WAWA CONVENIENCE STORE & GAS STATION

Traffic Impact Study

Plainfield, IN

February 2026

Prepared for:

Teachers' Retirement System

Kimley»Horn

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CERTIFICATION

Study Prepared By: Meg Hunter, PE

Study Reviewed By: Rahul Rajbhara, PE, PTOE, RSP_1

I certify that this Traffic Impact Analysis (TIA) report has been prepared by me or under my immediate supervision and that I have experience and training in the field of traffic and transportation engineering.

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EXECUTIVE SUMMARY

Kimley-Horn and Associates, Inc. (Kimley-Horn) was retained by the Teachers' Retirement System to perform a traffic impact study for the proposed Wawa convenience store and gas station development located at the northwest corner of US 40 (Main Street) & Dan Jones Road / Holiday Drive in Plainfield, Indiana. The proposed development includes an approximately 6,400 square-foot convenience store with 16 fueling positions. Access to the proposed site will be provided via two existing access drives on US 40 and Dan Jones Road. This report includes a capacity analysis of the study intersections, a crash analysis, and a comparison of the trips generated by the Walgreens that used to be operational at the proposed site and the proposed Wawa development.

The capacity analysis included two access scenarios at the intersection of US 40 & Access Drive: a full access and a right-in-right-out-left-in access (RIRO+LI). The intersection of US 40 & Dan Jones Road is projected to operate at LOS D or better in all peak hours in both scenarios in the Future Year (2027) Build condition. Some minor movements and approaches operate at LOS E under existing conditions and are projected to operate at LOS E or LOS F in the future build conditions. US 40 & Dan Jones Road is a high-volume intersection; therefore, it is not unusual for minor movements to operate with longer delays.

The access drive along Dan Jones Road is projected to operate at LOS B or better in all peak hours and both scenarios. The southbound approach at US 40 & Access Drive is projected to operate at LOS F in the PM and Saturday peak hours in the full access scenario. In the RIRO+LI scenario, the southbound approach is projected to operate at LOS B or better. The increase in delay for the full access condition is attributable to the delay caused by vehicles waiting for a gap to make a left-turn movement. In the real world, if the delay is too long, drivers will seek alternatives, such as making a right turn followed by a U-turn on US 40 or using the other access drive.

In addition to performing a capacity review at the study intersections, a crash analysis was conducted at the two access drives for a three-year period (2022 to 2024), when they were full access drives serving the Walgreens. In the three years, there was one rear-end collision (property damage only) that occurred in the queue exiting the Walgreens parking lot at US 40 & Access Drive. At Dan Jones Road & Access Drive, there were four crashes during this period, all resulting in property damage. Two incidents involved vehicles leaving the site failing to yield to southbound traffic, one involved a northbound vehicle turning left into the site without yielding to southbound traffic, and another crash occurred within the queue while exiting the parking lot onto Dan Jones Road.

The following geometric and traffic control mitigations are recommended.

- US 40 & Dan Jones Road
  - Signal Timing Optimization
- US 40 & Access Drive
  - Installation of a Westbound dedicated 50 ft right-turn lane with a 50 ft taper

INTRODUCTION

Kimley-Horn and Associates, Inc. (Kimley-Horn) was retained by the Teachers' Retirement System to perform a traffic impact study for the proposed Wawa convenience store and gas station development located at the northwest corner of US 40 (Main Street) & Dan Jones Road / Holiday Drive in Plainfield, Indiana. The proposed development includes an approximately 6,400 square-foot convenience store with 16 fueling positions. Access to the proposed site will be provided via two existing access drives on US 40 and Dan Jones Road. The proposed site is shown in **Exhibit 1**.

This report presents and documents the study methodology, summarizes data collection and development traffic characteristics, highlights the evaluation of traffic conditions on the study intersection and roadways, and identifies recommendations to address operational impacts and integrate the proposed development into the surrounding transportation system.

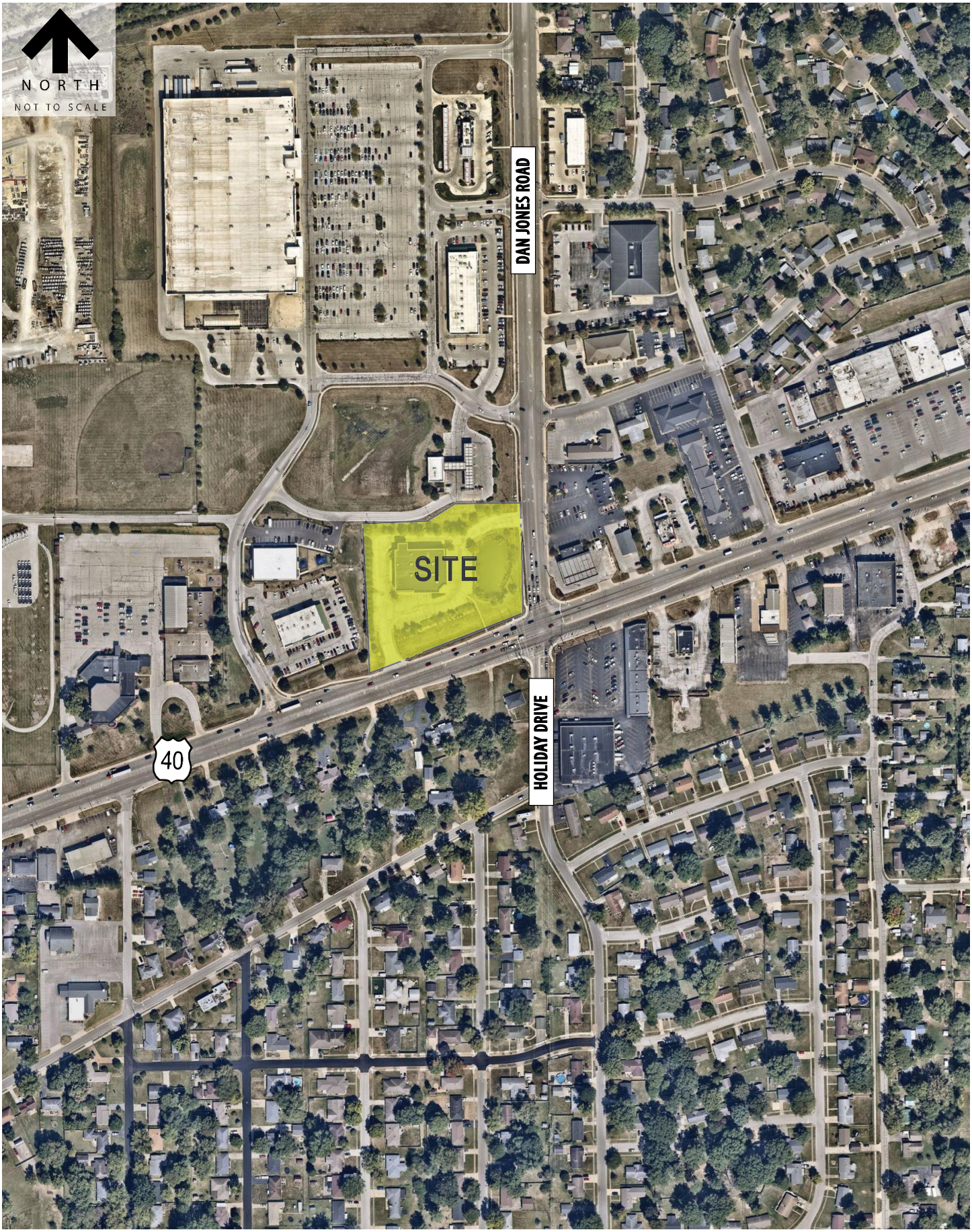

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EXHIBIT 1
SITE LOCATION

EXISTING CONDITIONS

Kimley-Horn conducted a review of the subject site and surrounding area to inventory relevant information pertaining to nearby land uses, inventory key transportation system characteristics, and document existing traffic control. This section of the report details information on these existing conditions.

Area Land Uses & Connectivity

There is currently a vacant Walgreens located on the site accessible by two full access drives along US 40 and Dan Jones Road. There are commercial retail and restaurant developments located directly north, east, and west of the proposed site. South of the proposed site (i.e., south of US 40) is largely residential.

US 40 provides regional connectivity through Plainfield and to Indianapolis in the east.

Existing Roadway Characteristics

Existing road characteristics are illustrated in **Exhibit 2**.

Traffic Count Data

Traffic counts were collected on Wednesday, January 7, 2026, from 7:00 AM to 9:00 AM, Thursday, December 4, 2025, from 4:00 PM to 6:00 PM, and Saturday, December 6, 2026, from 11:00 AM to 1:00 PM at US 40 & Dan Jones Road / Holiday Drive. Copies of the traffic counts are included in the **Appendix**. In the scoping meeting with the Indiana Department of Transportation (INDOT), INDOT requested AM peak hour counts in addition to the PM and Saturday counts that had already been collected.

The turning movement counts indicated a morning peak hour from 8:00 AM to 9:00 AM, an evening peak hour from 5:00 PM to 6:00 PM, and a Saturday midday peak hour from 11:45 AM to 12:45 PM. The Existing (2025) traffic counts are illustrated in **Exhibit 3.**

Queue length data was collected on Wednesday, January 21, 2026, from 5:00 PM to 6:00 PM for the eastbound and southbound approaches. A summary of the data collected is included in the **Appendix**.

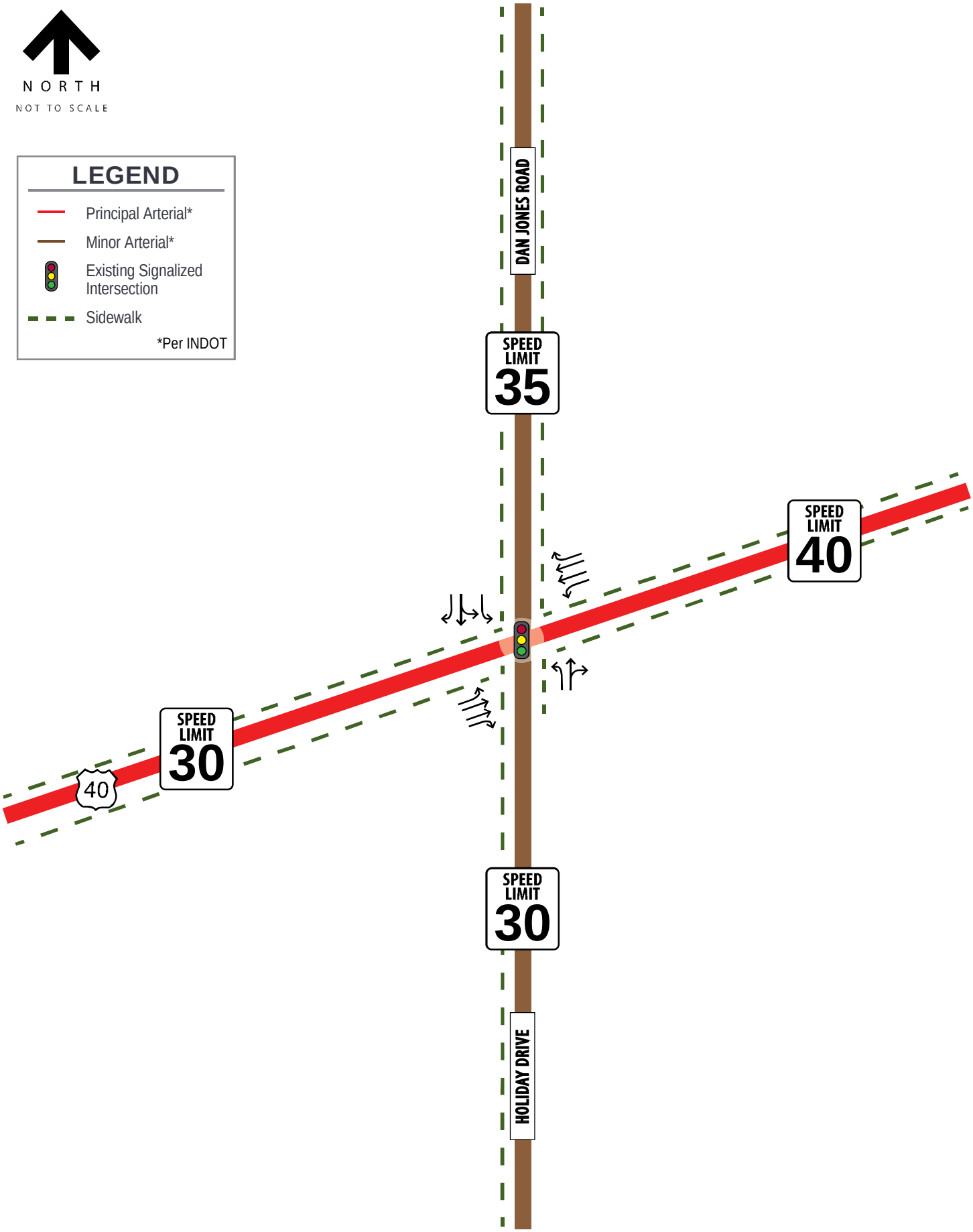

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EXHIBIT 2

EXISTING ROADWAY CHARACTERISTICS

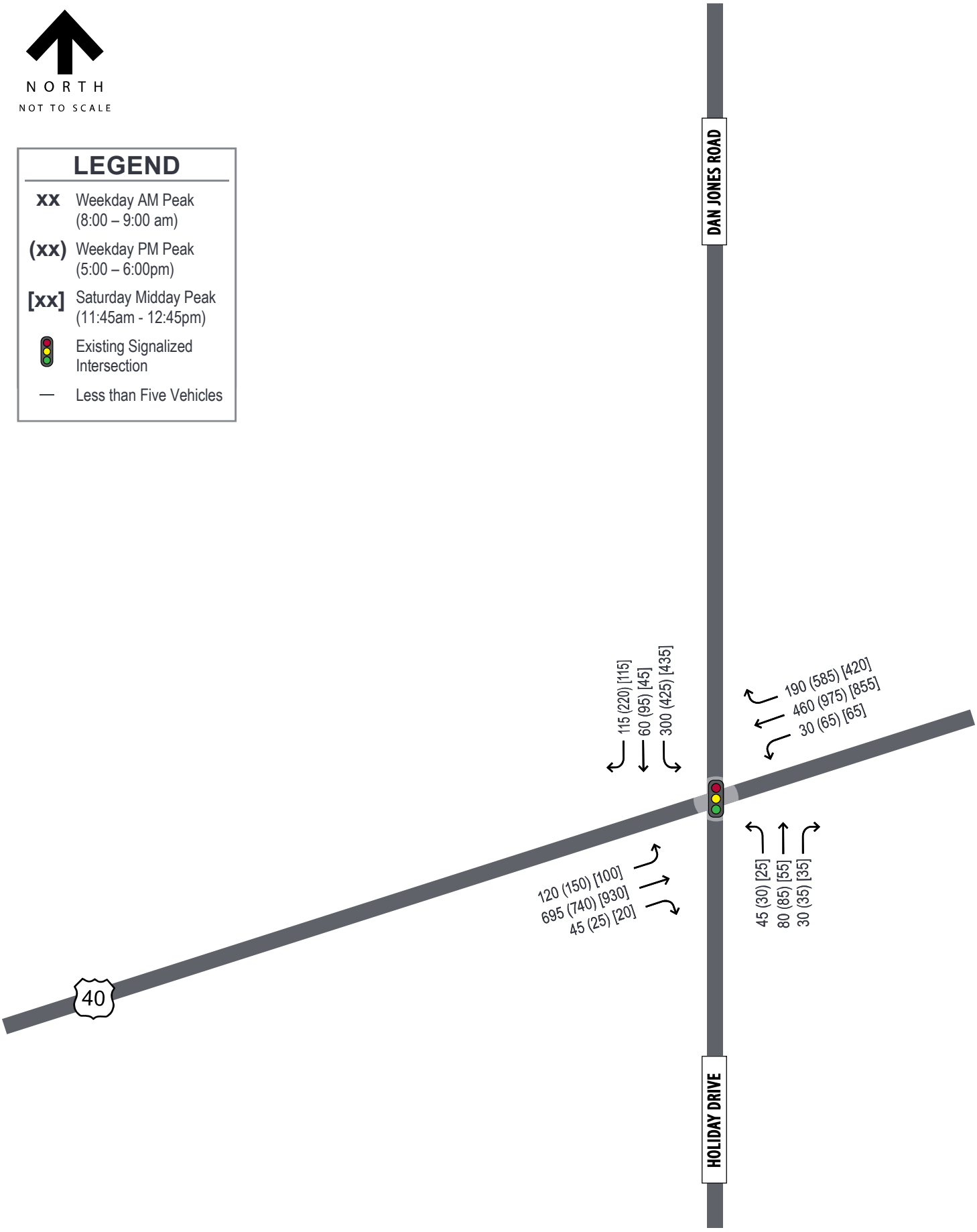

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EXHIBIT 3

EXISTING (2025) TRAFFIC VOLUMES

Existing Capacity Analysis

Per INDOT standards, Synchro capacity software was used to evaluate existing and future operational conditions at the study intersections during the weekday and Saturday peak hours. The capacity of an intersection quantifies its ability to accommodate traffic volumes and is expressed in terms of level of service (LOS), measured in average delay per vehicle. LOS grades range from A to F, with LOS A as the highest (best traffic flow and least delay), LOS E as saturated or at-capacity conditions, and LOS F as the lowest (oversaturated conditions). For the capacity analysis criteria, most review agencies consider acceptable conditions at LOS D or better.

The LOS grades shown below, which are provided in the Transportation Research Board's Highway Capacity Manual (HCM), quantify and categorize the driver's discomfort, frustration, fuel consumption, and travel times experienced as a result of intersection control and the resulting traffic queuing. A detailed description of each LOS rating can be found in **Table 1**.

Table 1. Level of Service Grading Descriptions[1]

Level of Service	Description
A	Minimal control delay; traffic operates at primarily free-flow conditions; unimpeded movement within traffic stream.
B	Minor control delay at signalized intersections; traffic operates at a fairly unimpeded level with slightly restricted movement within traffic stream.
C	Moderate control delay; movement within traffic stream more restricted than at LOS B; formation of queues contributes to lower average travel speeds.
D	Considerable control delay that may be substantially increased by small increases in flow; average travel speeds continue to decrease.
E	High control delay; average travel speed no more than 33 percent of free flow speed.
F	Extremely high control delay; extensive queuing and high volumes create exceedingly restricted traffic flow.

[1]Highway Capacity Manual, 7th Edition.

The range of control delay for each rating (as detailed in the HCM) is shown in **Table 2**. Higher delays are tolerated for signalized intersection LOS ratings because they are expected to carry a larger volume of vehicles and stopping is required during red time.

Table 2. Level of Service Grading Criteria[1]

Level of Service	Average Control Delay (s/veh) at:	
	Unsignalized Intersections	Signalized Intersections
A	0 – 10	0 – 10
B	> 10 – 15	> 10 – 20
C	> 15 – 25	> 20 – 35
D	> 25 – 35	> 35 – 55
E	> 35 – 50	> 55 – 80
F[2]	> 50	> 80

[1] Highway Capacity Manual, 7th Edition
[2] All movements with a Volume to Capacity (v/C) ratio greater than 1 receive a rating of LOS F.

