

Traffic Report



Traffic Impact and Access Study

Proposed Affordable Housing
35 Sherburne Road
Portsmouth, New Hampshire

TFM Project #47528.00

April 21, 2023

Prepared for:
Portsmouth Housing Authority

Submitted to:
City of Portsmouth

Prepared by:



Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists

48 Constitution Drive, Bedford, NH 03110
(603) 472-4488 www.tfmoran.com

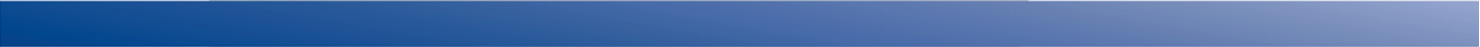
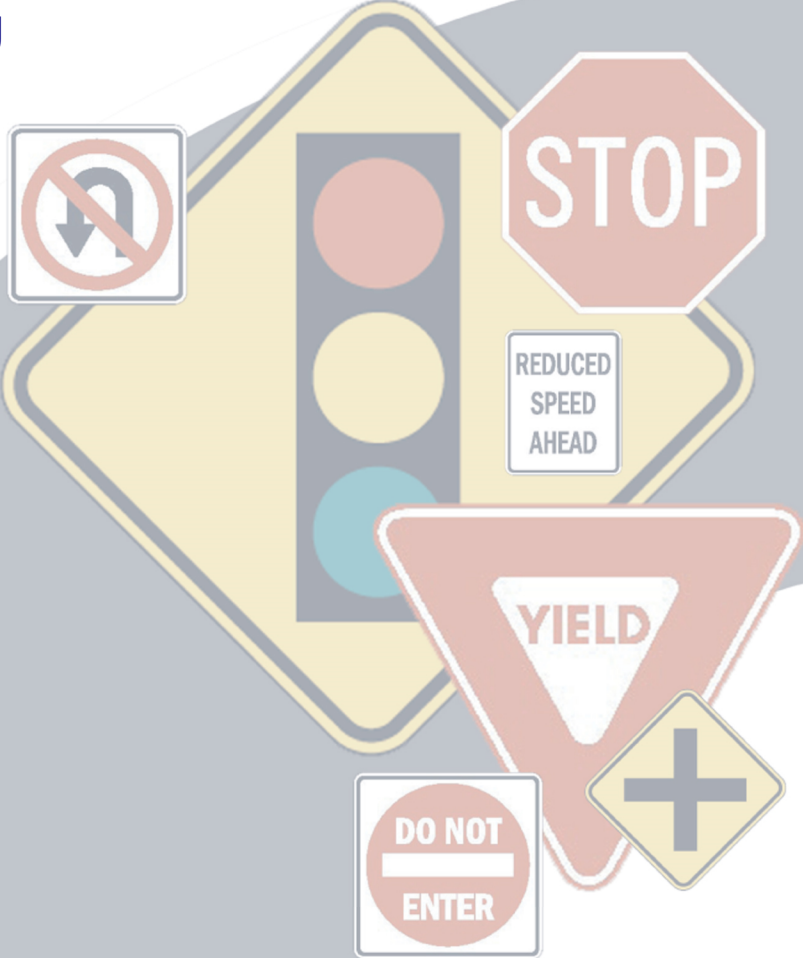


TABLE OF CONTENTS

1.	Introduction	1
	<i>Proposal, Scope of Study</i>	
2.	Existing Conditions	3
	<i>Descriptions of Roadways and Intersections</i>	
3.	Background Volumes	6
	<i>Seasonal Adjustment, Covid Adjustment, Signal Timings, Balance, Base Diagrams: 2023</i>	
4.	No-Build Volumes	8
	<i>Growth Factor, Other Developments No-Build Diagrams: 2026, 2036</i>	
5.	Trip Generation	11
	<i>Proposed Trips: Tables 1a-c</i>	
6.	Trip Composition, Distribution and Assignment	11
	<i>Composition, Distribution Site Trip Assignment & Distribution Diagrams</i>	
7.	Build Volumes	14
	<i>Build Diagrams: 2026, 2036</i>	
8.	Level of Service / Queue Analysis	17
	<i>Level of Service Analysis, Study Area Queue Analysis, Methodology, Signal Timing Level of Service & Queue Analysis Summary Table 2 (2023/2026 LOS & Queue) Table 3 (2036 LOS & Queue)</i>	
9.	Sight Distance	20
10.	Speed Study	20
	<i>Table 4 – Observed Travel Speeds</i>	
11.	Accident Evaluation	20
	<i>Table 5 – Crash Data Summary</i>	
12.	Conclusions	21

APPENDIX

APPENDICES

- APPENDIX A** **Site Trips**
- Trip Generation
 - Distribution
- APPENDIX B** **Existing Trip Deductions**
- Distribution
 - Diagrams
- APPENDIX C** **Volume Adjustments**
- Seasonal Adjustment
 - Covid Factor
 - Growth
- APPENDIX D** **Other Developments**
- Correspondence
- APPENDIX E** **Volumes (AM/PM)**
- Calculations
 - ProRata
 - Balance
- APPENDIX F** **AM Synchro**
- BASE 2023
 - NoBuild – 2026, 2036
 - Build – 2026, 2036
- APPENDIX G** **PM Synchro**
- BASE 2023
 - NoBuild – 2026, 2036
 - Build – 2026, 2036
- APPENDIX H** **Crash Data**
- Data from Portsmouth PD
- APPENDIX I** **Counts**
- Turning Movements Counts
 - Speed Data
 - Video Count Tabulation
- APPENDIX J** **Signal Timing**
- APPENDIX K** **Plan**
- Concept C – Proposed Housing Development



Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists

Traffic Impact and Access Study

Proposed Affordable Housing
35 Sherburne Road
Portsmouth, New Hampshire
April 21, 2023

1. Introduction

TFMoran Inc. has completed this traffic impact and access study on behalf Portsmouth Housing Authority to determine traffic impacts associated with a 111 unit affordable housing development. The objectives of the study are:

- To estimate trip generation and distribution for the proposed use to perform capacity analysis for the project study area
- To determine potential traffic impacts of the proposed development use
- To provide recommendations for operational improvements within the study area to mitigate the proposed development's traffic impacts

Portsmouth Housing Authority is proposing an affordable housing development at 35 Sherburne Road in Portsmouth. The project includes an 88 unit apartment building, 2 townhouses with 4 units each and converting the existing school building on site into 15 apartment units.

The site will have two driveways, the new driveway to the south will be enter only and the existing driveway will be converted to exit only. This will allow one-way circulation around the site. There are xx parking spaces proposed.

The existing site is currently an "alternative high school" for approximately 30 students which will be moving to a new location on the nearby community college campus at Pease.

Scope of Study

At the traffic scoping meeting held via Zoom on February 17th, 2023 with City Engineering, TFMoran, and the PHA. It was agreed that this study would consider the following conditions:

Analysis Periods:

- Weekday AM and PM roadway peak hours
- No Saturday

Covid/Stay-at-Home Volume Adjustments:

- Volumes will be adjusted by a Covid/Stay-at-Home factor.
 - review data from City and NHDOT MS2

TFMoran, Inc.
48 Constitution Drive, Bedford, NH 03110
T(603) 472-4488 www.tfmoran.com

TFMoran Seacoast Division
170 Commerce Way–Suite 102, Portsmouth, NH 03801
T(603) 431-2222

Background growth:

- 1% seems to high for this area, review data from City and check MS2 data

Seasonal Adjustment:

- NHDOT Group 4 data for seasonal adjustment

Opening Year/Future Year:

- 2026/2036

Other Developments:

- Two other projects in area – Liberty Mutual Building (consolidating office into the Greenland Road location), and Hospital expansion project.

Site Trip Generation/Composition:

- Trip Generation and Composition is based on the current ITE Trip Generation 11th Edition
 - LUC 223 Affordable Housing
 - AI trips Primary

Site Trip Distribution

- Distribution prorata based on the counts

Study Area Intersections:

- 1) Site Driveway
- 2) Greenland Road at Borthwick Ave [stop controlled]
- 3) Greenland Road at NH Route 33 [signal]



2. Existing Conditions

Description of Roadways and Intersections:

Roadways

NH Route 33 (Greenland Road)

- **Classification.** NH33 is a State-maintained highway in the Seacoast Region that provides east-west travel connecting Stratham with Portsmouth. The following descriptions apply within the study area.
- **Lane widths and usage.** In the project vicinity, the roadway generally provides two 12' travel lanes in each direction, with left turn lanes at major intersections, and 5-6' wide paved shoulders.
- **Pedestrian facilities.** Pedestrians are not permitted.
- **Signage.** The speed limit is posted at 35 mph. There are lane use signs, roadway directional signs, overhead lane designations signs and blue hospital & interstate signs. Pavement markings consist of double-yellow centerline, dashed white lines dividing lanes and white shoulder markings, in generally good condition.
- **Lighting.** Cobra-head roadway lighting is provided in the study area intersections.
- **Road conditions.** The roadway is fairly level, open drainage with guardrails and normal crown along straights. The pavement is in fair to good condition.

Greenland Road (City portion)

- **Classification.** Greenland Road is a short local roadway that connects to NH33 and is dead-ended.
- **Lane widths and usage.** The roadway generally provides two way travel with 12' lanes in each direction and varying widths of paved shoulder.
- **Pedestrian facilities.** There are sidewalks along the residential portion of the roadway.
- **Signage.** The speed limit is 30 mph. There are roadway signs, a stop sign, a "Dead End" sign. There is no striping along the roadway.
- **Lighting.** A cobra-head roadway light is provided at the intersection of Sherburne Road.
- **Road conditions.** The roadway is generally flat and straight, open drainage, and normal crown throughout. The pavement is in fair condition with cracking, rutting and pavement patches.
- **Adjacent uses and driveways.** Other than Orchard Park business park near the intersection of Greenland Road and Borthwick Avenue, the remaining area is residential homes.

Borthwick Avenue

- **Classification.** Borthwick Avenue is a local roadway that connects NH33 with Bypass US1.
- **Lane widths and usage.** The roadway generally provides two way travel with 12' lanes in each direction and 2-6' wide paved shoulders.
- **Pedestrian facilities.** There are sidewalks along the east side of the roadway.
- **Signage.** The speed limit is 25 mph in the study area. There are crosswalk signs, a warning chevron arrow at the corner approaching Greenland Road, "No Parking This Side of Street" signs on the east side of the roadway and a stop sign. Pavement markings consist of double-yellow centerline and white shoulder markings.

- Lighting. Cobra-head roadway lighting is generally provided throughout.
- Road conditions. The roadway is generally flat with curves, open drainage and normal crown throughout. The pavement is in fair to good condition. .
- Adjacent uses and driveways. The Borthwick Park is located along the roadway including Portsmouth Hospital, Liberty Mutual, High Liner Foods, Fairfield Inn and other Office/industrial/Service companies.

Sherburne Road

- Classification. Sherburne Road is a local roadway that is primarily a residential area. The far end of the roadway is gated and does not allow access onto Grafton Road.
- Lane widths and usage. The roadway generally provides two way travel with 12' lanes in each direction, no painted shoulder.
- Pedestrian facilities. Sidewalks are provided on the east side of the roadway.
- Signage. Posted speed limit is 20 mph. There is a "No Parking" sign in front of the school, but no other signs in the area. Pavement markings consist of double yellow centerline in fair condition.
- Sight Distance. Sight distance along the roadway is adequate for the posted speed.
- Lighting. Cobra-head roadway lighting is provided at the southern end of the I95 overpass.
- Road conditions. The roadway is curbed where there is sidewalk and open drainage on the opposite side. The pavement is in fair condition. There is minor crack-sealing, and cracking at the edges of the non-curbed roadway.
- Adjacent uses and driveways: school, and residential.

Intersections

NH Route 33 at Greenland Road

- Traffic Control. This is an existing 3-way signalized intersection. NH Route 33 forms the eastbound and westbound approaches and Greenland Road forms the southbound approach.
- Pedestrian facilities. No sidewalks at intersection.
- Approaches. The EB and WB approaches consist of two 12' lanes. The EB approach each has an exclusive left turn lane, and the WB approach has a right turn slip lane onto Greenland Road. The SB approach consists of two lanes, a right-turn lane and a left-turn lane.
- Signage. "Keep Right", "No Turns on Right Arrow" and NH33 signs are present at the intersection.
- Sight Distance. Intersection sight distance appears adequate in all directions for the posted speed.
- Lighting. Cobra-head style lighting is provided at the SB approach and the center of the intersection on the south side of NH33.
- Roadway condition. Existing roadway is in good condition through the intersection.
- Signal Timing. Existing data provided by NHDOT, Coordinated system with ramps.

Greenland Road at Borthwick Avenue

- **Traffic Control.** This is an existing 3-way stop controlled unsignalized intersection. Greenland Road forms the EB and NB approaches. Borthwick Ave forms the WB approach.
- **Pedestrian facilities.** There is an existing sidewalk along the north end of the intersection along Borthwick and Greenland Road. A 2023 City Neighborhood Sidewalk Improvement project will install an extension of the sidewalk along the south side of Borthwick Avenue and propose a new pedestrian crossing at the 3-way intersection and reroute the sidewalk along Greenland Road west.
- **Approaches.** Each approach accommodates two way traffic. The EB and WB approaches consist of one lane each for through movements and turns. The NB approach provides a left only lane and a right slip lane for turns heading onto Borthwick Ave. The NB approach is divided by concrete median at the center line and grass island between the NB lanes.
- **Signage.** The 2023 Sidewalk project will propose a stop sign at all three legs of the intersection. A yield sign will remain at the northbound left turn lane onto Borthwick Ave. There are also road identification signs, “stay right” signs at medians, blue informational signs (parking bans and hospital), a Borthwick Park directional sign and a “No Outlet” sign on Greenland Road heading west.
- **Sight Distance.** Intersection sight distance appears adequate in all directions for the posted speed.
- **Lighting.** Cobra head lighting is provided in the grass island between the NBL and NBR lanes.
- **Roadway condition.** Existing roadways in good condition.

Sherburne Road at Site Driveway (Existing)

- **Traffic Control.** This is an existing driveway. Sherburne Road forms the NB and SB approaches. The driveway forms the WB approach.
- **Pedestrian facilities.** A sidewalk is located on the east side of Sherburne Road.
- **Approaches.** All approaches each consist of a single lane for both through movements and turns.
- **Signage.** There is a “No Parking” sign in front of the school, but no other signs in the area.
- **Sight Distance.** Intersection sight distance appears adequate in all directions for the posted speed.
- **Lighting.** Cobra-head style lighting is provided at the bridge just north of the driveway.
- **Roadway condition.** Existing roadways in fair condition.

3. Background Volumes:

To quantify existing peak hour traffic volumes within the study area, turning movement counts were taken at the study intersections. These counts are tabulated in Appendix I.

Counts were taken at all study intersections on Thursday March 9, 2023 – 7AM to 9AM and 2PM to 6PM.

Seasonal Adjustment.

To account for seasonal variations, the data was seasonally adjusted upward by a factor of 15% to reflect the estimated peak month traffic volume. See Appendix C.

COVID/Stay-at Home Adjustment.

Data was provided by the City at a local signalized intersection where data is collected daily. At the intersection of Lafayette Road and South Street, the City has been collecting data since before the pandemic.

Comparing the data for mid-week (Tuesday – Thursday) for the months of January and February of 2019 vs 2023, shows that the daily volumes are still down by about 13%. The March 2023 counts were adjusted up by 13% to account for traffic that has not returned to pre-pandemic volumes. See calculations in Appendix C.

Volumes adjusted as necessary are shown in the following Base condition figures.

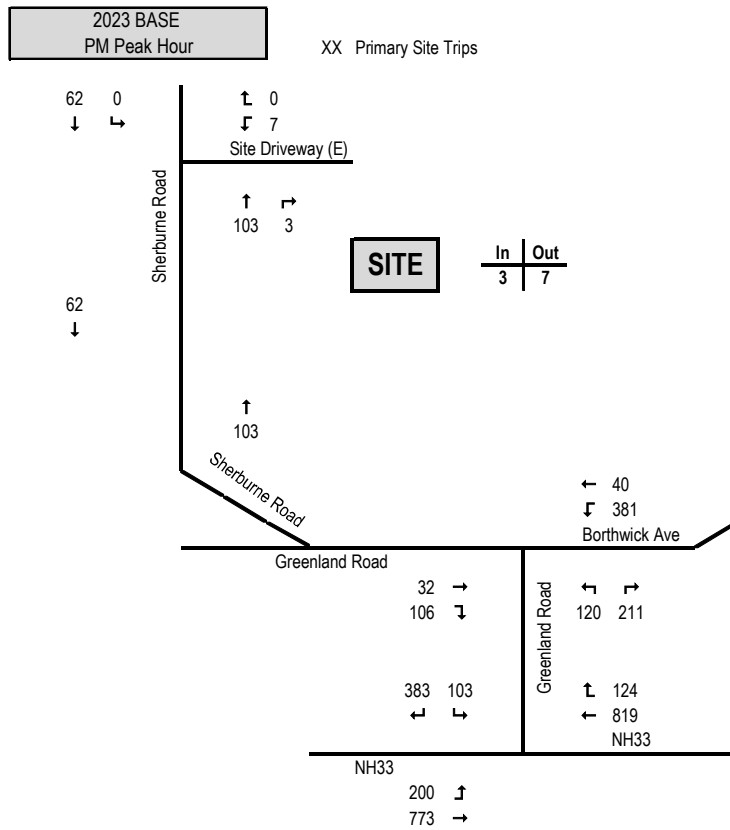
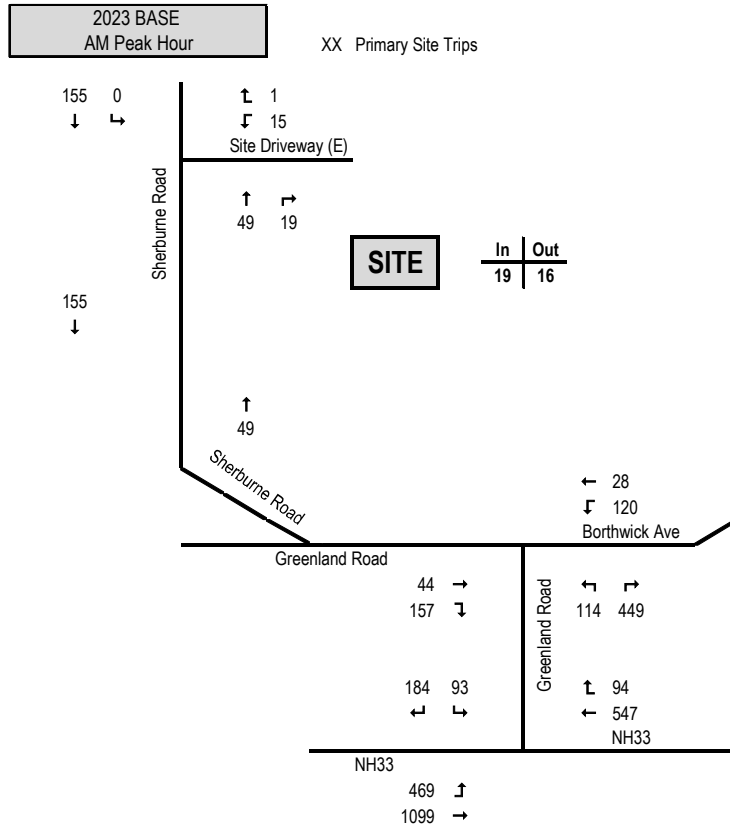
Signal Timings

Existing signal timing at the NH33 and Greenland Road intersection is based on current NHDOT timings received by TFM on March 13, 2023. The timings are attached in Appendix J.

Balance

Volumes were balanced between the Greenland/Borthwick intersection and the signal at NH33.

The existing volumes are shown in the following figures:



4. No-Build Volumes:

To establish No-Build traffic volumes for this study, the following adjustments were made to the Covid- and seasonally adjusted 2023 Base volumes:

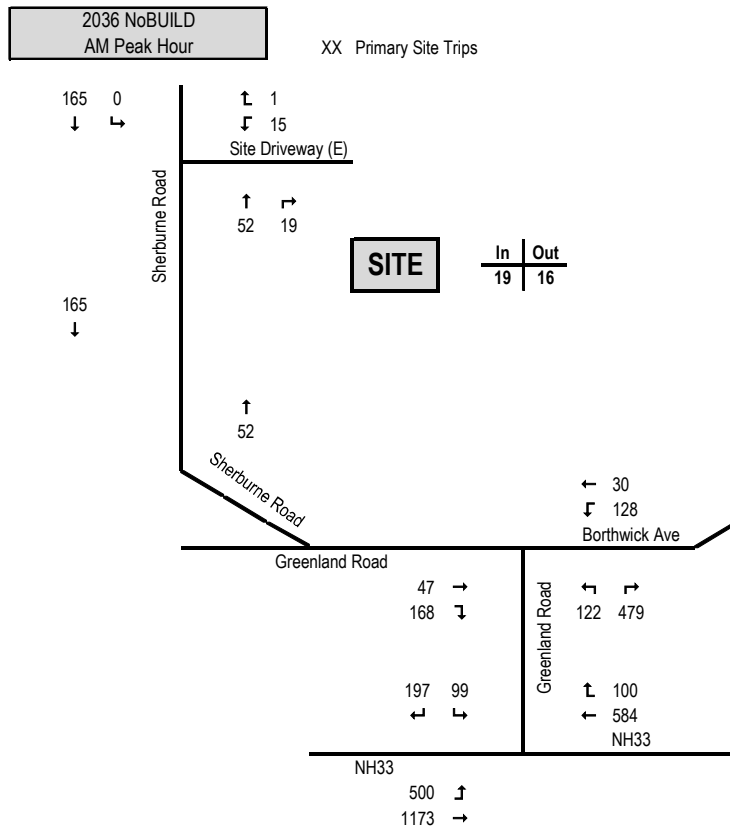
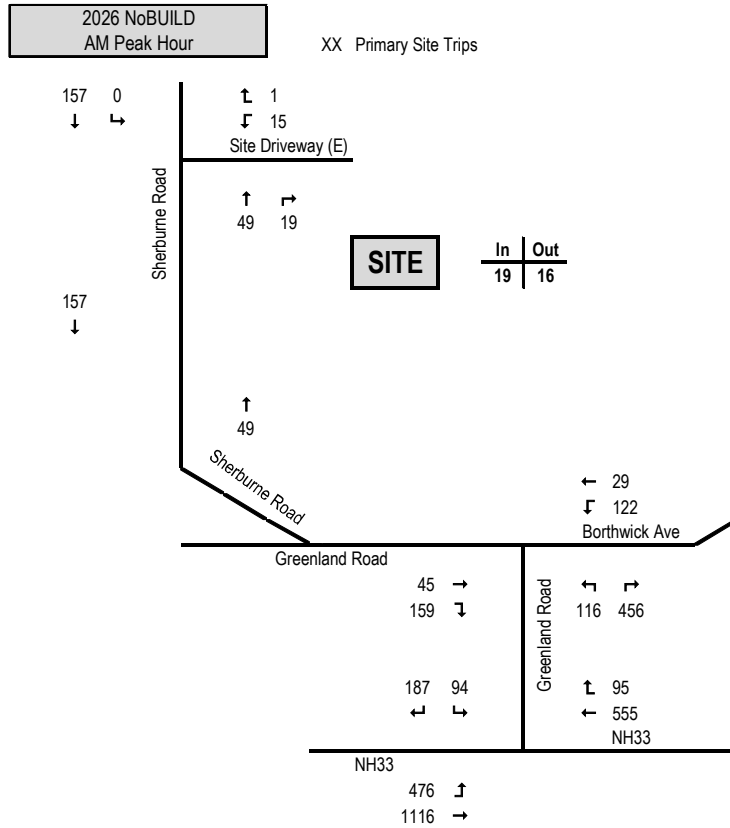
Growth Factor.

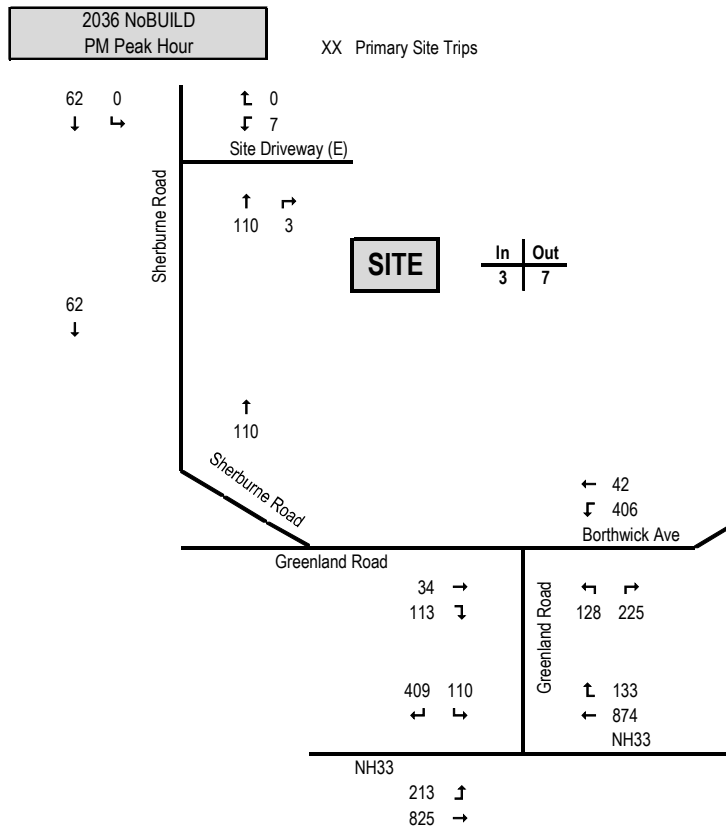
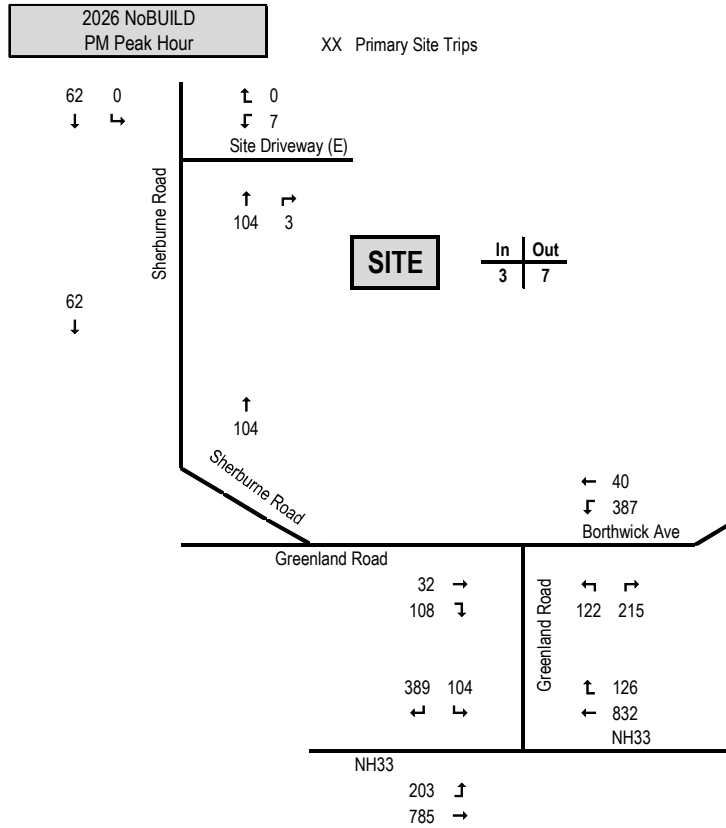
NHDOT Historical Annual Growth Data from 2006 to 2019 was reviewed at two stations in Portsmouth: NH33 west of Griffin Road and Borthwick Avenue east of Highliner Avenue. Calculations show that NH33 calculated a plus 0.31% growth rate and Borthwick Ave a minus 0.62% growth rate. The average of the two results in a nearly zero rate of growth for the area, minus 0.16%. See the data and calculations in Appendix C. For the volume calculations, a plus 0.50% growth rate was used as a conservative assumption to account for small local development and in keeping with other studies done in the area.

