Traffic Impact Study

Bright Rd – Continuing Care Retirement Community

Prepared for

City of Dublin, Transportation and Mobility

City of Columbus, Division of Traffic Management

By

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Mark I. Mann, P.E.
Director – Transportation Services

November 20, 2022

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Introduction

The proposed Continuing Care Retirement Community development site is in the City of Dublin located in the northeast quadrant of the Emerald Parkway and Bright Road intersection. The access for the site is proposed to be along Bright Road about 700' east of the Emerald Parkway and Bright Road intersection.

There is an existing Right-in/Right-out (RIRO) access off Sawmill Rd. that is used by the existing office buildings that include medical/dental uses and general office buildings. The proposed Continuing Care Retirement Community development site will also use this RIRO access however the traffic volume using this access is minimal.

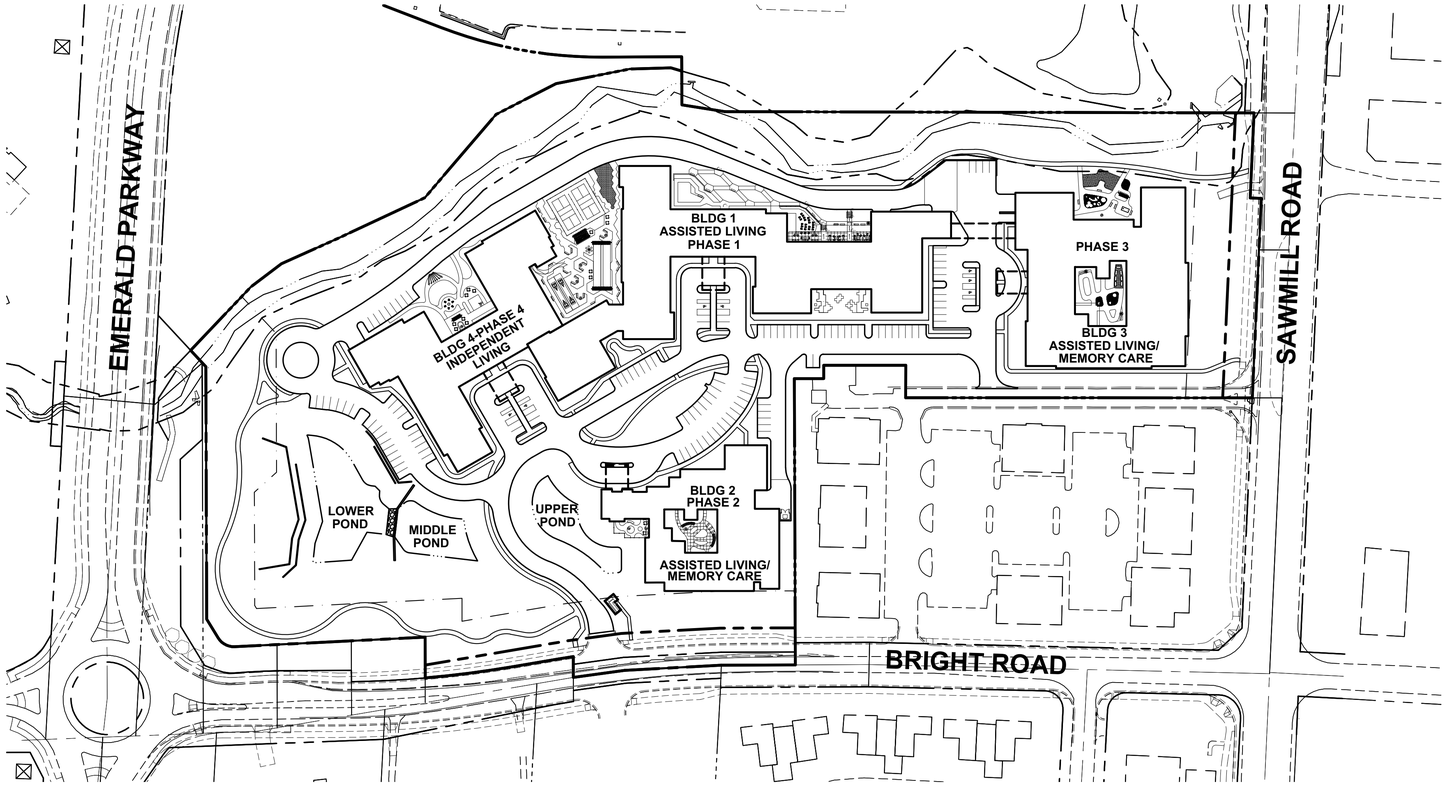
As development in the area continues, particularly the construction of the new Mount Carmel Hospital, traffic from the Retirement Community, and more future growth, current signalized intersections will need to be improved to keep up with increasing capacity needs as well as the current existing volumes.

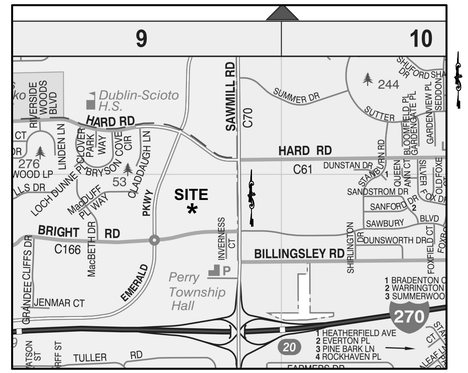
The scope of this study was developed from correspondence with the City of Dublin and City of Columbus. The following will be studied and evaluated as part of this study:

- Left turn lane warrant at the Proposed Access Point
- Right turn lane warrant at the Proposed Access Point and existing Right In/Right Out site access off Sawmill Road
- Level of Service (LOS) at the Proposed Access Point and the following intersections
    - Emerald Parkway/Bright Road
    - Emerald Parkway/Hard Road
    - Bright Road/Sawbury Boulevard/Sawmill Road (City of Columbus)
    - Hard Road/Sawmill Road (City of Columbus)
    - Bright Road/Inverness Court
    - Ex. Right-in/Right-out (RIRO) / Sawmill Road (City of Columbus and Dublin)

The primary goal of this study is to determine any transportation impacts related to the proposed development, Continuing Care Retirement Community, and identify any required mitigation at site area intersections.

CITY OF DUBLIN, COUNTY OF FRANKLIN, OHIO
PRELIMINARY DEVELOPMENT PLAN
FOR
THE BEACON
CCRC
2023





VICINITY MAP
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GRAPHIC SCALE
0 50 100 200
1 inch = 100 feet

SHEET INDEX

CITY OF DUBLIN, OHIO
PRELIMINARY DEVELOPMENT PLAN
TITLE SHEET
FOR
THE BEACON

PLAN PREPARED BY:
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SCALE: AS NOTED
DATE: 10/24/2023
SHEET C1

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Existing/ No Build Conditions

Bright Road is a 2-lane section with a posted speed limit of 25 MPH. Sawmill Road is a 6-lane section with a posted speed limit of 45 MPH. Hard Road is a 5-lane section with a posted speed limit of 35 MPH. Emerald Parkway is a 4-lane section with a posted speed limit of 40 MPH.

The Columbus intersections of Sawmill Road & Hard Road and Sawmill Road & Bright Road/Sawbury Boulevard are signalized with a span wire traffic signal. The traffic signals are within the City of Columbus and under their control.

At the Sawmill & Hard intersection there are two northbound and southbound through lanes as well as two left turn lanes and one right turn lane for both approaches. Both the east and westbound approaches have two left turn lanes and two through lanes, the eastbound approach has one right turn lane.

At the Sawmill & Bright/Sawbury intersection there are three Northbound and two Southbound through lanes as well as one left turn lane for both approaches. Both the east and westbound approaches have one left turn lane and one through lane.

The Dublin intersection of Emerald Parkway & Hard Road is signalized with a mast arm traffic signal, all approaches have two through lanes and one left turn lane. The intersection of Emerald Parkway & Bright Road is a roundabout with 2 lane approaches in all directions except eastbound which only has a one lane approach. The westbound approach has a single westbound through/left lane and a dedicated right turn lane. Both intersections are within the City of Dublin and under their control.

At the Bright Road & Inverness Court intersection, Bright Road traffic is not interrupted with one eastbound and one westbound through lane. Inverness Court is a stopped 2-lane crossroad. The intersection is within the City of Dublin and under their control.

About 350’ north of the Bright Rd/Sawbury Boulevard & Sawmill Road intersection is a Right-in/Right-out (RIRO) off the southbound through lanes. There is currently no right turn lane into the RIRO. This RIRO is under City of Columbus’ control.

Traffic Volumes and Trip Generation

Traffic volume data for this updated study was from EMHT’s 3865 Bright Road Traffic Impact Study. The EMHT study provides counts at all but one Study Area intersections. For the Sawmill Road & Hard Road intersection a February 27th, 2020, traffic count was used. Traffic signal timings were also provided for the traffic signals in the study area by City of Columbus and City of Dublin.

Background growth rates were obtained from MORPC for the EMHT study and those same growth rates will be applied at an annual linear rate to the roadway sections for this study. These growth rates have two different scenarios for the 2033 design year. There are different growth rates for each study area intersection depending on the Emerald Parkway to Tuller Road connector over I-270. (See appendix for growth rates).

The EMHT study build, 2024 and 2034, volumes were used as the no build data for this study. The 2024 and 2034 volumes were taken back one year to 2023 and 2033 for the opening year (2023) and design year (2033) for this study using the growth factors provided by MORPC.

Trip Generation for the site was developed using the latest edition of the ITE Trip Generation Manual (see Appendices). The proposed Continuing Care Retirement Community (LUC 255) shows 394 units.

Table 1. Trip Generations

Trip Generation					
	Land Use Code (LUC)		IN	OUT	Total
Continuing Care Retirement Community	LUC 255	AM	45	24	69
		PM	40	63	103
		Total	85	87	172

Land use code 255 has the most trips when referencing similar LUCs (252, 253, 254, and 620) for this development type. The following are the total trips generated (368 Units) by each of the similar LUCs:

- Nursing Home (LUC 620): 55 in AM, 55 in PM
- Senior Adult Housing – Multifamily (LUC 252): 79 in AM, 99 in PM
- Congregate Care Facility (LUC 253): 32 in AM, 71 in PM
- Assisted Living (LUC 254): 71 in AM, 95 in PM

Based on the ITE Description for LUS 255 it also seems to be the best fit of uses considering what uses are projected for the facility. LUC 255 and will be the LUC used for this Traffic Impact Study.

Land Use: 255
Continuing Care Retirement Community

Description

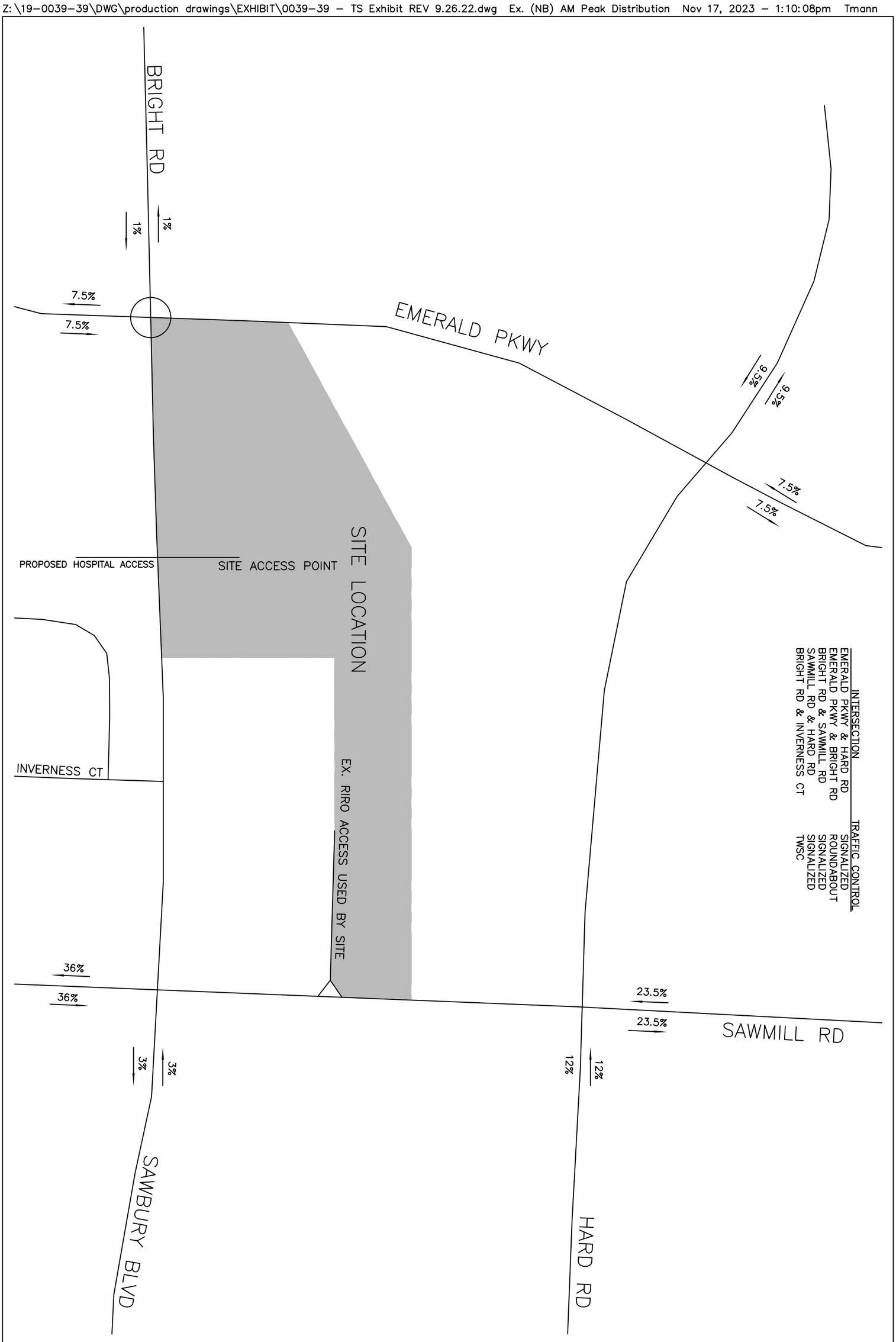
A continuing care retirement community (CCRC) is a land use that provides multiple elements of senior adult living. A CCRC enables a resident to transition in place from independent living to increased care as the medical needs of the resident change. Housing options may include various combinations of senior adult housing (both single-family and multifamily), congregate care, assisted living, and nursing home. The community may also contain special services such as medical, dining, recreational, communal transportation, and some limited, supporting retail facilities. A CCRC is usually a self-contained village. Senior adult housing—single-family (Land Use 251), senior adult housing—multifamily (Land Use 252), congregate care facility (Land Use 253), assisted living (Land Use 254), and nursing home (Land Use 620) are related uses.

The distribution of trips in the network was derived from the EMHT study distribution but based off City of Columbus comments a higher percent of trips was added to/from south of Sawmill Road and a percentage of trips were taken away from to/from north of Emerald Parkway. The percentages were determined to be as follows in Table 2:

Table 2. Directional Approach %

Approach direction	To the Site	From the Site
N/o Emerald Pkwy	7.5%	7.5%
S/o Emerald Pkwy	7.5%	7.5%
N/o Sawmill Rd	23.5%	23.5%
S/o Sawmill Rd	36.0%	36.0%
W/o Bright Rd	1.0%	1.0%
E/o Sawbury Blvd	3.0%	3.0%
W/o Hard Rd	9.5%	9.5%
E/o Hard Rd	12.0%	12.0%

The in-bound and out-bound percentages trip volumes, and distribution of trips on the network are all shown in the following exhibits.



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DATE: 11/16/2023

SHEET 2 / 9

TRAFFIC STUDY EXHIBIT
PEAK PERCENTAGE DISTRIBUTION
FOR
BRIGHT RD - CONTINUING CARE RETIREMENT COMMUNITY

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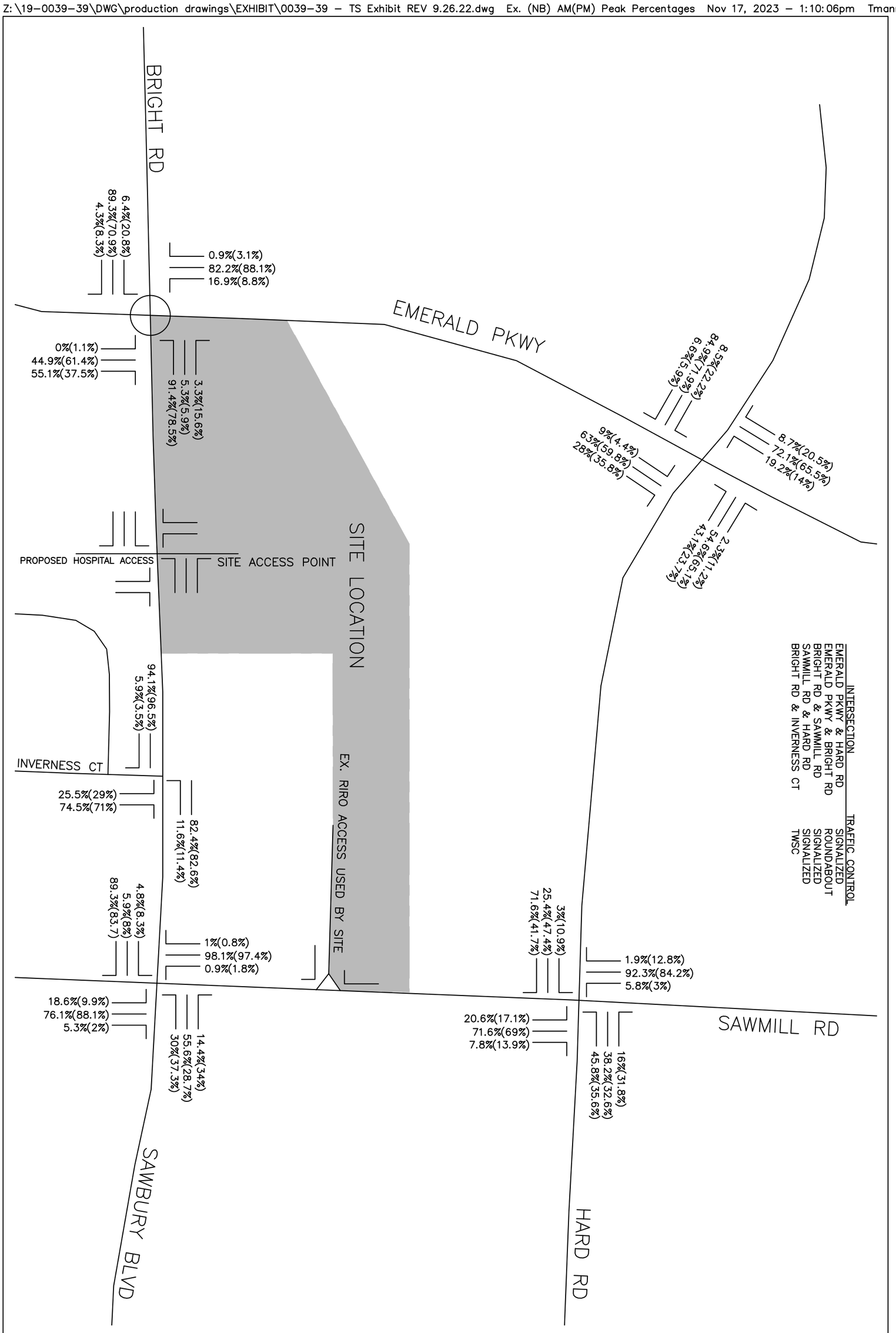

INTERSECTION	TRAFFIC CONTROL
EMERALD PKWY & HARD RD	SIGNALIZED
EMERALD PKWY & BRIGHT RD	ROUNDABOUT
BRIGHT RD & SAWMILL RD	SIGNALIZED
SAWMILL RD & HARD RD	SIGNALIZED
BRIGHT RD & INVERNESS CT	TWSC

SCALE: NOT TO SCALE
DATE: 11/16/2023

SHEET 1 / 9

TRAFFIC STUDY EXHIBIT
EX (2020) NO BUILD AM(PM) PEAK DISTRIBUTION
FOR
BRIGHT RD - CONTINUING CARE RETIREMENT COMMUNITY

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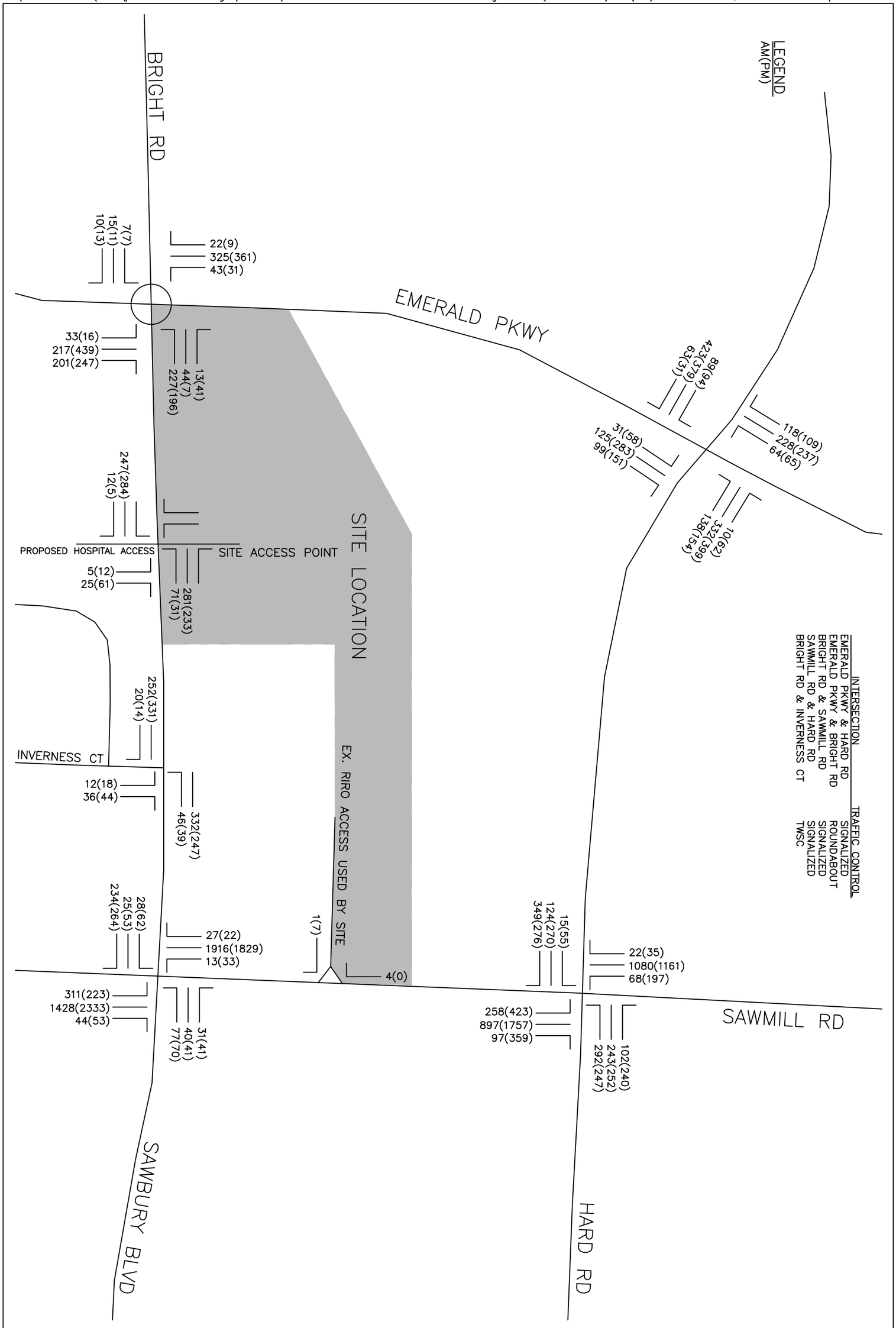

SCALE: NOT TO SCALE
DATE: 11/16/2023

SHEET 3 / 9

TRAFFIC STUDY EXHIBIT
OPENING YEAR (2023) NO BUILD WITHOUT CONNECTOR AM(PM) PEAK
FOR
BRIGHT RD - CONTINUING CARE RETIREMENT COMMUNITY

PLAN PREPARED BY:
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INTERSECTION	TRAFFIC CONTROL
EMERALD PKWY & HARD RD	SIGNALIZED
EMERALD PKWY & BRIGHT RD	ROUNDABOUT
BRIGHT RD & SAWMILL RD	SIGNALIZED
SAWMILL RD & HARD RD	SIGNALIZED
BRIGHT RD & INVERNESS CT	TWSC

LEGEND
AM(PM)

130(120)
260(264)
70(71)

105(111)
499(446)
77(39)

11(73)
395(474)
168(184)

36(70)
142(329)
112(174)

23(36)
1133(1218)
71(207)

121(285)
289(300)
347(294)

17(65)
146(318)
412(325)

271(444)
941(1844)
102(377)

SAWMILL RD

HARD RD

EMERALD PKWY

SITE LOCATION

EX. RIRO ACCESS USED BY SITE

4(0)

1(7)

SITE ACCESS POINT

25(11)
395(428)
52(37)

16(50)
47(8)
250(213)

293(248)
102(50)

382(279)
53(44)

33(26)
2016(1921)
14(35)

36(47)
49(49)
88(81)

BRIGHT RD

8(8)
17(13)
12(14)

37(18)
251(521)
232(292)

284(334)
17(8)

PROPOSED HOSPITAL ACCESS

7(19)
34(96)

295(414)
23(16)

INVERNESS CT

13(19)
37(47)

33(79)
27(69)
259(309)

353(248)
1498(2448)
46(55)

SAWBURY BLVD

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TRAFFIC STUDY EXHIBIT
DESIGN YEAR (2033) NO BUILD WITHOUT CONNECTOR AM(PM) PEAK
FOR
BRIGHT RD - CONTINUING CARE RETIREMENT COMMUNITY

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SHEET 4 / 9

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Capacity Analyses No-Build

Capacity analyses were performed utilizing HCM module in Synchro 11, Sidra and HCS. The Opening Year (2023) No-Build, Design Year (2033) No-Build were all analyzed. The results are summarized in Tables 3 and 4, below. Detailed print outs are contained in the Appendices.

Table 3. Traffic Study Signalized Intersections LOS, No Build

Intersection		Signalized Intersection Level of Service (LOS/ sec. delay)																							
		No Build Without Connector (Existing Conditions w/ EMHT Study Improvements)																With Connector							
		2023								2033								2033							
		AM				PM				AM				PM				AM				PM			
		NB	SB	EB	WB	NB	SB	EB	WB	NB	SB	EB	WB	NB	SB	EB	WB	NB	SB	EB	WB	NB	SB	EB	WB
Emerald Parkway & Hard Road (Existing Conditions)	LT	D/39.9	D/39.3	A/7.3	A/7.7	D/35.3	D/36.2	A/9.5	A/9.8	D/38.6	D/38.0	A/8.1	A/9.0	C/33.7	C/34.8	B/11.4	B/11.6	D/37.5	D/37.0	A/8.8	A/9.7	C/33.0	C/33.0	B/13.2	B/13.2
	TH	D/47.2	D/50.1	B/11.4	B/10.5	D/48.2	D/44.0	B/13.6	B/13.8	D/45.9	D/50.3	B/12.9	B/11.7	D/49.8	D/42.3	B/16.2	B/15.9	D/44.6	D/50.6	B/13.7	B/12.5	D/46.9	D/48.3	B/18.4	B/17.9
	RT	D/48.2	D/51.6	B/11.4	B/10.5	D/50.1	D/44.5	B/13.6	B/13.8	D/46.8	D/52.6	B/12.9	B/11.7	D/51.7	D/42.7	B/16.2	B/15.9	D/45.4	D/52.9	B/13.8	B/12.5	D/48.1	D/49.1	B/18.4	B/17.9
	Approach	D/46.7	D/49.0	B/10.7	A/9.7	D/47.5	D/43.0	B/12.8	B/12.8	D/45.4	D/49.4	B/12.2	B/10.9	D/48.6	D/41.3	B/15.3	B/14.8	D/44.1	D/49.5	B/13.0	B/11.7	D/45.9	D/46.9	B/17.5	B/16.7
	Overall	C/24.9				C/27.4				C/25.1				C/28.3				C/26.3				C/31.8			
Sawmill Road & Hard Road (Existing Conditions)	LT	E/66.5	E/61.5	E/67.8	E/73.0	E/72.8	F/88.9	E/65.5	F/94.3	E/66.1	E/61.5	E/67.5	E/75.0	E/72.3	F/97.5	E/65.7	F/110.8	E/64.8	E/61.5	E/67.5	E/74.4	E/72.4	F/93.3	E/65.7	F/109.4
	TH	B/14.4	B/19.6	D/52.9	D/45.1	D/40.3	C/25.0	E/58.0	F/85.5	B/16.5	C/23.4	D/53.3	D/44.8	F/61.4	C/29.5	E/63.1	F/118.0	B/16.0	C/22.2	D/53.3	D/44.9	F/51.5	C/27.6	E/63.1	F/116.0
	RT	A/6.8	B/11.5	F/115.6	D/45.6	A/8.7	B/12.5	D/47.7	F/104.2	A/7.1	B/12.9	F/175.1	D/45.4	A/9.1	B/13.5	D/53.6	F/144.1	A/7.0	B/12.6	F/179.8	D/45.5	A/9.0	B/13.2	D/54.8	F/139.0
	Approach	C/24.5	C/21.9	F/98.2	E/58.0	D/41.3	C/33.7	D/54.0	F/94.5	C/26.0	C/25.4	F/141.1	E/58.8	E/55.8	D/38.8	E/59.0	F/124.0	C/25.4	C/24.3	F/144.4	E/58.6	D/49.0	D/36.6	E/59.5	F/121.2
	Overall	D/39.8				D/48.2				D/49.3				E/62.4				D/49.5				E/58.3			
Sawmill Road & Bright/Sawbury Road (Existing Conditions w/ EMHT Study Improvements)	LT	E/75.2	A/8.7	D/53.5	D/54.3	E/68.8	B/10.3	D/51.7	D/50.9	E/77.5	A/9.2	E/56.1	E/57.1	E/65.0	B/13.6	D/51.1	D/20.7	E/74.6	A/8.7	E/56.3	E/56.4	E/65.9	B/10.8	D/52.8	D/52.0
	TH	A/1.7	C/22.5	D/48.4	D/50.4	A/6.2	C/20.4	D/45.2	D/46.5	A/1.5	D/37.1	D/49.5	D/52.1	A/8.6	D/37.2	D/43.5	D/44.7	A/1.5	C/27.8	D/49.5	D/44.7	A/6.6	C/21.0	D/44.7	D/46.0
	RT	A/2.2	C/22.6	D/45.4	D/50.4	A/8.1	C/20.4	D/46.7	D/46.5	A/2.0	D/38.0	D/47.3	D/52.1	B/11.3	D/37.6	D/46.9	D/44.7	A/2.0	C/28.3	D/48.1	D/44.7	A/8.5	C/21.0	D/46.6	D/46.0
	Approach	B/14.6	C/22.5	D/46.5	D/52.4	B/12.2	C/20.2	D/47.3	D/48.5	B/15.8	D/37.4	D/48.4	D/54.7	B/14.5	D/37.0	D/47.1	D/47.4	B/14.3	C/27.9	D/49.1	D/54.3	B/12.3	C/20.8	D/47.5	D/48.7
	Overall	C/21.9				B/18.9				C/29.7				C/26.7				C/24.7				B/19.7			

Table 4. Traffic Study Un-Signalized Intersections LOS, No Build

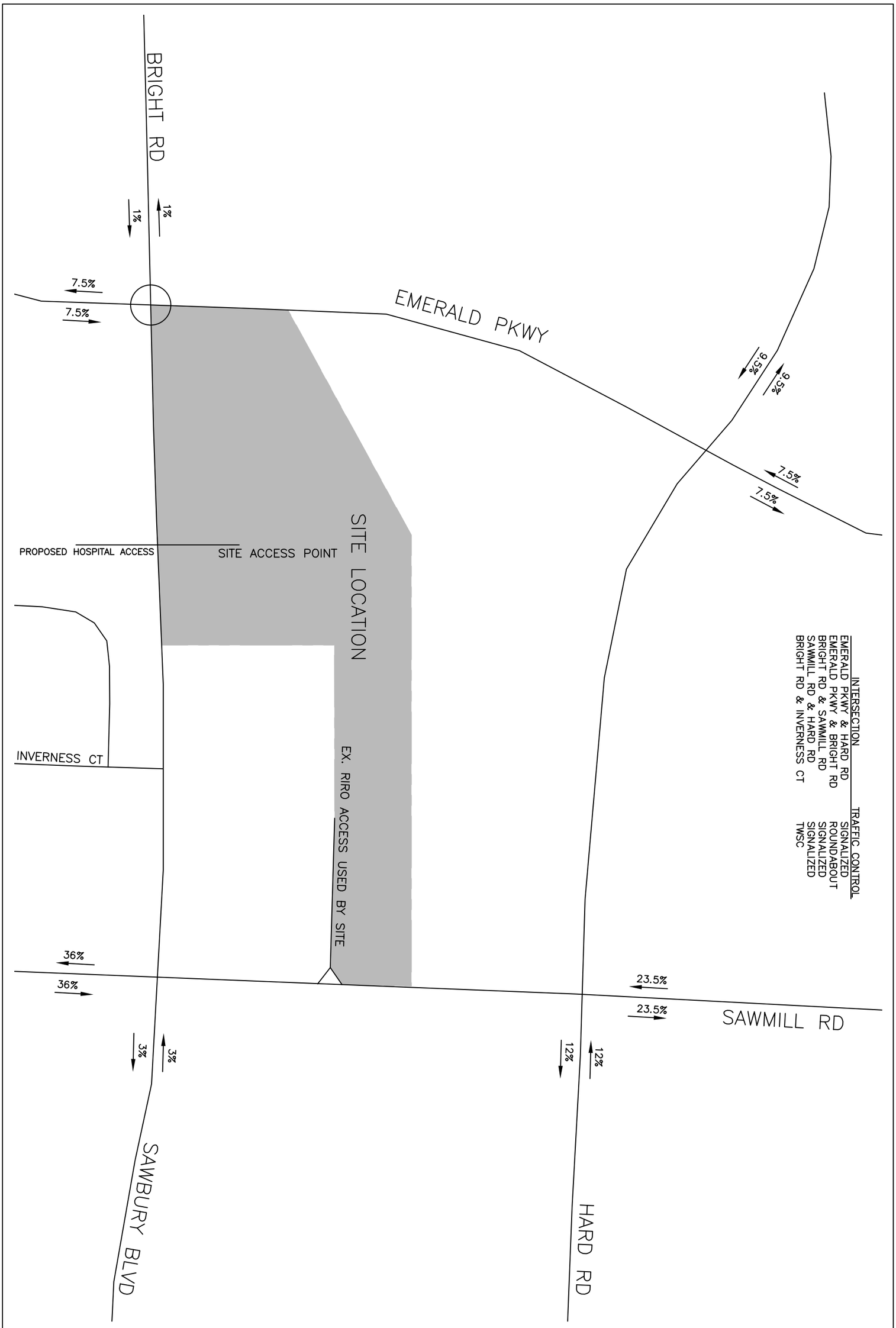
Intersection	Un-Signalized Intersection Level of Service (LOS/ sec. delay)																							
	No Build																No Build With Connector							
	2023								2033								2033							
	AM				PM				AM				PM				AM				PM			
	NB	SB	EB	WB	NB	SB	EB	WB	NB	SB	EB	WB	NB	SB	EB	WB	NB	SB	EB	WB	NB	SB	EB	WB
Bright Road & Emerald Parkway (Roundabout)	A/5.5	A/4.3	A/5.8	A/5.5	A/5.2	A/5.0	A/6.2	A/5.5	A/6.2	A/4.7	A/6.3	A/6.1	A/5.7	A/5.6	A/6.8	A/5.9	A/6.2	A/4.6	A/6.2	A/6.1	A/6.2	A/6.0	A/7.1	A/6.3
Site Access Point & Bright Road	B/10.8	-	A/0.0	A/1.6	B/11.0	-	A/0.0	A/0.9	B/11.5	-	A/0.0	A/2.1	B/12.0	-	A/0.0	A/1.4	B/11.5	-	A/0.0	A/1.8	B/12.0	-	A/0.0	A/1.2
Bright Road & Inverness Court	B/11.7	-	A/0.0	A/1.3	B/12.5	-	A/0.0	A/1.4	B/12.6	-	A/0.0	A/1.4	B/14.5	-	A/0.0	A/1.4	B/12.3	-	A/0.0	A/1.5	B/13.7	-	A/0.0	A/1.6
Ex. RIRO Access used by site & Sawmill Road	A/0.0	A/0.0	C/21.7	-	A/0.0	A/0.0	C/21.1	-	A/0.0	A/0.0	C/23.3	-	A/0.0	A/0.0	C/22.5	-	A/0.0	A/0.0	C/22.6	-	A/0.0	A/0.0	C/20.7	-

In the Existing Conditions No-Build scenarios the Sawmill Road & Hard Road signalized intersection fails to meet City of Columbus' traffic study guidelines. The intersection has Level of Service (LOS) "F" on one or more approaches. All other City of Columbus controlled intersections meet the City of Columbus' traffic study guidelines, when including an approved EMH&T traffic study's roadway improvements, and all City of Dublin controlled intersections meet the City of Dublin's traffic study guidelines.

Improvements to the Sawmill Rd & Hard Road intersection to improve the LOS to acceptable conditions were presumed. For the Sawmill Rd & Hard Road intersection a second eastbound right turn lane, taking away one of the 2 eastbound left turn lanes, a westbound right turn lane, and a 3rd northbound thru lane show the intersections will operate with acceptable LOS, no approaches worse than LOS "E" and overall intersection no worse than LOS "D", for all approaches

These No Build improvements will be further used for the Build analysis for the Continuing Care Retirement Community development later in this study.

The un-signalized intersections in the study area operate at acceptable LOS for No-Build Opening and Design Year (See appendices for HCS calculations). All movements at the Emerald Parkway & Bright Road roundabout operate at LOS A for the AM and PM peaks and during all scenarios (See appendices for Sidra calculations).



