97	119	12
Internal Link Dist (ft)	1149			836	617	
Turn Bay Length (ft)			275			275
Base Capacity (vph)	697	733	510	2041	1430	843
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	0.60	0.25	0.32	0.37	0.43	0.41
Intersection Summary						

Queues

2031 Total AM

4: Harvest Rd & Louisiana Pkwy

09/20/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	9	54	24	101	42	511	10	28	566
v/c Ratio	0.09	0.31	0.22	0.48	0.07	0.19	0.01	0.04	0.21
Control Delay (s/veh)	38.4	18.4	41.9	19.9	2.4	1.9	0.0	1.8	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	38.4	18.4	41.9	19.9	2.4	1.9	0.0	1.8	1.4
Queue Length 50th (ft)	5	4	13	9	1	8	0	1	8
Queue Length 95th (ft)	19	37	36	55	10	37	0	m5	28
Internal Link Dist (ft)		436		653		757			836
Turn Bay Length (ft)	100		100		275		275	275	
Base Capacity (vph)	316	462	355	492	698	2714	1229	724	2643
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	0.03	0.12	0.07	0.21	0.06	0.19	0.01	0.04	0.21

Intersection Summary

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

Queues

2031 Total PM

4: Harvest Rd & Louisiana Pkwy

09/20/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	27	95	14	79	79	643	49	86	572
v/c Ratio	0.25	0.46	0.13	0.40	0.12	0.25	0.04	0.13	0.22
Control Delay (s/veh)	42.9	20.8	39.5	19.0	1.5	1.8	0.3	1.2	1.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	42.9	20.8	39.5	19.0	1.5	1.8	0.3	1.2	1.3
Queue Length 50th (ft)	15	11	8	6	4	21	0	2	10
Queue Length 95th (ft)	39	55	25	47	11	37	0	m9	27
Internal Link Dist (ft)		436		564		757			836
Turn Bay Length (ft)	100		100		275		275	275	
Base Capacity (vph)	333	472	321	462	760	2565	1166	740	2584
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	0.08	0.20	0.04	0.17	0.10	0.25	0.04	0.12	0.22

Intersection Summary

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

Queues

2033 Total AM

4: Harvest Rd & Louisiana Pkwy

09/20/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	12	64	32	159	46	695	16	51	646
v/c Ratio	0.15	0.33	0.26	0.59	0.08	0.25	0.01	0.09	0.23
Control Delay (s/veh)	39.7	18.9	41.6	19.4	1.0	2.4	0.1	2.3	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	39.7	18.9	41.6	19.4	1.0	2.4	0.1	2.3	1.7
Queue Length 50th (ft)	6	7	17	14	1	6	0	2	12
Queue Length 95th (ft)	22	42	42	69	2	10	0	14	54
Internal Link Dist (ft)		436		3642		907			836
Turn Bay Length (ft)	100		100		275		275	275	
Base Capacity (vph)	288	573	438	624	592	2771	1243	564	2758
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	0.04	0.11	0.07	0.25	0.08	0.25	0.01	0.09	0.23

Intersection Summary

Queues

2033 Total PM

4: Harvest Rd & Louisiana Pkwy

09/20/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	38	104	22	119	80	764	62	127	670
v/c Ratio	0.40	0.47	0.20	0.50	0.14	0.28	0.05	0.24	0.24
Control Delay (s/veh)	49.5	21.3	38.1	15.8	1.0	1.0	0.1	2.2	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	49.5	21.3	38.1	15.8	1.0	1.0	0.1	2.2	1.0
Queue Length 50th (ft)	21	14	12	12	1	6	0	2	6
Queue Length 95th (ft)	51	60	34	57	3	9	0	13	25
Internal Link Dist (ft)		436		3642		907			836
Turn Bay Length (ft)	100		100		275		275	275	
Base Capacity (vph)	272	477	306	486	579	2774	1253	524	2762
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	0.14	0.22	0.07	0.24	0.14	0.28	0.05	0.24	0.24

Intersection Summary

Queues

2031 Total AM

5: Harvest Rd & Flat Rock Trl/Kewaunee St

09/20/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	11	24	74	93	17	463	28	53	587
v/c Ratio	0.08	0.12	0.48	0.36	0.03	0.18	0.02	0.07	0.22
Control Delay (s/veh)	34.4	17.0	48.4	14.4	1.9	3.9	0.1	1.4	1.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	34.4	17.0	48.4	14.4	1.9	3.9	0.1	1.4	1.6
Queue Length 50th (ft)	6	2	42	4	1	26	0	2	14
Queue Length 95th (ft)	20	23	73	35	m3	55	m0	10	40
Internal Link Dist (ft)		244		1480		564			416
Turn Bay Length (ft)	100		100		275		275	275	
Base Capacity (vph)	357	460	380	502	715	2567	1167	825	2648
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	0.03	0.05	0.19	0.19	0.02	0.18	0.02	0.06	0.22

Intersection Summary

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

Queues

2031 Total PM

5: Harvest Rd & Flat Rock Trl/Kewaunee St

09/20/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	23	39	66	134	35	630	83	118	508
v/c Ratio	0.22	0.19	0.46	0.48	0.05	0.28	0.08	0.18	0.21
Control Delay (s/veh)	39.8	17.3	44.1	12.1	2.2	4.4	0.8	2.8	3.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	39.8	17.3	44.1	12.1	2.2	4.4	0.8	2.8	3.1
Queue Length 50th (ft)	12	4	32	7	2	51	0	8	21
Queue Length 95th (ft)	34	31	65	32	m8	78	m4	20	50
Internal Link Dist (ft)		244		1480		564			416
Turn Bay Length (ft)	100		100		275		275	275	
Base Capacity (vph)	265	455	360	515	690	2240	1031	716	2471
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	0.09	0.09	0.18	0.26	0.05	0.28	0.08	0.16	0.21

Intersection Summary

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

Queues

2033 Total AM

5: Harvest Rd & Flat Rock Trl/Kewaunee St

09/20/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	12	30	89	125	17	595	38	73	653
v/c Ratio	0.09	0.14	0.53	0.42	0.03	0.26	0.04	0.13	0.26
Control Delay (s/veh)	33.7	17.5	44.5	10.4	9.5	9.0	3.7	5.1	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	33.7	17.5	44.5	10.4	9.5	9.0	3.7	5.1	4.6
Queue Length 50th (ft)	6	4	49	5	5	95	1	4	21
Queue Length 95th (ft)	21	27	88	47	m15	149	m7	23	68
Internal Link Dist (ft)		244		1480		564			416
Turn Bay Length (ft)	100		100		275		275	275	
Base Capacity (vph)	305	470	378	524	572	2304	1054	614	2468
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	0.04	0.06	0.24	0.24	0.03	0.26	0.04	0.12	0.26

Intersection Summary

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

Queues

2033 Total PM

5: Harvest Rd & Flat Rock Trl/Kewaunee St

09/20/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	28	44	79	156	35	739	95	138	585
v/c Ratio	0.28	0.20	0.51	0.50	0.06	0.33	0.09	0.26	0.24
Control Delay (s/veh)	41.3	17.7	48.5	14.5	2.3	5.1	0.2	2.5	2.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	41.3	17.7	48.5	14.5	2.3	5.1	0.2	2.5	2.8
Queue Length 50th (ft)	15	6	38	9	3	51	0	7	26
Queue Length 95th (ft)	39	34	79	54	m6	85	m0	17	56
Internal Link Dist (ft)		244		1480		564			416
Turn Bay Length (ft)	100		100		275		275	275	
Base Capacity (vph)	213	426	329	498	649	2232	1043	628	2425
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	0.13	0.10	0.24	0.31	0.05	0.33	0.09	0.22	0.24

Intersection Summary

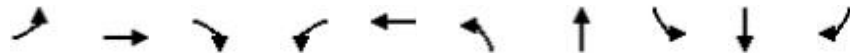
m Volume for 95th percentile queue is metered by upstream signal.

Queues

2026 Total AM

6: Jewell Ave & Harvest Rd

05/31/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	47	250	21	18	489	36	39	23	12	86
v/c Ratio	0.09	0.20	0.02	0.03	0.45	0.11	0.09	0.07	0.03	0.19
Control Delay (s/veh)	5.7	6.5	2.3	9.8	13.0	27.9	21.1	27.4	26.6	7.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	5.7	6.5	2.3	9.8	13.0	27.9	21.1	27.4	26.6	7.7
Queue Length 50th (ft)	8	49	0	5	162	16	12	10	5	0
Queue Length 95th (ft)	19	79	7	15	244	41	37	30	19	36
Internal Link Dist (ft)	696		1334			434		789		
Turn Bay Length (ft)	125	150		150	150		275		275	
Base Capacity (vph)	520	1231	1053	661	1091	333	433	325	445	443
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	0.09	0.20	0.02	0.03	0.45	0.11	0.09	0.07	0.03	0.19

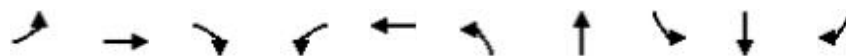
Intersection Summary

Queues

2026 Total PM

6: Jewell Ave & Harvest Rd

05/31/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	113	492	60	11	388	35	39	20	35	68
v/c Ratio	0.20	0.42	0.06	0.02	0.39	0.11	0.09	0.06	0.08	0.16
Control Delay (s/veh)	6.4	8.5	1.7	11.1	13.8	27.9	22.7	27.2	27.3	7.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	6.4	8.5	1.7	11.1	13.8	27.9	22.7	27.2	27.3	7.4
Queue Length 50th (ft)	21	116	0	3	123	16	13	9	16	0
Queue Length 95th (ft)	39	175	12	12	199	40	39	27	40	30
Internal Link Dist (ft)		696			1334		434		789	
Turn Bay Length (ft)	125		150	150		150		275		275
Base Capacity (vph)	600	1174	1066	495	1007	326	436	325	445	433
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	0.19	0.42	0.06	0.02	0.39	0.11	0.09	0.06	0.08	0.16

Intersection Summary

Queues

2027 Total AM

6: Jewell Ave & Harvest Rd

05/31/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	87	293	26	24	602	39	44	38	15	149
v/c Ratio	0.19	0.23	0.02	0.04	0.56	0.13	0.11	0.13	0.04	0.32
Control Delay (s/veh)	5.8	5.9	1.9	9.2	14.6	29.8	22.2	29.9	28.3	7.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	5.8	5.9	1.9	9.2	14.6	29.8	22.2	29.9	28.3	7.4
Queue Length 50th (ft)	14	54	0	6	206	18	14	18	7	0
Queue Length 95th (ft)	29	86	7	17	307	45	42	44	23	47
Internal Link Dist (ft)	696				1334		434		789	
Turn Bay Length (ft)	125	150		150	150		275		275	
Base Capacity (vph)	456	1273	1089	632	1084	301	395	293	403	459
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	0.19	0.23	0.02	0.04	0.56	0.13	0.11	0.13	0.04	0.32

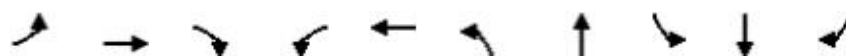
Intersection Summary

Queues

2027 Total PM

6: Jewell Ave & Harvest Rd

05/31/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	203	590	68	14	502	43	44	43	38	155
v/c Ratio	0.40	0.49	0.06	0.03	0.52	0.15	0.11	0.15	0.09	0.33
Control Delay (s/veh)	7.5	8.4	1.4	11.4	16.4	30.1	24.2	30.2	29.0	7.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	7.5	8.4	1.4	11.4	16.4	30.1	24.2	30.2	29.0	7.3
Queue Length 50th (ft)	36	138	0	4	172	20	16	20	17	0
Queue Length 95th (ft)	61	207	12	14	279	48	43	48	43	49
Internal Link Dist (ft)	696		1334			434		789		
Turn Bay Length (ft)	125	150		150	150		275		275	
Base Capacity (vph)	551	1213	1103	435	964	295	397	293	403	464
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	0.37	0.49	0.06	0.03	0.52	0.15	0.11	0.15	0.09	0.33

Intersection Summary

Queues

2028 Total AM

6: Jewell Ave & Harvest Rd

09/20/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	96	340	32	29	680	41	41	49	39	17	155
v/c Ratio	0.24	0.33	0.04	0.05	0.39	0.05	0.11	0.10	0.11	0.03	0.29
Control Delay (s/veh)	11.8	12.4	0.4	5.4	6.3	0.4	25.7	18.9	25.7	24.4	6.0
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 (s/veh)	11.8	12.4	0.4	5.4	6.3	0.4	25.7	18.9	25.7	24.4	6.0
Queue Length 50th (ft)	20	80	0	3	39	0	17	14	17	7	0
Queue Length 95th (ft)	54	179	3	9	58	2	43	41	42	23	45
Internal Link Dist (ft)	696			1334			434			789	
Turn Bay Length (ft)	225		225	225		225	150		275		275
Base Capacity (vph)	454	1039	914	574	1762	823	367	480	357	492	531
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	0.21	0.33	0.04	0.05	0.39	0.05	0.11	0.10	0.11	0.03	0.29

Intersection Summary

Queues

2028 Total PM

6: Jewell Ave & Harvest Rd

09/20/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	211	712	76	16	551	50	51	47	43	40	162
v/c Ratio	0.38	0.58	0.07	0.04	0.29	0.06	0.19	0.13	0.16	0.11	0.36
Control Delay (s/veh)	8.1	11.1	1.9	3.0	3.6	0.3	31.7	24.9	31.3	30.0	7.7
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 (s/veh)	8.1	11.1	1.9	3.0	3.6	0.3	31.7	24.9	31.3	30.0	7.7
Queue Length 50th (ft)	36	175	0	1	21	1	24	17	20	19	0
Queue Length 95th (ft)	87	378	17	m4	33	0	56	46	49	46	50
Internal Link Dist (ft)	696		1334				434			789	
Turn Bay Length (ft)	225	225		225	225		150	275		275	
Base Capacity (vph)	575	1218	1060	418	1868	869	271	367	270	372	444
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	0.37	0.58	0.07	0.04	0.29	0.06	0.19	0.13	0.16	0.11	0.36