Based on these standards, capacity results were identified for the study intersections under the existing conditions. The results of capacity analysis for the existing conditions are summarized in **Table 3**. In this table, the operation on each approach is quantified according to the average delay per vehicle and the corresponding level of service. Due to non-NEMA phasing at the intersection of US 40 & Dan Jones Road, the capacity analysis was conducted using HCM 2000's methodology. The HCM 2000 summary reports are included in the **Appendix**.

Table 3. Existing (2025) Levels of Service

Intersection	Weekday AM Peak		Weekday PM Peak		Saturday Midday Peak	
	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS
US 40 & Dan Jones Road Sig						
Eastbound	26	C	44	D[2]	71	E
Westbound	21	C	30	C	26	C
Northbound	52	D	64	E	49	D
Southbound	50	D[1]	51	D[1]	42	D
Intersection	***32***	***C***	***40***	***D***	***45***	***D***

Sig – Signalized Intersection
[1] Through movement operates at LOS E
[2] Left movement operates at LOS E

Under existing conditions, US 40 & Dan Jones Road operates at LOS D or better in all three peak hours. The following approaches and movements operate at LOS E or LOS F.

- NB approach: Operates at LOS E in the PM peak hour
- EB approach: Operates at LOS E in the Saturday midday peak hour
- EBL: Operates at LOS E in the PM peak hour
- SBT: Operates at LOS E in the AM and PM peak hours

In addition to performing a capacity analysis, a queue analysis was performed. The PM peak hour Synchro model was calibrated using queue lengths collected in the field. The same parameter updates were applied to the AM peak hour and the Saturday midday peak hour. The 95th percentile queues are shown in **Table 4**. A comparison of the modeled 95th percentile queues and the observed 95th percentile are shown in **Table 5**.

Table 4. Existing (2025) 95th Percentile Queues (feet)

Intersection	Storage Bay Length (linear feet)	Weekday AM Peak	Weekday PM Peak	Saturday Midday Peak
US 40 & Dan Jones Road				
Eastbound (Left)	250	80	215	80
Eastbound (Through)[3]	300[1]	485	585	880
Southbound (Left)	325	230	300	255
Southbound (Through/Left)	210[2]	165	435	300
Southbound (Right)	210[2]	55	190	50

[1] US 40 & Access Drive is approximately 300 ft upstream of the eastbound stop bar
[2] Dan Jones Road & Access Drive is approximately 210 ft upstream of the southbound stop bar
[3] Eastbound through lanes are not equally utilized due to the heavy right-turn traffic at the downstream intersection of Quaker Boulevard. Queues listed in this table are for the critical lane (outside through lane).

The Existing (2025) 95th percentile queue analysis results are summarized below.

- EBL, SBL, and SBR: Queues are contained within the storage bay in all three peak hours
- EBT: Queues extend past the access drive along US 40 and Dan Jones Road in all three peak hours
- SBT: Queues extend past the access drive along Dan Jones Road in the weekday PM and Saturday MD peak hours.

Table 5. Modeled vs. Observed 95th Percentile Queues

Intersection	Weekday PM Peak Modeled	Weekday PM Peak Observed
US 40 & Dan Jones Road		
Eastbound (Left)	215	230
Eastbound (Through)[1]	585	615
Southbound (Left)	300	250
Southbound (Through/Left)	435	488
Southbound (Right)	190	194

[1] Eastbound through lanes are not equally utilized due to the heavy right-turn traffic at the downstream intersection of Quaker Boulevard. Queues listed in this table are for the critical lane (outside through lane).

DEVELOPMENT CHARACTERISTICS

This section of the report outlines key characteristics for the proposed Wawa convenience store and gas station and estimates the site's trip generation and distribution on the study area street network during peak hours.

Development Characteristics

The proposed convenience store and gas station would include an approximately 6,400 square-foot convenience store with 16 fueling positions. Access to the site will be provided via two access drives: one along US 40 and one along Dan Jones Road. A copy of the concept site plan is included in the **Appendix**.

Trip Generation

To estimate trips generated by the proposed development plan, data was referenced from ITE's Trip Generation, 12th Edition. The proposed development was modeled using Land Use Code (LUC) 945 (Convenience Store/Gas Station). Trip generation rates used are shown in **Table 6**.

Table 6. ITE Trip Generation Data

ITE Land Use	Units	Weekday		Saturday
		AM Peak Hour	PM Peak Hour	Midday Peak Hour
Convenience Store/Gas Station (945)	*Per Veh. Fueling Position*	T = 23.21(X) 50% In / 50% Out	T = 21.08(X) 50% In / 50% Out	T = 18.72(X) 50% In / 50% Out

T = Number of Trips
X = Number of Units

The site-generated trips are expected to follow multiple routing patterns when traveling to and from the subject site, as described below:

- **Primary Trips** - Vehicles that travel to the subject development and then return directly to their place of origin are called "primary trips." Primary trips reflect new traffic volumes generated by the proposed development that would approach and depart on the same route.
- **Pass-By** - Pass-by traffic reflects the travel patterns of motorists who are already traveling on the adjacent study roadways and stop at the site en route to another destination. The pass-by rates listed in the ITE Trip Generation Manual, 12th Edition, were used to calculate the number of pass-by trips.

Based on the ITE data provided in **Table 6**, site-generated trips were calculated for the proposed development. Site-generation traffic projections for the complete development are shown in **Table 7**.

Table 7. Site-Generated Traffic Projections[1]

Land Use	Size	Weekday						Saturday		
		AM Peak Hour			PM Peak Hour			Midday Peak Hour		
		In	Out	Total	In	Out	Total	In	Out	Total
Convenience Store/Gas Station (945)	16 VFP	185	185	370	170	170	340	150	150	300
Total Trips		185	185	370	170	170	340	150	150	300
Minus Pass-By Trips (945)[2]		*-140*	*-140*	*-280*	*-125*	*-125*	*-250*	*-115*	*-115*	-230
Total Pass-by Trips (Minus)		*-140*	*-140*	*-280*	*-125*	*-125*	*-250*	*-115*	*-115*	*-230*
Total New Trips		45	45	90	45	45	90	35	35	70

[1] In/Out volumes are rounded to the nearest multiple of five.
[2] A pass-by rate of 76% was used in the AM peak hour and 75% in the PM peak hour. There was no pass-by rate associated with the Saturday midday peak hour; therefore, the pass-by rate for the PM peak hour was used.

Directional Distribution

The estimated distribution of site-generated traffic on the surrounding roadway network as it approaches and departs the site is a function of several variables, such as site access locations, characteristics of the street system, the ease with which motorists can travel over various sections of the street system, key origins and destinations, and prevailing traffic volumes/patterns. As such, the directional distribution shown in **Table 8** presents the anticipated directional distribution from which vehicles will travel to and from the site. The distribution was assumed to remain the same for all three peak hours**.**

Table 8. Estimated Trip Distribution

Traveling to/from	Estimated Trip Distribution
East on US 40	38%
West on US 40	37%
North on Dan Jones Road	20%
South on Holiday Drive	5%
Total	100%

Site Traffic Assignment

The site-generated traffic will enter and exit through two access drives: one along US 40 and one along Dan Jones Road. Two access scenarios were analyzed in this report: a full access drive along US 40 and a right-in-right-out-left-in (RIRO+LI) access drive along US 40. Both scenarios assume the Dan Jones Road access drive would be full access.

Based on the preceding directional distribution assumptions in conjunction with the estimated trip generation, the primary trip assignments for the complete development are illustrated in **Exhibit 4**. **Exhibit 5** depicts the pass-by trips, and the total trip assignment is shown in **Exhibit 6**.

Note: The estimated trip generation presented in the exhibits reflects the full access scenario for the access drive on US 40.

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EXHIBIT 4

PRIMARY TRIP ASSIGNMENT

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EXHIBIT 5

PASS-BY TRIP ASSIGNMENT

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EXHIBIT 6
TOTAL TRIP ASSIGNMENT

FUTURE CONDITIONS

This section of the report discusses the projected background traffic growth and the level of service for the future no-build and future build scenarios for the proposed Wawa convenience store and gas station development. The proposed development is expected to be constructed and operational by Year 2027; Kimley-Horn, therefore, evaluated future traffic conditions for Future Year 2027 as the future conditions analysis horizon.

Future Background Traffic Projections

Background Traffic Growth

Area background traffic was developed with consideration for regional traffic growth over time. In order to estimate the growth and ambient levels of traffic in the study area, an annual growth rate was applied to existing traffic volumes in the study area. A growth rate of 0.5% was determined based on historical data and upon consultation with INDOT. This rate was linearly applied to existing trips to project 2027 traffic.

To develop Future Year (2027) No-Built traffic projections, the applied annual growth rate was added to the Existing Year (2025) traffic volumes. The Future Year (2027) No-Build traffic projections are presented in **Exhibit 7**.

To develop future build traffic projections, site trips were added to the no-build traffic projections. Traffic projections for the Future Year (2027) Build scenario are shown in **Exhibit 8**.

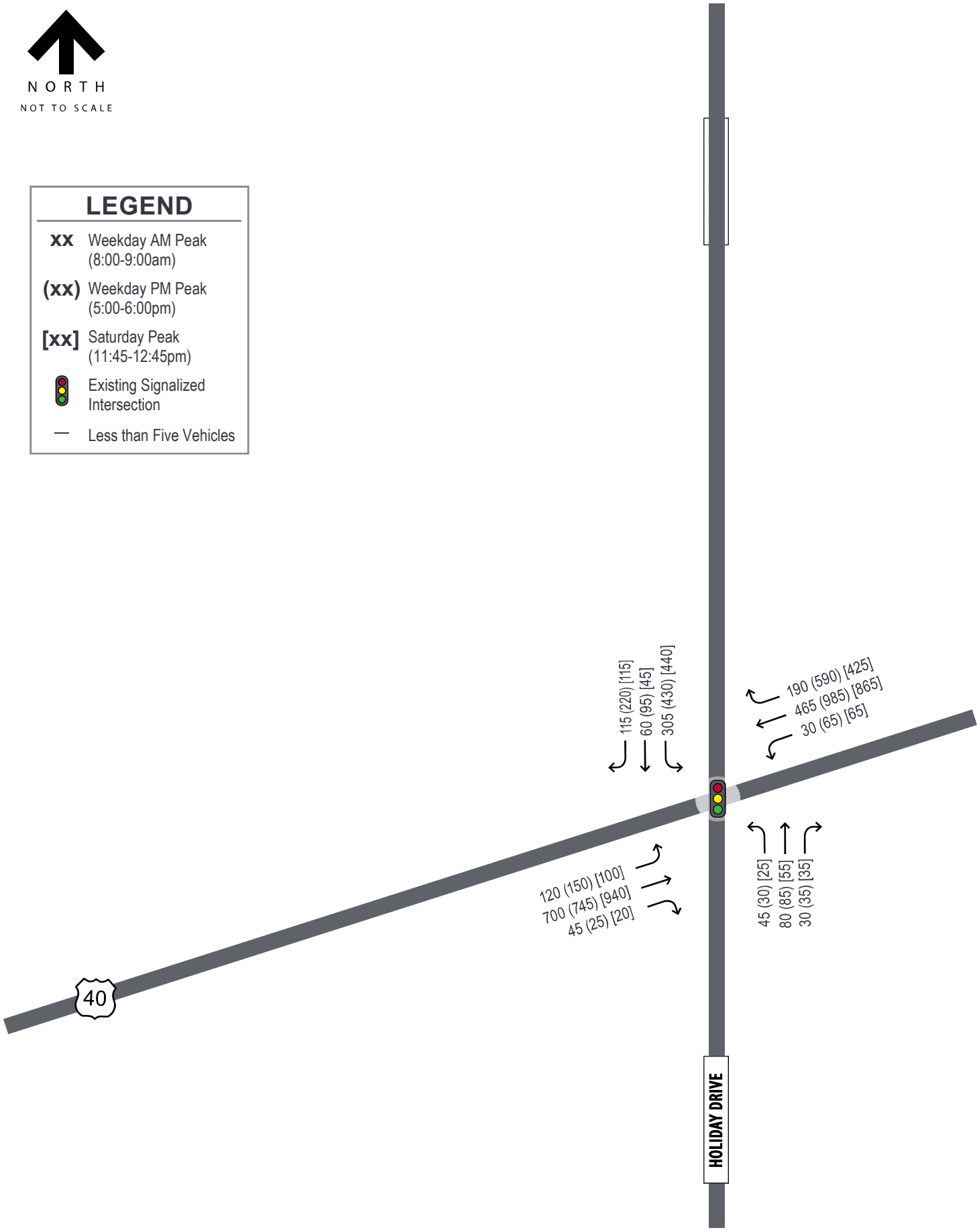

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EXHIBIT 7

NO-BUILD (2027) TRAFFIC PROJECTIONS

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EXHIBIT 8

BUILD (2027) TRAFFIC PROJECTIONS

Future Geometry

The following provides a summary of future geometry at the study intersections. Right-turn lane warrant analysis was completed for the US 40 & Access Drive intersection to assess potential off-site improvements.

Turn Lane Warrants

US 40 & Access Drive projected traffic volumes were evaluated against right-turn warrant criteria per Chapter 46 in the Indian Design Manual (IDM). The turn lane warrant calculations are provided in the **Appendix**.

In the Future Year (2027) Build condition, a westbound right-turn lane is warranted at US 40 & Access Drive. A right-turn lane is included in the Future Year (2027) Build conditions. The westbound turn lane should have 50 ft of storage with 50 ft of taper.

Future Capacity Analysis

As with the Existing Year (2025) capacity analysis, Synchro capacity software was used to evaluate the future operational conditions at the study intersections. Due to non-NEMA phasing at the intersection of US 40 & Dan Jones Road, the capacity analysis was conducted using HCM 2000 methodology. The capacity analysis for the two access drives was conducted using HCM 7th edition methodology. The capacity analysis summary results are included in the **Appendix**.

Future Year (2027) No-Build Capacity Analysis

Based on the volume projections provided in **Exhibit 7**, capacity results were identified for the Future Year (2027) No-Build conditions. The results of the capacity analysis are summarized in **Table 9**.

Table 9. Future Year (2027) No-Build Levels of Service.

Intersection	Weekday AM Peak		Weekday PM Peak		Saturday Midday Peak	
	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS
US 40 & Dan Jones Road Sig						
Eastbound	27	C	45	D[2]	75	E[3]
Westbound	21	C	30	C	27	C
Northbound	52	D	64	E	49	D
Southbound	50	D[1]	52	D[1]	42	D
Intersection	***32***	***C***	***41***	***D***	***47***	***D***

Sig - Signalized Intersection
[1] Through movement operates at LOS E
[2] Left movement operates at LOS E
[3] Through movement operates at LOS F

Similar to Existing (2025) conditions, in the Future Year (2027) No-Build condition, the intersection of US 40 & Dan Jones Road is anticipated to operate at LOS D or better in all three peak hours. The following approaches and movements operate at LOS E or LOS F.

- NB approach: Projected to operate at LOS E in the PM peak hour (consistent with Existing (2025) conditions)
- EB approach: Projected to operate at LOS E in the Saturday midday peak hour (consistent with Existing (2025) conditions)
- EBL: Projected to operate at LOS E in the PM peak hour (consistent with Existing (2025) conditions) and at LOS F in the Saturday midday peak hour.
- SBT: Projected to operate at LOS E in the AM and PM peak hours (consistent with Existing (2025) conditions)

As with the Existing (2025) conditions, a queue analysis was performed. The same parameters used in the Existing (2025) analysis were applied to the Future Year (2027) No-Build model. The 95th Percentile queues are shown in **Table 10**.

Table 10. Future Year (2027) No-Build 95th Percentile Queues (feet)

Movement	Storage Bay Length	Weekday AM Peak	Weekday PM Peak	Saturday Midday Peak
US 40 & Dan Jones Road				
Eastbound (Left)	250	80	220	80
Eastbound (Through)[3]	300[1]	490	590	890
Southbound (Left)	325	235	305	255
Southbound (Through/Left)	210[2]	165	440	305
Southbound (Right)	210[2]	55	190	50

[1] US 40 & Access Drive is approximately 300 ft upstream of the eastbound stop bar
[2] Dan Jones Road & Access Drive is approximately 210 ft upstream of the southbound stop bar
[3] Eastbound through lanes are not equally utilized due to the heavy right-turn traffic at the downstream intersection of Quaker Boulevard. Queues listed in this table are for the critical lane (outside through lane).

The Future Year (2027) No-Build 95th percentile queues analysis results are summarized below.

- EBL, SBL, and SBR: Queues are projected to be contained within the provided storage bay for all peak hours (consistent with Existing (2025) conditions)
- EBT: Queues are projected to exceed 300 feet in all peak hours (consistent with Existing (2025) conditions)
- SBT: Queues are projected to exceed 210 feet in two peak hours (consistent with Existing (2025) conditions)

Future Year (2027) Build Capacity Analysis

Based on the volume projections provided in **Exhibit 8**, capacity results were identified for the Future Year (2027) Build conditions. The access drive at US 40 & Access Drive was assumed to be a full access. The results of the capacity analysis are summarized in **Table 11**.

Table 11. Future Year (2027) Build Levels of Service

Intersection		Weekday AM Peak		Weekday PM Peak		Saturday Midday Peak	
		Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS
US 40 & Dan Jones Road	Sig						
Eastbound		28	C	48	D[2]	83	F
Westbound		22	C	31	C	27	C
Northbound		53	D	64	E	49	D
Southbound		50	D[1]	53	D[1]	42	D
Intersection		***33***	***C***	***42***	***D***	***50***	***D***
Dan Jones Road & Access Drive	MLSC						
Eastbound		11	B	13	B	12	B
Northbound (Left)		9	A	9	A	9	A
US 40 & Access Drive	MLSC						
Eastbound (Left)		9	A	13	B	11	B
Southbound		36	E	>120	F	118	F

Sig - Signalized Intersection
MLSC – Minor-Leg Stop-Controlled Intersection
[1] Through movement operates at LOS E
[2] Left movement operates at LOS E
[3] Through movement operates at LOS F

Similar to Future Year (2027) No-Build conditions, in the Future Year (2027) Build condition, the intersection of US 40 & Dan Jones Road is projected to operate at LOS D or better in all three peak hours. The following approaches and movements operate at LOS E or LOS F.

- NB approach: Projected to operate at LOS E in the PM peak hour (consistent with Existing (2025) conditions)
- EB approach: Projected to operate at LOS F in the Saturday midday peak hour
- EBL: Projected to operate at LOS E in the PM peak hour (consistent with Existing (2025) conditions)
- SBT: Projected to operate at LOS E in the AM and PM peak hours (consistent with Existing (2025) conditions)

Dan Jones Road & Access Drive is projected to operate at LOS B or better in all three peak hours. US 40 & Access Drive's southbound approach is projected to operate at LOS E or LOS F in the Future Build condition. Due to heavy mainline traffic on US 40, it is not uncommon for the minor-leg approaches to experience a high level of delay. When delays become long, drivers will choose alternative routes such as making a right-turn followed by a U-turn on US 40 or exiting from the access drive on Dan Jones Road.