Other Developments.

Per the scoping meeting, two nearby projects were mentioned: a Hospital Expansion and Liberty Mutual reoccupying their existing building. Correspondence with the City (Appendix D) noted that the hospital project only provided a trip memo as it was generating less than a dozen trips during peak hours. Liberty Mutual is just reoccupying their existing building which had been partially vacant during the pandemic and no traffic study was required. Both occurrences can be accounted for within the background growth rate or daily fluctuations of traffic and no additional trips were added to the No-Build volumes.

The total no-build volumes for the opening (2026) and future (2036) years are presented in the figures below.





5. Trip Generation:

Proposed Trips

Standard trip generation rates published by the ITE¹ (11th Edition), were used to calculate the vehicle trips for the proposed development. LUC 223, Affordable Housing was used to calculate the trips for the apartment building, townhouses and converted school apartments. Existing school trips were counted at the site driveway. See the table below.

Table 1a – Proposed Trip Generation

<u>Land Use</u>	<u>In</u>	<u>Out</u>	<u>Total</u>
Affordable Housing (LUC 223): 111 Units			
Weekday AM Peak Hour Adjacent Street	12	28	40
Weekday PM Peak Hour Adjacent Street	30	21	51

Table 1b – Existing Trip Generation

<u>Land Use School (based on counts)</u>	<u>In</u>	<u>Out</u>	<u>Total</u>
Existing School			
Weekday AM Peak Hour Adjacent Street	17	14	31
Weekday PM Peak Hour Adjacent Street	3	6	9

Table 1c – New Trips

	<u>In</u>	<u>Out</u>	<u>Total</u>
Weekday AM Peak Hour Adjacent Street	(-5)	14	9
Weekday PM Peak Hour Adjacent Street	27	15	42

6. Trip Composition, Distribution and Assignment:

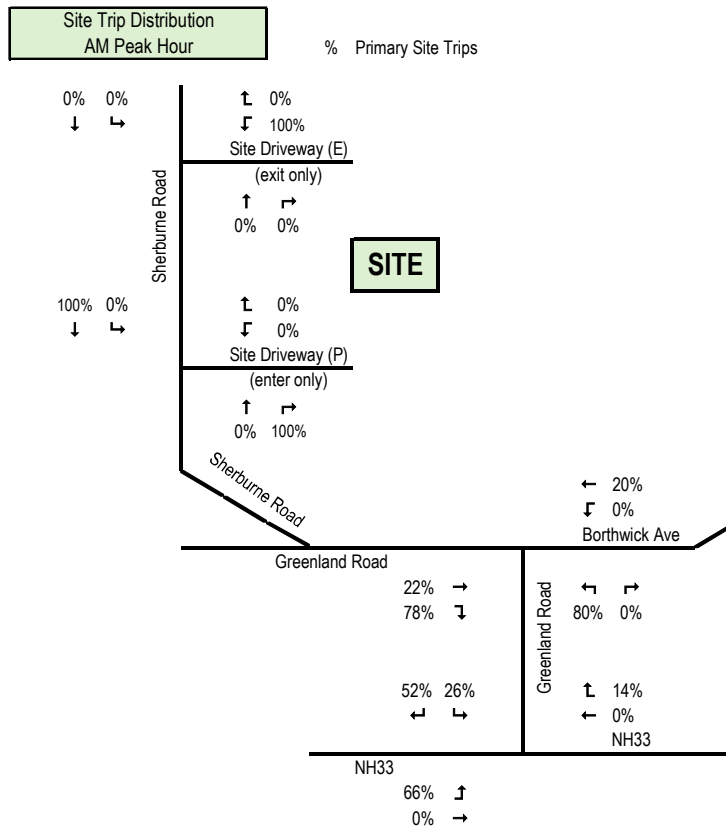
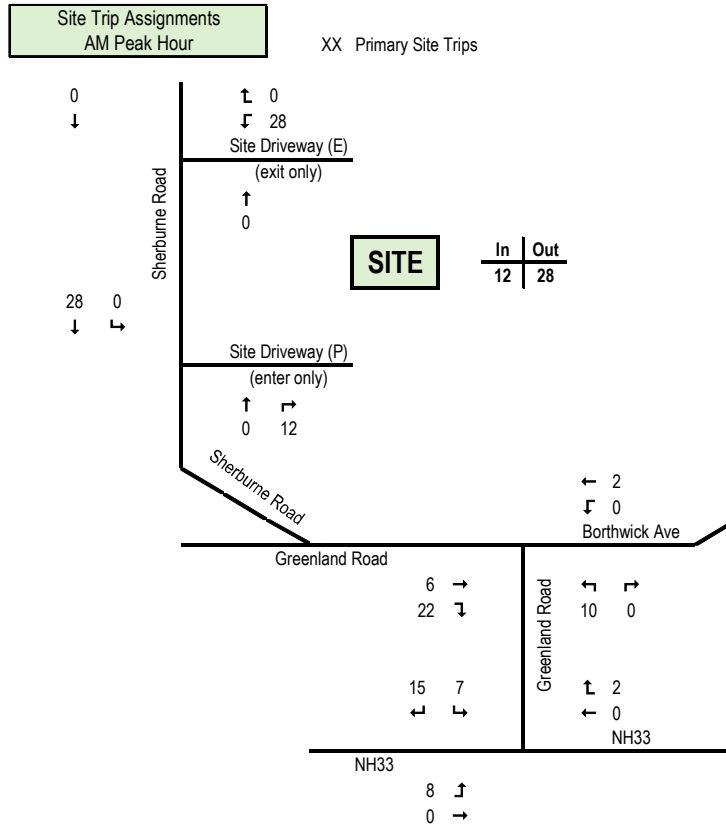
Composition

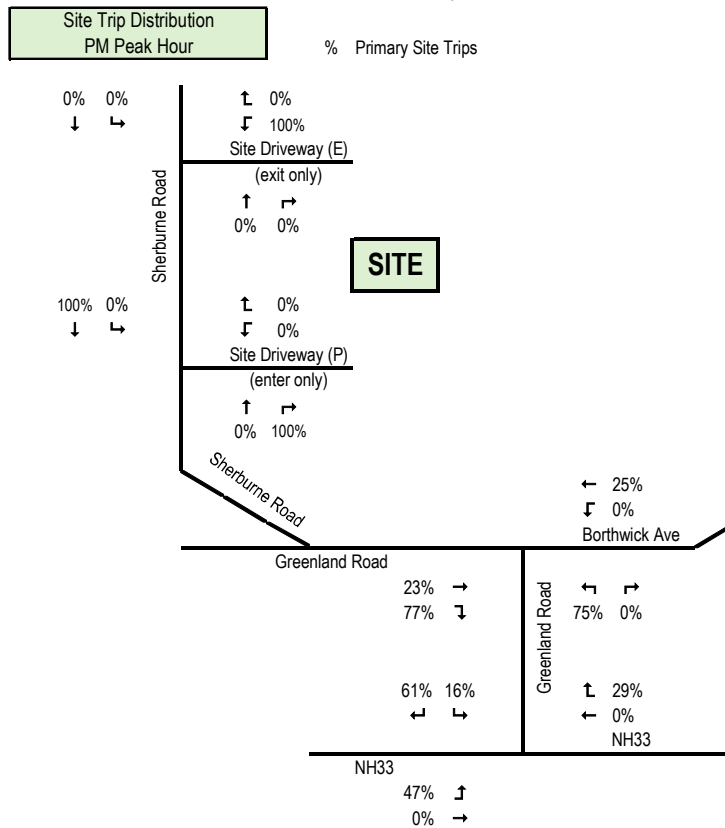
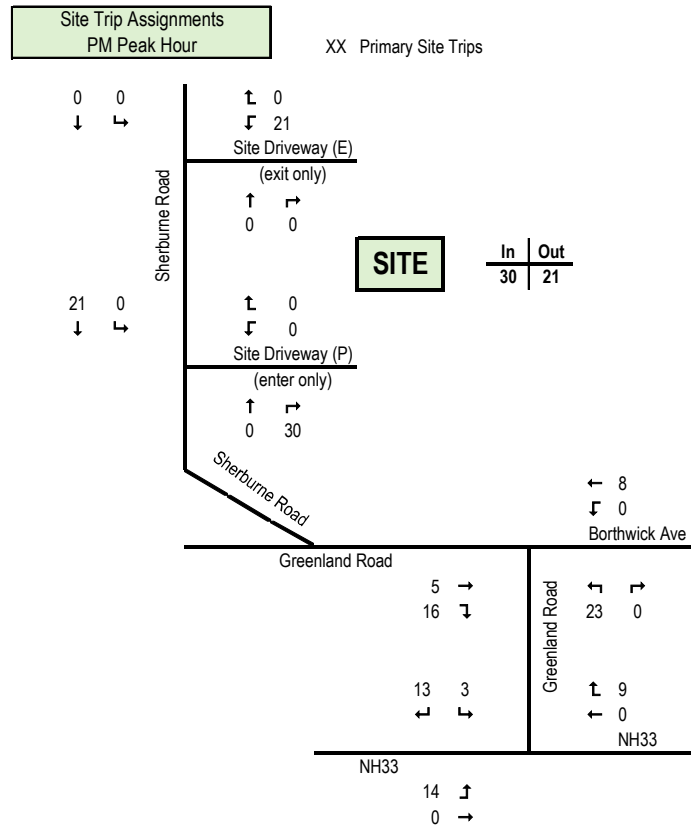
For this project, all trips are considered primary trips. Primary trips go directly from origin to generator and return to origin.

Distribution

We used prorata distribution based on the new counts in the study area. Sherburne Road is a dead-end roadway, so the existing intersection distributions would represent where residential trips are going to and arriving from. The site trip distributions are shown in the diagrams below.

¹ *Trip Generation Manual*, Institute of Transportation Engineers (ITE), 11th Edition.

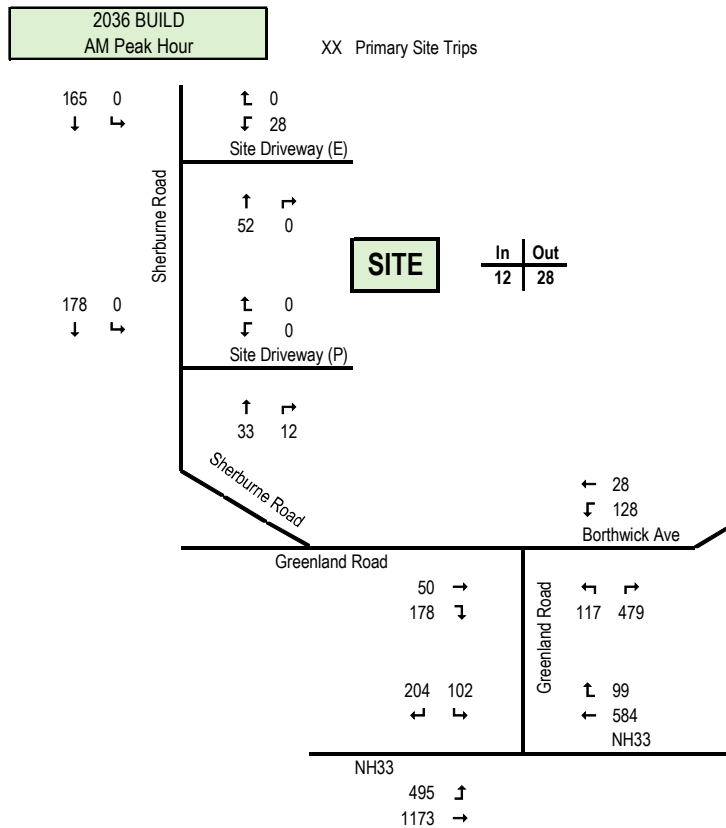
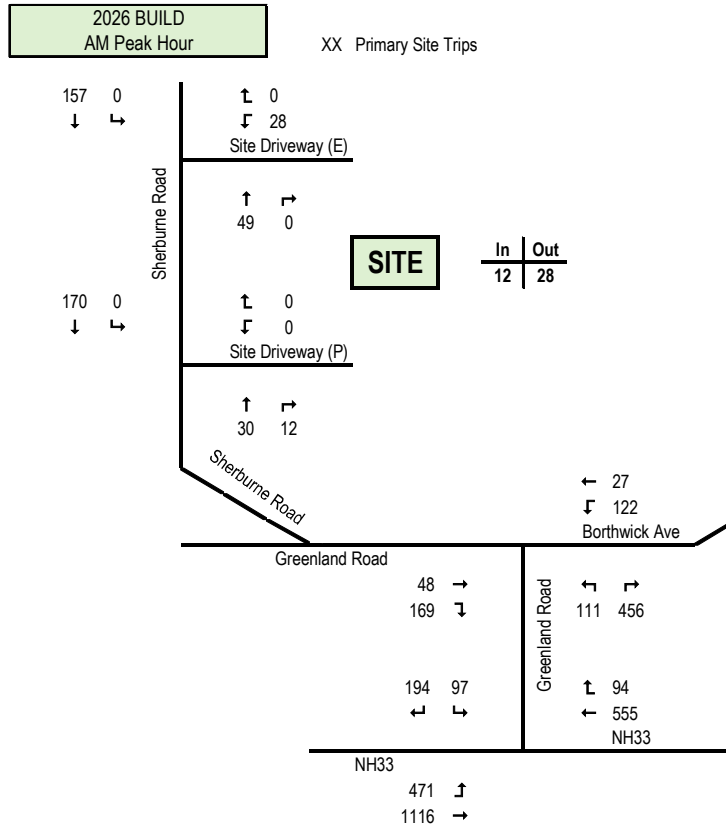


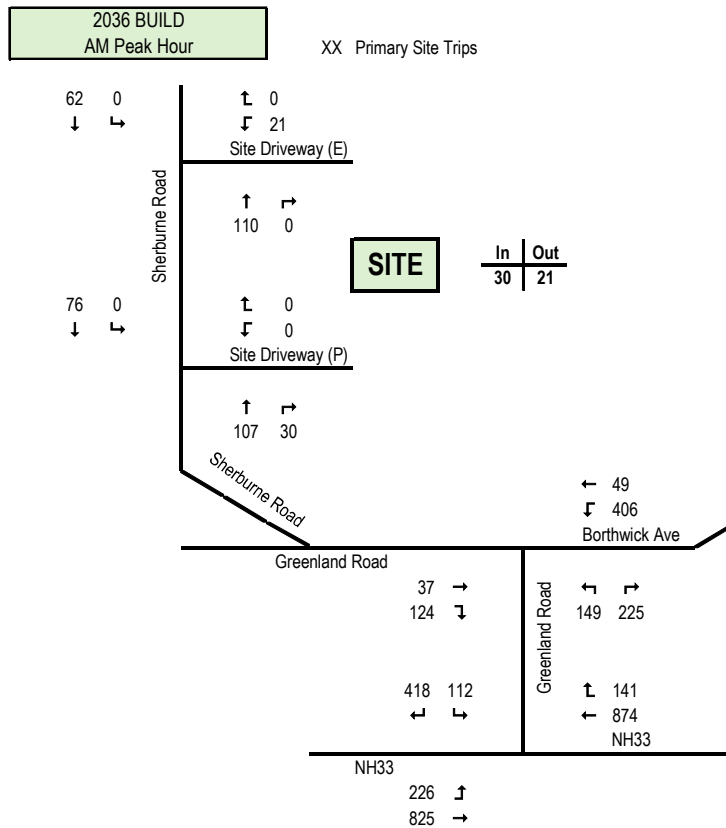
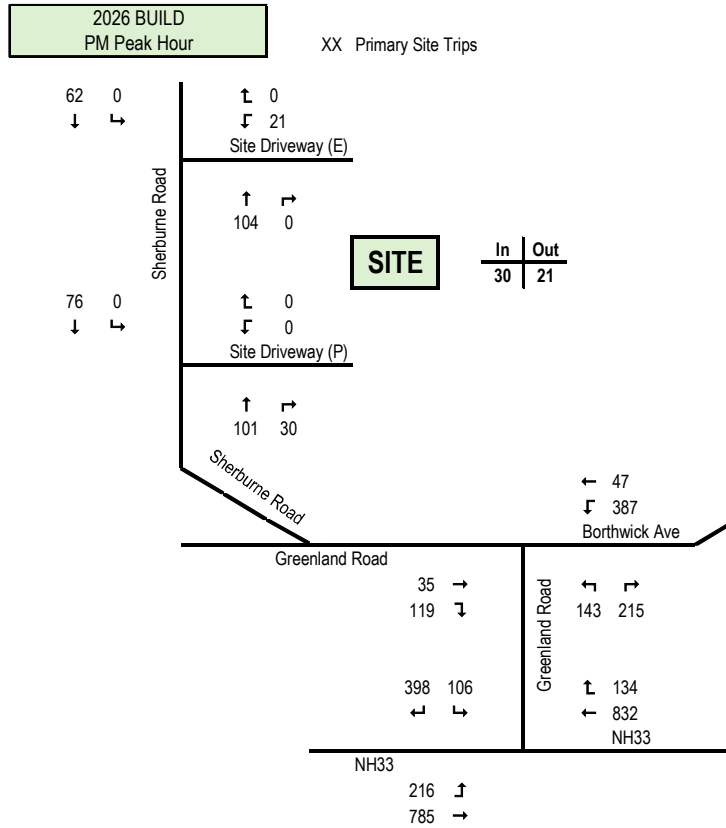


7. Build Volumes:

The existing school volumes are deducted from the NoBuild Volumes, and then the site trips generated by the development were added to No-Build traffic volumes throughout the study area to produce Build diagrams for the project.

2026 and 2036 diagrams are shown on the following pages for each peak hour:





8. Level of Service Analysis:

Level of Service Analysis:

Level of service (LOS) is a qualitative description of operational conditions within a traffic stream measured in terms of control delay, a function of capacity, degree of saturation, and delay associated with traffic signals and “STOP” signs. Control delay includes initial deceleration, delay approaching a control device, stopped delay, queue move-up time, and acceleration delay from a stopped condition. The relationship between control delay and LOS is shown in the following table.

Level of Service (LOS)	Signalized Control Delay (sec)	Unsignalized Control Delay (sec)
A	≤10.0	≤10.0
B	10.1 to 20.0	10.1 to 15.0
C	20.1 to 35.0	15.1 to 25.0
D	35.1 to 55.0	25.1 to 35.0
E	55.1 to 80.0	35.1 to 50.0
F	Over 80.0	Over 50.0

Study Area.

Analyses were performed for the study area intersections previously described, that is:

1. Sherburne Road at Site Driveway (exit)
2. Sherburne Road at Site Driveway (enter)
3. Greenland Road at Borthwick Avenue
4. NH33 at Greenland Road

Queue Analysis.

Vehicle queue lengths are determined by the capacity of the movement under study and the volume of traffic processed by the intersection during the analysis period. It is standard practice to report the 95th percentile queue, that is, the queue that will be exceeded no more than 5% of the time during the peak periods.

Methodology.

Trafficware “Synchro” v11 software was used to analyze signalized and unsignalized intersections (based on HCM 2000 for the signal and HCM 6th for stop controlled) within the study area intersections during the weekday PM and Saturday peak hours.

Signal Timing.

Signal timing for the NH33 signal is based on data provided by the NHDOT and provided in Appendix J.

Volume to capacity (v/c) ratios, Level of Service (LOS), delays and queue results are summarized in the following tables:

Table 2 Level of Service Analysis Summary (2023/2026)

Location/ Peak Hour	2023 BASE				2026 NoBuild				2026 Build			
	v/c ^a	Del. ^b	LOS ^c	Q ^d	v/c ^a	Del. ^b	LOS ^c	Q ^d	v/c ^a	Del. ^b	LOS ^c	Q ^d
1: Sherburne Road at Site Driveway (Existing) - [exit only Build Case]												
AM Peak OVERALL	---	1.3	A	---	---	1.3	A	---	---	1.1	A	---
WB L/R	0.06	10.5	B	5	0.06	10.5	B	5	0.04	10.2	B	3
NB T/R [T]	-	-	-	-	-	-	-	-	-	-	-	-
SB L/T [T]	-	0.0	A	0	-	0.0	A	0	-	-	-	-
PM Peak OVERALL	---	0.7	A	---	---	0.7	A	---	---	0.9	A	---
WB L/R	0.02	9.8	A	3	0.02	9.8	A	3	0.03	9.9	A	9.9
NB T/R [T]	-	-	-	-	-	-	-	-	-	-	-	-
SB L/T [T]	-	0.0	A	0	-	0.0	A	0	-	-	-	-
4: Greenland Road at Borthwick Avenue												
AM Peak OVERALL	---	20.1	C	---	---	21.2	C	---	---	21.7	C	---
EB All	0.37	11.7	B	43	0.38	11.9	B	43	0.40	12.2	B	48
WB All	0.30	12.0	B	33	0.31	12.2	B	33	0.31	12.2	B	33
NB L	0.27	11.3	B	28	0.27	11.4	B	28	0.26	11.4	B	25
NB R	0.83	28.0	D	233	0.85	30.0	D	248	0.86	30.9	D	253
PM Peak OVERALL	---	15.0	B	---	---	15.3	C	---	---	16.1	C	---
EB All	0.23	9.8	A	23	0.24	9.9	A	23	0.27	10.3	B	28
WB All	0.69	19.5	C	138	0.70	20.2	C	145	0.73	21.8	C	155
NB L	0.25	11.8	B	25	0.26	11.9	B	25	0.31	12.6	B	33
NB R	0.37	11.5	B	43	0.38	11.6	B	45	0.38	11.8	B	45
5: NH33 at Greenland Road (signalized)												
AM Peak OVERALL	0.74	22.2	C	---	0.76	22.6	C	---	0.75	22.6	C	---
EB L	0.88	40.3	D	442	0.88	40.3	D	461	0.89	41.0	D	454
EB T	0.52	5.9	A	192	0.53	6.2	A	203	0.53	6.2	A	203
WB TT/R	0.69	31.7	C	253	0.72	33.1	C	257	0.71	32.4	C	257
SB L	0.48	38.3	D	97	0.48	38.0	D	97	0.49	38.0	D	99
SB R	0.15	34.9	C	44	0.15	34.7	C	43	0.15	34.7	C	44
PM Peak OVERALL	0.63	19.4	B	---	0.64	19.7	B	---	0.66	20.2	C	---
EB L	0.62	33.2	C	154	0.63	33.5	C	156	0.65	33.8	C	167
EB T	0.33	5.3	A	133	0.34	5.3	A	137	0.34	5.4	A	138
WB TT/R	0.72	22.1	C	433	0.73	22.6	C	444	0.75	23.5	C	450
SB L	0.42	31.9	C	88	0.42	31.8	C	89	0.42	31.8	C	90
SB R	0.26	30.4	C	68	0.26	30.4	C	69	0.27	30.4	C	68

^a Volume-to-capacity ratio - ^b Average control delay (sec/veh) - ^c Level of service - ^d 95th percentile queue in feet

Table 3 Level of Service Analysis Summary (2036)

Location/ Peak Hour	2036 NoBuild				2026 Build			
	v/c ^a	Del. ^b	LOS ^c	Q ^d	v/c ^a	Del. ^b	LOS ^c	Q ^d
1: Sherburne Road at Site Driveway (Existing) - [exit only Build Case]								
AM Peak OVERALL	---	1.2	A	---	---	1.0	A	---
WB L/R	0.06	10.6	B	5	0.04	10.3	B	3
NB T/R [T]	-	-	-	-	-	-	-	-
SB L/T [T]	-	0.0	A	0	-	-	-	-
PM Peak OVERALL	---	0.7	A	---	---			---
WB L/R	0.02	9.9	A	3	0.03	9.9	A	3
NB T/R [T]	-	-	-	-	-	-	-	-
SB L/T [T]	-	0.0	A	0	-	-	-	-
4: Greenland Road at Borthwick Avenue								
AM Peak OVERALL	---	25.6	D	---	---	26.23	D	---
EB All	0.40	12.5	B	48	0.43	12.9	B	53
WB All	0.33	12.7	B	35	0.33	12.7	B	35
NB L	0.29	11.8	B	30	0.28	11.7	B	28
NB R	0.90	38.1	E	300	0.91	39.2	E	305
PM Peak OVERALL	---	16.9	C	---	---	17.8	C	---
EB All	0.26	10.2	B	25	0.29	10.7	B	30
WB All	0.75	23.0	C	168	0.77	24.9	C	183
NB L	0.28	12.2	B	28	0.33	13.0	B	35
NB R	0.40	12.2	B	48	0.41	12.4	B	50
5: NH33 at Greenland Road								
AM Peak OVERALL	0.79	23.9	C	---	0.79	23.9	C	---
EB L	0.89	40.4	D	497	0.90	41.0	D	490
EB T	0.56	6.5	A	219	0.56	6.6	A	219
WB TT/R	0.80	37.4	D	273	0.79	36.9	D	272
SB L	0.50	38.2	D	101	0.51	38.1	D	103
SB R	0.16	34.7	C	44	0.16	34.5	C	45
PM Peak OVERALL	0.67	20.6	C	---	0.69	21.2	C	---
EB L	0.65	34.0	C	166	0.67	34.4	C	175
EB T	0.36	5.6	A	148	0.36	5.7	A	148
WB TT/R	0.78	24.7	C	476	0.80	25.8	C	482
SB L	0.43	31.6	C	92	0.43	31.6	C	93
SB R	0.28	30.2	C	69	0.28	30.1	C	71

^a Volume-to-capacity ratio - ^b Average control delay (sec/veh) - ^c Level of service - ^d 95th percentile queue in feet

9. Sight Distance:

The proposed driveways have adequate sight distance based on grade and distance to adjacent intersections. The existing site driveway on Sherburne Road has a clear sight distance of 310' to the Greenland Road intersection looking left and about 330' looking right over the bridge. At 25 mph, the required AASHTO intersection sight distance for a left turn is 280'. The required sight distance for 32 mph is 357'.

10. Speed Study

A speed study was measured along Sherburne Road adjacent to the existing school driveway. The travel times were recorded using ATRs over a 24-hour period which recorded travel speeds. The results of the speed measurements are summarized in the table below.

Table 4 – Observed Travel Speeds

Sherburne Road at existing school driveway	Posted Speed Limit	Average Speed	85 th Percentile Speed
Northbound	20	28.2	32.0
Southbound	20	24.6	28.0

As shown in Table 3, the observed speeds along Sherburne Road were found to exceed the posted school zone speed limit of 20 mph. The school zone designation will need to be removed as part of this project; however, the adjacent neighborhood on the north side of the I95 overpass is also posted at 20 mph.

11. Accident Evaluation:

Crash data requested for the study intersections was received from the Portsmouth Police Department for the years 2019-2022 and is provided in Appendix H. A summary of the crash data is provided in Table 4.

