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MEMORANDUM

TO: Mr. Eric B. Eby, P.E.
Parking and Transportation Engineer
City of Portsmouth Department of Public Works
680 Peverly Hill Road
Portsmouth, NH 03801

DATE: November 1, 2016

FROM: Kevin R. Dandrade, P.E., PTOE, Principal
Douglas S. Halpert, E.I.T., Project Engineer

PROJECT NO.: N0620.01

RE: Updated Traffic Impact Assessment
Water Country Egress Alternatives - Portsmouth, New Hampshire

INTRODUCTION

On May 25, 2016, TEC, Inc. submitted a Traffic Impact Assessment (TIA) to the City of Portsmouth, New Hampshire, identifying and analyzing the potential traffic-related impacts associated with modifications to the egress movements from Water Country. Currently, all Water Country traffic exits the site along an egress-only driveway located along the northerly side of Constitution Avenue, approximately 1,100 feet west of US Route 1 (Lafayette Road). Residents within the several neighborhoods surrounding Water Country have raised concerns regarding the high traffic volumes and traffic safety during the summertime weekend evening peak, when a high volume of Water Country patrons exit the site at closing time.

The original TIA established traffic volume conditions along the existing roadways utilizing manual turning movement counts (TMCs) conducted at the study area intersections on Saturday, March 5, 2016 during the Saturday evening (4:00 PM – 6:00 PM) peak period. Traffic volumes exiting the Water Country driveway, along Constitution Avenue, were conducted on Saturday, August 18 and 25, 2012 during the Saturday Water Country peak hour (5:00 PM – 6:00 PM). These 2012 counts were conducted as part of a previous traffic evaluation for the Southgate Plaza Expansion prepared by Pernaw & Company, Inc.

Subsequent to the submittal of the original TIA, the City of Portsmouth sought to update the traffic volume data for key study area intersections to determine present-day summer-time conditions. During the summer of 2016, the City of Portsmouth conducted supplemental TMCs at various intersections in the study area to determine the actual seasonal peak traffic conditions and to assess a present-day egress count from the existing Water Country Driveway along Constitution Avenue. The Water Country egress driveway was counted every weekend between June 17 and September 5, 2016. In addition, the driveway was also counted on weekdays during times of high temperatures, when Water Country typically experiences their largest attendance. The updated traffic counts at key study intersections were conducted by Portsmouth DPW on various Saturdays between June 18 and September 3, 2016, during the Saturday Water Country peak period (4:00 PM – 7:30 PM). For the purposes of this study, traffic volumes at the intersection of Constitution Avenue / Water Country Exit Driveway were assessed for Saturday, July 23, 2016 which showed a

For the purposes of this study, traffic volumes at the intersection of Constitution Avenue / Water Country Exit Driveway were assessed for Saturday, July 23, 2016 which showed a peak exiting volume of 777 vehicles during the Saturday evening peak hour. The 2016 summer-time counts were approximately 2 percent lower than the previous summer-time counts from 2012. Of the data collected by the City of Portsmouth, the exiting volume from Water Country was in excess of 700 vehicles for only four of the 13 Saturdays during Water Country's season. It is important to note that this extreme traffic condition only occurs a minimal number of times per year. The resulting 2026 Build, trip redistribution, and 2026 Build Alternative A traffic-volume networks are illustrated in Attachment A.

The Saturday evening condition was analyzed as it is the time period with the greatest volume of vehicles exiting the Water Country site and the typical summer Saturday shows the heaviest vehicle split towards Banfield Road. This trend could be the result of Water Country patrons wishing to avoid the more heavily commercial routes like US Route 1. As Saturday presents the peak condition for the Water Country site, no further analysis of summer weekday conditions is warranted. A detailed summary of the TMCs, partitioned into 15-minute intervals, is provided within Attachment B.

UPDATED ANALYSIS CONDITIONS

As part of a supplemental review of alternative egress schemes, TEC utilized the updated summer-time traffic volumes, collected by the City of Portsmouth, under existing distribution conditions and Alternative A (described below).

- Egress Alternative A: Close existing Constitution Avenue exit driveway and construct new egress driveway along southerly side of West Road. Water Country traffic will access US Route 1 via existing unsignalized intersection of US Route 1 / West Road;

To compare analyses between the previous and updated TIAs, the future year planning horizon examines traffic operations under the future year (2026) traffic volume projections.

General Distribution Characteristics of Water Country Exiting Trips

Based on the updated traffic counts at Water Country's driveway along Constitution Avenue and the TMCs conducted at adjacent intersections, Table 1 summarizes the following approximate distribution characteristics for Water Country's exiting traffic.



Table 1 –Water Country Driveway Exiting Trip Distribution

Movement / Route	Original TIA Approximate Percentage of Total Exiting Traffic	August Percentage of Total Existing Traffic
Right onto Constitution Avenue	50%	70%
Then Right onto Banfield Rd	20%	7%
Then Left onto Banfield Rd	30%	63%
Left onto Constitution Avenue	50%	30%
Then Left onto Rt. 1 Northbound	10%	7%
Then Right onto Rt. 1 Southbound	40%	23%

Table 1 shows a shift of egress trips from the Water Country driveway along Constitution Avenue from a previously even distribution north and south of the driveway to a more prominent egress movement to the north towards Banfield Road. Furthermore, the 2016 Saturday summer-time TMCs also show that of the Water Country exiting traffic destined to Banfield Road, 90 percent will turn left onto Banfield Road westbound toward Ocean Road. This is a significant change from the 2012 counts which indicated only 60 percent of the traffic in this direction.

The average egress split from the Water Country driveway was 66 percent towards Banfield Road and 34 percent towards US Route 1. However, the peak hour count collected on Saturday, July 23, 2016 showed a 69 percent split towards Banfield Road. This egress distribution is representative of multiple summer-time counts. In order to provide a conservative (worst case) scenario the trip distribution split used was rounded to 70 percent of egress trips towards Banfield Road for the Saturday peak hour condition.

Over the course of the week, the average distribution split is 59 percent towards Banfield Road and 41 percent towards US Route 1. This trend, along with lower patron volumes, results in improved traffic operations for all intersections.

Updated Analysis Results

The 2026 Future Year with Existing Egress traffic volume networks were derived by applying a 1.0 percent compounded annual growth rate over a 10-year horizon with the addition of the estimated site-generated traffic volumes from the specific developments by others, including the 95-unit apartment building currently under construction at the Southgate Plaza. The seasonal adjustment was not applied to the updated 2016 counts as generally the July, August and September months represent peak-month conditions. Furthermore, TEC applied the highest count from each intersection and balanced the traffic volumes to establish a worst-case summertime condition. Table 2 shows the volume comparison between the 2026 Future Year conditions from the original TIA in comparison and the updated 2026 Future Year conditions based on the 2016 summertime traffic counts along both US Route 1 and Banfield Road.



**Table 2 –Traffic Volume Comparisons – 2026 Build Existing Distribution
 (March 2016 Base Volume vs. August 2016 Raw Volume)**

Movement / Route	March 2026	August 2026	Difference
Banfield Road @ Constitution Avenue			
Banfield Road EB Approach	201	145	-28%
Banfield Road WB Approach	200	142	-29%
Constitution Avenue NBL	391	586	+50%
Constitution Avenue NBR	257	74	-71%
Overall			-10%
US Route 1 @ St James Church / West Road			
West Road EB Approach	19	17	-11%
Church Driveway WB Approach	3	1	-67%
US Route 1 NB Approach	1217	939	-23%
US Route 1 SB Approach	1130	814	-28%
Overall			-25%

Most intersections within the study area are projected to carry lower 2026 summer-time volumes than originally projected in the original TIA. In addition, the actual 2016 summer-time traffic volumes at the key study intersections were not significantly higher than the March 2016 traffic volumes. Only the Banfield Road / Ocean Road intersection is expected to carry more traffic than projected in the original TIA, and that increase is less than one percent when compared to the seasonally adjusted March 2026 traffic volumes.

UPDATED CAPACITY AND QUEUE ANALYSIS

Water Country Egress Traffic Volume Redistribution

The redistribution of Water Country traffic volumes was based upon existing traffic conditions at the study area intersections. With the three trip distribution alternatives previously proposed to mitigate the disruption of traffic through the surrounding neighborhoods, each alternative was expected to observe a different redistribution of traffic. The following section describes the redistribution of traffic for the Water Country egress Alternative A. The other previously identified alternatives were not further explored because they were deemed to have a greater level of neighborhood impact.

Egress Alternative A – West Road / US Route 1 Exit Route

This scenario would redistribute traffic away from the existing Water Country egress driveway on Constitution Avenue to a new egress driveway at the West Road / Campus Drive intersection. All traffic would be then directed eastbound towards US Route 1 (Lafayette Road) via West Road eastbound.

TEC conducted level-of-service and queue analyses for 2026 Future Year Build with the existing driveway egress operation and trip distribution characteristics and 2026 Future Year



Alternative Egress A for the key signalized and unsignalized intersections within the study area. The results of the intersection capacity and queue analysis are summarized in Table 3. TEC analyzed the US Route 1 / West Road / St. James Church Driveway intersection as a signalized intersection as possible mitigation for the significant increase in trips, despite the fact that the traditional warrants for the installation of a traffic signal may not be satisfied. The results of the intersection capacity and queue analysis comparison for the signalized and unsignalized conditions are summarized in Table 4. The detailed capacity analysis worksheets are provided in Attachment C.

Banfield Road / Ocean Road

The traffic operations at the intersection of Banfield Road / Ocean Road are anticipated to operate at a slightly degraded level-of-service as compared to the analysis presented in the original TIA due to the higher number of right-turns on the Banfield Road approach. Within the May 2016 study, TEC had conservatively modeled the Banfield Road approach with a single lane since there was potential for the right-turns to be blocked by a queue of three or more left-turning vehicles. However, based on the observations during the summer and the updated counts, it is more appropriate to model the intersection with the two separate lanes that are striped on the pavement. Utilizing the 2026 summer-time Water Country exiting distribution, the Banfield Road westbound approach is anticipated to operate at LOS E with an approximately 25 second increase in delay per vehicle as compared to the original study. This condition is normally experienced for approximately one hour at Water Country's peak departure period.

In order to analyze the potential travel route impacts for Alternative Egress A, it is assumed that 100 percent of the redistributed trips from the Banfield Road westbound approach are on the Ocean Road northbound approach. TEC recognizes the possibility of patrons using Heritage Avenue or Constitution Avenue in an attempt to bypass Ocean Road.

Banfield Road / Constitution Avenue

The traffic operations at the intersection of Banfield Road / Constitution Avenue are anticipated to continue operating at comparable levels-of-service to the analysis presented in the original study.

Peeverly Hill Road / Banfield Road / Mirona Road

The traffic operations of the updated capacity analysis compared to the operations summarized in the previously study shows an improvement in operations at the intersection as a result of the overall lower traffic volumes and as a result of the decreased percentage of Water Country traffic through the intersection.

US Route 1 / Peeverly Hill Road / Elwyn Road

The traffic operations of the updated capacity analysis compared to the operations summarized in the previously study shows an improvement in operations at the intersection as a result of the overall lower traffic volumes and as a result of the decreased percentage of Water Country traffic through the intersection.