Intersection Summary

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

Queues

2029 Total AM

6: Jewell Ave & Harvest Rd

09/20/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	115	558	48	46	910	53	52	56	46	23	182
v/c Ratio	0.30	0.28	0.05	0.08	0.48	0.06	0.16	0.13	0.15	0.05	0.36
Control Delay (s/veh)	7.7	10.4	1.3	2.5	6.0	0.1	28.8	21.0	28.6	27.0	6.7
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 (s/veh)	7.7	10.4	1.3	2.5	6.0	0.1	28.8	21.0	28.6	27.0	6.7
Queue Length 50th (ft)	21	86	0	4	62	0	24	17	21	10	0
Queue Length 95th (ft)	40	118	9	m3	52	m1	54	48	50	30	50
Internal Link Dist (ft)	696			1334			434			789	
Turn Bay Length (ft)	225		225	225		225	150		275		275
Base Capacity (vph)	444	2022	934	548	1887	901	320	425	311	432	505
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	0.26	0.28	0.05	0.08	0.48	0.06	0.16	0.13	0.15	0.05	0.36

Intersection Summary

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

Queues

2029 Total PM

6: Jewell Ave & Harvest Rd

09/20/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	238	878	114	22	715	57	73	53	47	46	185
v/c Ratio	0.51	0.41	0.11	0.06	0.42	0.07	0.24	0.13	0.16	0.11	0.38
Control Delay (s/veh)	12.4	9.8	2.2	4.6	4.4	0.4	31.1	23.7	29.6	28.5	7.0
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 (s/veh)	12.4	9.8	2.2	4.6	4.4	0.4	31.1	23.7	29.6	28.5	7.0
Queue Length 50th (ft)	45	101	0	2	28	0	34	19	22	21	0
Queue Length 95th (ft)	106	189	22	m5	51	m1	72	49	51	49	52
Internal Link Dist (ft)	696		1334				434		789		
Turn Bay Length (ft)	225	225		225	225		150	275		275	
Base Capacity (vph)	589	2158	1008	359	1708	800	299	407	297	412	493
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	0.40	0.41	0.11	0.06	0.42	0.07	0.24	0.13	0.16	0.11	0.38

Intersection Summary

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

Queues

2031 Total AM

6: Jewell Ave & Harvest Rd

09/20/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	228	629	64	64	1023	203	74	125	135	91	438
v/c Ratio	0.56	0.31	0.07	0.15	0.59	0.23	0.26	0.31	0.50	0.22	0.28
Control Delay (s/veh)	42.7	10.6	2.2	4.7	6.0	0.6	31.4	28.2	31.6	23.4	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
Total Delay (s/veh)	42.7	10.6	2.2	4.7	6.0	0.6	31.4	28.2	31.6	23.4	0.6
Queue Length 50th (ft)	63	94	0	5	46	1	35	53	72	43	0
Queue Length 95th (ft)	98	127	14	m11	62	1	73	102	124	78	0
Internal Link Dist (ft)		696			1334			434		789	
Turn Bay Length (ft)	225		225	225		225	150		275		275
Base Capacity (vph)	463	2005	927	433	1721	871	287	409	269	412	1538
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	0.49	0.31	0.07	0.15	0.59	0.23	0.26	0.31	0.50	0.22	0.28

Intersection Summary

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

Queues

2031 Total PM

6: Jewell Ave & Harvest Rd

09/20/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	405	1021	141	33	789	182	95	146	82	103	387
v/c Ratio	0.68	0.48	0.14	0.11	0.50	0.23	0.35	0.37	0.35	0.26	0.25
Control Delay (s/veh)	40.4	11.1	2.0	6.6	7.0	0.9	34.3	31.2	26.2	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 (s/veh)	40.4	11.1	2.0	6.6	7.0	0.9	34.3	31.2	26.2	23.0	0.5
Queue Length 50th (ft)	112	172	0	3	37	0	46	66	36	44	0
Queue Length 95th (ft)	151	224	24	m10	72	4	92	122	74	82	0
Internal Link Dist (ft)		696			1334			434		789	
Turn Bay Length (ft)	225		225	225		225	150		275		275
Base Capacity (vph)	759	2120	1002	305	1563	798	270	390	237	392	1538
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	0.53	0.48	0.14	0.11	0.50	0.23	0.35	0.37	0.35	0.26	0.25

Intersection Summary

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

Queues

2033 Total AM

6: Jewell Ave & Harvest Rd

09/20/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	265	776	86	92	1373	259	96	149	157	125	476
v/c Ratio	0.70	0.39	0.09	0.23	0.79	0.28	0.36	0.36	0.63	0.30	0.31
Control Delay (s/veh)	49.2	11.4	2.4	10.0	13.3	1.2	33.8	29.5	44.6	31.8	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
Total Delay (s/veh)	49.2	11.4	2.4	10.0	13.3	1.2	33.8	29.5	44.6	31.8	0.8
Queue Length 50th (ft)	75	123	0	18	147	5	46	65	80	63	2
Queue Length 95th (ft)	#117	163	19	m23	166	m2	92	120	#121	95	9
Internal Link Dist (ft)		696			1334			434		789	
Turn Bay Length (ft)	225		225	225		225	150		275		275
Base Capacity (vph)	389	1999	930	397	1749	909	269	409	249	412	1538
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	0.68	0.39	0.09	0.23	0.79	0.28	0.36	0.36	0.63	0.30	0.31

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

2033 Total PM

6: Jewell Ave & Harvest Rd

09/20/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	453	1195	168	38	1113	230	127	164	92	163	402
v/c Ratio	0.76	0.56	0.17	0.14	0.71	0.28	0.57	0.42	0.41	0.42	0.26
Control Delay (s/veh)	43.9	12.0	1.9	6.4	8.8	0.8	42.8	32.5	31.4	28.4	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 (s/veh)	43.9	12.0	1.9	6.4	8.8	0.8	42.8	32.5	31.4	28.4	0.4
Queue Length 50th (ft)	125	214	0	3	55	1	65	76	33	57	0
Queue Length 95th (ft)	176	276	25	m8	88	1	125	136	85	113	0
Internal Link Dist (ft)		696			1334			434		789	
Turn Bay Length (ft)	225		225	225		225	150		275		275
Base Capacity (vph)	648	2131	1017	266	1562	824	223	390	222	392	1538
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	0.70	0.56	0.17	0.14	0.71	0.28	0.57	0.42	0.41	0.42	0.26

Intersection Summary

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

Queues

2028 Total AM

7: Jewell Ave & Powhatan Rd

09/20/2024



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	326	105	201	37	27	491
v/c Ratio	0.53	0.11	0.35	0.07	0.04	0.57
Control Delay (s/veh)	10.1	5.9	26.9	8.9	19.0	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	10.1	5.9	26.9	8.9	19.0	4.9
Queue Length 50th (ft)	73	23	87	0	10	0
Queue Length 95th (ft)	78	32	160	23	27	63
Internal Link Dist (ft)		1795	411		457	
Turn Bay Length (ft)				225	275	
Base Capacity (vph)	664	975	577	515	620	869
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	0.49	0.11	0.35	0.07	0.04	0.57
Intersection Summary						

Queues

2028 Total PM

7: Jewell Ave & Powhatan Rd

09/20/2024



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	562	214	167	85	130	512
v/c Ratio	0.73	0.20	0.31	0.16	0.26	0.63
Control Delay (s/veh)	11.6	4.3	28.3	7.6	25.9	6.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	11.6	4.3	28.3	7.6	25.9	6.3
Queue Length 50th (ft)	114	42	72	0	56	0
Queue Length 95th (ft)	155	20	143	37	103	76
Internal Link Dist (ft)		1795	411		457	
Turn Bay Length (ft)				225	275	
Base Capacity (vph)	832	1096	545	522	506	814
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	0.68	0.20	0.31	0.16	0.26	0.63
Intersection Summary						

Queues

2029 Total AM

7: Jewell Ave & Powhatan Rd

09/20/2024



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	376	289	426	54	39	521
v/c Ratio	0.71	0.26	0.59	0.08	0.08	0.64
Control Delay (s/veh)	30.3	6.6	26.0	5.6	16.1	7.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	30.3	6.6	26.0	5.6	16.1	7.4
Queue Length 50th (ft)	70	62	191	0	11	0
Queue Length 95th (ft)	99	87	291	23	25	110
Internal Link Dist (ft)		1795	411		5917	
Turn Bay Length (ft)	225			225	275	
Base Capacity (vph)	574	1096	719	643	506	816
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	0.66	0.26	0.59	0.08	0.08	0.64
Intersection Summary						

Queues

2029 Total PM

7: Jewell Ave & Powhatan Rd

09/20/2024



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	604	343	296	112	151	559
v/c Ratio	0.79	0.32	0.52	0.20	0.29	0.65
Control Delay (s/veh)	26.3	2.8	30.2	6.0	18.2	7.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	26.3	2.8	30.2	6.0	18.2	7.4
Queue Length 50th (ft)	122	22	138	0	71	112
Queue Length 95th (ft)	123	33	228	38	62	85
Internal Link Dist (ft)		1795	411		5917	
Turn Bay Length (ft)	225			225	275	
Base Capacity (vph)	870	1075	568	560	525	858
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	0.69	0.32	0.52	0.20	0.29	0.65
Intersection Summary						

Queues

2031 Total AM

7: Jewell Ave & Powhatan Rd

09/20/2024



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	397	470	550	158	55	527
v/c Ratio	0.61	0.37	0.67	0.20	0.16	0.34
Control Delay (s/veh)	39.7	3.3	24.1	3.2	42.3	1.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	39.7	3.3	24.1	3.2	42.3	1.8
Queue Length 50th (ft)	123	89	236	0	31	15
Queue Length 95th (ft)	167	14	353	33	69	0
Internal Link Dist (ft)		2266	411		5460	
Turn Bay Length (ft)	225			225	275	
Base Capacity (vph)	648	1267	824	786	343	1538
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	0.37	0.67	0.20	0.16	0.34
Intersection Summary						

Queues

2031 Total PM

7: Jewell Ave & Powhatan Rd

09/20/2024



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	518	584	427	203	178	513
v/c Ratio	0.62	0.46	0.60	0.28	0.50	0.33
Control Delay (s/veh)	31.7	2.9	25.9	3.8	48.9	2.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	31.7	2.9	25.9	3.8	48.9	2.6
Queue Length 50th (ft)	153	5	188	0	103	0
Queue Length 95th (ft)	204	6	286	41	173	135
Internal Link Dist (ft)		2266	411		5460	
Turn Bay Length (ft)	225			225	275	
Base Capacity (vph)	833	1256	713	729	353	1538
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	0.62	0.46	0.60	0.28	0.50	0.33
Intersection Summary						

Queues

2033 Total AM

7: Jewell Ave & Powhatan Rd

09/20/2024



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	421	664	771	174	77	592
v/c Ratio	0.69	0.28	0.50	0.22	0.21	0.38
Control Delay (s/veh)	29.0	1.6	19.6	3.6	25.7	1.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	29.0	1.6	19.6	3.6	25.7	1.8
Queue Length 50th (ft)	57	11	158	0	40	0
Queue Length 95th (ft)	82	18	230	38	66	254
Internal Link Dist (ft)		2266	411		5460	
Turn Bay Length (ft)	225			225	275	
Base Capacity (vph)	796	2349	1546	787	372	1538
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	0.53	0.28	0.50	0.22	0.21	0.38
Intersection Summary						

Queues

2033 Total PM

7: Jewell Ave & Powhatan Rd

09/20/2024



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	565	691	627	252	211	580
v/c Ratio	0.75	0.30	0.47	0.34	0.51	0.38
Control Delay (s/veh)	40.8	2.5	23.1	4.3	27.8	1.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	40.8	2.5	23.1	4.3	27.8	1.2
Queue Length 50th (ft)	128	24	138	0	115	6
Queue Length 95th (ft)	150	18	207	51	163	0
Internal Link Dist (ft)		2266	411		5460	
Turn Bay Length (ft)	225			225	275	
Base Capacity (vph)	944	2272	1322	746	410	1538
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	0.60	0.30	0.47	0.34	0.51	0.38
Intersection Summary						

Queues

2031 Total AM

8: Harvest Rd & Mississippi Ave

09/20/2024



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	234	42	538	114	37	537
v/c Ratio	0.70	0.13	0.46	0.11	0.07	0.42
Control Delay (s/veh)	44.8	10.4	12.0	3.1	3.7	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	44.8	10.4	12.0	3.1	3.7	4.8
Queue Length 50th (ft)	123	1	199	0	4	57
Queue Length 95th (ft)	177	25	263	7	m9	80
Internal Link Dist (ft)	5247		617			4554
Turn Bay Length (ft)		150		275	275	
Base Capacity (vph)	467	449	1157	1024	555	1277
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	0.50	0.09	0.46	0.11	0.07	0.42

Intersection Summary

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

Queues

2031 Total PM

8: Harvest Rd & Mississippi Ave

09/20/2024



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	191	41	688	278	45	587
v/c Ratio	0.67	0.14	0.57	0.25	0.09	0.44
Control Delay (s/veh)	49.4	14.9	10.2	1.4	2.7	3.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	49.4	14.9	10.2	1.4	2.7	3.9
Queue Length 50th (ft)	103	3	231	3	2	43
Queue Length 95th (ft)	157	28	334	12	m8	121
Internal Link Dist (ft)	5247		617			4554
Turn Bay Length (ft)		150		275	275	
Base Capacity (vph)	372	365	1208	1119	478	1329
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	0.51	0.11	0.57	0.25	0.09	0.44

Intersection Summary

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

Queues

2033 Total AM

8: Harvest Rd & Mississippi Ave

09/20/2024



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	237	52	760	116	45	625
v/c Ratio	0.70	0.15	0.35	0.12	0.09	0.26
Control Delay (s/veh)	41.1	8.7	5.2	0.4	4.3	3.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	41.1	8.7	5.2	0.4	4.3	3.9
Queue Length 50th (ft)	133	3	60	0	5	40
Queue Length 95th (ft)	193	30	95	3	13	54
Internal Link Dist (ft)	5247		617			4554
Turn Bay Length (ft)		150		275	275	
Base Capacity (vph)	563	539	2141	1001	511	2416
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	0.42	0.10	0.35	0.12	0.09	0.26
Intersection Summary						