Table 5 – Crash Data Summary

	Greenland Rd at Borthwick Ave (Unsignalized)	NH33 at Greenland Rd (Signal)
CRASH FREQUENCY		
Total Crashes	6	2
Crashes per Year (Ave)	1.5	0.5
CRASH SEVERITY		
Property Damage Only	5	2
Injury	1	0
Fatalities	0	0
CRASH TYPE		
Angle/Cross Movement	3	0
Rear End	3	1
Side-Swipe	0	1
ADVERSE CONDITIONS		
Sun Glare	1	0
Snow	1	0
WEEKDAY COMMUTER PEAK		
Weekday AM (7-9am)	1	0
Weekday PM (3-6pm)	0	2
Non-Commuter Peak	5	0

Greenland Road at Borthwick Avenue (3-leg unsignalized intersection)

Six crashes occurred in the vicinity of the Greenland Road/Borthwick Ave intersection and none resulting in injury. All crashes involved two vehicles, three of which were rear end occurrences and three from crossing the intersection. Two were the result of adverse conditions (sun glare or snow) with only one accident occurring during the weekday peak hours of the roadway. Based on this data, there does not appear to be any safety concerns at this intersection, however, the City is currently planning to update this intersection, by making all three legs stop controlled. (Currently only WB Borthwick and NB Greenland are stop controlled. The EB Greenland Road approach is free.)

NH33 at Greenland Road (3-leg signalized intersection)

Two crashes occurred in the vicinity of the NH33/Greenland Road intersection, with only one incident resulting in injury. All crashes involved two vehicles, one was a side-swipe from changing lanes and one rear end collision. Both accidents occurred during the weekday peak PM hours of the roadway. Based on this data, there does not appear to be any safety concerns at this intersection.

13. Conclusions:

This study shows that traffic from this redevelopment housing proposal is all primary trips and adds 9 new trips in the AM Peak Hour and 42 new trips during the PM Peak Hour. That is less than one new trip per minute during peak hours. Therefore, only minor impacts are caused to the study area intersections.

- Queues and delays at the study intersections are essentially unchanged (overall LOS D or better) in all scenarios.
- The enter-only driveway will have primarily right turns in with very few conflicts, and the exit-only driveway functions favorably.
- At the NH28 site driveway, entering traffic operates favorably (B or better) in all scenarios, with 95th pctl queues of less than one car length for entering and exiting traffic.
- School zone signs should be removed upon closure of the school.

We therefore conclude that this new proposal will have no significant negative impact on the adjacent roadway network. The existing intersections will operate acceptably with adequate reserve capacity in opening and future years.

Respectfully Submitted,
TFMORAN, INC.



Robert Duval, PE
Chief Engineer

APPENDIX A

Proposed Trip Generation

Based on ITE Trip Generation 11th Edition

ITE LUC 223 - Affordable Housing - Income Limits

Use Includes: 111 Dwelling Units (8 Townhouse units, 88 apartment units, 15 units in existing building)

Time Period	Rate/Equun		Rate/ Eq Used	Trip Ends	Directional Split		Directional Distribution	
	X	Rate			In	Out	In	Out
Weekday AM Peak Hour Adjacent Street	111	0.36	Rate	40	29%	71%	12	28
Weekday PM Peak Hour Adjacent Street	111	0.46	Rate	51	59%	41%	30	21
Weekday Daily	111	4.81	Rate	534	50%	50%	267	267

Description of LUC 223:

Affordable housing includes all multifamily housing that is rented at below market rate to households that include at least one employed member. Eligibility to live in affordable housing can be a function of limited household income and resident age.

Site Trip Distribution

Primary

	In	Out
AM Totals	12	28

Sherburne Road at Site Driveway (Existing)

<u>Movement</u>	PERCENTAGES		TRIPS	
	<u>In</u>	<u>Out</u>	<u>In</u>	<u>Out</u>
WBL		100%	0	28
WLR			0	0
NBT			0	0
NBR			0	0
SBL			0	0
SBT			0	0

Sherburne Road at Site Driveway (Proposed)

<u>Movement</u>	PERCENTAGES		TRIPS	
	<u>In</u>	<u>Out</u>	<u>In</u>	<u>Out</u>
WBL			0	0
WLR			0	0
NBT			0	0
NBR	100%		12	0
SBL			0	0
SBT		100%	0	28

Greenland at Borthwick

<u>Movement</u>	PERCENTAGES		TRIPS	
	<u>In</u>	<u>Out</u>	<u>In</u>	<u>Out</u>
EBT		22%	0	6
EBR		78%	0	22
WBL			0	0
WBT	20%		2	0
NBL	80%		10	0
NBR			0	0

NH33 at Greenland

<u>Movement</u>	PERCENTAGES		TRIPS	
	<u>In</u>	<u>Out</u>	<u>In</u>	<u>Out</u>
EBL	66%		8	0
EBT			0	0
WBT			0	0
WBR	14%		2	0
SBL		26%	0	7
SBR		52%	0	15

**TOTAL:
Site Trip Assignment**

TOTAL

	AM TOTAL
	40

Sherburne Road at Site Driveway (Existing)

<u>Movement</u>	
WBL	28
WLR	0
NBT	0
NBR	0
SBL	0
SBT	0

Sherburne Road at Site Driveway (Proposed)

<u>Movement</u>	
WBL	0
WLR	0
NBT	0
NBR	12
SBL	0
SBT	28

Greenland at Borthwick

<u>Movement</u>	
EBT	6
EBR	22
WBL	0
WBT	2
NBL	10
NBR	0

NH33 at Greenland

<u>Movement</u>	
EBL	8
EBT	0
WBT	0
WBR	2
SBL	7
SBR	15

Site Trip Distribution

Primary

	In	Out
PM Totals	30	21

Sherburne Road at Site Driveway (Existing)

<u>Movement</u>	PERCENTAGES		TRIPS	
	<u>In</u>	<u>Out</u>	<u>In</u>	<u>Out</u>
WBL		100%	0	21
WLR			0	0
NBT			0	0
NBR			0	0
SBL			0	0
SBT			0	0

Sherburne Road at Site Driveway (Proposed)

<u>Movement</u>	PERCENTAGES		TRIPS	
	<u>In</u>	<u>Out</u>	<u>In</u>	<u>Out</u>
WBL			0	0
WLR			0	0
NBT			0	0
NBR	100%		30	0
SBL			0	0
SBT		100%	0	21

Greenland at Borthwick

<u>Movement</u>	PERCENTAGES		TRIPS	
	<u>In</u>	<u>Out</u>	<u>In</u>	<u>Out</u>
EBT		23%	0	5
EBR		77%	0	16
WBL			0	0
WBT	25%		8	0
NBL	75%		23	0
NBR			0	0

NH33 at Greenland

<u>Movement</u>	PERCENTAGES		TRIPS	
	<u>In</u>	<u>Out</u>	<u>In</u>	<u>Out</u>
EBL	47%		14	0
EBT			0	0
WBT			0	0
WBR	29%		9	0
SBL		16%	0	3
SBR		61%	0	13

**TOTAL:
Site Trip Assignment**

TOTAL

	PM TOTAL
	51

Sherburne Road at Site Driveway (Existing)

<u>Movement</u>		
WBL	0	21
WLR	0	0
NBT	0	0
NBR	0	0
SBL	0	0
SBT	0	0

Sherburne Road at Site Driveway (Proposed)

<u>Movement</u>		
WBL	0	0
WLR	0	0
NBT	0	0
NBR	30	0
SBL	0	0
SBT	0	21

Greenland at Borthwick

<u>Movement</u>		
EBT	5	0
EBR	16	0
WBL	0	0
WBT	8	0
NBL	23	0
NBR	0	0

NH33 at Greenland

<u>Movement</u>		
EBL	14	0
EBT	0	0
WBT	0	0
WBR	9	0
SBL	3	0
SBR	13	0

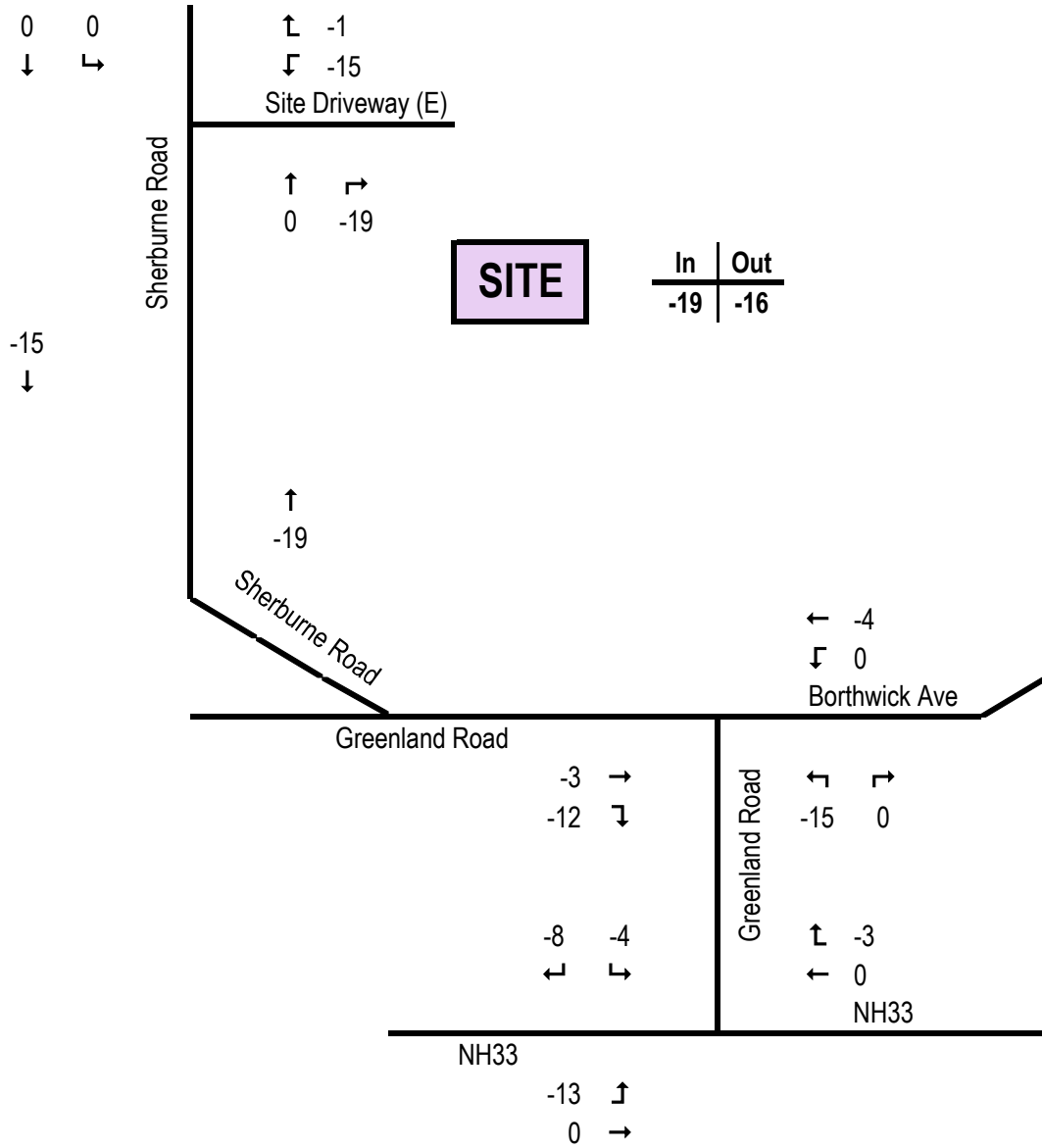
APPENDIX B

Site Trip Distribution				
Primary				
		In	Out	
AM Totals		19	16	
Sherburne Road at Site Driveway (Existing)				
	PERCENTAGES		TRIPS	
<u>Movement</u>	<u>In</u>	<u>Out</u>	<u>In</u>	<u>Out</u>
WBL		95%	0	15
WBR		5%	0	1
NBT			0	0
NBR	100%		19	0
SBL			0	0
SBT			0	0
Sherburne Road at Site Driveway (Proposed)				
	PERCENTAGES		TRIPS	
<u>Movement</u>	<u>In</u>	<u>Out</u>	<u>In</u>	<u>Out</u>
WBL			0	0
WLR			0	0
NBT	100%		19	0
NBR			0	0
SBL			0	0
SBT		95%	0	15
Greenland at Borthwick				
	PERCENTAGES		TRIPS	
<u>Movement</u>	<u>In</u>	<u>Out</u>	<u>In</u>	<u>Out</u>
EBT		21%	0	3
EBR		74%	0	12
WBL			0	0
WBT	20%		4	0
NBL	80%		15	0
NBR			0	0
NH33 at Greenland				
	PERCENTAGES		TRIPS	
<u>Movement</u>	<u>In</u>	<u>Out</u>	<u>In</u>	<u>Out</u>
EBL	66%		13	0
EBT			0	0
WBT			0	0
WBR	14%		3	0
SBL		24%	0	4
SBR		50%	0	8

TOTAL: Site Trip Assignment	
TOTAL	
	AM TOTAL
	35
Sherburne Road at Site Driveway (Existing)	
<u>Movement</u>	
WBL	-15
WBR	-1
NBT	0
NBR	-19
SBL	0
SBT	0
Sherburne Road at Site Driveway (Proposed)	
<u>Movement</u>	
WBL	0
WLR	0
NBT	-19
NBR	0
SBL	0
SBT	-15
Greenland at Borthwick	
<u>Movement</u>	
EBT	-3
EBR	-12
WBL	0
WBT	-4
NBL	-15
NBR	0
NH33 at Greenland	
<u>Movement</u>	
EBL	-13
EBT	0
WBT	0
WBR	-3
SBL	-4
SBR	-8

Existing Site Trip Deductions
 2023 BASE
 AM Peak Hour

XX Primary Site Trips



Existing Site Trip Deduction %
AM Peak Hour

% Primary Site Trips

0% 0%
↓ ↘

Sherburne Road

↑ 5%
↘ 95%

Site Driveway (E)

↑ ↘
0% 100%

SITE

95%
↓

↑
100%

Sherburne Road

← 20%
↘ 0%

Borthwick Ave

Greenland Road

21% →
74% ↘

Greenland Road

↙ ↘
80% 0%

50% 24%
↙ ↘

↑ 14%
← 0%

NH33

NH33

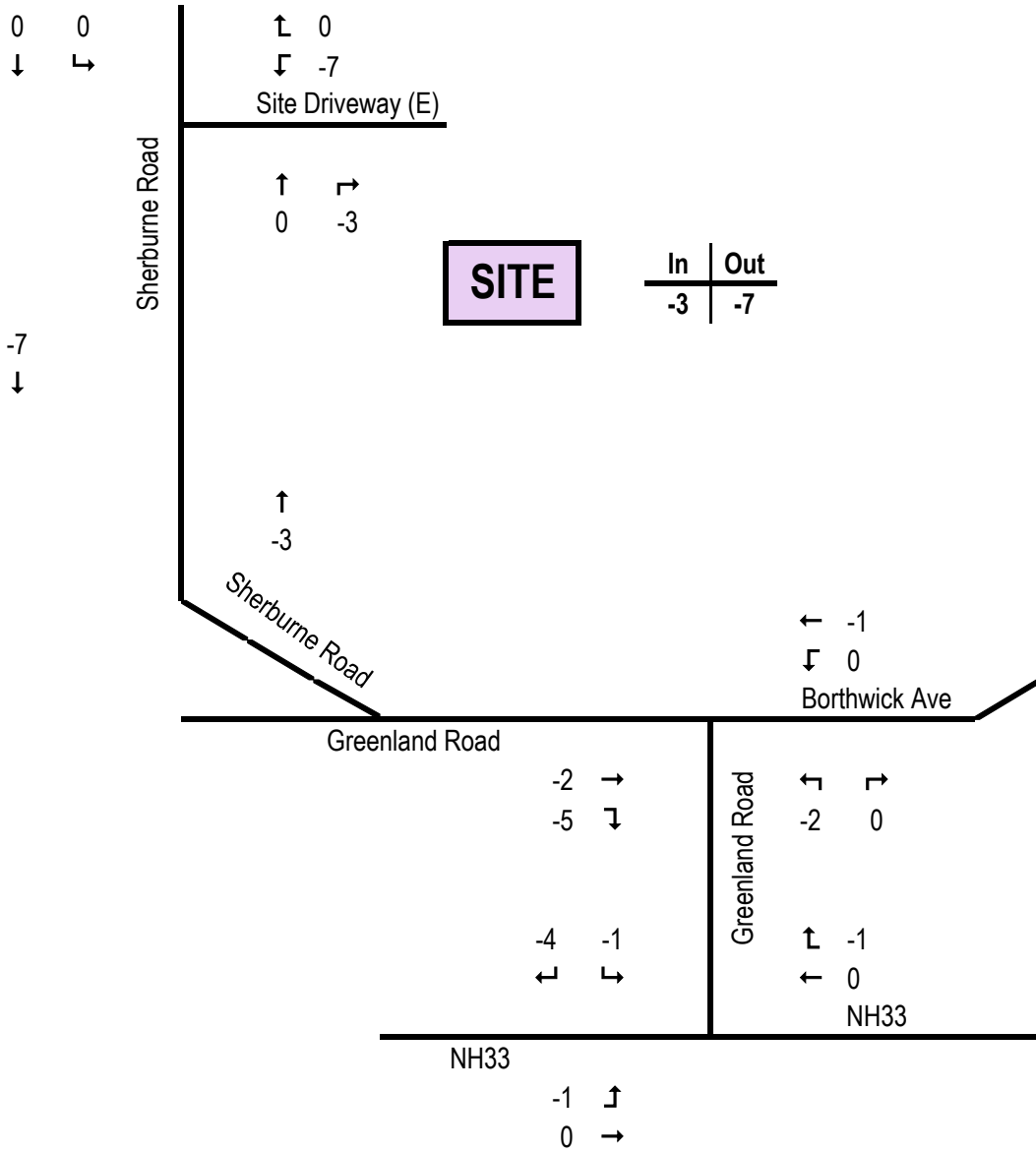
66% ↗
0% →

Site Trip Distribution					
Primary					
			In	Out	
PM Totals			3	7	
Sherburne Road at Site Driveway (Existing)					
		PERCENTAGES		TRIPS	
Movement	In	Out	In	Out	
WBL		100%	0	7	
WBR			0	0	
NBT			0	0	
NBR	100%		3	0	
SBL			0	0	
SBT			0	0	
Sherburne Road at Site Driveway (Proposed)					
		PERCENTAGES		TRIPS	
Movement	In	Out	In	Out	
WBL			0	0	
WLR			0	0	
NBT	100%		3	0	
NBR			0	0	
SBL			0	0	
SBT		100%	0	7	
Greenland at Borthwick					
		PERCENTAGES		TRIPS	
Movement	In	Out	In	Out	
EBT		23%	0	2	
EBR		77%	0	5	
WBL			0	0	
WBT	25%		1	0	
NBL	75%		2	0	
NBR			0	0	
NH33 at Greenland					
		PERCENTAGES		TRIPS	
Movement	In	Out	In	Out	
EBL	47%		1	0	
EBT			0	0	
WBT			0	0	
WBR	28%		1	0	
SBL		16%	0	1	
SBR		61%	0	4	

TOTAL: Site Trip Assignment	
TOTAL	
PM TOTAL	
	10
Sherburne Road at Site Driveway (Existing)	
Movement	
WBL	-7
WBR	0
NBT	0
NBR	-3
SBL	0
SBT	0
Sherburne Road at Site Driveway (Proposed)	
Movement	
WBL	0
WLR	0
NBT	-3
NBR	0
SBL	0
SBT	-7
Greenland at Borthwick	
Movement	
EBT	-2
EBR	-5
WBL	0
WBT	-1
NBL	-2
NBR	0
NH33 at Greenland	
Movement	
EBL	-1
EBT	0
WBT	0
WBR	-1
SBL	-1
SBR	-4

Existing Site Trip Deductions
 2023 BASE
 PM Peak Hour

XX Primary Site Trips



Existing Site Trip Deduction %
PM Peak Hour

% Primary Site Trips

0% 0%
↓ ↘

↑ 0%
↘ 100%

Sherburne Road

Site Driveway (E)

↑ ↘
0% 100%

SITE

100%
↓

↑
100%

Sherburne Road

← 25%
↘ 0%

Borthwick Ave

Greenland Road

23% →
77% ↘

↙ ↘
75% 0%

61% 16%
↙ ↘

↑ 28%
← 0%

NH33

NH33

47% ↗
0% →

APPENDIX C

Year 2019 Monthly Data

Group 4 Averages:

Urban Highways

<u>Month</u>	<u>ADT</u>	For WARRANTS	For Traffic
		<u>Adjustment to</u> <u>Average</u>	<u>Adjustment to</u> <u>Peak</u>
January	11,431	1.12	1.23
February	11,848	1.08	1.18
March	12,141	1.06	1.15
April	12,860	1.00	1.09
May	13,551	0.95	1.03
June	13,785	0.93	1.02
July	13,942	0.92	1.01
August	14,016	0.92	1.00
September	13,379	0.96	1.05
October	13,339	0.96	1.05
November	12,265	1.05	1.14
December	11,496	1.12	1.22
Average ADT:	12,838		
Peak ADT:	14,016		

PM Peak Hour at South and Lafayette (Data from City)

2019 PM Peak Hr			2023 PM Peak Hr			% Change	
<u>DATE</u>	<u>WEEKDAY</u>	<u>VOLUME</u>	<u>DATE</u>	<u>WEEKDAY</u>	<u>VOLUME</u>		
2019 PM Peak Hr							
1/1/2019	Tuesday	1016	1/3/2023	Tuesday	1214	19%	Remove Highest
1/2/2019	Wednesday	1550	1/4/2023	Wednesday	1286	-17%	
1/3/2019	Thursday	1532	1/5/2023	Thursday	1357	-11%	
1/8/2019	Tuesday	1411	1/10/2023	Tuesday	1327	-6%	
1/9/2019	Wednesday	1457	1/11/2023	Wednesday	1378	-5%	
1/10/2019	Thursday	1571	1/12/2023	Thursday	1158	-26%	Remove Lowest
1/15/2019	Tuesday	1498	1/17/2023	Tuesday	1330	-11%	
1/16/2019	Wednesday	1480	1/18/2023	Wednesday	1274	-14%	
1/17/2019	Thursday	1529	1/19/2023	Thursday	1402	-8%	
1/22/2019	Tuesday	1316	1/24/2023	Tuesday	1185	-10%	
1/23/2019	Wednesday	1295	1/25/2023	Wednesday	1033	-20%	
1/24/2019	Thursday	1440	1/26/2023	Thursday	1279	-11%	
1/29/2019	Tuesday	1388	1/31/2023	Tuesday	1257	-9%	
1/30/2019	Wednesday	1454	2/1/2023	Wednesday	1309	-10%	
1/31/2019	Thursday	1525	2/2/2023	Thursday	1274	-16%	
2/5/2019	Tuesday	1473	2/7/2023	Tuesday	1262	-14%	
2/6/2019	Wednesday	1415	2/8/2023	Wednesday	1137	-20%	
2/7/2019	Thursday	1407	2/9/2023	Thursday	1304	-7%	
2/12/2019	Tuesday	1468	2/14/2023	Tuesday	1244	-15%	
2/13/2019	Wednesday	1237	2/15/2023	Wednesday	1281	4%	
2/14/2019	Thursday	1480	2/16/2023	Thursday	1310	-11%	
2/19/2019	Tuesday	1538	2/21/2023	Tuesday	1267	-18%	
2/20/2019	Wednesday	1473	2/22/2023	Wednesday	1384	-6%	
2/21/2019	Thursday	1474	2/23/2023	Thursday	786	-47%	
2/26/2019	Tuesday	1132	2/28/2023	Tuesday	686	-39%	2023
2/27/2019	Wednesday	1123	3/1/2023	Wednesday	1030	-8%	School
2/28/2019	Thursday	1074	3/2/2023	Thursday	979	-9%	Vacation
Average Weekday Change						-13%	

NHDOT Historical Traffic Growth Rate
MS2 Data

Station	Location	Year											Average Annual Rate
		2006	2009	2010	2012	2015	2016	2017	2018	2019	2020*	2021*	
82379074	NH33 (Middle Road) West of Griffin Rd	-2%		-3%	21%	-6%	2%	2%	-11%	1%	-16%	-5%	0.31%
82379094	Borthwick Ave East of Highliner Ave	-4%	4%	0%	-1%	-1%	2%	2%	-5%	1%	-16%	-1%	-0.62%

* Years not included in calculation due to ongoing covid recovery

Average Annual Growth Rate = -0.16%

Record 1 of 1 Goto Record go

Location ID	82379074	MPO ID	
Type	SPOT	HPMS ID	
On NHS	No	On HPMS	Yes
LRS ID	S0000033	LRS Loc Pt.	
SF Group	04	Route Type	
AF Group	04	Route	NH 33
GF Group	E	Active	Yes
Class Dist Grp	Default	Category	3
Seas Clss Grp	Default		
WIM Group	Default		
QC Group	Default		
Functl Class	Minor Arterial	Milepost	
Located On	Greenland Rd		
Loc On Alias	NH 33 (MIDDLE RD) WEST OF GRIFFIN RD		

More Detail >

STATION DATA

Directions: 2-WAY ?

Year	AADT	DHV-30	K %	D %	PA	BC	Src
2021	13,525	1,278	9		12,294 (91%)	1,231 (9%)	
2020	14,279 ³		8		12,993 (91%)	1,286 (9%)	Grown from 2019
2019	16,918 ³		8		15,496 (92%)	1,422 (8%)	Grown from 2018
2018	16,717	1,397	8		15,414 (92%)	1,303 (8%)	
2017	18,727 ³				17,378 (93%)	1,349 (7%)	Grown from 2016

<< < > >> 1-5 of 16

Travel Demand Model

Model Year	Model AADT	AM PHV	AM PPV	MD PHV	MD PPV	PM PHV	PM PPV	NT PHV	NT PPV
------------	------------	--------	--------	--------	--------	--------	--------	--------	--------

VOLUME COUNT		
Date	Int	Total
Thu 8/26/2021	60	16,027
Wed 8/25/2021	60	15,524
Tue 8/24/2021	60	15,707
Thu 8/2/2018	60	19,188
Wed 8/1/2018	60	19,399
Tue 7/31/2018	60	19,284
Fri 8/28/2015	60	20,117
Thu 8/27/2015	60	20,744
Wed 8/26/2015	60	20,538
Tue 8/25/2015	60	19,782

mm/dd/yyyy To Date

Record 1 of 1 Goto Record go

Location ID	82379094	MPO ID	
Type	SPOT	HPMS ID	
On NHS	No	On HPMS	No
LRS ID	L3790517	LRS Loc Pt.	
SF Group	04	Route Type	
AF Group	04	Route	
GF Group	E	Active	Yes
Class Dist Grp	Default	Category	3
Seas Clss Grp	Default		
WIM Group	Default		
QC Group	Default		
Functl Class	Major Collector	Milepost	
Located On	Borthwick Ave		
Loc On Alias	BORTHWICK AVE EAST OF HIGHLINER AVE		

More Detail >

STATION DATA

Directions: 2-WAY ?