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DATE: 4/19/2022

SHEET 8 / 13

TRAFFIC STUDY EXHIBIT
PEAK PERCENTAGE DISTRIBUTION
FOR
BRIGHT RD - CONTINUING CARE RETIREMENT COMMUNITY

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ADVANCED CIVIL DESIGN
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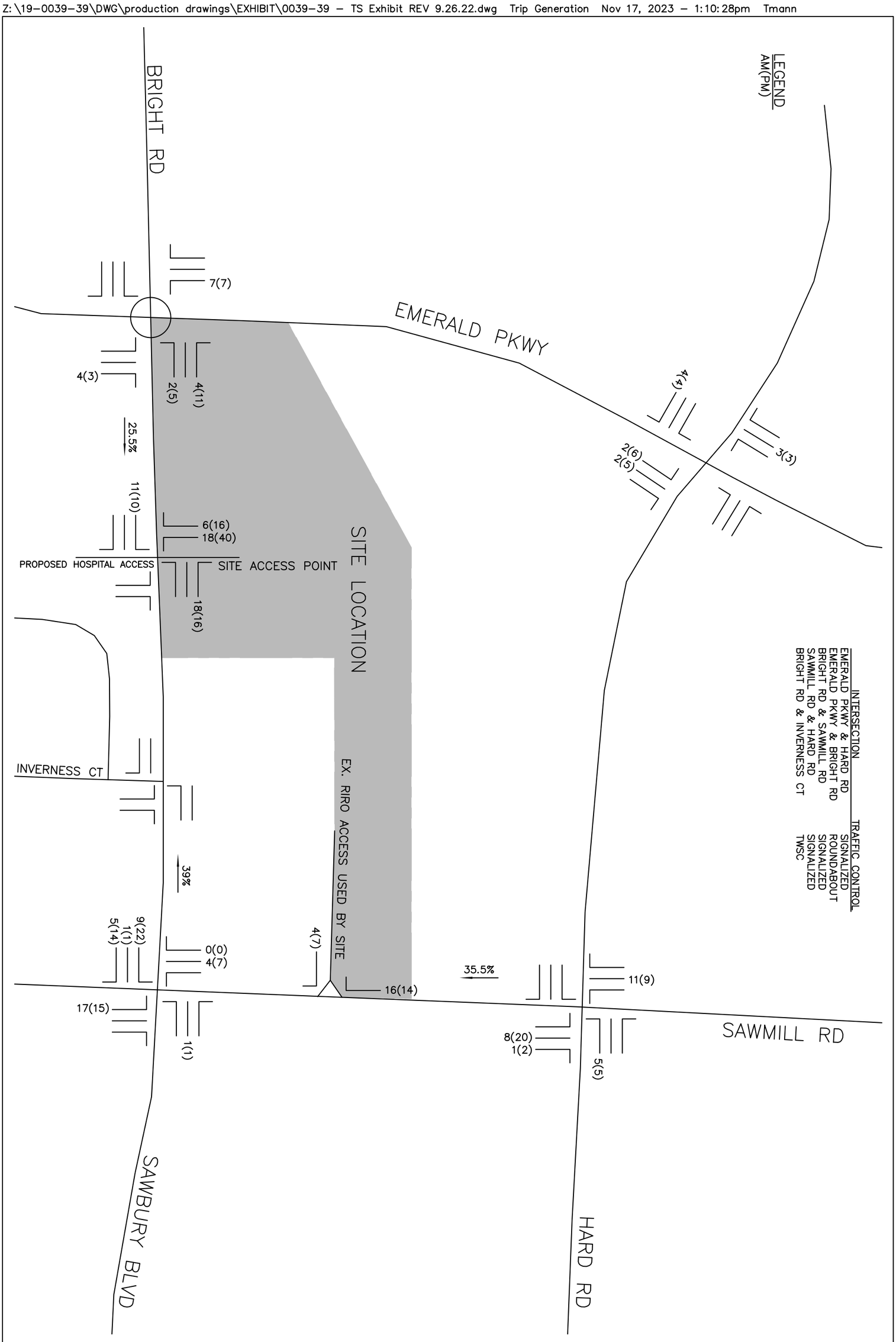

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SHEET 6 / 9

TRAFFIC STUDY EXHIBIT
SITE TRIP GENERATION AM(PM)
FOR
BRIGHT RD - CONTINUING CARE RETIREMENT COMMUNITY

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LEGEND
AM(PM)

INTERSECTION	TRAFFIC CONTROL
EMERALD PKWY & HARD RD	SIGNALIZED
EMERALD PKWY & BRIGHT RD	ROUNDABOUT
BRIGHT RD & SAWMILL RD	SIGNALIZED
SAWMILL RD & HARD RD	SIGNALIZED
BRIGHT RD & INVERNESS CT	TWSC

EMERALD PKWY
SAWMILL RD
HARD RD
BRIGHT RD
SAWBURY BLVD
SITE LOCATION
SITE ACCESS POINT
PROPOSED HOSPITAL ACCESS
INVERNESS CT
EX. RIRO ACCESS USED BY SITE

118(109)
228+3=231(237+3=240)
64(65)
89(94)
423(379)
63+4=67(31+4=35)
10(62)
332(399)
138(154)
31+2=33(58+6=64)
125+2=127(283+5=288)
99(151)
22(35)
1080+11=1091(1161+9=1120)
68(197)
102(240)
243(252)
292+5=297(247+5=252)
15(55)
124(270)
349(276)
258(423)
897+8=905(1757+20=1777)
97+1=98(359+2=36)
16(14)
4(7)
22(9)
325(361)
43+7=50(31+7=38)
13+4=17(41+11=52)
44(7)
227+2=229(196+5=201)
6(16)
18(40)
18(16)
281(233)
71(31)
27+0=27(30+0=30)
332+18=350
(225+16=241)
46(39)
1921(1838)
13(33)
31(41)
40+1=41(41+1=42)
77(70)
7(7)
15(11)
10(13)
33(16)
217(439)
201+4=205(247+3=250)
11(10)
247(284)
12(5)
5(12)
25(61)
252+18=270(331+40=371)
20(14)
12(18)
36(44)
37(85)
26(55)
238(279)
1428(2333)
44(53)
311+17=328(223+15=238)

PLAN PREPARED BY:
ADVANCED CIVIL DESIGN ENGINEERS SURVEYORS
422 Beecher Road
Gahanna, Ohio 43230
ph 614.428.7750
fax 614.428.7755

TRAFFIC STUDY EXHIBIT
OPENING YEAR (2023) BUILD WITHOUT CONNECTOR AM(PM) PEAK
FOR
BRIGHT RD - CONTINUING CARE RETIREMENT COMMUNITY

SCALE: NOT TO SCALE
DATE: 11/16/2023

INTERSECTION	TRAFFIC CONTROL
EMERALD PKWY & HARD RD	SIGNALIZED
EMERALD PKWY & BRIGHT RD	ROUNDABOUT
BRIGHT RD & SAWMILL RD	SIGNALIZED
SAWMILL RD & HARD RD	SIGNALIZED
BRIGHT RD & INVERNESS CT	TWSC

LEGEND
AM(PM)

SAWMILL RD

HARD RD

EMERALD PKWY

SITE LOCATION

EX. RIRO ACCESS USED BY SITE

SITE ACCESS POINT

PROPOSED HOSPITAL ACCESS

INVERNESS CT

BRIGHT RD

SAWBURY BLVD

130(120)
260+3=263(264+3=267)
70(71)
11(73)
395(474)
168(184)
105(111)
499(446)
77+4=81(39+4=43)
36+2=38(70+6=76)
142+2=144(329+5=334)
112(174)
23(36)
1133+11=1144(1218+9=1227)
71(207)
121(285)
289(300)
347+5=353(294+5=299)
17(65)
146(318)
412(325)
271(444)
941+8=949(1944+20=1864)
102+1=103(377+2=379)
16(14)
4(7)
25(11)
395(428)
52+7=59(37+7=44)
16+4=20(50+11=61)
47(8)
250+2=252(213+5=218)
6(16)
18(40)
18(16)
293(248)
102(50)
33+0=33(26+0=26)
382+18=400
(279+16=295)
53(44)
2021(1930)
14(35)
36(47)
49+1=50(49+1=50)
88(81)
8(8)
17(13)
12(14)
37(18)
251(521)
252+4=236(292+3=295)
11(10)
284(334)
17(8)
7(19)
34(96)
295+18=313(414+40=454)
23(16)
13(19)
37(47)
33+9=42(79+22=101)
27+1=28(69+1=70)
259+5=264
(309+4=323)
1498(2448)
46(55)
353+17=370(248+15=263)

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TRAFFIC STUDY EXHIBIT
DESIGN YEAR (2033) BUILD WITHOUT CONNECTOR AM(PM) PEAK
FOR
BRIGHT RD - CONTINUING CARE RETIREMENT COMMUNITY

SCALE: NOT TO SCALE
DATE: 11/16/2023

Z:\19-0039-39\DWG\production drawings\EXHIBIT\0039-39 - TS Exhibit REV 9.26.22.dwg 2033 (B no Con) AM(PM) Peak Nov 17, 2023 - 1:10:38pm Tmann

Z:\19-0039-39\DWG\production drawings\EXHIBIT\0039-39 - TS Exhibit REV 9.26.22.dwg 2033 (B w Con) AM(PM) Peak Nov 17, 2023 - 1:10:43pm Tmann

LEGEND
AM(PM)

INTERSECTION	TRAFFIC CONTROL
EMERALD PKWY & HARD RD	SIGNALIZED
EMERALD PKWY & BRIGHT RD	ROUNDABOUT
BRIGHT RD & SAWMILL RD	SIGNALIZED
SAWMILL RD & HARD RD	SIGNALIZED
BRIGHT RD & INVERNESS CT	TWSC

SAWMILL RD

HARD RD

EMERALD PKWY

SITE LOCATION

EX. RIRO ACCESS USED BY SITE

SITE ACCESS POINT

PROPOSED HOSPITAL ACCESS

INVERNESS CT

BRIGHT RD

SAWBURY BLVD

145(133)
285+3=288(465+3=468)
78(79)

105(111)
499(446)
79+4=81(39+4=43)

11(72)
388(465)
165(181)

37+2=39(74+6=80)
151+2=153(388+5=393)
120(185)

23(35)
1105+11=1116(1189+9=1198)
70(202)

118(279)
283(294)
339+5=344(288+5=293)

17(65)
146(318)
412(325)

264(433)
918+8=926(1799+20=1819)
100+101(368+2=370)

16(14)

4(7)

26(11)
399(514)
55+7=62(39+7=46)

16+4=20(50+11=61)
47(8)
241+2=243(210+5=215)

6(16)
18(40)

18(16)
282(233)
78(38)

33+0=33(26+0=26)
347+18=365
(267+16=283)
53(44)

1976(1806)
14(32)

37(48)
50+1=51(50+1=51)
83(82)

9(9)
18(14)
13(15)

36(20)
242(587)
222+4=226(306+3=309)

11(10)
278(351)
17(8)

7(19)
24(69)

279+18=294(404+40=444)

23(16)

13(19)
37(47)

33+9=42(80+22=102)
28+1=29(69+1=70)
248+5=253
(277+14=291)

1465(2303)
45(51)

317+17=334(221+15=236)

PLAN PREPARED BY:
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TRAFFIC STUDY EXHIBIT
DESIGN YEAR (2033) BUILD WITH CONNECTOR AM(PM) PEAK
FOR
BRIGHT RD - CONTINUING CARE RETIREMENT COMMUNITY

SCALE: NOT TO SCALE
DATE: 11/16/2023

Build Conditions

Turn Lane and Signal Warrants, Storage Length Calculations, and Queuing

The procedure to determine whether left turn lanes are warranted is according to City of Dublin Turn Lane Requirements. The procedure to determine whether right turn lanes are warranted is according to the ODOT Access Management Manual Section 4.5.4. The posted speed limit of 25 MPH was used for the analysis on Bright Road and 45 MPH was used for the analysis on Sawmill Road. The results are shown in the table below:

Movement	2022	2032
	'Opening Year'	'Design Year'
Bright Road LT at Prop. Site Access	Warranted by City of Dublin	Warranted by City of Dublin
Bright Road RT at Prop. Site Access	Not Warranted	Not Warranted
SB Sawmill Road RT at Existing RIRO	Not Warranted	Not Warranted

ODOT L&D Manual Vol. 1 Section 401-9 provides design criteria for the calculation of storage lengths of warranted right and left turn lanes. Based on these criteria, and, the Design Hour Volumes, the turn lanes were calculated. Those results show a 100 feet long eastbound left turn lane including a 50 feet taper is warranted, however Dublin requires a 125 feet long turn lane with a 50 feet taper minimum so that is what is going to be used. (See appendices for turn lane length calcs and for roadway improvement exhibit).

Capacity Analyses Build

Capacity analyses were performed utilizing HCM module in Synchro 11. The Opening Year (2023) Build, and, Design Year (2033) Build were all analyzed. The results are summarized in Tables 5 and 6, below. Detailed Synchro and HCS print outs are contained in the Appendices.

Table 5. Traffic Study Signalized Intersections LOS, Build

Intersection		Signalized Intersection Level of Service (LOS/ sec. delay)																							
		Build Without Connector (Existing Conditions w/ EMHT Study Improvements)																With Connector							
		2023								2033								2033							
		AM				PM				AM				PM				AM				PM			
		NB	SB	EB	WB	NB	SB	EB	WB	NB	SB	EB	WB	NB	SB	EB	WB	NB	SB	EB	WB	NB	SB	EB	WB
Emerald Parkway & Hard Road (Existing Conditions)	LT	D/39.7	D/39.1	A/7.4	A/7.8	D/35.3	D/36.1	A/9.6	A/9.9	D/38.4	D/37.8	A/8.2	A/9.1	C/33.8	C/34.8	B/11.5	B/11.6	D/37.5	D/37.0	A/8.8	A/9.7	C/33.0	C/33.0	B/13.2	B/13.2
	TH	D/46.9	D/50.0	B/11.5	B/10.6	D/48.3	D/44.1	B/13.7	B/13.8	D/45.7	D/50.4	B/13.0	B/11.8	D/49.9	D/42.3	B/16.4	B/16.0	D/44.6	D/50.6	B/13.7	B/12.5	D/46.9	D/48.3	B/18.4	B/17.9
	RT	D/47.8	D/51.5	B/11.5	B/10.6	D/50.1	D/44.6	B/13.7	B/13.9	D/46.5	D/52.7	B/13.0	B/11.8	D/51.8	D/42.8	B/16.4	B/16.0	D/45.4	D/52.9	B/13.8	B/12.5	D/48.1	D/43.1	B/18.4	B/17.9
	Approach	D/46.4	D/48.9	B/10.3	A/9.8	D/47.4	D/43.1	B/12.9	B/12.9	D/45.1	D/49.4	B/12.3	B/11.0	D/48.6	D/41.4	B/15.5	B/14.9	D/44.1	D/49.5	B/13.0	B/11.7	D/45.9	D/46.9	B/17.5	B/16.7
	Overall	C/25.0				C/27.5				C/25.3				C/28.4				C/26.3				C/31.8			
Sawmill Road & Hard Road (Existing Conditions)	LT	E/71.2	E/61.5	D/50.2	E/63.8	E/73.0	E/71.4	D/48.9	E/76.0	E/72.9	E/61.5	D/50.0	E/71.5	E/74.9	E/77.3	D/49.2	E/78.1	E/64.8	E/61.5	E/67.5	E/74.4	E/72.4	F/93.3	E/65.7	F/103.4
	TH	B/14.7	B/20.0	D/52.9	D/42.4	D/54.0	C/27.1	E/57.6	E/72.0	B/16.9	C/23.8	D/53.3	D/44.2	F/88.7	C/33.5	E/61.9	F/93.4	B/16.0	C/22.2	D/53.3	D/44.9	D/51.5	C/27.6	E/63.1	F/116.0
	RT	A/6.9	B/11.7	F/117.6	D/35.4	A/9.4	B/13.3	D/47.3	F/85.2	A/7.2	B/13.0	F/173.5	D/44.8	B/10.2	B/14.7	D/53.1	F/103.5	A/7.0	B/12.6	F/179.8	D/45.5	A/9.0	B/13.2	D/54.8	F/136.0
	Approach	C/25.6	C/22.2	F/93.1	E/56.4	D/50.8	C/33.0	D/52.1	E/58.1	C/27.6	C/25.8	F/143.7	E/57.0	E/75.3	D/39.2	E/56.7	F/92.1	C/25.4	C/24.3	F/144.4	E/58.6	D/49.0	D/36.6	E/53.5	F/121.2
	Overall	D/40.0				D/50.0				D/49.9				E/66.4				D/49.5				E/58.3			
Sawmill Road & Bright/Sawbury Road (Existing Conditions w/ EMHT Study Improvements)	LT	E/76.6	A/8.9	D/54.2	D/54.4	E/69.9	B/11.2	D/51.9	D/49.9	E/77.7	A/9.0	E/58.4	E/59.4	E/64.6	B/12.0	D/54.1	D/52.1	E/74.5	A/8.7	E/56.3	E/56.4	E/65.9	B/10.8	D/52.8	D/52.0
	TH	A/1.7	C/24.4	D/48.5	D/50.5	A/6.9	C/24.8	D/44.2	D/45.4	A/1.2	D/35.9	D/50.8	D/53.6	A/7.3	D/38.0	D/44.5	D/45.7	A/1.5	C/27.8	D/43.5	D/52.2	A/6.6	C/21.0	D/44.7	D/46.0
	RT	A/2.2	C/24.5	D/45.0	D/50.5	A/8.9	C/25.0	D/45.9	D/45.4	A/1.7	D/36.7	D/48.9	D/53.6	B/9.7	D/38.9	D/49.9	D/45.7	A/2.0	C/28.3	D/48.1	D/52.2	A/8.5	C/21.0	D/46.6	D/46.0
	Approach	B/15.5	C/24.4	D/46.4	D/52.5	B/13.2	C/24.7	D/46.9	D/47.5	B/16.2	D/36.1	D/50.2	E/56.6	B/13.5	D/38.1	D/50.0	D/48.6	B/14.3	C/27.9	D/49.1	D/54.3	B/12.3	C/20.8	D/47.5	D/48.7
	Overall	C/23.1				C/21.3				C/29.5				C/27.0				C/24.7				B/19.7			

Table 6. Traffic Study Un-Signalized Intersections LOS, Build

Intersection	Un-Signalized Intersection Level of Service (LOS/ sec. delay)																								
	Build Without Connector																	Build With Connector							
	2023								2033									2033							
	AM				PM				AM				PM					AM				PM			
	NB	SB	EB	WB	NB	SB	EB	WB	NB	SB	EB	WB	NB	SB	EB	WB		NB	SB	EB	WB	NB	SB	EB	WB
Bright Road & Emerald Parkway (Roundabout)	A/5.6	A/4.4	A/5.9	A/5.6	A/5.2	A/5.1	A/6.4	A/5.5	A/6.3	A/4.8	A/6.4	A/6.1	A/5.8	A/5.7	A/7.0	A/6.0		A/6.3	A/4.7	A/6.3	A/6.2	A/6.3	A/6.2	A/7.3	A/6.4
Site Access Point & Bright Road	B/11.2	C/15.9	A/0.4	A/1.5	B/11.3	C/16.4	A/0.3	A/0.9	B/12.1	C/18.7	A/0.3	A/2.0	B/12.5	C/20.7	A/0.2	A/1.3		B/12.1	C/16.9	A/0.3	A/1.6	B/12.6	C/18.8	A/0.2	A/1.1
Bright Road & Inverness Court	B/12.0	-	A/0.0	A/1.3	B/13.1	-	A/0.0	A/1.4	B/13.0	-	A/0.0	A/1.4	B/14.8	-	A/0.0	A/1.5		B/12.6	-	A/0.0	A/1.4	B/14.5	-	A/0.0	A/1.6
Ex. RIRO Access used by site & Sawmill Road	A/0.0	A/0.0	C/22.5	-	A/0.0	A/0.0	C/22.2	-	A/0.0	A/0.0	C/24.2	-	A/0.0	A/0.0	C/23.8	-		A/0.0	A/0.0	C/23.4	-	A/0.0	A/0.0	C/21.8	-

The above analysis results show that all study intersections, except Sawmill & Hard would operate at acceptable LOS for the Opening Year and the Design Year with the improvements at the Sawmill and Bright Road intersection from the EMH&T Mount Carmel study.

These result also show that without committed improvements to the Sawmill & Hard Road intersection from the Sawmill Road Corridor study this intersection operate outside of criteria.

All un-signalized, intersections including the proposed Site Access Point & Bright Road intersection, in the study area operate at acceptable LOS for Opening and Design Year. All movements at the Emerald Parkway & Bright Road roundabout operate at LOS A for the AM and PM peaks and during all scenarios (See appendices for Sidra and HCS calculations).

Conclusions and Recommendations

With the continued growth in the area, these results show that the study area intersections will need improvements to accommodate the current traffic levels.

The added traffic from the Continuing Care Retirement Community development during build conditions, which amounts to 1.1% at the Sawmill and Bright intersection and 1.6% at the Bright and Emerald Parkway intersection in the design year, show no additional improvements beyond the No Build improvement would be required for either of these intersections.

As detailed above, a 125 feet long eastbound left turn lane including a 50 feet taper is warranted at the access to the Continuing Care Retirement Community.

The proposed Mt. Carmel Hospital driveway should align with this Continuing Care Retirement Community Development driveway on Bright Road.

Sight triangles exhibit can be found in the appendix showing that acceptable sight distance is provided for the proposed access point off Bright Road.

Both Sawmill study area intersections, one being no build improvements from an approved EMH&T traffic study, as identified in this and other recent studies in the area, requires background No Build improvements to meet City of Columbus LOS requirements.

Appendices

Scoping Documentation

ADVANCED
CIVIL DESIGN

April 19, 2022

Tina Wawszkiewicz, P.E.
Civil Engineer II
Department of Public Works
6555 Shier Rings Road
Dublin, Ohio 43016

Subject: Emerald Parkway/Bright Road NE Quadrant Traffic Impact Study
Memorandum of Understanding and Traffic Assignment

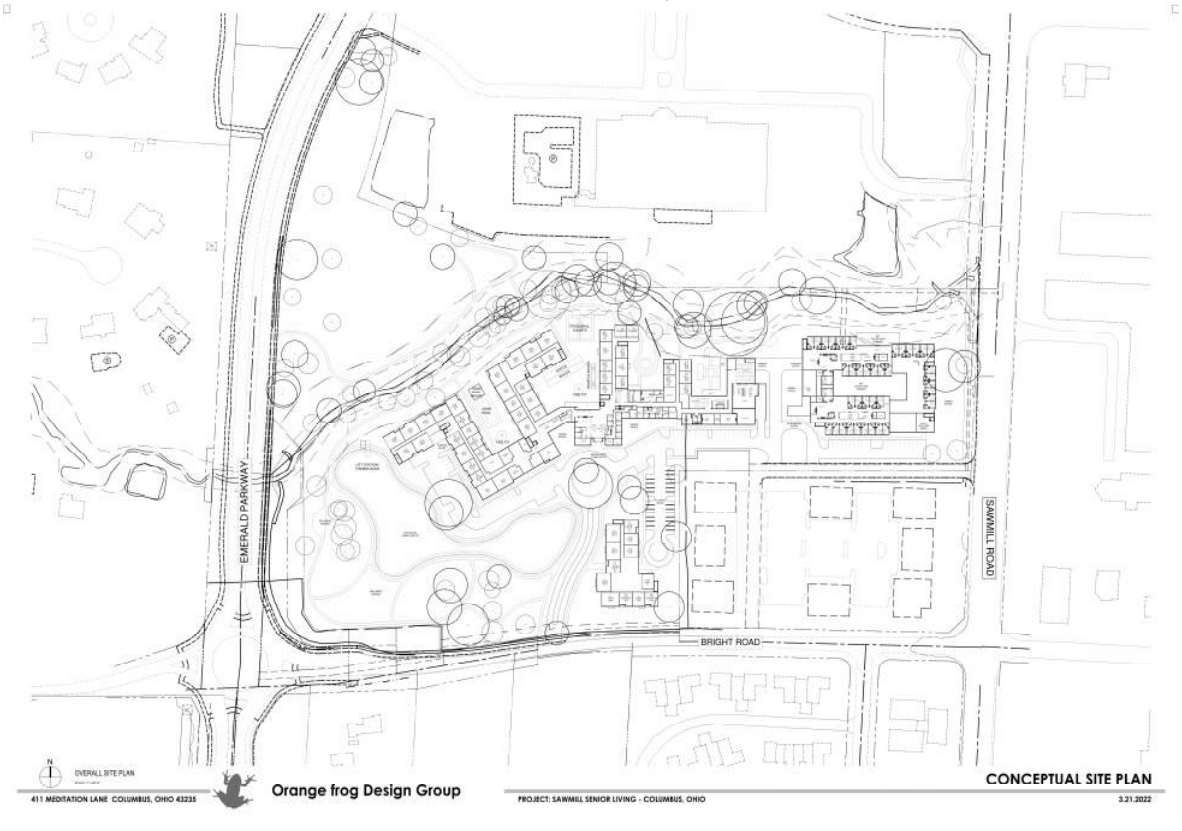
Dear Ms. Wawszkiewicz,

We submit this Memorandum of Understanding (MOU) to document the scope of the above captioned traffic study as discussed in a meeting with the staff of Dublin and Columbus on April 19th, 2022. This submission also adds our detailed traffic assignment for your review.

Proposed Development & Access Plan

Figure 1 shows the development concept for site layout and access points. Proposed access includes one full movement access point on Bright Road and one access on the existing Right-in/Right-out off of Sawmill Road.

Figure 1: Site Concept Plan



Site Design for 2023 Opening Year and 2033 Design Year

- Western most building is Active Adult with 110 units
- Middle building is Independent Living with assistance with 118 units
- Eastern most building is Memory care with 42 units / Assisted Living with 47 units / Independent Living with assistance with 47 units.
- Small southern building is 30 units.
- Total for the development is 394 units.

Study Area

The Study Area of this TIS is limited to the following intersections:

1. Emerald Parkway/Bright Road
2. Emerald Parkway/Hard Road
3. Bright Road/Sawbury Boulevard/Sawmill Road (City of Columbus)
4. Hard Road/Sawmill Road (City of Columbus)
5. Bright Road/Inverness Court
6. 1 proposed site access point
7. Ex. Right-in/Right-out (RIRO) / Sawmill Road

Data Collection

We will use a February 27th, 2020 count of the study area intersections listed above. This count provides turning and thru movement volumes between the hours of 7-9 AM and 3-6 PM at Study Area intersections. The count data for the 5 intersections are attached.

We requested future traffic growth rates from the Mid-Ohio Regional Planning Commission (MORPC). Growth rates are included.

Trip Generation and Distribution

This study will estimate new trips generated by development according to the data and procedures contained in the Trip Generation Manual, 11th ed. (Institute of Transportation Engineers, 2021). We will use land use code 255 (Continuing Care Retirement Community) to forecast site generated trips. The trip generation for the proposed site (394 units) are shown in **Table 1**.

Table 1: Trip Generation

Trip Generation					
	Land Use Code (LUC)		IN	OUT	Total
Continuing Care Retirement Community	LUC 255	AM	47	26	73
		PM	41	65	106

Table 2 shows the trip distribution applied to the site-generated vehicle trips calculated in Table 1 in order to route site trips through the Study Area.

Table 2: Trip Distribution

From/To	Percentage
Sawmill Road South of Bright Road	29%
Sawmill Road North of Hard Road	24%
Sawbury Boulevard East of Sawmill Road	3%
Hard Road East of Sawmill Road	12%
Hard Road West of Emerald Parkway	10%
Emerald Parkway North of Hard Road	14%
Emerald Parkway South of Bright Road	8%

Traffic Assignment and Volume Balancing

This study developed AM and PM peak hour volumes for the following scenarios and the attached volume exhibits are submitted for review with this submission:

- 2023 No-Build Site
- 2023 Build Site
- 2033 No-Build Site
- 2033 Build Site

The attached volume exhibits increase counts to design year No-Build conditions based on growth rates provided by MORPC. The attached volume exhibits show the straight mathematical application of MORPC growth rates to each intersection approach.

Traffic Analyses

The I-270 & Sawmill Road interchange is not part of this study, therefore no ODOT involvement is expected.

Intersection Capacity Analyses

Advanced Civil Design will use Synchro (v.11) software to evaluate intersection capacity at Study Area intersections. We will use Sidra software as the primary analysis tool for roundabout intersections with HCS as a supplement if necessary.

City of Dublin performance criteria for the overall intersection Level of Service (LOS) is LOS D with individual movements also at LOS D or better. City of Columbus performance criteria for the overall intersection is LOS D with approach LOS D and LOS E in any individual movement. The Sawmill Road corridor is severely congested under background conditions and the Sawmill Road Corridor Study and Tuller Road/Emerald Parkway connector study are regional initiatives intended to address multiple existing deficiencies in the area road network. If improvements required to meet traditional agency performance criteria are not practical, this study will consider alternate goals such as restoring pre-development performance and/or mitigating queues where background conditions are severely deficient. Agency concurrence is required in the event that alternate criteria are used as the basis for study recommendations.

Specific improvements recommended in the Sawmill Road Corridor Study as background improvements at the Sawmill Road/Bright Road intersection (add third SBT lane starting north of Bright Road; add SBR lane; add EBR lane; add second NBL lane; add second EB and WB through lane on Bright Road west of Sawmill Road) may be considered as mitigation strategies but the improvements are not programmed and are not eligible for inclusion in the baseline condition of the roadways in either of the design years assessed for this study.

Turn Lane Warrant Analysis

We will analyze right turn lane warrants at proposed site access points. Left turn lane warrants are generally not applicable because Dublin requires left turn lane additions to the street being accessed irrespective of warrant analysis. For the existing Sawmill Right-in/Right-out access, this study will analyze right turn lane warrants at that location but if warranted we will not recommend the right turn lane due to existing Right-of-way constraints in the corridor. We will evaluate the length of existing and proposed Study Area turn lanes impacted by site generated traffic. We will prepare our turn lane analysis in accordance with the Location and Design Manual § 401 (Ohio Department of Transportation).

We will determine lane length based on the maximum volume for the design year Build condition for either AM or PM peak conditions considering both L&D methodology and SimTraffic queue reports.

Signal Warrant Analysis
If signalization is considered to meet performance criteria at a location that is not currently signalized, we will evaluate traffic signal warrants. Traffic signal warrant evaluation will use thresholds established by the Ohio Manual of Uniform Traffic Control Devices §4C (Ohio Department of Transportation). This study is limited to analysis of Warrants 1, 2 and 3. We will remove a portion of minor street right turns in accordance with the Traffic Engineering Manual §402-5 (Ohio Department of Transportation). We will consider roundabouts as an alternative to signalization where applicable.

Traffic Impact Study Report
A report including applicable figures and tables will be prepared to summarize study methodologies, analysis, findings and recommendations. We will provide the report to City of Dublin, City of Columbus and ODOT for review.

Please signify your concurrence with the scope of services outlined herein by signing below and returning this Memorandum of Understanding to me. Please feel free to contact me at (614) 944-5035.

Sincerely,

Mark I. Mann, PE
Director - Transportation Services

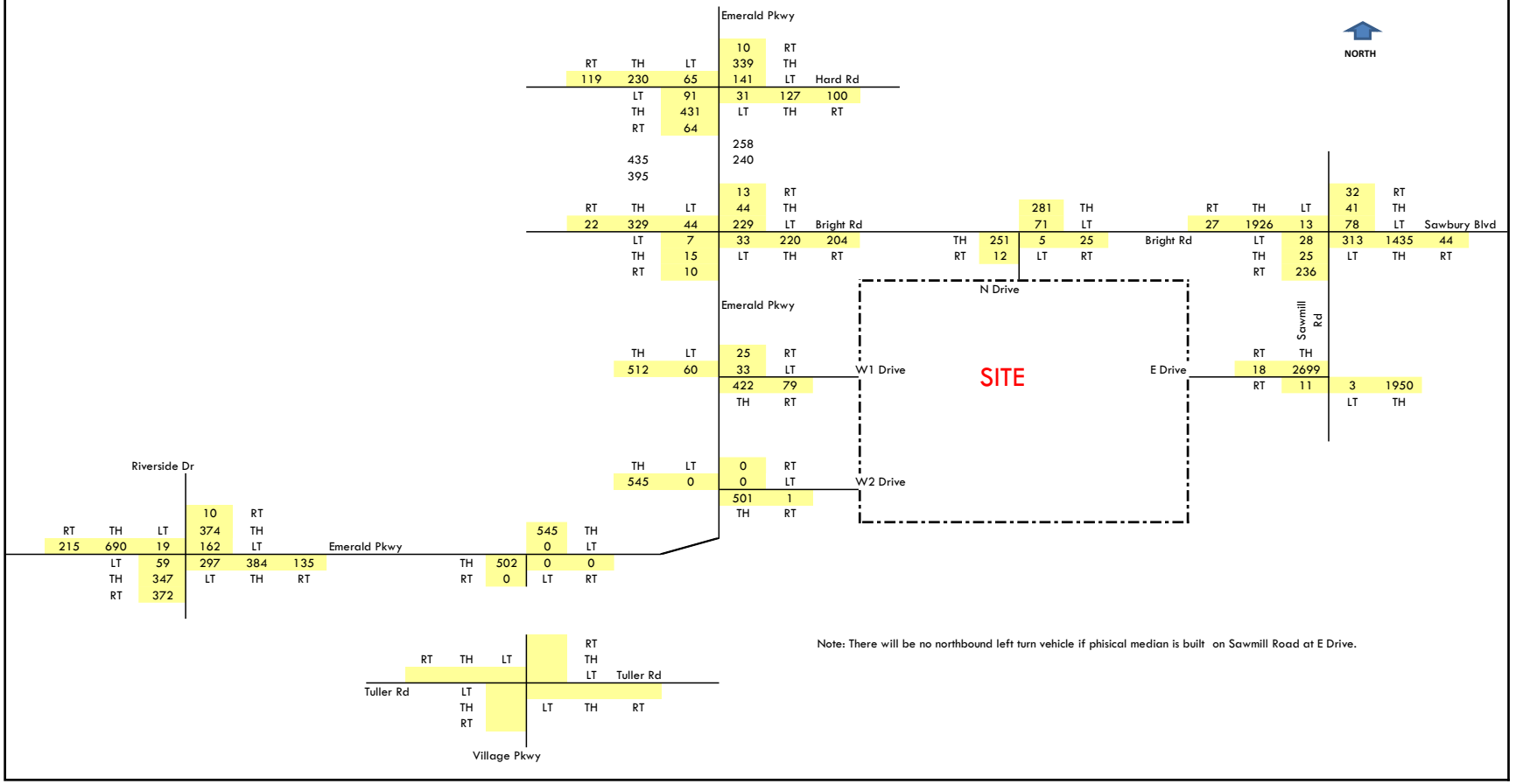
ACCEPTANCE AND APPROVAL OF MEMORANDUM OF UNDERSTANDING

By: _____
For City of Dublin Date

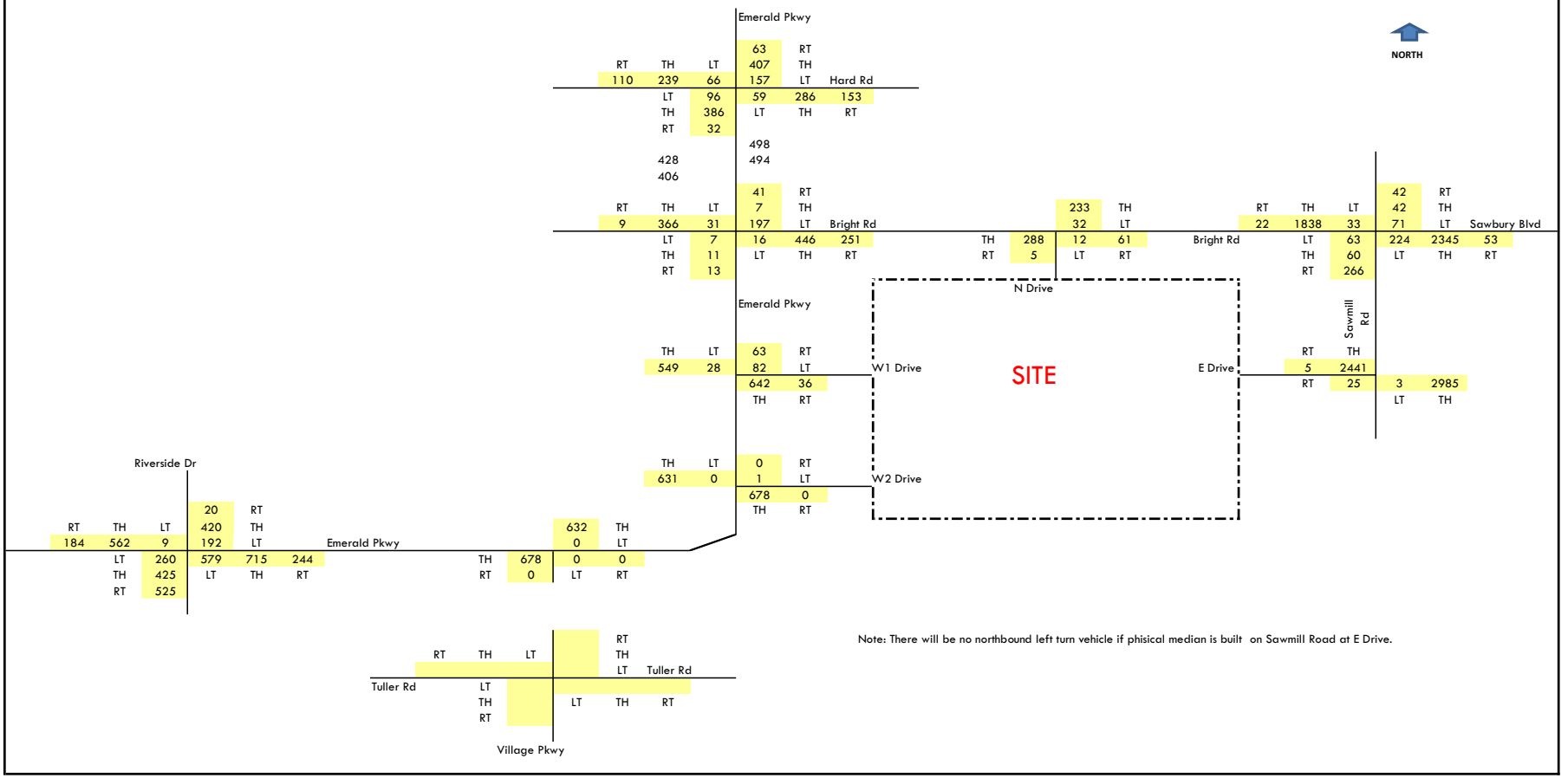
By: _____
For City of Columbus Date

Traffic Count Data

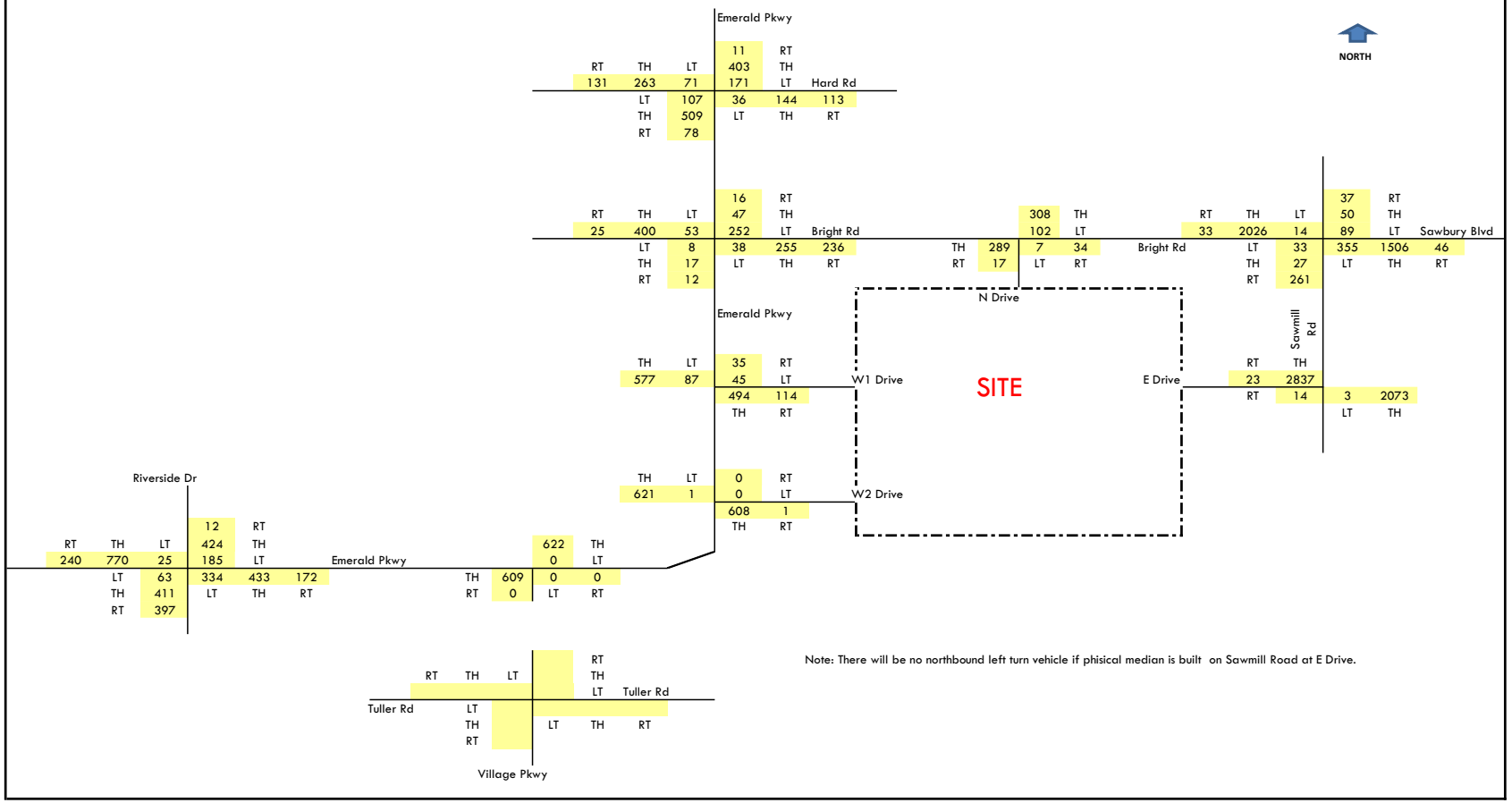
2024 Build Phase 1 Traffic Volumes, No Connector, w/ Bright Road Access — **AM Peak Hour**
(7:30 - 8:30) — **g=e+f1**



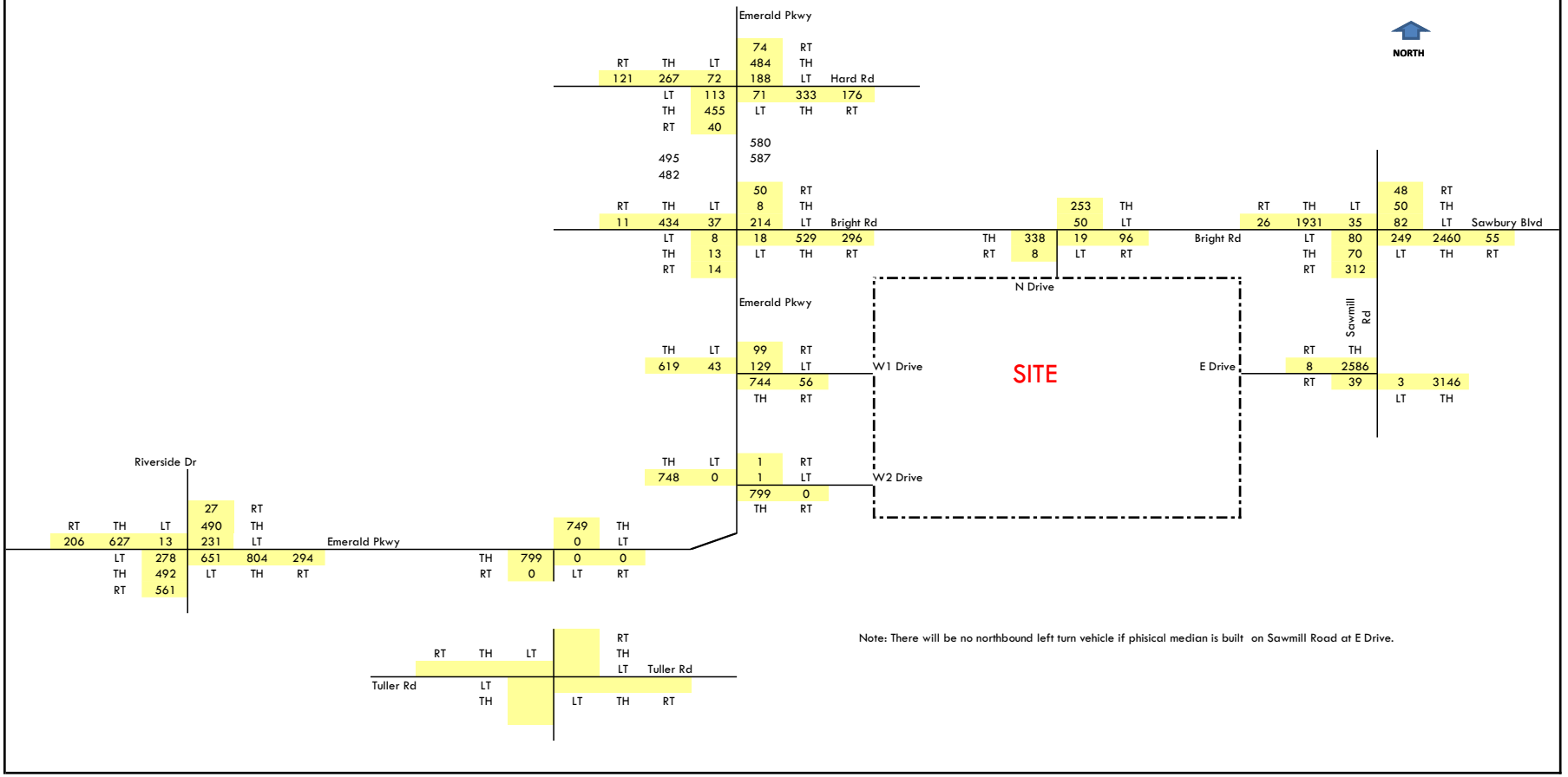
2024 Build Phase 1 Traffic Volumes, No Connector — **PM Peak Hour**
(4:45 - 5:45) — **g=e+f1**



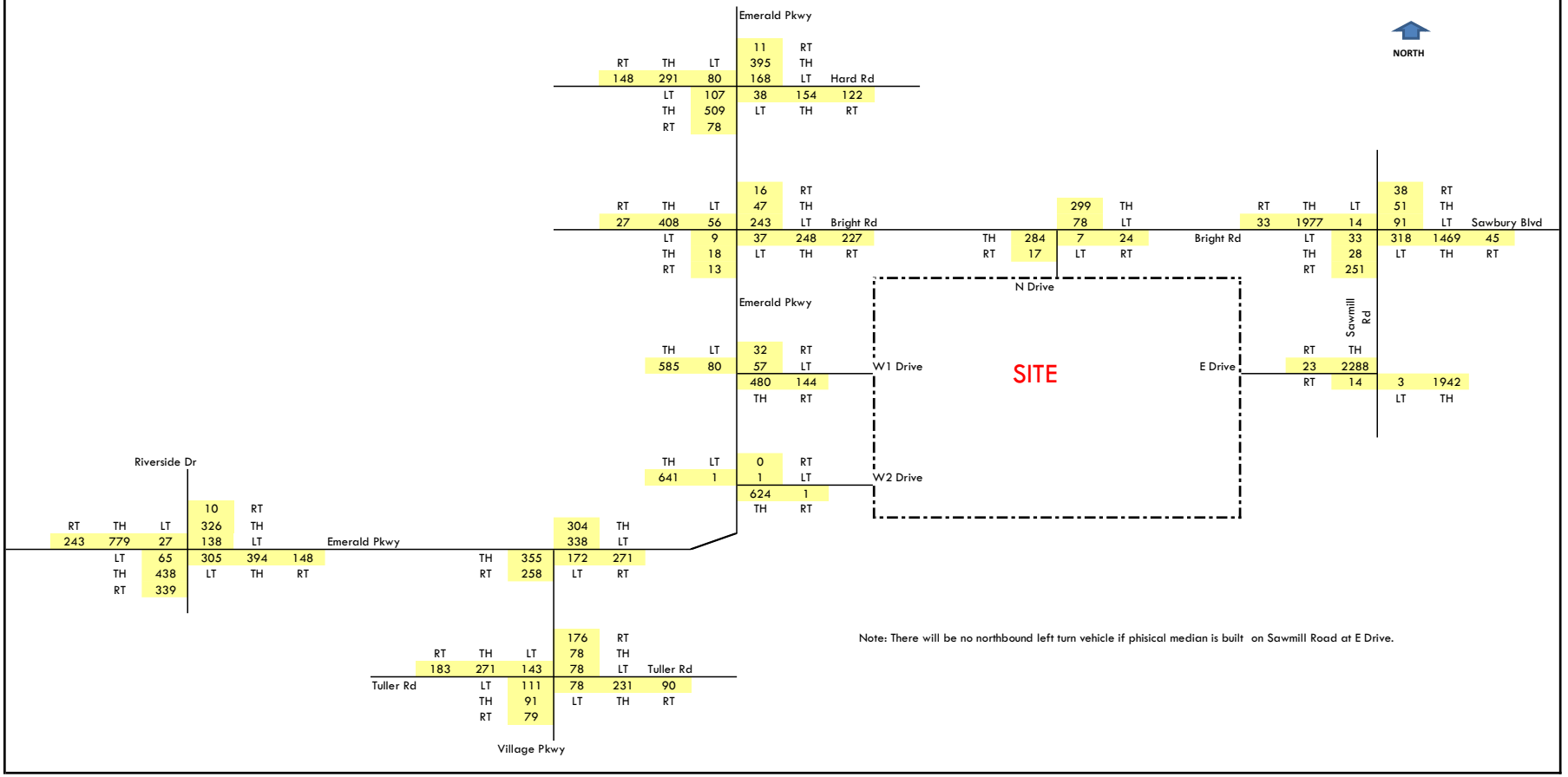
2034 Build (Phase 1 & 2) Traffic Volumes, No Connector — **AM Peak Hour**
(7:30 - 8:30) — **g1=e3+f2**

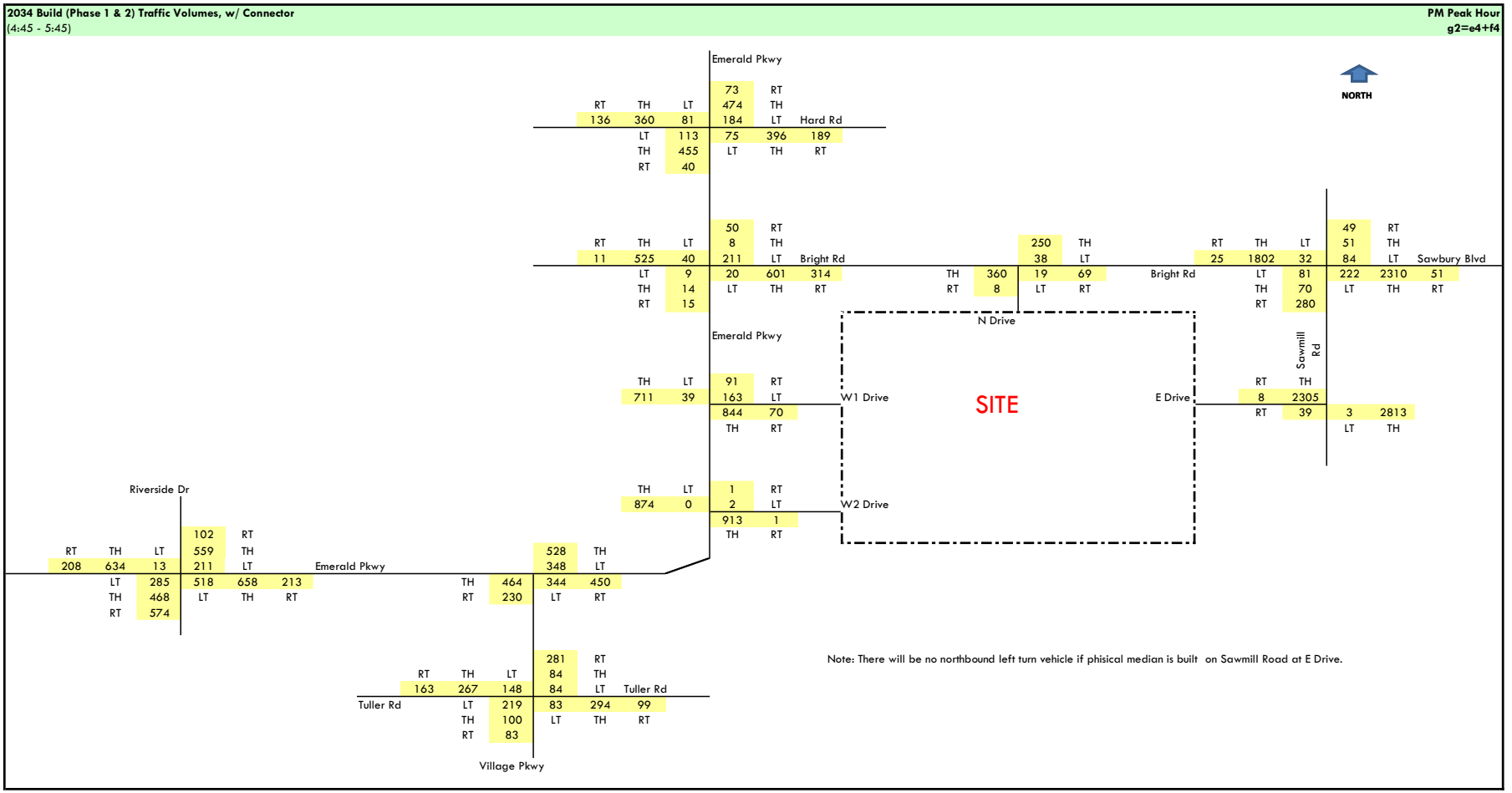


2034 Build (Phase 1 & 2) Traffic Volumes, No Connector **PM Peak Hour**
(4:45 - 5:45) **g1=e3+f2**



2034 Build (Phase 1 & 2) Traffic Volumes, w/ Connector **AM Peak Hour**
(7:30 - 8:30) **g2=e4+f4**




2034 Build (Phase 1 & 2) Traffic Volumes, w/ Connector
(4:45 - 5:45)
PM Peak Hour
g2=e4+f4
NORTH
Emerald Pkwy
Hard Rd
Bright Rd
Sawbury Blvd
N Drive
Sawmill Rd
W1 Drive
W2 Drive
E Drive
SITE
Riverside Dr
Tuller Rd
Village Pkwy
Note: There will be no northbound left turn vehicle if phisical median is built on Sawmill Road at E Drive.