Queues

2033 Total PM

8: Harvest Rd & Mississippi Ave

09/20/2024



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	195	49	880	282	52	763
v/c Ratio	0.66	0.16	0.39	0.26	0.12	0.30
Control Delay (s/veh)	37.9	8.2	10.8	2.8	2.4	2.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	37.9	8.2	10.8	2.8	2.4	2.6
Queue Length 50th (ft)	89	3	160	12	3	35
Queue Length 95th (ft)	138	22	188	34	m11	61
Internal Link Dist (ft)	5247		617			4554
Turn Bay Length (ft)		150		275	275	
Base Capacity (vph)	467	454	2245	1102	450	2504
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	0.42	0.11	0.39	0.26	0.12	0.30

Intersection Summary

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

Queues

2031 Total AM

9: Powhatan Rd & Mississippi Ave

09/20/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	49	92	45	92	33	559	113	99	565	34
v/c Ratio	0.32	0.45	0.37	0.44	0.06	0.27	0.12	0.19	0.25	0.03
Control Delay (s/veh)	43.8	24.8	45.7	23.9	6.9	5.9	0.4	6.2	5.1	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	43.8	24.8	45.7	23.9	6.9	5.9	0.4	6.2	5.1	0.1
Queue Length 50th (ft)	24	13	24	19	4	35	0	13	39	0
Queue Length 95th (ft)	49	45	56	62	m11	69	m0	24	52	0
Internal Link Dist (ft)	5247		411		5460		4955			
Turn Bay Length (ft)	150		150		150		150	150		150
Base Capacity (vph)	353	384	259	382	526	2065	974	543	2237	1045
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	0.14	0.24	0.17	0.24	0.06	0.27	0.12	0.18	0.25	0.03

Intersection Summary

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

Queues

2031 Total PM

9: Powhatan Rd & Mississippi Ave

09/23/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	55	113	111	85	64	665	87	87	522	50
v/c Ratio	0.31	0.53	0.61	0.30	0.14	0.38	0.10	0.23	0.29	0.06
Control Delay (s/veh)	47.7	39.5	49.1	19.1	7.7	7.2	0.3	11.7	9.8	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	47.7	39.5	49.1	19.1	7.7	7.2	0.3	11.7	9.8	0.1
Queue Length 50th (ft)	30	39	60	19	7	40	0	16	54	0
Queue Length 95th (ft)	65	87	107	56	m19	77	m0	33	72	0
Internal Link Dist (ft)	5247		411		5460		4955			
Turn Bay Length (ft)	150		150		150		150	150		150
Base Capacity (vph)	353	380	256	381	473	1728	836	386	1826	876
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.30	0.43	0.22	0.14	0.38	0.10	0.23	0.29	0.06

Intersection Summary

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

Queues

2033 Total AM

9: Powhatan Rd & Mississippi Ave

09/20/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	92	222	112	183	103	563	139	110	574	61
v/c Ratio	0.60	0.64	0.91	0.55	0.17	0.27	0.14	0.18	0.27	0.06
Control Delay (s/veh)	50.6	32.1	95.9	30.1	3.5	5.3	0.6	2.9	4.5	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	50.6	32.1	95.9	30.1	3.5	5.3	0.6	2.9	4.5	0.4
Queue Length 50th (ft)	47	76	63	71	7	32	0	4	31	0
Queue Length 95th (ft)	85	131	#126	122	24	70	0	18	43	1
Internal Link Dist (ft)		5247		411		5460			4955	
Turn Bay Length (ft)	150		150		150		150	150		150
Base Capacity (vph)	296	609	237	603	646	2114	999	667	2117	975
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.36	0.47	0.30	0.16	0.27	0.14	0.16	0.27	0.06

Intersection Summary

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

Queue shown is maximum after two cycles.

Queues

2033 Total PM

9: Powhaton Rd & Mississippi Ave

09/20/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	100	261	122	183	118	676	143	120	529	72
v/c Ratio	0.54	0.69	0.98	0.49	0.22	0.36	0.16	0.22	0.26	0.08
Control Delay (s/veh)	38.4	31.4	110.8	27.2	4.0	7.7	1.6	3.2	4.2	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	38.4	31.4	110.8	27.2	4.0	7.7	1.6	3.2	4.2	0.4
Queue Length 50th (ft)	49	104	70	71	7	43	0	7	23	0
Queue Length 95th (ft)	81	146	#141	117	m22	103	m2	14	31	0
Internal Link Dist (ft)		5247		411		5460			4955	
Turn Bay Length (ft)	150		150		150		150	150		150
Base Capacity (vph)	314	606	210	603	592	1886	908	591	2001	925
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	0.32	0.43	0.58	0.30	0.20	0.36	0.16	0.20	0.26	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

2028 Total AM

16: Jewell Ave & Kewaunee St

09/20/2024



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	37	346	11	627	60	76	44	62	91
v/c Ratio	0.07	0.17	0.02	0.34	0.07	0.21	0.09	0.17	0.18
Control Delay (s/veh)	6.1	6.1	9.8	12.6	1.3	26.6	11.7	25.8	7.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	6.1	6.1	9.8	12.6	1.3	26.6	11.7	25.8	7.4
Queue Length 50th (ft)	6	36	4	134	1	33	5	26	2
Queue Length 95th (ft)	14	39	m5	155	m2	69	29	59	37
Internal Link Dist (ft)		1334		1057			342		290
Turn Bay Length (ft)	225		225		225	150		100	
Base Capacity (vph)	535	2032	545	1822	849	357	478	373	501
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	0.07	0.17	0.02	0.34	0.07	0.21	0.09	0.17	0.18

Intersection Summary

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

Queues

2028 Total PM

16: Jewell Ave & Kewaunee St

09/20/2024



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	116	718	11	565	123	43	22	134	70
v/c Ratio	0.20	0.36	0.04	0.35	0.16	0.11	0.04	0.34	0.14
Control Delay (s/veh)	8.2	8.0	11.6	15.3	1.8	24.3	16.0	27.9	8.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	8.2	8.0	11.6	15.3	1.8	24.3	16.0	27.9	8.0
Queue Length 50th (ft)	22	75	4	126	11	18	4	59	2
Queue Length 95th (ft)	m31	74	m5	139	m4	43	22	110	32
Internal Link Dist (ft)		1334		1057			342		290
Turn Bay Length (ft)	225		225		225	150		100	
Base Capacity (vph)	579	1992	325	1592	778	378	500	395	504
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	0.20	0.36	0.03	0.35	0.16	0.11	0.04	0.34	0.14

Intersection Summary

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

Queues

2029 Total AM

16: Jewell Ave & Kewaunee St

09/20/2024



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	47	617	11	901	67	87	49	74	107
v/c Ratio	0.11	0.29	0.03	0.46	0.07	0.28	0.11	0.23	0.23
Control Delay (s/veh)	7.7	7.1	5.2	9.1	1.1	30.2	12.2	29.1	7.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	7.7	7.1	5.2	9.1	1.1	30.2	12.2	29.1	7.8
Queue Length 50th (ft)	7	60	2	157	1	40	5	34	2
Queue Length 95th (ft)	22	90	m3	255	4	82	32	71	42
Internal Link Dist (ft)		1334		1057			342		290
Turn Bay Length (ft)	225		225		225	150		100	
Base Capacity (vph)	421	2150	433	1959	907	311	428	328	464
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	0.11	0.29	0.03	0.46	0.07	0.28	0.11	0.23	0.23

Intersection Summary

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

Queues

2029 Total PM

16: Jewell Ave & Kewaunee St

09/20/2024



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	133	924	11	742	138	60	38	143	84
v/c Ratio	0.26	0.45	0.05	0.49	0.18	0.17	0.08	0.40	0.18
Control Delay (s/veh)	7.7	6.9	7.0	10.5	1.6	26.8	12.9	30.7	7.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	7.7	6.9	7.0	10.5	1.6	26.8	12.9	30.7	7.8
Queue Length 50th (ft)	24	90	3	147	17	26	5	66	2
Queue Length 95th (ft)	31	82	m3	53	1	58	28	121	36
Internal Link Dist (ft)	1334		1057		342		290		
Turn Bay Length (ft)	225		225		225		100		
Base Capacity (vph)	507	2067	242	1508	752	345	459	360	480
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	0.26	0.45	0.05	0.49	0.18	0.17	0.08	0.40	0.18

Intersection Summary

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

Queues

2031 Total AM

16: Jewell Ave & Kewaunee St

09/20/2024



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	38	750	16	1149	40	98	55	54	63
v/c Ratio	0.12	0.34	0.04	0.55	0.04	0.33	0.14	0.18	0.16
Control Delay (s/veh)	4.9	4.5	3.6	5.1	0.1	32.8	12.7	34.8	14.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	4.9	4.5	3.6	5.1	0.1	32.8	12.7	34.8	14.3
Queue Length 50th (ft)	3	29	1	83	1	47	5	28	3
Queue Length 95th (ft)	m11	81	m3	58	m0	93	35	61	39
Internal Link Dist (ft)	1334		867		289		1735		
Turn Bay Length (ft)	225		225		225	100		100	
Base Capacity (vph)	317	2233	395	2082	960	295	397	297	400
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	0.12	0.34	0.04	0.55	0.04	0.33	0.14	0.18	0.16

Intersection Summary

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

Queues

2031 Total PM

16: Jewell Ave & Kewaunee St

09/20/2024



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	89	1045	16	886	82	71	40	82	67
v/c Ratio	0.21	0.48	0.06	0.47	0.09	0.23	0.10	0.26	0.16
Control Delay (s/veh)	4.8	4.9	4.1	6.5	0.5	30.0	14.6	39.1	18.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	4.8	4.9	4.1	6.5	0.5	30.0	14.6	39.1	18.1
Queue Length 50th (ft)	6	56	1	32	0	33	6	44	10
Queue Length 95th (ft)	18	72	m3	42	2	70	31	88	45
Internal Link Dist (ft)	1334		867		289		1735		
Turn Bay Length (ft)	225		225		225	100		100	
Base Capacity (vph)	439	2180	274	1875	876	308	409	316	420
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	0.20	0.48	0.06	0.47	0.09	0.23	0.10	0.26	0.16

Intersection Summary

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

Queues

2033 Total AM

16: Jewell Ave & Kewaunee St

09/20/2024



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	53	918	16	1479	57	163	68	74	90
v/c Ratio	0.23	0.40	0.05	0.70	0.06	0.59	0.18	0.27	0.22
Control Delay (s/veh)	8.5	3.9	4.1	6.4	0.2	41.9	12.5	30.8	8.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	8.5	3.9	4.1	6.4	0.2	41.9	12.5	30.8	8.8
Queue Length 50th (ft)	3	37	2	133	0	84	6	36	8
Queue Length 95th (ft)	m13	84	m3	83	m0	151	40	75	39
Internal Link Dist (ft)		1334		867			289		1735
Turn Bay Length (ft)	225		225		225	100		100	
Base Capacity (vph)	226	2275	334	2120	976	274	387	279	402
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	0.23	0.40	0.05	0.70	0.06	0.59	0.18	0.27	0.22

Intersection Summary

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

Queues

2033 Total PM

16: Jewell Ave & Kewaunee St

09/20/2024



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	115	1209	16	1198	98	120	51	92	84
v/c Ratio	0.34	0.53	0.07	0.62	0.11	0.44	0.14	0.33	0.21
Control Delay (s/veh)	9.3	6.3	4.9	7.5	0.4	36.3	14.0	38.9	15.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	9.3	6.3	4.9	7.5	0.4	36.3	14.0	38.9	15.0
Queue Length 50th (ft)	15	83	1	53	0	59	6	48	6
Queue Length 95th (ft)	27	118	m3	71	m2	113	35	99	51
Internal Link Dist (ft)		1334		887			289		1735
Turn Bay Length (ft)	225		225		225	100		100	
Base Capacity (vph)	348	2263	228	1921	903	275	377	283	398
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	0.33	0.53	0.07	0.62	0.11	0.44	0.14	0.33	0.21

Intersection Summary

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

Queues

2029 Total AM

18: Jewell Ave & Louisiana Pkwy

09/20/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	7	717	11	951	82	32	12	17
v/c Ratio	0.02	0.33	0.03	0.43	0.25	0.08	0.04	0.04
Control Delay (s/veh)	3.7	4.7	6.2	6.0	30.3	12.7	26.9	16.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	3.7	4.7	6.2	6.0	30.3	12.7	26.9	16.5
Queue Length 50th (ft)	1	75	1	47	38	2	5	2
Queue Length 95th (ft)	m4	98	m3	133	78	25	19	19
Internal Link Dist (ft)		1111		1795		448		421
Turn Bay Length (ft)	225		225		150		150	
Base Capacity (vph)	410	2188	439	2189	322	397	318	395
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.33	0.03	0.43	0.25	0.08	0.04	0.04

Intersection Summary

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

Queues

2029 Total PM

18: Jewell Ave & Louisiana Pkwy

09/20/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	18	1055	11	885	60	21	8	13
v/c Ratio	0.05	0.48	0.03	0.41	0.19	0.06	0.03	0.03
Control Delay (s/veh)	3.6	4.3	4.2	5.6	30.2	15.4	27.4	19.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	3.6	4.3	4.2	5.6	30.2	15.4	27.4	19.0
Queue Length 50th (ft)	1	104	1	27	28	2	4	2
Queue Length 95th (ft)	m4	64	m2	151	62	21	15	17
Internal Link Dist (ft)		1111		1795		448		421
Turn Bay Length (ft)	225		225		150		150	
Base Capacity (vph)	377	2221	373	2143	308	377	306	380
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.48	0.03	0.41	0.19	0.06	0.03	0.03

Intersection Summary

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

Queues

2031 Total AM

18: Jewell Ave & Louisiana Pkwy

09/20/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	17	812	16	1046	110	38	27	39
v/c Ratio	0.05	0.38	0.04	0.51	0.33	0.09	0.08	0.09
Control Delay (s/veh)	2.4	6.2	1.1	3.3	31.0	11.4	30.2	14.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	2.4	6.2	1.1	3.3	31.0	11.4	30.2	14.4
Queue Length 50th (ft)	3	80	1	11	51	2	12	3
Queue Length 95th (ft)	m1	240	m1	64	99	26	36	30
Internal Link Dist (ft)		830		2266		254		2406
Turn Bay Length (ft)	225		225		100		100	
Base Capacity (vph)	332	2150	434	2070	331	418	331	418
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.38	0.04	0.51	0.33	0.09	0.08	0.09