Table 3 –Intersection Capacity and Queue Analysis Summary

Intersection / Lane Group	2026 Existing Egress Conditions from March TIA				2026 Existing Egress Conditions w/ New Summer Data				2026 – Egress Alternative A from March TIA				2026 – Egress Alternative A w/ New Summer Data			
	V/C ^a	Delay ^b	LOS ^c	Queue ^d	V/C	Delay	LOS	Queue	V/C	Delay	LOS	Queue	V/C	Delay	LOS	Queue
Banfield Road / Ocean Road*																
<i>Saturday Evening Peak Period</i>																
Banfield Road WBL	0.14	18.8	C	<25	0.17	16.9	C	<25	0.23	29.4	D	<25	0.38	40.7	E	40
Banfield Road WBR	0.75	21.6	C	173	0.96	46.2	E	378	0.48	17.9	C	65	0.34	19.1	C	36
Ocean Road SB Approach	0.12	3.9	A	<25	0.09	3.2	A	<25	0.16	4.6	A	<25	0.14	4.4	A	<25
Banfield Road / Constitution Avenue																
<i>Saturday Evening Peak Period</i>																
Banfield Road WB Approach	0.06	2.9	A	<25	0.03	1.8	A	<25	0.05	2.6	A	<25	0.03	1.8	A	<25
Constitution Avenue NB Approach	1.31	174.9	F	802	1.12	95.9	F	553	0.37	14.5	B	42	0.14	11.2	B	<25
Pevery Hill Road / Banfield Road / Mirona Road																
<i>Saturday Evening Peak Period</i>																
Banfield Road EB LT	0.57	17.6	B	53/124	0.46	18.1	B	<25/61	0.48	20.0	C	<25/64	0.36	17.9	B	<25/45
Banfield Road EB TH/RT	0.38	15.0	B	44/105	0.20	16.2	B	<25/40	0.21	17.8	B	<25/45	0.14	16.5	B	<25/30
Mirona Road WB Approach	0.13	13.5	B	<25/39	0.10	15.7	B	<25/26	0.21	17.7	B	<25/40	0.11	16.3	B	<25/26
Pevery Hill Road NB LT	0.41	23.9	C	<25/51	0.52	25.1	C	<25/34	0.40	22.5	C	<25/43	0.51	24.1	C	<25/32
Pevery Hill Road NB TH/RT	0.39	14.1	B	34/126	0.27	9.9	A	<25/75	0.43	10.4	B	41/146	0.31	9.6	A	<25/83
Pevery Hill Road SB LT	0.44	26.7	C	<25/39	0.47	24.1	C	<25/34	0.42	24.9	C	<25/33	0.44	23.1	C	<25/32
Pevery Hill Road SB TH	0.46	15.7	B	60/149	0.39	10.8	B	34/130	0.34	10.8	B	52/120	0.38	10.1	B	31/121
Pevery Hill Road SB RT	0.09	13.5	B	<25/37	0.08	9.2	A	<25/27	0.08	9.5	A	<25/31	0.08	8.6	A	<25/26
Overall Intersection	0.50	15.8	B	-	0.42	13.4	B	-	0.46	13.8	B	-	0.39	12.6	B	-
US Route 1 / Pevery Hill Road / Elwyn Road																
<i>Saturday Evening Peak Period</i>																
Pevery Hill Road EB LT	1.45	292.3	F	289/450	0.76	70.9	E	113/248	1.19	188.9	F	214/363	0.69	63.7	E	100/208
Pevery Hill Road EB TH	0.34	35.1	D	127/191	0.30	31.2	C	111/190	0.33	34.8	C	127/191	0.31	31.1	C	115/190
Pevery Hill Road EB RT	0.08	31.9	C	<25/42	0.06	28.4	C	<25/42	0.08	31.6	C	<25/42	0.06	28.3	C	<25/42
Elwyn Road WB LT	0.79	71.5	E	126/173	0.74	62.3	E	114/218	0.79	70.8	E	126/173	0.74	60.9	E	118/218
Elwyn Road WB TH	0.47	50.2	D	110/150	0.31	44.6	D	69/130	0.46	49.9	D	110/150	0.31	44.1	D	71/130
Elwyn Road WB RT	0.15	46.4	D	<25/32	0.15	43.0	D	<25/75	0.15	46.1	D	<25/32	0.15	42.5	D	<25/75
US Route 1 NB LT	0.54	62.8	E	61/112	0.50	57.4	E	54/103	0.65	59.3	E	133/202	0.50	52.8	D	80/135
US Route 1 NB TH/RT	0.87	43.1	D	520/678	0.71	35.2	D	340/422	0.94	51.3	D	582/768	0.75	36.3	D	362/443
US Route 1 SB LT	0.77	64.2	E	184/276	0.73	56.8	E	167/249	0.76	63.7	E	184/276	0.71	55.4	E	172/249
US Route 1 SB TH	0.57	25.0	C	329/422	0.56	24.8	C	283/348	0.65	31.5	C	355/466	0.60	28.0	C	295/363
US Route 1 SB RT	0.05	18.1	B	<25/<25	0.02	18.2	B	<25/<25	0.05	22.5	C	<25/<25	0.02	20.4	C	<25/<25
Overall Intersection	0.90	56.7	E	-	0.73	37.4	D	-	0.91	52.8	D	-	0.73	38.0	D	-

^a Volume-to-capacity ratio

^b Delay expressed in seconds per vehicle (average)

^c Level of service

^d 50th / 95th Percentile Queue (95th Percentile Queue only in unsignalized intersections)

*Updated from May 2016 study to assume 2-lane approach because the left-turn lane was not observed to block the right-turn lane.

Table 4 –Intersection Capacity and Queue Analysis Summary (Continued)

Intersection / Lane Group	2026 Conditions with Existing Egress from March Study				Updated 2026 Conditions with Existing Egress w/ New Summer Data				2026 Egress Alternative A from March TIA				2026 Egress Alternative A w/ New Summer Data				2026 Egress Alternative A w/ Mitigation from March TIA				2026 Egress Alternative A w/ Mitigation w/ New Summer Data			
	V/C ^a	Delay ^b	LOS ^c	Queue ^d	V/C	Delay	LOS	Queue	V/C	Delay	LOS	Queue	V/C	Delay	LOS	Queue	V/C	Delay	LOS	Queue	V/C	Delay	LOS	Queue
US Route 1 / West Road / St. James Church Driveway																								
<i>Saturday Evening Peak Period</i>																								
West Road EB Approach	0.14	24.0	C	<25	0.13	27.2	D	<25	>2.0	>999.9	F	>1000	>2.0	>999.9	F	>1000	-	-	-	-	-	-	-	-
West Road EB LT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.80	36.3	D	182/209	0.60	28.7	C	120/168
West Road EB RT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.36	201.6	F	443/443	1.43	233	F	430/430
St. James Driveway WB Approach	0.04	24.3	C	<25	0.01	18.1	C	<25	0.04	21.7	C	<25	0.01	15.5	C	<25	0.00	41.7	D	<25/<25	0.00	42.8	D	<25/<25
US Route 1 NB LT	0.01	12.2	B	<25	0.01	11.1	B	<25	0.01	12.1	B	<25	0.02	11.1	B	<25	0.07	37.4	D	<25/<25	0.11	38.8	D	<25/<25
US Route 1 NB TH/RT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.72	19.1	B	210/374	0.61	20.8	C	133/304
US Route 1 SB LT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.35	53.2	D	<25/<25
US Route 1 SB TH/RT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.00	55.0	E	285/525	0.72	26.4	C	187/315
Overall Intersection	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.17	79.6	E	-	1.05	90.9	F	-

^a Volume-to-capacity ratio

^b Delay expressed in seconds per vehicle (average)

^c Level of service

^d 50th / 95th Percentile Queue (95th Percentile Queue only in unsignalized intersections)

US Route 1 / West Road / St. James Church Driveway

Under Egress Alternative A, the operations at the intersection of US Route 1 / West Road / St. James Church Driveway are anticipated to operate at degraded levels-of-service, LOS F, at a worsened level as compared to the analysis provided in the original TIA under both signalized and unsignalized conditions. With unsignalized control in place, the delay along West Street is expected to be in excess of 15 minutes per vehicle and result in a queue of more than 1,000 feet. Although the operations would be significantly improved with the construction of a traffic signal at this location, the intersection would still continue to operate at LOS F, with over 200 seconds of delay along the West Street eastbound approach.

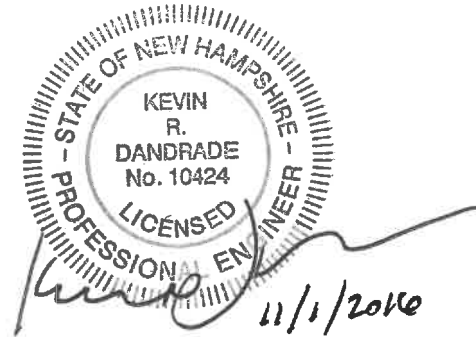
CONCLUSIONS

Based on the new summertime traffic data and the results of the updated capacity analysis, reflecting current summertime conditions, TEC recommendations are consistent with those reflected in the original TIA. The following findings should be considered carefully by the City of Portsmouth prior to implementing any access changes:

- TEC does not recommend Egress Alternative A due to the challenges listed below and the potential disproportionate increase in traffic within other neighborhoods, such as the Ocean Road area, by influencing traffic to avoid Banfield Road:
 - The redistribution of trips to the proposed US Route 1 / West Road / St. James Church driveway intersection under Alternative A yields very high delays and a poor level-of-service (LOS F) for the West Road eastbound approach.
 - The installation of a traffic signal may not be permitted by NHDOT due to the inconsistent volume of traffic on the side street. The high demand is limited to only a few critical hours per week.
 - In order to mitigate signal-related delays on US Route 1, this alternative may require the construction of a five-lane cross section across US Route 1 and widening of West Road to provide an exclusive left-turn and an exclusive right-turn lane. The cost associated with these improvements is anticipated to be approximately \$1,000,000 in construction costs, exclusive of the proposed Water Country driveway modifications. Even with these improvements in place, the intersection would still operate over capacity.
 - Although this alternative may decrease exiting traffic onto Banfield Road, it is expected to measurably increase traffic on Ocean Road and Peverly Hill Road. As traffic turns right from West Road onto Route 1 southbound under this alternative, some motorists may still elect to use Constitution Avenue in lieu of Ocean Road depending on the actual traffic conditions and real-time data from GPS-based mobile phone applications.
 - This egress scheme will require significant personnel or police details to enforce the desired routing pattern.



- This access scenario would need to be employed during all time periods, not just weekend peak times. This may have other greater capacity impacts associated with mid-week Water Country closing times and peak-hour commuter/employee and shopping-related flows along US Route 1, West Road, and Pevery Hill Road.
- The current egress scheme at Water Country via Constitution Avenue allows traffic to distribute to the local and regional roadway network in an efficient manner. Most of the patrons are currently using Banfield Road (to the south) and Ocean Road for access to I-95 and other regional destinations. This route appears to have the fewest number of potentially affected residential and institutional properties.



