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Monument Academy South Residential Rezone
Traffic Impact Study
EPC PCD File No.: P262
(LSC #S254260)
June 4, 2026

Traffic Engineer's Statement

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

Developer's Statement

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

DocuSigned by:
C10AD256542D402...

6/9/2026
Date

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Monument Academy South Residential Rezone Traffic Impact Study

Prepared for:
Matt and Bill Dunston
1230 Scarsbrook Court
Monument, CO 80132-8487

JUNE 4, 2026

LSC Transportation Consultants, Inc.
Prepared by: Jeffrey C. Hodsdon, P.E.

LSC #S254260

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June 4, 2026

Matt and Bill Dunston
1230 Scarsbrook Ct
Monument, CO 80132-8487

RE: Monument Academy South
Residential Rezone
Traffic Impact Study
El Paso County, CO
EPC PCD File No.: P262
LSC #S254260

Dear Messrs. Dunston,

LSC Transportation Consultants, Inc. has prepared this Traffic Impact Study to accompany the rezoning application for two parcels of land (35 total acres) located southeast of the intersection of State Highway (SH) 83/Walker Road. in unincorporated El Paso County, Colorado. The site location is shown in Figure 1. The properties are proposed for rezoning for residential development. These parcels are located just west and south of the Monument Academy Charter School (East Campus).

Access would be to Pinehurst Circle and Jane Lundeen Drive. No direct access to SH 83 or Walker Road.

This report has been prepared for submittal to El Paso County and CDOT.

REPORT CONTENTS

The preparation of this report included the following:

- An inventory of existing roadway and traffic conditions on major thoroughfares adjacent to the site, including surface conditions, functional classification, widths, pavement markings, traffic-control signs, posted speed limits, intersection and access spacing, roadway and intersection alignments, roadway grades, and auxiliary turn lanes;
- Weekday peak-hour turning-movement traffic counts (AM, school-PM, and PM) at the following “study-area” intersections:
    - State Highway 83/Highway 105/Walker Road
    - State Highway 83/Pinehurst Circle
    - Walker Road/Jane Lundeen Drive
    - Jane Lundeen Drive/Pinehurst Circle
    - Pinehurst Circle/Monument Academy site access

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- Estimated average daily traffic (ADT) volumes on the study-area roadway segments;
- Projections of short-term baseline (2026) and 20-year background traffic volumes on the study-area roadways adjacent to the site;
- The proposed site land use and access plan;
- Estimates of average weekday and weekday peak-hour trip generation for the proposed development and the estimated directional distribution of site-generated vehicle trips on roadways and intersections adjacent to and in the vicinity of the site;
- Projected site-generated and resulting total peak-hour intersection traffic volumes at the study-area intersections;
- Intersection level of service (LOS) analysis at the study-area intersections; generalized daily traffic-volume "level of service" (or comparison to El Paso County's *Engineering Criteria Manual* design ADT by classification) on the study-area streets;
- Findings regarding any potential roadway improvements, including evaluation of short-term and long-term projected intersection volumes to determine potential requirements for any new auxiliary right-/left-turn lanes at the proposed site-access points and/or study-area intersections, based on the criteria in El Paso County's *Engineering Criteria Manual* (*ECM*) and CDOT's *State Highway Access Code*.

PRIOR TRAFFIC REPORTS

The following previous traffic reports have been utilized/referenced when preparing this report.

- Walden Preserve Filing No. 5 (SF2211)
- Monument Academy Charter School (PPR199)
- Monument Academy Minor Subdivision

LAND USE AND ACCESS

The proposed 35-acre rezone to multiple residential zone districts includes two parcels of land – Tracts A and B MA SUB. (Monument Academy Subdivision).

Tract A

As shown in Figure 1, the 15.35-acre site is located west of Jane Lundeen Drive, south of Walker Road, and east of State Highway 83 (El Paso County parcel ID 6115011001).

The north and south parts of Tract A are proposed for two different zone districts for the following anticipated residential development:

- South portion – 70 single-family attached dwelling units
- North portion – 230 multi-family dwelling units

Tract A access is proposed to Jane Lundeen Drive at three locations and one access to Pinehurst Circle is also proposed as shown in Figure 2. The north access is proposed as a right-in/right-out (RIRO), while the middle and south access points to Jane Lundeen are proposed to be full-movement.

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Three Tract A accesses to Jane Lundeen Drive are proposed:

- Full-movement – located approximately 330 feet south of proposed north RIRO access
- Full-movement – located approximately 317 feet north of Pinehurst/Jane Lundeen (The spacing of this access point to Jane Lundeen will be subject to approval of a deviation. This deviation will be applied for later - at the subdivision stage of development rather than with this rezone application).
- Right-in/right-out (RIRO) access point to Jane Lundeen – proposed for a location approximately 504 feet south of Walker /Jane Lundeen (This will be subject to approval of a deviations. This deviation will be applied for later - at the subdivision stage of development rather than with this rezone application).

One access point is proposed to Pinehurst Circle located approximately 252 feet west of Jane Lundeen Drive. This access would be a left-in-only for eastbound traffic turning into the site from the adjacent one-way section of Pinehurst Circle. This access will also be subject to approval of a deviation, which will also be applied for later - at the subdivision stage of development rather than with this rezone application.

While no specific plans have been prepared at this rezone stage, this report assumes these access points would be subdivision **public street** connections.

Tract B

As shown in Figure 1, the 19.9-acre Tract B parcel is located south of Pinehurst Circle and east of State Highway 83 (El Paso County parcel ID 6115010031). Approximately 31 single-family dwelling units are anticipated for the Tract B site.

Primary access for Tract B is proposed to Pinehurst Circle as a new south leg of the Jane Lundeen Drive roundabout. A secondary access to Pinehurst Circle is also planned. This access would be located southeast of the Monument Academy southeast access. The specific location of this access has not yet been determined. The location will be identified at the site plan or platting stage of development. These new connections are proposed to be full-movement intersections. The Tract B access plan is shown in Figure 2. While no specific lot and roadway plans are included at this rezone stage, this report assumes these access points would be subdivision **public road** connections.

Previously, land-use assumptions for Tracts A and B were based on rezoning shown in the Black Forest Master Plan at the time the school TIS was prepared (2018):

- The Monument Academy TIS assumed Tracts A and B would be developed with a more intense mix of retail and office uses. Appendix Table 1 from the MA TIS is attached, for reference.
- Prior traffic reports included long term background traffic that may be generated by future development of land northeast of Walker Road/SH 83. A mix of future residential and commercial uses were assumed. These same estimated background trips have been assumed in this report.

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ROADWAY AND TRAFFIC CONDITIONS AND MTCP CLASSIFICATION

Study Area Roadway System

Figure 1 shows the roads adjacent to and in the vicinity of the site. Adjacent roads serving the site are identified below, followed by a brief description of each:

State Highway 83 (SH 83) runs north-to-south from Interquest Parkway to downtown Denver and is classified as a two-lane "R-A – Regional Highway." Adjacent to the site, the posted speed limit on SH 83 is 65 miles per hour (mph). Auxiliary left-turn deceleration lanes, right-turn deceleration lanes, and right-turn acceleration lanes exist on both the northbound and southbound approaches at its intersection with Highway 105/Walker Road. SH 83 is owned and maintained by CDOT.

Highway 105 is classified by El Paso County as a two-lane, Rural Principal Arterial that extends east-to-west from Jackson Creek Parkway to SH 83. The posted speed limit on Highway 105 adjacent to the site is 50 mph. Auxiliary turn lanes currently exist at its signalized intersection with SH 83. East of Highway 105, Highway 105 is renamed Walker Road. Highway 105 is owned and maintained by El Paso County.

Walker Road is classified by El Paso County as a two-lane, Rural Major Collector (2045 *Major Transportation Corridors Plan* (*MTCP)* Roadway Plan) that extends east from SH 83 to Meridian Road. Generally, the Walker Road posted speed limit is 45 mph east of State Highway 83. The posted speed limit on Walker Road is 35 mph in the westbound direction beginning about 600 feet east of Jane Lundeen Drives. No posted speed limit signs were observed in the eastbound direction east of State Highway 83. Walker Road is owned and maintained by El Paso County.

Jane Lundeen Drive is a rural, two-lane paved Rural Local roadway extending generally north-to-south for 0.3 miles from Walker Road to Pinehurst Circle. Auxiliary turn lanes currently exist on the northbound approach at its roundabout intersection with Walker Road. No auxiliary turn lanes currently exist on the southbound approach at its roundabout intersection with Pinehurst Circle. A new northbound leg to the current roundabout T-intersection of Jane Lundeen Drive/Pinehurst Circle will be constructed as part of this development, which would create a four-leg roundabout intersection. The posted speed limit on Jane Lundeen Drive is 30 mph, and curb-and-gutter is present. Ownership of Jane Lundeen Drive has not been accepted by El Paso County at the time of this application.

Pinehurst Circle is a rural, two-lane paved Rural Local roadway extending generally east-to-west for 1.8 miles from SH 83 to Walden Way. No auxiliary turn lanes currently exist on any approach at its roundabout intersection with Walker Road. The posted speed limit on Pinehurst Circle is 30 mph. The section of Pinehurst Circle between SH 83 and the roundabout at Jane Lundeen Drive is one way eastbound. Pinehurst Circle is owned and maintained by El Paso County.

Please refer to Figure 3 for existing intersection laneage, traffic control, peak-hour volumes, and average daily traffic volumes.

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Existing Traffic Volumes

Vehicular intersection turning-movement counts were conducted at the following intersections. Counts were conducted during the following periods - the morning peak, mid-afternoon "school" peak, and late-afternoon peak traffic periods. Figure 3 shows peak-hour volumes based on the turning-movement volume data (raw-count data sheets are attached), as well as estimated weekday (AWT) traffic volumes:

- State Highway 83/Highway 105/Walker Road
  - Tuesday, May 13, 2025 from 6:30 a.m. – 8:30 a.m.
  - Tuesday, May 13, 2025 from 3:00 p.m. – 6:00 p.m.
- Jane Lundeen Drive/Walker Road
  - Wednesday, October 15, 2025 from 6:30 a.m. – 8:30 a.m.
  - Wednesday, October 15, 2025 from 3:00 p.m. – 6:00 p.m.
- Jane Lundeen Drive/Pinehurst Circle
  - Wednesday, October 15, 2025 from 6:30 a.m. – 8:30 a.m.
  - Wednesday, October 15, 2025 from 3:00 p.m. – 6:00 p.m.
- State Highway 83/Pinehurst Circle
  - Tuesday, May 13, 2025 from 6:30 a.m. – 8:30 a.m.
  - Tuesday, May 13, 2025 from 3:00 p.m. – 6:00 p.m.

Existing Level of Service

Existing intersection level of service is summarized on Figure 3. Please refer to the level of service section for LOS definitions, methodology, and complete details.

Existing Vehicle Queuing Observations

During May 2025 data collection (morning peak hour), queues on the westbound approach at Walker/SH 83 were observed backing into the Jane Lundeen/Walker Roundabout during a 15—20-minute period of time starting at 7:35 am. Queues were observed backing into the outermost circulating lane, but not the inner circulating lane) around the north side of the circle. Also, for about 8—10 minutes, queues extended back onto the Jane Lundeen northbound approach. While some non-school motorists likely incur associated delay, the effect of queue spillback did not appear to be particularly problematic, as northbound motorists appeared to wait to enter the roundabout to avoid blockage of eastbound through traffic. Based on traffic crash/accident information LSC was able to obtain, no crashes have been reported at the intersection of Jane Lundeen Drive/Walker Road during the past three years.

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Crash History Data

Three years of reported crash data (2022-2025) were obtained and reviewed by LSC at the study-area intersections.

State Highway 83/Highway 105/Walker Road

Seven crashes were reported at this intersection from 2022-2025. Two of the crashes involved injuries, while none resulted in a fatality. No correctable crash patterns were identified in the crashes recorded.

Jane Lundeen Drive/Walker Road

No crashes were reported at the intersection of Jane Lundeen Drive/Walker Road during the past three years.

Jane Lundeen Drive/Pinehurst Circle

No crashes were reported at the intersection of Jane Lundeen Drive/Pinehurst Circle during the past three years.

State Highway 83/Pinehurst Circle

No crashes were reported at the intersection of State Highway 83/Pinehurst Circle during the past three years.

Existing Pedestrian and Bicycle Facilities

Currently, sidewalks exist on the east side of Jane Lundeen Drive between the roundabouts at Walker Road and Pinehurst Circle. That sidewalk then continues along the north side of Pinehurst Circle for about 500 feet between the roundabout and the Monument Academy school access. **Sidewalk is required on the west side of Jane Lundeen Drive, per approved CDR201.**

Bicycle facilities do not currently exist on the study-area roadways.

2026 Short Term Baseline Traffic Volumes

Figure 4 shows the estimated 2026 short-term baseline turning movements at the study-area intersections:

- State Highway 83/Highway 105/Walker Road
- State Highway 83/Pinehurst Circle
- Jane Lundeen Drive/Walker Road
- Jane Lundeen Drive/Pinehurst Circle

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These volumes represent existing traffic volumes from Figure 3 plus projected future trips from currently undeveloped, platted lots in Walden Preserve Filing No. 5. As of November 2025, there were 45 residential lots that were under construction or vacant in this adjacent subdivision east of Tract B. ITE Land Use Code "210 – Single-Family (Detached) Housing" was used to estimate projected future traffic from these 45 single-family dwelling units, which were then added to existing traffic counts to establish short-term baseline traffic volumes.

SIGHT DISTANCE ANALYSIS

Sight distance will be evaluated with the future applications for SDP and final plat.

TRIP GENERATION

Estimates of the vehicle trips projected to be generated by the proposed Tract A and Tract B residential subdivisions/development (following rezoning application approval) have been made using the nationally published trip-generation rates from *Trip Generation, 12th Edition, 2025* by the Institute of Transportation Engineers (ITE).

Table 1 below presents a **summary** of the estimated Tract A and B site trip generation. A detailed trip-generation estimate, including ITE rates for the proposed land uses, is presented in Table 2 (attached).

Table 1: Estimated Site Vehicle-Trip Generation Summary

Tract A (300 Dwelling Units)			
Analysis Period	**In**	**Out**	**Total**
Morning Peak Hour	31	100	131
School Afternoon Peak Hour	80	60	140
Afternoon Peak Hour	98	60	159
Daily/24-Hour	966	966	1,931
Tract B (31 Dwelling Units)			
Analysis Period	**In**	**Out**	**Total**
Morning Peak Hour	7	19	26
School Afternoon Peak Hour	17	11	27
Afternoon Peak Hour	20	12	33
Daily/24-Hour	258	258	516

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Tract A

Approximately 300 multi-family and single-family attached dwelling units are envisioned for Tract A. Estimated site vehicle-trip generation for Tract A is as follows:

- 24-hour daily – 1,931 total vehicle trips, with about half entering and half exiting the site
- AM peak hour – 31 entering trips and 100 exiting trips
- School-PM peak hour – 80 entering trips and 60 exiting trips
- PM peak hour – 98 entering trips and 60 exiting trips

Tract B

Approximately 31 single-family detached dwelling units are proposed for Tract B. Estimated site vehicle-trip generation for Tract B is as follows:

- 24-hour daily – 516 total vehicle trips, with about half entering and half exiting the site
- AM peak hour – 7 entering trips and 19 exiting trips
- School-PM peak hour – 17 entering trips and 11 exiting trips
- PM peak hour – 20 entering trips and 12 exiting trips

TRIP DISTRIBUTION AND ASSIGNMENT

Trip Directional Distribution

The directional-distribution estimate of site-generated vehicle trips to the study-area roads and intersections is a necessary component in determining the site's traffic impacts. Figure 5 shows the percentages of the site-generated vehicle trips projected to be oriented to and from the site's major approaches. Estimates have been based on the following factors: the area traffic impact studies, the traffic-count data, the proposed land use, the area roadway system serving the site, and the site's geographic location relative to the Monument and El Paso County/Colorado Springs areas.

Site-Generated Traffic

Site-generated traffic volumes have been estimated at the following study-area intersections:

- State Highway 83/Highway 105/Walker Road
- State Highway 83/Pinehurst Circle
- Jane Lundeen Drive/Walker Road
- Jane Lundeen Drive/Pinehurst Circle

These site-generated volumes have been calculated by applying directional-distribution percentages estimated by LSC (from Figure 5) to the trip-generation estimates (from Table 2).

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Tract A

Figure 6 shows the projected site-generated traffic volumes for the average weekday and weekday morning and afternoon peak hours for Tract A only.

Tract B

Figure 7 shows the projected site-generated traffic volumes for the average weekday and weekday morning and afternoon peak hours for Tract B only.

2026 Short-Term Total Traffic Volumes

Figure 8 shows the sum of short-term baseline traffic volumes (from Figure 4), site-generated volumes from Tract A (shown in Figure 6), and site-generated volumes from Tract B (shown in Figure 7). These volumes represent the projected short-term total traffic following development of the site.

2045 Background Traffic Volumes

Long-term background traffic volumes are estimates by LSC. Estimated site-generated traffic for the Tract A and Tract B residential developments is **not** included in 2045 background traffic volumes.

The following 20-year growth factors were applied to through volumes on SH 83, per data published on CDOT's Online Transportation Information System (OTIS):

- 1.37 – south of Highway 105/Walker Road
- 1.42 – south of Highway 105/Walker Road

Several currently-vacant parcels in the vicinity of the site were also considered when estimating additional long-term background traffic:

- North leg of Jane Lundeen/Walker roundabout – 150 single-family dwelling units and 30,000 square feet of retail space
- Walker Road, east of Jane Lundeen – 1.50 growth factor for potential residential growth east of the roundabout
- North and south of Highway 105, west of SH 83 – several vacant lots that are zoned RR-5
- Northeast corner of Jane Lundeen/Pinehurst roundabout – YMCA fitness center

Please refer to Figure 9 for estimated long-term background volumes at the study-area intersections.

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2045 Total Traffic Volumes

Figure 10 shows the sum of 2045 background traffic volumes (from Figure 9) plus site-generated traffic volumes (from Figure 6 and Figure 7).

LEVEL OF SERVICE ANALYSIS

Intersection Level of Service

Level of service (LOS) is a quantitative measure of the level of congestion or delay at an intersection and is indicated on a scale from "A" to "F." LOS A is indicative of little congestion or delay. LOS F indicates a high level of congestion or delay. Table 3 shows the level of service delay ranges for signalized and unsignalized intersections.

Table 3: Intersection Levels of Service Delay Ranges

Level of Service	Signalized Intersections Average Control Delay (seconds per vehicle)	Unsignalized Intersections Average Control Delay (seconds per vehicle)(1)
A	10.0 sec or less	10.0 sec or less
B	10.1-20.0 sec	10.1-15.0 sec
C	20.1-35.0 sec	15.1-25.0 sec
D	35.1-55.0 sec	25.1-35.0 sec
E	55.1-80.0 sec	35.1-50.0 sec
F	80.1 sec or more	50.1 sec or more

(1) For unsignalized intersections, if v/c ratio is greater than 1.0 the level of service is LOS F, regardless of the projected average control delay per vehicle.

LOS values have been included in each figure for each turning movement/approach during the weekday morning and afternoon peak hours for the proposed site-access intersections and off-site intersections in the study area:

- Figure 3: Existing Traffic, Lane Geometry, Traffic Control, and LOS
- Figure 4: 2026 Short-Term Baseline Traffic, Lane Geometry, Traffic Control, and LOS
- Figure 8: 2026 Short-Term Baseline + Site Traffic, Lane Geometry, Traffic Control, and LOS
- Figure 9: 2045 Background Traffic, Lane Geometry, Traffic Control, and LOS
- Figure 10: 2045 Background + Site Traffic, Lane Geometry, Traffic Control, and LOS

LOS calculations for long-term scenarios were based upon the recommended lane geometries and traffic controls outlined in the figures above.

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State Highway 83/Highway 105/Walker Road

Short Term

If no modifications are made to existing signal timings or lane geometries during the short-term scenarios, the following turning movements currently operate at and are projected to remain at LOS E or worse, with or without the addition of site-generated traffic:

- Westbound-through/right – LOS F during AM peak hour
- Westbound-left – LOS F during Am and school PM peak hours
- Eastbound-through – LOS F during school PM peak hour

All other movements at this intersection currently operate at and are projected to remain at LOS D or better during all short-term peak hours with the addition of site-generated traffic (without any signal-timing or lane-geometry modifications).

Note: If a second westbound-through lane were to be constructed, all individual turning movements would operate at LOS D or better during the short-term AM and PM peak hours. With minor signal-timing modifications (3 seconds of green time shifted from the northbound-through/southbound-through phases on SH 83 to the eastbound-through/westbound-through phases on Walker/Highway 105), all individual turning movements would operate at LOS D or better during the short-term school PM peak hour with the addition of site-generated traffic.

With the addition of a second westbound through approach lane, the westbound departure leg would need to be expanded to provide two receiving lanes. Depending on the design (to be determined later), the eastbound approach laneage, and possibly the westbound left-turn lane and east-leg departure lane may need adjustment/realignment.

Long Term

Based on existing signal timings and lane geometries, the signalized intersection of SH 83/Highway 105/Walker Road is projected to operate at LOS F overall during the 2045 AM and 2045 school-PM peak hours, with or without the addition of site-generated traffic.

Previous traffic studies in the vicinity have assumed both the SH 83 and the Highway 105/Walker Road intersection approaches improved from 2-through lanes to 4 through lanes in the long term. As shown in Figure 10, all individual turning movements at this intersection are projected to operate at LOS D or better during all long-term peak hours with 2 westbound-through lanes, 1 westbound-left lane, 2 eastbound-through lanes, and minor signal timing modifications.

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Roundabout (Alternative LOS)

If the intersection of SH 83/Highway 105/Walker Road were to be converted to a roundabout during the long term, all individual turning movements would operate at LOS C or better, with or without the addition of site-generated traffic. Please refer to the proposed roundabout laneage shown on Figure 9 and Figure 10 for more details.

Jane Lundeen Drive/Walker Road

Short Term

All movements at this intersection currently operate at and are projected to remain at LOS B or better during all short-term peak hours, with the addition of site-generated traffic.

Long Term

All movements at this intersection are projected to operate at LOS C or better for all long-term both peak hours with the addition of site-generated traffic.

Jane Lundeen Drive/Pinehurst Circle

All movements at this intersection are projected to operate at LOS A during all long-term peak hours with the addition of site-generated traffic. Although queues extend back on Pinehurst Circle from the school access to the roundabout at Jane Lundeen Drive, these queues are brief (limited to only 5-10 minutes during school pick-up procedures during the school-PM peak period).

Tract A Site Access to Jane Lundeen Drive

North Site Access (RIRO)

All movements at the proposed north RIRO access to Tract A are projected to operate at LOS A during all short-term and long-term peak hours with the addition of site-generated traffic.

Middle Site Access (Full-Movement)

All movements at the proposed middle full-movement site access to Tract A are projected to operate at LOS D or better during all short-term peak hours.

During the long term, the eastbound single-lane approach is projected to operate at LOS E or worse based on the long-term AM peak and school-PM peak analysis scenarios. All other individual turning movements/single-lane approaches are projected to operate at LOS C or better during all peak hours.

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Despite this LOS E individual movement level of service, analysis results show a v/c ratio to be below 1.00 for all turning movements/approaches during all long-term buildout traffic scenarios.

Delay for the side street is projected to be in the E range during the busiest 15 minutes during Monument Academy parent drop-off and pick up. Motorists exiting the residential development will likely learn to avoid departing during these "sharp" school peak times. Drivers departing during these periods would have a good "indirect" left turn option by turning right onto Jane Lundeen drive south, complete a U-turn in the roundabout.

In response to County staff initial review comments, a "Intersection LOS Mitigation Alternatives" section has been added to this report to present alternatives for which LOS would be D or better for the site access intersections on Jane Lundeen Drive.

South Site Access (to Jane Lundeen Drive) (Full-Movement)

All movements at the proposed south full-movement site access to Tract A are projected to operate at LOS C or better during all short-term and long-term peak hours.

Tract B Site Access to Pinehurst Circle

West Site Access (at the Pinehurst Roundabout)

Currently, the intersection of Jane Lundeen Drive/Pinehurst Circle is a 3-leg roundabout. A new south leg (northbound approach) will be constructed with Tract B development.

All movements at this intersection are projected to operate at LOS A during all long-term peak hours with the addition of site-generated traffic. Although queues extend back on Pinehurst Circle from the school access to the roundabout at Jane Lundeen Drive, these queues are brief (limited to only 5-10 minutes during school pick-up procedures during the school-PM peak period).

East Site Access (Full-Movement)

Assuming a secondary access for Tract B will be constructed, all movements at the following proposed east Tract B site access are projected to operate at LOS A during all peak hours.

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Intersection LOS Mitigation Alternatives

State Highway 83/Highway 105/Walker Road

Short-Term

As shown in Figure 8, if a second westbound-through lane were to be constructed, all individual turning movements would operate at LOS D or better during the short-term AM and PM peak hours. With minor signal-timing modifications (3 seconds of green time shifted from the northbound through/southbound-through phases on SH 83 to the eastbound through/westbound-through phases on Walker/Highway 105), all individual turning movements would operate at LOS D or better during the short-term school PM peak hour with the addition of site-generated traffic.

With the addition of a second westbound through approach lane, the westbound departure leg would need to be expanded to provide two receiving lanes. Depending on the design (to be determined later), the eastbound approach laneage, and possibly the westbound left-turn lane and east-leg departure lane may need adjustment/realignment.

Long-Term

As shown in Figure 10, all individual turning movements at this intersection are projected to operate at LOS D or better during all long-term peak hours with 2 westbound-through lanes, 1 westbound-left lane, 2 eastbound-through lanes, and minor signal timing modifications.

Jane Lundeen Drive/Proposed Tract A Middle Site Access

In response to County staff initial review comments, LSC has completed supplemental analysis of alternatives that would result in LOS to D or better at this access intersection.

The following options are shown to achieve this result:

1) Force an eastbound (exiting) right turn out of Tract A during school peak times, using traffic regulatory signage. The concept involves an “indirect left turn,” whereby exiting residents, after turning right instead of left onto Jane Lundeen, would drive south to the Pinehurst Roundabout and make a U turn to reverse direction and head north and proceed up to the Walker roundabout.
2) Reconstruct this intersection as a modern roundabout (if feasible).

These two options have been analyzed to determine if level of service could be improved at the middle site-access intersection on Jane Lundeen. See Table 4 which shows the specific alternatives analyzed.

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The alternatives A, B, and C have been first analyzed assuming future approval of a deviation request for the north access (right-in/right-out) (which will be applied for later - at the subdivision stage of development rather than with this rezone application) Alternatives D, E, and F assume County-denial of a future deviation request for the north access (right-in/right-out).

Eastbound-left turns were assumed prohibited, in several alternatives, during both AM and school PM peak times using signage. Alternatives C and F present analysis of a roundabout at the middle site access.

Table 4: Summary of Alternative Intersections Configurations on Jane Lundeen Drive

Figure	Alternative	North Access	Middle Access	South Access
11	A	RIRO	TWSC, no EBL *	TWSC
11	B	RIRO	TWSC, no EBL *	TWSC, no EBL *
11	C	RIRO	Roundabout	TWSC, no EBL *
12	D	Delete	TWSC, no EBL *	TWSC
12	E	Delete	TWSC, no EBL *	TWSC, no EBL *
12	F	Delete	Roundabout	TWSC, no EBL *
* No EBL turns allowed during school peak times (using signage)				

Alternatives Assuming a Right-in/Right-out North Access

➢ Alternative A

Without any turn restrictions during school peak times, the eastbound approach at the south access would operate at LOS E during AM peak hour. All other turning movements and single-lane approaches at the study-area intersections along Jane Lundeen Drive would operate at LOS C or better using the laneage configurations described in alternative A. See Figure 11 for more details. As the LOS E is shown at the south access in this alternative, an Alternative B has been included to address this LOS below D.

➢ Alternative B

This alternative assumes eastbound-left turns would be restricted during school peak times at **both** the middle and south accesses. All turning movements and single-lane approaches at all study-area intersections along Jane Lundeen Drive would operate at LOS C or better using the laneage configurations described in alternative B. See Figure 11 for more details.

➢ Alternative C

This alternative presents analysis assuming a modern roundabout instead of TWSC at the **middle** site access. Note: this alternative also assumes eastbound-left turns restricted during school peak times at the **south** accesses. All turning movements and single-lane approaches at all study-area intersections along Jane Lundeen Drive would operate at LOS D or better using the laneage configurations described in alternative B. See Figure 11 for more details.

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Alternatives Assuming No North Access

Alternatives in this scenario assume the absence of the north (RIRO) access, presumably due to subsequent denial of a required deviation that will be requested later. This scenario reflects a shift of most trips otherwise assigned to the north RIRO access in the preferred scenario (**with** this access) to the middle access.

➢ Alternative D

All turning movements and single-lane approaches at the study-area intersections along Jane Lundeen Drive would operate at LOS C or better using the laneage configurations described in alternative D, except the eastbound approach at the south access (analysis shows LOS E during AM peak hour). See Figure 12 for more details. As LOS E is shown at the south access in this alternative, an Alternative E has been included to address this LOS-below-D condition.

➢ Alternative E

For this alternative, eastbound-left turns were assumed restricted during school peak times at both the middle and south accesses. All turning movements and single-lane approaches at all study-area intersections along Jane Lundeen Drive would operate at LOS C or better using the laneage configurations described in alternative E. See Figure 12 for more details.

➢ Alternative F

This alternative assumes a modern roundabout instead of TWSC at the middle site access. Note: this alternative also assumes eastbound-left turns restricted during school peak times at the **south** accesses. All turning movements and single-lane approaches at all study-area intersections along Jane Lundeen Drive would operate at LOS D or better using the laneage configurations described in alternative F. See Figure 12 for more details.

Other Alternatives

As the projected levels of service are primarily due to the sharp peak periods of the adjacent school traffic, potential measures that could be taken by the school to reduce Tract A access delay and potentially result in better LOS without the need to implement the above-described alternatives include:

- Further staggering of school start and end times
- Metering of the parent drop-off/pick-up traffic at the egress point from the school parking lot/pick-up/drop-off loop to create frequent gaps in the traffic stream on northbound Jane Lundeen Drive

Potentially, coordinating these gaps with the traffic signal phases at SH 83 (which somewhat affects the **entering** school traffic stream on **southbound** Jane Lundeen Drive) could improve the effectiveness of this strategy.

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VEHICLE QUEUEING ANALYSIS

A SimTraffic queueing analysis was performed to estimate the maximum and 95th-percentile queues at the intersection of **SH 83/Highway 105/Walker Road** during the morning, school-PM, and afternoon peak hours.

"Upstream block time" represents the percent of time during the peak hour in which the entry point for a turn lane upstream of the subject intersection is blocked by a queue in the adjacent through lane. "Storage block time" is the proportion of time in which the turn lane's queue exceeds the available storage length and left-turning vehicles overspill the turn lane in the model and into the adjacent through lane.

"Maximum queue" represents the maximum queue length observed for each individual lane during the 15-minute analysis period. SimTraffic records the maximum back of queue observed for every two-minute period. In SimTraffic, a vehicle is considered queued whenever it is behind another vehicle traveling at less than 10 feet/second (approximately 7 mph) or at a stop bar. The maximum observed queue may not occur during the same interval in which the highest upstream block time (percent) or storage block time (percent) occurs. SimTraffic reports have reported the highest value for each metric for each turn lane/approach, regardless of whether or not they occur in the same 15-minute interval.

Reported queue length for auxiliary turn lanes in SimTraffic is generally limited by the turn-lane length. SimTraffic simply reports the maximum observed queue length during simulations. The reported 95th-percentile queue is also part of the results.

Analysis has been run to estimate the queue length that the westbound approach at SH 83/Highway 105/Walker Road will extend back through the roundabout at Jane Lundeen Drive. There are about 580 feet between the stop line on the westbound approach on Walker Road and the west circulating lane within the Walker/Jane Lundeen roundabout. Queues less than 580 feet would not extend back into the roundabout.

Existing Conditions

As discussed above in the "Existing Conditions" section, queue backups on the westbound approach at Walker/SH 83 were observed during May 2025 data collection (morning peak hour). Queues were observed backing into the outermost circulating lane, but not the inner circulating lane around the north side of the circle which resulted in an "upstream" queue on the Jane Lundeen northbound approach in the outside (No.2) entry/approach lane. The queues did not appear to block the eastbound departure lane on the east leg as most drivers on the northbound approach paused at the yield line to avoid blocking eastbound "straight-through" traffic.

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Short Term – Existing Laneage with Existing Signal Timings

Results from the SimTraffic simulations indicate that all queues on the eastbound and westbound approaches at the signalized intersection of SH 83/Highway 105/Walker Road would be accommodated during the short term with the addition of site-generated traffic. No upstream block times or storage block times were reported for the westbound approach during the long term. Constructing a second westbound-through lane would be required to alleviate queue spillback during the short term.

Long Term – Recommended Laneage (with Modified Signal Timings)

The following queuing analysis results assume the following modifications would be made to the existing laneage on Walker Road and Highway 105 approaching SH 83, assuming minor signal-timing modifications would be implemented:

- 1 westbound-left turn lane (current condition)
- 2 westbound-through turn lanes
- 2 eastbound-through turn lanes

Westbound Approach

Results from the SimTraffic simulations indicate that westbound queue spillback extending back on Walker Road between SH 83 and the roundabout at Jane Lundeen Drive would be mitigated during all peak hours with the recommended intersection approach-lane modifications shown in Figure 10. No upstream block times or storage block times were reported for the westbound approach during the long term.

Eastbound Approach

Results from the SimTraffic simulations indicate that eastbound queues extending back on Highway 105 west of SH 83 would be mitigated during the AM and PM peak hours with the recommended turn-lane modifications shown in Figure 10. Brief queue-storage block times were reported during the school PM peak hour for the eastbound-through turn lane. Queues in this lane would block vehicles from entering the eastbound-left turn lane approximately 7 percent of the time during the busiest 15-minute interval of the school PM peak hour. Otherwise, storage block time would be minimal (0-2 percent storage block times during the remainder of the school PM peak hour).

STREET CLASSIFICATIONS

Road classifications for major roadways are shown on the 2045 Roadway Plan in the County *MTCP*. Also, *ECM* Tables 2-4 through 2-7 list design average daily traffic (ADT) thresholds for roadway functional classifications. Determination of functional classification is based on several factors.

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Please refer to Figure 13 for a summary of proposed roadway classifications for roadways in the study area with the addition of site-generated traffic.

Walker Road

The long-term projected ADT on Walker Road between SH 83 and Jane Lundeen Drive is 10,122 vpd. Figure 22 of El Paso County's *Major Transportation Corridors Plan (MTCP)* shows Walker Road as a **Rural Major Collector**. However, in the vicinity of the Jane Lundeen roundabout and between the SH 83 and Jane Lundeen intersection, Walker should be treated as "Urban" because the roadway is built with curb and gutter. If this segment of Walker is considered an "Urban Non-Residential Collector" through this section, the projected volumes will not exceed the associated 20,000 VPD max ADT.

Jane Lundeen Drive

The long-term projected ADT on Jane Lundeen Drive south of the roundabout at Walker Road is 4,167 vpd. As such, the projected buildout/20-year volume on Jane Lundeen Drive will not exceed the design ADT of 20,000 vpd for an Urban Non-Residential Collector.

Tract A (Preliminary)

Based on projected ADTs shown on Figure 10, and other considerations, the proposed entry/access roads for Tract A would likely be classified as follows:

- Tract A north site access drive – private access drive or possibly Urban Local
- Tract A middle site access street/drive– Urban Local, potentially a private street.
- Tract A south site access street/drive – Urban Local, potentially a private street.

Tract B

The proposed subdivision roads within Tract B will likely be classified as "Rural Local."

ROADWAY IMPROVEMENTS

MTCP-Identified Roadway Improvements

State whether the MTCP or other approved corridor study calls for the construction of improvements in the immediate area.

The following roadway improvement projects within the immediate area/study area have been identified as being needed by the year 2045 per Figure 27 of El Paso County's 2024 *MTCP*. A copy of the 2045 *MTCP* is here:

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Highway 105 (Project # 508)

The segment of Highway 105 from Martingale Road to SH 83 is planned to be improved to a 2-lane Rural Principal Arterial by 2045. Previous LSC studies have shown four intersection-approach through lanes at the SH 83 intersection during long-term analysis. In order to achieve acceptable LOS at the SH 83/Highway 105/Walker Road intersection, the eastbound and westbound approaches would need 2 through lanes during the long term. The westbound departure leg would need two receiving lanes.

Walker Road (Project # 154)

The segment of Walker Road from SH 83 to Steppler Road is shown as a 2-lane Rural Major Collector on the 2045 Roadway Plan. In order to achieve acceptable LOS at the SH 83/Highway 105/Walker Road intersection, Highway 105 would need 2 through lanes per direction during the long term. Note: As Walker Road has already been upgraded in the vicinity of the Jane Lundeen roundabout and between the SH 83 and Jane Lundeen intersection, Walker should be treated as "Urban" because the roadway is built with curb and gutter. In order to achieve acceptable LOS at the SH 83/Highway 105/Walker Road intersection, the eastbound and westbound approaches would need 2 through lanes during the long term. The westbound departure leg would need to be expanded to provide two receiving lanes.

ECM Requirements for Auxiliary Turn Lanes

Appendix B.8 List ECM criteria for stacking, storage, and taper for every affected auxiliary lane and access and state whether this access can be met. If it cannot be met, state the required modifications so that it can be met.

Left-Turn Deceleration Lanes

According to the El Paso County *Engineering Criteria Manual* (*ECM*), exclusive left-turn lanes shall be provided for any access on "Minor Arterials and lower classifications" with a projected peak-hour ingress turning volume of 25 vehicles per hour (vph) or greater.

Right-Turn Deceleration Lane

Per Section 2.3.7.D.1 of the *ECM* for Minor Arterials and lower classifications, exclusive right-turn lanes shall be provided for any access with a projected peak-hour ingress turning volume of 50 vehicles per hour (vph) or greater.

Right-Turn Acceleration Lanes

Right-turn acceleration lanes are generally not required on Minor Arterials and lower classifications roadways, per Section 2.3.7.D.2 of the *ECM*.

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Auxiliary-Turn-Lane Needs Evaluation and Recommendations

Tract A – North Site Access (RIRO)

Left turns would not be permitted into or out of the site, as the proposed north site access on Jane Lundeen Drive would be restricted to right-in/right-out movement.

The projected southbound-right turn volume at this intersection is not projected to exceed the 50-vph minimum right-turn volume thresholds prescribing a turn lane outlined in the *ECM* upon site buildout. As such, a southbound-right deceleration lane would **not** be required on Jane Lundeen Drive approaching this proposed site access.

Tract A – Middle Site Access (Full-Movement)

Fewer than 25 vehicles are projected to turn northbound-left from Jane Lundeen Drive onto the middle site access. As such, a northbound-left deceleration lane would **not** be required.

Fewer than 50 vehicles are projected to turn southbound-right from Jane Lundeen Drive onto the middle site access. As such, a southbound-right deceleration lane would **not** be required.

Tract A – South Site Access (Full-Movement)

Fewer than 25 vehicles are projected to turn northbound-left from Jane Lundeen Drive onto the south site access. As such, a northbound-left deceleration lane would **not** be required.

Fewer than 50 vehicles are projected to turn southbound-right from Jane Lundeen onto the south site access. As such, a southbound-right deceleration lane would **not** be required.

Tract A – Southwest Site Access (Left-In Only)

Greater than 25 vehicles are projected to turn northbound-left from Jane Lundeen Drive onto the south site access. As such, the *ECM* prescribes a 325-foot eastbound-left deceleration lane would be required (based on criteria for a 35-mph design speed):

- 135 feet of full-width lane
- 140-foot approach taper
- 50 feet of storage length

Please refer to the deviation request included with this submittal, which addresses the **potential** request to waive this turn-lane requirement at the site-development or platting stage based on unique site-specific conditions.

Right turns would not be permitted into or out of the site, as the proposed southwest site access on Pinehurst Circle would be restricted to left-in movement only.

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Tract B – West Site Access (Roundabout)

Currently, the intersection of Jane Lundeen Drive/Pinehurst Circle is a 3-leg roundabout. A new south leg (northbound approach) will be constructed with Tract B development. All approaches would be single-lane approaches once this intersection is converted to a 4-leg roundabout.

Tract B – East Site Access (Full-Movement)

Fewer than 25 vehicles are projected to turn westbound-left from Pinehurst Circle onto the east site access. As such, a westbound-left deceleration lane would **not** be required.

Fewer than 50 vehicles are projected to turn eastbound-right from Pinehurst Circle onto the east site access. As such, an eastbound-right deceleration lane would **not** be required.

State Highway 83/Highway 105/Walker Road

The only laneage modifications or signal-timing adjustments that would be required during the short term to ensure that short-term LOS and queues would both be acceptable is constructing a second westbound-through turn lane. The westbound departure leg would need two receiving lanes. Constructing a second westbound-through lane would be required to mitigate the existing and projected short-term side-street levels of service and alleviate queue spillback into the roundabout during the short term. While these are **existing deficiencies** (primarily the effect of to peak school traffic volumes), this development or potentially other nearby developments if occurring ahead of these developments, would likely be responsible for constructing these improvements (or depending on the relative impact of individual development projects, possibly escrowing funds as fair share participation toward later completion of them). This will likely be determined with the CDOT access permit process (which would occur at the subdivision stage or site-development phase of the EPC process)

Note: While the applicant cannot control or dictate school schedules or operations, it is notable that staggering of school start times to spread out school-peak-period traffic demand could potentially have a significant effect and improve level of service/reduce queuing.

If the intersection of SH 83/Highway 105/Walker Road were to remain signalized during the long term, the following laneage modifications would be required in order for LOS to operate at an acceptable level and for queues to be mitigated (based on existing signal timings):

- Construct a second westbound-through turn lane
- Construct a second eastbound-through turn lane
- The eastbound and westbound departure legs would need two receiving lanes. On the east leg, the widening to two through lanes would only be needed between the intersection and the point at which there are already two lanes on the approach to the Walker/Jane Lundeen roundabout.

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The level of service section included evaluation of this intersection as a modern roundabout. The above findings and recommendations for auxiliary turn lanes would change for a roundabout.

This project may be subject to "cost recovery" for future improvements at this intersection if constructed by other developments **and/or** CDOT may require pro-rata share participation in future improvements (potentially in the form of an escrow). Also, there is the potential that intersection improvements, although within CDOT ROW, may be added to the list of "eligible improvements" under the EPC Roadway Improvement Fee Program. These improvements may include new or improved auxiliary turn lanes, traffic-control upgrades/change (roundabout), etc. This could be addressed at the Preliminary Plan/Platting stage.

TRACT A AND B ROADWAY CLASSIFICATIONS

A classification of Rural Local is likely most appropriate for the Tract B internal roadways. Tract A streets would likely be Urban Local or Local (Low Volume) given the higher density zoning. This can be confirmed at the Preliminary Plan/Platting stage.

COUNTY ROAD IMPROVEMENT FEE PROGRAM

Transportation Impact Fees

This development would be required to participate in the Roadway Improvement Fee Program. Estimates of fees would be included at the plat stage.

MULTI-MODAL TRANSPORTATION AND TDM OPPORTUNITIES

No multi-modal transportation improvement projects have been identified as being needed by the year 2045 per Figure 27 of El Paso County's 2024 *MTCP*.

DEVIATIONS

The proposed north right-in/right out access point to Jane Lundeen and the south left-in-only access to Tract A from Pinehurst Circle will be subject to approval of deviations. Also, the spacing of the proposed south full-movement shown approximately 317 feet north of Pinehurst/Jane Lundeen intersection will also be subject to approval of a deviation.

These deviations will be applied for later - at the subdivision stage of development rather than with this rezone application.

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FINDINGS AND CONCLUSIONS

- Tract A is projected to generate about:
  - Average weekday – 1,931 new driveway vehicle-trips (half entering, half exiting)
  - AM peak hour – 31 entering vehicles and 100 exiting vehicles
  - School-PM peak hour – 80 entering vehicles and 60 exiting vehicles
  - PM peak hour – 98 entering vehicles and 60 exiting vehicles
- Tract B is projected to generate about:
  - Average weekday – 516 new driveway vehicle-trips (half entering, half exiting)
  - AM peak hour – 7 entering vehicles and 19 exiting vehicles
  - School-PM peak hour – 17 entering vehicles and 11 exiting vehicles
  - PM peak hour – 20 entering vehicles and 12 exiting vehicles
- Please refer to the "Level of Service" section above for analysis of existing conditions, and short- and long-term projected conditions. The levels of service analysis for Walker Road/SH 83/Highway 105 includes results based on current laneage/traffic control and with recommended lane improvements.
- Please refer to the "Queuing Analysis" section above for more details.
- No auxiliary turn lanes would be required at any of the proposed site access intersections, with the possible exception of the Tract A Left-In only access. Please refer to the "Auxiliary Turn-Lane Analysis" section for evaluation details.
- Upgrades with additional east/west (side street) laneage are projected to be needed to improve levels of service and address queuing during the school peak parent drop off and pick up times. An alternative could include replacing the signalized intersection with a modern roundabout. Also note: although the applicant cannot control or dictate school schedules or operations, it is notable that staggering of school start times to spread out school-peak-period traffic demand could potentially have a significant effect and improve level of service/reduce queuing.

* * * * *

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Please contact me if you have any questions regarding this report.

Sincerely,

LSC TRANSPORTATION CONSULTANTS, INC.

By Jeffrey C. Hodsdon, P.E.
Principal

JCH/JAB:jas

Enclosures: Table 2
Figure 1 - Figure 13
Traffic Count Reports
Synchro LOS Reports
Sidra LOS Reports
Queue Reports

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Table 2

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Table 2: Detailed Trip Generation Estimate

ITE		Value	Units [1]	Trip Generation Rates [2]							Total Trips Generated					
				Average Weekday	A.M. Peak Hour		School P.M. Peak Hour		P.M. Peak Hour		Average Weekday [3]	A.M. Peak Hour [4]		School P.M. Peak Hour		P.M. Peak Hour [4]	
Code	Description				In	Out	In	Out	In	Out		In	Out	In	Out	In	Out
Tract A -- Current Rezone Application																	
Tract A - North Side																	
220	Multi-Family Housing (Low-Rise)	230	DU	6.15	0.10	0.31	0.27	0.18	0.32	0.19	1,417	22	71	61	42	73	45
Tract A - South Side																	
215	Single-Family (Attached) Housing	70	DU	7.35	0.13	0.41	0.27	0.27	0.36	0.22	515	9	28	19	19	25	16
								Tract A - North Side			1,417	22	71	61	42	73	45
								Tract A - South Side			515	9	28	19	19	25	16
								Tract A - Total			**1,931**	**31**	**100**	**80**	**60**	**98**	**60**
Tract B -- Current Rezone Application																	
210	Single-Family (Detached) Housing	31	DU	16.63	0.23	0.62	0.54	0.34	0.66	0.40	516	7	19	17	11	20	12

[1] DU = dwelling units

[2] Source: *Trip Generation, 12th Edition (2025)* by the Institute of Transportation Engineers (ITE)

[3] Units = vehicle-trips per day

[4] Units = vehicle-trips per hour

January 15, 2026

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Figures 1-13

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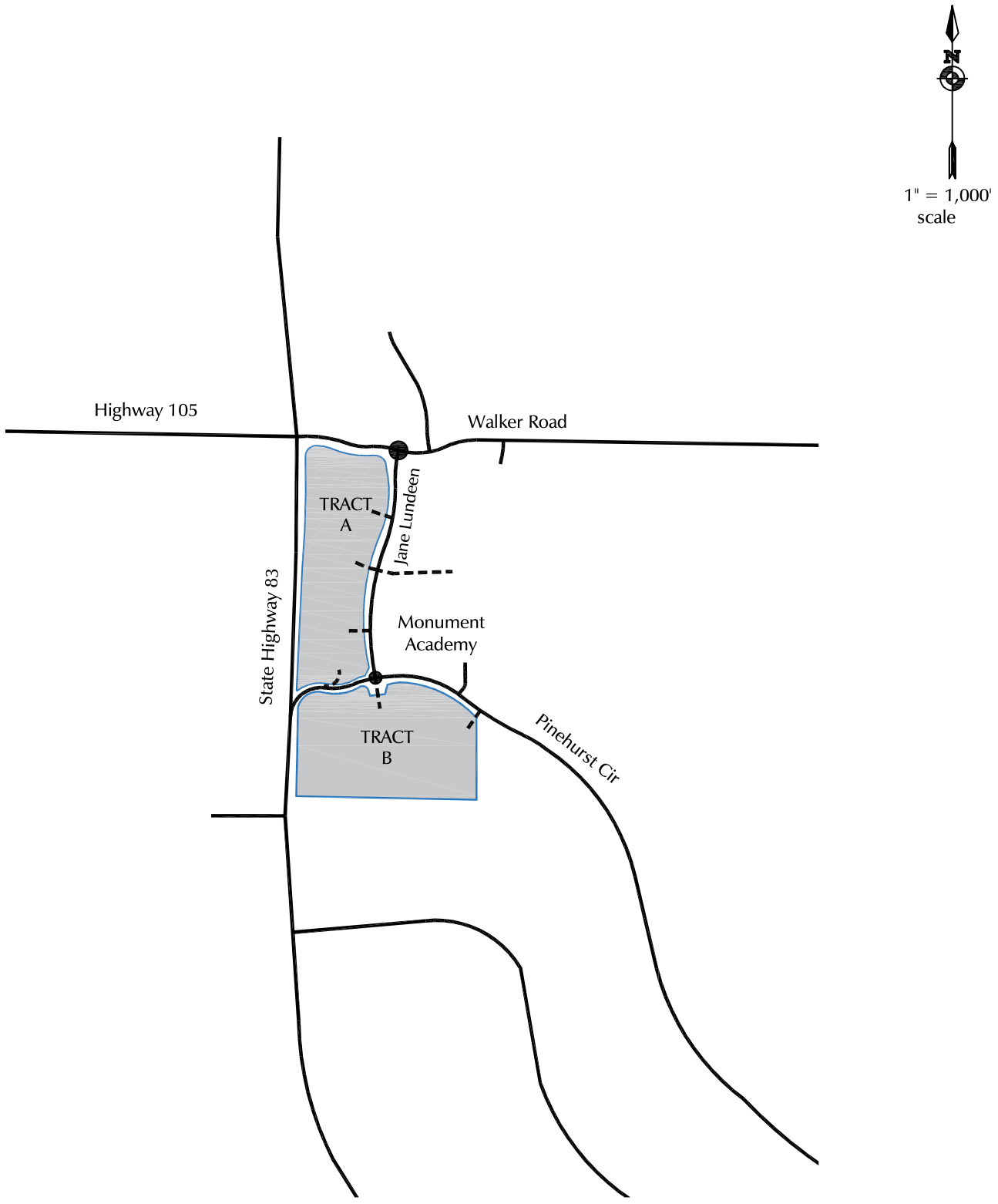

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Figure 1

Vicinity Map

Monument Academy South Residential (LSC #S254260)

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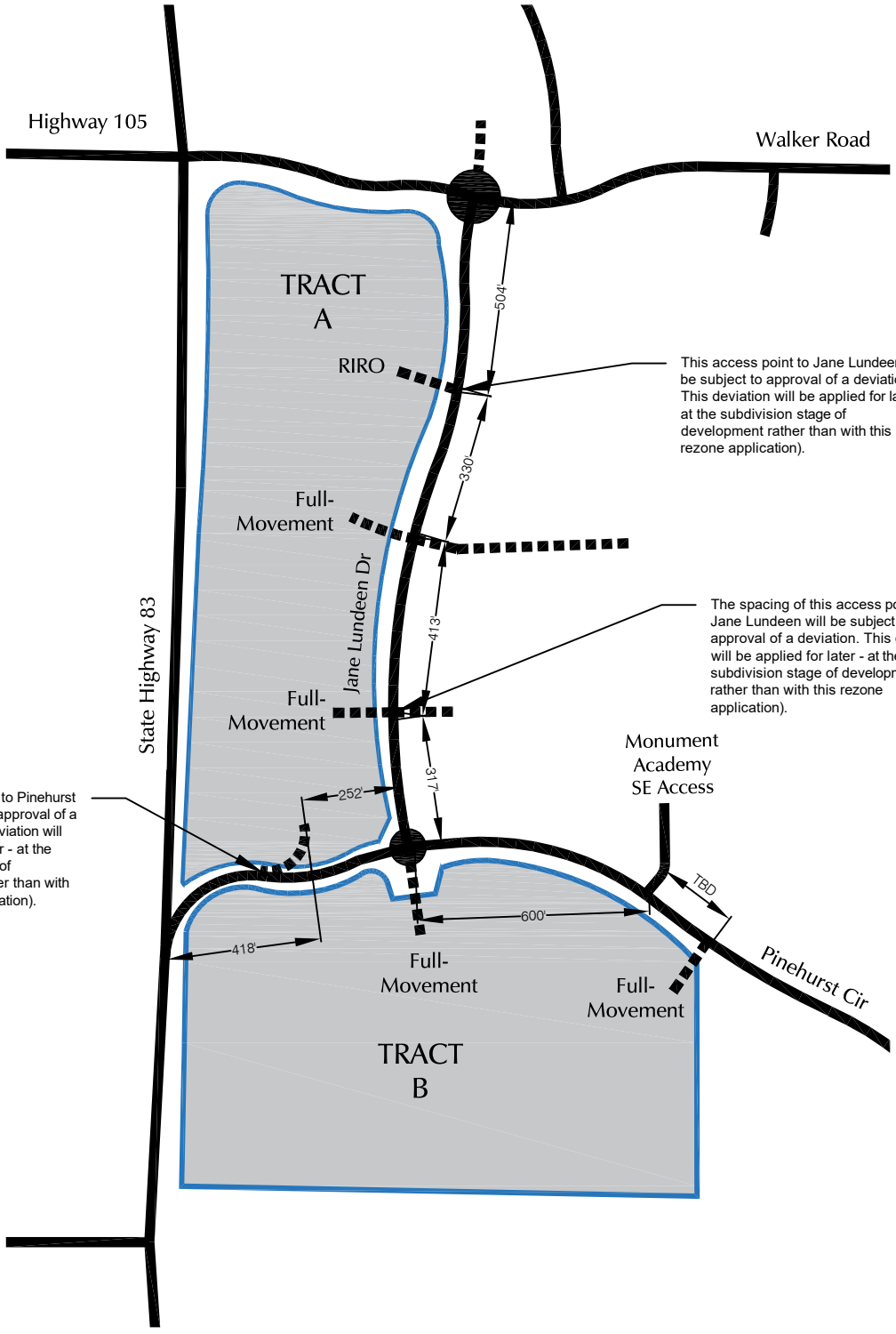

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Figure 2

Access Plan

Monument Academy South Residential (LSC #S254260)

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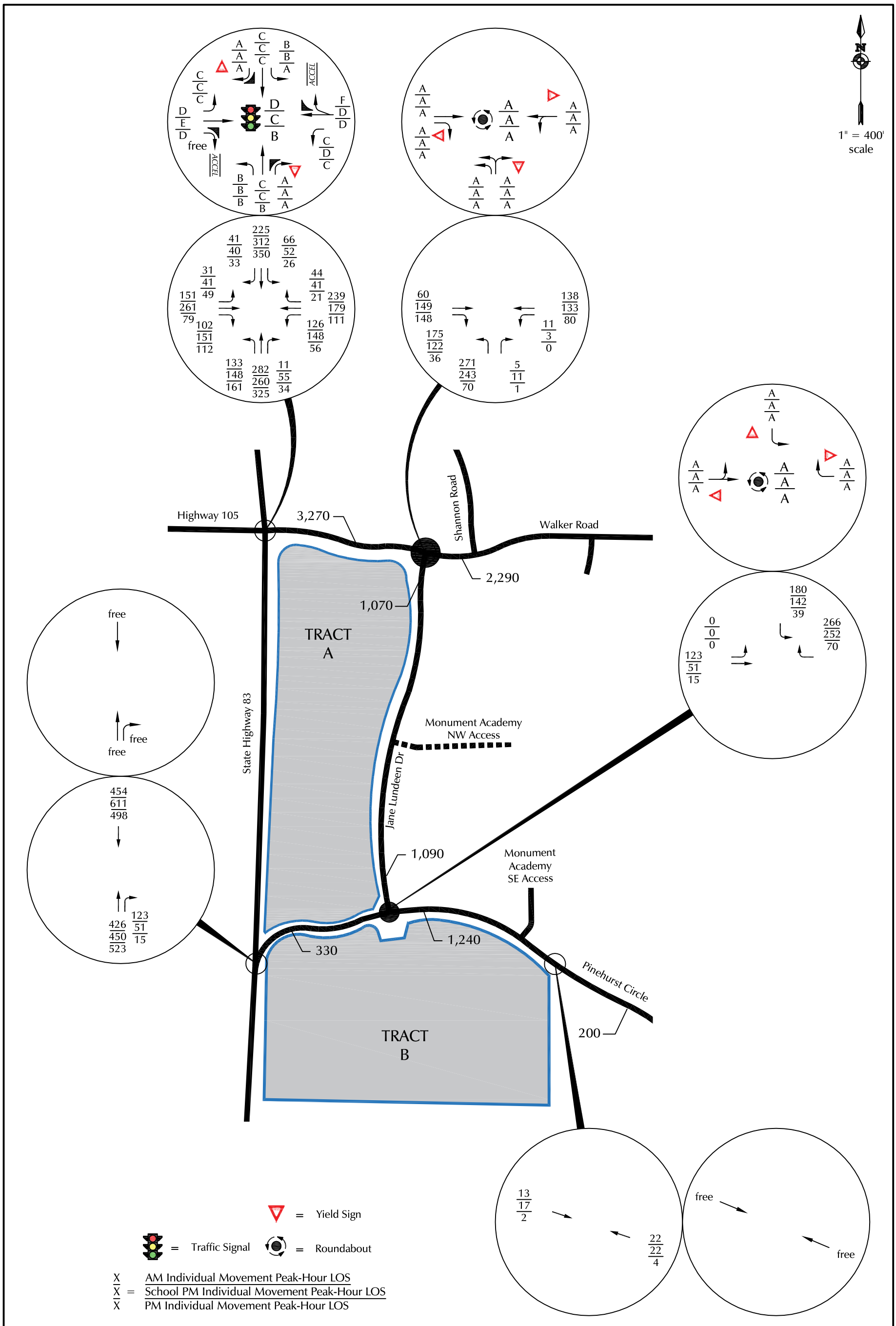

Figure 3

2025 Existing Traffic, Lane Geometry, Traffic Control, and LOS

Monument Academy South Residential (LSC #S254260)

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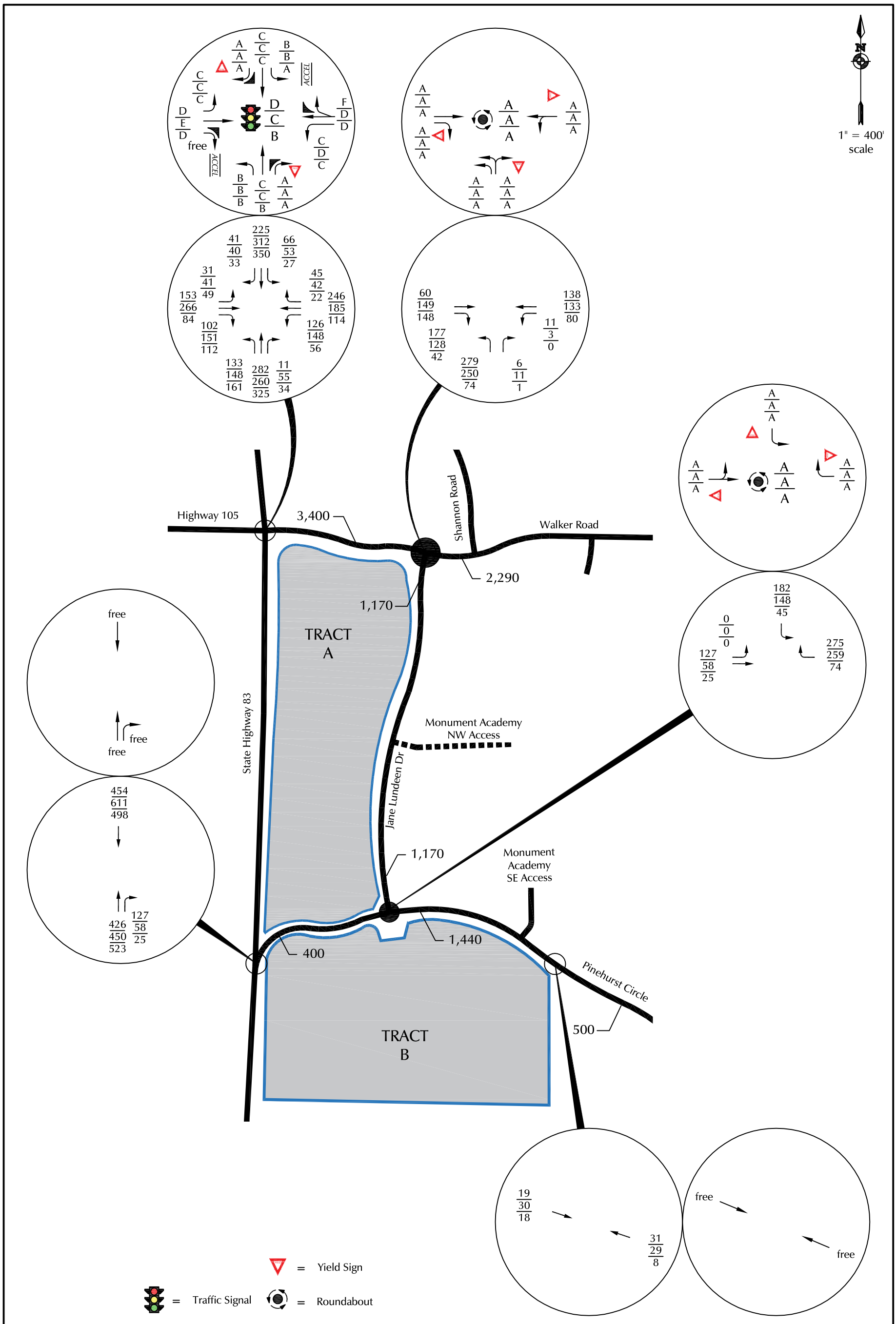

Figure 4

2026 Baseline Traffic, Lane Geometry, Traffic Control, and LOS

Monument Academy South Residential (LSC #S254260)

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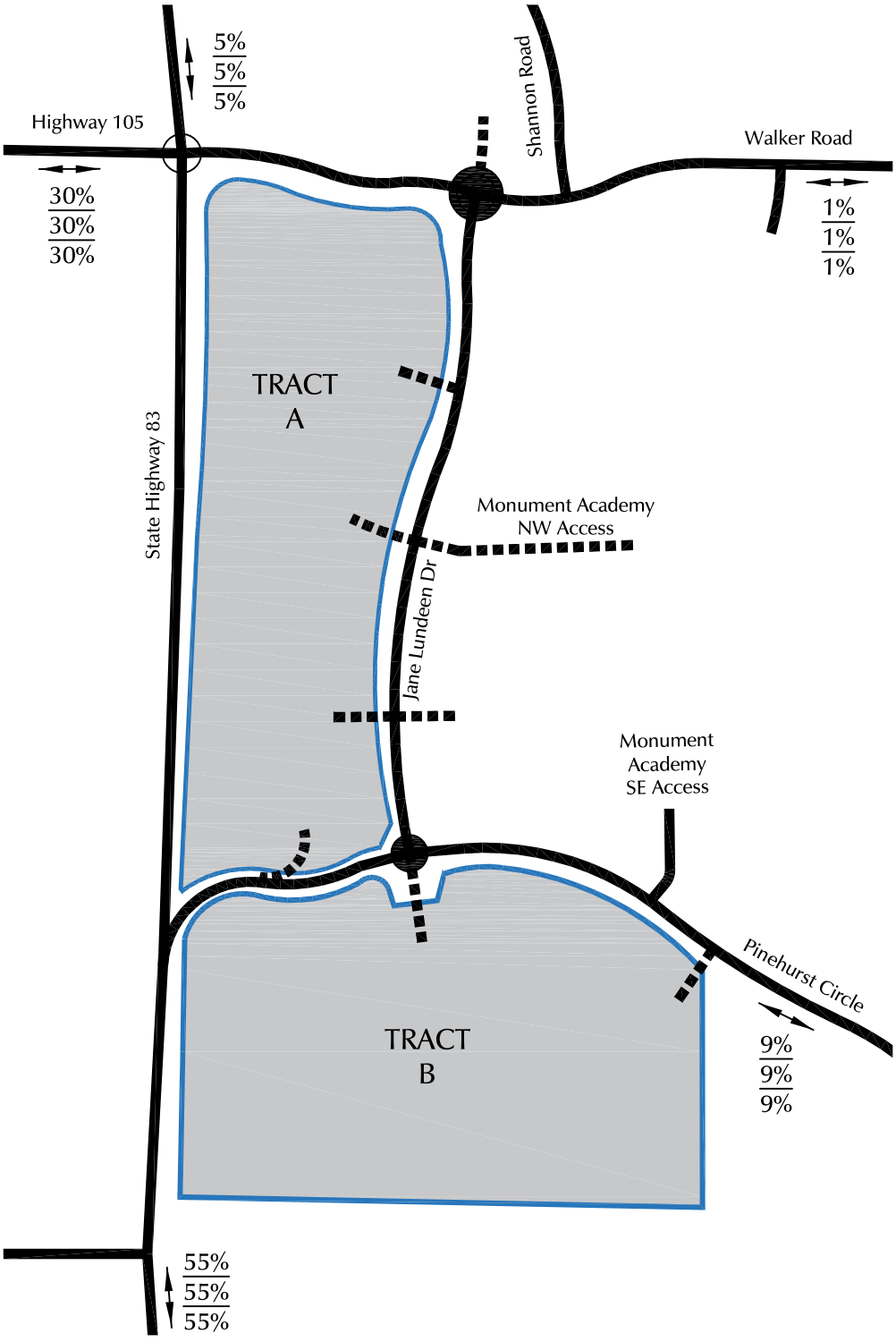

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Estimated Direction Distribution of Site-Generated Vehicle Trips:

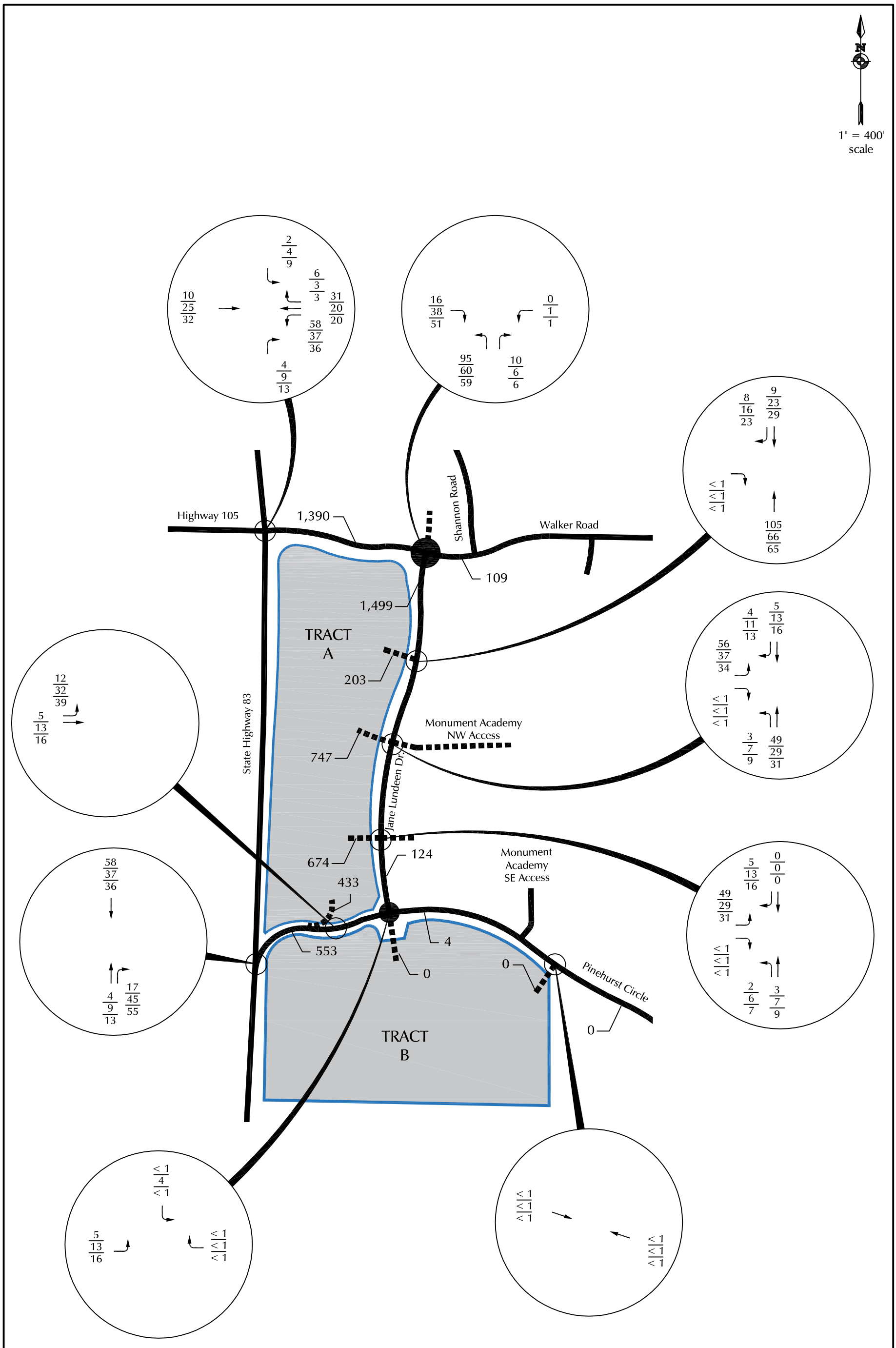
$$\frac{XX\%}{XX\%}{XX\%} = \frac{\text{A.M. Peak Hour \% of Site-Generated Trips}}{\text{School P.M. Peak Hour \% of Site-Generated Trips}}{\text{P.M. Peak Hour \% of Site-Generated Trips}}$$

Figure 5

Directional Distribution

Monument Academy South Residential (LSC #S254260)

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848



X = AM Weekday Peak-Hour Traffic (Vehicles/Hour)
X = School PM Weekday Peak-Hour Traffic (Vehicles/Hour)
X = PM Weekday Peak-Hour Traffic (Vehicles/Hour)

X,XXX = Average Daily Traffic (Vehicles/Day)

TRANSPORTATION CONSULTANTS, INC.

Figure 6

Site-Generated Traffic Tract A

Monument Academy South Residential (LSC #S254260)

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

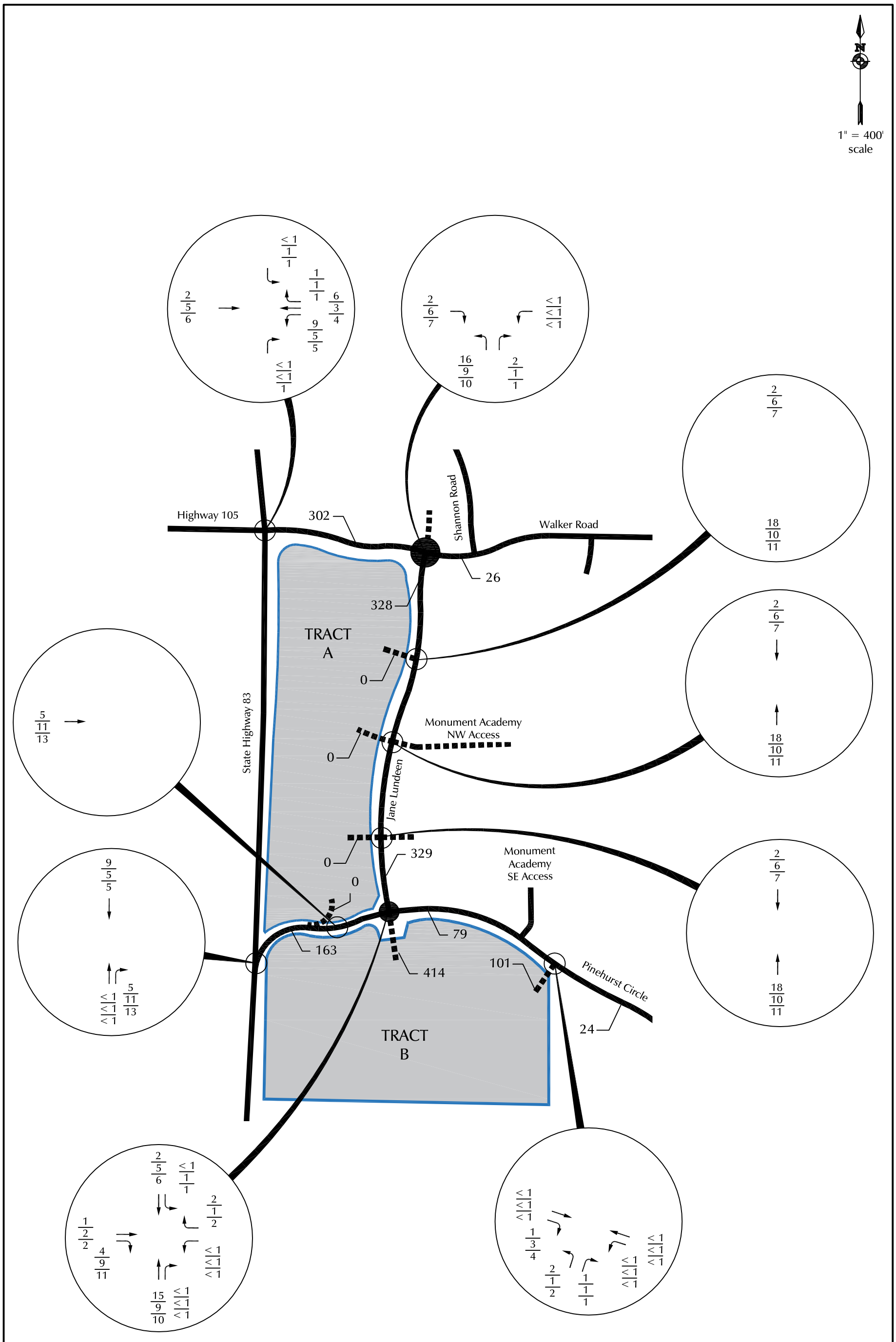


Figure 7

Site-Generated Traffic
Tract B

X = AM Weekday Peak-Hour Traffic (Vehicles/Hour)
X = School PM Weekday Peak-Hour Traffic (Vehicles/Hour)
X = PM Weekday Peak-Hour Traffic (Vehicles/Hour)

X,XXX = Average Daily Traffic (Vehicles/Day)

TRANSPORTATION CONSULTANTS, INC.

Monument Academy South Residential (LSC #S254260)

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Existing EB/WB Laneage,
Existing Signal Timings

Recommended Laneage,
Existing Signal Timings (AM, PM)
Modified Signal Timings (School PM)

1" = 400'
scale

Highway 105
Shannon Road
Walker Road
State Highway 83
Jane Lundeen
Monument Academy NW Access
Monument Academy SE Access
Pinehurst Circle

5,092
2,425
2,997
203
747
674
433
1,623
1,116
1,523
414
101
524

TRACT A
TRACT B

= Traffic Signal
= Yield Sign
= Stop Sign
= Roundabout

X / X / X = AM / School PM / PM Individual Movement Peak-Hour LOS

X / X / X = AM / School PM / PM Weekday Peak-Hour Traffic (Vehicles/Hour)

X,XXX = Average Daily Traffic (Vehicles/Day)

TRANSPORTATION CONSULTANTS, INC.

Figure 8

2026 Short-Term Baseline + Site Traffic, Lane Geometry, Traffic Control, and LOS

Monument Academy South Residential (LSC #S254260)

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Existing EB/WB Laneage,
Existing Signal Timings

Recommended Laneage,
Existing Signal Timings

1" = 400'
scale

Highway 105

8,530

Shannon Road

Walker Road

4,280

2,340

State Highway 83

TRACT
A

Monument Academy
NW Access

Jane Lundeen

1,912

Monument
Academy
SE Access

742

1,440

Pinehurst Circle

500

TRACT
B

= Traffic Signal

= Yield Sign

= Stop Sign

= Roundabout

X — AM Individual Movement Peak-Hour LOS
X = School PM Individual Movement Peak-Hour LOS
X — PM Individual Movement Peak-Hour LOS

X — AM Weekday Peak-Hour Traffic (Vehicles/Hour)
X = School PM Weekday Peak-Hour Traffic (Vehicles/Hour)
X — PM Weekday Peak-Hour Traffic (Vehicles/Hour)

X,XXX = Average Daily Traffic (Vehicles/Day)

TRANSPORTATION CONSULTANTS, INC.

Figure 9

2045 Background Traffic, Lane Geometry, Traffic Control, and LOS

Monument Academy South Residential (LSC #S254260)

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

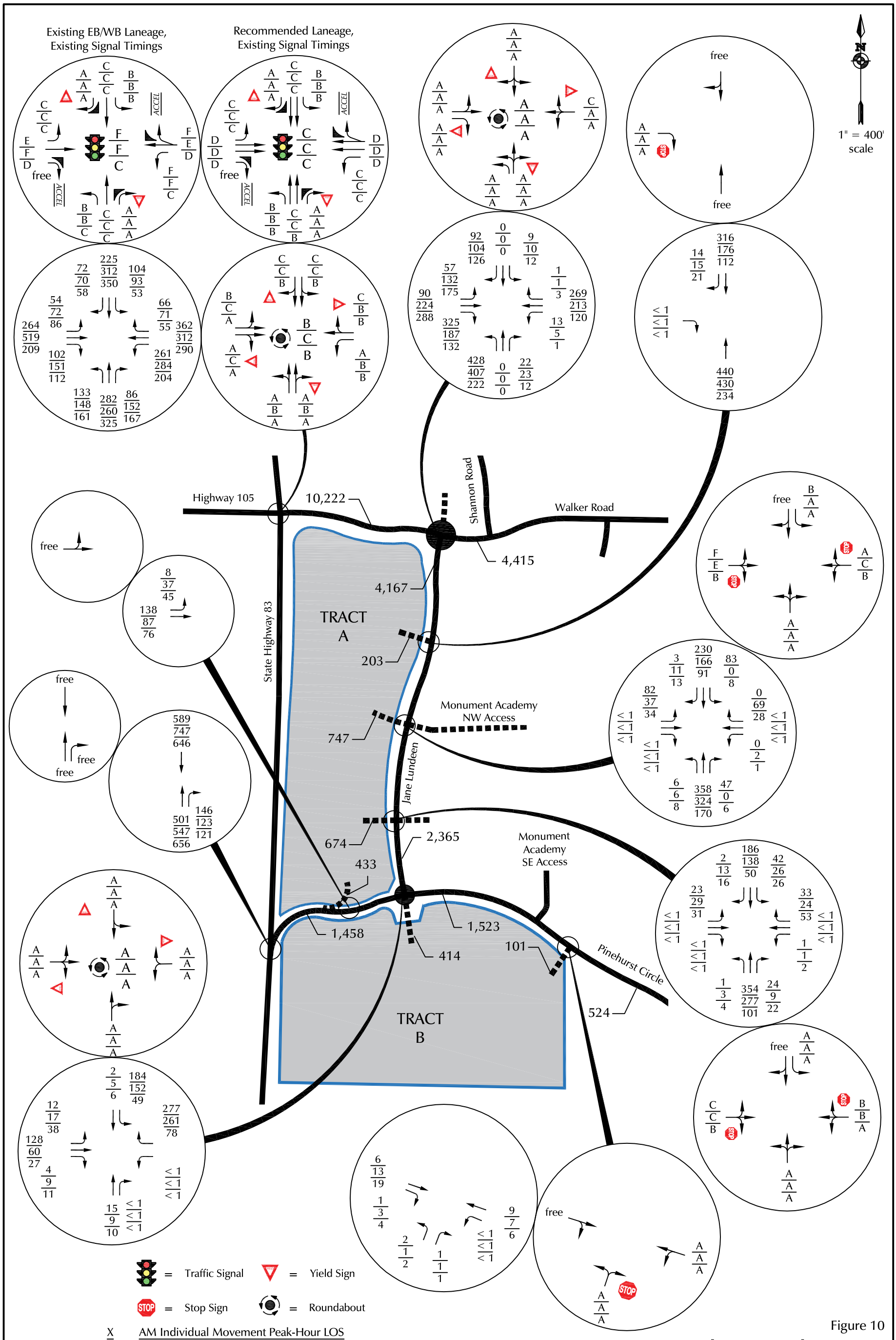


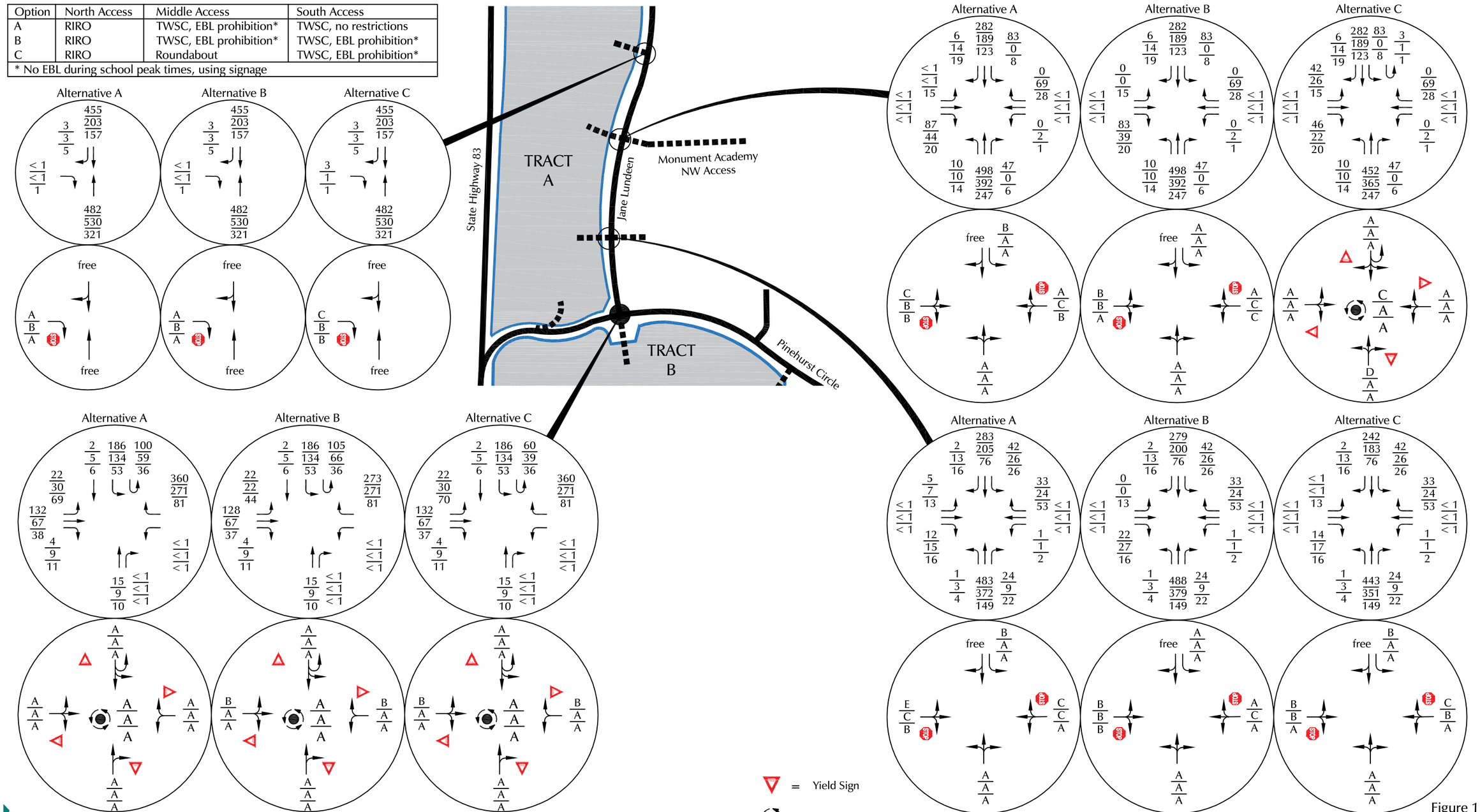
Figure 10

2045 Background + Site Traffic, Lane Geometry, Traffic Control, and LOS

Monument Academy South Residential (LSC #S254260)

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Option	North Access	Middle Access	South Access
A	RIRO	TWSC, EBL prohibition*	TWSC, no restrictions
B	RIRO	TWSC, EBL prohibition*	TWSC, EBL prohibition*
C	RIRO	Roundabout	TWSC, EBL prohibition*
* No EBL during school peak times, using signage			



X,XXX = Average Daily Traffic (Vehicles/Day)

$\frac{X}{X}$ = AM Weekday Peak-Hour Traffic (Vehicles/Hour) / School PM Weekday Peak-Hour Traffic (Vehicles/Hour) / PM Weekday Peak-Hour Traffic (Vehicles/Hour)

$\frac{X}{X}$ = AM Individual Movement Peak-Hour LOS / School PM Individual Movement Peak-Hour LOS / PM Individual Movement Peak-Hour LOS

TRANSPORTATION CONSULTANTS, INC.