Year	AADT	DHV-30	K %	D %	PA	BC	Src
2021	4,409	450	10		4,007 (91%)	402 (9%)	
2020	4,453 ³		11		4,051 (91%)	402 (9%)	Grown from 2019
2019	5,276 ³		11		4,831 (92%)	445 (8%)	Grown from 2018
2018	5,213	578	11		4,807 (92%)	406 (8%)	
2017	5,514 ³				5,114 (93%)	400 (7%)	Grown from 2016

<< < > >> 1-5 of 13

Travel Demand Model

Model Year	Model AADT	AM PHV	AM PPV	MD PHV	MD PPV	PM PHV	PM PPV	NT PHV	NT PPV
------------	------------	--------	--------	--------	--------	--------	--------	--------	--------

VOLUME COUNT		
Date	Int	Total
Thu 8/12/2021	60	4,895
Wed 8/11/2021	60	5,351
Tue 8/10/2021	60	5,162
Thu 6/21/2018	60	6,170
Wed 6/20/2018	60	6,115
Tue 6/19/2018	60	5,791
Fri 8/28/2015	60	5,646
Thu 8/27/2015	60	6,114
Wed 8/26/2015	60	6,083
Tue 8/25/2015	60	6,018

mm/dd/yyyy To Date

APPENDIX D

From: Eric B. Eby <ebeby@cityofportsmouth.com>
Sent: Thursday, March 30, 2023 5:19 PM
To: Jack McTigue <jmctigue@tfmoran.com>
Subject: RE: Sherburne Traffic Study

Jack

The hospital expansion only provided a brief trip generation memo, as it was generating less than a dozen trips during the peak hours. That amount of traffic can be accounted for in any background growth rate or daily fluctuations of traffic.

Liberty Mutual is not expanding, just reoccupying their existing building which had been mostly vacant since the pandemic. So no traffic study was required.

Eric

Eric B. Eby, P.E.

City Engineer – Parking, Transportation, and Planning
Department of Public Works
City of Portsmouth
680 Peverly Hill Road
Portsmouth, NH 03801
(603) 766-1415
Cell (603)-815-1761

From: Jack McTigue <jmctigue@tfmoran.com>
Sent: Thursday, March 30, 2023 4:47 PM
To: Eric B. Eby <ebeby@cityofportsmouth.com>
Subject: Sherburne Traffic Study

Eric,

Do you have the traffic studies for the hospital expansion or Liberty Mutual? Do you know if they were done yet?

Our traffic engineer would like to include them in our report.

Sincerely,

Jack McTigue, PE, CPESC
Project Manager

TFMoran Seacoast Division
170 Commerce Way - Suite 102, Portsmouth, NH 03801
E-Mail: jmctigue@tfmoran.com
Tel: (603) 431-2222 **Fax:** (603) 431-0910
Cell: (603) 315-3078

APPENDIX E

**Background Traffic Volumes
AM Peak data**

Assumed growth rate	0.005
MARCH 2019 Seasonal	1.15 NHDOT Group 4 Averages
Covid/Stay-home factor	1.130 NHDOT Methodology

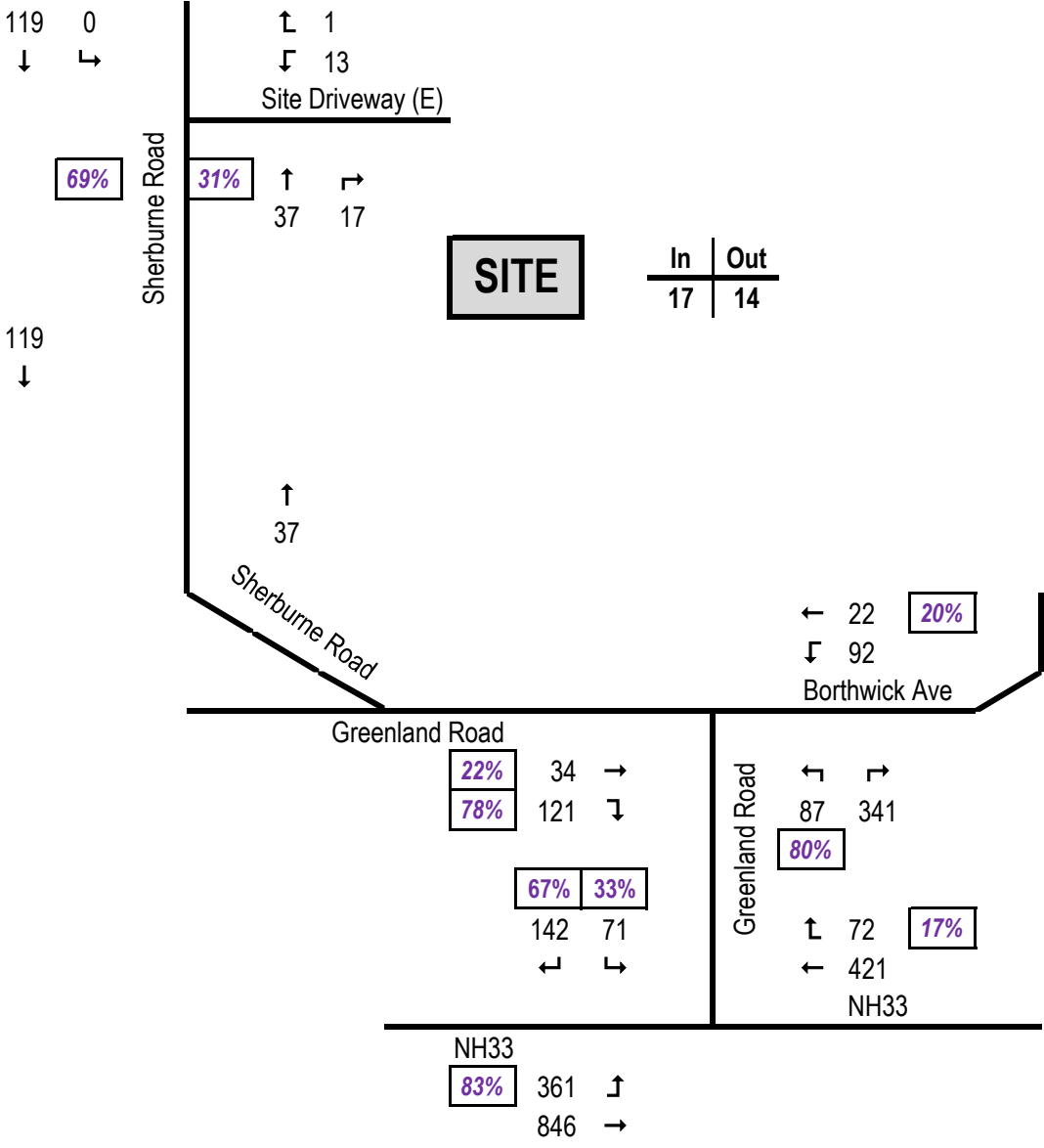
Site Trips are not Seasonally Adjusted or Grown.
ALL TRIPS ARE COVID ADJUSTED

AM Peak Hour	Existing 2023 (Raw data) 10/3/09/2023	Existing 2023 w/ Seasonal Adjustment	Covid/Stay Home Adjustment	2023 ADJUSTED	Balance	2023 BASE	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
1: Sherburne Road at Site Driveway (E) 7:30 AM																			
per video obs																			
Movement [A]																			
WBL	13	13	1.130	14.69		14.69	14.69	14.69	14.69	14.69	14.69	14.69	14.69	14.69	14.69	14.69	14.69	14.69	14.69
WBR	1	1	1.130	1.13		1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13
NBT	37	43	1.130	48.59		48.59	48.83	49.07	49.32	49.57	49.82	50.07	50.32	50.57	50.82	51.07	51.33	51.59	51.85
NBR	17	17	1.130	19.21		19.21	19.21	19.21	19.21	19.21	19.21	19.21	19.21	19.21	19.21	19.21	19.21	19.21	19.21
SBL	0	0	1.130	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SBT	119	137	1.130	154.81		154.81	155.58	156.36	157.14	157.93	158.72	159.51	160.31	161.11	161.92	162.73	163.54	164.36	165.18
2: Sherburne Road at Site Driveway (P) 7:30 AM																			
calculated from above																			
Movement																			
WBL		0	1.130	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WBR		0	1.130	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NBT	37	43	1.130	48.59		48.59	48.83	49.07	49.32	49.57	49.82	50.07	50.32	50.57	50.82	51.07	51.33	51.59	51.85
NBR		0	1.130	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SBL		0	1.130	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SBT	119	137	1.130	154.81		154.81	155.58	156.36	157.14	157.93	158.72	159.51	160.31	161.11	161.92	162.73	163.54	164.36	165.18
4: Greenland Road at Borthwick Ave 7:30 AM																			
Movement (B)																			
EBT	34	39	1.130	44.07		44.07	44.29	44.51	44.73	44.95	45.17	45.40	45.63	45.86	46.09	46.32	46.55	46.78	47.01
EBR	121	139	1.130	157.07		157.07	157.86	158.65	159.44	160.24	161.04	161.85	162.66	163.47	164.29	165.11	165.94	166.77	167.60
WBL	92	106	1.130	119.78		119.78	120.38	120.98	121.58	122.19	122.80	123.41	124.03	124.65	125.27	125.90	126.53	127.16	127.80
WBT	22	25	1.130	28.25		28.25	28.39	28.53	28.67	28.81	28.95	29.09	29.24	29.39	29.54	29.69	29.84	29.99	30.14
NBL	87	100	1.130	113.00	+1	114.00	114.57	115.14	115.72	116.30	116.88	117.46	118.05	118.64	119.23	119.83	120.43	121.03	121.64
NBR	341	392	1.130	442.96	+6	448.96	451.20	453.46	455.73	458.01	460.30	462.60	464.91	467.23	469.57	471.92	474.28	476.65	479.03
5: NH33 at Greenland Road 7:30 AM																			
Movement (A)																			
EBL	361	415	1.130	468.95		468.95	471.29	473.65	476.02	478.40	480.79	483.19	485.61	488.04	490.48	492.93	495.39	497.87	500.36
EBT	846	973	1.130	1099.49		1099.49	1104.99	1110.51	1116.06	1121.64	1127.25	1132.89	1138.55	1144.24	1149.96	1155.71	1161.49	1167.30	1173.14
WBT	421	484	1.130	546.92		546.92	549.65	552.40	555.16	557.94	560.73	563.53	566.35	569.18	572.03	574.89	577.76	580.65	583.55
WBR	72	83	1.130	93.79		93.79	94.26	94.73	95.20	95.68	96.16	96.64	97.12	97.61	98.10	98.59	99.08	99.58	100.08
SBL	71	82	1.130	92.66		92.66	93.12	93.59	94.06	94.53	95.00	95.48	95.96	96.44	96.92	97.40	97.89	98.38	98.87
SBR	142	163	1.130	184.19		184.19	185.11	186.04	186.97	187.90	188.84	189.78	190.73	191.68	192.64	193.60	194.57	195.54	196.52

AM PHF	% Heavy	Counted Heavy	AM Peak Hour	2023 BASE	2026 No-Build	EXISTING TRIP DEDUCTION	Site Trip Distribution	2026 Build	Build PHF	Build HV	Build HV	AM Peak Hour	2026 No-Build	EXISTING TRIP DEDUCTION	Site Trip Distribution	2026 Build
1: Sherburne Road at Site Driveway (E)																
<u>Movement</u>																
0.39	14%	2	WBL	15	15	-15	28	28	0.90	0%	0	WBL	15	-15	28	28
	0%	0	WBR	1	1	-1	0	0		0%	0	WBR	1	-1	0	0
0.79	6%	3	NBT	49	49	0	0	49	0.79	6%	3	NBT	52	0	0	52
	10%	2	NBR	19	19	-19	0	0		0%	0	NBR	19	-19	0	0
0.76	0%	0	SBL	0	0	0	0	0	0.76	0%	0	SBL	0	0	0	0
	2%	3	SBT	155	157	0	0	157		2%	3	SBT	165	0	0	165
2: Sherburne Road at Site Driveway (P)																
<u>Movement</u>																
0.90	0%		WBL	0	0	0	0	0	0.90	0%	0	WBL	0	0	0	0
	10%	5	WBR	0	0	0	0	0		0%	0	WBR	0	0	0	0
0.90	0%		NBT	49	49	-19	0	30	0.90	10%	3	NBT	52	-19	0	33
	0%		NBR	0	0	0	12	12		0%	0	NBR	0	0	12	12
0.90	0%		SBL	0	0	0	0	0	0.90	0%	0	SBL	0	0	0	0
	3%	5	SBT	155	157	-15	28	170		3%	5	SBT	165	-15	28	178
4: Greenland Road at Borthwick Ave																
<u>Movement</u>																
0.84	2%	1	EBT	44	45	-3	6	48	0.84	2%	1	EBT	47	-3	6	50
	3%	4	EBR	157	159	-12	22	169		3%	4	EBR	168	-12	22	178
0.86	6%	7	WBL	120	122	0	0	122	0.86	6%	7	WBL	128	0	0	128
	0%	0	WBT	28	29	-4	2	27		0%	0	WBT	30	-4	2	28
0.75	6%	7	NBL	114	116	-15	10	111	0.75	6%	7	NBL	122	-15	10	117
	2%	11	NBR	449	456	0	0	456		2%	11	NBR	479	0	0	479
5: NH33 at Greenland Road																
<u>Movement</u>																
0.82	2%	11	EBL	469	476	-13	8	471	0.82	2%	11	EBL	500	-13	8	495
	3%	33	EBT	1099	1116	0	0	1116		3%	33	EBT	1173	0	0	1173
0.89	4%	22	WBT	547	555	0	0	555	0.89	4%	22	WBT	584	0	0	584
	4%	4	WBR	94	95	-3	2	94		4%	4	WBR	100	-3	2	99
0.82	3%	3	SBL	93	94	-4	7	97	0.82	3%	3	SBL	99	-4	7	102
	5%	9	SBR	184	187	-8	15	194		5%	9	SBR	197	-8	15	204

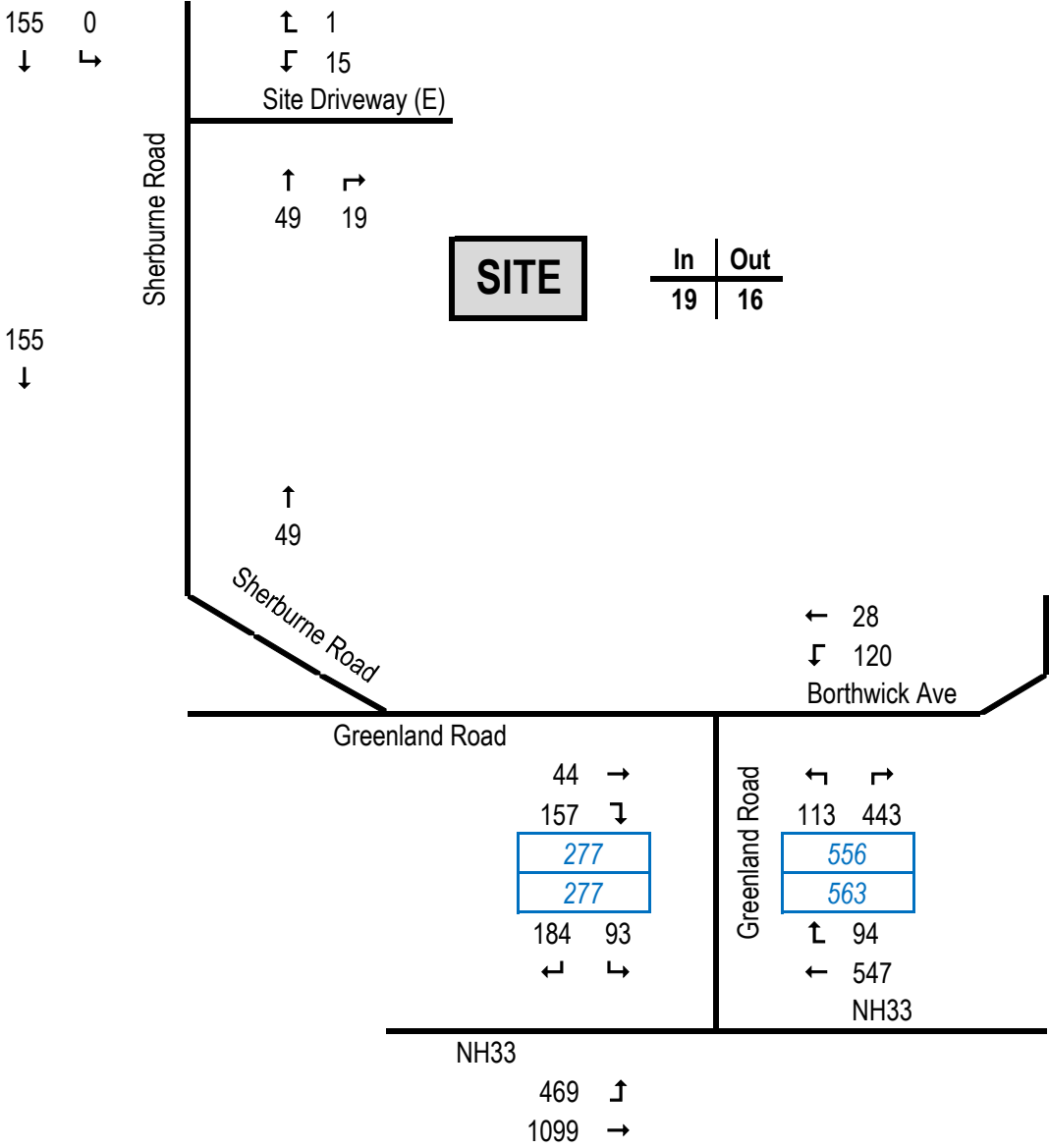
2023 RAW DATA
PRORATA
 AM Peak Hour

XX Primary Site Trips



2023 ADJUSTED
BALANCE
AM Peak Hour

XX Primary Site Trips



Background Traffic Volumes
PM Peak data

Assumed growth rate 0.005
MARCH 2019 Seasonal 1.15 NHDOT Group 4 Averages
Covid/Stay-home factor 1.130 NHDOT Methodology

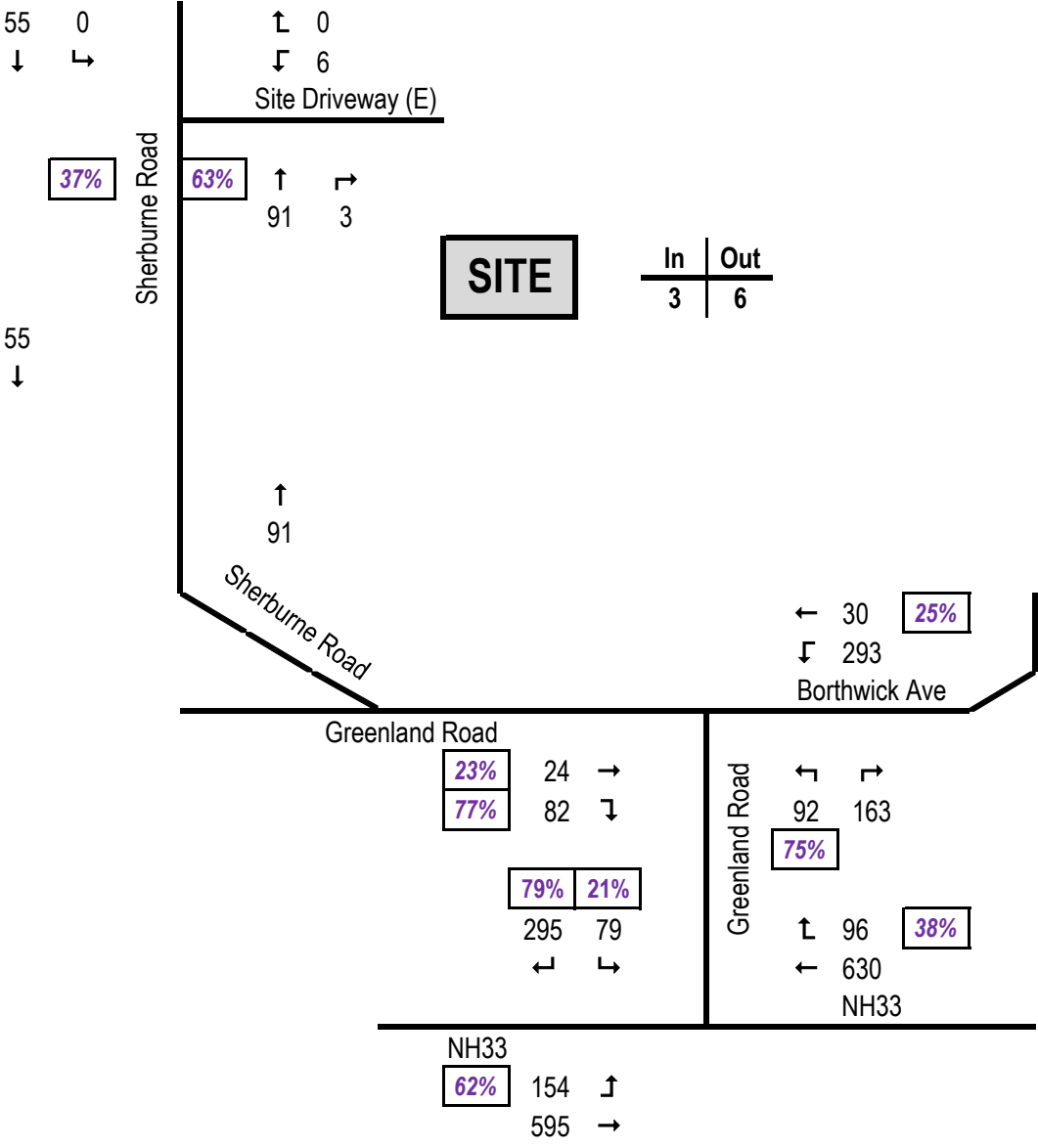
Site Trips are not Seasonally Adjusted or Grown.
ALL TRIPS ARE COVID ADJUSTED

PM Peak Hour	Existing 2023 (Raw data) 03/09/2023	Existing 2023 w/ Seasonal Adjustment	Covid/Stay Home Adjustment	2023 ADJUSTED	BALANC E	2023 BASE	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
1: Sherburne Road																			
at Site Driveway (E) 3:30 PM																			
Movement per video obs [A]																			
WBL	6	6	1.130	6.78	6.78	6.78	6.78	6.78	6.78	6.78	6.78	6.78	6.78	6.78	6.78	6.78	6.78	6.78	6.78
WBR	0	0	1.130	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NBT	91	91	1.130	102.83	102.83	103.34	103.86	104.38	104.90	105.42	105.95	106.48	107.01	107.55	108.09	108.63	109.17	109.72	109.72
NBR	3	3	1.130	3.39	3.39	3.39	3.39	3.39	3.39	3.39	3.39	3.39	3.39	3.39	3.39	3.39	3.39	3.39	3.39
SBL	0	0	1.130	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SBT	55	55	1.130	62.15	62.15	62.15	62.15	62.15	62.15	62.15	62.15	62.15	62.15	62.15	62.15	62.15	62.15	62.15	62.15
2: Sherburne Road																			
at Site Driveway (P) calculated from above																			
Movement																			
WBL		0	1.130	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WBR		0	1.130	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NBT	91	91	1.130	102.83	102.83	103.34	103.86	104.38	104.90	105.42	105.95	106.48	107.01	107.55	108.09	108.63	109.17	109.72	109.72
NBR		0	1.130	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SBL		0	1.130	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SBT	55	55	1.130	62.15	62.15	62.15	62.15	62.15	62.15	62.15	62.15	62.15	62.15	62.15	62.15	62.15	62.15	62.15	62.15
4: Greenland Road																			
at Borthwick Ave 3:00 PM																			
Movement (B)																			
EBT	24	28	1.130	31.64	31.64	31.80	31.96	32.12	32.28	32.44	32.60	32.76	32.92	33.08	33.25	33.42	33.59	33.76	33.76
EBR	82	94	1.130	106.22	106.22	106.75	107.28	107.82	108.36	108.90	109.44	109.99	110.54	111.09	111.65	112.21	112.77	113.33	113.33
WBL	293	337	1.130	380.81	380.81	382.71	384.62	386.54	388.47	390.41	392.36	394.32	396.29	398.27	400.26	402.26	404.27	406.29	406.29
WBT	30	35	1.130	39.55	39.55	39.75	39.95	40.15	40.35	40.55	40.75	40.95	41.15	41.36	41.57	41.78	41.99	42.20	42.20
NBL	92	106	1.130	119.78	119.78	120.38	120.98	121.58	122.19	122.80	123.41	124.03	124.65	125.27	125.90	126.53	127.16	127.80	127.80
NBR	163	187	1.130	211.31	211.31	212.37	213.43	214.50	215.57	216.65	217.73	218.82	219.91	221.01	222.12	223.23	224.35	225.47	225.47
5: NH33																			
at Greenland Road 3:15 PM																			
Movement (A)																			
EBL	154	177	1.130	200.01	200.01	201.01	202.02	203.03	204.05	205.07	206.10	207.13	208.17	209.21	210.26	211.31	212.37	213.43	213.43
EBT	595	684	1.130	772.92	772.92	776.78	780.66	784.56	788.48	792.42	796.38	800.36	804.36	808.38	812.42	816.48	820.56	824.66	824.66
WBT	630	725	1.130	819.25	819.25	823.35	827.47	831.61	835.77	839.95	844.15	848.37	852.61	856.87	861.15	865.46	869.79	874.14	874.14
WBR	96	110	1.130	124.30	124.30	124.92	125.54	126.17	126.80	127.43	128.07	128.71	129.35	130.00	130.65	131.30	131.96	132.62	132.62
SBL	79	91	1.130	102.83	102.83	103.34	103.86	104.38	104.90	105.42	105.95	106.48	107.01	107.55	108.09	108.63	109.17	109.72	109.72
SBR	295	339	1.130	383.07	383.07	384.99	386.91	388.84	390.78	392.73	394.69	396.66	398.64	400.63	402.63	404.64	406.66	408.69	408.69

PM PHF	% Heavy	Counted Heavy	PM Peak Hour	2023 BASE	2026 No-Build	EXISTING TRIP DEDUCTION	Site Trip Distribution	2026 Build	Build PHF	Build HV	Build HV	PM Peak Hour	2026 No-Build	EXISTING TRIP DEDUCTION	Site Trip Distribution	2026 Build
			1: Sherburne Road at Site Driveway Movement													
0.38	0%	0	WBL	7	7	-7	21	21	0.90	0%	0	WBL	7	-7	21	21
	0%	0	WBR	0	0	0	0	0		0%	0	WBR	0	0	0	0
	1%	1	NBT	103	104	0	0	104	0.69	1%	1	NBT	110	0	0	110
	0%	0	NBR	3	3	-3	0	0		0%	0	NBR	3	-3	0	0
	0%	0	SBL	0	0	0	0	0	0.81	0%	0	SBL	0	0	0	0
0.81	2%	1	SBT	62	62	0	0	62		2%	1	SBT	62	0	0	62
			2: Sherburne Road at Site Driveway Movement													
0.90	0%		WBL	0	0	0	0	0	0.90	0%		WBL	0	0	0	0
	0%		WBR	0	0	0	0	0		0%		WBR	0	0	0	0
	1%	1	NBT	103	104	-3	0	101	0.90	1%		NBT	110	-3	0	107
	0%		NBR	0	0	0	30	30		0%		NBR	0	0	30	30
	0%		SBL	0	0	0	0	0	0.90	0%		SBL	0	0	0	0
0.90	2%	1	SBT	62	62	-7	21	76		2%		SBT	62	-7	21	76
			4: Greenland Road at Borthwick Ave Movement													
0.86	3%	1	EBT	32	32	-2	5	35	0.86	3%		EBT	34	-2	5	37
	3%	3	EBR	106	108	-5	16	119		3%		EBR	113	-5	16	124
	2%	8	WBL	381	387	0	0	387	0.91	2%		WBL	406	0	0	406
	3%	1	WBT	40	40	-1	8	47		3%		WBT	42	-1	8	49
	3%	3	NBL	120	122	-2	23	143	0.88	3%		NBL	128	-2	23	149
0.88	4%	9	NBR	211	215	0	0	215		4%		NBR	225	0	0	225
			5: NH33 at Greenland Road Movement													
0.94	2%	5	EBL	200	203	-1	14	216	0.94	2%		EBL	213	-1	14	226
	2%	15	EBT	773	785	0	0	785		2%		EBT	825	0	0	825
	2%	14	WBT	819	832	0	0	832	0.89	2%		WBT	874	0	0	874
	6%	7	WBR	124	126	-1	9	134		6%		WBR	133	-1	9	141
	6%	6	SBL	103	104	-1	3	106	0.93	6%		SBL	110	-1	3	112
0.93	1%	5	SBR	383	389	-4	13	398		1%		SBR	409	-4	13	418