Future Year (2027) Build Capacity Analysis Mitigation

With signal timing adjustments, the intersection of US 40 & Dan Jones Road is projected to operate at LOS D or better on all approaches in the Saturday peak hour. The mitigated capacity results are provided in the **Appendix**.

Given the high volume of vehicles utilizing this intersection during the peak hours, it is not uncommon for longer delays to be experienced by the non-mainline movements.

US 40 & Access Drive: Right-In-Right-Out-Left-In

The above Future Year (2027) Build capacity analysis assumes the US 40 & Access Drive will be full access as it was when the Walgreens was operational. In addition to analyzing the US 40 & Access Drive as a full access drive, additional capacity analysis was completed assuming a right-in-right-out-left-in (RIRO+LI) configuration.

The capacity analysis, assuming a right-in-right-out-left-in access drive along US 40, is presented in **Table 12**. The signal timings were optimized to match Existing (2025) LOS or better. A summary of the capacity results is provided in the **Appendix**.

Table 12. Future Year (2027) Build RIRO + LI Levels of Service

Intersection		Weekday AM Peak		Weekday PM Peak		Saturday Midday Peak	
		Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS
US 40 & Dan Jones Road	Sig						
Eastbound		29	C	48	D	65	E
Westbound		23	C	37	D	27	C
Northbound		53	D	65	E	49	D
Southbound		47	D[1]	54	D[1]	46	D[1]
Intersection		***33***	***C***	***45***	***D***	***44***	***D***
Dan Jones Road & Access Drive	MLSC						
Eastbound		11	B	13	B	12	B
Northbound (Left)		9	A	9	A	9	A
US 40 & Access Drive	MLSC						
Eastbound (Left)		9	A	13	B	11	B
Southbound		11	B	15	B	13	B

Sig - Signalized Intersection
MLSC – Minor-Leg Stop-Controlled Intersection
[1] Through movement operates at LOS E

As in the full access scenario, US 40 & Dan Jones Road is projected to operate at LOS D or better in the peak hours in the RIRO+LI scenario. Some minor movements are projected to operate at LOS E; however, the intersection overall is projected to maintain a LOS D or better.

Dan Jones Road & Access Drive is projected to operate with LOS B or better in all peak hours in the RIRO+LI scenario.

US 40 & Access Drive is projected to operate at LOS B or better in all peak hours in the RIRO+LI scenario. The improvement in LOS from the full access scenario is due to the restriction of left-outs

in the model. In practice, when drivers grow impatient waiting to turn left, they often choose to make a right turn instead or use another access road.

Future Year (2027) Build 95th Percentile Queues

The results of the 95th percentile queue are shown in **Table 13**.

Table 13. Future Year (2027) Build 95th Percentile Queues (feet)

		Build (2027) - Full Access			Build (2027) - RIRO+LI		
Movement	Storage Bay Length	AM Peak	PM Peak	Sat. Midday Peak	AM Peak	PM Peak	Sat. Midday Peak
US 40 & Dan Jones Road							
Eastbound (Left)	250	80	230	65	80	210	75
Eastbound (Through)[3]	300[1]	500	605	775	435	555	795
Southbound (Left)	325	245	315	305	300	340	295
Southbound (Through/Left)	210[2]	175	465	410	195	485	405
Southbound (Right)	210[2]	55	190	55	55	185	50

[1] US 40 & Access Drive is approximately 300 ft upstream of the eastbound stop bar
[2] Dan Jones Road & Access Drive is approximately 210 ft upstream of the southbound stop bar
[3] Eastbound through lanes are not equally utilized due to the heavy right-turn traffic at the downstream intersection of Quaker Boulevard. Queues listed in this table are for the critical lane (outside through lane).

The Future Year (2027) Build 95th percentile queues that are projected to exceed their storage capacity are presented below.

- EBT: Queues are projected to extend past the US 40 access drive in all peak hours in all scenarios.
- SBL: Queues are projected to exceed their storage capacity in the PM peak hour in the RIRO+LI condition.
- SBT: Queues are projected to extend past the Dan Jones Road access drive in the PM and Saturday peak hours in all three conditions.

CRASH ANALYSIS

Kimley-Horn conducted a crash analysis for the road network around the proposed Wawa convenience store and gas station. Kimley-Horn understands that the Walgreens at 1516 E Main St. was operational through 2024. Crash data, provided by INDOT, was reviewed to understand crash trends for the three years between 2022 and 2024. **Table 14** presents select crash trends for the road network around the US 40 & Dan Jones Road intersection between 2022 and 2024.

Table 14: Crash Trends Near US 40 & Dan Jones Road[1]

Year	Rear-end Collisions at US 40 & Dan Jones Road	Left-Turn Collisions at US 40 & Dan Jones Road	Collisions Associated with US 40 & Walgreens Access Drive	Collisions Associated with Dan Jones & Walgreens Access Drive
2022	11	3	0	3[3]
2023	11	3	0	0
2024	8	3	1[2]	1[2]
Total	**30**	**9**	**1**	**4**

[1] Crash analysis is reliant on the accuracy and completeness of the crash reports. The crash analysis presented in this table is reflective of the data generated by ARIES and the engineering interpretation.
[2] Rear-end crash caused by vehicle 2 hitting vehicle 1 while vehicle 1 was waiting to exit Walgreens parking lot and make a turn onto main road
[3] Two collisions occurred while vehicle was exiting the Walgreens drive and one collision occurred while a vehicle was making a northbound left into the Walgreens drive.

At US 40 & Walgreens Full Access Drive, between 2022 and 2024, there were zero crashes associated with vehicles turning onto or from US 40. The one crash that occurred at the Walgreens full-access drive along US 40 was a rear-end collision between two vehicles waiting to make the turning movement out of the access drive.

At Dan Jones Road & Walgreens Full Access Drive, there were four crashes in the three years between 2022 and 2024. Two crashes were caused by the exiting vehicle not yielding to an oncoming southbound vehicle. One crash was caused by a northbound left-turning vehicle not yielding to an oncoming southbound vehicle, and one crash was a rear-end collision that occurred while the vehicles were waiting to turn onto Dan Jones Road.

The crash reports indicate that all five crashes that occurred at the Walgreens access drives on US 40 and Dan Jones Road involved property damage only (no injury). In the three years between 2022 and 2024, it is estimated (per ITE Trip Generation Manual) that approximately 1.7 million trips were generated by the Walgreens. This suggests that the existing full access drives on US 40 and Dan Jones have not historically seen a high frequency or severity of crashes.

Trip Generation Comparison

The proposed Wawa convenience store and gas station is planned for a site previously occupied by Walgreens. A trip generation comparison was completed to understand how site-generated trips are projected to change with a gas station and convenience store instead of a pharmacy. As with the trip generation estimates for the Wawa convenience store and gas station, the trips generated by the Walgreens were estimated using data from ITE's Trip Generation, 12th Edition. The Walgreens was modeled using Land Use Code (LUC) 881 (Pharmacy/Drugstore with Drive-Through Window). The trip generation rate used is shown in **Table 15**.

Table 15: ITE Trip Generation Data - Walgreens

ITE Land Use	Units	Weekday		Saturday
		AM Peak Hour	PM Peak Hour	Midday Peak Hour
Pharmacy/Drugstore with Drive-Through Window (881)	*Per 1,000 SF*	T = 3.83(X) 52% In / 48% Out	T = 10.24(X) 50% In / 50% Out	T = 8.92(X) 50% In / 50% Out

T = Number of Trips
X = Units

Based on the ITE data provided in **Table 15**, site-generated trips were calculated for the proposed development. Site-generation traffic projections for the complete development are shown in **Table 16**. **Table 17** presents the trip generation projections for the Walgreens and the Wawa.

Table 16: Walgreens Generated Traffic Projections[1]

Land Use	Size	Weekday						Saturday		
		AM Peak Hour			PM Peak Hour			Midday Peak Hour		
		In	Out	Total	In	Out	Total	In	Out	Total
Pharmacy/Drugstore with Drive-Through Window (881)	16.7 x 1,000 SF	35	30	65	85	85	170	75	75	150
Total Trips		35	30	65	85	85	170	75	75	150
Minus Pass-By Trips (881)[2]		*-15*	*-15*	*-30*	*-40*	*-40*	*-80*	*-35*	*-35*	-70
Total Pass-by Trips (Minus)		*-15*	*-15*	*-30*	*-40*	*-40*	*-80*	*-35*	*-35*	*-70*
Total New Trips		20	15	35	45	45	90	40	40	80

[1] In/Out volumes are rounded to the nearest multiple of five.
[2] There are no pass-by rates associated with LUC 881 (Pharmacy/Drugstore with Drive-Through Window) for the AM peak hour and Saturday Midday peak hour, so the pass-by rate for the PM peak hour was used for all three peak hours. A pass-by rate of 49% was used.

Table 17. Trip Generation Comparison

Land Use	Weekday						Saturday		
	AM Peak Hour			PM Peak Hour			Midday Peak Hour		
	In	Out	Total	In	Out	Total	In	Out	Total
Total Trips									
Wawa Convenience Store and Gas Station	185	185	370	170	170	340	150	150	300
Walgreens	35	30	65	85	85	170	75	75	150
Difference	*150*	*155*	*305*	*85*	*85*	*170*	*75*	*75*	*150*
Excluding Pass-By Trips									
Wawa Convenience Store and Gas Station	45	45	90	45	45	90	35	35	70
Walgreens	20	15	35	45	45	90	40	40	80
Difference	***+25***	***+30***	***+55***	***0***	***0***	***0***	***-5***	***-5***	***-10***

When pass-by trips are excluded, the Wawa is projected to generate approximately 55 new trips in the AM peak hour, while the number of new trips generated in the PM peak hour and Saturday peak hour are expected to be comparable to that of the Walgreens.

RECOMMENDATIONS & CONCLUSIONS

Kimley-Horn conducted a traffic impact analysis for the proposed Wawa convenience store and gas station at the northwest corner of US 40 & Dan Jones Road in Plainfield, Indiana. The proposed development would include an approximately 6,400 square-foot convenience store with 16 fueling positions. Access to the proposed site will be provided via two existing access drives along US 40 and along Dan Jones Road. This study performed a capacity analysis for two access scenarios. All scenarios assumed a full access at Dan Jones Road & Access Drive; however, the configuration at US 40 & Access Drive was varied. The scenarios included a full access drive and a right-in-right-out-left-in (RIRO+LI) access drive. With timing adjustments, US 40 & Dan Jones Road is projected to operate similarly to Existing (2025) levels of service. In the full access scenario, the southbound approach at US 40 & Access Drive is projected to have a high level of delay due to vehicles being required to wait for an adequate gap to make an outbound left-turn. In practice, when drivers grow impatient waiting to turn left, they often choose to make a right turn instead or use another access road. In the RIRO+LI scenario, the southbound approach at US 40 & Access Drive is projected to operate at LOS B.

In addition to performing a capacity review at the study intersections, a crash analysis was conducted at the two access drives for the three years between 2022 and 2024, when they were full access drives serving the Walgreens. In the three years, there were five property damage collisions between the two full access drives. Two were on-site collisions. It is estimated (per ITE Trip Generation Manual) that approximately 1.7 million trips were generated by the Walgreens in those three years. This suggests that the existing full access drives on US 40 and Dan Jones have not historically seen a high frequency or severity of crashes.

Based on Kimley-Horn's review of the proposed site plan and evaluation of existing and future traffic conditions, the study intersections are projected to adequately accommodate the proposed development with the implementation of the following improvements:

- US 40 & Dan Jones Road
  - Signal Timing Optimization
- US 40 & Access Drive
  - Installation of a Westbound dedicated 50 ft right-turn lane with a 50 ft taper

As the site design progresses, care should be taken with landscaping, signage, and monumentation at the site access locations to ensure that adequate horizontal sight distance is maintained. If alterations to the site plan or land use should occur, changes to the analysis provided within this traffic impact study may be needed.

APPENDIX

Conceptual Site Plan

Traffic Count Data

Queue Length Data Collection Summary

Existing Year (2025) Capacity Reports

Future Year (2027) No-Build Capacity Reports

Future Year (2027) Build Capacity Reports

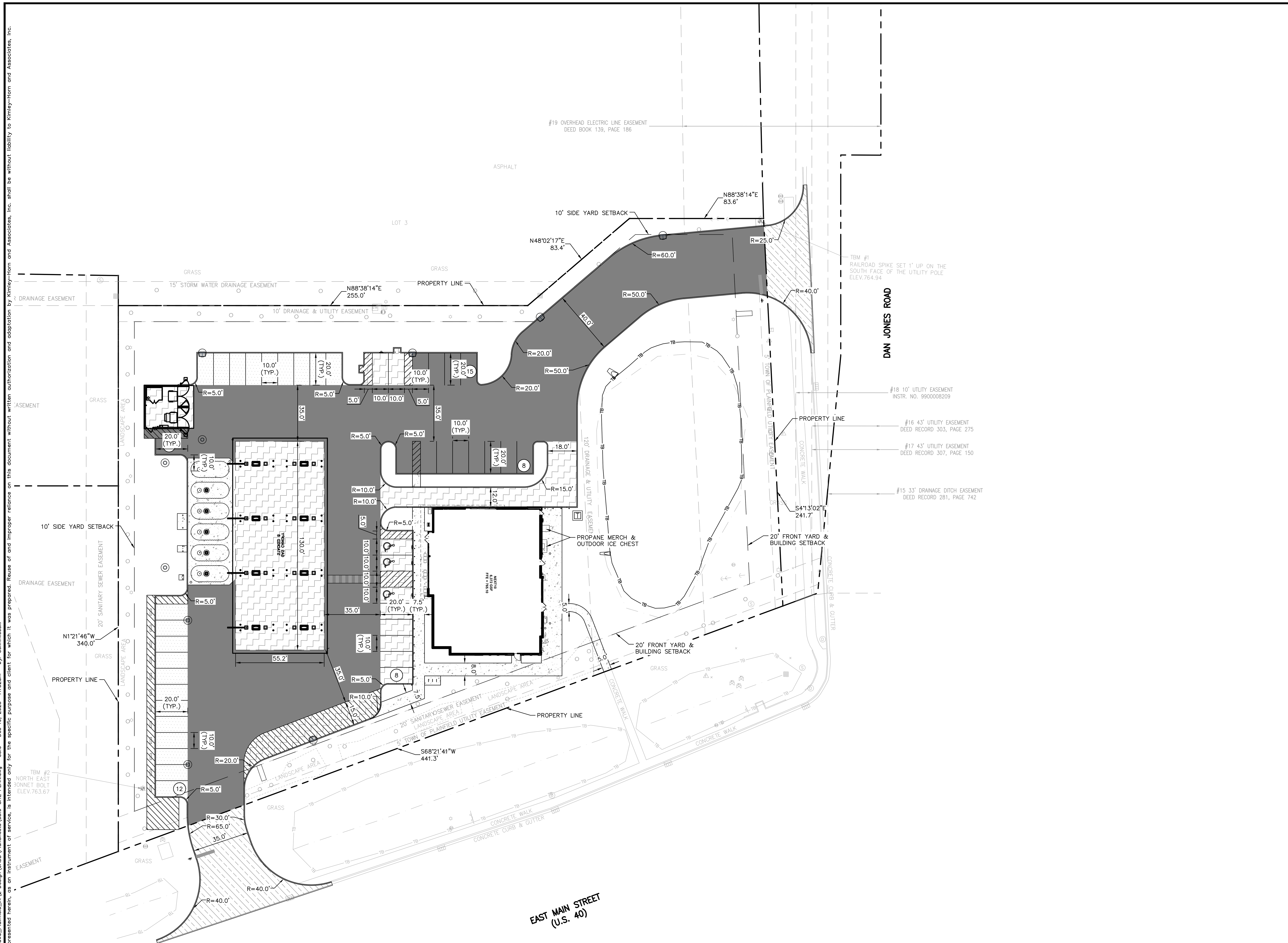
Future Year (2027) Build Mitigated Capacity Reports

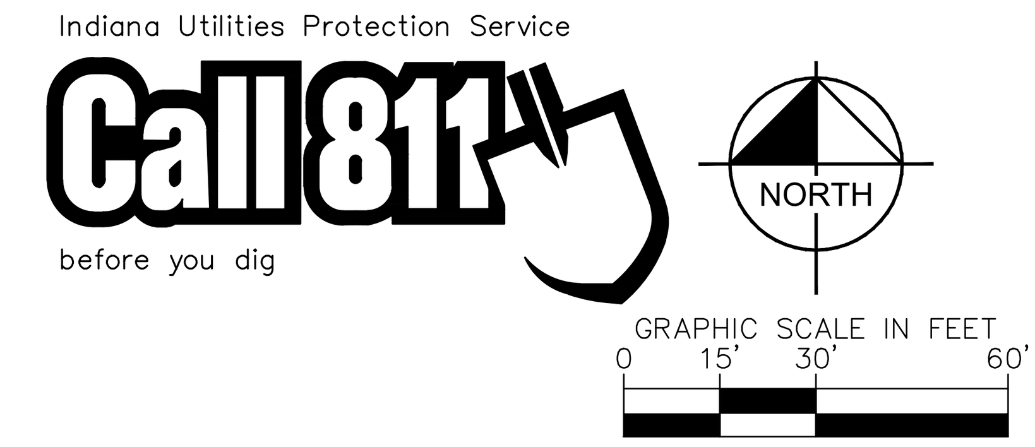
Future Year (2027) Build RIRO+LI Capacity Reports

Queue Reports

Turn Lane Warrant Analysis

CONCEPTUAL SITE PLAN





PAVING LEGEND

- STANDARD DUTY ASPHALT PAVEMENT — SEE CONSTRUCTION DETAILS FOR PAVEMENT SECTION
- HEAVY DUTY ASPHALT PAVEMENT — SEE CONSTRUCTION DETAILS FOR PAVEMENT SECTION
- RIGHT OF WAY PAVEMENT — SEE CONSTRUCTION DETAILS FOR PAVEMENT SECTION
- CONCRETE SIDEWALK — SEE CONSTRUCTION DETAILS FOR PAVEMENT SECTION
- HEAVY DUTY CONCRETE PAVEMENT — SEE CONSTRUCTION DETAILS FOR PAVEMENT SECTION

SITE SUMMARY

SITE ZONING*	=	GC
SITE ACREAGE	=	2.63 AC.±
BUILDING AREA	=	6,372 SF
PARKING SPACES (STANDARD) REQUIRED*	=	40 SPACES
PARKING SPACES (ACCESSIBLE) REQUIRED	=	3 SPACES
PARKING SPACES (BICYCLE) REQUIRED**	=	5 SPACES
PARKING SPACES (STANDARD) PROVIDED	=	40 SPACES
PARKING SPACES (ACCESSIBLE) PROVIDED	=	3 SPACES
TOTAL PARKING SPACES PROVIDED	=	43 SPACES

*MARKET BASED PARKING, PROVIDE JUSTIFICATION FOR NUMBER OF SPACES
**1 BICYCLE SPACE PER PUBLIC ACCESS DOOR REQUIRED

GENERAL PLAN NOTES

REFER TO GENERAL NOTES SHEET FOR MORE INFORMATION INCLUDING THE FOLLOWING: (EXISTING LEGEND, BENCHMARK INFORMATION, AND SPECIFIC GENERAL PLAN NOTES.)