Bright Road & Inverness Court - TMC

Thu Feb 27, 2020
Full Length (7 AM-9 AM, 3 PM-6 PM)
All Classes (Lights and Motorcycles, Heavy, Pedestrians)
All Movements
ID: 753642, Location: 40.114185, -83.091478

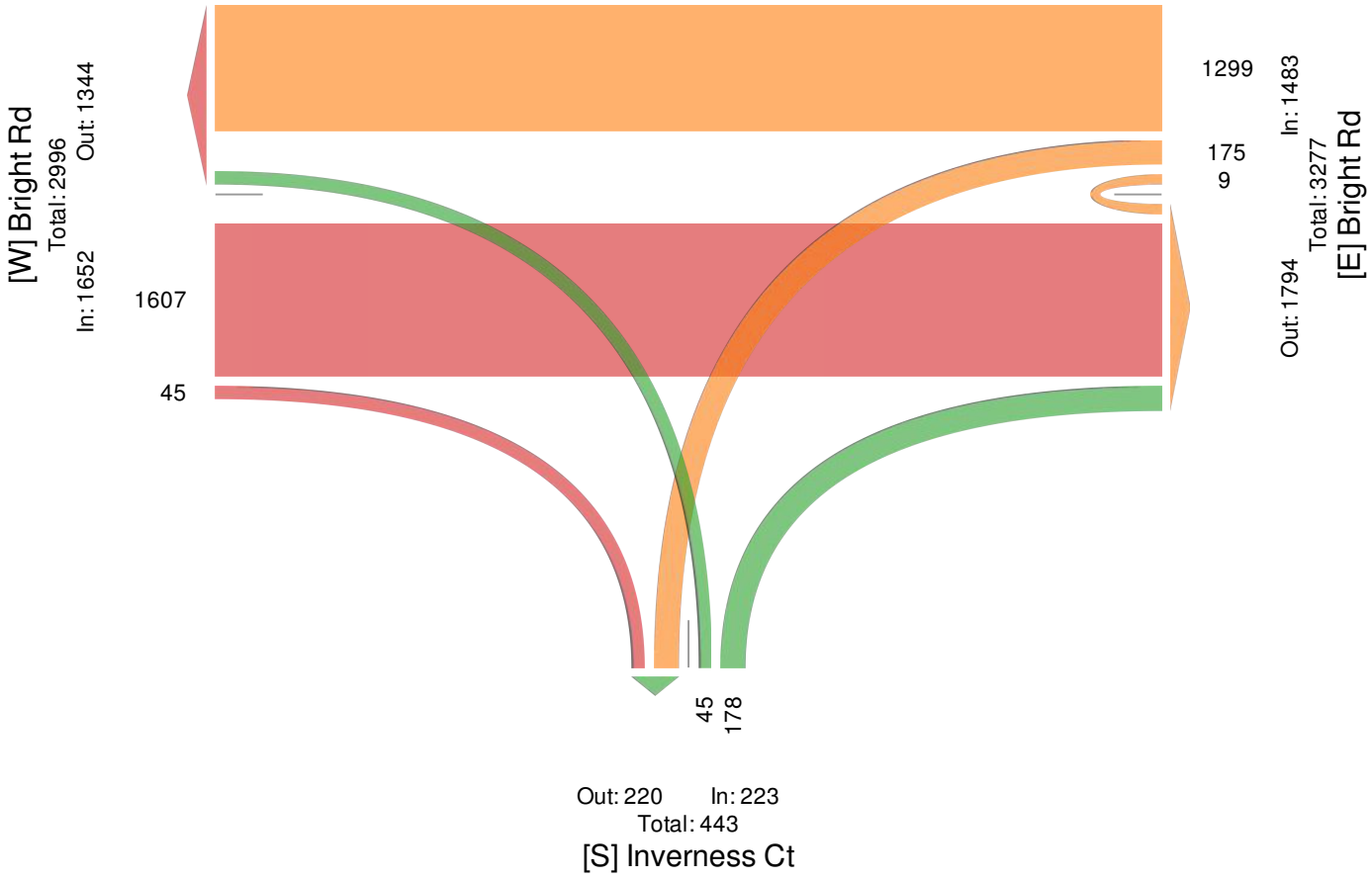
Provided by: Smart Services, Inc.
88 W. Church Street, Newark, OH, 43055, US

Leg	Bright Rd					Bright Rd					Inverness Ct					
Direction	Eastbound					Westbound					Northbound					
Time	T	R	U	App	Ped*	L	T	U	App	Ped*	L	R	U	App	Ped*	Int
2020-02-27 7:00AM	65	1	0	**66**	0	4	44	0	**48**	0	1	4	0	**5**	0	**119**
7:15AM	81	0	0	**81**	0	4	64	0	**68**	0	0	0	0	**0**	0	**149**
7:30AM	107	1	0	**108**	0	6	68	0	**74**	0	0	5	0	**5**	0	**187**
7:45AM	100	6	0	**106**	0	13	79	1	**93**	0	1	4	0	**5**	0	**204**
Hourly Total	353	8	0	**361**	0	27	255	1	**283**	0	2	13	0	**15**	0	**659**
8:00AM	83	4	0	**87**	0	11	81	0	**92**	0	3	9	0	**12**	0	**191**
8:15AM	84	7	0	**91**	0	11	85	0	**96**	0	2	3	0	**5**	0	**192**
8:30AM	79	6	0	**85**	0	12	87	1	**100**	0	5	10	0	**15**	0	**200**
8:45AM	57	2	0	**59**	0	10	82	0	**92**	0	2	13	0	**15**	0	**166**
Hourly Total	303	19	0	**322**	0	44	335	1	**380**	0	12	35	0	**47**	0	**749**
3:00PM	41	1	0	**42**	0	6	52	1	**59**	0	2	10	0	**12**	0	**113**
3:15PM	57	0	0	**57**	0	8	44	2	**54**	0	3	9	0	**12**	0	**123**
3:30PM	72	0	0	**72**	0	4	57	0	**61**	0	1	10	0	**11**	0	**144**
3:45PM	71	0	0	**71**	0	8	39	1	**48**	0	4	7	0	**11**	0	**130**
Hourly Total	241	1	0	**242**	0	26	192	4	**222**	0	10	36	0	**46**	0	**510**
4:00PM	90	0	0	**90**	0	8	50	0	**58**	0	0	16	0	**16**	0	**164**
4:15PM	77	1	0	**78**	0	8	57	1	**66**	0	0	4	0	**4**	0	**148**
4:30PM	90	3	0	**93**	0	16	59	0	**75**	0	2	13	0	**15**	0	**183**
4:45PM	91	0	0	**91**	0	9	65	0	**74**	0	1	17	0	**18**	0	**183**
Hourly Total	348	4	0	**352**	0	41	231	1	**273**	0	3	50	0	**53**	0	**678**
5:00PM	90	1	0	**91**	0	5	63	0	**68**	0	3	7	0	**10**	0	**169**
5:15PM	116	6	0	**122**	0	10	83	0	**93**	0	5	12	0	**17**	0	**232**
5:30PM	80	4	0	**84**	0	9	61	2	**72**	0	5	13	0	**18**	0	**174**
5:45PM	76	2	0	**78**	0	13	79	0	**92**	0	5	12	0	**17**	0	**187**
Hourly Total	362	13	0	**375**	0	37	286	2	**325**	0	18	44	0	**62**	0	**762**
Total	1607	45	0	**1652**	0	175	1299	9	**1483**	0	45	178	0	**223**	0	**3358**
% Approach	97.3%	2.7%	0%	**-**	-	11.8%	87.6%	0.6%	**-**	-	20.2%	79.8%	0%	**-**	-	-
% Total	47.9%	1.3%	0%	**49.2%**	-	5.2%	38.7%	0.3%	**44.2%**	-	1.3%	5.3%	0%	**6.6%**	-	-
Lights and Motorcycles	1590	44	0	**1634**	-	170	1289	9	**1468**	-	44	173	0	**217**	-	3319
% Lights and Motorcycles	98.9%	97.8%	0%	**98.9%**	-	97.1%	99.2%	100%	**99.0%**	-	97.8%	97.2%	0%	**97.3%**	-	98.8%
Heavy	17	1	0	**18**	-	5	10	0	**15**	-	1	5	0	**6**	-	39
% Heavy	1.1%	2.2%	0%	**1.1%**	-	2.9%	0.8%	0%	**1.0%**	-	2.2%	2.8%	0%	**2.7%**	-	1.2%
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

Bright Road & Inverness Court - TMC
Thu Feb 27, 2020
Full Length (7 AM-9 AM, 3 PM-6 PM)
All Classes (Lights and Motorcycles, Heavy, Pedestrians)
All Movements
ID: 753642, Location: 40.114185, -83.091478

Provided by: Smart Services, Inc.
88 W. Church Street, Newark, OH, 43055, US



Bright Road & Inverness Court - TMC

Thu Feb 27, 2020
AM Peak (7:45 AM - 8:45 AM) - Overall Peak Hour
All Classes (Lights and Motorcycles, Heavy, Pedestrians)
All Movements
ID: 753642, Location: 40.114185, -83.091478

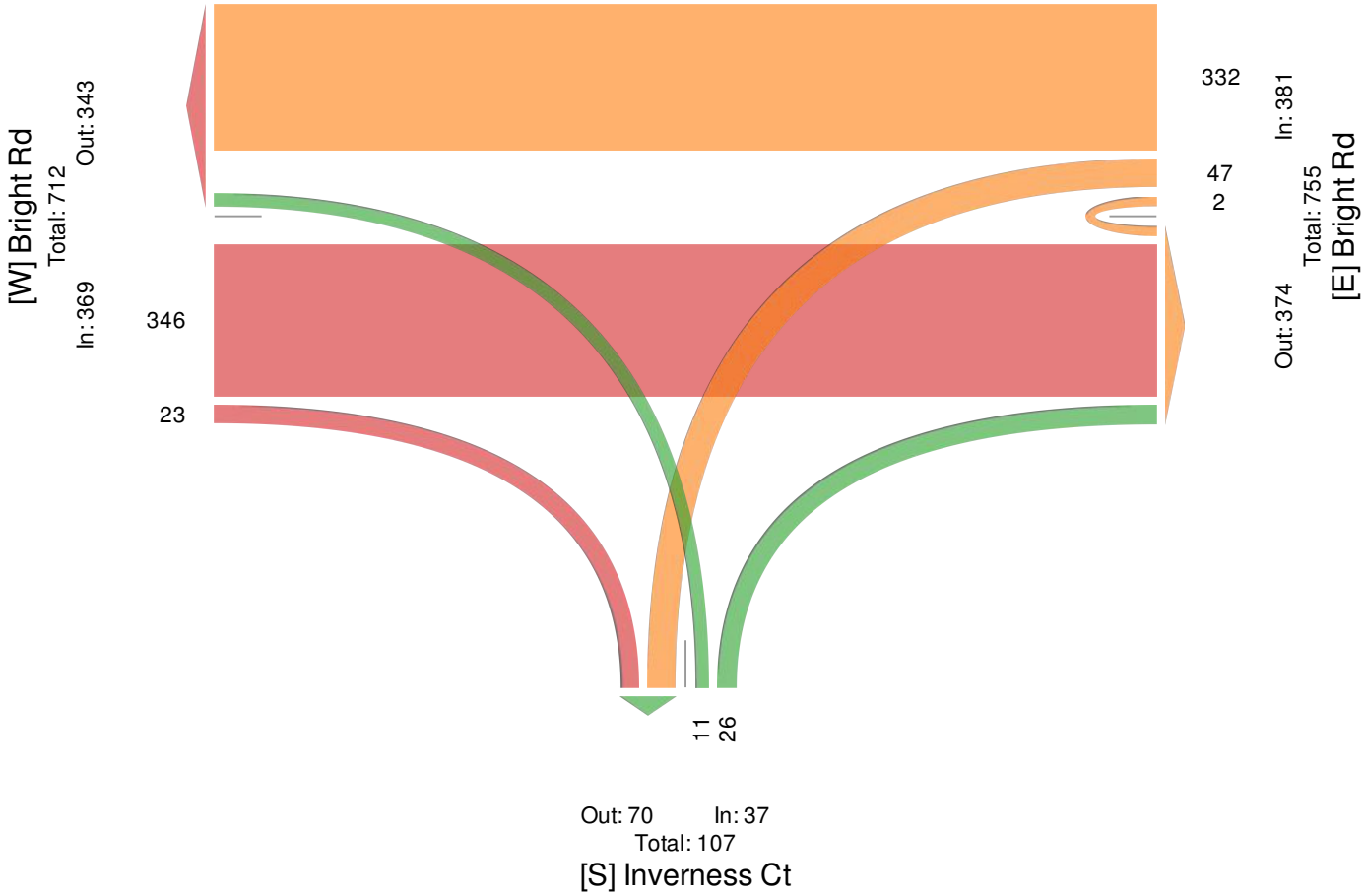
Provided by: Smart Services, Inc.
88 W. Church Street, Newark, OH, 43055, US

Leg	Bright Rd					Bright Rd					Inverness Ct					
Direction	Eastbound					Westbound					Northbound					
Time	T	R	U	App	Ped*	L	T	U	App	Ped*	L	R	U	App	Ped*	Int
2020-02-27 7:45AM	100	6	0	**106**	0	13	79	1	**93**	0	1	4	0	**5**	0	**204**
8:00AM	83	4	0	**87**	0	11	81	0	**92**	0	3	9	0	**12**	0	**191**
8:15AM	84	7	0	**91**	0	11	85	0	**96**	0	2	3	0	**5**	0	**192**
8:30AM	79	6	0	**85**	0	12	87	1	**100**	0	5	10	0	**15**	0	**200**
Total	346	23	0	**369**	0	47	332	2	**381**	0	11	26	0	**37**	0	**787**
% Approach	93.8%	6.2%	0%	**-**	-	12.3%	87.1%	0.5%	**-**	-	29.7%	70.3%	0%	**-**	-	-
% Total	44.0%	2.9%	0%	**46.9%**	-	6.0%	42.2%	0.3%	**48.4%**	-	1.4%	3.3%	0%	**4.7%**	-	-
PHF	0.865	0.821	-	**0.870**	-	0.904	0.954	0.500	**0.953**	-	0.550	0.650	-	**0.617**	-	0.964
Lights and Motorcycles	337	22	0	**359**	-	47	328	2	**377**	-	11	24	0	**35**	-	771
% Lights and Motorcycles	97.4%	95.7%	0%	**97.3%**	-	100%	98.8%	100%	**99.0%**	-	100%	92.3%	0%	**94.6%**	-	98.0%
Heavy	9	1	0	**10**	-	0	4	0	**4**	-	0	2	0	**2**	-	16
% Heavy	2.6%	4.3%	0%	**2.7%**	-	0%	1.2%	0%	**1.0%**	-	0%	7.7%	0%	**5.4%**	-	2.0%
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

Bright Road & Inverness Court - TMC
Thu Feb 27, 2020
AM Peak (7:45 AM - 8:45 AM) - Overall Peak Hour
All Classes (Lights and Motorcycles, Heavy, Pedestrians)
All Movements
ID: 753642, Location: 40.114185, -83.091478

Provided by: Smart Services, Inc.
88 W. Church Street, Newark, OH, 43055, US



Bright Road & Inverness Court - TMC

Thu Feb 27, 2020
PM Peak (4:30 PM - 5:30 PM)
All Classes (Lights and Motorcycles, Heavy, Pedestrians)
All Movements
ID: 753642, Location: 40.114185, -83.091478

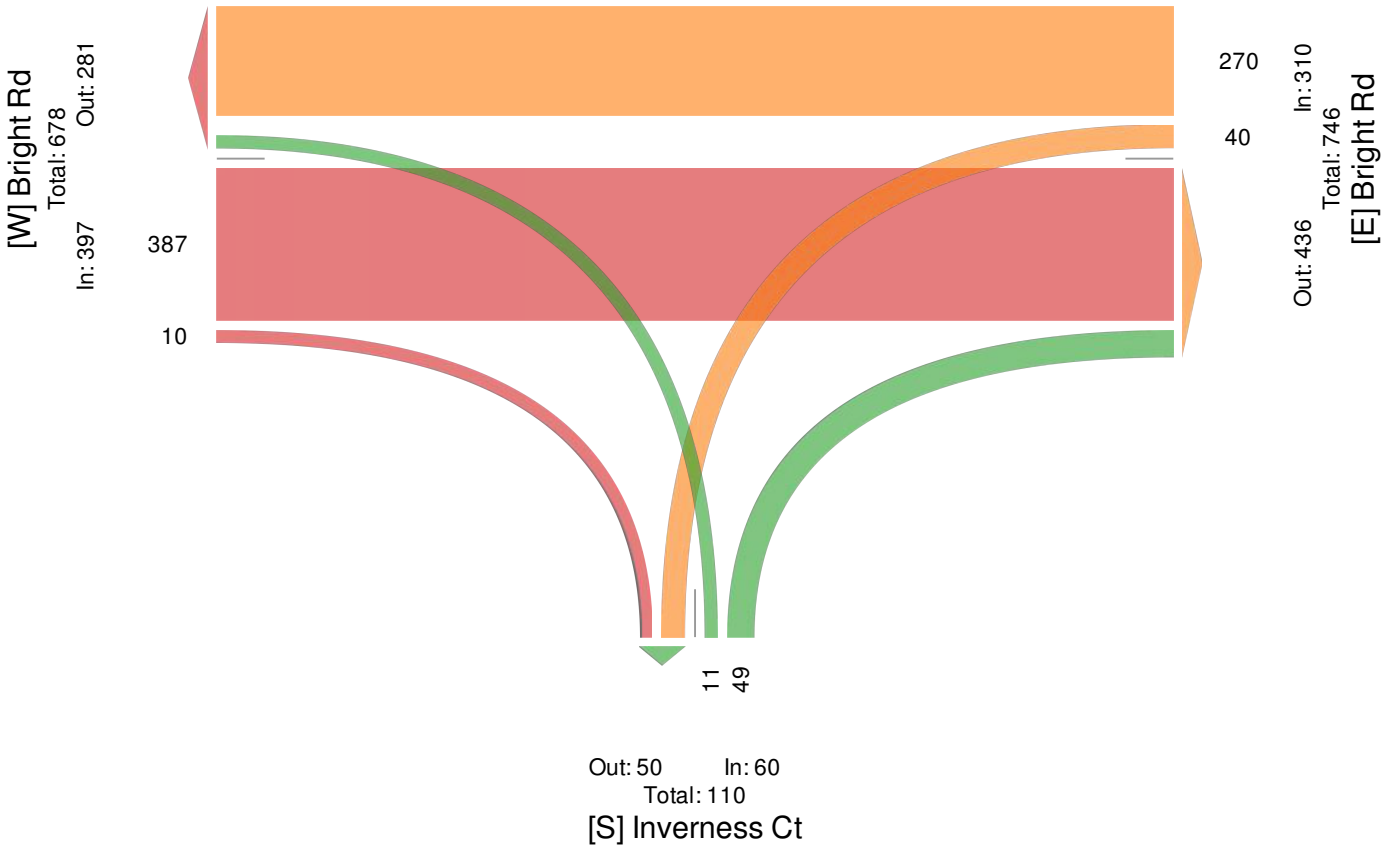
Provided by: Smart Services, Inc.
88 W. Church Street, Newark, OH, 43055, US

Leg	Bright Rd					Bright Rd					Inverness Ct					
Direction	Eastbound					Westbound					Northbound					
Time	T	R	U	App	Ped*	L	T	U	App	Ped*	L	R	U	App	Ped*	Int
2020-02-27 4:30PM	90	3	0	**93**	0	16	59	0	**75**	0	2	13	0	**15**	0	**183**
4:45PM	91	0	0	**91**	0	9	65	0	**74**	0	1	17	0	**18**	0	**183**
5:00PM	90	1	0	**91**	0	5	63	0	**68**	0	3	7	0	**10**	0	**169**
5:15PM	116	6	0	**122**	0	10	83	0	**93**	0	5	12	0	**17**	0	**232**
Total	387	10	0	**397**	0	40	270	0	**310**	0	11	49	0	**60**	0	**767**
% Approach	97.5%	2.5%	0%	**-**	-	12.9%	87.1%	0%	**-**	-	18.3%	81.7%	0%	**-**	-	-
% Total	50.5%	1.3%	0%	**51.8%**	-	5.2%	35.2%	0%	**40.4%**	-	1.4%	6.4%	0%	**7.8%**	-	-
PHF	0.834	0.417	-	**0.814**	-	0.625	0.813	-	**0.833**	-	0.550	0.721	-	**0.833**	-	0.827
Lights and Motorcycles	387	10	0	**397**	-	40	269	0	**309**	-	11	49	0	**60**	-	766
% Lights and Motorcycles	100%	100%	0%	**100%**	-	100%	99.6%	0%	**99.7%**	-	100%	100%	0%	**100%**	-	99.9%
Heavy	0	0	0	**0**	-	0	1	0	**1**	-	0	0	0	**0**	-	1
% Heavy	0%	0%	0%	**0%**	-	0%	0.4%	0%	**0.3%**	-	0%	0%	0%	**0%**	-	0.1%
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

Bright Road & Inverness Court - TMC
Thu Feb 27, 2020
PM Peak (4:30 PM - 5:30 PM)
All Classes (Lights and Motorcycles, Heavy, Pedestrians)
All Movements
ID: 753642, Location: 40.114185, -83.091478

Provided by: Smart Services, Inc.
88 W. Church Street, Newark, OH, 43055, US



Sawmill Road & Hard Road - TMC
Thu Feb 27, 2020
Full Length (7 AM-9 AM, 3 PM-6 PM)
All Classes (Lights and Motorcycles, Heavy, Pedestrians)
All Movements
ID: 753653, Location: 40.117911, -83.090383

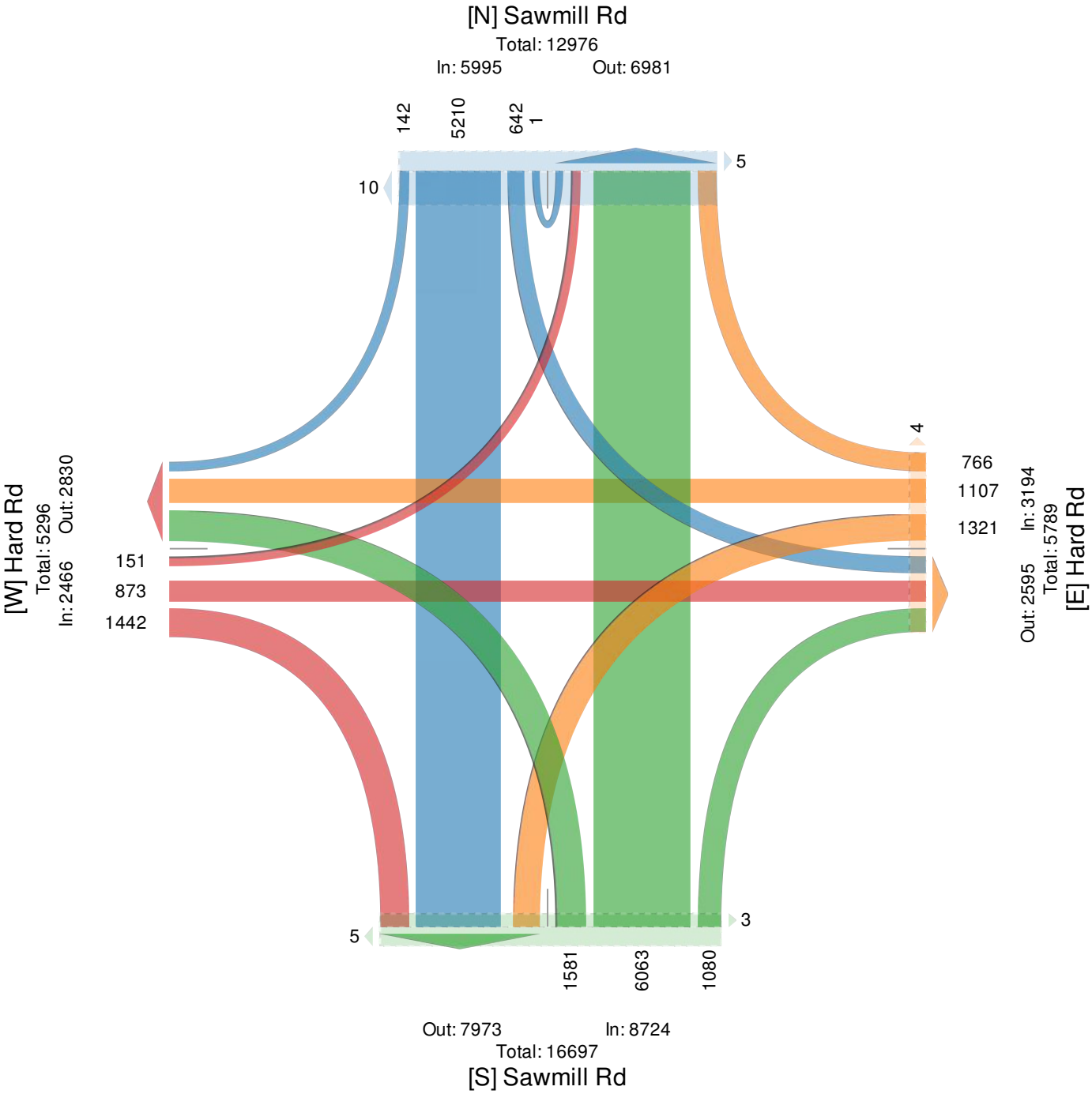
Provided by: Smart Services, Inc.
88 W. Church Street, Newark, OH, 43055, US

Leg	Hard Rd						Hard Rd						Sawmill Rd						Sawmill Rd						
Direction	Eastbound						Westbound						Northbound						Southbound						
Time	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	Int
2020-02-27 7:00AM	1	28	115	0	**144**	0	51	48	18	0	**117**	0	46	111	25	0	**182**	0	15	264	10	0	**289**	2	**732**
7:15AM	6	33	95	0	**134**	0	72	64	16	0	**152**	0	69	107	31	0	**207**	0	12	207	8	0	**227**	1	**720**
7:30AM	6	37	91	0	**134**	0	90	68	16	0	**174**	0	70	135	29	0	**234**	0	15	204	0	0	**219**	2	**761**
7:45AM	5	53	97	0	**155**	0	98	85	30	0	**213**	0	57	173	18	0	**248**	0	15	213	6	0	**234**	1	**850**
Hourly Total	18	151	398	0	**567**	0	311	265	80	0	**656**	0	242	526	103	0	**871**	0	57	888	24	0	**969**	6	**3063**
8:00AM	4	27	96	0	**127**	0	81	53	19	0	**153**	0	59	180	33	0	**272**	0	17	225	6	0	**248**	1	**800**
8:15AM	4	27	87	0	**118**	0	89	66	15	0	**170**	0	66	205	27	0	**298**	0	13	258	4	0	**275**	0	**861**
8:30AM	3	26	75	0	**104**	0	60	62	25	0	**147**	0	65	231	21	0	**317**	0	14	267	4	0	**285**	0	**853**
8:45AM	3	37	72	0	**112**	0	45	48	37	0	**130**	0	64	268	15	0	**347**	3	23	314	8	0	**345**	0	**934**
Hourly Total	14	117	330	0	**461**	0	275	229	96	0	**600**	0	254	884	96	0	**1234**	3	67	1064	22	0	**1153**	1	**3448**
3:00PM	14	46	69	0	**129**	0	74	37	46	0	**157**	0	64	332	51	0	**447**	0	31	218	3	0	**252**	1	**985**
3:15PM	2	28	47	0	**77**	0	68	45	47	0	**160**	0	72	347	49	0	**468**	0	48	262	7	0	**317**	0	**1022**
3:30PM	6	33	59	0	**98**	0	60	54	54	0	**168**	0	69	338	67	0	**474**	0	39	281	5	0	**325**	3	**1065**
3:45PM	6	33	46	0	**85**	0	59	32	46	0	**137**	0	92	398	65	0	**555**	0	43	225	10	0	**278**	2	**1055**
Hourly Total	28	140	221	0	**389**	0	261	168	193	0	**622**	0	297	1415	232	0	**1944**	0	161	986	25	0	**1172**	6	**4127**
4:00PM	11	44	63	0	**118**	0	51	36	33	0	**120**	0	81	324	60	0	**465**	3	40	283	4	0	**327**	0	**1030**
4:15PM	6	49	66	0	**121**	0	51	46	38	0	**135**	2	104	430	83	0	**617**	0	35	261	8	0	**304**	0	**1177**
4:30PM	6	46	62	0	**114**	0	64	63	48	0	**175**	0	85	403	74	0	**562**	0	43	286	14	0	**343**	0	**1194**
4:45PM	8	64	72	0	**144**	0	59	72	55	0	**186**	0	105	419	98	0	**622**	0	60	266	4	0	**330**	0	**1282**
Hourly Total	31	203	263	0	**497**	0	225	217	174	0	**616**	2	375	1576	315	0	**2266**	3	178	1096	30	0	**1304**	0	**4683**
5:00PM	18	71	69	0	**158**	0	75	50	60	0	**185**	0	116	419	81	0	**616**	0	36	295	5	0	**336**	1	**1295**
5:15PM	12	78	64	0	**154**	0	53	54	60	0	**167**	0	80	417	76	0	**573**	0	57	320	14	0	**391**	1	**1285**
5:30PM	14	42	56	0	**112**	0	46	62	51	0	**159**	0	116	476	99	0	**691**	0	41	263	11	1	**316**	0	**1278**
5:45PM	16	71	41	0	**128**	0	75	62	52	0	**189**	2	101	350	78	0	**529**	2	45	298	11	0	**354**	0	**1200**
Hourly Total	60	262	230	0	**552**	0	249	228	223	0	**700**	2	413	1662	334	0	**2409**	2	179	1176	41	1	**1397**	2	**5058**
Total	151	873	1442	0	**2466**	0	1321	1107	766	0	**3194**	4	1581	6063	1080	0	**8724**	8	642	5210	142	1	**5995**	15	**20379**
% Approach	6.1%	35.4%	58.5%	0%	**-**	-	41.4%	34.7%	24.0%	0%	**-**	-	18.1%	69.5%	12.4%	0%	**-**	-	10.7%	86.9%	2.4%	0%	**-**	-	**-**
% Total	0.7%	4.3%	7.1%	0%	**12.1%**	-	6.5%	5.4%	3.8%	0%	**15.7%**	-	7.8%	29.8%	5.3%	0%	**42.8%**	-	3.2%	25.6%	0.7%	0%	**29.4%**	-	**-**
Lights and Motorcycles	151	851	1396	0	**2398**	-	1293	1092	754	0	**3139**	-	1542	5975	1053	0	**8570**	-	633	5118	140	1	**5892**	-	19999
% Lights and Motorcycles	100%	97.5%	96.8%	0%	**97.2%**	-	97.9%	98.6%	98.4%	0%	**98.3%**	-	97.5%	98.5%	97.5%	0%	**98.2%**	-	98.6%	98.2%	98.6%	100%	**98.3%**	-	98.1%
Heavy	0	22	46	0	**68**	-	28	15	12	0	**55**	-	39	88	27	0	**154**	-	9	92	2	0	**103**	-	380
% Heavy	0%	2.5%	3.2%	0%	**2.8%**	-	2.1%	1.4%	1.6%	0%	**1.7%**	-	2.5%	1.5%	2.5%	0%	**1.8%**	-	1.4%	1.8%	1.4%	0%	**1.7%**	-	1.9%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	4	-	-	-	-	-	8	-	-	-	-	-	15	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	100%	-

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

Sawmill Road & Hard Road - TMC
Thu Feb 27, 2020
Full Length (7 AM-9 AM, 3 PM-6 PM)
All Classes (Lights and Motorcycles, Heavy, Pedestrians)
All Movements
ID: 753653, Location: 40.117911, -83.090383

Provided by: Smart Services, Inc.
88 W. Church Street, Newark, OH, 43055, US



Sawmill Road & Hard Road - TMC
Thu Feb 27, 2020
AM Peak (8 AM - 9 AM)
All Classes (Lights and Motorcycles, Heavy, Pedestrians)
All Movements
ID: 753653, Location: 40.117911, -83.090383

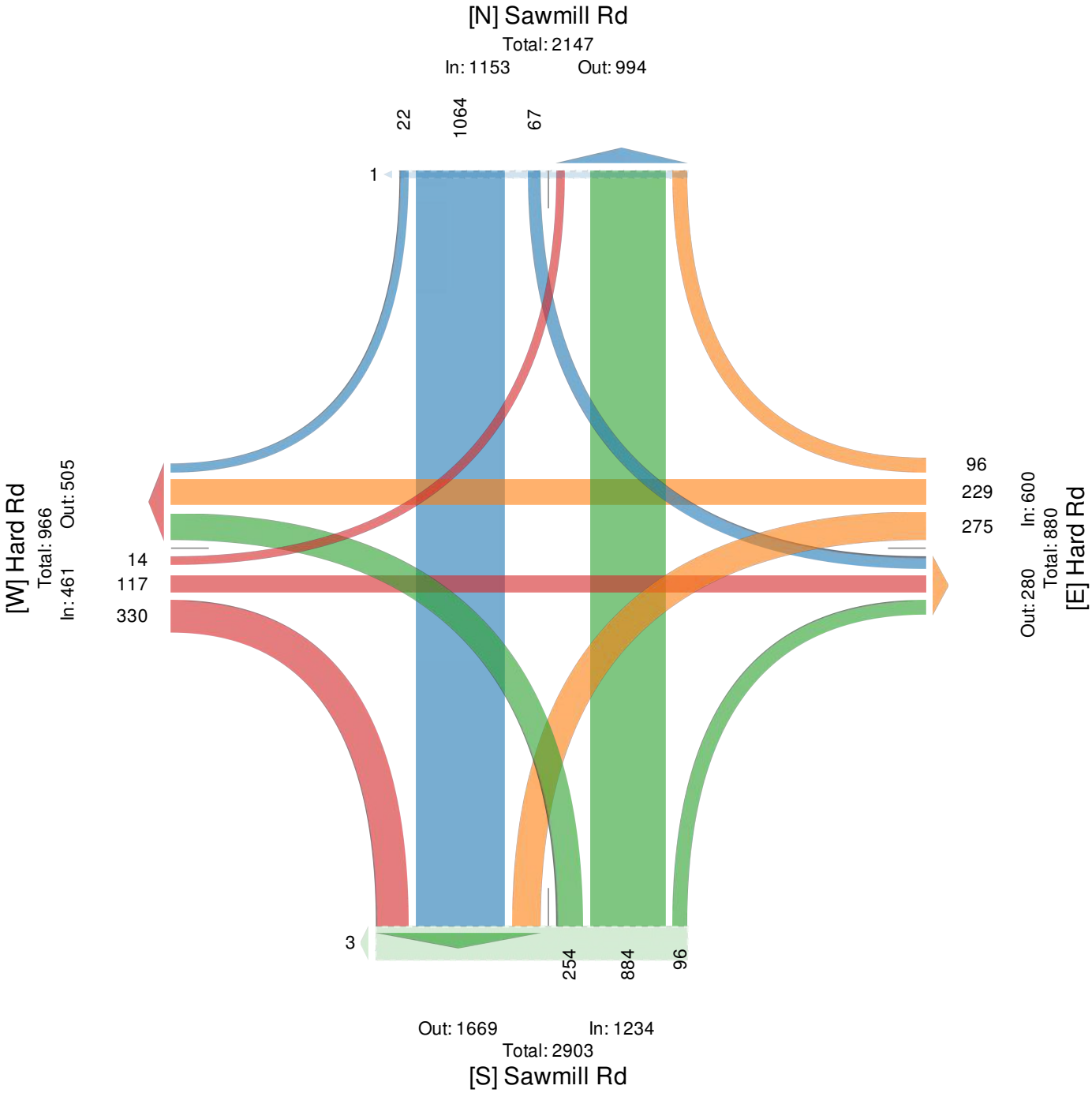
Provided by: Smart Services, Inc.
88 W. Church Street, Newark, OH, 43055, US

Leg	Hard Rd						Hard Rd						Sawmill Rd						Sawmill Rd						
Direction	Eastbound						Westbound						Northbound						Southbound						
Time	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	Int
2020-02-27 8:00AM	4	27	96	0	**127**	0	81	53	19	0	**153**	0	59	180	33	0	**272**	0	17	225	6	0	**248**	1	**800**
8:15AM	4	27	87	0	**118**	0	89	66	15	0	**170**	0	66	205	27	0	**298**	0	13	258	4	0	**275**	0	**861**
8:30AM	3	26	75	0	**104**	0	60	62	25	0	**147**	0	65	231	21	0	**317**	0	14	267	4	0	**285**	0	**853**
8:45AM	3	37	72	0	**112**	0	45	48	37	0	**130**	0	64	268	15	0	**347**	3	23	314	8	0	**345**	0	**934**
Total	14	117	330	0	**461**	0	275	229	96	0	**600**	0	254	884	96	0	**1234**	3	67	1064	22	0	**1153**	1	**3448**
% Approach	3.0%	25.4%	71.6%	0%	**-**	-	45.8%	38.2%	16.0%	0%	**-**	-	20.6%	71.6%	7.8%	0%	**-**	-	5.8%	92.3%	1.9%	0%	**-**	-	-
% Total	0.4%	3.4%	9.6%	0%	**13.4%**	-	8.0%	6.6%	2.8%	0%	**17.4%**	-	7.4%	25.6%	2.8%	0%	**35.8%**	-	1.9%	30.9%	0.6%	0%	**33.4%**	-	-
PHF	0.875	0.791	0.859	-	**0.907**	-	0.772	0.867	0.649	-	**0.882**	-	0.962	0.825	0.727	-	**0.889**	-	0.728	0.847	0.688	-	**0.836**	-	0.923
Lights and Motorcycles	14	107	323	0	**444**	-	262	225	90	0	**577**	-	239	846	79	0	**1164**	-	66	1040	22	0	**1128**	-	3313
% Lights and Motorcycles	100%	91.5%	97.9%	0%	**96.3%**	-	95.3%	98.3%	93.8%	0%	**96.2%**	-	94.1%	95.7%	82.3%	0%	**94.3%**	-	98.5%	97.7%	100%	0%	**97.8%**	-	96.1%
Heavy	0	10	7	0	**17**	-	13	4	6	0	**23**	-	15	38	17	0	**70**	-	1	24	0	0	**25**	-	135
% Heavy	0%	8.5%	2.1%	0%	**3.7%**	-	4.7%	1.7%	6.3%	0%	**3.8%**	-	5.9%	4.3%	17.7%	0%	**5.7%**	-	1.5%	2.3%	0%	0%	**2.2%**	-	3.9%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	3	-	-	-	-	-	1	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	100%	-

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

Sawmill Road & Hard Road - TMC
Thu Feb 27, 2020
AM Peak (8 AM - 9 AM)
All Classes (Lights and Motorcycles, Heavy, Pedestrians)
All Movements
ID: 753653, Location: 40.117911, -83.090383