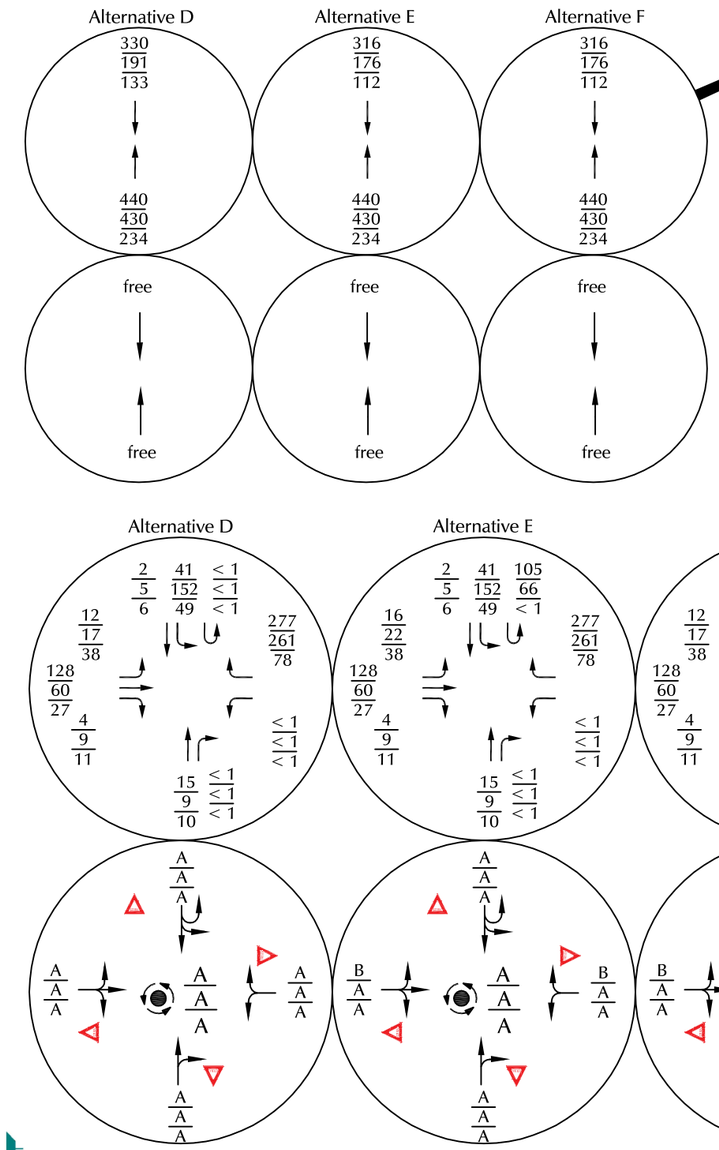
Figure 11

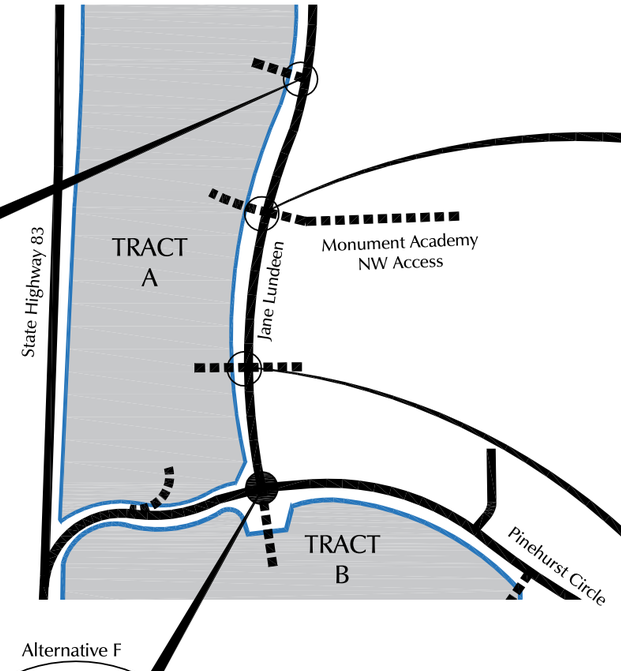
2045 Background + Site Traffic, Lane Geometry, Traffic Control, and LOS (with Right-In/Right-Out)

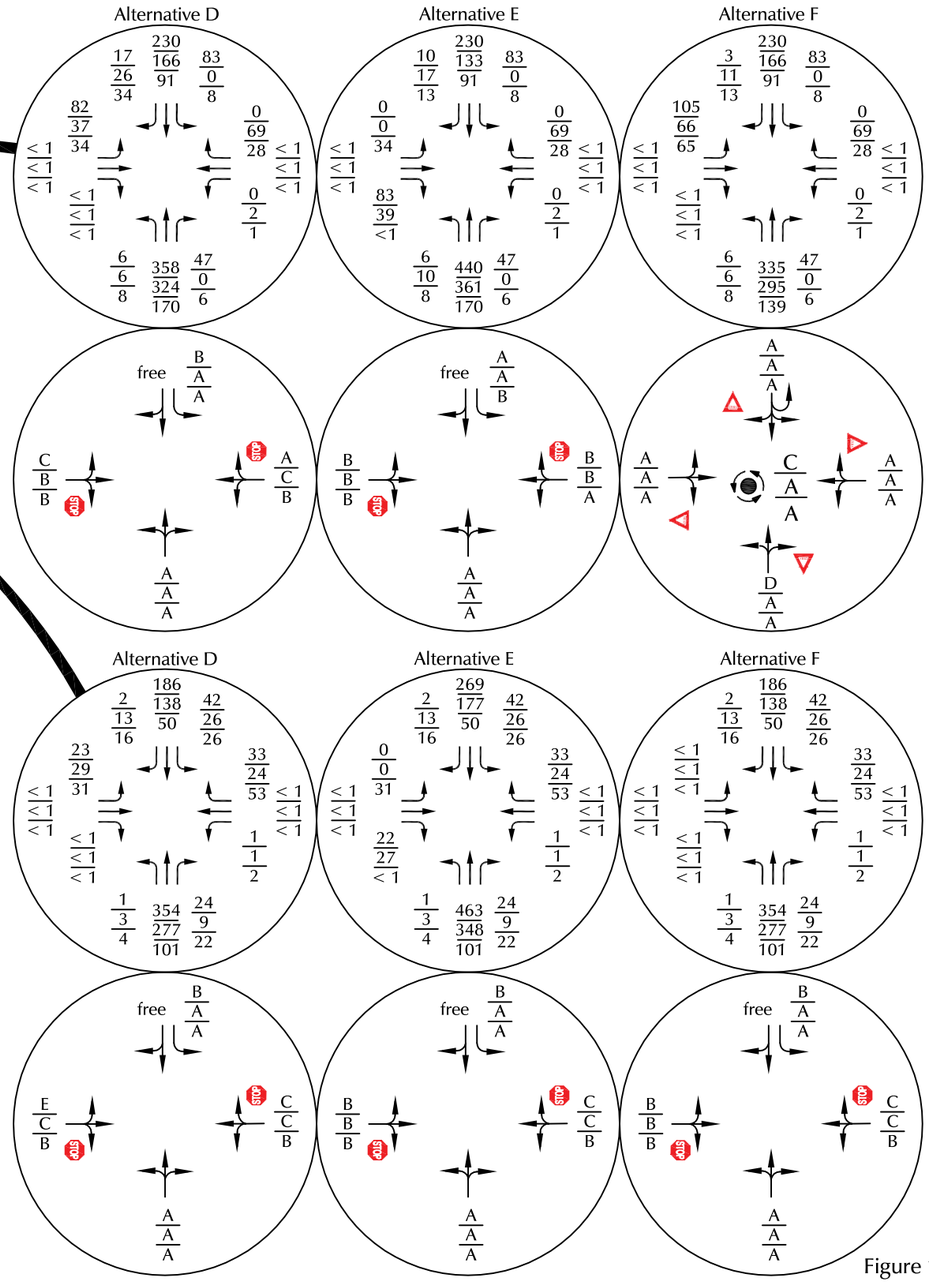
Monument Academy South Residential (LSC #S254260)

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Option	North Access	Middle Access	South Access
D	Removed	TWSC, EBL prohibition*	TWSC, no restrictions
E	Removed	TWSC, EBL prohibition*	TWSC, EBL prohibition*
F	Removed	Roundabout	TWSC, EBL prohibition*
* No EBL during school peak times, using signage			







X,XXX = Average Daily Traffic (Vehicles/Day)

$\frac{X}{X}$ = AM Weekday Peak-Hour Traffic (Vehicles/Hour) / School PM Weekday Peak-Hour Traffic (Vehicles/Hour) / PM Weekday Peak-Hour Traffic (Vehicles/Hour)

$\frac{X}{X}$ = AM Individual Movement Peak-Hour LOS / School PM Individual Movement Peak-Hour LOS / PM Individual Movement Peak-Hour LOS

= Yield Sign

= Roundabout

= Traffic Signal

= Stop Sign

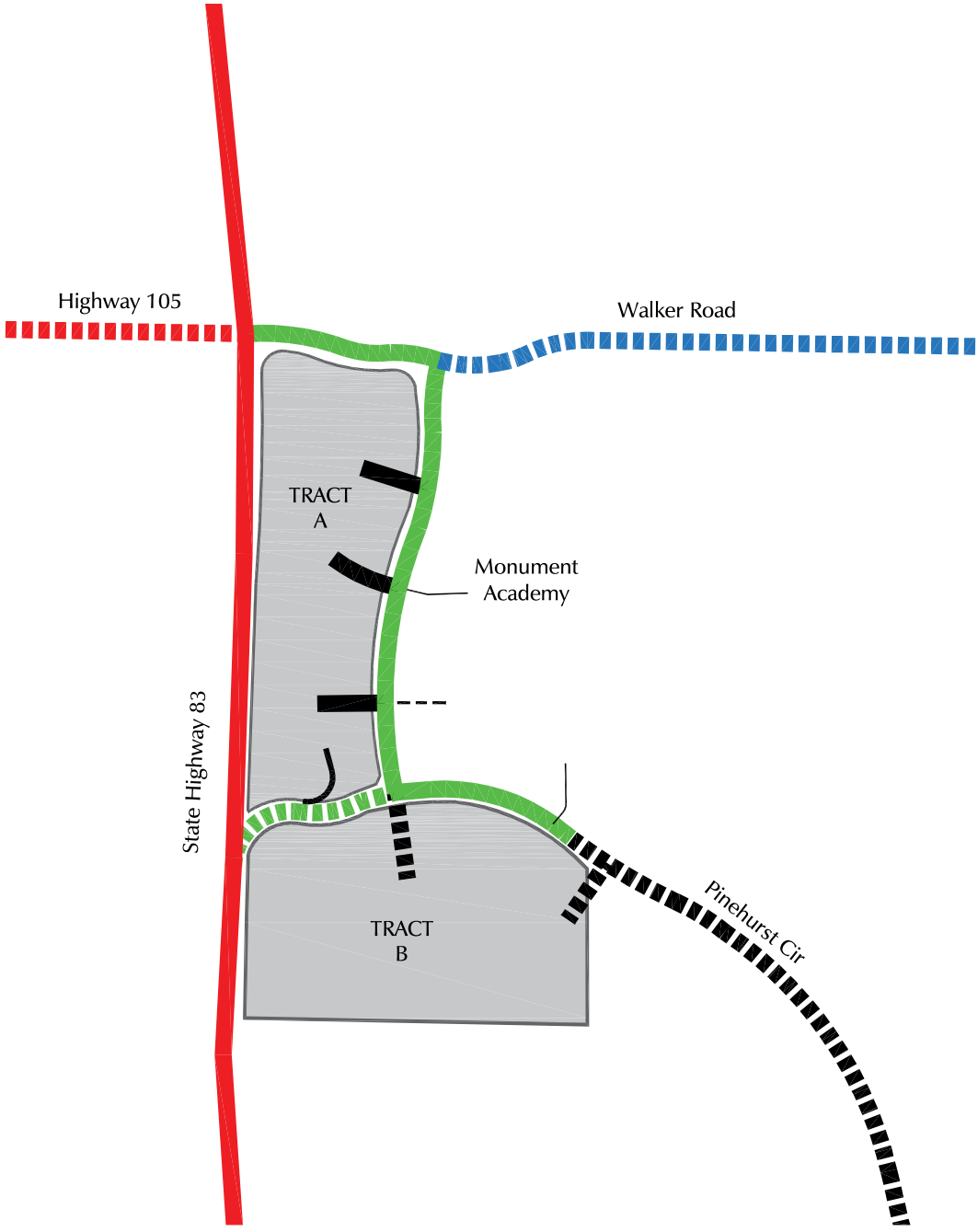
TRANSPORTATION CONSULTANTS, INC.

Figure 12

2045 Background + Site Traffic, Lane Geometry, Traffic Control, and LOS (No Right-In/Right-Out)

Monument Academy South Residential (LSC #S254260)

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848



Regional Highway (CDOT R-A)
Principal Arterial (Rural, 3 Lanes)
Major Collector (Rural)
Non-Residential Collector (Urban)
Non-Residential Collector (Urban, One-Way/Modified)
Local (Urban)
Local (Rural)

TRANSPORTATION CONSULTANTS, INC.

Figure 13

Roadway Classifications (Existing and Recommended Site)

Monument Academy South Residential (LSC #S254260)

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Traffic Counts

TRANSPORTATION
CONSULTANTS, INC.

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LSC Transportation Consultants, Inc.

2504 E. Pikes Peak Ave, Suite 304
Colorado Springs, CO 80909
719-633-2868

File Name : Hwy 83 - Walker Rd AM 5-13-25
Site Code : 00000000
Start Date : 5/13/2025
Page No : 1

Groups Printed- Unshifted

	Hwy 83 Southbound					Walker Rd Westbound					Hwy 83 Northbound					Hwy 105 Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
06:30	0	12	0	0	12	0	2	2	0	4	0	32	5	0	37	3	1	0	0	4	57
06:35	0	11	0	0	11	2	2	0	0	4	0	29	10	0	39	3	0	0	0	3	57
06:40	1	15	1	0	17	0	1	2	0	3	0	31	16	0	47	4	0	3	0	7	74
06:45	1	9	0	0	10	2	8	1	0	11	0	18	11	0	29	13	0	2	0	15	65
06:50	2	18	1	0	21	1	5	5	0	11	1	27	16	0	44	8	3	1	0	12	88
06:55	2	16	0	0	18	1	5	2	0	8	0	24	11	0	35	12	0	1	0	13	74
Total	6	81	2	0	89	6	23	12	0	41	1	161	69	0	231	43	4	7	0	54	415
07:00	4	24	2	0	30	2	2	1	0	5	0	26	14	0	40	10	3	0	0	13	88
07:05	5	15	0	0	20	1	5	4	0	10	1	25	7	0	33	6	3	3	0	12	75
07:10	5	13	1	0	19	3	4	6	0	13	0	25	6	0	31	9	3	1	0	13	76
07:15	3	21	2	0	26	1	12	5	0	18	0	21	9	0	30	6	11	2	0	19	93
07:20	4	20	5	0	29	0	20	6	0	26	0	18	4	0	22	8	14	1	0	23	100
07:25	3	23	11	0	37	4	13	7	0	24	1	31	15	0	47	8	23	0	0	31	139
07:30	4	17	18	0	39	6	38	13	0	57	2	15	10	0	27	8	39	5	0	52	175
07:35	5	15	14	0	34	9	33	12	0	54	0	28	9	0	37	6	30	5	0	41	166
07:40	4	27	5	0	36	4	28	20	0	52	4	20	14	0	38	10	11	4	0	25	151
07:45	2	20	3	0	25	8	42	21	0	71	0	28	12	0	40	6	7	2	0	15	151
07:50	1	16	5	0	22	9	28	26	0	63	0	24	15	0	39	13	3	3	0	19	143
07:55	2	20	1	0	23	0	15	4	0	19	1	24	15	0	40	6	1	4	0	11	93
Total	42	231	67	0	340	47	240	125	0	412	9	285	130	0	424	96	148	30	0	274	1450
08:00	3	18	1	0	22	0	6	3	0	9	2	23	17	0	42	16	6	1	0	23	96
08:05	2	8	0	0	10	3	6	1	0	10	1	16	7	0	24	12	6	0	0	18	62
08:10	4	10	0	0	14	0	2	0	0	2	1	26	11	0	38	17	4	1	0	22	76
08:15	2	14	3	0	19	0	3	2	0	5	3	38	8	0	49	9	5	5	0	19	92
08:20	4	22	0	0	26	0	4	3	0	7	4	22	7	0	33	12	6	1	0	19	85
08:25	1	17	0	0	18	0	3	2	0	5	6	9	11	0	26	5	8	0	0	13	62
Grand Total	64	401	73	0	538	56	287	148	0	491	27	580	260	0	867	210	187	45	0	442	2338
Apprch %	11.9	74.5	13.6	0		11.4	58.5	30.1	0		3.1	66.9	30	0		47.5	42.3	10.2	0		
Total %	2.7	17.2	3.1	0	23	2.4	12.3	6.3	0	21	1.2	24.8	11.1	0	37.1	9	8	1.9	0	18.9	

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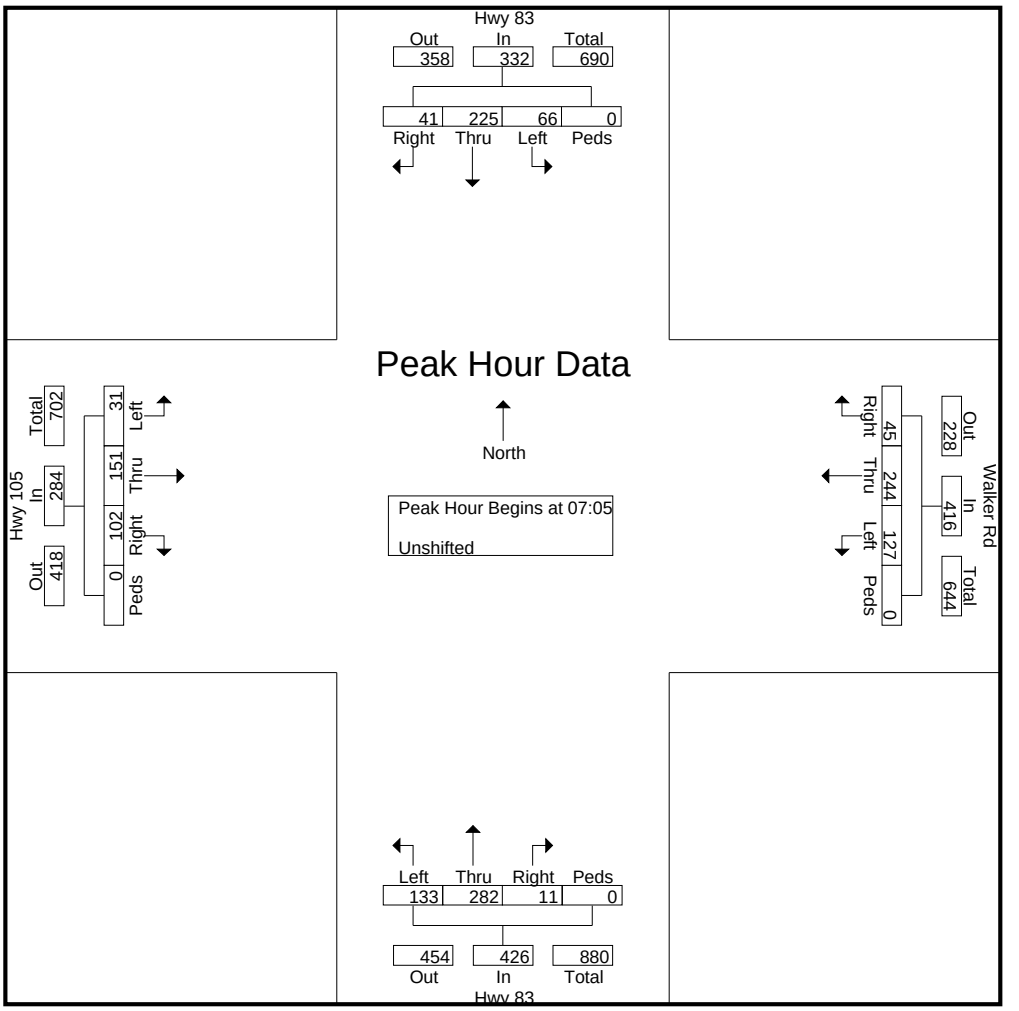
LSC Transportation Consultants, Inc.

2504 E. Pikes Peak Ave, Suite 304
Colorado Springs, CO 80909
719-633-2868

File Name : Hwy 83 - Walker Rd AM 5-13-25
Site Code : 00000000
Start Date : 5/13/2025
Page No : 2

	Hwy 83 Southbound					Walker Rd Westbound					Hwy 83 Northbound					Hwy 105 Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 06:30 to 08:25 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:05																					
07:05	**5**	15	0	0	20	1	5	4	0	10	1	25	7	0	33	6	3	3	0	12	75
07:10	5	13	1	0	19	3	4	6	0	13	0	25	6	0	31	9	3	1	0	13	76
07:15	3	21	2	0	26	1	12	5	0	18	0	21	9	0	30	6	11	2	0	19	93
07:20	4	20	5	0	29	0	20	6	0	26	0	18	4	0	22	8	14	1	0	23	100
07:25	3	23	11	0	37	4	13	7	0	24	1	**31**	15	0	**47**	8	23	0	0	31	139
07:30	4	17	**18**	0	**39**	6	38	13	0	57	2	15	10	0	27	8	**39**	**5**	0	**52**	**175**
07:35	5	15	14	0	34	**9**	33	12	0	54	0	28	9	0	37	6	30	5	0	41	166
07:40	4	**27**	5	0	36	4	28	20	0	52	**4**	20	14	0	38	10	11	4	0	25	151
07:45	2	20	3	0	25	8	**42**	21	0	**71**	0	28	12	0	40	6	7	2	0	15	151
07:50	1	16	5	0	22	9	28	**26**	0	63	0	24	15	0	39	13	3	3	0	19	143
07:55	2	20	1	0	23	0	15	4	0	19	1	24	15	0	40	6	1	4	0	11	93
08:00	3	18	1	0	22	0	6	3	0	9	2	23	**17**	0	42	**16**	6	1	0	23	96
Total Volume	41	225	66	0	332	45	244	127	0	416	11	282	133	0	426	102	151	31	0	284	1458
% App. Total	12.3	67.8	19.9	0		10.8	58.7	30.5	0		2.6	66.2	31.2	0		35.9	53.2	10.9	0		
PHF	.683	.694	.306	.000	.709	.417	.484	.407	.000	.488	.229	.758	.652	.000	.755	.531	.323	.517	.000	.455	.694



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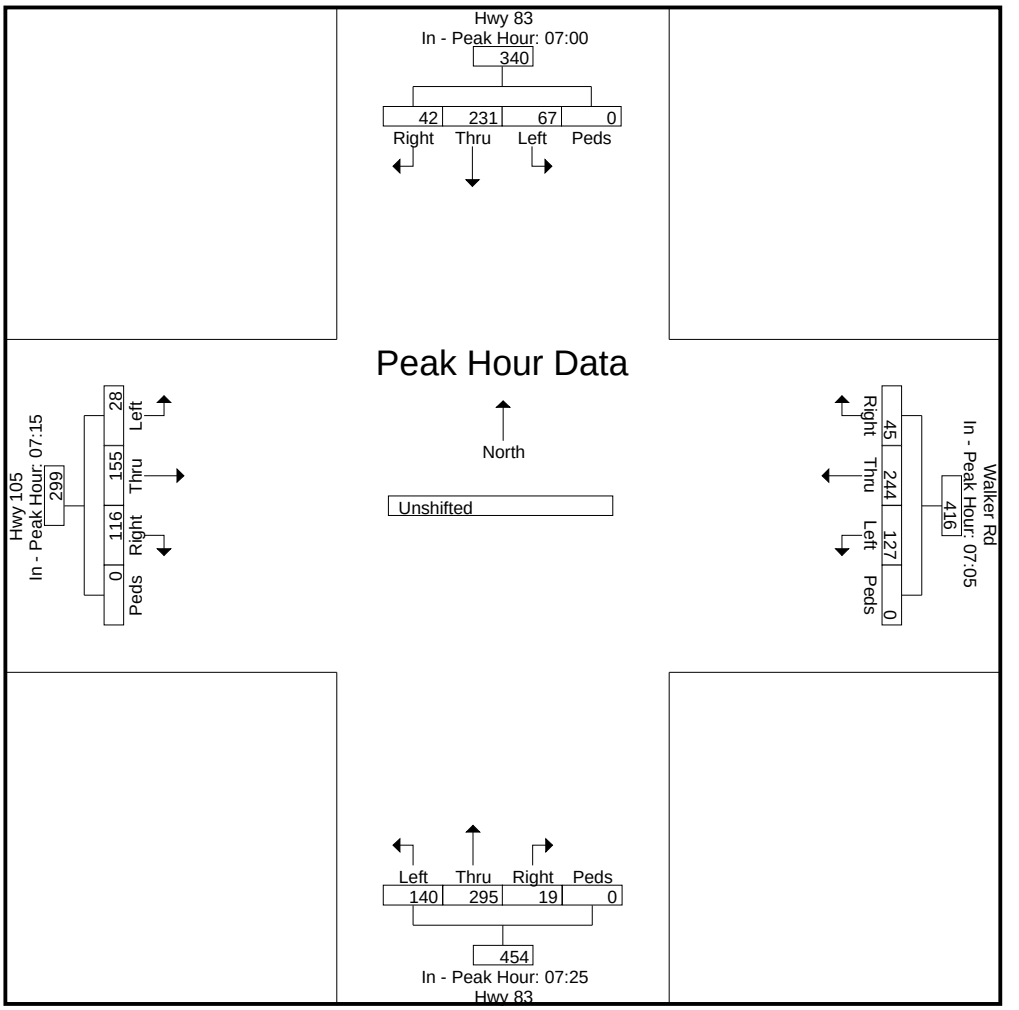
2504 E. Pikes Peak Ave, Suite 304
Colorado Springs, CO 80909
719-633-2868

File Name : Hwy 83 - Walker Rd AM 5-13-25
Site Code : 00000000
Start Date : 5/13/2025
Page No : 3

	Hwy 83 Southbound					Walker Rd Westbound					Hwy 83 Northbound					Hwy 105 Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 06:30 to 08:25 - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	07:00					07:05					07:25					07:15					
+0 mins.	4	24	2	0	30	1	5	4	0	10	1	31	15	0	47	6	11	2	0	19	
+5 mins.	**5**	15	0	0	20	3	4	6	0	13	2	15	10	0	27	8	14	1	0	23	
+10 mins.	5	13	1	0	19	1	12	5	0	18	0	28	9	0	37	8	23	0	0	31	
+15 mins.	3	21	2	0	26	0	20	6	0	26	**4**	20	14	0	38	8	**39**	**5**	0	**52**	
+20 mins.	4	20	5	0	29	4	13	7	0	24	0	28	12	0	40	6	30	5	0	41	
+25 mins.	3	23	11	0	37	6	38	13	0	57	0	24	15	0	39	10	11	4	0	25	
+30 mins.	4	17	**18**	0	**39**	**9**	33	12	0	54	1	24	15	0	40	6	7	2	0	15	
+35 mins.	5	15	14	0	34	4	28	20	0	52	2	23	**17**	0	42	13	3	3	0	19	
+40 mins.	4	**27**	5	0	36	8	**42**	21	0	**71**	1	16	7	0	24	6	1	4	0	11	
+45 mins.	2	20	3	0	25	9	28	**26**	0	63	1	26	11	0	38	16	6	1	0	23	
+50 mins.	1	16	5	0	22	0	15	4	0	19	3	**38**	8	0	**49**	12	6	0	0	18	
+55 mins.	2	20	1	0	23	0	6	3	0	9	4	22	7	0	33	**17**	4	1	0	22	
Total Volume	42	231	67	0	340	45	244	127	0	416	19	295	140	0	454	116	155	28	0	299	
% App. Total	12.4	67.9	19.7	0		10.8	58.7	30.5	0		4.2	65	30.8	0		38.8	51.8	9.4	0		
PHF	.700	.713	.310	.000	.726	.417	.484	.407	.000	.488	.396	.647	.686	.000	.772	.569	.331	.467	.000	.479	



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LSC Transportation Consultants, Inc.

2504 E. Pikes Peak Ave, Suite 304
Colorado Springs, CO 80909
719-633-2868

File Name : Hwy 83 - Walker Rd PM 5-13-25
Site Code : 00000000
Start Date : 5/13/2025
Page No : 1

Groups Printed- Unshifted

	Hwy 83 Southbound					Walker Rd Westbound					Hwy 83 Northbound					Hwy 105 Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
15:00	3	25	1	0	29	1	7	3	0	11	0	23	12	0	35	8	15	1	0	24	99
15:05	4	14	2	0	20	0	7	1	0	8	1	19	8	0	28	14	10	4	0	28	84
15:10	2	18	3	0	23	0	5	6	0	11	4	19	12	0	35	7	19	4	0	30	99
15:15	5	19	6	0	30	2	5	4	0	11	2	14	16	0	32	8	13	6	0	27	100
15:20	3	29	5	0	37	1	1	1	0	3	8	23	9	0	40	14	11	2	0	27	107
15:25	2	19	1	0	22	1	5	2	0	8	2	21	14	0	37	10	15	9	0	34	101
15:30	1	24	4	0	29	1	6	6	0	13	5	14	17	0	36	13	15	1	0	29	107
15:35	5	27	5	0	37	7	21	18	0	46	10	23	6	0	39	13	20	3	0	36	158
15:40	2	26	7	0	35	0	39	13	0	52	5	26	11	0	42	12	7	1	0	20	149
15:45	4	20	3	0	27	6	29	24	0	59	3	17	7	0	27	12	8	6	0	26	139
15:50	3	38	4	0	45	8	27	24	0	59	3	22	16	0	41	13	17	2	0	32	177
15:55	5	23	3	0	31	7	18	9	0	34	0	10	12	0	22	13	6	1	0	20	107
Total	39	282	44	0	365	34	170	111	0	315	43	231	140	0	414	137	156	40	0	333	1427
16:00	5	17	0	0	22	3	13	15	0	31	7	28	17	0	52	18	6	6	0	30	135
16:05	3	28	1	0	32	5	6	17	0	28	1	15	8	0	24	10	6	3	0	19	103
16:10	4	37	1	0	42	1	4	6	0	11	2	29	11	0	42	19	5	2	0	26	121
16:15	0	19	2	0	21	2	7	6	0	15	1	27	19	0	47	8	4	5	0	17	100
16:20	6	34	0	0	40	0	4	8	0	12	3	28	10	0	41	10	7	2	0	19	112
16:25	2	9	1	0	12	2	1	6	0	9	3	29	16	0	48	13	4	5	0	22	91
16:30	0	24	1	0	25	1	8	1	0	10	4	28	10	0	42	15	5	2	0	22	99
16:35	5	22	2	0	29	2	4	5	0	11	3	18	12	0	33	14	3	3	0	20	93
16:40	3	31	2	0	36	1	12	2	0	15	2	27	8	0	37	9	3	2	0	14	102
16:45	7	22	1	0	30	1	8	7	0	16	2	15	8	0	25	15	5	7	0	27	98
16:50	1	28	1	0	30	0	3	1	0	4	6	19	18	0	43	8	9	3	0	20	97
16:55	2	36	2	0	40	2	5	2	0	9	0	26	10	0	36	9	13	1	0	23	108
Total	38	307	14	0	359	20	75	76	0	171	34	289	147	0	470	148	70	41	0	259	1259
17:00	1	30	0	0	31	1	8	2	0	11	5	23	11	0	39	4	4	4	0	12	93
17:05	2	41	8	0	51	1	3	3	0	7	5	38	13	0	56	7	13	5	0	25	139
17:10	3	29	6	0	38	0	9	2	0	11	2	16	12	0	30	9	10	2	0	21	100
17:15	5	29	2	0	36	0	5	1	0	6	4	23	16	0	43	9	9	4	0	22	107
17:20	1	27	1	0	29	0	5	3	0	8	4	26	12	0	42	13	11	7	0	31	110
17:25	6	30	5	0	41	2	5	2	0	9	1	26	12	0	39	9	5	7	0	21	110
17:30	5	14	1	0	20	1	4	3	0	8	5	49	15	0	69	14	7	4	0	25	122
17:35	1	36	2	0	39	2	3	5	0	10	3	36	15	0	54	11	3	4	0	18	121
17:40	3	16	2	0	21	1	2	4	0	7	1	14	11	0	26	9	8	5	0	22	76
17:45	3	34	2	0	39	1	3	8	0	12	1	29	16	0	46	10	4	3	0	17	114
17:50	3	30	1	0	34	0	1	2	0	3	3	15	16	0	34	15	2	3	0	20	91
17:55	3	29	4	0	36	2	3	3	1	9	4	20	10	0	34	8	8	4	0	20	99
Total	36	345	34	0	415	11	51	38	1	101	38	315	159	0	512	118	84	52	0	254	1282
Grand Total	113	934	92	0	1139	65	296	225	1	587	115	835	446	0	1396	403	310	133	0	846	3968
Apprch %	9.9	82	8.1	0		11.1	50.4	38.3	0.2		8.2	59.8	31.9	0		47.6	36.6	15.7	0		
Total %	2.8	23.5	2.3	0	28.7	1.6	7.5	5.7	0	14.8	2.9	21	11.2	0	35.2	10.2	7.8	3.4	0	21.3	

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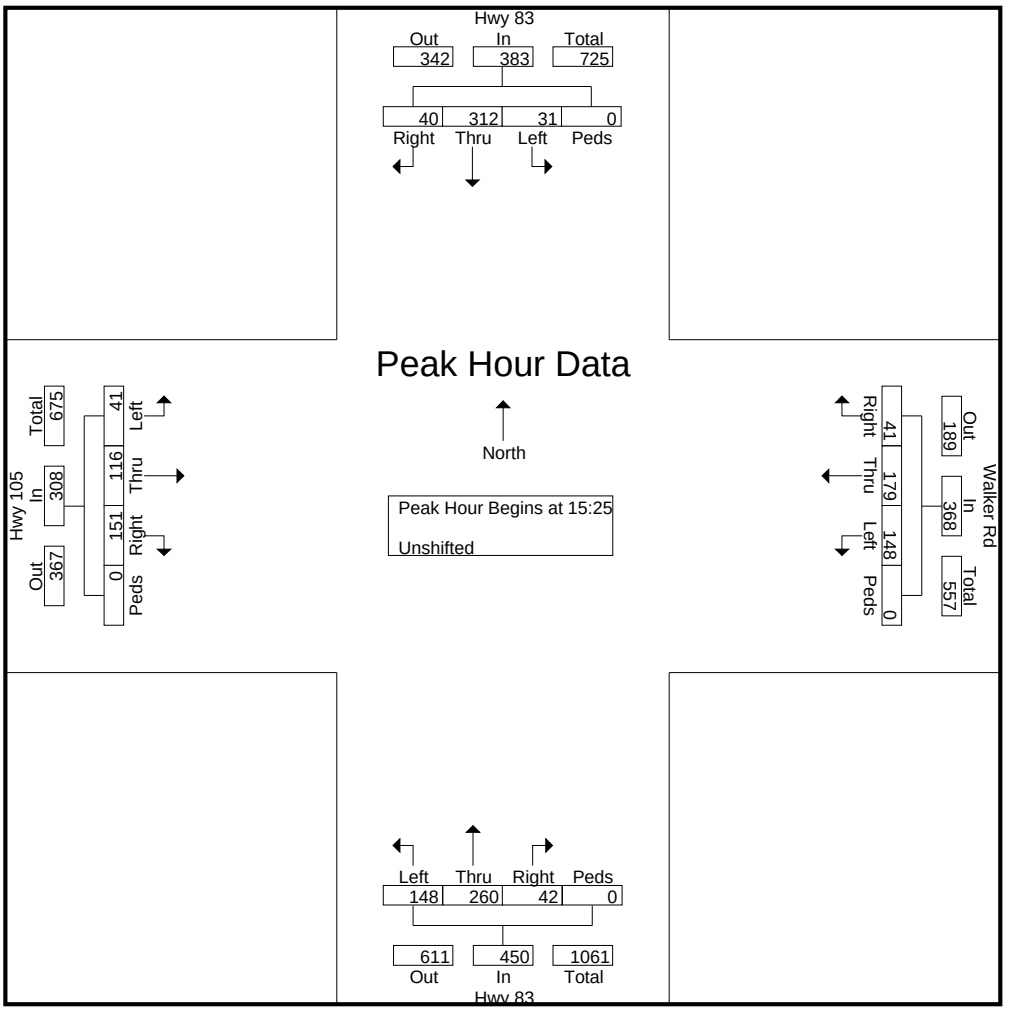
LSC Transportation Consultants, Inc.

2504 E. Pikes Peak Ave, Suite 304
Colorado Springs, CO 80909
719-633-2868

File Name : Hwy 83 - Walker Rd PM 5-13-25
Site Code : 00000000
Start Date : 5/13/2025
Page No : 2

	Hwy 83 Southbound					Walker Rd Westbound					Hwy 83 Northbound					Hwy 105 Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 15:00 to 17:55 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 15:25																					
15:25	2	19	1	0	22	1	5	2	0	8	2	21	14	0	37	10	15	**9**	0	34	101
15:30	1	24	4	0	29	1	6	6	0	13	5	14	17	0	36	13	15	1	0	29	107
15:35	5	27	5	0	37	7	21	18	0	46	**10**	23	6	0	39	13	**20**	3	0	**36**	158
15:40	2	26	**7**	0	35	0	**39**	13	0	52	5	26	11	0	42	12	7	1	0	20	149
15:45	4	20	3	0	27	6	29	**24**	0	**59**	3	17	7	0	27	12	8	6	0	26	139
15:50	3	**38**	4	0	**45**	**8**	27	24	0	59	3	22	16	0	41	13	17	2	0	32	**177**
15:55	5	23	3	0	31	7	18	9	0	34	0	10	12	0	22	13	6	1	0	20	107
16:00	5	17	0	0	22	3	13	15	0	31	7	28	17	0	**52**	18	6	6	0	30	135
16:05	3	28	1	0	32	5	6	17	0	28	1	15	8	0	24	10	6	3	0	19	103
16:10	4	37	1	0	42	1	4	6	0	11	2	**29**	11	0	42	**19**	5	2	0	26	121
16:15	0	19	2	0	21	2	7	6	0	15	1	27	**19**	0	47	8	4	5	0	17	100
16:20	**6**	34	0	0	40	0	4	8	0	12	3	28	10	0	41	10	7	2	0	19	112
Total Volume	40	312	31	0	383	41	179	148	0	368	42	260	148	0	450	151	116	41	0	308	1509
% App. Total	10.4	81.5	8.1	0		11.1	48.6	40.2	0		9.3	57.8	32.9	0		49	37.7	13.3	0		
PHF	.556	.684	.369	.000	.709	.427	.382	.514	.000	.520	.350	.747	.649	.000	.721	.662	.483	.380	.000	.713	.710



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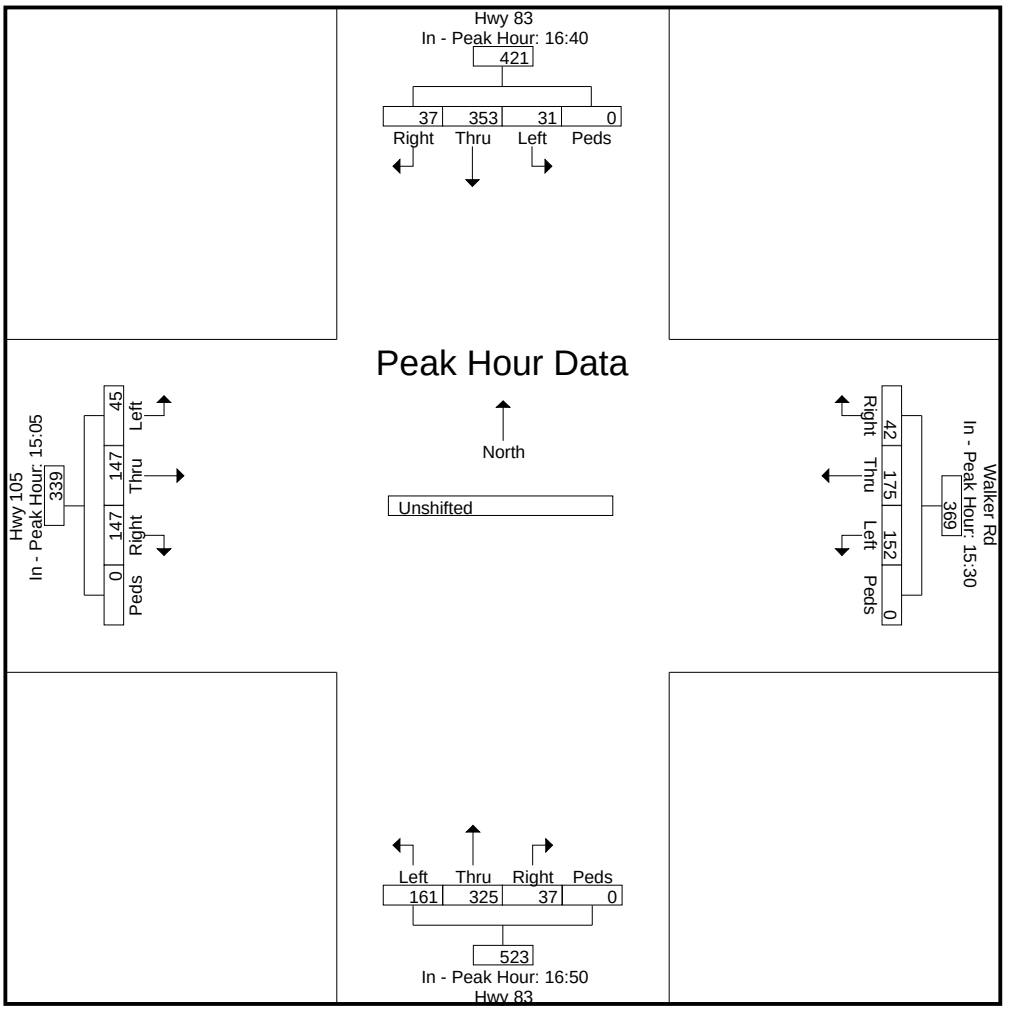
LSC Transportation Consultants, Inc.

2504 E. Pikes Peak Ave, Suite 304
Colorado Springs, CO 80909
719-633-2868

File Name : Hwy 83 - Walker Rd PM 5-13-25
Site Code : 00000000
Start Date : 5/13/2025
Page No : 3

	Hwy 83 Southbound					Walker Rd Westbound					Hwy 83 Northbound					Hwy 105 Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 15:00 to 17:55 - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	16:40					15:30					16:50					15:05					
+0 mins.	3	31	2	0	36	1	6	6	0	13	**6**	19	**18**	0	43	14	10	4	0	28	
+5 mins.	**7**	22	1	0	30	7	21	18	0	46	0	26	10	0	36	7	19	4	0	30	
+10 mins.	1	28	1	0	30	0	**39**	13	0	52	5	23	11	0	39	8	13	6	0	27	
+15 mins.	2	36	2	0	40	6	29	**24**	0	**59**	5	38	13	0	56	14	11	2	0	27	
+20 mins.	1	30	0	0	31	**8**	27	24	0	59	2	16	12	0	30	10	15	**9**	0	34	
+25 mins.	2	**41**	**8**	0	**51**	7	18	9	0	34	4	23	16	0	43	13	15	1	0	29	
+30 mins.	3	29	6	0	38	3	13	15	0	31	4	26	12	0	42	13	**20**	3	0	**36**	
+35 mins.	5	29	2	0	36	5	6	17	0	28	1	26	12	0	39	12	7	1	0	20	
+40 mins.	1	27	1	0	29	1	4	6	0	11	5	**49**	15	0	**69**	12	8	6	0	26	
+45 mins.	6	30	5	0	41	2	7	6	0	15	3	36	15	0	54	13	17	2	0	32	
+50 mins.	5	14	1	0	20	0	4	8	0	12	1	14	11	0	26	13	6	1	0	20	
+55 mins.	1	36	2	0	39	2	1	6	0	9	1	29	16	0	46	**18**	6	6	0	30	
Total Volume	37	353	31	0	421	42	175	152	0	369	37	325	161	0	523	147	147	45	0	339	
% App. Total	8.8	83.8	7.4	0		11.4	47.4	41.2	0		7.1	62.1	30.8	0		43.4	43.4	13.3	0		
PHF	.440	.717	.323	.000	.688	.438	.374	.528	.000	.521	.514	.553	.745	.000	.632	.681	.613	.417	.000	.785	



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LSC Transportation Consultants, Inc.

2504 E. Pikes Peak Ave, Suite 304
Colorado Springs, CO 80909
719-633-2868

File Name : Jane Lundeen Dr - Pinehurst Cir AM 10-15-25 Site Code : S214070
Start Date : 10/15/2025
Page No : 1

Groups Printed- Unshifted

	Jane Lundeen Dr Southbound					Pinehurst Cir Westbound					Northbound					Pinehurst Cir Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
06:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
06:35	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	3	0	0	3	4
*** BREAK ***																					
06:45	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	3
06:50	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
06:55	0	0	3	0	3	1	0	0	0	1	0	0	0	0	0	0	2	0	0	2	6
Total	0	0	7	0	7	2	0	0	0	2	0	0	0	0	0	0	8	0	0	8	17
07:00	0	0	2	0	2	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	4
07:05	0	0	1	0	1	2	0	0	0	2	0	0	0	0	0	0	5	0	0	5	8
07:10	0	0	10	0	10	5	0	0	0	5	0	0	0	0	0	0	4	0	0	4	19
07:15	0	0	11	0	11	5	0	0	0	5	0	0	0	0	0	0	4	0	0	4	20
07:20	0	0	14	0	14	14	0	0	0	14	0	0	0	0	0	0	14	0	0	14	42
07:25	0	0	27	0	27	27	0	0	0	27	0	0	0	0	0	0	11	0	0	11	65
07:30	0	0	38	1	39	43	0	0	0	43	0	0	0	0	0	0	30	0	0	30	112
07:35	0	0	34	0	34	52	0	0	0	52	0	0	0	0	0	0	24	0	0	24	110
07:40	0	0	23	0	23	53	0	0	0	53	0	0	0	0	0	0	20	0	0	20	96
07:45	0	0	12	0	12	49	0	0	0	49	0	0	0	0	0	0	7	0	0	7	68
07:50	0	0	5	0	5	14	0	0	0	14	0	0	0	0	0	0	1	0	0	1	20
07:55	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	1	0	0	1	3
Total	0	0	177	1	178	267	0	0	0	267	0	0	0	0	0	0	122	0	0	122	567
08:00	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	1	0	0	1	3
08:05	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
08:10	0	0	2	0	2	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3
08:15	0	0	1	0	1	2	0	0	0	2	0	0	0	0	0	0	1	0	0	1	4
08:20	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	2
08:25	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	3
Grand Total	0	0	190	1	191	276	0	0	0	276	0	0	0	0	0	0	134	0	0	134	601
Apprch %	0	0	99.5	0.5		100	0	0	0		0	0	0	0		0	100	0	0		
Total %	0	0	31.6	0.2	31.8	45.9	0	0	0	45.9	0	0	0	0	0	0	22.3	0	0	22.3	

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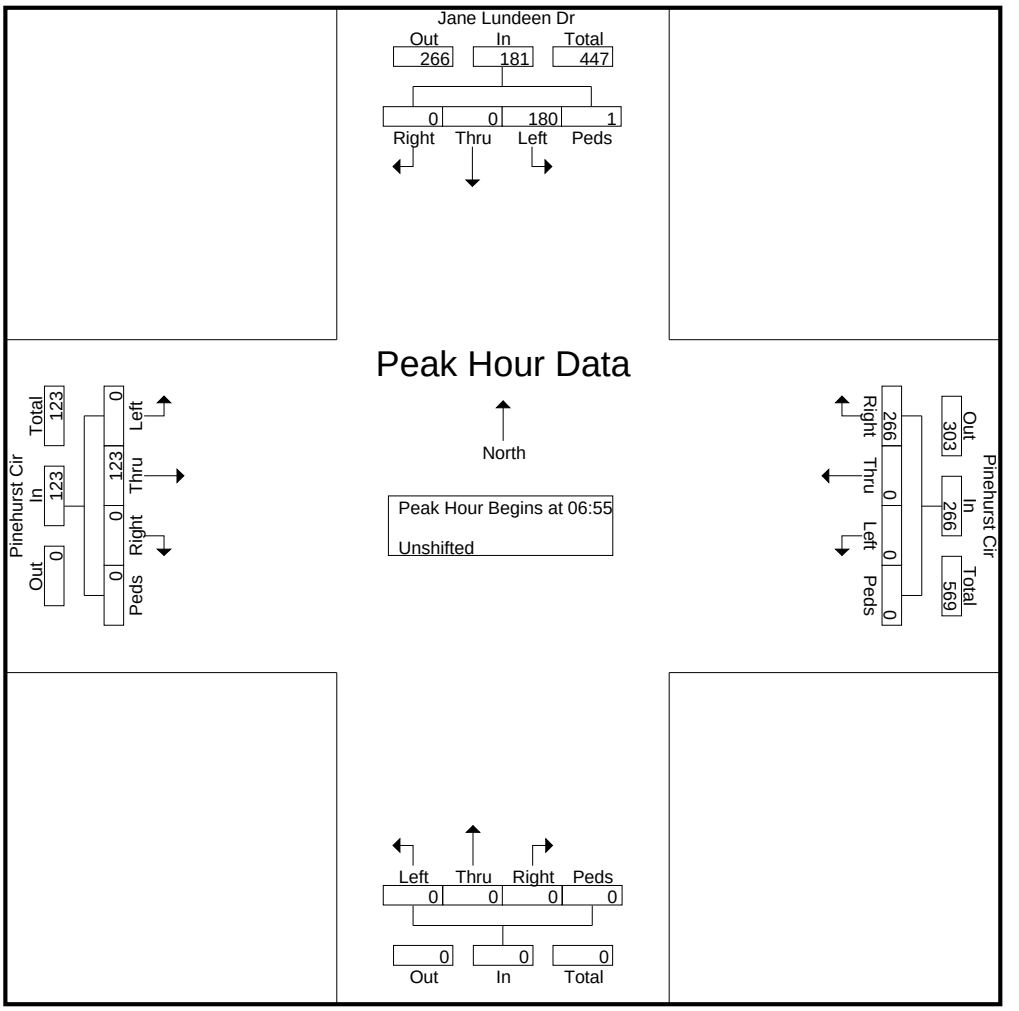
LSC Transportation Consultants, Inc.

2504 E. Pikes Peak Ave, Suite 304
Colorado Springs, CO 80909
719-633-2868

File Name : Jane Lundeen Dr - Pinehurst Cir AM 10-15-25 Site Code : S214070
Start Date : 10/15/2025

	Jane Lundeen Dr Southbound					Pinehurst Cir Westbound					Northbound					Pinehurst Cir Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 06:30 to 08:25 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 06:55																					
06:55	0	0	3	0	3	1	0	0	0	1	0	0	0	0	0	0	2	0	0	2	6
07:00	0	0	2	0	2	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	4
07:05	0	0	1	0	1	2	0	0	0	2	0	0	0	0	0	0	5	0	0	5	8
07:10	0	0	10	0	10	5	0	0	0	5	0	0	0	0	0	0	4	0	0	4	19
07:15	0	0	11	0	11	5	0	0	0	5	0	0	0	0	0	0	4	0	0	4	20
07:20	0	0	14	0	14	14	0	0	0	14	0	0	0	0	0	0	14	0	0	14	42
07:25	0	0	27	0	27	27	0	0	0	27	0	0	0	0	0	0	11	0	0	11	65
07:30	0	0	**38**	**1**	**39**	43	0	0	0	43	0	0	0	0	0	0	**30**	0	0	**30**	**112**
07:35	0	0	34	0	34	52	0	0	0	52	0	0	0	0	0	0	24	0	0	24	110
07:40	0	0	23	0	23	**53**	0	0	0	**53**	0	0	0	0	0	0	20	0	0	20	96
07:45	0	0	12	0	12	49	0	0	0	49	0	0	0	0	0	0	7	0	0	7	68
07:50	0	0	5	0	5	14	0	0	0	14	0	0	0	0	0	0	1	0	0	1	20
Total Volume	0	0	180	1	181	266	0	0	0	266	0	0	0	0	0	0	123	0	0	123	570
% App. Total	0	0	99.4	0.6		100	0	0	0		0	0	0	0		0	100	0	0		
PHF	.000	.000	.395	.083	.387	.418	.000	.000	.000	.418	.000	.000	.000	.000	.000	.000	.342	.000	.000	.342	.424



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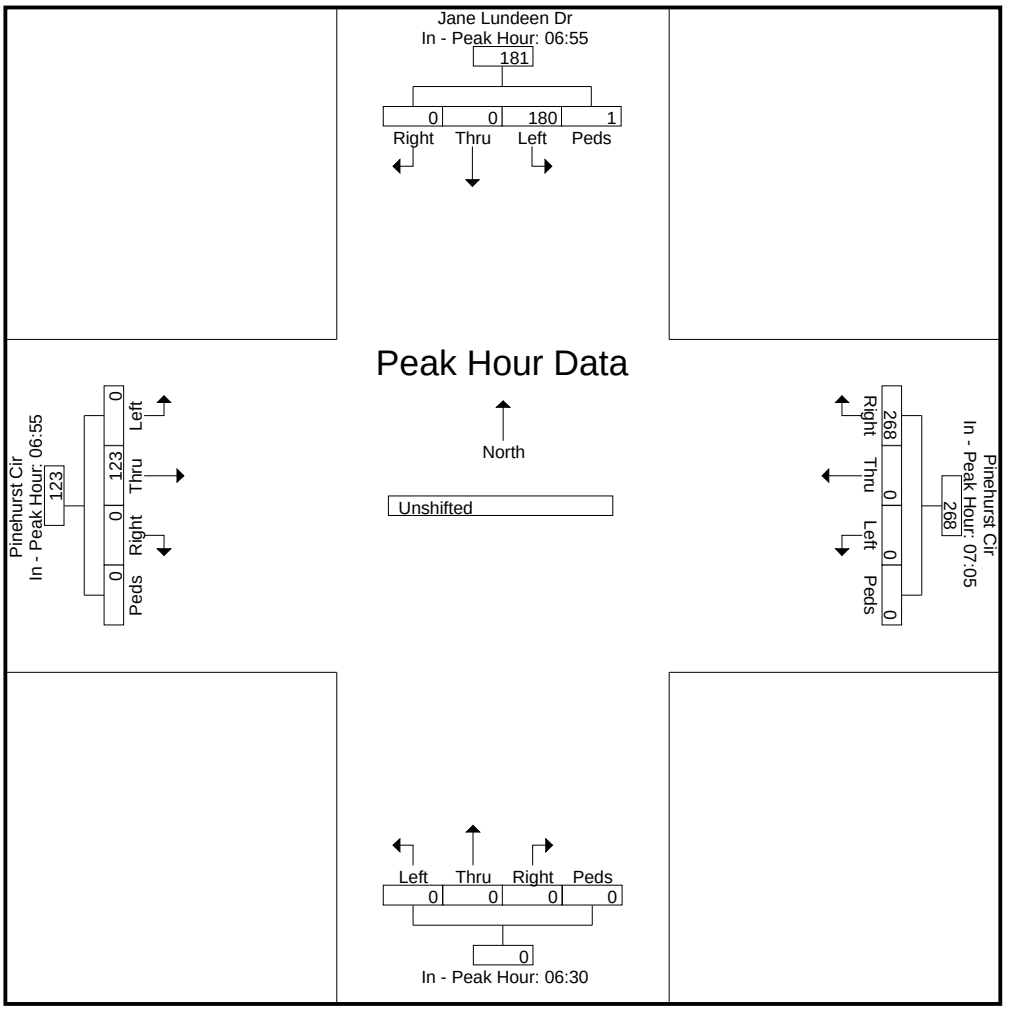
LSC Transportation Consultants, Inc.

2504 E. Pikes Peak Ave, Suite 304
Colorado Springs, CO 80909
719-633-2868

File Name : Jane Lundeen Dr - Pinehurst Cir AM 10-15-25 Site Code : S214070
Start Date : 10/15/2025

	Jane Lundeen Dr Southbound					Pinehurst Cir Westbound					Northbound					Pinehurst Cir Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 06:30 to 08:25 - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	06:55					07:05					06:30					06:55					
+0 mins.	0	0	3	0	3	2	0	0	0	2	0	0	0	0	0	0	2	0	0	2	
+5 mins.	0	0	2	0	2	5	0	0	0	5	0	0	0	0	0	0	1	0	0	1	
+10 mins.	0	0	1	0	1	5	0	0	0	5	0	0	0	0	0	0	5	0	0	5	
+15 mins.	0	0	10	0	10	14	0	0	0	14	0	0	0	0	0	0	4	0	0	4	
+20 mins.	0	0	11	0	11	27	0	0	0	27	0	0	0	0	0	0	4	0	0	4	
+25 mins.	0	0	14	0	14	43	0	0	0	43	0	0	0	0	0	0	14	0	0	14	
+30 mins.	0	0	27	0	27	52	0	0	0	52	0	0	0	0	0	0	11	0	0	11	
+35 mins.	0	0	**38**	**1**	**39**	**53**	0	0	0	**53**	0	0	0	0	0	0	**30**	0	0	**30**	
+40 mins.	0	0	34	0	34	49	0	0	0	49	0	0	0	0	0	0	24	0	0	24	
+45 mins.	0	0	23	0	23	14	0	0	0	14	0	0	0	0	0	0	20	0	0	20	
+50 mins.	0	0	12	0	12	2	0	0	0	2	0	0	0	0	0	0	7	0	0	7	
+55 mins.	0	0	5	0	5	2	0	0	0	2	0	0	0	0	0	0	1	0	0	1	
Total Volume	0	0	180	1	181	268	0	0	0	268	0	0	0	0	0	0	123	0	0	123	
% App. Total	0	0	99.4	0.6		100	0	0	0		0	0	0	0		0	100	0	0		
PHF	.000	.000	.395	.083	.387	.421	.000	.000	.000	.421	.000	.000	.000	.000	.000	.000	.342	.000	.000	.342	



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LSC Transportation Consultants, Inc.

2504 E. Pikes Peak Ave, Suite 304
Colorado Springs, CO 80909
719-633-2868

File Name : Jane Lundeen Dr - Pinehurst Cir PM 10-15-25 Site Code : S214070
Start Date : 10/14/2025

Groups Printed- Unshifted

	Jane Lundeen Dr Southbound					Pinehurst Cir Westbound					Northbound					Pinehurst Cir Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
15:00	0	0	5	0	5	1	0	0	0	1	0	0	0	0	0	0	2	0	0	2	8
15:05	0	0	7	0	7	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5	12
15:10	0	0	18	0	18	0	0	0	0	0	0	0	0	0	0	0	8	0	0	8	26
15:15	0	0	11	0	11	3	0	0	0	3	0	0	0	0	0	0	10	0	0	10	24
15:20	0	0	12	0	12	2	0	0	0	2	0	0	0	0	0	0	8	0	0	8	22
15:25	0	0	24	0	24	2	0	0	0	2	0	0	0	0	0	0	5	0	0	5	31
15:30	0	0	10	0	10	31	0	0	0	31	0	0	0	0	0	0	5	0	0	5	46
15:35	0	0	18	0	18	54	0	0	0	54	0	0	0	0	0	0	1	0	0	1	73
15:40	0	0	16	0	16	70	0	0	0	70	0	0	0	0	0	0	5	0	0	5	91
15:45	0	0	16	0	16	42	0	0	0	42	0	0	0	0	0	0	4	0	0	4	62
15:50	0	0	6	0	6	30	0	0	0	30	0	0	0	0	0	0	1	0	0	1	37
15:55	0	0	5	0	5	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	9
Total	0	0	148	0	148	239	0	0	0	239	0	0	0	0	0	0	54	0	0	54	441
16:00	0	0	2	0	2	8	0	0	0	8	0	0	0	0	0	0	0	0	0	0	10
16:05	0	0	4	0	4	6	0	0	0	6	0	0	0	0	0	0	4	0	0	4	14
16:10	0	0	2	0	2	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	7
16:15	0	0	1	0	1	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	4
16:20	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	1	0	0	1	4
16:25	0	0	1	0	1	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	3
16:30	0	0	1	0	1	2	0	0	0	2	0	0	0	0	0	0	1	0	0	1	4
16:35	0	0	2	0	2	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	6
16:40	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	3
*** BREAK ***																					
16:50	0	0	1	0	1	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	3
16:55	0	0	2	0	2	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	4
Total	0	0	17	0	17	38	0	0	0	38	0	0	0	0	0	0	7	0	0	7	62
17:00	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
17:05	0	0	3	0	3	4	0	0	0	4	0	0	0	0	0	0	3	0	0	3	10
17:10	0	0	8	0	8	5	0	0	0	5	0	0	0	0	0	0	2	0	0	2	15
17:15	0	0	7	0	7	15	0	0	0	15	0	0	0	0	0	0	3	0	0	3	25
17:20	0	0	4	0	4	9	0	0	0	9	0	0	0	0	0	0	3	0	0	3	16
17:25	0	0	8	0	8	2	0	0	0	2	0	0	0	0	0	0	2	0	0	2	12
17:30	0	0	4	0	4	3	0	0	0	3	0	0	0	0	0	0	1	0	0	1	8
17:35	0	0	2	0	2	13	0	0	0	13	0	0	0	0	0	0	1	0	0	1	16
17:40	0	0	0	0	0	14	0	0	0	14	0	0	0	0	0	0	0	0	0	0	14
17:45	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
*** BREAK ***																					
Total	0	0	36	0	36	68	0	0	0	68	0	0	0	0	0	0	15	0	0	15	119
Grand Total	0	0	201	0	201	345	0	0	0	345	0	0	0	0	0	0	76	0	0	76	622
Apprch %	0	0	100	0		100	0	0	0		0	0	0	0		0	100	0	0		
Total %	0	0	32.3	0	32.3	55.5	0	0	0	55.5	0	0	0	0	0	0	12.2	0	0	12.2	

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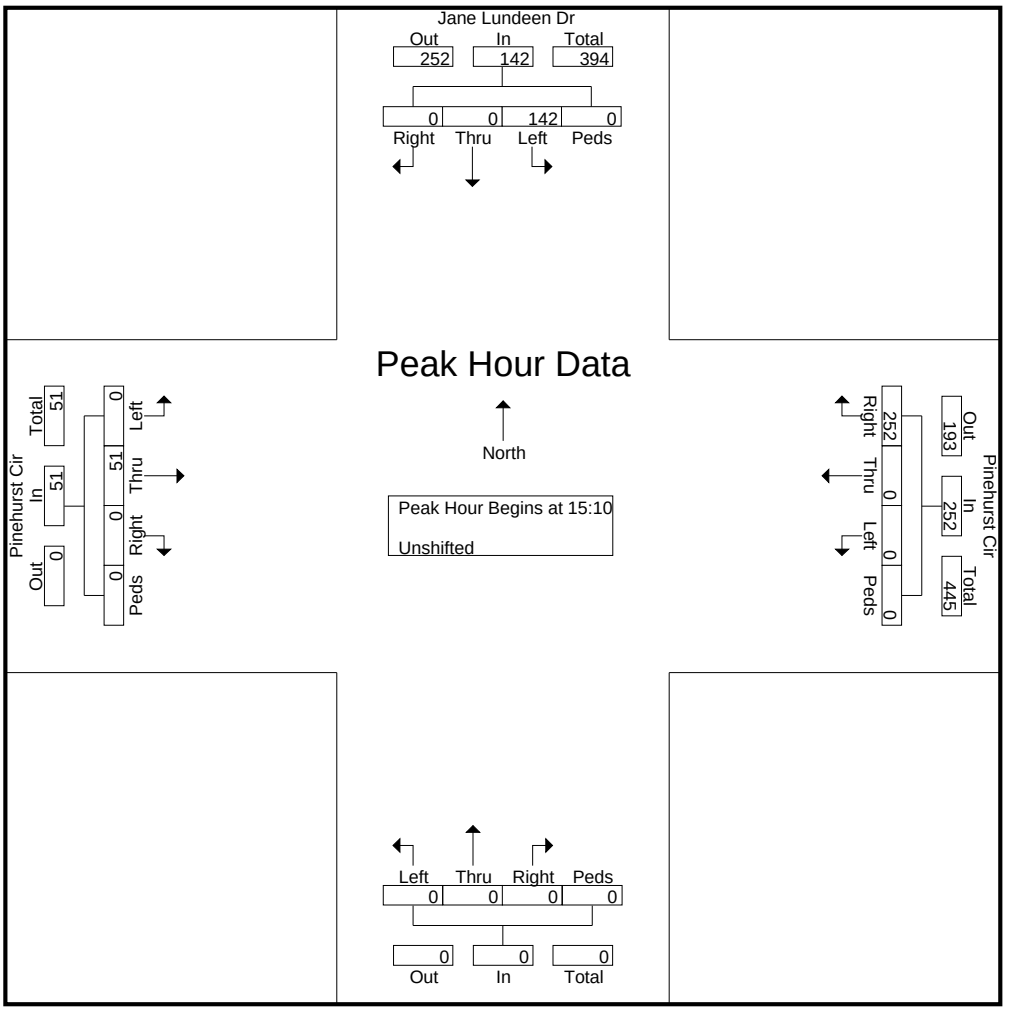
LSC Transportation Consultants, Inc.

2504 E. Pikes Peak Ave, Suite 304
Colorado Springs, CO 80909
719-633-2868

File Name : Jane Lundeen Dr - Pinehurst Cir PM 10-15-25 Site Code : S214070
Start Date : 10/14/2025

	Jane Lundeen Dr Southbound					Pinehurst Cir Westbound					Northbound					Pinehurst Cir Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 15:00 to 17:55 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 15:10																					
15:10	0	0	18	0	18	0	0	0	0	0	0	0	0	0	0	0	8	0	0	8	26
15:15	0	0	11	0	11	3	0	0	0	3	0	0	0	0	0	0	**10**	0	0	**10**	24
15:20	0	0	12	0	12	2	0	0	0	2	0	0	0	0	0	0	8	0	0	8	22
15:25	0	0	**24**	0	**24**	2	0	0	0	2	0	0	0	0	0	0	5	0	0	5	31
15:30	0	0	10	0	10	31	0	0	0	31	0	0	0	0	0	0	5	0	0	5	46
15:35	0	0	18	0	18	54	0	0	0	54	0	0	0	0	0	0	1	0	0	1	73
15:40	0	0	16	0	16	**70**	0	0	0	**70**	0	0	0	0	0	0	5	0	0	5	**91**
15:45	0	0	16	0	16	42	0	0	0	42	0	0	0	0	0	0	4	0	0	4	62
15:50	0	0	6	0	6	30	0	0	0	30	0	0	0	0	0	0	1	0	0	1	37
15:55	0	0	5	0	5	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	9
16:00	0	0	2	0	2	8	0	0	0	8	0	0	0	0	0	0	0	0	0	0	10
16:05	0	0	4	0	4	6	0	0	0	6	0	0	0	0	0	0	4	0	0	4	14
Total Volume	0	0	142	0	142	252	0	0	0	252	0	0	0	0	0	0	51	0	0	51	445
% App. Total	0	0	100	0		100	0	0	0		0	0	0	0		0	100	0	0		
PHF	.000	.000	.493	.000	.493	.300	.000	.000	.000	.300	.000	.000	.000	.000	.000	.000	.425	.000	.000	.425	.408



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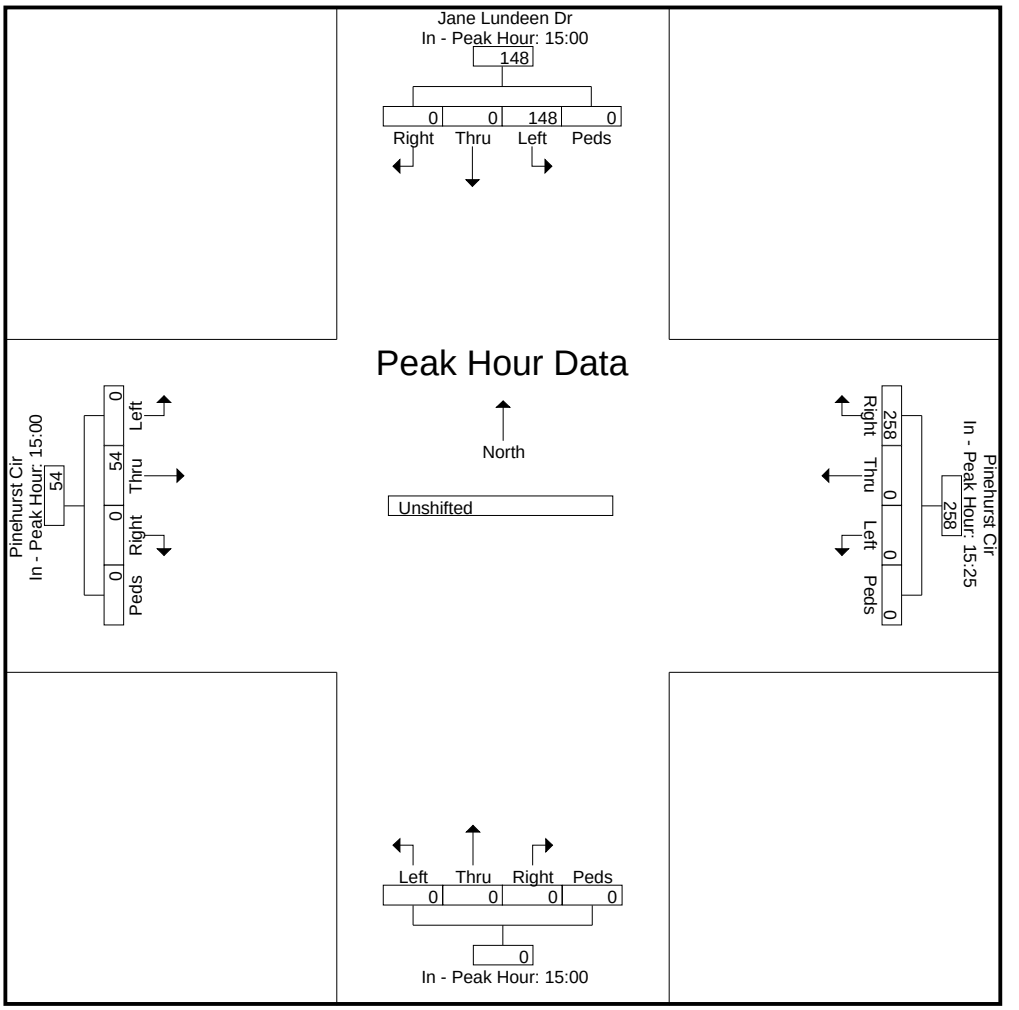
LSC Transportation Consultants, Inc.

2504 E. Pikes Peak Ave, Suite 304
Colorado Springs, CO 80909
719-633-2868

File Name : Jane Lundeen Dr - Pinehurst Cir PM 10-15-25 Site Code : S214070
Start Date : 10/14/2025

	Jane Lundeen Dr Southbound					Pinehurst Cir Westbound					Northbound					Pinehurst Cir Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 15:00 to 17:55 - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	15:00					15:25					15:00					15:00					
+0 mins.	0	0	5	0	5	2	0	0	0	2	0	0	0	0	0	0	2	0	0	2	
+5 mins.	0	0	7	0	7	31	0	0	0	31	0	0	0	0	0	0	5	0	0	5	
+10 mins.	0	0	18	0	18	54	0	0	0	54	0	0	0	0	0	0	8	0	0	8	
+15 mins.	0	0	11	0	11	**70**	0	0	0	**70**	0	0	0	0	0	0	**10**	0	0	**10**	
+20 mins.	0	0	12	0	12	42	0	0	0	42	0	0	0	0	0	0	8	0	0	8	
+25 mins.	0	0	**24**	0	**24**	30	0	0	0	30	0	0	0	0	0	0	5	0	0	5	
+30 mins.	0	0	10	0	10	4	0	0	0	4	0	0	0	0	0	0	5	0	0	5	
+35 mins.	0	0	18	0	18	8	0	0	0	8	0	0	0	0	0	0	1	0	0	1	
+40 mins.	0	0	16	0	16	6	0	0	0	6	0	0	0	0	0	0	5	0	0	5	
+45 mins.	0	0	16	0	16	5	0	0	0	5	0	0	0	0	0	0	4	0	0	4	
+50 mins.	0	0	6	0	6	3	0	0	0	3	0	0	0	0	0	0	1	0	0	1	
+55 mins.	0	0	5	0	5	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	
Total Volume	0	0	148	0	148	258	0	0	0	258	0	0	0	0	0	0	54	0	0	54	
% App. Total	0	0	100	0		100	0	0	0		0	0	0	0		0	100	0	0		
PHF	.000	.000	.514	.000	.514	.307	.000	.000	.000	.307	.000	.000	.000	.000	.000	.000	.450	.000	.000	.450	



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LSC Transportation Consultants, Inc.

2504 E. Pikes Peak Ave, Suite 304
Colorado Springs, CO 80909
719-633-2868

File Name : Jane Lundeen Dr - Walker Rd AM 10-15-25 Site Code : S214070
Start Date : 10/15/2025

Groups Printed- Unshifted

	Southbound					Walker Rd Westbound					Jane Lundeen Dr Northbound					Walker Rd Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
06:30	0	0	0	0	0	0	14	0	0	14	0	0	1	0	1	0	2	0	0	2	17
06:45	0	0	0	0	0	0	28	2	0	30	0	0	0	0	0	5	7	0	0	12	42
Total	0	0	0	0	0	0	42	2	0	44	0	0	1	0	1	5	9	0	0	14	59
07:00	0	0	0	0	0	0	31	0	0	31	0	0	6	0	6	9	6	0	0	15	52
07:15	0	0	0	0	0	5	34	1	0	40	1	0	38	0	39	53	11	0	0	64	143
07:30	0	0	0	0	0	0	14	4	0	18	3	0	149	0	152	99	17	0	5	121	291
07:45	0	0	0	0	0	0	27	1	0	28	1	0	78	0	79	14	26	0	0	40	147
Total	0	0	0	0	0	5	106	6	0	117	5	0	271	0	276	175	60	0	5	240	633
08:00	0	0	0	0	0	0	27	1	0	28	0	0	3	0	3	3	17	0	0	20	51
08:15	0	0	0	0	0	0	16	0	0	16	1	0	4	0	5	2	16	0	0	18	39
Grand Total	0	0	0	0	0	5	191	9	0	205	6	0	279	0	285	185	102	0	5	292	782
Apprch %	0	0	0	0		2.4	93.2	4.4	0		2.1	0	97.9	0		63.4	34.9	0	1.7		
Total %	0	0	0	0	0	0.6	24.4	1.2	0	26.2	0.8	0	35.7	0	36.4	23.7	13	0	0.6	37.3	

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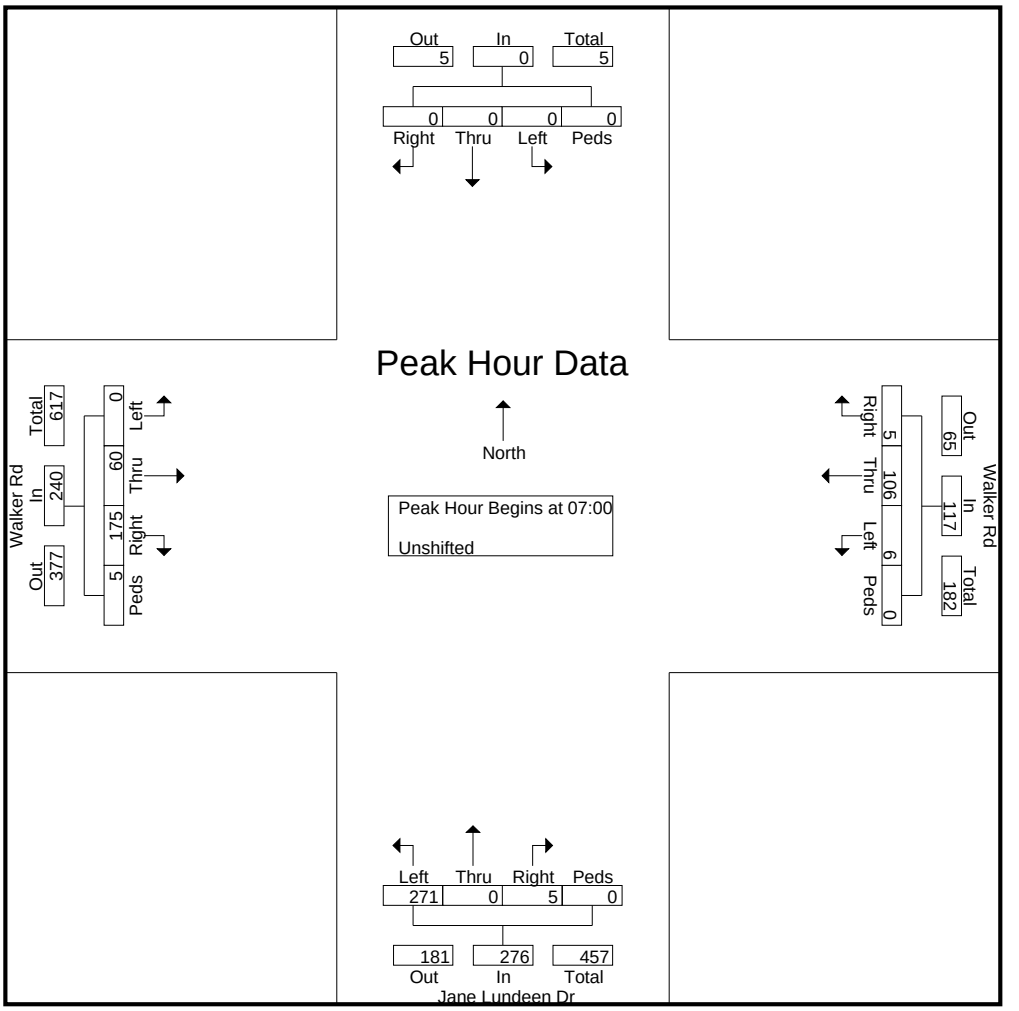
LSC Transportation Consultants, Inc.