REVISIONS — No. — DATE — BY

Kimley»Horn
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500 EAST 96TH STREET, SUITE 300,
INDIANAPOLIS, IN 46240
PHONE: 317-218-9560
WWW.KIMLEY-HORN.COM

SCALE: AS NOTED
DESIGNED BY: CAN
DRAWN BY: CAN
CHECKED BY: CSM

CHAD STEVEN ... REGISTERED PROFESSIONAL ENGINEER, STATE OF INDIANA
NOT APPROVED FOR CONSTRUCTION

TRS KENTUCKY

SITE PLAN

WAWA PLAINFIELD
1516 EAST MAIN STREET,
PLAINFIELD, IN 46168

ORIGINAL ISSUE: 12/26/2025
KHA PROJECT NO. 170278002
SHEET NUMBER
C3.0

TRAFFIC COUNT DATA

Main St / US 40 & Dan Jones / Holiday Dr - TMC

Wed Jan 7, 2026
Full Length (7 AM-9 AM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 1369201, Location: 39.70951, -86.380632

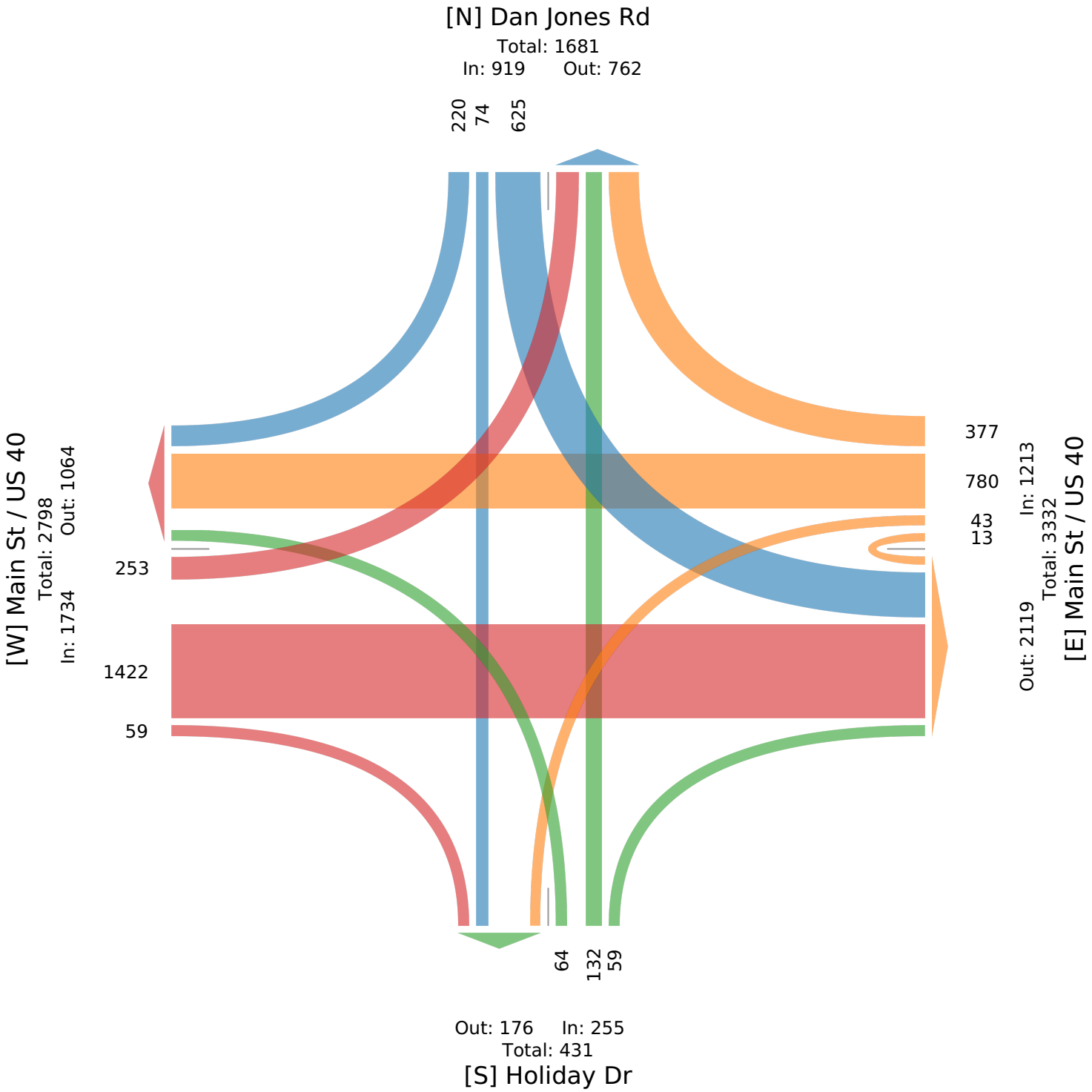
GEWALT HAMILTON ASSOCIATES, INC.
Provided by: Gewalt Hamilton Associates Inc.
625 Forest Edge Drive, Vernon Hills, IL, 60061, US

Leg	Main St / US 40					Main St / US 40					Holiday Dr					Dan Jones Rd					
Direction	Eastbound					Westbound					Northbound					Southbound					
Time	R	T	L	U	**App**	R	T	L	U	**App**	R	T	L	U	**App**	R	T	L	U	**App**	**Int**
2026-01-07 7:00AM	1	152	20	0	**173**	41	73	3	2	**119**	7	12	4	0	**23**	18	1	64	0	**83**	**398**
7:15AM	2	187	35	0	**224**	41	73	2	2	**118**	6	13	4	0	**23**	29	3	77	0	**109**	**474**
7:30AM	6	204	33	0	**243**	49	68	6	3	**126**	7	10	5	0	**22**	27	8	86	0	**121**	**512**
7:45AM	3	184	43	0	**230**	54	107	3	1	**165**	9	16	5	0	**30**	31	4	96	0	**131**	**556**
Hourly Total	12	727	131	0	**870**	185	321	14	8	**528**	29	51	18	0	**98**	105	16	323	0	**444**	**1940**
8:00AM	7	150	26	0	**183**	49	107	5	2	**163**	4	20	7	0	**31**	33	8	77	0	**118**	**495**
8:15AM	20	151	21	0	**192**	41	123	7	2	**173**	6	11	3	0	**20**	36	25	82	0	**143**	**528**
8:30AM	9	195	34	0	**238**	45	122	6	0	**173**	8	30	24	0	**62**	26	13	83	0	**122**	**595**
8:45AM	11	199	41	0	**251**	57	107	11	1	**176**	12	20	12	0	**44**	20	12	60	0	**92**	**563**
Hourly Total	47	695	122	0	**864**	192	459	29	5	**685**	30	81	46	0	**157**	115	58	302	0	**475**	**2181**
Total	59	1422	253	0	**1734**	377	780	43	13	**1213**	59	132	64	0	**255**	220	74	625	0	**919**	**4121**
% Approach	3.4%	82.0%	14.6%	0%	**-**	31.1%	64.3%	3.5%	1.1%	**-**	23.1%	51.8%	25.1%	0%	**-**	23.9%	8.1%	68.0%	0%	**-**	-
% Total	1.4%	34.5%	6.1%	0%	**42.1%**	9.1%	18.9%	1.0%	0.3%	**29.4%**	1.4%	3.2%	1.6%	0%	**6.2%**	5.3%	1.8%	15.2%	0%	**22.3%**	-
Lights	59	1376	249	0	**1684**	370	726	43	13	**1152**	59	132	63	0	**254**	217	74	617	0	**908**	3998
% Lights	100%	96.8%	98.4%	0%	**97.1%**	98.1%	93.1%	100%	100%	**95.0%**	100%	100%	98.4%	0%	**99.6%**	98.6%	100%	98.7%	0%	**98.8%**	97.0%
Articulated Trucks	0	19	0	0	**19**	2	16	0	0	**18**	0	0	0	0	**0**	0	0	2	0	**2**	39
% Articulated Trucks	0%	1.3%	0%	0%	**1.1%**	0.5%	2.1%	0%	0%	**1.5%**	0%	0%	0%	0%	**0%**	0%	0%	0.3%	0%	**0.2%**	0.9%
Buses and Single-Unit Trucks	0	27	4	0	**31**	5	38	0	0	**43**	0	0	1	0	**1**	3	0	6	0	**9**	84
% Buses and Single-Unit Trucks	0%	1.9%	1.6%	0%	**1.8%**	1.3%	4.9%	0%	0%	**3.5%**	0%	0%	1.6%	0%	**0.4%**	1.4%	0%	1.0%	0%	**1.0%**	2.0%

*L: Left, R: Right, T: Thru, U: U-Turn

Main St / US 40 & Dan Jones / Holiday Dr - TMC
Wed Jan 7, 2026
Full Length (7 AM-9 AM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks)
All Movements
ID: 1369201, Location: 39.70951, -86.380632

Provided by: Gewalt Hamilton Associates Inc.
625 Forest Edge Drive, Vernon Hills, IL, 60061, US



Main St / US 40 & Dan Jones / Holiday Dr - TMC

Thu Dec 4, 2025
Full Length (4 PM-6 PM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)
All Movements
ID: 1362727, Location: 39.709438, -86.380637

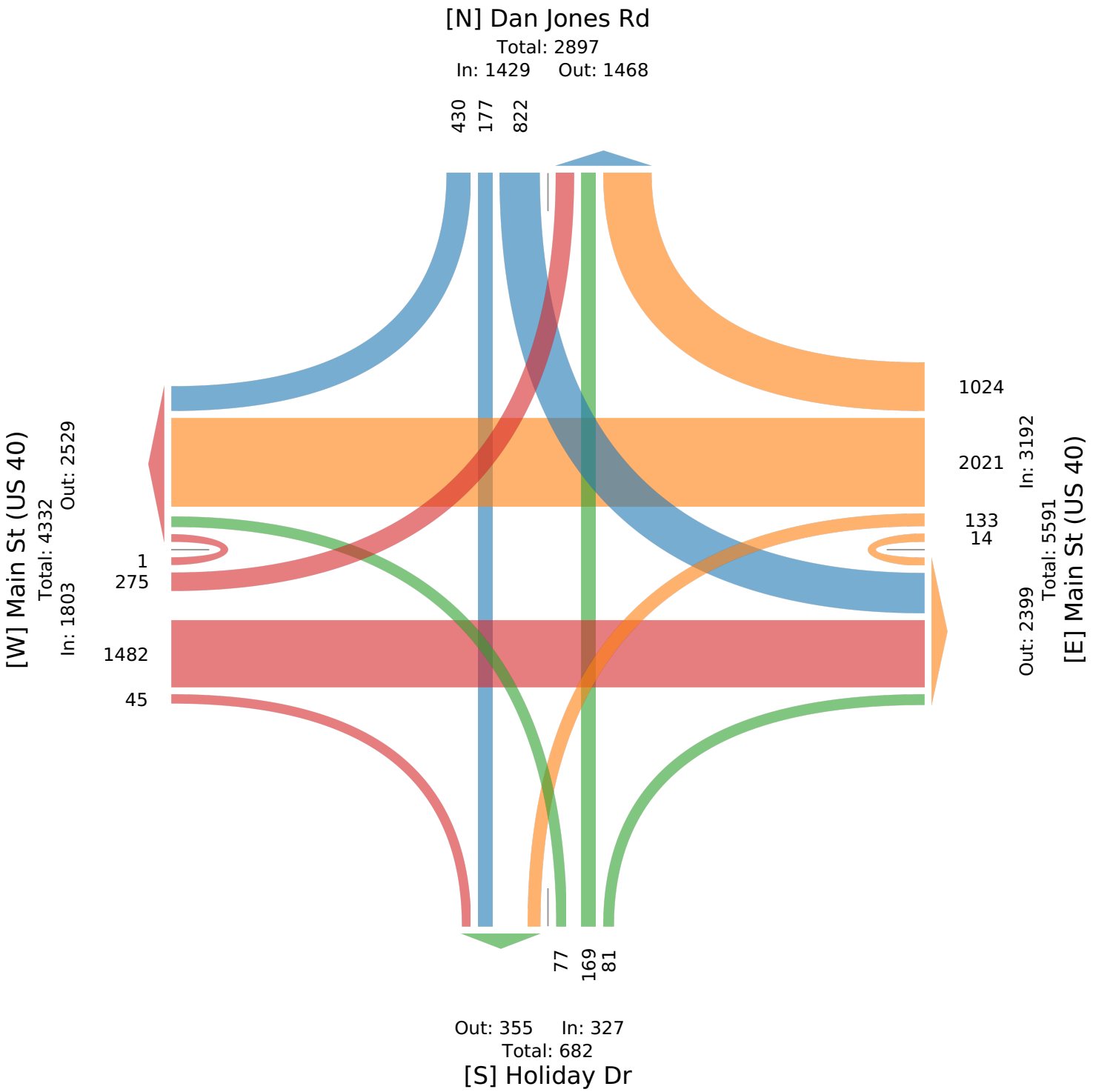
GEWALT HAMILTON ASSOCIATES, INC.
Provided by: Gewalt Hamilton Associates Inc.
625 Forest Edge Drive, Vernon Hills, IL, 60061, US

Leg	Main St (US 40)						Main St (US 40)						Holiday Dr						Dan Jones Rd						
Direction	Eastbound						Westbound						Northbound						Southbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2025-12-04 4:00PM	7	199	34	0	**240**	0	114	248	19	2	**383**	0	12	20	9	0	**41**	0	49	18	87	0	**154**	0	**818**
4:15PM	6	189	30	0	**225**	0	105	273	14	2	**394**	0	11	22	4	0	**37**	0	46	24	117	0	**187**	0	**843**
4:30PM	4	170	26	0	**200**	0	101	258	14	3	**376**	0	14	22	19	0	**55**	0	51	19	108	0	**178**	0	**809**
4:45PM	5	182	35	0	**222**	0	118	265	21	1	**405**	0	9	21	14	0	**44**	0	66	21	87	0	**174**	0	**845**
Hourly Total	22	740	125	0	**887**	0	438	1044	68	8	**1558**	0	46	85	46	0	**177**	0	212	82	399	0	**693**	0	**3315**
5:00PM	6	179	37	0	**222**	0	144	268	17	1	**430**	0	10	18	4	0	**32**	0	47	27	133	0	**207**	0	**891**
5:15PM	6	174	41	1	**222**	0	133	221	16	3	**373**	0	7	15	9	0	**31**	0	68	20	91	0	**179**	0	**805**
5:30PM	5	199	41	0	**245**	0	159	236	16	1	**412**	0	10	21	11	0	**42**	0	50	20	119	0	**189**	0	**888**
5:45PM	6	190	31	0	**227**	0	150	252	16	1	**419**	0	8	30	7	0	**45**	0	53	28	80	0	**161**	0	**852**
Hourly Total	23	742	150	1	**916**	0	586	977	65	6	**1634**	0	35	84	31	0	**150**	0	218	95	423	0	**736**	0	**3436**
Total	45	1482	275	1	**1803**	0	1024	2021	133	14	**3192**	0	81	169	77	0	**327**	0	430	177	822	0	**1429**	0	**6751**
% Approach	2.5%	82.2%	15.3%	0.1%	**-**	-	32.1%	63.3%	4.2%	0.4%	**-**	-	24.8%	51.7%	23.5%	0%	**-**	-	30.1%	12.4%	57.5%	0%	**-**	-	**-**
% Total	0.7%	22.0%	4.1%	0%	**26.7%**	-	15.2%	29.9%	2.0%	0.2%	**47.3%**	-	1.2%	2.5%	1.1%	0%	**4.8%**	-	6.4%	2.6%	12.2%	0%	**21.2%**	-	**-**
Lights	45	1452	272	1	**1770**	-	1020	1994	131	14	**3159**	-	81	168	77	0	**326**	-	430	177	810	0	**1417**	-	6672
% Lights	100%	98.0%	98.9%	100%	**98.2%**	-	99.6%	98.7%	98.5%	100%	**99.0%**	-	100%	99.4%	100%	0%	**99.7%**	-	100%	100%	98.5%	0%	**99.2%**	-	98.8%
Articulated Trucks	0	18	0	0	**18**	-	1	13	0	0	**14**	-	0	0	0	0	**0**	-	0	0	2	0	**2**	-	34
% Articulated Trucks	0%	1.2%	0%	0%	**1.0%**	-	0.1%	0.6%	0%	0%	**0.4%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0.2%	0%	**0.1%**	-	0.5%
Buses and Single-Unit Trucks	0	12	3	0	**15**	-	3	14	2	0	**19**	-	0	1	0	0	**1**	-	0	0	10	0	**10**	-	45
% Buses and Single-Unit Trucks	0%	0.8%	1.1%	0%	**0.8%**	-	0.3%	0.7%	1.5%	0%	**0.6%**	-	0%	0.6%	0%	0%	**0.3%**	-	0%	0%	1.2%	0%	**0.7%**	-	0.7%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Main St / US 40 & Dan Jones / Holiday Dr - TMC
Thu Dec 4, 2025
Full Length (4 PM-6 PM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)
All Movements
ID: 1362727, Location: 39.709438, -86.380637

Provided by: Gewalt Hamilton Associates Inc.
625 Forest Edge Drive, Vernon Hills, IL, 60061, US



Main St / US 40 & Dan Jones / Holiday Dr - TMC

Sat Dec 6, 2025
Full Length (11 AM-1 PM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)
All Movements
ID: 1362728, Location: 39.70951, -86.380632