Provided by: Smart Services, Inc.
88 W. Church Street, Newark, OH, 43055, US



Sawmill Road & Hard Road - TMC
Thu Feb 27, 2020
PM Peak (4:45 PM - 5:45 PM) - Overall Peak Hour
All Classes (Lights and Motorcycles, Heavy, Pedestrians)
All Movements
ID: 753653, Location: 40.117911, -83.090383

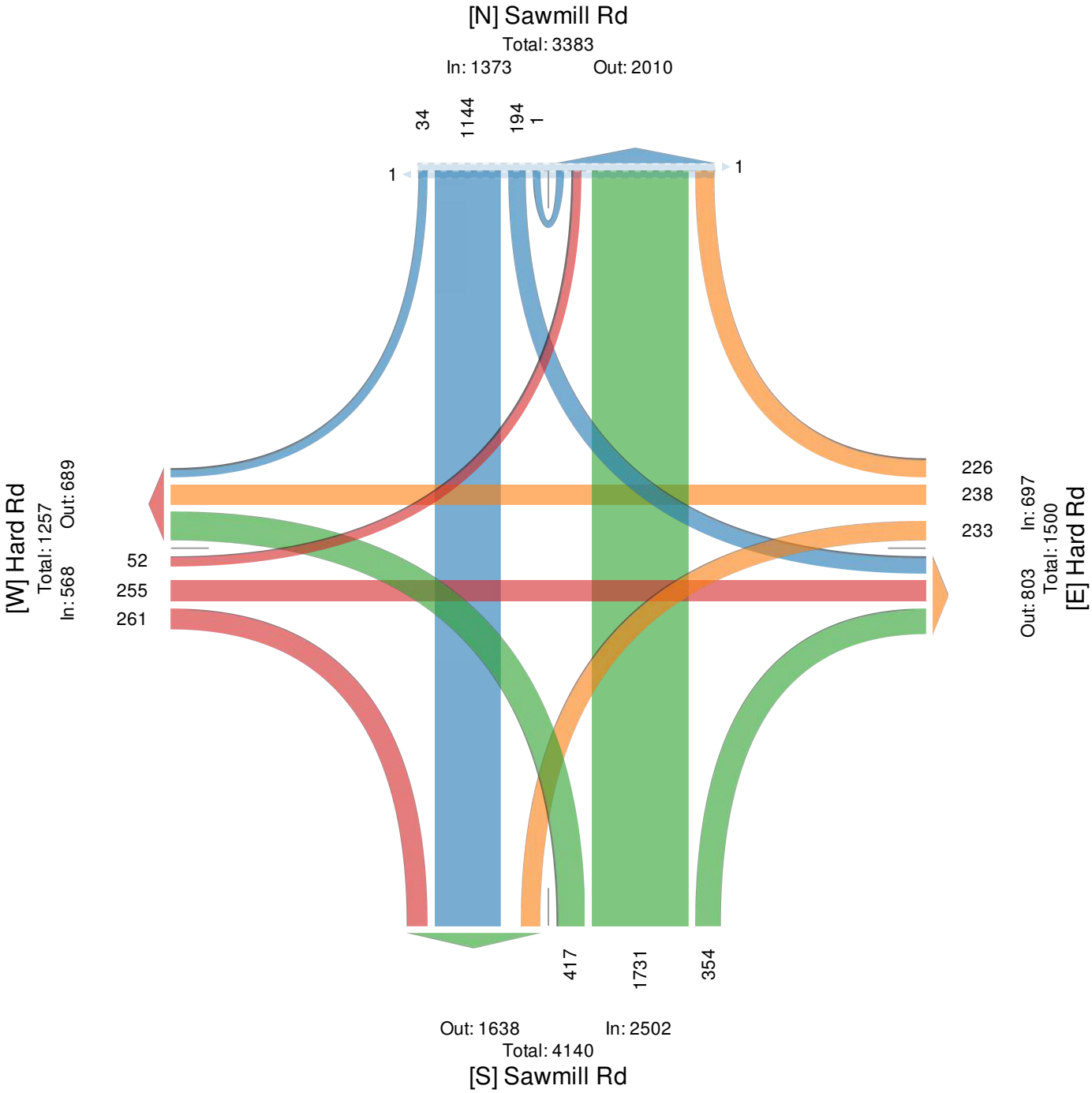
Provided by: Smart Services, Inc.
88 W. Church Street, Newark, OH, 43055, US

Leg	Hard Rd						Hard Rd						Sawmill Rd						Sawmill Rd						
Direction	Eastbound						Westbound						Northbound						Southbound						
Time	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	Int
2020-02-27 4:45PM	8	64	72	0	**144**	0	59	72	55	0	**186**	0	105	419	98	0	**622**	0	60	266	4	0	**330**	0	**1282**
5:00PM	18	71	69	0	**158**	0	75	50	60	0	**185**	0	116	419	81	0	**616**	0	36	295	5	0	**336**	1	**1295**
5:15PM	12	78	64	0	**154**	0	53	54	60	0	**167**	0	80	417	76	0	**573**	0	57	320	14	0	**391**	1	**1285**
5:30PM	14	42	56	0	**112**	0	46	62	51	0	**159**	0	116	476	99	0	**691**	0	41	263	11	1	**316**	0	**1278**
Total	52	255	261	0	**568**	0	233	238	226	0	**697**	0	417	1731	354	0	**2502**	0	194	1144	34	1	**1373**	2	**5140**
% Approach	9.2%	44.9%	46.0%	0%	**-**	-	33.4%	34.1%	32.4%	0%	**-**	-	16.7%	69.2%	14.1%	0%	**-**	-	14.1%	83.3%	2.5%	0.1%	**-**	-	-
% Total	1.0%	5.0%	5.1%	0%	**11.1%**	-	4.5%	4.6%	4.4%	0%	**13.6%**	-	8.1%	33.7%	6.9%	0%	**48.7%**	-	3.8%	22.3%	0.7%	0%	**26.7%**	-	-
PHF	0.722	0.817	0.906	-	**0.899**	-	0.777	0.826	0.942	-	**0.937**	-	0.899	0.909	0.894	-	**0.905**	-	0.808	0.894	0.607	0.250	**0.878**	-	0.992
Lights and Motorcycles	52	254	259	0	**565**	-	233	238	225	0	**696**	-	416	1722	354	0	**2492**	-	194	1127	34	1	**1356**	-	5109
% Lights and Motorcycles	100%	99.6%	99.2%	0%	**99.5%**	-	100%	100%	99.6%	0%	**99.9%**	-	99.8%	99.5%	100%	0%	**99.6%**	-	100%	98.5%	100%	100%	**98.8%**	-	99.4%
Heavy	0	1	2	0	**3**	-	0	0	1	0	**1**	-	1	9	0	0	**10**	-	0	17	0	0	**17**	-	31
% Heavy	0%	0.4%	0.8%	0%	**0.5%**	-	0%	0%	0.4%	0%	**0.1%**	-	0.2%	0.5%	0%	0%	**0.4%**	-	0%	1.5%	0%	0%	**1.2%**	-	0.6%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	2	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	-

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

Sawmill Road & Hard Road - TMC
Thu Feb 27, 2020
PM Peak (4:45 PM - 5:45 PM) - Overall Peak Hour
All Classes (Lights and Motorcycles, Heavy, Pedestrians)
All Movements
ID: 753653, Location: 40.117911, -83.090383

Provided by: Smart Services, Inc.
88 W. Church Street, Newark, OH, 43055, US



Sawmill Road & RIRO (West North of Bright Rd) - TMC

Thu Feb 27, 2020
Full Length (7 AM-9 AM, 3 PM-6 PM)
All Classes (Lights and Motorcycles, Heavy, Pedestrians)
All Movements
ID: 753646, Location: 40.115238, -83.090541

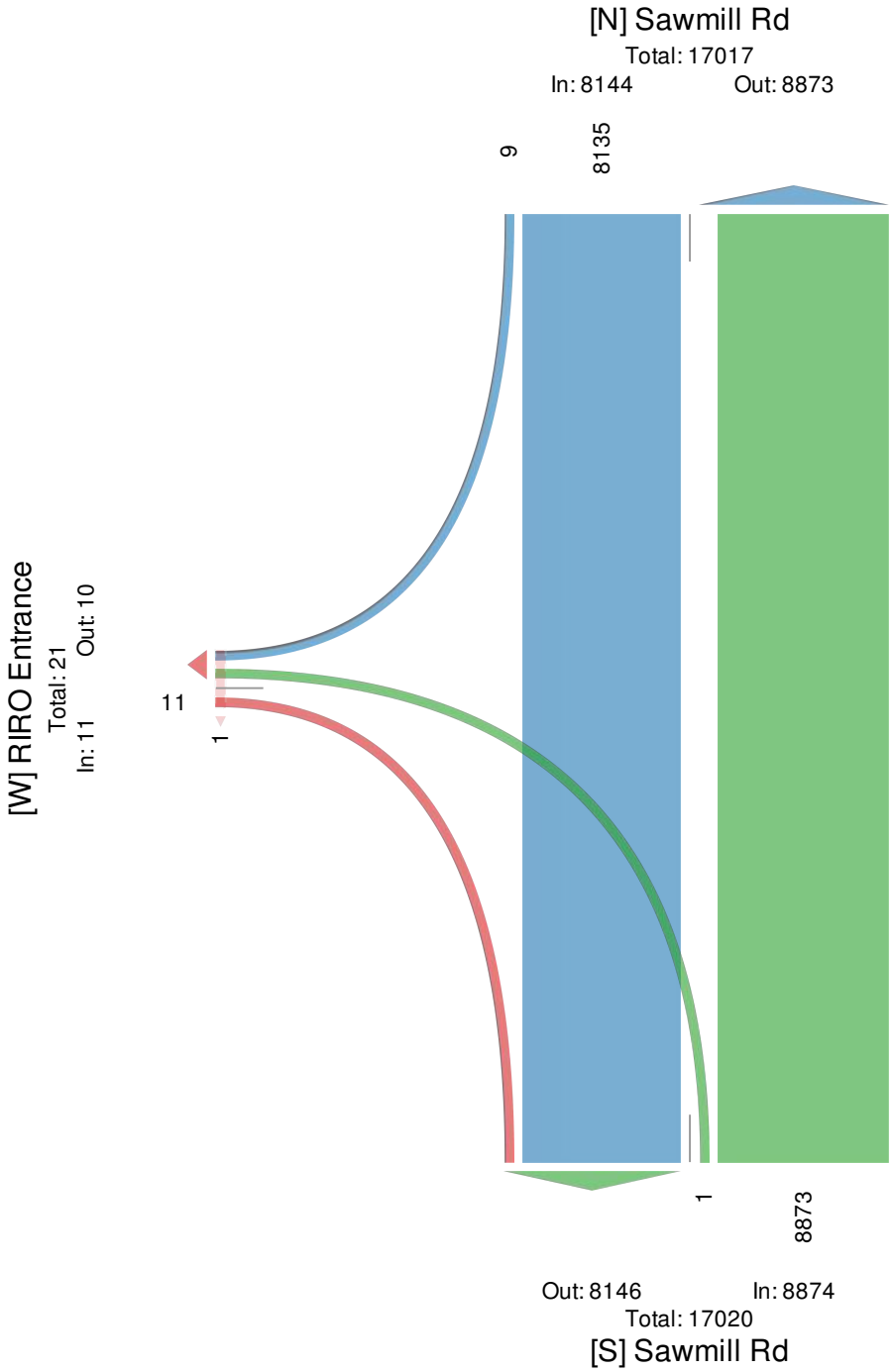
Provided by: Smart Services, Inc.
88 W. Church Street, Newark, OH, 43055, US

Leg	RIRO Entrance					Sawmill Rd					Sawmill Rd					
Direction	Eastbound					Northbound					Southbound					
Time	L	R	U	**App**	Ped*	L	T	U	**App**	Ped*	T	R	U	**App**	Ped*	**Int**
2020-02-27 7:00AM	0	1	0	**1**	0	0	187	0	**187**	0	413	0	0	**413**	0	**601**
7:15AM	0	0	0	**0**	0	0	213	0	**213**	0	396	0	0	**396**	0	**609**
7:30AM	0	0	0	**0**	0	0	240	0	**240**	0	388	0	0	**388**	0	**628**
7:45AM	0	0	0	**0**	0	0	245	0	**245**	0	431	0	0	**431**	0	**676**
Hourly Total	0	1	0	**1**	0	0	885	0	**885**	0	1628	0	0	**1628**	0	**2514**
8:00AM	0	0	0	**0**	0	1	254	0	**255**	0	424	0	0	**424**	0	**679**
8:15AM	0	0	0	**0**	0	0	292	0	**292**	0	430	1	0	**431**	0	**723**
8:30AM	0	0	0	**0**	0	0	290	0	**290**	0	436	2	0	**438**	0	**728**
8:45AM	0	0	0	**0**	0	0	318	0	**318**	0	445	1	0	**446**	0	**764**
Hourly Total	0	0	0	**0**	0	1	1154	0	**1155**	0	1735	4	0	**1739**	0	**2894**
3:00PM	0	1	0	**1**	0	0	457	0	**457**	0	366	1	0	**367**	0	**825**
3:15PM	0	0	0	**0**	0	0	454	0	**454**	0	379	0	0	**379**	0	**833**
3:30PM	0	0	0	**0**	0	0	523	0	**523**	0	399	2	0	**401**	0	**924**
3:45PM	0	2	0	**2**	0	0	528	0	**528**	0	347	0	0	**347**	0	**877**
Hourly Total	0	3	0	**3**	0	0	1962	0	**1962**	0	1491	3	0	**1494**	0	**3459**
4:00PM	0	0	0	**0**	0	0	535	0	**535**	0	391	0	0	**391**	0	**926**
4:15PM	0	0	0	**0**	0	0	595	0	**595**	0	391	0	0	**391**	0	**986**
4:30PM	0	0	0	**0**	0	0	611	0	**611**	0	401	0	0	**401**	0	**1012**
4:45PM	0	0	0	**0**	0	0	637	0	**637**	0	416	1	0	**417**	0	**1054**
Hourly Total	0	0	0	**0**	0	0	2378	0	**2378**	0	1599	1	0	**1600**	0	**3978**
5:00PM	0	3	0	**3**	0	0	600	0	**600**	0	421	0	0	**421**	0	**1024**
5:15PM	0	2	0	**2**	0	0	648	0	**648**	0	462	0	0	**462**	0	**1112**
5:30PM	0	1	0	**1**	1	0	645	0	**645**	0	369	0	0	**369**	0	**1015**
5:45PM	0	1	0	**1**	0	0	601	0	**601**	0	430	1	0	**431**	0	**1033**
Hourly Total	0	7	0	**7**	1	0	2494	0	**2494**	0	1682	1	0	**1683**	0	**4184**
Total	0	11	0	**11**	1	1	8873	0	**8874**	0	8135	9	0	**8144**	0	**17029**
% Approach	0%	100%	0%	**-**	-	0%	100.0%	0%	**-**	-	99.9%	0.1%	0%	**-**	-	-
% Total	0%	0.1%	0%	**0.1%**	-	0%	52.1%	0%	**52.1%**	-	47.8%	0.1%	0%	**47.8%**	-	-
Lights and Motorcycles	0	11	0	**11**	-	1	8710	0	**8711**	-	7967	9	0	**7976**	-	16698
% Lights and Motorcycles	0%	100%	0%	**100%**	-	100%	98.2%	0%	**98.2%**	-	97.9%	100%	0%	**97.9%**	-	98.1%
Heavy	0	0	0	**0**	-	0	163	0	**163**	-	168	0	0	**168**	-	331
% Heavy	0%	0%	0%	**0%**	-	0%	1.8%	0%	**1.8%**	-	2.1%	0%	0%	**2.1%**	-	1.9%
Pedestrians	-	-	-	-	1	-	-	-	-	0	-	-	-	-	0	
% Pedestrians	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-

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

Sawmill Road & RIRO (West North of Bright Rd) - TMC
Thu Feb 27, 2020
Full Length (7 AM-9 AM, 3 PM-6 PM)
All Classes (Lights and Motorcycles, Heavy, Pedestrians)
All Movements
ID: 753646, Location: 40.115238, -83.090541

Provided by: Smart Services, Inc.
88 W. Church Street, Newark, OH, 43055, US



Sawmill Road & RIRO (West North of Bright Rd) - TMC

Thu Feb 27, 2020
AM Peak (8 AM - 9 AM)
All Classes (Lights and Motorcycles, Heavy, Pedestrians)
All Movements
ID: 753646, Location: 40.115238, -83.090541

Provided by: Smart Services, Inc.
88 W. Church Street, Newark, OH, 43055, US

Leg	RIRO Entrance					Sawmill Rd					Sawmill Rd					
Direction	Eastbound					Northbound					Southbound					
Time	L	R	U	**App**	Ped*	L	T	U	**App**	Ped*	T	R	U	**App**	Ped*	**Int**
2020-02-27 8:00AM	0	0	0	**0**	0	1	254	0	**255**	0	424	0	0	**424**	0	**679**
8:15AM	0	0	0	**0**	0	0	292	0	**292**	0	430	1	0	**431**	0	**723**
8:30AM	0	0	0	**0**	0	0	290	0	**290**	0	436	2	0	**438**	0	**728**
8:45AM	0	0	0	**0**	0	0	318	0	**318**	0	445	1	0	**446**	0	**764**
Total	0	0	0	**0**	0	1	1154	0	**1155**	0	1735	4	0	**1739**	0	**2894**
% Approach	0%	0%	0%	**-**	-	0.1%	99.9%	0%	**-**	-	99.8%	0.2%	0%	**-**	-	-
% Total	0%	0%	0%	**0%**	-	0%	39.9%	0%	**39.9%**	-	60.0%	0.1%	0%	**60.1%**	-	-
PHF	-	-	-	**-**	-	0.250	0.907	-	**0.908**	-	0.975	0.500	-	**0.975**	-	0.947
Lights and Motorcycles	0	0	0	**0**	-	1	1078	0	**1079**	-	1690	4	0	**1694**	-	2773
% Lights and Motorcycles	0%	0%	0%	**-**	-	100%	93.4%	0%	**93.4%**	-	97.4%	100%	0%	**97.4%**	-	95.8%
Heavy	0	0	0	**0**	-	0	76	0	**76**	-	45	0	0	**45**	-	121
% Heavy	0%	0%	0%	**-**	-	0%	6.6%	0%	**6.6%**	-	2.6%	0%	0%	**2.6%**	-	4.2%
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

Sawmill Road & RIRO (West North of Bright Rd) - TMC
Thu Feb 27, 2020
AM Peak (8 AM - 9 AM)
All Classes (Lights and Motorcycles, Heavy, Pedestrians)
All Movements
ID: 753646, Location: 40.115238, -83.090541

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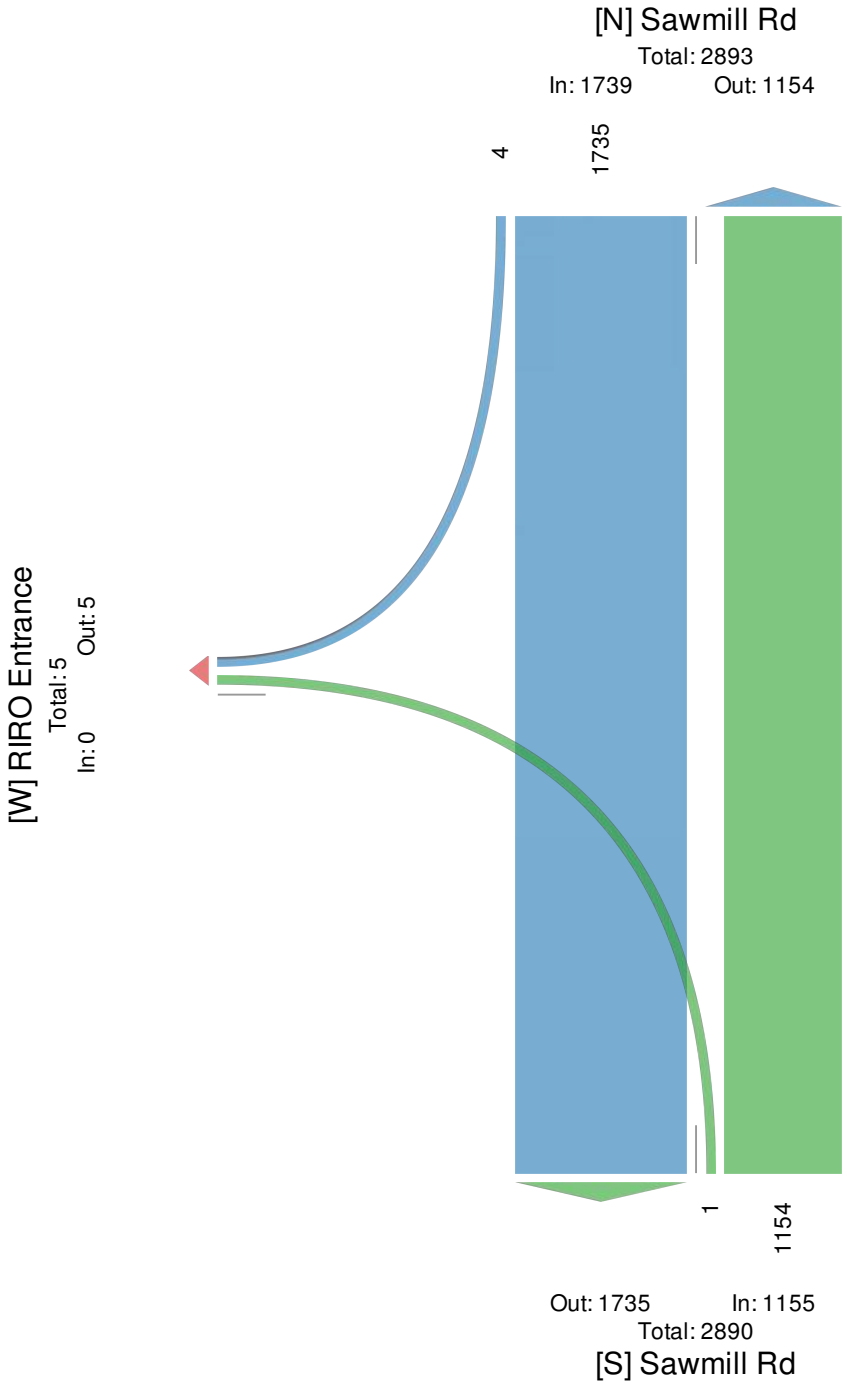

Sawmill Road & RIRO (West North of Bright Rd) - TMC

Thu Feb 27, 2020
PM Peak (4:45 PM - 5:45 PM) - Overall Peak Hour
All Classes (Lights and Motorcycles, Heavy, Pedestrians)
All Movements
ID: 753646, Location: 40.115238, -83.090541

Provided by: Smart Services, Inc.
88 W. Church Street, Newark, OH, 43055, US

Leg	RIRO Entrance					Sawmill Rd					Sawmill Rd					
Direction	Eastbound					Northbound					Southbound					
Time	L	R	U	**App**	Ped*	L	T	U	**App**	Ped*	T	R	U	**App**	Ped*	**Int**
2020-02-27 4:45PM	0	0	0	**0**	0	0	637	0	**637**	0	416	1	0	**417**	0	**1054**
5:00PM	0	3	0	**3**	0	0	600	0	**600**	0	421	0	0	**421**	0	**1024**
5:15PM	0	2	0	**2**	0	0	648	0	**648**	0	462	0	0	**462**	0	**1112**
5:30PM	0	1	0	**1**	1	0	645	0	**645**	0	369	0	0	**369**	0	**1015**
Total	0	6	0	**6**	1	0	2530	0	**2530**	0	1668	1	0	**1669**	0	**4205**
% Approach	0%	100%	0%	**-**	-	0%	100%	0%	**-**	-	99.9%	0.1%	0%	**-**	-	-
% Total	0%	0.1%	0%	**0.1%**	-	0%	60.2%	0%	**60.2%**	-	39.7%	0%	0%	**39.7%**	-	-
PHF	-	0.500	-	**0.500**	-	-	0.976	-	**0.976**	-	0.903	0.250	-	**0.903**	-	0.945
Lights and Motorcycles	0	6	0	**6**	-	0	2519	0	**2519**	-	1649	1	0	**1650**	-	4175
% Lights and Motorcycles	0%	100%	0%	**100%**	-	0%	99.6%	0%	**99.6%**	-	98.9%	100%	0%	**98.9%**	-	99.3%
Heavy	0	0	0	**0**	-	0	11	0	**11**	-	19	0	0	**19**	-	30
% Heavy	0%	0%	0%	**0%**	-	0%	0.4%	0%	**0.4%**	-	1.1%	0%	0%	**1.1%**	-	0.7%
Pedestrians	-	-	-	-	1	-	-	-	-	0	-	-	-	-	0	
% Pedestrians	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-

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

Sawmill Road & RIRO (West North of Bright Rd) - TMC
Thu Feb 27, 2020
PM Peak (4:45 PM - 5:45 PM) - Overall Peak Hour
All Classes (Lights and Motorcycles, Heavy, Pedestrians)
All Movements
ID: 753646, Location: 40.115238, -83.090541

Provided by: Smart Services, Inc.
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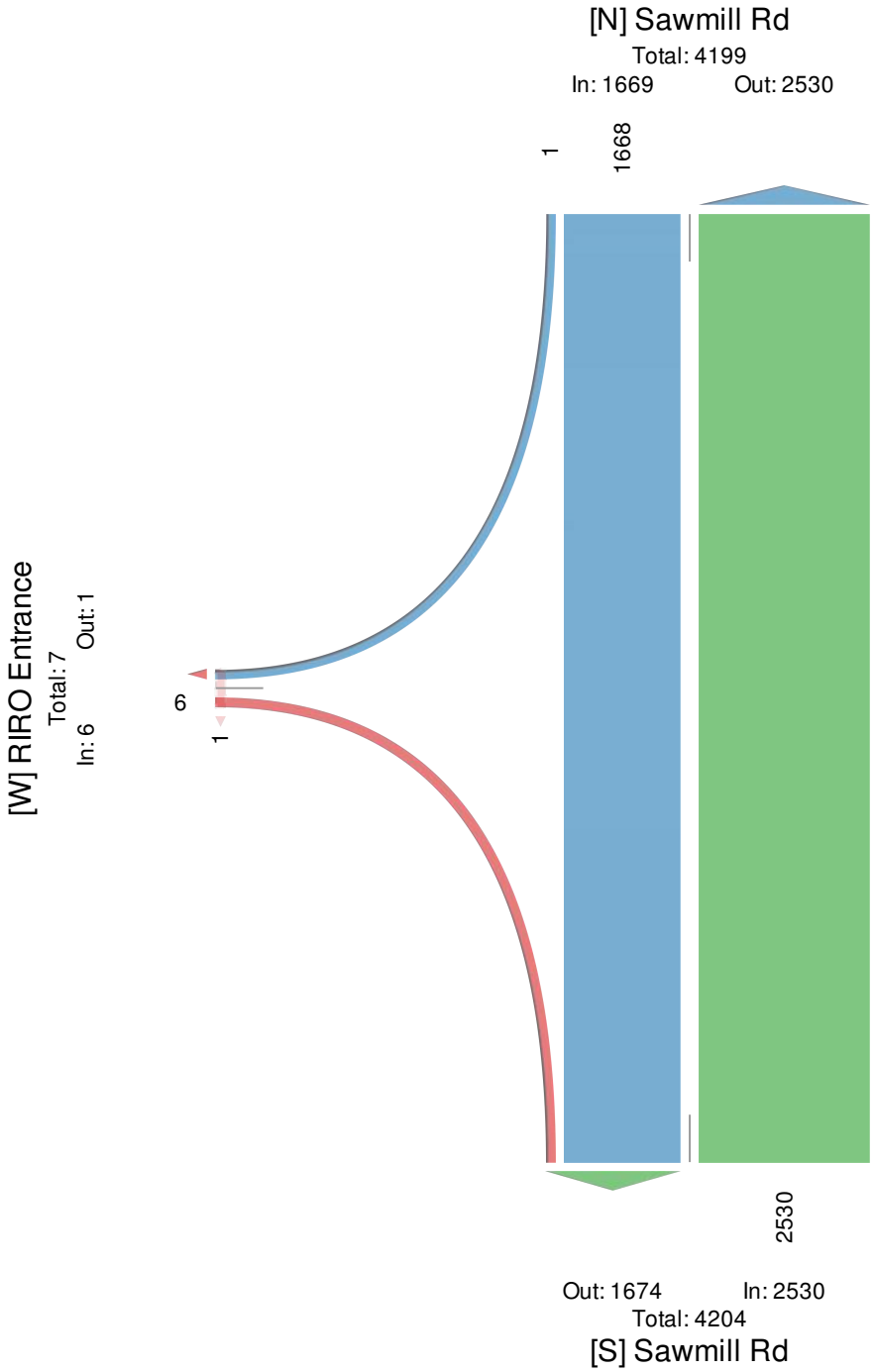
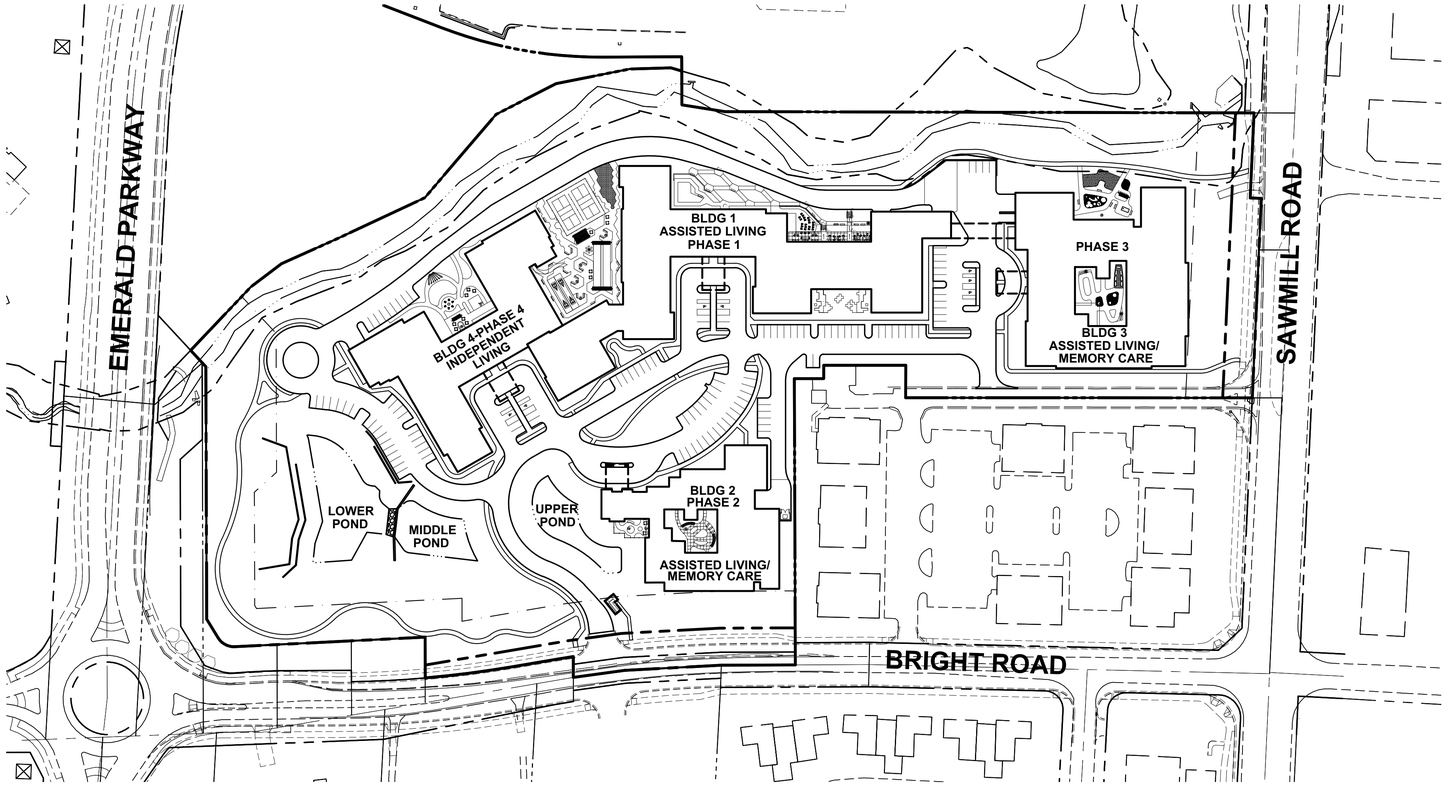
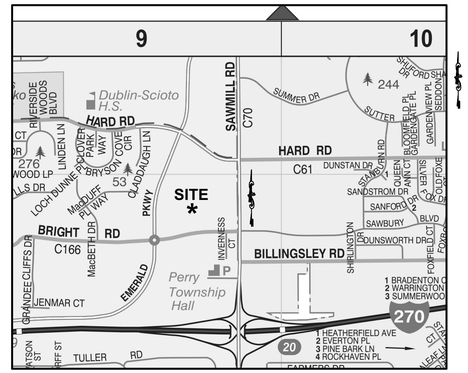


Site Plan

CITY OF DUBLIN, COUNTY OF FRANKLIN, OHIO
PRELIMINARY DEVELOPMENT PLAN
FOR
THE BEACON
CCRC
2023





VICINITY MAP
SCALE: NTS

GRAPHIC SCALE
0 50 100 200
1 inch = 100 feet

SHEET INDEX

CITY OF DUBLIN, OHIO
PRELIMINARY DEVELOPMENT PLAN
TITLE SHEET
FOR
THE BEACON

PLAN PREPARED BY:
ADVANCED CIVIL DESIGN ENGINEERS SURVEYORS
781 Science Boulevard, Suite 100
Gahanna, Ohio 43230
ph 614.428.7750
fax 614.428.7755

SCALE: AS NOTED
DATE: 10/24/2023
SHEET C1

Z:\19-0039-39\DWG\PRODUCTION DRAWINGS\PRE DEVELOPMENT PLAN\PDP-TITLE SHEET.dwg C1 TITLE SHEET Oct 24, 2023 - 12:52:28pm jpatchal

Site Access Left Turn Lane Exhibit

GRAPHIC SCALE

0 10 20 40

1 inch = 20 feet

PLAN PREPARED BY:

ADVANCED CIVIL DESIGN ENGINEERS SURVEYORS

422 Beecher Road
Gahanna, Ohio 43230
ph 614.428.7750
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MUNICIPALITY / COUNTY, OHIO
BRIGHT ROAD

SAWMILL 55+ CONTINUING CARE RETIREMENT COMMUNITY
FOR
CITY OF DUBLIN

ROADWAY IMPROVEMENTS

Issue Dates:
XX/XX/XX: Issued For

Date: 10/12/2022
Scale: 1" = 20'

Drawn By: EEB
Checked By: MM

Project Number:
19-0039-39

Drawing Number:
1 / 1

Z:\19-0039-39\DWG\PRODUCTION DRAWINGS\EXHIBIT\0039-39 - Roadway Improvements Exhibit.dwg Roadway Exhibit Oct 12, 2022 - 1:34:30pm ebillietta

335'

335'

21'

21'

21'

21'

21'

21'

GRAPHIC SCALE

0 12.5 25 50

1 inch = 25 feet

PLAN PREPARED BY:

ADVANCED CIVIL DESIGN ENGINEERS SURVEYORS

422 Beecher Road
Gahanna, Ohio 43230
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MUNICIPALITY / COUNTY, OHIO
BRIGHT ROAD

SAWMILL 55+ CONTINUING CARE RETIREMENT COMMUNITY
FOR
CITY OF DUBLIN

SIGHT TRIANGLES EXHIBIT

Issue Dotsec:
XX/XX/XX: Issued For

Date: 10/12/2022
Scale: 1" = 25'

Drawn By: EEB
Checked By: MM

Project Number:
19-0039-39

Drawing Number:
1 / 1

Z:\19-0039-39\PWCV\PRODUCTION DRAWINGS\EXHIBITS\Sight Triangles.dwg Roadway Exhibit (2) Oct. 17, 2022 - 9:04:45am eBillets

Trip Generation Data

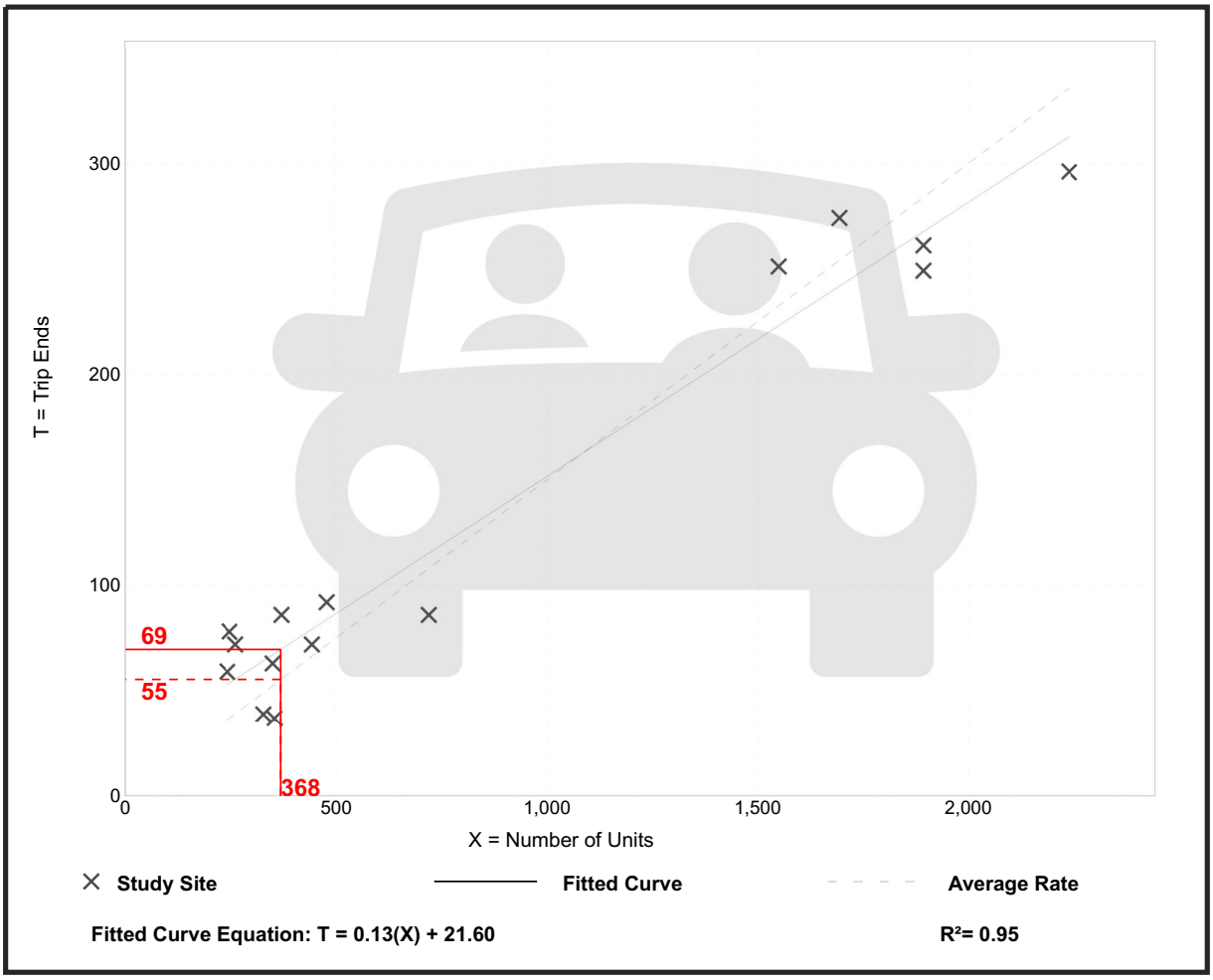
Continuing Care Retirement Community
(255)

Vehicle Trip Ends vs: **Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 15
Avg. Num. of Units: 871
Directional Distribution: 65% entering, 35% exiting

Vehicle Trip Generation per Unit

Average Rate	Range of Rates	Standard Deviation
0.15	0.10 - 0.32	0.04

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

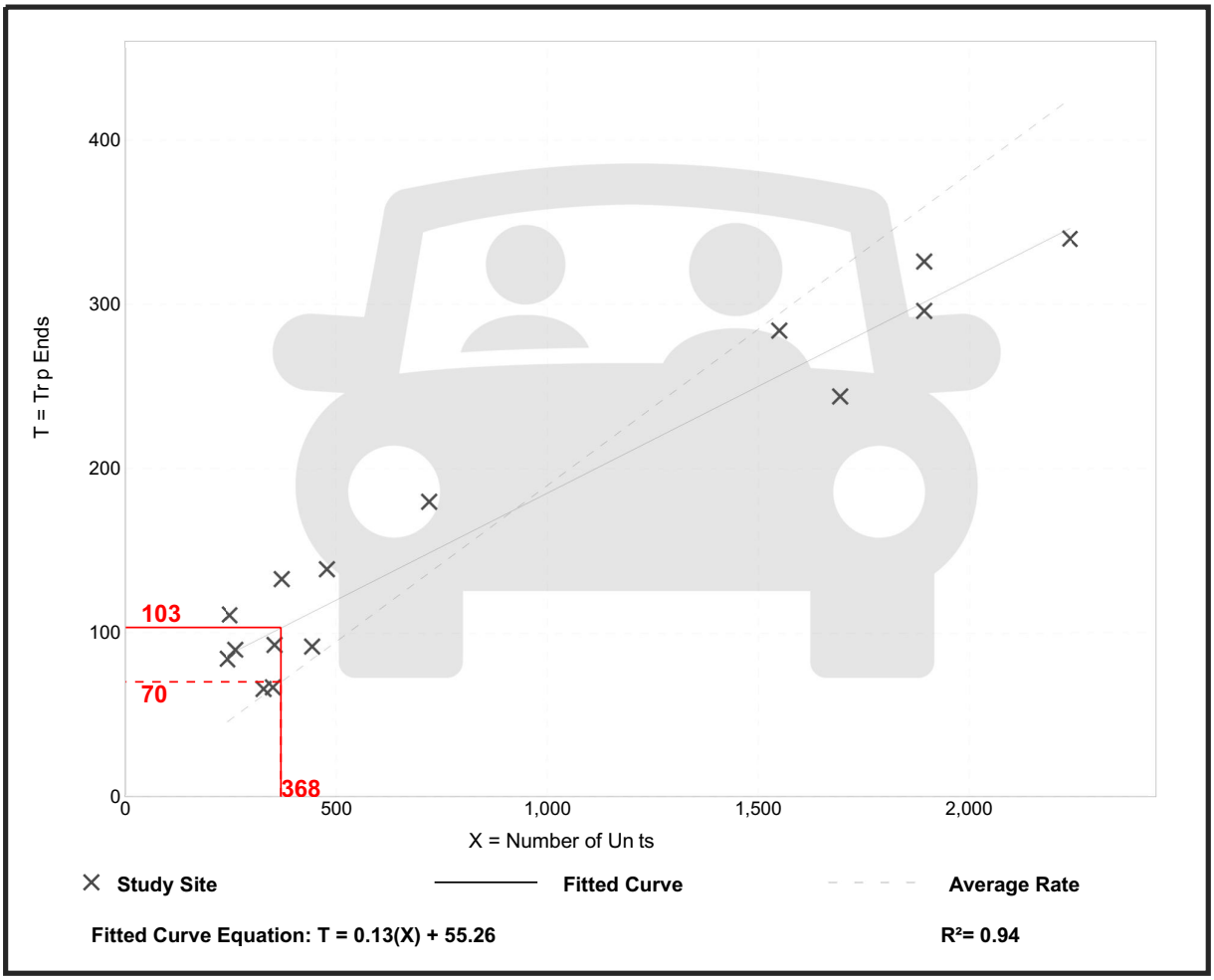
Continuing Care Retirement Community
(255)

Vehicle Trip Ends vs: **Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Stud es: 15
Avg. Num. of Un ts: 871
D rect onal D str but on: 39% enter ng, 61% ex t ng

Vehicle Trip Generation per Unit

Average Rate	Range of Rates	Standard Dev at on
0.19	0.14 - 0.45	0.07

Data Plot and Equation



Trip Gen Manual, 11th Ed t on ● Inst tute of Transportat on Eng neers

Turn Lane Warrants and Calculations

2-LANE RIGHT TURN LANE WARRANT (LOW SPEED)