2504 E. Pikes Peak Ave, Suite 304
Colorado Springs, CO 80909
719-633-2868

File Name : Jane Lundeen Dr - Walker Rd AM 10-15-25 Site Code : S214070
Start Date : 10/15/2025

	Southbound					Walker Rd Westbound					Jane Lundeen Dr Northbound					Walker Rd Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 06:30 to 08:15 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00																					
07:00	0	0	0	0	0	0	31	0	0	31	0	0	6	0	6	9	6	0	0	15	52
07:15	0	0	0	0	0	**5**	**34**	1	0	**40**	1	0	38	0	39	53	11	0	0	64	143
07:30	0	0	0	0	0	0	14	**4**	0	18	**3**	0	**149**	0	**152**	**99**	17	0	**5**	**121**	**291**
07:45	0	0	0	0	0	0	27	1	0	28	1	0	78	0	79	14	**26**	0	0	40	147
Total Volume	0	0	0	0	0	5	106	6	0	117	5	0	271	0	276	175	60	0	5	240	633
% App. Total	0	0	0	0		4.3	90.6	5.1	0		1.8	0	98.2	0		72.9	25	0	2.1		
PHF	.000	.000	.000	.000	.000	.250	.779	.375	.000	.731	.417	.000	.455	.000	.454	.442	.577	.000	.250	.496	.544



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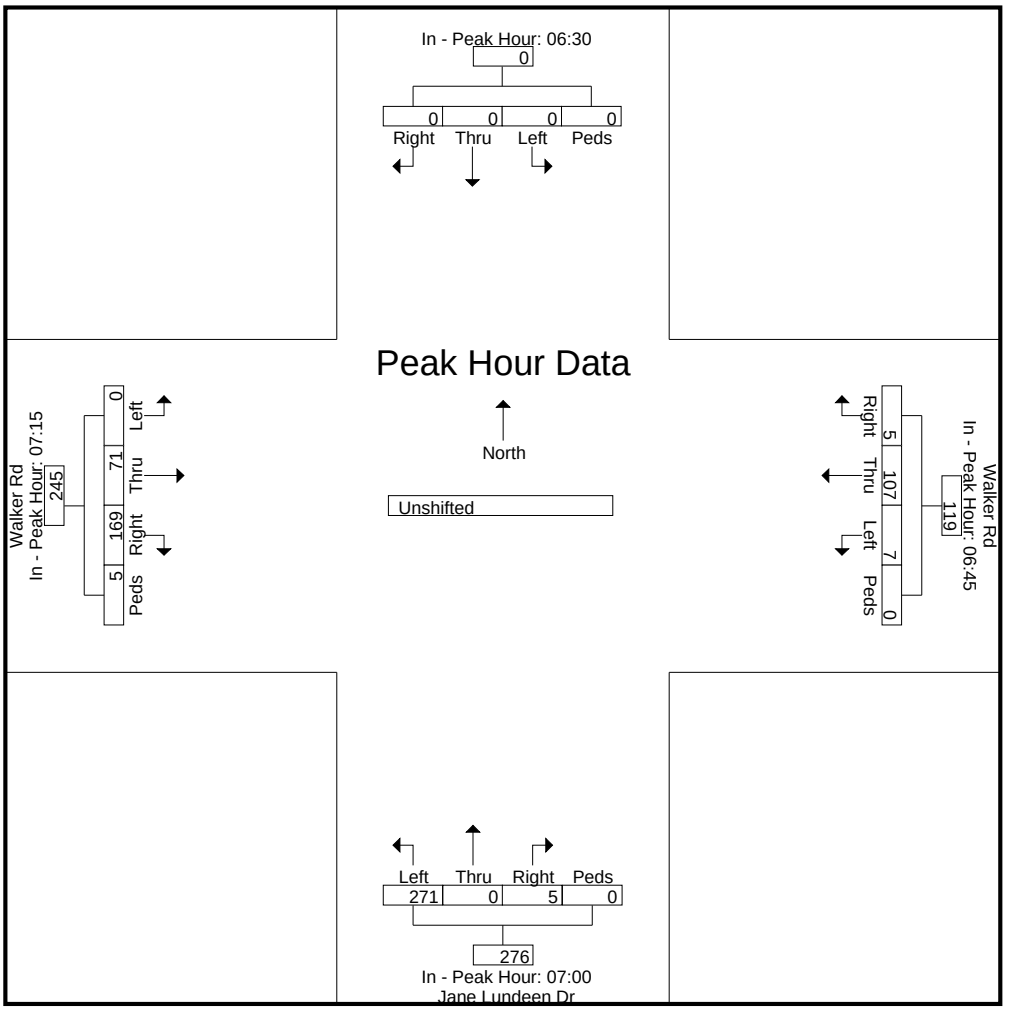
LSC Transportation Consultants, Inc.

2504 E. Pikes Peak Ave, Suite 304
Colorado Springs, CO 80909
719-633-2868

File Name : Jane Lundeen Dr - Walker Rd AM 10-15-25 Site Code : S214070
Start Date : 10/15/2025

	Southbound					Walker Rd Westbound					Jane Lundeen Dr Northbound					Walker Rd Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 06:30 to 08:15 - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	06:30					06:45					07:00					07:15					
+0 mins.	0	0	0	0	0	0	28	2	0	30	0	0	6	0	6	53	11	0	0	64	
+15 mins.	0	0	0	0	0	0	31	0	0	31	1	0	38	0	39	**99**	17	0	**5**	**121**	
+30 mins.	0	0	0	0	0	**5**	**34**	1	0	**40**	**3**	0	**149**	0	**152**	14	**26**	0	0	40	
+45 mins.	0	0	0	0	0	0	14	**4**	0	18	1	0	78	0	79	3	17	0	0	20	
Total Volume	0	0	0	0	0	5	107	7	0	119	5	0	271	0	276	169	71	0	5	245	
% App. Total	0	0	0	0		4.2	89.9	5.9	0		1.8	0	98.2	0		69	29	0	2		
PHF	.000	.000	.000	.000	.000	.250	.787	.438	.000	.744	.417	.000	.455	.000	.454	.427	.683	.000	.250	.506	



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LSC Transportation Consultants, Inc.

2504 E. Pikes Peak Ave, Suite 304
Colorado Springs, CO 80909
719-633-2868

File Name : Jane Lundeen Dr - Walker Rd PM 10-15-25 Site Code : S214070
Start Date : 10/15/2025

Groups Printed- Unshifted

	Southbound					Walker Rd Westbound					Jane Lundeen Dr Northbound					Walker Rd Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
15:00	0	0	0	0	0	0	17	2	0	19	0	0	1	0	1	22	17	0	0	39	59
15:15	0	0	0	0	0	0	22	3	0	25	1	0	5	0	6	41	38	0	0	79	110
15:30	0	0	0	0	0	0	18	0	0	18	7	0	128	0	135	58	34	0	5	97	250
15:45	0	0	0	0	0	0	18	0	0	18	2	0	90	0	92	26	50	0	0	76	186
Total	0	0	0	0	0	0	75	5	0	80	10	0	224	0	234	147	139	0	5	291	605
16:00	0	0	0	0	0	0	48	1	0	49	1	0	18	0	19	11	38	0	0	49	117
16:15	0	0	0	0	0	0	29	0	0	29	1	0	7	0	8	2	27	0	1	30	67
16:30	0	0	0	0	0	0	26	1	1	28	0	0	8	0	8	2	22	0	0	24	60
16:45	0	0	0	0	0	0	13	0	0	13	0	0	5	0	5	2	31	0	0	33	51
Total	0	0	0	0	0	0	116	2	1	119	2	0	38	0	40	17	118	0	1	136	295
17:00	0	0	0	0	0	0	29	0	0	29	1	0	6	0	7	10	20	0	0	30	66
17:15	0	0	0	0	0	0	23	0	0	23	0	0	29	0	29	19	24	0	0	43	95
17:30	0	0	0	0	0	0	15	0	0	15	0	0	30	0	30	5	13	0	0	18	63
17:45	0	0	0	0	0	0	16	0	0	16	0	0	3	0	3	0	27	0	0	27	46
Total	0	0	0	0	0	0	83	0	0	83	1	0	68	0	69	34	84	0	0	118	270
Grand Total	0	0	0	0	0	0	274	7	1	282	13	0	330	0	343	198	341	0	6	545	1170
Apprch %	0	0	0	0		0	97.2	2.5	0.4		3.8	0	96.2	0		36.3	62.6	0	1.1		
Total %	0	0	0	0	0	0	23.4	0.6	0.1	24.1	1.1	0	28.2	0	29.3	16.9	29.1	0	0.5	46.6	

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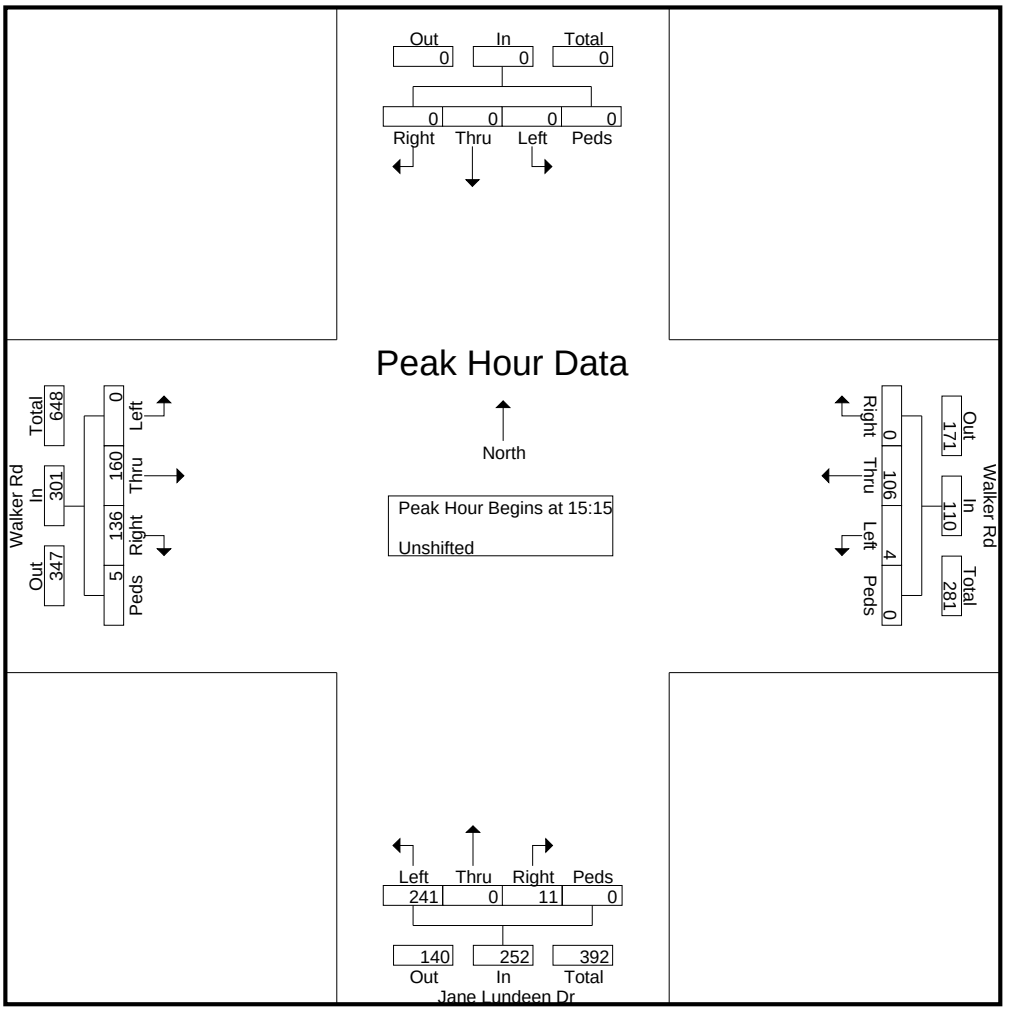
LSC Transportation Consultants, Inc.

2504 E. Pikes Peak Ave, Suite 304
Colorado Springs, CO 80909
719-633-2868

File Name : Jane Lundeen Dr - Walker Rd PM 10-15-25 Site Code : S214070
Start Date : 10/15/2025
Page No : 2

	Southbound					Walker Rd Westbound					Jane Lundeen Dr Northbound					Walker Rd Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 15:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 15:15																					
15:15	0	0	0	0	0	0	22	**3**	0	25	1	0	5	0	6	41	38	0	0	79	110
15:30	0	0	0	0	0	0	18	0	0	18	**7**	0	**128**	0	**135**	**58**	34	0	**5**	**97**	**250**
15:45	0	0	0	0	0	0	18	0	0	18	2	0	90	0	92	26	**50**	0	0	76	186
16:00	0	0	0	0	0	0	**48**	1	0	**49**	1	0	18	0	19	11	38	0	0	49	117
Total Volume	0	0	0	0	0	0	106	4	0	110	11	0	241	0	252	136	160	0	5	301	663
% App. Total	0	0	0	0		0	96.4	3.6	0		4.4	0	95.6	0		45.2	53.2	0	1.7		
PHF	.000	.000	.000	.000	.000	.000	.552	.333	.000	.561	.393	.000	.471	.000	.467	.586	.800	.000	.250	.776	.663



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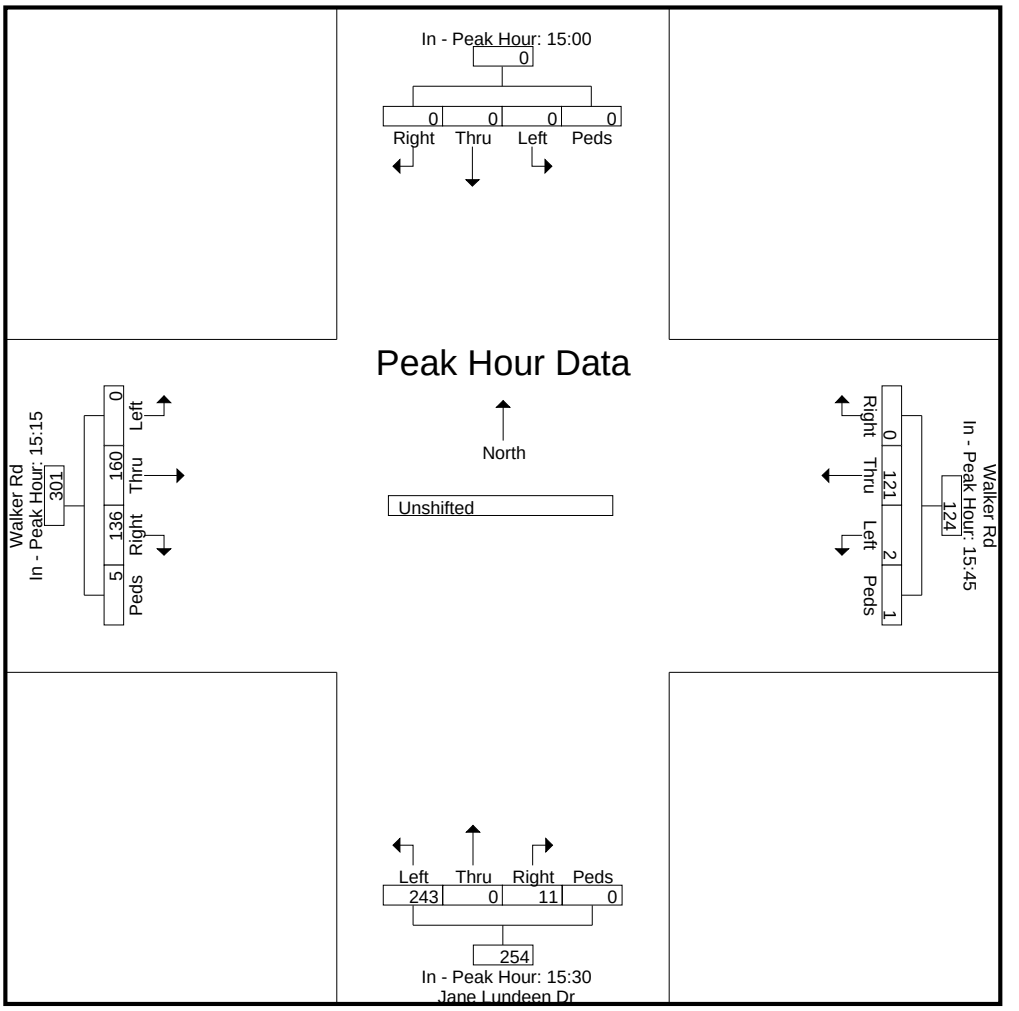
LSC Transportation Consultants, Inc.

2504 E. Pikes Peak Ave, Suite 304
Colorado Springs, CO 80909
719-633-2868

File Name : Jane Lundeen Dr - Walker Rd PM 10-15-25 Site Code : S214070
Start Date : 10/15/2025

	Southbound					Walker Rd Westbound					Jane Lundeen Dr Northbound					Walker Rd Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 15:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	15:00					15:45					15:30					15:15					
+0 mins.	0	0	0	0	0	0	18	0	0	18	**7**	0	**128**	0	**135**	41	38	0	0	79	
+15 mins.	0	0	0	0	0	0	**48**	**1**	0	**49**	2	0	90	0	92	**58**	34	0	**5**	**97**	
+30 mins.	0	0	0	0	0	0	29	0	0	29	1	0	18	0	19	26	**50**	0	0	76	
+45 mins.	0	0	0	0	0	0	26	1	**1**	28	1	0	7	0	8	11	38	0	0	49	
Total Volume	0	0	0	0	0	0	121	2	1	124	11	0	243	0	254	136	160	0	5	301	
% App. Total	0	0	0	0		0	97.6	1.6	0.8		4.3	0	95.7	0		45.2	53.2	0	1.7		
PHF	.000	.000	.000	.000	.000	.000	.630	.500	.250	.633	.393	.000	.475	.000	.470	.586	.800	.000	.250	.776	



Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Level of Service Reports - Original

TRANSPORTATION
CONSULTANTS, INC.

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Synchro Level of Service Reports

Intersection
SH 83 + Walker Road/Highway 105

Scenario(s)
2025 Existing
Short-Term Baseline
Short-Term Baseline + Site
2045 Background
2045 Background + Site

Laneage on Walker Road/Highway 105
Same as Existing

Signal Timings
Same as Existing

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	61	151	102	126	239	44	133	282	11	66	225	41
Future Volume (vph)	61	151	102	126	239	44	133	282	11	66	225	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	265		330	0		0	455		400	435		435
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	75			25			220			300		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.977				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1820	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.180			0.364			0.509			0.530		
Satd. Flow (perm)	335	1863	1583	678	1820	0	948	1863	1583	987	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			200		8				130			130
Link Speed (mph)		45			35			60			60	
Link Distance (ft)		734			692			827			592	
Travel Time (s)		11.1			13.5			9.4			6.7	
Peak Hour Factor	0.70	0.63	1.00	0.60	0.54	0.54	0.95	0.93	0.69	0.75	0.91	0.93
Adj. Flow (vph)	87	240	102	210	443	81	140	303	16	88	247	44
Shared Lane Traffic (%)												
Lane Group Flow (vph)	87	240	102	210	524	0	140	303	16	88	247	44
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Free	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		Free	8			2		2	6		6

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Lanes, Volumes, Timings
1: SH 83 & Walker Rd

2025 Existing
AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	6.0		5.0	6.0		5.0	30.0	30.0	5.0	30.0	30.0
Minimum Split (s)	10.0	22.5		10.0	22.5		10.0	37.0	37.0	10.0	37.0	37.0
Total Split (s)	17.0	32.0		17.0	32.0		17.0	43.0	43.0	17.0	43.0	43.0
Total Split (%)	15.6%	29.4%		15.6%	29.4%		15.6%	39.4%	39.4%	15.6%	39.4%	39.4%
Maximum Green (s)	12.0	26.0		12.0	26.0		12.0	36.0	36.0	12.0	36.0	36.0
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0		5.0	6.0		5.0	7.0	7.0	5.0	7.0	7.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Act Effct Green (s)	30.9	21.1	101.5	36.4	26.2		50.4	40.3	40.3	46.4	36.2	36.2
Actuated g/C Ratio	0.30	0.21	1.00	0.36	0.26		0.50	0.40	0.40	0.46	0.36	0.36
v/c Ratio	0.38	0.62	0.06	0.58	1.10		0.26	0.41	0.02	0.17	0.37	0.07
Control Delay	25.8	44.4	0.1	29.3	109.7		15.0	26.8	0.1	14.6	27.8	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.8	44.4	0.1	29.3	109.7		15.0	26.8	0.1	14.6	27.8	0.2
LOS	C	D	A	C	F		B	C	A	B	C	A
Approach Delay		30.1			86.7			22.3			21.5	
Approach LOS		C			F			C			C	
Queue Length 50th (ft)	36	143	0	94	~405		48	151	0	29	123	0
Queue Length 95th (ft)	54	150	0	97	267		86	247	0	48	204	0
Internal Link Dist (ft)		654			612			747			512	
Turn Bay Length (ft)	265		330				455		400	435		435
Base Capacity (vph)	283	479	1583	373	475		579	740	707	582	664	648
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	0.31	0.50	0.06	0.56	1.10		0.24	0.41	0.02	0.15	0.37	0.07

Intersection Summary			
Area Type:	Other		
Cycle Length: 109			
Actuated Cycle Length: 101.5			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.10			
Intersection Signal Delay: 47.4		Intersection LOS: D	
Intersection Capacity Utilization 71.0%		ICU Level of Service C	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

Splits and Phases: 1: SH 83 & Walker Rd

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	261	151	148	179	41	148	260	55	52	312	40
Future Volume (vph)	41	261	151	148	179	41	148	260	55	52	312	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	265		330	0		0	455		400	435		435
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	75			25			220			300		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.981				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1827	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.320			0.243			0.427			0.575		
Satd. Flow (perm)	596	1863	1583	453	1827	0	795	1863	1583	1071	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			200		6				130			130
Link Speed (mph)		45			35			60			60	
Link Distance (ft)		734			692			827			592	
Travel Time (s)		11.1			13.5			9.4			6.7	
Peak Hour Factor	1.00	0.83	1.00	0.67	0.50	0.79	1.00	0.98	0.58	0.52	1.00	0.93
Adj. Flow (vph)	41	314	151	221	358	52	148	265	95	100	312	43
Shared Lane Traffic (%)												
Lane Group Flow (vph)	41	314	151	221	410	0	148	265	95	100	312	43
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Free	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		Free	8			2		2	6		6

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	6.0		5.0	6.0		5.0	30.0	30.0	5.0	30.0	30.0
Minimum Split (s)	10.0	22.5		10.0	22.5		10.0	37.0	37.0	10.0	37.0	37.0
Total Split (s)	17.0	32.0		17.0	32.0		17.0	43.0	43.0	17.0	43.0	43.0
Total Split (%)	15.6%	29.4%		15.6%	29.4%		15.6%	39.4%	39.4%	15.6%	39.4%	39.4%
Maximum Green (s)	12.0	26.0		12.0	26.0		12.0	36.0	36.0	12.0	36.0	36.0
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0		5.0	6.0		5.0	7.0	7.0	5.0	7.0	7.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Act Effct Green (s)	29.3	21.2	102.0	38.3	30.4		50.5	40.1	40.1	46.7	36.2	36.2
Actuated g/C Ratio	0.29	0.21	1.00	0.38	0.30		0.50	0.39	0.39	0.46	0.35	0.35
v/c Ratio	0.16	0.81	0.10	0.69	0.75		0.30	0.36	0.14	0.18	0.47	0.07
Control Delay	21.9	55.5	0.1	35.4	43.3		15.6	26.4	2.3	14.6	29.9	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.9	55.5	0.1	35.4	43.3		15.6	26.4	2.3	14.6	29.9	0.2
LOS	C	E	A	D	D		B	C	A	B	C	A
Approach Delay		36.3			40.5			18.7			23.7	
Approach LOS		D			D			B			C	
Queue Length 50th (ft)	17	197	0	101	254		50	129	0	33	161	0
Queue Length 95th (ft)	40	272	0	116	181		91	218	0	36	261	0
Internal Link Dist (ft)		654			612			747			512	
Turn Bay Length (ft)	265		330				455		400	435		435
Base Capacity (vph)	339	477	1583	325	549		516	733	701	610	661	645
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.66	0.10	0.68	0.75		0.29	0.36	0.14	0.16	0.47	0.07

Intersection Summary			
Area Type:	Other		
Cycle Length: 109			
Actuated Cycle Length: 102			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.81			
Intersection Signal Delay: 30.6		Intersection LOS: C	
Intersection Capacity Utilization 74.3%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 1: SH 83 & Walker Rd

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	79	112	56	111	21	161	325	34	26	350	33
Future Volume (vph)	49	79	112	56	111	21	161	325	34	26	350	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	265		330	0		0	455		400	435		435
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	75			25			220			300		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.972				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1811	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.602			0.695			0.405			0.511		
Satd. Flow (perm)	1121	1863	1583	1295	1811	0	754	1863	1583	952	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			200		10				130			130
Link Speed (mph)		45			35			60			60	
Link Distance (ft)		734			692			827			592	
Travel Time (s)		11.1			13.5			9.4			6.7	
Peak Hour Factor	0.80	0.92	0.85	0.85	0.92	0.75	0.85	0.75	0.92	0.92	0.95	0.75
Adj. Flow (vph)	61	86	132	66	121	28	189	433	37	28	368	44
Shared Lane Traffic (%)												
Lane Group Flow (vph)	61	86	132	66	149	0	189	433	37	28	368	44
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Free	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		Free	8			2		2	6		6

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	6.0		5.0	6.0		5.0	30.0	30.0	5.0	30.0	30.0
Minimum Split (s)	10.0	22.5		10.0	22.5		10.0	37.0	37.0	10.0	37.0	37.0
Total Split (s)	17.0	32.0		17.0	32.0		17.0	43.0	43.0	17.0	43.0	43.0
Total Split (%)	15.6%	29.4%		15.6%	29.4%		15.6%	39.4%	39.4%	15.6%	39.4%	39.4%
Maximum Green (s)	12.0	26.0		12.0	26.0		12.0	36.0	36.0	12.0	36.0	36.0
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0		5.0	6.0		5.0	7.0	7.0	5.0	7.0	7.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Act Effct Green (s)	19.5	12.1	87.7	19.6	12.1		54.1	47.8	47.8	44.8	36.6	36.6
Actuated g/C Ratio	0.22	0.14	1.00	0.22	0.14		0.62	0.55	0.55	0.51	0.42	0.42
v/c Ratio	0.20	0.34	0.08	0.20	0.58		0.32	0.43	0.04	0.05	0.47	0.06
Control Delay	24.9	39.5	0.1	24.9	43.6		10.5	17.1	0.1	9.6	23.6	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.9	39.5	0.1	24.9	43.6		10.5	17.1	0.1	9.6	23.6	0.2
LOS	C	D	A	C	D		B	B	A	A	C	A
Approach Delay		17.7			37.9			14.2			20.3	
Approach LOS		B			D			B			C	
Queue Length 50th (ft)	26	46	0	28	76		44	126	0	6	156	0
Queue Length 95th (ft)	48	92	0	55	141		87	234	0	20	272	0
Internal Link Dist (ft)		654			612			747			512	
Turn Bay Length (ft)	265		330				455		400	435		435
Base Capacity (vph)	386	561	1583	408	552		606	1016	922	665	777	736
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.15	0.08	0.16	0.27		0.31	0.43	0.04	0.04	0.47	0.06

Intersection Summary			
Area Type:	Other		
Cycle Length: 109			
Actuated Cycle Length: 87.7			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.58			
Intersection Signal Delay: 19.7		Intersection LOS: B	
Intersection Capacity Utilization 64.4%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: SH 83 & Walker Rd

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	153	102	126	246	45	133	282	11	66	225	41
Future Volume (vph)	31	153	102	126	246	45	133	282	11	66	225	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	265		330	0		0	455		400	435		435
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	75			25			220			300		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.977				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1820	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.190			0.334			0.512			0.534		
Satd. Flow (perm)	354	1863	1583	622	1820	0	954	1863	1583	995	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			200		8				130			130
Link Speed (mph)		45			35			60			60	
Link Distance (ft)		734			692			827			592	
Travel Time (s)		11.1			13.5			9.4			6.7	
Peak Hour Factor	0.70	0.63	1.00	0.60	0.54	0.54	0.95	0.93	0.69	0.75	0.91	0.93
Adj. Flow (vph)	44	243	102	210	456	83	140	303	16	88	247	44
Shared Lane Traffic (%)												
Lane Group Flow (vph)	44	243	102	210	539	0	140	303	16	88	247	44
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Free	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		Free	8			2		2	6		6

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Lanes, Volumes, Timings
1: SH 83 & Walker Rd

ST Baseline
AM

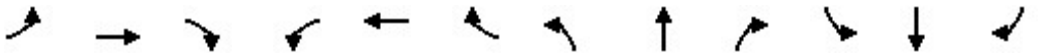
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	6.0		5.0	6.0		5.0	30.0	30.0	5.0	30.0	30.0
Minimum Split (s)	10.0	22.5		10.0	22.5		10.0	37.0	37.0	10.0	37.0	37.0
Total Split (s)	17.0	32.0		17.0	32.0		17.0	43.0	43.0	17.0	43.0	43.0
Total Split (%)	15.6%	29.4%		15.6%	29.4%		15.6%	39.4%	39.4%	15.6%	39.4%	39.4%
Maximum Green (s)	12.0	26.0		12.0	26.0		12.0	36.0	36.0	12.0	36.0	36.0
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0		5.0	6.0		5.0	7.0	7.0	5.0	7.0	7.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Act Effct Green (s)	27.0	18.9	99.2	35.7	27.9		50.3	40.3	40.3	46.3	36.2	36.2
Actuated g/C Ratio	0.27	0.19	1.00	0.36	0.28		0.51	0.41	0.41	0.47	0.36	0.36
v/c Ratio	0.22	0.69	0.06	0.59	1.04		0.25	0.40	0.02	0.17	0.36	0.07
Control Delay	23.4	48.2	0.1	30.0	87.9		14.2	25.7	0.1	13.8	26.7	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.4	48.2	0.1	30.0	87.9		14.2	25.7	0.1	13.8	26.7	0.2
LOS	C	D	A	C	F		B	C	A	B	C	A
Approach Delay		32.8			71.7			21.3			20.6	
Approach LOS		C			E			C			C	
Queue Length 50th (ft)	18	145	0	94	~411		46	146	0	28	118	0
Queue Length 95th (ft)	32	152	0	97	267		86	247	0	48	204	0
Internal Link Dist (ft)		654			612			747			512	
Turn Bay Length (ft)	265		330				455		400	435		435
Base Capacity (vph)	286	491	1583	363	517		595	756	719	598	680	660
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	0.15	0.49	0.06	0.58	1.04		0.24	0.40	0.02	0.15	0.36	0.07

Intersection Summary			
Area Type:	Other		
Cycle Length: 109			
Actuated Cycle Length: 99.2			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.04			
Intersection Signal Delay: 42.5		Intersection LOS: D	
Intersection Capacity Utilization 71.4%		ICU Level of Service C	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

Splits and Phases: 1: SH 83 & Walker Rd

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	266	151	148	185	42	148	260	55	53	312	40
Future Volume (vph)	49	266	151	148	185	42	148	260	55	53	312	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	265		330	0		0	455		400	435		435
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	75			25			220			300		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.981				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1827	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.244			0.228			0.429			0.574		
Satd. Flow (perm)	455	1863	1583	425	1827	0	799	1863	1583	1069	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			200		6				130			130
Link Speed (mph)		45			35			60			60	
Link Distance (ft)		734			692			827			592	
Travel Time (s)		11.1			13.5			9.4			6.7	
Peak Hour Factor	1.00	0.83	1.00	0.67	0.50	0.79	1.00	0.98	0.58	0.52	1.00	0.93
Adj. Flow (vph)	49	320	151	221	370	53	148	265	95	102	312	43
Shared Lane Traffic (%)												
Lane Group Flow (vph)	49	320	151	221	423	0	148	265	95	102	312	43
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Free	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		Free	8			2		2	6		6

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

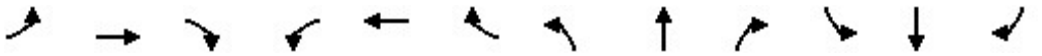
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	6.0		5.0	6.0		5.0	30.0	30.0	5.0	30.0	30.0
Minimum Split (s)	10.0	22.5		10.0	22.5		10.0	37.0	37.0	10.0	37.0	37.0
Total Split (s)	17.0	32.0		17.0	32.0		17.0	43.0	43.0	17.0	43.0	43.0
Total Split (%)	15.6%	29.4%		15.6%	29.4%		15.6%	39.4%	39.4%	15.6%	39.4%	39.4%
Maximum Green (s)	12.0	26.0		12.0	26.0		12.0	36.0	36.0	12.0	36.0	36.0
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0		5.0	6.0		5.0	7.0	7.0	5.0	7.0	7.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Act Effct Green (s)	30.1	21.8	102.5	38.6	28.3		50.4	40.1	40.1	46.8	36.2	36.2
Actuated g/C Ratio	0.29	0.21	1.00	0.38	0.28		0.49	0.39	0.39	0.46	0.35	0.35
v/c Ratio	0.22	0.81	0.10	0.71	0.83		0.30	0.36	0.14	0.19	0.47	0.07
Control Delay	22.7	55.3	0.1	36.6	51.1		15.8	26.6	2.4	14.8	30.1	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.7	55.3	0.1	36.6	51.1		15.8	26.6	2.4	14.8	30.1	0.2
LOS	C	E	A	D	D		B	C	A	B	C	A
Approach Delay		36.2			46.1			18.9			23.9	
Approach LOS		D			D			B			C	
Queue Length 50th (ft)	20	202	0	101	266		51	130	0	34	162	0
Queue Length 95th (ft)	45	278	0	116	188		91	218	0	36	261	0
Internal Link Dist (ft)		654			612			747			512	
Turn Bay Length (ft)	265		330				455		400	435		435
Base Capacity (vph)	309	474	1583	318	509		514	728	698	606	657	642
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.68	0.10	0.69	0.83		0.29	0.36	0.14	0.17	0.47	0.07

Intersection Summary

Area Type: Other
Cycle Length: 109
Actuated Cycle Length: 102.5
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 32.4 — Intersection LOS: C
Intersection Capacity Utilization 74.6% — ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 1: SH 83 & Walker Rd

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	84	112	56	114	22	161	325	34	27	350	33
Future Volume (vph)	49	84	112	56	114	22	161	325	34	27	350	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	265		330	0		0	455		400	435		435
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	75			25			220			300		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.972				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1811	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.589			0.692			0.404			0.511		
Satd. Flow (perm)	1097	1863	1583	1289	1811	0	753	1863	1583	952	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			200		10				130			130
Link Speed (mph)		45			35			60			60	
Link Distance (ft)		734			692			827			592	
Travel Time (s)		11.1			13.5			9.4			6.7	
Peak Hour Factor	0.80	0.92	0.85	0.85	0.92	0.75	0.85	0.75	0.92	0.92	0.95	0.75
Adj. Flow (vph)	61	91	132	66	124	29	189	433	37	29	368	44
Shared Lane Traffic (%)												
Lane Group Flow (vph)	61	91	132	66	153	0	189	433	37	29	368	44
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Free	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		Free	8			2		2	6		6

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	6.0		5.0	6.0		5.0	30.0	30.0	5.0	30.0	30.0
Minimum Split (s)	10.0	22.5		10.0	22.5		10.0	37.0	37.0	10.0	37.0	37.0
Total Split (s)	17.0	32.0		17.0	32.0		17.0	43.0	43.0	17.0	43.0	43.0
Total Split (%)	15.6%	29.4%		15.6%	29.4%		15.6%	39.4%	39.4%	15.6%	39.4%	39.4%
Maximum Green (s)	12.0	26.0		12.0	26.0		12.0	36.0	36.0	12.0	36.0	36.0
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0		5.0	6.0		5.0	7.0	7.0	5.0	7.0	7.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Act Effct Green (s)	19.8	12.3	88.0	19.8	12.3		54.2	47.9	47.9	44.9	36.6	36.6
Actuated g/C Ratio	0.22	0.14	1.00	0.22	0.14		0.62	0.54	0.54	0.51	0.42	0.42
v/c Ratio	0.20	0.35	0.08	0.20	0.58		0.32	0.43	0.04	0.05	0.47	0.06
Control Delay	24.9	39.7	0.1	24.8	43.7		10.6	17.2	0.1	9.7	23.7	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.9	39.7	0.1	24.8	43.7		10.6	17.2	0.1	9.7	23.7	0.2
LOS	C	D	A	C	D		B	B	A	A	C	A
Approach Delay		18.1			38.0			14.4			20.4	
Approach LOS		B			D			B			C	
Queue Length 50th (ft)	26	48	0	28	78		45	127	0	6	157	0
Queue Length 95th (ft)	48	96	0	55	144		87	235	0	21	274	0
Internal Link Dist (ft)		654			612			747			512	
Turn Bay Length (ft)	265		330				455		400	435		435
Base Capacity (vph)	384	560	1583	409	551		604	1014	920	663	775	734
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.16	0.08	0.16	0.28		0.31	0.43	0.04	0.04	0.47	0.06

Intersection Summary			
Area Type:	Other		
Cycle Length: 109			
Actuated Cycle Length: 88			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.58			
Intersection Signal Delay: 19.9		Intersection LOS: B	
Intersection Capacity Utilization 64.6%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: SH 83 & Walker Rd

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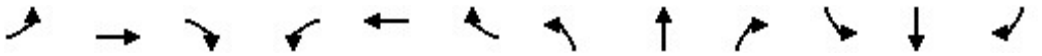

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	165	102	193	283	52	133	282	15	68	225	41
Future Volume (vph)	31	165	102	193	283	52	133	282	15	68	225	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	265		330	0		0	455		400	435		435
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	75			25			220			300		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.977				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	1881	1599	1787	1838	0	1787	1881	1599	1787	1881	1599
Flt Permitted	0.190			0.311			0.510			0.532		
Satd. Flow (perm)	357	1881	1599	585	1838	0	959	1881	1599	1001	1881	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			200		8				130			130
Link Speed (mph)		45			35			60			60	
Link Distance (ft)		734			692			827			592	
Travel Time (s)		11.1			13.5			9.4			6.7	
Peak Hour Factor	0.70	0.65	1.00	0.71	0.59	0.59	0.95	0.93	0.75	0.76	0.91	0.93
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	44	254	102	272	480	88	140	303	20	89	247	44
Shared Lane Traffic (%)												
Lane Group Flow (vph)	44	254	102	272	568	0	140	303	20	89	247	44
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1		1	2	1	1	2	1
Detector Template								Thru	Right		Thru	Right
Leading Detector (ft)	40	40	0	40	40		40	100	20	40	100	20
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)	40	40	40	40	40		40	6	20	40	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)								94			94	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	pm+pt	NA	Free	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	

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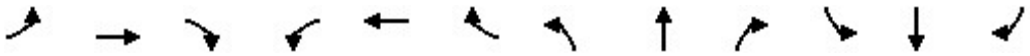

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		Free	8			2		2	6		6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	6.0		5.0	6.0		5.0	30.0	30.0	5.0	30.0	30.0
Minimum Split (s)	10.0	12.0		10.0	12.0		10.0	37.0	37.0	10.0	37.0	37.0
Total Split (s)	17.0	32.0		17.0	32.0		17.0	43.0	43.0	17.0	43.0	43.0
Total Split (%)	15.6%	29.4%		15.6%	29.4%		15.6%	39.4%	39.4%	15.6%	39.4%	39.4%
Maximum Green (s)	12.0	26.0		12.0	26.0		12.0	36.0	36.0	12.0	36.0	36.0
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	1.0		1.0	1.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0		6.0	7.0		5.0	7.0	7.0	5.0	7.0	7.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Act Effct Green (s)	27.1	18.0	99.8	34.8	27.5		50.2	40.2	40.2	46.2	36.2	36.2
Actuated g/C Ratio	0.27	0.18	1.00	0.35	0.28		0.50	0.40	0.40	0.46	0.36	0.36
v/c Ratio	0.22	0.75	0.06	0.81	1.11		0.25	0.40	0.03	0.17	0.36	0.07
Control Delay	23.4	53.1	0.1	45.7	108.7		14.3	25.7	0.1	13.9	26.8	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.4	53.1	0.1	45.7	108.7		14.3	25.7	0.1	13.9	26.8	0.2
LOS	C	D	A	D	F		B	C	A	B	C	A
Approach Delay		36.3			88.3			21.2			20.7	
Approach LOS		D			F			C			C	
Queue Length 50th (ft)	18	155	0	129	~461		45	146	0	28	118	0
Queue Length 95th (ft)	32	166	0	153	321		87	247	0	49	204	0
Internal Link Dist (ft)		654			612			747			512	
Turn Bay Length (ft)	265		330				455		400	435		435
Base Capacity (vph)	287	473	1599	337	512		595	757	721	599	682	662
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	0.15	0.54	0.06	0.81	1.11		0.24	0.40	0.03	0.15	0.36	0.07

Intersection Summary			
Area Type:	Other		
Cycle Length: 109			
Actuated Cycle Length: 99.8			
Natural Cycle: 90			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 1.11			
Intersection Signal Delay: 51.1		Intersection LOS: D	
Intersection Capacity Utilization 74.6%		ICU Level of Service D	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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Splits and Phases: 1: SH 83 & Walker Rd

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	296	151	190	208	46	148	260	64	58	312	40
Future Volume (vph)	41	296	151	190	208	46	148	260	64	58	312	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	265		330	0		0	455		400	435		435
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	75			25			220			300		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.980				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1825	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.307			0.209			0.434			0.535		
Satd. Flow (perm)	572	1863	1583	389	1825	0	808	1863	1583	997	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			200		7				130			130
Link Speed (mph)		45			35			60			60	
Link Distance (ft)		734			692			827			592	
Travel Time (s)		11.1			13.5			9.4			6.7	
Peak Hour Factor	1.00	0.84	1.00	0.73	0.55	0.80	1.00	0.98	0.63	0.55	1.00	0.91
Adj. Flow (vph)	41	352	151	260	378	58	148	265	102	105	312	44
Shared Lane Traffic (%)												
Lane Group Flow (vph)	41	352	151	260	436	0	148	265	102	105	312	44
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1		1	2	1	1	2	1
Detector Template								Thru	Right		Thru	Right
Leading Detector (ft)	40	40	0	40	40		40	100	20	40	100	20
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)	40	40	40	40	40		40	6	20	40	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)								94			94	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	pm+pt	NA	Free	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		Free	8			2		2	6		6

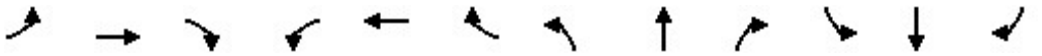
Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	6.0		5.0	6.0		5.0	30.0	30.0	5.0	30.0	30.0
Minimum Split (s)	10.0	12.0		10.0	12.0		10.0	37.0	37.0	10.0	37.0	37.0
Total Split (s)	17.0	32.0		17.0	32.0		17.0	43.0	43.0	17.0	43.0	43.0
Total Split (%)	15.6%	29.4%		15.6%	29.4%		15.6%	39.4%	39.4%	15.6%	39.4%	39.4%
Maximum Green (s)	12.0	26.0		12.0	26.0		12.0	36.0	36.0	12.0	36.0	36.0
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0		5.0	6.0		5.0	7.0	7.0	5.0	7.0	7.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Act Effct Green (s)	31.1	23.1	104.3	40.7	32.7		49.3	37.3	37.3	46.9	36.1	36.1
Actuated g/C Ratio	0.30	0.22	1.00	0.39	0.31		0.47	0.36	0.36	0.45	0.35	0.35
v/c Ratio	0.16	0.85	0.10	0.84	0.76		0.31	0.40	0.16	0.21	0.48	0.07
Control Delay	21.8	59.3	0.1	48.1	43.4		16.3	28.4	2.9	15.3	30.9	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.8	59.3	0.1	48.1	43.4		16.3	28.4	2.9	15.3	30.9	0.2
LOS	C	E	A	D	D		B	C	A	B	C	A
Approach Delay		40.1			45.1			19.8			24.4	
Approach LOS		D			D			B			C	
Queue Length 50th (ft)	17	228	0	122	276		54	137	0	37	170	0
Queue Length 95th (ft)	40	312	0	149	216		91	219	0	40	261	0
Internal Link Dist (ft)		654			612			747			512	
Turn Bay Length (ft)	265		330				455		400	435		435
Base Capacity (vph)	336	465	1583	311	577		507	666	649	568	644	632
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.76	0.10	0.84	0.76		0.29	0.40	0.16	0.18	0.48	0.07

Intersection Summary			
Area Type:	Other		
Cycle Length: 109			
Actuated Cycle Length: 104.3			
Natural Cycle: 80			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 33.7		Intersection LOS: C	
Intersection Capacity Utilization 78.5%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 1: SH 83 & Walker Rd

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	87	112	56	78	15	161	325	34	29	350	33
Future Volume (vph)	49	87	112	56	78	15	161	325	34	29	350	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	265		330	0		0	455		400	435		435
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	75			25			220			300		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.973				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1812	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.690			0.687			0.420			0.511		
Satd. Flow (perm)	1285	1863	1583	1280	1812	0	782	1863	1583	952	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			200		10				130			130
Link Speed (mph)		45			35			60			60	
Link Distance (ft)		734			692			827			592	
Travel Time (s)		11.1			13.5			9.4			6.7	
Peak Hour Factor	0.80	0.92	0.85	0.88	0.92	0.78	0.85	0.75	0.92	0.92	0.95	0.75
Adj. Flow (vph)	61	95	132	64	85	19	189	433	37	32	368	44
Shared Lane Traffic (%)												
Lane Group Flow (vph)	61	95	132	64	104	0	189	433	37	32	368	44
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1		1	2	1	1	2	1
Detector Template								Thru	Right		Thru	Right
Leading Detector (ft)	40	40	0	40	40		40	100	20	40	100	20
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)	40	40	40	40	40		40	6	20	40	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)								94			94	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	pm+pt	NA	Free	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		Free	8			2		2	6		6

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	6.0		5.0	6.0		5.0	30.0	30.0	5.0	30.0	30.0
Minimum Split (s)	10.0	12.0		10.0	12.0		10.0	37.0	37.0	10.0	37.0	37.0
Total Split (s)	17.0	32.0		17.0	32.0		17.0	43.0	43.0	17.0	43.0	43.0
Total Split (%)	15.6%	29.4%		15.6%	29.4%		15.6%	39.4%	39.4%	15.6%	39.4%	39.4%
Maximum Green (s)	12.0	26.0		12.0	26.0		12.0	36.0	36.0	12.0	36.0	36.0
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0		5.0	6.0		5.0	7.0	7.0	5.0	7.0	7.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Act Effct Green (s)	16.6	9.8	82.3	16.7	9.9		54.6	48.5	48.5	45.9	37.5	37.5
Actuated g/C Ratio	0.20	0.12	1.00	0.20	0.12		0.66	0.59	0.59	0.56	0.46	0.46
v/c Ratio	0.20	0.43	0.08	0.21	0.46		0.30	0.39	0.04	0.05	0.43	0.06
Control Delay	25.6	43.0	0.1	25.6	40.7		9.2	16.8	0.1	8.6	21.1	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.6	43.0	0.1	25.6	40.7		9.2	16.8	0.1	8.6	21.1	0.1
LOS	C	D	A	C	D		A	B	A	A	C	A
Approach Delay		19.6			35.0			13.6			18.1	
Approach LOS		B			C			B			B	
Queue Length 50th (ft)	25	49	0	26	49		41	160	0	6	143	0
Queue Length 95th (ft)	49	101	0	57	102		79	219	0	20	257	0
Internal Link Dist (ft)		654			612			747			512	
Turn Bay Length (ft)	265		330				455		400	435		435
Base Capacity (vph)	405	613	1583	404	603		670	1097	986	724	848	791
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	0.15	0.15	0.08	0.16	0.17		0.28	0.39	0.04	0.04	0.43	0.06

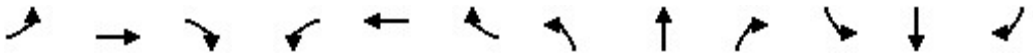
Intersection Summary			
Area Type:	Other		
Cycle Length: 109			
Actuated Cycle Length: 82.3			
Natural Cycle: 70			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.46			
Intersection Signal Delay: 18.3		Intersection LOS: B	
Intersection Capacity Utilization 58.7%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 1: SH 83 & Walker Rd

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	252	102	194	325	59	133	282	79	102	225	72
Future Volume (vph)	54	252	102	194	325	59	133	282	79	102	225	72
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	265		330	0		255	455		400	435		435
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	75			25			220			300		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.977				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	1881	1599	1787	1838	0	1787	3574	1599	1787	3574	1599
Flt Permitted	0.168			0.211			0.592			0.567		
Satd. Flow (perm)	316	1881	1599	397	1838	0	1114	3574	1599	1067	3574	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			200		8				130			130
Link Speed (mph)		45			35			60			60	
Link Distance (ft)		734			692			827			592	
Travel Time (s)		11.1			13.5			9.4			6.7	
Peak Hour Factor	0.79	0.74	1.00	0.71	0.63	0.63	0.95	0.93	0.89	0.81	0.91	0.93
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	68	341	102	273	516	94	140	303	89	126	247	77
Shared Lane Traffic (%)												
Lane Group Flow (vph)	68	341	102	273	610	0	140	303	89	126	247	77
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1		1	2	1	1	2	1
Detector Template								Thru	Right		Thru	Right
Leading Detector (ft)	40	40	0	40	40		40	100	20	40	100	20
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)	40	40	40	40	40		40	6	20	40	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)								94			94	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	pm+pt	NA	Free	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		Free	8			2		2	6		6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	6.0		5.0	6.0		5.0	30.0	30.0	5.0	30.0	30.0
Minimum Split (s)	10.0	12.0		10.0	12.0		10.0	37.0	37.0	10.0	37.0	37.0
Total Split (s)	17.0	32.0		17.0	32.0		17.0	43.0	43.0	17.0	43.0	43.0
Total Split (%)	15.6%	29.4%		15.6%	29.4%		15.6%	39.4%	39.4%	15.6%	39.4%	39.4%
Maximum Green (s)	12.0	26.0		12.0	26.0		12.0	36.0	36.0	12.0	36.0	36.0
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	1.0		1.0	1.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0		6.0	7.0		5.0	7.0	7.0	5.0	7.0	7.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Act Effct Green (s)	31.6	21.6	103.5	37.6	28.0		48.1	36.5	36.5	47.4	36.1	36.1
Actuated g/C Ratio	0.31	0.21	1.00	0.36	0.27		0.46	0.35	0.35	0.46	0.35	0.35
v/c Ratio	0.32	0.87	0.06	0.93	1.21		0.24	0.24	0.14	0.23	0.20	0.12
Control Delay	24.7	62.4	0.1	66.2	147.8		15.4	25.3	2.1	15.3	25.1	1.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.7	62.4	0.1	66.2	147.8		15.4	25.3	2.1	15.3	25.1	1.2
LOS	C	E	A	E	F		B	C	A	B	C	A
Approach Delay		44.9			122.6			18.8			18.3	
Approach LOS		D			F			B			B	
Queue Length 50th (ft)	28	220	0	130	~516		49	76	0	44	62	0
Queue Length 95th (ft)	50	260	0	#165	#442		87	116	13	70	96	7
Internal Link Dist (ft)		654			612			747			512	
Turn Bay Length (ft)	265		330				455		400	435		435
Base Capacity (vph)	279	455	1599	292	503		620	1258	647	599	1246	642
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	0.24	0.75	0.06	0.93	1.21		0.23	0.24	0.14	0.21	0.20	0.12

Intersection Summary			
Area Type:	Other		
Cycle Length: 109			
Actuated Cycle Length: 103.5			
Natural Cycle: 90			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 1.21			
Intersection Signal Delay: 62.9		Intersection LOS: E	
Intersection Capacity Utilization 77.2%		ICU Level of Service D	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

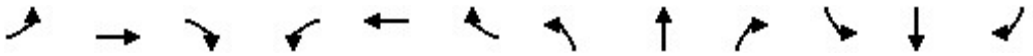
Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Splits and Phases: 1: SH 83 & Walker Rd

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	72	489	151	242	289	67	148	260	144	88	312	70
Future Volume (vph)	72	489	151	242	289	67	148	260	144	88	312	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	265		330	0		255	455		400	435		435
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	75			25			220			300		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.977				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1820	0	1770	3539	1583	1770	3539	1583
Flt Permitted	0.148			0.125			0.551			0.588		
Satd. Flow (perm)	276	1863	1583	233	1820	0	1026	3539	1583	1095	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			200		8				182			130
Link Speed (mph)		45			35			60			60	
Link Distance (ft)		734			692			827			592	
Travel Time (s)		11.1			13.5			9.4			6.7	
Peak Hour Factor	0.97	0.87	1.00	0.77	0.65	0.84	1.00	0.98	0.79	0.68	1.00	0.91
Adj. Flow (vph)	74	562	151	314	445	80	148	265	182	129	312	77
Shared Lane Traffic (%)												
Lane Group Flow (vph)	74	562	151	314	525	0	148	265	182	129	312	77
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1		1	2	1	1	2	1
Detector Template								Thru	Right		Thru	Right
Leading Detector (ft)	40	40	0	40	40		40	100	20	40	100	20
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)	40	40	40	40	40		40	6	20	40	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)								94			94	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	pm+pt	NA	Free	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		Free	8			2		2	6		6

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	6.0		5.0	6.0		5.0	30.0	30.0	5.0	30.0	30.0
Minimum Split (s)	10.0	12.0		10.0	12.0		10.0	37.0	37.0	10.0	37.0	37.0
Total Split (s)	17.0	32.0		17.0	32.0		17.0	43.0	43.0	17.0	43.0	43.0
Total Split (%)	15.6%	29.4%		15.6%	29.4%		15.6%	39.4%	39.4%	15.6%	39.4%	39.4%
Maximum Green (s)	12.0	26.0		12.0	26.0		12.0	36.0	36.0	12.0	36.0	36.0
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0		5.0	6.0		5.0	7.0	7.0	5.0	7.0	7.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Act Effct Green (s)	35.2	26.0	107.1	42.5	32.0		48.6	36.5	36.5	47.6	36.0	36.0
Actuated g/C Ratio	0.33	0.24	1.00	0.40	0.30		0.45	0.34	0.34	0.44	0.34	0.34
v/c Ratio	0.36	1.24	0.10	1.19	0.96		0.28	0.22	0.28	0.24	0.26	0.12
Control Delay	25.4	163.2	0.1	144.1	68.2		16.4	26.1	5.0	16.0	26.9	1.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.4	163.2	0.1	144.1	68.2		16.4	26.1	5.0	16.0	26.9	1.2
LOS	C	F	A	F	E		B	C	A	B	C	A
Approach Delay		118.9			96.6			17.2			20.4	
Approach LOS		F			F			B			C	
Queue Length 50th (ft)	31	~484	0	~213	~383		54	67	0	46	81	0
Queue Length 95th (ft)	62	#674	0	#313	#365		91	103	31	59	120	7
Internal Link Dist (ft)		654			612			747			512	
Turn Bay Length (ft)	265		330				455		400	435		435
Base Capacity (vph)	268	452	1583	264	548		567	1207	659	586	1189	618
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	0.28	1.24	0.10	1.19	0.96		0.26	0.22	0.28	0.22	0.26	0.12

Intersection Summary			
Area Type:	Other		
Cycle Length: 109			
Actuated Cycle Length: 107.1			
Natural Cycle: 100			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 1.24			
Intersection Signal Delay: 71.3		Intersection LOS: E	
Intersection Capacity Utilization 91.5%		ICU Level of Service F	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Splits and Phases: 1: SH 83 & Walker Rd

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	171	112	163	266	51	161	325	156	46	350	58
Future Volume (vph)	86	171	112	163	266	51	161	325	156	46	350	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	265		330	0		255	455		400	435		435
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	75			25			220			300		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.974				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1814	0	1770	3539	1583	1770	3539	1583
Flt Permitted	0.293			0.467			0.458			0.500		
Satd. Flow (perm)	546	1863	1583	870	1814	0	853	3539	1583	931	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			200		9				170			130
Link Speed (mph)		45			35			60			60	
Link Distance (ft)		734			692			827			592	
Travel Time (s)		11.1			13.5			9.4			6.7	
Peak Hour Factor	0.85	0.92	0.85	0.90	0.92	0.85	0.85	0.75	0.92	0.92	0.95	0.82
Adj. Flow (vph)	101	186	132	181	289	60	189	433	170	50	368	71
Shared Lane Traffic (%)												
Lane Group Flow (vph)	101	186	132	181	349	0	189	433	170	50	368	71
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1		1	2	1	1	2	1
Detector Template								Thru	Right		Thru	Right
Leading Detector (ft)	40	40	0	40	40		40	100	20	40	100	20
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)	40	40	40	40	40		40	6	20	40	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)								94			94	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	pm+pt	NA	Free	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		Free	8			2		2	6		6

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Lanes, Volumes, Timings
1: SH 83 & Walker Rd

2045 Background
PM

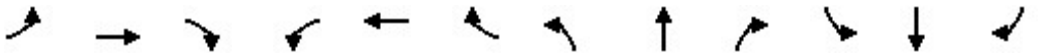
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	6.0		5.0	6.0		5.0	30.0	30.0	5.0	30.0	30.0
Minimum Split (s)	10.0	12.0		10.0	12.0		10.0	37.0	37.0	10.0	37.0	37.0
Total Split (s)	17.0	32.0		17.0	32.0		17.0	43.0	43.0	17.0	43.0	43.0
Total Split (%)	15.6%	29.4%		15.6%	29.4%		15.6%	39.4%	39.4%	15.6%	39.4%	39.4%
Maximum Green (s)	12.0	26.0		12.0	26.0		12.0	36.0	36.0	12.0	36.0	36.0
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0		5.0	6.0		5.0	7.0	7.0	5.0	7.0	7.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Act Effct Green (s)	30.6	20.1	101.4	34.4	24.3		53.5	42.7	42.7	45.3	36.3	36.3
Actuated g/C Ratio	0.30	0.20	1.00	0.34	0.24		0.53	0.42	0.42	0.45	0.36	0.36
v/c Ratio	0.36	0.51	0.08	0.46	0.79		0.35	0.29	0.22	0.11	0.29	0.11
Control Delay	25.1	41.1	0.1	26.5	50.7		15.6	22.5	4.4	14.2	25.6	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	25.1	41.1	0.1	26.5	50.7		15.6	22.5	4.4	14.2	25.6	0.6
LOS	C	D	A	C	D		B	C	A	B	C	A
Approach Delay		24.3			42.4			17.0			20.8	
Approach LOS		C			D			B			C	
Queue Length 50th (ft)	44	111	0	83	219		67	107	0	16	96	0
Queue Length 95th (ft)	76	179	0	135	#365		107	127	44	37	140	0
Internal Link Dist (ft)		654			612			747			512	
Turn Bay Length (ft)	265		330				455		400	435		435
Base Capacity (vph)	325	481	1583	404	475		561	1488	764	563	1267	650
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	0.31	0.39	0.08	0.45	0.73		0.34	0.29	0.22	0.09	0.29	0.11

Intersection Summary			
Area Type:	Other		
Cycle Length: 109			
Actuated Cycle Length: 101.4			
Natural Cycle: 80			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.79			
Intersection Signal Delay: 25.2		Intersection LOS: C	
Intersection Capacity Utilization 74.9%		ICU Level of Service D	
Analysis Period (min) 15			

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

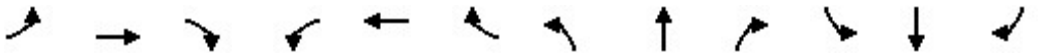
Splits and Phases: 1: SH 83 & Walker Rd

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	264	102	261	362	66	133	282	86	104	225	72
Future Volume (vph)	54	264	102	261	362	66	133	282	86	104	225	72
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	265		330	0		0	455		400	435		435
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	75			25			220			300		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.977				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	1881	1599	1787	1838	0	1787	1881	1599	1787	1881	1599
Flt Permitted	0.165			0.199			0.535			0.471		
Satd. Flow (perm)	310	1881	1599	374	1838	0	1006	1881	1599	886	1881	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			200		8				130			130
Link Speed (mph)		45			35			60			60	
Link Distance (ft)		734			692			827			592	
Travel Time (s)		11.1			13.5			9.4			6.7	
Peak Hour Factor	0.79	0.75	1.00	0.77	0.66	0.66	0.95	0.93	0.89	0.81	0.91	0.93
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	68	352	102	339	548	100	140	303	97	128	247	77
Shared Lane Traffic (%)												
Lane Group Flow (vph)	68	352	102	339	648	0	140	303	97	128	247	77
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	Right	L NA	Left	Right	L NA	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1		1	2	1	1	2	1
Detector Template								Thru	Right		Thru	Right
Leading Detector (ft)	40	40	0	40	40		40	100	20	40	100	20
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)	40	40	40	40	40		40	6	20	40	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)								94			94	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	pm+pt	NA	Free	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		Free	8			2		2	6		6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	6.0		5.0	6.0		5.0	30.0	30.0	5.0	30.0	30.0
Minimum Split (s)	10.0	12.0		10.0	12.0		10.0	37.0	37.0	10.0	37.0	37.0
Total Split (s)	17.0	32.0		17.0	32.0		17.0	43.0	43.0	17.0	43.0	43.0
Total Split (%)	15.6%	29.4%		15.6%	29.4%		15.6%	39.4%	39.4%	15.6%	39.4%	39.4%
Maximum Green (s)	12.0	26.0		12.0	26.0		12.0	36.0	36.0	12.0	36.0	36.0
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	1.0		1.0	1.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0		6.0	7.0		5.0	7.0	7.0	5.0	7.0	7.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Act Effct Green (s)	32.1	22.1	104.1	38.2	28.5		48.2	36.5	36.5	47.5	36.1	36.1
Actuated g/C Ratio	0.31	0.21	1.00	0.37	0.27		0.46	0.35	0.35	0.46	0.35	0.35
v/c Ratio	0.33	0.88	0.06	1.19	1.27		0.26	0.46	0.15	0.26	0.38	0.12
Control Delay	24.7	63.7	0.1	139.3	171.2		15.7	30.0	2.6	15.8	28.7	1.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.7	63.7	0.1	139.3	171.2		15.7	30.0	2.6	15.8	28.7	1.2
LOS	C	E	A	F	F		B	C	A	B	C	A
Approach Delay		46.2			160.3			21.4			20.4	
Approach LOS		D			F			C			C	
Queue Length 50th (ft)	28	229	0	~201	~568		50	161	0	46	128	0
Queue Length 95th (ft)	50	273	0	#308	#525		87	252	19	71	204	7
Internal Link Dist (ft)		654			612			747			512	
Turn Bay Length (ft)	265		330				455		400	435		435
Base Capacity (vph)	278	453	1599	286	509		577	659	644	531	652	639
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	0.24	0.78	0.06	1.19	1.27		0.24	0.46	0.15	0.24	0.38	0.12

Intersection Summary			
Area Type:	Other		
Cycle Length: 109			
Actuated Cycle Length: 104.1			
Natural Cycle: 90			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 1.27			
Intersection Signal Delay: 81.2		Intersection LOS: F	
Intersection Capacity Utilization 81.6%		ICU Level of Service D	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

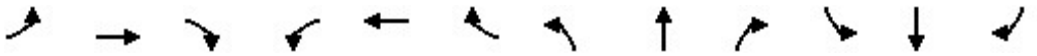
Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Splits and Phases: 1: SH 83 & Walker Rd

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	72	519	151	284	312	71	148	260	152	93	312	70
Future Volume (vph)	72	519	151	284	312	71	148	260	152	93	312	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	265		330	0		0	455		400	435		435
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	75			25			220			300		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.977				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1820	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.148			0.125			0.437			0.513		
Satd. Flow (perm)	276	1863	1583	233	1820	0	814	1863	1583	956	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			200		8				190			130
Link Speed (mph)		45			35			60			60	
Link Distance (ft)		734			692			827			592	
Travel Time (s)		11.1			13.5			9.4			6.7	
Peak Hour Factor	0.97	0.87	1.00	0.79	0.67	0.84	1.00	0.98	0.80	0.69	1.00	0.91
Adj. Flow (vph)	74	597	151	359	466	85	148	265	190	135	312	77
Shared Lane Traffic (%)												
Lane Group Flow (vph)	74	597	151	359	551	0	148	265	190	135	312	77
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	Right	L NA	Left	Right	L NA	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1		1	2	1	1	2	1
Detector Template								Thru	Right		Thru	Right
Leading Detector (ft)	40	40	0	40	40		40	100	20	40	100	20
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)	40	40	40	40	40		40	6	20	40	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)								94			94	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	pm+pt	NA	Free	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		Free	8			2		2	6		6

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	6.0		5.0	6.0		5.0	30.0	30.0	5.0	30.0	30.0
Minimum Split (s)	10.0	12.0		10.0	12.0		10.0	37.0	37.0	10.0	37.0	37.0
Total Split (s)	17.0	32.0		17.0	32.0		17.0	43.0	43.0	17.0	43.0	43.0
Total Split (%)	15.6%	29.4%		15.6%	29.4%		15.6%	39.4%	39.4%	15.6%	39.4%	39.4%
Maximum Green (s)	12.0	26.0		12.0	26.0		12.0	36.0	36.0	12.0	36.0	36.0
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0		5.0	6.0		5.0	7.0	7.0	5.0	7.0	7.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Act Effct Green (s)	35.3	26.0	107.1	42.5	32.0		48.5	36.4	36.4	47.7	36.0	36.0
Actuated g/C Ratio	0.33	0.24	1.00	0.40	0.30		0.45	0.34	0.34	0.45	0.34	0.34
v/c Ratio	0.36	1.32	0.10	1.36	1.01		0.32	0.42	0.29	0.27	0.50	0.12
Control Delay	25.4	193.6	0.1	210.4	79.0		17.0	30.1	5.0	16.4	32.0	1.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.4	193.6	0.1	210.4	79.0		17.0	30.1	5.0	16.4	32.0	1.2
LOS	C	F	A	F	E		B	C	A	B	C	A
Approach Delay		142.9			130.8			19.0			23.5	
Approach LOS		F			F			B			C	
Queue Length 50th (ft)	31	~534	0	~279	~422		54	139	0	49	170	0
Queue Length 95th (ft)	62	#726	0	#393	#418		91	220	32	62	261	7
Internal Link Dist (ft)		654			612			747			512	
Turn Bay Length (ft)	265		330				455		400	435		435
Base Capacity (vph)	268	452	1583	264	548		489	632	662	537	626	618
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	0.28	1.32	0.10	1.36	1.01		0.30	0.42	0.29	0.25	0.50	0.12

Intersection Summary			
Area Type:	Other		
Cycle Length: 109			
Actuated Cycle Length: 107.1			
Natural Cycle: 100			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 1.36			
Intersection Signal Delay: 91.0		Intersection LOS: F	
Intersection Capacity Utilization 95.4%		ICU Level of Service F	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Splits and Phases: 1: SH 83 & Walker Rd

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	209	112	204	290	55	161	325	167	53	350	58
Future Volume (vph)	86	209	112	204	290	55	161	325	167	53	350	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	265		330	0		0	455		400	435		435
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	75			25			220			300		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.974				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1814	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.249			0.385			0.341			0.416		
Satd. Flow (perm)	464	1863	1583	717	1814	0	635	1863	1583	775	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			200		9				182			130
Link Speed (mph)		45			35			60			60	
Link Distance (ft)		734			692			827			592	
Travel Time (s)		11.1			13.5			9.4			6.7	
Peak Hour Factor	0.85	0.92	0.85	0.90	0.92	0.85	0.50	0.75	0.92	0.92	0.95	0.82
Adj. Flow (vph)	101	227	132	227	315	65	322	433	182	58	368	71
Shared Lane Traffic (%)												
Lane Group Flow (vph)	101	227	132	227	380	0	322	433	182	58	368	71
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	Right	L NA	Left	Right	L NA	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1		1	2	1	1	2	1
Detector Template								Thru	Right		Thru	Right
Leading Detector (ft)	40	40	0	40	40		40	100	20	40	100	20
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)	40	40	40	40	40		40	6	20	40	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)								94			94	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	pm+pt	NA	Free	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		Free	8			2		2	6		6

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	6.0		5.0	6.0		5.0	30.0	30.0	5.0	30.0	30.0
Minimum Split (s)	10.0	12.0		10.0	12.0		10.0	37.0	37.0	10.0	37.0	37.0
Total Split (s)	17.0	32.0		17.0	32.0		17.0	43.0	43.0	17.0	43.0	43.0
Total Split (%)	15.6%	29.4%		15.6%	29.4%		15.6%	39.4%	39.4%	15.6%	39.4%	39.4%
Maximum Green (s)	12.0	26.0		12.0	26.0		12.0	36.0	36.0	12.0	36.0	36.0
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0		5.0	6.0		5.0	7.0	7.0	5.0	7.0	7.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Act Effct Green (s)	31.6	21.1	104.0	36.2	25.8		54.6	43.3	43.3	45.4	36.1	36.1
Actuated g/C Ratio	0.30	0.20	1.00	0.35	0.25		0.52	0.42	0.42	0.44	0.35	0.35
v/c Ratio	0.39	0.60	0.08	0.62	0.83		0.69	0.56	0.24	0.14	0.57	0.11
Control Delay	25.9	44.4	0.1	31.6	54.2		25.2	29.2	4.4	14.7	32.9	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	25.9	44.4	0.1	31.6	54.2		25.2	29.2	4.4	14.7	32.9	0.6
LOS	C	D	A	C	D		C	C	A	B	C	A
Approach Delay		27.6			45.8			23.0			26.1	
Approach LOS		C			D			C			C	
Queue Length 50th (ft)	44	138	0	107	243		125	235	0	19	206	0
Queue Length 95th (ft)	76	216	0	168	#417		95	283	46	42	313	0
Internal Link Dist (ft)		654			612			747			512	
Turn Bay Length (ft)	265		330				455		400	435		435
Base Capacity (vph)	303	467	1583	371	462		464	776	765	489	647	634
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	0.33	0.49	0.08	0.61	0.82		0.69	0.56	0.24	0.12	0.57	0.11

Intersection Summary

Area Type: Other
Cycle Length: 109
Actuated Cycle Length: 104
Natural Cycle: 80
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 30.0 — Intersection LOS: C
Intersection Capacity Utilization 76.5% — ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: SH 83 & Walker Rd

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Level of Service Reports

Intersection
SH 83 + Walker Road/Highway 105

Scenario(s)
2045 Background + Site

Laneage on Walker Road/Highway 105
Same as Existing

Signal Timings
Modified from Existing

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	264	102	261	362	66	133	282	86	104	225	72
Future Volume (vph)	54	264	102	261	362	66	133	282	86	104	225	72
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	265		330	0		0	455		400	435		435
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	75			25			220			300		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.977				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	1881	1599	1787	1838	0	1787	1881	1599	1787	1881	1599
Flt Permitted	0.127			0.290			0.522			0.442		
Satd. Flow (perm)	239	1881	1599	546	1838	0	982	1881	1599	831	1881	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			250		10				180			180
Link Speed (mph)		45			35			60			60	
Link Distance (ft)		734			692			827			592	
Travel Time (s)		11.1			13.5			9.4			6.7	
Peak Hour Factor	0.79	0.75	1.00	0.77	0.66	0.66	0.95	0.93	0.89	0.81	0.91	0.93
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	68	352	102	339	548	100	140	303	97	128	247	77
Shared Lane Traffic (%)												
Lane Group Flow (vph)	68	352	102	339	648	0	140	303	97	128	247	77
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	Right	L NA	Left	Right	L NA	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1		1	2	1	1	2	1
Detector Template								Thru	Right		Thru	Right
Leading Detector (ft)	40	40	0	40	40		40	100	20	40	100	20
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)	40	40	40	40	40		40	6	20	40	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)								94			94	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	pm+pt	NA	Free	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	

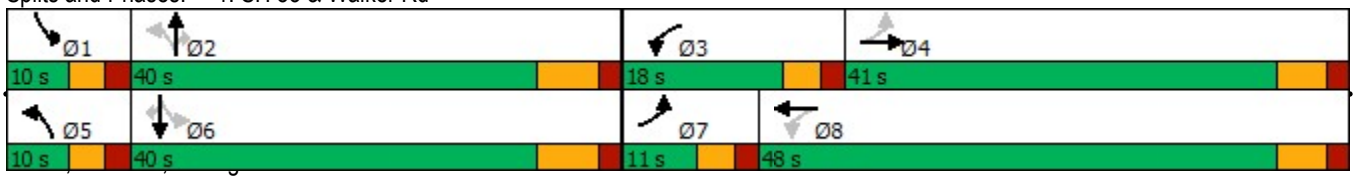
Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		Free	8			2		2	6		6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	6.0		5.0	6.0		5.0	30.0	30.0	5.0	30.0	30.0
Minimum Split (s)	10.0	12.0		10.0	12.0		10.0	37.0	37.0	10.0	37.0	37.0
Total Split (s)	11.0	41.0		18.0	48.0		10.0	40.0	40.0	10.0	40.0	40.0
Total Split (%)	10.1%	37.6%		16.5%	44.0%		9.2%	36.7%	36.7%	9.2%	36.7%	36.7%
Maximum Green (s)	6.0	35.0		13.0	42.0		5.0	33.0	33.0	5.0	33.0	33.0
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	1.0		1.0	1.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0		6.0	7.0		5.0	7.0	7.0	5.0	7.0	7.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Act Effct Green (s)	37.4	29.4	104.9	48.6	39.1		40.2	33.2	33.2	40.2	33.2	33.2
Actuated g/C Ratio	0.36	0.28	1.00	0.46	0.37		0.38	0.32	0.32	0.38	0.32	0.32
v/c Ratio	0.39	0.67	0.06	0.86	0.94		0.34	0.51	0.15	0.35	0.42	0.12
Control Delay	22.4	39.7	0.1	41.8	54.7		23.7	34.2	0.5	23.9	32.2	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.4	39.7	0.1	41.8	54.7		23.7	34.2	0.5	23.9	32.2	0.4
LOS	C	D	A	D	D		C	C	A	C	C	A
Approach Delay		29.7			50.3			25.4			24.4	
Approach LOS		C			D			C			C	
Queue Length 50th (ft)	24	207	0	145	424		61	176	0	56	138	0
Queue Length 95th (ft)	42	241	0	176	364		105	264	0	86	214	0
Internal Link Dist (ft)		654			612			747			512	
Turn Bay Length (ft)	265		330				455		400	435		435
Base Capacity (vph)	174	613	1599	395	728		415	595	629	364	595	629
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	0.39	0.57	0.06	0.86	0.89		0.34	0.51	0.15	0.35	0.42	0.12

Intersection Summary

Area Type: Other
Cycle Length: 109
Actuated Cycle Length: 104.9
Natural Cycle: 90
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.94
Intersection Signal Delay: 36.0 — Intersection LOS: D
Intersection Capacity Utilization 81.6% — ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 1: SH 83 & Walker Rd



Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	72	519	151	284	312	71	148	260	152	93	312	70
Future Volume (vph)	72	519	151	284	312	71	148	260	152	93	312	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	265		330	0		0	455		400	435		435
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	75			25			220			300		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.977				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1820	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.385			0.095			0.326			0.375		
Satd. Flow (perm)	717	1863	1583	177	1820	0	607	1863	1583	699	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			200		10				190			130
Link Speed (mph)		45			35			60			60	
Link Distance (ft)		734			692			827			592	
Travel Time (s)		11.1			13.5			9.4			6.7	
Peak Hour Factor	0.97	0.87	1.00	0.79	0.67	0.84	1.00	0.98	0.80	0.69	1.00	0.91
Adj. Flow (vph)	74	597	151	359	466	85	148	265	190	135	312	77
Shared Lane Traffic (%)												
Lane Group Flow (vph)	74	597	151	359	551	0	148	265	190	135	312	77
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	Right	L NA	Left	Right	L NA	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1		1	2	1	1	2	1
Detector Template								Thru	Right		Thru	Right
Leading Detector (ft)	40	40	0	40	40		40	100	20	40	100	20
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)	40	40	40	40	40		40	6	20	40	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)								94			94	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	pm+pt	NA	Free	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		Free	8			2		2	6		6

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Lanes, Volumes, Timings
1: SH 83 & Walker Rd

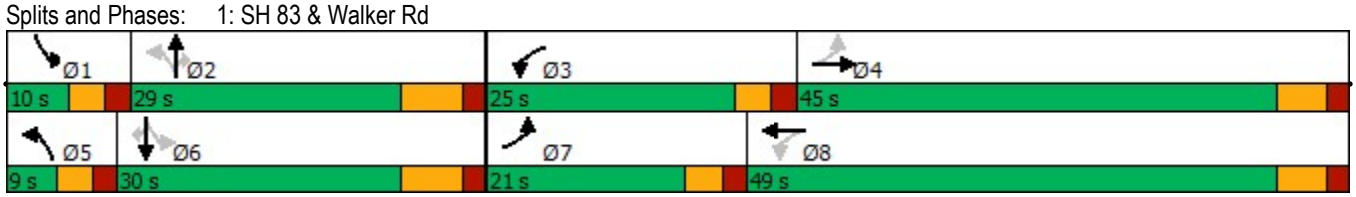
2045 Background + Site
School PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	6.0		5.0	6.0		5.0	30.0	30.0	5.0	30.0	30.0
Minimum Split (s)	10.0	12.0		10.0	12.0		10.0	37.0	37.0	10.0	37.0	37.0
Total Split (s)	21.0	45.0		25.0	49.0		9.0	29.0	29.0	10.0	30.0	30.0
Total Split (%)	19.3%	41.3%		22.9%	45.0%		8.3%	26.6%	26.6%	9.2%	27.5%	27.5%
Maximum Green (s)	16.0	39.0		20.0	43.0		4.0	22.0	22.0	5.0	23.0	23.0
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0		5.0	6.0		5.0	7.0	7.0	5.0	7.0	7.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Act Effct Green (s)	44.6	36.2	105.3	61.1	50.2		28.1	22.1	22.1	30.1	23.1	23.1
Actuated g/C Ratio	0.42	0.34	1.00	0.58	0.48		0.27	0.21	0.21	0.29	0.22	0.22
v/c Ratio	0.20	0.93	0.10	0.93	0.63		0.72	0.68	0.39	0.54	0.76	0.17
Control Delay	12.1	56.6	0.1	59.3	25.1		53.1	49.3	8.1	38.2	53.3	1.9
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.1	56.6	0.1	59.3	25.1		53.1	49.3	8.1	38.2	53.3	1.9
LOS	B	E	A	E	C		D	D	A	D	D	A
Approach Delay		42.2			38.6			37.3			41.8	
Approach LOS		D			D			D			D	
Queue Length 50th (ft)	20	391	0	190	276		77	174	0	70	208	0
Queue Length 95th (ft)	40	#564	0	#275	261		#162	#267	39	90	#342	8
Internal Link Dist (ft)		654			612			747			512	
Turn Bay Length (ft)	265		330				455		400	435		435
Base Capacity (vph)	523	692	1583	406	872		206	391	482	250	408	448
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	0.14	0.86	0.10	0.88	0.63		0.72	0.68	0.39	0.54	0.76	0.17

Intersection Summary			
Area Type:	Other		
Cycle Length: 109			
Actuated Cycle Length: 105.3			
Natural Cycle: 100			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.93			
Intersection Signal Delay: 39.9		Intersection LOS: D	
Intersection Capacity Utilization 95.4%		ICU Level of Service F	
Analysis Period (min) 15			

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: SH 83 & Walker Rd



Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	209	112	204	290	55	161	325	167	53	350	58
Future Volume (vph)	86	209	112	204	290	55	161	325	167	53	350	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	265		330	0		0	455		400	435		435
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	75			25			220			300		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.974				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1814	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.249			0.385			0.341			0.416		
Satd. Flow (perm)	464	1863	1583	717	1814	0	635	1863	1583	775	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			200		9				182			130
Link Speed (mph)		45			35			60			60	
Link Distance (ft)		734			692			827			592	
Travel Time (s)		11.1			13.5			9.4			6.7	
Peak Hour Factor	0.85	0.92	0.85	0.90	0.92	0.85	0.50	0.75	0.92	0.92	0.95	0.82
Adj. Flow (vph)	101	227	132	227	315	65	322	433	182	58	368	71
Shared Lane Traffic (%)												
Lane Group Flow (vph)	101	227	132	227	380	0	322	433	182	58	368	71
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	Right	L NA	Left	Right	L NA	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1		1	2	1	1	2	1
Detector Template								Thru	Right		Thru	Right
Leading Detector (ft)	40	40	0	40	40		40	100	20	40	100	20
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)	40	40	40	40	40		40	6	20	40	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)								94			94	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	pm+pt	NA	Free	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		Free	8			2		2	6		6

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	6.0		5.0	6.0		5.0	30.0	30.0	5.0	30.0	30.0
Minimum Split (s)	10.0	12.0		10.0	12.0		10.0	37.0	37.0	10.0	37.0	37.0
Total Split (s)	17.0	32.0		17.0	32.0		17.0	43.0	43.0	17.0	43.0	43.0
Total Split (%)	15.6%	29.4%		15.6%	29.4%		15.6%	39.4%	39.4%	15.6%	39.4%	39.4%
Maximum Green (s)	12.0	26.0		12.0	26.0		12.0	36.0	36.0	12.0	36.0	36.0
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0		5.0	6.0		5.0	7.0	7.0	5.0	7.0	7.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Act Effct Green (s)	31.6	21.1	104.0	36.2	25.8		54.6	43.3	43.3	45.4	36.1	36.1
Actuated g/C Ratio	0.30	0.20	1.00	0.35	0.25		0.52	0.42	0.42	0.44	0.35	0.35
v/c Ratio	0.39	0.60	0.08	0.62	0.83		0.69	0.56	0.24	0.14	0.57	0.11
Control Delay	25.9	44.4	0.1	31.6	54.2		25.2	29.2	4.4	14.7	32.9	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	25.9	44.4	0.1	31.6	54.2		25.2	29.2	4.4	14.7	32.9	0.6
LOS	C	D	A	C	D		C	C	A	B	C	A
Approach Delay		27.6			45.8			23.0			26.1	
Approach LOS		C			D			C			C	
Queue Length 50th (ft)	44	138	0	107	243		125	235	0	19	206	0
Queue Length 95th (ft)	76	216	0	168	#417		95	283	46	42	313	0
Internal Link Dist (ft)		654			612			747			512	
Turn Bay Length (ft)	265		330				455		400	435		435
Base Capacity (vph)	303	467	1583	371	462		464	776	765	489	647	634
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	0.33	0.49	0.08	0.61	0.82		0.69	0.56	0.24	0.12	0.57	0.11

Intersection Summary

Area Type: Other
Cycle Length: 109
Actuated Cycle Length: 104
Natural Cycle: 80
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 30.0 — Intersection LOS: C
Intersection Capacity Utilization 76.5% — ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: SH 83 & Walker Rd

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Level of Service Reports

Intersection
SH 83 + Walker Road/Highway 105

Scenario(s)
2026 Background + Site

Laneage on Walker Road/Highway 105
1 Westbound-Left Lane
2 Westbound-Through Lanes
1 Eastbound-Through Lane