11/1/2016

Attachment A

Traffic Networks

Not to Scale

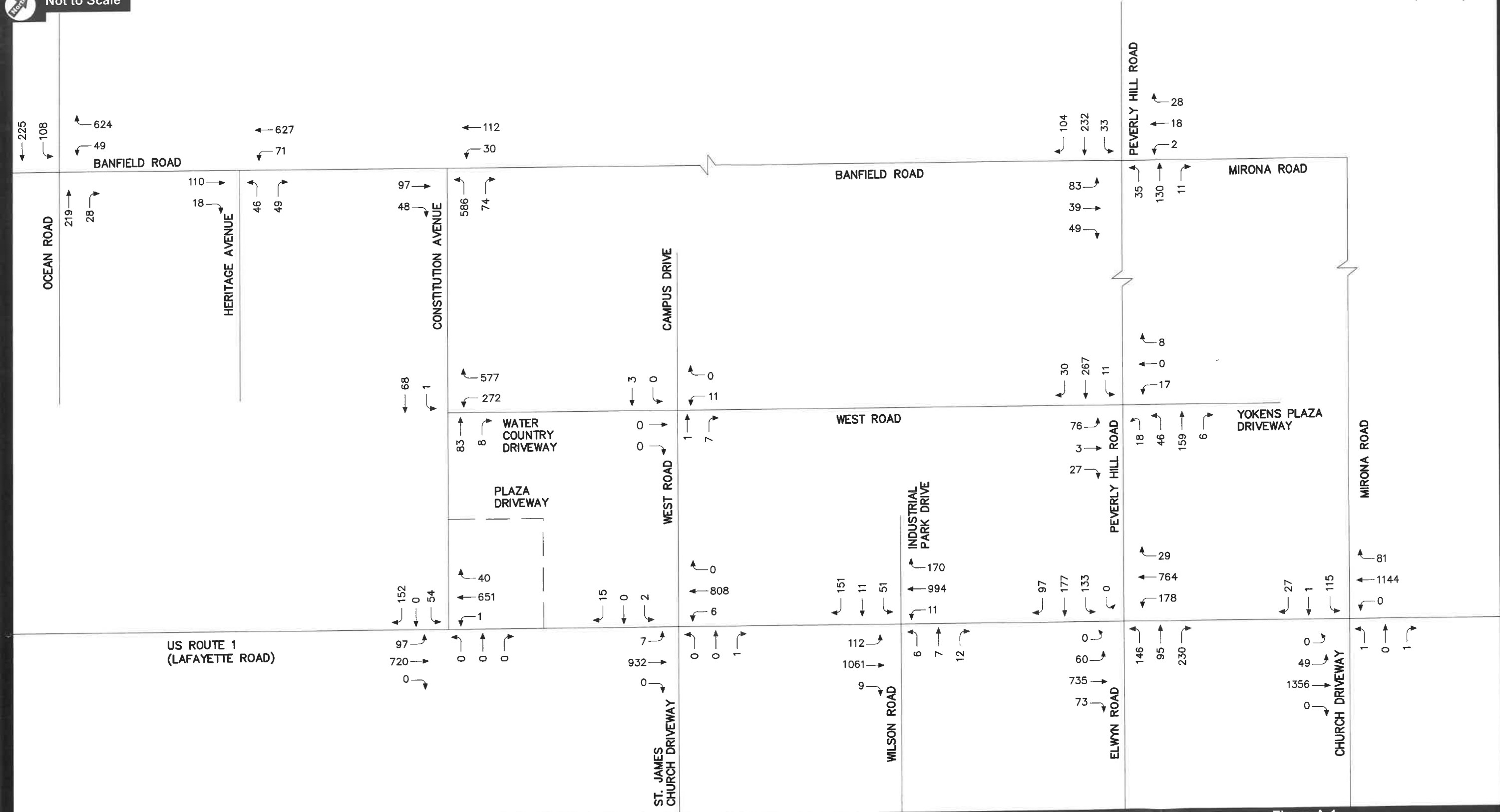


Figure A-1

2026 Existing Egress Conditions
Saturday Evening
Peak Hour Traffic Volumes



Not to Scale

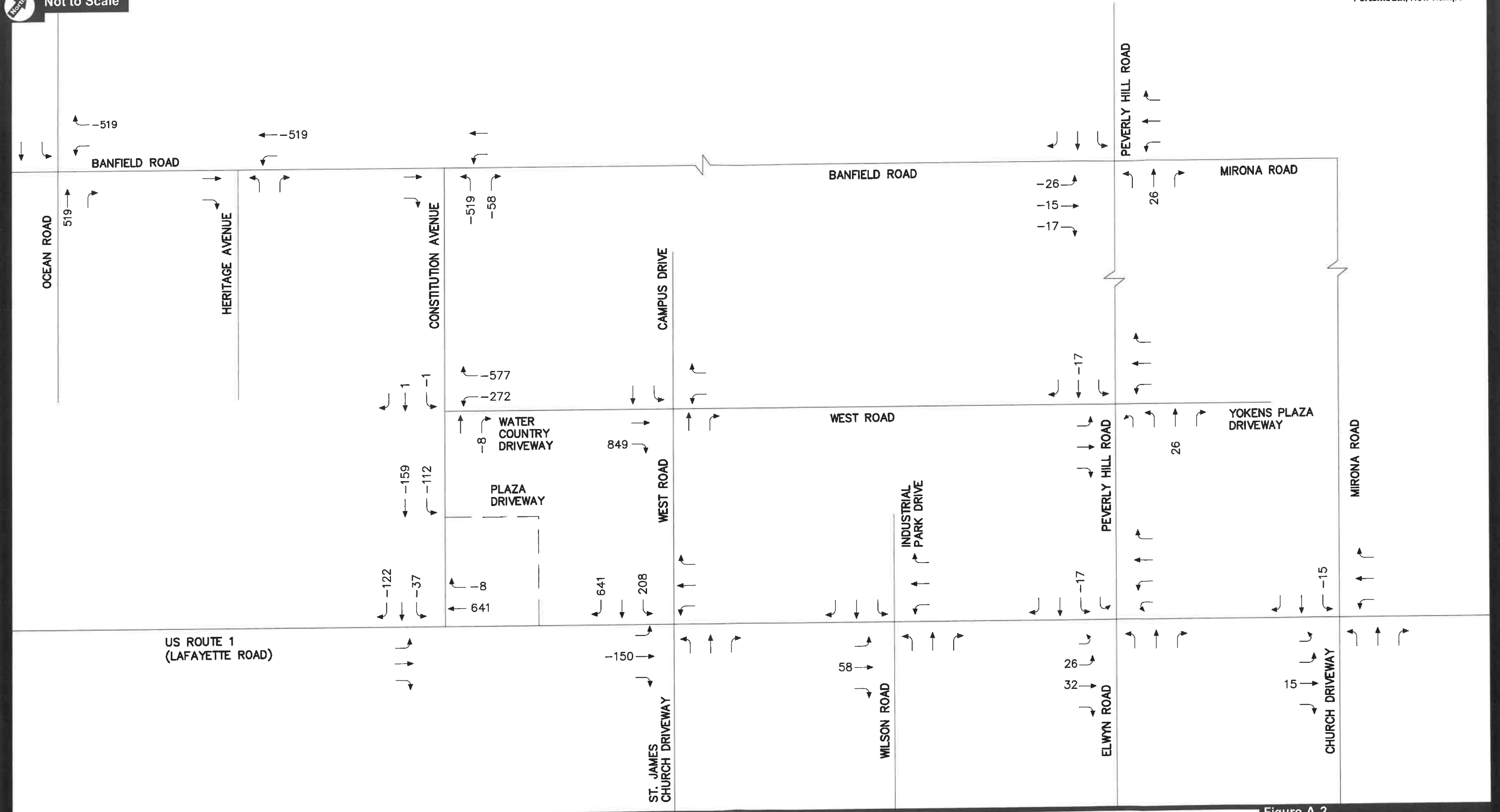


Figure A-2

2026 Egress Alternative A
 Trip Redistribution
 Saturday Evening
 Peak Hour Traffic Volumes



Not to Scale

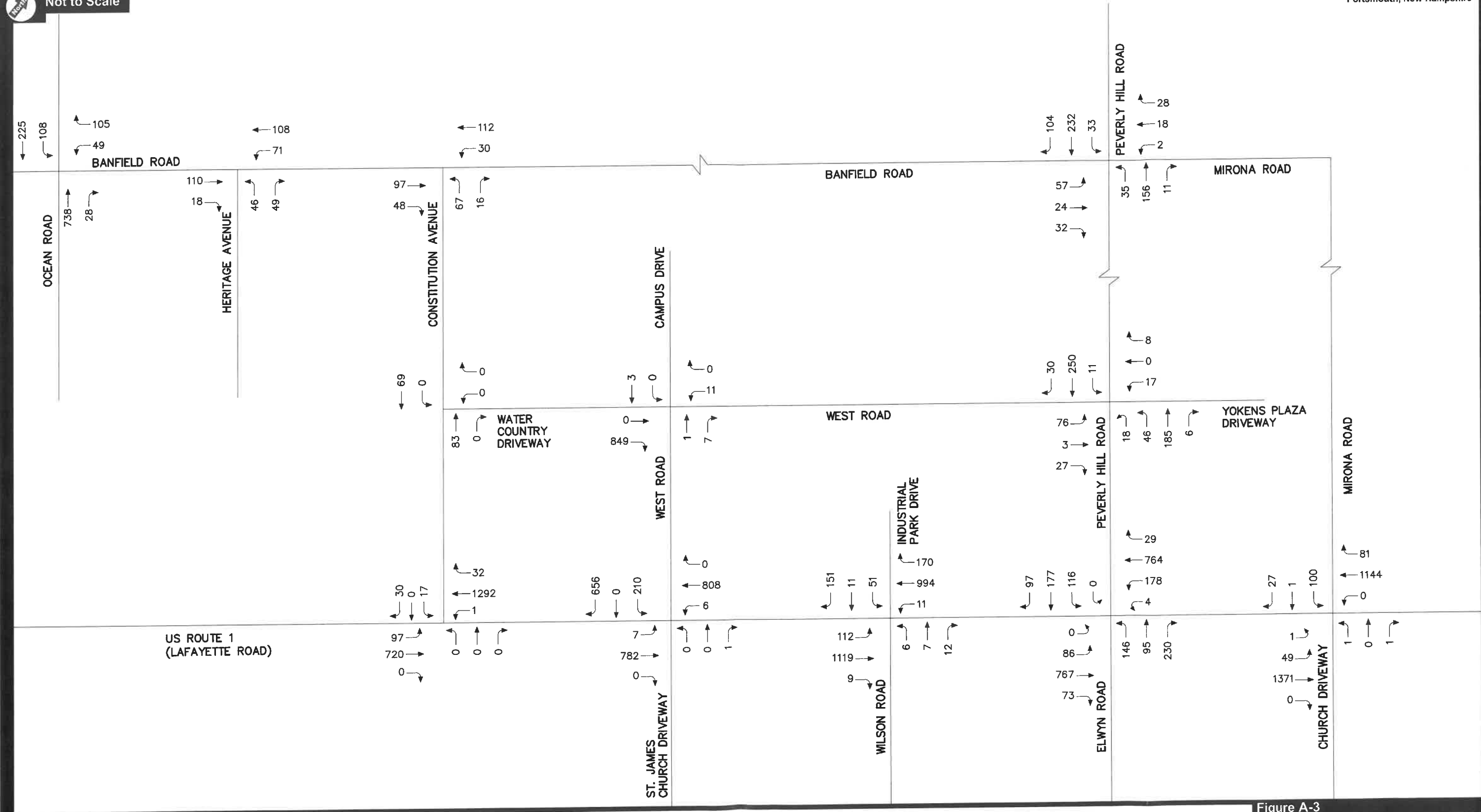


Figure A-3

2026 Egress Alternative A Conditions
Saturday Evening
Peak Hour Traffic Volumes



Attachment B

Turning Movement Counts (TMCs)

Summary

Study Name Banfield at Ocean 8/27
 Project
 Project Code
 Legs and Movements All Processed Legs & Movements
 Bin Size 15 minutes
 Time Zone America/New_York
 Start Time 8/27/2016 16:00
 End Time 8/27/2016 18:00
 Location Banfield at Ocean
 Latitude and Longitude 43.033508,-70.808505

Lights

Start Time	Ocean Road Southbound			Banfield Road Westbound			Ocean Road Northbound		
	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn
8/27/2016 16:00	49	26	0	50	9	0	1	52	0
8/27/2016 16:15	53	28	0	59	5	0	5	47	0
8/27/2016 16:30	42	26	0	63	5	0	2	54	0
8/27/2016 16:45	57	20	0	85	9	0	7	51	0
8/27/2016 17:00	55	22	0	102	8	0	3	55	0
8/27/2016 17:15	45	23	0	115	12	0	2	56	0
8/27/2016 17:30	44	32	0	152	7	0	13	35	0
8/27/2016 17:45	40	28	0	124	2	0	4	51	0
8/27/2016 18:00	0	0	0	0	0	0	0	0	0

Buses

Start Time	Ocean Road Southbound			Banfield Road Westbound			Ocean Road Northbound		
	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn
8/27/2016 16:00	0	0	0	0	0	0	0	0	0
8/27/2016 16:15	0	0	0	0	0	0	0	0	0
8/27/2016 16:30	0	0	0	0	0	0	0	0	0
8/27/2016 16:45	0	0	0	1	0	0	0	0	0
8/27/2016 17:00	0	0	0	0	0	0	0	0	0
8/27/2016 17:15	0	0	0	1	0	0	0	0	0
8/27/2016 17:30	0	0	0	1	0	0	0	0	0
8/27/2016 17:45	0	0	0	0	0	0	0	0	0
8/27/2016 18:00	0	0	0	0	0	0	0	0	0

Trucks

Start Time	Ocean Road Southbound			Banfield Road Westbound			Ocean Road Northbound		
	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn
8/27/2016 16:00	0	0	0	0	0	0	0	1	0
8/27/2016 16:15	2	0	0	0	0	0	0	0	0
8/27/2016 16:30	1	1	0	0	0	0	0	1	0
8/27/2016 16:45	1	1	0	0	0	0	0	0	0
8/27/2016 17:00	1	0	0	0	0	0	0	0	0
8/27/2016 17:15	1	0	0	0	0	0	0	1	0
8/27/2016 17:30	0	0	0	0	0	0	0	0	0
8/27/2016 17:45	1	0	0	1	0	0	0	0	0
8/27/2016 18:00	0	0	0	0	0	0	0	0	0

Totals

Start Time	Ocean Road Southbound			Banfield Road Westbound			Ocean Road Northbound		
	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn
8/27/2016 16:00	49	26	0	50	9	0	1	53	0
8/27/2016 16:15	55	28	0	59	5	0	5	47	0
8/27/2016 16:30	43	27	0	63	5	0	2	55	0
8/27/2016 16:45	58	21	0	86	9	0	7	51	0
8/27/2016 17:00	56	22	0	102	8	0	3	55	0

8/27/2016 17:15	46	23	0	116	12	0	2	57	0
8/27/2016 17:30	44	32	0	153	7	0	13	35	0
8/27/2016 17:45	41	28	0	125	2	0	4	51	0
8/27/2016 18:00	0	0	0	0	0	0	0	0	0
	204	98	0	457	36	0	25	198	0

Summary

Study Name Banfield at Constitution
 Project
 Project Code
 Legs and Movements All Processed Legs & Movements
 Bin Size 15 minutes
 Time Zone America/New_York
 Start Time 8/20/2016 16:00
 End Time 8/20/2016 18:00
 Location Banfield at Constitution
 Latitude and Longitude 43.03959,-70.795576

Lights

Start Time	Banfield Road Southbound			Constitution Ave Westbound			Banfield Road Northbound			
	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	
8/20/2016 16:00		31	5	0	22	49	0	16	21	0
8/20/2016 16:15		23	12	0	9	49	0	8	25	0
8/20/2016 16:30		21	8	0	15	61	0	16	27	0
8/20/2016 16:45		20	11	0	15	70	0	6	22	0
8/20/2016 17:00		29	9	0	15	100	0	9	18	0
8/20/2016 17:15		23	5	0	12	121	0	13	25	0
8/20/2016 17:30		27	4	0	12	145	0	10	20	0
8/20/2016 17:45		29	2	0	17	139	0	13	29	0
8/20/2016 18:00		0	0	0	0	0	0	0	0	0

Buses

Start Time	Banfield Road Southbound			Constitution Ave Westbound			Banfield Road Northbound			
	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	
8/20/2016 16:00		0	0	0	0	0	0	0	0	0
8/20/2016 16:15		0	0	0	0	0	0	0	0	0
8/20/2016 16:30		0	0	0	0	0	0	0	0	0
8/20/2016 16:45		0	0	0	0	0	0	0	0	0
8/20/2016 17:00		0	0	0	0	0	0	0	0	0
8/20/2016 17:15		0	0	0	0	1	0	0	0	0
8/20/2016 17:30		0	0	0	0	0	0	0	0	0
8/20/2016 17:45		0	0	0	0	0	0	0	0	0
8/20/2016 18:00		0	0	0	0	0	0	0	0	0

Trucks

Start Time	Banfield Road Southbound			Constitution Ave Westbound			Banfield Road Northbound			
	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	
8/20/2016 16:00		0	0	0	0	0	0	0	1	0
8/20/2016 16:15		1	0	0	0	0	0	0	0	0
8/20/2016 16:30		2	0	0	0	0	0	0	0	0
8/20/2016 16:45		0	0	0	0	0	0	0	0	0
8/20/2016 17:00		0	0	0	0	0	0	0	0	0
8/20/2016 17:15		0	0	0	1	1	0	0	1	0
8/20/2016 17:30		0	0	0	0	0	0	0	0	0
8/20/2016 17:45		0	0	0	0	0	0	0	0	0
8/20/2016 18:00		0	0	0	0	0	0	0	0	0

Bicycles on Road

Start Time	Banfield Road Southbound			Constitution Ave Westbound			Banfield Road Northbound			
	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	
8/20/2016 16:00		0	0	0	0	0	0	0	0	0
8/20/2016 16:15		0	0	0	0	0	0	0	0	0
8/20/2016 16:30		0	0	0	0	0	0	0	0	0
8/20/2016 16:45		0	0	0	0	0	0	0	0	0
8/20/2016 17:00		0	0	0	0	0	0	1	0	0