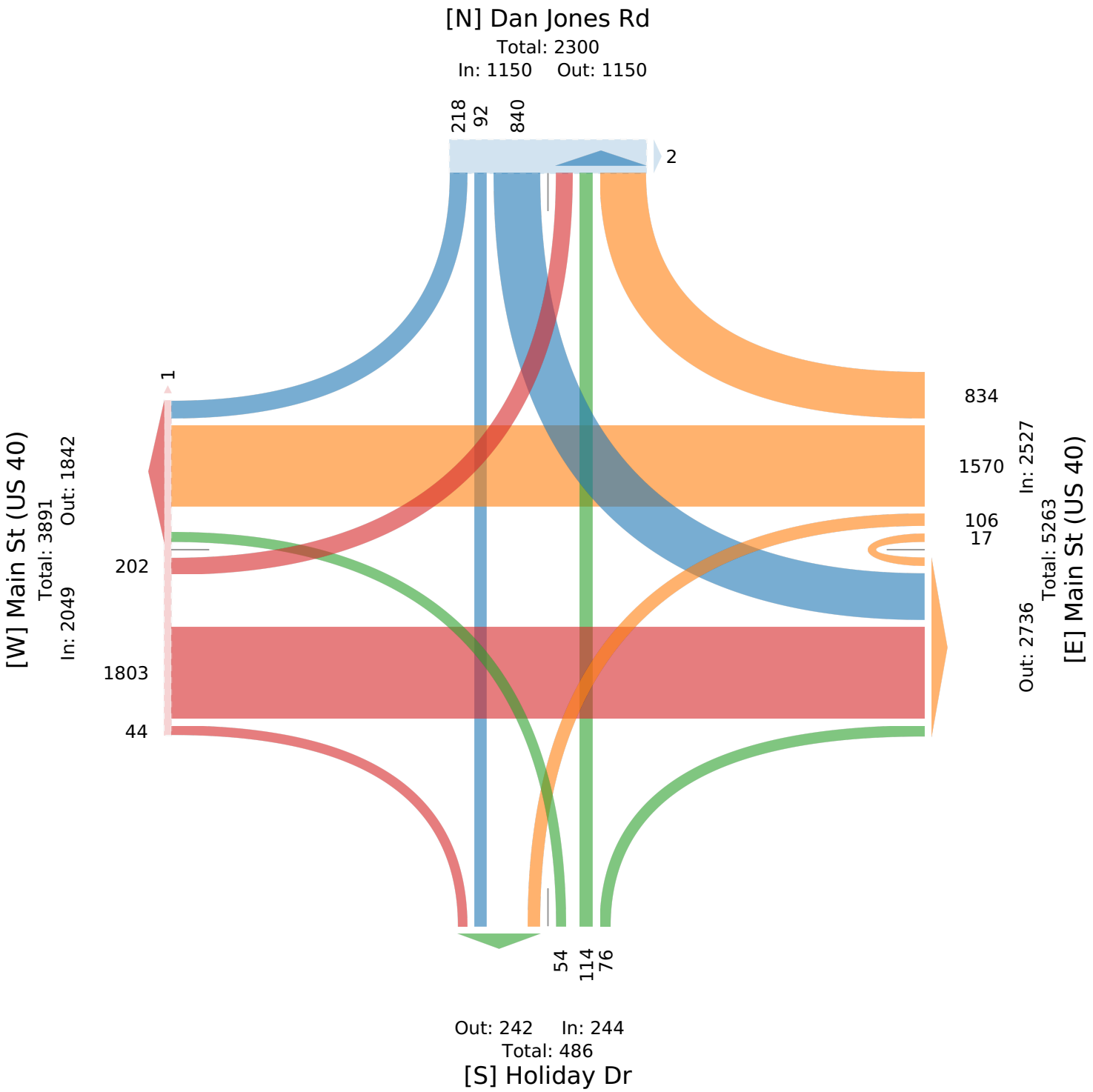
Provided by: Gewalt Hamilton Associates Inc.
625 Forest Edge Drive, Vernon Hills, IL, 60061, US

Leg	Main St (US 40)						Main St (US 40)						Holiday Dr						Dan Jones Rd						
Direction	Eastbound						Westbound						Northbound						Southbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2025-12-06 11:00AM	5	218	26	0	**249**	0	90	150	10	1	**251**	0	9	17	5	0	**31**	0	20	15	105	0	**140**	0	**671**
11:15AM	3	210	22	0	**235**	0	116	189	11	2	**318**	0	6	14	13	0	**33**	0	24	7	83	0	**114**	0	**700**
11:30AM	4	214	28	0	**246**	0	98	165	13	2	**278**	0	15	14	8	0	**37**	0	26	12	109	0	**147**	0	**708**
11:45AM	7	242	19	0	**268**	0	113	208	16	2	**339**	0	9	16	7	0	**32**	0	22	12	115	0	**149**	0	**788**
Hourly Total	19	884	95	0	**998**	0	417	712	50	7	**1186**	0	39	61	33	0	**133**	0	92	46	412	0	**550**	0	**2867**
12:00PM	5	247	30	0	**282**	0	123	206	19	3	**351**	0	9	15	6	0	**30**	0	35	11	122	0	**168**	0	**831**
12:15PM	3	231	25	0	**259**	0	87	230	17	2	**336**	0	11	10	5	0	**26**	0	29	12	108	0	**149**	0	**770**
12:30PM	7	210	26	0	**243**	0	97	212	11	4	**324**	0	5	14	5	0	**24**	0	28	10	92	0	**130**	0	**721**
12:45PM	10	231	26	0	**267**	1	110	210	9	1	**330**	0	12	14	5	0	**31**	0	34	13	106	0	**153**	2	**781**
Hourly Total	25	919	107	0	**1051**	1	417	858	56	10	**1341**	0	37	53	21	0	**111**	0	126	46	428	0	**600**	2	**3103**
Total	44	1803	202	0	**2049**	1	834	1570	106	17	**2527**	0	76	114	54	0	**244**	0	218	92	840	0	**1150**	2	**5970**
% Approach	2.1%	88.0%	9.9%	0%	**-**	-	33.0%	62.1%	4.2%	0.7%	**-**	-	31.1%	46.7%	22.1%	0%	**-**	-	19.0%	8.0%	73.0%	0%	**-**	-	-
% Total	0.7%	30.2%	3.4%	0%	**34.3%**	-	14.0%	26.3%	1.8%	0.3%	**42.3%**	-	1.3%	1.9%	0.9%	0%	**4.1%**	-	3.7%	1.5%	14.1%	0%	**19.3%**	-	-
Lights	44	1785	200	0	**2029**	-	832	1551	105	17	**2505**	-	76	114	54	0	**244**	-	217	91	832	0	**1140**	-	5918
% Lights	100%	99.0%	99.0%	0%	**99.0%**	-	99.8%	98.8%	99.1%	100%	**99.1%**	-	100%	100%	100%	0%	**100%**	-	99.5%	98.9%	99.0%	0%	**99.1%**	-	99.1%
Articulated Trucks	0	4	1	0	**5**	-	1	10	0	0	**11**	-	0	0	0	0	**0**	-	0	0	1	0	**1**	-	17
% Articulated Trucks	0%	0.2%	0.5%	0%	**0.2%**	-	0.1%	0.6%	0%	0%	**0.4%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0.1%	0%	**0.1%**	-	0.3%
Buses and Single-Unit Trucks	0	14	1	0	**15**	-	1	9	1	0	**11**	-	0	0	0	0	**0**	-	1	1	7	0	**9**	-	35
% Buses and Single-Unit Trucks	0%	0.8%	0.5%	0%	**0.7%**	-	0.1%	0.6%	0.9%	0%	**0.4%**	-	0%	0%	0%	0%	**0%**	-	0.5%	1.1%	0.8%	0%	**0.8%**	-	0.6%
Pedestrians	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	2	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Main St / US 40 & Dan Jones / Holiday Dr - TMC
Sat Dec 6, 2025
Full Length (11 AM-1 PM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)
All Movements
ID: 1362728, Location: 39.70951, -86.380632

GEWALT HAMILTON ASSOCIATES, INC.
Provided by: Gewalt Hamilton Associates Inc.
625 Forest Edge Drive, Vernon Hills, IL, 60061, US



QUEUE LENGTH DATA COLLECTION SUMMARY

US 40 and Dan Jones Road

Queue Data

	EB Apprach		SB Approach		
	Left	Critical Through Lane	Left	Through-Left	Right
Max (ft)	10.00	27.00	10.00	20.00	8.00
Average (ft)	3.37	13.41	4.75	9.46	3.00
95th Percentile (ft)	9.20	24.60	10.00	19.50	7.75

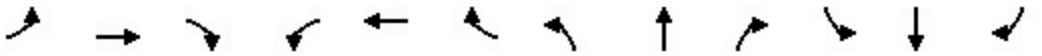
Max (veh)	250	675	250	500	200
Average (veh)	84	335	119	236	75
95th Percentile (veh)	230	615	250	488	194

Data collected on Wednesday, January 21, 2026 from 5:00 PM to 6:00 PM

EXISTING YEAR (2025) CAPACITY REPORTS

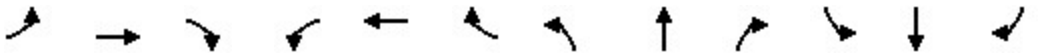
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	120	695	45	30	460	190	45	80	30	300	60	115
Future Volume (vph)	120	695	45	30	460	190	45	80	30	300	60	115
Ideal Flow (vphpl)	1500	1900	1900	1900	1900	1900	1900	1900	1900	2200	1900	1900
Total Lost time (s)	6.6	6.2	6.6	6.6	6.2	6.6	6.6	6.6		6.6	6.6	6.6
Lane Util. Factor	1.00	*0.65	1.00	1.00	0.95	1.00	1.00	1.00		*1.00	*0.90	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.97	1.00
Satd. Flow (prot)	1397	2398	1583	1770	3343	1583	1770	1786		2049	1633	1568
Flt Permitted	0.42	1.00	1.00	0.12	1.00	1.00	0.95	1.00		0.95	0.97	1.00
Satd. Flow (perm)	611	2398	1583	225	3343	1583	1770	1786		2049	1633	1568
Peak-hour factor, PHF	0.74	0.87	0.59	0.92	0.92	0.92	0.92	0.92	0.92	0.91	0.58	0.80
Adj. Flow (vph)	162	799	76	33	500	207	49	87	33	330	103	144
RTOR Reduction (vph)	0	0	34	0	0	88	0	13	0	0	0	74
Lane Group Flow (vph)	162	799	42	33	500	119	49	107	0	214	219	70
Heavy Vehicles (%)	2%	3%	2%	2%	8%	2%	2%	2%	2%	2%	2%	3%
Turn Type	D.P+P	NA	pm+ov	D.P+P	NA	pm+ov	Split	NA		Split	NA	pm+ov
Protected Phases	5	2	3	1	6	4	3	3		4	4	5
Permitted Phases	6		2	2		6						4
Actuated Green, G (s)	57.5	51.9	63.6	57.5	46.9	65.7	11.7	11.7		18.8	18.8	29.4
Effective Green, g (s)	57.5	51.9	63.6	57.5	46.9	65.7	11.7	11.7		18.8	18.8	29.4
Actuated g/C Ratio	0.50	0.46	0.56	0.50	0.41	0.58	0.10	0.10		0.16	0.16	0.26
Clearance Time (s)	6.6	6.2	6.6	6.6	6.2	6.6	6.6	6.6		6.6	6.6	6.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	381	1091	883	189	1375	912	181	183		337	269	495
v/s Ratio Prot	0.04	c0.33	0.00	0.01	0.15	0.02	0.03	c0.06		0.10	c0.13	0.01
v/s Ratio Perm	c0.17		0.02	0.08		0.05						0.03
v/c Ratio	0.43	0.73	0.05	0.17	0.36	0.13	0.27	0.59		0.64	0.81	0.14
Uniform Delay, d1	16.0	25.4	11.4	32.2	23.2	11.1	47.2	48.8		44.4	45.9	32.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.8	4.4	0.0	0.4	0.7	0.1	0.8	4.7		3.9	17.0	0.1
Delay (s)	16.8	29.7	11.5	32.6	24.0	11.1	48.0	53.6		48.3	62.9	32.7
Level of Service	B	C	B	C	C	B	D	D		D	E	C
Approach Delay (s/veh)		26.4			20.8			52.0			49.9	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	31.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	26.0
Intersection Capacity Utilization	56.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	150	740	25	65	975	585	30	85	35	425	95	220
Future Volume (vph)	150	740	25	65	975	585	30	85	35	425	95	220
Ideal Flow (vphpl)	1500	1900	1900	1900	1900	1900	1900	1900	1900	2200	1900	1900
Total Lost time (s)	6.6	6.2	6.6	6.6	6.2	6.6	6.6	6.6		6.6	6.6	6.6
Lane Util. Factor	1.00	*0.65	1.00	1.00	0.95	1.00	1.00	1.00		*1.00	*0.90	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.97	1.00
Satd. Flow (prot)	1397	2422	1583	1770	3539	1583	1770	1782		2049	1623	1583
Flt Permitted	0.12	1.00	1.00	0.08	1.00	1.00	0.95	1.00		0.95	0.97	1.00
Satd. Flow (perm)	177	2422	1583	156	3539	1583	1770	1782		2049	1623	1583
Peak-hour factor, PHF	0.91	0.93	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.80	0.85	0.80
Adj. Flow (vph)	165	796	26	68	1016	609	31	89	36	531	112	275
RTOR Reduction (vph)	0	0	13	0	0	116	0	12	0	0	0	76
Lane Group Flow (vph)	165	796	13	68	1016	493	31	113	0	319	324	199
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Turn Type	D.P+P	NA	pm+ov	D.P+P	NA	pm+ov	Split	NA		Split	NA	Perm
Protected Phases	5	2	3	1	6	4	3	3		4	4	
Permitted Phases	6		2	2		6						4
Actuated Green, G (s)	58.5	50.2	62.0	58.5	47.3	77.0	11.8	11.8		29.7	29.7	29.7
Effective Green, g (s)	58.5	50.2	62.0	58.5	47.3	77.0	11.8	11.8		29.7	29.7	29.7
Actuated g/C Ratio	0.46	0.40	0.49	0.46	0.38	0.61	0.09	0.09		0.24	0.24	0.24
Clearance Time (s)	6.6	6.2	6.6	6.6	6.2	6.6	6.6	6.6		6.6	6.6	6.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	190	964	778	178	1328	967	165	166		482	382	373
v/s Ratio Prot	0.08	c0.33	0.00	0.03	0.29	0.12	0.02	c0.06		0.16	c0.20	
v/s Ratio Perm	c0.32		0.01	0.15		0.19						0.13
v/c Ratio	0.87	0.83	0.02	0.38	0.77	0.51	0.19	0.68		0.66	0.85	0.53
Uniform Delay, d1	25.3	34.0	16.4	47.0	34.5	13.8	52.7	55.3		43.6	46.0	42.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	31.6	8.0	0.0	1.4	4.2	0.4	0.6	11.0		3.4	15.9	1.5
Delay (s)	57.0	42.0	16.4	48.3	38.7	14.3	53.2	66.3		47.0	61.9	43.5
Level of Service	E	D	B	D	D	B	D	E		D	E	D
Approach Delay (s/veh)		43.8			30.3			63.7			51.2	
Approach LOS		D			C			E			D	

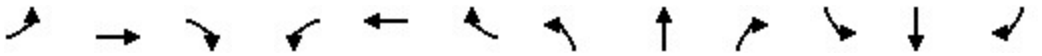
Intersection Summary			
HCM 2000 Control Delay (s/veh)	40.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	126.0	Sum of lost time (s)	26.0
Intersection Capacity Utilization	74.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	930	20	65	855	420	25	55	35	435	45	115
Future Volume (vph)	100	930	20	65	855	420	25	55	35	435	45	115
Ideal Flow (vphpl)	1500	1900	1900	1900	1900	1900	1900	1900	1900	2200	1900	1900
Total Lost time (s)	6.6	6.2	6.6	6.6	6.2	6.6	6.6	6.6		6.6	6.6	6.6
Lane Util. Factor	1.00	*0.65	1.00	1.00	0.95	1.00	1.00	1.00		*1.00	*0.90	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.96	1.00
Satd. Flow (prot)	1397	2422	1583	1770	3539	1583	1770	1755		2049	1611	1583
Flt Permitted	0.17	1.00	1.00	0.09	1.00	1.00	0.95	1.00		0.95	0.96	1.00
Satd. Flow (perm)	249	2422	1583	174	3539	1583	1770	1755		2049	1611	1583
Peak-hour factor, PHF	0.83	0.94	0.79	0.94	0.94	0.94	0.94	0.94	0.94	0.90	0.94	0.81
Adj. Flow (vph)	120	989	25	69	910	447	27	59	37	483	48	142
RTOR Reduction (vph)	0	0	13	0	0	184	0	21	0	0	0	70
Lane Group Flow (vph)	120	989	12	69	910	263	27	75	0	266	265	72
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Turn Type	D.P+P	NA	pm+ov	D.P+P	NA	pm+ov	Split	NA		Split	NA	pm+ov
Protected Phases	5	2	3	1	6	4	3	3		4	4	5
Permitted Phases	6		2	2		6						4
Actuated Green, G (s)	50.0	42.7	53.0	50.0	41.0	64.7	10.3	10.3		23.7	23.7	32.7
Effective Green, g (s)	50.0	42.7	53.0	50.0	41.0	64.7	10.3	10.3		23.7	23.7	32.7
Actuated g/C Ratio	0.45	0.39	0.48	0.45	0.37	0.59	0.09	0.09		0.22	0.22	0.30
Clearance Time (s)	6.6	6.2	6.6	6.6	6.2	6.6	6.6	6.6		6.6	6.6	6.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	207	940	762	185	1319	931	165	164		441	347	565
v/s Ratio Prot	0.05	c0.41	0.00	0.02	c0.26	0.06	0.02	c0.04		0.13	c0.16	0.01
v/s Ratio Perm	0.22		0.01	0.14		0.11						0.03
v/c Ratio	0.58	1.05	0.02	0.37	0.69	0.28	0.16	0.46		0.60	0.76	0.13
Uniform Delay, d1	20.1	33.7	14.9	46.0	29.1	11.2	45.9	47.2		38.9	40.5	28.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	3.9	44.0	0.0	1.3	3.0	0.2	0.5	2.0		2.3	9.6	0.1
Delay (s)	24.0	77.7	14.9	47.3	32.1	11.4	46.4	49.2		41.2	50.1	28.3
Level of Service	C	E	B	D	C	B	D	D		D	D	C
Approach Delay (s/veh)		70.6			26.3			48.6			42.0	
Approach LOS		E			C			D			D	

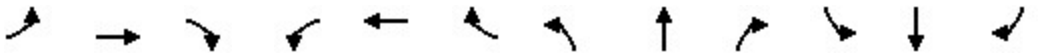
Intersection Summary			
HCM 2000 Control Delay (s/veh)	45.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	26.0
Intersection Capacity Utilization	66.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