Signal Timings
Same as Existing

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	165	102	193	283	52	133	282	15	68	225	41
Future Volume (vph)	31	165	102	193	283	52	133	282	15	68	225	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	265		330	0		0	455		400	435		435
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	75			25			220			300		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.977				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	1881	1599	1787	3492	0	1787	1881	1599	1787	1881	1599
Flt Permitted	0.426			0.306			0.513			0.532		
Satd. Flow (perm)	801	1881	1599	576	3492	0	965	1881	1599	1001	1881	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			200		18				130			130
Link Speed (mph)		45			35			60			60	
Link Distance (ft)		734			692			827			592	
Travel Time (s)		11.1			13.5			9.4			6.7	
Peak Hour Factor	0.70	0.65	1.00	0.71	0.59	0.59	0.95	0.93	0.75	0.76	0.91	0.93
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	44	254	102	272	480	88	140	303	20	89	247	44
Shared Lane Traffic (%)												
Lane Group Flow (vph)	44	254	102	272	568	0	140	303	20	89	247	44
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1		1	2	1	1	2	1
Detector Template								Thru	Right		Thru	Right
Leading Detector (ft)	40	40	0	40	40		40	100	20	40	100	20
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)	40	40	40	40	40		40	6	20	40	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)								94			94	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	pm+pt	NA	Free	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Lanes, Volumes, Timings
1: SH 83 & Walker Rd

ST Baseline + Site
AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		Free	8			2		2	6		6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	6.0		5.0	6.0		5.0	30.0	30.0	5.0	30.0	30.0
Minimum Split (s)	10.0	12.0		10.0	12.0		10.0	37.0	37.0	10.0	37.0	37.0
Total Split (s)	17.0	32.0		17.0	32.0		17.0	43.0	43.0	17.0	43.0	43.0
Total Split (%)	15.6%	29.4%		15.6%	29.4%		15.6%	39.4%	39.4%	15.6%	39.4%	39.4%
Maximum Green (s)	12.0	26.0		12.0	26.0		12.0	36.0	36.0	12.0	36.0	36.0
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	1.0		1.0	1.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0		6.0	7.0		5.0	7.0	7.0	5.0	7.0	7.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Act Effct Green (s)	26.5	17.4	99.2	34.3	27.0		50.1	40.1	40.1	46.2	36.2	36.2
Actuated g/C Ratio	0.27	0.18	1.00	0.35	0.27		0.51	0.40	0.40	0.47	0.36	0.36
v/c Ratio	0.15	0.77	0.06	0.82	0.59		0.25	0.40	0.03	0.17	0.36	0.07
Control Delay	22.0	54.9	0.1	46.8	34.5		14.0	25.4	0.1	13.7	26.4	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.0	54.9	0.1	46.8	34.5		14.0	25.4	0.1	13.7	26.4	0.2
LOS	C	D	A	D	C		B	C	A	B	C	A
Approach Delay		37.3			38.5			20.9			20.4	
Approach LOS		D			D			C			C	
Queue Length 50th (ft)	18	154	0	129	168		43	139	0	26	113	0
Queue Length 95th (ft)	32	166	0	153	142		87	247	0	49	204	0
Internal Link Dist (ft)		654			612			747			512	
Turn Bay Length (ft)	265		330				455		400	435		435
Base Capacity (vph)	374	476	1599	333	980		601	761	724	602	686	665
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.53	0.06	0.82	0.58		0.23	0.40	0.03	0.15	0.36	0.07

Intersection Summary

Area Type: Other
Cycle Length: 109
Actuated Cycle Length: 99.2
Natural Cycle: 80
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 31.1 — Intersection LOS: C
Intersection Capacity Utilization 72.6% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 1: SH 83 & Walker Rd

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	296	151	190	208	46	148	260	64	58	312	40
Future Volume (vph)	41	296	151	190	208	46	148	260	64	58	312	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	265		330	0		0	455		400	435		435
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	75			25			220			300		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.980				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	3468	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.499			0.209			0.434			0.535		
Satd. Flow (perm)	930	1863	1583	389	3468	0	808	1863	1583	997	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			200		15				130			130
Link Speed (mph)		45			35			60			60	
Link Distance (ft)		734			692			827			592	
Travel Time (s)		11.1			13.5			9.4			6.7	
Peak Hour Factor	1.00	0.84	1.00	0.73	0.55	0.80	1.00	0.98	0.63	0.55	1.00	0.91
Adj. Flow (vph)	41	352	151	260	378	58	148	265	102	105	312	44
Shared Lane Traffic (%)												
Lane Group Flow (vph)	41	352	151	260	436	0	148	265	102	105	312	44
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1		1	2	1	1	2	1
Detector Template								Thru	Right		Thru	Right
Leading Detector (ft)	40	40	0	40	40		40	100	20	40	100	20
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)	40	40	40	40	40		40	6	20	40	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)								94			94	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	pm+pt	NA	Free	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		Free	8			2		2	6		6

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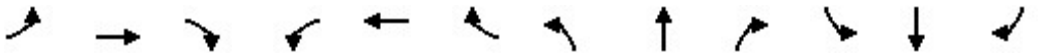
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	6.0		5.0	6.0		5.0	30.0	30.0	5.0	30.0	30.0
Minimum Split (s)	10.0	12.0		10.0	12.0		10.0	37.0	37.0	10.0	37.0	37.0
Total Split (s)	17.0	32.0		17.0	32.0		17.0	43.0	43.0	17.0	43.0	43.0
Total Split (%)	15.6%	29.4%		15.6%	29.4%		15.6%	39.4%	39.4%	15.6%	39.4%	39.4%
Maximum Green (s)	12.0	26.0		12.0	26.0		12.0	36.0	36.0	12.0	36.0	36.0
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0		5.0	6.0		5.0	7.0	7.0	5.0	7.0	7.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Act Effct Green (s)	31.1	23.1	104.3	40.7	32.7		49.3	37.3	37.3	46.9	36.1	36.1
Actuated g/C Ratio	0.30	0.22	1.00	0.39	0.31		0.47	0.36	0.36	0.45	0.35	0.35
v/c Ratio	0.12	0.85	0.10	0.84	0.40		0.31	0.40	0.16	0.21	0.48	0.07
Control Delay	21.1	59.3	0.1	48.1	29.9		16.3	28.4	2.9	15.3	30.9	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.1	59.3	0.1	48.1	29.9		16.3	28.4	2.9	15.3	30.9	0.2
LOS	C	E	A	D	C		B	C	A	B	C	A
Approach Delay		40.0			36.7			19.8			24.4	
Approach LOS		D			D			B			C	
Queue Length 50th (ft)	17	228	0	122	123		54	137	0	37	170	0
Queue Length 95th (ft)	40	312	0	149	99		91	219	0	40	261	0
Internal Link Dist (ft)		654			612			747			512	
Turn Bay Length (ft)	265		330				455		400	435		435
Base Capacity (vph)	419	465	1583	311	1098		507	666	649	568	644	632
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	0.10	0.76	0.10	0.84	0.40		0.29	0.40	0.16	0.18	0.48	0.07

Intersection Summary			
Area Type:	Other		
Cycle Length: 109			
Actuated Cycle Length: 104.3			
Natural Cycle: 80			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 31.0		Intersection LOS: C	
Intersection Capacity Utilization 78.5%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 1: SH 83 & Walker Rd

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	87	112	56	78	15	161	325	34	29	350	33
Future Volume (vph)	49	87	112	56	78	15	161	325	34	29	350	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	265		330	0		0	455		400	435		435
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	75			25			220			300		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.973				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	3444	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.686			0.687			0.420			0.511		
Satd. Flow (perm)	1278	1863	1583	1280	3444	0	782	1863	1583	952	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			200		19				130			130
Link Speed (mph)		45			35			60			60	
Link Distance (ft)		734			692			827			592	
Travel Time (s)		11.1			13.5			9.4			6.7	
Peak Hour Factor	0.80	0.92	0.85	0.88	0.92	0.78	0.85	0.75	0.92	0.92	0.95	0.75
Adj. Flow (vph)	61	95	132	64	85	19	189	433	37	32	368	44
Shared Lane Traffic (%)												
Lane Group Flow (vph)	61	95	132	64	104	0	189	433	37	32	368	44
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1		1	2	1	1	2	1
Detector Template								Thru	Right		Thru	Right
Leading Detector (ft)	40	40	0	40	40		40	100	20	40	100	20
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)	40	40	40	40	40		40	6	20	40	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)								94			94	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	pm+pt	NA	Free	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		Free	8			2		2	6		6

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	6.0		5.0	6.0		5.0	30.0	30.0	5.0	30.0	30.0
Minimum Split (s)	10.0	12.0		10.0	12.0		10.0	37.0	37.0	10.0	37.0	37.0
Total Split (s)	17.0	32.0		17.0	32.0		17.0	43.0	43.0	17.0	43.0	43.0
Total Split (%)	15.6%	29.4%		15.6%	29.4%		15.6%	39.4%	39.4%	15.6%	39.4%	39.4%
Maximum Green (s)	12.0	26.0		12.0	26.0		12.0	36.0	36.0	12.0	36.0	36.0
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0		5.0	6.0		5.0	7.0	7.0	5.0	7.0	7.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Act Effct Green (s)	16.4	9.7	82.2	16.6	9.8		54.5	48.5	48.5	45.9	37.5	37.5
Actuated g/C Ratio	0.20	0.12	1.00	0.20	0.12		0.66	0.59	0.59	0.56	0.46	0.46
v/c Ratio	0.20	0.43	0.08	0.21	0.24		0.30	0.39	0.04	0.05	0.43	0.06
Control Delay	25.6	43.2	0.1	25.7	31.6		9.1	16.7	0.1	8.5	21.0	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.6	43.2	0.1	25.7	31.6		9.1	16.7	0.1	8.5	21.0	0.1
LOS	C	D	A	C	C		A	B	A	A	C	A
Approach Delay		19.7			29.4			13.6			18.1	
Approach LOS		B			C			B			B	
Queue Length 50th (ft)	25	49	0	26	22		41	160	0	6	143	0
Queue Length 95th (ft)	49	101	0	57	48		78	218	0	20	256	0
Internal Link Dist (ft)		654			612			747			512	
Turn Bay Length (ft)	265		330				455		400	435		435
Base Capacity (vph)	403	613	1583	404	1147		670	1099	987	725	849	792
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	0.15	0.15	0.08	0.16	0.09		0.28	0.39	0.04	0.04	0.43	0.06

Intersection Summary			
Area Type:	Other		
Cycle Length: 109			
Actuated Cycle Length: 82.2			
Natural Cycle: 70			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.43			
Intersection Signal Delay: 17.7		Intersection LOS: B	
Intersection Capacity Utilization 58.7%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 1: SH 83 & Walker Rd

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Level of Service Reports

Intersection
SH 83 + Walker Road/Highway 105

Scenario(s)
Short-Term Baseline + Site
2045 Background + Site

Laneage on Walker Road/Highway 105
1 Westbound-Left Lane
2 Westbound-Through Lanes
1 Eastbound-Through Lane

Signal Timings
Modified from Existing

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

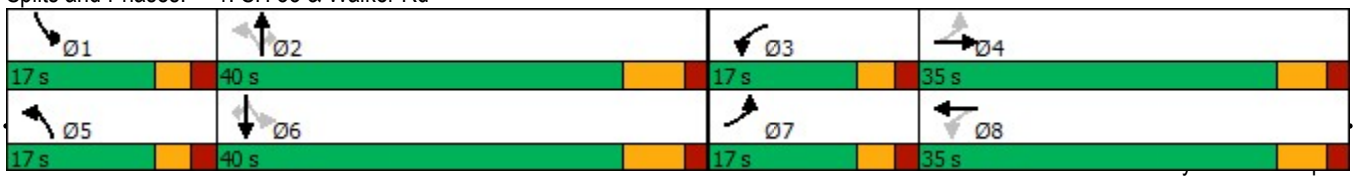
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	296	151	190	208	46	148	260	64	58	312	40
Future Volume (vph)	41	296	151	190	208	46	148	260	64	58	312	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	265		330	0		0	455		400	435		435
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	75			25			220			300		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.980				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	3468	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.499			0.227			0.424			0.527		
Satd. Flow (perm)	930	1863	1583	423	3468	0	790	1863	1583	982	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			200		15				130			130
Link Speed (mph)		45			35			60			60	
Link Distance (ft)		734			692			827			592	
Travel Time (s)		11.1			13.5			9.4			6.7	
Peak Hour Factor	1.00	0.84	1.00	0.73	0.55	0.80	1.00	0.98	0.63	0.55	1.00	0.91
Adj. Flow (vph)	41	352	151	260	378	58	148	265	102	105	312	44
Shared Lane Traffic (%)												
Lane Group Flow (vph)	41	352	151	260	436	0	148	265	102	105	312	44
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1		1	2	1	1	2	1
Detector Template								Thru	Right		Thru	Right
Leading Detector (ft)	40	40	0	40	40		40	100	20	40	100	20
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)	40	40	40	40	40		40	6	20	40	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)								94			94	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	pm+pt	NA	Free	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		Free	8			2		2	6		6

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	6.0		5.0	6.0		5.0	30.0	30.0	5.0	30.0	30.0
Minimum Split (s)	10.0	12.0		10.0	12.0		10.0	37.0	37.0	10.0	37.0	37.0
Total Split (s)	17.0	35.0		17.0	35.0		17.0	40.0	40.0	17.0	40.0	40.0
Total Split (%)	15.6%	32.1%		15.6%	32.1%		15.6%	36.7%	36.7%	15.6%	36.7%	36.7%
Maximum Green (s)	12.0	29.0		12.0	29.0		12.0	33.0	33.0	12.0	33.0	33.0
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0		5.0	6.0		5.0	7.0	7.0	5.0	7.0	7.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Act Effct Green (s)	31.3	23.3	101.4	40.8	32.9		46.2	34.3	34.3	44.0	33.2	33.2
Actuated g/C Ratio	0.31	0.23	1.00	0.40	0.32		0.46	0.34	0.34	0.43	0.33	0.33
v/c Ratio	0.12	0.82	0.10	0.80	0.38		0.32	0.42	0.16	0.21	0.51	0.07
Control Delay	19.5	53.6	0.1	41.1	28.0		17.4	30.1	3.2	16.3	32.7	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.5	53.6	0.1	41.1	28.0		17.4	30.1	3.2	16.3	32.7	0.2
LOS	B	D	A	D	C		B	C	A	B	C	A
Approach Delay		36.2			32.9			21.1			25.9	
Approach LOS		D			C			C			C	
Queue Length 50th (ft)	16	218	0	115	117		52	134	0	36	166	0
Queue Length 95th (ft)	38	300	0	141	95		97	230	0	42	273	0
Internal Link Dist (ft)		654			612			747			512	
Turn Bay Length (ft)	265		330				455		400	435		435
Base Capacity (vph)	433	535	1583	330	1136		491	629	621	551	609	605
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	0.09	0.66	0.10	0.79	0.38		0.30	0.42	0.16	0.19	0.51	0.07

Intersection Summary			
Area Type:	Other		
Cycle Length: 109			
Actuated Cycle Length: 101.4			
Natural Cycle: 80			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.82			
Intersection Signal Delay: 29.5		Intersection LOS: C	
Intersection Capacity Utilization 78.5%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 1: SH 83 & Walker Rd



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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	264	102	261	362	66	133	282	86	104	225	72
Future Volume (vph)	54	264	102	261	362	66	133	282	86	104	225	72
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	265		330	0		0	455		400	435		435
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	75			25			220			300		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.977				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	3574	1599	1787	3492	0	1787	3574	1599	1787	3574	1599
Flt Permitted	0.358			0.322			0.594			0.567		
Satd. Flow (perm)	673	3574	1599	606	3492	0	1117	3574	1599	1067	3574	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			200		18				130			130
Link Speed (mph)		45			35			60			60	
Link Distance (ft)		734			692			827			592	
Travel Time (s)		11.1			13.5			9.4			6.7	
Peak Hour Factor	0.79	0.75	1.00	0.77	0.66	0.66	0.95	0.93	0.89	0.81	0.91	0.93
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	68	352	102	339	548	100	140	303	97	128	247	77
Shared Lane Traffic (%)												
Lane Group Flow (vph)	68	352	102	339	648	0	140	303	97	128	247	77
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	Right	L NA	Left	Right	L NA	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1		1	2	1	1	2	1
Detector Template								Thru	Right		Thru	Right
Leading Detector (ft)	40	40	0	40	40		40	100	20	40	100	20
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)	40	40	40	40	40		40	6	20	40	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)								94			94	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	pm+pt	NA	Free	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	

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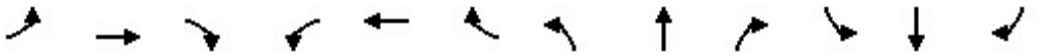


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		Free	8			2		2	6		6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	6.0		5.0	6.0		5.0	30.0	30.0	5.0	30.0	30.0
Minimum Split (s)	10.0	12.0		10.0	12.0		10.0	37.0	37.0	10.0	37.0	37.0
Total Split (s)	17.0	28.0		21.0	32.0		17.0	43.0	43.0	17.0	43.0	43.0
Total Split (%)	15.6%	25.7%		19.3%	29.4%		15.6%	39.4%	39.4%	15.6%	39.4%	39.4%
Maximum Green (s)	12.0	22.0		16.0	26.0		12.0	36.0	36.0	12.0	36.0	36.0
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	1.0		1.0	1.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0		6.0	7.0		5.0	7.0	7.0	5.0	7.0	7.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Act Effct Green (s)	24.6	14.6	99.9	36.2	24.6		47.9	36.4	36.4	47.3	36.1	36.1
Actuated g/C Ratio	0.25	0.15	1.00	0.36	0.25		0.48	0.36	0.36	0.47	0.36	0.36
v/c Ratio	0.27	0.68	0.06	0.86	0.74		0.23	0.23	0.15	0.22	0.19	0.12
Control Delay	24.0	47.5	0.1	48.9	41.0		14.1	23.7	2.5	14.1	23.5	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.0	47.5	0.1	48.9	41.0		14.1	23.7	2.5	14.1	23.5	1.1
LOS	C	D	A	D	D		B	C	A	B	C	A
Approach Delay		35.1			43.7			17.4			17.0	
Approach LOS		D			D			B			B	
Queue Length 50th (ft)	28	113	0	167	202		44	69	0	39	56	0
Queue Length 95th (ft)	50	134	0	#212	191		84	114	19	69	95	6
Internal Link Dist (ft)		654			612			747			512	
Turn Bay Length (ft)	265		330				455		400	435		435
Base Capacity (vph)	327	753	1599	397	920		643	1303	665	622	1292	661
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	0.47	0.06	0.85	0.70		0.22	0.23	0.15	0.21	0.19	0.12

Intersection Summary			
Area Type:	Other		
Cycle Length: 109			
Actuated Cycle Length: 99.9			
Natural Cycle: 80			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.86			
Intersection Signal Delay: 31.4		Intersection LOS: C	
Intersection Capacity Utilization 75.0%		ICU Level of Service D	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Splits and Phases: 1: SH 83 & Walker Rd

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	72	519	151	284	312	71	148	260	152	93	312	70
Future Volume (vph)	72	519	151	284	312	71	148	260	152	93	312	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	265		330	0		0	455		400	435		435
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	75			25			220			300		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.977				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3458	0	1770	3539	1583	1770	3539	1583
Flt Permitted	0.446			0.159			0.549			0.588		
Satd. Flow (perm)	831	3539	1583	296	3458	0	1023	3539	1583	1095	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			250		19				190			180
Link Speed (mph)		45			35			60			60	
Link Distance (ft)		734			692			827			592	
Travel Time (s)		11.1			13.5			9.4			6.7	
Peak Hour Factor	0.97	0.87	1.00	0.79	0.67	0.84	1.00	0.98	0.80	0.69	1.00	0.91
Adj. Flow (vph)	74	597	151	359	466	85	148	265	190	135	312	77
Shared Lane Traffic (%)												
Lane Group Flow (vph)	74	597	151	359	551	0	148	265	190	135	312	77
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	Right	L NA	Left	Right	L NA	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1		1	2	1	1	2	1
Detector Template								Thru	Right		Thru	Right
Leading Detector (ft)	40	40	0	40	40		40	100	20	40	100	20
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)	40	40	40	40	40		40	6	20	40	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)								94			94	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	pm+pt	NA	Free	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		Free	8			2		2	6		6

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Lanes, Volumes, Timings
1: SH 83 & Walker Rd

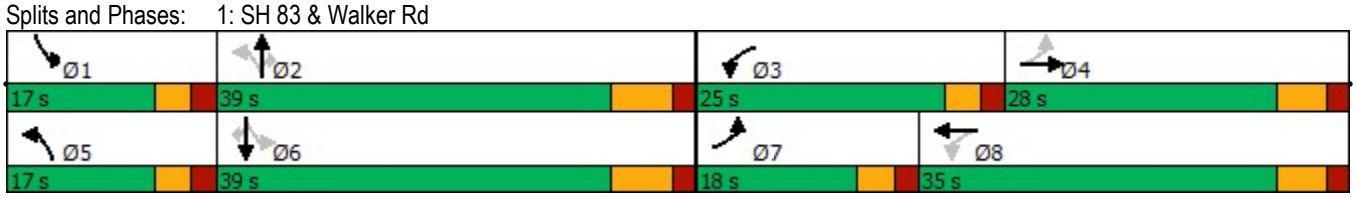
2045 Background + Site
School PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	6.0		5.0	6.0		5.0	30.0	30.0	5.0	30.0	30.0
Minimum Split (s)	10.0	12.0		10.0	12.0		10.0	37.0	37.0	10.0	37.0	37.0
Total Split (s)	18.0	28.0		25.0	35.0		17.0	39.0	39.0	17.0	39.0	39.0
Total Split (%)	16.5%	25.7%		22.9%	32.1%		15.6%	35.8%	35.8%	15.6%	35.8%	35.8%
Maximum Green (s)	13.0	22.0		20.0	29.0		12.0	32.0	32.0	12.0	32.0	32.0
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0		5.0	6.0		5.0	7.0	7.0	5.0	7.0	7.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Act Effct Green (s)	29.8	20.7	105.3	46.0	34.3		44.6	32.4	32.4	43.9	32.1	32.1
Actuated g/C Ratio	0.28	0.20	1.00	0.44	0.33		0.42	0.31	0.31	0.42	0.30	0.30
v/c Ratio	0.24	0.86	0.10	0.90	0.48		0.29	0.24	0.31	0.26	0.29	0.13
Control Delay	21.0	54.5	0.1	53.3	30.4		18.6	28.8	5.7	18.2	29.6	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	21.0	54.5	0.1	53.3	30.4		18.6	28.8	5.7	18.2	29.6	0.4
LOS	C	D	A	D	C		B	C	A	B	C	A
Approach Delay		41.5			39.4			19.0			22.4	
Approach LOS		D			D			B			C	
Queue Length 50th (ft)	29	209	0	184	156		58	72	0	53	87	0
Queue Length 95th (ft)	58	#270	0	#271	153		99	109	34	68	127	0
Internal Link Dist (ft)		654			612			747			512	
Turn Bay Length (ft)	265		330				455		400	435		435
Base Capacity (vph)	390	741	1583	409	1137		536	1089	619	556	1078	607
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	0.19	0.81	0.10	0.88	0.48		0.28	0.24	0.31	0.24	0.29	0.13

Intersection Summary			
Area Type:	Other		
Cycle Length: 109			
Actuated Cycle Length: 105.3			
Natural Cycle: 90			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.90			
Intersection Signal Delay: 32.6		Intersection LOS: C	
Intersection Capacity Utilization 82.4%		ICU Level of Service E	
Analysis Period (min) 15			

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: SH 83 & Walker Rd



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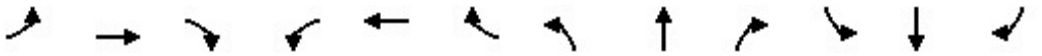

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	209	112	204	290	55	161	325	167	53	350	58
Future Volume (vph)	86	209	112	204	290	55	161	325	167	53	350	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	265		330	0		0	455		400	435		435
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	75			25			220			300		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.974				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3447	0	1770	3539	1583	1770	3539	1583
Flt Permitted	0.515			0.485			0.466			0.500		
Satd. Flow (perm)	959	3539	1583	903	3447	0	868	3539	1583	931	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			200		21				182			130
Link Speed (mph)		45			35			60			60	
Link Distance (ft)		734			692			827			592	
Travel Time (s)		11.1			13.5			9.4			6.7	
Peak Hour Factor	0.85	0.92	0.85	0.90	0.92	0.85	0.50	0.75	0.92	0.92	0.95	0.82
Adj. Flow (vph)	101	227	132	227	315	65	322	433	182	58	368	71
Shared Lane Traffic (%)												
Lane Group Flow (vph)	101	227	132	227	380	0	322	433	182	58	368	71
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	Right	L NA	Left	Right	L NA	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1		1	2	1	1	2	1
Detector Template								Thru	Right		Thru	Right
Leading Detector (ft)	40	40	0	40	40		40	100	20	40	100	20
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)	40	40	40	40	40		40	6	20	40	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)								94			94	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	pm+pt	NA	Free	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		Free	8			2		2	6		6

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	6.0		5.0	6.0		5.0	30.0	30.0	5.0	30.0	30.0
Minimum Split (s)	10.0	12.0		10.0	12.0		10.0	37.0	37.0	10.0	37.0	37.0
Total Split (s)	17.0	32.0		17.0	32.0		17.0	43.0	43.0	17.0	43.0	43.0
Total Split (%)	15.6%	29.4%		15.6%	29.4%		15.6%	39.4%	39.4%	15.6%	39.4%	39.4%
Maximum Green (s)	12.0	26.0		12.0	26.0		12.0	36.0	36.0	12.0	36.0	36.0
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0		5.0	6.0		5.0	7.0	7.0	5.0	7.0	7.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Act Effct Green (s)	23.6	13.3	96.0	28.5	18.0		54.6	43.4	43.4	45.0	36.1	36.1
Actuated g/C Ratio	0.25	0.14	1.00	0.30	0.19		0.57	0.45	0.45	0.47	0.38	0.38
v/c Ratio	0.32	0.46	0.08	0.61	0.57		0.53	0.27	0.22	0.12	0.28	0.11
Control Delay	26.0	40.9	0.1	33.1	38.4		15.4	18.8	3.9	11.4	22.4	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	26.0	40.9	0.1	33.1	38.4		15.4	18.8	3.9	11.4	22.4	0.6
LOS	C	D	A	C	D		B	B	A	B	C	A
Approach Delay		26.0			36.4			14.8			18.0	
Approach LOS		C			D			B			B	
Queue Length 50th (ft)	44	68	0	107	109		95	87	0	14	80	0
Queue Length 95th (ft)	77	104	0	170	161		84	116	43	37	130	0
Internal Link Dist (ft)		654			612			747			512	
Turn Bay Length (ft)	265		330				455		400	435		435
Base Capacity (vph)	364	961	1583	376	951		606	1598	815	591	1330	676
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	0.28	0.24	0.08	0.60	0.40		0.53	0.27	0.22	0.10	0.28	0.11

Intersection Summary			
Area Type:	Other		
Cycle Length: 109			
Actuated Cycle Length: 96			
Natural Cycle: 70			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.61			
Intersection Signal Delay: 22.7		Intersection LOS: C	
Intersection Capacity Utilization 70.2%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: SH 83 & Walker Rd

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Level of Service Reports

Intersection
SH 83 + Walker Road/Highway 105

Scenario(s)
2045 Background + Site

Laneage on Walker Road/Highway 105
1 Westbound-Left Lane
2 Westbound-Through Lanes
2 Eastbound-Through Lanes

Signal Timings
Same as Existing

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	252	102	194	325	59	133	282	79	102	225	72
Future Volume (vph)	54	252	102	194	325	59	133	282	79	102	225	72
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	265		330	0		255	455		400	435		435
Storage Lanes	1		1	2		0	1		1	1		1
Taper Length (ft)	75			25			220			300		
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.977				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	3574	1599	3467	3492	0	1787	3574	1599	1787	3574	1599
Flt Permitted	0.292			0.412			0.592			0.567		
Satd. Flow (perm)	549	3574	1599	1504	3492	0	1114	3574	1599	1067	3574	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			200		18				130			130
Link Speed (mph)		45			35			60			60	
Link Distance (ft)		734			692			827			592	
Travel Time (s)		11.1			13.5			9.4			6.7	
Peak Hour Factor	0.79	0.74	1.00	0.71	0.63	0.63	0.95	0.93	0.89	0.81	0.91	0.93
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	68	341	102	273	516	94	140	303	89	126	247	77
Shared Lane Traffic (%)												
Lane Group Flow (vph)	68	341	102	273	610	0	140	303	89	126	247	77
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1		1	2	1	1	2	1
Detector Template								Thru	Right		Thru	Right
Leading Detector (ft)	40	40	0	40	40		40	100	20	40	100	20
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)	40	40	40	40	40		40	6	20	40	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)								94			94	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	pm+pt	NA	Free	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		Free	8			2		2	6		6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	6.0		5.0	6.0		5.0	30.0	30.0	5.0	30.0	30.0
Minimum Split (s)	10.0	12.0		10.0	12.0		10.0	37.0	37.0	10.0	37.0	37.0
Total Split (s)	17.0	32.0		17.0	32.0		17.0	43.0	43.0	17.0	43.0	43.0
Total Split (%)	15.6%	29.4%		15.6%	29.4%		15.6%	39.4%	39.4%	15.6%	39.4%	39.4%
Maximum Green (s)	12.0	26.0		12.0	26.0		12.0	36.0	36.0	12.0	36.0	36.0
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	1.0		1.0	1.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0		6.0	7.0		5.0	7.0	7.0	5.0	7.0	7.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Act Effct Green (s)	27.6	17.4	97.8	31.1	22.3		48.0	36.6	36.6	47.3	36.3	36.3
Actuated g/C Ratio	0.28	0.18	1.00	0.32	0.23		0.49	0.37	0.37	0.48	0.37	0.37
v/c Ratio	0.26	0.54	0.06	0.41	0.75		0.23	0.23	0.13	0.22	0.19	0.11
Control Delay	23.5	39.7	0.1	24.3	41.9		13.8	23.1	2.0	13.7	23.0	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.5	39.7	0.1	24.3	41.9		13.8	23.1	2.0	13.7	23.0	1.1
LOS	C	D	A	C	D		B	C	A	B	C	A
Approach Delay		29.7			36.5			17.1			16.7	
Approach LOS		C			D			B			B	
Queue Length 50th (ft)	28	102	0	60	187		42	67	0	38	54	0
Queue Length 95th (ft)	50	122	0	71	170		85	115	14	69	95	6
Internal Link Dist (ft)		654			612			747			512	
Turn Bay Length (ft)	265		330				455		400	435		435
Base Capacity (vph)	330	921	1599	711	913		659	1339	680	637	1326	675
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	0.37	0.06	0.38	0.67		0.21	0.23	0.13	0.20	0.19	0.11

Intersection Summary

Area Type: Other
Cycle Length: 109
Actuated Cycle Length: 97.8
Natural Cycle: 75
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.75
Intersection Signal Delay: 26.9 — Intersection LOS: C
Intersection Capacity Utilization 67.4% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 1: SH 83 & Walker Rd

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	72	489	151	242	289	67	148	260	144	88	312	70
Future Volume (vph)	72	489	151	242	289	67	148	260	144	88	312	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	265		330	0		255	455		400	435		435
Storage Lanes	1		1	2		0	1		1	1		1
Taper Length (ft)	75			25			220			300		
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.977				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	3433	3458	0	1770	3539	1583	1770	3539	1583
Flt Permitted	0.381			0.206			0.553			0.588		
Satd. Flow (perm)	710	3539	1583	744	3458	0	1030	3539	1583	1095	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			200		18				182			130
Link Speed (mph)		45			35			60			60	
Link Distance (ft)		734			692			827			592	
Travel Time (s)		11.1			13.5			9.4			6.7	
Peak Hour Factor	0.97	0.87	1.00	0.77	0.65	0.84	1.00	0.98	0.79	0.68	1.00	0.91
Adj. Flow (vph)	74	562	151	314	445	80	148	265	182	129	312	77
Shared Lane Traffic (%)												
Lane Group Flow (vph)	74	562	151	314	525	0	148	265	182	129	312	77
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1		1	2	1	1	2	1
Detector Template								Thru	Right		Thru	Right
Leading Detector (ft)	40	40	0	40	40		40	100	20	40	100	20
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)	40	40	40	40	40		40	6	20	40	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)								94			94	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	pm+pt	NA	Free	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		Free	8			2		2	6		6

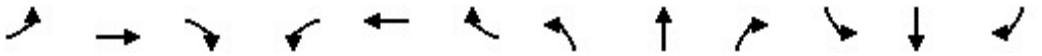
Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	6.0		5.0	6.0		5.0	30.0	30.0	5.0	30.0	30.0
Minimum Split (s)	10.0	12.0		10.0	12.0		10.0	37.0	37.0	10.0	37.0	37.0
Total Split (s)	17.0	32.0		17.0	32.0		17.0	43.0	43.0	17.0	43.0	43.0
Total Split (%)	15.6%	29.4%		15.6%	29.4%		15.6%	39.4%	39.4%	15.6%	39.4%	39.4%
Maximum Green (s)	12.0	26.0		12.0	26.0		12.0	36.0	36.0	12.0	36.0	36.0
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0		5.0	6.0		5.0	7.0	7.0	5.0	7.0	7.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Act Effct Green (s)	30.0	20.8	100.9	36.0	26.0		48.5	36.8	36.8	47.4	36.2	36.2
Actuated g/C Ratio	0.30	0.21	1.00	0.36	0.26		0.48	0.36	0.36	0.47	0.36	0.36
v/c Ratio	0.25	0.77	0.10	0.56	0.58		0.26	0.21	0.26	0.22	0.25	0.12
Control Delay	23.0	45.8	0.1	25.8	35.6		14.8	23.9	4.9	14.5	24.6	1.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.0	45.8	0.1	25.8	35.6		14.8	23.9	4.9	14.5	24.6	1.2
LOS	C	D	A	C	D		B	C	A	B	C	A
Approach Delay		34.9			31.9			15.8			18.6	
Approach LOS		C			C			B			B	
Queue Length 50th (ft)	31	183	0	70	155		48	62	0	42	75	0
Queue Length 95th (ft)	62	238	0	87	148		91	103	31	59	120	7
Internal Link Dist (ft)		654			612			747			512	
Turn Bay Length (ft)	265		330				455		400	435		435
Base Capacity (vph)	365	916	1583	589	942		606	1289	692	625	1269	651
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	0.20	0.61	0.10	0.53	0.56		0.24	0.21	0.26	0.21	0.25	0.12

Intersection Summary			
Area Type:	Other		
Cycle Length: 109			
Actuated Cycle Length: 100.9			
Natural Cycle: 75			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay: 26.8		Intersection LOS: C	
Intersection Capacity Utilization 72.8%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: SH 83 & Walker Rd

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	171	112	163	266	51	161	325	156	46	350	58
Future Volume (vph)	86	171	112	163	266	51	161	325	156	46	350	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	265		330	0		255	455		400	435		435
Storage Lanes	1		1	2		0	1		1	1		1
Taper Length (ft)	75			25			220			300		
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.974				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	3433	3447	0	1770	3539	1583	1770	3539	1583
Flt Permitted	0.472			0.592			0.471			0.500		
Satd. Flow (perm)	879	3539	1583	2139	3447	0	877	3539	1583	931	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			200		21				170			130
Link Speed (mph)		45			35			60			60	
Link Distance (ft)		734			692			827			592	
Travel Time (s)		11.1			13.5			9.4			6.7	
Peak Hour Factor	0.85	0.92	0.85	0.90	0.92	0.85	0.85	0.75	0.92	0.92	0.95	0.82
Adj. Flow (vph)	101	186	132	181	289	60	189	433	170	50	368	71
Shared Lane Traffic (%)												
Lane Group Flow (vph)	101	186	132	181	349	0	189	433	170	50	368	71
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1		1	2	1	1	2	1
Detector Template								Thru	Right		Thru	Right
Leading Detector (ft)	40	40	0	40	40		40	100	20	40	100	20
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)	40	40	40	40	40		40	6	20	40	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)								94			94	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	pm+pt	NA	Free	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		Free	8			2		2	6		6

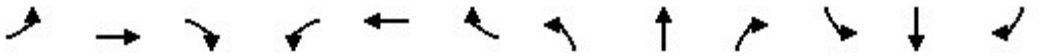
Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	6.0		5.0	6.0		5.0	30.0	30.0	5.0	30.0	30.0
Minimum Split (s)	10.0	12.0		10.0	12.0		10.0	37.0	37.0	10.0	37.0	37.0
Total Split (s)	17.0	32.0		17.0	32.0		17.0	43.0	43.0	17.0	43.0	43.0
Total Split (%)	15.6%	29.4%		15.6%	29.4%		15.6%	39.4%	39.4%	15.6%	39.4%	39.4%
Maximum Green (s)	12.0	26.0		12.0	26.0		12.0	36.0	36.0	12.0	36.0	36.0
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0		5.0	6.0		5.0	7.0	7.0	5.0	7.0	7.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Act Effct Green (s)	24.5	14.1	93.0	24.7	16.3		53.4	44.8	44.8	45.0	36.2	36.2
Actuated g/C Ratio	0.26	0.15	1.00	0.27	0.18		0.57	0.48	0.48	0.48	0.39	0.39
v/c Ratio	0.31	0.35	0.08	0.26	0.56		0.31	0.25	0.20	0.10	0.27	0.10
Control Delay	25.8	37.1	0.1	24.0	38.1		11.8	17.1	3.8	10.9	21.3	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	25.8	37.1	0.1	24.0	38.1		11.8	17.1	3.8	10.9	21.3	0.6
LOS	C	D	A	C	D		B	B	A	B	C	A
Approach Delay		22.7			33.3			13.0			17.2	
Approach LOS		C			C			B			B	
Queue Length 50th (ft)	43	52	0	39	97		50	85	0	12	77	0
Queue Length 95th (ft)	77	86	0	64	149		93	113	40	32	127	0
Internal Link Dist (ft)		654			612			747			512	
Turn Bay Length (ft)	265		330				455		400	435		435
Base Capacity (vph)	372	995	1583	780	984		620	1703	850	612	1378	696
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	0.27	0.19	0.08	0.23	0.35		0.30	0.25	0.20	0.08	0.27	0.10

Intersection Summary			
Area Type:	Other		
Cycle Length: 109			
Actuated Cycle Length: 93			
Natural Cycle: 70			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.56			
Intersection Signal Delay: 20.6		Intersection LOS: C	
Intersection Capacity Utilization 66.8%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: SH 83 & Walker Rd

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	264	102	261	362	66	133	282	86	104	225	72
Future Volume (vph)	54	264	102	261	362	66	133	282	86	104	225	72
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	265		330	0		0	455		400	435		435
Storage Lanes	1		1	2		0	1		1	1		1
Taper Length (ft)	75			25			220			300		
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.977				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	3574	1599	3467	3492	0	1787	3574	1599	1787	3574	1599
Flt Permitted	0.272			0.384			0.594			0.567		
Satd. Flow (perm)	512	3574	1599	1401	3492	0	1117	3574	1599	1067	3574	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			200		18				130			130
Link Speed (mph)		45			35			60			60	
Link Distance (ft)		734			692			827			592	
Travel Time (s)		11.1			13.5			9.4			6.7	
Peak Hour Factor	0.79	0.75	1.00	0.77	0.66	0.66	0.95	0.93	0.89	0.81	0.91	0.93
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	68	352	102	339	548	100	140	303	97	128	247	77
Shared Lane Traffic (%)												
Lane Group Flow (vph)	68	352	102	339	648	0	140	303	97	128	247	77
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	Right	L NA	Left	Right	L NA	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1		1	2	1	1	2	1
Detector Template								Thru	Right		Thru	Right
Leading Detector (ft)	40	40	0	40	40		40	100	20	40	100	20
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)	40	40	40	40	40		40	6	20	40	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)								94			94	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	pm+pt	NA	Free	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Lanes, Volumes, Timings
1: SH 83 & Walker Rd

2045 Background + Site
AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		Free	8			2		2	6		6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	6.0		5.0	6.0		5.0	30.0	30.0	5.0	30.0	30.0
Minimum Split (s)	10.0	12.0		10.0	12.0		10.0	37.0	37.0	10.0	37.0	37.0
Total Split (s)	17.0	32.0		17.0	32.0		17.0	43.0	43.0	17.0	43.0	43.0
Total Split (%)	15.6%	29.4%		15.6%	29.4%		15.6%	39.4%	39.4%	15.6%	39.4%	39.4%
Maximum Green (s)	12.0	26.0		12.0	26.0		12.0	36.0	36.0	12.0	36.0	36.0
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	1.0		1.0	1.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0		6.0	7.0		5.0	7.0	7.0	5.0	7.0	7.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Act Effct Green (s)	27.7	17.6	98.6	32.4	23.1		48.0	36.6	36.6	47.4	36.2	36.2
Actuated g/C Ratio	0.28	0.18	1.00	0.33	0.23		0.49	0.37	0.37	0.48	0.37	0.37
v/c Ratio	0.27	0.55	0.06	0.50	0.78		0.23	0.23	0.14	0.22	0.19	0.12
Control Delay	23.7	40.4	0.1	25.5	42.9		14.0	23.4	2.5	14.0	23.3	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.7	40.4	0.1	25.5	42.9		14.0	23.4	2.5	14.0	23.3	1.1
LOS	C	D	A	C	D		B	C	A	B	C	A
Approach Delay		30.3			36.9			17.2			16.9	
Approach LOS		C			D			B			B	
Queue Length 50th (ft)	28	107	0	77	202		44	69	0	40	56	0
Queue Length 95th (ft)	50	127	0	95	192		85	115	19	70	95	6
Internal Link Dist (ft)		654			612			747			512	
Turn Bay Length (ft)	265		330				455		400	435		435
Base Capacity (vph)	320	912	1599	696	904		654	1325	674	631	1313	669
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	0.39	0.06	0.49	0.72		0.21	0.23	0.14	0.20	0.19	0.12

Intersection Summary

Area Type: Other
Cycle Length: 109
Actuated Cycle Length: 98.6
Natural Cycle: 75
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 27.7 Intersection LOS: C
Intersection Capacity Utilization 68.6% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 1: SH 83 & Walker Rd

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	72	519	151	284	312	71	148	260	152	93	312	70
Future Volume (vph)	72	519	151	284	312	71	148	260	152	93	312	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	265		330	0		0	455		400	435		435
Storage Lanes	1		1	2		0	1		1	1		1
Taper Length (ft)	75			25			220			300		
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.977				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	3433	3458	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.366			0.184			0.456			0.526		
Satd. Flow (perm)	682	3539	1583	665	3458	0	849	1863	1583	980	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			200		18				190			130
Link Speed (mph)		45			35			60			60	
Link Distance (ft)		734			692			827			592	
Travel Time (s)		11.1			13.5			9.4			6.7	
Peak Hour Factor	0.97	0.87	1.00	0.79	0.67	0.84	1.00	0.98	0.80	0.69	1.00	0.91
Adj. Flow (vph)	74	597	151	359	466	85	148	265	190	135	312	77
Shared Lane Traffic (%)												
Lane Group Flow (vph)	74	597	151	359	551	0	148	265	190	135	312	77
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	Right	L NA	Left	Right	L NA	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1		1	2	1	1	2	1
Detector Template								Thru	Right		Thru	Right
Leading Detector (ft)	40	40	0	40	40		40	100	20	40	100	20
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)	40	40	40	40	40		40	6	20	40	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)								94			94	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	pm+pt	NA	Free	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		Free	8			2		2	6		6

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	6.0		5.0	6.0		5.0	30.0	30.0	5.0	30.0	30.0
Minimum Split (s)	10.0	12.0		10.0	12.0		10.0	37.0	37.0	10.0	37.0	37.0
Total Split (s)	17.0	32.0		17.0	32.0		17.0	43.0	43.0	17.0	43.0	43.0
Total Split (%)	15.6%	29.4%		15.6%	29.4%		15.6%	39.4%	39.4%	15.6%	39.4%	39.4%
Maximum Green (s)	12.0	26.0		12.0	26.0		12.0	36.0	36.0	12.0	36.0	36.0
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0		5.0	6.0		5.0	7.0	7.0	5.0	7.0	7.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Act Effct Green (s)	31.0	21.7	102.2	37.6	27.3		48.4	36.5	36.5	47.6	36.2	36.2
Actuated g/C Ratio	0.30	0.21	1.00	0.37	0.27		0.47	0.36	0.36	0.47	0.35	0.35
v/c Ratio	0.25	0.79	0.10	0.65	0.59		0.30	0.40	0.28	0.26	0.47	0.12
Control Delay	22.9	46.8	0.1	27.8	35.6		15.6	28.2	4.9	15.2	29.9	1.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.9	46.8	0.1	27.8	35.6		15.6	28.2	4.9	15.2	29.9	1.2
LOS	C	D	A	C	D		B	C	A	B	C	A
Approach Delay		36.1			32.5			17.8			21.9	
Approach LOS		D			C			B			C	
Queue Length 50th (ft)	31	197	0	81	164		50	131	0	45	161	0
Queue Length 95th (ft)	62	254	0	102	162		91	220	32	62	261	7
Internal Link Dist (ft)		654			612			747			512	
Turn Bay Length (ft)	265		330				455		400	435		435
Base Capacity (vph)	360	904	1583	571	952		528	665	688	574	658	643
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	0.66	0.10	0.63	0.58		0.28	0.40	0.28	0.24	0.47	0.12

Intersection Summary			
Area Type:	Other		
Cycle Length: 109			
Actuated Cycle Length: 102.2			
Natural Cycle: 75			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.79			
Intersection Signal Delay: 28.5		Intersection LOS: C	
Intersection Capacity Utilization 74.8%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 1: SH 83 & Walker Rd

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	209	112	204	290	55	161	325	167	53	350	58
Future Volume (vph)	86	209	112	204	290	55	161	325	167	53	350	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	265		330	0		0	455		400	435		435
Storage Lanes	1		1	2		0	1		1	1		1
Taper Length (ft)	75			25			220			300		
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.974				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	3433	3447	0	1770	1863	1583	1770	1863	1583
Flt Permitted	0.454			0.544			0.368			0.458		
Satd. Flow (perm)	846	3539	1583	1966	3447	0	685	1863	1583	853	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			200		21				182			130
Link Speed (mph)		45			35			60			60	
Link Distance (ft)		734			692			827			592	
Travel Time (s)		11.1			13.5			9.4			6.7	
Peak Hour Factor	0.85	0.92	0.85	0.90	0.92	0.85	0.50	0.75	0.92	0.92	0.95	0.82
Adj. Flow (vph)	101	227	132	227	315	65	322	433	182	58	368	71
Shared Lane Traffic (%)												
Lane Group Flow (vph)	101	227	132	227	380	0	322	433	182	58	368	71
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	Right	L NA	Left	Right	L NA	Left	Right	Left	Left	Right
Median Width(ft)		24			24			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	0	1	1		1	2	1	1	2	1
Detector Template								Thru	Right		Thru	Right
Leading Detector (ft)	40	40	0	40	40		40	100	20	40	100	20
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)	40	40	40	40	40		40	6	20	40	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)								94			94	
Detector 2 Size(ft)								6			6	
Detector 2 Type								Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0			0.0	
Turn Type	pm+pt	NA	Free	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		Free	8			2		2	6		6

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	6.0		5.0	6.0		5.0	30.0	30.0	5.0	30.0	30.0
Minimum Split (s)	10.0	12.0		10.0	12.0		10.0	37.0	37.0	10.0	37.0	37.0
Total Split (s)	17.0	32.0		17.0	32.0		17.0	43.0	43.0	17.0	43.0	43.0
Total Split (%)	15.6%	29.4%		15.6%	29.4%		15.6%	39.4%	39.4%	15.6%	39.4%	39.4%
Maximum Green (s)	12.0	26.0		12.0	26.0		12.0	36.0	36.0	12.0	36.0	36.0
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0		5.0	6.0		5.0	7.0	7.0	5.0	7.0	7.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max
Act Effct Green (s)	24.7	14.3	95.5	26.6	17.4		54.7	43.5	43.5	45.1	36.1	36.1
Actuated g/C Ratio	0.26	0.15	1.00	0.28	0.18		0.57	0.46	0.46	0.47	0.38	0.38
v/c Ratio	0.33	0.43	0.08	0.32	0.59		0.61	0.51	0.22	0.12	0.52	0.10
Control Delay	26.1	39.2	0.1	24.8	38.9		17.5	23.6	3.9	11.5	27.4	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	26.1	39.2	0.1	24.8	38.9		17.5	23.6	3.9	11.5	27.4	0.6
LOS	C	D	A	C	D		B	C	A	B	C	A
Approach Delay		25.1			33.6			17.7			21.7	
Approach LOS		C			C			B			C	
Queue Length 50th (ft)	44	66	0	51	109		95	191	0	15	171	0
Queue Length 95th (ft)	77	104	0	78	161		84	258	43	37	290	0
Internal Link Dist (ft)		654			612			747			512	
Turn Bay Length (ft)	265		330				455		400	435		435
Base Capacity (vph)	359	966	1583	757	956		529	848	820	563	704	679
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	0.28	0.23	0.08	0.30	0.40		0.61	0.51	0.22	0.10	0.52	0.10

Intersection Summary			
Area Type:	Other		
Cycle Length: 109			
Actuated Cycle Length: 95.5			
Natural Cycle: 70			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.61			
Intersection Signal Delay: 23.7		Intersection LOS: C	
Intersection Capacity Utilization 67.6%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: SH 83 & Walker Rd

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Level of Service Reports

Intersections

Jane Lundeen Drive/Walker Road
Jane Lundeen Drive/Pinehurst Circle

Scenario(s)

2025 Existing
Short-Term Baseline
Short-Term Baseline + Site
2045 Background
2045 Background + Site

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Intersection	
Intersection Delay, s/veh	5.1
Intersection LOS	A

Approach	EB	WB	NB
Entry Lanes	2	1	2
Conflicting Circle Lanes	2	2	2
Adj Approach Flow, veh/h	475	164	613
Demand Flow Rate, veh/h	484	168	625
Vehicles Circulating, veh/h	27	614	69
Vehicles Exiting, veh/h	755	80	442
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	5.0	6.5	4.9
Approach LOS	A	A	A

Lane	Left	Right	Left	Left	Right
Designated Moves	LT	R	LT	L	LTR
Assumed Moves	LT	R	LT	L	LTR
RT Channelized					
Lane Util	0.143	0.857	1.000	0.530	0.470
Follow-Up Headway, s	2.667	2.535	2.535	2.667	2.535
Critical Headway, s	4.645	4.328	4.328	4.645	4.328
Entry Flow, veh/h	69	415	168	331	294
Cap Entry Lane, veh/h	1317	1388	843	1267	1339
Entry HV Adj Factor	0.980	0.981	0.978	0.982	0.980
Flow Entry, veh/h	68	407	164	325	288
Cap Entry, veh/h	1291	1361	824	1243	1312
V/C Ratio	0.052	0.299	0.199	0.261	0.220
Control Delay, s/veh	3.2	5.3	6.5	5.2	4.6
LOS	A	A	A	A	A
95th %tile Queue, veh	0	1	1	1	1

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Intersection	
Intersection Delay, s/veh	6.5
Intersection LOS	A

Approach	EB	WB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	293	591	383
Demand Flow Rate, veh/h	299	603	391
Vehicles Circulating, veh/h	391	0	0
Vehicles Exiting, veh/h	0	690	603
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	7.5	6.9	5.1
Approach LOS	A	A	A

Lane	Left	Left	Left
Designated Moves	T	R	L
Assumed Moves	T	R	L
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	299	603	391
Cap Entry Lane, veh/h	926	1380	1380
Entry HV Adj Factor	0.980	0.980	0.980
Flow Entry, veh/h	293	591	383
Cap Entry, veh/h	908	1352	1352
V/C Ratio	0.323	0.437	0.283
Control Delay, s/veh	7.5	6.9	5.1
LOS	A	A	A
95th %tile Queue, veh	1	2	1

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Intersection	
Intersection Delay, s/veh	4.8
Intersection LOS	A

Approach	EB	WB	NB
Entry Lanes	2	1	2
Conflicting Circle Lanes	2	2	2
Adj Approach Flow, veh/h	439	140	540
Demand Flow Rate, veh/h	448	143	550
Vehicles Circulating, veh/h	7	527	152
Vehicles Exiting, veh/h	663	175	303
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	4.1	5.6	5.1
Approach LOS	A	A	A

Lane	Left	Right	Left	Left	Right
Designated Moves	LT	R	LT	L	LTR
Assumed Moves	LT	R	LT	L	LTR
RT Channelized					
Lane Util	0.339	0.661	1.000	0.529	0.471
Follow-Up Headway, s	2.667	2.535	2.535	2.667	2.535
Critical Headway, s	4.645	4.328	4.328	4.645	4.328
Entry Flow, veh/h	152	296	143	291	259
Cap Entry Lane, veh/h	1341	1412	907	1174	1248
Entry HV Adj Factor	0.980	0.980	0.981	0.984	0.980
Flow Entry, veh/h	149	290	140	286	254
Cap Entry, veh/h	1315	1383	890	1154	1223
V/C Ratio	0.113	0.210	0.158	0.248	0.208
Control Delay, s/veh	3.7	4.3	5.6	5.4	4.8
LOS	A	A	A	A	A
95th %tile Queue, veh	0	1	1	1	1

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Intersection	
Intersection Delay, s/veh	6.6
Intersection LOS	A

Approach	EB	WB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	51	663	200
Demand Flow Rate, veh/h	52	676	204
Vehicles Circulating, veh/h	204	0	0
Vehicles Exiting, veh/h	0	256	676
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	3.7	7.6	3.9
Approach LOS	A	A	A

Lane	Left	Left	Left
Designated Moves	T	R	L
Assumed Moves	T	R	L
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	52	676	204
Cap Entry Lane, veh/h	1121	1380	1380
Entry HV Adj Factor	0.980	0.981	0.980
Flow Entry, veh/h	51	663	200
Cap Entry, veh/h	1099	1353	1353
V/C Ratio	0.046	0.490	0.148
Control Delay, s/veh	3.7	7.6	3.9
LOS	A	A	A
95th %tile Queue, veh	0	3	1

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Intersection	
Intersection Delay, s/veh	3.5
Intersection LOS	A

Approach	EB	WB	NB
Entry Lanes	2	1	2
Conflicting Circle Lanes	2	2	2
Adj Approach Flow, veh/h	238	92	119
Demand Flow Rate, veh/h	243	94	121
Vehicles Circulating, veh/h	0	119	164
Vehicles Exiting, veh/h	213	166	79
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	3.5	3.5	3.5
Approach LOS	A	A	A

Lane	Left	Right	Left	Left	Right
Designated Moves	LT	R	LT	L	LTR
Assumed Moves	LT	R	LT	L	LTR
RT Channelized					
Lane Util	0.675	0.325	1.000	0.529	0.471
Follow-Up Headway, s	2.667	2.535	2.535	2.667	2.535
Critical Headway, s	4.645	4.328	4.328	4.645	4.328
Entry Flow, veh/h	164	79	94	64	57
Cap Entry Lane, veh/h	1350	1420	1283	1161	1235
Entry HV Adj Factor	0.980	0.975	0.980	0.985	0.981
Flow Entry, veh/h	161	77	92	63	56
Cap Entry, veh/h	1323	1384	1258	1144	1212
V/C Ratio	0.121	0.056	0.073	0.055	0.046
Control Delay, s/veh	3.7	3.0	3.5	3.6	3.3
LOS	A	A	A	A	A
95th %tile Queue, veh	0	0	0	0	0

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Intersection	
Intersection Delay, s/veh	3.2
Intersection LOS	A

Approach	EB	WB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	32	113	76
Demand Flow Rate, veh/h	33	115	78
Vehicles Circulating, veh/h	78	0	0
Vehicles Exiting, veh/h	0	111	115
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	3.1	3.3	3.1
Approach LOS	A	A	A

Lane	Left	Left	Left
Designated Moves	T	R	L
Assumed Moves	T	R	L
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	33	115	78
Cap Entry Lane, veh/h	1274	1380	1380
Entry HV Adj Factor	0.980	0.983	0.974
Flow Entry, veh/h	32	113	76
Cap Entry, veh/h	1249	1356	1344
V/C Ratio	0.026	0.083	0.057
Control Delay, s/veh	3.1	3.3	3.1
LOS	A	A	A
95th %tile Queue, veh	0	0	0

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Intersection	
Intersection Delay, s/veh	6.2
Intersection LOS	A

Approach	EB	WB	NB
Entry Lanes	2	1	2
Conflicting Circle Lanes	2	2	2
Adj Approach Flow, veh/h	521	164	907
Demand Flow Rate, veh/h	531	168	925
Vehicles Circulating, veh/h	27	884	69
Vehicles Exiting, veh/h	1025	110	489
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	5.3	8.6	6.2
Approach LOS	A	A	A

Lane	Left	Right	Left	Left	Right
Designated Moves	LT	R	LT	L	LTR
Assumed Moves	LT	R	LT	L	LTR
RT Channelized					
Lane Util	0.130	0.870	1.000	0.530	0.470
Follow-Up Headway, s	2.667	2.535	2.535	2.667	2.535
Critical Headway, s	4.645	4.328	4.328	4.645	4.328
Entry Flow, veh/h	69	462	168	490	435
Cap Entry Lane, veh/h	1317	1388	670	1267	1339
Entry HV Adj Factor	0.980	0.981	0.978	0.981	0.980
Flow Entry, veh/h	68	453	164	481	426
Cap Entry, veh/h	1291	1361	655	1243	1312
V/C Ratio	0.052	0.333	0.251	0.387	0.325
Control Delay, s/veh	3.2	5.6	8.6	6.6	5.7
LOS	A	A	A	A	A
95th %tile Queue, veh	0	1	1	2	1

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Intersection	
Intersection Delay, s/veh	7.5
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	662	24	19	7
Demand Flow Rate, veh/h	675	24	19	7
Vehicles Circulating, veh/h	7	677	674	0
Vehicles Exiting, veh/h	0	16	8	701
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	7.7	5.6	5.6	2.7
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LR	TR	LT
Assumed Moves	LTR	LR	TR	LT
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	675	24	19	7
Cap Entry Lane, veh/h	1370	692	694	1380
Entry HV Adj Factor	0.980	1.000	0.980	0.992
Flow Entry, veh/h	662	24	19	7
Cap Entry, veh/h	1343	692	680	1368
V/C Ratio	0.493	0.035	0.027	0.005
Control Delay, s/veh	7.7	5.6	5.6	2.7
LOS	A	A	A	A
95th %tile Queue, veh	3	0	0	0

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Intersection	
Intersection Delay, s/veh	7.0
Intersection LOS	A

Approach	EB	WB	NB
Entry Lanes	2	1	2
Conflicting Circle Lanes	2	2	2
Adj Approach Flow, veh/h	765	321	717
Demand Flow Rate, veh/h	780	327	732
Vehicles Circulating, veh/h	4	693	362
Vehicles Exiting, veh/h	1016	401	422
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	5.1	10.0	7.6
Approach LOS	A	B	A

Lane	Left	Right	Left	Left	Right
Designated Moves	LT	R	LT	L	LTR
Assumed Moves	LT	R	LT	L	LTR
RT Channelized					
Lane Util	0.464	0.536	1.000	0.530	0.470
Follow-Up Headway, s	2.667	2.535	2.535	2.667	2.535
Critical Headway, s	4.645	4.328	4.328	4.645	4.328
Entry Flow, veh/h	362	418	327	388	344
Cap Entry Lane, veh/h	1345	1415	788	968	1044
Entry HV Adj Factor	0.980	0.981	0.981	0.979	0.980
Flow Entry, veh/h	355	410	321	380	337
Cap Entry, veh/h	1319	1388	773	948	1023
V/C Ratio	0.269	0.295	0.415	0.401	0.330
Control Delay, s/veh	5.1	5.2	10.0	8.3	6.9
LOS	A	A	B	A	A
95th %tile Queue, veh	1	1	2	2	1

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Intersection	
Intersection Delay, s/veh	3.4
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	137	21	10	15
Demand Flow Rate, veh/h	139	21	10	15
Vehicles Circulating, veh/h	15	135	139	0
Vehicles Exiting, veh/h	0	14	15	156
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	3.5	3.1	3.1	2.7
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LR	TR	LT
Assumed Moves	LTR	LR	TR	LT
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	139	21	10	15
Cap Entry Lane, veh/h	1359	1202	1197	1380
Entry HV Adj Factor	0.985	1.000	0.980	0.993
Flow Entry, veh/h	137	21	10	15
Cap Entry, veh/h	1339	1202	1174	1371
V/C Ratio	0.102	0.017	0.008	0.011
Control Delay, s/veh	3.5	3.1	3.1	2.7
LOS	A	A	A	A
95th %tile Queue, veh	0	0	0	0

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Intersection	
Intersection Delay, s/veh	3.8
Intersection LOS	A

Approach	EB	WB	NB
Entry Lanes	2	1	2
Conflicting Circle Lanes	2	2	2
Adj Approach Flow, veh/h	320	92	119
Demand Flow Rate, veh/h	327	94	121
Vehicles Circulating, veh/h	0	119	248
Vehicles Exiting, veh/h	213	250	79
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	4.0	3.5	3.8
Approach LOS	A	A	A

Lane	Left	Right	Left	Left	Right
Designated Moves	LT	R	LT	L	LTR
Assumed Moves	LT	R	LT	L	LTR
RT Channelized					
Lane Util	0.758	0.242	1.000	0.529	0.471
Follow-Up Headway, s	2.667	2.535	2.535	2.667	2.535
Critical Headway, s	4.645	4.328	4.328	4.645	4.328
Entry Flow, veh/h	248	79	94	64	57
Cap Entry Lane, veh/h	1350	1420	1283	1074	1150
Entry HV Adj Factor	0.980	0.975	0.980	0.985	0.981
Flow Entry, veh/h	243	77	92	63	56
Cap Entry, veh/h	1323	1384	1258	1059	1129
V/C Ratio	0.184	0.056	0.073	0.060	0.050
Control Delay, s/veh	4.3	3.0	3.5	3.9	3.6
LOS	A	A	A	A	A
95th %tile Queue, veh	1	0	0	0	0

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Intersection	
Intersection Delay, s/veh	3.2
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	32	113	0	76
Demand Flow Rate, veh/h	33	115	0	78
Vehicles Circulating, veh/h	78	0	111	0
Vehicles Exiting, veh/h	0	111	0	115
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	3.1	3.3	0.0	3.1
Approach LOS	A	A	-	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LR	TR	LT
Assumed Moves	LTR	LR	TR	LT
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	33	115	0	78
Cap Entry Lane, veh/h	1274	1380	1232	1380
Entry HV Adj Factor	0.980	0.983	1.000	0.974
Flow Entry, veh/h	32	113	0	76
Cap Entry, veh/h	1249	1356	1232	1344
V/C Ratio	0.026	0.083	0.000	0.057
Control Delay, s/veh	3.1	3.3	2.9	3.1
LOS	A	A	A	A
95th %tile Queue, veh	0	0	0	0

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Intersection	
Intersection Delay, s/veh	5.2
Intersection LOS	A

Approach	EB	WB	NB
Entry Lanes	2	1	2
Conflicting Circle Lanes	2	2	2
Adj Approach Flow, veh/h	480	164	633
Demand Flow Rate, veh/h	489	168	645
Vehicles Circulating, veh/h	27	632	69
Vehicles Exiting, veh/h	773	82	447
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	5.0	6.6	5.0
Approach LOS	A	A	A

Lane	Left	Right	Left	Left	Right
Designated Moves	LT	R	LT	L	LTR
Assumed Moves	LT	R	LT	L	LTR
RT Channelized					
Lane Util	0.141	0.859	1.000	0.530	0.470
Follow-Up Headway, s	2.667	2.535	2.535	2.667	2.535
Critical Headway, s	4.645	4.328	4.328	4.645	4.328
Entry Flow, veh/h	69	420	168	342	303
Cap Entry Lane, veh/h	1317	1388	830	1267	1339
Entry HV Adj Factor	0.980	0.981	0.978	0.981	0.982
Flow Entry, veh/h	68	412	164	335	298
Cap Entry, veh/h	1291	1361	811	1243	1315
V/C Ratio	0.052	0.303	0.202	0.270	0.226
Control Delay, s/veh	3.2	5.3	6.6	5.3	4.7
LOS	A	A	A	A	A
95th %tile Queue, veh	0	1	1	1	1

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Intersection	
Intersection Delay, s/veh	6.6
Intersection LOS	A

Approach	EB	WB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	302	611	387
Demand Flow Rate, veh/h	308	623	395
Vehicles Circulating, veh/h	395	0	0
Vehicles Exiting, veh/h	0	703	623
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	7.6	7.1	5.2
Approach LOS	A	A	A

Lane	Left	Left	Left
Designated Moves	T	R	L
Assumed Moves	T	R	L
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	308	623	395
Cap Entry Lane, veh/h	922	1380	1380
Entry HV Adj Factor	0.980	0.981	0.980
Flow Entry, veh/h	302	611	387
Cap Entry, veh/h	904	1353	1352
V/C Ratio	0.334	0.452	0.286
Control Delay, s/veh	7.6	7.1	5.2
LOS	A	A	A
95th %tile Queue, veh	1	2	1

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Intersection	
Intersection Delay, s/veh	4.8
Intersection LOS	A

Approach	EB	WB	NB
Entry Lanes	2	1	2
Conflicting Circle Lanes	2	2	2
Adj Approach Flow, veh/h	454	140	555
Demand Flow Rate, veh/h	463	143	566
Vehicles Circulating, veh/h	7	543	152
Vehicles Exiting, veh/h	679	175	318
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	4.2	5.7	5.2
Approach LOS	A	A	A

Lane	Left	Right	Left	Left	Right
Designated Moves	LT	R	LT	L	LTR
Assumed Moves	LT	R	LT	L	LTR
RT Channelized					
Lane Util	0.328	0.672	1.000	0.530	0.470
Follow-Up Headway, s	2.667	2.535	2.535	2.667	2.535
Critical Headway, s	4.645	4.328	4.328	4.645	4.328
Entry Flow, veh/h	152	311	143	300	266
Cap Entry Lane, veh/h	1341	1412	895	1174	1248
Entry HV Adj Factor	0.980	0.981	0.981	0.980	0.981
Flow Entry, veh/h	149	305	140	294	261
Cap Entry, veh/h	1315	1384	878	1151	1224
V/C Ratio	0.113	0.220	0.160	0.256	0.213
Control Delay, s/veh	3.7	4.4	5.7	5.5	4.8
LOS	A	A	A	A	A
95th %tile Queue, veh	0	1	1	1	1

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Intersection	
Intersection Delay, s/veh	6.7
Intersection LOS	A

Approach	EB	WB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	58	682	208
Demand Flow Rate, veh/h	59	696	212
Vehicles Circulating, veh/h	212	0	0
Vehicles Exiting, veh/h	0	271	696
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	3.8	7.9	3.9
Approach LOS	A	A	A

Lane	Left	Left	Left
Designated Moves	T	R	L
Assumed Moves	T	R	L
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	59	696	212
Cap Entry Lane, veh/h	1112	1380	1380
Entry HV Adj Factor	0.980	0.980	0.981
Flow Entry, veh/h	58	682	208
Cap Entry, veh/h	1090	1352	1354
V/C Ratio	0.053	0.504	0.154
Control Delay, s/veh	3.8	7.9	3.9
LOS	A	A	A
95th %tile Queue, veh	0	3	1

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Intersection	
Intersection Delay, s/veh	3.5
Intersection LOS	A

Approach	EB	WB	NB
Entry Lanes	2	1	2
Conflicting Circle Lanes	2	2	2
Adj Approach Flow, veh/h	250	92	125
Demand Flow Rate, veh/h	255	94	127
Vehicles Circulating, veh/h	0	125	164
Vehicles Exiting, veh/h	219	166	91
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	3.5	3.5	3.5
Approach LOS	A	A	A

Lane	Left	Right	Left	Left	Right
Designated Moves	LT	R	LT	L	LTR
Assumed Moves	LT	R	LT	L	LTR
RT Channelized					
Lane Util	0.643	0.357	1.000	0.528	0.472
Follow-Up Headway, s	2.667	2.535	2.535	2.667	2.535
Critical Headway, s	4.645	4.328	4.328	4.645	4.328
Entry Flow, veh/h	164	91	94	67	60
Cap Entry Lane, veh/h	1350	1420	1277	1161	1235
Entry HV Adj Factor	0.980	0.978	0.980	0.989	0.979
Flow Entry, veh/h	161	89	92	66	59
Cap Entry, veh/h	1323	1389	1252	1148	1210
V/C Ratio	0.121	0.064	0.074	0.058	0.049
Control Delay, s/veh	3.7	3.1	3.5	3.6	3.4
LOS	A	A	A	A	A
95th %tile Queue, veh	0	0	0	0	0

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Intersection	
Intersection Delay, s/veh	3.3
Intersection LOS	A

Approach	EB	WB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	53	119	88
Demand Flow Rate, veh/h	54	121	90
Vehicles Circulating, veh/h	90	0	0
Vehicles Exiting, veh/h	0	144	121
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	3.3	3.3	3.2
Approach LOS	A	A	A

Lane	Left	Left	Left
Designated Moves	T	R	L
Assumed Moves	T	R	L
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	54	121	90
Cap Entry Lane, veh/h	1259	1380	1380
Entry HV Adj Factor	0.980	0.983	0.978
Flow Entry, veh/h	53	119	88
Cap Entry, veh/h	1234	1357	1349
V/C Ratio	0.043	0.088	0.065
Control Delay, s/veh	3.3	3.3	3.2
LOS	A	A	A
95th %tile Queue, veh	0	0	0

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Intersection	
Intersection Delay, s/veh	7.5
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	2	1	2	1
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	871	300	726	122
Demand Flow Rate, veh/h	888	306	740	124
Vehicles Circulating, veh/h	42	781	178	1023
Vehicles Exiting, veh/h	1105	137	752	64
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	7.4	10.7	6.1	8.8
Approach LOS	A	B	A	A

Lane	Left	Right	Left	Left	Right	Left
Designated Moves	LT	R	LTR	L	LTR	LTR
Assumed Moves	LT	R	LTR	L	LTR	LTR
RT Channelized						
Lane Util	0.188	0.812	1.000	0.530	0.470	1.000
Follow-Up Headway, s	2.667	2.535	2.535	2.667	2.535	2.535
Critical Headway, s	4.645	4.328	4.328	4.645	4.328	4.328
Entry Flow, veh/h	167	721	306	392	348	124
Cap Entry Lane, veh/h	1299	1370	731	1146	1221	595
Entry HV Adj Factor	0.982	0.981	0.979	0.982	0.981	0.984
Flow Entry, veh/h	164	707	300	385	341	122
Cap Entry, veh/h	1275	1344	716	1125	1197	586
V/C Ratio	0.129	0.526	0.419	0.342	0.285	0.208
Control Delay, s/veh	3.9	8.2	10.7	6.6	5.6	8.8
LOS	A	A	B	A	A	A
95th %tile Queue, veh	0	3	2	2	1	1

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Intersection	
Intersection Delay, s/veh	6.3
Intersection LOS	A

Approach	EB	WB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	316	611	87
Demand Flow Rate, veh/h	322	623	89
Vehicles Circulating, veh/h	89	14	0
Vehicles Exiting, veh/h	0	397	637
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	5.2	7.2	3.2
Approach LOS	A	A	A

Lane	Left	Left	Left
Designated Moves	LT	R	L
Assumed Moves	LT	R	L
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	322	623	89
Cap Entry Lane, veh/h	1260	1360	1380
Entry HV Adj Factor	0.981	0.981	0.978
Flow Entry, veh/h	316	611	87
Cap Entry, veh/h	1236	1334	1349
V/C Ratio	0.256	0.458	0.065
Control Delay, s/veh	5.2	7.2	3.2
LOS	A	A	A
95th %tile Queue, veh	1	2	0

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Intersection	
Intersection Delay, s/veh	13.1
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	2	1	2	1
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	1019	512	753	137
Demand Flow Rate, veh/h	1040	522	768	140
Vehicles Circulating, veh/h	16	879	702	1254
Vehicles Exiting, veh/h	1377	591	354	147
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	7.1	25.6	13.0	11.9
Approach LOS	A	D	B	B

Lane	Left	Right	Left	Left	Right	Left
Designated Moves	LT	R	LTR	L	LTR	LTR
Assumed Moves	LT	R	LTR	L	LTR	LTR
RT Channelized						
Lane Util	0.663	0.337	1.000	0.530	0.470	1.000
Follow-Up Headway, s	2.667	2.535	2.535	2.667	2.535	2.535
Critical Headway, s	4.645	4.328	4.328	4.645	4.328	4.328
Entry Flow, veh/h	690	350	522	407	361	140
Cap Entry Lane, veh/h	1330	1401	673	708	782	489
Entry HV Adj Factor	0.980	0.980	0.981	0.981	0.980	0.979
Flow Entry, veh/h	676	343	512	399	354	137
Cap Entry, veh/h	1304	1373	660	694	767	479
V/C Ratio	0.519	0.250	0.776	0.575	0.462	0.286
Control Delay, s/veh	8.3	4.7	25.6	14.8	11.0	11.9
LOS	A	A	D	B	B	B
95th %tile Queue, veh	3	1	7	4	2	1

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Intersection	
Intersection Delay, s/veh	6.8
Intersection LOS	A

Approach	EB	WB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	66	684	213
Demand Flow Rate, veh/h	67	698	217
Vehicles Circulating, veh/h	217	8	0
Vehicles Exiting, veh/h	0	276	706
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	3.8	8.0	3.9
Approach LOS	A	A	A

Lane	Left	Left	Left
Designated Moves	LT	R	L
Assumed Moves	LT	R	L
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	67	698	217
Cap Entry Lane, veh/h	1106	1369	1380
Entry HV Adj Factor	0.983	0.980	0.982
Flow Entry, veh/h	66	684	213
Cap Entry, veh/h	1087	1341	1354
V/C Ratio	0.061	0.510	0.157
Control Delay, s/veh	3.8	8.0	3.9
LOS	A	A	A
95th %tile Queue, veh	0	3	1

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Intersection	
Intersection Delay, s/veh	8.1
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	2	1	2	1
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	965	142	263	166
Demand Flow Rate, veh/h	984	145	268	169
Vehicles Circulating, veh/h	14	454	833	401
Vehicles Exiting, veh/h	556	647	165	198
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	9.0	5.2	8.0	5.2
Approach LOS	A	A	A	A

Lane	Left	Right	Left	Left	Right	Left
Designated Moves	LT	R	LTR	L	LTR	LTR
Assumed Moves	LT	R	LTR	L	LTR	LTR
RT Channelized						
Lane Util	0.832	0.168	1.000	0.530	0.470	1.000
Follow-Up Headway, s	2.667	2.535	2.535	2.667	2.535	2.535
Critical Headway, s	4.645	4.328	4.328	4.645	4.328	4.328
Entry Flow, veh/h	819	165	145	142	126	169
Cap Entry Lane, veh/h	1333	1403	965	627	699	1010
Entry HV Adj Factor	0.980	0.982	0.981	0.982	0.981	0.982
Flow Entry, veh/h	803	162	142	139	124	166
Cap Entry, veh/h	1306	1378	947	616	686	992
V/C Ratio	0.615	0.118	0.150	0.226	0.180	0.167
Control Delay, s/veh	10.1	3.5	5.2	8.7	7.3	5.2
LOS	B	A	A	A	A	A
95th %tile Queue, veh	4	0	1	1	1	1

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Intersection	
Intersection Delay, s/veh	3.5
Intersection LOS	A

Approach	EB	WB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	108	123	94
Demand Flow Rate, veh/h	110	125	96
Vehicles Circulating, veh/h	96	56	0
Vehicles Exiting, veh/h	0	150	181
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	3.7	3.6	3.2
Approach LOS	A	A	A

Lane	Left	Left	Left
Designated Moves	LT	R	L
Assumed Moves	LT	R	L
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	110	125	96
Cap Entry Lane, veh/h	1251	1303	1380
Entry HV Adj Factor	0.981	0.984	0.979
Flow Entry, veh/h	108	123	94
Cap Entry, veh/h	1228	1282	1351
V/C Ratio	0.088	0.096	0.070
Control Delay, s/veh	3.7	3.6	3.2
LOS	A	A	A
95th %tile Queue, veh	0	0	0

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Intersection	
Intersection Delay, s/veh	9.0
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	2	1	2	1
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	920	300	1000	122
Demand Flow Rate, veh/h	938	306	1020	124
Vehicles Circulating, veh/h	42	1033	178	1275
Vehicles Exiting, veh/h	1357	165	802	64
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	8.0	15.3	7.7	11.5
Approach LOS	A	C	A	B

Lane	Left	Right	Left	Left	Right	Left
Designated Moves	LT	R	LTR	L	LTR	LTR
Assumed Moves	LT	R	LTR	L	LTR	LTR
RT Channelized						
Lane Util	0.178	0.822	1.000	0.530	0.470	1.000
Follow-Up Headway, s	2.667	2.535	2.535	2.667	2.535	2.535
Critical Headway, s	4.645	4.328	4.328	4.645	4.328	4.328
Entry Flow, veh/h	167	771	306	541	479	124
Cap Entry Lane, veh/h	1299	1370	590	1146	1221	480
Entry HV Adj Factor	0.982	0.981	0.979	0.980	0.981	0.984
Flow Entry, veh/h	164	756	300	530	470	122
Cap Entry, veh/h	1275	1344	578	1123	1198	473
V/C Ratio	0.129	0.563	0.519	0.472	0.392	0.258
Control Delay, s/veh	3.9	8.9	15.3	8.4	6.9	11.5
LOS	A	A	C	A	A	B
95th %tile Queue, veh	0	4	3	3	2	1

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Intersection	
Intersection Delay, s/veh	6.5
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	339	616	19	90
Demand Flow Rate, veh/h	346	628	19	92
Vehicles Circulating, veh/h	92	49	430	0
Vehicles Exiting, veh/h	0	400	8	677
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	5.4	7.7	4.3	3.2
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LR	TR	LT
Assumed Moves	LTR	LR	TR	LT
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	346	628	19	92
Cap Entry Lane, veh/h	1256	1313	890	1380
Entry HV Adj Factor	0.979	0.981	0.980	0.978
Flow Entry, veh/h	339	616	19	90
Cap Entry, veh/h	1230	1287	873	1349
V/C Ratio	0.275	0.478	0.021	0.067
Control Delay, s/veh	5.4	7.7	4.3	3.2
LOS	A	A	A	A
95th %tile Queue, veh	1	3	0	0

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Intersection	
Intersection Delay, s/veh	17.2
Intersection LOS	C

Approach	EB	WB	NB	SB
Entry Lanes	2	1	2	1
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	1121	513	915	137
Demand Flow Rate, veh/h	1144	523	933	140
Vehicles Circulating, veh/h	17	1029	702	1405
Vehicles Exiting, veh/h	1527	606	459	147
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	7.2	40.5	16.7	14.3
Approach LOS	A	E	C	B

Lane	Left	Right	Left	Left	Right	Left
Designated Moves	LT	R	LTR	L	LTR	LTR
Assumed Moves	LT	R	LTR	L	LTR	LTR
RT Channelized						
Lane Util	0.603	0.397	1.000	0.529	0.471	1.000
Follow-Up Headway, s	2.667	2.535	2.535	2.667	2.535	2.535
Critical Headway, s	4.645	4.328	4.328	4.645	4.328	4.328
Entry Flow, veh/h	690	454	523	494	439	140
Cap Entry Lane, veh/h	1329	1400	592	708	782	430
Entry HV Adj Factor	0.980	0.980	0.981	0.982	0.980	0.979
Flow Entry, veh/h	676	445	513	485	430	137
Cap Entry, veh/h	1303	1372	581	695	766	421
V/C Ratio	0.519	0.324	0.883	0.698	0.561	0.325
Control Delay, s/veh	8.3	5.5	40.5	19.7	13.4	14.3
LOS	A	A	E	C	B	B
95th %tile Queue, veh	3	1	10	6	4	1

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Intersection	
Intersection Delay, s/veh	6.9
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	88	687	12	220
Demand Flow Rate, veh/h	89	701	12	224
Vehicles Circulating, veh/h	224	29	296	0
Vehicles Exiting, veh/h	0	279	17	730
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	4.0	8.3	3.7	4.0
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LR	TR	LT
Assumed Moves	LTR	LR	TR	LT
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	89	701	12	224
Cap Entry Lane, veh/h	1098	1340	1020	1380
Entry HV Adj Factor	0.987	0.980	0.980	0.982
Flow Entry, veh/h	88	687	12	220
Cap Entry, veh/h	1083	1313	1000	1354
V/C Ratio	0.081	0.523	0.012	0.162
Control Delay, s/veh	4.0	8.3	3.7	4.0
LOS	A	A	A	A
95th %tile Queue, veh	0	3	0	1

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Intersection	
Intersection Delay, s/veh	8.4
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	2	1	2	1
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	1084	144	390	166
Demand Flow Rate, veh/h	1106	147	397	169
Vehicles Circulating, veh/h	16	571	833	520
Vehicles Exiting, veh/h	673	659	289	198
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	8.6	5.9	9.5	5.9
Approach LOS	A	A	A	A

Lane	Left	Right	Left	Left	Right	Left
Designated Moves	LT	R	LTR	L	LTR	LTR
Assumed Moves	LT	R	LTR	L	LTR	LTR
RT Channelized						
Lane Util	0.741	0.259	1.000	0.529	0.471	1.000
Follow-Up Headway, s	2.667	2.535	2.535	2.667	2.535	2.535
Critical Headway, s	4.645	4.328	4.328	4.645	4.328	4.328
Entry Flow, veh/h	819	287	147	210	187	169
Cap Entry Lane, veh/h	1330	1401	874	627	699	913
Entry HV Adj Factor	0.980	0.979	0.981	0.984	0.980	0.982
Flow Entry, veh/h	803	281	144	207	183	166
Cap Entry, veh/h	1304	1372	858	617	686	897
V/C Ratio	0.616	0.205	0.168	0.335	0.267	0.185
Control Delay, s/veh	10.2	4.3	5.9	10.4	8.5	5.9
LOS	B	A	A	B	A	A
95th %tile Queue, veh	4	1	1	1	1	1