Intersection Summary

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

Queues

2031 Total PM

18: Jewell Ave & Louisiana Pkwy

09/20/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	52	1079	16	924	84	32	21	29
v/c Ratio	0.14	0.49	0.05	0.46	0.26	0.08	0.07	0.07
Control Delay (s/veh)	2.5	4.8	1.1	4.3	30.5	12.7	32.7	18.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	2.5	4.8	1.1	4.3	30.5	12.7	32.7	18.1
Queue Length 50th (ft)	4	64	0	100	39	2	10	4
Queue Length 95th (ft)	m3	323	m1	102	79	25	32	27
Internal Link Dist (ft)		830		2266		254		2406
Turn Bay Length (ft)	225		225		100		100	
Base Capacity (vph)	385	2181	341	2004	318	397	318	396
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.49	0.05	0.46	0.26	0.08	0.07	0.07

Intersection Summary

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

Queues

2033 Total AM

18: Jewell Ave & Louisiana Pkwy

09/20/2024



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	23	1010	16	1328	14	175	57	40	54
v/c Ratio	0.11	0.46	0.04	0.63	0.01	0.55	0.14	0.13	0.13
Control Delay (s/veh)	4.1	5.4	6.3	6.5	0.0	37.6	10.9	29.1	11.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	4.1	5.4	6.3	6.5	0.0	37.6	10.9	29.1	11.9
Queue Length 50th (ft)	4	84	1	52	0	87	3	18	4
Queue Length 95th (ft)	m4	136	m6	154	m0	155	33	46	34
Internal Link Dist (ft)		830		2266			254		2406
Turn Bay Length (ft)	225		225		225	100		100	
Base Capacity (vph)	215	2187	361	2114	974	316	418	315	417
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	0.11	0.46	0.04	0.63	0.01	0.55	0.14	0.13	0.13

Intersection Summary

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

Queues

2033 Total PM

18: Jewell Ave & Louisiana Pkwy

09/20/2024



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	68	1220	16	1146	34	143	43	28	39
v/c Ratio	0.25	0.55	0.05	0.58	0.04	0.48	0.11	0.09	0.10
Control Delay (s/veh)	4.5	4.6	4.3	5.5	0.1	36.2	11.7	35.4	18.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	4.5	4.6	4.3	5.5	0.1	36.2	11.7	35.4	18.3
Queue Length 50th (ft)	6	116	1	37	0	71	2	13	4
Queue Length 95th (ft)	m9	53	m4	76	m0	129	29	36	30
Internal Link Dist (ft)		810		2266			254		2406
Turn Bay Length (ft)	225		225		225	100		100	
Base Capacity (vph)	280	2225	295	1977	915	301	386	300	384
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	0.24	0.55	0.05	0.58	0.04	0.48	0.11	0.09	0.10

Intersection Summary

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



APPENDIX G

Signal Warrant Analysis Worksheets

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

Manual on Uniform Traffic Control Devices (2009 Edition)

INTERSECTION NAME: [Alameda Avenue & Harvest Road](#)

HORIZON YEAR: [2029 Background](#)

MAJOR STREET: [Alameda Avenue](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Harvest Road](#)

OF APPROACH LANES: [1](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [N](#)

			MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3	
					MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET			
THRESHOLD VALUES →					500	150		750	75				
06:00 AM	TO	07:00 AM											
07:00 AM	TO	08:00 AM	475	153	N	Y		N	Y		N	N	
08:00 AM	TO	09:00 AM	528	170	Y	Y	Y	N	Y		N	N	
09:00 AM	TO	10:00 AM											
10:00 AM	TO	11:00 AM											
11:00 AM	TO	12:00 PM											
12:00 PM	TO	01:00 PM											
01:00 PM	TO	02:00 PM											
02:00 PM	TO	03:00 PM											
03:00 PM	TO	04:00 PM	660	286	Y	Y	Y	N	Y		Y	N	
04:00 PM	TO	05:00 PM	734	318	Y	Y	Y	N	Y		Y	Y	
05:00 PM	TO	06:00 PM	815	354	Y	Y	Y	Y	Y	Y	Y	Y	
06:00 PM	TO	07:00 PM	725	315	Y	Y	Y	N	Y		Y	Y	
07:00 PM	TO	08:00 PM											
08:00 PM	TO	09:00 PM											
09:00 PM	TO	10:00 PM											
			3,937	1,595	5			1			4	3	
						8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED SATISFIED	1 HR NEEDED SATISFIED

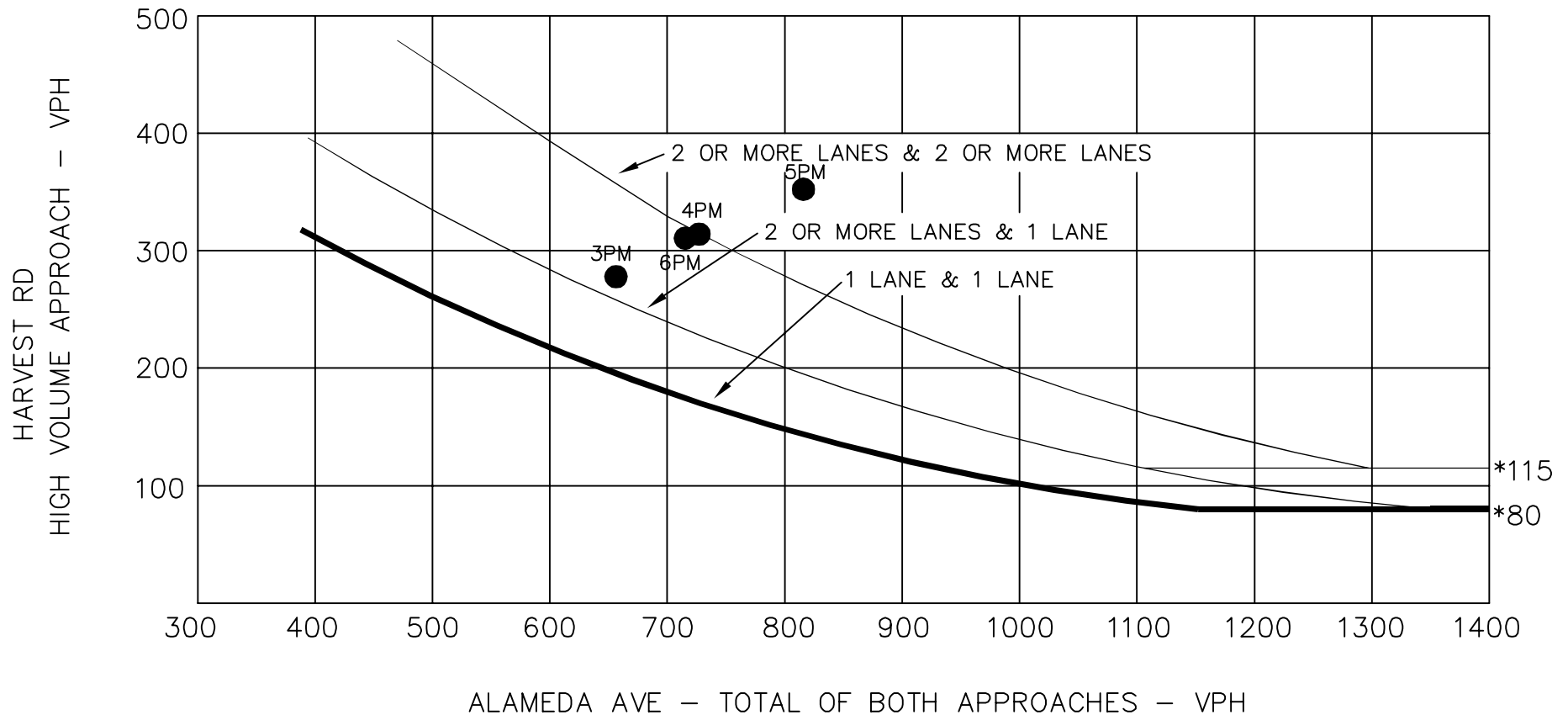
WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

WARRANT 2 - FOUR HOUR VEHICULAR VOLUME



ALAMEDA AVE & HARVEST ROAD
SIGNAL WARRANT ANALYSIS
FOUR HOUR VOLUME WARRANT

* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 80 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

● 2029 BACKGROUND TRAFFIC DATA POINT

Source: Manual of Uniform Traffic Control Devices 2009

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

Manual on Uniform Traffic Control Devices (2009 Edition)

INTERSECTION NAME: Powhaton Road & Alameda Avenue

HORIZON YEAR: 2029 Background

MAJOR STREET: Powhaton Road

OF APPROACH LANES: 2

MINOR STREET: Alameda Avenue

OF APPROACH LANES: 1

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): Y

			MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3	
					MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET			
THRESHOLD VALUES →					420	105		630	53				
06:00 AM	TO	07:00 AM											
07:00 AM	TO	08:00 AM	833	173	Y	Y	Y	Y	Y	Y	Y	Y	
08:00 AM	TO	09:00 AM	925	193	Y	Y	Y	Y	Y	Y	Y	Y	
09:00 AM	TO	10:00 AM											
10:00 AM	TO	11:00 AM											
11:00 AM	TO	12:00 PM											
12:00 PM	TO	01:00 PM											
01:00 PM	TO	02:00 PM											
02:00 PM	TO	03:00 PM											
03:00 PM	TO	04:00 PM	862	225	Y	Y	Y	Y	Y	Y	Y	Y	
04:00 PM	TO	05:00 PM	958	250	Y	Y	Y	Y	Y	Y	Y	Y	
05:00 PM	TO	06:00 PM	1,064	278	Y	Y	Y	Y	Y	Y	Y	Y	
06:00 PM	TO	07:00 PM	947	247	Y	Y	Y	Y	Y	Y	Y	Y	
07:00 PM	TO	08:00 PM											
08:00 PM	TO	09:00 PM											
09:00 PM	TO	10:00 PM											
			5,588	1,365	6			6			6	6	
						8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED SATISFIED	1 HR NEEDED SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

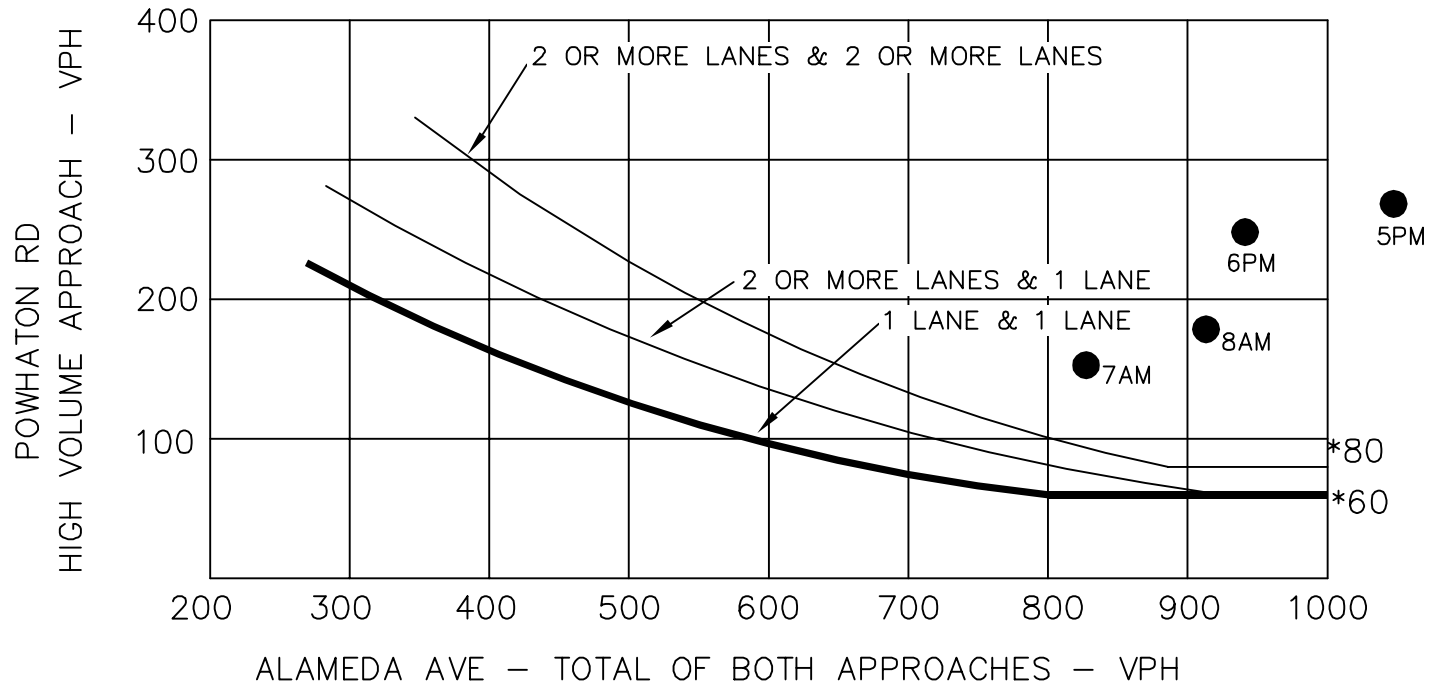
WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-2

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-4

Scale: 1=100

WARRANT 2 - FOUR HOUR VEHICULAR VOLUME (70% FACTOR)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h (40 mph) ON MAJOR STREET)



ALAMEDA AVE & POWHATON RD
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.