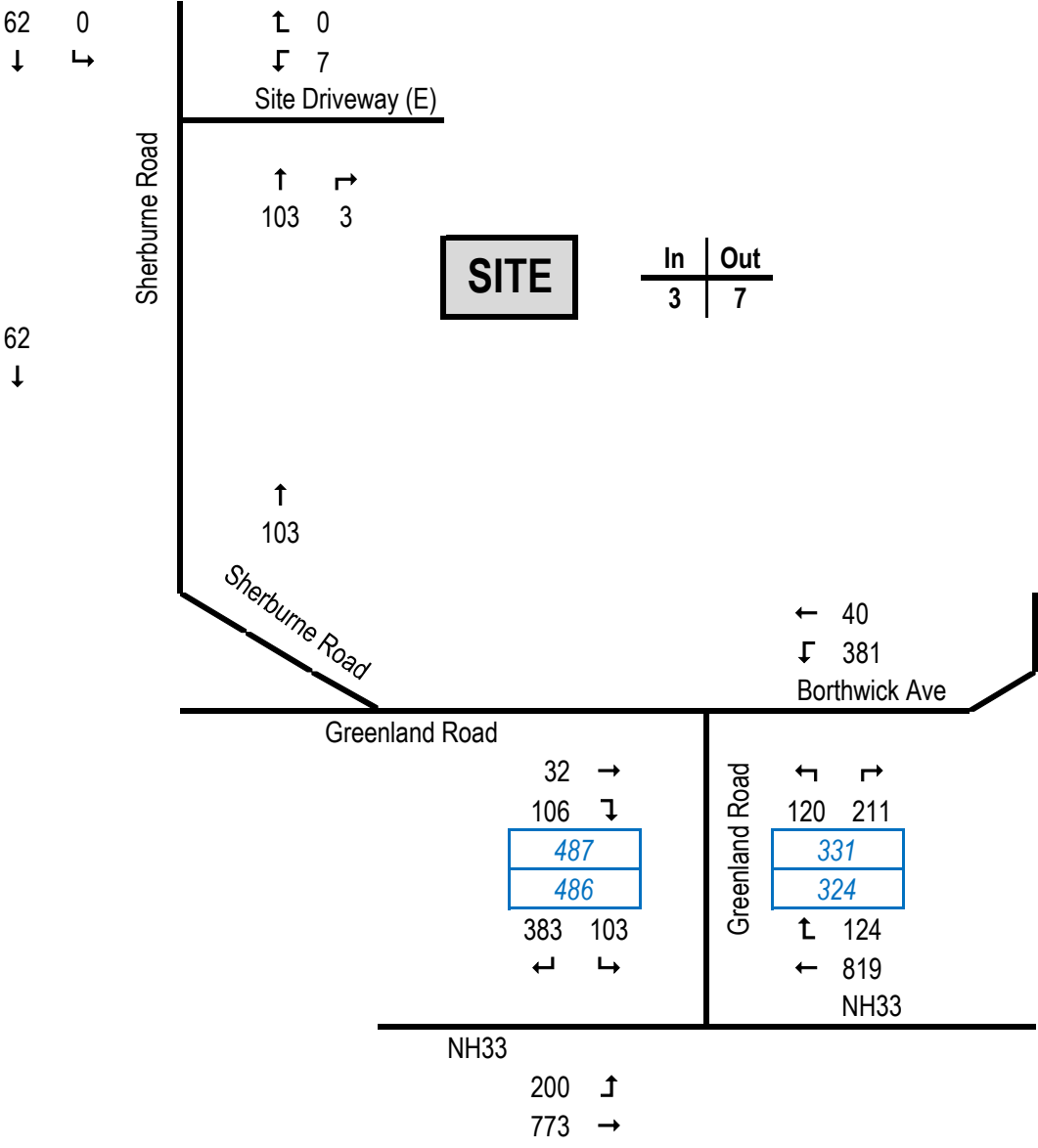
2023 RAW DATA
PRORATA
 PM Peak Hour

XX Primary Site Trips



2023 ADJUSTED
BALANCE
PM Peak Hour

XX Primary Site Trips



APPENDIX F

Intersection						
Int Delay, s/veh	1.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	15	1	49	19	0	155
Future Vol, veh/h	15	1	49	19	0	155
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	39	39	79	79	76	76
Heavy Vehicles, %	14	0	6	10	0	2
Mvmt Flow	38	3	62	24	0	204

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	278	74	0	0	86
Stage 1	74	-	-	-	-
Stage 2	204	-	-	-	-
Critical Hdwy	6.54	6.2	-	-	4.1
Critical Hdwy Stg 1	5.54	-	-	-	-
Critical Hdwy Stg 2	5.54	-	-	-	-
Follow-up Hdwy	3.626	3.3	-	-	2.2
Pot Cap-1 Maneuver	687	993	-	-	1523
Stage 1	919	-	-	-	-
Stage 2	802	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	687	993	-	-	1523
Mov Cap-2 Maneuver	687	-	-	-	-
Stage 1	919	-	-	-	-
Stage 2	802	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.5	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	700	1523
HCM Lane V/C Ratio	-	-	0.059	-
HCM Control Delay (s)	-	-	10.5	0
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.2	0

Intersection	
Intersection Delay, s/veh	20.1
Intersection LOS	C

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	44	157	120	28	114	449
Future Vol, veh/h	44	157	120	28	114	449
Peak Hour Factor	0.84	0.84	0.86	0.86	0.75	0.75
Heavy Vehicles, %	2	3	6	0	6	2
Mvmt Flow	52	187	140	33	152	599
Number of Lanes	1	0	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	1
HCM Control Delay	11.7	12	24.6
HCM LOS	B	B	C

Lane	NBLn1	NBLn2	EBLn1	WBLn1
Vol Left, %	100%	0%	0%	81%
Vol Thru, %	0%	0%	22%	19%
Vol Right, %	0%	100%	78%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	114	449	201	148
LT Vol	114	0	0	120
Through Vol	0	0	44	28
RT Vol	0	449	157	0
Lane Flow Rate	152	599	239	172
Geometry Grp	7	7	2	2
Degree of Util (X)	0.266	0.836	0.366	0.301
Departure Headway (Hd)	6.31	5.03	5.502	6.291
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	570	718	653	571
Service Time	4.042	2.761	3.541	4.333
HCM Lane V/C Ratio	0.267	0.834	0.366	0.301
HCM Control Delay	11.3	28	11.7	12
HCM Lane LOS	B	D	B	B
HCM 95th-tile Q	1.1	9.3	1.7	1.3

Timings
5: RT33 & Greenland Rd



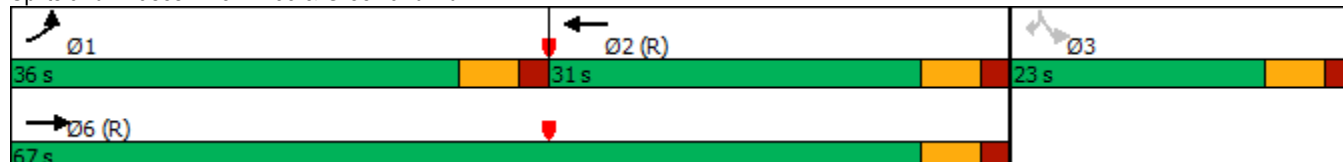
Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations	↖	↗	↖↗	↖	↗
Traffic Volume (vph)	469	1099	547	93	184
Future Volume (vph)	469	1099	547	93	184
Turn Type	Prot	NA	NA	Perm	Perm
Protected Phases	1	6	2		
Permitted Phases				3	3
Detector Phase	1	6	2	3	3
Switch Phase					
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	14.0	24.0	24.0	23.0	23.0
Total Split (s)	36.0	67.0	31.0	23.0	23.0
Total Split (%)	40.0%	74.4%	34.4%	25.6%	25.6%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead		Lag		
Lead-Lag Optimize?	Yes		Yes		
Recall Mode	None	C-Min	C-Min	Min	Min
Act Effct Green (s)	33.0	66.0	26.9	12.0	12.0
Actuated g/C Ratio	0.37	0.73	0.30	0.13	0.13
v/c Ratio	0.88	0.52	0.70	0.48	0.56
Control Delay	44.1	6.5	32.0	42.4	10.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	44.1	6.5	32.0	42.4	10.7
LOS	D	A	C	D	B
Approach Delay		17.7	32.0	21.3	
Approach LOS		B	C	C	

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 51 (57%), Referenced to phase 2:WBT and 6:EBT, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.88
 Intersection Signal Delay: 21.6
 Intersection Capacity Utilization 65.8%
 Analysis Period (min) 15

Intersection LOS: C
 ICU Level of Service C

Splits and Phases: 5: RT33 & Greenland Rd



Queues
5: RT33 & Greenland Rd

AM 2023 BASE.syn



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	572	1340	721	113	224
v/c Ratio	0.88	0.52	0.70	0.48	0.56
Control Delay	44.1	6.5	32.0	42.4	10.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	44.1	6.5	32.0	42.4	10.7
Queue Length 50th (ft)	288	143	190	60	0
Queue Length 95th (ft)	#442	192	253	97	44
Internal Link Dist (ft)		520	520	270	
Turn Bay Length (ft)	200			100	
Base Capacity (vph)	649	2568	1030	330	472
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.88	0.52	0.70	0.34	0.47

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis
5: RT33 & Greenland Rd

AM 2023 BASE.syn



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	469	1099	547	94	93	184
Future Volume (vph)	469	1099	547	94	93	184
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0		6.0	6.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	0.98		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	3505	3395		1752	1538
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1770	3505	3395		1752	1538
Peak-hour factor, PHF	0.82	0.82	0.89	0.89	0.82	0.82
Adj. Flow (vph)	572	1340	615	106	113	224
RTOR Reduction (vph)	0	0	15	0	0	194
Lane Group Flow (vph)	572	1340	706	0	113	30
Heavy Vehicles (%)	2%	3%	4%	4%	3%	5%
Turn Type	Prot	NA	NA		Perm	Perm
Protected Phases	1	6	2			
Permitted Phases					3	3
Actuated Green, G (s)	33.0	66.0	27.0		12.0	12.0
Effective Green, g (s)	33.0	66.0	27.0		12.0	12.0
Actuated g/C Ratio	0.37	0.73	0.30		0.13	0.13
Clearance Time (s)	6.0	6.0	6.0		6.0	6.0
Vehicle Extension (s)	4.0	4.0	4.0		4.0	4.0
Lane Grp Cap (vph)	649	2570	1018		233	205
v/s Ratio Prot	c0.32	0.38	c0.21			
v/s Ratio Perm					c0.06	0.02
v/c Ratio	0.88	0.52	0.69		0.48	0.15
Uniform Delay, d1	26.7	5.2	27.8		36.1	34.5
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	13.7	0.8	3.9		2.2	0.4
Delay (s)	40.3	5.9	31.7		38.3	34.9
Level of Service	D	A	C		D	C
Approach Delay (s)		16.2	31.7		36.1	
Approach LOS		B	C		D	
Intersection Summary						
HCM 2000 Control Delay			22.2		HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.74			
Actuated Cycle Length (s)			90.0		Sum of lost time (s)	18.0
Intersection Capacity Utilization			65.8%		ICU Level of Service	C
Analysis Period (min)			15			
c Critical Lane Group						

Intersection						
Int Delay, s/veh	1.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	15	1	49	19	0	157
Future Vol, veh/h	15	1	49	19	0	157
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	39	39	79	79	76	76
Heavy Vehicles, %	14	0	6	10	0	2
Mvmt Flow	38	3	62	24	0	207

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	281	74	0	0	86
Stage 1	74	-	-	-	-
Stage 2	207	-	-	-	-
Critical Hdwy	6.54	6.2	-	-	4.1
Critical Hdwy Stg 1	5.54	-	-	-	-
Critical Hdwy Stg 2	5.54	-	-	-	-
Follow-up Hdwy	3.626	3.3	-	-	2.2
Pot Cap-1 Maneuver	684	993	-	-	1523
Stage 1	919	-	-	-	-
Stage 2	800	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	684	993	-	-	1523
Mov Cap-2 Maneuver	684	-	-	-	-
Stage 1	919	-	-	-	-
Stage 2	800	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.5	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	698	1523
HCM Lane V/C Ratio	-	-	0.059	-
HCM Control Delay (s)	-	-	10.5	0
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.2	0

Intersection	
Intersection Delay, s/veh	21.2
Intersection LOS	C

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	45	159	122	29	116	456
Future Vol, veh/h	45	159	122	29	116	456
Peak Hour Factor	0.84	0.84	0.86	0.86	0.75	0.75
Heavy Vehicles, %	2	3	6	0	6	2
Mvmt Flow	54	189	142	34	155	608
Number of Lanes	1	0	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	1
HCM Control Delay	11.9	12.2	26.2
HCM LOS	B	B	D

Lane	NBLn1	NBLn2	EBLn1	WBLn1
Vol Left, %	100%	0%	0%	81%
Vol Thru, %	0%	0%	22%	19%
Vol Right, %	0%	100%	78%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	116	456	204	151
LT Vol	116	0	0	122
Through Vol	0	0	45	29
RT Vol	0	456	159	0
Lane Flow Rate	155	608	243	176
Geometry Grp	7	7	2	2
Degree of Util (X)	0.272	0.854	0.374	0.309
Departure Headway (Hd)	6.338	5.057	5.54	6.327
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	568	717	648	567
Service Time	4.07	2.788	3.581	4.373
HCM Lane V/C Ratio	0.273	0.848	0.375	0.31
HCM Control Delay	11.4	30	11.9	12.2
HCM Lane LOS	B	D	B	B
HCM 95th-tile Q	1.1	9.9	1.7	1.3

Timings
5: RT33 & Greenland Rd

AM 2026 NoBUILD.syn



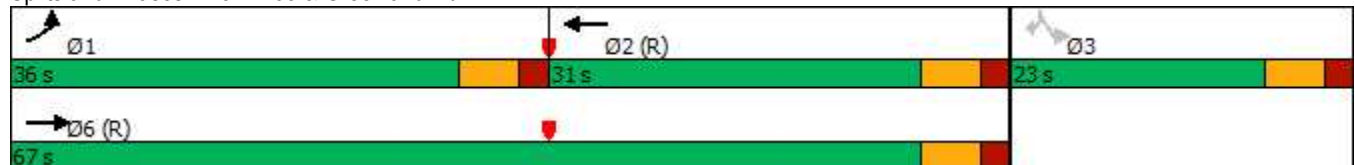
Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations	↖	↗	↕	↖	↗
Traffic Volume (vph)	476	1116	555	94	187
Future Volume (vph)	476	1116	555	94	187
Turn Type	Prot	NA	NA	Perm	Perm
Protected Phases	1	6	2		
Permitted Phases				3	3
Detector Phase	1	6	2	3	3
Switch Phase					
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	14.0	24.0	24.0	23.0	23.0
Total Split (s)	36.0	67.0	31.0	23.0	23.0
Total Split (%)	40.0%	74.4%	34.4%	25.6%	25.6%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead		Lag		
Lead-Lag Optimize?	Yes		Yes		
Recall Mode	None	C-Min	C-Min	Min	Min
Act Effct Green (s)	33.4	65.7	26.3	12.3	12.3
Actuated g/C Ratio	0.37	0.73	0.29	0.14	0.14
v/c Ratio	0.88	0.53	0.73	0.48	0.56
Control Delay	44.3	6.7	33.2	42.0	10.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	44.3	6.7	33.2	42.0	10.5
LOS	D	A	C	D	B
Approach Delay		17.9	33.2	21.0	
Approach LOS		B	C	C	

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 51 (57%), Referenced to phase 2:WBT and 6:EBT, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.88
 Intersection Signal Delay: 22.0
 Intersection Capacity Utilization 66.4%
 Analysis Period (min) 15

Intersection LOS: C
 ICU Level of Service C

Splits and Phases: 5: RT33 & Greenland Rd



Queues
5: RT33 & Greenland Rd

AM 2026 NoBUILD.syn



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	580	1361	731	115	228
v/c Ratio	0.88	0.53	0.73	0.48	0.56
Control Delay	44.3	6.7	33.2	42.0	10.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	44.3	6.7	33.2	42.0	10.5
Queue Length 50th (ft)	294	146	194	61	0
Queue Length 95th (ft)	#461	203	257	97	43
Internal Link Dist (ft)		520	520	270	
Turn Bay Length (ft)	200			100	
Base Capacity (vph)	657	2560	1007	330	475
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.88	0.53	0.73	0.35	0.48

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis
5: RT33 & Greenland Rd

AM 2026 NoBUILD.syn



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	476	1116	555	95	94	187
Future Volume (vph)	476	1116	555	95	94	187
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0		6.0	6.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	0.98		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	3505	3395		1752	1538
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1770	3505	3395		1752	1538
Peak-hour factor, PHF	0.82	0.82	0.89	0.89	0.82	0.82
Adj. Flow (vph)	580	1361	624	107	115	228
RTOR Reduction (vph)	0	0	15	0	0	197
Lane Group Flow (vph)	580	1361	716	0	115	31
Heavy Vehicles (%)	2%	3%	4%	4%	3%	5%
Turn Type	Prot	NA	NA		Perm	Perm
Protected Phases	1	6	2			
Permitted Phases					3	3
Actuated Green, G (s)	33.4	65.7	26.3		12.3	12.3
Effective Green, g (s)	33.4	65.7	26.3		12.3	12.3
Actuated g/C Ratio	0.37	0.73	0.29		0.14	0.14
Clearance Time (s)	6.0	6.0	6.0		6.0	6.0
Vehicle Extension (s)	4.0	4.0	4.0		4.0	4.0
Lane Grp Cap (vph)	656	2558	992		239	210
v/s Ratio Prot	c0.33	0.39	c0.21			
v/s Ratio Perm					c0.07	0.02
v/c Ratio	0.88	0.53	0.72		0.48	0.15
Uniform Delay, d1	26.5	5.4	28.6		35.9	34.2
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	13.8	0.8	4.5		2.1	0.4
Delay (s)	40.3	6.2	33.1		38.0	34.7
Level of Service	D	A	C		D	C
Approach Delay (s)		16.4	33.1		35.8	
Approach LOS		B	C		D	
Intersection Summary						
HCM 2000 Control Delay			22.6		HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.76			
Actuated Cycle Length (s)			90.0		Sum of lost time (s)	18.0
Intersection Capacity Utilization			66.4%		ICU Level of Service	C
Analysis Period (min)			15			
c Critical Lane Group						

Intersection						
Int Delay, s/veh	1.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	15	1	52	19	0	165
Future Vol, veh/h	15	1	52	19	0	165
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	39	39	79	79	76	76
Heavy Vehicles, %	14	0	6	10	0	2
Mvmt Flow	38	3	66	24	0	217

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	295	78	0	0	90
Stage 1	78	-	-	-	-
Stage 2	217	-	-	-	-
Critical Hdwy	6.54	6.2	-	-	4.1
Critical Hdwy Stg 1	5.54	-	-	-	-
Critical Hdwy Stg 2	5.54	-	-	-	-
Follow-up Hdwy	3.626	3.3	-	-	2.2
Pot Cap-1 Maneuver	672	988	-	-	1518
Stage 1	916	-	-	-	-
Stage 2	791	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	672	988	-	-	1518
Mov Cap-2 Maneuver	672	-	-	-	-
Stage 1	916	-	-	-	-
Stage 2	791	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	686	1518
HCM Lane V/C Ratio	-	-	0.06	-
HCM Control Delay (s)	-	-	10.6	0
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.2	0

Intersection	
Intersection Delay, s/veh	25.6
Intersection LOS	D

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↻			↻	↻	↻
Traffic Vol, veh/h	47	168	128	30	122	479
Future Vol, veh/h	47	168	128	30	122	479
Peak Hour Factor	0.84	0.84	0.86	0.86	0.75	0.75
Heavy Vehicles, %	2	3	6	0	6	2
Mvmt Flow	56	200	149	35	163	639
Number of Lanes	1	0	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	1
HCM Control Delay	12.5	12.7	32.8
HCM LOS	B	B	D

Lane	NBLn1	NBLn2	EBLn1	WBLn1
Vol Left, %	100%	0%	0%	81%
Vol Thru, %	0%	0%	22%	19%
Vol Right, %	0%	100%	78%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	122	479	215	158
LT Vol	122	0	0	128
Through Vol	0	0	47	30
RT Vol	0	479	168	0
Lane Flow Rate	163	639	256	184
Geometry Grp	7	7	2	2
Degree of Util (X)	0.29	0.911	0.402	0.329
Departure Headway (Hd)	6.417	5.135	5.648	6.448
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	560	709	635	557
Service Time	4.153	2.871	3.695	4.5
HCM Lane V/C Ratio	0.291	0.901	0.403	0.33
HCM Control Delay	11.8	38.1	12.5	12.7
HCM Lane LOS	B	E	B	B
HCM 95th-tile Q	1.2	12	1.9	1.4

Timings
5: RT33 & Greenland Rd

AM 2036 NoBUILD.syn

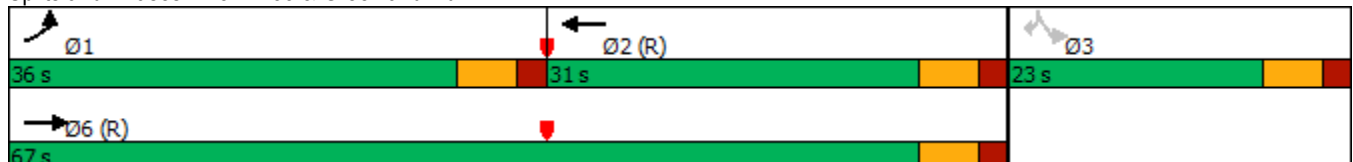


Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations	↖	↗↗	↗↖	↖	↗
Traffic Volume (vph)	500	1173	584	99	197
Future Volume (vph)	500	1173	584	99	197
Turn Type	Prot	NA	NA	Perm	Perm
Protected Phases	1	6	2		
Permitted Phases				3	3
Detector Phase	1	6	2	3	3
Switch Phase					
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	14.0	24.0	24.0	23.0	23.0
Total Split (s)	36.0	67.0	31.0	23.0	23.0
Total Split (%)	40.0%	74.4%	34.4%	25.6%	25.6%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead		Lag		
Lead-Lag Optimize?	Yes		Yes		
Recall Mode	None	C-Min	C-Min	Min	Min
Act Effct Green (s)	34.7	65.6	24.8	12.4	12.4
Actuated g/C Ratio	0.39	0.73	0.28	0.14	0.14
v/c Ratio	0.89	0.56	0.81	0.50	0.57
Control Delay	45.1	7.1	37.3	42.4	10.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	45.1	7.1	37.3	42.4	10.5
LOS	D	A	D	D	B
Approach Delay		18.5	37.3	21.2	
Approach LOS		B	D	C	

Intersection Summary

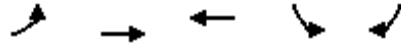
Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 51 (57%), Referenced to phase 2:WBT and 6:EBT, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.89
 Intersection Signal Delay: 23.3
 Intersection Capacity Utilization 68.7%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service C

Splits and Phases: 5: RT33 & Greenland Rd



Queues
5: RT33 & Greenland Rd

AM 2036 NoBUILD.syn



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	610	1430	768	121	240
v/c Ratio	0.89	0.56	0.81	0.50	0.57
Control Delay	45.1	7.1	37.3	42.4	10.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	45.1	7.1	37.3	42.4	10.5
Queue Length 50th (ft)	320	162	207	65	0
Queue Length 95th (ft)	#497	219	273	101	44
Internal Link Dist (ft)		520	520	270	
Turn Bay Length (ft)	200			100	
Base Capacity (vph)	683	2553	958	330	485
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.89	0.56	0.80	0.37	0.49

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis
5: RT33 & Greenland Rd

AM 2036 NoBUILD.syn



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	500	1173	584	100	99	197
Future Volume (vph)	500	1173	584	100	99	197
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0		6.0	6.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	0.98		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	3505	3395		1752	1538
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1770	3505	3395		1752	1538
Peak-hour factor, PHF	0.82	0.82	0.89	0.89	0.82	0.82
Adj. Flow (vph)	610	1430	656	112	121	240
RTOR Reduction (vph)	0	0	15	0	0	207
Lane Group Flow (vph)	610	1430	753	0	121	33
Heavy Vehicles (%)	2%	3%	4%	4%	3%	5%
Turn Type	Prot	NA	NA		Perm	Perm
Protected Phases	1	6	2			
Permitted Phases					3	3
Actuated Green, G (s)	34.7	65.6	24.9		12.4	12.4
Effective Green, g (s)	34.7	65.6	24.9		12.4	12.4
Actuated g/C Ratio	0.39	0.73	0.28		0.14	0.14
Clearance Time (s)	6.0	6.0	6.0		6.0	6.0
Vehicle Extension (s)	4.0	4.0	4.0		4.0	4.0
Lane Grp Cap (vph)	682	2554	939		241	211
v/s Ratio Prot	c0.34	0.41	c0.22			
v/s Ratio Perm					c0.07	0.02
v/c Ratio	0.89	0.56	0.80		0.50	0.16
Uniform Delay, d1	25.9	5.6	30.3		35.9	34.2
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	14.5	0.9	7.2		2.2	0.5
Delay (s)	40.4	6.5	37.4		38.2	34.7
Level of Service	D	A	D		D	C
Approach Delay (s)		16.6	37.4		35.8	
Approach LOS		B	D		D	
Intersection Summary						
HCM 2000 Control Delay			23.9		HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.79			
Actuated Cycle Length (s)			90.0		Sum of lost time (s)	18.0
Intersection Capacity Utilization			68.7%		ICU Level of Service	C
Analysis Period (min)			15			
c Critical Lane Group						

Intersection						
Int Delay, s/veh	1.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		↑			↑
Traffic Vol, veh/h	28	0	49	0	0	157
Future Vol, veh/h	28	0	49	0	0	157
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	79	79	76	76
Heavy Vehicles, %	0	0	6	0	0	2
Mvmt Flow	31	0	62	0	0	207

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	269	62	0	-	-	-
Stage 1	62	-	-	-	-	-
Stage 2	207	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	-	-
Pot Cap-1 Maneuver	725	1009	-	0	0	-
Stage 1	966	-	-	0	0	-
Stage 2	832	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	725	1009	-	-	-	-
Mov Cap-2 Maneuver	725	-	-	-	-	-
Stage 1	966	-	-	-	-	-
Stage 2	832	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.2	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBTWBLn1	SBT
Capacity (veh/h)	- 725	-
HCM Lane V/C Ratio	- 0.043	-
HCM Control Delay (s)	- 10.2	-
HCM Lane LOS	- B	-
HCM 95th %tile Q(veh)	- 0.1	-