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Intersection	
Intersection Delay, s/veh	3.7
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	151	126	13	103
Demand Flow Rate, veh/h	154	129	13	105
Vehicles Circulating, veh/h	105	96	239	0
Vehicles Exiting, veh/h	0	156	20	225
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	4.0	3.8	3.5	3.3
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LR	TR	LT
Assumed Moves	LTR	LR	TR	LT
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	154	129	13	105
Cap Entry Lane, veh/h	1240	1251	1081	1380
Entry HV Adj Factor	0.980	0.977	0.980	0.980
Flow Entry, veh/h	151	126	13	103
Cap Entry, veh/h	1214	1222	1060	1352
V/C Ratio	0.124	0.103	0.012	0.076
Control Delay, s/veh	4.0	3.8	3.5	3.3
LOS	A	A	A	A
95th %tile Queue, veh	0	0	0	0

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Level of Service Reports

Intersections

All stop sign-controlled intersections

Scenario(s)

Short-Term Baseline + Site

2045 Background + Site

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	398	193	8
Future Vol, veh/h	0	0	0	398	193	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	43	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	433	449	9

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	454	-	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	606	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	606	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

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

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	56	0	4	341	189	4
Future Vol, veh/h	56	0	4	341	189	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	83	83	92	45	43	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	67	0	4	758	440	5

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1209	443	445	0	-	0
Stage 1	443	-	-	-	-	-
Stage 2	766	-	-	-	-	-
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	202	615	1115	-	-	-
Stage 1	647	-	-	-	-	-
Stage 2	459	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	201	615	1115	-	-	-
Mov Cap-2 Maneuver	201	-	-	-	-	-
Stage 1	643	-	-	-	-	-
Stage 2	459	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	31.7	0	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1115	-	201	-	-
HCM Lane V/C Ratio	0.004	-	0.336	-	-
HCM Control Delay (s)	8.2	0	31.7	-	-
HCM Lane LOS	A	A	D	-	-
HCM 95th %tile Q(veh)	0	-	1.4	-	-

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	49	0	2	296	184	5
Future Vol, veh/h	49	0	2	296	184	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	155	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	78	92	45	43	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	63	0	2	658	428	6

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1093	431	434	0	-	0
Stage 1	431	-	-	-	-	-
Stage 2	662	-	-	-	-	-
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	237	624	1126	-	-	-
Stage 1	655	-	-	-	-	-
Stage 2	513	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	237	624	1126	-	-	-
Mov Cap-2 Maneuver	237	-	-	-	-	-
Stage 1	654	-	-	-	-	-
Stage 2	513	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	25.6	0	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1126	-	237	-	-
HCM Lane V/C Ratio	0.002	-	0.265	-	-
HCM Control Delay (s)	8.2	-	25.6	-	-
HCM Lane LOS	A	-	D	-	-
HCM 95th %tile Q(veh)	0	-	1	-	-

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Intersection	
Int Delay, s/veh	1.3

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	6	1	0	9	2	1
Future Vol, veh/h	6	1	0	9	2	1
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	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	1	0	12	3	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	9	0	21	9
Stage 1	-	-	-	-	9	-
Stage 2	-	-	-	-	12	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1611	-	996	1073
Stage 1	-	-	-	-	1014	-
Stage 2	-	-	-	-	1011	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1611	-	996	1073
Mov Cap-2 Maneuver	-	-	-	-	996	-
Stage 1	-	-	-	-	1014	-
Stage 2	-	-	-	-	1011	-

Approach	EB	WB	NE
HCM Control Delay, s	0	0	8.5
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1020	-	-	1611	-
HCM Lane V/C Ratio	0.004	-	-	-	-
HCM Control Delay (s)	8.5	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	151	78	21
Future Vol, veh/h	0	0	0	151	78	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	78	87	60	47	83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	252	166	25

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	179	-	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	864	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	864	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

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

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	34	0	8	117	65	13
Future Vol, veh/h	34	0	8	117	65	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	78	83	60	47	83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	44	0	10	195	138	16

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	361	146	154	0	-	0
Stage 1	146	-	-	-	-	-
Stage 2	215	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	638	901	1426	-	-	-
Stage 1	881	-	-	-	-	-
Stage 2	821	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	633	901	1426	-	-	-
Mov Cap-2 Maneuver	633	-	-	-	-	-
Stage 1	874	-	-	-	-	-
Stage 2	821	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.1	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1426	-	633	-	-
HCM Lane V/C Ratio	0.007	-	0.069	-	-
HCM Control Delay (s)	7.5	0	11.1	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

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Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	31	0	4	95	49	16
Future Vol, veh/h	31	0	4	95	49	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	-	155	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	78	83	60	47	83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	40	0	5	158	104	19

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	282	114	123	0	-	0
Stage 1	114	-	-	-	-	-
Stage 2	168	-	-	-	-	-
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	708	939	1464	-	-	-
Stage 1	911	-	-	-	-	-
Stage 2	862	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	706	939	1464	-	-	-
Mov Cap-2 Maneuver	706	-	-	-	-	-
Stage 1	908	-	-	-	-	-
Stage 2	862	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.4	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1464	-	706	-	-
HCM Lane V/C Ratio	0.003	-	0.056	-	-
HCM Control Delay (s)	7.5	-	10.4	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

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Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	2	0	0	4	0	0
Future Vol, veh/h	2	0	0	4	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	0	0	5	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	3	0	8	3
Stage 1	-	-	-	-	3	-
Stage 2	-	-	-	-	5	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1619	-	1013	1081
Stage 1	-	-	-	-	1020	-
Stage 2	-	-	-	-	1018	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1619	-	1013	1081
Mov Cap-2 Maneuver	-	-	-	-	1013	-
Stage 1	-	-	-	-	1020	-
Stage 2	-	-	-	-	1018	-

Approach	EB	WB	NE
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1619	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	151	78	21
Future Vol, veh/h	0	0	0	151	78	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	78	87	60	47	83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	252	166	25

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	179	-	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	864	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	864	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

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

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Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	34	0	8	117	65	13
Future Vol, veh/h	34	0	8	117	65	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	78	83	60	47	83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	44	0	10	195	138	16

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	361	146	154	0	-	0
Stage 1	146	-	-	-	-	-
Stage 2	215	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	638	901	1426	-	-	-
Stage 1	881	-	-	-	-	-
Stage 2	821	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	633	901	1426	-	-	-
Mov Cap-2 Maneuver	633	-	-	-	-	-
Stage 1	874	-	-	-	-	-
Stage 2	821	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.1	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1426	-	633	-	-
HCM Lane V/C Ratio	0.007	-	0.069	-	-
HCM Control Delay (s)	7.5	0	11.1	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	31	0	4	95	49	16
Future Vol, veh/h	31	0	4	95	49	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	-	155	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	78	83	60	47	83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	40	0	5	158	104	19

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	282	114	123	0	-	0
Stage 1	114	-	-	-	-	-
Stage 2	168	-	-	-	-	-
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	708	939	1464	-	-	-
Stage 1	911	-	-	-	-	-
Stage 2	862	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	706	939	1464	-	-	-
Mov Cap-2 Maneuver	706	-	-	-	-	-
Stage 1	908	-	-	-	-	-
Stage 2	862	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.4	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1464	-	706	-	-
HCM Lane V/C Ratio	0.003	-	0.056	-	-
HCM Control Delay (s)	7.5	-	10.4	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

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Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	2	0	0	4	0	0
Future Vol, veh/h	2	0	0	4	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	0	0	5	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	3	0	8	3
Stage 1	-	-	-	-	3	-
Stage 2	-	-	-	-	5	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1619	-	1013	1081
Stage 1	-	-	-	-	1020	-
Stage 2	-	-	-	-	1018	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1619	-	1013	1081
Mov Cap-2 Maneuver	-	-	-	-	1013	-
Stage 1	-	-	-	-	1020	-
Stage 2	-	-	-	-	1018	-

Approach	EB	WB	NE
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1619	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

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Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	317	47	83	226
Future Vol, veh/h	0	0	317	47	83	226
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	-	-	-	155	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	45	92	92	43
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	704	51	90	526

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1436	730	0	0	755	0
Stage 1	730	-	-	-	-	-
Stage 2	706	-	-	-	-	-
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	147	422	-	-	855	-
Stage 1	477	-	-	-	-	-
Stage 2	489	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	132	422	-	-	855	-
Mov Cap-2 Maneuver	132	-	-	-	-	-
Stage 1	477	-	-	-	-	-
Stage 2	438	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	1.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	855	-
HCM Lane V/C Ratio	-	-	-	0.106	-
HCM Control Delay (s)	-	-	0	9.7	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0.4	-

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Intersection	
Int Delay, s/veh	1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	33	331	24	42	184
Future Vol, veh/h	1	33	331	24	42	184
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	-	-	-	155	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	78	25	92	92	43
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	42	1324	26	46	428

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1857	1337	0	0	1350	0
Stage 1	1337	-	-	-	-	-
Stage 2	520	-	-	-	-	-
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	81	187	-	-	510	-
Stage 1	245	-	-	-	-	-
Stage 2	597	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	74	187	-	-	510	-
Mov Cap-2 Maneuver	74	-	-	-	-	-
Stage 1	245	-	-	-	-	-
Stage 2	543	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	31.5	0	1.2
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	179	510	-
HCM Lane V/C Ratio	-	-	0.244	0.09	-
HCM Control Delay (s)	-	-	31.5	12.8	-
HCM Lane LOS	-	-	D	B	-
HCM 95th %tile Q(veh)	-	-	0.9	0.3	-

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Intersection	
Int Delay, s/veh	1.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	69	285	0	0	147
Future Vol, veh/h	2	69	285	0	0	147
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	-	-	-	155	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	83	83	47	92	83	42
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	83	606	0	0	350

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	956	606	0	0	606	0
Stage 1	606	-	-	-	-	-
Stage 2	350	-	-	-	-	-
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	286	497	-	-	972	-
Stage 1	545	-	-	-	-	-
Stage 2	713	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	286	497	-	-	972	-
Mov Cap-2 Maneuver	286	-	-	-	-	-
Stage 1	545	-	-	-	-	-
Stage 2	713	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	487	972	-
HCM Lane V/C Ratio	-	-	0.176	-	-
HCM Control Delay (s)	-	-	14	0	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.6	0	-

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Intersection	
Int Delay, s/veh	0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	24	261	9	26	132
Future Vol, veh/h	1	24	261	9	26	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	-	-	-	155	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	78	47	92	87	42
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	31	555	10	30	314

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	934	560	0	0	565	0
Stage 1	560	-	-	-	-	-
Stage 2	374	-	-	-	-	-
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	295	528	-	-	1007	-
Stage 1	572	-	-	-	-	-
Stage 2	696	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	286	528	-	-	1007	-
Mov Cap-2 Maneuver	286	-	-	-	-	-
Stage 1	572	-	-	-	-	-
Stage 2	675	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.5	0	0.8
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	511	1007	-
HCM Lane V/C Ratio	-	-	0.063	0.03	-
HCM Control Delay (s)	-	-	12.5	8.7	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

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Intersection	
Int Delay, s/veh	1.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	28	128	6	8	68
Future Vol, veh/h	1	28	128	6	8	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	-	-	-	155	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	78	60	83	83	47
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	36	213	7	10	145

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	382	217	0	0	220	0
Stage 1	217	-	-	-	-	-
Stage 2	165	-	-	-	-	-
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	620	823	-	-	1349	-
Stage 1	819	-	-	-	-	-
Stage 2	864	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	616	823	-	-	1349	-
Mov Cap-2 Maneuver	616	-	-	-	-	-
Stage 1	819	-	-	-	-	-
Stage 2	858	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.6	0	0.5
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	814	1349	-
HCM Lane V/C Ratio	-	-	0.046	0.007	-
HCM Control Delay (s)	-	-	9.6	7.7	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-

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Intersection	
Int Delay, s/veh	2.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	53	81	22	26	43
Future Vol, veh/h	2	53	81	22	26	43
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	-	-	-	155	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	83	83	60	83	83	47
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	64	135	27	31	91

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	302	149	0	0	162	0
Stage 1	149	-	-	-	-	-
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	690	898	-	-	1417	-
Stage 1	879	-	-	-	-	-
Stage 2	875	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	675	898	-	-	1417	-
Mov Cap-2 Maneuver	675	-	-	-	-	-
Stage 1	879	-	-	-	-	-
Stage 2	856	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.4	0	1.9
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	887	1417	-
HCM Lane V/C Ratio	-	-	0.075	0.022	-
HCM Control Delay (s)	-	-	9.4	7.6	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

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Intersection	
Int Delay, s/veh	1.3

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	6	1	0	9	2	1
Future Vol, veh/h	6	1	0	9	2	1
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	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	1	0	12	3	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	9	0	21	9
Stage 1	-	-	-	-	9	-
Stage 2	-	-	-	-	12	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1611	-	996	1073
Stage 1	-	-	-	-	1014	-
Stage 2	-	-	-	-	1011	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1611	-	996	1073
Mov Cap-2 Maneuver	-	-	-	-	996	-
Stage 1	-	-	-	-	1014	-
Stage 2	-	-	-	-	1011	-

Approach	EB	WB	NE
HCM Control Delay, s	0	0	8.5
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1020	-	-	1611	-
HCM Lane V/C Ratio	0.004	-	-	-	-
HCM Control Delay (s)	8.5	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

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Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	440	316	14
Future Vol, veh/h	0	0	0	440	316	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	45	43	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	978	735	15

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	743	-	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	415	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	415	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

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

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Intersection	
Int Delay, s/veh	16.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕		↰	↕	
Traffic Vol, veh/h	82	0	0	0	0	0	6	358	47	83	230	3
Future Vol, veh/h	82	0	0	0	0	0	6	358	47	83	230	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	-	-	-	-	-	-	-	-	-	155	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	92	92	92	92	45	92	92	43	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	99	0	0	0	0	0	7	796	51	90	535	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1553	1578	537	1553	1554	822	538	0	0	847	0	0
Stage 1	717	717	-	836	836	-	-	-	-	-	-	-
Stage 2	836	861	-	717	718	-	-	-	-	-	-	-
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	~ 92	109	544	92	113	374	1030	-	-	790	-	-
Stage 1	421	434	-	362	382	-	-	-	-	-	-	-
Stage 2	362	372	-	421	433	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 83	95	544	83	99	374	1030	-	-	790	-	-
Mov Cap-2 Maneuver	~ 83	95	-	83	99	-	-	-	-	-	-	-
Stage 1	416	385	-	357	377	-	-	-	-	-	-	-
Stage 2	357	367	-	373	384	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	249.5	0	0.1	1.5
HCM LOS	F	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1030	-	-	83	-	790	-	-
HCM Lane V/C Ratio	0.006	-	-	1.19	-	0.114	-	-
HCM Control Delay (s)	8.5	0	-	249.5	0	10.1	-	-
HCM Lane LOS	A	A	-	F	A	B	-	-
HCM 95th %tile Q(veh)	0	-	-	7.2	-	0.4	-	-

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

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Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	23	0	0	1	0	33	1	354	24	42	186	2
Future Vol, veh/h	23	0	0	1	0	33	1	354	24	42	186	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	-	-	-	-	-	-	155	-	-	155	-	-
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	25	0	0	1	0	36	1	385	26	46	202	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	713	708	203	695	696	398	204	0	0	411	0	0
Stage 1	295	295	-	400	400	-	-	-	-	-	-	-
Stage 2	418	413	-	295	296	-	-	-	-	-	-	-
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	347	360	838	357	365	652	1368	-	-	1148	-	-
Stage 1	713	669	-	626	602	-	-	-	-	-	-	-
Stage 2	612	594	-	713	668	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	318	345	838	346	350	652	1368	-	-	1148	-	-
Mov Cap-2 Maneuver	318	345	-	346	350	-	-	-	-	-	-	-
Stage 1	712	642	-	625	601	-	-	-	-	-	-	-
Stage 2	578	593	-	684	641	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	17.3	11	0	1.5
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1368	-	-	318	635	1148	-	-
HCM Lane V/C Ratio	0.001	-	-	0.079	0.058	0.04	-	-
HCM Control Delay (s)	7.6	-	-	17.3	11	8.3	-	-
HCM Lane LOS	A	-	-	C	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.2	0.1	-	-

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Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	13	3	0	7	1	1
Future Vol, veh/h	13	3	0	7	1	1
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	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	4	0	9	1	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	21	0	28	19
Stage 1	-	-	-	-	19	-
Stage 2	-	-	-	-	9	-
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	-	-	1595	-	987	1059
Stage 1	-	-	-	-	1004	-
Stage 2	-	-	-	-	1014	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1595	-	987	1059
Mov Cap-2 Maneuver	-	-	-	-	987	-
Stage 1	-	-	-	-	1004	-
Stage 2	-	-	-	-	1014	-

Approach	EB	WB	NE
HCM Control Delay, s	0	0	8.5
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1022	-	-	1595	-
HCM Lane V/C Ratio	0.003	-	-	-	-
HCM Control Delay (s)	8.5	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

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Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	430	176	15
Future Vol, veh/h	0	0	0	430	176	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	47	42	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	915	419	16

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	427	-	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	628	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	628	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

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

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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	37	0	0	2	0	69	6	324	0	0	166	11
Future Vol, veh/h	37	0	0	2	0	69	6	324	0	0	166	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	-	-	-	-	-	-	-	-	-	155	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	83	83	83	92	47	92	87	42	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	47	0	0	2	0	83	7	689	0	0	395	12

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1146	1104	401	1104	1110	689	407	0	0	689	0	0
Stage 1	401	401	-	703	703	-	-	-	-	-	-	-
Stage 2	745	703	-	401	407	-	-	-	-	-	-	-
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	176	211	649	188	209	446	1152	-	-	905	-	-
Stage 1	626	601	-	428	440	-	-	-	-	-	-	-
Stage 2	406	440	-	626	597	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	142	209	649	186	207	446	1152	-	-	905	-	-
Mov Cap-2 Maneuver	142	209	-	186	207	-	-	-	-	-	-	-
Stage 1	620	601	-	424	436	-	-	-	-	-	-	-
Stage 2	327	436	-	626	597	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	42.6	15.5	0.1	0
HCM LOS	E	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1152	-	-	142	429	905	-	-
HCM Lane V/C Ratio	0.006	-	-	0.334	0.199	-	-	-
HCM Control Delay (s)	8.1	0	-	42.6	15.5	0	-	-
HCM Lane LOS	A	A	-	E	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	1.4	0.7	0	-	-

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Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	29	0	0	1	0	24	3	217	9	26	138	13
Future Vol, veh/h	29	0	0	1	0	24	3	217	9	26	138	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	155	-	-	155	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	87	47	87	87	42	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	37	0	0	1	0	31	3	462	10	30	329	15

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	886	875	337	870	877	467	344	0	0	472	0	0
Stage 1	397	397	-	473	473	-	-	-	-	-	-	-
Stage 2	489	478	-	397	404	-	-	-	-	-	-	-
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	265	288	705	272	287	596	1215	-	-	1090	-	-
Stage 1	629	603	-	572	558	-	-	-	-	-	-	-
Stage 2	561	556	-	629	599	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	246	279	705	266	278	596	1215	-	-	1090	-	-
Mov Cap-2 Maneuver	246	279	-	266	278	-	-	-	-	-	-	-
Stage 1	628	586	-	571	557	-	-	-	-	-	-	-
Stage 2	531	555	-	612	582	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	22.2	11.7	0.1	0.7
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1215	-	-	246	568	1090	-	-
HCM Lane V/C Ratio	0.003	-	-	0.151	0.056	0.027	-	-
HCM Control Delay (s)	8	-	-	22.2	11.7	8.4	-	-
HCM Lane LOS	A	-	-	C	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.5	0.2	0.1	-	-

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Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	19	4	0	6	2	1
Future Vol, veh/h	19	4	0	6	2	1
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	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	5	0	8	3	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	29	0	35	27
Stage 1	-	-	-	-	27	-
Stage 2	-	-	-	-	8	-
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	-	-	1584	-	978	1048
Stage 1	-	-	-	-	996	-
Stage 2	-	-	-	-	1015	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1584	-	978	1048
Mov Cap-2 Maneuver	-	-	-	-	978	-
Stage 1	-	-	-	-	996	-
Stage 2	-	-	-	-	1015	-

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

Minor Lane/Major Mvmt	NELn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1000	-	-	1584	-
HCM Lane V/C Ratio	0.004	-	-	-	-
HCM Control Delay (s)	8.6	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

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Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	234	112	21
Future Vol, veh/h	0	0	0	234	112	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	78	78	60	47	83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	390	238	25

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	251	-	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	788	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	788	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

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

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Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕		↰	↕	
Traffic Vol, veh/h	34	0	0	1	0	28	8	170	6	8	91	13
Future Vol, veh/h	34	0	0	1	0	28	8	170	6	8	91	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	155	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	87	60	87	83	47	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	44	0	0	1	0	36	9	283	7	10	194	16

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	545	530	202	527	535	287	210	0	0	290	0	0
Stage 1	222	222	-	305	305	-	-	-	-	-	-	-
Stage 2	323	308	-	222	230	-	-	-	-	-	-	-
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	449	455	839	462	452	752	1361	-	-	1272	-	-
Stage 1	780	720	-	705	662	-	-	-	-	-	-	-
Stage 2	689	660	-	780	714	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	423	448	839	456	445	752	1361	-	-	1272	-	-
Mov Cap-2 Maneuver	423	448	-	456	445	-	-	-	-	-	-	-
Stage 1	774	714	-	699	657	-	-	-	-	-	-	-
Stage 2	651	655	-	774	708	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.5	10.2	0.2	0.3
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1361	-	-	423	736	1272	-	-
HCM Lane V/C Ratio	0.007	-	-	0.103	0.051	0.008	-	-
HCM Control Delay (s)	7.7	0	-	14.5	10.2	7.9	-	-
HCM Lane LOS	A	A	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.2	0	-	-

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

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	31	0	0	2	0	53	4	101	22	26	50	16
Future Vol, veh/h	31	0	0	2	0	53	4	101	22	26	50	16
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	-	-	-	-	-	-	155	-	-	155	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	83	83	83	83	60	83	83	47	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	40	0	0	2	0	64	5	168	27	31	106	19

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	402	383	116	370	379	182	125	0	0	195	0	0
Stage 1	178	178	-	192	192	-	-	-	-	-	-	-
Stage 2	224	205	-	178	187	-	-	-	-	-	-	-
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	559	550	936	587	553	861	1462	-	-	1378	-	-
Stage 1	824	752	-	810	742	-	-	-	-	-	-	-
Stage 2	779	732	-	824	745	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	508	536	936	575	539	861	1462	-	-	1378	-	-
Mov Cap-2 Maneuver	508	536	-	575	539	-	-	-	-	-	-	-
Stage 1	822	735	-	808	740	-	-	-	-	-	-	-
Stage 2	719	730	-	805	729	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.7	9.6	0.2	1.5
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1462	-	-	508	846	1378	-	-
HCM Lane V/C Ratio	0.003	-	-	0.078	0.078	0.023	-	-
HCM Control Delay (s)	7.5	-	-	12.7	9.6	7.7	-	-
HCM Lane LOS	A	-	-	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.3	0.1	-	-

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Level of Service Reports - Mitigation

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LOS Synchro Reports

2045 Background + Site
Stop Sign-Controlled Intersections on Jane Lundeen Dr
Option A

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Intersection	
Int Delay, s/veh	1.3

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	6	1	0	9	2	1
Future Vol, veh/h	6	1	0	9	2	1
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	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	1	0	12	3	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	9	0	21	9
Stage 1	-	-	-	-	9	-
Stage 2	-	-	-	-	12	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1611	-	996	1073
Stage 1	-	-	-	-	1014	-
Stage 2	-	-	-	-	1011	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1611	-	996	1073
Mov Cap-2 Maneuver	-	-	-	-	996	-
Stage 1	-	-	-	-	1014	-
Stage 2	-	-	-	-	1011	-

Approach	EB	WB	NE
HCM Control Delay, s	0	0	8.5
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1020	-	-	1611	-
HCM Lane V/C Ratio	0.004	-	-	-	-
HCM Control Delay (s)	8.5	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	482	455	3
Future Vol, veh/h	0	0	0	482	455	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	45	43	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	1071	1058	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	1060	-	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	272	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	272	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

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

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

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	0	0	87	0	0	0	10	498	47	83	282	6
Future Vol, veh/h	0	0	87	0	0	0	10	498	47	83	282	6
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	-	-	-	-	-	-	-	-	-	155	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	78	78	78	92	45	92	92	43	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	105	0	0	0	11	1107	51	90	656	7

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1995	2020	660	2047	1998	1133	663	0	0	1158	0	0
Stage 1	840	840	-	1155	1155	-	-	-	-	-	-	-
Stage 2	1155	1180	-	892	843	-	-	-	-	-	-	-
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	45	58	463	41	60	247	926	-	-	603	-	-
Stage 1	360	381	-	240	271	-	-	-	-	-	-	-
Stage 2	240	264	-	337	380	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	39	48	463	27	49	247	926	-	-	603	-	-
Mov Cap-2 Maneuver	39	48	-	27	49	-	-	-	-	-	-	-
Stage 1	348	324	-	232	262	-	-	-	-	-	-	-
Stage 2	232	255	-	222	323	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	15	0	0.1	1.4
HCM LOS	C	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	926	-	-	463	-	603	-	-
HCM Lane V/C Ratio	0.012	-	-	0.226	-	0.15	-	-
HCM Control Delay (s)	8.9	0	-	15	0	12	-	-
HCM Lane LOS	A	A	-	C	A	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0.9	-	0.5	-	-

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Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↰	↑		↰	↑	
Traffic Vol, veh/h	5	0	12	1	0	33	1	483	24	42	283	2
Future Vol, veh/h	5	0	12	1	0	33	1	483	24	42	283	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	-	-	-	-	-	-	155	-	-	155	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	92	45	92	87	43	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	0	15	1	0	42	1	1073	26	48	658	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1864	1856	659	1851	1844	1086	660	0	0	1099	0	0
Stage 1	755	755	-	1088	1088	-	-	-	-	-	-	-
Stage 2	1109	1101	-	763	756	-	-	-	-	-	-	-
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	56	74	464	57	75	263	928	-	-	635	-	-
Stage 1	401	417	-	261	292	-	-	-	-	-	-	-
Stage 2	254	288	-	397	416	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	44	68	464	52	69	263	928	-	-	635	-	-
Mov Cap-2 Maneuver	44	68	-	52	69	-	-	-	-	-	-	-
Stage 1	401	385	-	261	292	-	-	-	-	-	-	-
Stage 2	213	288	-	355	384	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	40.8	23.8	0	0.8
HCM LOS	E	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	928	-	-	122	235	635	-	-
HCM Lane V/C Ratio	0.001	-	-	0.179	0.185	0.076	-	-
HCM Control Delay (s)	8.9	-	-	40.8	23.8	11.1	-	-
HCM Lane LOS	A	-	-	E	C	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0.6	0.7	0.2	-	-

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Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	13	3	0	7	1	1
Future Vol, veh/h	13	3	0	7	1	1
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	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	4	0	9	1	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	21	0	28	19
Stage 1	-	-	-	-	19	-
Stage 2	-	-	-	-	9	-
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	-	-	1595	-	987	1059
Stage 1	-	-	-	-	1004	-
Stage 2	-	-	-	-	1014	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1595	-	987	1059
Mov Cap-2 Maneuver	-	-	-	-	987	-
Stage 1	-	-	-	-	1004	-
Stage 2	-	-	-	-	1014	-

Approach	EB	WB	NE
HCM Control Delay, s	0	0	8.5
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1022	-	-	1595	-
HCM Lane V/C Ratio	0.003	-	-	-	-
HCM Control Delay (s)	8.5	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	530	203	3
Future Vol, veh/h	0	0	0	530	203	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	47	42	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	1128	483	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	485	-	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	582	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	582	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

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

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕		↰	↕	
Traffic Vol, veh/h	0	0	44	2	0	69	10	392	0	0	189	4
Future Vol, veh/h	0	0	44	2	0	69	10	392	0	0	189	4
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	-	-	-	-	-	-	-	-	-	155	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	83	83	83	92	47	92	87	42	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	56	2	0	83	11	834	0	0	450	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1351	1309	453	1337	1311	834	455	0	0	834	0	0
Stage 1	453	453	-	856	856	-	-	-	-	-	-	-
Stage 2	898	856	-	481	455	-	-	-	-	-	-	-
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	127	159	607	130	159	368	1106	-	-	799	-	-
Stage 1	586	570	-	352	374	-	-	-	-	-	-	-
Stage 2	334	374	-	566	569	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	97	156	607	116	156	368	1106	-	-	799	-	-
Mov Cap-2 Maneuver	97	156	-	116	156	-	-	-	-	-	-	-
Stage 1	575	570	-	345	367	-	-	-	-	-	-	-
Stage 2	254	367	-	513	569	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.5	18.7	0.1	0
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1106	-	-	607	347	799	-	-
HCM Lane V/C Ratio	0.01	-	-	0.093	0.247	-	-	-
HCM Control Delay (s)	8.3	0	-	11.5	18.7	0	-	-
HCM Lane LOS	A	A	-	B	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.3	1	0	-	-

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

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	7	0	15	1	0	24	3	372	9	26	205	13
Future Vol, veh/h	7	0	15	1	0	24	3	372	9	26	205	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	155	-	-	155	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	87	47	87	87	42	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	0	19	1	0	31	3	791	10	30	488	15

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1374	1363	496	1367	1365	796	503	0	0	801	0	0
Stage 1	556	556	-	802	802	-	-	-	-	-	-	-
Stage 2	818	807	-	565	563	-	-	-	-	-	-	-
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	123	148	574	124	147	387	1061	-	-	822	-	-
Stage 1	515	513	-	378	396	-	-	-	-	-	-	-
Stage 2	370	394	-	510	509	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	110	142	574	116	141	387	1061	-	-	822	-	-
Mov Cap-2 Maneuver	110	142	-	116	141	-	-	-	-	-	-	-
Stage 1	513	495	-	377	395	-	-	-	-	-	-	-
Stage 2	340	393	-	475	491	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	21.6	16.2	0	0.5
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1061	-	-	245	354	822	-	-
HCM Lane V/C Ratio	0.003	-	-	0.115	0.091	0.036	-	-
HCM Control Delay (s)	8.4	-	-	21.6	16.2	9.5	-	-
HCM Lane LOS	A	-	-	C	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0.3	0.1	-	-

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	19	4	0	6	2	1
Future Vol, veh/h	19	4	0	6	2	1
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	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	5	0	8	3	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	29	0	35	27
Stage 1	-	-	-	-	27	-
Stage 2	-	-	-	-	8	-
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	-	-	1584	-	978	1048
Stage 1	-	-	-	-	996	-
Stage 2	-	-	-	-	1015	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1584	-	978	1048
Mov Cap-2 Maneuver	-	-	-	-	978	-
Stage 1	-	-	-	-	996	-
Stage 2	-	-	-	-	1015	-

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

Minor Lane/Major Mvmt	NELn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1000	-	-	1584	-
HCM Lane V/C Ratio	0.004	-	-	-	-
HCM Control Delay (s)	8.6	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	1	0	321	157	5
Future Vol, veh/h	0	1	0	321	157	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	60	47	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1	0	535	334	5

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	337	-	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	705	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	705	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.1	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	705	-	-
HCM Lane V/C Ratio	-	0.002	-	-
HCM Control Delay (s)	-	10.1	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0	-	-

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕		↰	↕	
Traffic Vol, veh/h	15	0	20	1	0	28	14	247	6	8	123	19
Future Vol, veh/h	15	0	20	1	0	28	14	247	6	8	123	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	-	-	-	-	-	-	-	-	-	155	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	87	60	87	83	47	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	19	0	26	1	0	36	16	412	7	10	262	23

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	760	745	274	755	753	416	285	0	0	419	0	0
Stage 1	294	294	-	448	448	-	-	-	-	-	-	-
Stage 2	466	451	-	307	305	-	-	-	-	-	-	-
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	323	342	765	325	339	637	1277	-	-	1140	-	-
Stage 1	714	670	-	590	573	-	-	-	-	-	-	-
Stage 2	577	571	-	703	662	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	299	333	765	308	331	637	1277	-	-	1140	-	-
Mov Cap-2 Maneuver	299	333	-	308	331	-	-	-	-	-	-	-
Stage 1	703	664	-	581	564	-	-	-	-	-	-	-
Stage 2	536	562	-	673	656	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.7	11.2	0.3	0.3
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1277	-	-	459	614	1140	-	-
HCM Lane V/C Ratio	0.013	-	-	0.098	0.061	0.008	-	-
HCM Control Delay (s)	7.9	0	-	13.7	11.2	8.2	-	-
HCM Lane LOS	A	A	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.2	0	-	-

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↰	↱		↰	↱	
Traffic Vol, veh/h	13	0	16	2	0	53	4	149	22	26	76	16
Future Vol, veh/h	13	0	16	2	0	53	4	149	22	26	76	16
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	-	-	-	-	-	-	155	-	-	155	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	83	83	83	83	60	83	83	47	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	17	0	21	2	0	64	5	248	27	31	162	19

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	538	519	172	516	515	262	181	0	0	275	0	0
Stage 1	234	234	-	272	272	-	-	-	-	-	-	-
Stage 2	304	285	-	244	243	-	-	-	-	-	-	-
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	454	461	872	470	464	777	1394	-	-	1288	-	-
Stage 1	769	711	-	734	685	-	-	-	-	-	-	-
Stage 2	705	676	-	760	705	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	408	448	872	449	451	777	1394	-	-	1288	-	-
Mov Cap-2 Maneuver	408	448	-	449	451	-	-	-	-	-	-	-
Stage 1	766	694	-	731	682	-	-	-	-	-	-	-
Stage 2	645	673	-	724	688	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.7	10.2	0.1	1.2
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1394	-	-	578	757	1288	-	-
HCM Lane V/C Ratio	0.003	-	-	0.064	0.088	0.024	-	-
HCM Control Delay (s)	7.6	-	-	11.7	10.2	7.9	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.3	0.1	-	-

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LOS Synchro Reports

2045 Background + Site
Stop Sign-Controlled Intersections on Jane Lundeen Dr
Option B

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Intersection	
Int Delay, s/veh	1.3

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	6	1	0	9	2	1
Future Vol, veh/h	6	1	0	9	2	1
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	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	1	0	12	3	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	9	0	21	9
Stage 1	-	-	-	-	9	-
Stage 2	-	-	-	-	12	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1611	-	996	1073
Stage 1	-	-	-	-	1014	-
Stage 2	-	-	-	-	1011	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1611	-	996	1073
Mov Cap-2 Maneuver	-	-	-	-	996	-
Stage 1	-	-	-	-	1014	-
Stage 2	-	-	-	-	1011	-

Approach	EB	WB	NE
HCM Control Delay, s	0	0	8.5
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1020	-	-	1611	-
HCM Lane V/C Ratio	0.004	-	-	-	-
HCM Control Delay (s)	8.5	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	328	130	14
Future Vol, veh/h	0	0	0	328	130	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	45	43	83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	729	302	17

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	311	-	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	729	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	729	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

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

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

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	0	0	135	0	0	0	44	328	0	0	93	37
Future Vol, veh/h	0	0	135	0	0	0	44	328	0	0	93	37
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	155	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	78	78	78	92	45	92	92	43	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	163	0	0	0	48	729	0	0	216	40

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1061	1061	236	1143	1081	729	256	0	0	729	0	0
Stage 1	236	236	-	825	825	-	-	-	-	-	-	-
Stage 2	825	825	-	318	256	-	-	-	-	-	-	-
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	202	224	803	177	218	423	1309	-	-	875	-	-
Stage 1	767	710	-	367	387	-	-	-	-	-	-	-
Stage 2	367	387	-	693	696	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	193	210	803	135	204	423	1309	-	-	875	-	-
Mov Cap-2 Maneuver	193	210	-	135	204	-	-	-	-	-	-	-
Stage 1	719	710	-	344	363	-	-	-	-	-	-	-
Stage 2	344	363	-	553	696	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.6	0	0.5	0
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1309	-	-	803	-	875	-	-
HCM Lane V/C Ratio	0.037	-	-	0.203	-	-	-	-
HCM Control Delay (s)	7.9	0	-	10.6	0	0	-	-
HCM Lane LOS	A	A	-	B	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.8	-	0	-	-

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↰	↱		↰	↱	
Traffic Vol, veh/h	0	0	65	0	0	0	6	372	0	0	207	21
Future Vol, veh/h	0	0	65	0	0	0	6	372	0	0	207	21
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	-	-	-	-	-	-	155	-	-	155	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	92	45	92	87	43	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	83	0	0	0	7	827	0	0	481	24

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1334	1334	493	1376	1346	827	505	0	0	827	0	0
Stage 1	493	493	-	841	841	-	-	-	-	-	-	-
Stage 2	841	841	-	535	505	-	-	-	-	-	-	-
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	131	154	576	122	151	371	1060	-	-	804	-	-
Stage 1	558	547	-	359	380	-	-	-	-	-	-	-
Stage 2	359	380	-	529	540	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	130	153	576	104	150	371	1060	-	-	804	-	-
Mov Cap-2 Maneuver	130	153	-	104	150	-	-	-	-	-	-	-
Stage 1	554	547	-	356	377	-	-	-	-	-	-	-
Stage 2	357	377	-	452	540	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.3	0	0.1	0
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1060	-	-	576	-	804	-	-
HCM Lane V/C Ratio	0.006	-	-	0.145	-	-	-	-
HCM Control Delay (s)	8.4	-	-	12.3	0	0	-	-
HCM Lane LOS	A	-	-	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.5	-	0	-	-

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Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	13	3	0	7	1	1
Future Vol, veh/h	13	3	0	7	1	1
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	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	4	0	9	1	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	21	0	28	19
Stage 1	-	-	-	-	19	-
Stage 2	-	-	-	-	9	-
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	-	-	1595	-	987	1059
Stage 1	-	-	-	-	1004	-
Stage 2	-	-	-	-	1014	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1595	-	987	1059
Mov Cap-2 Maneuver	-	-	-	-	987	-
Stage 1	-	-	-	-	1004	-
Stage 2	-	-	-	-	1014	-

Approach	EB	WB	NE
HCM Control Delay, s	0	0	8.5
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1022	-	-	1595	-
HCM Lane V/C Ratio	0.003	-	-	-	-
HCM Control Delay (s)	8.5	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

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Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	530	203	3
Future Vol, veh/h	0	0	0	530	203	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	47	42	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	1128	483	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	485	-	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	582	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	582	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

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

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Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕		↰	↕	
Traffic Vol, veh/h	0	0	39	2	0	69	10	392	0	0	189	14
Future Vol, veh/h	0	0	39	2	0	69	10	392	0	0	189	14
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	155	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	83	83	83	92	47	92	87	42	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	50	2	0	83	11	834	0	0	450	16

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1356	1314	458	1339	1322	834	466	0	0	834	0	0
Stage 1	458	458	-	856	856	-	-	-	-	-	-	-
Stage 2	898	856	-	483	466	-	-	-	-	-	-	-
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	126	158	603	130	156	368	1095	-	-	799	-	-
Stage 1	583	567	-	352	374	-	-	-	-	-	-	-
Stage 2	334	374	-	565	562	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	96	155	603	118	153	368	1095	-	-	799	-	-
Mov Cap-2 Maneuver	96	155	-	118	153	-	-	-	-	-	-	-
Stage 1	572	567	-	345	367	-	-	-	-	-	-	-
Stage 2	254	367	-	518	562	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.5	18.7	0.1	0
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1095	-	-	603	347	799	-	-
HCM Lane V/C Ratio	0.01	-	-	0.083	0.247	-	-	-
HCM Control Delay (s)	8.3	0	-	11.5	18.7	0	-	-
HCM Lane LOS	A	A	-	B	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.3	1	0	-	-

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Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↰	↑		↰	↑	
Traffic Vol, veh/h	0	0	27	1	0	24	3	379	9	26	200	13
Future Vol, veh/h	0	0	27	1	0	24	3	379	9	26	200	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	155	-	-	155	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	87	47	87	87	42	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	35	1	0	31	3	806	10	30	476	15

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1377	1366	484	1378	1368	811	491	0	0	816	0	0
Stage 1	544	544	-	817	817	-	-	-	-	-	-	-
Stage 2	833	822	-	561	551	-	-	-	-	-	-	-
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	122	147	583	122	147	379	1072	-	-	812	-	-
Stage 1	523	519	-	370	390	-	-	-	-	-	-	-
Stage 2	363	388	-	512	515	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	109	141	583	111	141	379	1072	-	-	812	-	-
Mov Cap-2 Maneuver	109	141	-	111	141	-	-	-	-	-	-	-
Stage 1	521	500	-	369	389	-	-	-	-	-	-	-
Stage 2	333	387	-	464	496	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.6	16.5	0	0.6
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1072	-	-	583	346	812	-	-
HCM Lane V/C Ratio	0.003	-	-	0.059	0.093	0.037	-	-
HCM Control Delay (s)	8.4	-	-	11.6	16.5	9.6	-	-
HCM Lane LOS	A	-	-	B	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.3	0.1	-	-

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Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	19	4	0	6	2	1
Future Vol, veh/h	19	4	0	6	2	1
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	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	5	0	8	3	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	29	0	35	27
Stage 1	-	-	-	-	27	-
Stage 2	-	-	-	-	8	-
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	-	-	1584	-	978	1048
Stage 1	-	-	-	-	996	-
Stage 2	-	-	-	-	1015	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1584	-	978	1048
Mov Cap-2 Maneuver	-	-	-	-	978	-
Stage 1	-	-	-	-	996	-
Stage 2	-	-	-	-	1015	-

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

Minor Lane/Major Mvmt	NELn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1000	-	-	1584	-
HCM Lane V/C Ratio	0.004	-	-	-	-
HCM Control Delay (s)	8.6	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

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Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	1	0	321	157	5
Future Vol, veh/h	0	1	0	321	157	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	60	47	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1	0	535	334	5

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	337	-	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	705	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	705	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.1	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	705	-	-
HCM Lane V/C Ratio	-	0.002	-	-
HCM Control Delay (s)	-	10.1	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0	-	-

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Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕		↰	↕	
Traffic Vol, veh/h	15	0	20	1	0	28	14	247	6	8	123	19
Future Vol, veh/h	15	0	20	1	0	28	14	247	6	8	123	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	-	-	-	-	-	-	-	-	-	155	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	87	60	87	83	47	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	19	0	26	1	0	36	16	412	7	10	262	23

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	760	745	274	755	753	416	285	0	0	419	0	0
Stage 1	294	294	-	448	448	-	-	-	-	-	-	-
Stage 2	466	451	-	307	305	-	-	-	-	-	-	-
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	323	342	765	325	339	637	1277	-	-	1140	-	-
Stage 1	714	670	-	590	573	-	-	-	-	-	-	-
Stage 2	577	571	-	703	662	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	299	333	765	308	331	637	1277	-	-	1140	-	-
Mov Cap-2 Maneuver	299	333	-	308	331	-	-	-	-	-	-	-
Stage 1	703	664	-	581	564	-	-	-	-	-	-	-
Stage 2	536	562	-	673	656	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.7	11.2	0.3	0.3
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1277	-	-	459	614	1140	-	-
HCM Lane V/C Ratio	0.013	-	-	0.098	0.061	0.008	-	-
HCM Control Delay (s)	7.9	0	-	13.7	11.2	8.2	-	-
HCM Lane LOS	A	A	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.2	0	-	-

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Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↰	↱		↰	↱	
Traffic Vol, veh/h	13	0	16	2	0	53	4	149	22	26	76	16
Future Vol, veh/h	13	0	16	2	0	53	4	149	22	26	76	16
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	-	-	-	-	-	-	155	-	-	155	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	83	83	83	83	60	83	83	47	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	17	0	21	2	0	64	5	248	27	31	162	19

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	538	519	172	516	515	262	181	0	0	275	0	0
Stage 1	234	234	-	272	272	-	-	-	-	-	-	-
Stage 2	304	285	-	244	243	-	-	-	-	-	-	-
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	454	461	872	470	464	777	1394	-	-	1288	-	-
Stage 1	769	711	-	734	685	-	-	-	-	-	-	-
Stage 2	705	676	-	760	705	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	408	448	872	449	451	777	1394	-	-	1288	-	-
Mov Cap-2 Maneuver	408	448	-	449	451	-	-	-	-	-	-	-
Stage 1	766	694	-	731	682	-	-	-	-	-	-	-
Stage 2	645	673	-	724	688	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.7	10.2	0.1	1.2
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1394	-	-	578	757	1288	-	-
HCM Lane V/C Ratio	0.003	-	-	0.064	0.088	0.024	-	-
HCM Control Delay (s)	7.6	-	-	11.7	10.2	7.9	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.3	0.1	-	-

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LOS Synchro Reports

2045 Background + Site
Stop Sign-Controlled Intersections on Jane Lundeen Dr
Option C

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Intersection	
Int Delay, s/veh	1.3

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	6	1	0	9	2	1
Future Vol, veh/h	6	1	0	9	2	1
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	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	1	0	12	3	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	9	0	21	9
Stage 1	-	-	-	-	9	-
Stage 2	-	-	-	-	12	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1611	-	996	1073
Stage 1	-	-	-	-	1014	-
Stage 2	-	-	-	-	1011	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1611	-	996	1073
Mov Cap-2 Maneuver	-	-	-	-	996	-
Stage 1	-	-	-	-	1014	-
Stage 2	-	-	-	-	1011	-

Approach	EB	WB	NE
HCM Control Delay, s	0	0	8.5
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1020	-	-	1611	-
HCM Lane V/C Ratio	0.004	-	-	-	-
HCM Control Delay (s)	8.5	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	3	0	482	455	3
Future Vol, veh/h	0	3	0	482	455	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	45	43	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	3	0	1071	1058	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	1060	-	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	272	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	272	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.4	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	272	-	-
HCM Lane V/C Ratio	-	0.012	-	-
HCM Control Delay (s)	-	18.4	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	0	-	-

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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	0	0	14	1	0	33	1	443	24	42	242	2
Future Vol, veh/h	0	0	14	1	0	33	1	443	24	42	242	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	-	-	-	-	-	-	155	-	-	155	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	92	45	92	87	43	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	18	1	0	42	1	984	26	48	563	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1680	1672	564	1668	1660	997	565	0	0	1010	0	0
Stage 1	660	660	-	999	999	-	-	-	-	-	-	-
Stage 2	1020	1012	-	669	661	-	-	-	-	-	-	-
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	75	96	525	77	97	296	1007	-	-	686	-	-
Stage 1	452	460	-	293	321	-	-	-	-	-	-	-
Stage 2	285	317	-	447	460	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	61	89	525	70	90	296	1007	-	-	686	-	-
Mov Cap-2 Maneuver	61	89	-	70	90	-	-	-	-	-	-	-
Stage 1	452	428	-	293	321	-	-	-	-	-	-	-
Stage 2	244	317	-	402	428	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.1	20.9	0	0.8
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1007	-	-	525	270	686	-	-
HCM Lane V/C Ratio	0.001	-	-	0.034	0.161	0.07	-	-
HCM Control Delay (s)	8.6	-	-	12.1	20.9	10.6	-	-
HCM Lane LOS	A	-	-	B	C	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.6	0.2	-	-

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Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	13	3	0	7	1	1
Future Vol, veh/h	13	3	0	7	1	1
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	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	4	0	9	1	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	21	0	28	19
Stage 1	-	-	-	-	19	-
Stage 2	-	-	-	-	9	-
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	-	-	1595	-	987	1059
Stage 1	-	-	-	-	1004	-
Stage 2	-	-	-	-	1014	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1595	-	987	1059
Mov Cap-2 Maneuver	-	-	-	-	987	-
Stage 1	-	-	-	-	1004	-
Stage 2	-	-	-	-	1014	-

Approach	EB	WB	NE
HCM Control Delay, s	0	0	8.5
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1022	-	-	1595	-
HCM Lane V/C Ratio	0.003	-	-	-	-
HCM Control Delay (s)	8.5	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	1	0	530	203	3
Future Vol, veh/h	0	1	0	530	203	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	47	42	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1	0	1128	483	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	485	-	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	582	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	582	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.2	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	582	-	-
HCM Lane V/C Ratio	-	0.002	-	-
HCM Control Delay (s)	-	11.2	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0	-	-

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	17	1	0	24	3	351	9	26	183	13
Future Vol, veh/h	0	0	17	1	0	24	3	351	9	26	183	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	155	-	-	155	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	87	47	87	87	42	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	22	1	0	31	3	747	10	30	436	15

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1278	1267	444	1273	1269	752	451	0	0	757	0	0
Stage 1	504	504	-	758	758	-	-	-	-	-	-	-
Stage 2	774	763	-	515	511	-	-	-	-	-	-	-
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	143	169	614	144	168	410	1109	-	-	854	-	-
Stage 1	550	541	-	399	415	-	-	-	-	-	-	-
Stage 2	391	413	-	543	537	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	128	163	614	135	162	410	1109	-	-	854	-	-
Mov Cap-2 Maneuver	128	163	-	135	162	-	-	-	-	-	-	-
Stage 1	548	522	-	398	414	-	-	-	-	-	-	-
Stage 2	361	412	-	505	518	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.1	15.4	0	0.6
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1109	-	-	614	379	854	-	-
HCM Lane V/C Ratio	0.003	-	-	0.035	0.085	0.035	-	-
HCM Control Delay (s)	8.3	-	-	11.1	15.4	9.4	-	-
HCM Lane LOS	A	-	-	B	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.3	0.1	-	-

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Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	19	4	0	6	2	1
Future Vol, veh/h	19	4	0	6	2	1
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	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	5	0	8	3	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	29	0	35	27
Stage 1	-	-	-	-	27	-
Stage 2	-	-	-	-	8	-
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	-	-	1584	-	978	1048
Stage 1	-	-	-	-	996	-
Stage 2	-	-	-	-	1015	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1584	-	978	1048
Mov Cap-2 Maneuver	-	-	-	-	978	-
Stage 1	-	-	-	-	996	-
Stage 2	-	-	-	-	1015	-

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

Minor Lane/Major Mvmt	NELn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1000	-	-	1584	-
HCM Lane V/C Ratio	0.004	-	-	-	-
HCM Control Delay (s)	8.6	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

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Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	1	0	321	157	5
Future Vol, veh/h	0	1	0	321	157	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	60	47	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1	0	535	334	5

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	337	-	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	705	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	705	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.1	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	705	-	-
HCM Lane V/C Ratio	-	0.002	-	-
HCM Control Delay (s)	-	10.1	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0	-	-

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Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↰	↱		↰	↱	
Traffic Vol, veh/h	13	0	16	2	0	53	4	149	22	26	76	16
Future Vol, veh/h	13	0	16	2	0	53	4	149	22	26	76	16
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	-	-	-	-	-	-	155	-	-	155	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	83	83	83	83	60	83	83	47	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	17	0	21	2	0	64	5	248	27	31	162	19

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	538	519	172	516	515	262	181	0	0	275	0	0
Stage 1	234	234	-	272	272	-	-	-	-	-	-	-
Stage 2	304	285	-	244	243	-	-	-	-	-	-	-
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	454	461	872	470	464	777	1394	-	-	1288	-	-
Stage 1	769	711	-	734	685	-	-	-	-	-	-	-
Stage 2	705	676	-	760	705	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	408	448	872	449	451	777	1394	-	-	1288	-	-
Mov Cap-2 Maneuver	408	448	-	449	451	-	-	-	-	-	-	-
Stage 1	766	694	-	731	682	-	-	-	-	-	-	-
Stage 2	645	673	-	724	688	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.7	10.2	0.1	1.2
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1394	-	-	578	757	1288	-	-
HCM Lane V/C Ratio	0.003	-	-	0.064	0.088	0.024	-	-
HCM Control Delay (s)	7.6	-	-	11.7	10.2	7.9	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.3	0.1	-	-

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LOS Synchro Reports

2045 Background + Site
Stop Sign-Controlled Intersections on Jane Lundeen Dr
Option D

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Intersection	
Int Delay, s/veh	1.3

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	6	1	0	9	2	1
Future Vol, veh/h	6	1	0	9	2	1
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	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	1	0	12	3	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	9	0	21	9
Stage 1	-	-	-	-	9	-
Stage 2	-	-	-	-	12	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1611	-	996	1073
Stage 1	-	-	-	-	1014	-
Stage 2	-	-	-	-	1011	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1611	-	996	1073
Mov Cap-2 Maneuver	-	-	-	-	996	-
Stage 1	-	-	-	-	1014	-
Stage 2	-	-	-	-	1011	-

Approach	EB	WB	NE
HCM Control Delay, s	0	0	8.5
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1020	-	-	1611	-
HCM Lane V/C Ratio	0.004	-	-	-	-
HCM Control Delay (s)	8.5	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

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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	0	0	87	0	0	0	10	498	47	83	282	10
Future Vol, veh/h	0	0	87	0	0	0	10	498	47	83	282	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	-	-	-	-	-	-	-	-	-	155	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	78	78	78	92	45	92	92	43	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	105	0	0	0	11	1107	51	90	656	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1997	2022	662	2049	2002	1133	667	0	0	1158	0	0
Stage 1	842	842	-	1155	1155	-	-	-	-	-	-	-
Stage 2	1155	1180	-	894	847	-	-	-	-	-	-	-
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	45	58	462	41	60	247	923	-	-	603	-	-
Stage 1	359	380	-	240	271	-	-	-	-	-	-	-
Stage 2	240	264	-	336	378	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	39	48	462	27	49	247	923	-	-	603	-	-
Mov Cap-2 Maneuver	39	48	-	27	49	-	-	-	-	-	-	-
Stage 1	347	323	-	232	262	-	-	-	-	-	-	-
Stage 2	232	255	-	221	322	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	15.1	0	0.1	1.4
HCM LOS	C	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	923	-	-	462	-	603	-	-
HCM Lane V/C Ratio	0.012	-	-	0.227	-	0.15	-	-
HCM Control Delay (s)	8.9	0	-	15.1	0	12	-	-
HCM Lane LOS	A	A	-	C	A	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0.9	-	0.5	-	-

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Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↰	↱		↰	↱	
Traffic Vol, veh/h	5	0	12	1	0	33	1	483	24	42	283	2
Future Vol, veh/h	5	0	12	1	0	33	1	483	24	42	283	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	-	-	-	-	-	-	155	-	-	155	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	92	45	92	87	43	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	0	15	1	0	42	1	1073	26	48	658	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1864	1856	659	1851	1844	1086	660	0	0	1099	0	0
Stage 1	755	755	-	1088	1088	-	-	-	-	-	-	-
Stage 2	1109	1101	-	763	756	-	-	-	-	-	-	-
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	56	74	464	57	75	263	928	-	-	635	-	-
Stage 1	401	417	-	261	292	-	-	-	-	-	-	-
Stage 2	254	288	-	397	416	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	44	68	464	52	69	263	928	-	-	635	-	-
Mov Cap-2 Maneuver	44	68	-	52	69	-	-	-	-	-	-	-
Stage 1	401	385	-	261	292	-	-	-	-	-	-	-
Stage 2	213	288	-	355	384	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	40.8	23.8	0	0.8
HCM LOS	E	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	928	-	-	122	235	635	-	-
HCM Lane V/C Ratio	0.001	-	-	0.179	0.185	0.076	-	-
HCM Control Delay (s)	8.9	-	-	40.8	23.8	11.1	-	-
HCM Lane LOS	A	-	-	E	C	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0.6	0.7	0.2	-	-

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Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	13	3	0	7	1	1
Future Vol, veh/h	13	3	0	7	1	1
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	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	4	0	9	1	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	21	0	28	19
Stage 1	-	-	-	-	19	-
Stage 2	-	-	-	-	9	-
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	-	-	1595	-	987	1059
Stage 1	-	-	-	-	1004	-
Stage 2	-	-	-	-	1014	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1595	-	987	1059
Mov Cap-2 Maneuver	-	-	-	-	987	-
Stage 1	-	-	-	-	1004	-
Stage 2	-	-	-	-	1014	-

Approach	EB	WB	NE
HCM Control Delay, s	0	0	8.5
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1022	-	-	1595	-
HCM Lane V/C Ratio	0.003	-	-	-	-
HCM Control Delay (s)	8.5	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

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Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕		↰	↕	
Traffic Vol, veh/h	0	0	44	2	0	69	10	392	0	0	189	17
Future Vol, veh/h	0	0	44	2	0	69	10	392	0	0	189	17
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	155	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	83	83	83	92	47	92	87	42	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	56	2	0	83	11	834	0	0	450	20

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1358	1316	460	1344	1326	834	470	0	0	834	0	0
Stage 1	460	460	-	856	856	-	-	-	-	-	-	-
Stage 2	898	856	-	488	470	-	-	-	-	-	-	-
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	126	158	601	129	156	368	1092	-	-	799	-	-
Stage 1	581	566	-	352	374	-	-	-	-	-	-	-
Stage 2	334	374	-	561	560	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	96	155	601	115	153	368	1092	-	-	799	-	-
Mov Cap-2 Maneuver	96	155	-	115	153	-	-	-	-	-	-	-
Stage 1	570	566	-	345	367	-	-	-	-	-	-	-
Stage 2	254	367	-	508	560	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.6	18.7	0.1	0
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1092	-	-	601	347	799	-	-
HCM Lane V/C Ratio	0.01	-	-	0.094	0.247	-	-	-
HCM Control Delay (s)	8.3	0	-	11.6	18.7	0	-	-
HCM Lane LOS	A	A	-	B	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.3	1	0	-	-

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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	7	0	15	1	0	24	3	372	9	26	205	13
Future Vol, veh/h	7	0	15	1	0	24	3	372	9	26	205	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	155	-	-	155	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	87	47	87	87	42	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	0	19	1	0	31	3	791	10	30	488	15

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1374	1363	496	1367	1365	796	503	0	0	801	0	0
Stage 1	556	556	-	802	802	-	-	-	-	-	-	-
Stage 2	818	807	-	565	563	-	-	-	-	-	-	-
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	123	148	574	124	147	387	1061	-	-	822	-	-
Stage 1	515	513	-	378	396	-	-	-	-	-	-	-
Stage 2	370	394	-	510	509	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	110	142	574	116	141	387	1061	-	-	822	-	-
Mov Cap-2 Maneuver	110	142	-	116	141	-	-	-	-	-	-	-
Stage 1	513	495	-	377	395	-	-	-	-	-	-	-
Stage 2	340	393	-	475	491	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	21.6	16.2	0	0.5
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1061	-	-	245	354	822	-	-
HCM Lane V/C Ratio	0.003	-	-	0.115	0.091	0.036	-	-
HCM Control Delay (s)	8.4	-	-	21.6	16.2	9.5	-	-
HCM Lane LOS	A	-	-	C	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0.3	0.1	-	-

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Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	19	4	0	6	2	1
Future Vol, veh/h	19	4	0	6	2	1
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	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	5	0	8	3	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	29	0	35	27
Stage 1	-	-	-	-	27	-
Stage 2	-	-	-	-	8	-
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	-	-	1584	-	978	1048
Stage 1	-	-	-	-	996	-
Stage 2	-	-	-	-	1015	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1584	-	978	1048
Mov Cap-2 Maneuver	-	-	-	-	978	-
Stage 1	-	-	-	-	996	-
Stage 2	-	-	-	-	1015	-

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

Minor Lane/Major Mvmt	NELn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1000	-	-	1584	-
HCM Lane V/C Ratio	0.004	-	-	-	-
HCM Control Delay (s)	8.6	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

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Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕		↰	↕	
Traffic Vol, veh/h	15	0	20	1	0	28	14	247	6	8	123	23
Future Vol, veh/h	15	0	20	1	0	28	14	247	6	8	123	23
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	155	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	87	60	87	83	47	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	19	0	26	1	0	36	16	412	7	10	262	28

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	762	747	276	757	758	416	290	0	0	419	0	0
Stage 1	296	296	-	448	448	-	-	-	-	-	-	-
Stage 2	466	451	-	309	310	-	-	-	-	-	-	-
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	322	341	763	324	336	637	1272	-	-	1140	-	-
Stage 1	712	668	-	590	573	-	-	-	-	-	-	-
Stage 2	577	571	-	701	659	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	298	332	763	307	328	637	1272	-	-	1140	-	-
Mov Cap-2 Maneuver	298	332	-	307	328	-	-	-	-	-	-	-
Stage 1	701	662	-	581	564	-	-	-	-	-	-	-
Stage 2	536	562	-	672	653	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.7	11.2	0.3	0.3
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1272	-	-	457	614	1140	-	-
HCM Lane V/C Ratio	0.013	-	-	0.098	0.061	0.008	-	-
HCM Control Delay (s)	7.9	0	-	13.7	11.2	8.2	-	-
HCM Lane LOS	A	A	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.2	0	-	-

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Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	0	16	2	0	53	4	149	22	26	76	16
Future Vol, veh/h	13	0	16	2	0	53	4	149	22	26	76	16
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	-	-	-	-	-	-	155	-	-	155	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	83	83	83	83	60	83	83	47	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	17	0	21	2	0	64	5	248	27	31	162	19

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	538	519	172	516	515	262	181	0	0	275	0	0
Stage 1	234	234	-	272	272	-	-	-	-	-	-	-
Stage 2	304	285	-	244	243	-	-	-	-	-	-	-
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	454	461	872	470	464	777	1394	-	-	1288	-	-
Stage 1	769	711	-	734	685	-	-	-	-	-	-	-
Stage 2	705	676	-	760	705	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	408	448	872	449	451	777	1394	-	-	1288	-	-
Mov Cap-2 Maneuver	408	448	-	449	451	-	-	-	-	-	-	-
Stage 1	766	694	-	731	682	-	-	-	-	-	-	-
Stage 2	645	673	-	724	688	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.7	10.2	0.1	1.2
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1394	-	-	578	757	1288	-	-
HCM Lane V/C Ratio	0.003	-	-	0.064	0.088	0.024	-	-
HCM Control Delay (s)	7.6	-	-	11.7	10.2	7.9	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.3	0.1	-	-

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LOS Synchro Reports

2045 Background + Site
Stop Sign-Controlled Intersections on Jane Lundeen Dr
Option E

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Intersection	
Int Delay, s/veh	1.3

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	6	1	0	9	2	1
Future Vol, veh/h	6	1	0	9	2	1
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	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	1	0	12	3	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	9	0	21	9
Stage 1	-	-	-	-	9	-
Stage 2	-	-	-	-	12	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1611	-	996	1073
Stage 1	-	-	-	-	1014	-
Stage 2	-	-	-	-	1011	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1611	-	996	1073
Mov Cap-2 Maneuver	-	-	-	-	996	-
Stage 1	-	-	-	-	1014	-
Stage 2	-	-	-	-	1011	-

Approach	EB	WB	NE
HCM Control Delay, s	0	0	8.5
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1020	-	-	1611	-
HCM Lane V/C Ratio	0.004	-	-	-	-
HCM Control Delay (s)	8.5	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

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Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕		↰	↕	
Traffic Vol, veh/h	0	0	83	0	0	0	10	498	7	83	282	0
Future Vol, veh/h	0	0	83	0	0	0	10	498	7	83	282	0
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	-	-	-	-	-	-	-	-	-	155	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	78	78	78	92	45	92	92	43	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	100	0	0	0	11	1107	8	90	656	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1969	1973	656	2019	1969	1111	656	0	0	1115	0	0
Stage 1	836	836	-	1133	1133	-	-	-	-	-	-	-
Stage 2	1133	1137	-	886	836	-	-	-	-	-	-	-
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	47	62	465	43	63	254	931	-	-	626	-	-
Stage 1	362	382	-	247	278	-	-	-	-	-	-	-
Stage 2	247	277	-	339	382	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	41	51	465	29	52	254	931	-	-	626	-	-
Mov Cap-2 Maneuver	41	51	-	29	52	-	-	-	-	-	-	-
Stage 1	351	327	-	239	269	-	-	-	-	-	-	-
Stage 2	239	268	-	228	327	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.9	0	0.1	1.4
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	931	-	-	465	-	626	-	-
HCM Lane V/C Ratio	0.012	-	-	0.215	-	0.144	-	-
HCM Control Delay (s)	8.9	0	-	14.9	0	11.7	-	-
HCM Lane LOS	A	A	-	B	A	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0.8	-	0.5	-	-

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Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	22	1	0	33	1	488	24	42	279	2
Future Vol, veh/h	0	0	22	1	0	33	1	488	24	42	279	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	-	-	-	-	-	-	155	-	-	155	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	92	45	92	87	43	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	28	1	0	42	1	1084	26	48	649	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1866	1858	650	1859	1846	1097	651	0	0	1110	0	0
Stage 1	746	746	-	1099	1099	-	-	-	-	-	-	-
Stage 2	1120	1112	-	760	747	-	-	-	-	-	-	-
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	56	73	469	56	75	259	935	-	-	629	-	-
Stage 1	405	421	-	258	288	-	-	-	-	-	-	-
Stage 2	251	284	-	398	420	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	44	67	469	50	69	259	935	-	-	629	-	-
Mov Cap-2 Maneuver	44	67	-	50	69	-	-	-	-	-	-	-
Stage 1	405	389	-	258	288	-	-	-	-	-	-	-
Stage 2	210	284	-	346	388	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.2	24.2	0	0.8
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	935	-	-	469	231	629	-	-
HCM Lane V/C Ratio	0.001	-	-	0.06	0.189	0.077	-	-
HCM Control Delay (s)	8.9	-	-	13.2	24.2	11.2	-	-
HCM Lane LOS	A	-	-	B	C	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.7	0.2	-	-

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Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	13	3	0	7	1	1
Future Vol, veh/h	13	3	0	7	1	1
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	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	4	0	9	1	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	21	0	28	19
Stage 1	-	-	-	-	19	-
Stage 2	-	-	-	-	9	-
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	-	-	1595	-	987	1059
Stage 1	-	-	-	-	1004	-
Stage 2	-	-	-	-	1014	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1595	-	987	1059
Mov Cap-2 Maneuver	-	-	-	-	987	-
Stage 1	-	-	-	-	1004	-
Stage 2	-	-	-	-	1014	-

Approach	EB	WB	NE
HCM Control Delay, s	0	0	8.5
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1022	-	-	1595	-
HCM Lane V/C Ratio	0.003	-	-	-	-
HCM Control Delay (s)	8.5	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

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Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕		↰	↕	
Traffic Vol, veh/h	0	0	39	2	0	69	10	392	0	0	189	17
Future Vol, veh/h	0	0	39	2	0	69	10	392	0	0	189	17
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	155	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	83	83	83	92	47	92	87	42	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	50	2	0	83	11	834	0	0	450	20

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1358	1316	460	1341	1326	834	470	0	0	834	0	0
Stage 1	460	460	-	856	856	-	-	-	-	-	-	-
Stage 2	898	856	-	485	470	-	-	-	-	-	-	-
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	126	158	601	129	156	368	1092	-	-	799	-	-
Stage 1	581	566	-	352	374	-	-	-	-	-	-	-
Stage 2	334	374	-	563	560	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	96	155	601	117	153	368	1092	-	-	799	-	-
Mov Cap-2 Maneuver	96	155	-	117	153	-	-	-	-	-	-	-
Stage 1	570	566	-	345	367	-	-	-	-	-	-	-
Stage 2	254	367	-	516	560	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.5	18.7	0.1	0
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1092	-	-	601	347	799	-	-
HCM Lane V/C Ratio	0.01	-	-	0.083	0.247	-	-	-
HCM Control Delay (s)	8.3	0	-	11.5	18.7	0	-	-
HCM Lane LOS	A	A	-	B	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.3	1	0	-	-

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Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	27	1	0	24	3	379	9	26	200	13
Future Vol, veh/h	0	0	27	1	0	24	3	379	9	26	200	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	155	-	-	155	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	87	47	87	87	42	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	35	1	0	31	3	806	10	30	476	15

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1377	1366	484	1378	1368	811	491	0	0	816	0	0
Stage 1	544	544	-	817	817	-	-	-	-	-	-	-
Stage 2	833	822	-	561	551	-	-	-	-	-	-	-
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	122	147	583	122	147	379	1072	-	-	812	-	-
Stage 1	523	519	-	370	390	-	-	-	-	-	-	-
Stage 2	363	388	-	512	515	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	109	141	583	111	141	379	1072	-	-	812	-	-
Mov Cap-2 Maneuver	109	141	-	111	141	-	-	-	-	-	-	-
Stage 1	521	500	-	369	389	-	-	-	-	-	-	-
Stage 2	333	387	-	464	496	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.6	16.5	0	0.6
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1072	-	-	583	346	812	-	-
HCM Lane V/C Ratio	0.003	-	-	0.059	0.093	0.037	-	-
HCM Control Delay (s)	8.4	-	-	11.6	16.5	9.6	-	-
HCM Lane LOS	A	-	-	B	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.3	0.1	-	-

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Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	19	4	0	6	2	1
Future Vol, veh/h	19	4	0	6	2	1
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	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	5	0	8	3	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	29	0	35	27
Stage 1	-	-	-	-	27	-
Stage 2	-	-	-	-	8	-
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	-	-	1584	-	978	1048
Stage 1	-	-	-	-	996	-
Stage 2	-	-	-	-	1015	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1584	-	978	1048
Mov Cap-2 Maneuver	-	-	-	-	978	-
Stage 1	-	-	-	-	996	-
Stage 2	-	-	-	-	1015	-

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

Minor Lane/Major Mvmt	NELn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1000	-	-	1584	-
HCM Lane V/C Ratio	0.004	-	-	-	-
HCM Control Delay (s)	8.6	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

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Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕		↰	↕	
Traffic Vol, veh/h	0	0	83	0	0	0	10	498	47	83	282	10
Future Vol, veh/h	0	0	83	0	0	0	10	498	47	83	282	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	-	-	-	-	-	-	-	-	-	155	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	87	60	87	83	47	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	106	0	0	0	11	830	54	100	600	12

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1685	1712	606	1738	1691	857	612	0	0	884	0	0
Stage 1	806	806	-	879	879	-	-	-	-	-	-	-
Stage 2	879	906	-	859	812	-	-	-	-	-	-	-
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	75	90	497	68	93	357	967	-	-	765	-	-
Stage 1	376	395	-	342	365	-	-	-	-	-	-	-
Stage 2	342	355	-	351	392	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	66	76	497	47	79	357	967	-	-	765	-	-
Mov Cap-2 Maneuver	66	76	-	47	79	-	-	-	-	-	-	-
Stage 1	367	343	-	334	357	-	-	-	-	-	-	-
Stage 2	334	347	-	240	341	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.2	0	0.1	1.5
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	967	-	-	497	-	765	-	-
HCM Lane V/C Ratio	0.012	-	-	0.214	-	0.131	-	-
HCM Control Delay (s)	8.8	0	-	14.2	0	10.4	-	-
HCM Lane LOS	A	A	-	B	A	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0.8	-	0.4	-	-

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Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	0	16	2	0	53	4	149	22	26	76	16
Future Vol, veh/h	13	0	16	2	0	53	4	149	22	26	76	16
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	-	-	-	-	-	-	155	-	-	155	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	83	83	83	83	60	83	83	47	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	17	0	21	2	0	64	5	248	27	31	162	19

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	538	519	172	516	515	262	181	0	0	275	0	0
Stage 1	234	234	-	272	272	-	-	-	-	-	-	-
Stage 2	304	285	-	244	243	-	-	-	-	-	-	-
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	454	461	872	470	464	777	1394	-	-	1288	-	-
Stage 1	769	711	-	734	685	-	-	-	-	-	-	-
Stage 2	705	676	-	760	705	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	408	448	872	449	451	777	1394	-	-	1288	-	-
Mov Cap-2 Maneuver	408	448	-	449	451	-	-	-	-	-	-	-
Stage 1	766	694	-	731	682	-	-	-	-	-	-	-
Stage 2	645	673	-	724	688	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.7	10.2	0.1	1.2
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1394	-	-	578	757	1288	-	-
HCM Lane V/C Ratio	0.003	-	-	0.064	0.088	0.024	-	-
HCM Control Delay (s)	7.6	-	-	11.7	10.2	7.9	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.3	0.1	-	-

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LOS Synchro Reports

2045 Background + Site
Stop Sign-Controlled Intersections on Jane Lundeen Dr
Option F

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Intersection	
Int Delay, s/veh	1.3

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	6	1	0	9	2	1
Future Vol, veh/h	6	1	0	9	2	1
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	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	1	0	12	3	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	9	0	21	9
Stage 1	-	-	-	-	9	-
Stage 2	-	-	-	-	12	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1611	-	996	1073
Stage 1	-	-	-	-	1014	-
Stage 2	-	-	-	-	1011	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1611	-	996	1073
Mov Cap-2 Maneuver	-	-	-	-	996	-
Stage 1	-	-	-	-	1014	-
Stage 2	-	-	-	-	1011	-

Approach	EB	WB	NE
HCM Control Delay, s	0	0	8.5
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1020	-	-	1611	-
HCM Lane V/C Ratio	0.004	-	-	-	-
HCM Control Delay (s)	8.5	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

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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	0	0	14	1	0	33	1	443	24	42	242	2
Future Vol, veh/h	0	0	14	1	0	33	1	443	24	42	242	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	-	-	-	-	-	-	155	-	-	155	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	92	45	92	87	43	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	18	1	0	42	1	984	26	48	563	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1680	1672	564	1668	1660	997	565	0	0	1010	0	0
Stage 1	660	660	-	999	999	-	-	-	-	-	-	-
Stage 2	1020	1012	-	669	661	-	-	-	-	-	-	-
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	75	96	525	77	97	296	1007	-	-	686	-	-
Stage 1	452	460	-	293	321	-	-	-	-	-	-	-
Stage 2	285	317	-	447	460	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	61	89	525	70	90	296	1007	-	-	686	-	-
Mov Cap-2 Maneuver	61	89	-	70	90	-	-	-	-	-	-	-
Stage 1	452	428	-	293	321	-	-	-	-	-	-	-
Stage 2	244	317	-	402	428	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.1	20.9	0	0.8
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1007	-	-	525	270	686	-	-
HCM Lane V/C Ratio	0.001	-	-	0.034	0.161	0.07	-	-
HCM Control Delay (s)	8.6	-	-	12.1	20.9	10.6	-	-
HCM Lane LOS	A	-	-	B	C	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.6	0.2	-	-

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Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	13	3	0	7	1	1
Future Vol, veh/h	13	3	0	7	1	1
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	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	4	0	9	1	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	21	0	28	19
Stage 1	-	-	-	-	19	-
Stage 2	-	-	-	-	9	-
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	-	-	1595	-	987	1059
Stage 1	-	-	-	-	1004	-
Stage 2	-	-	-	-	1014	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1595	-	987	1059
Mov Cap-2 Maneuver	-	-	-	-	987	-
Stage 1	-	-	-	-	1004	-
Stage 2	-	-	-	-	1014	-

Approach	EB	WB	NE
HCM Control Delay, s	0	0	8.5
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1022	-	-	1595	-
HCM Lane V/C Ratio	0.003	-	-	-	-
HCM Control Delay (s)	8.5	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

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Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	17	1	0	24	3	351	9	26	183	13
Future Vol, veh/h	0	0	17	1	0	24	3	351	9	26	183	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	155	-	-	155	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	87	47	87	87	42	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	22	1	0	31	3	747	10	30	436	15

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1278	1267	444	1273	1269	752	451	0	0	757	0	0
Stage 1	504	504	-	758	758	-	-	-	-	-	-	-
Stage 2	774	763	-	515	511	-	-	-	-	-	-	-
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	143	169	614	144	168	410	1109	-	-	854	-	-
Stage 1	550	541	-	399	415	-	-	-	-	-	-	-
Stage 2	391	413	-	543	537	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	128	163	614	135	162	410	1109	-	-	854	-	-
Mov Cap-2 Maneuver	128	163	-	135	162	-	-	-	-	-	-	-
Stage 1	548	522	-	398	414	-	-	-	-	-	-	-
Stage 2	361	412	-	505	518	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.1	15.4	0	0.6
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1109	-	-	614	379	854	-	-
HCM Lane V/C Ratio	0.003	-	-	0.035	0.085	0.035	-	-
HCM Control Delay (s)	8.3	-	-	11.1	15.4	9.4	-	-
HCM Lane LOS	A	-	-	B	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.3	0.1	-	-

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Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	19	4	0	6	2	1
Future Vol, veh/h	19	4	0	6	2	1
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	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	5	0	8	3	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	29	0	35	27
Stage 1	-	-	-	-	27	-
Stage 2	-	-	-	-	8	-
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	-	-	1584	-	978	1048
Stage 1	-	-	-	-	996	-
Stage 2	-	-	-	-	1015	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1584	-	978	1048
Mov Cap-2 Maneuver	-	-	-	-	978	-
Stage 1	-	-	-	-	996	-
Stage 2	-	-	-	-	1015	-

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

Minor Lane/Major Mvmt	NELn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1000	-	-	1584	-
HCM Lane V/C Ratio	0.004	-	-	-	-
HCM Control Delay (s)	8.6	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

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Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	0	16	2	0	53	4	149	22	26	76	16
Future Vol, veh/h	13	0	16	2	0	53	4	149	22	26	76	16
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	-	-	-	-	-	-	155	-	-	155	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	83	83	83	83	60	83	83	47	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	17	0	21	2	0	64	5	248	27	31	162	19

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	538	519	172	516	515	262	181	0	0	275	0	0
Stage 1	234	234	-	272	272	-	-	-	-	-	-	-
Stage 2	304	285	-	244	243	-	-	-	-	-	-	-
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	454	461	872	470	464	777	1394	-	-	1288	-	-
Stage 1	769	711	-	734	685	-	-	-	-	-	-	-
Stage 2	705	676	-	760	705	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	408	448	872	449	451	777	1394	-	-	1288	-	-
Mov Cap-2 Maneuver	408	448	-	449	451	-	-	-	-	-	-	-
Stage 1	766	694	-	731	682	-	-	-	-	-	-	-
Stage 2	645	673	-	724	688	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.7	10.2	0.1	1.2
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1394	-	-	578	757	1288	-	-
HCM Lane V/C Ratio	0.003	-	-	0.064	0.088	0.024	-	-
HCM Control Delay (s)	7.6	-	-	11.7	10.2	7.9	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.3	0.1	-	-

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Sidra Reports

TRANSPORTATION
CONSULTANTS, INC.

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Sidra Roundabout Reports

State Highway 83 + Highway 105/Walker Road
From January 2026 report

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE LEVEL OF SERVICE

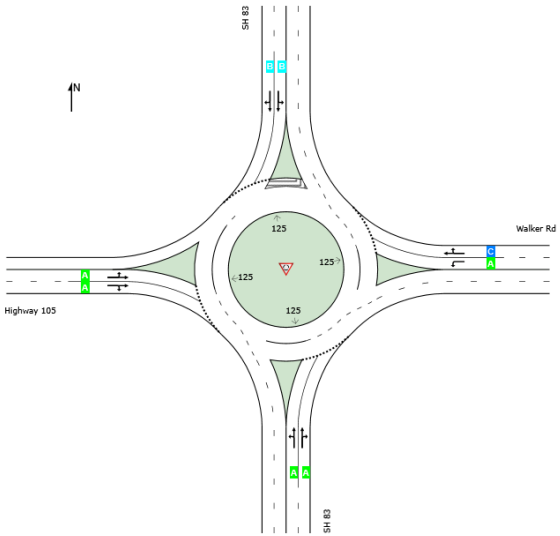
Lane Level of Service

Site: 101 [2045 BG AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	B	B	A	B



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE SUMMARY

Site: 101 [2045 BG AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: SH 83															
Lane 1	255	3.0	255	3.0	776	0.329	100	8.5	LOS A	1.4	35.0	Full	1600	0.0	0.0
Lane 2[d]	277	3.0	277	3.0	842	0.329	100	8.0	LOS A	1.3	34.5	Full	1600	0.0	0.0
Approach	532	3.0	532	3.0		0.329		8.2	LOS A	1.4	35.0				
East: Walker Rd															
Lane 1	273	3.0	273	3.0	794	0.344	100	8.6	LOS A	1.5	37.6	Full	570	0.0	0.0
Lane 2[d]	610	3.0	610	3.0	860	0.708	100	16.9	LOS C	7.8	200.8	Full	1600	0.0	0.0
Approach	883	3.0	883	3.0		0.708		14.3	LOS B	7.8	200.8				
North: SH 83															
Lane 1	225	3.0	225	3.0	552	0.408	100	12.9	LOS B	1.8	46.4	Full	1600	0.0	0.0
Lane 2[d]	225	3.0	225	3.0	552	0.408	100	12.9	LOS B	1.8	46.4	Full	1600	0.0	0.0
Approach	451	3.0	451	3.0		0.408		12.9	LOS B	1.8	46.4				
West: Highway 105															
Lane 1	244	3.0	244	3.0	694	0.352	100	9.7	LOS A	1.5	39.4	Full	1100	0.0	0.0
Lane 2[d]	267	3.0	267	3.0	759	0.352	100	9.0	LOS A	1.5	38.7	Full	1100	0.0	0.0
Approach	511	3.0	511	3.0		0.352		9.3	LOS A	1.5	39.4				
All Vehicles	2376	3.0	2376	3.0		0.708		11.6	LOS B	7.8	200.8				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.

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Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)

South: SH 83

Mov. From S To Exit:	L2 W	T1 N	R2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	140	115	-	255	3.0	776	0.329	100	NA	NA
Lane 2	-	188	89	277	3.0	842	0.329	100	NA	NA
Approach	140	303	89	532	3.0		0.329			

East: Walker Rd

Mov. From E To Exit:	L2 S	T1 W	R2 N	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	273	-	-	273	3.0	794	0.344	100	NA	NA
Lane 2	-	516	94	610	3.0	860	0.708	100	NA	NA
Approach	273	516	94	883	3.0		0.708			

North: SH 83

Mov. From N To Exit:	L2 E	T1 S	R2 W	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	126	99	-	225	3.0	552	0.408	100	NA	NA
Lane 2	-	148	77	225	3.0	552	0.408	100	NA	NA
Approach	126	247	77	451	3.0		0.408			

West: Highway 105

Mov. From W To Exit:	L2 N	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	68	176	-	244	3.0	694	0.352	100	NA	NA
Lane 2	-	165	102	267	3.0	759	0.352	100	NA	NA
Approach	68	341	102	511	3.0		0.352			

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	Total	%HV	Deg.Satn (v/c)
All Vehicles	2376	3.0	0.708

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis

	Exit Lane Number	Short Lane Length ft	Percent Opng in Lane %	Opposing Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
There are no Exit Short Lanes for Merge Analysis at this Site.												