● 2029 BACKGROUND TRAFFIC VOLUMES

Source: Manual of Uniform Traffic Control Devices 11th Edition – Figure 4C-1

Kimley»Horn

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

Manual on Uniform Traffic Control Devices (2009 Edition)

INTERSECTION NAME: [Harvest Road & Mississippi Avenue](#)

HORIZON YEAR: [2031 Background](#)

MAJOR STREET: [Harvest Road](#)

OF APPROACH LANES: [2](#)

MINOR STREET: [Mississippi Avenue](#)

OF APPROACH LANES: [1](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [Y](#)

			MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
					MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES					420	105		630	53			
06:00 AM	TO	07:00 AM										
07:00 AM	TO	08:00 AM	867	177	Y	Y	Y	Y	Y	Y	Y	Y
08:00 AM	TO	09:00 AM	963	197	Y	Y	Y	Y	Y	Y	Y	Y
09:00 AM	TO	10:00 AM										
10:00 AM	TO	11:00 AM										
11:00 AM	TO	12:00 PM										
12:00 PM	TO	01:00 PM										
01:00 PM	TO	02:00 PM										
02:00 PM	TO	03:00 PM										
03:00 PM	TO	04:00 PM	741	290	Y	Y	Y	Y	Y	Y	Y	Y
04:00 PM	TO	05:00 PM	824	323	Y	Y	Y	Y	Y	Y	Y	Y
05:00 PM	TO	06:00 PM	915	359	Y	Y	Y	Y	Y	Y	Y	Y
06:00 PM	TO	07:00 PM	814	319	Y	Y	Y	Y	Y	Y	Y	Y
07:00 PM	TO	08:00 PM										
08:00 PM	TO	09:00 PM										
09:00 PM	TO	10:00 PM										
			5,124	1,664	6			6			6	6
					8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED SATISFIED	1 HR NEEDED SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

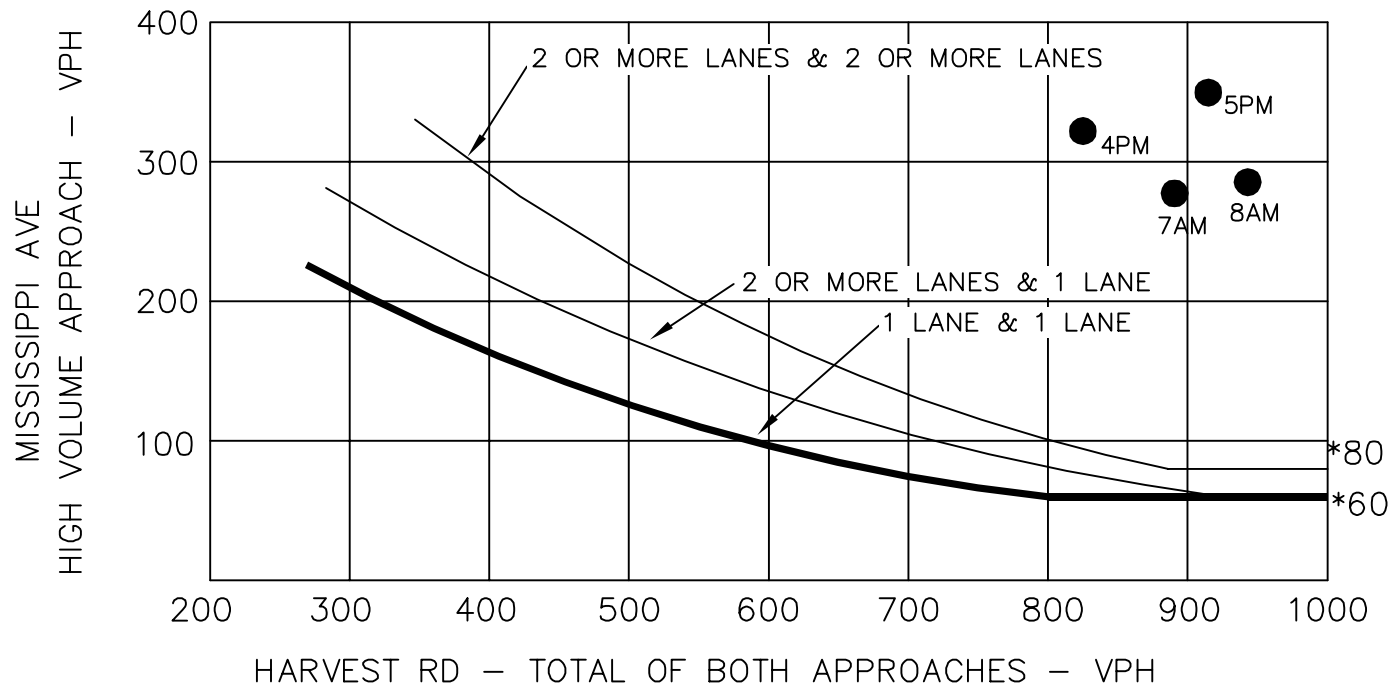
WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-2

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-4

Scale: 1=100

WARRANT 2 - FOUR HOUR VEHICULAR VOLUME (70% FACTOR)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h (40 mph) ON MAJOR STREET)



MISSISSIPPI AVE & HARVEST RD
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.

● 2031 BACKGROUND TRAFFIC VOLUMES

Source: Manual of Uniform Traffic Control Devices 11th Edition - Figure 4C-1

Kimley»Horn

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

Manual on Uniform Traffic Control Devices (2009 Edition)

INTERSECTION NAME: [Harvest Road & Louisiana Parkway](#)

HORIZON YEAR: [2031 Total](#)

MAJOR STREET: [Harvest Road](#)

OF APPROACH LANES: [2](#)

MINOR STREET: [Louisiana Parkway](#)

OF APPROACH LANES: [1](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [Y](#)

			MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
					MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES					420	105		630	53			
06:00 AM	TO	07:00 AM										
07:00 AM	TO	08:00 AM	958	69	Y	N		Y	Y	Y	Y	N
08:00 AM	TO	09:00 AM	1,064	77	Y	N		Y	Y	Y	Y	N
09:00 AM	TO	10:00 AM										
10:00 AM	TO	11:00 AM										
11:00 AM	TO	12:00 PM										
12:00 PM	TO	01:00 PM										
01:00 PM	TO	02:00 PM										
02:00 PM	TO	03:00 PM										
03:00 PM	TO	04:00 PM	1,065	63	Y	N		Y	Y	Y	Y	N
04:00 PM	TO	05:00 PM	1,184	70	Y	N		Y	Y	Y	Y	N
05:00 PM	TO	06:00 PM	1,315	78	Y	N		Y	Y	Y	Y	Y
06:00 PM	TO	07:00 PM	1,170	69	Y	N		Y	Y	Y	Y	N
07:00 PM	TO	08:00 PM										
08:00 PM	TO	09:00 PM										
09:00 PM	TO	10:00 PM										
			6,756	424	0			6			6	1
					8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED SATISFIED	1 HR NEEDED SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

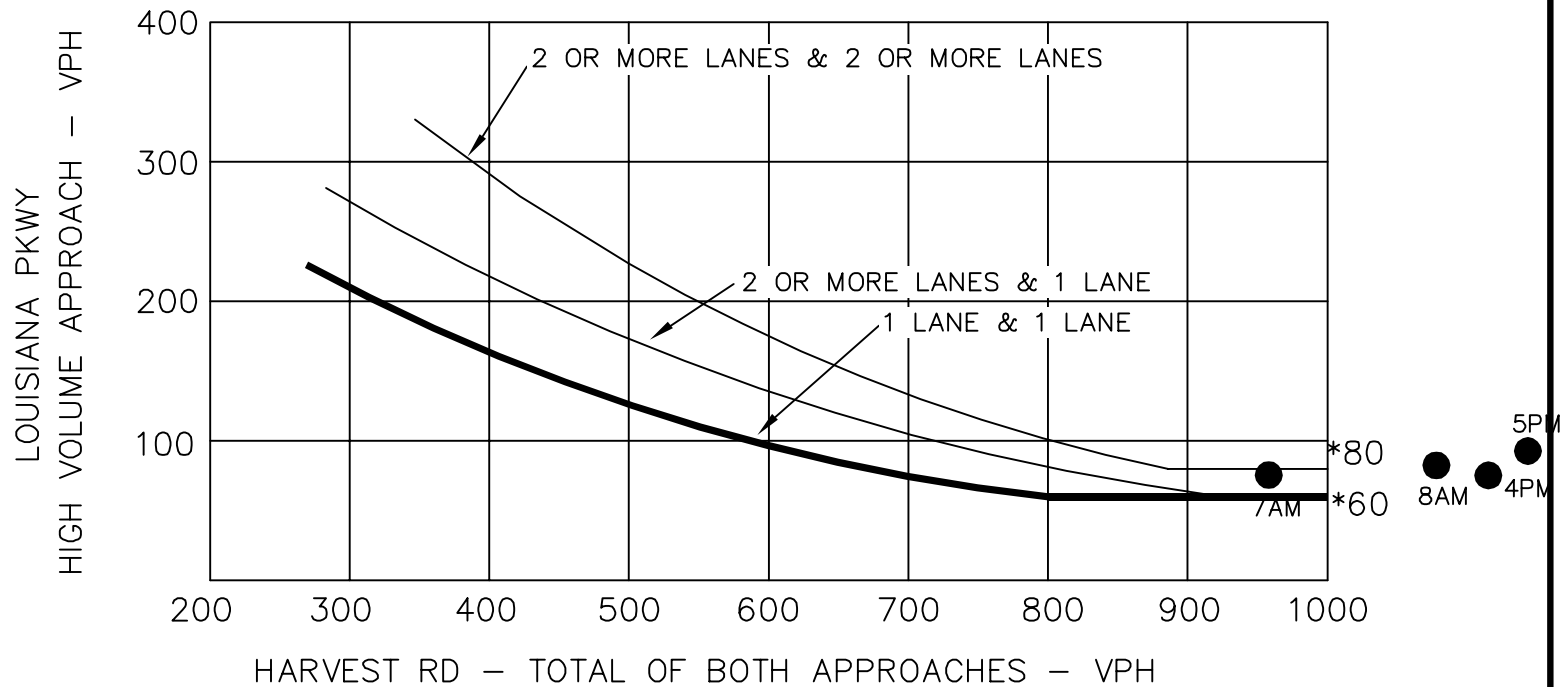
WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-2

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-4

Scale: 1=100

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.

LOUISIANA PKWY & HARVEST ROAD
SIGNAL WARRANT ANALYSIS
FOUR HOUR VOLUME WARRANT

● 2031 TOTAL TRAFFIC VOLUMES

Source: Manual of Uniform Traffic Control Devices 11th Edition - Figure 4C-1

Kimley»Horn

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

Manual on Uniform Traffic Control Devices (2009 Edition)

INTERSECTION NAME: **Harvest Road & Flat Rock Trail**

HORIZON YEAR: **2031 Total**

MAJOR STREET: **Harvest Road**

OF APPROACH LANES: **2**

MINOR STREET: **Flat Rock Trail**

OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **Y**

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			420	105		630	53			
06:00 AM TO 07:00 AM										
07:00 AM TO 08:00 AM	951	102	Y	N		Y	Y	Y	Y	N
08:00 AM TO 09:00 AM	1,057	113	Y	Y	Y	Y	Y	Y	Y	Y
09:00 AM TO 10:00 AM										
10:00 AM TO 11:00 AM										
11:00 AM TO 12:00 PM										
12:00 PM TO 01:00 PM										
01:00 PM TO 02:00 PM										
02:00 PM TO 03:00 PM										
03:00 PM TO 04:00 PM	1,024	102	Y	N		Y	Y	Y	Y	N
04:00 PM TO 05:00 PM	1,138	113	Y	Y	Y	Y	Y	Y	Y	Y
05:00 PM TO 06:00 PM	1,264	126	Y	Y	Y	Y	Y	Y	Y	Y
06:00 PM TO 07:00 PM	1,125	112	Y	Y	Y	Y	Y	Y	Y	Y
07:00 PM TO 08:00 PM										
08:00 PM TO 09:00 PM										
09:00 PM TO 10:00 PM										
	6,559	667	4			6			6	4
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED SATISFIED	1 HR NEEDED SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

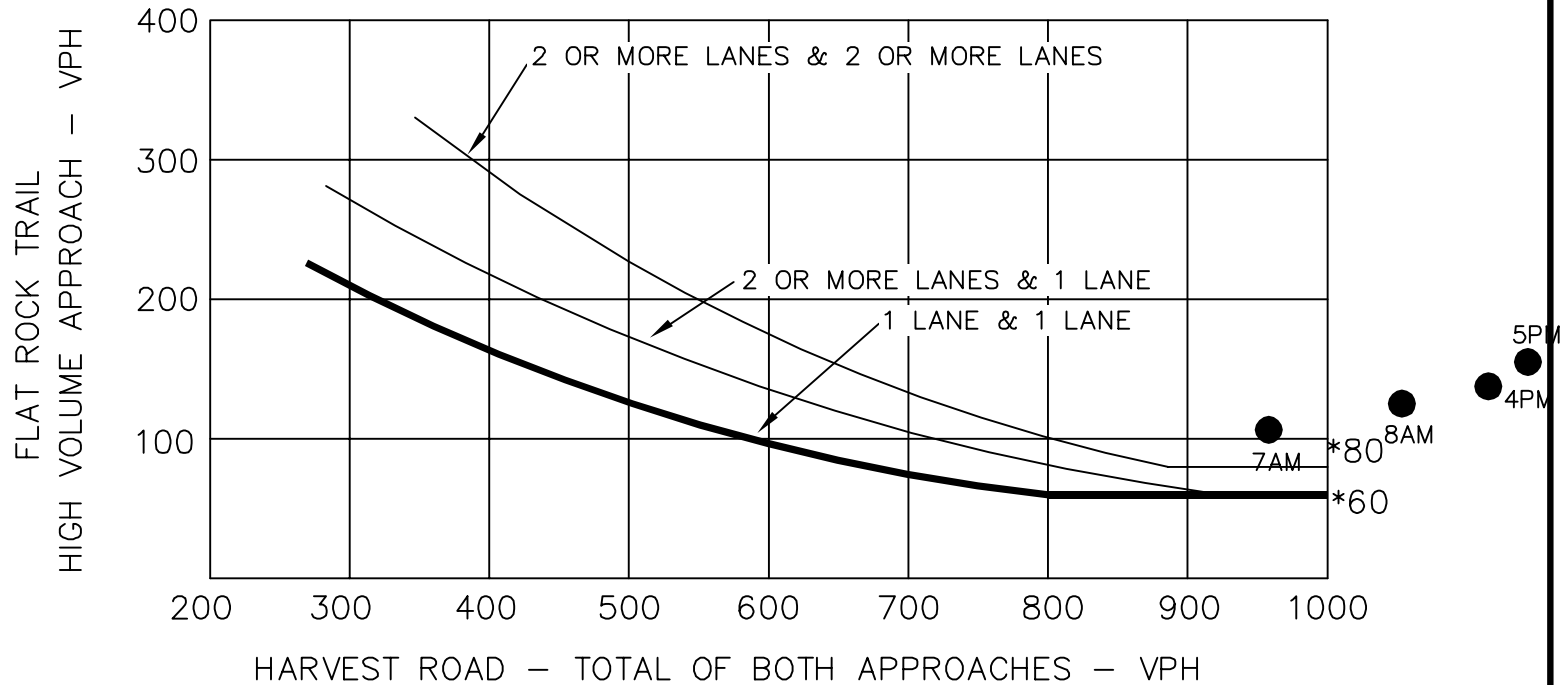
WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-2

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-4

Scale: 1=100

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.