Summary
 Study Name Peverly Hill Road at Banfield Road
 Project
 Project Code
 Legs and Movement All Processed Legs & Movements
 Blk Size 15 minutes
 Time Zone America/New_York
 Start Time 7/2/2016 16:00
 End Time 7/2/2016 18:59
 Location Peverly Banfield
 Latitude and Longitude 43.0491386;-70.778561
 Motorcycles

Start Time	Peverly Hill Road Southbound			Peverly Hill right turn lane Southwestbound			Mirona Road Westbound			Peverly Hill Road Northbound			Banfield Road Eastbound			Banfield Road Westbound											
	Right	Left	Thru	U-Turn	Peds CW	Peds CCW	Bear right	Bear left	Right	Thru	Left	U-Turn	Peds CW	Peds CCW	Right	Thru	Left	U-Turn	Peds CW	Peds CCW	Right	Thru	Left	U-Turn	Peds CW	Peds CCW	
7/2/2016 16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/2/2016 16:15	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/2/2016 16:30	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/2/2016 16:45	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/2/2016 17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/2/2016 17:15	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/2/2016 17:30	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/2/2016 17:45	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/2/2016 18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/2/2016 18:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/2/2016 18:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/2/2016 18:45	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cars

Start Time	Peverly Hill Road Southbound			Peverly Hill right turn lane Southwestbound			Mirona Road Westbound			Peverly Hill Road Northbound			Banfield Road Eastbound			Banfield Road Westbound										
	Right	Left	Thru	U-Turn	Peds CW	Peds CCW	Bear right	Bear left	Right	Thru	Left	U-Turn	Peds CW	Peds CCW	Right	Thru	Left	U-Turn	Peds CW	Peds CCW	Right	Thru	Left	U-Turn	Peds CW	Peds CCW
7/2/2016 16:00	0	44	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/2/2016 16:15	2	36	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/2/2016 16:30	0	42	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/2/2016 16:45	0	43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/2/2016 17:00	0	53	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/2/2016 17:15	0	37	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/2/2016 17:30	0	35	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/2/2016 17:45	1	39	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/2/2016 18:00	0	22	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/2/2016 18:15	0	56	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/2/2016 18:30	0	28	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/2/2016 18:45	0	32	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Light Goods Vehicles

Start Time	Peverly Hill Road Southbound			Peverly Hill right turn lane Southwestbound			Mirona Road Westbound			Peverly Hill Road Northbound			Banfield Road Eastbound			Banfield Road Westbound										
	Right	Left	Thru	U-Turn	Peds CW	Peds CCW	Bear right	Bear left	Right	Thru	Left	U-Turn	Peds CW	Peds CCW	Right	Thru	Left	U-Turn	Peds CW	Peds CCW	Right	Thru	Left	U-Turn	Peds CW	Peds CCW
7/2/2016 16:00	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/2/2016 16:15	0	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/2/2016 16:30	1	7	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/2/2016 16:45	0	6	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/2/2016 17:00	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/2/2016 17:15	0	9	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/2/2016 17:30	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/2/2016 17:45	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/2/2016 18:00	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/2/2016 18:15	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/2/2016 18:30	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/2/2016 18:45	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Buses

Start Time	Peverly Hill Road Southbound			Peverly Hill right turn lane Southwestbound			Mirona Road Westbound			Peverly Hill Road Northbound			Banfield Road Eastbound			Banfield Road Westbound										
	Right	Left	Thru	U-Turn	Peds CW	Peds CCW	Bear right	Bear left	Right	Thru	Left	U-Turn	Peds CW	Peds CCW	Right	Thru	Left	U-Turn	Peds CW	Peds CCW	Right	Thru	Left	U-Turn	Peds CW	Peds CCW
7/2/2016 16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/2/2016 16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/2/2016 16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/2/2016 16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/2/2016 17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/2/2016 17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/2/2016 17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/2/2016 17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/2/2016 18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/2/2016 18:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/2/2016 18:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/2/2016 18:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Single-Unit Trucks

7/2/2016 18:15
 7/2/2016 18:30
 7/2/2016 18:45
 Totals

Start Time	Peeverly Hill Road Southbound			Peeverly Hill right turn lane Southwestbound			Mirona Road Westbound			Peeverly Hill Road Northbound			Barrifield Road Eastbound								
	Thru	Left	U-Turn	Peds CW	Peds CCW	Bear-right	Peds CW	Peds CCW	Right	Thru	Left	U-Turn	Peds CW	Peds CCW	Right	Thru	Left	U-Turn	Peds CW	Peds CCW	
7/2/2016 16:00	0	48	6	0	0	0	0	0	0	5	3	0	0	0	0	2	36	12	0	0	0
7/2/2016 16:15	2	42	3	0	0	0	19	0	0	3	10	0	0	0	0	5	25	5	0	0	0
7/2/2016 16:30	1	50	10	0	0	0	20	0	0	7	6	0	0	0	0	1	29	8	0	0	0
7/2/2016 16:45	0	51	6	0	0	0	17	0	0	7	3	0	0	0	0	0	21	8	0	0	0
7/2/2016 17:00	0	63	8	0	0	0	28	0	0	8	7	0	0	0	0	4	47	5	0	0	0
7/2/2016 17:15	0	46	8	0	0	0	20	0	0	5	1	2	0	0	0	6	28	13	0	0	0
7/2/2016 17:30	0	41	7	0	0	0	24	0	0	4	6	0	0	0	0	1	29	8	0	0	0
7/2/2016 17:45	1	42	3	0	0	0	11	0	0	4	7	2	0	0	0	2	28	4	0	0	0
7/2/2016 18:00	0	26	1	0	0	0	16	0	0	2	3	0	0	0	0	1	30	12	0	0	0
7/2/2016 18:15	0	40	3	0	0	0	12	0	0	7	5	0	0	0	0	3	30	4	0	0	0
7/2/2016 18:30	0	32	6	0	0	0	18	0	0	8	2	0	0	0	0	1	29	8	0	0	0
7/2/2016 18:45	0	37	3	0	0	0	13	0	0	3	4	0	0	0	0	2	24	6	0	0	0
Totals	0	48	6	0	0	0	27	0	0	5	3	0	0	0	0	2	36	12	0	0	0

Summary

Study Name Constitution at Lafayette 8/6
 Project
 Project Code
 Legs and Moven All Processed Legs & Movements
 Bin Size 15 minutes
 Time Zone America/New_York
 Start Time 8/6/2016 17:00
 End Time 8/6/2016 19:29
 Location Constitution at Lafayette
 Latitude and Lor 43.033331,-70.783582
 Lights

Start Time	Constitution Ave. Southbound				Lafayette Road Westbound				driveway Northbound				Lafayette Road Eastbound			
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
8/6/2016 17:00	21	0	11	0	6	188	0	0	0	0	0	0	0	170	19	0
8/6/2016 17:15	21	0	4	0	2	160	0	0	0	0	0	0	0	169	14	0
8/6/2016 17:30	25	0	13	0	4	152	0	0	0	0	0	0	0	156	21	0
8/6/2016 17:45	17	0	11	0	7	142	0	0	0	0	0	0	0	135	16	0
8/6/2016 18:00	30	0	4	0	7	149	0	0	0	0	0	0	0	160	16	0
8/6/2016 18:15	30	0	13	0	10	136	1	0	0	0	0	0	0	169	19	0
8/6/2016 18:30	34	0	13	0	4	162	0	0	0	0	0	0	0	157	23	0
8/6/2016 18:45	40	0	13	0	8	138	0	0	0	0	0	0	0	162	25	0
8/6/2016 19:00	27	0	16	0	2	144	0	0	0	0	0	0	0	145	20	0
8/6/2016 19:15	17	0	17	0	9	167	0	0	0	0	0	0	0	148	15	1

Buses

Start Time	Constitution Ave. Southbound				Lafayette Road Westbound				driveway Northbound				Lafayette Road Eastbound			
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
8/6/2016 17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/6/2016 17:15	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
8/6/2016 17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/6/2016 17:45	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
8/6/2016 18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/6/2016 18:15	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
8/6/2016 18:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/6/2016 18:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/6/2016 19:00	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
8/6/2016 19:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Trucks

Start Time	Constitution Ave. Southbound				Lafayette Road Westbound				driveway Northbound				Lafayette Road Eastbound			
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
8/6/2016 17:00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
8/6/2016 17:15	0	0	0	0	0	1	0	0	0	0	0	0	0	4	1	0
8/6/2016 17:30	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0
8/6/2016 17:45	0	0	0	0	0	2	0	0	0	0	0	0	0	2	0	0
8/6/2016 18:00	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
8/6/2016 18:15	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
8/6/2016 18:30	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0
8/6/2016 18:45	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
8/6/2016 19:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/6/2016 19:15	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0

Totals

Start Time	Constitution Ave. Southbound				Lafayette Road Westbound				driveway Northbound				Lafayette Road Eastbound			
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
8/6/2016 17:00	21	0	11	0	6	189	0	0	0	0	0	0	0	170	19	0
8/6/2016 17:15	21	0	4	0	3	161	0	0	0	0	0	0	0	173	15	0
8/6/2016 17:30	25	0	13	0	4	153	0	0	0	0	0	0	0	157	21	0
8/6/2016 17:45	17	0	11	0	7	145	0	0	0	0	0	0	0	137	16	0
8/6/2016 18:00	30	0	4	0	7	150	0	0	0	0	0	0	0	160	16	0
8/6/2016 18:15	30	0	13	0	10	137	1	0	0	0	0	0	0	171	19	0
8/6/2016 18:30	34	0	13	0	4	163	0	0	0	0	0	0	0	159	23	0
8/6/2016 18:45	41	0	13	0	8	138	0	0	0	0	0	0	0	162	26	0
8/6/2016 19:00	27	0	16	0	2	144	0	0	0	0	0	0	0	146	20	0
8/6/2016 19:15	17	0	17	0	10	167	0	0	0	0	0	0	0	148	15	1

Summary

Study Name Route 1 at Peverly and Elwyn 8/13 PM
 Project
 Project Code
 Legs and Movement All Processed Legs & Movements
 Bin Size 15 minutes
 Time Zone America/New_York
 Start Time 8/13/2016 17:00
 End Time 8/13/2016 19:30
 Location Route 1 at Peverly
 Latitude and Longitd 43.045007,-70.772724
 Motorcycles

Start Time	Route 1 Southbound				Elwyn Road Westbound				Route 1 Northbound				Peverly Hill Road Eastbound				
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	
8/13/2016 17:00	0	4	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0
8/13/2016 17:15	0	1	0	0	0	0	1	1	0	1	5	0	0	0	0	0	0
8/13/2016 17:30	0	4	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0
8/13/2016 17:45	0	3	0	0	0	3	0	0	0	1	2	0	0	0	4	0	0
8/13/2016 18:00	0	2	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0
8/13/2016 18:15	0	2	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0
8/13/2016 18:30	0	1	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0
8/13/2016 18:45	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/13/2016 19:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/13/2016 19:15	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/13/2016 19:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Cars

Start Time	Route 1 Southbound				Elwyn Road Westbound				Route 1 Northbound				Peverly Hill Road Eastbound			
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
8/13/2016 17:00	8	177	42	0	39	19	40	0	15	147	10	0	13	37	33	0
8/13/2016 17:15	4	151	34	2	58	16	19	0	20	167	10	0	21	33	21	0
8/13/2016 17:30	5	145	41	1	41	27	22	0	12	124	15	0	22	42	25	0
8/13/2016 17:45	5	132	31	1	45	16	27	0	17	143	13	0	20	23	27	0
8/13/2016 18:00	7	130	38	0	36	11	21	0	15	153	17	0	15	32	26	0
8/13/2016 18:15	6	116	38	0	37	15	26	0	14	140	13	0	7	26	31	0
8/13/2016 18:30	2	137	32	0	23	16	15	0	11	129	8	0	16	28	19	0
8/13/2016 18:45	15	122	30	0	28	16	20	0	9	97	8	0	15	21	21	0
8/13/2016 19:00	6	115	28	0	29	14	19	0	13	144	11	0	16	19	22	0
8/13/2016 19:15	9	139	20	0	31	14	10	0	10	109	10	0	13	18	11	0
8/13/2016 19:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Light Goods Vehicles

Start Time	Route 1 Southbound				Elwyn Road Westbound				Route 1 Northbound				Peverly Hill Road Eastbound			
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
8/13/2016 17:00	2	18	3	0	2	1	7	0	0	16	1	0	3	2	6	0
8/13/2016 17:15	0	12	6	0	5	3	5	0	0	13	2	0	4	9	3	0
8/13/2016 17:30	1	13	3	0	4	2	5	0	0	19	2	0	1	6	0	0
8/13/2016 17:45	0	17	0	0	9	0	5	0	0	10	0	0	4	2	4	0
8/13/2016 18:00	0	18	3	0	5	3	1	0	3	10	1	0	3	0	1	0
8/13/2016 18:15	0	18	0	0	4	0	1	0	0	16	1	0	3	1	0	0
8/13/2016 18:30	0	15	2	0	2	0	1	0	0	12	0	0	2	3	1	0
8/13/2016 18:45	0	12	3	0	0	2	4	0	2	11	0	0	0	2	1	0
8/13/2016 19:00	0	10	4	0	2	0	3	0	1	10	1	0	2	3	1	0
8/13/2016 19:15	0	16	2	0	1	2	1	0	2	13	0	0	0	1	2	0
8/13/2016 19:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Buses