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: SH 83				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0
East: Walker Rd				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0
North: SH 83				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0
West: Highway 105				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE LEVEL OF SERVICE

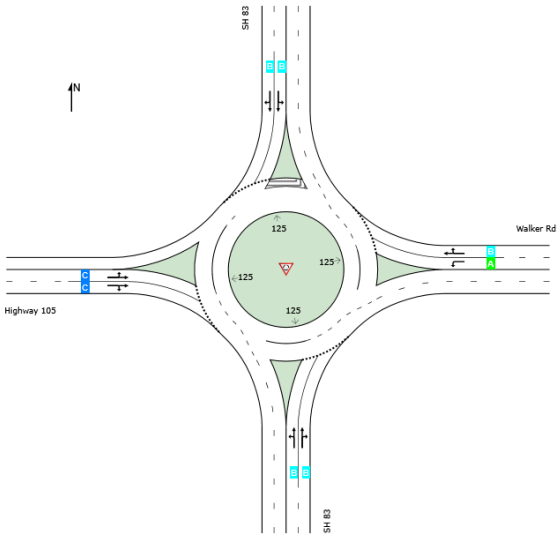
Lane Level of Service

Site: 101 [2045 BG School PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	B	B	B	C	B



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE SUMMARY

Site: 101 [2045 BG School PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: SH 83															
Lane 1	283	3.0	283	3.0	616	0.460	100	12.9	LOS B	2.3	59.8	Full	1600	0.0	0.0
Lane 2[d]	312	3.0	312	3.0	678	0.460	100	12.0	LOS B	2.3	59.8	Full	1600	0.0	0.0
Approach	596	3.0	596	3.0		0.460		12.4	LOS B	2.3	59.8				
East: Walker Rd															
Lane 1	314	3.0	314	3.0	813	0.387	100	9.1	LOS A	1.9	47.6	Full	570	0.0	0.0
Lane 2[d]	524	3.0	524	3.0	880	0.596	100	12.8	LOS B	5.0	127.4	Full	1600	0.0	0.0
Approach	839	3.0	839	3.0		0.596		11.4	LOS B	5.0	127.4				
North: SH 83															
Lane 1	259	3.0	259	3.0	564	0.459	100	13.9	LOS B	2.2	56.8	Full	1600	0.0	0.0
Lane 2[d]	259	3.0	259	3.0	564	0.459	100	13.9	LOS B	2.2	56.8	Full	1600	0.0	0.0
Approach	518	3.0	518	3.0		0.459		13.9	LOS B	2.2	56.8				
West: Highway 105															
Lane 1	375	3.0	375	3.0	622	0.602	100	17.0	LOS C	4.0	101.5	Full	1100	0.0	0.0
Lane 2[d]	412	3.0	412	3.0	685	0.602	100	15.8	LOS C	4.0	103.0	Full	1100	0.0	0.0
Approach	787	3.0	787	3.0		0.602		16.3	LOS C	4.0	103.0				
All Vehicles	2740	3.0	2740	3.0		0.602		13.5	LOS B	5.0	127.4				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
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LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.

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Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)

South: SH 83

Mov. From S To Exit:	L2 W	T1 N	R2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	148	135	-	283	3.0	616	0.460	100	NA	NA
Lane 2	-	130	182	312	3.0	678	0.460	100	NA	NA
Approach	148	265	182	596	3.0		0.460			

East: Walker Rd

Mov. From E To Exit:	L2 S	T1 W	R2 N	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	314	-	-	314	3.0	813	0.387	100	NA	NA
Lane 2	-	445	80	524	3.0	880	0.596	100	NA	NA
Approach	314	445	80	839	3.0		0.596			

North: SH 83

Mov. From N To Exit:	L2 E	T1 S	R2 W	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	129	130	-	259	3.0	564	0.459	100	NA	NA
Lane 2	-	182	77	259	3.0	564	0.459	100	NA	NA
Approach	129	312	77	518	3.0		0.459			

West: Highway 105

Mov. From W To Exit:	L2 N	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	74	301	-	375	3.0	622	0.602	100	NA	NA
Lane 2	-	261	151	412	3.0	685	0.602	100	NA	NA
Approach	74	562	151	787	3.0		0.602			

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	Total	%HV	Deg.Satn (v/c)
All Vehicles	2740	3.0	0.602

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis

	Exit Lane Number	Short Lane Length ft	Percent Opng in Lane %	Opposing Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
There are no Exit Short Lanes for Merge Analysis at this Site.												

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: SH 83				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0
East: Walker Rd				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0
North: SH 83				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0
West: Highway 105				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE LEVEL OF SERVICE

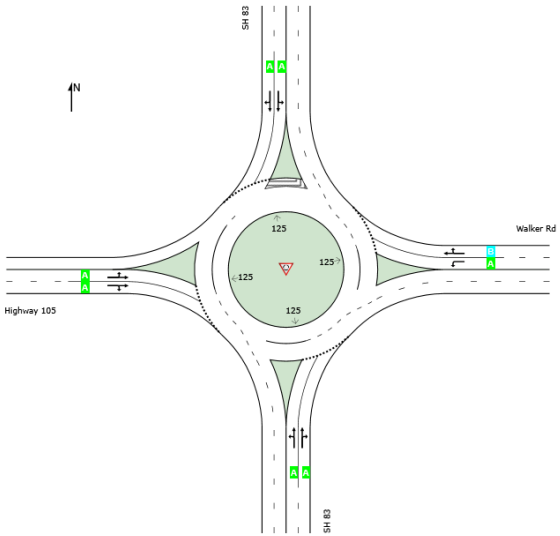
Lane Level of Service

Site: 101 [2045 BG PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	B	A	A	A



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
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LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

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LANE SUMMARY

Site: 101 [2045 BG PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: SH 83															
Lane 1	382	3.0	382	3.0	944	0.405	100	8.3	LOS A	2.0	50.6	Full	1600	0.0	0.0
Lane 2[d]	410	3.0	410	3.0	1012	0.405	100	7.9	LOS A	1.9	49.7	Full	1600	0.0	0.0
Approach	792	3.0	792	3.0		0.405		8.1	LOS A	2.0	50.6				
East: Walker Rd															
Lane 1	181	3.0	181	3.0	642	0.282	100	9.2	LOS A	1.1	27.2	Full	570	0.0	0.0
Lane 2[d]	349	3.0	349	3.0	705	0.495	100	12.4	LOS B	2.8	70.8	Full	1600	0.0	0.0
Approach	530	3.0	530	3.0		0.495		11.3	LOS B	2.8	70.8				
North: SH 83															
Lane 1	245	3.0	245	3.0	722	0.339	100	9.2	LOS A	1.5	37.6	Full	1600	0.0	0.0
Lane 2[d]	245	3.0	245	3.0	722	0.339	100	9.2	LOS A	1.5	37.6	Full	1600	0.0	0.0
Approach	489	3.0	489	3.0		0.339		9.2	LOS A	1.5	37.6				
West: Highway 105															
Lane 1	200	3.0	200	3.0	727	0.276	100	8.2	LOS A	1.1	27.6	Full	1100	0.0	0.0
Lane 2[d]	218	3.0	218	3.0	793	0.276	100	7.6	LOS A	1.1	27.1	Full	1100	0.0	0.0
Approach	419	3.0	419	3.0		0.276		7.9	LOS A	1.1	27.6				
All Vehicles	2231	3.0	2231	3.0		0.495		9.1	LOS A	2.8	70.8				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.

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Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)

South: SH 83

Mov. From S To Exit:	L2 W	T1 N	R2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	189	193	-	382	3.0	944	0.405	100	NA	NA
Lane 2	-	240	170	410	3.0	1012	0.405	100	NA	NA
Approach	189	433	170	792	3.0		0.405			

East: Walker Rd

Mov. From E To Exit:	L2 S	T1 W	R2 N	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	181	-	-	181	3.0	642	0.282	100	NA	NA
Lane 2	-	289	60	349	3.0	705	0.495	100	NA	NA
Approach	181	289	60	530	3.0		0.495			

North: SH 83

Mov. From N To Exit:	L2 E	T1 S	R2 W	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	50	195	-	245	3.0	722	0.339	100	NA	NA
Lane 2	-	174	71	245	3.0	722	0.339	100	NA	NA
Approach	50	368	71	489	3.0		0.339			

West: Highway 105

Mov. From W To Exit:	L2 N	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	101	99	-	200	3.0	727	0.276	100	NA	NA
Lane 2	-	87	132	218	3.0	793	0.276	100	NA	NA
Approach	101	186	132	419	3.0		0.276			

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	Total	%HV	Deg.Satn (v/c)
All Vehicles	2231	3.0	0.495

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis

	Exit Lane Number	Short Lane Length ft	Percent Opng in Lane %	Opposing Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
There are no Exit Short Lanes for Merge Analysis at this Site.												

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: SH 83				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0
East: Walker Rd				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0
North: SH 83				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0
West: Highway 105				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0

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LANE SUMMARY

Site: 101 [2045 BG + Site AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: SH 83															
Lane 1	259	3.0	259	3.0	765	0.338	100	8.7	LOS A	1.4	36.7	Full	1600	0.0	0.0
Lane 2[d]	281	3.0	281	3.0	831	0.338	100	8.2	LOS A	1.4	35.6	Full	1600	0.0	0.0
Approach	540	3.0	540	3.0		0.338		8.4	LOS A	1.4	36.7				
East: Walker Rd															
Lane 1	339	3.0	339	3.0	794	0.427	100	9.9	LOS A	2.3	58.8	Full	570	0.0	0.0
Lane 2[d]	648	3.0	648	3.0	860	0.754	100	19.2	LOS C	9.5	244.1	Full	1600	0.0	0.0
Approach	987	3.0	987	3.0		0.754		16.0	LOS C	9.5	244.1				
North: SH 83															
Lane 1	227	3.0	227	3.0	500	0.453	100	15.2	LOS C	2.0	51.8	Full	1600	0.0	0.0
Lane 2[d]	227	3.0	227	3.0	500	0.453	100	15.2	LOS C	2.0	51.8	Full	1600	0.0	0.0
Approach	453	3.0	453	3.0		0.453		15.2	LOS C	2.0	51.8				
West: Highway 105															
Lane 1	226	3.0	226	3.0	648	0.349	100	10.2	LOS B	1.5	38.3	Full	1100	0.0	0.0
Lane 2[d]	248	3.0	248	3.0	712	0.349	100	9.4	LOS A	1.5	37.8	Full	1100	0.0	0.0
Approach	474	3.0	474	3.0		0.349		9.8	LOS A	1.5	38.3				
All Vehicles	2455	3.0	2455	3.0		0.754		13.0	LOS B	9.5	244.1				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.

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Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)

South: SH 83

Mov. From S To Exit:	L2 W	T1 N	R2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	140	119	-	259	3.0	765	0.338	100	NA	NA
Lane 2	-	184	97	281	3.0	831	0.338	100	NA	NA
Approach	140	303	97	540	3.0		0.338			

East: Walker Rd

Mov. From E To Exit:	L2 S	T1 W	R2 N	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	339	-	-	339	3.0	794	0.427	100	NA	NA
Lane 2	-	548	100	648	3.0	860	0.754	100	NA	NA
Approach	339	548	100	987	3.0		0.754			

North: SH 83

Mov. From N To Exit:	L2 E	T1 S	R2 W	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	128	98	-	227	3.0	500	0.453	100	NA	NA
Lane 2	-	149	77	227	3.0	500	0.453	100	NA	NA
Approach	128	247	77	453	3.0		0.453			

West: Highway 105

Mov. From W To Exit:	L2 N	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	68	158	-	226	3.0	648	0.349	100	NA	NA
Lane 2	-	194	54	248	3.0	712	0.349	100	NA	NA
Approach	68	352	54	474	3.0		0.349			

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	Total	%HV	Deg.Satn (v/c)
All Vehicles	2455	3.0	0.754

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis

	Exit Lane Number	Short Lane Length ft	Percent Opng in Lane %	Opposing Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
There are no Exit Short Lanes for Merge Analysis at this Site.												

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: SH 83				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0
East: Walker Rd				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0
North: SH 83				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0
West: Highway 105				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0

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LANE LEVEL OF SERVICE

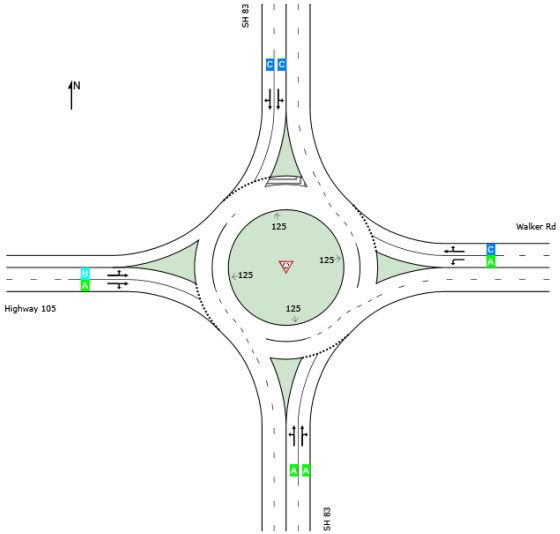
Lane Level of Service

Site: 101 [2045 BG + Site AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	C	C	A	B



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

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LANE SUMMARY

Site: 101 [2045 BG + Site School PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: SH 83															
Lane 1	287	3.0	287	3.0	592	0.485	100	14.0	LOS B	2.5	63.7	Full	1600	0.0	0.0
Lane 2[d]	317	3.0	317	3.0	653	0.485	100	12.9	LOS B	2.5	63.9	Full	1600	0.0	0.0
Approach	603	3.0	603	3.0		0.485		13.4	LOS B	2.5	63.9				
East: Walker Rd															
Lane 1	359	3.0	359	3.0	813	0.442	100	10.0	LOS B	2.5	63.5	Full	570	0.0	0.0
Lane 2[d]	550	3.0	550	3.0	880	0.625	100	13.6	LOS B	5.6	144.4	Full	1600	0.0	0.0
Approach	910	3.0	910	3.0		0.625		12.2	LOS B	5.6	144.4				
North: SH 83															
Lane 1	262	3.0	262	3.0	528	0.496	100	15.7	LOS C	2.4	61.9	Full	1600	0.0	0.0
Lane 2[d]	262	3.0	262	3.0	528	0.496	100	15.7	LOS C	2.4	61.9	Full	1600	0.0	0.0
Approach	524	3.0	524	3.0		0.496		15.7	LOS C	2.4	61.9				
West: Highway 105															
Lane 1	418	3.0	418	3.0	591	0.707	100	22.6	LOS C	5.5	139.7	Full	1100	0.0	0.0
Lane 2[d]	462	3.0	462	3.0	653	0.707	100	20.9	LOS C	5.6	143.2	Full	1100	0.0	0.0
Approach	880	3.0	880	3.0		0.707		21.7	LOS C	5.6	143.2				
All Vehicles	2916	3.0	2916	3.0		0.707		16.0	LOS C	5.6	144.4				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.

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Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)

South: SH 83

Mov. From S To Exit:	L2 W	T1 N	R2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	148	139	-	287	3.0	592	0.485	100	NA	NA
Lane 2	-	127	190	317	3.0	653	0.485	100	NA	NA
Approach	148	265	190	603	3.0		0.485			

East: Walker Rd

Mov. From E To Exit:	L2 S	T1 W	R2 N	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	359	-	-	359	3.0	813	0.442	100	NA	NA
Lane 2	-	466	85	550	3.0	880	0.625	100	NA	NA
Approach	359	466	85	910	3.0		0.625			

North: SH 83

Mov. From N To Exit:	L2 E	T1 S	R2 W	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	135	127	-	262	3.0	528	0.496	100	NA	NA
Lane 2	-	185	77	262	3.0	528	0.496	100	NA	NA
Approach	135	312	77	524	3.0		0.496			

West: Highway 105

Mov. From W To Exit:	L2 N	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	74	344	-	418	3.0	591	0.707	100	NA	NA
Lane 2	-	253	209	462	3.0	653	0.707	100	NA	NA
Approach	74	597	209	880	3.0		0.707			

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	Total	%HV	Deg.Satn (v/c)
All Vehicles	2916	3.0	0.707

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis

	Exit Lane Number	Short Lane Length ft	Percent Opng in Lane %	Opposing Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
There are no Exit Short Lanes for Merge Analysis at this Site.												

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: SH 83				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0
East: Walker Rd				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0
North: SH 83				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0
West: Highway 105				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0

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LANE LEVEL OF SERVICE

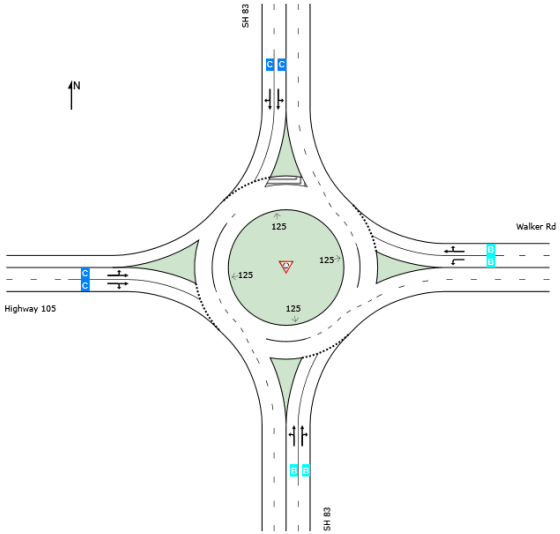
Lane Level of Service

Site: 101 [2045 BG + Site School PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	B	B	C	C	C



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

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LANE LEVEL OF SERVICE

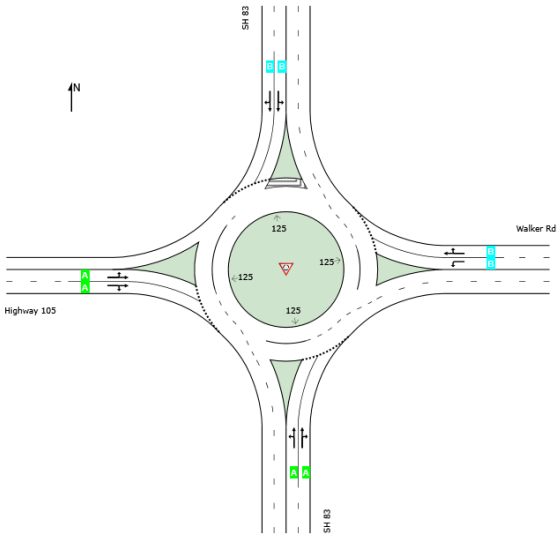
Lane Level of Service

Site: 101 [2045 BG + Site PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	B	B	A	B



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

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LANE SUMMARY

Site: 101 [2045 BG + Site PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: SH 83															
Lane 1	388	3.0	388	3.0	899	0.431	100	9.1	LOS A	2.3	59.3	Full	1600	0.0	0.0
Lane 2[d]	417	3.0	417	3.0	967	0.431	100	8.6	LOS A	2.2	57.2	Full	1600	0.0	0.0
Approach	804	3.0	804	3.0		0.431		8.8	LOS A	2.3	59.3				
East: Walker Rd															
Lane 1	227	3.0	227	3.0	642	0.353	100	10.3	LOS B	1.5	39.0	Full	570	0.0	0.0
Lane 2[d]	380	3.0	380	3.0	705	0.539	100	13.5	LOS B	3.3	83.5	Full	1600	0.0	0.0
Approach	607	3.0	607	3.0		0.539		12.3	LOS B	3.3	83.5				
North: SH 83															
Lane 1	248	3.0	248	3.0	672	0.369	100	10.2	LOS B	1.7	42.9	Full	1600	0.0	0.0
Lane 2[d]	248	3.0	248	3.0	672	0.369	100	10.2	LOS B	1.7	42.9	Full	1600	0.0	0.0
Approach	497	3.0	497	3.0		0.369		10.2	LOS B	1.7	42.9				
West: Highway 105															
Lane 1	220	3.0	220	3.0	690	0.319	100	9.2	LOS A	1.3	33.1	Full	1100	0.0	0.0
Lane 2[d]	240	3.0	240	3.0	754	0.319	100	8.5	LOS A	1.3	32.3	Full	1100	0.0	0.0
Approach	460	3.0	460	3.0		0.319		8.9	LOS A	1.3	33.1				
All Vehicles	2368	3.0	2368	3.0		0.539		10.0	LOS B	3.3	83.5				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.

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Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)

South: SH 83

Mov. From S To Exit:	L2 W	T1 N	R2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	189	198	-	388	3.0	899	0.431	100	NA	NA
Lane 2	-	235	182	417	3.0	967	0.431	100	NA	NA
Approach	189	433	182	804	3.0		0.431			

East: Walker Rd

Mov. From E To Exit:	L2 S	T1 W	R2 N	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	227	-	-	227	3.0	642	0.353	100	NA	NA
Lane 2	-	315	65	380	3.0	705	0.539	100	NA	NA
Approach	227	315	65	607	3.0		0.539			

North: SH 83

Mov. From N To Exit:	L2 E	T1 S	R2 W	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	58	191	-	248	3.0	672	0.369	100	NA	NA
Lane 2	-	178	71	248	3.0	672	0.369	100	NA	NA
Approach	58	368	71	497	3.0		0.369			

West: Highway 105

Mov. From W To Exit:	L2 N	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	101	119	-	220	3.0	690	0.319	100	NA	NA
Lane 2	-	109	132	240	3.0	754	0.319	100	NA	NA
Approach	101	227	132	460	3.0		0.319			

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	Total	%HV	Deg.Satn (v/c)
All Vehicles	2368	3.0	0.539

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis

	Exit Lane Number	Short Lane Length ft	Percent Opng in Lane %	Opposing Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
There are no Exit Short Lanes for Merge Analysis at this Site.												

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: SH 83				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0
East: Walker Rd				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0
North: SH 83				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0
West: Highway 105				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0

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Sidra Roundabout Reports

Jane Lundeen Drive + Walker Road
From January 2026 report

TRANSPORTATION
CONSULTANTS, INC.

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE LEVEL OF SERVICE

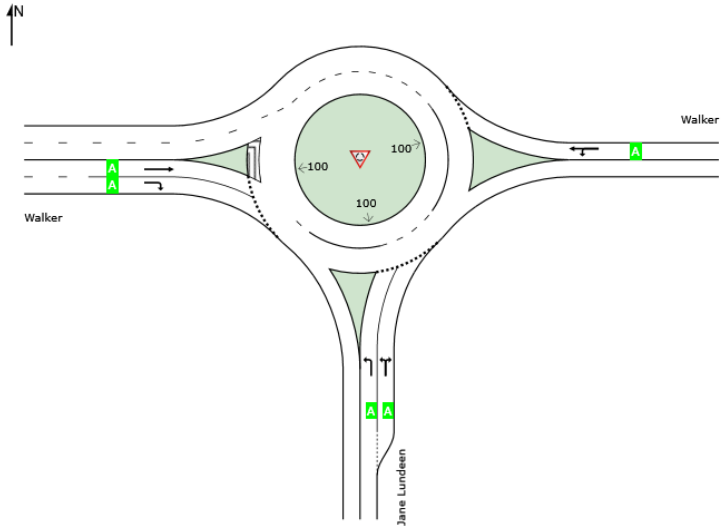
Lane Level of Service

Site: 101 [2025 Existing AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

	Approaches			Intersection
	South	East	West	
LOS	A	A	A	A



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

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LANE SUMMARY

Site: 101 [2025 Existing AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Jane Lundeen															
Lane 1	146	3.0	146	3.0	1229	0.119	100	3.9	LOS A	0.5	12.2	Full	1600	0.0	0.0
Lane 2[d]	154	3.0	154	3.0	1295	0.119	100	3.7	LOS A	0.5	11.9	Short	235	0.0	NA
Approach	300	3.0	300	3.0		0.119		3.8	LOS A	0.5	12.2				
East: Walker															
Lane 1[d]	141	3.0	141	3.0	1052	0.134	100	4.6	LOS A	0.5	12.9	Full	1600	0.0	0.0
Approach	141	3.0	141	3.0		0.134		4.6	LOS A	0.5	12.9				
West: Walker															
Lane 1	69	3.0	69	3.0	1362	0.051	100	2.9	LOS A	0.2	5.1	Full	1600	0.0	0.0
Lane 2[d]	201	3.0	201	3.0	1362	0.148	100	3.6	LOS A	0.6	16.5	Full	1600	0.0	0.0
Approach	270	3.0	270	3.0		0.148		3.4	LOS A	0.6	16.5				
All Vehicles	711	3.0	711	3.0		0.148		3.8	LOS A	0.6	16.5				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

d Dominant lane on roundabout approach

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Approach Lane Flows (veh/h)

South: Jane Lundeen

Mov. From S To Exit:	L2 W	R2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	146	-	146	3.0	1229	0.119	100	NA	NA
Lane 2	148	5	154	3.0	1295	0.119	100	0.0	1
Approach	295	5	300	3.0		0.119			

East: Walker

Mov. From E To Exit:	L2 S	T1 W	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	13	128	141	3.0	1052	0.134	100	NA	NA
Approach	13	128	141	3.0		0.134			

West: Walker

Mov. From W To Exit:	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	69	-	69	3.0	1362	0.051	100	NA	NA
Lane 2	-	201	201	3.0	1362	0.148	100	NA	NA
Approach	69	201	270	3.0		0.148			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	711	3.0	0.148

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis

	Exit Lane Number	Short Lane Length ft	Percent Opng in Lane %	Opposing Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
There are no Exit Short Lanes for Merge Analysis at this Site.												

Variable Demand Analysis

	Initial Queued	Residual Queued	Time for Residual	Duration of

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

	Demand veh	Demand veh	Demand to Clear sec	Oversatn sec
South: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0
East: Walker				
Lane 1	0.0	0.0	0.0	0.0
West: Walker				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0

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LANE LEVEL OF SERVICE

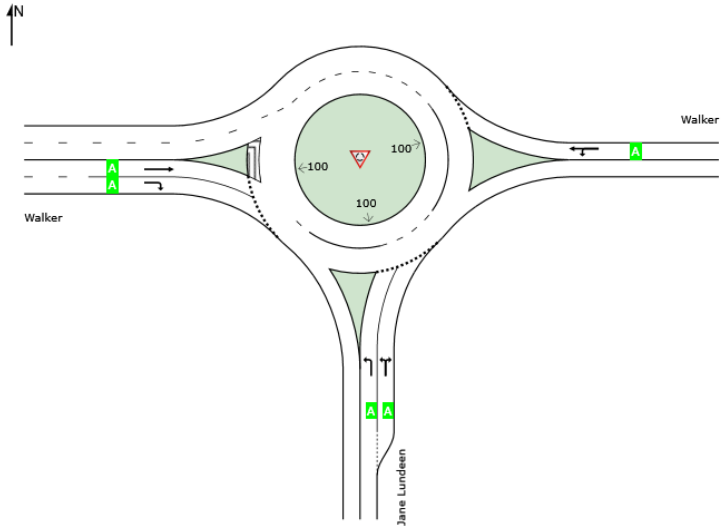
Lane Level of Service

Site: 101 [2025 Existing School PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

	Approaches			Intersection
	South	East	West	
LOS	A	A	A	A



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE SUMMARY

Site: 101 [2025 Existing School PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Jane Lundeen															
Lane 1	134	3.0	134	3.0	1122	0.119	100	4.2	LOS A	0.5	12.0	Full	1600	0.0	0.0
Lane 2[d]	142	3.0	142	3.0	1189	0.119	100	4.0	LOS A	0.5	11.7	Short	235	0.0	NA
Approach	276	3.0	276	3.0		0.119		4.1	LOS A	0.5	12.0				
East: Walker															
Lane 1[d]	143	3.0	143	3.0	1082	0.132	100	4.5	LOS A	0.5	12.8	Full	1600	0.0	0.0
Approach	143	3.0	143	3.0		0.132		4.5	LOS A	0.5	12.8				
West: Walker															
Lane 1[d]	162	3.0	162	3.0	1375	0.118	100	3.3	LOS A	0.5	12.8	Full	1600	0.0	0.0
Lane 2	133	3.0	133	3.0	1375	0.096	100	3.1	LOS A	0.4	10.2	Full	1600	0.0	0.0
Approach	295	3.0	295	3.0		0.118		3.2	LOS A	0.5	12.8				
All Vehicles	714	3.0	714	3.0		0.132		3.8	LOS A	0.5	12.8				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

d Dominant lane on roundabout approach

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Approach Lane Flows (veh/h)

South: Jane Lundeen

Mov. From S To Exit:	L2 W	R2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	134	-	134	3.0	1122	0.119	100	NA	NA
Lane 2	130	12	142	3.0	1189	0.119	100	0.0	1
Approach	264	12	276	3.0		0.119			

East: Walker

Mov. From E To Exit:	L2 S	T1 W	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	4	140	143	3.0	1082	0.132	100	NA	NA
Approach	4	140	143	3.0		0.132			

West: Walker

Mov. From W To Exit:	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	162	-	162	3.0	1375	0.118	100	NA	NA
Lane 2	-	133	133	3.0	1375	0.096	100	NA	NA
Approach	162	133	295	3.0		0.118			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	714	3.0	0.132

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis

	Exit Lane Number	Short Lane Length ft	Percent Opng in Lane %	Opposing Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
There are no Exit Short Lanes for Merge Analysis at this Site.												

Variable Demand Analysis

	Initial Queued	Residual Queued	Time for Residual	Duration of

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

	Demand veh	Demand veh	Demand to Clear sec	Oversatn sec
South: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0
East: Walker				
Lane 1	0.0	0.0	0.0	0.0
West: Walker				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0

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Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE LEVEL OF SERVICE

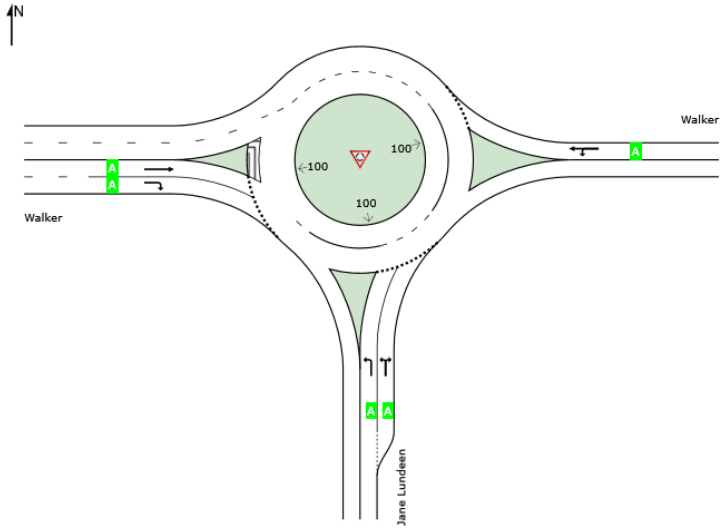
Lane Level of Service

Site: 101 [2025 Existing PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

	Approaches			Intersection
	South	East	West	
LOS	A	A	A	A



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE SUMMARY

Site: 101 [2025 Existing PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Jane Lundeen															
Lane 1	42	3.0	42	3.0	1185	0.035	100	3.3	LOS A	0.1	3.3	Full	1600	0.0	0.0
Lane 2[d]	44	3.0	44	3.0	1252	0.035	100	3.1	LOS A	0.1	3.2	Short	235	0.0	NA
Approach	86	3.0	86	3.0		0.035		3.2	LOS A	0.1	3.3				
East: Walker															
Lane 1[d]	98	3.0	98	3.0	1277	0.076	100	3.4	LOS A	0.3	7.3	Full	1600	0.0	0.0
Approach	98	3.0	98	3.0		0.076		3.4	LOS A	0.3	7.3				
West: Walker															
Lane 1[d]	106	3.0	106	3.0	1378	0.077	100	3.0	LOS A	0.3	8.0	Full	1600	0.0	0.0
Lane 2	43	3.0	43	3.0	1378	0.031	100	2.8	LOS A	0.1	3.1	Full	1600	0.0	0.0
Approach	149	3.0	149	3.0		0.077		2.9	LOS A	0.3	8.0				
All Vehicles	333	3.0	333	3.0		0.077		3.1	LOS A	0.3	8.0				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

d Dominant lane on roundabout approach

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Approach Lane Flows (veh/h)

South: Jane Lundeen

Mov. From S To Exit:	L2 W	R2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	42	-	42	3.0	1185	0.035	100	NA	NA
Lane 2	43	1	44	3.0	1252	0.035	100	0.0	1
Approach	84	1	86	3.0		0.035			

East: Walker

Mov. From E To Exit:	L2 S	T1 W	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	1	96	98	3.0	1277	0.076	100	NA	NA
Approach	1	96	98	3.0		0.076			

West: Walker

Mov. From W To Exit:	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	106	-	106	3.0	1378	0.077	100	NA	NA
Lane 2	-	43	43	3.0	1378	0.031	100	NA	NA
Approach	106	43	149	3.0		0.077			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	333	3.0	0.077

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis

	Exit Lane Number	Short Lane Length ft	Percent Opng in Lane %	Opposing Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
There are no Exit Short Lanes for Merge Analysis at this Site.												

Variable Demand Analysis

	Initial Queued	Residual Queued	Time for Residual	Duration of

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

	Demand veh	Demand veh	Demand to Clear sec	Oversatn sec
South: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0
East: Walker				
Lane 1	0.0	0.0	0.0	0.0
West: Walker				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0

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LANE LEVEL OF SERVICE

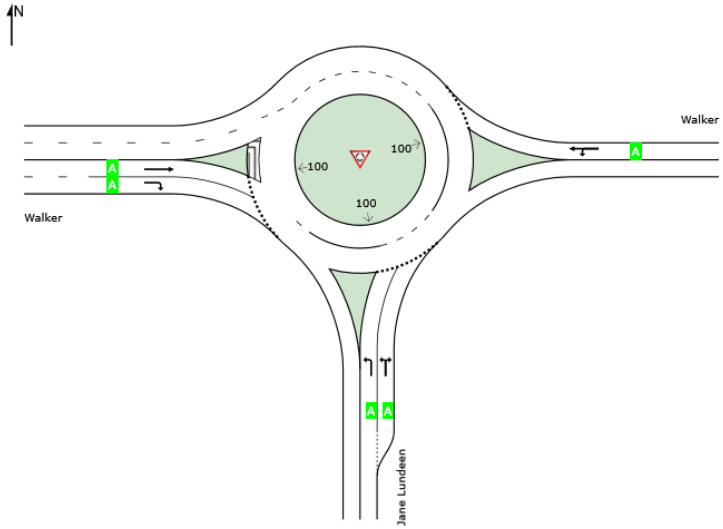
Lane Level of Service

Site: 101 [ST Baseline AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

	Approaches			Intersection
	South	East	West	
LOS	A	A	A	A



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE SUMMARY

Site: 101 [ST Baseline AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Jane Lundeen															
Lane 1	206	3.0	206	3.0	1234	0.167	100	4.3	LOS A	0.7	18.2	Full	1600	0.0	0.0
Lane 2[d]	217	3.0	217	3.0	1300	0.167	100	4.1	LOS A	0.7	17.7	Short	235	0.0	NA
Approach	424	3.0	424	3.0		0.167		4.2	LOS A	0.7	18.2				
East: Walker															
Lane 1[d]	141	3.0	141	3.0	949	0.149	100	5.2	LOS A	0.5	14.1	Full	1600	0.0	0.0
Approach	141	3.0	141	3.0		0.149		5.2	LOS A	0.5	14.1				
West: Walker															
Lane 1	65	3.0	65	3.0	1362	0.048	100	2.9	LOS A	0.2	4.8	Full	1600	0.0	0.0
Lane 2[d]	214	3.0	214	3.0	1362	0.157	100	3.7	LOS A	0.7	17.8	Full	1600	0.0	0.0
Approach	279	3.0	279	3.0		0.157		3.5	LOS A	0.7	17.8				
All Vehicles	844	3.0	844	3.0		0.167		4.1	LOS A	0.7	18.2				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

d Dominant lane on roundabout approach

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Approach Lane Flows (veh/h)

South: Jane Lundeen

Mov. From S To Exit:	L2 W	R2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	206	-	206	3.0	1234	0.167	100	NA	NA
Lane 2	200	17	217	3.0	1300	0.167	100	0.0	1
Approach	407	17	424	3.0		0.167			

East: Walker

Mov. From E To Exit:	L2 S	T1 W	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	13	128	141	3.0	949	0.149	100	NA	NA
Approach	13	128	141	3.0		0.149			

West: Walker

Mov. From W To Exit:	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	65	-	65	3.0	1362	0.048	100	NA	NA
Lane 2	-	214	214	3.0	1362	0.157	100	NA	NA
Approach	65	214	279	3.0		0.157			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	844	3.0	0.167

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis

	Exit Lane Number	Short Lane Length ft	Percent Opng in Lane %	Opposing Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
There are no Exit Short Lanes for Merge Analysis at this Site.												

Variable Demand Analysis

	Initial Queued	Residual Queued	Time for Residual	Duration of

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

	Demand veh	Demand veh	Demand to Clear sec	Oversatn sec
South: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0
East: Walker				
Lane 1	0.0	0.0	0.0	0.0
West: Walker				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0

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Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE LEVEL OF SERVICE

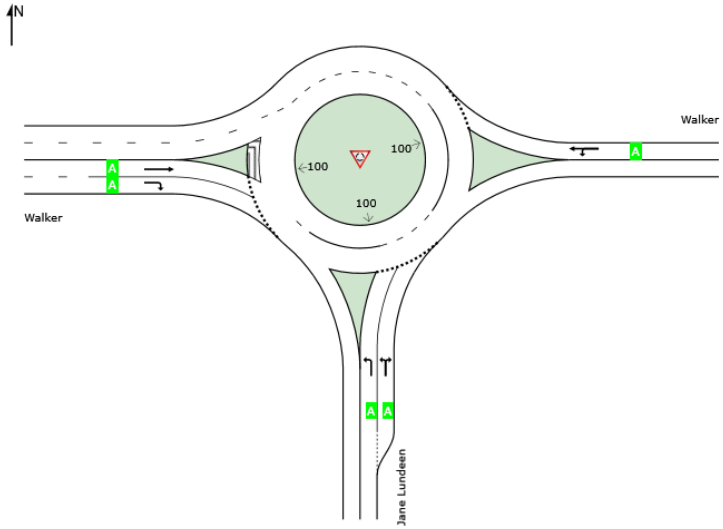
Lane Level of Service

Site: 101 [ST Baseline School PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

	Approaches			Intersection
	South	East	West	
LOS	A	A	A	A



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE SUMMARY

Site: 101 [ST Baseline School PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Jane Lundeen															
Lane 1	143	3.0	143	3.0	1122	0.127	100	4.3	LOS A	0.5	12.9	Full	1600	0.0	0.0
Lane 2[d]	152	3.0	152	3.0	1189	0.127	100	4.1	LOS A	0.5	12.6	Short	235	0.0	NA
Approach	295	3.0	295	3.0		0.127		4.2	LOS A	0.5	12.9				
East: Walker															
Lane 1[d]	143	3.0	143	3.0	1065	0.135	100	4.6	LOS A	0.5	13.0	Full	1600	0.0	0.0
Approach	143	3.0	143	3.0		0.135		4.6	LOS A	0.5	13.0				
West: Walker															
Lane 1[d]	162	3.0	162	3.0	1375	0.118	100	3.3	LOS A	0.5	12.8	Full	1600	0.0	0.0
Lane 2	146	3.0	146	3.0	1375	0.106	100	3.2	LOS A	0.4	11.3	Full	1600	0.0	0.0
Approach	308	3.0	308	3.0		0.118		3.2	LOS A	0.5	12.8				
All Vehicles	746	3.0	746	3.0		0.135		3.9	LOS A	0.5	13.0				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

d Dominant lane on roundabout approach

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Approach Lane Flows (veh/h)

South: Jane Lundeen

Mov. From S To Exit:	L2 W	R2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	143	-	143	3.0	1122	0.127	100	NA	NA
Lane 2	139	13	152	3.0	1189	0.127	100	0.0	1
Approach	282	13	295	3.0		0.127			

East: Walker

Mov. From E To Exit:	L2 S	T1 W	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	4	140	143	3.0	1065	0.135	100	NA	NA
Approach	4	140	143	3.0		0.135			

West: Walker

Mov. From W To Exit:	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	162	-	162	3.0	1375	0.118	100	NA	NA
Lane 2	-	146	146	3.0	1375	0.106	100	NA	NA
Approach	162	146	308	3.0		0.118			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	746	3.0	0.135

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis

	Exit Lane Number	Short Lane Length ft	Percent Opng in Lane %	Opposing Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
There are no Exit Short Lanes for Merge Analysis at this Site.												

Variable Demand Analysis

	Initial Queued	Residual Queued	Time for Residual	Duration of

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

	Demand veh	Demand veh	Demand to Clear sec	Oversatn sec
South: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0
East: Walker				
Lane 1	0.0	0.0	0.0	0.0
West: Walker				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0

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Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE LEVEL OF SERVICE

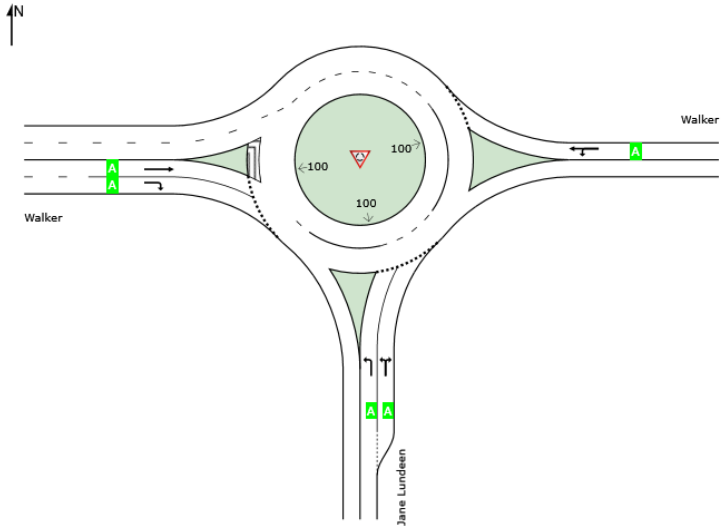
Lane Level of Service

Site: 101 [ST Baseline PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

	Approaches			Intersection
	South	East	West	
LOS	A	A	A	A



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE SUMMARY

Site: 101 [ST Baseline PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Jane Lundeen															
Lane 1	50	3.0	50	3.0	1185	0.043	100	3.4	LOS A	0.2	4.0	Full	1600	0.0	0.0
Lane 2[d]	53	3.0	53	3.0	1252	0.043	100	3.2	LOS A	0.2	3.9	Short	235	0.0	NA
Approach	104	3.0	104	3.0		0.043		3.3	LOS A	0.2	4.0				
East: Walker															
Lane 1[d]	98	3.0	98	3.0	1257	0.078	100	3.5	LOS A	0.3	7.4	Full	1600	0.0	0.0
Approach	98	3.0	98	3.0		0.078		3.5	LOS A	0.3	7.4				
West: Walker															
Lane 1[d]	106	3.0	106	3.0	1378	0.077	100	3.0	LOS A	0.3	8.0	Full	1600	0.0	0.0
Lane 2	59	3.0	59	3.0	1378	0.043	100	2.8	LOS A	0.2	4.3	Full	1600	0.0	0.0
Approach	165	3.0	165	3.0		0.077		2.9	LOS A	0.3	8.0				
All Vehicles	366	3.0	366	3.0		0.078		3.2	LOS A	0.3	8.0				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

d Dominant lane on roundabout approach

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Approach Lane Flows (veh/h)

South: Jane Lundeen

Mov. From S To Exit:	L2 W	R2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	50	-	50	3.0	1185	0.043	100	NA	NA
Lane 2	51	2	53	3.0	1252	0.043	100	0.0	1
Approach	101	2	104	3.0		0.043			

East: Walker

Mov. From E To Exit:	L2 S	T1 W	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	1	96	98	3.0	1257	0.078	100	NA	NA
Approach	1	96	98	3.0		0.078			

West: Walker

Mov. From W To Exit:	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	106	-	106	3.0	1378	0.077	100	NA	NA
Lane 2	-	59	59	3.0	1378	0.043	100	NA	NA
Approach	106	59	165	3.0		0.077			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	366	3.0	0.078

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis

	Exit Lane Number	Short Lane Length ft	Percent Opng in Lane %	Opposing Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
There are no Exit Short Lanes for Merge Analysis at this Site.												

Variable Demand Analysis

	Initial Queued	Residual Queued	Time for Residual	Duration of

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

	Demand veh	Demand veh	Demand to Clear sec	Oversatn sec
South: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0
East: Walker				
Lane 1	0.0	0.0	0.0	0.0
West: Walker				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0

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Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE LEVEL OF SERVICE

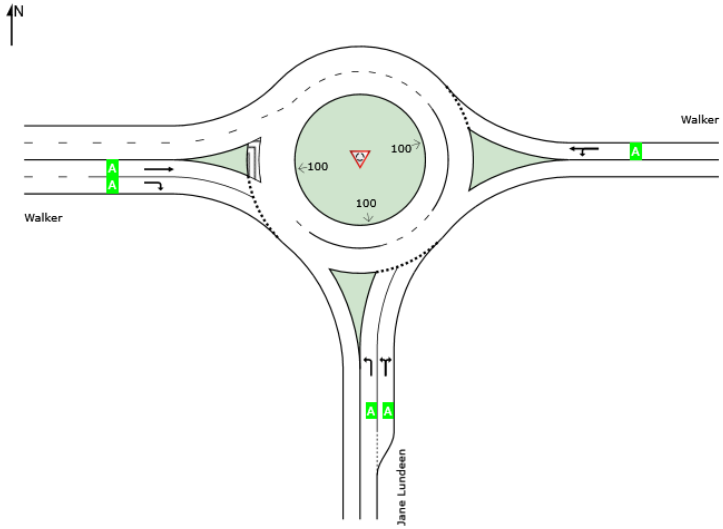
Lane Level of Service

Site: 101 [ST Baseline + Site AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

	Approaches			Intersection
	South	East	West	
LOS	A	A	A	A



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

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Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE SUMMARY

Site: 101 [ST Baseline + Site AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Jane Lundeen															
Lane 1	216	3.0	216	3.0	1234	0.175	100	4.3	LOS A	0.7	19.2	Full	1600	0.0	0.0
Lane 2[d]	228	3.0	228	3.0	1300	0.175	100	4.2	LOS A	0.7	18.6	Short	235	0.0	NA
Approach	443	3.0	443	3.0		0.175		4.2	LOS A	0.7	19.2				
East: Walker															
Lane 1[d]	141	3.0	141	3.0	933	0.151	100	5.3	LOS A	0.6	14.3	Full	1600	0.0	0.0
Approach	141	3.0	141	3.0		0.151		5.3	LOS A	0.6	14.3				
West: Walker															
Lane 1	65	3.0	65	3.0	1362	0.048	100	2.9	LOS A	0.2	4.8	Full	1600	0.0	0.0
Lane 2[d]	216	3.0	216	3.0	1362	0.159	100	3.7	LOS A	0.7	18.0	Full	1600	0.0	0.0
Approach	282	3.0	282	3.0		0.159		3.5	LOS A	0.7	18.0				
All Vehicles	866	3.0	866	3.0		0.175		4.2	LOS A	0.7	19.2				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

d Dominant lane on roundabout approach

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Approach Lane Flows (veh/h)

South: Jane Lundeen

Mov. From S To Exit:	L2 W	R2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	216	-	216	3.0	1234	0.175	100	NA	NA
Lane 2	208	20	228	3.0	1300	0.175	100	0.0	1
Approach	424	20	443	3.0		0.175			

East: Walker

Mov. From E To Exit:	L2 S	T1 W	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	13	128	141	3.0	933	0.151	100	NA	NA
Approach	13	128	141	3.0		0.151			

West: Walker

Mov. From W To Exit:	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	65	-	65	3.0	1362	0.048	100	NA	NA
Lane 2	-	216	216	3.0	1362	0.159	100	NA	NA
Approach	65	216	282	3.0		0.159			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	866	3.0	0.175

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis

	Exit Lane Number	Short Lane Length ft	Percent Opng in Lane %	Opposing Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec

There are no Exit Short Lanes for Merge Analysis at this Site.

Variable Demand Analysis

	Initial Queued	Residual Queued	Time for Residual	Duration of

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

	Demand veh	Demand veh	Demand to Clear sec	Oversatn sec
South: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0
East: Walker				
Lane 1	0.0	0.0	0.0	0.0
West: Walker				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0

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Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE LEVEL OF SERVICE

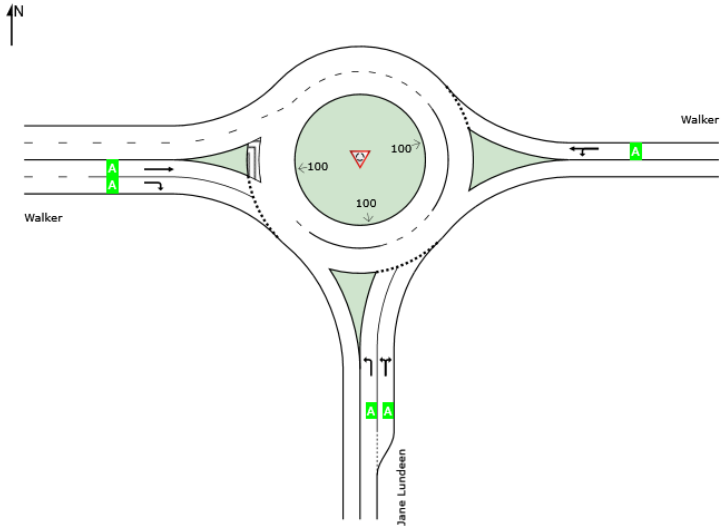
Lane Level of Service

Site: 101 [ST Baseline + Site School PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

	Approaches			Intersection
	South	East	West	
LOS	A	A	A	A



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE SUMMARY

Site: 101 [ST Baseline + Site School PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Jane Lundeen															
Lane 1	178	3.0	178	3.0	1122	0.159	100	4.6	LOS A	0.6	16.6	Full	1600	0.0	0.0
Lane 2[d]	188	3.0	188	3.0	1189	0.159	100	4.4	LOS A	0.6	16.1	Short	235	0.0	NA
Approach	366	3.0	366	3.0		0.159		4.5	LOS A	0.6	16.6				
East: Walker															
Lane 1[d]	145	3.0	145	3.0	1003	0.144	100	4.9	LOS A	0.5	13.8	Full	1600	0.0	0.0
Approach	145	3.0	145	3.0		0.144		4.9	LOS A	0.5	13.8				
West: Walker															
Lane 1	162	3.0	162	3.0	1373	0.118	100	3.3	LOS A	0.5	12.8	Full	1600	0.0	0.0
Lane 2[d]	186	3.0	186	3.0	1373	0.135	100	3.4	LOS A	0.6	15.0	Full	1600	0.0	0.0
Approach	348	3.0	348	3.0		0.135		3.3	LOS A	0.6	15.0				
All Vehicles	859	3.0	859	3.0		0.159		4.1	LOS A	0.6	16.6				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

d Dominant lane on roundabout approach

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Approach Lane Flows (veh/h)

South: Jane Lundeen

Mov. From S To Exit:	L2 W	R2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	178	-	178	3.0	1122	0.159	100	NA	NA
Lane 2	169	20	188	3.0	1189	0.159	100	0.0	1
Approach	347	20	366	3.0		0.159			

East: Walker

Mov. From E To Exit:	L2 S	T1 W	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	5	140	145	3.0	1003	0.144	100	NA	NA
Approach	5	140	145	3.0		0.144			

West: Walker

Mov. From W To Exit:	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	162	-	162	3.0	1373	0.118	100	NA	NA
Lane 2	-	186	186	3.0	1373	0.135	100	NA	NA
Approach	162	186	348	3.0		0.135			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	859	3.0	0.159

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis

	Exit Lane Number	Short Lane Length ft	Percent Opng in Lane %	Opposing Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
There are no Exit Short Lanes for Merge Analysis at this Site.												

Variable Demand Analysis

	Initial Queued	Residual Queued	Time for Residual	Duration of

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

	Demand veh	Demand veh	Demand to Clear sec	Oversatn sec
South: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0
East: Walker				
Lane 1	0.0	0.0	0.0	0.0
West: Walker				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0

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LANE LEVEL OF SERVICE

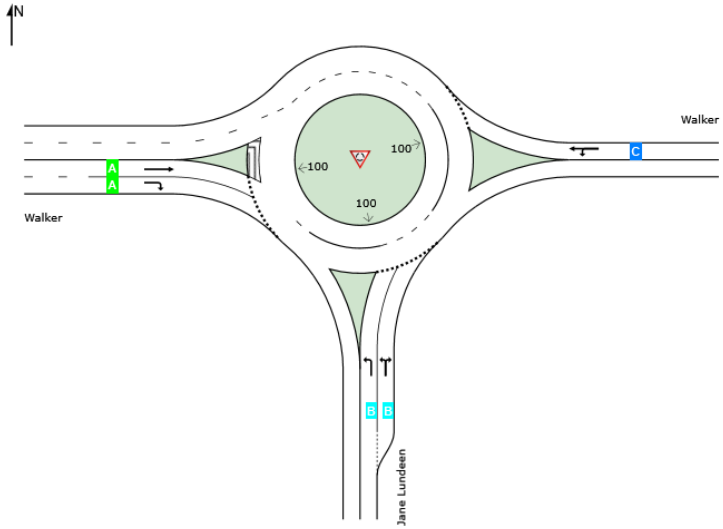
Lane Level of Service

Site: 101 [ST Baseline + Site PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

	Approaches			Intersection
	South	East	West	
LOS	B	C	A	B



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

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LANE SUMMARY

Site: 101 [ST Baseline + Site PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Jane Lundeen															
Lane 1	844	3.0	844	3.0	1185	0.712	100	12.9	LOS B	7.1	182.1	Full	1600	0.0	0.0
Lane 2[d]	891	3.0	891	3.0	1252	0.712	100	12.4	LOS B	7.0	179.2	Short	235	0.0	NA
Approach	1735	3.0	1735	3.0		0.712		12.6	LOS B	7.1	182.1				
East: Walker															
Lane 1[d]	98	3.0	98	3.0	268	0.364	100	22.6	LOS C	1.1	28.4	Full	1600	0.0	0.0
Approach	98	3.0	98	3.0		0.364		22.6	LOS C	1.1	28.4				
West: Walker															
Lane 1	106	3.0	106	3.0	1378	0.077	100	3.0	LOS A	0.3	8.0	Full	1600	0.0	0.0
Lane 2[d]	119	3.0	119	3.0	1378	0.087	100	3.1	LOS A	0.4	9.1	Full	1600	0.0	0.0
Approach	225	3.0	225	3.0		0.087		3.0	LOS A	0.4	9.1				
All Vehicles	2058	3.0	2058	3.0		0.712		12.0	LOS B	7.1	182.1				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

d Dominant lane on roundabout approach

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Approach Lane Flows (veh/h)

South: Jane Lundeen

Mov. From S To Exit:	L2 W	R2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	844	-	844	3.0	1185	0.712	100	NA	NA
Lane 2	889	2	891	3.0	1252	0.712	100	0.0	1
Approach	1733	2	1735	3.0		0.712			

East: Walker

Mov. From E To Exit:	L2 S	T1 W	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	1	96	98	3.0	268	0.364	100	NA	NA
Approach	1	96	98	3.0		0.364			

West: Walker

Mov. From W To Exit:	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	106	-	106	3.0	1378	0.077	100	NA	NA
Lane 2	-	119	119	3.0	1378	0.087	100	NA	NA
Approach	106	119	225	3.0		0.087			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	2058	3.0	0.712

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis

	Exit Lane Number	Short Lane Length ft	Percent Opng in Lane %	Opposing Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
There are no Exit Short Lanes for Merge Analysis at this Site.												

Variable Demand Analysis

	Initial Queued	Residual Queued	Time for Residual	Duration of

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

	Demand veh	Demand veh	Demand to Clear sec	Oversatn sec
South: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0
East: Walker				
Lane 1	0.0	0.0	0.0	0.0
West: Walker				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0

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Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE LEVEL OF SERVICE

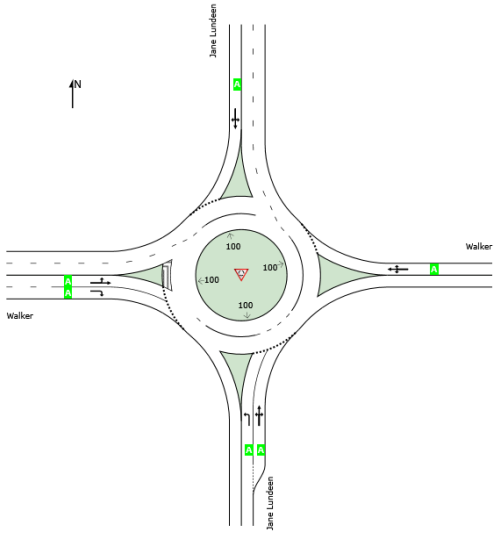
Lane Level of Service

Site: 101 [2045 BG AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	A	A	A	A



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE SUMMARY

Site: 101 [2045 BG AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Jane Lundeen															
Lane 1	176	3.0	176	3.0	1113	0.158	100	4.6	LOS A	0.6	16.5	Full	1600	0.0	0.0
Lane 2[d]	186	3.0	186	3.0	1181	0.158	100	4.4	LOS A	0.6	16.0	Short	235	0.0	NA
Approach	362	3.0	362	3.0		0.158		4.5	LOS A	0.6	16.5				
East: Walker															
Lane 1[d]	341	3.0	341	3.0	943	0.361	100	7.7	LOS A	1.6	41.0	Full	1600	0.0	0.0
Approach	341	3.0	341	3.0		0.361		7.7	LOS A	1.6	41.0				
North: Jane Lundeen															
Lane 1[d]	111	3.0	111	3.0	732	0.151	100	6.5	LOS A	0.5	13.4	Full	1600	0.0	0.0
Approach	111	3.0	111	3.0		0.151		6.5	LOS A	0.5	13.4				
West: Walker															
Lane 1	160	3.0	160	3.0	1345	0.119	100	3.5	LOS A	0.5	12.8	Full	1600	0.0	0.0
Lane 2[d]	330	3.0	330	3.0	1345	0.246	100	4.5	LOS A	1.2	30.9	Full	1600	0.0	0.0
Approach	490	3.0	490	3.0		0.246		4.2	LOS A	1.2	30.9				
All Vehicles	1304	3.0	1304	3.0		0.361		5.4	LOS A	1.6	41.0				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.

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HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)

South: Jane Lundeen

Mov. From S To Exit:	L2 W	T1 N	R2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	176	-	-	176	3.0	1113	0.158	100	NA	NA
Lane 2	169	7	11	186	3.0	1181	0.158	100	0.0	1
Approach	345	7	11	362	3.0		0.158			

East: Walker

Mov. From E To Exit:	L2 S	T1 W	R2 N	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	16	324	1	341	3.0	943	0.361	100	NA	NA
Approach	16	324	1	341	3.0		0.361			

North: Jane Lundeen

Mov. From N To Exit:	L2 E	T1 S	R2 W	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	10	1	100	111	3.0	732	0.151	100	NA	NA
Approach	10	1	100	111	3.0		0.151			

West: Walker

Mov. From W To Exit:	L2 N	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	62	98	-	160	3.0	1345	0.119	100	NA	NA
Lane 2	-	-	330	330	3.0	1345	0.246	100	NA	NA
Approach	62	98	330	490	3.0		0.246			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	1304	3.0	0.361

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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Merge Analysis

	Exit Lane Number	Short Lane Length ft	Percent Opng in Lane %	Opposing Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
There are no Exit Short Lanes for Merge Analysis at this Site.												

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0
East: Walker				
Lane 1	0.0	0.0	0.0	0.0
North: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
West: Walker				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE LEVEL OF SERVICE

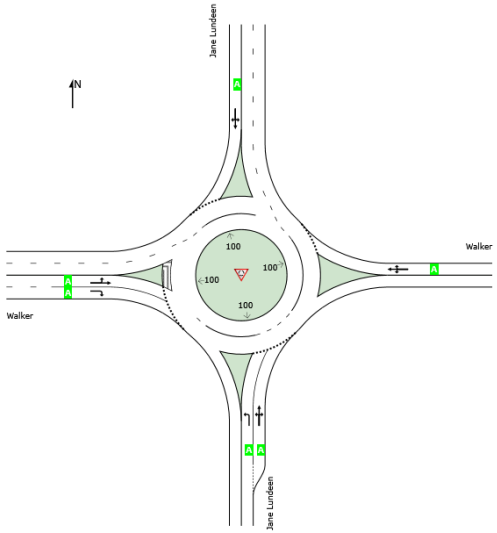
Lane Level of Service

Site: 101 [2045 BG School PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	A	A	A	A



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

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Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE SUMMARY

Site: 101 [2045 BG School PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Jane Lundeen															
Lane 1	186	3.0	186	3.0	889	0.209	100	6.1	LOS A	0.8	21.3	Full	1600	0.0	0.0
Lane 2[d]	200	3.0	200	3.0	956	0.209	100	5.8	LOS A	0.8	20.8	Short	235	0.0	NA
Approach	386	3.0	386	3.0		0.209		6.0	LOS A	0.8	21.3				
East: Walker															
Lane 1[d]	263	3.0	263	3.0	860	0.305	100	7.5	LOS A	1.2	31.7	Full	1600	0.0	0.0
Approach	263	3.0	263	3.0		0.305		7.5	LOS A	1.2	31.7				
North: Jane Lundeen															
Lane 1[d]	125	3.0	125	3.0	771	0.162	100	6.4	LOS A	0.6	14.7	Full	1600	0.0	0.0
Approach	125	3.0	125	3.0		0.162		6.4	LOS A	0.6	14.7				
West: Walker															
Lane 1[d]	387	3.0	387	3.0	1357	0.285	100	4.7	LOS A	1.5	37.9	Full	1600	0.0	0.0
Lane 2	157	3.0	157	3.0	1357	0.115	100	3.4	LOS A	0.5	12.4	Full	1600	0.0	0.0
Approach	543	3.0	543	3.0		0.285		4.3	LOS A	1.5	37.9				
All Vehicles	1317	3.0	1317	3.0		0.305		5.6	LOS A	1.5	37.9				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.

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HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)

South: Jane Lundeen

Mov. From S To Exit:	L2 W	T1 N	R2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	186	-	-	186	3.0	889	0.209	100	NA	NA
Lane 2	182	1	17	200	3.0	956	0.209	100	0.0	1
Approach	367	1	17	386	3.0		0.209			

East: Walker

Mov. From E To Exit:	L2 S	T1 W	R2 N	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	5	257	1	263	3.0	860	0.305	100	NA	NA
Approach	5	257	1	263	3.0		0.305			

North: Jane Lundeen

Mov. From N To Exit:	L2 E	T1 S	R2 W	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	11	1	113	125	3.0	771	0.162	100	NA	NA
Approach	11	1	113	125	3.0		0.162			

West: Walker

Mov. From W To Exit:	L2 N	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	143	243	-	387	3.0	1357	0.285	100	NA	NA
Lane 2	-	-	157	157	3.0	1357	0.115	100	NA	NA
Approach	143	243	157	543	3.0		0.285			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	1317	3.0	0.305

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Merge Analysis

	Exit Lane Number	Short Lane Length ft	Percent Opng in Lane %	Opposing Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
There are no Exit Short Lanes for Merge Analysis at this Site.												

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0
East: Walker				
Lane 1	0.0	0.0	0.0	0.0
North: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
West: Walker				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE LEVEL OF SERVICE

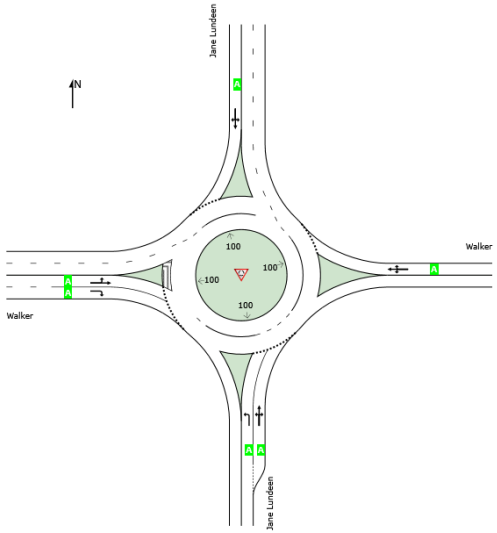
Lane Level of Service

Site: 101 [2045 BG PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	A	A	A	A



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE SUMMARY

Site: 101 [2045 BG PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Jane Lundeen															
Lane 1	92	3.0	92	3.0	764	0.120	100	5.9	LOS A	0.4	11.0	Full	1600	0.0	0.0
Lane 2[d]	100	3.0	100	3.0	830	0.120	100	5.5	LOS A	0.4	10.8	Short	235	0.0	NA
Approach	191	3.0	191	3.0		0.120		5.7	LOS A	0.4	11.0				
East: Walker															
Lane 1[d]	149	3.0	149	3.0	976	0.153	100	5.1	LOS A	0.6	14.6	Full	1600	0.0	0.0
Approach	149	3.0	149	3.0		0.153		5.1	LOS A	0.6	14.6				
North: Jane Lundeen															
Lane 1[d]	151	3.0	151	3.0	1018	0.148	100	4.9	LOS A	0.6	14.3	Full	1600	0.0	0.0
Approach	151	3.0	151	3.0		0.148		4.9	LOS A	0.6	14.3				
West: Walker															
Lane 1[d]	537	3.0	537	3.0	1191	0.451	100	7.6	LOS A	2.7	69.5	Full	1600	0.0	0.0
Lane 2	92	3.0	92	3.0	1191	0.077	100	3.6	LOS A	0.3	7.7	Full	1600	0.0	0.0
Approach	629	3.0	629	3.0		0.451		7.0	LOS A	2.7	69.5				
All Vehicles	1120	3.0	1120	3.0		0.451		6.3	LOS A	2.7	69.5				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.

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HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)

South: Jane Lundeen

Mov. From S To Exit:	L2 W	T1 N	R2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	92	-	-	92	3.0	764	0.120	100	NA	NA
Lane 2	93	1	6	100	3.0	830	0.120	100	0.0	1
Approach	184	1	6	191	3.0		0.120			

East: Walker

Mov. From E To Exit:	L2 S	T1 W	R2 N	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	1	145	3	149	3.0	976	0.153	100	NA	NA
Approach	1	145	3	149	3.0		0.153			

North: Jane Lundeen

Mov. From N To Exit:	L2 E	T1 S	R2 W	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	13	137	1	151	3.0	1018	0.148	100	NA	NA
Approach	13	137	1	151	3.0		0.148			

West: Walker

Mov. From W To Exit:	L2 N	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	190	347	-	537	3.0	1191	0.451	100	NA	NA
Lane 2	-	-	92	92	3.0	1191	0.077	100	NA	NA
Approach	190	347	92	629	3.0		0.451			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	1120	3.0	0.451

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Merge Analysis

	Exit Lane Number	Short Lane Length ft	Percent Opng in Lane %	Opposing Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
There are no Exit Short Lanes for Merge Analysis at this Site.												

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0
East: Walker				
Lane 1	0.0	0.0	0.0	0.0
North: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
West: Walker				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE LEVEL OF SERVICE

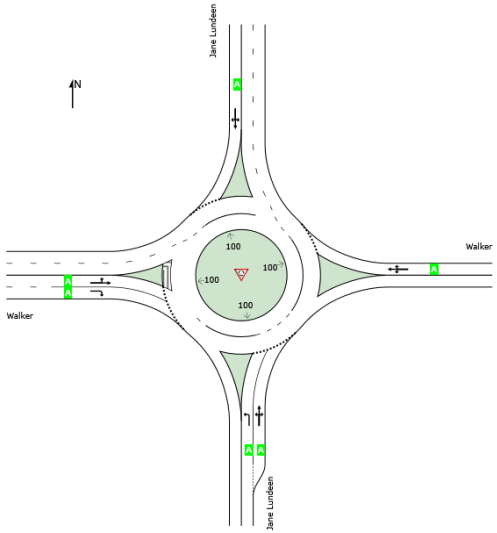
Lane Level of Service

Site: 101 [2045 BG + Site AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	A	A	A	A



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE SUMMARY

Site: 101 [2045 BG + Site AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Jane Lundeen															
Lane 1	238	3.0	238	3.0	1113	0.214	100	5.1	LOS A	0.9	23.6	Full	1600	0.0	0.0
Lane 2[d]	252	3.0	252	3.0	1181	0.214	100	4.9	LOS A	0.9	23.0	Short	235	0.0	NA
Approach	490	3.0	490	3.0		0.214		5.0	LOS A	0.9	23.6				
East: Walker															
Lane 1[d]	341	3.0	341	3.0	847	0.402	100	9.0	LOS A	2.0	51.0	Full	1600	0.0	0.0
Approach	341	3.0	341	3.0		0.402		9.0	LOS A	2.0	51.0				
North: Jane Lundeen															
Lane 1[d]	111	3.0	111	3.0	654	0.170	100	7.5	LOS A	0.6	14.7	Full	1600	0.0	0.0
Approach	111	3.0	111	3.0		0.170		7.5	LOS A	0.6	14.7				
West: Walker															
Lane 1	160	3.0	160	3.0	1345	0.119	100	3.5	LOS A	0.5	12.8	Full	1600	0.0	0.0
Lane 2[d]	353	3.0	353	3.0	1345	0.263	100	4.6	LOS A	1.3	33.7	Full	1600	0.0	0.0
Approach	513	3.0	513	3.0		0.263		4.3	LOS A	1.3	33.7				
All Vehicles	1455	3.0	1455	3.0		0.402		5.9	LOS A	2.0	51.0				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.

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HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)

South: Jane Lundeen

Mov. From S To Exit:	L2 W	T1 N	R2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	238	-	-	238	3.0	1113	0.214	100	NA	NA
Lane 2	227	1	24	252	3.0	1181	0.214	100	0.0	1
Approach	465	1	24	490	3.0		0.214			

East: Walker

Mov. From E To Exit:	L2 S	T1 W	R2 N	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	16	324	1	341	3.0	847	0.402	100	NA	NA
Approach	16	324	1	341	3.0		0.402			

North: Jane Lundeen

Mov. From N To Exit:	L2 E	T1 S	R2 W	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	10	1	100	111	3.0	654	0.170	100	NA	NA
Approach	10	1	100	111	3.0		0.170			

West: Walker

Mov. From W To Exit:	L2 N	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	62	98	-	160	3.0	1345	0.119	100	NA	NA
Lane 2	-	-	353	353	3.0	1345	0.263	100	NA	NA
Approach	62	98	353	513	3.0		0.263			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	1455	3.0	0.402

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Merge Analysis

	Exit Lane Number	Short Lane Length ft	Percent Opng in Lane %	Opposing Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
There are no Exit Short Lanes for Merge Analysis at this Site.												

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0
East: Walker				
Lane 1	0.0	0.0	0.0	0.0
North: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
West: Walker				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE LEVEL OF SERVICE

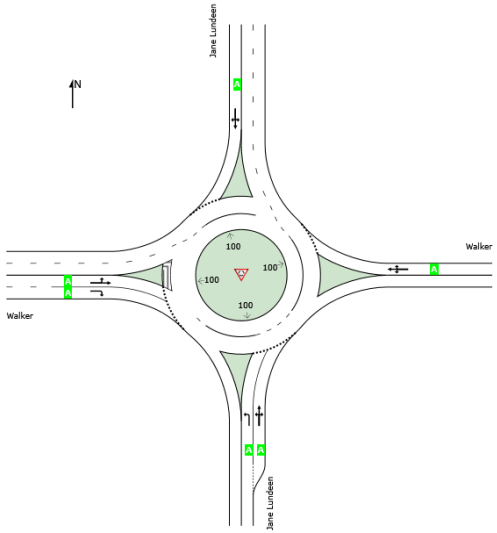
Lane Level of Service

Site: 101 [2045 BG + Site School PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	A	A	A	A



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

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LANE SUMMARY

Site: 101 [2045 BG + Site School PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Jane Lundeen															
Lane 1	226	3.0	226	3.0	889	0.254	100	6.7	LOS A	1.0	26.8	Full	1600	0.0	0.0
Lane 2[d]	243	3.0	243	3.0	956	0.254	100	6.3	LOS A	1.0	26.3	Short	235	0.0	NA
Approach	468	3.0	468	3.0		0.254		6.5	LOS A	1.0	26.8				
East: Walker															
Lane 1[d]	264	3.0	264	3.0	802	0.329	100	8.3	LOS A	1.3	34.0	Full	1600	0.0	0.0
Approach	264	3.0	264	3.0		0.329		8.3	LOS A	1.3	34.0				
North: Jane Lundeen															
Lane 1[d]	125	3.0	125	3.0	718	0.174	100	6.9	LOS A	0.6	15.6	Full	1600	0.0	0.0
Approach	125	3.0	125	3.0		0.174		6.9	LOS A	0.6	15.6				
West: Walker															
Lane 1[d]	387	3.0	387	3.0	1356	0.285	100	4.7	LOS A	1.5	37.9	Full	1600	0.0	0.0
Lane 2	203	3.0	203	3.0	1356	0.150	100	3.7	LOS A	0.7	16.8	Full	1600	0.0	0.0
Approach	590	3.0	590	3.0		0.285		4.3	LOS A	1.5	37.9				
All Vehicles	1447	3.0	1447	3.0		0.329		6.0	LOS A	1.5	37.9				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.

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HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)

South: Jane Lundeen

Mov. From S To Exit:	L2 W	T1 N	R2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	226	-	-	226	3.0	889	0.254	100	NA	NA
Lane 2	217	1	25	243	3.0	956	0.254	100	0.0	1
Approach	442	1	25	468	3.0		0.254			

East: Walker

Mov. From E To Exit:	L2 S	T1 W	R2 N	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	6	257	1	264	3.0	802	0.329	100	NA	NA
Approach	6	257	1	264	3.0		0.329			

North: Jane Lundeen

Mov. From N To Exit:	L2 E	T1 S	R2 W	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	11	1	113	125	3.0	718	0.174	100	NA	NA
Approach	11	1	113	125	3.0		0.174			

West: Walker

Mov. From W To Exit:	L2 N	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	143	243	-	387	3.0	1356	0.285	100	NA	NA
Lane 2	-	-	203	203	3.0	1356	0.150	100	NA	NA
Approach	143	243	203	590	3.0		0.285			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	1447	3.0	0.329

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Merge Analysis

	Exit Lane Number	Short Lane Length ft	Percent Opng in Lane %	Opposing Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
There are no Exit Short Lanes for Merge Analysis at this Site.												

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0
East: Walker				
Lane 1	0.0	0.0	0.0	0.0
North: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
West: Walker				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE LEVEL OF SERVICE

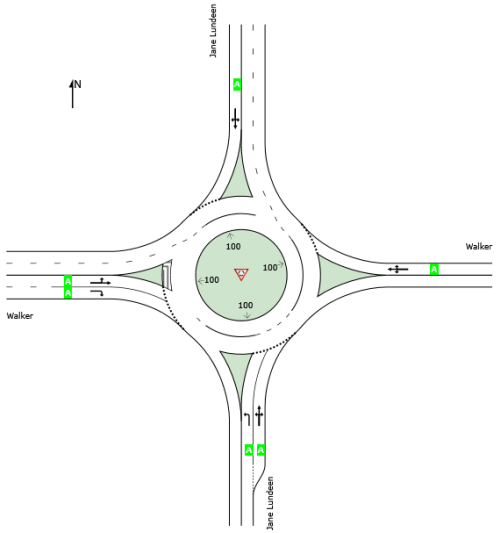
Lane Level of Service

Site: 101 [2045 BG + Site PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	A	A	A	A



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE SUMMARY

Site: 101 [2045 BG + Site PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Jane Lundeen															
Lane 1	136	3.0	136	3.0	764	0.178	100	6.6	LOS A	0.7	16.9	Full	1600	0.0	0.0
Lane 2[d]	147	3.0	147	3.0	830	0.178	100	6.1	LOS A	0.6	16.6	Short	235	0.0	NA
Approach	283	3.0	283	3.0		0.178		6.4	LOS A	0.7	16.9				
East: Walker															
Lane 1[d]	149	3.0	149	3.0	904	0.165	100	5.6	LOS A	0.6	15.6	Full	1600	0.0	0.0
Approach	149	3.0	149	3.0		0.165		5.6	LOS A	0.6	15.6				
North: Jane Lundeen															
Lane 1[d]	151	3.0	151	3.0	943	0.160	100	5.3	LOS A	0.6	15.3	Full	1600	0.0	0.0
Approach	151	3.0	151	3.0		0.160		5.3	LOS A	0.6	15.3				
West: Walker															
Lane 1[d]	537	3.0	537	3.0	1359	0.395	100	5.5	LOS A	2.4	61.9	Full	1600	0.0	0.0
Lane 2	159	3.0	159	3.0	1359	0.117	100	3.4	LOS A	0.5	12.7	Full	1600	0.0	0.0
Approach	696	3.0	696	3.0		0.395		5.0	LOS A	2.4	61.9				
All Vehicles	1279	3.0	1279	3.0		0.395		5.4	LOS A	2.4	61.9				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.

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HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)

South: Jane Lundeen

Mov. From S To Exit:	L2 W	T1 N	R2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	136	-	-	136	3.0	764	0.178	100	NA	NA
Lane 2	132	1	14	147	3.0	830	0.178	100	0.0	1
Approach	267	1	14	283	3.0		0.178			

East: Walker

Mov. From E To Exit:	L2 S	T1 W	R2 N	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	1	145	3	149	3.0	904	0.165	100	NA	NA
Approach	1	145	3	149	3.0		0.165			

North: Jane Lundeen

Mov. From N To Exit:	L2 E	T1 S	R2 W	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	13	1	137	151	3.0	943	0.160	100	NA	NA
Approach	13	1	137	151	3.0		0.160			

West: Walker

Mov. From W To Exit:	L2 N	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	190	347	-	537	3.0	1359	0.395	100	NA	NA
Lane 2	-	-	159	159	3.0	1359	0.117	100	NA	NA
Approach	190	347	159	696	3.0		0.395			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	1279	3.0	0.395

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Merge Analysis

	Exit Lane Number	Short Lane Length ft	Percent Opng in Lane %	Opposing Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
There are no Exit Short Lanes for Merge Analysis at this Site.												

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0
East: Walker				
Lane 1	0.0	0.0	0.0	0.0
North: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
West: Walker				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0

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Sidra Roundabout Reports

Jane Lundeen Drive + Pinehurst Circle
From January 2026 report

TRANSPORTATION
CONSULTANTS, INC.

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE LEVEL OF SERVICE

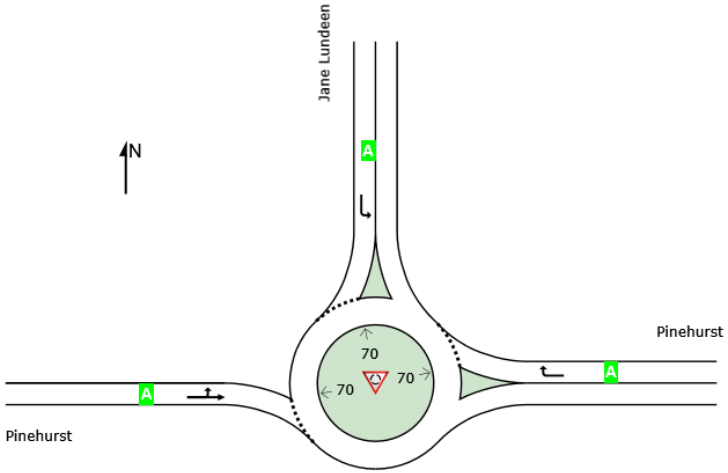
Lane Level of Service

Site: 101 [2025 Existing AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

	Approaches			Intersection
	East	North	West	
LOS	A	A	A	A



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

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LANE SUMMARY

Site: 101 [2025 Existing AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
East: Pinehurst															
Lane 1[d]	591	3.0	591	3.0	1340	0.441	100	5.1	LOS A	3.2	82.4	Full	800	0.0	0.0
Approach	591	3.0	591	3.0		0.441		5.1	LOS A	3.2	82.4				
North: Jane Lundeen															
Lane 1[d]	383	3.0	383	3.0	1343	0.285	100	4.1	LOS A	0.0	0.0	Full	600	0.0	0.0
Approach	383	3.0	383	3.0		0.285		4.1	LOS A	0.0	0.0				
West: Pinehurst															
Lane 1[d]	295	3.0	295	3.0	887	0.333	100	7.7	LOS A	1.6	41.6	Full	300	0.0	0.0
Approach	295	3.0	295	3.0		0.333		7.7	LOS A	1.6	41.6				
All Vehicles	1269	3.0	1269	3.0		0.441		5.4	LOS A	3.2	82.4				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)

East: Pinehurst									
Mov. From E To Exit:	R2 N	Total	%HV		Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	591	591	3.0		1340	0.441	100	NA	NA
Approach	591	591	3.0			0.441			

North: Jane Lundeen								
Mov. From N To Exit:	L2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	383	383	3.0	1343	0.285	100	NA	NA
Approach	383	383	3.0		0.285			

West: Pinehurst									
Mov. From W To Exit:	L2 N	T1 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	2	293	295	3.0	887	0.333	100	NA	NA
Approach	2	293	295	3.0		0.333			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	1269	3.0	0.441

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis

	Exit Lane Number	Short Lane Length ft	Percent Opng in Lane %	Opposing Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
There are no Exit Short Lanes for Merge Analysis at this Site.												