FLAT ROCK TRAIL & HARVEST ROAD
SIGNAL WARRANT ANALYSIS
FOUR HOUR VOLUME WARRANT ● 2031 TOTAL TRAFFIC VOLUMES

Source: Manual of Uniform Traffic Control Devices 11th Edition - Figure 4C-1

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

Manual on Uniform Traffic Control Devices (2009 Edition)

INTERSECTION NAME: Jewell Avenue & Harvest Road

HORIZON YEAR: 2026 Total

MAJOR STREET: Jewell Avenue

OF APPROACH LANES: 2

MINOR STREET: Harvest Road

OF APPROACH LANES: 1

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): N

			MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3	
					MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET			
THRESHOLD VALUES →					600	150		900	75				
06:00 AM	TO	07:00 AM											
07:00 AM	TO	08:00 AM	692	64	Y	N		N	N		N	N	
08:00 AM	TO	09:00 AM	769	72	Y	N		N	N		N	N	
09:00 AM	TO	10:00 AM											
10:00 AM	TO	11:00 AM											
11:00 AM	TO	12:00 PM											
12:00 PM	TO	01:00 PM											
01:00 PM	TO	02:00 PM											
02:00 PM	TO	03:00 PM											
03:00 PM	TO	04:00 PM	795	66	Y	N		N	N		N	N	
04:00 PM	TO	05:00 PM	883	74	Y	N		N	N		N	N	
05:00 PM	TO	06:00 PM	981	82	Y	N		Y	Y	Y	N	N	
06:00 PM	TO	07:00 PM	873	73	Y	N		N	N		N	N	
07:00 PM	TO	08:00 PM											
08:00 PM	TO	09:00 PM											
09:00 PM	TO	10:00 PM											
			4,993	431	0			1			0	0	
						8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

Manual on Uniform Traffic Control Devices (2009 Edition)

INTERSECTION NAME: Jewell Avenue & Harvest Road

HORIZON YEAR: 2027 Total

MAJOR STREET: Jewell Avenue


OF APPROACH LANES: 2

MINOR STREET: Harvest Road

OF APPROACH LANES: 1

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): N

			MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
					MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES 					600	150		900	75			
06:00 AM	TO	07:00 AM										
07:00 AM	TO	08:00 AM	864	106	Y	N		N	Y		N	N
08:00 AM	TO	09:00 AM	960	118	Y	N		Y	Y	Y	N	N
09:00 AM	TO	10:00 AM										
10:00 AM	TO	11:00 AM										
11:00 AM	TO	12:00 PM										
12:00 PM	TO	01:00 PM										
01:00 PM	TO	02:00 PM										
02:00 PM	TO	03:00 PM										
03:00 PM	TO	04:00 PM	1,029	119	Y	N		Y	Y	Y	N	N
04:00 PM	TO	05:00 PM	1,143	132	Y	N		Y	Y	Y	Y	N
05:00 PM	TO	06:00 PM	1,270	147	Y	N		Y	Y	Y	Y	N
06:00 PM	TO	07:00 PM	1,130	131	Y	N		Y	Y	Y	Y	N
07:00 PM	TO	08:00 PM										
08:00 PM	TO	09:00 PM										
09:00 PM	TO	10:00 PM										
			6,396	752	0			5			3	0
						8 HOURS NEEDED NOT SATISFIED		8 HOURS NEEDED NOT SATISFIED		4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED	

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

Manual on Uniform Traffic Control Devices (2009 Edition)

INTERSECTION NAME: Jewell Avenue & Harvest Road

HORIZON YEAR: 2028 Total

MAJOR STREET: Jewell Avenue


OF APPROACH LANES: 2

MINOR STREET: Harvest Road

OF APPROACH LANES: 1

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): N

		MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
				MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES 				600	150		900	75			
06:00 AM	TO 07:00 AM										
07:00 AM	TO 08:00 AM	1,009	111	Y	N		Y	Y	Y	N	N
08:00 AM	TO 09:00 AM	1,121	124	Y	N		Y	Y	Y	Y	N
09:00 AM	TO 10:00 AM										
10:00 AM	TO 11:00 AM										
11:00 AM	TO 12:00 PM										
12:00 PM	TO 01:00 PM										
01:00 PM	TO 02:00 PM										
02:00 PM	TO 03:00 PM										
03:00 PM	TO 04:00 PM	1,204	123	Y	N		Y	Y	Y	Y	N
04:00 PM	TO 05:00 PM	1,338	136	Y	N		Y	Y	Y	Y	N
05:00 PM	TO 06:00 PM	1,487	152	Y	Y	Y	Y	Y	Y	Y	Y
06:00 PM	TO 07:00 PM	1,323	135	Y	N		Y	Y	Y	Y	N
07:00 PM	TO 08:00 PM										
08:00 PM	TO 09:00 PM										
09:00 PM	TO 10:00 PM										
		7,483	780	1			6			5	1
				8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED SATISFIED	1 HR NEEDED SATISFIED

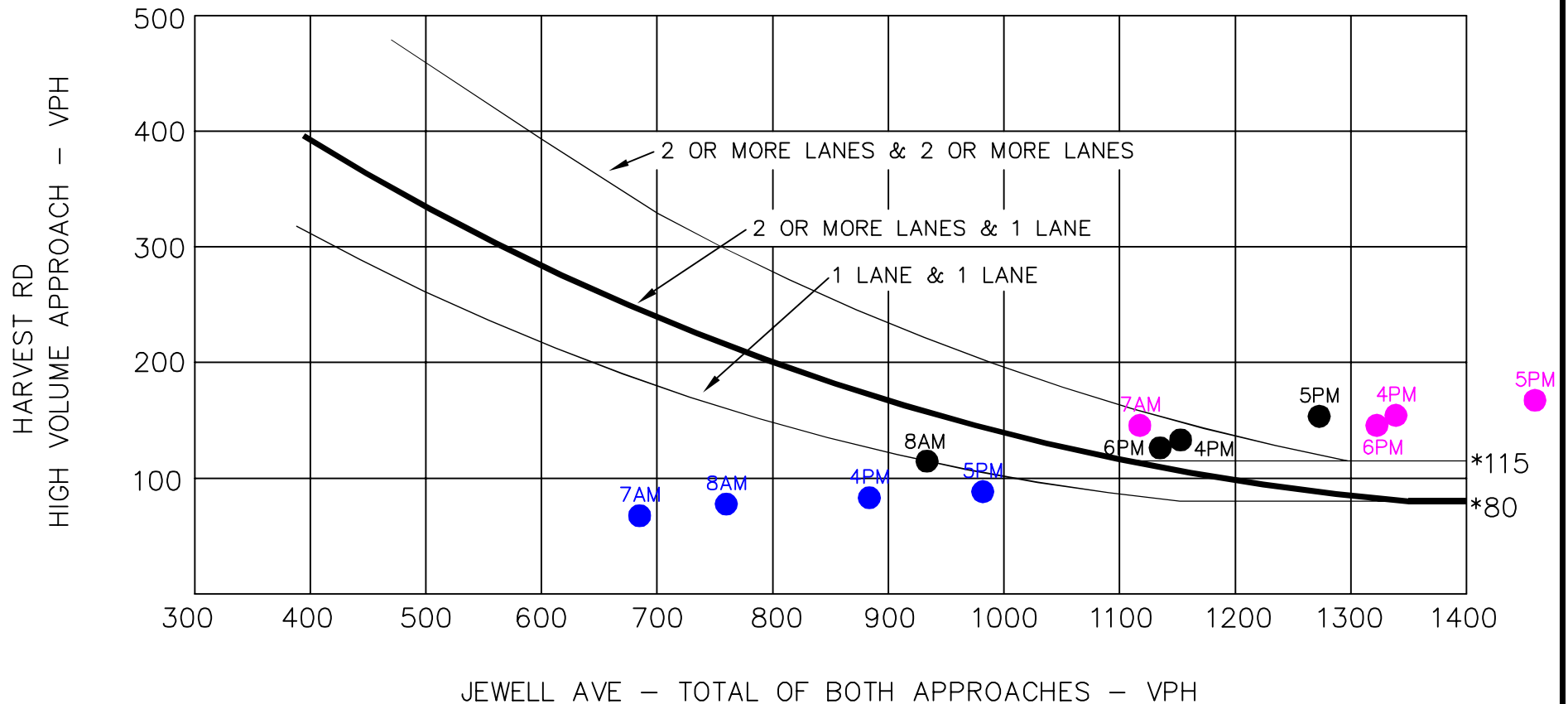
WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

WARRANT 2 - FOUR HOUR VEHICULAR VOLUME



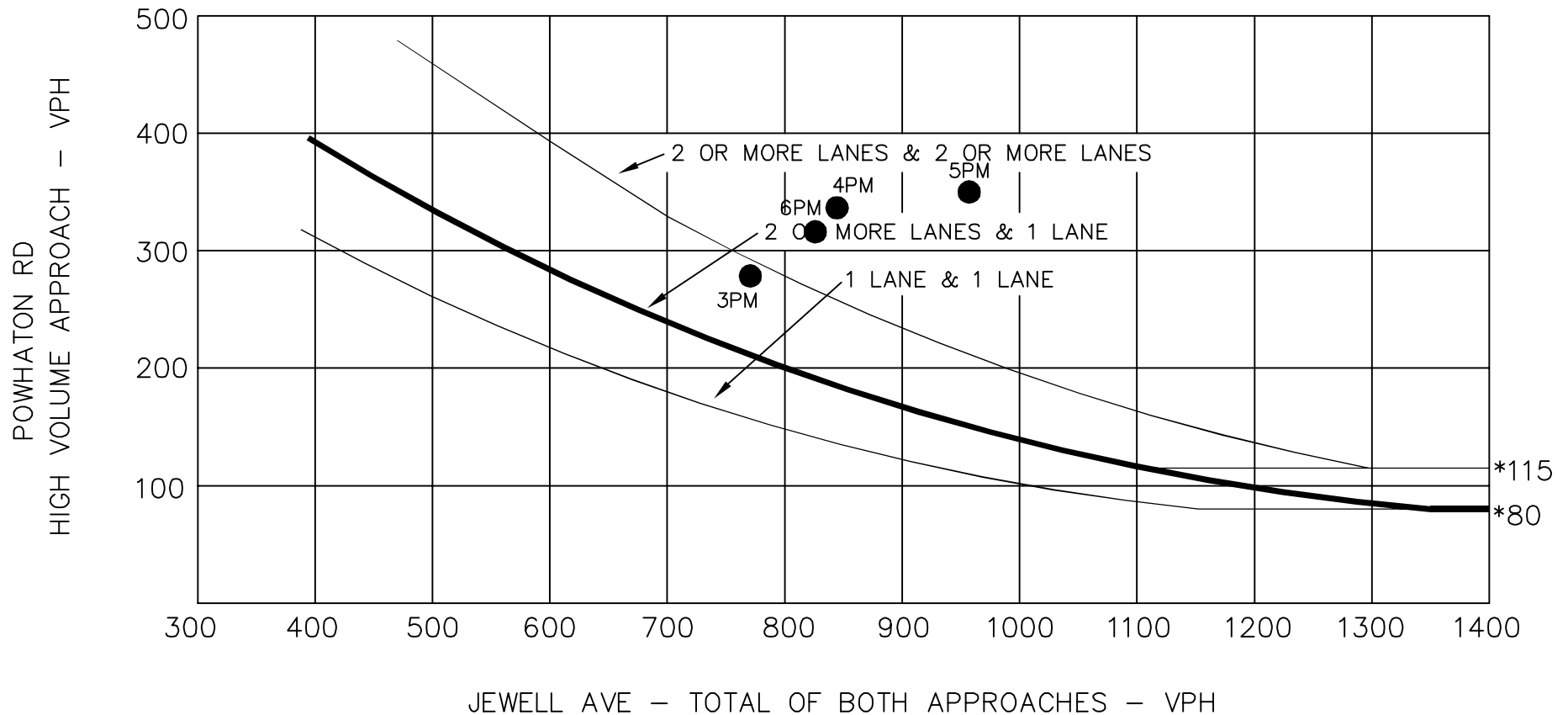
* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 80 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

JEWELL AVE & HARVEST ROAD
SIGNAL WARRANT ANALYSIS
FOUR HOUR VOLUME WARRANT

- 2026 TOTAL TRAFFIC DATA POINT
- 2027 TOTAL TRAFFIC DATA POINT
- 2028 TOTAL TRAFFIC DATA POINT

Source: Manual of Uniform Traffic Control Devices 2009

WARRANT 2 - FOUR HOUR VEHICULAR VOLUME



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 80 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

JEWELL AVE & POWATON ROAD
SIGNAL WARRANT ANALYSIS
FOUR HOUR VOLUME WARRANT

● 2028 TOTAL TRAFFIC DATA POINT

Source: Manual of Uniform Traffic Control Devices 2009

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

Manual on Uniform Traffic Control Devices (2009 Edition)

INTERSECTION NAME: **Jewell Avenue & Powhatan Road**

HORIZON YEAR: **2028 Total**

MAJOR STREET: **Jewell Avenue**

OF APPROACH LANES: **2**

MINOR STREET: **Powhatan Road**

OF APPROACH LANES: **1**

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **N**

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): **N**

			MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
					MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES →					600	150		900	75			
06:00 AM	TO	07:00 AM										
07:00 AM	TO	08:00 AM	554	226	N	Y		N	Y		N	N
08:00 AM	TO	09:00 AM	616	251	Y	Y	Y	N	Y		N	N
09:00 AM	TO	10:00 AM										
10:00 AM	TO	11:00 AM										
11:00 AM	TO	12:00 PM										
12:00 PM	TO	01:00 PM										
01:00 PM	TO	02:00 PM										
02:00 PM	TO	03:00 PM										
03:00 PM	TO	04:00 PM	766	288	Y	Y	Y	N	Y		Y	N
04:00 PM	TO	05:00 PM	851	320	Y	Y	Y	N	Y		Y	N
05:00 PM	TO	06:00 PM	946	356	Y	Y	Y	Y	Y	Y	Y	Y
06:00 PM	TO	07:00 PM	842	316	Y	Y	Y	N	Y		Y	N
07:00 PM	TO	08:00 PM										
08:00 PM	TO	09:00 PM										
09:00 PM	TO	10:00 PM										
			4,576	1,757	5			1			4	1
						8 HOURS NEEDED NOT SATISFIED		8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED SATISFIED	1 HR NEEDED SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