Intersection

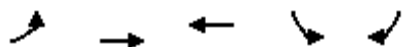
Intersection Delay, s/veh 21.7
Intersection LOS C

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	48	169	122	27	111	456
Future Vol, veh/h	48	169	122	27	111	456
Peak Hour Factor	0.84	0.84	0.86	0.86	0.75	0.75
Heavy Vehicles, %	2	3	6	0	6	2
Mvmt Flow	57	201	142	31	148	608
Number of Lanes	1	0	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	1
HCM Control Delay	12.2	12.2	27.1
HCM LOS	B	B	D

Lane	NBLn1	NBLn2	EBLn1	WBLn1
Vol Left, %	100%	0%	0%	82%
Vol Thru, %	0%	0%	22%	18%
Vol Right, %	0%	100%	78%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	111	456	217	149
LT Vol	111	0	0	122
Through Vol	0	0	48	27
RT Vol	0	456	169	0
Lane Flow Rate	148	608	258	173
Geometry Grp	7	7	2	2
Degree of Util (X)	0.262	0.86	0.398	0.306
Departure Headway (Hd)	6.374	5.092	5.54	6.363
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	564	711	648	565
Service Time	4.107	2.825	3.584	4.411
HCM Lane V/C Ratio	0.262	0.855	0.398	0.306
HCM Control Delay	11.4	30.9	12.2	12.2
HCM Lane LOS	B	D	B	B
HCM 95th-tile Q	1	10.1	1.9	1.3

Timings
5: RT33 & Greenland Rd

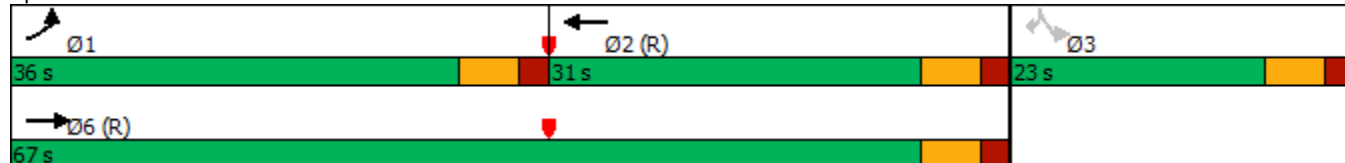


Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations	↖	↗	↖↗	↖	↗
Traffic Volume (vph)	471	1116	555	97	194
Future Volume (vph)	471	1116	555	97	194
Turn Type	Prot	NA	NA	Perm	Perm
Protected Phases	1	6	2		
Permitted Phases				3	3
Detector Phase	1	6	2	3	3
Switch Phase					
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	14.0	24.0	24.0	23.0	23.0
Total Split (s)	36.0	67.0	31.0	23.0	23.0
Total Split (%)	40.0%	74.4%	34.4%	25.6%	25.6%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead		Lag		
Lead-Lag Optimize?	Yes		Yes		
Recall Mode	None	C-Min	C-Min	Min	Min
Act Effct Green (s)	32.9	65.6	26.7	12.4	12.4
Actuated g/C Ratio	0.37	0.73	0.30	0.14	0.14
v/c Ratio	0.89	0.53	0.71	0.49	0.57
Control Delay	45.2	6.7	32.5	42.2	10.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	45.2	6.7	32.5	42.2	10.5
LOS	D	A	C	D	B
Approach Delay		18.1	32.5	21.0	
Approach LOS		B	C	C	

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 51 (57%), Referenced to phase 2:WBT and 6:EBT, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.89
 Intersection Signal Delay: 22.0
 Intersection Capacity Utilization 66.1%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service C

Splits and Phases: 5: RT33 & Greenland Rd



Queues
5: RT33 & Greenland Rd

AM 2026 BUILD.syn



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	574	1361	730	118	237
v/c Ratio	0.89	0.53	0.71	0.49	0.57
Control Delay	45.2	6.7	32.5	42.2	10.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	45.2	6.7	32.5	42.2	10.5
Queue Length 50th (ft)	291	148	194	63	0
Queue Length 95th (ft)	#454	203	257	99	44
Internal Link Dist (ft)		520	520	270	
Turn Bay Length (ft)	200			100	
Base Capacity (vph)	647	2556	1023	330	482
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.89	0.53	0.71	0.36	0.49

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis
5: RT33 & Greenland Rd

AM 2026 BUILD.syn



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑↑	↗		↙	↘
Traffic Volume (vph)	471	1116	555	94	97	194
Future Volume (vph)	471	1116	555	94	97	194
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0		6.0	6.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	0.98		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	3505	3396		1752	1538
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1770	3505	3396		1752	1538
Peak-hour factor, PHF	0.82	0.82	0.89	0.89	0.82	0.82
Adj. Flow (vph)	574	1361	624	106	118	237
RTOR Reduction (vph)	0	0	15	0	0	204
Lane Group Flow (vph)	574	1361	715	0	118	33
Heavy Vehicles (%)	2%	3%	4%	4%	3%	5%
Turn Type	Prot	NA	NA		Perm	Perm
Protected Phases	1	6	2			
Permitted Phases					3	3
Actuated Green, G (s)	32.9	65.6	26.7		12.4	12.4
Effective Green, g (s)	32.9	65.6	26.7		12.4	12.4
Actuated g/C Ratio	0.37	0.73	0.30		0.14	0.14
Clearance Time (s)	6.0	6.0	6.0		6.0	6.0
Vehicle Extension (s)	4.0	4.0	4.0		4.0	4.0
Lane Grp Cap (vph)	647	2554	1007		241	211
v/s Ratio Prot	c0.32	0.39	c0.21			
v/s Ratio Perm					c0.07	0.02
v/c Ratio	0.89	0.53	0.71		0.49	0.15
Uniform Delay, d1	26.8	5.4	28.2		35.9	34.2
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	14.2	0.8	4.2		2.1	0.5
Delay (s)	41.0	6.2	32.4		38.0	34.7
Level of Service	D	A	C		D	C
Approach Delay (s)		16.5	32.4		35.8	
Approach LOS		B	C		D	
Intersection Summary						
HCM 2000 Control Delay			22.6		HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.75			
Actuated Cycle Length (s)			90.0		Sum of lost time (s)	18.0
Intersection Capacity Utilization			66.1%		ICU Level of Service	C
Analysis Period (min)			15			
c Critical Lane Group						

Intersection						
Int Delay, s/veh	1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		↑			↑
Traffic Vol, veh/h	28	0	52	0	0	165
Future Vol, veh/h	28	0	52	0	0	165
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	79	79	76	76
Heavy Vehicles, %	0	0	6	0	0	2
Mvmt Flow	31	0	66	0	0	217

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	283	66	0	-	-	-
Stage 1	66	-	-	-	-	-
Stage 2	217	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	-	-
Pot Cap-1 Maneuver	711	1003	-	0	0	-
Stage 1	962	-	-	0	0	-
Stage 2	824	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	711	1003	-	-	-	-
Mov Cap-2 Maneuver	711	-	-	-	-	-
Stage 1	962	-	-	-	-	-
Stage 2	824	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.3	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBTWBLn1	SBT
Capacity (veh/h)	- 711	-
HCM Lane V/C Ratio	- 0.044	-
HCM Control Delay (s)	- 10.3	-
HCM Lane LOS	- B	-
HCM 95th %tile Q(veh)	- 0.1	-

Intersection

Intersection Delay, s/veh 26.2

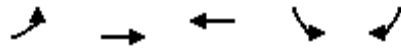
Intersection LOS D

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	50	178	128	28	117	479
Future Vol, veh/h	50	178	128	28	117	479
Peak Hour Factor	0.84	0.84	0.86	0.86	0.75	0.75
Heavy Vehicles, %	2	3	6	0	6	2
Mvmt Flow	60	212	149	33	156	639
Number of Lanes	1	0	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	1
HCM Control Delay	12.9	12.7	33.8
HCM LOS	B	B	D

Lane	NBLn1	NBLn2	EBLn1	WBLn1
Vol Left, %	100%	0%	0%	82%
Vol Thru, %	0%	0%	22%	18%
Vol Right, %	0%	100%	78%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	117	479	228	156
LT Vol	117	0	0	128
Through Vol	0	0	50	28
RT Vol	0	479	178	0
Lane Flow Rate	156	639	271	181
Geometry Grp	7	7	2	2
Degree of Util (X)	0.28	0.917	0.426	0.327
Departure Headway (Hd)	6.454	5.171	5.65	6.486
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	557	703	635	553
Service Time	4.192	2.909	3.7	4.54
HCM Lane V/C Ratio	0.28	0.909	0.427	0.327
HCM Control Delay	11.7	39.2	12.9	12.7
HCM Lane LOS	B	E	B	B
HCM 95th-tile Q	1.1	12.2	2.1	1.4

Timings
5: RT33 & Greenland Rd

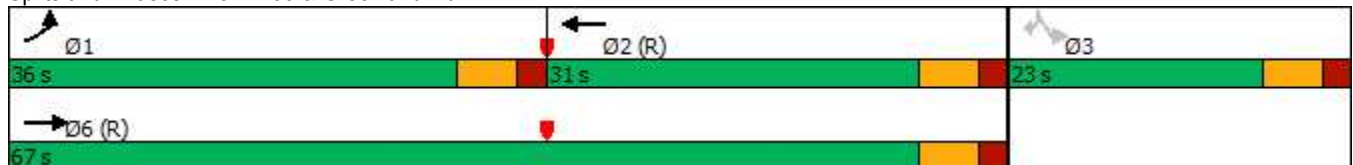


Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations	↖	↗	↕	↖	↗
Traffic Volume (vph)	495	1173	584	102	204
Future Volume (vph)	495	1173	584	102	204
Turn Type	Prot	NA	NA	Perm	Perm
Protected Phases	1	6	2		
Permitted Phases				3	3
Detector Phase	1	6	2	3	3
Switch Phase					
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	14.0	24.0	24.0	23.0	23.0
Total Split (s)	36.0	67.0	31.0	23.0	23.0
Total Split (%)	40.0%	74.4%	34.4%	25.6%	25.6%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead		Lag		
Lead-Lag Optimize?	Yes		Yes		
Recall Mode	None	C-Min	C-Min	Min	Min
Act Effct Green (s)	34.3	65.4	25.1	12.6	12.6
Actuated g/C Ratio	0.38	0.73	0.28	0.14	0.14
v/c Ratio	0.89	0.56	0.80	0.51	0.58
Control Delay	45.6	7.1	36.6	42.5	10.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	45.6	7.1	36.6	42.5	10.4
LOS	D	A	D	D	B
Approach Delay		18.6	36.6	21.1	
Approach LOS		B	D	C	

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 51 (57%), Referenced to phase 2:WBT and 6:EBT, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.89
 Intersection Signal Delay: 23.2
 Intersection Capacity Utilization 68.4%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service C

Splits and Phases: 5: RT33 & Greenland Rd



Queues
5: RT33 & Greenland Rd

AM 2036 BUILD.syn



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	604	1430	767	124	249
v/c Ratio	0.89	0.56	0.80	0.51	0.58
Control Delay	45.6	7.1	36.6	42.5	10.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	45.6	7.1	36.6	42.5	10.4
Queue Length 50th (ft)	316	164	207	66	0
Queue Length 95th (ft)	#490	219	272	103	45
Internal Link Dist (ft)		520	520	270	
Turn Bay Length (ft)	200			100	
Base Capacity (vph)	675	2548	962	330	492
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.89	0.56	0.80	0.38	0.51

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis
5: RT33 & Greenland Rd

AM 2036 BUILD.syn



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	495	1173	584	99	102	204
Future Volume (vph)	495	1173	584	99	102	204
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0		6.0	6.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	0.98		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	3505	3396		1752	1538
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1770	3505	3396		1752	1538
Peak-hour factor, PHF	0.82	0.82	0.89	0.89	0.82	0.82
Adj. Flow (vph)	604	1430	656	111	124	249
RTOR Reduction (vph)	0	0	15	0	0	214
Lane Group Flow (vph)	604	1430	752	0	124	35
Heavy Vehicles (%)	2%	3%	4%	4%	3%	5%
Turn Type	Prot	NA	NA		Perm	Perm
Protected Phases	1	6	2			
Permitted Phases					3	3
Actuated Green, G (s)	34.3	65.4	25.1		12.6	12.6
Effective Green, g (s)	34.3	65.4	25.1		12.6	12.6
Actuated g/C Ratio	0.38	0.73	0.28		0.14	0.14
Clearance Time (s)	6.0	6.0	6.0		6.0	6.0
Vehicle Extension (s)	4.0	4.0	4.0		4.0	4.0
Lane Grp Cap (vph)	674	2546	947		245	215
v/s Ratio Prot	c0.34	0.41	c0.22			
v/s Ratio Perm					c0.07	0.02
v/c Ratio	0.90	0.56	0.79		0.51	0.16
Uniform Delay, d1	26.2	5.7	30.1		35.8	34.1
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	14.8	0.9	6.8		2.2	0.5
Delay (s)	41.0	6.6	36.9		38.1	34.5
Level of Service	D	A	D		D	C
Approach Delay (s)		16.8	36.9		35.7	
Approach LOS		B	D		D	
Intersection Summary						
HCM 2000 Control Delay			23.9		HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.79			
Actuated Cycle Length (s)			90.0		Sum of lost time (s)	18.0
Intersection Capacity Utilization			68.4%		ICU Level of Service	C
Analysis Period (min)			15			
c Critical Lane Group						

APPENDIX G

Intersection						
Int Delay, s/veh	0.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	0	103	3	0	62
Future Vol, veh/h	7	0	103	3	0	62
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	38	38	69	69	81	81
Heavy Vehicles, %	0	0	1	0	0	2
Mvmt Flow	18	0	149	4	0	77

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	228	151	0	0	153
Stage 1	151	-	-	-	-
Stage 2	77	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	765	901	-	-	1440
Stage 1	882	-	-	-	-
Stage 2	951	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	765	901	-	-	1440
Mov Cap-2 Maneuver	765	-	-	-	-
Stage 1	882	-	-	-	-
Stage 2	951	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.8	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	765	1440
HCM Lane V/C Ratio	-	-	0.024	-
HCM Control Delay (s)	-	-	9.8	0
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0

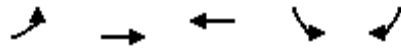
Intersection	
Intersection Delay, s/veh	15
Intersection LOS	B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	32	106	381	40	120	211
Future Vol, veh/h	32	106	381	40	120	211
Peak Hour Factor	0.86	0.86	0.91	0.91	0.88	0.88
Heavy Vehicles, %	3	3	2	3	3	4
Mvmt Flow	37	123	419	44	136	240
Number of Lanes	1	0	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	1
HCM Control Delay	9.8	19.5	11.6
HCM LOS	A	C	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1
Vol Left, %	100%	0%	0%	90%
Vol Thru, %	0%	0%	23%	10%
Vol Right, %	0%	100%	77%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	120	211	138	421
LT Vol	120	0	0	381
Through Vol	0	0	32	40
RT Vol	0	211	106	0
Lane Flow Rate	136	240	160	463
Geometry Grp	7	7	2	2
Degree of Util (X)	0.255	0.368	0.233	0.69
Departure Headway (Hd)	6.726	5.527	5.218	5.37
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	535	652	688	675
Service Time	4.46	3.26	3.254	3.398
HCM Lane V/C Ratio	0.254	0.368	0.233	0.686
HCM Control Delay	11.8	11.5	9.8	19.5
HCM Lane LOS	B	B	A	C
HCM 95th-tile Q	1	1.7	0.9	5.5

Timings
5: RT33 & Greenland Rd



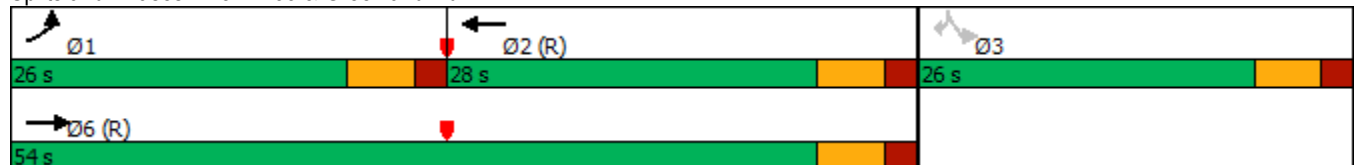
Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations	↖	↕	↕↔	↖	↗
Traffic Volume (vph)	200	773	819	103	383
Future Volume (vph)	200	773	819	103	383
Turn Type	Prot	NA	NA	Perm	Perm
Protected Phases	1	6	2		
Permitted Phases				3	3
Detector Phase	1	6	2	3	3
Switch Phase					
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	14.0	24.0	24.0	23.0	23.0
Total Split (s)	26.0	54.0	28.0	26.0	26.0
Total Split (%)	32.5%	67.5%	35.0%	32.5%	32.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead		Lag		
Lead-Lag Optimize?	Yes		Yes		
Recall Mode	None	C-Min	C-Min	Min	Min
Act Effct Green (s)	15.6	55.5	33.9	12.5	12.5
Actuated g/C Ratio	0.20	0.69	0.42	0.16	0.16
v/c Ratio	0.62	0.33	0.72	0.42	0.69
Control Delay	36.9	5.9	25.2	33.9	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	36.9	5.9	25.2	33.9	9.7
LOS	D	A	C	C	A
Approach Delay		12.3	25.2	14.8	
Approach LOS		B	C	B	

Intersection Summary

Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 75 (94%), Referenced to phase 2:WBT and 6:EBT, Start of Green
 Natural Cycle: 65
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.72
 Intersection Signal Delay: 18.0
 Intersection Capacity Utilization 60.3%
 Analysis Period (min) 15

Intersection LOS: B
 ICU Level of Service B

Splits and Phases: 5: RT33 & Greenland Rd



Queues
5: RT33 & Greenland Rd

PM 2023 BASE.syn



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	213	822	1059	111	412
v/c Ratio	0.62	0.33	0.72	0.42	0.69
Control Delay	36.9	5.9	25.2	33.9	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	36.9	5.9	25.2	33.9	9.7
Queue Length 50th (ft)	98	67	213	52	0
Queue Length 95th (ft)	154	133	#433	88	68
Internal Link Dist (ft)		520	520	270	
Turn Bay Length (ft)	200			100	
Base Capacity (vph)	445	2454	1474	425	708
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.48	0.33	0.72	0.26	0.58

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis
5: RT33 & Greenland Rd

PM 2023 BASE.syn



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑↑	↗		↙	↘
Traffic Volume (vph)	200	773	819	124	103	383
Future Volume (vph)	200	773	819	124	103	383
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0		6.0	6.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	0.98		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	3539	3452		1703	1599
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1770	3539	3452		1703	1599
Peak-hour factor, PHF	0.94	0.94	0.89	0.89	0.93	0.93
Adj. Flow (vph)	213	822	920	139	111	412
RTOR Reduction (vph)	0	0	12	0	0	348
Lane Group Flow (vph)	213	822	1047	0	111	64
Heavy Vehicles (%)	2%	2%	2%	6%	6%	1%
Turn Type	Prot	NA	NA		Perm	Perm
Protected Phases	1	6	2			
Permitted Phases					3	3
Actuated Green, G (s)	15.6	55.5	33.9		12.5	12.5
Effective Green, g (s)	15.6	55.5	33.9		12.5	12.5
Actuated g/C Ratio	0.19	0.69	0.42		0.16	0.16
Clearance Time (s)	6.0	6.0	6.0		6.0	6.0
Vehicle Extension (s)	4.0	4.0	4.0		4.0	4.0
Lane Grp Cap (vph)	345	2455	1462		266	249
v/s Ratio Prot	c0.12	0.23	c0.30			
v/s Ratio Perm					c0.07	0.04
v/c Ratio	0.62	0.33	0.72		0.42	0.26
Uniform Delay, d1	29.5	4.9	19.1		30.5	29.7
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	3.7	0.4	3.0		1.4	0.8
Delay (s)	33.2	5.3	22.1		31.9	30.4
Level of Service	C	A	C		C	C
Approach Delay (s)		11.0	22.1		30.7	
Approach LOS		B	C		C	

Intersection Summary				
HCM 2000 Control Delay		19.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio		0.63		
Actuated Cycle Length (s)		80.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization		60.3%	ICU Level of Service	B
Analysis Period (min)		15		
c Critical Lane Group				

Intersection						
Int Delay, s/veh	0.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	TT		TT			TT
Traffic Vol, veh/h	7	0	104	3	0	62
Future Vol, veh/h	7	0	104	3	0	62
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	38	38	69	69	81	81
Heavy Vehicles, %	0	0	1	0	0	2
Mvmt Flow	18	0	151	4	0	77

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	230	153	0	0	155
Stage 1	153	-	-	-	-
Stage 2	77	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	763	898	-	-	1438
Stage 1	880	-	-	-	-
Stage 2	951	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	763	898	-	-	1438
Mov Cap-2 Maneuver	763	-	-	-	-
Stage 1	880	-	-	-	-
Stage 2	951	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.8	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	763	1438
HCM Lane V/C Ratio	-	-	0.024	-
HCM Control Delay (s)	-	-	9.8	0
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0

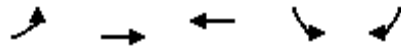
Intersection	
Intersection Delay, s/veh	15.3
Intersection LOS	C

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↶			↷	↶	↷
Traffic Vol, veh/h	32	108	387	40	122	215
Future Vol, veh/h	32	108	387	40	122	215
Peak Hour Factor	0.86	0.86	0.91	0.91	0.88	0.88
Heavy Vehicles, %	3	3	2	3	3	4
Mvmt Flow	37	126	425	44	139	244
Number of Lanes	1	0	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	1
HCM Control Delay	9.9	20.2	11.7
HCM LOS	A	C	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1
Vol Left, %	100%	0%	0%	91%
Vol Thru, %	0%	0%	23%	9%
Vol Right, %	0%	100%	77%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	122	215	140	427
LT Vol	122	0	0	387
Through Vol	0	0	32	40
RT Vol	0	215	108	0
Lane Flow Rate	139	244	163	469
Geometry Grp	7	7	2	2
Degree of Util (X)	0.26	0.377	0.237	0.703
Departure Headway (Hd)	6.756	5.556	5.251	5.396
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	532	647	684	671
Service Time	4.49	3.29	3.288	3.423
HCM Lane V/C Ratio	0.261	0.377	0.238	0.699
HCM Control Delay	11.9	11.6	9.9	20.2
HCM Lane LOS	B	B	A	C
HCM 95th-tile Q	1	1.8	0.9	5.8

Timings
5: RT33 & Greenland Rd



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations	↖	↕	↕↔	↖	↗
Traffic Volume (vph)	203	785	832	104	389
Future Volume (vph)	203	785	832	104	389
Turn Type	Prot	NA	NA	Perm	Perm
Protected Phases	1	6	2		
Permitted Phases				3	3
Detector Phase	1	6	2	3	3
Switch Phase					
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	14.0	24.0	24.0	23.0	23.0
Total Split (s)	26.0	54.0	28.0	26.0	26.0
Total Split (%)	32.5%	67.5%	35.0%	32.5%	32.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead		Lag		
Lead-Lag Optimize?	Yes		Yes		
Recall Mode	None	C-Min	C-Min	Min	Min
Act Effct Green (s)	15.6	55.4	33.8	12.6	12.6
Actuated g/C Ratio	0.20	0.69	0.42	0.16	0.16
v/c Ratio	0.63	0.34	0.73	0.42	0.69
Control Delay	37.1	6.0	25.7	33.9	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	37.1	6.0	25.7	33.9	9.7
LOS	D	A	C	C	A
Approach Delay		12.4	25.7	14.8	
Approach LOS		B	C	B	

Intersection Summary

Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 75 (94%), Referenced to phase 2:WBT and 6:EBT, Start of Green
 Natural Cycle: 65
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.73
 Intersection Signal Delay: 18.2
 Intersection Capacity Utilization 61.1%
 Analysis Period (min) 15

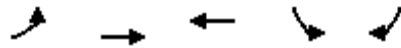
Intersection LOS: B
 ICU Level of Service B

Splits and Phases: 5: RT33 & Greenland Rd



Queues
5: RT33 & Greenland Rd

PM 2026 NoBUILD.syn



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	216	835	1077	112	418
v/c Ratio	0.63	0.34	0.73	0.42	0.69
Control Delay	37.1	6.0	25.7	33.9	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	37.1	6.0	25.7	33.9	9.7
Queue Length 50th (ft)	100	70	220	52	0
Queue Length 95th (ft)	156	137	#444	89	69
Internal Link Dist (ft)		520	520	270	
Turn Bay Length (ft)	200			100	
Base Capacity (vph)	444	2451	1469	425	713
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.49	0.34	0.73	0.26	0.59

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis
5: RT33 & Greenland Rd

PM 2026 NoBUILD.syn



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	203	785	832	126	104	389
Future Volume (vph)	203	785	832	126	104	389
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0		6.0	6.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	0.98		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	3539	3451		1703	1599
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1770	3539	3451		1703	1599
Peak-hour factor, PHF	0.94	0.94	0.89	0.89	0.93	0.93
Adj. Flow (vph)	216	835	935	142	112	418
RTOR Reduction (vph)	0	0	12	0	0	352
Lane Group Flow (vph)	216	835	1065	0	112	66
Heavy Vehicles (%)	2%	2%	2%	6%	6%	1%
Turn Type	Prot	NA	NA		Perm	Perm
Protected Phases	1	6	2			
Permitted Phases					3	3
Actuated Green, G (s)	15.6	55.4	33.8		12.6	12.6
Effective Green, g (s)	15.6	55.4	33.8		12.6	12.6
Actuated g/C Ratio	0.19	0.69	0.42		0.16	0.16
Clearance Time (s)	6.0	6.0	6.0		6.0	6.0
Vehicle Extension (s)	4.0	4.0	4.0		4.0	4.0
Lane Grp Cap (vph)	345	2450	1458		268	251
v/s Ratio Prot	c0.12	0.24	c0.31			
v/s Ratio Perm					c0.07	0.04
v/c Ratio	0.63	0.34	0.73		0.42	0.26
Uniform Delay, d1	29.5	5.0	19.3		30.4	29.6
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	4.0	0.4	3.3		1.4	0.8
Delay (s)	33.5	5.3	22.6		31.8	30.4
Level of Service	C	A	C		C	C
Approach Delay (s)		11.1	22.6		30.7	
Approach LOS		B	C		C	

Intersection Summary				
HCM 2000 Control Delay		19.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio		0.64		
Actuated Cycle Length (s)		80.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization		61.1%	ICU Level of Service	B
Analysis Period (min)		15		
c Critical Lane Group				

Intersection						
Int Delay, s/veh	0.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	0	110	3	0	62
Future Vol, veh/h	7	0	110	3	0	62
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	38	38	69	69	81	81
Heavy Vehicles, %	0	0	1	0	0	2
Mvmt Flow	18	0	159	4	0	77

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	238	161	0	0	163
Stage 1	161	-	-	-	-
Stage 2	77	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	755	889	-	-	1428
Stage 1	873	-	-	-	-
Stage 2	951	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	755	889	-	-	1428
Mov Cap-2 Maneuver	755	-	-	-	-
Stage 1	873	-	-	-	-
Stage 2	951	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.9	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	755	1428
HCM Lane V/C Ratio	-	-	0.024	-
HCM Control Delay (s)	-	-	9.9	0
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0

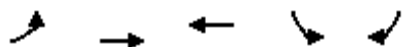
Intersection	
Intersection Delay, s/veh	16.9
Intersection LOS	C