FUTURE YEAR (2027) NO-BUILD CAPACITY REPORTS



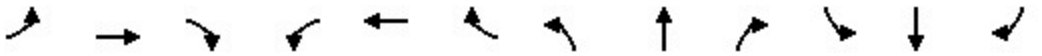
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	120	700	45	30	465	190	45	80	30	305	60	115
Future Volume (vph)	120	700	45	30	465	190	45	80	30	305	60	115
Ideal Flow (vphpl)	1500	1900	1900	1900	1900	1900	1900	1900	1900	2200	1900	1900
Total Lost time (s)	6.6	6.2	6.6	6.6	6.2	6.6	6.6	6.6		6.6	6.6	6.6
Lane Util. Factor	1.00	*0.65	1.00	1.00	0.95	1.00	1.00	1.00		*1.00	*0.90	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.97	1.00
Satd. Flow (prot)	1397	2398	1583	1770	3343	1583	1770	1786		2049	1633	1568
Flt Permitted	0.41	1.00	1.00	0.12	1.00	1.00	0.95	1.00		0.95	0.97	1.00
Satd. Flow (perm)	607	2398	1583	220	3343	1583	1770	1786		2049	1633	1568
Peak-hour factor, PHF	0.74	0.87	0.59	0.92	0.92	0.92	0.92	0.92	0.92	0.91	0.58	0.80
Adj. Flow (vph)	162	805	76	33	505	207	49	87	33	335	103	144
RTOR Reduction (vph)	0	0	34	0	0	88	0	13	0	0	0	74
Lane Group Flow (vph)	162	805	42	33	505	119	49	107	0	218	220	70
Heavy Vehicles (%)	2%	3%	2%	2%	8%	2%	2%	2%	2%	2%	2%	3%
Turn Type	D.P+P	NA	pm+ov	D.P+P	NA	pm+ov	Split	NA		Split	NA	pm+ov
Protected Phases	5	2	3	1	6	4	3	3		4	4	5
Permitted Phases	6		2	2		6						4
Actuated Green, G (s)	57.5	51.9	63.6	57.5	46.9	65.7	11.7	11.7		18.8	18.8	29.4
Effective Green, g (s)	57.5	51.9	63.6	57.5	46.9	65.7	11.7	11.7		18.8	18.8	29.4
Actuated g/C Ratio	0.50	0.46	0.56	0.50	0.41	0.58	0.10	0.10		0.16	0.16	0.26
Clearance Time (s)	6.6	6.2	6.6	6.6	6.2	6.6	6.6	6.6		6.6	6.6	6.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	379	1091	883	187	1375	912	181	183		337	269	495
v/s Ratio Prot	0.04	c0.34	0.00	0.01	0.15	0.02	0.03	c0.06		0.11	c0.13	0.01
v/s Ratio Perm	c0.18		0.02	0.08		0.05						0.03
v/c Ratio	0.43	0.74	0.05	0.18	0.37	0.13	0.27	0.59		0.65	0.82	0.14
Uniform Delay, d1	16.0	25.5	11.4	32.5	23.3	11.1	47.2	48.8		44.5	45.9	32.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.8	4.5	0.0	0.5	0.8	0.1	0.8	4.7		4.2	17.3	0.1
Delay (s)	16.8	29.9	11.5	33.0	24.0	11.1	48.0	53.6		48.7	63.2	32.7
Level of Service	B	C	B	C	C	B	D	D		D	E	C
Approach Delay (s/veh)		26.6			20.8			52.0			50.2	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	32.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	26.0
Intersection Capacity Utilization	56.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	150	745	25	65	985	590	30	85	35	430	95	220
Future Volume (vph)	150	745	25	65	985	590	30	85	35	430	95	220
Ideal Flow (vphpl)	1500	1900	1900	1900	1900	1900	1900	1900	1900	2200	1900	1900
Total Lost time (s)	6.6	6.2	6.6	6.6	6.2	6.6	6.6	6.6		6.6	6.6	6.6
Lane Util. Factor	1.00	*0.65	1.00	1.00	0.95	1.00	1.00	1.00		*1.00	*0.90	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.97	1.00
Satd. Flow (prot)	1397	2422	1583	1770	3539	1583	1770	1782		2049	1623	1583
Flt Permitted	0.12	1.00	1.00	0.08	1.00	1.00	0.95	1.00		0.95	0.97	1.00
Satd. Flow (perm)	173	2422	1583	152	3539	1583	1770	1782		2049	1623	1583
Peak-hour factor, PHF	0.91	0.93	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.80	0.85	0.80
Adj. Flow (vph)	165	801	26	68	1026	615	31	89	36	538	112	275
RTOR Reduction (vph)	0	0	13	0	0	115	0	12	0	0	0	76
Lane Group Flow (vph)	165	801	13	68	1026	500	31	113	0	323	327	199
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Turn Type	D.P+P	NA	pm+ov	D.P+P	NA	pm+ov	Split	NA		Split	NA	Perm
Protected Phases	5	2	3	1	6	4	3	3		4	4	
Permitted Phases	6		2	2		6						4
Actuated Green, G (s)	58.5	50.2	62.0	58.5	47.5	77.2	11.8	11.8		29.7	29.7	29.7
Effective Green, g (s)	58.5	50.2	62.0	58.5	47.5	77.2	11.8	11.8		29.7	29.7	29.7
Actuated g/C Ratio	0.46	0.40	0.49	0.46	0.38	0.61	0.09	0.09		0.24	0.24	0.24
Clearance Time (s)	6.6	6.2	6.6	6.6	6.2	6.6	6.6	6.6		6.6	6.6	6.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	187	964	778	177	1334	969	165	166		482	382	373
v/s Ratio Prot	0.08	c0.33	0.00	0.03	0.29	0.12	0.02	c0.06		0.16	c0.20	
v/s Ratio Perm	c0.33		0.01	0.15		0.19						0.13
v/c Ratio	0.88	0.83	0.02	0.38	0.77	0.52	0.19	0.68		0.67	0.86	0.53
Uniform Delay, d1	25.5	34.1	16.4	47.1	34.4	13.8	52.7	55.3		43.7	46.1	42.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	35.1	8.3	0.0	1.4	4.3	0.5	0.6	11.0		3.6	16.9	1.5
Delay (s)	60.6	42.4	16.4	48.5	38.8	14.3	53.2	66.3		47.3	63.0	43.5
Level of Service	E	D	B	D	D	B	D	E		D	E	D
Approach Delay (s/veh)		44.7			30.3			63.7			51.7	
Approach LOS		D			C			E			D	

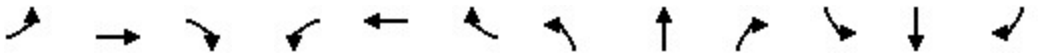
Intersection Summary			
HCM 2000 Control Delay (s/veh)	40.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	126.0	Sum of lost time (s)	26.0
Intersection Capacity Utilization	75.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	940	20	65	865	425	25	55	35	440	45	115
Future Volume (vph)	100	940	20	65	865	425	25	55	35	440	45	115
Ideal Flow (vphpl)	1500	1900	1900	1900	1900	1900	1900	1900	1900	2200	1900	1900
Total Lost time (s)	6.6	6.2	6.6	6.6	6.2	6.6	6.6	6.6		6.6	6.6	6.6
Lane Util. Factor	1.00	*0.65	1.00	1.00	0.95	1.00	1.00	1.00		*1.00	*0.90	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.96	1.00
Satd. Flow (prot)	1397	2422	1583	1770	3539	1583	1770	1755		2049	1610	1583
Flt Permitted	0.16	1.00	1.00	0.09	1.00	1.00	0.95	1.00		0.95	0.96	1.00
Satd. Flow (perm)	242	2422	1583	175	3539	1583	1770	1755		2049	1610	1583
Peak-hour factor, PHF	0.83	0.94	0.79	0.94	0.94	0.94	0.94	0.94	0.94	0.90	0.94	0.81
Adj. Flow (vph)	120	1000	25	69	920	452	27	59	37	489	48	142
RTOR Reduction (vph)	0	0	13	0	0	186	0	21	0	0	0	70
Lane Group Flow (vph)	120	1000	12	69	920	266	27	75	0	269	268	72
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Turn Type	D.P+P	NA	pm+ov	D.P+P	NA	pm+ov	Split	NA		Split	NA	pm+ov
Protected Phases	5	2	3	1	6	4	3	3		4	4	5
Permitted Phases	6		2	2		6						4
Actuated Green, G (s)	49.9	42.6	52.9	49.9	40.9	64.7	10.3	10.3		23.8	23.8	32.8
Effective Green, g (s)	49.9	42.6	52.9	49.9	40.9	64.7	10.3	10.3		23.8	23.8	32.8
Actuated g/C Ratio	0.45	0.39	0.48	0.45	0.37	0.59	0.09	0.09		0.22	0.22	0.30
Clearance Time (s)	6.6	6.2	6.6	6.6	6.2	6.6	6.6	6.6		6.6	6.6	6.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	204	937	761	185	1315	931	165	164		443	348	567
v/s Ratio Prot	0.05	c0.41	0.00	0.02	c0.26	0.06	0.02	c0.04		0.13	c0.17	0.01
v/s Ratio Perm	0.22		0.01	0.14		0.11						0.03
v/c Ratio	0.59	1.07	0.02	0.37	0.70	0.29	0.16	0.46		0.61	0.77	0.13
Uniform Delay, d1	20.2	33.7	14.9	46.0	29.3	11.2	45.9	47.2		38.9	40.5	28.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	4.3	49.1	0.0	1.3	3.1	0.2	0.5	2.0		2.4	10.1	0.1
Delay (s)	24.5	82.8	14.9	47.3	32.5	11.4	46.4	49.2		41.2	50.6	28.3
Level of Service	C	F	B	D	C	B	D	D		D	D	C
Approach Delay (s/veh)		75.2			26.6			48.6			42.2	
Approach LOS		E			C			D			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	46.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	26.0
Intersection Capacity Utilization	67.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

FUTURE YEAR (2027) BUILD CAPACITY REPORTS



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	120	710	45	30	480	195	45	85	30	315	65	115
Future Volume (vph)	120	710	45	30	480	195	45	85	30	315	65	115
Ideal Flow (vphpl)	1500	1900	1900	1900	1900	1900	1900	1900	1900	2200	1900	1900
Total Lost time (s)	6.6	6.2	6.6	6.6	6.2	6.6	6.6	6.6		6.6	6.6	6.6
Lane Util. Factor	1.00	*0.65	1.00	1.00	0.95	1.00	1.00	1.00		*1.00	*0.90	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.97	1.00
Satd. Flow (prot)	1397	2398	1583	1770	3343	1583	1770	1789		2049	1634	1568
Flt Permitted	0.40	1.00	1.00	0.11	1.00	1.00	0.95	1.00		0.95	0.97	1.00
Satd. Flow (perm)	585	2398	1583	203	3343	1583	1770	1789		2049	1634	1568
Peak-hour factor, PHF	0.74	0.87	0.59	0.92	0.92	0.92	0.92	0.92	0.92	0.91	0.58	0.80
Adj. Flow (vph)	162	816	76	33	522	212	49	92	33	346	112	144
RTOR Reduction (vph)	0	0	34	0	0	90	0	12	0	0	0	73
Lane Group Flow (vph)	162	816	42	33	522	122	49	113	0	225	233	71
Heavy Vehicles (%)	2%	3%	2%	2%	8%	2%	2%	2%	2%	2%	2%	3%
Turn Type	D.P+P	NA	pm+ov	D.P+P	NA	pm+ov	Split	NA		Split	NA	pm+ov
Protected Phases	5	2	3	1	6	4	3	3		4	4	5
Permitted Phases	6		2	2		6						4
Actuated Green, G (s)	56.6	51.0	62.8	56.6	45.9	65.5	11.8	11.8		19.6	19.6	30.3
Effective Green, g (s)	56.6	51.0	62.8	56.6	45.9	65.5	11.8	11.8		19.6	19.6	30.3
Actuated g/C Ratio	0.50	0.45	0.55	0.50	0.40	0.57	0.10	0.10		0.17	0.17	0.27
Clearance Time (s)	6.6	6.2	6.6	6.6	6.2	6.6	6.6	6.6		6.6	6.6	6.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	366	1072	872	177	1345	909	183	185		352	280	507
v/s Ratio Prot	0.04	c0.34	0.00	0.01	0.16	0.02	0.03	c0.06		0.11	c0.14	0.01
v/s Ratio Perm	c0.18		0.02	0.08		0.05						0.03
v/c Ratio	0.44	0.76	0.05	0.19	0.39	0.13	0.27	0.61		0.64	0.83	0.14
Uniform Delay, d1	16.6	26.4	11.8	34.2	24.1	11.2	47.1	48.9		43.9	45.6	31.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.9	5.1	0.0	0.5	0.8	0.1	0.8	5.9		3.8	18.6	0.1
Delay (s)	17.4	31.5	11.8	34.7	25.0	11.2	47.9	54.8		47.7	64.2	32.0
Level of Service	B	C	B	C	C	B	D	D		D	E	C
Approach Delay (s/veh)		27.9			21.6			52.9			50.3	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	32.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	26.0
Intersection Capacity Utilization	57.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	45	10	395	450	35
Future Vol, veh/h	5	45	10	395	450	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	49	11	429	489	38

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	726	245	527	0	-	0
Stage 1	489	-	-	-	-	-
Stage 2	236	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	360	756	1036	-	-	-
Stage 1	582	-	-	-	-	-
Stage 2	781	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	356	756	1036	-	-	-
Mov Cap-2 Maneuver	356	-	-	-	-	-
Stage 1	575	-	-	-	-	-
Stage 2	781	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	10.76	0.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	89	-	679	-	-
HCM Lane V/C Ratio	0.01	-	0.08	-	-
HCM Ctrl Dly (s/v)	8.5	0.1	10.8	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

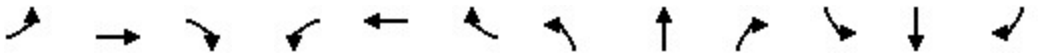
Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑	↱	↰	
Traffic Vol, veh/h	70	815	570	70	65	70
Future Vol, veh/h	70	815	570	70	65	70
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	100	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	76	886	620	76	71	76

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	696	0	-	0	1215	310
Stage 1	-	-	-	-	620	-
Stage 2	-	-	-	-	595	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	896	-	-	-	174	686
Stage 1	-	-	-	-	499	-
Stage 2	-	-	-	-	514	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	896	-	-	-	154	686
Mov Cap-2 Maneuver	-	-	-	-	154	-
Stage 1	-	-	-	-	443	-
Stage 2	-	-	-	-	514	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.74	0	35.9
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	896	-	-	-	258
HCM Lane V/C Ratio	0.085	-	-	-	0.569
HCM Ctrl Dly (s/v)	9.4	-	-	-	35.9
HCM Lane LOS	A	-	-	-	E
HCM 95th %tile Q(veh)	0.3	-	-	-	3.2



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	150	755	25	65	1000	595	30	90	35	440	100	220
Future Volume (vph)	150	755	25	65	1000	595	30	90	35	440	100	220
Ideal Flow (vphpl)	1500	1900	1900	1900	1900	1900	1900	1900	1900	2200	1900	1900
Total Lost time (s)	6.6	6.2	6.6	6.6	6.2	6.6	6.6	6.6		6.6	6.6	6.6
Lane Util. Factor	1.00	*0.65	1.00	1.00	0.95	1.00	1.00	1.00		*1.00	*0.90	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.97	1.00
Satd. Flow (prot)	1397	2422	1583	1770	3539	1583	1770	1785		2049	1624	1583
Flt Permitted	0.11	1.00	1.00	0.08	1.00	1.00	0.95	1.00		0.95	0.97	1.00
Satd. Flow (perm)	160	2422	1583	149	3539	1583	1770	1785		2049	1624	1583
Peak-hour factor, PHF	0.91	0.93	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.80	0.85	0.80
Adj. Flow (vph)	165	812	26	68	1042	620	31	94	36	550	118	275
RTOR Reduction (vph)	0	0	13	0	0	109	0	11	0	0	0	76
Lane Group Flow (vph)	165	812	13	68	1042	512	31	119	0	330	338	199
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Turn Type	D.P+P	NA	pm+ov	D.P+P	NA	pm+ov	Split	NA		Split	NA	Perm
Protected Phases	5	2	3	1	6	4	3	3		4	4	
Permitted Phases	6		2	2		6						4
Actuated Green, G (s)	57.9	49.9	62.0	57.9	47.0	77.0	12.1	12.1		30.0	30.0	30.0
Effective Green, g (s)	57.9	49.9	62.0	57.9	47.0	77.0	12.1	12.1		30.0	30.0	30.0
Actuated g/C Ratio	0.46	0.40	0.49	0.46	0.37	0.61	0.10	0.10		0.24	0.24	0.24
Clearance Time (s)	6.6	6.2	6.6	6.6	6.2	6.6	6.6	6.6		6.6	6.6	6.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	180	959	778	171	1320	967	169	171		487	386	376
v/s Ratio Prot	0.08	c0.34	0.00	0.03	0.29	0.13	0.02	c0.07		0.16	c0.21	
v/s Ratio Perm	c0.34		0.01	0.16		0.20						0.13
v/c Ratio	0.92	0.85	0.02	0.40	0.79	0.53	0.18	0.70		0.68	0.88	0.53
Uniform Delay, d1	27.2	34.6	16.4	48.0	35.1	14.1	52.4	55.2		43.6	46.2	41.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	43.6	9.2	0.0	1.5	4.9	0.5	0.5	11.7		3.7	19.3	1.3
Delay (s)	70.7	43.7	16.4	49.5	40.0	14.6	52.9	66.8		47.3	65.5	43.2
Level of Service	E	D	B	D	D	B	D	E		D	E	D
Approach Delay (s/veh)		47.5			31.3			64.2			52.6	
Approach LOS		D			C			E			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	42.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	126.0	Sum of lost time (s)	26.0
Intersection Capacity Utilization	81.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	40	10	830	720	30
Future Vol, veh/h	5	40	10	830	720	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	42	10	865	750	31

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1203	375	781	0	-	0
Stage 1	750	-	-	-	-	-
Stage 2	453	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	177	623	832	-	-	-
Stage 1	427	-	-	-	-	-
Stage 2	607	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	174	623	832	-	-	-
Mov Cap-2 Maneuver	174	-	-	-	-	-
Stage 1	420	-	-	-	-	-
Stage 2	607	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	13.24	0.26	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	43	-	484	-	-
HCM Lane V/C Ratio	0.013	-	0.097	-	-
HCM Ctrl Dly (s/v)	9.4	0.2	13.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

Intersection	
Int Delay, s/veh	13.9

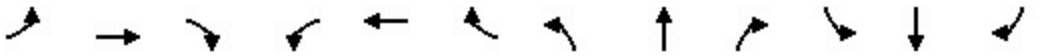
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	65	875	1185	65	60	65
Future Vol, veh/h	65	875	1185	65	60	65
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	100	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	68	911	1234	68	63	68

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1302	0	-	0	1826	617
Stage 1	-	-	-	-	1234	-
Stage 2	-	-	-	-	591	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	528	-	-	-	68	433
Stage 1	-	-	-	-	238	-
Stage 2	-	-	-	-	516	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	528	-	-	-	~ 57	433
Mov Cap-2 Maneuver	-	-	-	-	~ 57	-
Stage 1	-	-	-	-	197	-
Stage 2	-	-	-	-	516	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.89	0	250.74
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	528	-	-	-	103
HCM Lane V/C Ratio	0.128	-	-	-	1.26
HCM Ctrl Dly (s/v)	12.8	-	-	-	250.7
HCM Lane LOS	B	-	-	-	F
HCM 95th %tile Q(veh)	0.4	-	-	-	8.9