Start Time	Route 1 Southbound				Elwyn Road Westbound				Route 1 Northbound				Peverly Hill Road Eastbound			
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
8/13/2016 17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/13/2016 17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/13/2016 17:30	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0
8/13/2016 17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/13/2016 18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/13/2016 18:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/13/2016 18:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/13/2016 18:45	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/13/2016 19:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/13/2016 19:15	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
8/13/2016 19:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Single-Unit Trucks

Start Time	Route 1 Southbound				Elwyn Road Westbound				Route 1 Northbound				Peverly Hill Road Eastbound			
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
8/13/2016 17:00	0	2	1	0	0	0	0	0	0	0	0	0	0	1	0	0
8/13/2016 17:15	1	1	0	0	1	0	0	0	0	1	0	0	0	0	0	0
8/13/2016 17:30	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
8/13/2016 17:45	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/13/2016 18:00	0	0	0	0	0	1	0	0	0	1	0	0	1	0	0	0
8/13/2016 18:15	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0
8/13/2016 18:30	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/13/2016 18:45	1	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
8/13/2016 19:00	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
8/13/2016 19:15	0	3	0	0	0	0	0	0	0	0	0	0	0	0	2	0
8/13/2016 19:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Articulated Trucks











Attachment C

Intersection Capacity and Queue Analyses

2026 Future Year Build Conditions

Lanes, Volumes, Timings
 1: Ocean Road & Banfield Road

2026 Build Conditions
 Saturday Evening











						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	49	624	219	28	108	225
Future Volume (vph)	49	624	219	28	108	225
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	12	12	12
Storage Length (ft)	70	0		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.985			
Flt Protected	0.950					0.984
Satd. Flow (prot)	1685	1492	1855	0	0	1845
Flt Permitted	0.950					0.984
Satd. Flow (perm)	1685	1492	1855	0	0	1845
Link Speed (mph)	30		30			30
Link Distance (ft)	1001		867			500
Travel Time (s)	22.8		19.7			11.4
Peak Hour Factor	0.82	0.82	0.93	0.93	0.94	0.94
Heavy Vehicles (%)	0%	1%	1%	0%	0%	2%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized










HCM Unsignalized Intersection Capacity Analysis
 1: Ocean Road & Banfield Road

2026 Build Conditions
 Saturday Evening

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	49	624	219	28	108	225
Future Volume (Veh/h)	49	624	219	28	108	225
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.82	0.82	0.93	0.93	0.94	0.94
Hourly flow rate (vph)	60	761	235	30	115	239
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	719	250			265	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	719	250			265	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	83	4			91	
cM capacity (veh/h)	363	791			1311	
Direction, Lane #	WB 1	WB 2	NB 1	SB 1		
Volume Total	60	761	265	354		
Volume Left	60	0	0	115		
Volume Right	0	761	30	0		
cSH	363	791	1700	1311		
Volume to Capacity	0.17	0.96	0.16	0.09		
Queue Length 95th (ft)	15	378	0	7		
Control Delay (s)	16.9	46.2	0.0	3.2		
Lane LOS	C	E		A		
Approach Delay (s)	44.0		0.0	3.2		
Approach LOS	E					
Intersection Summary						
Average Delay			25.9			
Intersection Capacity Utilization			58.5%		ICU Level of Service	B
Analysis Period (min)			15			

Lanes, Volumes, Timings
 3: Constitution Avenue & Banfield Road

2026 Build Conditions
 Saturday Evening

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	97	48	30	112	586	74
Future Volume (vph)	97	48	30	112	586	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.955				0.985	
Flt Protected				0.989	0.957	
Satd. Flow (prot)	1742	0	0	1816	1787	0
Flt Permitted				0.989	0.957	
Satd. Flow (perm)	1742	0	0	1816	1787	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	1260			501	2972	
Travel Time (s)	28.6			11.4	67.5	
Confl. Bikes (#/hr)		1				
Peak Hour Factor	0.83	0.83	0.84	0.84	0.90	0.90
Heavy Vehicles (%)	1%	0%	0%	0%	0%	2%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

HCM Unsignalized Intersection Capacity Analysis 3: Constitution Avenue & Banfield Road

2026 Build Conditions
Saturday Evening

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↗			↖	↗	
Traffic Volume (veh/h)	97	48	30	112	586	74
Future Volume (Veh/h)	97	48	30	112	586	74
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.83	0.83	0.84	0.84	0.90	0.90
Hourly flow rate (vph)	117	58	36	133	651	82
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			175		351	146
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			175		351	146
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			97		0	91
cM capacity (veh/h)			1414		634	901
<hr/>						
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	175	169	733			
Volume Left	0	36	651			
Volume Right	58	0	82			
cSH	1700	1414	656			
Volume to Capacity	0.10	0.03	1.12			
Queue Length 95th (ft)	0	2	553			
Control Delay (s)	0.0	1.8	95.9			
Lane LOS		A	F			
Approach Delay (s)	0.0	1.8	95.9			
Approach LOS			F			
<hr/>						
Intersection Summary						
Average Delay			65.6			
Intersection Capacity Utilization			62.6%	ICU Level of Service		B
Analysis Period (min)			15			

Lanes, Volumes, Timings

2026 Build Conditions

4: Peverly Hill Road & Banfield Road/Mirona Road

Saturday Evening

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	83	39	49	2	18	28	35	130	11	33	232	104
Future Volume (vph)	83	39	49	2	18	28	35	130	11	33	232	104
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	15	15	15	11	11	11	11	11	11
Storage Length (ft)	150		0	0		0	320		0	165		0
Storage Lanes	1		0	0		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99			0.99			1.00				0.98
Frt		0.917			0.922			0.989				0.850
Flt Protected	0.950				0.998		0.950			0.950		
Satd. Flow (prot)	1694	1730	0	0	1899	0	1745	1796	0	1745	1837	1546
Flt Permitted	0.717				0.978		0.950			0.950		
Satd. Flow (perm)	1279	1730	0	0	1861	0	1745	1796	0	1745	1837	1513
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		61			36			5				121
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		501			499			1500			500	
Travel Time (s)		11.4			11.3			34.1			11.4	
Confl. Bikes (#/hr)			1			1			5			1
Peak Hour Factor	0.80	0.80	0.80	0.77	0.77	0.77	0.76	0.76	0.76	0.86	0.86	0.86
Heavy Vehicles (%)	3%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	1%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8			4								2
Detector Phase	8	8		4	4		1	6		5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		3.0	5.0		3.0	5.0	5.0
Minimum Split (s)	11.0	11.0		11.0	11.0		9.0	11.0		9.0	11.0	11.0
Total Split (s)	36.0	36.0		36.0	36.0		18.0	41.0		18.0	41.0	41.0
Total Split (%)	37.9%	37.9%		37.9%	37.9%		18.9%	43.2%		18.9%	43.2%	43.2%
Maximum Green (s)	30.0	30.0		30.0	30.0		12.0	35.0		12.0	35.0	35.0
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0			6.0		6.0	6.0		6.0	6.0	6.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.5	3.0		2.5	3.0	3.0
Recall Mode	None	None		None	None		None	Min		None	Min	Min







Intersection Summary

Area Type: Other
 Cycle Length: 95
 Actuated Cycle Length: 40.5
 Natural Cycle: 40
 Control Type: Actuated-Uncoordinated

Lanes, Volumes, Timings
 4: Pevery Hill Road & Banfield Road/Mirona Road

2026 Build Conditions
 Saturday Evening

Splits and Phases: 4: Pevery Hill Road & Banfield Road/Mirona Road









 Ø1	 Ø2	 Ø4
18 s	41 s	36 s
 Ø5	 Ø6	 Ø8
18 s	41 s	36 s

Queues

2026 Build Conditions

4: Peverly Hill Road & Banfield Road/Mirona Road





















Saturday Evening

								
Lane Group	EBL	EBT	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	104	110	62	46	185	38	270	121
v/c Ratio	0.34	0.24	0.13	0.16	0.22	0.13	0.32	0.16
Control Delay	19.3	10.5	10.4	20.9	12.8	21.2	13.9	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.3	10.5	10.4	20.9	12.8	21.2	13.9	4.3
Queue Length 50th (ft)	14	6	3	7	21	6	34	0
Queue Length 95th (ft)	61	40	26	34	75	34	130	27
Internal Link Dist (ft)		421	419		1420		420	
Turn Bay Length (ft)	150			320		165		
Base Capacity (vph)	1014	1385	1483	573	1527	573	1561	1304
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.08	0.04	0.08	0.12	0.07	0.17	0.09

Intersection Summary

HCM Signalized Intersection Capacity Analysis
 4: Peverly Hill Road & Banfield Road/Mirona Road

2026 Build Conditions
 Saturday Evening


















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	83	39	49	2	18	28	35	130	11	33	232	104
Future Volume (vph)	83	39	49	2	18	28	35	130	11	33	232	104
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	12	15	15	15	11	11	11	11	11	11
Total Lost time (s)	6.0	6.0			6.0		6.0	6.0		6.0	6.0	6.0
Lane Util. Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frb, ped/bikes	1.00	0.99			0.99		1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.92			0.92		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1694	1729			1897		1745	1796		1745	1837	1513
Flt Permitted	0.72	1.00			0.98		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1278	1729			1860		1745	1796		1745	1837	1513
Peak-hour factor, PHF	0.80	0.80	0.80	0.77	0.77	0.77	0.76	0.76	0.76	0.86	0.86	0.86
Adj. Flow (vph)	104	49	61	3	23	36	46	171	14	38	270	121
RTOR Reduction (vph)	0	50	0	0	30	0	0	3	0	0	0	76
Lane Group Flow (vph)	104	60	0	0	32	0	46	182	0	38	270	45
Confl. Bikes (#/hr)			1			1			5			1
Heavy Vehicles (%)	3%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	1%
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8			4								2
Actuated Green, G (s)	8.0	8.0			8.0		2.3	17.1		2.1	16.9	16.9
Effective Green, g (s)	8.0	8.0			8.0		2.3	17.1		2.1	16.9	16.9
Actuated g/C Ratio	0.18	0.18			0.18		0.05	0.38		0.05	0.37	0.37
Clearance Time (s)	6.0	6.0			6.0		6.0	6.0		6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0			3.0		2.5	3.0		2.5	3.0	3.0
Lane Grp Cap (vph)	226	306			329		88	679		81	686	565
v/s Ratio Prot		0.03					c0.03	0.10		0.02	c0.15	
v/s Ratio Perm	c0.08				0.02							0.03
v/c Ratio	0.46	0.20			0.10		0.52	0.27		0.47	0.39	0.08
Uniform Delay, d1	16.7	15.9			15.6		20.9	9.7		21.0	10.4	9.1
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	1.5	0.3			0.1		4.2	0.2		3.1	0.4	0.1
Delay (s)	18.1	16.2			15.7		25.1	9.9		24.1	10.8	9.2
Level of Service	B	B			B		C	A		C	B	A
Approach Delay (s)		17.1			15.7			13.0			11.5	
Approach LOS		B			B			B			B	

Intersection Summary

HCM 2000 Control Delay	13.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	45.2	Sum of lost time (s)	18.0
Intersection Capacity Utilization	41.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lanes, Volumes, Timings
 8: US Route 1 & West Road/St. James Church Driveway

2026 Build Conditions
 Saturday Evening


















												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	0	15	0	0	1	8	932	0	6	808	0
Future Volume (vph)	2	0	15	0	0	1	8	932	0	6	808	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	11	11	12	12	11	11
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.865		0.865							
Flt Protected		0.950					0.950					
Satd. Flow (prot)	0	0	1442	0	1644	0	1163	1837	0	0	1819	0
Flt Permitted		0.950					0.950					
Satd. Flow (perm)	0	0	1442	0	1644	0	1163	1837	0	0	1819	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1200			377			1000			2226	
Travel Time (s)		27.3			8.6			22.7			50.6	
Confl. Peds. (#/hr)			1			2						
Confl. Bikes (#/hr)												2
Peak Hour Factor	0.67	0.67	0.67	0.25	0.25	0.25	0.89	0.89	0.89	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	14%	0%	0%	0%	50%	0%	0%	0%	1%	0%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

HCM Unsignalized Intersection Capacity Analysis
 8: US Route 1 & West Road/St. James Church Driveway

2026 Build Conditions
 Saturday Evening

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	0	15	0	0	1	8	932	0	6	808	0
Future Volume (Veh/h)	2	0	15	0	0	1	8	932	0	6	808	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.67	0.67	0.67	0.25	0.25	0.25	0.89	0.89	0.89	0.91	0.91	0.91
Hourly flow rate (vph)	3	0	22	0	0	4	9	1047	0	7	888	0
Pedestrians								1			2	
Lane Width (ft)								11.0			11.0	
Walking Speed (ft/s)								4.0			4.0	
Percent Blockage								0			0	
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1973	1967	889	1990	1967	1049	888			1047		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1973	1967	889	1990	1967	1049	888			1047		
tC, single (s)	7.1	6.5	6.3	7.1	6.5	6.2	4.6			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.4	3.5	4.0	3.3	2.7			2.2		
p0 queue free %	93	100	93	100	100	99	98			99		
cM capacity (veh/h)	46	62	325	42	62	278	595			672		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1							
Volume Total	25	4	9	1047	895							
Volume Left	3	0	9	0	7							
Volume Right	22	4	0	0	0							
cSH	187	278	595	1700	672							
Volume to Capacity	0.13	0.01	0.02	0.62	0.01							
Queue Length 95th (ft)	11	1	1	0	1							
Control Delay (s)	27.2	18.1	11.1	0.0	0.3							
Lane LOS	D	C	B		A							
Approach Delay (s)	27.2	18.1	0.1		0.3							
Approach LOS	D	C										
Intersection Summary												
Average Delay			0.6									
Intersection Capacity Utilization			Err%		ICU Level of Service				H			
Analysis Period (min)			15									