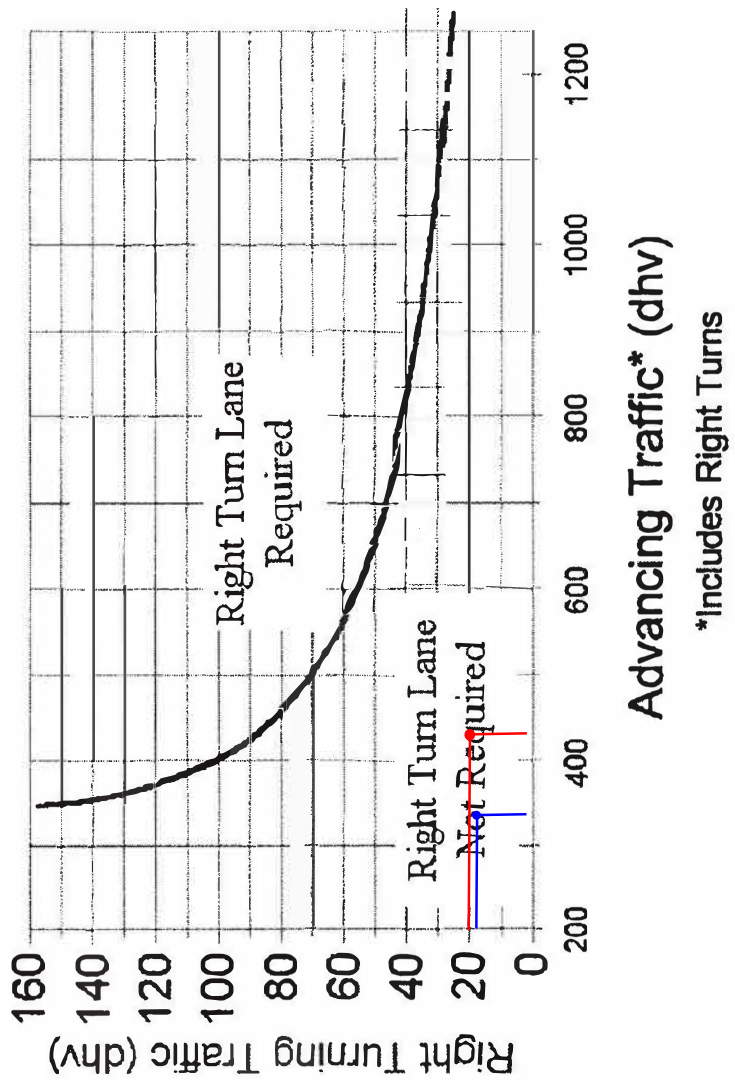
401-6a

REFERENCE SECTION
401.6.3

EB Bright Rd @ Site Access Point

— 2033 Build AM Peak: 413 Advancing, 18 Right Turns

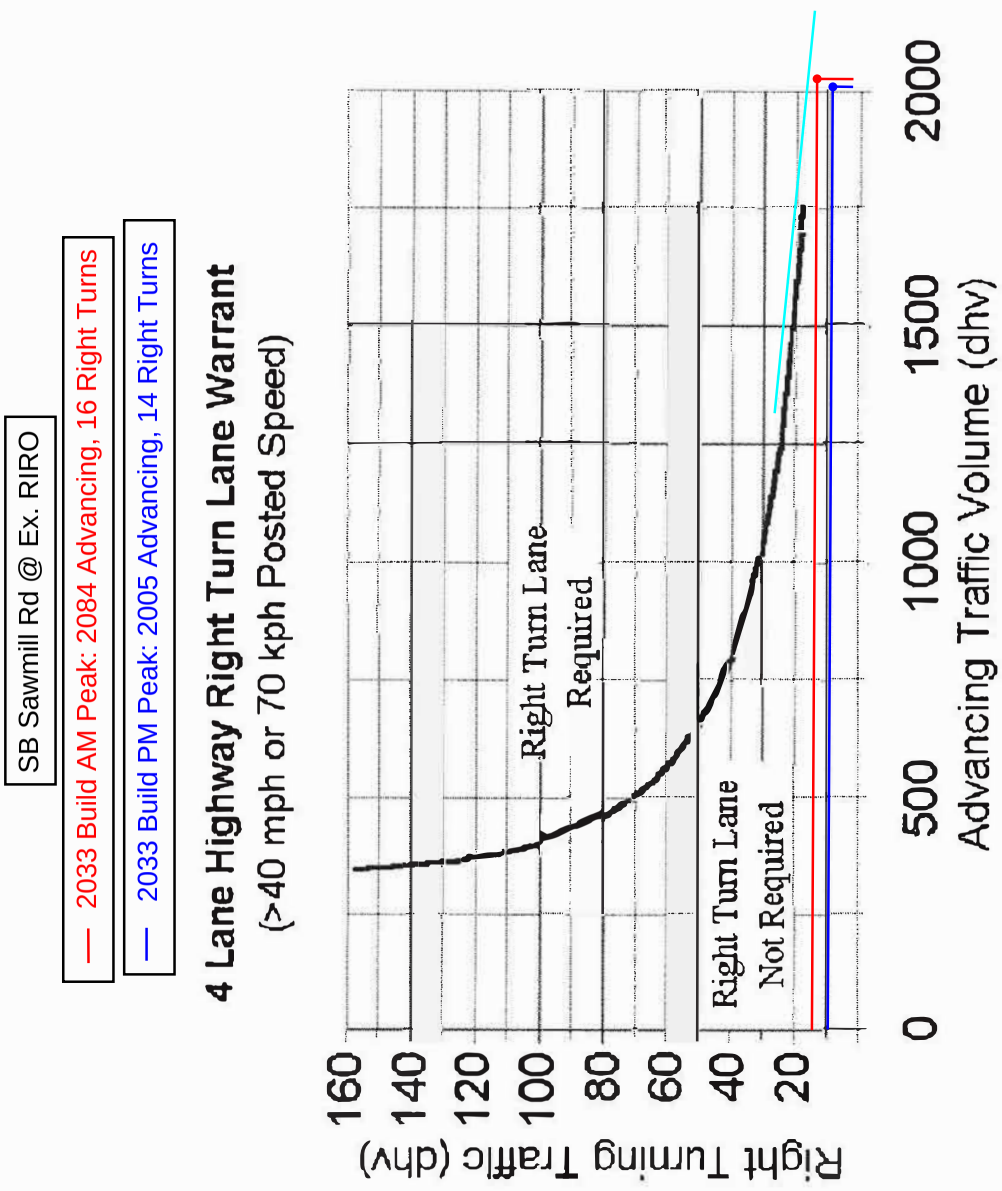
— 2033 Build PM Peak: 314 Advancing, 16 Right Turns



4-LANE RIGHT TURN LANE WARRANT (HIGH SPEED)

401-6d

REFERENCE SECTION 401.6.3



October 2004

Turn Lane Length Computation Worksheet
(Based on ODOT's Location Design Manual)

Project Name:	Sawmill 55+ Retirement Community	**Intersection:**	Site Access & Bright Rd
Project Number:		**Year:**	2033
Compiled By:	EEB - Advanced Civil Design	**Condition:**	Build

General Information:

Approach	EB Bright Rd			
Movement	LT			
Peak Hour	AM			

Type of Traffic Control

Signalized	NO	YES	YES	YES
Unsignalized Stopped Crossroad	YES	NO	NO	NO
Unsignalized Through Road	YES	NO	NO	NO

Design Parameters

Design Speed	25			
Turn Volume (vph)	12			
Approach Volume (vph)	313			
Turn Percentage	4%	#DIV/0!	#DIV/0!	#DIV/0!
High or Low	LOW	#DIV/0!	#DIV/0!	#DIV/0!
Applicable Design Condition (A, B or C)	A	A	A	A
Cycle Length (sec)	60			
Cycles/Hour	60	#DIV/0!	#DIV/0!	#DIV/0!
Average Number of Vehicles/Cycle	1	#DIV/0!	#DIV/0!	#DIV/0!
Storage Length (ft)	50	#DIV/0!	#DIV/0!	#DIV/0!

Design Method

Condition A (Storage Only)	***Taper***	50	50	50	50
	Storage	50	#DIV/0!	#DIV/0!	#DIV/0!
	Total	**100**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**
Condition B (High Speed Decel Only)	***Taper***	-	-	-	-
	Decel Length	-	-	-	-
	Total	**-**	**-**	**-**	**-**
Condition C (Moderate Speed Deceleration & Storage)	***Taper***	-	-	-	-
	Decel Length	-	-	-	-
	Storage	-	-	-	-
	Total	**-**	**-**	**-**	**-**

Required Storage and/or Decel Length (ft/lane) =	**50**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**
Required Turn Lane Length, including 50' taper (ft/lane) =	**100**	**#DIV/0!**	**#DIV/0!**	**#DIV/0!**

Note: EB - Eastbound, WB - Westbound, NB - Northbound, SB - Southbound

Source: January 2006 ODOT L& D Manual-Volume I: 401 - 9E, 401 -10E

Synchro Intersection Analysis

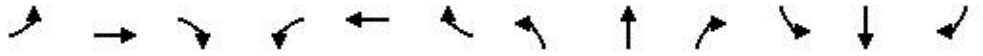
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	124	349	292	243	102	258	897	97	68	1080	22
Future Volume (veh/h)	15	124	349	292	243	102	258	897	97	68	1080	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	16	135	379	317	264	111	280	975	105	74	1174	24
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	80	457	358	368	521	213	337	1847	992	233	1740	813
Arrive On Green	0.03	0.17	0.17	0.14	0.28	0.28	0.13	0.69	0.69	0.09	0.65	0.65
Sat Flow, veh/h	3456	3554	1585	3456	2459	1007	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	16	135	379	317	189	186	280	975	105	74	1174	24
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1728	1777	1689	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	0.6	4.6	18.0	12.6	12.4	13.0	11.1	18.7	2.4	2.8	28.8	0.7
Cycle Q Clear(g_c), s	0.6	4.6	18.0	12.6	12.4	13.0	11.1	18.7	2.4	2.8	28.8	0.7
Prop In Lane	1.00		1.00	1.00		0.60	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	80	457	358	368	377	358	337	1847	992	233	1740	813
V/C Ratio(X)	0.20	0.30	1.06	0.86	0.50	0.52	0.83	0.53	0.11	0.32	0.67	0.03
Avail Cap(c_a), veh/h	173	457	358	439	377	358	521	1847	992	247	1740	813
HCM Platoon Ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.6	52.5	51.9	59.1	44.1	44.3	59.8	13.3	6.6	60.7	17.5	11.5
Incr Delay (d2), s/veh	1.2	0.4	63.7	13.9	1.0	1.3	6.7	1.1	0.2	0.8	2.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.1	19.0	6.0	5.4	5.4	4.9	6.0	0.9	1.2	9.7	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.8	52.9	115.6	73.0	45.1	45.6	66.5	14.4	6.8	61.5	19.6	11.5
LnGrp LOS	E	D	F	E	D	D	E	B	A	E	B	B
Approach Vol, veh/h		530			692			1360			1272	
Approach Delay, s/veh		98.2			58.0			24.5			21.9	
Approach LOS		F			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.3	78.6	21.1	23.9	20.5	74.4	9.4	35.6
Change Period (Y+Rc), s	6.9	* 5.9	* 6.2	* 5.9	6.9	* 5.9	* 6.2	* 5.9
Max Green Setting (Gmax), s	10.0	* 69	* 18	* 18	21.1	* 58	* 7	* 29
Max Q Clear Time (g_c+I1), s	4.8	20.7	14.6	20.0	13.1	30.8	2.6	15.0
Green Ext Time (p_c), s	0.1	8.2	0.4	0.0	0.6	9.1	0.0	1.9

Intersection Summary	
HCM 6th Ctrl Delay	39.8
HCM 6th LOS	D

Notes

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



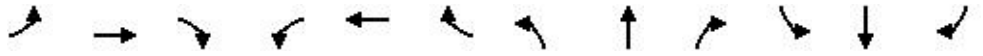
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	25	234	77	40	31	311	1428	44	13	1916	27
Future Volume (veh/h)	28	25	234	77	40	31	311	1428	44	13	1916	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	30	27	254	84	43	34	338	1552	48	14	2083	29
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	200	281	415	203	145	115	387	3626	112	289	2257	31
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.15	0.95	0.95	0.03	0.84	0.84
Sat Flow, veh/h	1322	1870	1585	1098	968	765	3456	5089	157	1781	3588	50
Grp Volume(v), veh/h	30	27	254	84	0	77	338	1038	562	14	1029	1083
Grp Sat Flow(s),veh/h/ln	1322	1870	1585	1098	0	1733	1728	1702	1842	1781	1777	1861
Q Serve(g_s), s	2.8	1.6	19.8	9.7	0.0	5.3	13.4	3.8	3.8	0.4	57.7	58.9
Cycle Q Clear(g_c), s	8.1	1.6	19.8	11.4	0.0	5.3	13.4	3.8	3.8	0.4	57.7	58.9
Prop In Lane	1.00		1.00	1.00		0.44	1.00		0.09	1.00		0.03
Lane Grp Cap(c), veh/h	200	281	415	203	0	260	387	2426	1313	289	1117	1171
V/C Ratio(X)	0.15	0.10	0.61	0.41	0.00	0.30	0.87	0.43	0.43	0.05	0.92	0.93
Avail Cap(c_a), veh/h	200	281	415	203	0	260	432	2426	1313	342	1117	1171
HCM Platoon Ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.2	48.3	42.8	52.9	0.0	49.7	58.6	1.1	1.1	8.6	9.0	9.1
Incr Delay (d2), s/veh	0.3	0.1	2.6	1.3	0.0	0.6	16.5	0.6	1.0	0.1	13.6	13.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.8	7.9	2.7	0.0	2.3	6.4	0.9	1.2	0.1	11.5	12.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.5	48.4	45.4	54.3	0.0	50.4	75.2	1.7	2.2	8.7	22.5	22.6
LnGrp LOS	D	D	D	D	A	D	E	A	A	A	C	C
Approach Vol, veh/h		311			161			1938			2126	
Approach Delay, s/veh		46.5			52.4			14.6			22.5	
Approach LOS		D			D			B			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.4	105.6		26.0	20.2	93.8		26.0				
Change Period (Y+Rc), s	* 5.5	5.8		* 5	4.5	5.8		* 5				
Max Green Setting (Gmax), s	* 7.1	95.6		* 21	17.5	85.7		* 21				
Max Q Clear Time (g_c+I1), s	2.4	5.8		21.8	15.4	60.9		13.4				
Green Ext Time (p_c), s	0.0	15.9		0.0	0.3	17.9		0.4				

Intersection Summary	
HCM 6th Ctrl Delay	21.9
HCM 6th LOS	C

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	423	63	138	332	10	31	125	99	64	228	118
Future Volume (veh/h)	89	423	63	138	332	10	31	125	99	64	228	118
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	97	460	68	150	361	11	34	136	108	70	248	128
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	726	1837	270	632	2091	64	172	246	181	228	324	162
Arrive On Green	0.06	0.59	0.59	0.06	0.59	0.59	0.04	0.13	0.13	0.06	0.14	0.14
Sat Flow, veh/h	1781	3108	457	1781	3521	107	1781	1950	1439	1781	2295	1146
Grp Volume(v), veh/h	97	262	266	150	182	190	34	123	121	70	190	186
Grp Sat Flow(s),veh/h/ln	1781	1777	1788	1781	1777	1851	1781	1777	1611	1781	1777	1664
Q Serve(g_s), s	2.2	7.8	7.9	3.5	5.1	5.1	1.8	7.2	7.8	3.7	11.3	11.9
Cycle Q Clear(g_c), s	2.2	7.8	7.9	3.5	5.1	5.1	1.8	7.2	7.8	3.7	11.3	11.9
Prop In Lane	1.00		0.26	1.00		0.06	1.00		0.89	1.00		0.69
Lane Grp Cap(c), veh/h	726	1050	1057	632	1055	1099	172	224	203	228	251	235
V/C Ratio(X)	0.13	0.25	0.25	0.24	0.17	0.17	0.20	0.55	0.60	0.31	0.76	0.79
Avail Cap(c_a), veh/h	805	1050	1057	804	1055	1099	269	412	374	314	428	401
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.2	10.8	10.8	7.5	10.1	10.1	39.4	45.1	45.4	38.6	45.4	45.7
Incr Delay (d2), s/veh	0.1	0.6	0.6	0.2	0.4	0.3	0.6	2.1	2.8	0.8	4.7	5.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	3.0	3.1	1.2	2.0	2.1	0.8	3.2	3.2	1.6	5.2	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.3	11.4	11.4	7.7	10.5	10.5	39.9	47.2	48.2	39.3	50.1	51.6
LnGrp LOS	A	B	B	A	B	B	D	D	D	D	D	D
Approach Vol, veh/h		625			522			278			446	
Approach Delay, s/veh		10.7			9.7			46.7			49.0	
Approach LOS		B			A			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.4	69.5	9.0	20.0	11.1	69.8	10.7	18.4
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	17.5	37.5	10.5	26.5	11.5	43.5	11.5	25.5
Max Q Clear Time (g_c+I1), s	5.5	9.9	3.8	13.9	4.2	7.1	5.7	9.8
Green Ext Time (p_c), s	0.3	3.2	0.0	1.6	0.1	2.2	0.1	1.1

Intersection Summary	
HCM 6th Ctrl Delay	24.9
HCM 6th LOS	C

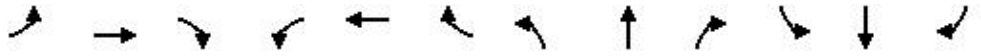
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	270	276	247	252	240	423	1757	359	197	1161	35
Future Volume (veh/h)	55	270	276	247	252	240	423	1757	359	197	1161	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	60	293	300	268	274	261	460	1910	390	214	1262	38
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	156	457	437	291	298	266	509	1911	986	247	1642	804
Arrive On Green	0.06	0.17	0.17	0.11	0.22	0.22	0.20	0.72	0.72	0.09	0.61	0.61
Sat Flow, veh/h	3456	3554	1585	3456	1777	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	60	293	300	268	274	261	460	1910	390	214	1262	38
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1728	1777	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	2.3	10.7	18.0	10.7	21.1	22.9	18.2	75.1	11.9	8.6	36.3	1.2
Cycle Q Clear(g_c), s	2.3	10.7	18.0	10.7	21.1	22.9	18.2	75.1	11.9	8.6	36.3	1.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	156	457	437	291	298	266	509	1911	986	247	1642	804
V/C Ratio(X)	0.38	0.64	0.69	0.92	0.92	0.98	0.90	1.00	0.40	0.87	0.77	0.05
Avail Cap(c_a), veh/h	173	457	437	291	298	266	553	1911	986	247	1642	804
HCM Platoon Ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.9	55.0	43.3	61.7	53.5	54.2	55.3	19.9	7.5	62.7	21.5	12.4
Incr Delay (d2), s/veh	1.5	3.0	4.4	32.6	32.0	50.0	17.5	20.4	1.2	26.2	3.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	4.9	9.7	5.9	11.7	12.5	8.6	26.6	3.7	4.5	13.1	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.5	58.0	47.7	94.3	85.5	104.2	72.8	40.3	8.7	88.9	25.0	12.5
LnGrp LOS	E	E	D	F	F	F	E	D	A	F	C	B
Approach Vol, veh/h		653			803			2760			1514	
Approach Delay, s/veh		54.0			94.5			41.3			33.7	
Approach LOS		D			F			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.9	81.2	18.0	23.9	27.5	70.6	12.5	29.4
Change Period (Y+Rc), s	6.9	* 5.9	* 6.2	* 5.9	6.9	* 5.9	* 6.2	* 5.9
Max Green Setting (Gmax), s	10.0	* 75	* 12	* 18	22.4	* 63	* 7	* 23
Max Q Clear Time (g_c+I1), s	10.6	77.1	12.7	20.0	20.2	38.3	4.3	24.9
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.4	9.7	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	48.2
HCM 6th LOS	D

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	53	264	70	41	41	223	2333	53	33	1829	22
Future Volume (veh/h)	62	53	264	70	41	41	223	2333	53	33	1829	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	67	58	287	76	45	45	242	2536	58	36	1988	24
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	231	337	421	212	154	154	295	3420	78	178	2223	27
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.11	0.89	0.89	0.05	0.82	0.82
Sat Flow, veh/h	1307	1870	1585	1036	858	858	3456	5136	117	1781	3596	43
Grp Volume(v), veh/h	67	58	287	76	0	90	242	1677	917	36	980	1032
Grp Sat Flow(s),veh/h/ln	1307	1870	1585	1036	0	1716	1728	1702	1849	1781	1777	1863
Q Serve(g_s), s	6.3	3.4	22.7	9.0	0.0	6.0	9.6	22.9	23.3	1.0	51.6	52.4
Cycle Q Clear(g_c), s	12.3	3.4	22.7	12.5	0.0	6.0	9.6	22.9	23.3	1.0	51.6	52.4
Prop In Lane	1.00		1.00	1.00		0.50	1.00		0.06	1.00		0.02
Lane Grp Cap(c), veh/h	231	337	421	212	0	309	295	2267	1231	178	1098	1151
V/C Ratio(X)	0.29	0.17	0.68	0.36	0.00	0.29	0.82	0.74	0.74	0.20	0.89	0.90
Avail Cap(c_a), veh/h	251	366	446	229	0	336	432	2267	1231	201	1098	1151
HCM Platoon Ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.0	45.0	42.8	49.9	0.0	45.9	61.0	4.0	4.0	9.7	9.3	9.4
Incr Delay (d2), s/veh	0.7	0.2	3.9	1.0	0.0	0.5	7.8	2.2	4.1	0.6	11.1	10.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	1.6	9.1	2.4	0.0	2.6	4.3	3.9	5.0	0.4	11.4	12.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.7	45.2	46.7	50.9	0.0	46.5	68.8	6.2	8.1	10.3	20.4	20.4
LnGrp LOS	D	D	D	D	A	D	E	A	A	B	C	C
Approach Vol, veh/h		412			166			2836			2048	
Approach Delay, s/veh		47.3			48.5			12.2			20.2	
Approach LOS		D			D			B			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.8	99.0		30.2	17.5	92.3		30.2				
Change Period (Y+Rc), s	* 5.5	5.8		* 5	* 5.5	5.8		* 5				
Max Green Setting (Gmax), s	* 7.1	89.2		* 27	* 18	71.8		* 27				
Max Q Clear Time (g_c+I1), s	3.0	25.3		24.7	11.6	54.4		14.5				
Green Ext Time (p_c), s	0.0	39.2		0.5	0.4	12.9		0.6				

Intersection Summary												
HCM 6th Ctrl Delay			18.9									
HCM 6th LOS			B									

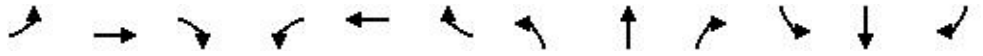
Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	94	379	31	154	399	62	58	283	151	65	237	109
Future Volume (veh/h)	94	379	31	154	399	62	58	283	151	65	237	109
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	102	412	34	167	434	67	63	308	164	71	258	118
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	598	1811	149	631	1689	259	234	389	202	201	417	185
Arrive On Green	0.06	0.54	0.54	0.06	0.55	0.55	0.05	0.17	0.17	0.06	0.17	0.17
Sat Flow, veh/h	1781	3325	273	1781	3088	474	1781	2260	1175	1781	2393	1063
Grp Volume(v), veh/h	102	219	227	167	249	252	63	241	231	71	190	186
Grp Sat Flow(s),veh/h/ln	1781	1777	1821	1781	1777	1785	1781	1777	1659	1781	1777	1679
Q Serve(g_s), s	2.6	7.1	7.1	4.5	8.1	8.2	3.1	14.3	14.8	3.5	10.9	11.3
Cycle Q Clear(g_c), s	2.6	7.1	7.1	4.5	8.1	8.2	3.1	14.3	14.8	3.5	10.9	11.3
Prop In Lane	1.00		0.15	1.00		0.27	1.00		0.71	1.00		0.63
Lane Grp Cap(c), veh/h	598	968	992	631	972	977	234	306	285	201	309	292
V/C Ratio(X)	0.17	0.23	0.23	0.26	0.26	0.26	0.27	0.79	0.81	0.35	0.61	0.64
Avail Cap(c_a), veh/h	676	968	992	818	972	977	323	477	445	287	477	450
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.4	13.0	13.0	9.6	13.1	13.1	34.7	43.6	43.8	35.2	42.0	42.2
Incr Delay (d2), s/veh	0.1	0.5	0.5	0.2	0.6	0.6	0.6	4.6	6.2	1.1	2.0	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	2.8	2.9	1.7	3.3	3.3	1.4	6.5	6.4	1.6	4.8	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.5	13.6	13.6	9.8	13.8	13.8	35.3	48.2	50.1	36.2	44.0	44.5
LnGrp LOS	A	B	B	A	B	B	D	D	D	D	D	D
Approach Vol, veh/h		548			668			535			447	
Approach Delay, s/veh		12.8			12.8			47.5			43.0	
Approach LOS		B			B			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.5	64.4	10.5	23.7	11.2	64.7	10.7	23.4
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	18.5	32.5	11.5	29.5	11.5	39.5	11.5	29.5
Max Q Clear Time (g_c+I1), s	6.5	9.1	5.1	13.3	4.6	10.2	5.5	16.8
Green Ext Time (p_c), s	0.3	2.5	0.0	1.8	0.1	3.1	0.1	2.2

Intersection Summary	
HCM 6th Ctrl Delay	27.4
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	146	412	347	289	121	271	941	102	71	1133	23
Future Volume (veh/h)	17	146	412	347	289	121	271	941	102	71	1133	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	18	159	448	377	314	132	295	1023	111	77	1232	25
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	87	457	365	425	556	229	353	1786	992	234	1665	783
Arrive On Green	0.03	0.17	0.17	0.16	0.30	0.30	0.14	0.67	0.67	0.09	0.62	0.62
Sat Flow, veh/h	3456	3554	1585	3456	2455	1011	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	18	159	448	377	225	221	295	1023	111	77	1232	25
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1728	1777	1688	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	0.7	5.5	18.0	14.9	14.9	15.5	11.7	21.6	2.7	2.9	33.9	0.8
Cycle Q Clear(g_c), s	0.7	5.5	18.0	14.9	14.9	15.5	11.7	21.6	2.7	2.9	33.9	0.8
Prop In Lane	1.00		1.00	1.00		0.60	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	87	457	365	425	402	382	353	1786	992	234	1665	783
V/C Ratio(X)	0.21	0.35	1.23	0.89	0.56	0.58	0.84	0.57	0.11	0.33	0.74	0.03
Avail Cap(c_a), veh/h	173	457	365	464	402	382	546	1786	992	247	1665	783
HCM Platoon Ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.3	52.9	51.6	57.6	43.1	43.2	59.4	15.1	6.9	60.7	20.4	12.9
Incr Delay (d2), s/veh	1.2	0.5	123.6	17.4	1.8	2.1	6.7	1.3	0.2	0.8	3.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.5	25.5	7.3	6.5	6.4	5.2	7.1	1.0	1.3	12.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.5	53.3	175.1	75.0	44.8	45.4	66.1	16.5	7.1	61.5	23.4	12.9
LnGrp LOS	E	D	F	E	D	D	E	B	A	E	C	B
Approach Vol, veh/h		625			823			1429			1334	
Approach Delay, s/veh		141.1			58.8			26.0			25.4	
Approach LOS		F			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.4	76.3	23.4	23.9	21.2	71.5	9.7	37.6
Change Period (Y+Rc), s	6.9	* 5.9	* 6.2	* 5.9	6.9	* 5.9	* 6.2	* 5.9
Max Green Setting (Gmax), s	10.0	* 68	* 19	* 18	22.1	* 56	* 7	* 30
Max Q Clear Time (g_c+I1), s	4.9	23.6	16.9	20.0	13.7	35.9	2.7	17.5
Green Ext Time (p_c), s	0.1	8.8	0.3	0.0	0.6	8.5	0.0	2.1

Intersection Summary	
HCM 6th Ctrl Delay	49.3
HCM 6th LOS	D

Notes

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

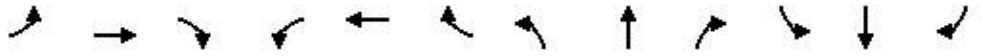
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	27	259	88	49	36	353	1498	46	14	2016	33
Future Volume (veh/h)	33	27	259	88	49	36	353	1498	46	14	2016	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	36	29	282	96	53	39	384	1628	50	15	2191	36
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	178	267	423	190	143	105	429	3658	112	273	2207	36
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.16	0.96	0.96	0.03	0.82	0.82
Sat Flow, veh/h	1304	1870	1585	1068	1001	737	3456	5090	156	1781	3578	59
Grp Volume(v), veh/h	36	29	282	96	0	92	384	1089	589	15	1085	1142
Grp Sat Flow(s),veh/h/ln	1304	1870	1585	1068	0	1738	1728	1702	1842	1781	1777	1860
Q Serve(g_s), s	3.5	1.8	20.0	11.8	0.0	6.5	15.2	3.4	3.4	0.4	81.8	84.3
Cycle Q Clear(g_c), s	10.0	1.8	20.0	13.6	0.0	6.5	15.2	3.4	3.4	0.4	81.8	84.3
Prop In Lane	1.00		1.00	1.00		0.42	1.00		0.08	1.00		0.03
Lane Grp Cap(c), veh/h	178	267	423	190	0	248	429	2446	1324	273	1096	1147
V/C Ratio(X)	0.20	0.11	0.67	0.50	0.00	0.37	0.90	0.45	0.45	0.06	0.99	1.00
Avail Cap(c_a), veh/h	178	267	423	190	0	248	444	2446	1324	323	1096	1147
HCM Platoon Ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.6	49.3	43.4	55.0	0.0	51.2	57.6	0.9	0.9	9.1	12.2	12.4
Incr Delay (d2), s/veh	0.6	0.2	4.0	2.1	0.0	0.9	20.0	0.6	1.1	0.1	24.9	25.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.9	9.1	3.2	0.0	2.9	7.4	0.9	1.1	0.2	20.7	22.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.1	49.5	47.3	57.1	0.0	52.1	77.5	1.5	2.0	9.2	37.1	38.0
LnGrp LOS	E	D	D	E	A	D	E	A	A	A	D	D
Approach Vol, veh/h		347			188			2062			2242	
Approach Delay, s/veh		48.4			54.7			15.8			37.4	
Approach LOS		D			D			B			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.6	106.4		25.0	22.9	92.1		25.0				
Change Period (Y+Rc), s	* 5.5	5.8		* 5	* 5.5	5.8		* 5				
Max Green Setting (Gmax), s	* 7.1	95.6		* 20	* 18	85.7		* 20				
Max Q Clear Time (g_c+I1), s	2.4	5.4		22.0	17.2	86.3		15.6				
Green Ext Time (p_c), s	0.0	17.5		0.0	0.1	0.0		0.3				

Intersection Summary	
HCM 6th Ctrl Delay	29.7
HCM 6th LOS	C

Notes

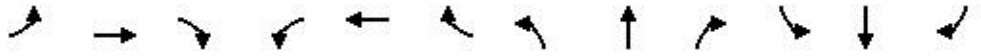
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	499	77	168	395	11	36	142	112	70	260	130
Future Volume (veh/h)	105	499	77	168	395	11	36	142	112	70	260	130
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	114	542	84	183	429	12	39	154	122	76	283	141
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	666	1771	274	564	2033	57	177	276	204	236	359	174
Arrive On Green	0.06	0.57	0.57	0.06	0.58	0.58	0.04	0.14	0.14	0.06	0.15	0.15
Sat Flow, veh/h	1781	3085	477	1781	3531	99	1781	1946	1442	1781	2320	1125
Grp Volume(v), veh/h	114	311	315	183	216	225	39	140	136	76	215	209
Grp Sat Flow(s),veh/h/ln	1781	1777	1785	1781	1777	1853	1781	1777	1611	1781	1777	1668
Q Serve(g_s), s	2.7	10.0	10.0	4.6	6.4	6.5	2.0	8.1	8.7	3.9	12.8	13.3
Cycle Q Clear(g_c), s	2.7	10.0	10.0	4.6	6.4	6.5	2.0	8.1	8.7	3.9	12.8	13.3
Prop In Lane	1.00		0.27	1.00		0.05	1.00		0.89	1.00		0.67
Lane Grp Cap(c), veh/h	666	1020	1024	564	1023	1067	177	252	228	236	275	258
V/C Ratio(X)	0.17	0.31	0.31	0.32	0.21	0.21	0.22	0.56	0.60	0.32	0.78	0.81
Avail Cap(c_a), veh/h	726	1020	1024	767	1023	1067	252	396	359	304	412	387
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.0	12.1	12.1	8.7	11.3	11.3	37.9	44.0	44.3	37.2	44.7	44.9
Incr Delay (d2), s/veh	0.1	0.8	0.8	0.3	0.5	0.5	0.6	1.9	2.5	0.8	5.6	7.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	4.0	4.0	1.7	2.6	2.7	0.9	3.6	3.6	1.7	5.9	5.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.1	12.9	12.9	9.0	11.7	11.7	38.6	45.9	46.8	38.0	50.3	52.6
LnGrp LOS	A	B	B	A	B	B	D	D	D	D	D	D
Approach Vol, veh/h		740			624			315			500	
Approach Delay, s/veh		12.2			10.9			45.4			49.4	
Approach LOS		B			B			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.5	67.6	9.4	21.5	11.3	67.8	10.8	20.1
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	19.5	37.5	9.5	25.5	10.5	46.5	10.5	24.5
Max Q Clear Time (g_c+I1), s	6.6	12.0	4.0	15.3	4.7	8.5	5.9	10.7
Green Ext Time (p_c), s	0.4	3.9	0.0	1.7	0.1	2.7	0.0	1.2

Intersection Summary	
HCM 6th Ctrl Delay	25.1
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	318	325	294	300	285	444	1844	377	207	1218	36
Future Volume (veh/h)	65	318	325	294	300	285	444	1844	377	207	1218	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	71	346	353	320	326	310	483	2004	410	225	1324	39
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	162	457	448	321	310	277	532	1881	986	247	1588	782
Arrive On Green	0.06	0.17	0.17	0.12	0.23	0.23	0.20	0.70	0.70	0.09	0.59	0.59
Sat Flow, veh/h	3456	3554	1585	3456	1777	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	71	346	353	320	326	310	483	2004	410	225	1324	39
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1728	1777	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	2.8	13.0	18.0	13.0	24.4	24.4	19.1	74.1	13.1	9.0	41.9	1.3
Cycle Q Clear(g_c), s	2.8	13.0	18.0	13.0	24.4	24.4	19.1	74.1	13.1	9.0	41.9	1.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	162	457	448	321	310	277	532	1881	986	247	1588	782
V/C Ratio(X)	0.44	0.76	0.79	1.00	1.05	1.12	0.91	1.07	0.42	0.91	0.83	0.05
Avail Cap(c_a), veh/h	173	457	448	321	310	277	575	1881	986	247	1588	782
HCM Platoon Ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.9	55.9	44.4	61.3	53.7	53.7	54.7	20.7	7.8	62.9	24.2	13.4
Incr Delay (d2), s/veh	1.9	7.1	9.1	49.4	65.1	90.4	17.6	40.7	1.3	34.6	5.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	6.1	12.5	7.7	16.1	16.3	9.1	32.1	4.0	5.0	15.7	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.7	63.1	53.6	110.8	118.8	144.1	72.3	61.4	9.1	97.5	29.5	13.5
LnGrp LOS	E	E	D	F	F	F	E	F	A	F	C	B
Approach Vol, veh/h		770			956			2897			1588	
Approach Delay, s/veh		59.0			124.3			55.8			38.8	
Approach LOS		E			F			E			D	

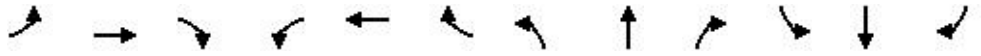
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.9	80.0	19.2	23.9	28.4	68.5	12.8	30.3
Change Period (Y+Rc), s	6.9	* 5.9	* 6.2	* 5.9	6.9	* 5.9	* 6.2	* 5.9
Max Green Setting (Gmax), s	10.0	* 74	* 13	* 18	23.3	* 61	* 7	* 24
Max Q Clear Time (g_c+I1), s	11.0	76.1	15.0	20.0	21.1	43.9	4.8	26.4
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.4	8.5	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	62.4
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

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



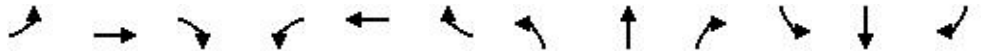
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	79	69	309	81	49	47	248	2448	55	35	1921	26
Future Volume (veh/h)	79	69	309	81	49	47	248	2448	55	35	1921	26
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	86	75	336	88	53	51	270	2661	60	38	2088	28
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	241	366	461	212	171	165	329	3336	75	164	2128	28
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.13	0.86	0.86	0.05	0.79	0.79
Sat Flow, veh/h	1290	1870	1585	975	876	843	3456	5138	115	1781	3591	48
Grp Volume(v), veh/h	86	75	336	88	0	104	270	1758	963	38	1031	1085
Grp Sat Flow(s),veh/h/ln	1290	1870	1585	975	0	1719	1728	1702	1850	1781	1777	1862
Q Serve(g_s), s	8.2	4.4	27.0	11.2	0.0	6.8	10.7	31.5	32.4	1.1	75.3	76.9
Cycle Q Clear(g_c), s	15.1	4.4	27.0	15.6	0.0	6.8	10.7	31.5	32.4	1.1	75.3	76.9
Prop In Lane	1.00		1.00	1.00		0.49	1.00		0.06	1.00		0.03
Lane Grp Cap(c), veh/h	241	366	461	212	0	336	329	2210	1201	164	1053	1103
V/C Ratio(X)	0.36	0.20	0.73	0.42	0.00	0.31	0.82	0.80	0.80	0.23	0.98	0.98
Avail Cap(c_a), veh/h	241	366	461	212	0	336	605	2210	1201	186	1053	1103
HCM Platoon Ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.2	43.3	41.2	49.4	0.0	44.2	60.0	5.5	5.6	12.9	14.0	14.2
Incr Delay (d2), s/veh	0.9	0.3	5.7	1.3	0.0	0.5	5.1	3.1	5.7	0.7	23.1	23.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	2.1	10.9	2.8	0.0	2.9	4.7	5.3	6.6	0.4	22.6	24.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.1	43.5	46.9	50.7	0.0	44.7	65.0	8.6	11.3	13.6	37.2	37.6
LnGrp LOS	D	D	D	D	A	D	E	A	B	B	D	D
Approach Vol, veh/h		497			192			2991			2154	
Approach Delay, s/veh		47.1			47.4			14.5			37.0	
Approach LOS		D			D			B			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.9	96.7		32.4	18.8	88.8		32.4				
Change Period (Y+Rc), s	* 5.5	5.8		* 5	* 5.5	5.8		* 5				
Max Green Setting (Gmax), s	* 7.1	89.2		* 27	* 25	71.8		* 27				
Max Q Clear Time (g_c+I1), s	3.1	34.4		29.0	12.7	78.9		17.6				
Green Ext Time (p_c), s	0.0	38.4		0.0	0.7	0.0		0.7				

Intersection Summary	
HCM 6th Ctrl Delay	26.7
HCM 6th LOS	C

Notes

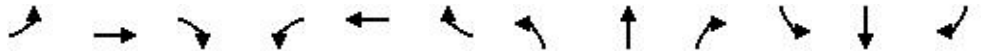
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	111	446	39	184	474	73	70	329	174	71	264	120
Future Volume (veh/h)	111	446	39	184	474	73	70	329	174	71	264	120
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	121	485	42	200	515	79	76	358	189	77	287	130
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	527	1690	146	571	1616	247	247	439	228	202	465	206
Arrive On Green	0.06	0.51	0.51	0.07	0.52	0.52	0.06	0.19	0.19	0.06	0.19	0.19
Sat Flow, veh/h	1781	3310	286	1781	3090	472	1781	2262	1174	1781	2397	1059
Grp Volume(v), veh/h	121	260	267	200	295	299	76	280	267	77	211	206
Grp Sat Flow(s),veh/h/ln	1781	1777	1819	1781	1777	1785	1781	1777	1659	1781	1777	1680
Q Serve(g_s), s	3.4	9.2	9.3	5.8	10.5	10.5	3.7	16.6	17.0	3.7	11.9	12.4
Cycle Q Clear(g_c), s	3.4	9.2	9.3	5.8	10.5	10.5	3.7	16.6	17.0	3.7	11.9	12.4
Prop In Lane	1.00		0.16	1.00		0.26	1.00		0.71	1.00		0.63
Lane Grp Cap(c), veh/h	527	907	929	571	929	933	247	345	322	202	345	326
V/C Ratio(X)	0.23	0.29	0.29	0.35	0.32	0.32	0.31	0.81	0.83	0.38	0.61	0.63
Avail Cap(c_a), veh/h	603	907	929	755	929	933	298	477	445	269	493	466
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.2	15.4	15.4	11.2	15.0	15.0	33.0	42.4	42.6	33.7	40.5	40.7
Incr Delay (d2), s/veh	0.2	0.8	0.8	0.4	0.9	0.9	0.7	7.3	9.1	1.2	1.8	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	3.8	3.9	2.2	4.3	4.3	1.6	7.8	7.6	1.6	5.3	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.4	16.2	16.2	11.6	15.9	15.9	33.7	49.8	51.7	34.8	42.3	42.7
LnGrp LOS	B	B	B	B	B	B	C	D	D	C	D	D
Approach Vol, veh/h		648			794			623			494	
Approach Delay, s/veh		15.3			14.8			48.6			41.3	
Approach LOS		B			B			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.7	60.7	10.8	25.9	11.3	62.0	10.8	25.8
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	19.5	32.5	9.5	30.5	11.5	40.5	10.5	29.5
Max Q Clear Time (g_c+I1), s	7.8	11.3	5.7	14.4	5.4	12.5	5.7	19.0
Green Ext Time (p_c), s	0.4	3.0	0.0	2.1	0.1	3.7	0.1	2.3

Intersection Summary	
HCM 6th Ctrl Delay	28.3
HCM 6th LOS	C



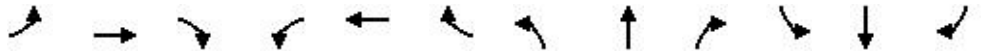
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	124	349	297	243	102	258	905	98	68	1091	22
Future Volume (veh/h)	15	124	349	297	243	102	258	905	98	68	1091	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	16	135	379	323	264	111	280	984	107	74	1186	24
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	422	457	356	378	528	216	332	1837	992	233	1734	810
Arrive On Green	0.03	0.17	0.17	0.15	0.29	0.29	0.13	0.69	0.69	0.09	0.65	0.65
Sat Flow, veh/h	3456	3554	1585	3456	2459	1007	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	16	135	379	323	189	186	280	984	107	74	1186	24
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1728	1777	1689	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	0.5	4.6	18.0	12.8	12.4	12.9	11.1	19.2	2.5	2.8	29.5	0.7
Cycle Q Clear(g_c), s	0.5	4.6	18.0	12.8	12.4	12.9	11.1	19.2	2.5	2.8	29.5	0.7
Prop In Lane	1.00		1.00	1.00		0.60	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	422	457	356	378	382	363	332	1837	992	233	1734	810
V/C Ratio(X)	0.04	0.30	1.06	0.85	0.49	0.51	0.84	0.54	0.11	0.32	0.68	0.03
Avail Cap(c_a), veh/h	515	457	356	494	393	374	432	1837	992	249	1734	810
HCM Platoon Ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.2	52.5	52.0	58.7	43.7	43.9	60.0	13.6	6.6	60.7	17.7	11.6
Incr Delay (d2), s/veh	0.0	0.4	65.6	11.0	1.0	1.1	11.2	1.1	0.2	0.8	2.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	2.1	19.1	6.0	5.4	5.3	5.1	6.2	0.9	1.2	10.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.2	52.9	117.6	69.7	44.7	45.0	71.2	14.7	6.9	61.5	20.0	11.7
LnGrp LOS	D	D	F	E	D	D	E	B	A	E	B	B
Approach Vol, veh/h		530			698			1371			1284	
Approach Delay, s/veh		99.1			56.4			25.6			22.2	
Approach LOS		F			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.3	78.3	21.5	23.9	20.4	74.2	9.4	36.0
Change Period (Y+Rc), s	6.9	* 5.9	* 6.2	* 5.9	6.9	* 5.9	* 6.2	* 5.9
Max Green Setting (Gmax), s	10.1	* 67	* 20	* 18	17.5	* 60	* 7	* 31
Max Q Clear Time (g_c+I1), s	4.8	21.2	14.8	20.0	13.1	31.5	2.5	14.9
Green Ext Time (p_c), s	0.1	8.3	0.5	0.0	0.4	9.3	0.0	2.0