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	950	20	65	875	430	25	60	35	445	50	115
Future Volume (vph)	100	950	20	65	875	430	25	60	35	445	50	115
Ideal Flow (vphpl)	1500	1900	1900	1900	1900	1900	1900	1900	1900	2200	1900	1900
Total Lost time (s)	6.6	6.2	6.6	6.6	6.2	6.6	6.6	6.6		6.6	6.6	6.6
Lane Util. Factor	1.00	*0.65	1.00	1.00	0.95	1.00	1.00	1.00		*1.00	*0.90	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.96	1.00
Satd. Flow (prot)	1397	2422	1583	1770	3539	1583	1770	1760		2049	1611	1583
Flt Permitted	0.16	1.00	1.00	0.10	1.00	1.00	0.95	1.00		0.95	0.96	1.00
Satd. Flow (perm)	231	2422	1583	177	3539	1583	1770	1760		2049	1611	1583
Peak-hour factor, PHF	0.83	0.94	0.79	0.94	0.94	0.94	0.94	0.94	0.94	0.90	0.94	0.81
Adj. Flow (vph)	120	1011	25	69	931	457	27	64	37	494	53	142
RTOR Reduction (vph)	0	0	13	0	0	189	0	20	0	0	0	70
Lane Group Flow (vph)	120	1011	12	69	931	268	27	81	0	272	275	72
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Turn Type	D.P+P	NA	pm+ov	D.P+P	NA	pm+ov	Split	NA		Split	NA	pm+ov
Protected Phases	5	2	3	1	6	4	3	3		4	4	5
Permitted Phases	6		2	2		6						4
Actuated Green, G (s)	49.4	42.1	52.6	49.4	40.5	64.6	10.5	10.5		24.1	24.1	33.0
Effective Green, g (s)	49.4	42.1	52.6	49.4	40.5	64.6	10.5	10.5		24.1	24.1	33.0
Actuated g/C Ratio	0.45	0.38	0.48	0.45	0.37	0.59	0.10	0.10		0.22	0.22	0.30
Clearance Time (s)	6.6	6.2	6.6	6.6	6.2	6.6	6.6	6.6		6.6	6.6	6.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	198	926	756	185	1302	929	168	168		448	352	569
v/s Ratio Prot	0.05	c0.42	0.00	0.02	c0.26	0.06	0.02	c0.05		0.13	c0.17	0.01
v/s Ratio Perm	0.22		0.01	0.14		0.11						0.04
v/c Ratio	0.61	1.09	0.02	0.37	0.72	0.29	0.16	0.48		0.61	0.78	0.13
Uniform Delay, d1	20.7	33.9	15.1	46.0	29.8	11.3	45.7	47.2		38.7	40.5	28.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	5.2	57.8	0.0	1.3	3.4	0.2	0.5	2.2		2.3	10.7	0.1
Delay (s)	25.9	91.8	15.1	47.3	33.2	11.5	46.2	49.4		41.0	51.2	28.1
Level of Service	C	F	B	D	C	B	D	D		D	D	C
Approach Delay (s/veh)		83.3			27.0			48.7			42.4	
Approach LOS		F			C			D			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	49.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	26.0
Intersection Capacity Utilization	67.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	35	10	580	575	30
Future Vol, veh/h	5	35	10	580	575	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	37	11	617	612	32

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	941	306	644	0	-	0
Stage 1	612	-	-	-	-	-
Stage 2	330	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	262	690	937	-	-	-
Stage 1	504	-	-	-	-	-
Stage 2	701	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	258	690	937	-	-	-
Mov Cap-2 Maneuver	258	-	-	-	-	-
Stage 1	497	-	-	-	-	-
Stage 2	701	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	11.82	0.27	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	61	-	571	-	-
HCM Lane V/C Ratio	0.011	-	0.075	-	-
HCM Ctrl Dly (s/v)	8.9	0.1	11.8	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection	
Int Delay, s/veh	6.2

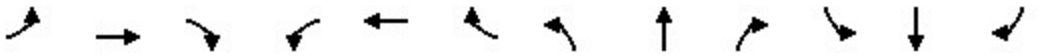
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	55	1015	960	55	55	55
Future Vol, veh/h	55	1015	960	55	55	55
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	100	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	59	1080	1021	59	59	59

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1080	0	-	0	1678	511
Stage 1	-	-	-	-	1021	-
Stage 2	-	-	-	-	657	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	642	-	-	-	86	508
Stage 1	-	-	-	-	308	-
Stage 2	-	-	-	-	478	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	642	-	-	-	75	508
Mov Cap-2 Maneuver	-	-	-	-	75	-
Stage 1	-	-	-	-	268	-
Stage 2	-	-	-	-	478	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.57	0	118.12
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	642	-	-	-	130
HCM Lane V/C Ratio	0.091	-	-	-	0.899
HCM Ctrl Dly (s/v)	11.2	-	-	-	118.1
HCM Lane LOS	B	-	-	-	F
HCM 95th %tile Q(veh)	0.3	-	-	-	5.9

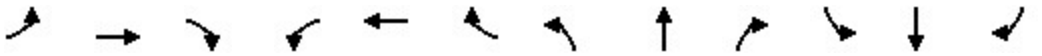
FUTURE YEAR (2027) BUILD MITIGATED CAPACITY REPORTS



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	950	20	65	875	430	25	60	35	445	50	115
Future Volume (vph)	100	950	20	65	875	430	25	60	35	445	50	115
Ideal Flow (vphpl)	1500	1900	1900	1900	1900	1900	1900	1900	1900	2200	1900	1900
Total Lost time (s)	6.6	6.2	6.6	6.6	6.2	6.6	6.6	6.6		6.6	6.6	6.6
Lane Util. Factor	1.00	*0.65	1.00	1.00	0.95	1.00	1.00	1.00		*1.00	*0.90	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.96	1.00
Satd. Flow (prot)	1397	2422	1583	1770	3539	1583	1770	1760		2049	1611	1583
Flt Permitted	0.18	1.00	1.00	0.09	1.00	1.00	0.95	1.00		0.95	0.96	1.00
Satd. Flow (perm)	265	2422	1583	161	3539	1583	1770	1760		2049	1611	1583
Peak-hour factor, PHF	0.83	0.94	0.79	0.94	0.94	0.94	0.94	0.94	0.94	0.90	0.94	0.81
Adj. Flow (vph)	120	1011	25	69	931	457	27	64	37	494	53	142
RTOR Reduction (vph)	0	0	12	0	0	181	0	19	0	0	0	73
Lane Group Flow (vph)	120	1011	13	69	931	276	27	82	0	272	275	69
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Turn Type	D.P+P	NA	pm+ov	D.P+P	NA	pm+ov	Split	NA		Split	NA	pm+ov
Protected Phases	5	2	3	1	6	4	3	3		4	4	5
Permitted Phases	6		2	2		6						4
Actuated Green, G (s)	52.5	46.3	56.3	52.5	44.4	65.9	10.0	10.0		21.5	21.5	29.6
Effective Green, g (s)	52.5	46.3	56.3	52.5	44.4	65.9	10.0	10.0		21.5	21.5	29.6
Actuated g/C Ratio	0.48	0.42	0.51	0.48	0.40	0.60	0.09	0.09		0.20	0.20	0.27
Clearance Time (s)	6.6	6.2	6.6	6.6	6.2	6.6	6.6	6.6		6.6	6.6	6.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	209	1019	810	167	1428	948	160	160		400	314	520
v/s Ratio Prot	0.04	c0.42	0.00	0.02	c0.26	0.06	0.02	c0.05		0.13	c0.17	0.01
v/s Ratio Perm	0.23		0.01	0.17		0.12						0.03
v/c Ratio	0.57	0.99	0.02	0.41	0.65	0.29	0.17	0.51		0.68	0.88	0.13
Uniform Delay, d1	18.5	31.7	13.2	47.0	26.5	10.7	46.2	47.7		41.1	43.0	30.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	3.8	26.4	0.0	1.7	2.3	0.2	0.5	2.8		4.7	22.8	0.1
Delay (s)	22.3	58.0	13.2	48.7	28.9	10.9	46.7	50.4		45.8	65.7	30.6
Level of Service	C	E	B	D	C	B	D	D		D	E	C
Approach Delay (s/veh)		53.4			24.2			49.6			50.6	
Approach LOS		D			C			D			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	40.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	26.0
Intersection Capacity Utilization	67.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

FUTURE YEAR (2027) BUILD RIRO+LI CAPACITY REPORTS



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	120	645	45	30	480	195	45	85	30	380	60	115
Future Volume (vph)	120	645	45	30	480	195	45	85	30	380	60	115
Ideal Flow (vphpl)	1500	1900	1900	1900	1900	1900	1900	1900	1900	2200	1900	1900
Total Lost time (s)	6.6	6.2	6.6	6.6	6.2	6.6	6.6	6.6		6.6	6.6	6.6
Lane Util. Factor	1.00	*0.65	1.00	1.00	0.95	1.00	1.00	1.00		*1.00	*0.90	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.97	1.00
Satd. Flow (prot)	1397	2398	1583	1770	3343	1583	1770	1789		2049	1627	1568
Flt Permitted	0.39	1.00	1.00	0.13	1.00	1.00	0.95	1.00		0.95	0.97	1.00
Satd. Flow (perm)	571	2398	1583	241	3343	1583	1770	1789		2049	1627	1568
Peak-hour factor, PHF	0.74	0.87	0.59	0.92	0.92	0.92	0.92	0.92	0.92	0.91	0.58	0.80
Adj. Flow (vph)	162	741	76	33	522	212	49	92	33	418	103	144
RTOR Reduction (vph)	0	0	36	0	0	90	0	12	0	0	0	71
Lane Group Flow (vph)	162	741	40	33	522	122	49	113	0	259	262	73
Heavy Vehicles (%)	2%	3%	2%	2%	8%	2%	2%	2%	2%	2%	2%	3%
Turn Type	D.P+P	NA	pm+ov	D.P+P	NA	pm+ov	Split	NA		Split	NA	pm+ov
Protected Phases	5	2	3	1	6	4	3	3		4	4	5
Permitted Phases	6		2	2		6						4
Actuated Green, G (s)	53.5	47.9	59.8	53.5	42.9	65.5	11.9	11.9		22.6	22.6	33.2
Effective Green, g (s)	53.5	47.9	59.8	53.5	42.9	65.5	11.9	11.9		22.6	22.6	33.2
Actuated g/C Ratio	0.47	0.42	0.52	0.47	0.38	0.57	0.10	0.10		0.20	0.20	0.29
Clearance Time (s)	6.6	6.2	6.6	6.6	6.2	6.6	6.6	6.6		6.6	6.6	6.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	344	1007	830	188	1258	909	184	186		406	322	547
v/s Ratio Prot	0.04	c0.31	0.01	0.01	0.16	0.03	0.03	c0.06		0.13	c0.16	0.01
v/s Ratio Perm	c0.18		0.02	0.07		0.05						0.03
v/c Ratio	0.47	0.74	0.05	0.18	0.41	0.13	0.27	0.61		0.64	0.81	0.13
Uniform Delay, d1	18.4	27.7	13.2	33.9	26.3	11.2	47.0	48.8		41.9	43.7	29.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	1.0	4.8	0.0	0.4	1.0	0.1	0.8	5.6		3.3	14.5	0.1
Delay (s)	19.4	32.5	13.2	34.4	27.3	11.2	47.8	54.4		45.2	58.2	29.9
Level of Service	B	C	B	C	C	B	D	D		D	E	C
Approach Delay (s/veh)		28.9			23.2			52.5			47.0	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	33.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	26.0
Intersection Capacity Utilization	56.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	105	10	395	450	35
Future Vol, veh/h	5	105	10	395	450	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	114	11	429	489	38

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	726	245	527	0	-	0
Stage 1	489	-	-	-	-	-
Stage 2	236	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	360	756	1036	-	-	-
Stage 1	582	-	-	-	-	-
Stage 2	781	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	356	756	1036	-	-	-
Mov Cap-2 Maneuver	356	-	-	-	-	-
Stage 1	575	-	-	-	-	-
Stage 2	781	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	11	0.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	89	-	719	-	-
HCM Lane V/C Ratio	0.01	-	0.166	-	-
HCM Ctrl Dly (s/v)	8.5	0.1	11	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.6	-	-

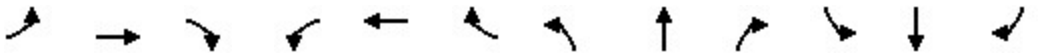
Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑	↱		↱
Traffic Vol, veh/h	70	815	570	70	0	75
Future Vol, veh/h	70	815	570	70	0	75
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	100	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	76	886	620	76	0	82

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	696	0	-	0	-	310
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.14	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.22	-	-	-	-	3.32
Pot Cap-1 Maneuver	896	-	-	-	0	686
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	896	-	-	-	-	686
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.74	0	10.95
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	896	-	-	-	686
HCM Lane V/C Ratio	0.085	-	-	-	0.119
HCM Ctrl Dly (s/v)	9.4	-	-	-	11
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.3	-	-	-	0.4



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	150	695	25	65	1000	595	30	90	35	500	95	220
Future Volume (vph)	150	695	25	65	1000	595	30	90	35	500	95	220
Ideal Flow (vphpl)	1500	1900	1900	1900	1900	1900	1900	1900	1900	2200	1900	1900
Total Lost time (s)	6.6	6.2	6.6	6.6	6.2	6.6	6.6	6.6		6.6	6.6	6.6
Lane Util. Factor	1.00	*0.65	1.00	1.00	0.95	1.00	1.00	1.00		*1.00	*0.90	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.97	1.00
Satd. Flow (prot)	1397	2422	1583	1770	3539	1583	1770	1785		2049	1620	1583
Flt Permitted	0.09	1.00	1.00	0.09	1.00	1.00	0.95	1.00		0.95	0.97	1.00
Satd. Flow (perm)	138	2422	1583	164	3539	1583	1770	1785		2049	1620	1583
Peak-hour factor, PHF	0.91	0.93	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.80	0.85	0.80
Adj. Flow (vph)	165	747	26	68	1042	620	31	94	36	625	112	275
RTOR Reduction (vph)	0	0	14	0	0	125	0	11	0	0	0	75
Lane Group Flow (vph)	165	747	12	68	1042	495	31	119	0	369	368	200
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Turn Type	D.P+P	NA	pm+ov	D.P+P	NA	pm+ov	Split	NA		Split	NA	Perm
Protected Phases	5	2	3	1	6	4	3	3		4	4	
Permitted Phases	6		2	2		6						4
Actuated Green, G (s)	56.5	45.5	57.5	56.5	42.6	74.1	12.0	12.0		31.5	31.5	31.5
Effective Green, g (s)	56.5	45.5	57.5	56.5	42.6	74.1	12.0	12.0		31.5	31.5	31.5
Actuated g/C Ratio	0.45	0.36	0.46	0.45	0.34	0.59	0.10	0.10		0.25	0.25	0.25
Clearance Time (s)	6.6	6.2	6.6	6.6	6.2	6.6	6.6	6.6		6.6	6.6	6.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	200	874	722	213	1196	930	168	170		512	405	395
v/s Ratio Prot	0.09	c0.31	0.00	0.03	c0.29	0.13	0.02	c0.07		0.18	c0.23	
v/s Ratio Perm	0.28		0.01	0.12		0.18						0.13
v/c Ratio	0.83	0.85	0.02	0.32	0.87	0.53	0.18	0.70		0.72	0.91	0.51
Uniform Delay, d1	31.6	37.2	18.8	46.2	39.1	15.6	52.5	55.3		43.2	45.9	40.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	23.3	10.4	0.0	0.9	8.8	0.6	0.5	12.3		5.0	23.6	1.0
Delay (s)	54.9	47.6	18.8	47.0	48.0	16.2	53.0	67.5		48.2	69.4	41.6
Level of Service	D	D	B	D	D	B	D	E		D	E	D
Approach Delay (s/veh)		48.1			36.5			64.7			54.1	
Approach LOS		D			D			E			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	45.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	126.0	Sum of lost time (s)	26.0
Intersection Capacity Utilization	83.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	95	10	830	720	30
Future Vol, veh/h	5	95	10	830	720	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	99	10	865	750	31

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1203	375	781	0	-	0
Stage 1	750	-	-	-	-	-
Stage 2	453	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	177	623	832	-	-	-
Stage 1	427	-	-	-	-	-
Stage 2	607	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	174	623	832	-	-	-
Mov Cap-2 Maneuver	174	-	-	-	-	-
Stage 1	420	-	-	-	-	-
Stage 2	607	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	13.04	0.26	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	43	-	551	-	-
HCM Lane V/C Ratio	0.013	-	0.189	-	-
HCM Ctrl Dly (s/v)	9.4	0.2	13	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.7	-	-

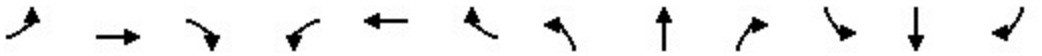
Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑	↱		↱
Traffic Vol, veh/h	65	875	1185	65	0	70
Future Vol, veh/h	65	875	1185	65	0	70
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	100	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	68	911	1234	68	0	73

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1302	0	-	0	-	617
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.14	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.22	-	-	-	-	3.32
Pot Cap-1 Maneuver	528	-	-	-	0	433
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	528	-	-	-	-	433
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.89	0	15
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	528	-	-	-	433
HCM Lane V/C Ratio	0.128	-	-	-	0.169
HCM Ctrl Dly (s/v)	12.8	-	-	-	15
HCM Lane LOS	B	-	-	-	B
HCM 95th %tile Q(veh)	0.4	-	-	-	0.6



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	895	20	65	875	430	25	60	35	500	45	115
Future Volume (vph)	100	895	20	65	875	430	25	60	35	500	45	115
Ideal Flow (vphpl)	1500	1900	1900	1900	1900	1900	1900	1900	1900	2200	1900	1900
Total Lost time (s)	6.6	6.2	6.6	6.6	6.2	6.6	6.6	6.6		6.6	6.6	6.6
Lane Util. Factor	1.00	*0.65	1.00	1.00	0.95	1.00	1.00	1.00		*1.00	*0.90	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.96	1.00
Satd. Flow (prot)	1397	2422	1583	1770	3539	1583	1770	1760		2049	1609	1583
Flt Permitted	0.16	1.00	1.00	0.10	1.00	1.00	0.95	1.00		0.95	0.96	1.00
Satd. Flow (perm)	233	2422	1583	177	3539	1583	1770	1760		2049	1609	1583
Peak-hour factor, PHF	0.83	0.94	0.79	0.94	0.94	0.94	0.94	0.94	0.94	0.90	0.94	0.81
Adj. Flow (vph)	120	952	25	69	931	457	27	64	37	556	48	142
RTOR Reduction (vph)	0	0	13	0	0	183	0	19	0	0	0	70
Lane Group Flow (vph)	120	952	12	69	931	274	27	82	0	300	304	72
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Turn Type	D.P+P	NA	pm+ov	D.P+P	NA	pm+ov	Split	NA		Split	NA	pm+ov
Protected Phases	5	2	3	1	6	4	3	3		4	4	5
Permitted Phases	6		2	2		6						4
Actuated Green, G (s)	49.1	42.1	52.4	49.1	40.7	65.3	10.3	10.3		24.6	24.6	33.0
Effective Green, g (s)	49.1	42.1	52.4	49.1	40.7	65.3	10.3	10.3		24.6	24.6	33.0
Actuated g/C Ratio	0.45	0.38	0.48	0.45	0.37	0.59	0.09	0.09		0.22	0.22	0.30
Clearance Time (s)	6.6	6.2	6.6	6.6	6.2	6.6	6.6	6.6		6.6	6.6	6.6
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	192	926	754	180	1309	939	165	164		458	359	569
v/s Ratio Prot	0.05	c0.39	0.00	0.02	c0.26	0.07	0.02	c0.05		0.15	c0.19	0.01
v/s Ratio Perm	0.23		0.01	0.15		0.11						0.04
v/c Ratio	0.63	1.03	0.02	0.38	0.71	0.29	0.16	0.50		0.66	0.85	0.13
Uniform Delay, d1	20.9	33.9	15.2	46.3	29.6	11.0	45.9	47.4		38.8	40.9	28.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	6.2	37.0	0.0	1.4	3.3	0.2	0.5	2.4		3.4	16.6	0.1
Delay (s)	27.1	70.9	15.2	47.6	32.9	11.2	46.4	49.8		42.2	57.5	28.1
Level of Service	C	E	B	D	C	B	D	D		D	E	C
Approach Delay (s/veh)		64.8			26.8			49.1			45.8	
Approach LOS		E			C			D			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	43.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	26.0
Intersection Capacity Utilization	69.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	85	10	580	575	30
Future Vol, veh/h	5	85	10	580	575	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	90	11	617	612	32