Lanes, Volumes, Timings
11: US Route 1 & Peverly Hill Road/Elywn Road

2026 Build Conditions
Saturday Evening

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	133	177	97	146	95	230	60	735	73	4	178	764
Future Volume (vph)	133	177	97	146	95	230	60	735	73	4	178	764
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	11	12	12	12	12	12	12
Storage Length (ft)	160		160	180		180	250		0		330	
Storage Lanes	1		0	1		0	1		0		1	
Taper Length (ft)	25			25			25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.95
Ped Bike Factor			0.99					1.00				
Frt			0.850			0.850		0.986				
Flt Protected	0.950			0.950			0.950				0.950	
Satd. Flow (prot)	1805	1881	1615	1745	1818	1546	1805	3552	0	0	1788	3574
Flt Permitted	0.950			0.641			0.950				0.950	
Satd. Flow (perm)	1805	1881	1593	1177	1818	1546	1805	3552	0	0	1788	3574
Right Turn on Red			Yes			Yes			Yes			
Satd. Flow (RTOR)			101			235		9				
Link Speed (mph)		30			30			30				30
Link Distance (ft)		600			500			775				1499
Travel Time (s)		13.6			11.4			17.6				34.1
Confl. Peds. (#/hr)						1						
Confl. Bikes (#/hr)			2			2			4			
Peak Hour Factor	0.96	0.96	0.96	0.98	0.98	0.98	0.87	0.87	0.87	0.85	0.85	0.85
Heavy Vehicles (%)	0%	1%	0%	0%	1%	1%	0%	0%	0%	0%	1%	1%
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Perm	NA	Prot	Prot	NA		Prot	Prot	NA
Protected Phases	7	4			8	8	5	2		1	1	6
Permitted Phases			4	8								
Detector Phase	7	4	4	8	8	8	5	2		1	1	6
Switch Phase												
Minimum Initial (s)	5.0	8.0	8.0	8.0	8.0	8.0	5.0	8.0		5.0	5.0	8.0
Minimum Split (s)	11.0	25.0	25.0	14.0	14.0	14.0	11.0	31.0		11.0	11.0	31.0
Total Split (s)	18.0	49.0	49.0	31.0	31.0	31.0	31.0	56.0		31.0	31.0	56.0
Total Split (%)	13.2%	36.0%	36.0%	22.8%	22.8%	22.8%	22.8%	41.2%		22.8%	22.8%	41.2%
Maximum Green (s)	12.0	43.0	43.0	25.0	25.0	25.0	25.0	50.0		25.0	25.0	50.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0	6.0
Lead/Lag	Lead			Lag	Lag	Lag	Lead	Lag		Lead	Lead	Lag
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.0		4.0	4.0	5.0
Recall Mode	None	None	None	None	None	None	None	Min		None	None	Min
Walk Time (s)		4.0	4.0					4.0				4.0
Flash Dont Walk (s)		15.0	15.0					21.0				21.0
Pedestrian Calls (#/hr)		5	5					5				5

Intersection Summary

Area Type: Other

Lanes, Volumes, Timings
 11: US Route 1 & Peverly Hill Road/Elywn Road

2026 Build Conditions
 Saturday Evening

Lane Group	SBR
Lane Configurations	7
Traffic Volume (vph)	29
Future Volume (vph)	29
Ideal Flow (vphpl)	1900
Lane Width (ft)	12
Storage Length (ft)	350
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Ped Bike Factor	
Frnt	0.850
Flt Protected	
Satd. Flow (prot)	1553
Flt Permitted	
Satd. Flow (perm)	1553
Right Turn on Red	Yes
Satd. Flow (RTOR)	120
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	0.85
Heavy Vehicles (%)	4%
Shared Lane Traffic (%)	
Turn Type	Perm
Protected Phases	
Permitted Phases	6
Detector Phase	6
Switch Phase	
Minimum Initial (s)	8.0
Minimum Split (s)	31.0
Total Split (s)	56.0
Total Split (%)	41.2%
Maximum Green (s)	50.0
Yellow Time (s)	4.0
All-Red Time (s)	2.0
Lost Time Adjust (s)	0.0
Total Lost Time (s)	6.0
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	5.0
Recall Mode	Min
Walk Time (s)	4.0
Flash Dont Walk (s)	21.0
Pedestrian Calls (#/hr)	5








Intersection Summary

Lanes, Volumes, Timings
 11: US Route 1 & Peverly Hill Road/Elywn Road

2026 Build Conditions
 Saturday Evening












Cycle Length: 136
 Actuated Cycle Length: 119.4
 Natural Cycle: 80
 Control Type: Actuated-Uncoordinated

Splits and Phases: 11: US Route 1 & Peverly Hill Road/Elywn Road

 Ø1	 Ø2	 Ø4	
31 s	56 s	49 s	
 Ø5	 Ø6	 Ø7	 Ø8
31 s	56 s	18 s	31 s

Queues
11: US Route 1 & Peverly Hill Road/Elywn Road

2026 Build Conditions
Saturday Evening























											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	139	184	101	149	97	235	69	929	214	899	34
v/c Ratio	0.76	0.30	0.17	0.74	0.31	0.51	0.41	0.73	0.72	0.55	0.04
Control Delay	81.2	33.9	7.0	71.9	48.8	10.1	62.7	37.9	63.3	26.6	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	81.2	33.9	7.0	71.9	48.8	10.1	62.7	37.9	63.3	26.6	0.1
Queue Length 50th (ft)	113	111	0	114	69	0	54	340	167	283	0
Queue Length 95th (ft)	#248	190	42	#218	130	75	103	422	249	348	0
Internal Link Dist (ft)		520			420			695		1419	
Turn Bay Length (ft)	160		160	180		180	250		330		350
Base Capacity (vph)	186	694	651	252	390	516	387	1530	384	1676	792
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.75	0.27	0.16	0.59	0.25	0.46	0.18	0.61	0.56	0.54	0.04

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis
 11: US Route 1 & Peverly Hill Road/Elywn Road

2026 Build Conditions
 Saturday Evening

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	
Lane Configurations													
Traffic Volume (vph)	133	177	97	146	95	230	60	735	73	4	178	764	
Future Volume (vph)	133	177	97	146	95	230	60	735	73	4	178	764	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width	12	12	12	11	11	11	12	12	12	12	12	12	
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0			6.0	6.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95			1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99			1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00			0.95	1.00	
Satd. Flow (prot)	1805	1881	1593	1745	1818	1546	1805	3553			1788	3574	
Flt Permitted	0.95	1.00	1.00	0.64	1.00	1.00	0.95	1.00			0.95	1.00	
Satd. Flow (perm)	1805	1881	1593	1178	1818	1546	1805	3553			1788	3574	
Peak-hour factor, PHF	0.96	0.96	0.96	0.98	0.98	0.98	0.87	0.87	0.87	0.85	0.85	0.85	
Adj. Flow (vph)	139	184	101	149	97	235	69	845	84	5	209	899	
RTOR Reduction (vph)	0	0	69	0	0	195	0	6	0	0	0	0	
Lane Group Flow (vph)	139	184	32	149	97	40	69	923	0	0	214	899	
Confl. Peds. (#/hr)						1							
Confl. Bikes (#/hr)			2			2			4				
Heavy Vehicles (%)	0%	1%	0%	0%	1%	1%	0%	0%	0%	0%	1%	1%	
Turn Type	Prot	NA	Perm	Perm	NA	Prot	Prot	NA		Prot	Prot	NA	
Protected Phases	7	4			8	8	5	2		1	1	6	
Permitted Phases			4	8									
Actuated Green, G (s)	12.2	38.7	38.7	20.5	20.5	20.5	9.2	43.9			19.9	54.6	
Effective Green, g (s)	12.2	38.7	38.7	20.5	20.5	20.5	9.2	43.9			19.9	54.6	
Actuated g/C Ratio	0.10	0.32	0.32	0.17	0.17	0.17	0.08	0.36			0.17	0.45	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0			6.0	6.0	
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.0			4.0	5.0	
Lane Grp Cap (vph)	182	604	511	200	309	263	137	1294			295	1619	
v/s Ratio Prot	c0.08	0.10			0.05	0.03	0.04	c0.26			c0.12	0.25	
v/s Ratio Perm			0.02	c0.13									
v/c Ratio	0.76	0.30	0.06	0.74	0.31	0.15	0.50	0.71			0.73	0.56	
Uniform Delay, d1	52.7	30.8	28.3	47.5	43.8	42.6	53.5	32.9			47.7	24.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	
Incremental Delay, d2	18.1	0.4	0.1	14.8	0.8	0.4	3.9	2.3			9.1	0.7	
Delay (s)	70.9	31.2	28.4	62.3	44.6	43.0	57.4	35.2			56.8	24.8	
Level of Service	E	C	C	E	D	D	E	D			E	C	
Approach Delay (s)		43.5			49.3			36.8				30.6	
Approach LOS		D			D			D				C	
Intersection Summary													
HCM 2000 Control Delay			37.4									HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio			0.73										
Actuated Cycle Length (s)			120.5									Sum of lost time (s)	24.0
Intersection Capacity Utilization			74.4%									ICU Level of Service	D
Analysis Period (min)			15										
c Critical Lane Group													

HCM Signalized Intersection Capacity Analysis
 11: US Route 1 & Peverly Hill Road/Elywn Road











2026 Build Conditions
 Saturday Evening

Movement	SBR
Lane Configurations	T
Traffic Volume (vph)	29
Future Volume (vph)	29
Ideal Flow (vphpl)	1900
Lane Width	12
Total Lost time (s)	6.0
Lane Util. Factor	1.00
Frbp, ped/bikes	1.00
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1553
Flt Permitted	1.00
Satd. Flow (perm)	1553
Peak-hour factor, PHF	0.85
Adj. Flow (vph)	34
RTOR Reduction (vph)	19
Lane Group Flow (vph)	15
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Heavy Vehicles (%)	4%
Turn Type	Perm
Protected Phases	
Permitted Phases	6
Actuated Green, G (s)	54.6
Effective Green, g (s)	54.6
Actuated g/C Ratio	0.45
Clearance Time (s)	6.0
Vehicle Extension (s)	5.0
Lane Grp Cap (vph)	703
v/s Ratio Prot	
v/s Ratio Perm	0.01
v/c Ratio	0.02
Uniform Delay, d1	18.2
Progression Factor	1.00
Incremental Delay, d2	0.0
Delay (s)	18.2
Level of Service	B
Approach Delay (s)	
Approach LOS	
Intersection Summary	

2026 Future Year Alternative A Conditions

Lanes, Volumes, Timings
1: Ocean Road & Banfield Road

2026 Build Alternative A Conditions
Saturday Evening











Lane Group						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	49	105	738	28	108	225
Future Volume (vph)	49	105	738	28	108	225
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	12	12	12
Storage Length (ft)	70	0		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.995			
Flt Protected	0.950					0.984
Satd. Flow (prot)	1685	1492	1872	0	0	1845
Flt Permitted	0.950					0.984
Satd. Flow (perm)	1685	1492	1872	0	0	1845
Link Speed (mph)	30		30			30
Link Distance (ft)	1001		867			500
Travel Time (s)	22.8		19.7			11.4
Peak Hour Factor	0.82	0.82	0.93	0.93	0.94	0.94
Heavy Vehicles (%)	0%	1%	1%	0%	0%	2%
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
Control Type: Unsignalized











HCM Unsignalized Intersection Capacity Analysis
 1: Ocean Road & Banfield Road

2026 Build Alternative A Conditions
 Saturday Evening

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	49	105	738	28	108	225
Future Volume (Veh/h)	49	105	738	28	108	225
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.82	0.82	0.93	0.93	0.94	0.94
Hourly flow rate (vph)	60	128	794	30	115	239
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1278	809			824	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1278	809			824	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	62	66			86	
cM capacity (veh/h)	159	382			815	
Direction, Lane #	WB 1	WB 2	NB 1	SB 1		
Volume Total	60	128	824	354		
Volume Left	60	0	0	115		
Volume Right	0	128	30	0		
cSH	159	382	1700	815		
Volume to Capacity	0.38	0.34	0.48	0.14		
Queue Length 95th (ft)	40	36	0	12		
Control Delay (s)	40.7	19.1	0.0	4.4		
Lane LOS	E	C		A		
Approach Delay (s)	26.0		0.0	4.4		
Approach LOS	D					
Intersection Summary						
Average Delay			4.7			
Intersection Capacity Utilization			71.7%		ICU Level of Service	C
Analysis Period (min)			15			

Lanes, Volumes, Timings
 3: Constitution Avenue & Banfield Road

2026 Build Alternative A Conditions
 Saturday Evening










Lane Group						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	97	48	30	112	67	16
Future Volume (vph)	97	48	30	112	67	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.955				0.974	
Flt Protected				0.989	0.961	
Satd. Flow (prot)	1742	0	0	1816	1771	0
Flt Permitted				0.989	0.961	
Satd. Flow (perm)	1742	0	0	1816	1771	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	1260			501	2972	
Travel Time (s)	28.6			11.4	67.5	
Confl. Bikes (#/hr)		1				
Peak Hour Factor	0.83	0.83	0.84	0.84	0.90	0.90
Heavy Vehicles (%)	1%	0%	0%	0%	0%	2%
Shared Lane Traffic (%)						
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