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
East: Pinehurst				

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Lane 1	0.0	0.0	0.0	0.0
North: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
West: Pinehurst				
Lane 1	0.0	0.0	0.0	0.0

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE LEVEL OF SERVICE

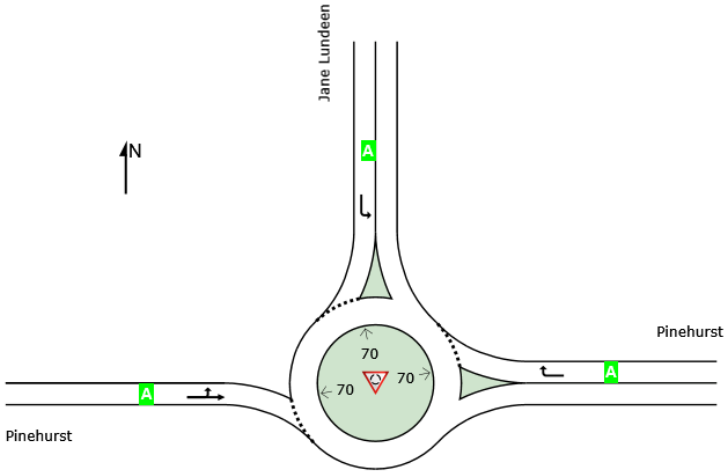
Lane Level of Service

Site: 101 [2025 Existing School PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

	Approaches			Intersection
	East	North	West	
LOS	A	A	A	A



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
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Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE SUMMARY

Site: 101 [2025 Existing School PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
East: Pinehurst															
Lane 1[d]	536	3.0	536	3.0	1341	0.400	100	4.8	LOS A	2.7	69.6	Full	800	0.0	0.0
Approach	536	3.0	536	3.0		0.400		4.8	LOS A	2.7	69.6				
North: Jane Lundeen															
Lane 1[d]	338	3.0	338	3.0	1343	0.252	100	3.9	LOS A	0.0	0.0	Full	600	0.0	0.0
Approach	338	3.0	338	3.0		0.252		3.9	LOS A	0.0	0.0				
West: Pinehurst															
Lane 1[d]	123	3.0	123	3.0	931	0.132	100	5.1	LOS A	0.6	14.2	Full	300	0.0	0.0
Approach	123	3.0	123	3.0		0.132		5.1	LOS A	0.6	14.2				
All Vehicles	997	3.0	997	3.0		0.400		4.5	LOS A	2.7	69.6				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)

East: Pinehurst									
Mov. From E To Exit:	R2 N	Total	%HV		Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	536	536	3.0		1341	0.400	100	NA	NA
Approach	536	536	3.0			0.400			

North: Jane Lundeen								
Mov. From N To Exit:	L2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	338	338	3.0	1343	0.252	100	NA	NA
Approach	338	338	3.0		0.252			

West: Pinehurst									
Mov. From W To Exit:	L2 N	T1 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	1	121	123	3.0	931	0.132	100	NA	NA
Approach	1	121	123	3.0		0.132			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	997	3.0	0.400

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis

	Exit Lane Number	Short Lane Length ft	Percent Opng in Lane %	Opposing Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
There are no Exit Short Lanes for Merge Analysis at this Site.												

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
East: Pinehurst				

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Lane 1	0.0	0.0	0.0	0.0
North: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
West: Pinehurst				
Lane 1	0.0	0.0	0.0	0.0

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LANE LEVEL OF SERVICE

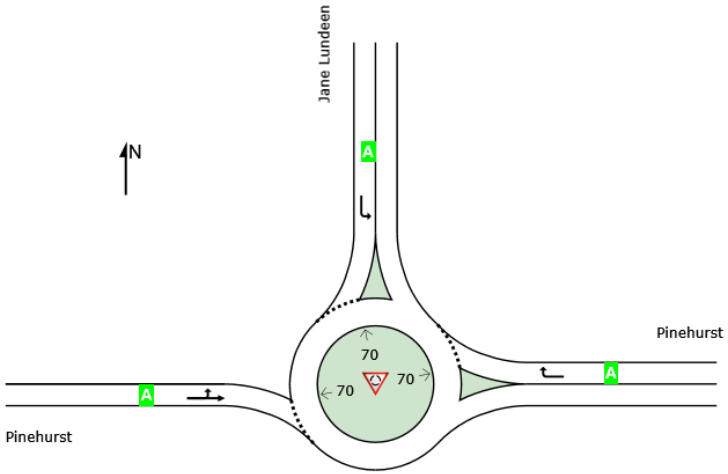
Lane Level of Service

Site: 101 [2025 Existing PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

	Approaches			Intersection
	East	North	West	
LOS	A	A	A	A



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

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LANE SUMMARY

Site: 101 [2025 Existing PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
East: Pinehurst															
Lane 1[d]	117	3.0	117	3.0	1341	0.087	100	3.1	LOS A	0.4	10.0	Full	800	0.0	0.0
Approach	117	3.0	117	3.0		0.087		3.1	LOS A	0.4	10.0				
North: Jane Lundeen															
Lane 1[d]	83	3.0	83	3.0	1343	0.062	100	3.0	LOS A	0.0	0.0	Full	600	0.0	0.0
Approach	83	3.0	83	3.0		0.062		3.0	LOS A	0.0	0.0				
West: Pinehurst															
Lane 1[d]	33	3.0	33	3.0	1228	0.027	100	3.1	LOS A	0.1	2.8	Full	300	0.0	0.0
Approach	33	3.0	33	3.0		0.027		3.1	LOS A	0.1	2.8				
All Vehicles	233	3.0	233	3.0		0.087		3.1	LOS A	0.4	10.0				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)

East: Pinehurst									
Mov. From E To Exit:	R2 N	Total	%HV		Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	117	117	3.0		1341	0.087	100	NA	NA
Approach	117	117	3.0			0.087			
North: Jane Lundeen									
Mov. From N To Exit:	L2 E	Total	%HV		Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	83	83	3.0		1343	0.062	100	NA	NA
Approach	83	83	3.0			0.062			
West: Pinehurst									
Mov. From W To Exit:	L2 N	T1 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	1	32	33	3.0	1228	0.027	100	NA	NA
Approach	1	32	33	3.0		0.027			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	233	3.0	0.087

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis

	Exit Lane Number	Short Lane Length ft	Percent Opng in Lane %	Opposing Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
There are no Exit Short Lanes for Merge Analysis at this Site.												

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
East: Pinehurst				

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Lane 1	0.0	0.0	0.0	0.0
North: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
West: Pinehurst				
Lane 1	0.0	0.0	0.0	0.0

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LANE LEVEL OF SERVICE

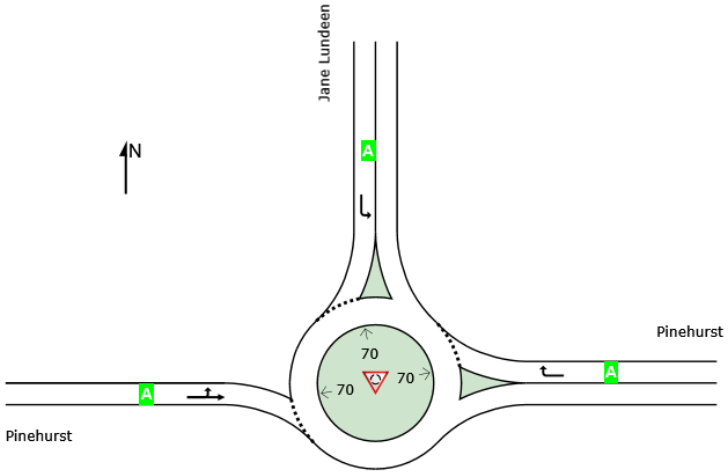
Lane Level of Service

Site: 101 [ST Baseline AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

	Approaches			Intersection
	East	North	West	
LOS	A	A	A	A



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

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LANE SUMMARY

Site: 101 [ST Baseline AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
East: Pinehurst															
Lane 1[d]	611	3.0	611	3.0	1340	0.456	100	5.2	LOS A	3.4	87.5	Full	800	0.0	0.0
Approach	611	3.0	611	3.0		0.456		5.2	LOS A	3.4	87.5				
North: Jane Lundeen															
Lane 1[d]	387	3.0	387	3.0	1343	0.288	100	4.1	LOS A	0.0	0.0	Full	600	0.0	0.0
Approach	387	3.0	387	3.0		0.288		4.1	LOS A	0.0	0.0				
West: Pinehurst															
Lane 1[d]	305	3.0	305	3.0	883	0.345	100	7.9	LOS A	1.7	43.5	Full	300	0.0	0.0
Approach	305	3.0	305	3.0		0.345		7.9	LOS A	1.7	43.5				
All Vehicles	1303	3.0	1303	3.0		0.456		5.5	LOS A	3.4	87.5				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)

East: Pinehurst									
Mov. From E To Exit:	R2 N	Total	%HV		Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	611	611	3.0		1340	0.456	100	NA	NA
Approach	611	611	3.0			0.456			
North: Jane Lundeen									
Mov. From N To Exit:	L2 E	Total	%HV		Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	387	387	3.0		1343	0.288	100	NA	NA
Approach	387	387	3.0			0.288			
West: Pinehurst									
Mov. From W To Exit:	L2 N	T1 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	2	302	305	3.0	883	0.345	100	NA	NA
Approach	2	302	305	3.0		0.345			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	1303	3.0	0.456

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis

	Exit Lane Number	Short Lane Length ft	Percent Opng in Lane %	Opposing Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
There are no Exit Short Lanes for Merge Analysis at this Site.												

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
East: Pinehurst				

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Lane 1	0.0	0.0	0.0	0.0
North: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
West: Pinehurst				
Lane 1	0.0	0.0	0.0	0.0

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LANE LEVEL OF SERVICE

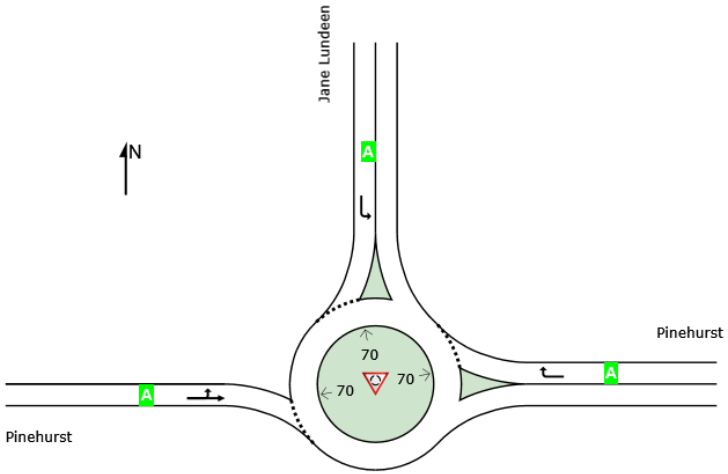
Lane Level of Service

Site: 101 [ST Baseline School PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

	Approaches			Intersection
	East	North	West	
LOS	A	A	A	A



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

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LANE SUMMARY

Site: 101 [ST Baseline School PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
East: Pinehurst															
Lane 1[d]	551	3.0	551	3.0	1341	0.411	100	4.8	LOS A	2.8	72.9	Full	800	0.0	0.0
Approach	551	3.0	551	3.0		0.411		4.8	LOS A	2.8	72.9				
North: Jane Lundeen															
Lane 1[d]	352	3.0	352	3.0	1343	0.262	100	4.0	LOS A	0.0	0.0	Full	600	0.0	0.0
Approach	352	3.0	352	3.0		0.262		4.0	LOS A	0.0	0.0				
West: Pinehurst															
Lane 1[d]	139	3.0	139	3.0	917	0.152	100	5.4	LOS A	0.6	16.6	Full	300	0.0	0.0
Approach	139	3.0	139	3.0		0.152		5.4	LOS A	0.6	16.6				
All Vehicles	1043	3.0	1043	3.0		0.411		4.6	LOS A	2.8	72.9				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)

East: Pinehurst									
Mov. From E To Exit:	R2 N	Total	%HV		Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	551	551	3.0		1341	0.411	100	NA	NA
Approach	551	551	3.0			0.411			

North: Jane Lundeen								
Mov. From N To Exit:	L2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	352	352	3.0	1343	0.262	100	NA	NA
Approach	352	352	3.0		0.262			

West: Pinehurst									
Mov. From W To Exit:	L2 N	T1 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	1	138	139	3.0	917	0.152	100	NA	NA
Approach	1	138	139	3.0		0.152			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	1043	3.0	0.411

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis

	Exit Lane Number	Short Lane Length ft	Percent Opng in Lane %	Opposing Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
There are no Exit Short Lanes for Merge Analysis at this Site.												

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
East: Pinehurst				

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Lane 1	0.0	0.0	0.0	0.0
North: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
West: Pinehurst				
Lane 1	0.0	0.0	0.0	0.0

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE LEVEL OF SERVICE

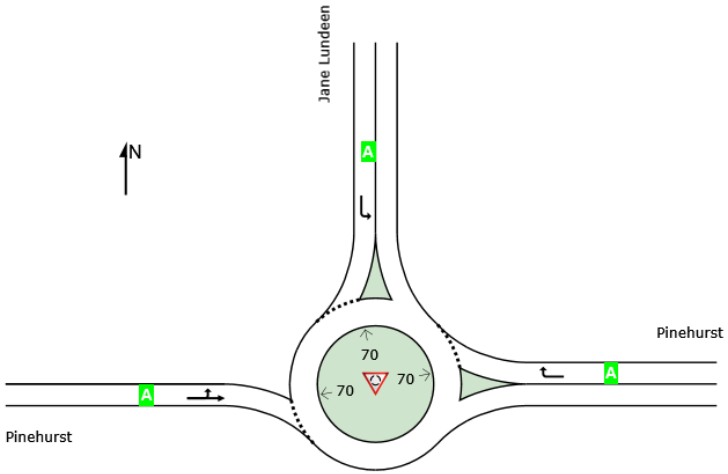
Lane Level of Service

Site: 101 [ST Baseline PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

	Approaches			Intersection
	East	North	West	
LOS	A	A	A	A



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

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Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE SUMMARY

Site: 101 [ST Baseline PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
East: Pinehurst															
Lane 1[d]	123	3.0	123	3.0	1341	0.092	100	3.2	LOS A	0.4	10.6	Full	800	0.0	0.0
Approach	123	3.0	123	3.0		0.092		3.2	LOS A	0.4	10.6				
North: Jane Lundeen															
Lane 1[d]	96	3.0	96	3.0	1343	0.071	100	3.0	LOS A	0.0	0.0	Full	600	0.0	0.0
Approach	96	3.0	96	3.0		0.071		3.0	LOS A	0.0	0.0				
West: Pinehurst															
Lane 1[d]	54	3.0	54	3.0	1211	0.045	100	3.3	LOS A	0.2	4.8	Full	300	0.0	0.0
Approach	54	3.0	54	3.0		0.045		3.3	LOS A	0.2	4.8				
All Vehicles	273	3.0	273	3.0		0.092		3.1	LOS A	0.4	10.6				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)

East: Pinehurst									
Mov. From E To Exit:	R2 N	Total	%HV		Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	123	123	3.0		1341	0.092	100	NA	NA
Approach	123	123	3.0			0.092			
North: Jane Lundeen									
Mov. From N To Exit:	L2 E	Total	%HV		Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	96	96	3.0		1343	0.071	100	NA	NA
Approach	96	96	3.0			0.071			
West: Pinehurst									
Mov. From W To Exit:	L2 N	T1 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	1	53	54	3.0	1211	0.045	100	NA	NA
Approach	1	53	54	3.0		0.045			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	273	3.0	0.092

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis

	Exit Lane Number	Short Lane Length ft	Percent Opng in Lane %	Opposing Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
There are no Exit Short Lanes for Merge Analysis at this Site.												

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
East: Pinehurst				

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Lane 1	0.0	0.0	0.0	0.0
North: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
West: Pinehurst				
Lane 1	0.0	0.0	0.0	0.0

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE LEVEL OF SERVICE

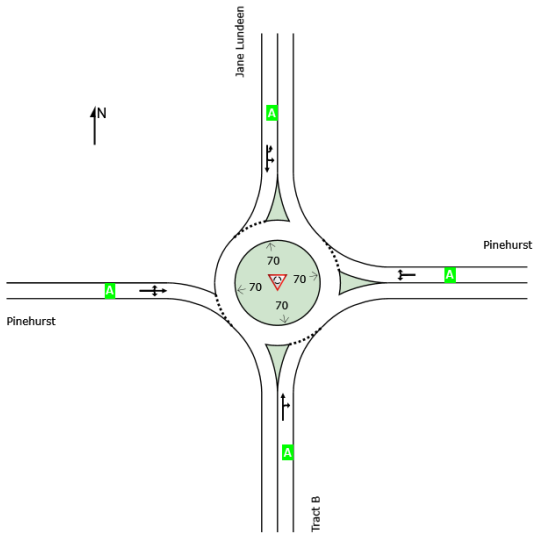
Lane Level of Service

Site: 101 [ST Baseline + Site AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	A	A	A	A



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE SUMMARY

Site: 101 [ST Baseline + Site AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Tract B															
Lane 1[d]	21	3.0	21	3.0	626	0.033	100	6.1	LOS A	0.1	3.0	Full	300	0.0	0.0
Approach	21	3.0	21	3.0		0.033		6.1	LOS A	0.1	3.0				
East: Pinehurst															
Lane 1[d]	617	3.0	617	3.0	1297	0.475	100	6.9	LOS A	3.6	91.5	Full	800	0.0	0.0
Approach	617	3.0	617	3.0		0.475		6.9	LOS A	3.6	91.5				
North: Jane Lundeen															
Lane 1[d]	391	3.0	391	3.0	1341	0.291	100	4.2	LOS A	1.7	43.0	Full	600	0.0	0.0
Approach	391	3.0	391	3.0		0.291		4.2	LOS A	1.7	43.0				
West: Pinehurst															
Lane 1[d]	319	3.0	319	3.0	879	0.363	100	8.2	LOS A	1.8	46.4	Full	300	0.0	0.0
Approach	319	3.0	319	3.0		0.363		8.2	LOS A	1.8	46.4				
All Vehicles	1347	3.0	1347	3.0		0.475		6.4	LOS A	3.6	91.5				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)

South: Tract B

Mov. From S To Exit:	T1 N	R2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	19	1	21	3.0	626	0.033	100	NA	NA
Approach	19	1	21	3.0		0.033			

East: Pinehurst

Mov. From E To Exit:	L2 S	R2 N	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	1	616	617	3.0	1297	0.475	100	NA	NA
Approach	1	616	617	3.0		0.475			

North: Jane Lundeen

Mov. From N To Exit:	U N	L2 E	T1 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	1	387	2	391	3.0	1341	0.291	100	NA	NA
Approach	1	387	2	391	3.0		0.291			

West: Pinehurst

Mov. From W To Exit:	L2 N	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	12	302	5	319	3.0	879	0.363	100	NA	NA
Approach	12	302	5	319	3.0		0.363			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	1347	3.0	0.475

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis

	Exit Lane Number	Short Lane Length	Percent Opng in Lane	Opposing Flow Rate	Critical Gap	Follow-up Headway	Lane Flow Rate	Capacity	Deg. Satn	Min. Delay	Merge Delay

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

	ft	%	veh/h	pcu/h	sec	sec	veh/h	veh/h	v/c	sec	sec
There are no Exit Short Lanes for Merge Analysis at this Site.											

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: Tract B				
Lane 1	0.0	0.0	0.0	0.0
East: Pinehurst				
Lane 1	0.0	0.0	0.0	0.0
North: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
West: Pinehurst				
Lane 1	0.0	0.0	0.0	0.0

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LANE LEVEL OF SERVICE

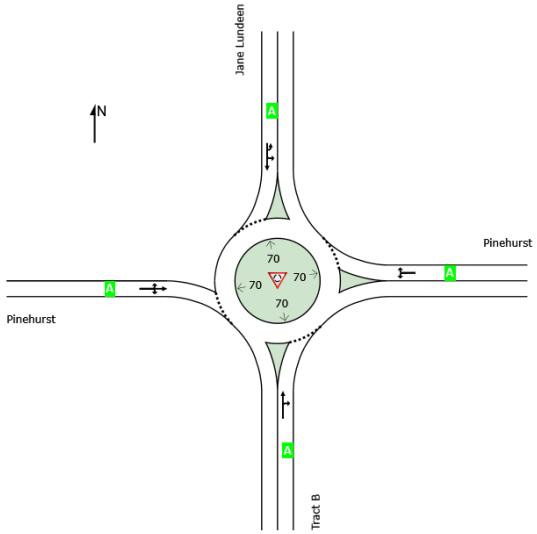
Lane Level of Service

Site: 101 [ST Baseline + Site School PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	A	A	A	A



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE SUMMARY

Site: 101 [ST Baseline + Site School PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Tract B															
Lane 1[d]	9	3.0	9	3.0	773	0.012	100	4.8	LOS A	0.0	1.1	Full	300	0.0	0.0
Approach	9	3.0	9	3.0		0.012		4.8	LOS A	0.0	1.1				
East: Pinehurst															
Lane 1[d]	554	3.0	554	3.0	1315	0.422	100	6.0	LOS A	2.9	74.8	Full	800	0.0	0.0
Approach	554	3.0	554	3.0		0.422		6.0	LOS A	2.9	74.8				
North: Jane Lundeen															
Lane 1[d]	362	3.0	362	3.0	1341	0.270	100	4.1	LOS A	1.5	38.6	Full	600	0.0	0.0
Approach	362	3.0	362	3.0		0.270		4.1	LOS A	1.5	38.6				
West: Pinehurst															
Lane 1[d]	165	3.0	165	3.0	907	0.181	100	5.7	LOS A	0.8	20.2	Full	300	0.0	0.0
Approach	165	3.0	165	3.0		0.181		5.7	LOS A	0.8	20.2				
All Vehicles	1089	3.0	1089	3.0		0.422		5.3	LOS A	2.9	74.8				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)

South: Tract B

Mov. From S To Exit:	T1 N	R2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	8	1	9	3.0	773	0.012	100	NA	NA
Approach	8	1	9	3.0		0.012			

East: Pinehurst

Mov. From E To Exit:	L2 S	R2 N	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	1	553	554	3.0	1315	0.422	100	NA	NA
Approach	1	553	554	3.0		0.422			

North: Jane Lundeen

Mov. From N To Exit:	U N	L2 E	T1 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	1	355	6	362	3.0	1341	0.270	100	NA	NA
Approach	1	355	6	362	3.0		0.270			

West: Pinehurst

Mov. From W To Exit:	L2 N	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	11	143	11	165	3.0	907	0.181	100	NA	NA
Approach	11	143	11	165	3.0		0.181			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	1089	3.0	0.422

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis

	Exit Lane Number	Short Lane Length	Percent Opng in Lane	Opposing Flow Rate	Critical Gap	Follow-up Headway	Lane Flow Rate	Capacity	Deg. Satn	Min. Delay	Merge Delay

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

	ft	%	veh/h	pcu/h	sec	sec	veh/h	veh/h	v/c	sec	sec
There are no Exit Short Lanes for Merge Analysis at this Site.											

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: Tract B				
Lane 1	0.0	0.0	0.0	0.0
East: Pinehurst				
Lane 1	0.0	0.0	0.0	0.0
North: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
West: Pinehurst				
Lane 1	0.0	0.0	0.0	0.0

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE LEVEL OF SERVICE

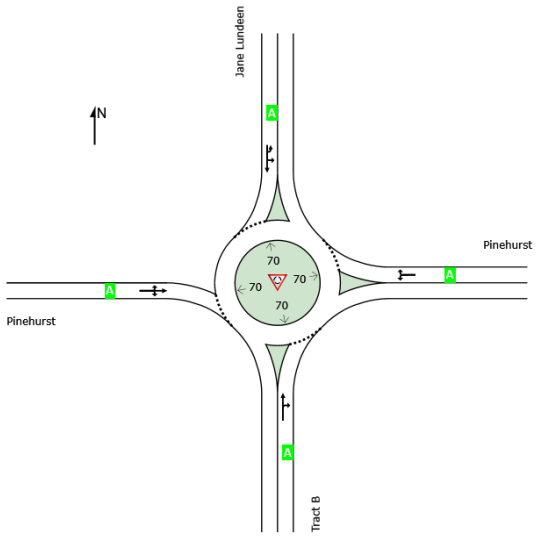
Lane Level of Service

Site: 101 [ST Baseline + Site PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	A	A	A	A



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE SUMMARY

Site: 101 [ST Baseline + Site PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Tract B															
Lane 1[d]	14	3.0	14	3.0	1116	0.013	100	3.3	LOS A	0.1	1.3	Full	300	0.0	0.0
Approach	14	3.0	14	3.0		0.013		3.3	LOS A	0.1	1.3				
East: Pinehurst															
Lane 1[d]	128	3.0	128	3.0	1302	0.098	100	3.5	LOS A	0.4	11.3	Full	800	0.0	0.0
Approach	128	3.0	128	3.0		0.098		3.5	LOS A	0.4	11.3				
North: Jane Lundeen															
Lane 1[d]	106	3.0	106	3.0	1341	0.079	100	3.1	LOS A	0.4	9.0	Full	600	0.0	0.0
Approach	106	3.0	106	3.0		0.079		3.1	LOS A	0.4	9.0				
West: Pinehurst															
Lane 1[d]	85	3.0	85	3.0	1196	0.071	100	3.6	LOS A	0.3	7.8	Full	300	0.0	0.0
Approach	85	3.0	85	3.0		0.071		3.6	LOS A	0.3	7.8				
All Vehicles	333	3.0	333	3.0		0.098		3.4	LOS A	0.4	11.3				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)

South: Tract B

Mov. From S To Exit:	T1 N	R2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	13	1	14	3.0	1116	0.013	100	NA	NA
Approach	13	1	14	3.0		0.013			

East: Pinehurst

Mov. From E To Exit:	L2 S	R2 N	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	1	127	128	3.0	1302	0.098	100	NA	NA
Approach	1	127	128	3.0		0.098			

North: Jane Lundeen

Mov. From N To Exit:	U N	L2 E	T1 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	1	98	7	106	3.0	1341	0.079	100	NA	NA
Approach	1	98	7	106	3.0		0.079			

West: Pinehurst

Mov. From W To Exit:	L2 N	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	14	57	13	85	3.0	1196	0.071	100	NA	NA
Approach	14	57	13	85	3.0		0.071			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	333	3.0	0.098

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis

	Exit Lane Number	Short Lane Length	Percent Opng in Lane	Opposing Flow Rate	Critical Gap	Follow-up Headway	Lane Flow Rate	Capacity	Deg. Satn	Min. Delay	Merge Delay

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

	ft	%	veh/h	pcu/h	sec	sec	veh/h	veh/h	v/c	sec	sec
There are no Exit Short Lanes for Merge Analysis at this Site.											

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: Tract B				
Lane 1	0.0	0.0	0.0	0.0
East: Pinehurst				
Lane 1	0.0	0.0	0.0	0.0
North: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
West: Pinehurst				
Lane 1	0.0	0.0	0.0	0.0

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE LEVEL OF SERVICE

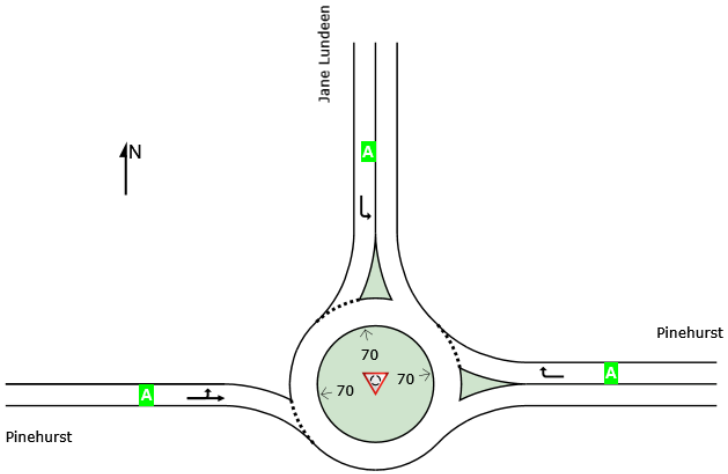
Lane Level of Service

Site: 101 [2045 Background AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

	Approaches			Intersection
	East	North	West	
LOS	A	A	A	A



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

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LANE SUMMARY

Site: 101 [2045 Background AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
East: Pinehurst															
Lane 1[d]	591	3.0	591	3.0	1340	0.441	100	5.1	LOS A	3.2	82.4	Full	800	0.0	0.0
Approach	591	3.0	591	3.0		0.441		5.1	LOS A	3.2	82.4				
North: Jane Lundeen															
Lane 1[d]	391	3.0	391	3.0	1343	0.291	100	4.1	LOS A	0.0	0.0	Full	600	0.0	0.0
Approach	391	3.0	391	3.0		0.291		4.1	LOS A	0.0	0.0				
West: Pinehurst															
Lane 1[d]	295	3.0	295	3.0	879	0.336	100	7.8	LOS A	1.6	41.9	Full	300	0.0	0.0
Approach	295	3.0	295	3.0		0.336		7.8	LOS A	1.6	41.9				
All Vehicles	1278	3.0	1278	3.0		0.441		5.4	LOS A	3.2	82.4				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)

East: Pinehurst									
Mov. From E To Exit:	R2 N	Total	%HV		Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	591	591	3.0		1340	0.441	100	NA	NA
Approach	591	591	3.0			0.441			
North: Jane Lundeen									
Mov. From N To Exit:	L2 E	Total	%HV		Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	391	391	3.0		1343	0.291	100	NA	NA
Approach	391	391	3.0			0.291			
West: Pinehurst									
Mov. From W To Exit:	L2 N	T1 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	2	293	295	3.0	879	0.336	100	NA	NA
Approach	2	293	295	3.0		0.336			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	1278	3.0	0.441

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis

	Exit Lane Number	Short Lane Length ft	Percent Opng in Lane %	Opposing Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
There are no Exit Short Lanes for Merge Analysis at this Site.												

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
East: Pinehurst				

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Lane 1	0.0	0.0	0.0	0.0
North: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
West: Pinehurst				
Lane 1	0.0	0.0	0.0	0.0

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LANE LEVEL OF SERVICE

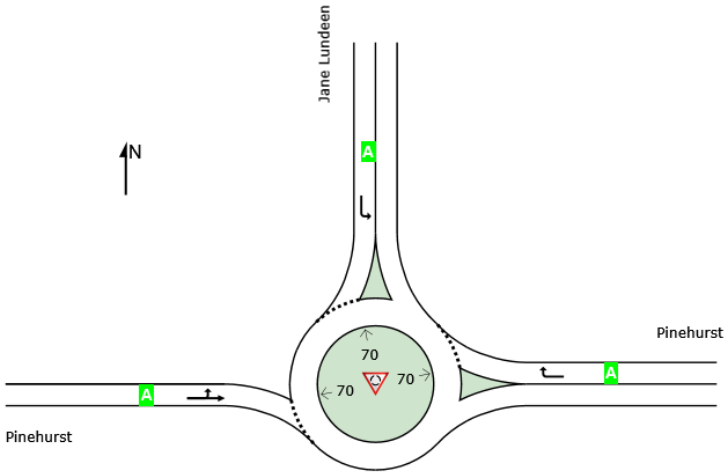
Lane Level of Service

Site: 101 [2045 Background School PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

	Approaches			Intersection
	East	North	West	
LOS	A	A	A	A



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

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LANE SUMMARY

Site: 101 [2045 Background School PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
East: Pinehurst															
Lane 1[d]	553	3.0	553	3.0	1341	0.412	100	4.8	LOS A	2.9	73.3	Full	800	0.0	0.0
Approach	553	3.0	553	3.0		0.412		4.8	LOS A	2.9	73.3				
North: Jane Lundeen															
Lane 1[d]	360	3.0	360	3.0	1343	0.268	100	4.0	LOS A	0.0	0.0	Full	600	0.0	0.0
Approach	360	3.0	360	3.0		0.268		4.0	LOS A	0.0	0.0				
West: Pinehurst															
Lane 1[d]	139	3.0	139	3.0	910	0.153	100	5.4	LOS A	0.7	16.7	Full	300	0.0	0.0
Approach	139	3.0	139	3.0		0.153		5.4	LOS A	0.7	16.7				
All Vehicles	1052	3.0	1052	3.0		0.412		4.6	LOS A	2.9	73.3				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)

East: Pinehurst									
Mov. From E To Exit:	R2 N	Total	%HV		Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	553	553	3.0		1341	0.412	100	NA	NA
Approach	553	553	3.0			0.412			
North: Jane Lundeen									
Mov. From N To Exit:	L2 E	Total	%HV		Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	360	360	3.0		1343	0.268	100	NA	NA
Approach	360	360	3.0			0.268			
West: Pinehurst									
Mov. From W To Exit:	L2 N	T1 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	1	138	139	3.0	910	0.153	100	NA	NA
Approach	1	138	139	3.0		0.153			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	1052	3.0	0.412

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis

	Exit Lane Number	Short Lane Length ft	Percent Opng in Lane %	Opposing Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
There are no Exit Short Lanes for Merge Analysis at this Site.												

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
East: Pinehurst				

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Lane 1	0.0	0.0	0.0	0.0
North: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
West: Pinehurst				
Lane 1	0.0	0.0	0.0	0.0

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LANE LEVEL OF SERVICE

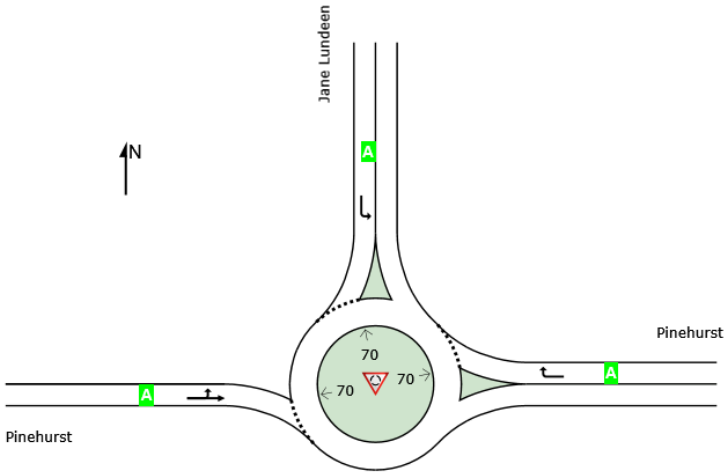
Lane Level of Service

Site: 101 [2045 Background PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

	Approaches			Intersection
	East	North	West	
LOS	A	A	A	A



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

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Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE SUMMARY

Site: 101 [2045 Background PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
East: Pinehurst															
Lane 1[d]	127	3.0	127	3.0	1298	0.098	100	3.5	LOS A	0.4	11.2	Full	800	0.0	0.0
Approach	127	3.0	127	3.0		0.098		3.5	LOS A	0.4	11.2				
North: Jane Lundeen															
Lane 1[d]	102	3.0	102	3.0	1343	0.076	100	3.1	LOS A	0.0	0.0	Full	600	0.0	0.0
Approach	102	3.0	102	3.0		0.076		3.1	LOS A	0.0	0.0				
West: Pinehurst															
Lane 1[d]	85	3.0	85	3.0	1203	0.070	100	3.5	LOS A	0.3	7.7	Full	300	0.0	0.0
Approach	85	3.0	85	3.0		0.070		3.5	LOS A	0.3	7.7				
All Vehicles	313	3.0	313	3.0		0.098		3.4	LOS A	0.4	11.2				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)

East: Pinehurst									
Mov. From E To Exit:	R2 N	Total	%HV		Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	127	127	3.0		1298	0.098	100	NA	NA
Approach	127	127	3.0			0.098			
North: Jane Lundeen									
Mov. From N To Exit:	L2 E	Total	%HV		Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	102	102	3.0		1343	0.076	100	NA	NA
Approach	102	102	3.0			0.076			
West: Pinehurst									
Mov. From W To Exit:	L2 N	T1 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	31	53	85	3.0	1203	0.070	100	NA	NA
Approach	31	53	85	3.0		0.070			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	313	3.0	0.098

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis

	Exit Lane Number	Short Lane Length ft	Percent Opng in Lane %	Opposing Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
There are no Exit Short Lanes for Merge Analysis at this Site.												

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
East: Pinehurst				

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Lane 1	0.0	0.0	0.0	0.0
North: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
West: Pinehurst				
Lane 1	0.0	0.0	0.0	0.0

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LANE LEVEL OF SERVICE

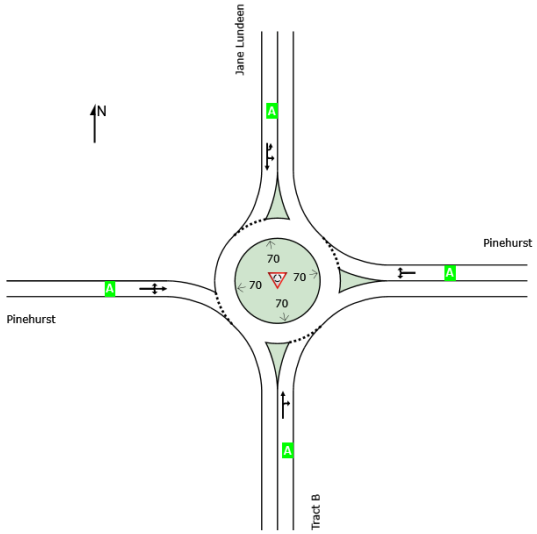
Lane Level of Service

Site: 101 [2045 Background + Site AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	A	A	A	A



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

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LANE SUMMARY

Site: 101 [2045 Background + Site AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Tract B															
Lane 1[d]	21	3.0	21	3.0	604	0.034	100	6.3	LOS A	0.1	3.1	Full	300	0.0	0.0
Approach	21	3.0	21	3.0		0.034		6.3	LOS A	0.1	3.1				
East: Pinehurst															
Lane 1[d]	617	3.0	617	3.0	1261	0.489	100	7.6	LOS A	3.7	93.7	Full	800	0.0	0.0
Approach	617	3.0	617	3.0		0.489		7.6	LOS A	3.7	93.7				
North: Jane Lundeen															
Lane 1[d]	395	3.0	395	3.0	1341	0.295	100	4.2	LOS A	1.7	43.6	Full	600	0.0	0.0
Approach	395	3.0	395	3.0		0.295		4.2	LOS A	1.7	43.6				
West: Pinehurst															
Lane 1[d]	348	3.0	348	3.0	875	0.398	100	8.7	LOS A	2.0	52.4	Full	300	0.0	0.0
Approach	348	3.0	348	3.0		0.398		8.7	LOS A	2.0	52.4				
All Vehicles	1380	3.0	1380	3.0		0.489		6.9	LOS A	3.7	93.7				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)

South: Tract B

Mov. From S To Exit:	T1 N	R2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	19	1	21	3.0	604	0.034	100	NA	NA
Approach	19	1	21	3.0		0.034			

East: Pinehurst

Mov. From E To Exit:	L2 S	R2 N	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	1	616	617	3.0	1261	0.489	100	NA	NA
Approach	1	616	617	3.0		0.489			

North: Jane Lundeen

Mov. From N To Exit:	U N	L2 E	T1 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	1	391	2	395	3.0	1341	0.295	100	NA	NA
Approach	1	391	2	395	3.0		0.295			

West: Pinehurst

Mov. From W To Exit:	L2 N	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	38	305	5	348	3.0	875	0.398	100	NA	NA
Approach	38	305	5	348	3.0		0.398			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	1380	3.0	0.489

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis

	Exit Lane Number	Short Lane Length	Percent Opng in Lane	Opposing Flow Rate	Critical Gap	Follow-up Headway	Lane Flow Rate	Capacity	Deg. Satn	Min. Delay	Merge Delay

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	ft	%	veh/h	pcu/h	sec	sec	veh/h	veh/h	v/c	sec	sec
There are no Exit Short Lanes for Merge Analysis at this Site.											

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: Tract B				
Lane 1	0.0	0.0	0.0	0.0
East: Pinehurst				
Lane 1	0.0	0.0	0.0	0.0
North: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
West: Pinehurst				
Lane 1	0.0	0.0	0.0	0.0

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LANE LEVEL OF SERVICE

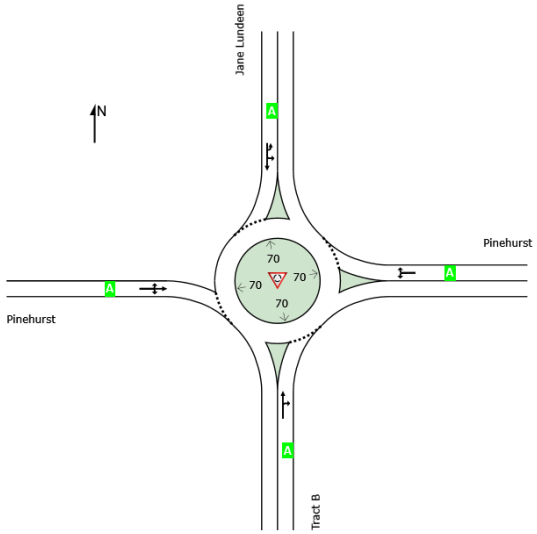
Lane Level of Service

Site: 101 [2045 BG + Site School PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	A	A	A	A



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

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LANE SUMMARY

Site: 101 [2045 BG + Site School PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Tract B															
Lane 1[d]	13	3.0	13	3.0	695	0.018	100	5.4	LOS A	0.1	1.7	Full	300	0.0	0.0
Approach	13	3.0	13	3.0		0.018		5.4	LOS A	0.1	1.7				
East: Pinehurst															
Lane 1[d]	556	3.0	556	3.0	1188	0.469	100	7.8	LOS A	3.2	82.1	Full	800	0.0	0.0
Approach	556	3.0	556	3.0		0.469		7.8	LOS A	3.2	82.1				
North: Jane Lundeen															
Lane 1[d]	444	3.0	444	3.0	1341	0.331	100	4.4	LOS A	2.0	51.6	Full	600	0.0	0.0
Approach	444	3.0	444	3.0		0.331		4.4	LOS A	2.0	51.6				
West: Pinehurst															
Lane 1[d]	180	3.0	180	3.0	830	0.217	100	6.6	LOS A	0.9	24.1	Full	300	0.0	0.0
Approach	180	3.0	180	3.0		0.217		6.6	LOS A	0.9	24.1				
All Vehicles	1193	3.0	1193	3.0		0.469		6.3	LOS A	3.2	82.1				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)

South: Tract B

Mov. From S To Exit:	T1 N	R2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	12	1	13	3.0	695	0.018	100	NA	NA
Approach	12	1	13	3.0		0.018			

East: Pinehurst

Mov. From E To Exit:	L2 S	R2 N	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	1	555	556	3.0	1188	0.469	100	NA	NA
Approach	1	555	556	3.0		0.469			

North: Jane Lundeen

Mov. From N To Exit:	U N	L2 E	T1 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	76	362	6	444	3.0	1341	0.331	100	NA	NA
Approach	76	362	6	444	3.0		0.331			

West: Pinehurst

Mov. From W To Exit:	L2 N	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	27	143	11	180	3.0	830	0.217	100	NA	NA
Approach	27	143	11	180	3.0		0.217			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	1193	3.0	0.469

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis

	Exit Lane Number	Short Lane Length	Percent Opng in Lane	Opposing Flow Rate	Critical Gap	Follow-up Headway	Lane Flow Rate	Capacity	Deg. Satn	Min. Delay	Merge Delay

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

	ft	%	veh/h	pcu/h	sec	sec	veh/h	veh/h	v/c	sec	sec
There are no Exit Short Lanes for Merge Analysis at this Site.											

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: Tract B				
Lane 1	0.0	0.0	0.0	0.0
East: Pinehurst				
Lane 1	0.0	0.0	0.0	0.0
North: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
West: Pinehurst				
Lane 1	0.0	0.0	0.0	0.0

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE LEVEL OF SERVICE

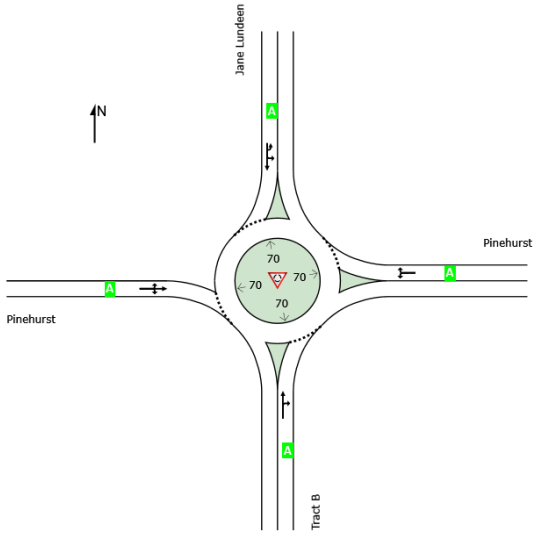
Lane Level of Service

Site: 101 [2045 BG + Site PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	A	A	A	A



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE SUMMARY

Site: 101 [2045 BG + Site PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Tract B															
Lane 1[d]	14	3.0	14	3.0	978	0.014	100	3.8	LOS A	0.1	1.4	Full	300	0.0	0.0
Approach	14	3.0	14	3.0		0.014		3.8	LOS A	0.1	1.4				
East: Pinehurst															
Lane 1[d]	131	3.0	131	3.0	1149	0.114	100	4.1	LOS A	0.5	12.9	Full	800	0.0	0.0
Approach	131	3.0	131	3.0		0.114		4.1	LOS A	0.5	12.9				
North: Jane Lundeen															
Lane 1[d]	187	3.0	187	3.0	1341	0.140	100	3.4	LOS A	0.7	17.0	Full	600	0.0	0.0
Approach	187	3.0	187	3.0		0.140		3.4	LOS A	0.7	17.0				
West: Pinehurst															
Lane 1[d]	124	3.0	124	3.0	1095	0.113	100	4.2	LOS A	0.5	12.6	Full	300	0.0	0.0
Approach	124	3.0	124	3.0		0.113		4.2	LOS A	0.5	12.6				
All Vehicles	456	3.0	456	3.0		0.140		3.8	LOS A	0.7	17.0				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)

South: Tract B

Mov. From S To Exit:	T1 N	R2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	13	1	14	3.0	978	0.014	100	NA	NA
Approach	13	1	14	3.0		0.014			

East: Pinehurst

Mov. From E To Exit:	L2 S	R2 N	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	1	130	131	3.0	1149	0.114	100	NA	NA
Approach	1	130	131	3.0		0.114			

North: Jane Lundeen

Mov. From N To Exit:	U N	L2 E	T1 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	78	104	5	187	3.0	1341	0.140	100	NA	NA
Approach	78	104	5	187	3.0		0.140			

West: Pinehurst

Mov. From W To Exit:	L2 N	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	53	57	13	124	3.0	1095	0.113	100	NA	NA
Approach	53	57	13	124	3.0		0.113			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	456	3.0	0.140

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis

	Exit Lane Number	Short Lane Length	Percent Opng in Lane	Opposing Flow Rate	Critical Gap	Follow-up Headway	Lane Flow Rate	Capacity	Deg. Satn	Min. Delay	Merge Delay

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

	ft	%	veh/h	pcu/h	sec	sec	veh/h	veh/h	v/c	sec	sec
There are no Exit Short Lanes for Merge Analysis at this Site.											

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: Tract B				
Lane 1	0.0	0.0	0.0	0.0
East: Pinehurst				
Lane 1	0.0	0.0	0.0	0.0
North: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
West: Pinehurst				
Lane 1	0.0	0.0	0.0	0.0

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Sidra Roundabout Reports

Jane Lundeen Drive + Pinehurst Circle
Option A

TRANSPORTATION
CONSULTANTS, INC.

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE LEVEL OF SERVICE

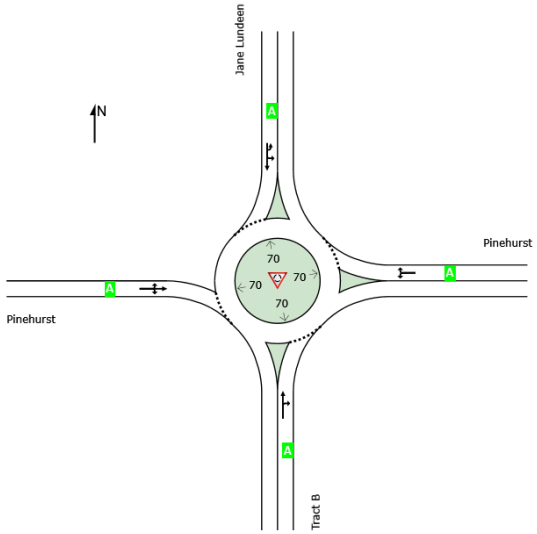
Lane Level of Service

Site: 101 [2045 BG + Site AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	A	A	A	A



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE SUMMARY

Site: 101 [2045 BG + Site AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Tract B															
Lane 1[d]	21	3.0	21	3.0	739	0.028	100	5.1	LOS A	0.1	2.6	Full	300	0.0	0.0
Approach	21	3.0	21	3.0		0.028		5.1	LOS A	0.1	2.6				
East: Pinehurst															
Lane 1[d]	617	3.0	617	3.0	1108	0.556	100	9.8	LOS A	4.1	104.6	Full	800	0.0	0.0
Approach	617	3.0	617	3.0		0.556		9.8	LOS A	4.1	104.6				
North: Jane Lundeen															
Lane 1[d]	210	3.0	210	3.0	1341	0.157	100	3.5	LOS A	0.8	19.4	Full	600	0.0	0.0
Approach	210	3.0	210	3.0		0.157		3.5	LOS A	0.8	19.4				
West: Pinehurst															
Lane 1[d]	348	3.0	348	3.0	1069	0.325	100	6.5	LOS A	1.7	44.2	Full	300	0.0	0.0
Approach	348	3.0	348	3.0		0.325		6.5	LOS A	1.7	44.2				
All Vehicles	1195	3.0	1195	3.0		0.556		7.7	LOS A	4.1	104.6				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)

South: Tract B

Mov. From S To Exit:	T1 N	R2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	19	1	21	3.0	739	0.028	100	NA	NA
Approach	19	1	21	3.0		0.028			

East: Pinehurst

Mov. From E To Exit:	L2 S	R2 N	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	1	616	617	3.0	1108	0.556	100	NA	NA
Approach	1	616	617	3.0		0.556			

North: Jane Lundeen

Mov. From N To Exit:	U N	L2 E	T1 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	120	87	2	210	3.0	1341	0.157	100	NA	NA
Approach	120	87	2	210	3.0		0.157			

West: Pinehurst

Mov. From W To Exit:	L2 N	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	38	305	5	348	3.0	1069	0.325	100	NA	NA
Approach	38	305	5	348	3.0		0.325			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	1195	3.0	0.556

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis

	Exit Lane Number	Short Lane Length	Percent Opng in Lane	Opposing Flow Rate	Critical Gap	Follow-up Headway	Lane Flow Rate	Capacity	Deg. Satn	Min. Delay	Merge Delay

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

	ft	%	veh/h	pcu/h	sec	sec	veh/h	veh/h	v/c	sec	sec
There are no Exit Short Lanes for Merge Analysis at this Site.											

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: Tract B				
Lane 1	0.0	0.0	0.0	0.0
East: Pinehurst				
Lane 1	0.0	0.0	0.0	0.0
North: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
West: Pinehurst				
Lane 1	0.0	0.0	0.0	0.0

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE LEVEL OF SERVICE

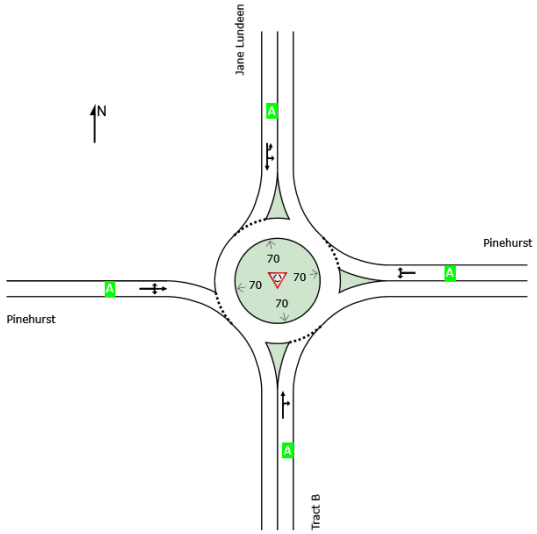
Lane Level of Service

Site: 101 [2045 BG + Site School PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	A	A	A	A



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE SUMMARY

Site: 101 [2045 BG + Site School PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Tract B															
Lane 1[d]	13	3.0	13	3.0	619	0.021	100	6.0	LOS A	0.1	1.9	Full	300	0.0	0.0
Approach	13	3.0	13	3.0		0.021		6.0	LOS A	0.1	1.9				
East: Pinehurst															
Lane 1[d]	556	3.0	556	3.0	1058	0.526	100	9.6	LOS A	3.5	90.6	Full	800	0.0	0.0
Approach	556	3.0	556	3.0		0.526		9.6	LOS A	3.5	90.6				
North: Jane Lundeen															
Lane 1[d]	550	3.0	550	3.0	1341	0.410	100	4.8	LOS A	2.8	72.7	Full	600	0.0	0.0
Approach	550	3.0	550	3.0		0.410		4.8	LOS A	2.8	72.7				
West: Pinehurst															
Lane 1[d]	180	3.0	180	3.0	739	0.244	100	7.6	LOS A	1.0	26.6	Full	300	0.0	0.0
Approach	180	3.0	180	3.0		0.244		7.6	LOS A	1.0	26.6				
All Vehicles	1300	3.0	1300	3.0		0.526		7.2	LOS A	3.5	90.6				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)

South: Tract B

Mov. From S To Exit:	T1 N	R2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	12	1	13	3.0	619	0.021	100	NA	NA
Approach	12	1	13	3.0		0.021			

East: Pinehurst

Mov. From E To Exit:	L2 S	R2 N	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	1	555	556	3.0	1058	0.526	100	NA	NA
Approach	1	555	556	3.0		0.526			

North: Jane Lundeen

Mov. From N To Exit:	U N	L2 E	T1 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	183	362	6	550	3.0	1341	0.410	100	NA	NA
Approach	183	362	6	550	3.0		0.410			

West: Pinehurst

Mov. From W To Exit:	L2 N	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	27	143	11	180	3.0	739	0.244	100	NA	NA
Approach	27	143	11	180	3.0		0.244			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	1300	3.0	0.526

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis

	Exit Lane Number	Short Lane Length	Percent Opng in Lane	Opposing Flow Rate	Critical Gap	Follow-up Headway	Lane Flow Rate	Capacity	Deg. Satn	Min. Delay	Merge Delay

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

	ft	%	veh/h	pcu/h	sec	sec	veh/h	veh/h	v/c	sec	sec
There are no Exit Short Lanes for Merge Analysis at this Site.											

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: Tract B				
Lane 1	0.0	0.0	0.0	0.0
East: Pinehurst				
Lane 1	0.0	0.0	0.0	0.0
North: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
West: Pinehurst				
Lane 1	0.0	0.0	0.0	0.0

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE LEVEL OF SERVICE

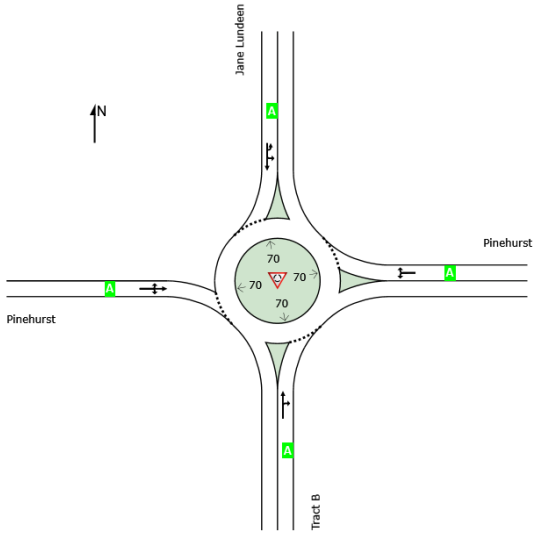
Lane Level of Service

Site: 101 [2045 BG + Site PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	A	A	A	A



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE SUMMARY

Site: 101 [2045 BG + Site PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Tract B															
Lane 1[d]	14	3.0	14	3.0	1016	0.014	100	3.7	LOS A	0.1	1.4	Full	300	0.0	0.0
Approach	14	3.0	14	3.0		0.014		3.7	LOS A	0.1	1.4				
East: Pinehurst															
Lane 1[d]	131	3.0	131	3.0	1194	0.110	100	3.9	LOS A	0.5	12.5	Full	800	0.0	0.0
Approach	131	3.0	131	3.0		0.110		3.9	LOS A	0.5	12.5				
North: Jane Lundeen															
Lane 1[d]	152	3.0	152	3.0	1341	0.114	100	3.3	LOS A	0.5	13.4	Full	600	0.0	0.0
Approach	152	3.0	152	3.0		0.114		3.3	LOS A	0.5	13.4				
West: Pinehurst															
Lane 1[d]	124	3.0	124	3.0	1138	0.109	100	4.1	LOS A	0.5	12.2	Full	300	0.0	0.0
Approach	124	3.0	124	3.0		0.109		4.1	LOS A	0.5	12.2				
All Vehicles	421	3.0	421	3.0		0.114		3.7	LOS A	0.5	13.4				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)

South: Tract B

Mov. From S To Exit:	T1 N	R2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	13	1	14	3.0	1016	0.014	100	NA	NA
Approach	13	1	14	3.0		0.014			

East: Pinehurst

Mov. From E To Exit:	L2 S	R2 N	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	1	130	131	3.0	1194	0.110	100	NA	NA
Approach	1	130	131	3.0		0.110			

North: Jane Lundeen

Mov. From N To Exit:	U N	L2 E	T1 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	43	104	5	152	3.0	1341	0.114	100	NA	NA
Approach	43	104	5	152	3.0		0.114			

West: Pinehurst

Mov. From W To Exit:	L2 N	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	53	57	13	124	3.0	1138	0.109	100	NA	NA
Approach	53	57	13	124	3.0		0.109			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	421	3.0	0.114

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis

	Exit Lane Number	Short Lane Length	Percent Opng in Lane	Opposing Flow Rate	Critical Gap	Follow-up Headway	Lane Flow Rate	Capacity	Deg. Satn	Min. Delay	Merge Delay

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

	ft	%	veh/h	pcu/h	sec	sec	veh/h	veh/h	v/c	sec	sec
There are no Exit Short Lanes for Merge Analysis at this Site.											

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: Tract B				
Lane 1	0.0	0.0	0.0	0.0
East: Pinehurst				
Lane 1	0.0	0.0	0.0	0.0
North: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
West: Pinehurst				
Lane 1	0.0	0.0	0.0	0.0

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Sidra Roundabout Reports

Jane Lundeen Drive + Pinehurst Circle
Option B

TRANSPORTATION
CONSULTANTS, INC.

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE LEVEL OF SERVICE

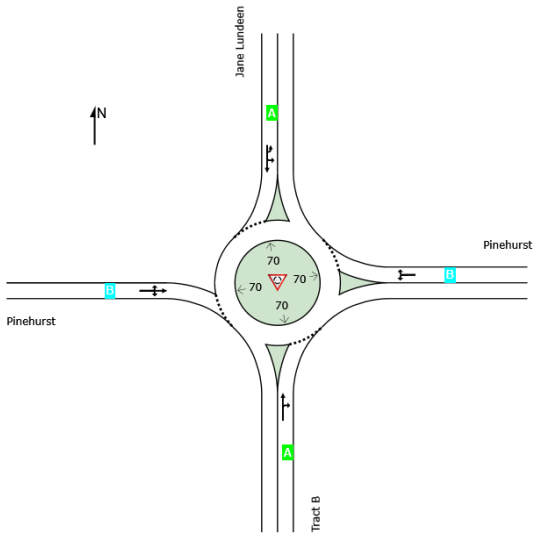
Lane Level of Service

Site: 101 [2045 BG + Site AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	B	A	B	A



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE SUMMARY

Site: 101 [2045 BG + Site AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Tract B															
Lane 1[d]	21	3.0	21	3.0	516	0.040	100	7.4	LOS A	0.1	3.5	Full	300	0.0	0.0
Approach	21	3.0	21	3.0		0.040		7.4	LOS A	0.1	3.5				
East: Pinehurst															
Lane 1[d]	608	3.0	608	3.0	1084	0.561	100	10.1	LOS B	4.1	103.7	Full	800	0.0	0.0
Approach	608	3.0	608	3.0		0.561		10.1	LOS B	4.1	103.7				
North: Jane Lundeen															
Lane 1[d]	525	3.0	525	3.0	1341	0.391	100	4.7	LOS A	2.6	67.1	Full	600	0.0	0.0
Approach	525	3.0	525	3.0		0.391		4.7	LOS A	2.6	67.1				
West: Pinehurst															
Lane 1[d]	362	3.0	362	3.0	760	0.477	100	11.3	LOS B	3.1	78.9	Full	300	0.0	0.0
Approach	362	3.0	362	3.0		0.477		11.3	LOS B	3.1	78.9				
All Vehicles	1515	3.0	1515	3.0		0.561		8.5	LOS A	4.1	103.7				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)

South: Tract B

Mov. From S To Exit:	T1 N	R2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	19	1	21	3.0	516	0.040	100	NA	NA
Approach	19	1	21	3.0		0.040			

East: Pinehurst

Mov. From E To Exit:	L2 S	R2 N	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	1	607	608	3.0	1084	0.561	100	NA	NA
Approach	1	607	608	3.0		0.561			

North: Jane Lundeen

Mov. From N To Exit:	U N	L2 E	T1 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	127	396	2	525	3.0	1341	0.391	100	NA	NA
Approach	127	396	2	525	3.0		0.391			

West: Pinehurst

Mov. From W To Exit:	L2 N	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	52	305	5	362	3.0	760	0.477	100	NA	NA
Approach	52	305	5	362	3.0		0.477			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	1515	3.0	0.561

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis

	Exit Lane Number	Short Lane Length	Percent Opng in Lane	Opposing Flow Rate	Critical Gap	Follow-up Headway	Lane Flow Rate	Capacity	Deg. Satn	Min. Delay	Merge Delay

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

	ft	%	veh/h	pcu/h	sec	sec	veh/h	veh/h	v/c	sec	sec
There are no Exit Short Lanes for Merge Analysis at this Site.											

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: Tract B				
Lane 1	0.0	0.0	0.0	0.0
East: Pinehurst				
Lane 1	0.0	0.0	0.0	0.0
North: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
West: Pinehurst				
Lane 1	0.0	0.0	0.0	0.0

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE LEVEL OF SERVICE

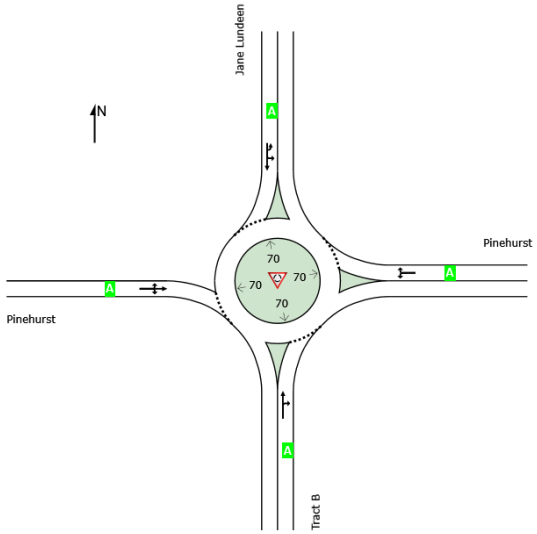
Lane Level of Service

Site: 101 [2045 BG + Site School PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	A	A	A	A



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE SUMMARY

Site: 101 [2045 BG + Site School PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Tract B															
Lane 1[d]	13	3.0	13	3.0	715	0.018	100	5.2	LOS A	0.1	1.7	Full	300	0.0	0.0
Approach	13	3.0	13	3.0		0.018		5.2	LOS A	0.1	1.7				
East: Pinehurst															
Lane 1[d]	578	3.0	578	3.0	1188	0.486	100	8.1	LOS A	3.4	87.7	Full	800	0.0	0.0
Approach	578	3.0	578	3.0		0.486		8.1	LOS A	3.4	87.7				
North: Jane Lundeen															
Lane 1[d]	401	3.0	401	3.0	1341	0.299	100	4.2	LOS A	1.7	44.5	Full	600	0.0	0.0
Approach	401	3.0	401	3.0		0.299		4.2	LOS A	1.7	44.5				
West: Pinehurst															
Lane 1[d]	197	3.0	197	3.0	869	0.226	100	6.4	LOS A	1.0	25.8	Full	300	0.0	0.0
Approach	197	3.0	197	3.0		0.226		6.4	LOS A	1.0	25.8				
All Vehicles	1188	3.0	1188	3.0		0.486		6.5	LOS A	3.4	87.7				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)

South: Tract B

Mov. From S To Exit:	T1 N	R2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	12	1	13	3.0	715	0.018	100	NA	NA
Approach	12	1	13	3.0		0.018			

East: Pinehurst

Mov. From E To Exit:	L2 S	R2 N	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	1	577	578	3.0	1188	0.486	100	NA	NA
Approach	1	577	578	3.0		0.486			

North: Jane Lundeen

Mov. From N To Exit:	U N	L2 E	T1 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	76	319	6	401	3.0	1341	0.299	100	NA	NA
Approach	76	319	6	401	3.0		0.299			

West: Pinehurst

Mov. From W To Exit:	L2 N	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	27	160	11	197	3.0	869	0.226	100	NA	NA
Approach	27	160	11	197	3.0		0.226			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	1188	3.0	0.486

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis

	Exit Lane Number	Short Lane Length	Percent Opng in Lane	Opposing Flow Rate	Critical Gap	Follow-up Headway	Lane Flow Rate	Capacity	Deg. Satn	Min. Delay	Merge Delay

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

	ft	%	veh/h	pcu/h	sec	sec	veh/h	veh/h	v/c	sec	sec
There are no Exit Short Lanes for Merge Analysis at this Site.											

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: Tract B				
Lane 1	0.0	0.0	0.0	0.0
East: Pinehurst				
Lane 1	0.0	0.0	0.0	0.0
North: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
West: Pinehurst				
Lane 1	0.0	0.0	0.0	0.0

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE LEVEL OF SERVICE

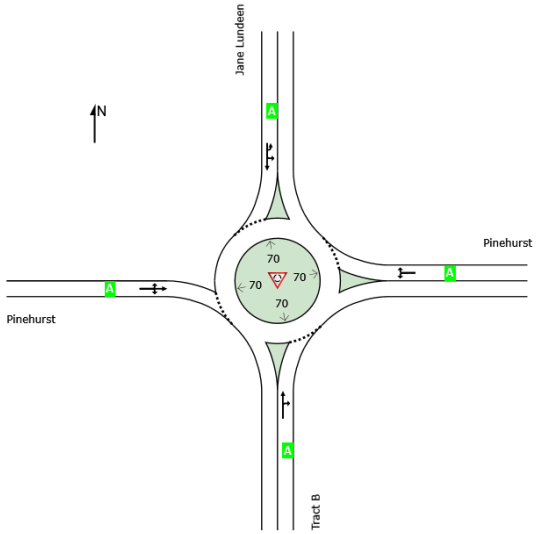
Lane Level of Service

Site: 101 [2045 BG + Site PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	A	A	A	A



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE SUMMARY

Site: 101 [2045 BG + Site PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Tract B															
Lane 1[d]	14	3.0	14	3.0	984	0.014	100	3.8	LOS A	0.1	1.4	Full	300	0.0	0.0
Approach	14	3.0	14	3.0		0.014		3.8	LOS A	0.1	1.4				
East: Pinehurst															
Lane 1[d]	136	3.0	136	3.0	1194	0.114	100	3.9	LOS A	0.5	13.0	Full	800	0.0	0.0
Approach	136	3.0	136	3.0		0.114		3.9	LOS A	0.5	13.0				
North: Jane Lundeen															
Lane 1[d]	163	3.0	163	3.0	1341	0.122	100	3.3	LOS A	0.6	14.5	Full	600	0.0	0.0
Approach	163	3.0	163	3.0		0.122		3.3	LOS A	0.6	14.5				
West: Pinehurst															
Lane 1[d]	145	3.0	145	3.0	1124	0.129	100	4.3	LOS A	0.6	14.7	Full	300	0.0	0.0
Approach	145	3.0	145	3.0		0.129		4.3	LOS A	0.6	14.7				
All Vehicles	459	3.0	459	3.0		0.129		3.8	LOS A	0.6	14.7				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)

South: Tract B

Mov. From S To Exit:	T1 N	R2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	13	1	14	3.0	984	0.014	100	NA	NA
Approach	13	1	14	3.0		0.014			

East: Pinehurst

Mov. From E To Exit:	L2 S	R2 N	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	1	135	136	3.0	1194	0.114	100	NA	NA
Approach	1	135	136	3.0		0.114			

North: Jane Lundeen

Mov. From N To Exit:	U N	L2 E	T1 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	43	113	7	163	3.0	1341	0.122	100	NA	NA
Approach	43	113	7	163	3.0		0.122			

West: Pinehurst

Mov. From W To Exit:	L2 N	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	53	79	13	145	3.0	1124	0.129	100	NA	NA
Approach	53	79	13	145	3.0		0.129			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	459	3.0	0.129

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis

	Exit Lane Number	Short Lane Length	Percent Opng in Lane	Opposing Flow Rate	Critical Gap	Follow-up Headway	Lane Flow Rate	Capacity	Deg. Satn	Min. Delay	Merge Delay

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	ft	%	veh/h	pcu/h	sec	sec	veh/h	veh/h	v/c	sec	sec
There are no Exit Short Lanes for Merge Analysis at this Site.											

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: Tract B				
Lane 1	0.0	0.0	0.0	0.0
East: Pinehurst				
Lane 1	0.0	0.0	0.0	0.0
North: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
West: Pinehurst				
Lane 1	0.0	0.0	0.0	0.0

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Sidra Roundabout Reports

Jane Lundeen Drive + Pinehurst Circle
Option C

TRANSPORTATION
CONSULTANTS, INC.

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE LEVEL OF SERVICE

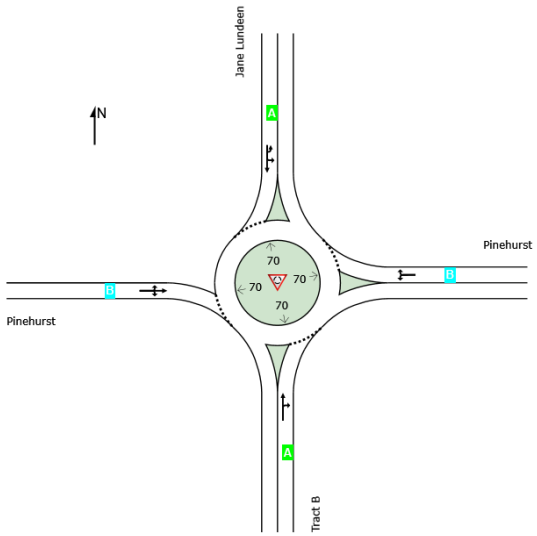
Lane Level of Service

Site: 101 [2045 BG + Site AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	B	A	B	A



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE SUMMARY

Site: 101 [2045 BG + Site AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Tract B															
Lane 1[d]	21	3.0	21	3.0	551	0.037	100	7.0	LOS A	0.1	3.4	Full	300	0.0	0.0
Approach	21	3.0	21	3.0		0.037		7.0	LOS A	0.1	3.4				
East: Pinehurst															
Lane 1[d]	801	3.0	801	3.0	1167	0.686	100	12.4	LOS B	6.8	174.6	Full	800	0.0	0.0
Approach	801	3.0	801	3.0		0.686		12.4	LOS B	6.8	174.6				
North: Jane Lundeen															
Lane 1[d]	470	3.0	470	3.0	1341	0.351	100	4.5	LOS A	2.2	56.4	Full	600	0.0	0.0
Approach	470	3.0	470	3.0		0.351		4.5	LOS A	2.2	56.4				
West: Pinehurst															
Lane 1[d]	357	3.0	357	3.0	806	0.443	100	10.1	LOS B	2.7	69.0	Full	300	0.0	0.0
Approach	357	3.0	357	3.0		0.443		10.1	LOS B	2.7	69.0				
All Vehicles	1649	3.0	1649	3.0		0.686		9.6	LOS A	6.8	174.6				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)

South: Tract B

Mov. From S To Exit:	T1 N	R2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	19	1	21	3.0	551	0.037	100	NA	NA
Approach	19	1	21	3.0		0.037			

East: Pinehurst

Mov. From E To Exit:	L2 S	R2 N	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	1	800	801	3.0	1167	0.686	100	NA	NA
Approach	1	800	801	3.0		0.686			

North: Jane Lundeen

Mov. From N To Exit:	U N	L2 E	T1 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	72	396	2	470	3.0	1341	0.351	100	NA	NA
Approach	72	396	2	470	3.0		0.351			

West: Pinehurst

Mov. From W To Exit:	L2 N	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	38	314	5	357	3.0	806	0.443	100	NA	NA
Approach	38	314	5	357	3.0		0.443			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	1649	3.0	0.686

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis

	Exit Lane Number	Short Lane Length	Percent Opng in Lane	Opposing Flow Rate	Critical Gap	Follow-up Headway	Lane Flow Rate	Capacity	Deg. Satn	Min. Delay	Merge Delay

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

	ft	%	veh/h	pcu/h	sec	sec	veh/h	veh/h	v/c	sec	sec
There are no Exit Short Lanes for Merge Analysis at this Site.											

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: Tract B				
Lane 1	0.0	0.0	0.0	0.0
East: Pinehurst				
Lane 1	0.0	0.0	0.0	0.0
North: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
West: Pinehurst				
Lane 1	0.0	0.0	0.0	0.0

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE LEVEL OF SERVICE

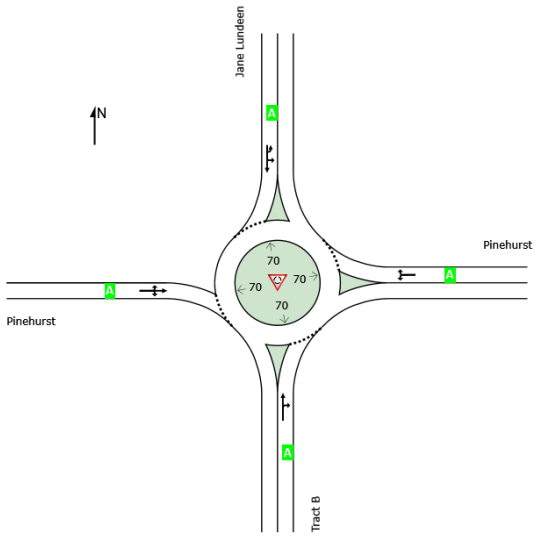
Lane Level of Service

Site: 101 [2045 BG + Site School PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	A	A	A	A



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

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Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE SUMMARY

Site: 101 [2045 BG + Site School PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Tract B															
Lane 1[d]	13	3.0	13	3.0	732	0.018	100	5.1	LOS A	0.1	1.7	Full	300	0.0	0.0
Approach	13	3.0	13	3.0		0.018		5.1	LOS A	0.1	1.7				
East: Pinehurst															
Lane 1[d]	556	3.0	556	3.0	1215	0.458	100	7.5	LOS A	3.1	80.5	Full	800	0.0	0.0
Approach	556	3.0	556	3.0		0.458		7.5	LOS A	3.1	80.5				
North: Jane Lundeen															
Lane 1[d]	370	3.0	370	3.0	1341	0.276	100	4.1	LOS A	1.6	39.8	Full	600	0.0	0.0
Approach	370	3.0	370	3.0		0.276		4.1	LOS A	1.6	39.8				
West: Pinehurst															
Lane 1[d]	207	3.0	207	3.0	899	0.230	100	6.3	LOS A	1.0	26.5	Full	300	0.0	0.0
Approach	207	3.0	207	3.0		0.230		6.3	LOS A	1.0	26.5				
All Vehicles	1145	3.0	1145	3.0		0.458		6.2	LOS A	3.1	80.5				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)

South: Tract B

Mov. From S To Exit:	T1 N	R2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	12	1	13	3.0	732	0.018	100	NA	NA
Approach	12	1	13	3.0		0.018			

East: Pinehurst

Mov. From E To Exit:	L2 S	R2 N	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	1	555	556	3.0	1215	0.458	100	NA	NA
Approach	1	555	556	3.0		0.458			

North: Jane Lundeen

Mov. From N To Exit:	U N	L2 E	T1 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	45	319	6	370	3.0	1341	0.276	100	NA	NA
Approach	45	319	6	370	3.0		0.276			

West: Pinehurst

Mov. From W To Exit:	L2 N	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	36	160	11	207	3.0	899	0.230	100	NA	NA
Approach	36	160	11	207	3.0		0.230			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	1145	3.0	0.458

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis

	Exit Lane Number	Short Lane Length	Percent Opng in Lane	Opposing Flow Rate	Critical Gap	Follow-up Headway	Lane Flow Rate	Capacity	Deg. Satn	Min. Delay	Merge Delay

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

	ft	%	veh/h	pcu/h	sec	sec	veh/h	veh/h	v/c	sec	sec
There are no Exit Short Lanes for Merge Analysis at this Site.											

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: Tract B				
Lane 1	0.0	0.0	0.0	0.0
East: Pinehurst				
Lane 1	0.0	0.0	0.0	0.0
North: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
West: Pinehurst				
Lane 1	0.0	0.0	0.0	0.0

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LANE LEVEL OF SERVICE

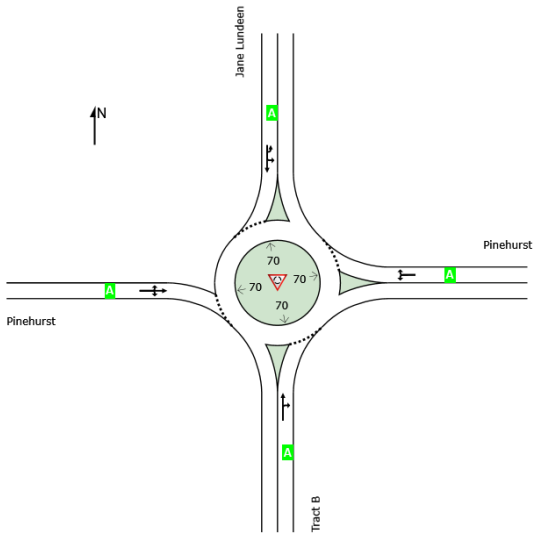
Lane Level of Service

Site: 101 [2045 BG + Site School PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	A	A	A	A



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

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LANE SUMMARY

Site: 101 [2045 BG + Site School PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Tract B															
Lane 1[d]	13	3.0	13	3.0	732	0.018	100	5.1	LOS A	0.1	1.7	Full	300	0.0	0.0
Approach	13	3.0	13	3.0		0.018		5.1	LOS A	0.1	1.7				
East: Pinehurst															
Lane 1[d]	556	3.0	556	3.0	1215	0.458	100	7.5	LOS A	3.1	80.5	Full	800	0.0	0.0
Approach	556	3.0	556	3.0		0.458		7.5	LOS A	3.1	80.5				
North: Jane Lundeen															
Lane 1[d]	370	3.0	370	3.0	1341	0.276	100	4.1	LOS A	1.6	39.8	Full	600	0.0	0.0
Approach	370	3.0	370	3.0		0.276		4.1	LOS A	1.6	39.8				
West: Pinehurst															
Lane 1[d]	207	3.0	207	3.0	899	0.230	100	6.3	LOS A	1.0	26.5	Full	300	0.0	0.0
Approach	207	3.0	207	3.0		0.230		6.3	LOS A	1.0	26.5				
All Vehicles	1145	3.0	1145	3.0		0.458		6.2	LOS A	3.1	80.5				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)

South: Tract B

Mov. From S To Exit:	T1 N	R2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	12	1	13	3.0	732	0.018	100	NA	NA
Approach	12	1	13	3.0		0.018			

East: Pinehurst

Mov. From E To Exit:	L2 S	R2 N	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	1	555	556	3.0	1215	0.458	100	NA	NA
Approach	1	555	556	3.0		0.458			

North: Jane Lundeen

Mov. From N To Exit:	U N	L2 E	T1 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	45	319	6	370	3.0	1341	0.276	100	NA	NA
Approach	45	319	6	370	3.0		0.276			

West: Pinehurst

Mov. From W To Exit:	L2 N	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	36	160	11	207	3.0	899	0.230	100	NA	NA
Approach	36	160	11	207	3.0		0.230			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	1145	3.0	0.458

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis

	Exit Lane Number	Short Lane Length	Percent Opng in Lane	Opposing Flow Rate	Critical Gap	Follow-up Headway	Lane Flow Rate	Capacity	Deg. Satn	Min. Delay	Merge Delay

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

	ft	%	veh/h	pcu/h	sec	sec	veh/h	veh/h	v/c	sec	sec
There are no Exit Short Lanes for Merge Analysis at this Site.											

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: Tract B				
Lane 1	0.0	0.0	0.0	0.0
East: Pinehurst				
Lane 1	0.0	0.0	0.0	0.0
North: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
West: Pinehurst				
Lane 1	0.0	0.0	0.0	0.0

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Sidra Roundabout Reports

Jane Lundeen Drive + Pinehurst Circle
Option D

TRANSPORTATION
CONSULTANTS, INC.

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE LEVEL OF SERVICE

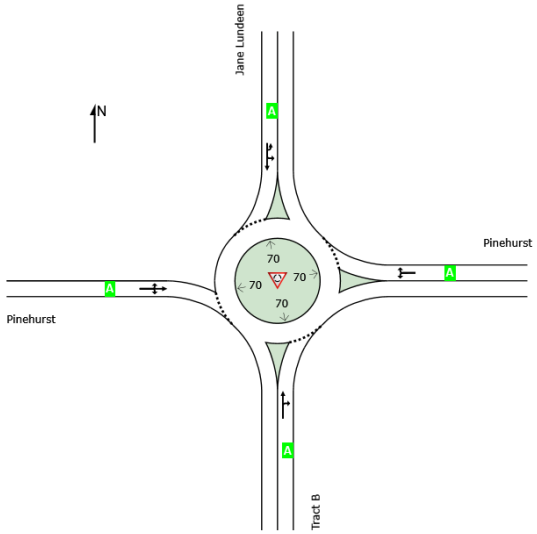
Lane Level of Service

Site: 101 [2045 BG + Site AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	A	A	A	A



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE SUMMARY

Site: 101 [2045 BG + Site AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Tract B															
Lane 1[d]	21	3.0	21	3.0	739	0.028	100	5.1	LOS A	0.1	2.6	Full	300	0.0	0.0
Approach	21	3.0	21	3.0		0.028		5.1	LOS A	0.1	2.6				
East: Pinehurst															
Lane 1[d]	617	3.0	617	3.0	1108	0.556	100	9.8	LOS A	4.1	104.6	Full	800	0.0	0.0
Approach	617	3.0	617	3.0		0.556		9.8	LOS A	4.1	104.6				
North: Jane Lundeen															
Lane 1[d]	210	3.0	210	3.0	1341	0.157	100	3.5	LOS A	0.8	19.4	Full	600	0.0	0.0
Approach	210	3.0	210	3.0		0.157		3.5	LOS A	0.8	19.4				
West: Pinehurst															
Lane 1[d]	348	3.0	348	3.0	1069	0.325	100	6.5	LOS A	1.7	44.2	Full	300	0.0	0.0
Approach	348	3.0	348	3.0		0.325		6.5	LOS A	1.7	44.2				
All Vehicles	1195	3.0	1195	3.0		0.556		7.7	LOS A	4.1	104.6				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)

South: Tract B

Mov. From S To Exit:	T1 N	R2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	19	1	21	3.0	739	0.028	100	NA	NA
Approach	19	1	21	3.0		0.028			

East: Pinehurst

Mov. From E To Exit:	L2 S	R2 N	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	1	616	617	3.0	1108	0.556	100	NA	NA
Approach	1	616	617	3.0		0.556			

North: Jane Lundeen

Mov. From N To Exit:	U N	L2 E	T1 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	120	87	2	210	3.0	1341	0.157	100	NA	NA
Approach	120	87	2	210	3.0		0.157			

West: Pinehurst

Mov. From W To Exit:	L2 N	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	38	305	5	348	3.0	1069	0.325	100	NA	NA
Approach	38	305	5	348	3.0		0.325			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	1195	3.0	0.556

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis

	Exit Lane Number	Short Lane Length	Percent Opng in Lane	Opposing Flow Rate	Critical Gap	Follow-up Headway	Lane Flow Rate	Capacity	Deg. Satn	Min. Delay	Merge Delay

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

	ft	%	veh/h	pcu/h	sec	sec	veh/h	veh/h	v/c	sec	sec
There are no Exit Short Lanes for Merge Analysis at this Site.											