Intersection Summary	
HCM 6th Ctrl Delay	40.0
HCM 6th LOS	D

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	26	238	77	41	31	328	1428	44	13	1921	27
Future Volume (veh/h)	37	26	238	77	41	31	328	1428	44	13	1921	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	40	28	259	84	45	34	357	1552	48	14	2088	29
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	198	281	423	202	148	112	404	3626	112	287	2239	31
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.16	0.95	0.95	0.03	0.83	0.83
Sat Flow, veh/h	1320	1870	1585	1092	989	747	3456	5089	157	1781	3589	50
Grp Volume(v), veh/h	40	28	259	84	0	79	357	1038	562	14	1031	1086
Grp Sat Flow(s),veh/h/ln	1320	1870	1585	1092	0	1736	1728	1702	1842	1781	1777	1861
Q Serve(g_s), s	3.8	1.7	20.2	9.8	0.0	5.4	14.2	3.8	3.8	0.4	60.6	61.9
Cycle Q Clear(g_c), s	9.2	1.7	20.2	11.5	0.0	5.4	14.2	3.8	3.8	0.4	60.6	61.9
Prop In Lane	1.00		1.00	1.00		0.43	1.00		0.09	1.00		0.03
Lane Grp Cap(c), veh/h	198	281	423	202	0	260	404	2426	1313	287	1109	1161
V/C Ratio(X)	0.20	0.10	0.61	0.42	0.00	0.30	0.88	0.43	0.43	0.05	0.93	0.93
Avail Cap(c_a), veh/h	198	281	423	202	0	260	432	2426	1313	340	1109	1161
HCM Platoon Ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.7	48.3	42.4	53.0	0.0	49.8	58.2	1.1	1.1	8.8	9.6	9.8
Incr Delay (d2), s/veh	0.5	0.2	2.6	1.4	0.0	0.6	18.4	0.6	1.0	0.1	14.7	14.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.8	8.0	2.7	0.0	2.4	6.9	0.9	1.2	0.1	13.1	13.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.2	48.5	45.0	54.4	0.0	50.5	76.6	1.7	2.2	8.9	24.4	24.5
LnGrp LOS	D	D	D	D	A	D	E	A	A	A	C	C
Approach Vol, veh/h		327			163			1957			2131	
Approach Delay, s/veh		46.4			52.5			15.5			24.4	
Approach LOS		D			D			B			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.4	105.6		26.0	20.8	93.2		26.0				
Change Period (Y+Rc), s	* 5.5	5.8		* 5	4.5	5.8		* 5				
Max Green Setting (Gmax), s	* 7.1	95.6		* 21	17.5	85.7		* 21				
Max Q Clear Time (g_c+I1), s	2.4	5.8		22.2	16.2	63.9		13.5				
Green Ext Time (p_c), s	0.0	15.9		0.0	0.2	16.2		0.4				

Intersection Summary	
HCM 6th Ctrl Delay	23.1
HCM 6th LOS	C

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	423	67	138	332	10	33	127	99	64	232	118
Future Volume (veh/h)	89	423	67	138	332	10	33	127	99	64	232	118
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	97	460	73	150	361	11	36	138	108	70	252	128
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	723	1810	286	627	2082	63	174	252	184	230	328	162
Arrive On Green	0.06	0.59	0.59	0.06	0.59	0.59	0.04	0.13	0.13	0.06	0.14	0.14
Sat Flow, veh/h	1781	3075	485	1781	3521	107	1781	1962	1428	1781	2307	1135
Grp Volume(v), veh/h	97	265	268	150	182	190	36	124	122	70	192	188
Grp Sat Flow(s),veh/h/ln	1781	1777	1783	1781	1777	1851	1781	1777	1613	1781	1777	1666
Q Serve(g_s), s	2.2	7.9	8.0	3.5	5.1	5.1	1.9	7.2	7.8	3.7	11.4	12.0
Cycle Q Clear(g_c), s	2.2	7.9	8.0	3.5	5.1	5.1	1.9	7.2	7.8	3.7	11.4	12.0
Prop In Lane	1.00		0.27	1.00		0.06	1.00		0.89	1.00		0.68
Lane Grp Cap(c), veh/h	723	1046	1050	627	1051	1095	174	228	207	230	253	237
V/C Ratio(X)	0.13	0.25	0.26	0.24	0.17	0.17	0.21	0.54	0.59	0.30	0.76	0.79
Avail Cap(c_a), veh/h	802	1046	1050	798	1051	1095	269	412	374	317	428	401
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.3	10.9	11.0	7.6	10.2	10.2	39.1	44.9	45.2	38.4	45.4	45.6
Incr Delay (d2), s/veh	0.1	0.6	0.6	0.2	0.4	0.3	0.6	2.0	2.6	0.7	4.7	5.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	3.1	3.2	1.3	2.0	2.1	0.8	3.2	3.2	1.6	5.3	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.4	11.5	11.5	7.8	10.6	10.6	39.7	46.9	47.8	39.1	50.0	51.5
LnGrp LOS	A	B	B	A	B	B	D	D	D	D	D	D
Approach Vol, veh/h		630			522			282			450	
Approach Delay, s/veh		10.9			9.8			46.4			48.9	
Approach LOS		B			A			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.4	69.3	9.2	20.1	11.1	69.5	10.7	18.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	17.5	37.5	10.5	26.5	11.5	43.5	11.5	25.5
Max Q Clear Time (g_c+I1), s	5.5	10.0	3.9	14.0	4.2	7.1	5.7	9.8
Green Ext Time (p_c), s	0.3	3.3	0.0	1.7	0.1	2.2	0.1	1.1

Intersection Summary	
HCM 6th Ctrl Delay	25.0
HCM 6th LOS	C

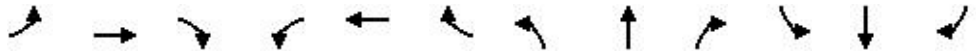
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	270	276	252	252	240	423	1777	361	197	1170	35
Future Volume (veh/h)	55	270	276	252	252	240	423	1777	361	197	1170	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	60	293	300	274	274	261	460	1932	392	214	1272	38
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	288	463	440	322	317	283	509	1855	975	265	1604	787
Arrive On Green	0.06	0.17	0.17	0.12	0.24	0.24	0.20	0.69	0.69	0.10	0.60	0.60
Sat Flow, veh/h	3456	3554	1585	3456	1777	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	60	293	300	274	274	261	460	1932	392	214	1272	38
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1728	1777	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	2.0	10.7	18.2	10.9	20.7	22.5	18.2	73.1	12.7	8.5	38.2	1.3
Cycle Q Clear(g_c), s	2.0	10.7	18.2	10.9	20.7	22.5	18.2	73.1	12.7	8.5	38.2	1.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	288	463	440	322	317	283	509	1855	975	265	1604	787
V/C Ratio(X)	0.21	0.63	0.68	0.85	0.86	0.92	0.90	1.04	0.40	0.81	0.79	0.05
Avail Cap(c_a), veh/h	305	463	440	365	327	292	550	1855	975	358	1604	787
HCM Platoon Ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.6	54.8	43.1	60.4	51.8	52.5	55.3	21.4	8.2	61.9	23.0	13.2
Incr Delay (d2), s/veh	0.4	2.8	4.3	15.6	20.3	32.8	17.7	32.6	1.2	9.6	4.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	4.9	9.7	5.3	10.7	11.2	8.7	30.1	3.9	3.9	14.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.9	57.6	47.3	76.0	72.0	85.2	73.0	54.0	9.4	71.4	27.1	13.3
LnGrp LOS	D	E	D	E	E	F	E	F	A	E	C	B
Approach Vol, veh/h		653			809			2784			1524	
Approach Delay, s/veh		52.1			77.6			50.8			33.0	
Approach LOS		D			E			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.6	79.0	19.3	24.1	27.5	69.1	12.5	30.9
Change Period (Y+Rc), s	6.9	* 5.9	* 6.2	* 5.9	6.9	* 5.9	* 6.2	* 5.9
Max Green Setting (Gmax), s	14.5	* 68	* 15	* 18	22.3	* 60	* 7	* 26
Max Q Clear Time (g_c+I1), s	10.5	75.1	12.9	20.2	20.2	40.2	4.0	24.5
Green Ext Time (p_c), s	0.2	0.0	0.2	0.0	0.4	8.8	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	50.0
HCM 6th LOS	D

Notes

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



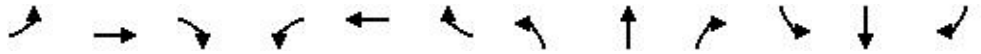
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	55	279	70	42	41	238	2333	53	33	1838	30
Future Volume (veh/h)	85	55	279	70	42	41	238	2333	53	33	1838	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	92	60	303	76	46	45	259	2536	58	36	1998	33
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	240	351	440	217	163	159	312	3382	77	176	2167	36
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.12	0.88	0.88	0.05	0.81	0.81
Sat Flow, veh/h	1306	1870	1585	1019	868	849	3456	5136	117	1781	3578	59
Grp Volume(v), veh/h	92	60	303	76	0	91	259	1677	917	36	989	1042
Grp Sat Flow(s),veh/h/ln	1306	1870	1585	1019	0	1717	1728	1702	1849	1781	1777	1860
Q Serve(g_s), s	8.8	3.5	23.9	9.1	0.0	6.0	10.3	24.9	25.4	1.0	58.4	59.7
Cycle Q Clear(g_c), s	14.8	3.5	23.9	12.6	0.0	6.0	10.3	24.9	25.4	1.0	58.4	59.7
Prop In Lane	1.00		1.00	1.00		0.49	1.00		0.06	1.00		0.03
Lane Grp Cap(c), veh/h	240	351	440	217	0	322	312	2241	1218	176	1076	1127
V/C Ratio(X)	0.38	0.17	0.69	0.35	0.00	0.28	0.83	0.75	0.75	0.21	0.92	0.92
Avail Cap(c_a), veh/h	251	366	453	225	0	336	432	2241	1218	199	1076	1127
HCM Platoon Ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.9	44.0	41.7	49.0	0.0	44.9	60.5	4.5	4.5	10.6	11.0	11.2
Incr Delay (d2), s/veh	1.0	0.2	4.2	1.0	0.0	0.5	9.4	2.3	4.3	0.6	13.8	13.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	1.7	9.6	2.3	0.0	2.6	4.7	4.3	5.4	0.4	14.9	15.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.9	44.2	45.9	49.9	0.0	45.4	69.9	6.9	8.9	11.2	24.8	25.0
LnGrp LOS	D	D	D	D	A	D	E	A	A	B	C	C
Approach Vol, veh/h		455			167			2853			2067	
Approach Delay, s/veh		46.9			47.5			13.2			24.7	
Approach LOS		D			D			B			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.8	98.0		31.2	18.1	90.6		31.2				
Change Period (Y+Rc), s	* 5.5	5.8		* 5	* 5.5	5.8		* 5				
Max Green Setting (Gmax), s	* 7.1	89.2		* 27	* 18	71.8		* 27				
Max Q Clear Time (g_c+I1), s	3.0	27.4		25.9	12.3	61.7		14.6				
Green Ext Time (p_c), s	0.0	38.5		0.3	0.4	8.3		0.6				

Intersection Summary	
HCM 6th Ctrl Delay	21.3
HCM 6th LOS	C

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	94	379	35	154	399	62	64	288	151	65	240	109
Future Volume (veh/h)	94	379	35	154	399	62	64	288	151	65	240	109
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	102	412	38	167	434	67	70	313	164	71	261	118
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	596	1788	164	627	1685	259	235	394	202	201	417	183
Arrive On Green	0.06	0.54	0.54	0.06	0.55	0.55	0.06	0.17	0.17	0.06	0.17	0.17
Sat Flow, veh/h	1781	3291	302	1781	3088	474	1781	2274	1164	1781	2402	1055
Grp Volume(v), veh/h	102	222	228	167	249	252	70	243	234	71	191	188
Grp Sat Flow(s),veh/h/ln	1781	1777	1816	1781	1777	1785	1781	1777	1661	1781	1777	1680
Q Serve(g_s), s	2.6	7.2	7.2	4.5	8.1	8.2	3.5	14.4	14.9	3.5	11.0	11.4
Cycle Q Clear(g_c), s	2.6	7.2	7.2	4.5	8.1	8.2	3.5	14.4	14.9	3.5	11.0	11.4
Prop In Lane	1.00		0.17	1.00		0.27	1.00		0.70	1.00		0.63
Lane Grp Cap(c), veh/h	596	965	987	627	970	974	235	308	288	201	309	292
V/C Ratio(X)	0.17	0.23	0.23	0.27	0.26	0.26	0.30	0.79	0.81	0.35	0.62	0.64
Avail Cap(c_a), veh/h	674	965	987	814	970	974	322	477	445	286	477	451
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.5	13.1	13.1	9.7	13.2	13.2	34.6	43.5	43.7	35.1	42.1	42.3
Incr Delay (d2), s/veh	0.1	0.6	0.5	0.2	0.6	0.6	0.7	4.8	6.4	1.1	2.0	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	2.9	3.0	1.7	3.3	3.3	1.5	6.6	6.5	1.5	4.9	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.6	13.7	13.7	9.9	13.8	13.9	35.3	48.3	50.1	36.1	44.1	44.6
LnGrp LOS	A	B	B	A	B	B	D	D	D	D	D	D
Approach Vol, veh/h		552			668			547			450	
Approach Delay, s/veh		12.9			12.9			47.4			43.1	
Approach LOS		B			B			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.5	64.3	10.7	23.6	11.2	64.5	10.7	23.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	18.5	32.5	11.5	29.5	11.5	39.5	11.5	29.5
Max Q Clear Time (g_c+I1), s	6.5	9.2	5.5	13.4	4.6	10.2	5.5	16.9
Green Ext Time (p_c), s	0.3	2.6	0.1	1.8	0.1	3.1	0.1	2.2

Intersection Summary	
HCM 6th Ctrl Delay	27.5
HCM 6th LOS	C

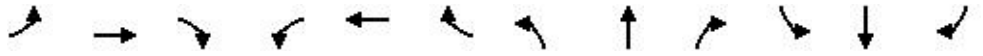
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	146	412	352	289	121	271	949	103	71	1144	23
Future Volume (veh/h)	17	146	412	352	289	121	271	949	103	71	1144	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	18	159	448	383	314	132	295	1032	112	77	1243	25
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	409	457	362	436	563	232	346	1775	992	234	1661	781
Arrive On Green	0.03	0.17	0.17	0.17	0.31	0.31	0.13	0.66	0.66	0.09	0.62	0.62
Sat Flow, veh/h	3456	3554	1585	3456	2455	1011	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	18	159	448	383	225	221	295	1032	112	77	1243	25
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1728	1777	1688	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	0.6	5.5	18.0	15.1	14.8	15.4	11.7	22.2	2.7	2.9	34.7	0.8
Cycle Q Clear(g_c), s	0.6	5.5	18.0	15.1	14.8	15.4	11.7	22.2	2.7	2.9	34.7	0.8
Prop In Lane	1.00		1.00	1.00		0.60	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	409	457	362	436	408	388	346	1775	992	234	1661	781
V/C Ratio(X)	0.04	0.35	1.24	0.88	0.55	0.57	0.85	0.58	0.11	0.33	0.75	0.03
Avail Cap(c_a), veh/h	495	457	362	513	408	388	422	1775	992	249	1661	781
HCM Platoon Ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.0	52.9	51.7	57.2	42.6	42.8	59.7	15.5	6.9	60.7	20.7	13.0
Incr Delay (d2), s/veh	0.0	0.5	127.8	14.3	1.6	2.0	13.3	1.4	0.2	0.8	3.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.5	25.7	7.3	6.5	6.4	5.5	7.3	1.0	1.3	12.3	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.0	53.3	179.5	71.5	44.2	44.8	72.9	16.9	7.2	61.5	23.8	13.0
LnGrp LOS	D	D	F	E	D	D	E	B	A	E	C	B
Approach Vol, veh/h		625			829			1439			1345	
Approach Delay, s/veh		143.7			57.0			27.6			25.8	
Approach LOS		F			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.4	75.8	23.9	23.9	20.9	71.3	9.7	38.0
Change Period (Y+Rc), s	6.9	* 5.9	* 6.2	* 5.9	6.9	* 5.9	* 6.2	* 5.9
Max Green Setting (Gmax), s	10.1	* 66	* 21	* 18	17.1	* 59	* 7	* 32
Max Q Clear Time (g_c+I1), s	4.9	24.2	17.1	20.0	13.7	36.7	2.6	17.4
Green Ext Time (p_c), s	0.1	8.8	0.5	0.0	0.3	9.1	0.0	2.3

Intersection Summary	
HCM 6th Ctrl Delay	49.9
HCM 6th LOS	D

Notes

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



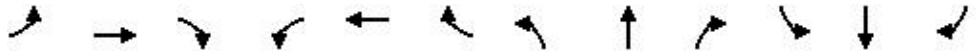
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	28	264	88	50	36	370	1498	46	14	2021	33
Future Volume (veh/h)	42	28	264	88	50	36	370	1498	46	14	2021	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	46	30	287	96	54	39	402	1628	50	15	2197	36
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	165	251	417	180	136	98	446	3701	114	274	2220	36
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.17	0.97	0.97	0.03	0.83	0.83
Sat Flow, veh/h	1303	1870	1585	1063	1010	729	3456	5090	156	1781	3578	58
Grp Volume(v), veh/h	46	30	287	96	0	93	402	1089	589	15	1088	1145
Grp Sat Flow(s),veh/h/ln	1303	1870	1585	1063	0	1739	1728	1702	1842	1781	1777	1860
Q Serve(g_s), s	4.6	1.9	18.8	12.1	0.0	6.6	16.0	2.6	2.6	0.4	80.8	83.3
Cycle Q Clear(g_c), s	11.2	1.9	18.8	14.0	0.0	6.6	16.0	2.6	2.6	0.4	80.8	83.3
Prop In Lane	1.00		1.00	1.00		0.42	1.00		0.08	1.00		0.03
Lane Grp Cap(c), veh/h	165	251	417	180	0	234	446	2475	1340	274	1102	1154
V/C Ratio(X)	0.28	0.12	0.69	0.53	0.00	0.40	0.90	0.44	0.44	0.05	0.99	0.99
Avail Cap(c_a), veh/h	165	251	417	180	0	234	457	2475	1340	344	1102	1154
HCM Platoon Ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.5	50.6	44.2	56.4	0.0	52.5	57.1	0.7	0.7	9.0	11.7	11.9
Incr Delay (d2), s/veh	0.9	0.2	4.7	3.0	0.0	1.1	20.6	0.6	1.1	0.1	24.2	24.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.9	9.5	3.3	0.0	3.0	7.8	0.7	0.9	0.2	19.6	21.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.4	50.8	48.9	59.4	0.0	53.6	77.7	1.2	1.7	9.0	35.9	36.7
LnGrp LOS	E	D	D	E	A	D	E	A	A	A	D	D
Approach Vol, veh/h		363			189			2080			2248	
Approach Delay, s/veh		50.2			56.6			16.2			36.1	
Approach LOS		D			E			B			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.6	107.6		23.8	23.6	92.6		23.8				
Change Period (Y+Rc), s	* 5.5	5.8		* 5	* 5.5	5.8		* 5				
Max Green Setting (Gmax), s	* 8.6	96.3		* 19	* 19	86.4		* 19				
Max Q Clear Time (g_c+I1), s	2.4	4.6		20.8	18.0	85.3		16.0				
Green Ext Time (p_c), s	0.0	17.5		0.0	0.1	1.1		0.2				

Intersection Summary	
HCM 6th Ctrl Delay	29.5
HCM 6th LOS	C

Notes

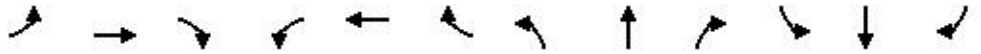
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	499	81	168	395	11	38	144	112	70	263	130
Future Volume (veh/h)	105	499	81	168	395	11	38	144	112	70	263	130
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	114	542	88	183	429	12	41	157	122	76	286	141
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	663	1752	283	560	2026	57	179	282	205	238	362	174
Arrive On Green	0.06	0.57	0.57	0.06	0.57	0.57	0.05	0.14	0.14	0.06	0.16	0.16
Sat Flow, veh/h	1781	3062	496	1781	3531	99	1781	1962	1428	1781	2328	1118
Grp Volume(v), veh/h	114	314	316	183	216	225	41	141	138	76	216	211
Grp Sat Flow(s),veh/h/ln	1781	1777	1781	1781	1777	1853	1781	1777	1613	1781	1777	1669
Q Serve(g_s), s	2.8	10.1	10.2	4.6	6.5	6.5	2.1	8.1	8.8	3.9	12.9	13.4
Cycle Q Clear(g_c), s	2.8	10.1	10.2	4.6	6.5	6.5	2.1	8.1	8.8	3.9	12.9	13.4
Prop In Lane	1.00		0.28	1.00		0.05	1.00		0.89	1.00		0.67
Lane Grp Cap(c), veh/h	663	1016	1019	560	1019	1063	179	255	232	238	276	260
V/C Ratio(X)	0.17	0.31	0.31	0.33	0.21	0.21	0.23	0.55	0.60	0.32	0.78	0.81
Avail Cap(c_a), veh/h	724	1016	1019	763	1019	1063	252	396	359	305	412	387
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.1	12.2	12.2	8.8	11.4	11.4	37.7	43.8	44.1	37.1	44.7	44.9
Incr Delay (d2), s/veh	0.1	0.8	0.8	0.3	0.5	0.5	0.6	1.9	2.4	0.8	5.7	7.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	4.0	4.1	1.7	2.6	2.7	0.9	3.6	3.6	1.7	6.0	6.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.2	13.0	13.0	9.1	11.8	11.8	38.4	45.7	46.5	37.8	50.4	52.7
LnGrp LOS	A	B	B	A	B	B	D	D	D	D	D	D
Approach Vol, veh/h		744			624			320			503	
Approach Delay, s/veh		12.3			11.0			45.1			49.4	
Approach LOS		B			B			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.5	67.4	9.5	21.6	11.3	67.6	10.8	20.3
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	19.5	37.5	9.5	25.5	10.5	46.5	10.5	24.5
Max Q Clear Time (g_c+I1), s	6.6	12.2	4.1	15.4	4.8	8.5	5.9	10.8
Green Ext Time (p_c), s	0.4	3.9	0.0	1.7	0.1	2.7	0.0	1.2

Intersection Summary	
HCM 6th Ctrl Delay	25.3
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	318	325	299	300	285	444	1864	379	207	1227	36
Future Volume (veh/h)	65	318	325	299	300	285	444	1864	379	207	1227	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	71	346	353	325	326	310	483	2026	412	225	1334	39
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	265	465	449	371	340	303	527	1795	971	272	1533	758
Arrive On Green	0.06	0.17	0.17	0.14	0.25	0.25	0.20	0.67	0.67	0.10	0.57	0.57
Sat Flow, veh/h	3456	3554	1585	3456	1777	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	71	346	353	325	326	310	483	2026	412	225	1334	39
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1728	1777	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	2.4	12.9	18.3	12.9	25.3	26.8	19.2	70.7	14.3	8.9	44.7	1.4
Cycle Q Clear(g_c), s	2.4	12.9	18.3	12.9	25.3	26.8	19.2	70.7	14.3	8.9	44.7	1.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	265	465	449	371	340	303	527	1795	971	272	1533	758
V/C Ratio(X)	0.27	0.74	0.79	0.88	0.96	1.02	0.92	1.13	0.42	0.83	0.87	0.05
Avail Cap(c_a), veh/h	276	465	449	390	340	303	546	1795	971	304	1533	758
HCM Platoon Ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.7	55.6	44.2	59.1	51.6	52.2	54.9	23.0	8.8	61.7	26.5	14.6
Incr Delay (d2), s/veh	0.5	6.3	8.9	19.0	37.8	57.3	20.0	65.7	1.4	15.6	7.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	6.0	12.5	6.5	14.4	15.1	9.3	38.3	4.4	4.4	17.3	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.2	61.9	53.1	78.1	89.4	109.5	74.9	88.7	10.2	77.3	33.5	14.7
LnGrp LOS	D	E	D	E	F	F	E	F	B	E	C	B
Approach Vol, veh/h		770			961			2921			1598	
Approach Delay, s/veh		56.7			92.1			75.3			39.2	
Approach LOS		E			F			E			D	

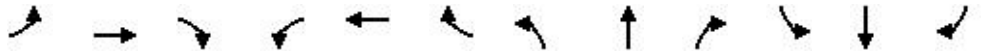
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.9	76.6	21.2	24.2	28.3	66.3	12.8	32.7
Change Period (Y+Rc), s	6.9	* 5.9	* 6.2	* 5.9	6.9	* 5.9	* 6.2	* 5.9
Max Green Setting (Gmax), s	12.3	* 69	* 16	* 18	22.1	* 59	* 7	* 27
Max Q Clear Time (g_c+I1), s	10.9	72.7	14.9	20.3	21.2	46.7	4.4	28.8
Green Ext Time (p_c), s	0.1	0.0	0.1	0.0	0.2	7.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	66.4
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	101	70	323	81	50	47	263	2448	55	26	1930	34
Future Volume (veh/h)	101	70	323	81	50	47	263	2448	55	26	1930	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	110	76	351	88	54	51	286	2661	60	28	2098	37
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	230	353	457	202	167	158	345	3401	76	159	2126	37
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.13	0.88	0.88	0.04	0.79	0.79
Sat Flow, veh/h	1289	1870	1585	961	885	835	3456	5138	115	1781	3573	63
Grp Volume(v), veh/h	110	76	351	88	0	105	286	1758	963	28	1040	1095
Grp Sat Flow(s),veh/h/ln	1289	1870	1585	961	0	1720	1728	1702	1850	1781	1777	1859
Q Serve(g_s), s	11.0	4.5	26.4	11.6	0.0	7.0	11.3	27.6	28.4	0.8	77.2	79.4
Cycle Q Clear(g_c), s	18.0	4.5	26.4	16.1	0.0	7.0	11.3	27.6	28.4	0.8	77.2	79.4
Prop In Lane	1.00		1.00	1.00		0.49	1.00		0.06	1.00		0.03
Lane Grp Cap(c), veh/h	230	353	457	202	0	324	345	2253	1224	159	1057	1106
V/C Ratio(X)	0.48	0.22	0.77	0.44	0.00	0.32	0.83	0.78	0.79	0.18	0.98	0.99
Avail Cap(c_a), veh/h	230	353	457	202	0	324	605	2253	1224	190	1057	1106
HCM Platoon Ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.5	44.2	42.2	50.6	0.0	45.2	59.5	4.5	4.5	11.5	14.0	14.2
Incr Delay (d2), s/veh	1.5	0.3	7.7	1.5	0.0	0.6	5.1	2.8	5.1	0.5	24.0	24.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	2.1	11.9	2.8	0.0	3.0	5.0	4.5	5.8	0.3	22.9	24.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.0	44.5	49.9	52.1	0.0	45.7	64.6	7.3	9.7	12.0	38.0	38.9
LnGrp LOS	D	D	D	D	A	D	E	A	A	B	D	D
Approach Vol, veh/h		537			193			3007			2163	
Approach Delay, s/veh		50.0			48.6			13.5			38.1	
Approach LOS		D			D			B			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.1	98.5		31.4	19.5	89.1		31.4				
Change Period (Y+Rc), s	* 5.5	5.8		* 5	* 5.5	5.8		* 5				
Max Green Setting (Gmax), s	* 7.1	90.2		* 26	* 25	72.8		* 26				
Max Q Clear Time (g_c+I1), s	2.8	30.4		28.4	13.3	81.4		18.1				
Green Ext Time (p_c), s	0.0	40.7		0.0	0.7	0.0		0.6				

Intersection Summary	
HCM 6th Ctrl Delay	27.0
HCM 6th LOS	C

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	111	446	43	184	474	73	76	334	174	71	267	120
Future Volume (veh/h)	111	446	43	184	474	73	76	334	174	71	267	120
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	121	485	47	200	515	79	83	363	189	77	290	130
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	526	1667	161	567	1611	246	248	444	227	202	467	204
Arrive On Green	0.06	0.51	0.51	0.07	0.52	0.52	0.06	0.20	0.20	0.06	0.19	0.19
Sat Flow, veh/h	1781	3274	316	1781	3090	472	1781	2273	1164	1781	2406	1052
Grp Volume(v), veh/h	121	262	270	200	295	299	83	282	270	77	212	208
Grp Sat Flow(s),veh/h/ln	1781	1777	1813	1781	1777	1785	1781	1777	1661	1781	1777	1681
Q Serve(g_s), s	3.4	9.4	9.4	5.8	10.5	10.6	4.0	16.7	17.2	3.7	12.0	12.5
Cycle Q Clear(g_c), s	3.4	9.4	9.4	5.8	10.5	10.6	4.0	16.7	17.2	3.7	12.0	12.5
Prop In Lane	1.00		0.17	1.00		0.26	1.00		0.70	1.00		0.63
Lane Grp Cap(c), veh/h	526	905	923	567	927	931	248	347	324	202	345	326
V/C Ratio(X)	0.23	0.29	0.29	0.35	0.32	0.32	0.33	0.81	0.83	0.38	0.62	0.64
Avail Cap(c_a), veh/h	602	905	923	750	927	931	297	477	445	269	493	466
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.3	15.5	15.6	11.3	15.1	15.1	33.0	42.4	42.5	33.6	40.6	40.7
Incr Delay (d2), s/veh	0.2	0.8	0.8	0.4	0.9	0.9	0.8	7.5	9.3	1.2	1.8	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	3.9	4.0	2.2	4.3	4.4	1.7	7.9	7.7	1.6	5.3	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.5	16.4	16.4	11.6	16.0	16.0	33.8	49.9	51.8	34.8	42.3	42.8
LnGrp LOS	B	B	B	B	B	B	C	D	D	C	D	D
Approach Vol, veh/h		653			794			635			497	
Approach Delay, s/veh		15.5			14.9			48.6			41.4	
Approach LOS		B			B			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.7	60.5	10.9	25.9	11.3	61.9	10.8	26.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	19.5	32.5	9.5	30.5	11.5	40.5	10.5	29.5
Max Q Clear Time (g_c+I1), s	7.8	11.4	6.0	14.5	5.4	12.6	5.7	19.2
Green Ext Time (p_c), s	0.4	3.0	0.0	2.1	0.1	3.7	0.1	2.3

Intersection Summary	
HCM 6th Ctrl Delay	28.4
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	146	412	339	283	118	264	918	100	70	1105	23
Future Volume (veh/h)	17	146	412	339	283	118	264	918	100	70	1105	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	18	159	448	368	308	128	287	998	109	76	1201	25
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	87	457	362	417	552	225	345	1795	992	234	1681	789
Arrive On Green	0.03	0.17	0.17	0.16	0.30	0.30	0.13	0.67	0.67	0.09	0.63	0.63
Sat Flow, veh/h	3456	3554	1585	3456	2464	1002	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	18	159	448	368	220	216	287	998	109	76	1201	25
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1728	1777	1690	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	0.7	5.5	18.0	14.6	14.6	15.1	11.3	20.6	2.6	2.9	31.9	0.8
Cycle Q Clear(g_c), s	0.7	5.5	18.0	14.6	14.6	15.1	11.3	20.6	2.6	2.9	31.9	0.8
Prop In Lane	1.00		1.00	1.00		0.59	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	87	457	362	417	398	379	345	1795	992	234	1681	789
V/C Ratio(X)	0.21	0.35	1.24	0.88	0.55	0.57	0.83	0.56	0.11	0.32	0.71	0.03
Avail Cap(c_a), veh/h	173	457	362	464	398	379	570	1795	992	247	1681	789
HCM Platoon Ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.3	52.9	51.7	57.8	43.2	43.4	59.5	14.7	6.8	60.7	19.6	12.6
Incr Delay (d2), s/veh	1.2	0.5	128.1	16.6	1.7	2.0	5.3	1.2	0.2	0.8	2.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.5	25.7	7.1	6.4	6.3	5.0	6.7	0.9	1.3	11.2	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.5	53.3	179.8	74.4	44.9	45.5	64.8	16.0	7.0	61.5	22.2	12.6
LnGrp LOS	E	D	F	E	D	D	E	B	A	E	C	B
Approach Vol, veh/h		625			804			1394			1302	
Approach Delay, s/veh		144.4			58.6			25.4			24.3	
Approach LOS		F			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.4	76.6	23.1	23.9	20.9	72.1	9.7	37.3
Change Period (Y+Rc), s	6.9	* 5.9	* 6.2	* 5.9	6.9	* 5.9	* 6.2	* 5.9
Max Green Setting (Gmax), s	10.0	* 68	* 19	* 18	23.1	* 55	* 7	* 30
Max Q Clear Time (g_c+I1), s	4.9	22.6	16.6	20.0	13.3	33.9	2.7	17.1
Green Ext Time (p_c), s	0.1	8.5	0.3	0.0	0.7	8.5	0.0	2.1

Intersection Summary	
HCM 6th Ctrl Delay	49.5
HCM 6th LOS	D

Notes

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

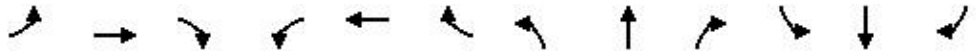
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	28	248	83	50	37	317	1465	45	14	1971	33
Future Volume (veh/h)	33	28	248	83	50	37	317	1465	45	14	1971	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	36	30	270	90	54	40	345	1592	49	15	2142	36
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	176	267	407	191	143	106	394	3657	113	282	2241	38
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.15	0.96	0.96	0.03	0.83	0.83
Sat Flow, veh/h	1302	1870	1585	1079	998	739	3456	5090	157	1781	3576	60
Grp Volume(v), veh/h	36	30	270	90	0	94	345	1065	576	15	1061	1117
Grp Sat Flow(s),veh/h/ln	1302	1870	1585	1079	0	1737	1728	1702	1842	1781	1777	1860
Q Serve(g_s), s	3.5	1.9	20.0	10.9	0.0	6.6	13.7	3.3	3.3	0.4	67.7	69.6
Cycle Q Clear(g_c), s	10.1	1.9	20.0	12.7	0.0	6.6	13.7	3.3	3.3	0.4	67.7	69.6
Prop In Lane	1.00		1.00	1.00		0.43	1.00		0.09	1.00		0.03
Lane Grp Cap(c), veh/h	176	267	407	191	0	248	394	2446	1324	282	1114	1165
V/C Ratio(X)	0.20	0.11	0.66	0.47	0.00	0.38	0.88	0.44	0.44	0.05	0.95	0.96
Avail Cap(c_a), veh/h	176	267	407	191	0	248	444	2446	1324	333	1114	1165
HCM Platoon Ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.7	49.4	44.1	54.6	0.0	51.3	58.4	0.9	0.9	8.6	10.0	10.1
Incr Delay (d2), s/veh	0.6	0.2	4.0	1.8	0.0	1.0	16.2	0.6	1.0	0.1	17.8	18.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.9	8.7	3.0	0.0	2.9	6.5	0.8	1.1	0.2	14.5	15.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.3	49.5	48.1	56.4	0.0	52.2	74.6	1.5	2.0	8.7	27.8	28.3
LnGrp LOS	E	D	D	E	A	D	E	A	A	A	C	C
Approach Vol, veh/h		336			184			1986			2193	
Approach Delay, s/veh		49.1			54.3			14.3			27.9	
Approach LOS		D			D			B			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.6	106.4		25.0	21.5	93.5		25.0				
Change Period (Y+Rc), s	* 5.5	5.8		* 5	* 5.5	5.8		* 5				
Max Green Setting (Gmax), s	* 7.1	95.6		* 20	* 18	85.7		* 20				
Max Q Clear Time (g_c+I1), s	2.4	5.3		22.0	15.7	71.6		14.7				
Green Ext Time (p_c), s	0.0	16.7		0.0	0.3	11.7		0.4				

Intersection Summary	
HCM 6th Ctrl Delay	24.7
HCM 6th LOS	C

Notes

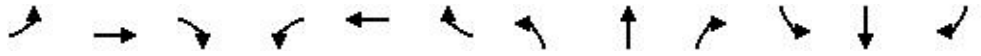
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	499	77	165	388	11	37	151	120	78	285	145
Future Volume (veh/h)	105	499	77	165	388	11	37	151	120	78	285	145
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	114	542	84	179	422	12	40	164	130	85	310	158
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	654	1727	267	550	1981	56	178	300	223	247	387	193
Arrive On Green	0.06	0.56	0.56	0.06	0.56	0.56	0.04	0.15	0.15	0.06	0.17	0.17
Sat Flow, veh/h	1781	3085	477	1781	3529	100	1781	1943	1445	1781	2297	1144
Grp Volume(v), veh/h	114	311	315	179	212	222	40	149	145	85	238	230
Grp Sat Flow(s),veh/h/ln	1781	1777	1785	1781	1777	1852	1781	1777	1610	1781	1777	1664
Q Serve(g_s), s	2.8	10.3	10.4	4.6	6.5	6.6	2.0	8.5	9.2	4.3	14.2	14.7
Cycle Q Clear(g_c), s	2.8	10.3	10.4	4.6	6.5	6.6	2.0	8.5	9.2	4.3	14.2	14.7
Prop In Lane	1.00		0.27	1.00		0.05	1.00		0.90	1.00		0.69
Lane Grp Cap(c), veh/h	654	995	999	550	998	1040	178	274	249	247	299	280
V/C Ratio(X)	0.17	0.31	0.31	0.33	0.21	0.21	0.22	0.54	0.58	0.34	0.80	0.82
Avail Cap(c_a), veh/h	714	995	999	721	998	1040	252	412	373	312	428	401
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.6	12.9	12.9	9.3	12.0	12.0	36.9	42.9	43.2	36.2	43.9	44.1
Incr Delay (d2), s/veh	0.1	0.8	0.8	0.3	0.5	0.5	0.6	1.7	2.2	0.8	6.7	8.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	4.1	4.2	1.7	2.6	2.7	0.9	3.8	3.7	1.9	6.6	6.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.8	13.7	13.8	9.7	12.5	12.5	37.5	44.6	45.4	37.0	50.6	52.9
LnGrp LOS	A	B	B	A	B	B	D	D	D	D	D	D
Approach Vol, veh/h		740			613			334			553	
Approach Delay, s/veh		13.0			11.7			44.1			49.5	
Approach LOS		B			B			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.5	66.1	9.4	23.0	11.3	66.3	11.0	21.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	17.5	38.5	9.5	26.5	10.5	45.5	10.5	25.5
Max Q Clear Time (g_c+I1), s	6.6	12.4	4.0	16.7	4.8	8.6	6.3	11.2
Green Ext Time (p_c), s	0.3	3.9	0.0	1.9	0.1	2.6	0.1	1.3

Intersection Summary	
HCM 6th Ctrl Delay	26.3
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	318	325	288	294	279	433	1799	368	202	1189	35
Future Volume (veh/h)	65	318	325	288	294	279	433	1799	368	202	1189	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	71	346	353	313	320	303	471	1955	400	220	1292	38
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	162	457	442	316	308	274	520	1886	986	247	1605	790
Arrive On Green	0.06	0.17	0.17	0.12	0.23	0.23	0.20	0.71	0.71	0.09	0.60	0.60
Sat Flow, veh/h	3456	3554	1585	3456	1777	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	71	346	353	313	320	303	471	1955	400	220	1292	38
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1728	1777	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	2.8	13.0	18.0	12.7	24.2	24.2	18.6	74.3	12.6	8.8	39.4	1.3
Cycle Q Clear(g_c), s	2.8	13.0	18.0	12.7	24.2	24.2	18.6	74.3	12.6	8.8	39.4	1.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	162	457	442	316	308	274	520	1886	986	247	1605	790
V/C Ratio(X)	0.44	0.76	0.80	0.99	1.04	1.10	0.91	1.04	0.41	0.89	0.80	0.05
Avail Cap(c_a), veh/h	173	457	442	316	308	274	565	1886	986	247	1605	790
HCM Platoon Ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.9	55.9	44.8	61.4	53.9	53.9	55.0	20.6	7.8	62.8	23.2	13.1
Incr Delay (d2), s/veh	1.9	7.1	9.9	48.0	62.1	85.1	17.4	30.9	1.2	30.5	4.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	6.1	12.7	7.5	15.7	15.8	8.8	29.6	3.9	4.8	14.5	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.7	63.1	54.8	109.4	116.0	139.0	72.4	51.5	9.0	93.3	27.6	13.2
LnGrp LOS	E	E	D	F	F	F	E	F	A	F	C	B
Approach Vol, veh/h		770			936			2826			1550	
Approach Delay, s/veh		59.5			121.2			49.0			36.6	
Approach LOS		E			F			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.9	80.2	19.0	23.9	28.0	69.1	12.8	30.1
Change Period (Y+Rc), s	6.9	* 5.9	* 6.2	* 5.9	6.9	* 5.9	* 6.2	* 5.9
Max Green Setting (Gmax), s	10.0	* 74	* 13	* 18	22.9	* 61	* 7	* 24
Max Q Clear Time (g_c+I1), s	10.8	76.3	14.7	20.0	20.6	41.4	4.8	26.2
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.4	9.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	58.3
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

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

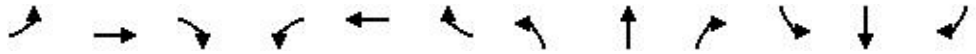
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	69	277	82	50	48	221	2303	51	32	1797	25
Future Volume (veh/h)	80	69	277	82	50	48	221	2303	51	32	1797	25
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	87	75	301	89	54	52	240	2503	55	35	1953	27
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	227	350	434	208	164	158	299	3390	74	178	2189	30
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.11	0.88	0.88	0.05	0.81	0.81
Sat Flow, veh/h	1288	1870	1585	1007	876	843	3456	5142	113	1781	3589	49
Grp Volume(v), veh/h	87	75	301	89	0	106	240	1654	904	35	965	1015
Grp Sat Flow(s),veh/h/ln	1288	1870	1585	1007	0	1719	1728	1702	1850	1781	1777	1861
Q Serve(g_s), s	8.5	4.5	23.9	11.1	0.0	7.1	9.5	23.7	24.1	1.0	51.6	52.5
Cycle Q Clear(g_c), s	15.6	4.5	23.9	15.6	0.0	7.1	9.5	23.7	24.1	1.0	51.6	52.5
Prop In Lane	1.00		1.00	1.00		0.49	1.00		0.06	1.00		0.03
Lane Grp Cap(c), veh/h	227	350	434	208	0	322	299	2244	1220	178	1084	1136
V/C Ratio(X)	0.38	0.21	0.69	0.43	0.00	0.33	0.80	0.74	0.74	0.20	0.89	0.89
Avail Cap(c_a), veh/h	238	366	447	216	0	336	605	2244	1220	202	1084	1136
HCM Platoon Ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.8	44.4	42.2	50.6	0.0	45.4	60.8	4.4	4.4	10.2	10.0	10.1
Incr Delay (d2), s/veh	1.1	0.3	4.5	1.4	0.0	0.6	5.1	2.2	4.1	0.5	11.0	10.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	2.1	9.6	2.8	0.0	3.1	4.2	4.2	5.2	0.4	12.3	13.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.8	44.7	46.6	52.0	0.0	46.0	65.9	6.6	8.5	10.8	21.0	21.0
LnGrp LOS	D	D	D	D	A	D	E	A	A	B	C	C
Approach Vol, veh/h		463			195			2798			2015	
Approach Delay, s/veh		47.5			48.7			12.3			20.8	
Approach LOS		D			D			B			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.7	98.1		31.2	17.6	91.2		31.2				
Change Period (Y+Rc), s	* 5.5	5.8		* 5	* 5.5	5.8		* 5				
Max Green Setting (Gmax), s	* 7.1	89.2		* 27	* 25	71.8		* 27				
Max Q Clear Time (g_c+I1), s	3.0	26.1		25.9	11.5	54.5		17.6				
Green Ext Time (p_c), s	0.0	38.0		0.3	0.6	12.7		0.7				