Manual on Uniform Traffic Control Devices (2009 Edition)

INTERSECTION NAME: [Harvest Road & Mississippi Avenue East](#)

HORIZON YEAR: [2031 Background](#)

MAJOR STREET: [Harvest Road](#)

OF APPROACH LANES: [1](#)

MINOR STREET: [Mississippi Avenue East](#)

OF APPROACH LANES: [1](#)

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): [N](#)

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): [Y](#)

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			350	105		525	53			
06:00 AM TO 07:00 AM										
07:00 AM TO 08:00 AM	770	202	Y	Y	Y	Y	Y	Y	Y	Y
08:00 AM TO 09:00 AM	856	225	Y	Y	Y	Y	Y	Y	Y	Y
09:00 AM TO 10:00 AM										
10:00 AM TO 11:00 AM										
11:00 AM TO 12:00 PM										
12:00 PM TO 01:00 PM										
01:00 PM TO 02:00 PM										
02:00 PM TO 03:00 PM										
03:00 PM TO 04:00 PM	816	164	Y	Y	Y	Y	Y	Y	Y	Y
04:00 PM TO 05:00 PM	906	183	Y	Y	Y	Y	Y	Y	Y	Y
05:00 PM TO 06:00 PM	1,007	203	Y	Y	Y	Y	Y	Y	Y	Y
06:00 PM TO 07:00 PM	896	181	Y	Y	Y	Y	Y	Y	Y	Y
07:00 PM TO 08:00 PM										
08:00 PM TO 09:00 PM										
09:00 PM TO 10:00 PM										
	5,252	1,157	6			6			6	6
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED SATISFIED	1 HR NEEDED SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

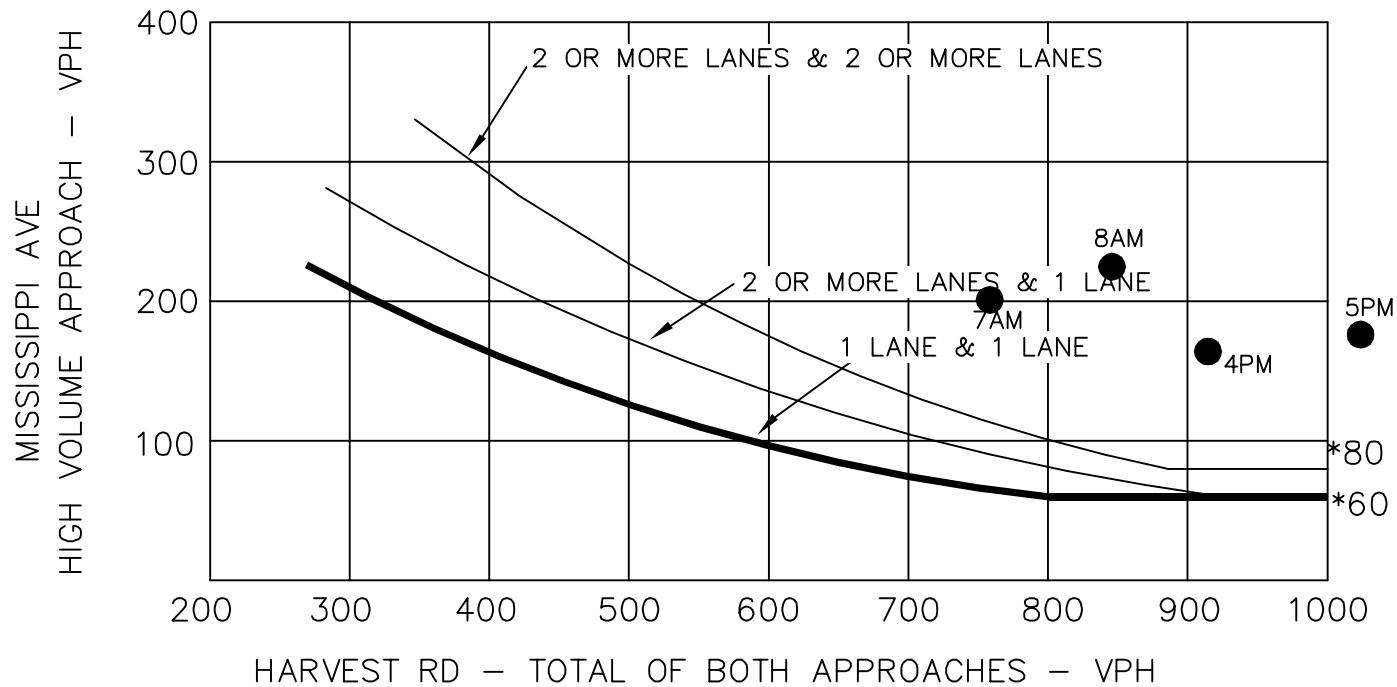
WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-2

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-4

Scale: 1=100

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.

MISSISSIPPI AVE & HARVEST ROAD
SIGNAL WARRANT ANALYSIS
FOUR HOUR VOLUME WARRANT

● 2031 BACKGROUND TRAFFIC VOLUMES

Source: Manual of Uniform Traffic Control Devices 11th Edition – Figure 4C-1

Kimley»Horn

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

Manual on Uniform Traffic Control Devices (2009 Edition)

INTERSECTION NAME: Powhatan Road & Mississippi Avenue

HORIZON YEAR: 2031 Total

MAJOR STREET: Powhatan Road


OF APPROACH LANES: 2

MINOR STREET: Mississippi Avenue

OF APPROACH LANES: 1

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): Y

			MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
					MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES 					420	105		630	53			
06:00 AM	TO	07:00 AM										
07:00 AM	TO	08:00 AM	1,161	90	Y	N		Y	Y	Y	Y	Y
08:00 AM	TO	09:00 AM	1,290	101	Y	N		Y	Y	Y	Y	Y
09:00 AM	TO	10:00 AM										
10:00 AM	TO	11:00 AM										
11:00 AM	TO	12:00 PM										
12:00 PM	TO	01:00 PM										
01:00 PM	TO	02:00 PM										
02:00 PM	TO	03:00 PM										
03:00 PM	TO	04:00 PM	1,099	106	Y	Y	Y	Y	Y	Y	Y	Y
04:00 PM	TO	05:00 PM	1,221	117	Y	Y	Y	Y	Y	Y	Y	Y
05:00 PM	TO	06:00 PM	1,357	131	Y	Y	Y	Y	Y	Y	Y	Y
06:00 PM	TO	07:00 PM	1,208	116	Y	Y	Y	Y	Y	Y	Y	Y
07:00 PM	TO	08:00 PM										
08:00 PM	TO	09:00 PM										
09:00 PM	TO	10:00 PM										
			7,336	661	4			6			6	6
						8 HOURS NEEDED NOT SATISFIED		8 HOURS NEEDED NOT SATISFIED		4 HRS NEEDED SATISFIED	1 HR NEEDED SATISFIED	

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

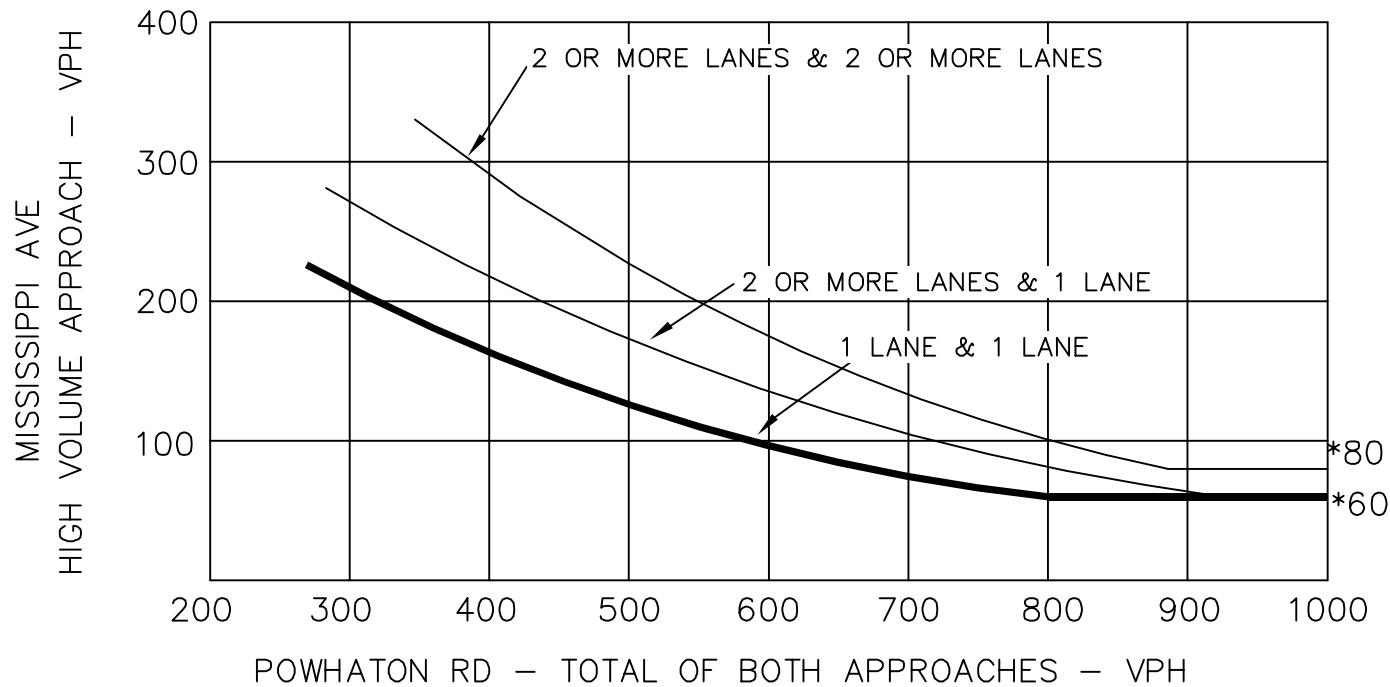
WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-2

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-4

Scale: 1=100

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.

MISSISSIPPI AVE & POWHATON ROAD
SIGNAL WARRANT ANALYSIS
FOUR HOUR VOLUME WARRANT

● 2031 TOTAL TRAFFIC VOLUMES

7AM

8AM

5PM
4PM

Source: Manual of Uniform Traffic Control Devices 11th Edition - Figure 4C-1

Kimley»Horn

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

Manual on Uniform Traffic Control Devices (2009 Edition)

INTERSECTION NAME: Jewell Avenue & Kewaunee Street

HORIZON YEAR: 2028 Total

MAJOR STREET: Jewell Avenue

OF APPROACH LANES: 2

MINOR STREET: Kewaunee Street

OF APPROACH LANES: 1

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): N

			MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3	
					MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET			
THRESHOLD VALUES →					600	150		900	75				
06:00 AM	TO	07:00 AM											
07:00 AM	TO	08:00 AM	896	91	Y	N		N	Y		N	N	
08:00 AM	TO	09:00 AM	995	102	Y	N		Y	Y	Y	N	N	
09:00 AM	TO	10:00 AM											
10:00 AM	TO	11:00 AM											
11:00 AM	TO	12:00 PM											
12:00 PM	TO	01:00 PM											
01:00 PM	TO	02:00 PM											
02:00 PM	TO	03:00 PM											
03:00 PM	TO	04:00 PM	1,143	128	Y	N		Y	Y	Y	Y	N	
04:00 PM	TO	05:00 PM	1,270	142	Y	N		Y	Y	Y	Y	N	
05:00 PM	TO	06:00 PM	1,411	158	Y	Y	Y	Y	Y	Y	Y	N	
06:00 PM	TO	07:00 PM	1,256	141	Y	N		Y	Y	Y	Y	N	
07:00 PM	TO	08:00 PM											
08:00 PM	TO	09:00 PM											
09:00 PM	TO	10:00 PM											
			6,970	762	1			5			4	0	
						8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED SATISFIED	1 HR NEEDED NOT SATISFIED

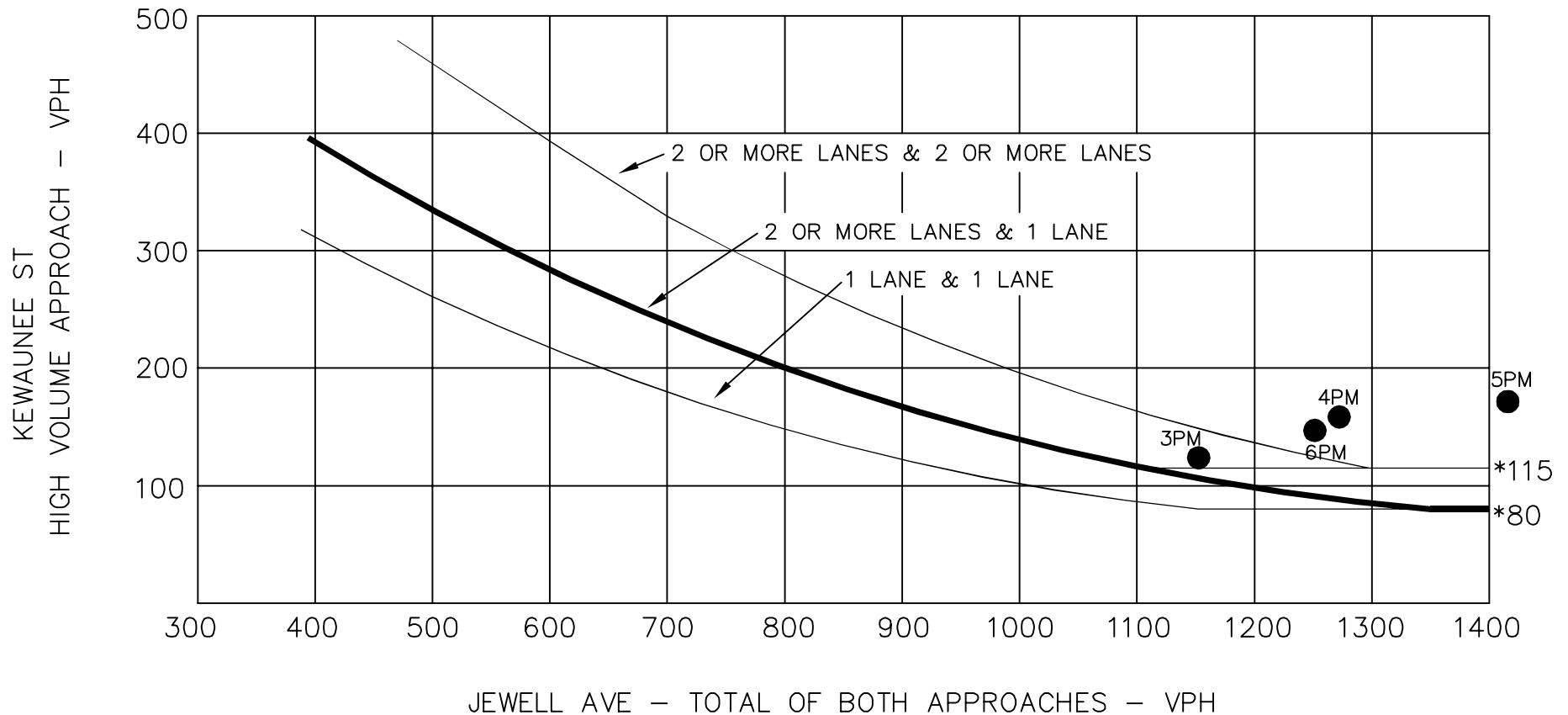
WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