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↻			↻	↻	↻
Traffic Vol, veh/h	34	113	406	42	128	225
Future Vol, veh/h	34	113	406	42	128	225
Peak Hour Factor	0.86	0.86	0.91	0.91	0.88	0.88
Heavy Vehicles, %	3	3	2	3	3	4
Mvmt Flow	40	131	446	46	145	256
Number of Lanes	1	0	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	1
HCM Control Delay	10.2	23	12.2
HCM LOS	B	C	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1
Vol Left, %	100%	0%	0%	91%
Vol Thru, %	0%	0%	23%	9%
Vol Right, %	0%	100%	77%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	128	225	147	448
LT Vol	128	0	0	406
Through Vol	0	0	34	42
RT Vol	0	225	113	0
Lane Flow Rate	145	256	171	492
Geometry Grp	7	7	2	2
Degree of Util (X)	0.277	0.402	0.254	0.748
Departure Headway (Hd)	6.855	5.654	5.358	5.469
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	524	637	668	660
Service Time	4.596	3.395	3.403	3.5
HCM Lane V/C Ratio	0.277	0.402	0.256	0.745
HCM Control Delay	12.2	12.2	10.2	23
HCM Lane LOS	B	B	B	C
HCM 95th-tile Q	1.1	1.9	1	6.7

Timings
5: RT33 & Greenland Rd



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations	↖	↕	↕↔	↖	↗
Traffic Volume (vph)	213	825	874	110	409
Future Volume (vph)	213	825	874	110	409
Turn Type	Prot	NA	NA	Perm	Perm
Protected Phases	1	6	2		
Permitted Phases				3	3
Detector Phase	1	6	2	3	3
Switch Phase					
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	14.0	24.0	24.0	23.0	23.0
Total Split (s)	26.0	54.0	28.0	26.0	26.0
Total Split (%)	32.5%	67.5%	35.0%	32.5%	32.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead		Lag		
Lead-Lag Optimize?	Yes		Yes		
Recall Mode	None	C-Min	C-Min	Min	Min
Act Effct Green (s)	15.9	55.0	33.1	13.0	13.0
Actuated g/C Ratio	0.20	0.69	0.41	0.16	0.16
v/c Ratio	0.65	0.36	0.79	0.43	0.70
Control Delay	37.8	6.3	27.8	33.6	9.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	37.8	6.3	27.8	33.6	9.6
LOS	D	A	C	C	A
Approach Delay		12.8	27.8	14.6	
Approach LOS		B	C	B	

Intersection Summary

Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 75 (94%), Referenced to phase 2:WBT and 6:EBT, Start of Green
 Natural Cycle: 70
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.79
 Intersection Signal Delay: 19.3
 Intersection Capacity Utilization 63.7%
 Analysis Period (min) 15

Intersection LOS: B
 ICU Level of Service B

Splits and Phases: 5: RT33 & Greenland Rd



Queues
5: RT33 & Greenland Rd

PM 2036 NoBUILD.syn



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	227	878	1131	118	440
v/c Ratio	0.65	0.36	0.79	0.43	0.70
Control Delay	37.8	6.3	27.8	33.6	9.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	37.8	6.3	27.8	33.6	9.6
Queue Length 50th (ft)	104	80	246	54	0
Queue Length 95th (ft)	166	148	#476	92	69
Internal Link Dist (ft)		520	520	270	
Turn Bay Length (ft)	200			100	
Base Capacity (vph)	442	2432	1440	425	729
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.51	0.36	0.79	0.28	0.60

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis
5: RT33 & Greenland Rd

PM 2036 NoBUILD.syn



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	213	825	874	133	110	409
Future Volume (vph)	213	825	874	133	110	409
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0		6.0	6.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	0.98		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	3539	3451		1703	1599
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1770	3539	3451		1703	1599
Peak-hour factor, PHF	0.94	0.94	0.89	0.89	0.93	0.93
Adj. Flow (vph)	227	878	982	149	118	440
RTOR Reduction (vph)	0	0	12	0	0	369
Lane Group Flow (vph)	227	878	1119	0	118	72
Heavy Vehicles (%)	2%	2%	2%	6%	6%	1%
Turn Type	Prot	NA	NA		Perm	Perm
Protected Phases	1	6	2			
Permitted Phases					3	3
Actuated Green, G (s)	15.9	55.0	33.1		13.0	13.0
Effective Green, g (s)	15.9	55.0	33.1		13.0	13.0
Actuated g/C Ratio	0.20	0.69	0.41		0.16	0.16
Clearance Time (s)	6.0	6.0	6.0		6.0	6.0
Vehicle Extension (s)	4.0	4.0	4.0		4.0	4.0
Lane Grp Cap (vph)	351	2433	1427		276	259
v/s Ratio Prot	c0.13	0.25	c0.32			
v/s Ratio Perm					c0.07	0.04
v/c Ratio	0.65	0.36	0.78		0.43	0.28
Uniform Delay, d1	29.5	5.2	20.3		30.2	29.4
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	4.5	0.4	4.4		1.5	0.8
Delay (s)	34.0	5.6	24.7		31.6	30.2
Level of Service	C	A	C		C	C
Approach Delay (s)		11.4	24.7		30.5	
Approach LOS		B	C		C	
Intersection Summary						
HCM 2000 Control Delay			20.6		HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.67			
Actuated Cycle Length (s)			80.0		Sum of lost time (s)	18.0
Intersection Capacity Utilization			63.7%		ICU Level of Service	B
Analysis Period (min)			15			
c Critical Lane Group						

Intersection						
Int Delay, s/veh	0.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		↑			↑
Traffic Vol, veh/h	21	0	104	0	0	62
Future Vol, veh/h	21	0	104	0	0	62
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	69	69	81	81
Heavy Vehicles, %	0	0	1	0	0	2
Mvmt Flow	23	0	151	0	0	77

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	228	151	0	-	-	-
Stage 1	151	-	-	-	-	-
Stage 2	77	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	-	-
Pot Cap-1 Maneuver	765	901	-	0	0	-
Stage 1	882	-	-	0	0	-
Stage 2	951	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	765	901	-	-	-	-
Mov Cap-2 Maneuver	765	-	-	-	-	-
Stage 1	882	-	-	-	-	-
Stage 2	951	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.9	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBTWBLn1	SBT
Capacity (veh/h)	- 765	-
HCM Lane V/C Ratio	- 0.031	-
HCM Control Delay (s)	- 9.9	-
HCM Lane LOS	- A	-
HCM 95th %tile Q(veh)	- 0.1	-

Intersection

Intersection Delay, s/veh 16.1

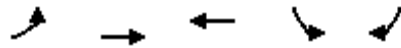
Intersection LOS C

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	35	119	387	47	143	215
Future Vol, veh/h	35	119	387	47	143	215
Peak Hour Factor	0.86	0.86	0.91	0.91	0.88	0.88
Heavy Vehicles, %	3	3	2	3	3	4
Mvmt Flow	41	138	425	52	163	244
Number of Lanes	1	0	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	1
HCM Control Delay	10.3	21.8	12.1
HCM LOS	B	C	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1
Vol Left, %	100%	0%	0%	89%
Vol Thru, %	0%	0%	23%	11%
Vol Right, %	0%	100%	77%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	143	215	154	434
LT Vol	143	0	0	387
Through Vol	0	0	35	47
RT Vol	0	215	119	0
Lane Flow Rate	162	244	179	477
Geometry Grp	7	7	2	2
Degree of Util (X)	0.309	0.382	0.266	0.727
Departure Headway (Hd)	6.837	5.636	5.346	5.488
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	527	638	670	658
Service Time	4.576	3.375	3.39	3.521
HCM Lane V/C Ratio	0.307	0.382	0.267	0.725
HCM Control Delay	12.6	11.8	10.3	21.8
HCM Lane LOS	B	B	B	C
HCM 95th-tile Q	1.3	1.8	1.1	6.2

Timings
5: RT33 & Greenland Rd



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations	↖	↑↑	↑↑↔	↖	↗
Traffic Volume (vph)	216	785	832	106	398
Future Volume (vph)	216	785	832	106	398
Turn Type	Prot	NA	NA	Perm	Perm
Protected Phases	1	6	2		
Permitted Phases				3	3
Detector Phase	1	6	2	3	3
Switch Phase					
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	14.0	24.0	24.0	23.0	23.0
Total Split (s)	26.0	54.0	28.0	26.0	26.0
Total Split (%)	32.5%	67.5%	35.0%	32.5%	32.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead		Lag		
Lead-Lag Optimize?	Yes		Yes		
Recall Mode	None	C-Min	C-Min	Min	Min
Act Effct Green (s)	16.1	55.3	33.3	12.7	12.7
Actuated g/C Ratio	0.20	0.69	0.42	0.16	0.16
v/c Ratio	0.65	0.34	0.75	0.42	0.70
Control Delay	37.7	6.0	26.5	33.9	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	37.7	6.0	26.5	33.9	9.7
LOS	D	A	C	C	A
Approach Delay		12.9	26.5	14.8	
Approach LOS		B	C	B	

Intersection Summary

Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 75 (94%), Referenced to phase 2:WBT and 6:EBT, Start of Green
 Natural Cycle: 65
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.75
 Intersection Signal Delay: 18.8
 Intersection Capacity Utilization 61.9%
 Analysis Period (min) 15

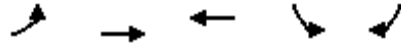
Intersection LOS: B
 ICU Level of Service B

Splits and Phases: 5: RT33 & Greenland Rd



Queues
5: RT33 & Greenland Rd

PM 2026 BUILD.syn



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	230	835	1086	114	428
v/c Ratio	0.65	0.34	0.75	0.42	0.70
Control Delay	37.7	6.0	26.5	33.9	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	37.7	6.0	26.5	33.9	9.7
Queue Length 50th (ft)	106	70	226	53	0
Queue Length 95th (ft)	167	138	#450	90	68
Internal Link Dist (ft)		520	520	270	
Turn Bay Length (ft)	200			100	
Base Capacity (vph)	443	2447	1445	425	720
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.52	0.34	0.75	0.27	0.59

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis
5: RT33 & Greenland Rd

PM 2026 BUILD.syn



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	216	785	832	134	106	398
Future Volume (vph)	216	785	832	134	106	398
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0		6.0	6.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	0.98		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	3539	3447		1703	1599
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1770	3539	3447		1703	1599
Peak-hour factor, PHF	0.94	0.94	0.89	0.89	0.93	0.93
Adj. Flow (vph)	230	835	935	151	114	428
RTOR Reduction (vph)	0	0	13	0	0	360
Lane Group Flow (vph)	230	835	1073	0	114	68
Heavy Vehicles (%)	2%	2%	2%	6%	6%	1%
Turn Type	Prot	NA	NA		Perm	Perm
Protected Phases	1	6	2			
Permitted Phases					3	3
Actuated Green, G (s)	16.1	55.3	33.2		12.7	12.7
Effective Green, g (s)	16.1	55.3	33.2		12.7	12.7
Actuated g/C Ratio	0.20	0.69	0.42		0.16	0.16
Clearance Time (s)	6.0	6.0	6.0		6.0	6.0
Vehicle Extension (s)	4.0	4.0	4.0		4.0	4.0
Lane Grp Cap (vph)	356	2446	1430		270	253
v/s Ratio Prot	c0.13	0.24	c0.31			
v/s Ratio Perm					c0.07	0.04
v/c Ratio	0.65	0.34	0.75		0.42	0.27
Uniform Delay, d1	29.3	5.0	19.9		30.3	29.6
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	4.5	0.4	3.7		1.5	0.8
Delay (s)	33.8	5.4	23.5		31.8	30.4
Level of Service	C	A	C		C	C
Approach Delay (s)		11.5	23.5		30.7	
Approach LOS		B	C		C	

Intersection Summary			
HCM 2000 Control Delay		20.2	HCM 2000 Level of Service C
HCM 2000 Volume to Capacity ratio		0.66	
Actuated Cycle Length (s)		80.0	Sum of lost time (s) 18.0
Intersection Capacity Utilization		61.9%	ICU Level of Service B
Analysis Period (min)		15	
c Critical Lane Group			

Intersection						
Int Delay, s/veh	0.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↑		↑			↑
Traffic Vol, veh/h	21	0	110	0	0	62
Future Vol, veh/h	21	0	110	0	0	62
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	69	69	81	81
Heavy Vehicles, %	0	0	1	0	0	2
Mvmt Flow	23	0	159	0	0	77

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	236	159	0	-	-	-
Stage 1	159	-	-	-	-	-
Stage 2	77	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	-	-
Pot Cap-1 Maneuver	757	892	-	0	0	-
Stage 1	875	-	-	0	0	-
Stage 2	951	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	757	892	-	-	-	-
Mov Cap-2 Maneuver	757	-	-	-	-	-
Stage 1	875	-	-	-	-	-
Stage 2	951	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.9	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBTWBLn1	SBT
Capacity (veh/h)	- 757	-
HCM Lane V/C Ratio	- 0.031	-
HCM Control Delay (s)	- 9.9	-
HCM Lane LOS	- A	-
HCM 95th %tile Q(veh)	- 0.1	-

Intersection

Intersection Delay, s/veh 17.8

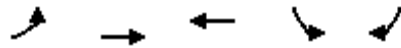
Intersection LOS C

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	37	124	406	49	149	225
Future Vol, veh/h	37	124	406	49	149	225
Peak Hour Factor	0.86	0.86	0.91	0.91	0.88	0.88
Heavy Vehicles, %	3	3	2	3	3	4
Mvmt Flow	43	144	446	54	169	256
Number of Lanes	1	0	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	1
HCM Control Delay	10.7	24.9	12.6
HCM LOS	B	C	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1
Vol Left, %	100%	0%	0%	89%
Vol Thru, %	0%	0%	23%	11%
Vol Right, %	0%	100%	77%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	149	225	161	455
LT Vol	149	0	0	406
Through Vol	0	0	37	49
RT Vol	0	225	124	0
Lane Flow Rate	169	256	187	500
Geometry Grp	7	7	2	2
Degree of Util (X)	0.326	0.407	0.284	0.772
Departure Headway (Hd)	6.938	5.735	5.454	5.561
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	518	626	657	650
Service Time	4.683	3.48	3.503	3.598
HCM Lane V/C Ratio	0.326	0.409	0.285	0.769
HCM Control Delay	13	12.4	10.7	24.9
HCM Lane LOS	B	B	B	C
HCM 95th-tile Q	1.4	2	1.2	7.3

Timings
5: RT33 & Greenland Rd



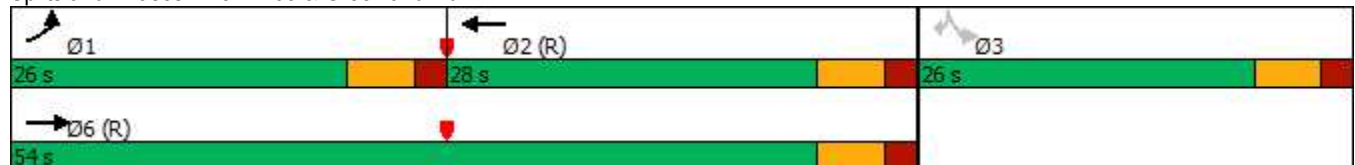
Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations	↖	↗	↖↗	↖	↗
Traffic Volume (vph)	226	825	874	112	418
Future Volume (vph)	226	825	874	112	418
Turn Type	Prot	NA	NA	Perm	Perm
Protected Phases	1	6	2		
Permitted Phases				3	3
Detector Phase	1	6	2	3	3
Switch Phase					
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	14.0	24.0	24.0	23.0	23.0
Total Split (s)	26.0	54.0	28.0	26.0	26.0
Total Split (%)	32.5%	67.5%	35.0%	32.5%	32.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead		Lag		
Lead-Lag Optimize?	Yes		Yes		
Recall Mode	None	C-Min	C-Min	Min	Min
Act Effct Green (s)	16.3	54.9	32.6	13.1	13.1
Actuated g/C Ratio	0.20	0.69	0.41	0.16	0.16
v/c Ratio	0.67	0.36	0.80	0.43	0.70
Control Delay	38.2	6.3	29.0	33.7	9.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	38.2	6.3	29.0	33.7	9.6
LOS	D	A	C	C	A
Approach Delay		13.2	29.0	14.6	
Approach LOS		B	C	B	

Intersection Summary

Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 75 (94%), Referenced to phase 2:WBT and 6:EBT, Start of Green
 Natural Cycle: 70
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.80
 Intersection Signal Delay: 19.8
 Intersection Capacity Utilization 64.5%
 Analysis Period (min) 15

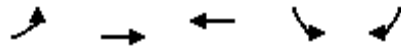
Intersection LOS: B
 ICU Level of Service C

Splits and Phases: 5: RT33 & Greenland Rd



Queues
5: RT33 & Greenland Rd

PM 2036 BUILD.syn



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	240	878	1140	120	449
v/c Ratio	0.67	0.36	0.80	0.43	0.70
Control Delay	38.2	6.3	29.0	33.7	9.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	38.2	6.3	29.0	33.7	9.6
Queue Length 50th (ft)	110	80	253	55	0
Queue Length 95th (ft)	175	148	#482	93	71
Internal Link Dist (ft)		520	520	270	
Turn Bay Length (ft)	200			100	
Base Capacity (vph)	442	2429	1417	425	736
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.54	0.36	0.80	0.28	0.61

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis
5: RT33 & Greenland Rd

PM 2036 BUILD.syn



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	226	825	874	141	112	418
Future Volume (vph)	226	825	874	141	112	418
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0		6.0	6.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	0.98		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	3539	3447		1703	1599
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1770	3539	3447		1703	1599
Peak-hour factor, PHF	0.94	0.94	0.89	0.89	0.93	0.93
Adj. Flow (vph)	240	878	982	158	120	449
RTOR Reduction (vph)	0	0	13	0	0	375
Lane Group Flow (vph)	240	878	1127	0	120	74
Heavy Vehicles (%)	2%	2%	2%	6%	6%	1%
Turn Type	Prot	NA	NA		Perm	Perm
Protected Phases	1	6	2			
Permitted Phases					3	3
Actuated Green, G (s)	16.3	54.9	32.6		13.1	13.1
Effective Green, g (s)	16.3	54.9	32.6		13.1	13.1
Actuated g/C Ratio	0.20	0.69	0.41		0.16	0.16
Clearance Time (s)	6.0	6.0	6.0		6.0	6.0
Vehicle Extension (s)	4.0	4.0	4.0		4.0	4.0
Lane Grp Cap (vph)	360	2428	1404		278	261
v/s Ratio Prot	c0.14	0.25	c0.33			
v/s Ratio Perm					c0.07	0.05
v/c Ratio	0.67	0.36	0.80		0.43	0.28
Uniform Delay, d1	29.3	5.2	20.9		30.1	29.3
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	5.1	0.4	4.9		1.5	0.8
Delay (s)	34.4	5.7	25.8		31.6	30.1
Level of Service	C	A	C		C	C
Approach Delay (s)		11.8	25.8		30.4	
Approach LOS		B	C		C	
Intersection Summary						
HCM 2000 Control Delay			21.2		HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.69			
Actuated Cycle Length (s)			80.0		Sum of lost time (s)	18.0
Intersection Capacity Utilization			64.5%		ICU Level of Service	C
Analysis Period (min)			15			
c Critical Lane Group						

APPENDIX H

UNIT NO: <u>1</u> <div style="display: flex; align-items: center; margin-top: 10px;"> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;">7</div> <div style="font-size: 8px;">INDICATE PROBABLE POINT OF IMPACT</div> </div> <div style="margin-top: 10px;"> </div> <div style="font-size: 8px; margin-top: 5px;"> 16. Undercarriage 17. Rollover 18. Fire/Explosion 19. Total </div>	<table border="1" style="width: 100%; border-collapse: collapse; font-size: 8px;"> <tr> <td>Rear</td> <td>Passing</td> <td>Lt. Turn</td> <td>Intersection</td> </tr> <tr> <td style="text-align: center;">→ →</td> <td style="text-align: center;">→ ↗</td> <td style="text-align: center;">→ ↘</td> <td style="text-align: center;">↘ ↙</td> </tr> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> <td style="text-align: center;">3</td> <td style="text-align: center;">4</td> </tr> <tr> <td>Rt. Turn</td> <td>Rt. Turn</td> <td>Head-On</td> <td>Sideswipe</td> </tr> <tr> <td style="text-align: center;">↘ ↙</td> <td style="text-align: center;">↘ ↙</td> <td style="text-align: center;">→ ←</td> <td style="text-align: center;">↔</td> </tr> <tr> <td style="text-align: center;">5</td> <td style="text-align: center;">6</td> <td style="text-align: center;">7</td> <td style="text-align: center;">8</td> </tr> </table> <p style="font-size: 8px; text-align: center;">Indicate Vehicle Numbers on Arrows Above</p>	Rear	Passing	Lt. Turn	Intersection	→ →	→ ↗	→ ↘	↘ ↙	1	2	3	4	Rt. Turn	Rt. Turn	Head-On	Sideswipe	↘ ↙	↘ ↙	→ ←	↔	5	6	7	8	UNIT NO: <u>2</u> <div style="display: flex; align-items: center; margin-top: 10px;"> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;">12</div> <div style="font-size: 8px;">INDICATE PROBABLE POINT OF IMPACT</div> </div> <div style="margin-top: 10px;"> </div> <div style="font-size: 8px; margin-top: 5px;"> 16. Undercarriage 17. Rollover 18. Fire/Explosion 19. Total </div>
Rear	Passing	Lt. Turn	Intersection																							
→ →	→ ↗	→ ↘	↘ ↙																							
1	2	3	4																							
Rt. Turn	Rt. Turn	Head-On	Sideswipe																							
↘ ↙	↘ ↙	→ ←	↔																							
5	6	7	8																							

ACCIDENT SKETCH
Indicate North

By Arrow

Moved prior to my arrival.

GIST OF ACCIDENT

Vehicle #1 was stopped (N/B) at the yield sign, yielding for traffic, on Borthwick Ave at Greenland Road. While waiting to enter traffic Vehicle #1 was struck by Vehicle #2. Vehicle #1 sustained damage to the left rear corner. The driver of Vehicle #1 did not complain of injury.

Vehicle #2 was traveling on Borthwick Ave (N/B). The driver of Vehicle # 2 stated that as he approached the intersection he did not see Vehicle #1 due to the glare of the sun obstructing his view. Vehicle #2 struck the rear of Vehicle #1. Vehicle #2 sustained damage to the right front corner. The driver of Vehicle #2 admitted fault for the collision. The Driver of Vehicle #2 did not complain of injury.

There were no witnesses on scene. Officer did not observe collision. Both vehicles were removed from the scene by their original drivers without further issue.

End report.

Officer Seth Chavez
Portsmouth Police Department.

SIGNATURE OF INVESTIGATING OFFICER	DATE OF REPORT 02/20/2019	REVIEWED BY
DEPARTMENT / DIVISION / TROOP Portsmouth Police Department	PHOTOS TAKEN YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> BY: _____	

UNIT NO: <u>1</u> <div style="display: flex; align-items: center; margin-top: 10px;"> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;">6</div> <div style="font-size: 8px;">INDICATE PROBABLE POINT OF IMPACT</div> </div> <div style="text-align: center; margin-top: 5px;"> </div> <ul style="list-style-type: none"> 16. Undercarriage 17. Rollover 18. Fire/Explosion 19. Total <p style="font-size: 8px; text-align: center;">Circle numbers indicating areas damaged.</p>	<table border="1" style="width: 100%; border-collapse: collapse; font-size: 8px;"> <tr> <td style="width: 25%;">Rear → →</td> <td style="width: 25%;">Passing → ↗</td> <td style="width: 25%;">Lt. Turn → ↘</td> <td style="width: 25%;">Intersection ↔</td> </tr> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> <tr> <td>Rt. Turn ↘</td> <td>Rt. Turn ↗</td> <td>Head-On ← →</td> <td>Sideswipe ↔</td> </tr> <tr> <td>5</td> <td>6</td> <td>7</td> <td>8</td> </tr> </table> <p style="font-size: 8px; text-align: center;">Indicate Vehicle Numbers on Arrows Above</p>	Rear → →	Passing → ↗	Lt. Turn → ↘	Intersection ↔	1	2	3	4	Rt. Turn ↘	Rt. Turn ↗	Head-On ← →	Sideswipe ↔	5	6	7	8	UNIT NO: <u>2</u> <div style="display: flex; align-items: center; margin-top: 10px;"> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;">1</div> <div style="font-size: 8px;">INDICATE PROBABLE POINT OF IMPACT</div> </div> <div style="text-align: center; margin-top: 5px;"> </div> <ul style="list-style-type: none"> 16. Undercarriage 17. Rollover 18. Fire/Explosion 19. Total <p style="font-size: 8px; text-align: center;">Circle numbers indicating areas damaged.</p>
Rear → →	Passing → ↗	Lt. Turn → ↘	Intersection ↔															
1	2	3	4															
Rt. Turn ↘	Rt. Turn ↗	Head-On ← →	Sideswipe ↔															
5	6	7	8															

ACCIDENT SKETCH
Indicate North

By Arrow

NO DIAGRAM

GIST OF ACCIDENT

On Wednesday March 20, 2019 at approximately 8:37 AM I was dispatched to a two (2) car accident in the private parking lot of Orchard Park, 875 Greenland Road. The Emergency Communication Center (ECC) advised of no known personal injuries.

██████████ was operating a 2013 GMC Terrain, bearing New ██████████. ██████████ was backing out of a parking spot when she collided with another vehicle traveling through said private lot on the main access/thru. There was damage to the rear passenger corner of ██████████ SUV. Photographs were taken of said damage. I asked ██████████ if she required any medical attention, she claimed her neck was sore. I asked her if she required any medical attention from the City of Portsmouth FD, she declined.

██████████ was operating said grey Toyota Tacoma, bearing ██████████, that ██████████ collided with. There was damage to the front passenger corner of said truck. Photographs were taken of said damage. I asked ██████████ if he required any medical attention, he stated no. ██████████ commented to me that ██████████ appeared to back out of said parking space rather quickly.

██████████ was advised that he could not drive his truck from said private lot due to the damage and was advised he would need to have the vehicle removed from the parking lot.

SIGNATURE OF INVESTIGATING OFFICER	DATE OF REPORT 03/20/2019	REVIEWED BY
DEPARTMENT / DIVISION / TROOP Portsmouth Police Department	PHOTOS TAKEN YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> BY: _____	

UNIT NO: 1

6 INDICATE PROBABLE POINT OF IMPACT

16. Undercarriage
17. Rollover
18. Fire/Explosion
19. Total

Circle numbers indicating areas damaged.

Rear 1 → →	Passing 2 → →	Lt. Turn 3 → ↗	Intersection 4 → ↓
Rt. Turn 5 ↘ →	Rt. Turn 6 ↘ ↗	Head-On 7 → ←	Sideswipe 8 → ↗

Indicate Vehicle Numbers on Arrows Above

UNIT NO: 2

INDICATE PROBABLE POINT OF IMPACT **12**

16. Undercarriage
17. Rollover
18. Fire/Explosion
19. Total

Circle numbers indicating areas damaged.

ACCIDENT SKETCH
Indicate North

By Arrow

GIST OF ACCIDENT

Gist: Vehicle 1 was starting from stopped at the yield sign from Greenland Road onto Borthwick Avenue but then stopped again for oncoming traffic. Vehicle 2 was stopped directly behind Vehicle 1 and started to proceed after seeing Vehicle 1 start to do the same but looked toward oncoming traffic for a second and did not see Vehicle 1 stop again, crashing into the rear of Vehicle 1. Damages were documented with photographs. Vehicles were moved prior to police arrival so there is no diagram. No injuries were reported on scene.