Intersection Summary	
HCM 6th Ctrl Delay	19.7
HCM 6th LOS	B

Notes

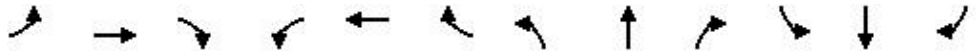
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	111	446	39	181	465	72	74	388	185	79	465	133
Future Volume (veh/h)	111	446	39	181	465	72	74	388	185	79	465	133
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	121	485	42	197	505	78	80	422	201	86	505	145
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	503	1584	137	543	1523	234	204	520	245	210	608	174
Arrive On Green	0.06	0.48	0.48	0.08	0.49	0.49	0.06	0.22	0.22	0.06	0.22	0.22
Sat Flow, veh/h	1781	3310	286	1781	3087	475	1781	2344	1105	1781	2728	779
Grp Volume(v), veh/h	121	260	267	197	290	293	80	319	304	86	328	322
Grp Sat Flow(s),veh/h/ln	1781	1777	1819	1781	1777	1785	1781	1777	1672	1781	1777	1730
Q Serve(g_s), s	3.7	9.8	9.9	6.1	10.9	11.0	3.7	18.7	19.0	4.0	19.3	19.5
Cycle Q Clear(g_c), s	3.7	9.8	9.9	6.1	10.9	11.0	3.7	18.7	19.0	4.0	19.3	19.5
Prop In Lane	1.00		0.16	1.00		0.27	1.00		0.66	1.00		0.45
Lane Grp Cap(c), veh/h	503	850	870	543	876	880	204	395	371	210	396	386
V/C Ratio(X)	0.24	0.31	0.31	0.36	0.33	0.33	0.39	0.81	0.82	0.41	0.83	0.83
Avail Cap(c_a), veh/h	563	850	870	706	876	880	255	541	509	259	541	527
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.9	17.5	17.5	12.8	16.9	16.9	31.8	40.6	40.7	31.7	40.7	40.8
Incr Delay (d2), s/veh	0.2	0.9	0.9	0.4	1.0	1.0	1.2	6.4	7.4	1.3	7.6	8.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	4.1	4.2	2.4	4.5	4.6	1.6	8.6	8.4	1.8	9.0	9.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.2	18.4	18.4	13.2	17.9	17.9	33.0	46.9	48.1	33.0	48.3	49.1
LnGrp LOS	B	B	B	B	B	B	C	D	D	C	D	D
Approach Vol, veh/h		648			780			703			736	
Approach Delay, s/veh		17.5			16.7			45.9			46.9	
Approach LOS		B			B			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.9	57.1	10.9	29.0	11.3	58.8	11.0	28.9
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	18.5	30.5	9.5	33.5	10.5	38.5	9.5	33.5
Max Q Clear Time (g_c+I1), s	8.1	11.9	5.7	21.5	5.7	13.0	6.0	21.0
Green Ext Time (p_c), s	0.4	2.9	0.0	3.0	0.1	3.6	0.0	2.9

Intersection Summary	
HCM 6th Ctrl Delay	31.8
HCM 6th LOS	C



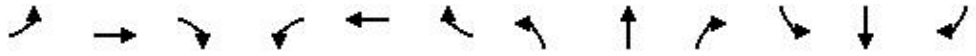
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	146	412	344	283	118	264	926	101	70	1116	23
Future Volume (veh/h)	17	146	412	344	283	118	264	926	101	70	1116	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	18	159	448	374	308	128	287	1007	110	76	1213	25
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	411	457	359	428	560	228	338	1784	992	234	1677	788
Arrive On Green	0.03	0.17	0.17	0.16	0.30	0.30	0.13	0.67	0.67	0.09	0.63	0.63
Sat Flow, veh/h	3456	3554	1585	3456	2464	1002	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	18	159	448	374	220	216	287	1007	110	76	1213	25
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1728	1777	1690	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	0.6	5.5	18.0	14.8	14.5	15.0	11.4	21.1	2.7	2.9	32.6	0.8
Cycle Q Clear(g_c), s	0.6	5.5	18.0	14.8	14.5	15.0	11.4	21.1	2.7	2.9	32.6	0.8
Prop In Lane	1.00		1.00	1.00		0.59	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	411	457	359	428	404	384	338	1784	992	234	1677	788
V/C Ratio(X)	0.04	0.35	1.25	0.87	0.55	0.56	0.85	0.56	0.11	0.32	0.72	0.03
Avail Cap(c_a), veh/h	497	457	359	513	404	384	422	1784	992	249	1677	788
HCM Platoon Ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.0	52.9	51.8	57.4	42.8	43.0	59.9	15.1	6.9	60.7	19.8	12.6
Incr Delay (d2), s/veh	0.0	0.5	132.8	13.6	1.5	1.9	12.5	1.3	0.2	0.8	2.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.5	25.9	7.1	6.3	6.3	5.3	6.9	1.0	1.3	11.5	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.0	53.3	184.6	71.0	44.3	44.9	72.4	16.4	7.1	61.5	22.6	12.7
LnGrp LOS	D	D	F	E	D	D	E	B	A	E	C	B
Approach Vol, veh/h		625			810			1404			1314	
Approach Delay, s/veh		147.3			56.8			27.1			24.6	
Approach LOS		F			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.4	76.2	23.5	23.9	20.6	72.0	9.7	37.7
Change Period (Y+Rc), s	6.9	* 5.9	* 6.2	* 5.9	6.9	* 5.9	* 6.2	* 5.9
Max Green Setting (Gmax), s	10.1	* 66	* 21	* 18	17.1	* 59	* 7	* 32
Max Q Clear Time (g_c+I1), s	4.9	23.1	16.8	20.0	13.4	34.6	2.6	17.0
Green Ext Time (p_c), s	0.1	8.5	0.5	0.0	0.3	9.1	0.0	2.3

Intersection Summary	
HCM 6th Ctrl Delay	50.2
HCM 6th LOS	D

Notes

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



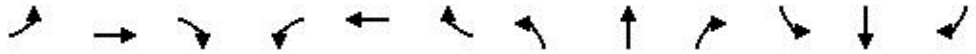
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	29	253	83	51	37	334	1465	45	14	1976	33
Future Volume (veh/h)	42	29	253	83	51	37	334	1465	45	14	1976	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	46	32	275	90	55	40	363	1592	49	15	2148	36
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	175	267	415	189	144	105	410	3657	113	281	2225	37
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.16	0.96	0.96	0.03	0.83	0.83
Sat Flow, veh/h	1301	1870	1585	1072	1007	732	3456	5090	157	1781	3577	60
Grp Volume(v), veh/h	46	32	275	90	0	95	363	1065	576	15	1064	1120
Grp Sat Flow(s),veh/h/ln	1301	1870	1585	1072	0	1739	1728	1702	1842	1781	1777	1860
Q Serve(g_s), s	4.5	2.0	20.0	11.0	0.0	6.7	14.4	3.3	3.3	0.4	71.1	73.2
Cycle Q Clear(g_c), s	11.2	2.0	20.0	12.9	0.0	6.7	14.4	3.3	3.3	0.4	71.1	73.2
Prop In Lane	1.00		1.00	1.00		0.42	1.00		0.09	1.00		0.03
Lane Grp Cap(c), veh/h	175	267	415	189	0	248	410	2446	1324	281	1105	1157
V/C Ratio(X)	0.26	0.12	0.66	0.48	0.00	0.38	0.88	0.44	0.44	0.05	0.96	0.97
Avail Cap(c_a), veh/h	175	267	415	189	0	248	444	2446	1324	332	1105	1157
HCM Platoon Ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.2	49.4	43.8	54.8	0.0	51.3	58.0	0.9	0.9	8.9	10.7	10.9
Incr Delay (d2), s/veh	0.8	0.2	3.9	1.8	0.0	1.0	17.9	0.6	1.0	0.1	19.5	19.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	1.0	8.9	3.0	0.0	3.0	6.9	0.8	1.1	0.2	16.4	17.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.0	49.6	47.7	56.6	0.0	52.3	75.9	1.5	2.0	9.0	30.2	30.8
LnGrp LOS	E	D	D	E	A	D	E	A	A	A	C	C
Approach Vol, veh/h		353			185			2004			2199	
Approach Delay, s/veh		49.1			54.4			15.1			30.3	
Approach LOS		D			D			B			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.6	106.4		25.0	22.1	92.9		25.0				
Change Period (Y+Rc), s	* 5.5	5.8		* 5	* 5.5	5.8		* 5				
Max Green Setting (Gmax), s	* 7.1	95.6		* 20	* 18	85.7		* 20				
Max Q Clear Time (g_c+I1), s	2.4	5.3		22.0	16.4	75.2		14.9				
Green Ext Time (p_c), s	0.0	16.7		0.0	0.2	9.0		0.4				

Intersection Summary	
HCM 6th Ctrl Delay	26.2
HCM 6th LOS	C

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	499	81	165	388	11	39	153	120	78	288	145
Future Volume (veh/h)	105	499	81	165	388	11	39	153	120	78	288	145
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	114	542	88	179	422	12	42	166	130	85	313	158
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	652	1708	276	546	1974	56	180	305	224	249	390	192
Arrive On Green	0.06	0.56	0.56	0.06	0.56	0.56	0.05	0.16	0.16	0.06	0.17	0.17
Sat Flow, veh/h	1781	3062	496	1781	3529	100	1781	1953	1436	1781	2305	1137
Grp Volume(v), veh/h	114	314	316	179	212	222	42	150	146	85	240	231
Grp Sat Flow(s),veh/h/ln	1781	1777	1781	1781	1777	1852	1781	1777	1612	1781	1777	1666
Q Serve(g_s), s	2.9	10.4	10.5	4.7	6.6	6.6	2.1	8.6	9.2	4.3	14.2	14.7
Cycle Q Clear(g_c), s	2.9	10.4	10.5	4.7	6.6	6.6	2.1	8.6	9.2	4.3	14.2	14.7
Prop In Lane	1.00		0.28	1.00		0.05	1.00		0.89	1.00		0.68
Lane Grp Cap(c), veh/h	652	991	994	546	994	1036	180	278	252	249	301	282
V/C Ratio(X)	0.17	0.32	0.32	0.33	0.21	0.21	0.23	0.54	0.58	0.34	0.80	0.82
Avail Cap(c_a), veh/h	712	991	994	717	994	1036	252	412	374	314	428	401
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.7	13.1	13.1	9.4	12.1	12.1	36.7	42.8	43.0	36.0	43.9	44.1
Incr Delay (d2), s/veh	0.1	0.8	0.8	0.3	0.5	0.5	0.7	1.6	2.1	0.8	6.8	8.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	4.2	4.2	1.7	2.6	2.7	0.9	3.8	3.7	1.9	6.7	6.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.8	13.9	13.9	9.8	12.6	12.6	37.3	44.4	45.2	36.8	50.7	53.0
LnGrp LOS	A	B	B	A	B	B	D	D	D	D	D	D
Approach Vol, veh/h		744			613			338			556	
Approach Delay, s/veh		13.1			11.8			43.8			49.5	
Approach LOS		B			B			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.5	65.9	9.6	23.1	11.3	66.0	11.0	21.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	17.5	38.5	9.5	26.5	10.5	45.5	10.5	25.5
Max Q Clear Time (g_c+I1), s	6.7	12.5	4.1	16.7	4.9	8.6	6.3	11.2
Green Ext Time (p_c), s	0.3	3.9	0.0	1.9	0.1	2.6	0.1	1.3

Intersection Summary	
HCM 6th Ctrl Delay	26.4
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	318	325	293	294	279	433	1819	370	202	1198	35
Future Volume (veh/h)	65	318	325	293	294	279	433	1819	370	202	1198	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	71	346	353	318	320	303	471	1977	402	220	1302	38
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	276	488	456	366	349	311	520	1782	963	267	1523	753
Arrive On Green	0.06	0.18	0.18	0.14	0.26	0.26	0.20	0.67	0.67	0.10	0.57	0.57
Sat Flow, veh/h	3456	3554	1585	3456	1777	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	71	346	353	318	320	303	471	1977	402	220	1302	38
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1728	1777	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	2.4	12.8	19.2	12.6	24.5	26.5	18.6	70.2	14.0	8.7	43.0	1.4
Cycle Q Clear(g_c), s	2.4	12.8	19.2	12.6	24.5	26.5	18.6	70.2	14.0	8.7	43.0	1.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	276	488	456	366	349	311	520	1782	963	267	1523	753
V/C Ratio(X)	0.26	0.71	0.77	0.87	0.92	0.97	0.91	1.11	0.42	0.82	0.86	0.05
Avail Cap(c_a), veh/h	287	488	456	407	349	311	563	1782	963	299	1523	753
HCM Platoon Ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.0	54.6	43.6	59.2	50.6	51.3	55.0	23.3	9.0	61.9	26.5	14.8
Incr Delay (d2), s/veh	0.5	4.7	8.1	16.6	28.2	43.6	17.6	57.9	1.3	15.4	6.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	5.9	12.3	6.2	13.2	13.9	8.9	36.3	4.4	4.3	16.6	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.5	59.3	51.7	75.8	78.8	94.9	72.6	81.2	10.4	77.3	32.8	14.9
LnGrp LOS	D	E	D	E	E	F	E	F	B	E	C	B
Approach Vol, veh/h		770			941			2850			1560	
Approach Delay, s/veh		54.8			83.0			69.8			38.6	
Approach LOS		D			F			E			D	

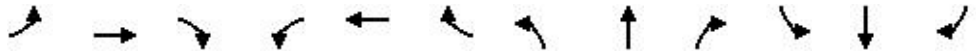
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.7	76.1	21.0	25.1	28.0	65.9	12.8	33.4
Change Period (Y+Rc), s	6.9	* 5.9	* 6.2	* 5.9	6.9	* 5.9	* 6.2	* 5.9
Max Green Setting (Gmax), s	12.1	* 69	* 17	* 18	22.8	* 58	* 7	* 28
Max Q Clear Time (g_c+I1), s	10.7	72.2	14.6	21.2	20.6	45.0	4.4	28.5
Green Ext Time (p_c), s	0.1	0.0	0.2	0.0	0.4	7.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	62.0
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

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



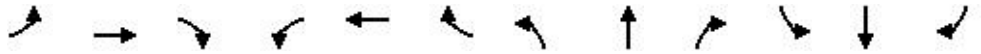
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	102	70	291	82	51	48	236	2303	51	32	1806	25
Future Volume (veh/h)	102	70	291	82	51	48	236	2303	51	32	1806	25
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	111	76	316	89	55	52	257	2503	55	35	1963	27
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	236	362	452	212	171	162	316	3356	73	176	2148	29
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.12	0.87	0.87	0.05	0.80	0.80
Sat Flow, veh/h	1287	1870	1585	992	884	836	3456	5142	113	1781	3589	49
Grp Volume(v), veh/h	111	76	316	89	0	107	257	1654	904	35	969	1021
Grp Sat Flow(s),veh/h/ln	1287	1870	1585	992	0	1720	1728	1702	1850	1781	1777	1861
Q Serve(g_s), s	11.0	4.5	25.0	11.2	0.0	7.1	10.1	25.3	25.8	1.0	56.8	57.8
Cycle Q Clear(g_c), s	18.1	4.5	25.0	15.7	0.0	7.1	10.1	25.3	25.8	1.0	56.8	57.8
Prop In Lane	1.00		1.00	1.00		0.49	1.00		0.06	1.00		0.03
Lane Grp Cap(c), veh/h	236	362	452	212	0	333	316	2222	1208	176	1064	1114
V/C Ratio(X)	0.47	0.21	0.70	0.42	0.00	0.32	0.81	0.74	0.75	0.20	0.91	0.92
Avail Cap(c_a), veh/h	238	366	455	214	0	337	605	2222	1208	200	1064	1114
HCM Platoon Ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.9	43.6	41.2	49.7	0.0	44.5	60.3	4.9	4.9	11.0	11.5	11.6
Incr Delay (d2), s/veh	1.5	0.3	4.7	1.3	0.0	0.6	5.1	2.3	4.3	0.5	13.1	13.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	2.1	10.1	2.8	0.0	3.0	4.5	4.5	5.6	0.4	15.2	16.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.3	43.9	45.8	51.0	0.0	45.1	65.4	7.2	9.2	11.5	24.6	24.7
LnGrp LOS	D	D	D	D	A	D	E	A	A	B	C	C
Approach Vol, veh/h		503			196			2815			2025	
Approach Delay, s/veh		47.2			47.8			13.1			24.4	
Approach LOS		D			D			B			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.7	97.2		32.1	18.3	89.6		32.1				
Change Period (Y+Rc), s	* 5.5	5.8		* 5	* 5.5	5.8		* 5				
Max Green Setting (Gmax), s	* 7.1	89.2		* 27	* 25	71.8		* 27				
Max Q Clear Time (g_c+I1), s	3.0	27.8		27.0	12.1	59.8		17.7				
Green Ext Time (p_c), s	0.0	37.4		0.1	0.7	9.5		0.7				

Intersection Summary	
HCM 6th Ctrl Delay	21.6
HCM 6th LOS	C

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	111	446	43	181	465	72	80	393	185	79	468	133
Future Volume (veh/h)	111	446	43	181	465	72	80	393	185	79	468	133
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	121	485	47	197	505	78	87	427	201	86	509	145
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	501	1559	151	538	1516	233	206	528	246	211	612	174
Arrive On Green	0.06	0.48	0.48	0.08	0.49	0.49	0.06	0.22	0.22	0.06	0.22	0.22
Sat Flow, veh/h	1781	3274	316	1781	3087	475	1781	2353	1097	1781	2733	775
Grp Volume(v), veh/h	121	262	270	197	290	293	87	321	307	86	330	324
Grp Sat Flow(s),veh/h/ln	1781	1777	1813	1781	1777	1785	1781	1777	1673	1781	1777	1731
Q Serve(g_s), s	3.7	10.0	10.1	6.1	10.9	11.0	4.0	18.8	19.2	4.0	19.5	19.7
Cycle Q Clear(g_c), s	3.7	10.0	10.1	6.1	10.9	11.0	4.0	18.8	19.2	4.0	19.5	19.7
Prop In Lane	1.00		0.17	1.00		0.27	1.00		0.66	1.00		0.45
Lane Grp Cap(c), veh/h	501	846	864	538	873	877	206	398	375	211	398	388
V/C Ratio(X)	0.24	0.31	0.31	0.37	0.33	0.33	0.42	0.81	0.82	0.41	0.83	0.84
Avail Cap(c_a), veh/h	561	846	864	700	873	877	255	541	509	259	541	527
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.0	17.7	17.7	12.9	17.0	17.0	31.7	40.4	40.5	31.6	40.7	40.7
Incr Delay (d2), s/veh	0.2	1.0	0.9	0.4	1.0	1.0	1.4	6.4	7.4	1.3	7.7	8.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	4.2	4.3	2.4	4.6	4.6	1.8	8.7	8.4	1.7	9.1	9.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.3	18.7	18.7	13.4	18.0	18.1	33.1	46.8	47.9	32.8	48.4	49.1
LnGrp LOS	B	B	B	B	B	B	C	D	D	C	D	D
Approach Vol, veh/h		653			780			715			740	
Approach Delay, s/veh		17.7			16.9			45.6			46.9	
Approach LOS		B			B			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	56.9	11.0	29.1	11.3	58.5	11.0	29.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	18.5	30.5	9.5	33.5	10.5	38.5	9.5	33.5
Max Q Clear Time (g_c+I1), s	8.1	12.1	6.0	21.7	5.7	13.0	6.0	21.2
Green Ext Time (p_c), s	0.4	2.9	0.0	3.0	0.1	3.6	0.0	2.9

Intersection Summary	
HCM 6th Ctrl Delay	31.9
HCM 6th LOS	C

Un-Signalized Intersection Analysis

HCS Two-Way Stop-Control Report

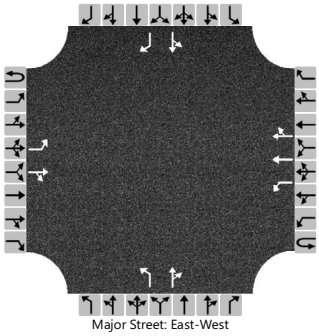
General Information

Analyst	MIM
Agency/Co.	ACD
Date Performed	11/18/23
Analysis Year	2023
Time Analyzed	Build w/o con. AM Peak
Intersection Orientation	East-West
Project Description	Sawmill 55+ Continuing Care Facility

Site Information

Intersection	Bright Rd. & Prop. Access
Jurisdiction	City of Dublin
East/West Street	Bright Rd.
North/South Street	Proposed Access
Peak Hour Factor	0.92
Analysis Time Period (hrs)	1.00

Lanes


Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	1	2	0		1	1	0		0	1	1
Configuration		L		TR		L	T	TR		L		TR		LT		R
Volume (veh/h)	0	11	247	12		71	281	18		5	0	25		18	0	6
Percent Heavy Vehicles (%)	3	3				3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized														No		
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.5	6.5	6.2		7.5	6.5	6.9
Critical Headway (sec)		4.16				4.16				7.56	6.56	6.26		7.56	6.56	6.96
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53	4.03	3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		12				77				5		27		20		7
Capacity, c (veh/h)		1224				1271				344		759		253		850
v/c Ratio		0.01				0.06				0.02		0.04		0.08		0.01
95% Queue Length, Q_{95} (veh)		0.0				0.2				0.0		0.1		0.3		0.0
Control Delay (s/veh)		8.0				8.0				15.6		9.9		20.4		9.3
Level of Service (LOS)		A				A				C		A		C		A
Approach Delay (s/veh)	0.3				1.5				10.9				17.6			
Approach LOS	A				A				B				C			

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HCS Two-Way Stop-Control Report

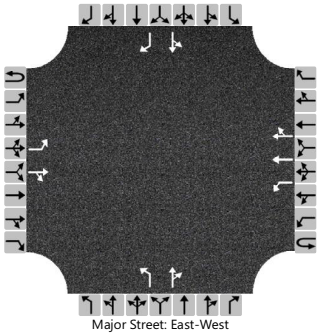
General Information

Analyst	MIM
Agency/Co.	ACD
Date Performed	11/19/23
Analysis Year	2023
Time Analyzed	Build w/o con. PM Peak
Intersection Orientation	East-West
Project Description	Sawmill 55+ Continuing Care Facility

Site Information

Intersection	Bright Rd. & Prop. Access
Jurisdiction	City of Dublin
East/West Street	Bright Rd.
North/South Street	Proposed Access
Peak Hour Factor	0.92
Analysis Time Period (hrs)	1.00

Lanes


Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	1	2	0		1	1	0		0	1	1
Configuration		L		TR		L	T	TR		L		TR		LT		R
Volume (veh/h)	0	10	284	5		31	233	16		12	0	61		40	0	16
Percent Heavy Vehicles (%)	3	3				3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized														No		
Median Type | Storage						Undivided										

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.5	6.5	6.2		7.5	6.5	6.9
Critical Headway (sec)		4.16				4.16				7.56	6.56	6.26		7.56	6.56	6.96
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53	4.03	3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		11				34				13		66		43		17
Capacity, c (veh/h)		1283				1236				402		724		286		885
v/c Ratio		0.01				0.03				0.03		0.09		0.15		0.02
95% Queue Length, Q_{95} (veh)		0.0				0.1				0.1		0.3		0.5		0.1
Control Delay (s/veh)		7.8				8.0				14.2		10.5		19.8		9.1
Level of Service (LOS)		A				A				B		B		C		A
Approach Delay (s/veh)	0.3				0.9				11.1				16.8			
Approach LOS	A				A				B				C			

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HCS Two-Way Stop-Control Report

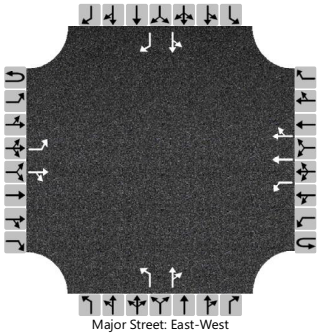
General Information

Analyst	MIM
Agency/Co.	ACD
Date Performed	11/18/23
Analysis Year	2033
Time Analyzed	Build w/o con. AM Peak
Intersection Orientation	East-West
Project Description	Sawmill 55+ Continuing Care Facility

Site Information

Intersection	Bright Rd. & Prop. Access
Jurisdiction	City of Dublin
East/West Street	Bright Rd.
North/South Street	Proposed Access
Peak Hour Factor	0.92
Analysis Time Period (hrs)	1.00

Lanes


Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	1	2	0		1	1	0		0	1	1
Configuration		L		TR		L	T	TR		L		TR		LT		R
Volume (veh/h)	0	11	284	17		102	293	18		7	0	34		18	0	6
Percent Heavy Vehicles (%)	3	3				3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized														No		
Median Type | Storage						Undivided										

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.5	6.5	6.2		7.5	6.5	6.9
Critical Headway (sec)		4.16				4.16				7.56	6.56	6.26		7.56	6.56	6.96
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53	4.03	3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		12				111				8		37		20		7
Capacity, c (veh/h)		1211				1222				274		718		195		842
v/c Ratio		0.01				0.09				0.03		0.05		0.10		0.01
95% Queue Length, Q_{95} (veh)		0.0				0.3				0.1		0.2		0.3		0.0
Control Delay (s/veh)		8.0				8.2				18.5		10.3		25.6		9.3
Level of Service (LOS)		A				A				C		B		D		A
Approach Delay (s/veh)	0.3				2.0				11.7				21.5			
Approach LOS	A				A				B				C			

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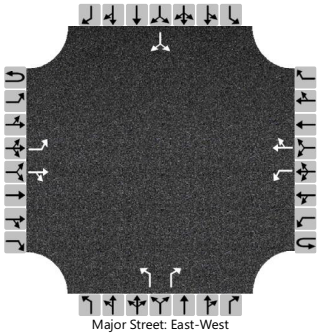
HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	MIM	Intersection	Bright Rd. & Prop. Access
Agency/Co.	ACD	Jurisdiction	City of Dublin
Date Performed	11/18/23	East/West Street	Bright Rd.
Analysis Year	2033	North/South Street	Proposed Access
Time Analyzed	Build w/o con. PM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	1.00
Project Description	Sawmill 55+ Continuing Care Facility		

Lanes


Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	1	1	0		1	0	1		0	1	0
Configuration		L		TR		L		TR		L		R			LR	
Volume (veh/h)		10	334	8		50	248	16		19		96		40		16
Percent Heavy Vehicles (%)		3				3				3		3		3		3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized										No						
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1		6.2		7.1		6.2
Critical Headway (sec)		4.13				4.13				7.13		6.23		7.13		6.23
Base Follow-Up Headway (sec)		2.2				2.2				3.5		3.3		3.5		3.3
Follow-Up Headway (sec)		2.23				2.23				3.53		3.33		3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		11				54				21		104			61	
Capacity, c (veh/h)		1269				1181				286		676			288	
v/c Ratio		0.01				0.05				0.07		0.15			0.21	
95% Queue Length, Q_{95} (veh)		0.0				0.1				0.2		0.5			0.8	
Control Delay (s/veh)		7.9				8.2				18.6		11.3			20.8	
Level of Service (LOS)		A				A				C		B			C	
Approach Delay (s/veh)	0.2				1.3				12.5				20.8			
Approach LOS	A				A				B				C			

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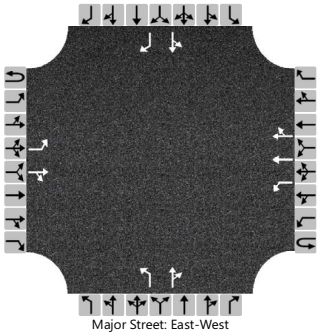
HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	MIM	Intersection	Bright Rd. & Prop. Access
Agency/Co.	ACD	Jurisdiction	City of Dublin
Date Performed	11/18/23	East/West Street	Bright Rd.
Analysis Year	2033	North/South Street	Proposed Access
Time Analyzed	Build w/ con. AM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	1.00
Project Description	Sawmill 55+ Continuing Care Facility		

Lanes


Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	1	2	0		1	1	0		0	1	1
Configuration		L		TR		L	T	TR		L		TR		LT		R
Volume (veh/h)	0	11	278	17		78	282	18		7	0	24		18	0	6
Percent Heavy Vehicles (%)	3	3				3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized														No		
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.5	6.5	6.2		7.5	6.5	6.9
Critical Headway (sec)		4.16				4.16				7.56	6.56	6.26		7.56	6.56	6.96
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53	4.03	3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		12				85				8		26		20		7
Capacity, c (veh/h)		1223				1229				313		724		230		850
v/c Ratio		0.01				0.07				0.02		0.04		0.09		0.01
95% Queue Length, Q_{95} (veh)		0.0				0.2				0.1		0.1		0.3		0.0
Control Delay (s/veh)		8.0				8.1				16.8		10.2		22.1		9.3
Level of Service (LOS)		A				A				C		B		C		A
Approach Delay (s/veh)	0.3				1.7				11.7				18.9			
Approach LOS	A				A				B				C			

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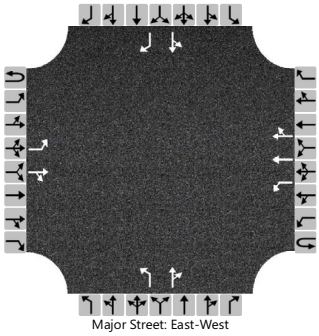
HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	MIM	Intersection	Bright Rd. & Prop. Access
Agency/Co.	ACD	Jurisdiction	City of Dublin
Date Performed	11/18/23	East/West Street	Bright Rd.
Analysis Year	2033	North/South Street	Proposed Access
Time Analyzed	Build w/ con. PM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	1.00
Project Description	Sawmill 55+ Continuing Care Facility		

Lanes


Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	1	2	0		1	1	0		0	1	1
Configuration		L		TR		L	T	TR		L		TR		LT		R
Volume (veh/h)	0	10	351	8		38	233	16		19	0	69		40	0	16
Percent Heavy Vehicles (%)	3	3				3				3	3	3		3	3	3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized														No		
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.5	6.5	6.2		7.5	6.5	6.9
Critical Headway (sec)		4.16				4.16				7.56	6.56	6.26		7.56	6.56	6.96
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53	4.03	3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		11				41				21		75		43		17
Capacity, c (veh/h)		1283				1158				344		657		236		885
v/c Ratio		0.01				0.04				0.06		0.11		0.18		0.02
95% Queue Length, Q_{95} (veh)		0.0				0.1				0.2		0.4		0.7		0.1
Control Delay (s/veh)		7.8				8.2				16.1		11.2		23.7		9.1
Level of Service (LOS)		A				A				C		B		C		A
Approach Delay (s/veh)	0.2				1.1				12.3				19.5			
Approach LOS	A				A				B				C			

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HCS Two-Way Stop-Control Report

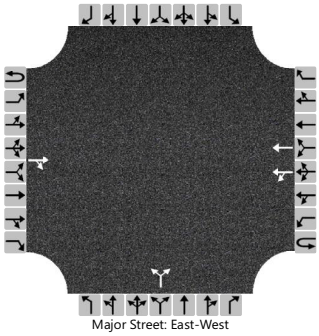
General Information

Analyst	MIM
Agency/Co.	ACD
Date Performed	11/18/23
Analysis Year	2023
Time Analyzed	Build w/o con. AM Peak
Intersection Orientation	East-West
Project Description	Sawmill 55+ Continuing Care Facility

Site Information

Intersection	Bright Rd. & Inverness Ct
Jurisdiction	City of Dublin
East/West Street	Bright Rd.
North/South Street	Inverness Ct.
Peak Hour Factor	0.92
Analysis Time Period (hrs)	1.00

Lanes


Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	2	0		0	1	0		0	0	0
Configuration				TR		LT	T				LR					
Volume (veh/h)			270	20		46	350			12		36				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.5		6.2				
Critical Headway (sec)						4.16				6.86		6.26				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						50					52					
Capacity, c (veh/h)						1235					613					
v/c Ratio						0.04					0.09					
95% Queue Length, Q_{95} (veh)						0.1					0.3					
Control Delay (s/veh)						8.0	0.3				11.4					
Level of Service (LOS)						A	A				B					
Approach Delay (s/veh)					1.2				11.4							
Approach LOS					A				B							

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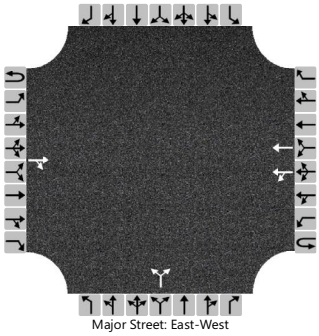
HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	MIM	Intersection	Bright Rd. & Inverness Ct
Agency/Co.	ACD	Jurisdiction	City of Dublin
Date Performed	11/18/23	East/West Street	Bright Rd.
Analysis Year	2023	North/South Street	Inverness Ct.
Time Analyzed	Build w/o con. PM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	1.00
Project Description	Sawmill 55+ Continuing Care Facility		

Lanes


Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	2	0		0	1	0		0	0	0
Configuration				TR		LT	T				LR					
Volume (veh/h)			371	14		39	241			18		44				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.5		6.2				
Critical Headway (sec)						4.16				6.86		6.26				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						42					67					
Capacity, c (veh/h)						1130					541					
v/c Ratio						0.04					0.12					
95% Queue Length, Q_{95} (veh)						0.1					0.4					
Control Delay (s/veh)						8.3	0.3				12.6					
Level of Service (LOS)						A	A				B					
Approach Delay (s/veh)					1.4				12.6							
Approach LOS					A				B							

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HCS Two-Way Stop-Control Report

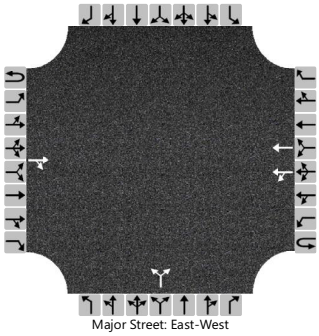
General Information

Analyst	MIM
Agency/Co.	ACD
Date Performed	11/18/23
Analysis Year	2033
Time Analyzed	Build w/ con. AM Peak
Intersection Orientation	East-West
Project Description	Sawmill 55+ Continuing Care Facility

Site Information

Intersection	Bright Rd. & Inverness Ct
Jurisdiction	City of Dublin
East/West Street	Bright Rd.
North/South Street	Inverness Ct.
Peak Hour Factor	0.92
Analysis Time Period (hrs)	1.00

Lanes


Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	2	0		0	1	0		0	0	0
Configuration				TR		LT	T				LR					
Volume (veh/h)			294	23		53	365			13		37				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.5		6.2				
Critical Headway (sec)						4.16				6.86		6.26				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						58					54					
Capacity, c (veh/h)						1204					577					
v/c Ratio						0.05					0.09					
95% Queue Length, Q_{95} (veh)						0.2					0.3					
Control Delay (s/veh)						8.1	0.3				11.9					
Level of Service (LOS)						A	A				B					
Approach Delay (s/veh)					1.3				11.9							
Approach LOS					A				B							

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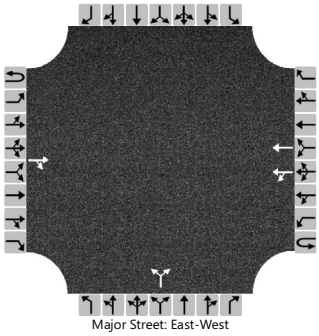
HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	MIM	Intersection	Bright Rd. & Inverness Ct
Agency/Co.	ACD	Jurisdiction	City of Dublin
Date Performed	11/18/23	East/West Street	Bright Rd.
Analysis Year	2033	North/South Street	Inverness Ct.
Time Analyzed	Build w/o con. PM Peak	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	1.00
Project Description	Sawmill 55+ Continuing Care Facility		

Lanes


Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	2	0		0	1	0		0	0	0
Configuration				TR		LT	T				LR					
Volume (veh/h)			454	16		44	295			19		47				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.5		6.2				
Critical Headway (sec)						4.16				6.86		6.26				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						48					72					
Capacity, c (veh/h)						1044					465					
v/c Ratio						0.05					0.15					
95% Queue Length, Q_{95} (veh)						0.1					0.5					
Control Delay (s/veh)						8.6	0.3				14.2					
Level of Service (LOS)						A	A				B					
Approach Delay (s/veh)					1.4				14.2							
Approach LOS					A				B							

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HCS Two-Way Stop-Control Report

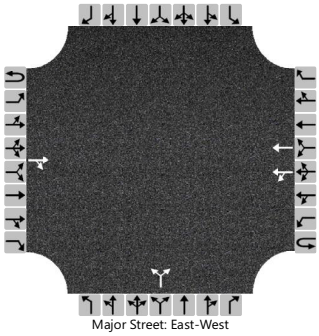
General Information

Analyst	MIM
Agency/Co.	ACD
Date Performed	11/18/23
Analysis Year	2033
Time Analyzed	Build w/ con. AM Peak
Intersection Orientation	East-West
Project Description	Sawmill 55+ Continuing Care Facility

Site Information

Intersection	Bright Rd. & Inverness Ct
Jurisdiction	City of Dublin
East/West Street	Bright Rd.
North/South Street	Inverness Ct.
Peak Hour Factor	0.92
Analysis Time Period (hrs)	1.00

Lanes


Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	2	0		0	1	0		0	0	0
Configuration				TR		LT	T				LR					
Volume (veh/h)			294	23		53	365			13		37				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.5		6.2				
Critical Headway (sec)						4.16				6.86		6.26				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						58					54					
Capacity, c (veh/h)						1204					577					
v/c Ratio						0.05					0.09					
95% Queue Length, Q_{95} (veh)						0.2					0.3					
Control Delay (s/veh)						8.1	0.3				11.9					
Level of Service (LOS)						A	A				B					
Approach Delay (s/veh)					1.3				11.9							
Approach LOS					A				B							

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HCS Two-Way Stop-Control Report

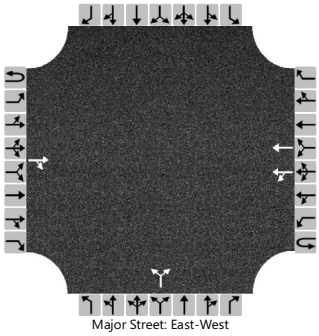
General Information

Analyst	MIM
Agency/Co.	ACD
Date Performed	11/18/23
Analysis Year	2033
Time Analyzed	Build w/ con. PM Peak
Intersection Orientation	East-West
Project Description	Sawmill 55+ Continuing Care Facility

Site Information

Intersection	Bright Rd. & Inverness Ct
Jurisdiction	City of Dublin
East/West Street	Bright Rd.
North/South Street	Inverness Ct.
Peak Hour Factor	0.92
Analysis Time Period (hrs)	1.00

Lanes


Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	2	0		0	1	0		0	0	0
Configuration				TR		LT	T				LR					
Volume (veh/h)			444	16		44	283			19		47				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.5		6.2				
Critical Headway (sec)						4.16				6.86		6.26				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						48					72					
Capacity, c (veh/h)						1053					474					
v/c Ratio						0.05					0.15					
95% Queue Length, Q_{95} (veh)						0.1					0.5					
Control Delay (s/veh)						8.6	0.3				13.9					
Level of Service (LOS)						A	A				B					
Approach Delay (s/veh)					1.4				13.9							
Approach LOS					A				B							

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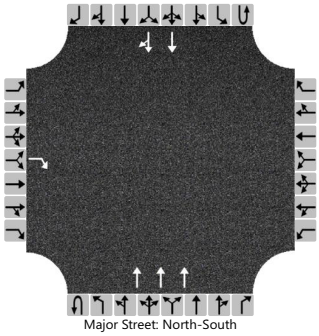
HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	MIM	Intersection	Sawmill Rd & Ex. RIRO
Agency/Co.	ACD	Jurisdiction	City of Dublin & Columbus
Date Performed	11/18/23	East/West Street	Ex. RIRO
Analysis Year	2023	North/South Street	Sawmill Road
Time Analyzed	Build w/o con. AM Peak	Peak Hour Factor	0.92
Intersection Orientation	North-South	Analysis Time Period (hrs)	1.00
Project Description	Sawmill 55+ Continuing Care Facility		

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	1		0	0	0	0	0	3	0	0	0	2	0
Configuration				R							T				T	TR
Volume (veh/h)				1							1496				1961	16
Percent Heavy Vehicles (%)				3												
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized		No														
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)				6.9												
Critical Headway (sec)				6.96												
Base Follow-Up Headway (sec)				3.3												
Follow-Up Headway (sec)				3.33												

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)				1												
Capacity, c (veh/h)				214												
v/c Ratio				0.01												
95% Queue Length, Q_{95} (veh)				0.0												
Control Delay (s/veh)				21.9												
Level of Service (LOS)				C												
Approach Delay (s/veh)		21.9														
Approach LOS		C														

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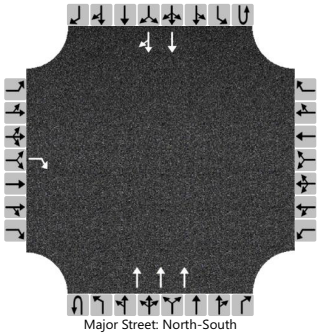
HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	MIM	Intersection	Sawmill Rd & Ex. RIRO
Agency/Co.	ACD	Jurisdiction	City of Dublin & Columbus
Date Performed	11/18/23	East/West Street	Ex. RIRO
Analysis Year	2023	North/South Street	Sawmill Road
Time Analyzed	Build w/o con. PM Peak	Peak Hour Factor	0.92
Intersection Orientation	North-South	Analysis Time Period (hrs)	1.00
Project Description	Sawmill 55+ Continuing Care Facility		

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	1		0	0	0	0	0	3	0	0	0	2	0
Configuration				R							T				T	TR
Volume (veh/h)				7							2459				1901	14
Percent Heavy Vehicles (%)				3												
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized		No														
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)				6.9												
Critical Headway (sec)				6.96												
Base Follow-Up Headway (sec)				3.3												
Follow-Up Headway (sec)				3.33												

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)				8												
Capacity, c (veh/h)				225												
v/c Ratio				0.03												
95% Queue Length, Q_{95} (veh)				0.1												
Control Delay (s/veh)				21.6												
Level of Service (LOS)				C												
Approach Delay (s/veh)		21.6														
Approach LOS		C														

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HCS Two-Way Stop-Control Report

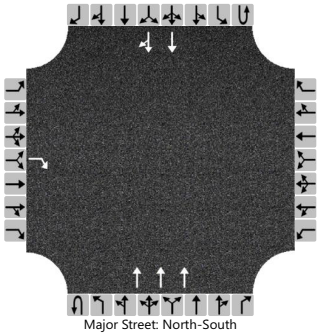
General Information

Analyst	MIM
Agency/Co.	ACD
Date Performed	11/18/23
Analysis Year	2033
Time Analyzed	Build w/o con. AM Peak
Intersection Orientation	North-South
Project Description	Sawmill 55+ Continuing Care Facility

Site Information

Intersection	Sawmill Rd & Ex. RIRO
Jurisdiction	City of Dublin & Columbus
East/West Street	Ex. RIRO
North/South Street	Sawmill Road
Peak Hour Factor	0.92
Analysis Time Period (hrs)	1.00

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	1		0	0	0	0	0	3	0	0	0	2	0
Configuration				R							T				T	TR
Volume (veh/h)				4							1576				2068	16
Percent Heavy Vehicles (%)				3												
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized		No														
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)				6.9												
Critical Headway (sec)				6.96												
Base Follow-Up Headway (sec)				3.3												
Follow-Up Headway (sec)				3.33												

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)				4												
Capacity, c (veh/h)				195												
v/c Ratio				0.02												
95% Queue Length, Q_{95} (veh)				0.1												
Control Delay (s/veh)				23.9												
Level of Service (LOS)				C												
Approach Delay (s/veh)		23.9														
Approach LOS		C														