HCM Unsignalized Intersection Capacity Analysis
 3: Constitution Avenue & Banfield Road

2026 Build Alternative A Conditions
 Saturday Evening

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	97	48	30	112	67	16
Future Volume (Veh/h)	97	48	30	112	67	16
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.83	0.83	0.84	0.84	0.90	0.90
Hourly flow rate (vph)	117	58	36	133	74	18
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			175		351	146
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			175		351	146
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			97		88	98
cM capacity (veh/h)			1414		634	901
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	175	169	92			
Volume Left	0	36	74			
Volume Right	58	0	18			
cSH	1700	1414	673			
Volume to Capacity	0.10	0.03	0.14			
Queue Length 95th (ft)	0	2	12			
Control Delay (s)	0.0	1.8	11.2			
Lane LOS		A	B			
Approach Delay (s)	0.0	1.8	11.2			
Approach LOS			B			
Intersection Summary						
Average Delay			3.1			
Intersection Capacity Utilization			30.3%	ICU Level of Service		A
Analysis Period (min)			15			

Lanes, Volumes, Timings

2026 Build Alternative A Conditions

4: Peverly Hill Road & Banfield Road/Mirona Road

Saturday Evening

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	57	24	32	2	18	28	35	156	11	33	232	104
Future Volume (vph)	57	24	32	2	18	28	35	156	11	33	232	104
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	15	15	15	11	11	11	11	11	11
Storage Length (ft)	150		0	0		0	320		0	165		0
Storage Lanes	1		0	0		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99			0.99			1.00				0.98
Frt		0.914			0.922			0.990				0.850
Flt Protected	0.950				0.998		0.950			0.950		
Satd. Flow (prot)	1694	1724	0	0	1899	0	1745	1799	0	1745	1837	1546
Flt Permitted	0.717				0.978		0.950			0.950		
Satd. Flow (perm)	1279	1724	0	0	1861	0	1745	1799	0	1745	1837	1513
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		40			36			4				121
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		501			499			1500			500	
Travel Time (s)		11.4			11.3			34.1			11.4	
Confl. Bikes (#/hr)			1			1			5			1
Peak Hour Factor	0.80	0.80	0.80	0.77	0.77	0.77	0.76	0.76	0.76	0.86	0.86	0.86
Heavy Vehicles (%)	3%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	1%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8			4								2
Detector Phase	8	8		4	4		1	6		5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		3.0	5.0		3.0	5.0	5.0
Minimum Split (s)	11.0	11.0		11.0	11.0		9.0	11.0		9.0	11.0	11.0
Total Split (s)	36.0	36.0		36.0	36.0		18.0	41.0		18.0	41.0	41.0
Total Split (%)	37.9%	37.9%		37.9%	37.9%		18.9%	43.2%		18.9%	43.2%	43.2%
Maximum Green (s)	30.0	30.0		30.0	30.0		12.0	35.0		12.0	35.0	35.0
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0			6.0		6.0	6.0		6.0	6.0	6.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.5	3.0		2.5	3.0	3.0
Recall Mode	None	None		None	None		None	Min		None	Min	Min





Intersection Summary

Area Type: Other
 Cycle Length: 95
 Actuated Cycle Length: 39.4
 Natural Cycle: 40
 Control Type: Actuated-Uncoordinated

Lanes, Volumes, Timings
 4: Pevery Hill Road & Banfield Road/Mirona Road









2026 Build Alternative A Conditions
 Saturday Evening

Splits and Phases: 4: Pevery Hill Road & Banfield Road/Mirona Road

 Ø1 18 s	 Ø2 41 s	 Ø4 36 s
 Ø5 18 s	 Ø6 41 s	 Ø8 36 s

Queues
4: Peverly Hill Road & Banfield Road/Mirona Road






















2026 Build Alternative A Conditions
Saturday Evening

								
Lane Group	EBL	EBT	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	71	70	62	46	219	38	270	121
v/c Ratio	0.26	0.17	0.15	0.16	0.25	0.13	0.31	0.15
Control Delay	18.9	11.0	10.8	19.7	12.1	19.9	12.8	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.9	11.0	10.8	19.7	12.1	19.9	12.8	4.1
Queue Length 50th (ft)	9	4	3	7	24	5	31	0
Queue Length 95th (ft)	45	30	26	32	83	32	121	26
Internal Link Dist (ft)		421	419		1420		420	
Turn Bay Length (ft)	150			320		165		
Base Capacity (vph)	1031	1398	1508	577	1554	577	1587	1323
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.05	0.04	0.08	0.14	0.07	0.17	0.09
Intersection Summary								

HCM Signalized Intersection Capacity Analysis
 4: Peverly Hill Road & Banfield Road/Mirona Road

2026 Build Alternative A Conditions

Saturday Evening


















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	57	24	32	2	18	28	35	156	11	33	232	104
Future Volume (vph)	57	24	32	2	18	28	35	156	11	33	232	104
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	12	15	15	15	11	11	11	11	11	11
Total Lost time (s)	6.0	6.0			6.0		6.0	6.0		6.0	6.0	6.0
Lane Util. Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frbp, ped/bikes	1.00	0.99			0.99		1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Frnt	1.00	0.91			0.92		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1694	1724			1897		1745	1799		1745	1837	1513
Flt Permitted	0.72	1.00			0.98		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1278	1724			1858		1745	1799		1745	1837	1513
Peak-hour factor, PHF	0.80	0.80	0.80	0.77	0.77	0.77	0.76	0.76	0.76	0.86	0.86	0.86
Adj. Flow (vph)	71	30	40	3	23	36	46	205	14	38	270	121
RTOR Reduction (vph)	0	34	0	0	30	0	0	2	0	0	0	74
Lane Group Flow (vph)	71	36	0	0	32	0	46	217	0	38	270	47
Confl. Bikes (#/hr)			1				1		5			1
Heavy Vehicles (%)	3%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	1%
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8			4								2
Actuated Green, G (s)	6.8	6.8			6.8		2.3	17.3		2.2	17.2	17.2
Effective Green, g (s)	6.8	6.8			6.8		2.3	17.3		2.2	17.2	17.2
Actuated g/C Ratio	0.15	0.15			0.15		0.05	0.39		0.05	0.39	0.39
Clearance Time (s)	6.0	6.0			6.0		6.0	6.0		6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0			3.0		2.5	3.0		2.5	3.0	3.0
Lane Grp Cap (vph)	196	264			285		90	702		86	713	587
v/s Ratio Prot		0.02					c0.03	0.12		0.02	c0.15	
v/s Ratio Perm	c0.06				0.02							0.03
v/c Ratio	0.36	0.14			0.11		0.51	0.31		0.44	0.38	0.08
Uniform Delay, d1	16.8	16.2			16.1		20.5	9.4		20.5	9.7	8.6
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	1.1	0.2			0.2		3.6	0.3		2.6	0.3	0.1
Delay (s)	17.9	16.5			16.3		24.1	9.6		23.1	10.1	8.6
Level of Service	B	B			B		C	A		C	B	A
Approach Delay (s)		17.2			16.3			12.1			10.8	
Approach LOS		B			B			B			B	
Intersection Summary												
HCM 2000 Control Delay			12.6				HCM 2000 Level of Service			B		
HCM 2000 Volume to Capacity ratio			0.39									
Actuated Cycle Length (s)			44.3				Sum of lost time (s)			18.0		
Intersection Capacity Utilization			40.4%				ICU Level of Service			A		
Analysis Period (min)			15									
c Critical Lane Group												

Lanes, Volumes, Timings

2026 Build Alternative A Conditions

8: US Route 1 & West Road/St. James Church Driveway

Saturday Evening

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	210	0	656	0	0	1	8	782	0	6	808	0
Future Volume (vph)	210	0	656	0	0	1	8	782	0	6	808	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	11	11	12	12	11	11
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Fr _t		0.898			0.865							
Fl _t Protected		0.988					0.950					
Satd. Flow (prot)	0	1524	0	0	1644	0	1163	1837	0	0	1819	0
Fl _t Permitted		0.988					0.950					
Satd. Flow (perm)	0	1524	0	0	1644	0	1163	1837	0	0	1819	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1200			377			1000			2226	
Travel Time (s)		27.3			8.6			22.7			50.6	
Confl. Peds. (#/hr)			1			2						
Confl. Bikes (#/hr)												2
Peak Hour Factor	0.67	0.67	0.67	0.25	0.25	0.25	0.89	0.89	0.89	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	14%	0%	0%	0%	50%	0%	0%	0%	1%	0%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	


















Intersection Summary

Area Type: Other

Control Type: Unsignalized

HCM Unsignalized Intersection Capacity Analysis
 8: US Route 1 & West Road/St. James Church Driveway

2026 Build Alternative A Conditions
 Saturday Evening

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	210	0	656	0	0	1	8	782	0	6	808	0
Future Volume (Veh/h)	210	0	656	0	0	1	8	782	0	6	808	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.67	0.67	0.67	0.25	0.25	0.25	0.89	0.89	0.89	0.91	0.91	0.91
Hourly flow rate (vph)	313	0	979	0	0	4	9	879	0	7	888	0
Pedestrians								1			2	
Lane Width (ft)								11.0			11.0	
Walking Speed (ft/s)								4.0			4.0	
Percent Blockage								0			0	
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1805	1799	889	2779	1799	881	888			879		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1805	1799	889	2779	1799	881	888			879		
tC, single (s)	7.1	6.5	6.3	7.1	6.5	6.2	4.6			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.4	3.5	4.0	3.3	2.7			2.2		
p0 queue free %	0	100	0	0	100	99	98			99		
cM capacity (veh/h)	60	79	325	0	79	348	595			777		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1							
Volume Total	1292	4	9	879	895							
Volume Left	313	0	9	0	7							
Volume Right	979	4	0	0	0							
cSH	157	348	595	1700	777							
Volume to Capacity	8.22	0.01	0.02	0.52	0.01							
Queue Length 95th (ft)	Err	1	1	0	1							
Control Delay (s)	Err	15.5	11.1	0.0	0.3							
Lane LOS	F	C	B		A							
Approach Delay (s)	Err	15.5	0.1		0.3							
Approach LOS	F	C										
Intersection Summary												
Average Delay			4195.9									
Intersection Capacity Utilization			112.8%		ICU Level of Service				H			
Analysis Period (min)			15									

Lanes, Volumes, Timings
 11: US Route 1 & Peverly Hill Road/Elywn Road

2026 Build Alternative A Conditions
 Saturday Evening

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	116	177	97	146	95	230	86	767	73	4	178	764
Future Volume (vph)	116	177	97	146	95	230	86	767	73	4	178	764
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	11	12	12	12	12	12	12
Storage Length (ft)	160		160	180		180	250		0		330	
Storage Lanes	1		0	1		0	1		0		1	
Taper Length (ft)	25			25			25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.95
Ped Bike Factor			0.99					1.00				
Frt			0.850			0.850		0.987				
Flt Protected	0.950			0.950			0.950				0.950	
Satd. Flow (prot)	1805	1881	1615	1745	1818	1546	1805	3556	0	0	1788	3574
Flt Permitted	0.950			0.641			0.950				0.950	
Satd. Flow (perm)	1805	1881	1593	1177	1818	1546	1805	3556	0	0	1788	3574
Right Turn on Red			Yes			Yes			Yes			
Satd. Flow (RTOR)			101			235		8				
Link Speed (mph)		30			30			30				30
Link Distance (ft)		600			500			775				1499
Travel Time (s)		13.6			11.4			17.6				34.1
Confl. Bikes (#/hr)			2			2			4			
Peak Hour Factor	0.96	0.96	0.96	0.98	0.98	0.98	0.87	0.87	0.87	0.85	0.85	0.85
Heavy Vehicles (%)	0%	1%	0%	0%	1%	1%	0%	0%	0%	0%	1%	1%
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Perm	NA	Prot	Prot	NA		Prot	Prot	NA
Protected Phases	7	4			8	8	5	2		1	1	6
Permitted Phases			4	8								
Detector Phase	7	4	4	8	8	8	5	2		1	1	6
Switch Phase												
Minimum Initial (s)	5.0	8.0	8.0	8.0	8.0	8.0	5.0	8.0		5.0	5.0	8.0
Minimum Split (s)	11.0	25.0	25.0	14.0	14.0	14.0	11.0	31.0		11.0	11.0	31.0
Total Split (s)	18.0	49.0	49.0	31.0	31.0	31.0	31.0	56.0		31.0	31.0	56.0
Total Split (%)	13.2%	36.0%	36.0%	22.8%	22.8%	22.8%	22.8%	41.2%		22.8%	22.8%	41.2%
Maximum Green (s)	12.0	43.0	43.0	25.0	25.0	25.0	25.0	50.0		25.0	25.0	50.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0	6.0
Lead/Lag	Lead			Lag	Lag	Lag	Lead	Lag		Lead	Lead	Lag
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.0		4.0	4.0	5.0
Recall Mode	None	None	None	None	None	None	None	Min		None	None	Min
Walk Time (s)		4.0	4.0					4.0				4.0
Flash Dont Walk (s)		15.0	15.0					21.0				21.0
Pedestrian Calls (#/hr)		5	5					5				5