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: Tract B				
Lane 1	0.0	0.0	0.0	0.0
East: Pinehurst				
Lane 1	0.0	0.0	0.0	0.0
North: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
West: Pinehurst				
Lane 1	0.0	0.0	0.0	0.0

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE LEVEL OF SERVICE

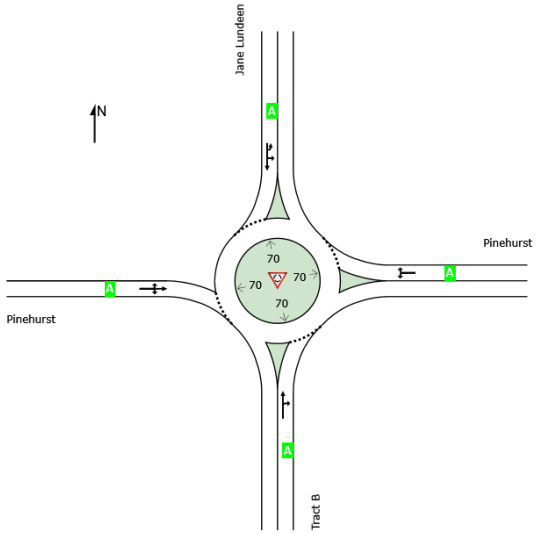
Lane Level of Service

Site: 101 [2045 BG + Site School PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	A	A	A	A



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE SUMMARY

Site: 101 [2045 BG + Site School PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Tract B															
Lane 1[d]	13	3.0	13	3.0	619	0.021	100	6.0	LOS A	0.1	1.9	Full	300	0.0	0.0
Approach	13	3.0	13	3.0		0.021		6.0	LOS A	0.1	1.9				
East: Pinehurst															
Lane 1[d]	556	3.0	556	3.0	1058	0.526	100	9.6	LOS A	3.5	90.6	Full	800	0.0	0.0
Approach	556	3.0	556	3.0		0.526		9.6	LOS A	3.5	90.6				
North: Jane Lundeen															
Lane 1[d]	550	3.0	550	3.0	1341	0.410	100	4.8	LOS A	2.8	72.7	Full	600	0.0	0.0
Approach	550	3.0	550	3.0		0.410		4.8	LOS A	2.8	72.7				
West: Pinehurst															
Lane 1[d]	180	3.0	180	3.0	739	0.244	100	7.6	LOS A	1.0	26.6	Full	300	0.0	0.0
Approach	180	3.0	180	3.0		0.244		7.6	LOS A	1.0	26.6				
All Vehicles	1300	3.0	1300	3.0		0.526		7.2	LOS A	3.5	90.6				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)

South: Tract B

Mov. From S To Exit:	T1 N	R2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	12	1	13	3.0	619	0.021	100	NA	NA
Approach	12	1	13	3.0		0.021			

East: Pinehurst

Mov. From E To Exit:	L2 S	R2 N	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	1	555	556	3.0	1058	0.526	100	NA	NA
Approach	1	555	556	3.0		0.526			

North: Jane Lundeen

Mov. From N To Exit:	U N	L2 E	T1 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	183	362	6	550	3.0	1341	0.410	100	NA	NA
Approach	183	362	6	550	3.0		0.410			

West: Pinehurst

Mov. From W To Exit:	L2 N	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	27	143	11	180	3.0	739	0.244	100	NA	NA
Approach	27	143	11	180	3.0		0.244			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	1300	3.0	0.526

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis

	Exit Lane Number	Short Lane Length	Percent Opng in Lane	Opposing Flow Rate	Critical Gap	Follow-up Headway	Lane Flow Rate	Capacity	Deg. Satn	Min. Delay	Merge Delay

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

	ft	%	veh/h	pcu/h	sec	sec	veh/h	veh/h	v/c	sec	sec
There are no Exit Short Lanes for Merge Analysis at this Site.											

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: Tract B				
Lane 1	0.0	0.0	0.0	0.0
East: Pinehurst				
Lane 1	0.0	0.0	0.0	0.0
North: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
West: Pinehurst				
Lane 1	0.0	0.0	0.0	0.0

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE LEVEL OF SERVICE

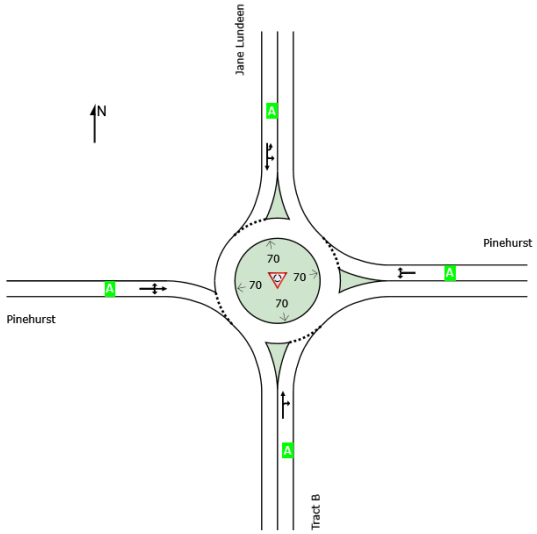
Lane Level of Service

Site: 101 [2045 BG + Site PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	A	A	A	A



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE SUMMARY

Site: 101 [2045 BG + Site PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Tract B															
Lane 1[d]	14	3.0	14	3.0	1016	0.014	100	3.7	LOS A	0.1	1.4	Full	300	0.0	0.0
Approach	14	3.0	14	3.0		0.014		3.7	LOS A	0.1	1.4				
East: Pinehurst															
Lane 1[d]	131	3.0	131	3.0	1194	0.110	100	3.9	LOS A	0.5	12.5	Full	800	0.0	0.0
Approach	131	3.0	131	3.0		0.110		3.9	LOS A	0.5	12.5				
North: Jane Lundeen															
Lane 1[d]	152	3.0	152	3.0	1341	0.114	100	3.3	LOS A	0.5	13.4	Full	600	0.0	0.0
Approach	152	3.0	152	3.0		0.114		3.3	LOS A	0.5	13.4				
West: Pinehurst															
Lane 1[d]	124	3.0	124	3.0	1138	0.109	100	4.1	LOS A	0.5	12.2	Full	300	0.0	0.0
Approach	124	3.0	124	3.0		0.109		4.1	LOS A	0.5	12.2				
All Vehicles	421	3.0	421	3.0		0.114		3.7	LOS A	0.5	13.4				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)

South: Tract B

Mov. From S To Exit:	T1 N	R2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	13	1	14	3.0	1016	0.014	100	NA	NA
Approach	13	1	14	3.0		0.014			

East: Pinehurst

Mov. From E To Exit:	L2 S	R2 N	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	1	130	131	3.0	1194	0.110	100	NA	NA
Approach	1	130	131	3.0		0.110			

North: Jane Lundeen

Mov. From N To Exit:	U N	L2 E	T1 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	43	104	5	152	3.0	1341	0.114	100	NA	NA
Approach	43	104	5	152	3.0		0.114			

West: Pinehurst

Mov. From W To Exit:	L2 N	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	53	57	13	124	3.0	1138	0.109	100	NA	NA
Approach	53	57	13	124	3.0		0.109			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	421	3.0	0.114

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis

	Exit Lane Number	Short Lane Length	Percent Opng in Lane	Opposing Flow Rate	Critical Gap	Follow-up Headway	Lane Flow Rate	Capacity	Deg. Satn	Min. Delay	Merge Delay

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

	ft	%	veh/h	pcu/h	sec	sec	veh/h	veh/h	v/c	sec	sec
There are no Exit Short Lanes for Merge Analysis at this Site.											

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: Tract B				
Lane 1	0.0	0.0	0.0	0.0
East: Pinehurst				
Lane 1	0.0	0.0	0.0	0.0
North: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
West: Pinehurst				
Lane 1	0.0	0.0	0.0	0.0

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Sidra Roundabout Reports

Jane Lundeen Drive + Pinehurst Circle
Option E

TRANSPORTATION
CONSULTANTS, INC.

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE LEVEL OF SERVICE

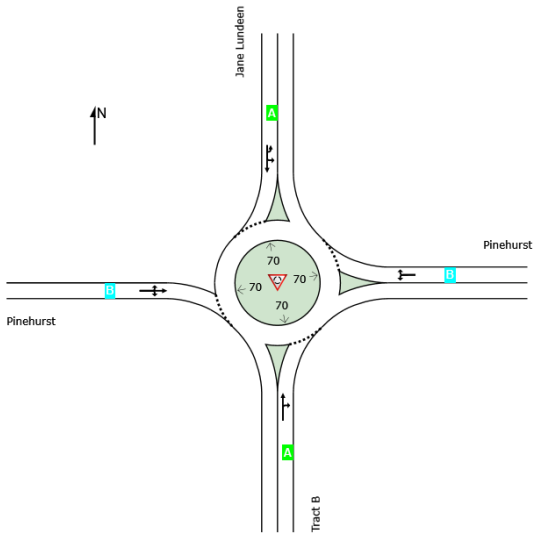
Lane Level of Service

Site: 101 [2045 BG + Site AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	B	A	B	A



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE SUMMARY

Site: 101 [2045 BG + Site AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Tract B															
Lane 1[d]	21	3.0	21	3.0	516	0.040	100	7.4	LOS A	0.1	3.5	Full	300	0.0	0.0
Approach	21	3.0	21	3.0		0.040		7.4	LOS A	0.1	3.5				
East: Pinehurst															
Lane 1[d]	608	3.0	608	3.0	1084	0.561	100	10.1	LOS B	4.1	103.7	Full	800	0.0	0.0
Approach	608	3.0	608	3.0		0.561		10.1	LOS B	4.1	103.7				
North: Jane Lundeen															
Lane 1[d]	525	3.0	525	3.0	1341	0.391	100	4.7	LOS A	2.6	67.1	Full	600	0.0	0.0
Approach	525	3.0	525	3.0		0.391		4.7	LOS A	2.6	67.1				
West: Pinehurst															
Lane 1[d]	362	3.0	362	3.0	760	0.477	100	11.3	LOS B	3.1	78.9	Full	300	0.0	0.0
Approach	362	3.0	362	3.0		0.477		11.3	LOS B	3.1	78.9				
All Vehicles	1515	3.0	1515	3.0		0.561		8.5	LOS A	4.1	103.7				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)

South: Tract B

Mov. From S To Exit:	T1 N	R2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	19	1	21	3.0	516	0.040	100	NA	NA
Approach	19	1	21	3.0		0.040			

East: Pinehurst

Mov. From E To Exit:	L2 S	R2 N	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	1	607	608	3.0	1084	0.561	100	NA	NA
Approach	1	607	608	3.0		0.561			

North: Jane Lundeen

Mov. From N To Exit:	U N	L2 E	T1 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	127	396	2	525	3.0	1341	0.391	100	NA	NA
Approach	127	396	2	525	3.0		0.391			

West: Pinehurst

Mov. From W To Exit:	L2 N	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	52	305	5	362	3.0	760	0.477	100	NA	NA
Approach	52	305	5	362	3.0		0.477			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	1515	3.0	0.561

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis

	Exit Lane Number	Short Lane Length	Percent Opng in Lane	Opposing Flow Rate	Critical Gap	Follow-up Headway	Lane Flow Rate	Capacity	Deg. Satn	Min. Delay	Merge Delay

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

	ft	%	veh/h	pcu/h	sec	sec	veh/h	veh/h	v/c	sec	sec
There are no Exit Short Lanes for Merge Analysis at this Site.											

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: Tract B				
Lane 1	0.0	0.0	0.0	0.0
East: Pinehurst				
Lane 1	0.0	0.0	0.0	0.0
North: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
West: Pinehurst				
Lane 1	0.0	0.0	0.0	0.0

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE LEVEL OF SERVICE

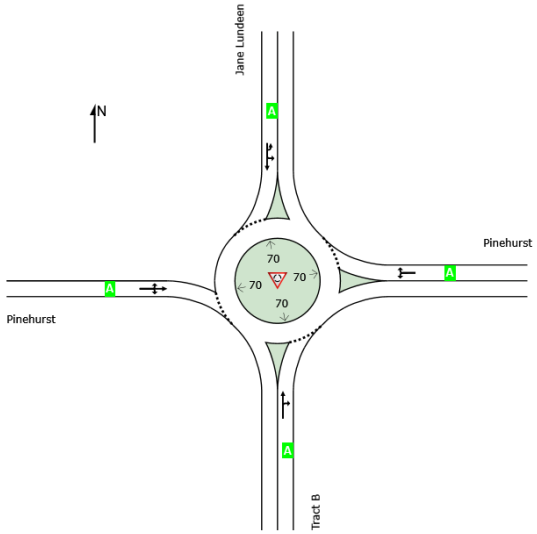
Lane Level of Service

Site: 101 [2045 BG + Site School PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	A	A	A	A



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE SUMMARY

Site: 101 [2045 BG + Site School PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Tract B															
Lane 1[d]	13	3.0	13	3.0	715	0.018	100	5.2	LOS A	0.1	1.7	Full	300	0.0	0.0
Approach	13	3.0	13	3.0		0.018		5.2	LOS A	0.1	1.7				
East: Pinehurst															
Lane 1[d]	578	3.0	578	3.0	1188	0.486	100	8.1	LOS A	3.4	87.7	Full	800	0.0	0.0
Approach	578	3.0	578	3.0		0.486		8.1	LOS A	3.4	87.7				
North: Jane Lundeen															
Lane 1[d]	401	3.0	401	3.0	1341	0.299	100	4.2	LOS A	1.7	44.5	Full	600	0.0	0.0
Approach	401	3.0	401	3.0		0.299		4.2	LOS A	1.7	44.5				
West: Pinehurst															
Lane 1[d]	197	3.0	197	3.0	869	0.226	100	6.4	LOS A	1.0	25.8	Full	300	0.0	0.0
Approach	197	3.0	197	3.0		0.226		6.4	LOS A	1.0	25.8				
All Vehicles	1188	3.0	1188	3.0		0.486		6.5	LOS A	3.4	87.7				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)

South: Tract B

Mov. From S To Exit:	T1 N	R2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	12	1	13	3.0	715	0.018	100	NA	NA
Approach	12	1	13	3.0		0.018			

East: Pinehurst

Mov. From E To Exit:	L2 S	R2 N	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	1	577	578	3.0	1188	0.486	100	NA	NA
Approach	1	577	578	3.0		0.486			

North: Jane Lundeen

Mov. From N To Exit:	U N	L2 E	T1 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	76	319	6	401	3.0	1341	0.299	100	NA	NA
Approach	76	319	6	401	3.0		0.299			

West: Pinehurst

Mov. From W To Exit:	L2 N	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	27	160	11	197	3.0	869	0.226	100	NA	NA
Approach	27	160	11	197	3.0		0.226			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	1188	3.0	0.486

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis

	Exit Lane Number	Short Lane Length	Percent Opng in Lane	Opposing Flow Rate	Critical Gap	Follow-up Headway	Lane Flow Rate	Capacity	Deg. Satn	Min. Delay	Merge Delay

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

	ft	%	veh/h	pcu/h	sec	sec	veh/h	veh/h	v/c	sec	sec
There are no Exit Short Lanes for Merge Analysis at this Site.											

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: Tract B				
Lane 1	0.0	0.0	0.0	0.0
East: Pinehurst				
Lane 1	0.0	0.0	0.0	0.0
North: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
West: Pinehurst				
Lane 1	0.0	0.0	0.0	0.0

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE LEVEL OF SERVICE

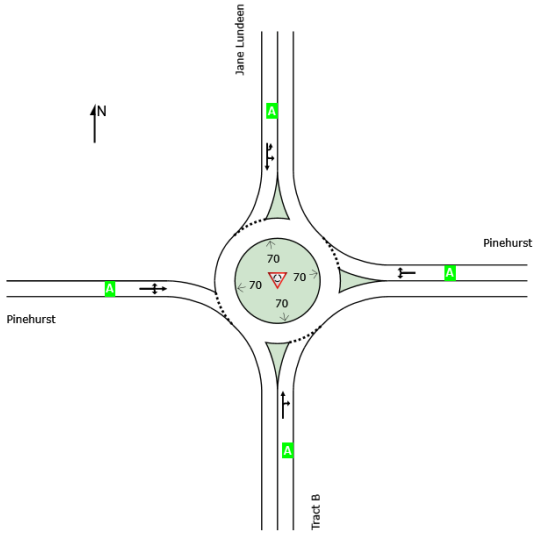
Lane Level of Service

Site: 101 [2045 BG + Site PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	A	A	A	A



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE SUMMARY

Site: 101 [2045 BG + Site PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Tract B															
Lane 1[d]	14	3.0	14	3.0	984	0.014	100	3.8	LOS A	0.1	1.4	Full	300	0.0	0.0
Approach	14	3.0	14	3.0		0.014		3.8	LOS A	0.1	1.4				
East: Pinehurst															
Lane 1[d]	136	3.0	136	3.0	1194	0.114	100	3.9	LOS A	0.5	13.0	Full	800	0.0	0.0
Approach	136	3.0	136	3.0		0.114		3.9	LOS A	0.5	13.0				
North: Jane Lundeen															
Lane 1[d]	163	3.0	163	3.0	1341	0.122	100	3.3	LOS A	0.6	14.5	Full	600	0.0	0.0
Approach	163	3.0	163	3.0		0.122		3.3	LOS A	0.6	14.5				
West: Pinehurst															
Lane 1[d]	145	3.0	145	3.0	1124	0.129	100	4.3	LOS A	0.6	14.7	Full	300	0.0	0.0
Approach	145	3.0	145	3.0		0.129		4.3	LOS A	0.6	14.7				
All Vehicles	459	3.0	459	3.0		0.129		3.8	LOS A	0.6	14.7				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)

South: Tract B

Mov. From S To Exit:	T1 N	R2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	13	1	14	3.0	984	0.014	100	NA	NA
Approach	13	1	14	3.0		0.014			

East: Pinehurst

Mov. From E To Exit:	L2 S	R2 N	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	1	135	136	3.0	1194	0.114	100	NA	NA
Approach	1	135	136	3.0		0.114			

North: Jane Lundeen

Mov. From N To Exit:	U N	L2 E	T1 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	43	113	7	163	3.0	1341	0.122	100	NA	NA
Approach	43	113	7	163	3.0		0.122			

West: Pinehurst

Mov. From W To Exit:	L2 N	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	53	79	13	145	3.0	1124	0.129	100	NA	NA
Approach	53	79	13	145	3.0		0.129			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	459	3.0	0.129

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis

	Exit Lane Number	Short Lane Length	Percent Opng in Lane	Opposing Flow Rate	Critical Gap	Follow-up Headway	Lane Flow Rate	Capacity	Deg. Satn	Min. Delay	Merge Delay

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

	ft	%	veh/h	pcu/h	sec	sec	veh/h	veh/h	v/c	sec	sec
There are no Exit Short Lanes for Merge Analysis at this Site.											

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: Tract B				
Lane 1	0.0	0.0	0.0	0.0
East: Pinehurst				
Lane 1	0.0	0.0	0.0	0.0
North: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
West: Pinehurst				
Lane 1	0.0	0.0	0.0	0.0

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Sidra Roundabout Reports

Jane Lundeen Drive + Pinehurst Circle
Option F

TRANSPORTATION
CONSULTANTS, INC.

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE LEVEL OF SERVICE

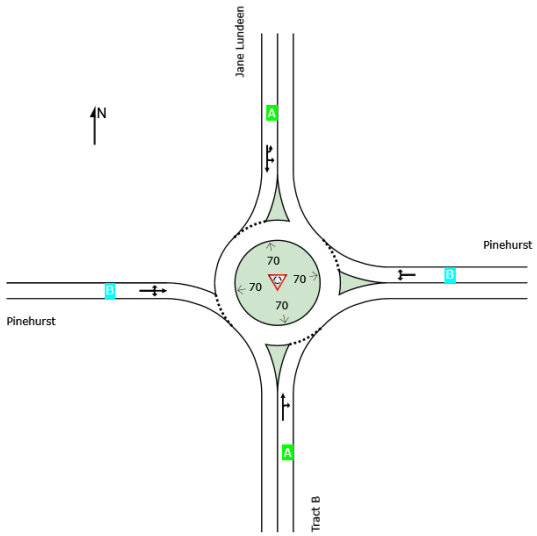
Lane Level of Service

Site: 101 [2045 BG + Site AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	B	A	B	A



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE SUMMARY

Site: 101 [2045 BG + Site AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Tract B															
Lane 1[d]	21	3.0	21	3.0	551	0.037	100	7.0	LOS A	0.1	3.4	Full	300	0.0	0.0
Approach	21	3.0	21	3.0		0.037		7.0	LOS A	0.1	3.4				
East: Pinehurst															
Lane 1[d]	801	3.0	801	3.0	1167	0.686	100	12.4	LOS B	6.8	174.6	Full	800	0.0	0.0
Approach	801	3.0	801	3.0		0.686		12.4	LOS B	6.8	174.6				
North: Jane Lundeen															
Lane 1[d]	470	3.0	470	3.0	1341	0.351	100	4.5	LOS A	2.2	56.4	Full	600	0.0	0.0
Approach	470	3.0	470	3.0		0.351		4.5	LOS A	2.2	56.4				
West: Pinehurst															
Lane 1[d]	357	3.0	357	3.0	806	0.443	100	10.1	LOS B	2.7	69.0	Full	300	0.0	0.0
Approach	357	3.0	357	3.0		0.443		10.1	LOS B	2.7	69.0				
All Vehicles	1649	3.0	1649	3.0		0.686		9.6	LOS A	6.8	174.6				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)

South: Tract B

Mov. From S To Exit:	T1 N	R2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	19	1	21	3.0	551	0.037	100	NA	NA
Approach	19	1	21	3.0		0.037			

East: Pinehurst

Mov. From E To Exit:	L2 S	R2 N	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	1	800	801	3.0	1167	0.686	100	NA	NA
Approach	1	800	801	3.0		0.686			

North: Jane Lundeen

Mov. From N To Exit:	U N	L2 E	T1 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	72	396	2	470	3.0	1341	0.351	100	NA	NA
Approach	72	396	2	470	3.0		0.351			

West: Pinehurst

Mov. From W To Exit:	L2 N	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	38	314	5	357	3.0	806	0.443	100	NA	NA
Approach	38	314	5	357	3.0		0.443			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	1649	3.0	0.686

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis

	Exit Lane Number	Short Lane Length	Percent Opng in Lane	Opposing Flow Rate	Critical Gap	Follow-up Headway	Lane Flow Rate	Capacity	Deg. Satn	Min. Delay	Merge Delay

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

	ft	%	veh/h	pcu/h	sec	sec	veh/h	veh/h	v/c	sec	sec
There are no Exit Short Lanes for Merge Analysis at this Site.											

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: Tract B				
Lane 1	0.0	0.0	0.0	0.0
East: Pinehurst				
Lane 1	0.0	0.0	0.0	0.0
North: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
West: Pinehurst				
Lane 1	0.0	0.0	0.0	0.0

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE LEVEL OF SERVICE

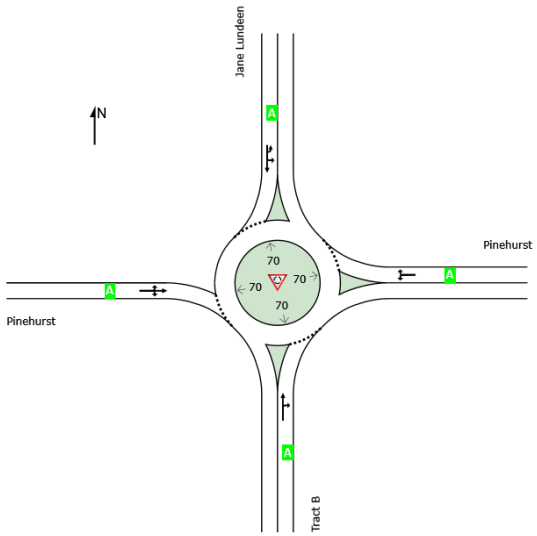
Lane Level of Service

Site: 101 [2045 BG + Site School PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	A	A	A	A



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

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Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE SUMMARY

Site: 101 [2045 BG + Site School PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Tract B															
Lane 1[d]	13	3.0	13	3.0	732	0.018	100	5.1	LOS A	0.1	1.7	Full	300	0.0	0.0
Approach	13	3.0	13	3.0		0.018		5.1	LOS A	0.1	1.7				
East: Pinehurst															
Lane 1[d]	556	3.0	556	3.0	1215	0.458	100	7.5	LOS A	3.1	80.5	Full	800	0.0	0.0
Approach	556	3.0	556	3.0		0.458		7.5	LOS A	3.1	80.5				
North: Jane Lundeen															
Lane 1[d]	370	3.0	370	3.0	1341	0.276	100	4.1	LOS A	1.6	39.8	Full	600	0.0	0.0
Approach	370	3.0	370	3.0		0.276		4.1	LOS A	1.6	39.8				
West: Pinehurst															
Lane 1[d]	207	3.0	207	3.0	899	0.230	100	6.3	LOS A	1.0	26.5	Full	300	0.0	0.0
Approach	207	3.0	207	3.0		0.230		6.3	LOS A	1.0	26.5				
All Vehicles	1145	3.0	1145	3.0		0.458		6.2	LOS A	3.1	80.5				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)

South: Tract B

Mov. From S To Exit:	T1 N	R2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	12	1	13	3.0	732	0.018	100	NA	NA
Approach	12	1	13	3.0		0.018			

East: Pinehurst

Mov. From E To Exit:	L2 S	R2 N	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	1	555	556	3.0	1215	0.458	100	NA	NA
Approach	1	555	556	3.0		0.458			

North: Jane Lundeen

Mov. From N To Exit:	U N	L2 E	T1 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	45	319	6	370	3.0	1341	0.276	100	NA	NA
Approach	45	319	6	370	3.0		0.276			

West: Pinehurst

Mov. From W To Exit:	L2 N	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	36	160	11	207	3.0	899	0.230	100	NA	NA
Approach	36	160	11	207	3.0		0.230			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	1145	3.0	0.458

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis

	Exit Lane Number	Short Lane Length	Percent Opng in Lane	Opposing Flow Rate	Critical Gap	Follow-up Headway	Lane Flow Rate	Capacity	Deg. Satn	Min. Delay	Merge Delay

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

	ft	%	veh/h	pcu/h	sec	sec	veh/h	veh/h	v/c	sec	sec
There are no Exit Short Lanes for Merge Analysis at this Site.											

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: Tract B				
Lane 1	0.0	0.0	0.0	0.0
East: Pinehurst				
Lane 1	0.0	0.0	0.0	0.0
North: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
West: Pinehurst				
Lane 1	0.0	0.0	0.0	0.0

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE LEVEL OF SERVICE

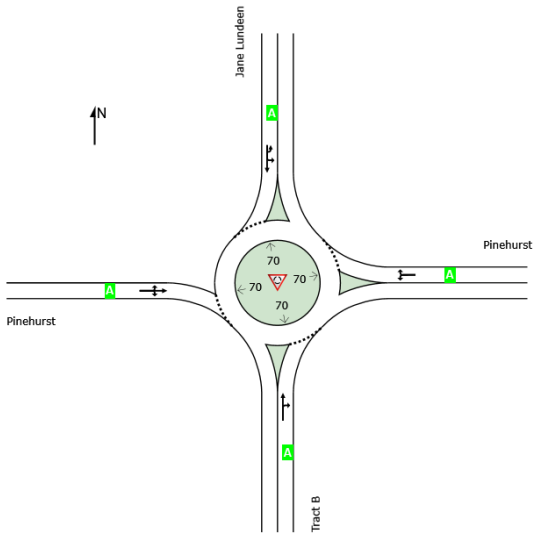
Lane Level of Service

Site: 101 [2045 BG + Site School PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	A	A	A	A



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

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Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE SUMMARY

Site: 101 [2045 BG + Site School PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Tract B															
Lane 1[d]	13	3.0	13	3.0	732	0.018	100	5.1	LOS A	0.1	1.7	Full	300	0.0	0.0
Approach	13	3.0	13	3.0		0.018		5.1	LOS A	0.1	1.7				
East: Pinehurst															
Lane 1[d]	556	3.0	556	3.0	1215	0.458	100	7.5	LOS A	3.1	80.5	Full	800	0.0	0.0
Approach	556	3.0	556	3.0		0.458		7.5	LOS A	3.1	80.5				
North: Jane Lundeen															
Lane 1[d]	370	3.0	370	3.0	1341	0.276	100	4.1	LOS A	1.6	39.8	Full	600	0.0	0.0
Approach	370	3.0	370	3.0		0.276		4.1	LOS A	1.6	39.8				
West: Pinehurst															
Lane 1[d]	207	3.0	207	3.0	899	0.230	100	6.3	LOS A	1.0	26.5	Full	300	0.0	0.0
Approach	207	3.0	207	3.0		0.230		6.3	LOS A	1.0	26.5				
All Vehicles	1145	3.0	1145	3.0		0.458		6.2	LOS A	3.1	80.5				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)

South: Tract B

Mov. From S To Exit:	T1 N	R2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	12	1	13	3.0	732	0.018	100	NA	NA
Approach	12	1	13	3.0		0.018			

East: Pinehurst

Mov. From E To Exit:	L2 S	R2 N	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	1	555	556	3.0	1215	0.458	100	NA	NA
Approach	1	555	556	3.0		0.458			

North: Jane Lundeen

Mov. From N To Exit:	U N	L2 E	T1 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	45	319	6	370	3.0	1341	0.276	100	NA	NA
Approach	45	319	6	370	3.0		0.276			

West: Pinehurst

Mov. From W To Exit:	L2 N	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	36	160	11	207	3.0	899	0.230	100	NA	NA
Approach	36	160	11	207	3.0		0.230			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	1145	3.0	0.458

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis

	Exit Lane Number	Short Lane Length	Percent Opng in Lane	Opposing Flow Rate	Critical Gap	Follow-up Headway	Lane Flow Rate	Capacity	Deg. Satn	Min. Delay	Merge Delay

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

	ft	%	veh/h	pcu/h	sec	sec	veh/h	veh/h	v/c	sec	sec
There are no Exit Short Lanes for Merge Analysis at this Site.											

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: Tract B				
Lane 1	0.0	0.0	0.0	0.0
East: Pinehurst				
Lane 1	0.0	0.0	0.0	0.0
North: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
West: Pinehurst				
Lane 1	0.0	0.0	0.0	0.0

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Sidra Roundabout Reports

Jane Lundeen Drive + Middle Access
Option C

TRANSPORTATION
CONSULTANTS, INC.

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE LEVEL OF SERVICE

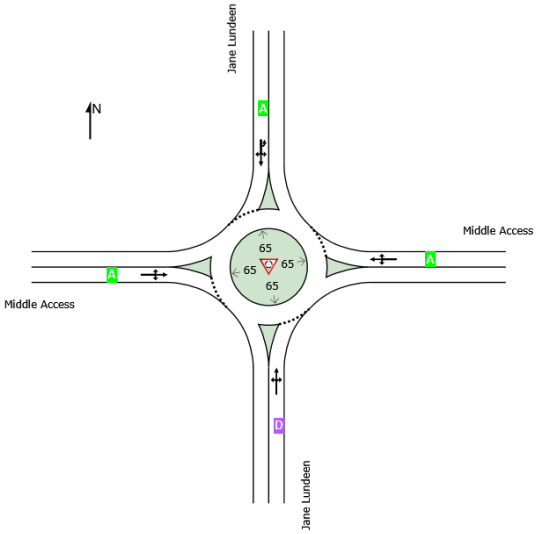
Lane Level of Service

Site: 101 [2045 BG + Site AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	D	A	A	A	C



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE SUMMARY

Site: 101 [2045 BG + Site AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Jane Lundeen															
Lane 1[d]	1066	3.0	1066	3.0	1148	0.929	100	28.0	LOS D	43.1	1102.8	Full	700	0.0	20.6
Approach	1066	3.0	1066	3.0		0.929		28.0	LOS D	43.1	1102.8				
East: Middle Access															
Lane 1[d]	4	3.0	4	3.0	419	0.009	100	8.7	LOS A	0.0	0.8	Full	300	0.0	0.0
Approach	4	3.0	4	3.0		0.009		8.7	LOS A	0.0	0.8				
North: Jane Lundeen															
Lane 1[d]	756	3.0	756	3.0	1324	0.571	100	7.1	LOS A	5.3	136.3	Full	800	0.0	0.0
Approach	756	3.0	756	3.0		0.571		7.1	LOS A	5.3	136.3				
West: Middle Access															
Lane 1[d]	107	3.0	107	3.0	594	0.180	100	8.3	LOS A	0.7	17.7	Full	300	0.0	0.0
Approach	107	3.0	107	3.0		0.180		8.3	LOS A	0.7	17.7				
All Vehicles	1933	3.0	1933	3.0		0.929		18.7	LOS C	43.1	1102.8				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)

South: Jane Lundeen

Mov. From S To Exit:	L2 W	T1 N	R2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	11	1004	51	1066	3.0	1148	0.929	100	NA	NA
Approach	11	1004	51	1066	3.0		0.929			

East: Middle Access

Mov. From E To Exit:	L2 S	T1 W	R2 N	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	1	1	1	4	3.0	419	0.009	100	NA	NA
Approach	1	1	1	4	3.0		0.009			

North: Jane Lundeen

Mov. From N To Exit:	U N	L2 E	T1 S	R2 W	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	3	90	656	7	756	3.0	1324	0.571	100	NA	NA
Approach	3	90	656	7	756	3.0		0.571			

West: Middle Access

Mov. From W To Exit:	L2 N	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	51	1	55	107	3.0	594	0.180	100	NA	NA
Approach	51	1	55	107	3.0		0.180			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	1933	3.0	0.929

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis

	Exit Lane Number	Short Lane Length	Percent Opng in Lane	Opposing Flow Rate	Critical Gap	Follow-up Headway	Lane Flow Rate	Capacity	Deg. Satn	Min. Delay	Merge Delay

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

	ft	%	veh/h	pcu/h	sec	sec	veh/h	veh/h	v/c	sec	sec
There are no Exit Short Lanes for Merge Analysis at this Site.											

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
East: Middle Access				
Lane 1	0.0	0.0	0.0	0.0
North: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
West: Middle Access				
Lane 1	0.0	0.0	0.0	0.0

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE LEVEL OF SERVICE

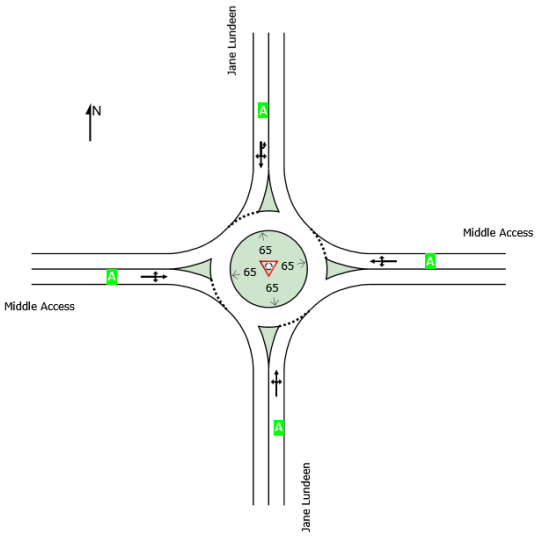
Lane Level of Service

Site: 101 [2045 BG + Site School PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	A	A	A	A



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE SUMMARY

Site: 101 [2045 BG + Site School PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Jane Lundeen															
Lane 1[d]	823	3.0	823	3.0	1291	0.638	100	9.4	LOS A	6.7	171.4	Full	700	0.0	0.0
Approach	823	3.0	823	3.0		0.638		9.4	LOS A	6.7	171.4				
East: Middle Access															
Lane 1[d]	87	3.0	87	3.0	529	0.164	100	8.9	LOS A	0.6	15.5	Full	300	0.0	0.0
Approach	87	3.0	87	3.0		0.164		8.9	LOS A	0.6	15.5				
North: Jane Lundeen															
Lane 1[d]	478	3.0	478	3.0	1322	0.362	100	5.3	LOS A	2.3	58.6	Full	800	0.0	0.0
Approach	478	3.0	478	3.0		0.362		5.3	LOS A	2.3	58.6				
West: Middle Access															
Lane 1[d]	63	3.0	63	3.0	811	0.077	100	5.2	LOS A	0.3	7.8	Full	300	0.0	0.0
Approach	63	3.0	63	3.0		0.077		5.2	LOS A	0.3	7.8				
All Vehicles	1451	3.0	1451	3.0		0.638		7.8	LOS A	6.7	171.4				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)

South: Jane Lundeen

Mov. From S To Exit:	L2 W	T1 N	R2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	11	811	1	823	3.0	1291	0.638	100	NA	NA
Approach	11	811	1	823	3.0		0.638			

East: Middle Access

Mov. From E To Exit:	L2 S	T1 W	R2 N	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	2	1	83	87	3.0	529	0.164	100	NA	NA
Approach	2	1	83	87	3.0		0.164			

North: Jane Lundeen

Mov. From N To Exit:	U N	L2 E	T1 S	R2 W	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	1	1	461	15	478	3.0	1322	0.362	100	NA	NA
Approach	1	1	461	15	478	3.0		0.362			

West: Middle Access

Mov. From W To Exit:	L2 N	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	33	1	28	63	3.0	811	0.077	100	NA	NA
Approach	33	1	28	63	3.0		0.077			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	1451	3.0	0.638

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis

	Exit Lane Number	Short Lane Length	Percent Opng in Lane	Opposing Flow Rate	Critical Gap	Follow-up Headway	Lane Flow Rate	Capacity	Deg. Satn	Min. Delay	Merge Delay

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

	ft	%	veh/h	pcu/h	sec	sec	veh/h	veh/h	v/c	sec	sec
There are no Exit Short Lanes for Merge Analysis at this Site.											

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
East: Middle Access				
Lane 1	0.0	0.0	0.0	0.0
North: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
West: Middle Access				
Lane 1	0.0	0.0	0.0	0.0

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LANE LEVEL OF SERVICE

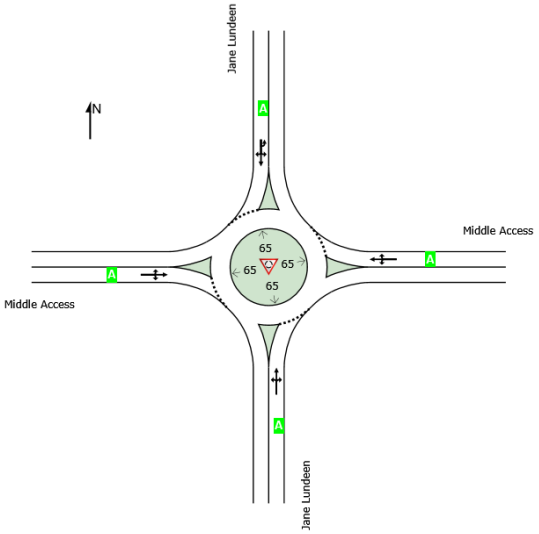
Lane Level of Service

Site: 101 [2045 BG + Site PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	A	A	A	A



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

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Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE SUMMARY

Site: 101 [2045 BG + Site PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Jane Lundeen															
Lane 1[d]	435	3.0	435	3.0	1299	0.335	100	5.5	LOS A	2.0	51.5	Full	700	0.0	0.0
Approach	435	3.0	435	3.0		0.335		5.5	LOS A	2.0	51.5				
East: Middle Access															
Lane 1[d]	38	3.0	38	3.0	827	0.047	100	4.8	LOS A	0.2	4.6	Full	300	0.0	0.0
Approach	38	3.0	38	3.0		0.047		4.8	LOS A	0.2	4.6				
North: Jane Lundeen															
Lane 1[d]	295	3.0	295	3.0	1316	0.224	100	4.3	LOS A	1.2	30.0	Full	800	0.0	0.0
Approach	295	3.0	295	3.0		0.224		4.3	LOS A	1.2	30.0				
West: Middle Access															
Lane 1[d]	46	3.0	46	3.0	999	0.046	100	4.0	LOS A	0.2	4.8	Full	300	0.0	0.0
Approach	46	3.0	46	3.0		0.046		4.0	LOS A	0.2	4.8				
All Vehicles	815	3.0	815	3.0		0.335		4.9	LOS A	2.0	51.5				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)

South: Jane Lundeen

Mov. From S To Exit:	L2 W	T1 N	R2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	16	412	7	435	3.0	1299	0.335	100	NA	NA
Approach	16	412	7	435	3.0		0.335			

East: Middle Access

Mov. From E To Exit:	L2 S	T1 W	R2 N	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	1	1	36	38	3.0	827	0.047	100	NA	NA
Approach	1	1	36	38	3.0		0.047			

North: Jane Lundeen

Mov. From N To Exit:	U N	L2 E	T1 S	R2 W	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	1	10	262	23	295	3.0	1316	0.224	100	NA	NA
Approach	1	10	262	23	295	3.0		0.224			

West: Middle Access

Mov. From W To Exit:	L2 N	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	19	1	26	46	3.0	999	0.046	100	NA	NA
Approach	19	1	26	46	3.0		0.046			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	815	3.0	0.335

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis

	Exit Lane Number	Short Lane Length	Percent Opng in Lane	Opposing Flow Rate	Critical Gap	Follow-up Headway	Lane Flow Rate	Capacity	Deg. Satn	Min. Delay	Merge Delay

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

	ft	%	veh/h	pcu/h	sec	sec	veh/h	veh/h	v/c	sec	sec
There are no Exit Short Lanes for Merge Analysis at this Site.											

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
East: Middle Access				
Lane 1	0.0	0.0	0.0	0.0
North: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
West: Middle Access				
Lane 1	0.0	0.0	0.0	0.0

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Sidra Roundabout Reports

Jane Lundeen Drive + Middle Access
Option F

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE LEVEL OF SERVICE

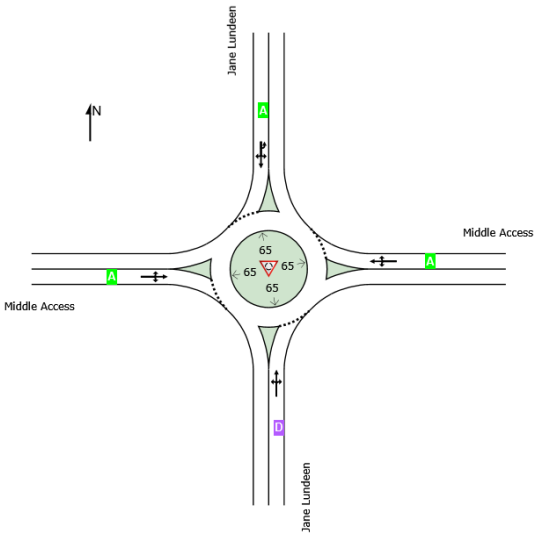
Lane Level of Service

Site: 101 [2045 BG + Site AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	D	A	A	A	C



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE SUMMARY

Site: 101 [2045 BG + Site AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Jane Lundeen															
Lane 1[d]	1066	3.0	1066	3.0	1145	0.932	100	28.5	LOS D	43.8	1120.3	Full	700	0.0	21.3
Approach	1066	3.0	1066	3.0		0.932		28.5	LOS D	43.8	1120.3				
East: Middle Access															
Lane 1[d]	4	3.0	4	3.0	418	0.009	100	8.7	LOS A	0.0	0.8	Full	300	0.0	0.0
Approach	4	3.0	4	3.0		0.009		8.7	LOS A	0.0	0.8				
North: Jane Lundeen															
Lane 1[d]	758	3.0	758	3.0	1324	0.573	100	7.1	LOS A	5.4	137.2	Full	800	0.0	0.0
Approach	758	3.0	758	3.0		0.573		7.1	LOS A	5.4	137.2				
West: Middle Access															
Lane 1[d]	112	3.0	112	3.0	596	0.188	100	8.3	LOS A	0.7	18.6	Full	300	0.0	0.0
Approach	112	3.0	112	3.0		0.188		8.3	LOS A	0.7	18.6				
All Vehicles	1940	3.0	1940	3.0		0.932		18.9	LOS C	43.8	1120.3				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)

South: Jane Lundeen

Mov. From S To Exit:	L2 W	T1 N	R2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	11	1004	51	1066	3.0	1145	0.932	100	NA	NA
Approach	11	1004	51	1066	3.0		0.932			

East: Middle Access

Mov. From E To Exit:	L2 S	T1 W	R2 N	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	1	1	1	4	3.0	418	0.009	100	NA	NA
Approach	1	1	1	4	3.0		0.009			

North: Jane Lundeen

Mov. From N To Exit:	U N	L2 E	T1 S	R2 W	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	1	90	656	11	758	3.0	1324	0.573	100	NA	NA
Approach	1	90	656	11	758	3.0		0.573			

West: Middle Access

Mov. From W To Exit:	L2 N	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	55	1	55	112	3.0	596	0.188	100	NA	NA
Approach	55	1	55	112	3.0		0.188			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	1940	3.0	0.932

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis

	Exit Lane Number	Short Lane Length	Percent Opng in Lane	Opposing Flow Rate	Critical Gap	Follow-up Headway	Lane Flow Rate	Capacity	Deg. Satn	Min. Delay	Merge Delay

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

	ft	%	veh/h	pcu/h	sec	sec	veh/h	veh/h	v/c	sec	sec
There are no Exit Short Lanes for Merge Analysis at this Site.											

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
East: Middle Access				
Lane 1	0.0	0.0	0.0	0.0
North: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
West: Middle Access				
Lane 1	0.0	0.0	0.0	0.0

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE SUMMARY

Site: 101 [2045 BG + Site School PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Jane Lundeen															
Lane 1[d]	823	3.0	823	3.0	1289	0.639	100	9.4	LOS A	6.7	171.6	Full	700	0.0	0.0
Approach	823	3.0	823	3.0		0.639		9.4	LOS A	6.7	171.6				
East: Middle Access															
Lane 1[d]	87	3.0	87	3.0	529	0.164	100	8.9	LOS A	0.6	15.5	Full	300	0.0	0.0
Approach	87	3.0	87	3.0		0.164		8.9	LOS A	0.6	15.5				
North: Jane Lundeen															
Lane 1[d]	482	3.0	482	3.0	1322	0.364	100	5.3	LOS A	2.3	59.3	Full	800	0.0	0.0
Approach	482	3.0	482	3.0		0.364		5.3	LOS A	2.3	59.3				
West: Middle Access															
Lane 1[d]	64	3.0	64	3.0	811	0.079	100	5.2	LOS A	0.3	7.9	Full	300	0.0	0.0
Approach	64	3.0	64	3.0		0.079		5.2	LOS A	0.3	7.9				
All Vehicles	1456	3.0	1456	3.0		0.639		7.8	LOS A	6.7	171.6				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)

South: Jane Lundeen

Mov. From S To Exit:	L2 W	T1 N	R2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	11	811	1	823	3.0	1289	0.639	100	NA	NA
Approach	11	811	1	823	3.0		0.639			

East: Middle Access

Mov. From E To Exit:	L2 S	T1 W	R2 N	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	2	1	83	87	3.0	529	0.164	100	NA	NA
Approach	2	1	83	87	3.0		0.164			

North: Jane Lundeen

Mov. From N To Exit:	U N	L2 E	T1 S	R2 W	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	1	1	461	18	482	3.0	1322	0.364	100	NA	NA
Approach	1	1	461	18	482	3.0		0.364			

West: Middle Access

Mov. From W To Exit:	L2 N	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	35	1	28	64	3.0	811	0.079	100	NA	NA
Approach	35	1	28	64	3.0		0.079			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	1456	3.0	0.639

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis

	Exit Lane Number	Short Lane Length	Percent Opng in Lane	Opposing Flow Rate	Critical Gap	Follow-up Headway	Lane Flow Rate	Capacity	Deg. Satn	Min. Delay	Merge Delay

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

	ft	%	veh/h	pcu/h	sec	sec	veh/h	veh/h	v/c	sec	sec
There are no Exit Short Lanes for Merge Analysis at this Site.											

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
East: Middle Access				
Lane 1	0.0	0.0	0.0	0.0
North: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
West: Middle Access				
Lane 1	0.0	0.0	0.0	0.0

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE LEVEL OF SERVICE

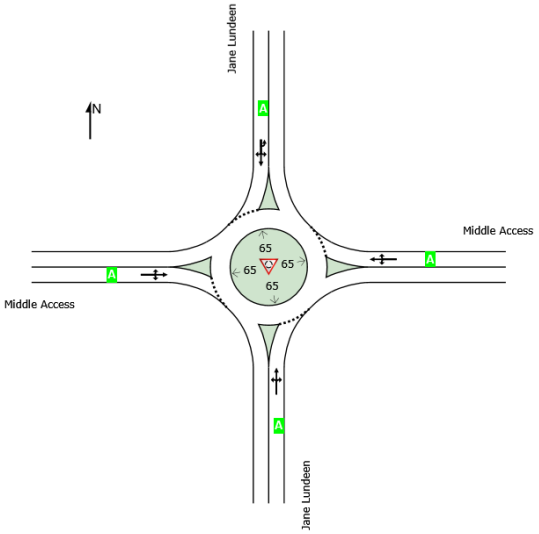
Lane Level of Service

Site: 101 [2045 BG + Site School PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	A	A	A	A



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE LEVEL OF SERVICE

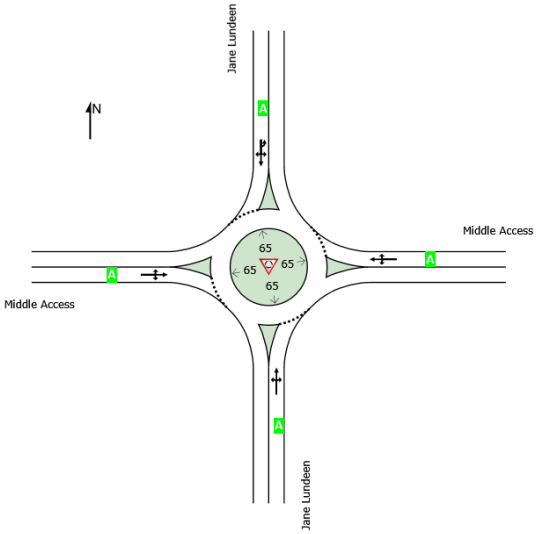
Lane Level of Service

Site: 101 [2045 BG + Site PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	A	A	A	A



Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

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Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

LANE SUMMARY

Site: 101 [2045 BG + Site PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Jane Lundeen															
Lane 1[d]	435	3.0	435	3.0	1297	0.335	100	5.5	LOS A	2.0	51.6	Full	700	0.0	0.0
Approach	435	3.0	435	3.0		0.335		5.5	LOS A	2.0	51.6				
East: Middle Access															
Lane 1[d]	38	3.0	38	3.0	825	0.047	100	4.8	LOS A	0.2	4.6	Full	300	0.0	0.0
Approach	38	3.0	38	3.0		0.047		4.8	LOS A	0.2	4.6				
North: Jane Lundeen															
Lane 1[d]	300	3.0	300	3.0	1316	0.228	100	4.3	LOS A	1.2	30.6	Full	800	0.0	0.0
Approach	300	3.0	300	3.0		0.228		4.3	LOS A	1.2	30.6				
West: Middle Access															
Lane 1[d]	47	3.0	47	3.0	999	0.047	100	4.0	LOS A	0.2	4.9	Full	300	0.0	0.0
Approach	47	3.0	47	3.0		0.047		4.0	LOS A	0.2	4.9				
All Vehicles	821	3.0	821	3.0		0.335		4.9	LOS A	2.0	51.6				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: Siegloch M1 implied by US HCM 6 Roundabout Capacity Model.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)

South: Jane Lundeen

Mov. From S To Exit:	L2 W	T1 N	R2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	16	412	7	435	3.0	1297	0.335	100	NA	NA
Approach	16	412	7	435	3.0		0.335			

East: Middle Access

Mov. From E To Exit:	L2 S	T1 W	R2 N	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	1	1	36	38	3.0	825	0.047	100	NA	NA
Approach	1	1	36	38	3.0		0.047			

North: Jane Lundeen

Mov. From N To Exit:	U N	L2 E	T1 S	R2 W	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	1	10	262	28	300	3.0	1316	0.228	100	NA	NA
Approach	1	10	262	28	300	3.0		0.228			

West: Middle Access

Mov. From W To Exit:	L2 N	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	21	1	26	47	3.0	999	0.047	100	NA	NA
Approach	21	1	26	47	3.0		0.047			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	821	3.0	0.335

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis

	Exit Lane Number	Short Lane Length	Percent Opng in Lane	Opposing Flow Rate	Critical Gap	Follow-up Headway	Lane Flow Rate	Capacity	Deg. Satn	Min. Delay	Merge Delay

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	ft	%	veh/h	pcu/h	sec	sec	veh/h	veh/h	v/c	sec	sec
There are no Exit Short Lanes for Merge Analysis at this Site.											

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
East: Middle Access				
Lane 1	0.0	0.0	0.0	0.0
North: Jane Lundeen				
Lane 1	0.0	0.0	0.0	0.0
West: Middle Access				
Lane 1	0.0	0.0	0.0	0.0

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Queuing Reports

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Queuing Reports

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Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Queuing Reports

Scenario
Short-Term Baseline + Site

Laneage on Walker Road/Highway 105
1 Westbound-Left Lane
1 Westbound-Through Lane
1 Eastbound-Through Lane

Signal Timings
Same as Existing

TRANSPORTATION
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Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Intersection: 1: SH 83 & Walker Rd, Interval #1

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	L	TR	L	T	L	T
Maximum Queue (ft)	47	145	165	176	70	166	60	146
Average Queue (ft)	19	79	97	106	38	95	29	81
95th Queue (ft)	51	143	173	176	78	171	60	150
Link Distance (ft)		698	566	566		765		528
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	265				455		435	
Storage Blk Time (%)								
Queuing Penalty (veh)								

Intersection: 1: SH 83 & Walker Rd, Interval #2

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	L	TR	L	T	L	T
Maximum Queue (ft)	38	124	134	192	68	129	55	126
Average Queue (ft)	16	81	89	122	43	78	28	70
95th Queue (ft)	42	134	150	210	74	144	60	123
Link Distance (ft)		698	566	566		765		528
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	265				455		435	
Storage Blk Time (%)								
Queuing Penalty (veh)								

Intersection: 1: SH 83 & Walker Rd, Interval #3

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	L	TR	L	T	L	T
Maximum Queue (ft)	60	229	528	554	111	189	75	162
Average Queue (ft)	36	152	302	419	63	121	44	100
95th Queue (ft)	64	239	663	715	99	199	77	156
Link Distance (ft)		698	566	566		765		528
Upstream Blk Time (%)			19	20				
Queuing Penalty (veh)			95	99				
Storage Bay Dist (ft)	265				455		435	
Storage Blk Time (%)		0						
Queuing Penalty (veh)		0						

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Intersection: 1: SH 83 & Walker Rd, Interval #4

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	L	TR	L	T	L	T
Maximum Queue (ft)	46	142	416	462	98	113	63	136
Average Queue (ft)	23	82	244	291	50	74	30	82
95th Queue (ft)	51	139	615	646	89	131	62	146
Link Distance (ft)		698	566	566		765		528
Upstream Blk Time (%)			12	15				
Queuing Penalty (veh)			22	28				
Storage Bay Dist (ft)	265				455		435	
Storage Blk Time (%)								
Queuing Penalty (veh)								

Intersection: 1: SH 83 & Walker Rd, All Intervals

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	L	TR	L	T	L	T
Maximum Queue (ft)	65	231	529	554	115	197	77	173
Average Queue (ft)	23	98	183	234	48	92	33	83
95th Queue (ft)	55	182	487	554	88	168	66	146
Link Distance (ft)		698	566	566		765		528
Upstream Blk Time (%)			8	9				
Queuing Penalty (veh)			29	32				
Storage Bay Dist (ft)	265				455		435	
Storage Blk Time (%)		0						
Queuing Penalty (veh)		0						

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Intersection: 1: SH 83 & Walker Rd, Interval #1

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	L	TR	L	T	L	T
Maximum Queue (ft)	51	234	179	161	95	162	42	202
Average Queue (ft)	30	158	107	92	51	91	20	122
95th Queue (ft)	59	248	188	163	95	169	45	199
Link Distance (ft)		698	566	566		765		528
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	265				455		435	
Storage Blk Time (%)		1						
Queuing Penalty (veh)		1						

Intersection: 1: SH 83 & Walker Rd, Interval #2

Movement	EB	EB	EB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	T	R	L	TR	L	T	R	L	T
Maximum Queue (ft)	58	336	100	206	336	99	177	22	79	215
Average Queue (ft)	25	219	14	122	224	59	110	3	48	141
95th Queue (ft)	60	357	152	212	344	103	182	24	83	223
Link Distance (ft)		698		566	566		765			528
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	265		330			455		400	435	
Storage Blk Time (%)		7								
Queuing Penalty (veh)		14								

Intersection: 1: SH 83 & Walker Rd, Interval #3

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	T	L	TR	L	T	R	L	T
Maximum Queue (ft)	58	239	160	179	107	138	10	51	175
Average Queue (ft)	27	158	91	98	60	85	1	22	119
95th Queue (ft)	63	259	169	177	106	146	15	50	212
Link Distance (ft)		698	566	566		765			528
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	265				455		400	435	
Storage Blk Time (%)		2							
Queuing Penalty (veh)		3							

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Intersection: 1: SH 83 & Walker Rd, Interval #4

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	T	L	TR	L	T	R	L	T
Maximum Queue (ft)	54	226	146	144	95	164	20	51	198
Average Queue (ft)	31	146	96	85	55	88	3	23	122
95th Queue (ft)	58	221	152	153	101	163	22	55	214
Link Distance (ft)		698	566	566		765			528
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	265				455		400	435	
Storage Blk Time (%)		0							
Queuing Penalty (veh)		0							

Intersection: 1: SH 83 & Walker Rd, All Intervals

Movement	EB	EB	EB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	T	R	L	TR	L	T	R	L	T
Maximum Queue (ft)	75	339	100	220	336	121	196	43	80	256
Average Queue (ft)	28	170	4	104	125	56	94	2	28	126
95th Queue (ft)	60	284	73	184	253	102	167	18	64	213
Link Distance (ft)		698		566	566		765			528
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	265		330			455		400	435	
Storage Blk Time (%)		2								
Queuing Penalty (veh)		5								

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Intersection: 1: SH 83 & Walker Rd, Interval #1

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	L	TR	L	T	L	T
Maximum Queue (ft)	59	102	72	81	78	109	31	184
Average Queue (ft)	29	56	38	43	46	74	14	110
95th Queue (ft)	64	108	78	81	90	129	37	195
Link Distance (ft)		698	566	566		765		528
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	265				455		435	
Storage Blk Time (%)								
Queuing Penalty (veh)								

Intersection: 1: SH 83 & Walker Rd, Interval #2

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	L	TR	L	T	L	T
Maximum Queue (ft)	70	77	59	95	90	111	42	152
Average Queue (ft)	30	45	34	51	46	68	20	89
95th Queue (ft)	70	87	70	104	93	121	45	151
Link Distance (ft)		698	566	566		765		528
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	265				455		435	
Storage Blk Time (%)								
Queuing Penalty (veh)								

Intersection: 1: SH 83 & Walker Rd, Interval #3

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	L	TR	L	T	L	T
Maximum Queue (ft)	68	101	64	82	100	161	40	217
Average Queue (ft)	41	56	38	47	58	84	16	119
95th Queue (ft)	73	107	70	82	103	163	42	218
Link Distance (ft)		698	566	566		765		528
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	265				455		435	
Storage Blk Time (%)								
Queuing Penalty (veh)								

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Intersection: 1: SH 83 & Walker Rd, Interval #4

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	L	TR	L	T	L	T
Maximum Queue (ft)	54	81	73	65	101	104	46	171
Average Queue (ft)	28	54	40	43	51	57	13	98
95th Queue (ft)	57	93	78	74	94	111	43	172
Link Distance (ft)		698	566	566		765		528
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	265				455		435	
Storage Blk Time (%)								
Queuing Penalty (veh)								

Intersection: 1: SH 83 & Walker Rd, All Intervals

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	L	TR	L	T	L	T
Maximum Queue (ft)	80	110	81	107	111	165	52	232
Average Queue (ft)	32	53	38	46	50	71	16	104
95th Queue (ft)	67	100	74	87	96	134	42	187
Link Distance (ft)		698	566	566		765		528
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	265				455		435	
Storage Blk Time (%)								
Queuing Penalty (veh)								

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Queuing Reports

Scenario
2045 Background + Site

Laneage on Walker Road/Highway 105
1 Westbound-Left Lane
2 Westbound-Through Lanes
2 Eastbound-Through Lanes

Signal Timings
Modified from Existing

TRANSPORTATION
CONSULTANTS, INC.

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Intersection: 1: SH 83 & Walker Rd, Interval #1

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	T	L	T	TR	L	T	T	L	T	T
Maximum Queue (ft)	55	113	117	206	111	134	88	88	75	76	93	71
Average Queue (ft)	24	74	63	115	73	79	47	52	40	38	58	28
95th Queue (ft)	59	127	119	204	125	133	89	92	81	78	96	81
Link Distance (ft)		684	684	554	554	554		753	753		514	514
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	265						455			435		
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 1: SH 83 & Walker Rd, Interval #2

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	T	L	T	TR	L	T	T	L	T	T
Maximum Queue (ft)	55	123	107	193	117	121	86	87	79	83	99	72
Average Queue (ft)	27	82	67	118	75	75	52	54	40	43	63	35
95th Queue (ft)	61	129	108	193	119	123	89	95	92	86	115	87
Link Distance (ft)		684	684	554	554	554		753	753		514	514
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	265						455			435		
Storage Blk Time (%)												
Queuing Penalty (veh)												

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Intersection: 1: SH 83 & Walker Rd, Interval #3

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	T	L	T	TR	L	T	T	R	L	T
Maximum Queue (ft)	67	157	196	231	179	208	108	108	85	30	84	124
Average Queue (ft)	37	85	137	174	124	143	64	71	47	6	54	79
95th Queue (ft)	70	163	200	237	188	206	124	117	96	32	86	133
Link Distance (ft)		684	684	554	554	554		753	753			514
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	265						455			400	435	
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 1: SH 83 & Walker Rd, Interval #3

Movement	SB
Directions Served	T
Maximum Queue (ft)	99
Average Queue (ft)	47
95th Queue (ft)	108
Link Distance (ft)	514
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Intersection: 1: SH 83 & Walker Rd, Interval #4

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	T	L	T	TR	L	T	T	R	L	T
Maximum Queue (ft)	59	119	138	221	141	162	82	106	99	11	84	119
Average Queue (ft)	26	76	74	130	82	91	42	63	44	2	46	70
95th Queue (ft)	64	128	134	219	138	160	83	112	102	16	87	121
Link Distance (ft)		684	684	554	554	554		753	753			514
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	265						455			400	435	
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 1: SH 83 & Walker Rd, Interval #4

Movement	SB
Directions Served	T
Maximum Queue (ft)	81
Average Queue (ft)	36
95th Queue (ft)	82
Link Distance (ft)	514
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Intersection: 1: SH 83 & Walker Rd, All Intervals

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	T	L	T	TR	L	T	T	R	L	T
Maximum Queue (ft)	72	164	196	261	179	208	116	118	109	31	105	140
Average Queue (ft)	29	79	85	134	88	97	51	60	42	2	45	67
95th Queue (ft)	65	139	160	223	153	171	99	106	93	18	86	119
Link Distance (ft)		684	684	554	554	554		753	753			514
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	265						455			400	435	
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 1: SH 83 & Walker Rd, All Intervals

Movement	SB
Directions Served	T
Maximum Queue (ft)	111
Average Queue (ft)	36
95th Queue (ft)	91
Link Distance (ft)	514
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Intersection: 1: SH 83 & Walker Rd, Interval #1

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	T	L	T	TR	L	T	T	L	T	T
Maximum Queue (ft)	85	257	224	203	108	124	111	98	79	71	178	141
Average Queue (ft)	47	196	157	131	71	62	64	67	49	38	106	68
95th Queue (ft)	88	266	242	214	120	127	121	108	93	73	184	142
Link Distance (ft)		684	684	554	554	554		753	753		514	514
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	265						455			435		
Storage Blk Time (%)		1										
Queuing Penalty (veh)		1										

Intersection: 1: SH 83 & Walker Rd, Interval #2

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	T	L	T	TR	L	T	T	R	L	T
Maximum Queue (ft)	63	270	231	271	171	186	119	114	100	52	112	146
Average Queue (ft)	37	202	159	160	119	131	63	71	59	16	66	102
95th Queue (ft)	68	281	256	275	198	209	114	116	107	62	120	157
Link Distance (ft)		684	684	554	554	554		753	753			514
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	265						455			400	435	
Storage Blk Time (%)		2										
Queuing Penalty (veh)		2										

Intersection: 1: SH 83 & Walker Rd, Interval #2

Movement	SB
Directions Served	T
Maximum Queue (ft)	117
Average Queue (ft)	73
95th Queue (ft)	131
Link Distance (ft)	514
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Intersection: 1: SH 83 & Walker Rd, Interval #3

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	T	L	T	TR	L	T	T	R	L	T
Maximum Queue (ft)	64	243	210	272	167	158	134	114	102	19	73	143
Average Queue (ft)	41	179	141	165	81	84	74	61	50	4	36	102
95th Queue (ft)	74	257	237	299	170	162	139	111	99	26	74	155
Link Distance (ft)		684	684	554	554	554		753	753			514
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	265						455			400	435	
Storage Blk Time (%)		2										
Queuing Penalty (veh)		1										

Intersection: 1: SH 83 & Walker Rd, Interval #3

Movement	SB
Directions Served	T
Maximum Queue (ft)	120
Average Queue (ft)	63
95th Queue (ft)	131
Link Distance (ft)	514
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Intersection: 1: SH 83 & Walker Rd, Interval #4

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	T	L	T	TR	L	T	T	R	L	T
Maximum Queue (ft)	75	257	217	226	117	129	104	95	92	11	63	151
Average Queue (ft)	36	187	149	138	67	76	64	62	48	2	35	103
95th Queue (ft)	73	262	224	223	118	144	110	104	100	17	70	170
Link Distance (ft)		684	684	554	554	554		753	753			514
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	265						455			400	435	
Storage Blk Time (%)		1										
Queuing Penalty (veh)		0										

Intersection: 1: SH 83 & Walker Rd, Interval #4

Movement	SB
Directions Served	T
Maximum Queue (ft)	109
Average Queue (ft)	57
95th Queue (ft)	125
Link Distance (ft)	514
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Intersection: 1: SH 83 & Walker Rd, All Intervals

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	T	L	T	TR	L	T	T	R	L	T
Maximum Queue (ft)	98	296	248	306	201	190	160	127	122	61	112	183
Average Queue (ft)	40	191	152	148	84	88	66	65	52	5	44	103
95th Queue (ft)	77	268	241	257	162	172	122	110	100	34	90	167
Link Distance (ft)		684	684	554	554	554		753	753			514
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	265						455			400	435	
Storage Blk Time (%)		1										
Queuing Penalty (veh)		1										

Intersection: 1: SH 83 & Walker Rd, All Intervals

Movement	SB
Directions Served	T
Maximum Queue (ft)	148
Average Queue (ft)	65
95th Queue (ft)	133
Link Distance (ft)	514
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Intersection: 1: SH 83 & Walker Rd, Interval #1

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	T	L	T	TR	L	T	T	L	T	T
Maximum Queue (ft)	106	136	99	140	111	108	93	84	74	41	146	114
Average Queue (ft)	52	87	28	89	76	67	47	49	41	21	94	64
95th Queue (ft)	97	148	74	142	117	110	90	87	82	48	154	130
Link Distance (ft)		684	684	554	554	554		753	753		514	514
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	265						455			435		
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 1: SH 83 & Walker Rd, Interval #2

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	T	L	T	TR	L	T	T	R	L	T
Maximum Queue (ft)	84	138	100	177	117	154	64	92	77	10	50	139
Average Queue (ft)	45	88	36	98	76	85	39	60	48	1	26	83
95th Queue (ft)	91	147	96	179	120	160	67	97	87	15	56	138
Link Distance (ft)		684	684	554	554	554		753	753			514
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	265						455			400	435	
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 1: SH 83 & Walker Rd, Interval #2

Movement	SB
Directions Served	T
Maximum Queue (ft)	94
Average Queue (ft)	40
95th Queue (ft)	94
Link Distance (ft)	514
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Intersection: 1: SH 83 & Walker Rd, Interval #3

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	T	L	T	TR	L	T	T	L	T	T
Maximum Queue (ft)	97	147	101	170	155	185	200	105	110	54	168	139
Average Queue (ft)	65	94	40	99	97	115	120	68	60	29	109	68
95th Queue (ft)	105	160	112	164	164	200	210	119	116	61	174	133
Link Distance (ft)		684	684	554	554	554		753	753		514	514
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	265						455			435		
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 1: SH 83 & Walker Rd, Interval #4

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	T	L	T	TR	L	T	T	L	T	T
Maximum Queue (ft)	93	170	121	177	123	154	116	94	88	50	138	99
Average Queue (ft)	48	96	49	107	88	90	48	57	47	21	91	60
95th Queue (ft)	98	180	124	185	128	160	108	96	89	52	149	122
Link Distance (ft)		684	684	554	554	554		753	753		514	514
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	265						455			435		
Storage Blk Time (%)												
Queuing Penalty (veh)												

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Intersection: 1: SH 83 & Walker Rd, All Intervals

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	T	L	T	TR	L	T	T	R	L	T
Maximum Queue (ft)	118	177	162	208	163	198	209	115	117	10	72	168
Average Queue (ft)	53	91	38	98	84	89	64	59	49	0	24	94
95th Queue (ft)	100	160	104	169	136	165	144	101	95	7	55	156
Link Distance (ft)		684	684	554	554	554		753	753			514
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	265						455			400	435	
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 1: SH 83 & Walker Rd, All Intervals

Movement	SB
Directions Served	T
Maximum Queue (ft)	150
Average Queue (ft)	58
95th Queue (ft)	122
Link Distance (ft)	514
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Queuing Reports

Scenario
2045 Background + Site

Laneage on Walker Road/Highway 105
2 Westbound-Left Lanes
2 Westbound-Through Lanes
2 Eastbound-Through Lanes

Signal Timings
Modified from Existing

TRANSPORTATION
CONSULTANTS, INC.

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Intersection: 1: SH 83 & Walker Rd, Interval #1

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB
Directions Served	L	T	T	L	L	T	TR	L	T	T	R	L
Maximum Queue (ft)	80	132	116	90	94	108	123	95	79	68	20	82
Average Queue (ft)	35	76	66	59	60	74	81	47	49	38	3	38
95th Queue (ft)	76	134	116	94	98	116	133	95	87	69	22	80
Link Distance (ft)		684	684	554	554	554	554		747	747		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	265							455			400	435
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 1: SH 83 & Walker Rd, Interval #1

Movement	SB	SB
Directions Served	T	T
Maximum Queue (ft)	107	84
Average Queue (ft)	62	28
95th Queue (ft)	109	80
Link Distance (ft)	509	509
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Intersection: 1: SH 83 & Walker Rd, Interval #2

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	T	T	L	L	T	TR	L	T	T	L	T
Maximum Queue (ft)	42	102	111	92	89	126	149	101	100	72	76	100
Average Queue (ft)	23	64	65	61	61	83	93	47	60	37	45	59
95th Queue (ft)	50	101	116	98	101	139	163	99	101	78	77	105
Link Distance (ft)		684	684	554	554	554	554		747	747		509
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	265							455			435	
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 1: SH 83 & Walker Rd, Interval #2

Movement	SB
Directions Served	T
Maximum Queue (ft)	69
Average Queue (ft)	22
95th Queue (ft)	71
Link Distance (ft)	509
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Intersection: 1: SH 83 & Walker Rd, Interval #3

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	T	T	L	L	T	TR	L	T	T	L	T
Maximum Queue (ft)	67	180	200	109	134	222	234	83	110	87	106	138
Average Queue (ft)	36	90	140	72	82	148	160	44	68	53	53	85
95th Queue (ft)	68	193	211	115	135	241	250	86	117	95	107	152
Link Distance (ft)		684	684	554	554	554	554		747	747		509
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	265							455			435	
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 1: SH 83 & Walker Rd, Interval #3

Movement	SB
Directions Served	T
Maximum Queue (ft)	109
Average Queue (ft)	41
95th Queue (ft)	111
Link Distance (ft)	509
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Intersection: 1: SH 83 & Walker Rd, Interval #4

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB
Directions Served	L	T	T	L	L	T	TR	L	T	T	R	L
Maximum Queue (ft)	67	128	131	113	130	160	179	81	88	95	10	64
Average Queue (ft)	34	75	77	62	68	95	102	49	59	49	2	41
95th Queue (ft)	70	134	139	113	131	163	180	87	98	96	16	74
Link Distance (ft)		684	684	554	554	554	554		747	747		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	265							455			400	435
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 1: SH 83 & Walker Rd, Interval #4

Movement	SB	SB
Directions Served	T	T
Maximum Queue (ft)	111	78
Average Queue (ft)	66	25
95th Queue (ft)	116	77
Link Distance (ft)	509	509
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Intersection: 1: SH 83 & Walker Rd, All Intervals

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB
Directions Served	L	T	T	L	L	T	TR	L	T	T	R	L
Maximum Queue (ft)	85	180	200	119	141	226	239	110	118	109	31	107
Average Queue (ft)	32	76	87	64	68	100	109	47	59	44	1	44
95th Queue (ft)	67	146	165	106	119	182	198	92	103	87	13	87
Link Distance (ft)		684	684	554	554	554	554		747	747		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	265							455			400	435
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 1: SH 83 & Walker Rd, All Intervals

Movement	SB	SB
Directions Served	T	T
Maximum Queue (ft)	143	124
Average Queue (ft)	68	29
95th Queue (ft)	124	87
Link Distance (ft)	509	509
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Intersection: 1: SH 83 & Walker Rd, Interval #1

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB
Directions Served	L	T	T	L	L	T	TR	L	T	T	R	L
Maximum Queue (ft)	68	277	237	100	99	112	124	116	88	83	21	76
Average Queue (ft)	39	170	130	63	65	73	71	65	52	42	4	43
95th Queue (ft)	82	265	241	102	103	118	133	123	95	90	28	82
Link Distance (ft)		684	684	554	554	554	554		747	747		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	265							455			400	435
Storage Blk Time (%)		1										
Queuing Penalty (veh)		1										

Intersection: 1: SH 83 & Walker Rd, Interval #1

Movement	SB	SB
Directions Served	T	T
Maximum Queue (ft)	168	158
Average Queue (ft)	104	77
95th Queue (ft)	174	166
Link Distance (ft)	509	509
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Intersection: 1: SH 83 & Walker Rd, Interval #2

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB
Directions Served	L	T	T	L	L	T	TR	L	T	T	R	L
Maximum Queue (ft)	80	246	209	98	118	159	178	111	107	98	52	102
Average Queue (ft)	38	183	157	65	78	106	119	58	67	54	14	56
95th Queue (ft)	75	266	216	104	125	171	188	111	114	105	59	107
Link Distance (ft)		684	684	554	554	554	554		747	747		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	265							455			400	435
Storage Blk Time (%)		0										
Queuing Penalty (veh)		0										

Intersection: 1: SH 83 & Walker Rd, Interval #2

Movement	SB	SB
Directions Served	T	T
Maximum Queue (ft)	156	122
Average Queue (ft)	91	47
95th Queue (ft)	152	116
Link Distance (ft)	509	509
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Intersection: 1: SH 83 & Walker Rd, Interval #3

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB
Directions Served	L	T	T	L	L	T	TR	L	T	T	R	L
Maximum Queue (ft)	130	250	188	107	113	154	172	123	95	83	21	89
Average Queue (ft)	51	176	130	79	80	87	95	68	61	45	3	42
95th Queue (ft)	141	278	228	128	136	150	168	124	110	93	24	87
Link Distance (ft)		684	684	554	554	554	554		747	747		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	265							455			400	435
Storage Blk Time (%)		1										
Queuing Penalty (veh)		1										

Intersection: 1: SH 83 & Walker Rd, Interval #3

Movement	SB	SB
Directions Served	T	T
Maximum Queue (ft)	177	133
Average Queue (ft)	107	67
95th Queue (ft)	176	140
Link Distance (ft)	509	509
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Intersection: 1: SH 83 & Walker Rd, Interval #4

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB
Directions Served	L	T	T	L	L	T	TR	L	T	T	R	L
Maximum Queue (ft)	79	239	204	109	116	117	113	99	97	87	11	69
Average Queue (ft)	46	175	135	73	70	68	68	58	59	45	2	38
95th Queue (ft)	83	250	216	114	119	114	131	102	106	88	17	72
Link Distance (ft)		684	684	554	554	554	554		747	747		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	265							455			400	435
Storage Blk Time (%)		0										
Queuing Penalty (veh)		0										

Intersection: 1: SH 83 & Walker Rd, Interval #4

Movement	SB	SB
Directions Served	T	T
Maximum Queue (ft)	150	113
Average Queue (ft)	106	67
95th Queue (ft)	167	132
Link Distance (ft)	509	509
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Intersection: 1: SH 83 & Walker Rd, All Intervals

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB
Directions Served	L	T	T	L	L	T	TR	L	T	T	R	L
Maximum Queue (ft)	145	296	256	120	144	171	183	140	123	116	52	106
Average Queue (ft)	44	176	138	70	73	83	88	62	60	47	6	45
95th Queue (ft)	100	266	230	114	122	144	163	116	107	95	35	89
Link Distance (ft)		684	684	554	554	554	554		747	747		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	265							455			400	435
Storage Blk Time (%)		1										
Queuing Penalty (veh)		1										

Intersection: 1: SH 83 & Walker Rd, All Intervals

Movement	SB	SB
Directions Served	T	T
Maximum Queue (ft)	186	172
Average Queue (ft)	102	65
95th Queue (ft)	168	141
Link Distance (ft)	509	509
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Intersection: 1: SH 83 & Walker Rd, Interval #1

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB
Directions Served	L	T	T	L	L	T	TR	L	T	T	R	L
Maximum Queue (ft)	80	148	106	103	88	138	138	73	96	75	10	36
Average Queue (ft)	45	83	45	56	54	84	77	43	49	36	2	18
95th Queue (ft)	84	154	118	99	93	140	138	79	95	76	16	41
Link Distance (ft)		684	684	554	554	554	554		747	747		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	265							455			400	435
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 1: SH 83 & Walker Rd, Interval #1

Movement	SB	SB
Directions Served	T	T
Maximum Queue (ft)	128	89
Average Queue (ft)	89	42
95th Queue (ft)	136	93
Link Distance (ft)	509	509
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Intersection: 1: SH 83 & Walker Rd, Interval #2

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB
Directions Served	L	T	T	L	L	T	TR	L	T	T	R	L
Maximum Queue (ft)	76	161	62	98	89	113	134	94	82	80	21	50
Average Queue (ft)	53	99	33	57	48	80	77	46	52	40	3	26
95th Queue (ft)	90	165	83	99	84	119	136	92	87	83	23	55
Link Distance (ft)		684	684	554	554	554	554		747	747		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	265							455			400	435
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 1: SH 83 & Walker Rd, Interval #2

Movement	SB	SB
Directions Served	T	T
Maximum Queue (ft)	127	88
Average Queue (ft)	87	37
95th Queue (ft)	141	89
Link Distance (ft)	509	509
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Intersection: 1: SH 83 & Walker Rd, Interval #3

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB
Directions Served	L	T	T	L	L	T	TR	L	T	T	R	L
Maximum Queue (ft)	119	174	153	78	95	119	146	208	101	106	10	50
Average Queue (ft)	63	98	69	49	58	81	99	115	70	65	2	30
95th Queue (ft)	115	171	149	84	101	130	158	204	107	116	16	59
Link Distance (ft)		684	684	554	554	554	554		747	747		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	265							455			400	435
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 1: SH 83 & Walker Rd, Interval #3

Movement	SB	SB
Directions Served	T	T
Maximum Queue (ft)	150	129
Average Queue (ft)	107	64
95th Queue (ft)	161	141
Link Distance (ft)	509	509
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Intersection: 1: SH 83 & Walker Rd, Interval #4

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB
Directions Served	L	T	T	L	L	T	TR	L	T	T	R	L
Maximum Queue (ft)	78	141	60	92	68	140	151	83	81	79	10	48
Average Queue (ft)	44	90	28	51	48	94	93	41	50	41	1	24
95th Queue (ft)	83	156	76	87	76	143	154	79	87	86	16	50
Link Distance (ft)		684	684	554	554	554	554		747	747		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	265							455			400	435
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 1: SH 83 & Walker Rd, Interval #4

Movement	SB	SB
Directions Served	T	T
Maximum Queue (ft)	135	112
Average Queue (ft)	83	41
95th Queue (ft)	135	104
Link Distance (ft)	509	509
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Docusign Envelope ID: B1D90C4C-6149-8491-8160-E8E55329D848

Intersection: 1: SH 83 & Walker Rd, All Intervals

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB	SB
Directions Served	L	T	T	L	L	T	TR	L	T	T	R	L
Maximum Queue (ft)	123	190	160	111	104	155	167	208	107	106	32	74
Average Queue (ft)	51	93	44	53	52	85	86	61	56	45	2	25
95th Queue (ft)	95	162	113	93	90	134	148	137	97	94	18	52
Link Distance (ft)		684	684	554	554	554	554		747	747		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	265							455			400	435
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 1: SH 83 & Walker Rd, All Intervals

Movement	SB	SB
Directions Served	T	T
Maximum Queue (ft)	156	138
Average Queue (ft)	92	46
95th Queue (ft)	146	110
Link Distance (ft)	509	509
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		