WARRANT 2 - FOUR HOUR VEHICULAR VOLUME



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 80 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

JEWELL AVE & KEWAUNEE ST
SIGNAL WARRANT ANALYSIS
FOUR HOUR VOLUME WARRANT

● 2028 TOTAL TRAFFIC DATA POINT

Source: Manual of Uniform Traffic Control Devices 2009

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

Manual on Uniform Traffic Control Devices (2009 Edition)

INTERSECTION NAME: Jewell Avenue & Louisiana Parkway

HORIZON YEAR: 2029 Total

MAJOR STREET: Jewell Avenue

OF APPROACH LANES: 2

MINOR STREET: Louisiana Parkway

OF APPROACH LANES: 1

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): N

	MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			600	150		900	75			
06:00 AM TO 07:00 AM										
07:00 AM TO 08:00 AM	1,396	83	Y	N		Y	Y	Y	Y	N
08:00 AM TO 09:00 AM	1,551	93	Y	N		Y	Y	Y	Y	N
09:00 AM TO 10:00 AM										
10:00 AM TO 11:00 AM										
11:00 AM TO 12:00 PM										
12:00 PM TO 01:00 PM										
01:00 PM TO 02:00 PM										
02:00 PM TO 03:00 PM										
03:00 PM TO 04:00 PM	1,472	55	Y	N		Y	N		N	N
04:00 PM TO 05:00 PM	1,635	61	Y	N		Y	N		N	N
05:00 PM TO 06:00 PM	1,817	68	Y	N		Y	N		N	N
06:00 PM TO 07:00 PM	1,617	60	Y	N		Y	N		N	N
07:00 PM TO 08:00 PM										
08:00 PM TO 09:00 PM										
09:00 PM TO 10:00 PM										
	9,488	419	0			2			2	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

Manual on Uniform Traffic Control Devices (2009 Edition)

INTERSECTION NAME: Jewell Avenue & Louisiana Parkway

HORIZON YEAR: 2031 Total

MAJOR STREET: Jewell Avenue

OF APPROACH LANES: 2

MINOR STREET: Louisiana Parkway

OF APPROACH LANES: 1

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): N

			MAJOR ST BOTH APPROACHES	MINOR ST HIGHEST APPROACH	Warrant 1 - Condition A			Warrant 1 - Condition B			WARRANT 2	WARRANT 3
					MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES →					600	150		900	75			
06:00 AM	TO	07:00 AM										
07:00 AM	TO	08:00 AM	1,566	109	Y	N		Y	Y	Y	Y	N
08:00 AM	TO	09:00 AM	1,740	121	Y	N		Y	Y	Y	Y	Y
09:00 AM	TO	10:00 AM										
10:00 AM	TO	11:00 AM										
11:00 AM	TO	12:00 PM										
12:00 PM	TO	01:00 PM										
01:00 PM	TO	02:00 PM										
02:00 PM	TO	03:00 PM										
03:00 PM	TO	04:00 PM	1,544	77	Y	N		Y	Y	Y	N	N
04:00 PM	TO	05:00 PM	1,715	85	Y	N		Y	Y	Y	Y	N
05:00 PM	TO	06:00 PM	1,906	95	Y	N		Y	Y	Y	Y	N
06:00 PM	TO	07:00 PM	1,696	84	Y	N		Y	Y	Y	Y	N
07:00 PM	TO	08:00 PM										
08:00 PM	TO	09:00 PM										
09:00 PM	TO	10:00 PM										
					0			6			5	1
					8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			4 HRS NEEDED SATISFIED	1 HR NEEDED SATISFIED

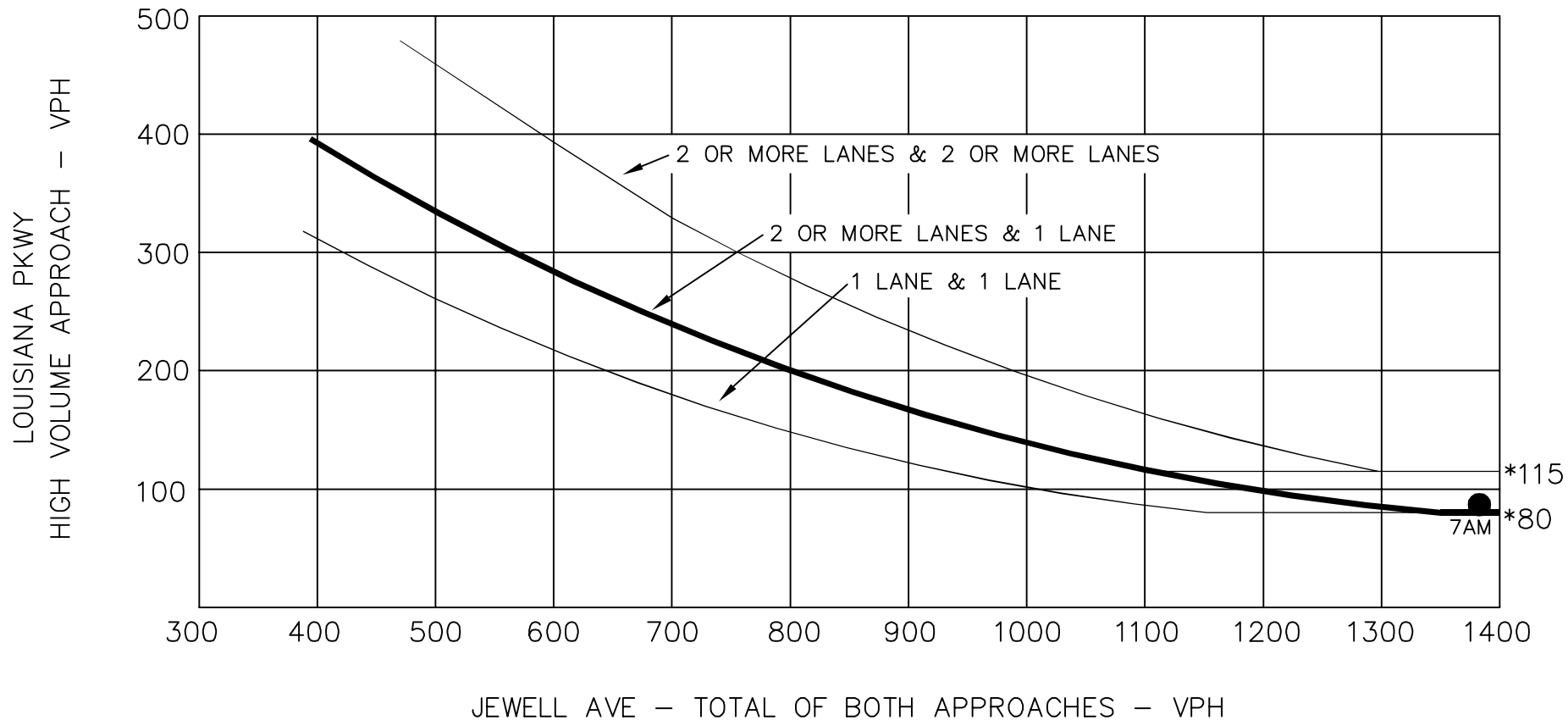
WARRANT 1 - Condition A -- Minimum Vehicular Volume Warrant (8 hours)

WARRANT 1 - Condition B -- Interruption of Continuous Traffic Warrant (8 hours)

WARRANT 2 -- Four Hour Volume Warrant - Figure 4C-1

WARRANT 3 -- Peak Hour Volume Warrant - Figure 4C-3

WARRANT 2 - FOUR HOUR VEHICULAR VOLUME



JEWELL AVE & LOUISIANA PKWY
SIGNAL WARRANT ANALYSIS
FOUR HOUR VOLUME WARRANT

* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 80 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

- 2029 TOTAL TRAFFIC DATA POINT
- 2031 TOTAL TRAFFIC DATA POINT

Source: Manual of Uniform Traffic Control Devices 2009

APPENDIX H

Conceptual Site Plan

OVERALL PRODUCT MIX		
Product	Units	Percentage
Townhomes (20'x82')	132	9.7%
Paired Homes (26'x82')*	284	20.9%
Motor Courts (45'x65')*	183	13.5%
SFD 46'x110*	361	26.6%
SFD 51'x110	240	17.7%
SFD 60'x110'	157	11.6%
Total	1357	100%

PHASE 1		
Product	Units	Percentage
Townhomes (20'x82')	0	0.0%
Paired Homes (26'x82')*	70	26.4%
Motor Courts (45'x65')*	66	24.9%
SFD 46'x110*	60	22.6%
SFD 51'x110'	31	11.7%
SFD 60'x110'	38	14.3%
Total	265	100%

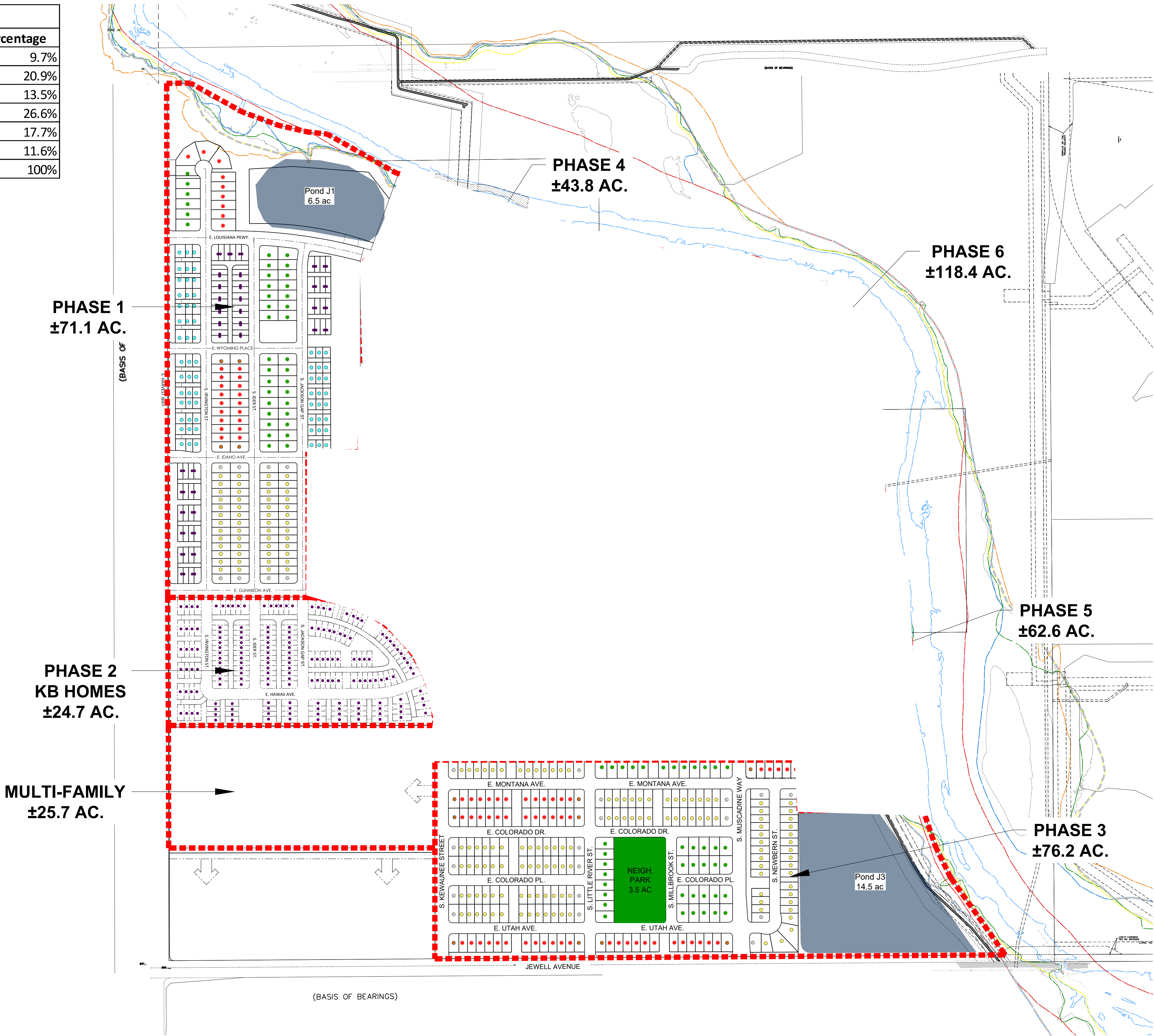
PHASE 2		
Product	Units	Percentage
Paired Homes (26'x82')*	174	100.0%
Total	174	100%

PHASE 3		
Product	Units	Percentage
Townhomes (20'x82')	0	0.0%
Paired Homes (26'x82')*	0	0.0%
Motor Courts (45'x65')*	0	0.0%
SFD 46'x110*	140	57.9%
SFD 51'x110'	62	25.6%
SFD 60'x110'	40	16.5%
Total	242	100%

p:\ventura capital\parklands\overall\cad\planning\dwg\parklands - overall yield.dwg

PARKLANDS

OVERALL LAND SALES MAP



GRAND TOTAL: 1,357