Intersection Summary

Area Type: Other
 Cycle Length: 136

Lanes, Volumes, Timings
 11: US Route 1 & Peverly Hill Road/Elywn Road

2026 Build Alternative A Conditions
 Saturday Evening

Lane Group	SBR
Lane Configurations	↑
Traffic Volume (vph)	29
Future Volume (vph)	29
Ideal Flow (vphpl)	1900
Lane Width (ft)	12
Storage Length (ft)	350
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Ped Bike Factor	
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1553
Flt Permitted	
Satd. Flow (perm)	1553
Right Turn on Red	Yes
Satd. Flow (RTOR)	120
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Bikes (#/hr)	
Peak Hour Factor	0.85
Heavy Vehicles (%)	4%
Shared Lane Traffic (%)	
Turn Type	Perm
Protected Phases	
Permitted Phases	6
Detector Phase	6
Switch Phase	
Minimum Initial (s)	8.0
Minimum Split (s)	31.0
Total Split (s)	56.0
Total Split (%)	41.2%
Maximum Green (s)	50.0
Yellow Time (s)	4.0
All-Red Time (s)	2.0
Lost Time Adjust (s)	0.0
Total Lost Time (s)	6.0
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	5.0
Recall Mode	Min
Walk Time (s)	4.0
Flash Dont Walk (s)	21.0
Pedestrian Calls (#/hr)	5








Intersection Summary

Lanes, Volumes, Timings
 11: US Route 1 & Peverly Hill Road/Elywn Road

2026 Build Alternative A Conditions
 Saturday Evening












Actuated Cycle Length: 120.1
 Natural Cycle: 80
 Control Type: Actuated-Uncoordinated

Splits and Phases: 11: US Route 1 & Peverly Hill Road/Elywn Road

 Ø1	 Ø2	 Ø4	
31 s	56 s	49 s	
 Ø5	 Ø6	 Ø7	 Ø8
31 s	56 s	18 s	31 s

Queues
11: US Route 1 & Peverly Hill Road/Elywn Road

2026 Build Alternative A Conditions
Saturday Evening

























											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	121	184	101	149	97	235	99	966	214	899	34
v/c Ratio	0.69	0.31	0.18	0.74	0.31	0.51	0.50	0.75	0.72	0.60	0.05
Control Delay	77.1	34.5	7.0	72.4	49.2	10.1	62.7	38.4	63.7	29.8	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	77.1	34.5	7.0	72.4	49.2	10.1	62.7	38.4	63.7	29.8	0.1
Queue Length 50th (ft)	100	115	0	118	71	0	80	362	172	295	0
Queue Length 95th (ft)	#208	190	42	#218	130	75	135	443	249	363	0
Internal Link Dist (ft)		520			420			695		1419	
Turn Bay Length (ft)	160		160	180		180	250		330		350
Base Capacity (vph)	185	691	649	251	388	514	385	1525	382	1643	778
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.65	0.27	0.16	0.59	0.25	0.46	0.26	0.63	0.56	0.55	0.04

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis
 11: US Route 1 & Peverly Hill Road/Elywn Road

2026 Build Alternative A Conditions
 Saturday Evening

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	116	177	97	146	95	230	86	767	73	4	178	764
Future Volume (vph)	116	177	97	146	95	230	86	767	73	4	178	764
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	11	11	11	12	12	12	12	12	12
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0			6.0	6.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95			1.00	0.95
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00			1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99			1.00	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00			0.95	1.00
Satd. Flow (prot)	1805	1881	1593	1745	1818	1546	1805	3555			1788	3574
Flt Permitted	0.95	1.00	1.00	0.64	1.00	1.00	0.95	1.00			0.95	1.00
Satd. Flow (perm)	1805	1881	1593	1178	1818	1546	1805	3555			1788	3574
Peak-hour factor, PHF	0.96	0.96	0.96	0.98	0.98	0.98	0.87	0.87	0.87	0.85	0.85	0.85
Adj. Flow (vph)	121	184	101	149	97	235	99	882	84	5	209	899
RTOR Reduction (vph)	0	0	69	0	0	195	0	5	0	0	0	0
Lane Group Flow (vph)	121	184	32	149	97	40	99	961	0	0	214	899
Confl. Bikes (#/hr)			2			2			4			
Heavy Vehicles (%)	0%	1%	0%	0%	1%	1%	0%	0%	0%	0%	1%	1%
Turn Type	Prot	NA	Perm	Perm	NA	Prot	Prot	NA		Prot	Prot	NA
Protected Phases	7	4			8	8	5	2		1	1	6
Permitted Phases			4	8								
Actuated Green, G (s)	11.7	38.3	38.3	20.6	20.6	20.6	13.2	43.3			20.1	50.2
Effective Green, g (s)	11.7	38.3	38.3	20.6	20.6	20.6	13.2	43.3			20.1	50.2
Actuated g/C Ratio	0.10	0.32	0.32	0.17	0.17	0.17	0.11	0.36			0.17	0.42
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0			6.0	6.0
Vehicle Extension (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.0			4.0	5.0
Lane Grp Cap (vph)	176	601	509	202	312	266	199	1285			300	1498
v/s Ratio Prot	c0.07	0.10			0.05	0.03	0.05	c0.27			c0.12	c0.25
v/s Ratio Perm			0.02	c0.13								
v/c Ratio	0.69	0.31	0.06	0.74	0.31	0.15	0.50	0.75			0.71	0.60
Uniform Delay, d1	52.2	30.7	28.3	47.0	43.3	42.1	50.1	33.4			47.1	27.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2	11.5	0.4	0.1	13.9	0.8	0.4	2.7	2.9			8.3	1.0
Delay (s)	63.7	31.1	28.3	60.9	44.1	42.5	52.8	36.3			55.4	28.0
Level of Service	E	C	C	E	D	D	D	D			E	C
Approach Delay (s)		40.1			48.5			37.9				32.9
Approach LOS		D			D			D				C
Intersection Summary												
HCM 2000 Control Delay			38.0		HCM 2000 Level of Service						D	
HCM 2000 Volume to Capacity ratio			0.73									
Actuated Cycle Length (s)			119.7		Sum of lost time (s)					24.0		
Intersection Capacity Utilization			74.3%		ICU Level of Service					D		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
 11: US Route 1 & Peverly Hill Road/Elywn Road

2026 Build Alternative A Conditions
 Saturday Evening

Movement	SBR
Lane Configurations	7
Traffic Volume (vph)	29
Future Volume (vph)	29
Ideal Flow (vphpl)	1900
Lane Width	12
Total Lost time (s)	6.0
Lane Util. Factor	1.00
Frpb, ped/bikes	1.00
Flpb, ped/bikes	1.00
Fr _t	0.85
Fl _t Protected	1.00
Satd. Flow (prot)	1553
Fl _t Permitted	1.00
Satd. Flow (perm)	1553
Peak-hour factor, PHF	0.85
Adj. Flow (vph)	34
RTOR Reduction (vph)	20
Lane Group Flow (vph)	14
Confl. Bikes (#/hr)	
Heavy Vehicles (%)	4%
Turn Type	Perm
Protected Phases	
Permitted Phases	6
Actuated Green, G (s)	50.2
Effective Green, g (s)	50.2
Actuated g/C Ratio	0.42
Clearance Time (s)	6.0
Vehicle Extension (s)	5.0
Lane Grp Cap (vph)	651
v/s Ratio Prot	
v/s Ratio Perm	0.01
v/c Ratio	0.02
Uniform Delay, d1	20.4
Progression Factor	1.00
Incremental Delay, d2	0.0
Delay (s)	20.4
Level of Service	C
Approach Delay (s)	
Approach LOS	
Intersection Summary	

2026 Future Year Alternative A with Mitigation Conditions

Lanes, Volumes, Timings

2026 Build Alternative A w/ Mitigation Conditions

8: US Route 1 & West Road/St. James Church Driveway

Saturday Evening







Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	210	0	656	0	0	1	8	782	0	6	808	0
Future Volume (vph)	210	0	656	0	0	1	8	782	0	6	808	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	11	11	12	12	11	11
Storage Length (ft)	0		0	0		0	50		0	50		0
Storage Lanes	1		1	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor					0.98							
Frt			0.850		0.865							
Flt Protected	0.950						0.950			0.950		
Satd. Flow (prot)	1805	0	1417	0	1618	0	1163	3490	0	1805	3455	0
Flt Permitted	0.950						0.950			0.950		
Satd. Flow (perm)	1805	0	1417	0	1618	0	1163	3490	0	1805	3455	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			399		206							
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1200			377			1000			2226	
Travel Time (s)		27.3			8.6			22.7			50.6	
Confl. Peds. (#/hr)			1			2						
Confl. Bikes (#/hr)												2
Peak Hour Factor	0.67	0.67	0.67	0.25	0.25	0.25	0.89	0.89	0.89	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	14%	0%	0%	0%	50%	0%	0%	0%	1%	0%
Shared Lane Traffic (%)												
Turn Type	Prot		pt+ov		NA		Prot	NA		Prot	NA	
Protected Phases	7		7.5		8		5	2		1	6	
Permitted Phases				8								
Detector Phase	7		7.5	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	6.0			6.0	6.0		6.0	6.0		6.0	6.0	
Minimum Split (s)	12.0			22.0	22.0		12.0	22.0		12.0	22.0	
Total Split (s)	31.0			22.0	22.0		12.0	35.0		12.0	35.0	
Total Split (%)	31.0%			22.0%	22.0%		12.0%	35.0%		12.0%	35.0%	
Maximum Green (s)	25.0			16.0	16.0		6.0	29.0		6.0	29.0	
Yellow Time (s)	4.0			4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0			2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0				0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0				6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lead			Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0			3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None			None	None		None	Min		None	Min	

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 77.6
 Natural Cycle: 130

Control Type: Actuated-Uncoordinated

Splits and Phases: 8: US Route 1 & West Road/St. James Church Driveway








 Ø1	 Ø2		
12 s	35 s		
 Ø5	 Ø6	 Ø7	 Ø8
12 s	35 s	31 s	22 s

Queues

2026 Build Alternative A w/ Mitigation Conditions

8: US Route 1 & West Road/St. James Church Driveway




















Saturday Evening

							
Lane Group	EBL	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	313	979	4	9	879	7	888
v/c Ratio	0.54	1.12	0.01	0.10	0.54	0.05	0.76
Control Delay	27.1	84.9	0.0	39.4	18.0	37.5	28.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.1	84.9	0.0	39.4	18.0	37.5	28.4
Queue Length 50th (ft)	120	~430	0	4	133	3	187
Queue Length 95th (ft)	168	#377	0	20	304	18	315
Internal Link Dist (ft)			297		920		2146
Turn Bay Length (ft)				50		50	
Base Capacity (vph)	585	874	499	90	1628	140	1299
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.54	1.12	0.01	0.10	0.54	0.05	0.68

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis 2026 Build Alternative A w/ Mitigation Conditions
 8: US Route 1 & West Road/St. James Church Driveway Saturday Evening

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	210	0	656	0	0	1	8	782	0	6	808	0
Future Volume (vph)	210	0	656	0	0	1	8	782	0	6	808	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	11	11	12	12	11	11
Total Lost time (s)	6.0		6.0		6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00		1.00		1.00		1.00	0.95		1.00	0.95	
Frbp, ped/bikes	1.00		1.00		0.94		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00		1.00		1.00		1.00	1.00		1.00	1.00	
Frt	1.00		0.85		0.86		1.00	1.00		1.00	1.00	
Flt Protected	0.95		1.00		1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805		1417		1539		1163	3490		1805	3455	
Flt Permitted	0.95		1.00		1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1805		1417		1539		1163	3490		1805	3455	
Peak-hour factor, PHF	0.67	0.67	0.67	0.25	0.25	0.25	0.89	0.89	0.89	0.91	0.91	0.91
Adj. Flow (vph)	313	0	979	0	0	4	9	879	0	7	888	0
RTOR Reduction (vph)	0	0	257	0	4	0	0	0	0	0	0	0
Lane Group Flow (vph)	313	0	722	0	0	0	9	879	0	7	888	0
Confl. Peds. (#/hr)			1				2					
Confl. Bikes (#/hr)												2
Heavy Vehicles (%)	0%	0%	14%	0%	0%	0%	50%	0%	0%	0%	1%	0%
Turn Type	Prot		pt+ov		NA		Prot	NA		Prot	NA	
Protected Phases	7		7 5		8		5	2		1	6	
Permitted Phases				8								
Actuated Green, G (s)	25.2		31.2		1.0		6.0	36.2		1.0	31.2	
Effective Green, g (s)	25.2		31.2		1.0		6.0	36.2		1.0	31.2	
Actuated g/C Ratio	0.29		0.36		0.01		0.07	0.41		0.01	0.36	
Clearance Time (s)	6.0				6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0				3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	520		505		17		79	1445		20	1233	
v/s Ratio Prot	0.17		c0.51		c0.00		0.01	c0.25		0.00	c0.26	
v/s Ratio Perm												
v/c Ratio	0.60		1.43		0.00		0.11	0.61		0.35	0.72	
Uniform Delay, d1	26.8		28.1		42.7		38.2	20.0		42.9	24.3	
Progression Factor	1.00		1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.0		204.9		0.1		0.6	0.7		10.3	2.1	
Delay (s)	28.7		233.0		42.8		38.8	20.8		53.2	26.4	
Level of Service	C		F		D		D	C		D	C	
Approach Delay (s)		183.6			42.8			21.0			26.6	
Approach LOS		F			D			C			C	
Intersection Summary												
HCM 2000 Control Delay			90.9									F
HCM 2000 Volume to Capacity ratio			1.05									
Actuated Cycle Length (s)			87.4						24.0			
Intersection Capacity Utilization			83.1%									E
Analysis Period (min)			15									