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	941	306	644	0	-	0
Stage 1	612	-	-	-	-	-
Stage 2	330	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	262	690	937	-	-	-
Stage 1	504	-	-	-	-	-
Stage 2	701	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	258	690	937	-	-	-
Mov Cap-2 Maneuver	258	-	-	-	-	-
Stage 1	497	-	-	-	-	-
Stage 2	701	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	11.72	0.27	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	61	-	631	-	-
HCM Lane V/C Ratio	0.011	-	0.152	-	-
HCM Ctrl Dly (s/v)	8.9	0.1	11.7	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.5	-	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑	↱		↱
Traffic Vol, veh/h	55	1015	960	55	0	60
Future Vol, veh/h	55	1015	960	55	0	60
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	100	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	59	1080	1021	59	0	64

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1080	0	-	0	-	511
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.14	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.22	-	-	-	-	3.32
Pot Cap-1 Maneuver	642	-	-	-	0	508
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	642	-	-	-	-	508
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.57	0	13.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	642	-	-	-	508
HCM Lane V/C Ratio	0.091	-	-	-	0.126
HCM Ctrl Dly (s/v)	11.2	-	-	-	13.1
HCM Lane LOS	B	-	-	-	B
HCM 95th %tile Q(veh)	0.3	-	-	-	0.4

QUEUE REPORTS

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	162	799	76	33	500	207	49	120	214	219	144
v/c Ratio	0.43	0.73	0.08	0.18	0.36	0.21	0.27	0.62	0.64	0.81	0.26
Control Delay (s/veh)	17.6	31.2	0.9	18.7	25.3	1.4	50.1	56.5	53.3	69.4	11.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	17.6	31.2	0.9	18.7	25.3	1.4	50.1	56.5	53.3	69.4	11.0
Queue Length 50th (ft)	62	391	0	11	152	0	34	76	145	171	22
Queue Length 95th (ft)	81	485	0	27	198	16	72	137	232	163	56
Internal Link Dist (ft)		686			1032			386		551	
Turn Bay Length (ft)	275		100	270		450	100		320		
Base Capacity (vph)	391	1094	947	200	1397	1008	212	226	358	285	576
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	0.41	0.73	0.08	0.17	0.36	0.21	0.23	0.53	0.60	0.77	0.25

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	165	796	26	68	1016	609	31	125	319	324	275
v/c Ratio	0.87	0.83	0.03	0.38	0.76	0.56	0.19	0.70	0.66	0.85	0.61
Control Delay (s/veh)	64.3	43.0	0.1	39.4	39.3	5.7	54.5	69.8	51.4	67.2	33.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	64.3	43.0	0.1	39.4	39.3	5.7	54.5	69.8	51.4	67.2	33.6
Queue Length 50th (ft)	80	459	0	29	394	56	24	90	238	283	128
Queue Length 95th (ft)	#216	585	0	54	466	98	56	159	302	#434	189
Internal Link Dist (ft)		1853			1656			581		1142	
Turn Bay Length (ft)	275		100	270		450	100		320		
Base Capacity (vph)	190	983	837	182	1373	1083	188	201	487	386	453
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	0.87	0.81	0.03	0.37	0.74	0.56	0.16	0.62	0.66	0.84	0.61

Intersection Summary

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	120	989	25	69	910	447	27	96	266	265	142
v/c Ratio	0.58	1.05	0.03	0.38	0.69	0.40	0.16	0.52	0.60	0.76	0.23
Control Delay (s/veh)	29.6	78.4	0.1	35.7	33.8	1.7	47.0	45.8	44.4	54.9	8.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	29.6	78.4	0.1	35.7	33.8	1.7	47.0	45.8	44.4	54.9	8.8
Queue Length 50th (ft)	46	~641	0	25	308	0	18	51	167	193	18
Queue Length 95th (ft)	81	#878	0	54	391	21	45	102	253	298	50
Internal Link Dist (ft)		686			1032			386		551	
Turn Bay Length (ft)	275		100	270		450	100		320		
Base Capacity (vph)	209	941	851	202	1318	1142	215	233	497	391	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	0.57	1.05	0.03	0.34	0.69	0.39	0.13	0.41	0.54	0.68	0.22

Intersection Summary

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

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	162	805	76	33	505	207	49	120	218	220	144
v/c Ratio	0.43	0.74	0.08	0.18	0.37	0.21	0.27	0.62	0.64	0.82	0.26
Control Delay (s/veh)	17.6	31.4	0.9	18.9	25.3	1.4	50.1	56.5	53.7	69.5	11.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	17.6	31.4	0.9	18.9	25.3	1.4	50.1	56.5	53.7	69.5	11.0
Queue Length 50th (ft)	62	396	0	11	154	0	34	76	148	171	22
Queue Length 95th (ft)	81	490	0	27	200	16	72	137	236	164	56
Internal Link Dist (ft)		686			1032			386		551	
Turn Bay Length (ft)	275		100	270		450	100		320		
Base Capacity (vph)	389	1094	947	198	1397	1008	212	226	358	285	577
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	0.42	0.74	0.08	0.17	0.36	0.21	0.23	0.53	0.61	0.77	0.25

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	165	801	26	68	1026	615	31	125	323	327	275
v/c Ratio	0.88	0.83	0.03	0.39	0.77	0.57	0.19	0.70	0.67	0.86	0.61
Control Delay (s/veh)	67.6	43.4	0.1	40.0	39.5	5.8	54.5	69.8	51.6	67.8	33.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	67.6	43.4	0.1	40.0	39.5	5.8	54.5	69.8	51.6	67.8	33.5
Queue Length 50th (ft)	81	462	0	29	398	58	24	90	242	287	129
Queue Length 95th (ft)	#219	590	0	54	473	102	56	159	306	#440	189
Internal Link Dist (ft)		1853			1656			581		1142	
Turn Bay Length (ft)	275		100	270		450	100		320		
Base Capacity (vph)	187	982	837	179	1372	1083	188	201	488	386	453
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	0.88	0.82	0.03	0.38	0.75	0.57	0.16	0.62	0.66	0.85	0.61

Intersection Summary

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	120	1000	25	69	920	452	27	96	269	268	142
v/c Ratio	0.59	1.07	0.03	0.38	0.70	0.41	0.16	0.52	0.61	0.77	0.23
Control Delay (s/veh)	30.5	83.1	0.1	35.8	34.1	1.7	47.0	45.8	44.4	55.2	8.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	30.5	83.1	0.1	35.8	34.1	1.7	47.0	45.8	44.4	55.2	8.8
Queue Length 50th (ft)	47	~656	0	26	313	0	18	51	169	195	18
Queue Length 95th (ft)	#81	#890	0	54	396	22	45	102	256	303	50
Internal Link Dist (ft)		686			1032			386		551	
Turn Bay Length (ft)	275		100	270		450	100		320		
Base Capacity (vph)	205	938	850	202	1315	1143	215	233	498	391	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	0.59	1.07	0.03	0.34	0.70	0.40	0.13	0.41	0.54	0.69	0.22

Intersection Summary

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

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	162	816	76	33	522	212	49	125	225	233	144
v/c Ratio	0.45	0.76	0.08	0.19	0.39	0.21	0.27	0.63	0.64	0.83	0.25
Control Delay (s/veh)	18.4	33.0	0.9	19.9	26.2	1.4	49.8	58.2	52.8	69.7	10.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	18.4	33.0	0.9	19.9	26.2	1.4	49.8	58.2	52.8	69.7	10.8
Queue Length 50th (ft)	64	416	0	12	165	0	34	81	151	180	21
Queue Length 95th (ft)	81	500	0	27	207	16	72	143	244	173	56
Internal Link Dist (ft)		301			1032			386		238	
Turn Bay Length (ft)	275		100	270		450	100		320		
Base Capacity (vph)	375	1081	934	189	1378	1003	212	226	367	293	588
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	0.43	0.75	0.08	0.17	0.38	0.21	0.23	0.55	0.61	0.80	0.24

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	165	812	26	68	1042	620	31	130	330	338	275
v/c Ratio	0.92	0.85	0.03	0.40	0.79	0.58	0.18	0.71	0.68	0.88	0.61
Control Delay (s/veh)	77.0	44.6	0.1	41.1	40.5	6.2	54.2	71.2	51.8	70.1	33.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	77.0	44.6	0.1	41.1	40.5	6.2	54.2	71.2	51.8	70.1	33.4
Queue Length 50th (ft)	86	467	0	29	404	65	24	95	251	302	130
Queue Length 95th (ft)	#228	603	0	54	482	110	56	#174	313	#463	189
Internal Link Dist (ft)		315			1656			581		238	
Turn Bay Length (ft)	275		100	270		450	100		320		
Base Capacity (vph)	180	973	834	177	1353	1071	189	201	488	386	453
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	0.92	0.83	0.03	0.38	0.77	0.58	0.16	0.65	0.68	0.88	0.61

Intersection Summary

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	120	1011	25	69	931	457	27	101	272	275	142
v/c Ratio	0.61	1.09	0.03	0.38	0.71	0.41	0.16	0.54	0.61	0.78	0.22
Control Delay (s/veh)	31.9	91.0	0.1	35.8	34.8	1.7	46.8	47.4	44.3	56.0	8.9
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 (s/veh)	31.9	91.0	0.1	35.8	34.8	1.7	46.8	47.4	44.3	56.0	8.9
Queue Length 50th (ft)	47	~680	0	26	320	0	18	55	170	200	18
Queue Length 95th (ft)	#84	#903	0	54	402	22	45	108	259	#313	50
Internal Link Dist (ft)		313			1032			386		238	
Turn Bay Length (ft)	275		100	270		450	100		320		
Base Capacity (vph)	200	928	844	202	1303	1141	215	233	499	392	636
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	0.60	1.09	0.03	0.34	0.71	0.40	0.13	0.43	0.55	0.70	0.22

Intersection Summary

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

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	120	1011	25	69	931	457	27	101	272	275	142
v/c Ratio	0.58	0.99	0.03	0.41	0.65	0.41	0.17	0.56	0.68	0.88	0.24
Control Delay (s/veh)	25.0	59.1	0.1	34.6	29.3	1.7	47.9	50.0	51.3	71.6	10.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	25.0	59.1	0.1	34.6	29.3	1.7	47.9	50.0	51.3	71.6	10.8
Queue Length 50th (ft)	43	~550	0	24	285	1	18	55	181	213	20
Queue Length 95th (ft)	67	#776	0	45	348	20	46	112	#304	#408	56
Internal Link Dist (ft)		313			1032			386		238	
Turn Bay Length (ft)	275		100	270		450	100		320		
Base Capacity (vph)	212	1018	873	186	1453	1124	184	202	400	314	591
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	0.57	0.99	0.03	0.37	0.64	0.41	0.15	0.50	0.68	0.88	0.24

Intersection Summary

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

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	162	741	76	33	522	212	49	125	259	262	144
v/c Ratio	0.47	0.74	0.09	0.18	0.41	0.21	0.27	0.63	0.64	0.81	0.24
Control Delay (s/veh)	20.4	33.5	1.0	19.7	28.1	1.4	49.7	57.9	50.4	64.5	10.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	20.4	33.5	1.0	19.7	28.1	1.4	49.7	57.9	50.4	64.5	10.4
Queue Length 50th (ft)	69	383	0	13	171	0	34	81	169	197	20
Queue Length 95th (ft)	81	437	0	27	207	16	72	143	#299	194	56
Internal Link Dist (ft)		301			1032			386		238	
Turn Bay Length (ft)	275		100	270		450	100		320		
Base Capacity (vph)	353	1052	896	199	1336	995	213	227	405	322	622
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	0.46	0.70	0.08	0.17	0.39	0.21	0.23	0.55	0.64	0.81	0.23

Intersection Summary

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	165	747	26	68	1042	620	31	130	369	368	275
v/c Ratio	0.83	0.85	0.03	0.32	0.87	0.59	0.18	0.72	0.72	0.91	0.59
Control Delay (s/veh)	62.9	48.0	0.1	37.9	49.0	6.6	54.3	71.8	52.4	73.5	31.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	62.9	48.0	0.1	37.9	49.0	6.6	54.3	71.8	52.4	73.5	31.6
Queue Length 50th (ft)	95	433	0	29	440	63	24	95	281	331	127
Queue Length 95th (ft)	#209	557	0	57	#574	114	56	#174	340	#486	183
Internal Link Dist (ft)		315			1656			581		238	
Turn Bay Length (ft)	275		100	270		450	100		320		
Base Capacity (vph)	216	899	782	212	1196	1054	188	200	516	408	473
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	0.76	0.83	0.03	0.32	0.87	0.59	0.16	0.65	0.72	0.90	0.58

Intersection Summary

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	120	952	25	69	931	457	27	101	300	304	142
v/c Ratio	0.63	1.03	0.03	0.39	0.71	0.41	0.16	0.55	0.66	0.85	0.22
Control Delay (s/veh)	32.4	71.8	0.1	35.4	33.9	1.7	47.2	48.8	46.4	62.7	9.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	32.4	71.8	0.1	35.4	33.9	1.7	47.2	48.8	46.4	62.7	9.4
Queue Length 50th (ft)	48	~603	0	26	312	1	18	55	189	224	19
Queue Length 95th (ft)	76	#795	0	51	384	21	46	110	294	#403	52
Internal Link Dist (ft)		313			1032			386		238	
Turn Bay Length (ft)	275		100	270		450	100		320		
Base Capacity (vph)	194	927	829	201	1318	1128	199	217	474	372	636
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	0.62	1.03	0.03	0.34	0.71	0.41	0.14	0.47	0.63	0.82	0.22

Intersection Summary

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

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

TURN LANE WARRANT ANALYSIS

TURN LANE WARRANT ANALYSIS

Intersection:	US 40 & Access Drive
Scenario:	Build - Full Access (2027)
Date:	1/23/2026

Mainline:

Dir:	EB/WB	**AADT:**	25,739
# of Lanes:	4	**AADT Year:**	2024
Speed Limit:	30		

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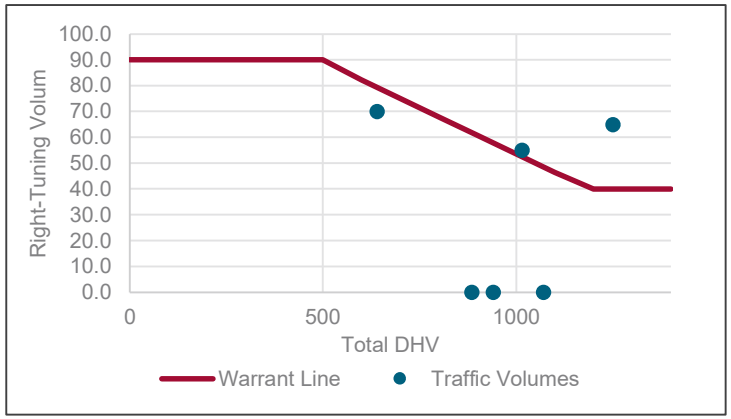
Traffic Volumes

AM				PM				Sat			
EB		WB		EB		WB		EB		WB	
Right Turns	0	Right Turns	70	Right Turns	0	Right Turns	65	Right Turns	0	Right Turns	55
Throughs	815	Throughs	570	Throughs	875	Throughs	1185	Throughs	1015	Throughs	960
Left Turns	70	Left Turns	0	Left Turns	65	Left Turns	0	Left Turns	55	Left Turns	0

Warrants

Right-Turn Lane

Warranted?	EB	WB
AM	No	No
PM	No	Yes
Sat	No	Yes



Left-Turn Lane

Warranted?	EB	WB
AM	NA	NA
PM	NA	NA
Sat	NA	NA

% Met:	EB	WB
AM	290%	0%
PM	330%	0%
Sat	230%	0%

Passing Blister

Warranted?	EB	WB
AM	No	No
PM	No	No
Sat	No	No

Note: Turning movements of less than 5 vehicles an hour are not evaluated.

TURN LANE WARRANT ANALYSIS

Intersection:	US 40 & Access Drive
Scenario:	Build - RIRO + Left In (2027)
Date:	1/23/2026

Mainline:

Dir:	EB/WB	**AADT:**	25,739
# of Lanes:	4	**AADT Year:**	2024
Speed Limit:	30		

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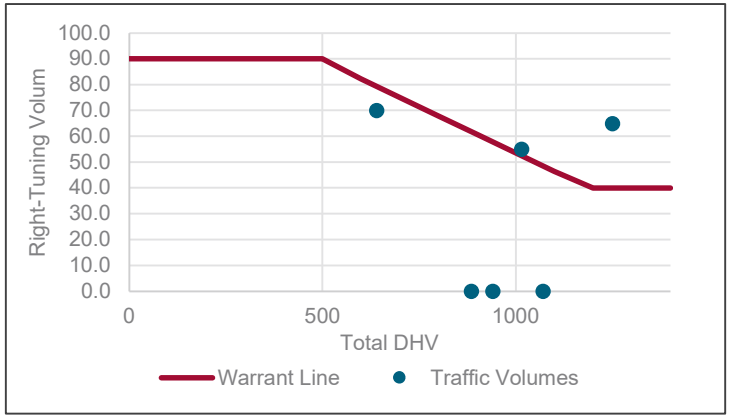
Traffic Volumes

AM				PM				Sat			
EB		WB		EB		WB		EB		WB	
Right Turns	0	Right Turns	70	Right Turns	0	Right Turns	65	Right Turns	0	Right Turns	55
Throughs	815	Throughs	570	Throughs	875	Throughs	1185	Throughs	1015	Throughs	960
Left Turns	70	Left Turns	0	Left Turns	65	Left Turns	0	Left Turns	55	Left Turns	0

Warrants

Right-Turn Lane

Warranted?	EB	WB
AM	No	No
PM	No	Yes
Sat	No	Yes



Left-Turn Lane

Warranted?	EB	WB
AM	NA	NA
PM	NA	NA
Sat	NA	NA

% Met:	EB	WB
AM	290%	0%
PM	330%	0%
Sat	230%	0%

Passing Blister

Warranted?	EB	WB
AM	No	No
PM	No	No
Sat	No	No

Note: Turning movements of less than 5 vehicles an hour are not evaluated.

Kimley»Horn

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