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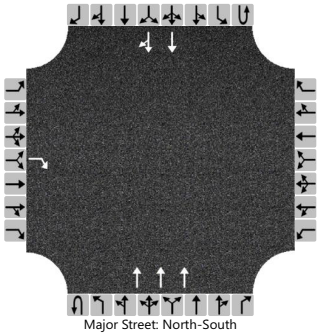
HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	MIM	Intersection	Sawmill Rd & Ex. RIRO
Agency/Co.	ACD	Jurisdiction	City of Dublin & Columbus
Date Performed	11/18/23	East/West Street	Ex. RIRO
Analysis Year	2033	North/South Street	Sawmill Road
Time Analyzed	Build w/o con. PM Peak	Peak Hour Factor	0.92
Intersection Orientation	North-South	Analysis Time Period (hrs)	1.00
Project Description	Sawmill 55+ Continuing Care Facility		

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	1		0	0	0	0	0	3	0	0	0	2	0
Configuration				R							T				T	TR
Volume (veh/h)				7							2596				1991	14
Percent Heavy Vehicles (%)				3												
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized		No														
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)				6.9												
Critical Headway (sec)				6.96												
Base Follow-Up Headway (sec)				3.3												
Follow-Up Headway (sec)				3.33												

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)				8												
Capacity, c (veh/h)				209												
v/c Ratio				0.04												
95% Queue Length, Q_{95} (veh)				0.1												
Control Delay (s/veh)				22.9												
Level of Service (LOS)				C												
Approach Delay (s/veh)		22.9														
Approach LOS		C														

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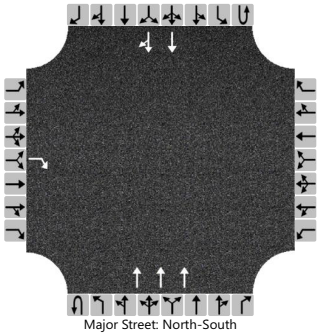
HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	MIM	Intersection	Sawmill Rd & Ex. RIRO
Agency/Co.	ACD	Jurisdiction	City of Dublin & Columbus
Date Performed	11/18/23	East/West Street	Ex. RIRO
Analysis Year	2033	North/South Street	Sawmill Road
Time Analyzed	Build w/ con. AM Peak	Peak Hour Factor	0.92
Intersection Orientation	North-South	Analysis Time Period (hrs)	1.00
Project Description	Sawmill 55+ Continuing Care Facility		

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	1		0	0	0	0	0	3	0	0	0	2	0
Configuration				R							T				T	TR
Volume (veh/h)				4							1544				2023	16
Percent Heavy Vehicles (%)				3												
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized		No														
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)				6.9												
Critical Headway (sec)				6.96												
Base Follow-Up Headway (sec)				3.3												
Follow-Up Headway (sec)				3.33												

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)				4												
Capacity, c (veh/h)				203												
v/c Ratio				0.02												
95% Queue Length, Q_{95} (veh)				0.1												
Control Delay (s/veh)				23.1												
Level of Service (LOS)				C												
Approach Delay (s/veh)		23.1														
Approach LOS		C														

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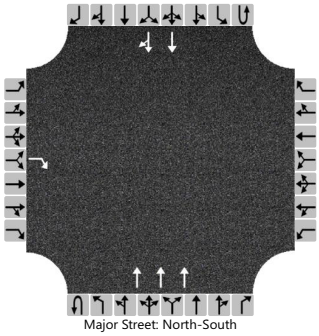
HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	MIM	Intersection	Sawmill Rd & Ex. RIRO
Agency/Co.	ACD	Jurisdiction	City of Dublin & Columbus
Date Performed	11/18/23	East/West Street	Ex. RIRO
Analysis Year	2033	North/South Street	Sawmill Road
Time Analyzed	Build w/ con. PM Peak	Peak Hour Factor	0.92
Intersection Orientation	North-South	Analysis Time Period (hrs)	1.00
Project Description	Sawmill 55+ Continuing Care Facility		

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	1		0	0	0	0	0	3	0	0	0	2	0
Configuration				R							T				T	TR
Volume (veh/h)				7							2453				1864	14
Percent Heavy Vehicles (%)				3												
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized		No														
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)				6.9												
Critical Headway (sec)				6.96												
Base Follow-Up Headway (sec)				3.3												
Follow-Up Headway (sec)				3.33												

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)				8												
Capacity, c (veh/h)				232												
v/c Ratio				0.03												
95% Queue Length, Q_{95} (veh)				0.1												
Control Delay (s/veh)				21.0												
Level of Service (LOS)				C												
Approach Delay (s/veh)		21.0														
Approach LOS		C														

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LEVEL OF SERVICE

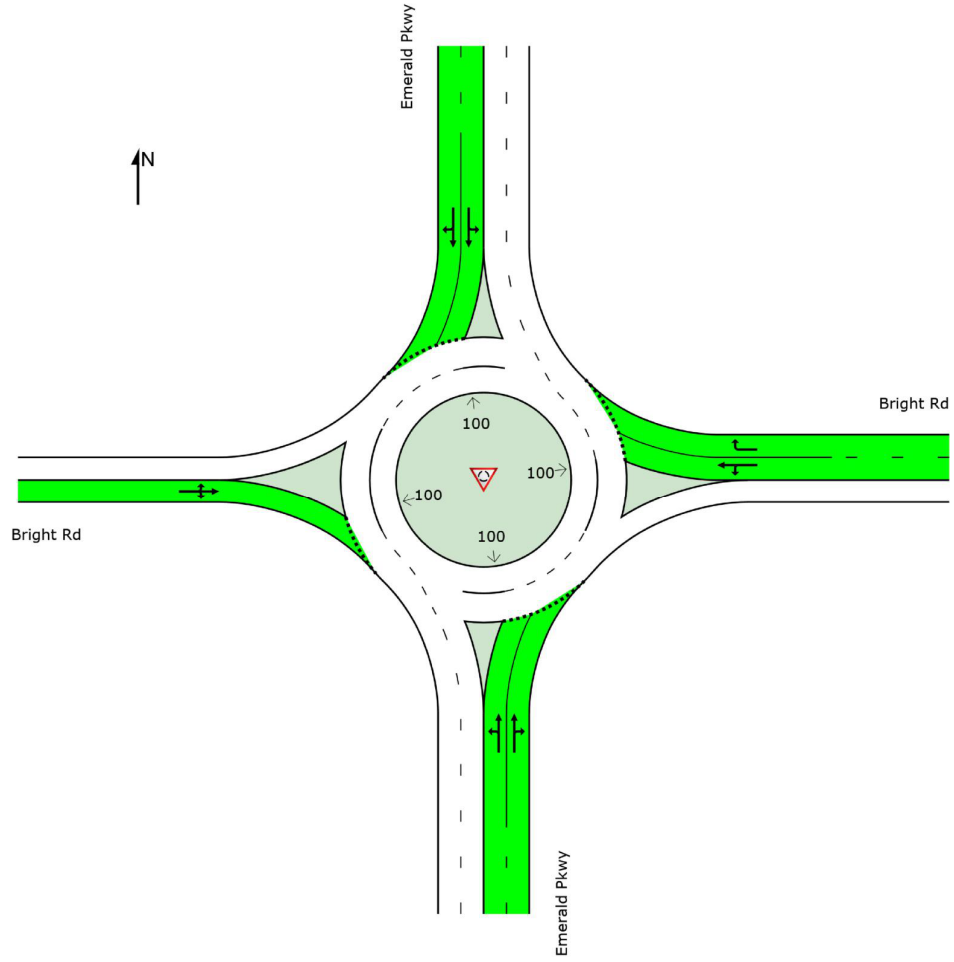
Lane Level of Service

Site: 101 [2023 AM No Build Without Connector (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.5.224

Bright Rd Senior Care Facility TIS
Emerald Pkwy and Bright Rd
2023 AM No Build
Site Category: (None)
Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	A	A	A	A



Colour code based on Level of Service

LOS A | LOS B | LOS C | LOS D | LOS E | LOS F

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout Level of Service Method: Same as Signalised Intersections
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

LEVEL OF SERVICE

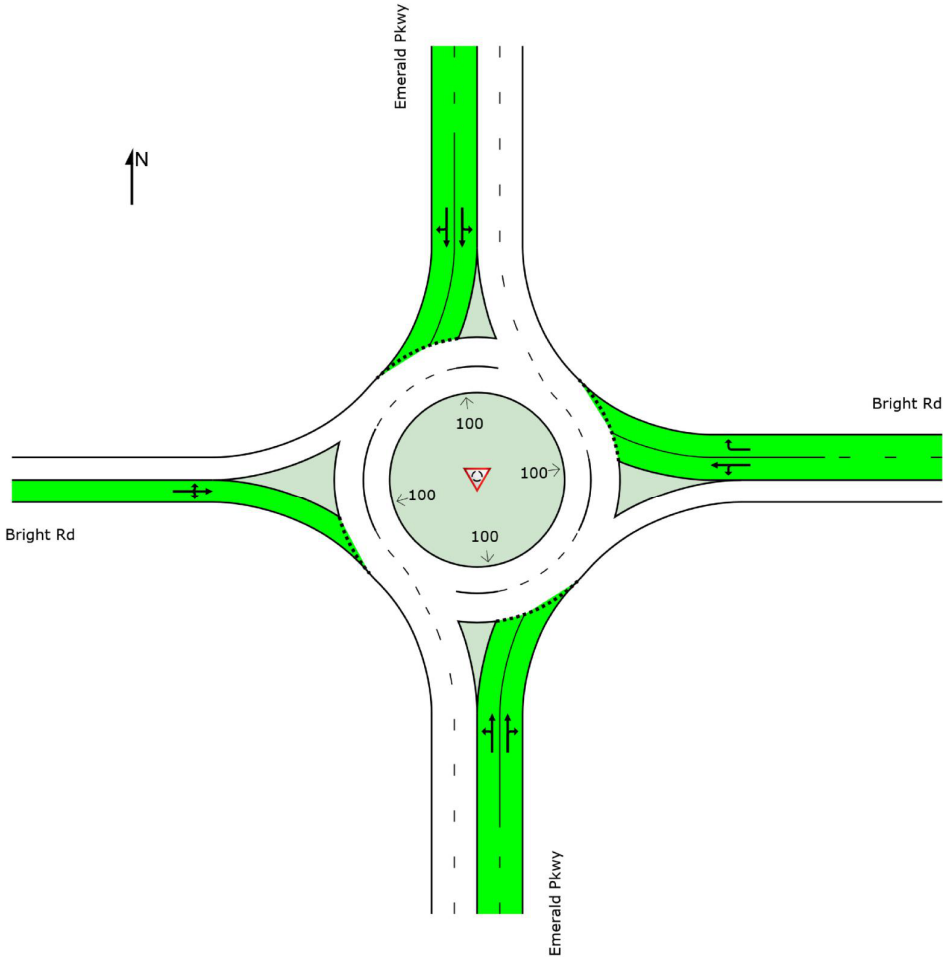
Lane Level of Service

Site: 101 [2023 PM No Build Without Connector (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.5.224

Bright Rd Senior Care Facility TIS
Emerald Pkwy and Bright Rd
2023 PM No Build
Site Category: (None)
Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	A	A	A	A



Colour code based on Level of Service

LOS A | LOS B | LOS C | LOS D | LOS E | LOS F

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout Level of Service Method: Same as Signalised Intersections
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

LEVEL OF SERVICE

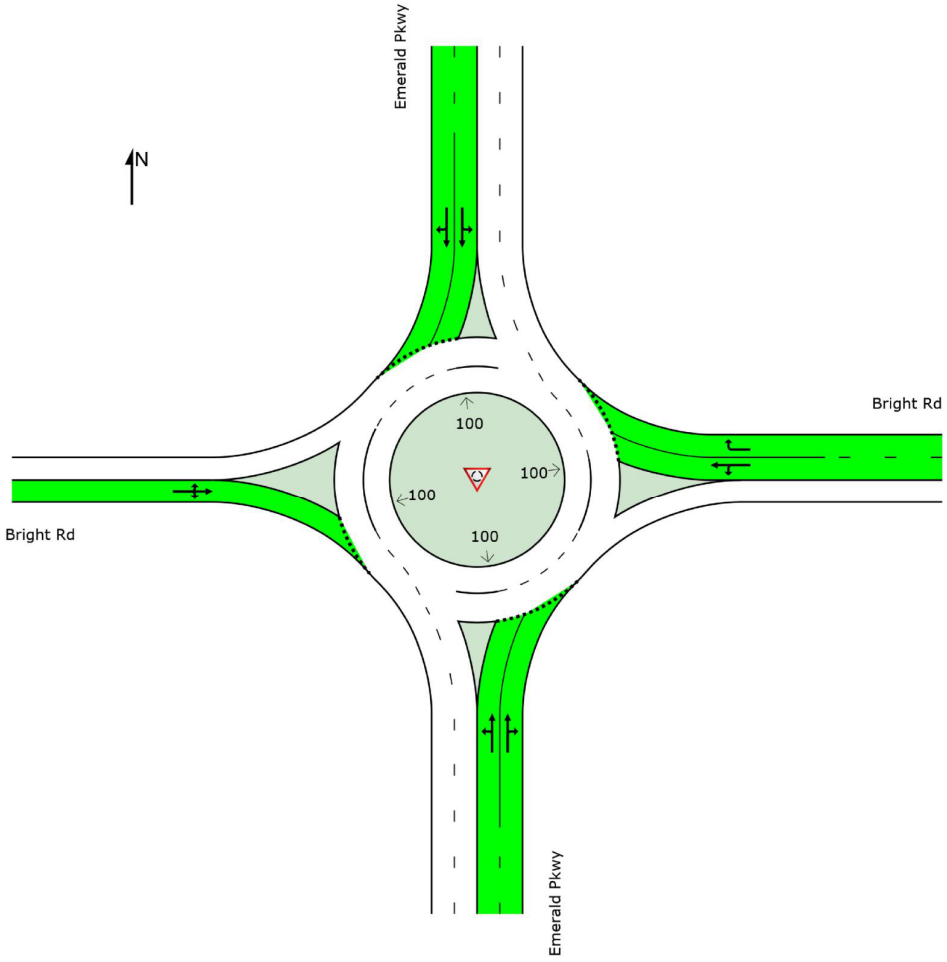
Lane Level of Service

Site: 101 [2023 AM Build Without Connector (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.5.224

Bright Rd Senior Care Facility TIS
Emerald Pkwy and Bright Rd
2023 AM Build
Site Category: (None)
Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	A	A	A	A



Colour code based on Level of Service

LOS A | LOS B | LOS C | LOS D | LOS E | LOS F

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout Level of Service Method: Same as Signalised Intersections
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

LEVEL OF SERVICE

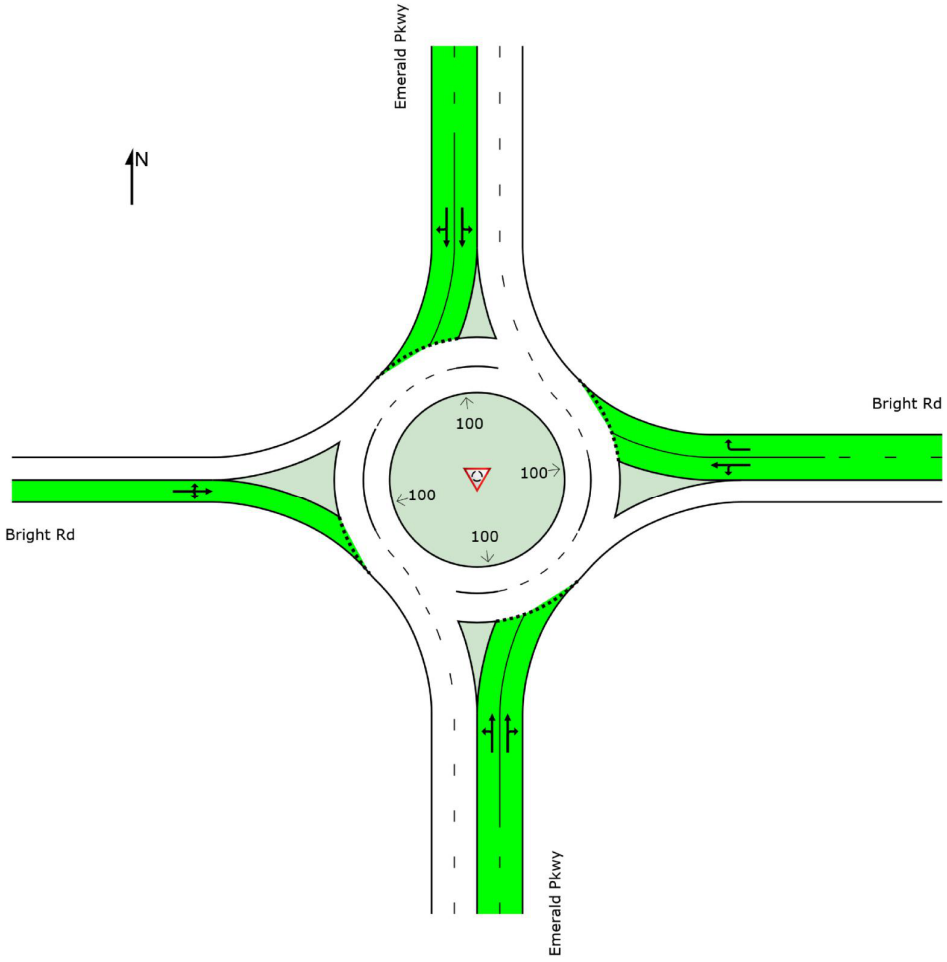
Lane Level of Service

Site: 101 [2023 PM Build Without Connector (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.5.224

Bright Rd Senior Care Facility TIS
Emerald Pkwy and Bright Rd
2023 PM Build
Site Category: (None)
Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	A	A	A	A



Colour code based on Level of Service

LOS A | LOS B | LOS C | LOS D | LOS E | LOS F

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout Level of Service Method: Same as Signalised Intersections
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

LEVEL OF SERVICE

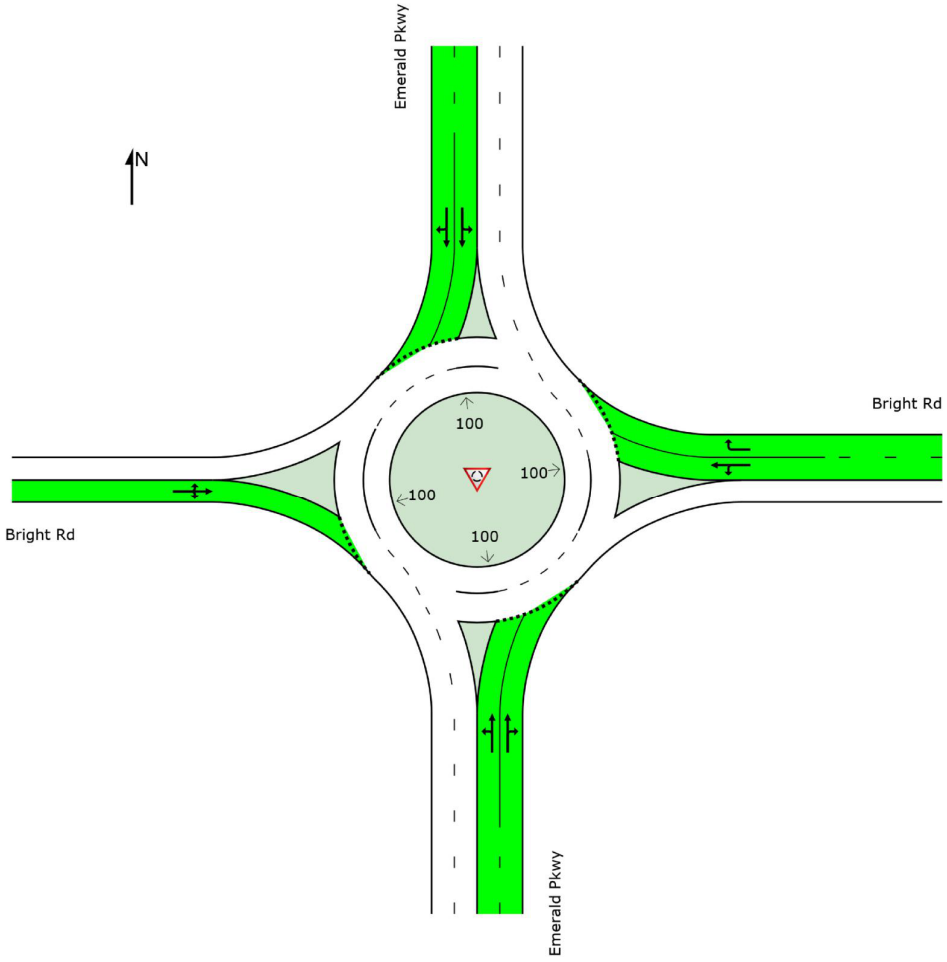
Lane Level of Service

Site: 101 [2033 PM No Build With Connector (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.5.224

Bright Rd Senior Care Facility TIS
Emerald Pkwy and Bright Rd
2033 PM No Build
Site Category: (None)
Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	A	A	A	A



Colour code based on Level of Service

LOS A | LOS B | LOS C | LOS D | LOS E | LOS F

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout Level of Service Method: Same as Signalised Intersections
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

LEVEL OF SERVICE

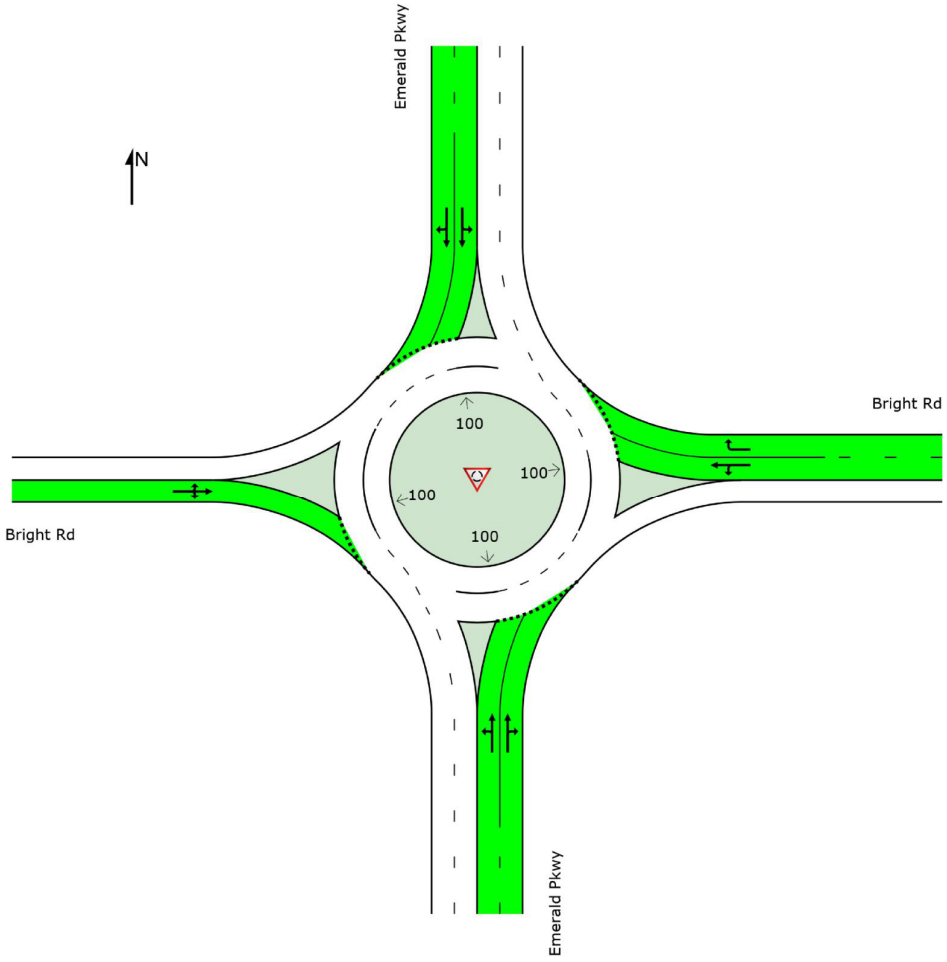
Lane Level of Service

Site: 101 [2033 PM Build With Connector (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.5.224

Bright Rd Senior Care Facility TIS
Emerald Pkwy and Bright Rd
2033 PM Build
Site Category: (None)
Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	A	A	A	A



Colour code based on Level of Service

LOS A | LOS B | LOS C | LOS D | LOS E | LOS F

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout Level of Service Method: Same as Signalised Intersections
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

LEVEL OF SERVICE

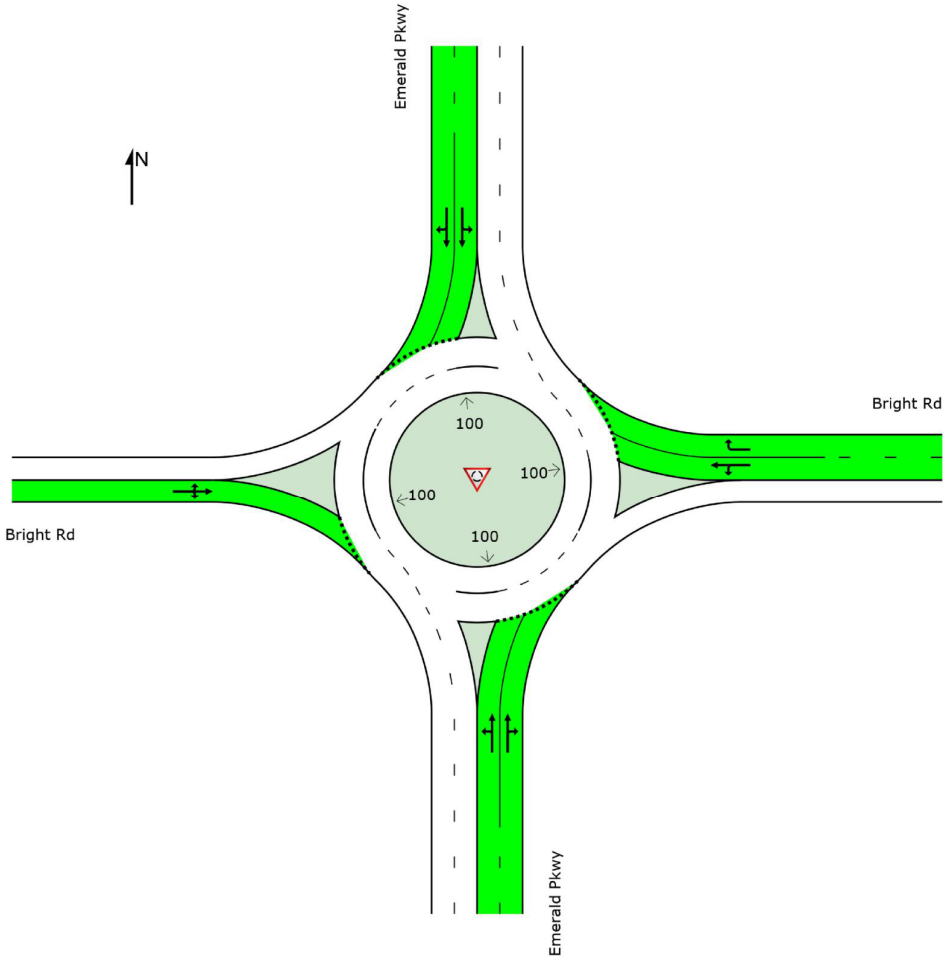
Lane Level of Service

Site: 101 [2033 PM Build Without Connector (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.5.224

Bright Rd Senior Care Facility TIS
Emerald Pkwy and Bright Rd
2033 PM Build
Site Category: (None)
Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	A	A	A	A



Colour code based on Level of Service

LOS A | LOS B | LOS C | LOS D | LOS E | LOS F

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout Level of Service Method: Same as Signalised Intersections
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

LEVEL OF SERVICE

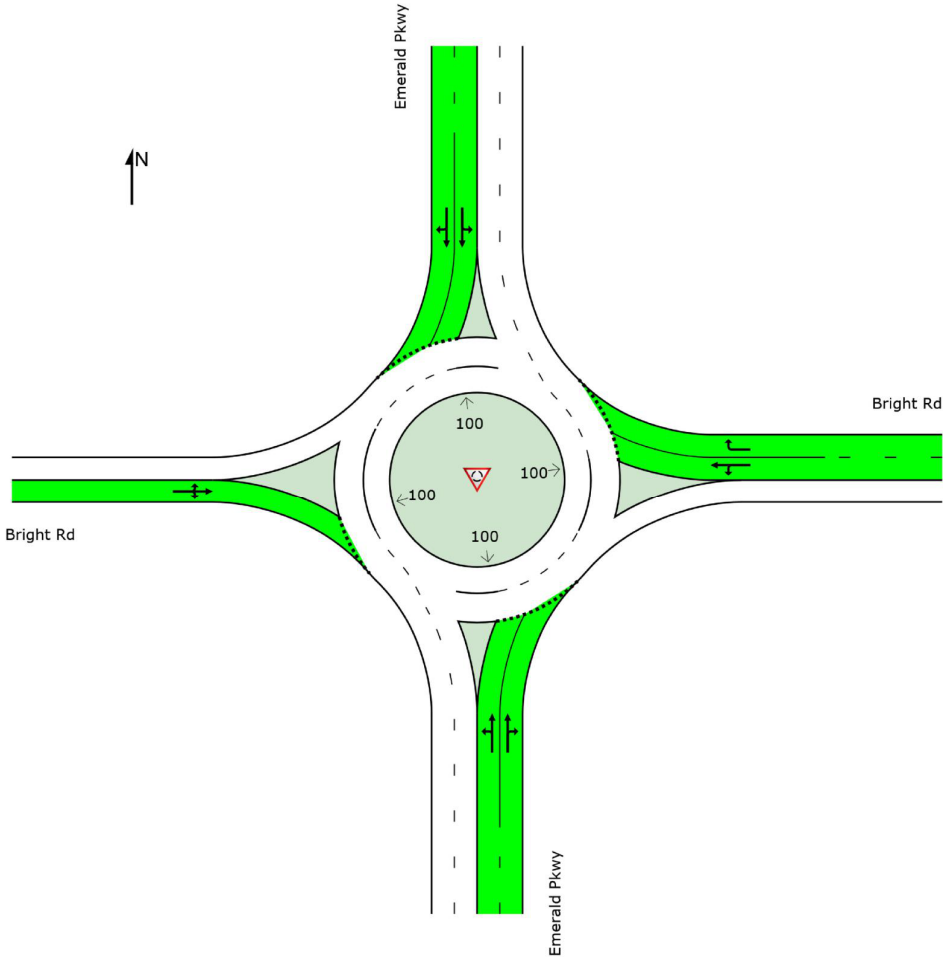
Lane Level of Service

Site: 101 [2033 PM No Build Without Connector (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.5.224

Bright Rd Senior Care Facility TIS
Emerald Pkwy and Bright Rd
2033 PM No Build
Site Category: (None)
Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	A	A	A	A



Colour code based on Level of Service

LOS A | LOS B | LOS C | LOS D | LOS E | LOS F

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout Level of Service Method: Same as Signalised Intersections
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

LEVEL OF SERVICE

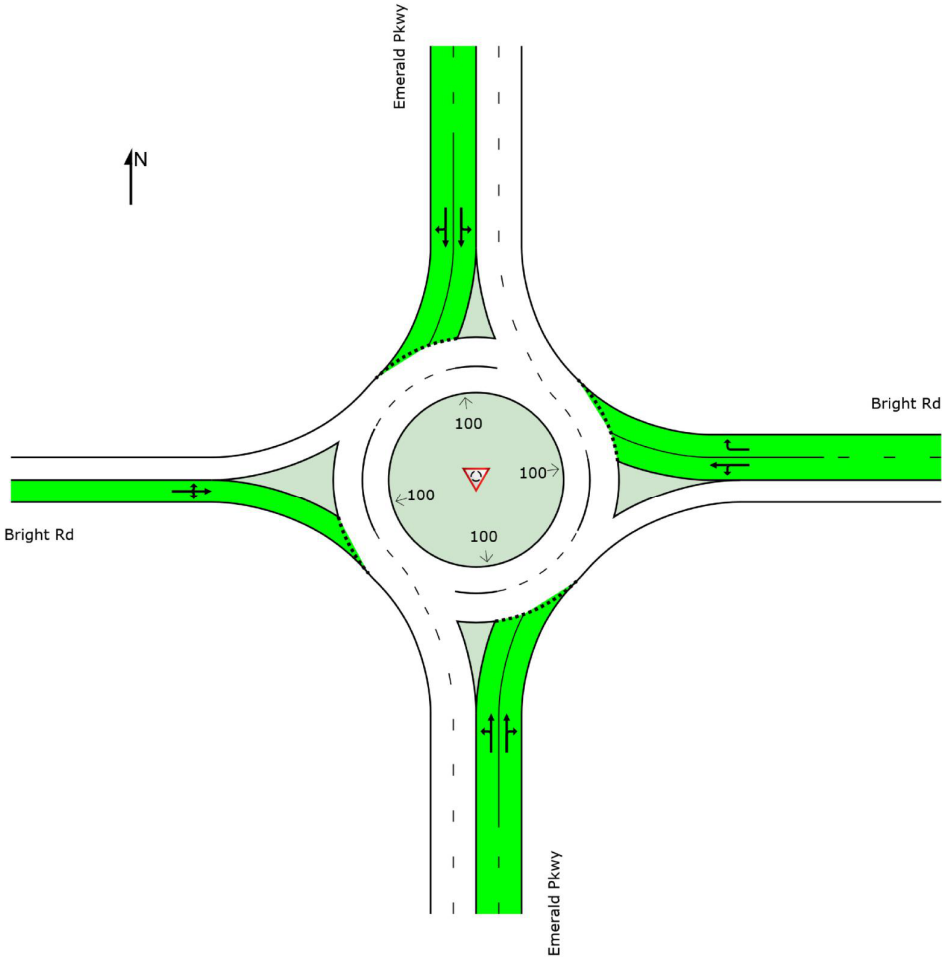
Lane Level of Service

Site: 101 [2033 AM Build With Connector (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.5.224

Bright Rd Senior Care Facility TIS
Emerald Pkwy and Bright Rd
2033 AM Build
Site Category: (None)
Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	A	A	A	A



Colour code based on Level of Service

LOS A | LOS B | LOS C | LOS D | LOS E | LOS F

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout Level of Service Method: Same as Signalised Intersections
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

LEVEL OF SERVICE

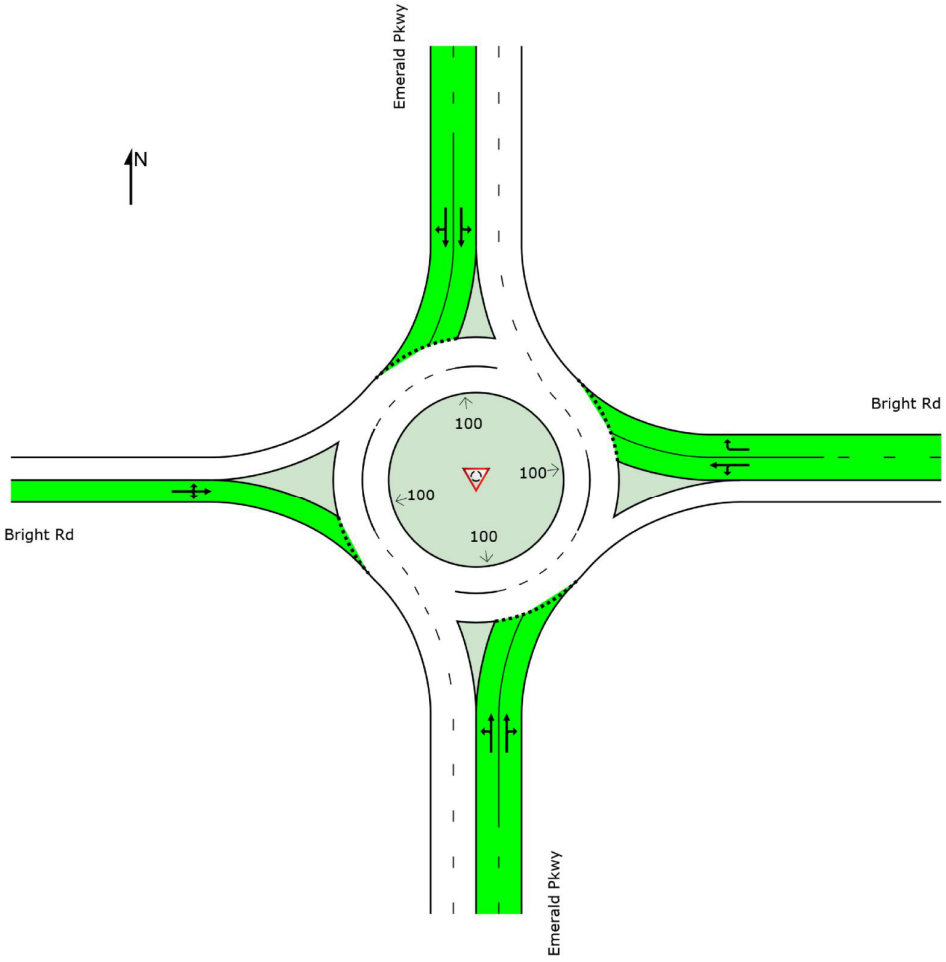
Lane Level of Service

Site: 101 [2033 AM No Build With Connector (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.5.224

Bright Rd Senior Care Facility TIS
Emerald Pkwy and Bright Rd
2033 AM No Build
Site Category: (None)
Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	A	A	A	A



Colour code based on Level of Service

LOS A | LOS B | LOS C | LOS D | LOS E | LOS F

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout Level of Service Method: Same as Signalised Intersections
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

LEVEL OF SERVICE

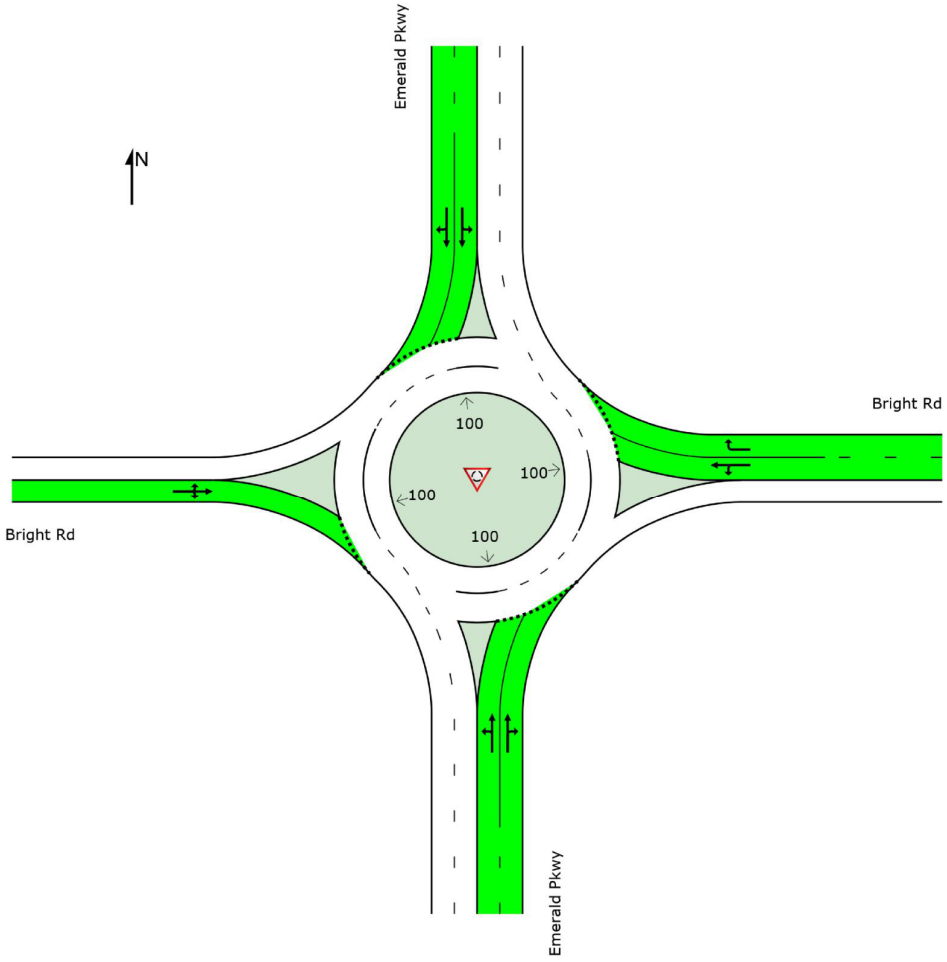
Lane Level of Service

Site: 101 [2033 AM Build Without Connector (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.5.224

Bright Rd Senior Care Facility TIS
Emerald Pkwy and Bright Rd
2033 AM Build
Site Category: (None)
Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	A	A	A	A



Colour code based on Level of Service

LOS A | LOS B | LOS C | LOS D | LOS E | LOS F

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout Level of Service Method: Same as Signalised Intersections
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

LEVEL OF SERVICE

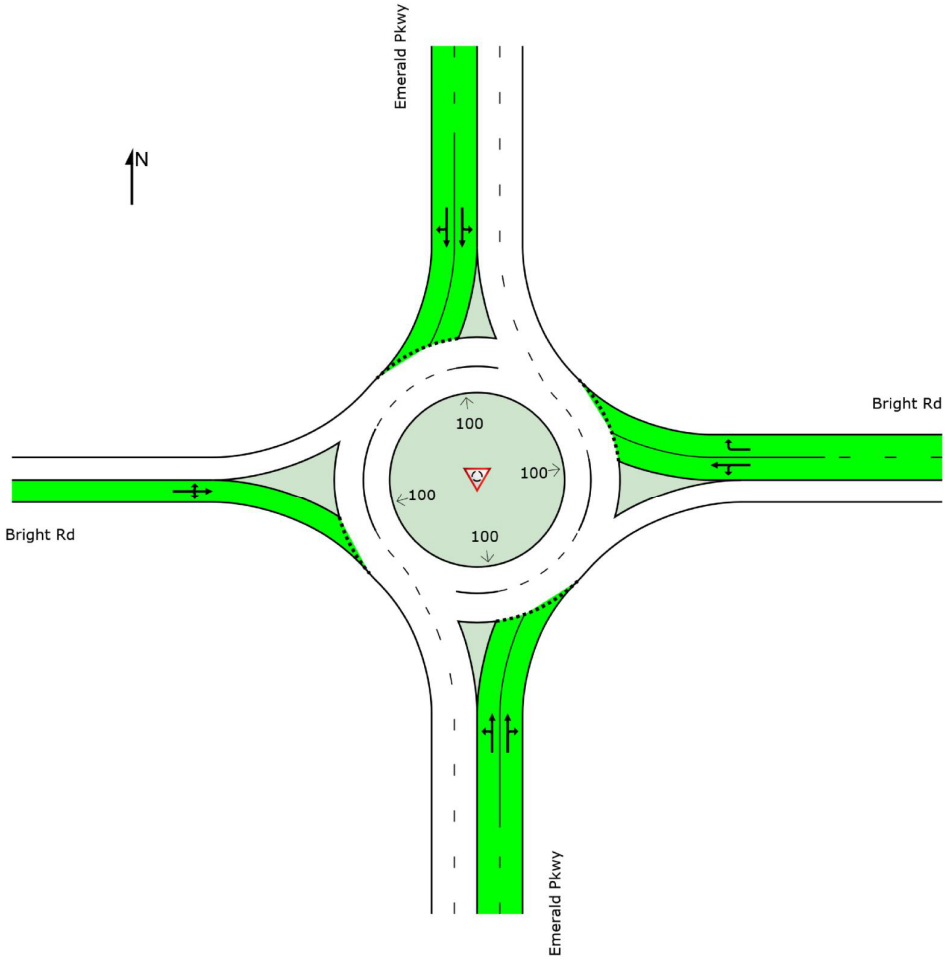
Lane Level of Service

Site: 101 [2033 AM No Build Without Connector (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.5.224

Bright Rd Senior Care Facility TIS
Emerald Pkwy and Bright Rd
2033 AM No Build
Site Category: (None)
Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	A	A	A	A



Colour code based on Level of Service

LOS A | LOS B | LOS C | LOS D | LOS E | LOS F

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout Level of Service Method: Same as Signalised Intersections
Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).