Master Patrol Officer Christina J. Meyer
Uniformed Patrol Division
Portsmouth Police Department

SIGNATURE OF INVESTIGATING OFFICER	DATE OF REPORT 05/30/2019	REVIEWED BY
DEPARTMENT / DIVISION / TROOP Portsmouth Police Department	PHOTOS TAKEN YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> BY:	

UNIT NO: <u>1</u> <div style="display: flex; align-items: center; margin-top: 10px;"> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;">12</div> <div style="font-size: 8px;">INDICATE PROBABLE POINT OF IMPACT</div> </div> <div style="text-align: center; margin-top: 5px;"> </div> <div style="font-size: 8px; margin-top: 5px;"> 16. Undercarriage 17. Rollover 18. Fire/Explosion 19. Total </div>	<table border="1" style="width: 100%; border-collapse: collapse; font-size: 8px;"> <tr> <td>Rear → →</td> <td>Passing → ↗</td> <td>Lt. Turn ↙ ↘</td> <td>Intersection ↘ ↙</td> </tr> <tr> <td>Rt. Turn ↘ ↙</td> <td>Rt. Turn ↘ ↙</td> <td>Head-On → ←</td> <td>Sideswipe ↗ ↘</td> </tr> </table> <p style="font-size: 8px;">Indicate Vehicle Numbers on Arrows Above</p>	Rear → →	Passing → ↗	Lt. Turn ↙ ↘	Intersection ↘ ↙	Rt. Turn ↘ ↙	Rt. Turn ↘ ↙	Head-On → ←	Sideswipe ↗ ↘	UNIT NO: <u>2</u> <div style="display: flex; align-items: center; margin-top: 10px;"> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;">21</div> <div style="font-size: 8px;">INDICATE PROBABLE POINT OF IMPACT</div> </div> <div style="text-align: center; margin-top: 5px;"> </div> <div style="font-size: 8px; margin-top: 5px;"> 16. Undercarriage 17. Rollover 18. Fire/Explosion 19. Total </div>
Rear → →	Passing → ↗	Lt. Turn ↙ ↘	Intersection ↘ ↙							
Rt. Turn ↘ ↙	Rt. Turn ↘ ↙	Head-On → ←	Sideswipe ↗ ↘							
Circle numbers indicating areas damaged.		Circle numbers indicating areas damaged.								

ACCIDENT SKETCH

Indicate North

↑

By Arrow

GIST OF ACCIDENT

07/12/2019

VEH 1 WAS MAKING RIGHT TURN WHILE TRAVELING ON GREENLAND RD. VEH 2 WAS MAKING LEFT TURN FROM BORTHWICK AVE ONTO GREENLAND RD. OPERATOR OF VEH 2 ADVISED HE BELIEVED HE HAD TIME TO MAKE TURN IN FRONT OF VEH 1. VEH 1 AND VEH 2 COLLIDED AS BOTH VEHICLES ENTERED INTERSECTION AT SAME TIME.

END REPORT.

PATROL OFFICER CHARLES A RAIZES
PORTSMOUTH POLICE DEPARTMENT

SIGNATURE OF INVESTIGATING OFFICER	DATE OF REPORT 07/16/2019	REVIEWED BY
DEPARTMENT / DIVISION / TROOP Portsmouth Police Department	PHOTOS TAKEN YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> BY: _____	

UNIT NO: 1

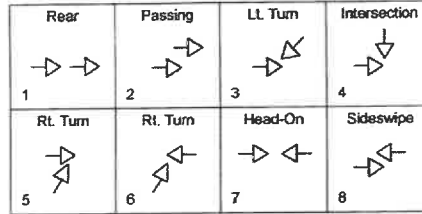
UNIT NO: 2

13 INDICATE PROBABLE POINT OF IMPACT



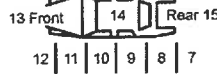
- 16. Undercarriage
- 17. Rollover
- 18. Fire/Explosion
- 19. Total

Circle numbers indicating areas damaged.



Indicate Vehicle Numbers on Arrows Above

INDICATE PROBABLE POINT OF IMPACT **4**



- 16. Undercarriage
- 17. Rollover
- 18. Fire/Explosion
- 19. Total

Circle numbers indicating areas damaged.

ACCIDENT SKETCH

Indicate North



By Arrow

Vehicles moved prior to arrival.

GIST OF ACCIDENT

Around 1038 hours on 03/03/2021 I came across a two car motor vehicle accident at the intersection of Greenland Road at Borthwick Avenue. The operator and sole occupant of unit one identified herself with a driver's license as [REDACTED]. The operator and sole occupant of unit two identified himself with a driver's license as [REDACTED]. Both operators described the following.

Unit one came to a complete stop at the stop sign of Greenland Road and Borthwick Avenue. Unit one went to execute a left turn to remain on Greenland Road. Unit one did not see unit two who was driving south on Greenland Road heading straight onto Borthwick Avenue. Unit two did not have a stop sign and had the right of way. Unit one subsequently struck the right side of unit two cause a moderate dent and scratch to the rear right door. Unit one sustained moderate dents and scratches to the front center of the bumper.

Both drivers were not injured and there were no air bags deployed.

End of report.

Officer Denman
Patrolman
Portsmouth, NH Police Department

SIGNATURE OF INVESTIGATING OFFICER	DATE OF REPORT 03/09/2021	REVIEWED BY
DEPARTMENT / DIVISION / TROOP Portsmouth Police Department	PHOTOS TAKEN YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> BY: _____	

UNIT NO: <u>1</u> <div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;">15</div> <div style="font-size: 8px;">INDICATE PROBABLE POINT OF IMPACT</div> </div> <div style="text-align: center; margin: 5px 0;"> </div> <div style="font-size: 8px;"> 16. Undercarriage 17. Rollover 18. Fire/Explosion 19. Total </div> <p style="font-size: 8px; text-align: center;">Circle numbers indicating areas damaged.</p>	<table border="1" style="width: 100%; border-collapse: collapse; font-size: 8px;"> <tr> <td style="width: 25%;">Rear </td> <td style="width: 25%;">Passing </td> <td style="width: 25%;">Lt. Turn </td> <td style="width: 25%;">Intersection </td> </tr> <tr> <td>Rt. Turn </td> <td>Rt. Turn </td> <td>Head-On </td> <td>Sideswipe </td> </tr> </table> <p style="font-size: 8px; text-align: center;">Indicate Vehicle Numbers on Arrows Above</p>	Rear 	Passing 	Lt. Turn 	Intersection 	Rt. Turn 	Rt. Turn 	Head-On 	Sideswipe 	UNIT NO: <u>2</u> <div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;">13</div> <div style="font-size: 8px;">INDICATE PROBABLE POINT OF IMPACT</div> </div> <div style="text-align: center; margin: 5px 0;"> </div> <div style="font-size: 8px;"> 16. Undercarriage 17. Rollover 18. Fire/Explosion 19. Total </div> <p style="font-size: 8px; text-align: center;">Circle numbers indicating areas damaged.</p>
Rear 	Passing 	Lt. Turn 	Intersection 							
Rt. Turn 	Rt. Turn 	Head-On 	Sideswipe 							

ACCIDENT SKETCH
Indicate North

By Arrow

VEHICLES MOVED PRIOR TO POLICE ARRIVAL.

GIST OF ACCIDENT

I WAS DISPATCHED TO 875 GREENLAND RD IN PORTSMOUTH, NH FOR A 2 CAR MVA. UPON ARRIVAL, I IDENTIFIED UNIT 1 AS A BLUE 2008 SUBA OUTBACK. UNIT 1 IS REGISTERED TO [REDACTED] AND OPERATED BY [REDACTED] I IDENTIFIED UNIT 2 AS A BLUE 2011 CHEV COLORADO. UNIT 2 IS REGISTERED TO AND OPERATED BY [REDACTED] UNIT 1 OPERATOR REPORTED SHE WAS AT GREENLAND ROAD STOPPED AT A TRAFFIC CONTROL LIGHT WHEN UNIT 2 HIT THE REAR OF HER VEHICLE. UNIT 2 OPERATOR REPORTED HE WAS ATTEMPTING TO STOP PRIOR TO UNIT 1 BUT SLID ON THE SNOW AND COLLIDED WITH THE REAR OF UNIT 1.

THE WEATHER CONDITIONS WERE WINTER WEATHER, SNOW. THE ROADWAY CONDITIONS WERE SLIPPERY WITH SNOW AND SLUSH. THERE WERE NO INJURIES REPORTED. UNIT 1 DROVE FROM THE SCENE. UNIT 2 PARKED AND WAITED FOR AAA. UNIT 2 SUSTAINED HEAVY DAMAGE TO THE FRONT OF THE VEHICLE. VEHICLES MOVED INTO THE PARKING LOT OF ORCHARD PARK, 875 GREENLAND ROAD IN PORTSMOUTH, NH. INFORMATION WAS EXCHANGED.

END OF REPORT.
 PATROL OFFICER JOSEPH I. MELANSON
 PORTSMOUTH POLICE DEPARTMENT
 PATROL DIVISION

SIGNATURE OF INVESTIGATING OFFICER	DATE OF REPORT 01/07/2022	REVIEWED BY
DEPARTMENT / DIVISION / TROOP Portsmouth Police Department	PHOTOS TAKEN YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> BY:	

UNIT NO: <u>1</u> <div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;">13</div> <div style="font-size: small;">INDICATE PROBABLE POINT OF IMPACT</div> </div> <div style="text-align: center; margin-top: 5px;"> </div> <div style="font-size: x-small;"> 16. Undercarriage 17. Rollover 18. Fire/Explosion 19. Total </div>	<table border="1" style="width: 100%; border-collapse: collapse; font-size: x-small;"> <tr> <td>Rear</td><td>Passing</td><td>Lt. Turn</td><td>Intersection</td></tr> <tr> <td></td><td></td><td></td><td></td></tr> <tr> <td>1</td><td>2</td><td>3</td><td>4</td></tr> <tr> <td>Rt. Turn</td><td>Rt. Turn</td><td>Head-On</td><td>Sideswipe</td></tr> <tr> <td></td><td></td><td></td><td></td></tr> <tr> <td>5</td><td>6</td><td>7</td><td>8</td></tr> </table>	Rear	Passing	Lt. Turn	Intersection					1	2	3	4	Rt. Turn	Rt. Turn	Head-On	Sideswipe					5	6	7	8	UNIT NO: <u>2</u> <div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;">15</div> <div style="font-size: small;">INDICATE PROBABLE POINT OF IMPACT</div> </div> <div style="text-align: center; margin-top: 5px;"> </div> <div style="font-size: x-small;"> 16. Undercarriage 17. Rollover 18. Fire/Explosion 19. Total </div>
Rear	Passing	Lt. Turn	Intersection																							
1	2	3	4																							
Rt. Turn	Rt. Turn	Head-On	Sideswipe																							
5	6	7	8																							
Circle numbers indicating areas damaged.	Indicate Vehicle Numbers on Arrows Above	Circle numbers indicating areas damaged.																								

ACCIDENT SKETCH
Indicate North

By Arrow

Vehicles were moved prior to arrival

GIST OF ACCIDENT

08/17/2022

Unit One was traveling westbound on Greenland Rd in the area of Borthwick and made contact with Unit Two's rear, causing moderate damage. Unit One received minor damage to the center front. Driver of Unit One stated she did not realize Unit Two was sitting at the light when she made contact. Driver of Unit One had no injuries and did not need a tow.

Unit Two was stopped at a red light on Borthwick Ave to travel Westbound on Greenland Rd and when the light just turned green, Unit One made contact with Unit Two. Unit Two had a passenger in the passenger's seat. Unit Two had a passenger in the passenger's seat. The Unit Two driver and passenger had no injuries. Unit Two did not need a tow.

SIGNATURE OF INVESTIGATING OFFICER	DATE OF REPORT 08/18/2022	REVIEWED BY
DEPARTMENT / DIVISION / TROOP Portsmouth Police Department	PHOTOS TAKEN YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> BY: _____	

UNIT NO: <u>1</u> <div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;">5</div> <div style="font-size: small;">INDICATE PROBABLE POINT OF IMPACT</div> </div> <div style="text-align: center; margin-top: 10px;"> </div> <div style="font-size: x-small; margin-top: 5px;"> 16. Undercarriage 17. Rollover 18. Fire/Explosion 19. Total </div> <p style="font-size: x-small; text-align: center;">Circle numbers indicating areas damaged.</p>	<table border="1" style="width: 100%; border-collapse: collapse; font-size: x-small;"> <tr> <td>Rear 1 → →</td> <td>Passing 2 → ↗</td> <td>Lt. Turn 3 ↗ ↘</td> <td>Intersection 4 ↘ ↙</td> </tr> <tr> <td>Rt. Turn 5 ↘ ↙</td> <td>Rt. Turn 6 ↘ ↙</td> <td>Head-On 7 → ←</td> <td>Sideswipe 8 ↗ ↘</td> </tr> </table> <p style="font-size: x-small;">Indicate Vehicle Numbers on Arrows Above</p>	Rear 1 → →	Passing 2 → ↗	Lt. Turn 3 ↗ ↘	Intersection 4 ↘ ↙	Rt. Turn 5 ↘ ↙	Rt. Turn 6 ↘ ↙	Head-On 7 → ←	Sideswipe 8 ↗ ↘	UNIT NO: <u>2</u> <div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 2px; margin-right: 5px;">12</div> <div style="font-size: small;">INDICATE PROBABLE POINT OF IMPACT</div> </div> <div style="text-align: center; margin-top: 10px;"> </div> <div style="font-size: x-small; margin-top: 5px;"> 16. Undercarriage 17. Rollover 18. Fire/Explosion 19. Total </div> <p style="font-size: x-small; text-align: center;">Circle numbers indicating areas damaged.</p>
Rear 1 → →	Passing 2 → ↗	Lt. Turn 3 ↗ ↘	Intersection 4 ↘ ↙							
Rt. Turn 5 ↘ ↙	Rt. Turn 6 ↘ ↙	Head-On 7 → ←	Sideswipe 8 ↗ ↘							

ACCIDENT SKETCH
Indicate North

By Arrow

Vehicles moved prior to Police arrival

GIST OF ACCIDENT

Unit 1 was in the left turning lane on Rt. 33 at Borthwick Avenue. Unit 2 was in the lane to the right of Unit 1. Unit 1 attempted to change lanes and cut in front of Unit 2. In doing so, the trailer being pulled by Unit 1 struck Unit 2 on the front left corner. Unit 2 sustained damage to its front bumper. It was unclear if Unit 1 sustained any damage.

The driver of Unit 1 said he was attempted to switch lanes. He didn't account for the extra length of the trailer being towed by his vehicle. The driver of Unit 2 said they were following the road when Unit 1 pulled in front of them.

There were no injuries as a result of the accident.

END OF NARRATIVE

Patrol Officer Roland J. Dupuis
Uniformed Patrol Division
Portsmouth Police Department

SIGNATURE OF INVESTIGATING OFFICER	DATE OF REPORT 09/30/2022	REVIEWED BY
DEPARTMENT / DIVISION / TROOP Portsmouth Police Department	PHOTOS TAKEN YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> BY: _____	

UNIT NO: <u>1</u> 10 INDICATE PROBABLE POINT OF IMPACT 16. Undercarriage 17. Rollover 18. Fire/Explosion 19. Total		<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:25%;">Rear → →</td> <td style="width:25%;">Passing → ↗</td> <td style="width:25%;">Lt. Turn → ↖</td> <td style="width:25%;">Intersection → ↓</td> </tr> <tr> <td>Rt. Turn ↘ →</td> <td>Rt. Turn ↙ →</td> <td>Head-On → ←</td> <td>Sideswipe → ↗</td> </tr> </table> Indicate Vehicle Numbers on Arrows Above	Rear → →	Passing → ↗	Lt. Turn → ↖	Intersection → ↓	Rt. Turn ↘ →	Rt. Turn ↙ →	Head-On → ←	Sideswipe → ↗	UNIT NO: <u>2</u> INDICATE PROBABLE POINT OF IMPACT 6 16. Undercarriage 17. Rollover 18. Fire/Explosion 19. Total
Rear → →	Passing → ↗	Lt. Turn → ↖	Intersection → ↓								
Rt. Turn ↘ →	Rt. Turn ↙ →	Head-On → ←	Sideswipe → ↗								

Circle numbers indicating areas damaged.

ACCIDENT SKETCH
Indicate North

By Arrow

Vehicles Moved PTA of PPD

GIST OF ACCIDENT

On November 16th, 2022 I was dispatched to a motor vehicle collision at the intersection of Greenland Rd and Borthwick Ave. Upon my arrival I met with both involved parties.

V1 is a 2019 Silver Nissan Rogue operated by [REDACTED] and V2 is a 2007 Yamaha Moped operated by [REDACTED]. [REDACTED] is reporting an injury to his right arm/shoulder, Portsmouth Fire Paramedics evaluated [REDACTED] and he refused transport to the hospital.

[REDACTED] reported that he was coming off greenland rd and taking a left, when [REDACTED] went through the stop sign and struck him in the intersection. [REDACTED] is reporting that he was at Borthwick heading straight and [REDACTED] is the one that went through the stop sign. [REDACTED] told me that he was looking at his phone for directions prior to the collision.

[REDACTED] was issued NH DOS citation [REDACTED] for mobile electronic use while driving. Both vehicles were driven from the scene.

Officer Michael Nicoli
Patrol Division
Portsmouth NH Police

SIGNATURE OF INVESTIGATING OFFICER	DATE OF REPORT 11/24/2022	REVIEWED BY
DEPARTMENT / DIVISION / TROOP Portsmouth Police Department	PHOTOS TAKEN YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> BY: _____	

APPENDIX I



Location Map: 239200 Portsmouth, NH

Precision Data Industries, LLC 157 Washington Street, Suite 2, Hudson, MA 01749 ph: 508-875-0100 email: datarequests@pdillc.com



(1) 7-9am/ 2-6pm TMC
 ** 2 VCUs @ B
 (1) 24HR VCU-ATRs w/ HR (Speeds)
 ** (4) VCUs (1) HR

Client: TFMoran	Engineer: J. Porter	Site Code: 47528.00	Date: Thurs 3/9/2023	PDI Job # 239200	City, State: Portsmouth, NH
--------------------	------------------------	------------------------	-------------------------	---------------------	--------------------------------

PDI File #: **239200 A**
 Location: **N: Borthwick Avenue**
 Location: **E: Greenland Road (Route 33) W: Greenland Road (Route 33)**
 City, State: **Portsmouth, NH**
 Client: **TFMoran/ J. Porter**
 Site Code: **47528.00**
 Count Date: **Thursday, March 9, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars and Heavy Vehicles (Combined)

	Borthwick Avenue				Greenland Road (Route 33)				Greenland Road (Route 33)				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
7:00 AM	21	8	0	29	5	68	0	73	108	60	0	168	270
7:15 AM	40	11	0	51	13	53	0	66	125	60	0	185	302
7:30 AM	34	11	0	45	11	96	0	107	185	76	0	261	413
7:45 AM	43	22	0	65	19	106	0	125	237	129	0	366	556
Total	138	52	0	190	48	323	0	371	655	325	0	980	1541
8:00 AM	28	23	0	51	18	104	0	122	230	73	0	303	476
8:15 AM	37	15	0	52	24	115	0	139	194	83	0	277	468
8:30 AM	28	15	0	43	21	94	0	115	165	58	0	223	381
8:45 AM	33	13	0	46	23	91	0	114	159	63	0	222	382
Total	126	66	0	192	86	404	0	490	748	277	0	1025	1707
Grand Total	264	118	0	382	134	727	0	861	1403	602	0	2005	3248
Approach %	69.1	30.9	0.0		15.6	84.4	0.0		70.0	30.0	0.0		
Total %	8.1	3.6	0.0	11.8	4.1	22.4	0.0	26.5	43.2	18.5	0.0	61.7	
Exiting Leg Total				736				1521				991	3248
Cars	243	113	0	356	126	691	0	817	1345	579	0	1924	3097
% Cars	92.0	95.8	0.0	93.2	94.0	95.0	0.0	94.9	95.9	96.2	0.0	96.0	95.4
Exiting Leg Total				705				1458				934	3097
Heavy Vehicles	21	5	0	26	8	36	0	44	58	23	0	81	151
% Heavy Vehicles	8.0	4.2	0.0	6.8	6.0	5.0	0.0	5.1	4.1	3.8	0.0	4.0	4.6
Exiting Leg Total				31				63				57	151

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:30 AM	Borthwick Avenue				Greenland Road (Route 33)				Greenland Road (Route 33)				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
7:30 AM	34	11	0	45	11	96	0	107	185	76	0	261	413
7:45 AM	43	22	0	65	19	106	0	125	237	129	0	366	556
8:00 AM	28	23	0	51	18	104	0	122	230	73	0	303	476
8:15 AM	37	15	0	52	24	115	0	139	194	83	0	277	468
Total Volume	142	71	0	213	72	421	0	493	846	361	0	1207	1913
% Approach Total	66.7	33.3	0.0		14.6	85.4	0.0		70.1	29.9	0.0		
PHF	0.826	0.772	0.000	0.819	0.750	0.915	0.000	0.887	0.892	0.700	0.000	0.824	0.860
Cars	133	68	0	201	68	399	0	467	813	350	0	1163	1831
Cars %	93.7	95.8	0.0	94.4	94.4	94.8	0.0	94.7	96.1	97.0	0.0	96.4	95.7
Heavy Vehicles	9	3	0	12	4	22	0	26	33	11	0	44	82
Heavy Vehicles %	6.3	4.2	0.0	5.6	5.6	5.2	0.0	5.3	3.9	3.0	0.0	3.6	4.3
Cars Enter Leg	133	68	0	201	68	399	0	467	813	350	0	1163	1831
Heavy Enter Leg	9	3	0	12	4	22	0	26	33	11	0	44	82
Total Entering Leg	142	71	0	213	72	421	0	493	846	361	0	1207	1913
Cars Exiting Leg				418				881				532	1831
Heavy Exiting Leg				15				36				31	82
Total Exiting Leg				433				917				563	1913

PDI File #: **239200 A**
 Location: **N: Borthwick Avenue**
 Location: **E: Greenland Road (Route 33) W: Greenland Road (Route 33)**
 City, State: **Portsmouth, NH**
 Client: **TFMoran/ J. Porter**
 Site Code: **47528.00**
 Count Date: **Thursday, March 9, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars

	Borthwick Avenue				Greenland Road (Route 33)				Greenland Road (Route 33)				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
7:00 AM	20	8	0	28	5	65	0	70	99	58	0	157	255
7:15 AM	36	10	0	46	12	51	0	63	121	57	0	178	287
7:30 AM	31	10	0	41	10	92	0	102	178	75	0	253	396
7:45 AM	39	22	0	61	18	98	0	116	229	126	0	355	532
Total	126	50	0	176	45	306	0	351	627	316	0	943	1470
8:00 AM	28	22	0	50	17	101	0	118	219	73	0	292	460
8:15 AM	35	14	0	49	23	108	0	131	187	76	0	263	443
8:30 AM	27	15	0	42	18	88	0	106	158	55	0	213	361
8:45 AM	27	12	0	39	23	88	0	111	154	59	0	213	363
Total	117	63	0	180	81	385	0	466	718	263	0	981	1627
Grand Total	243	113	0	356	126	691	0	817	1345	579	0	1924	3097
Approach %	68.3	31.7	0.0		15.4	84.6	0.0		69.9	30.1	0.0		
Total %	7.8	3.6	0.0	11.5	4.1	22.3	0.0	26.4	43.4	18.7	0.0	62.1	
Exiting Leg Total				705				1458				934	3097

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

	Borthwick Avenue				Greenland Road (Route 33)				Greenland Road (Route 33)				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
7:30 AM	31	10	0	41	10	92	0	102	178	75	0	253	396
7:45 AM	39	22	0	61	18	98	0	116	229	126	0	355	532
8:00 AM	28	22	0	50	17	101	0	118	219	73	0	292	460
8:15 AM	35	14	0	49	23	108	0	131	187	76	0	263	443
Total Volume	133	68	0	201	68	399	0	467	813	350	0	1163	1831
% Approach Total	66.2	33.8	0.0		14.6	85.4	0.0		69.9	30.1	0.0		
PHF	0.853	0.773	0.000	0.824	0.739	0.924	0.000	0.891	0.888	0.694	0.000	0.819	0.860
Entering Leg	133	68	0	201	68	399	0	467	813	350	0	1163	1831
Exiting Leg				418				881				532	1831
Total				619				1348				1695	3662

PDI File #: **239200 A**
 Location: **N: Borthwick Avenue**
 Location: **E: Greenland Road (Route 33) W: Greenland Road (Route 33)**
 City, State: **Portsmouth, NH**
 Client: **TFMoran/ J. Porter**
 Site Code: **47528.00**
 Count Date: **Thursday, March 9, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**



Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)

	Borthwick Avenue				Greenland Road (Route 33)				Greenland Road (Route 33)				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
7:00 AM	1	0	0	1	0	3	0	3	9	2	0	11	15
7:15 AM	4	1	0	5	1	2	0	3	4	3	0	7	15
7:30 AM	3	1	0	4	1	4	0	5	7	1	0	8	17
7:45 AM	4	0	0	4	1	8	0	9	8	3	0	11	24
Total	12	2	0	14	3	17	0	20	28	9	0	37	71
8:00 AM	0	1	0	1	1	3	0	4	11	0	0	11	16
8:15 AM	2	1	0	3	1	7	0	8	7	7	0	14	25
8:30 AM	1	0	0	1	3	6	0	9	7	3	0	10	20
8:45 AM	6	1	0	7	0	3	0	3	5	4	0	9	19
Total	9	3	0	12	5	19	0	24	30	14	0	44	80
Grand Total	21	5	0	26	8	36	0	44	58	23	0	81	151
Approach %	80.8	19.2	0.0		18.2	81.8	0.0		71.6	28.4	0.0		
Total %	13.9	3.3	0.0	17.2	5.3	23.8	0.0	29.1	38.4	15.2	0.0	53.6	
Exiting Leg Total	31				63				57				151
Buses	5	3	0	8	4	3	0	7	7	4	0	11	26
% Buses	23.8	60.0	0.0	30.8	50.0	8.3	0.0	15.9	12.1	17.4	0.0	13.6	17.2
Exiting Leg Total	8				10				8				26
Single-Unit Trucks	13	2	0	15	4	25	0	29	42	17	0	59	103
% Single-Unit	61.9	40.0	0.0	57.7	50.0	69.4	0.0	65.9	72.4	73.9	0.0	72.8	68.2
Exiting Leg Total	21				44				38				103
Articulated Trucks	3	0	0	3	0	8	0	8	9	2	0	11	22
% Articulated	14.3	0.0	0.0	11.5	0.0	22.2	0.0	18.2	15.5	8.7	0.0	13.6	14.6
Exiting Leg Total	2				9				11				22

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

	Borthwick Avenue				Greenland Road (Route 33)				Greenland Road (Route 33)				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
7:45 AM	4	0	0	4	1	8	0	9	8	3	0	11	24
8:00 AM	0	1	0	1	1	3	0	4	11	0	0	11	16
8:15 AM	2	1	0	3	1	7	0	8	7	7	0	14	25
8:30 AM	1	0	0	1	3	6	0	9	7	3	0	10	20
Total Volume	7	2	0	9	6	24	0	30	33	13	0	46	85
% Approach Total	77.8	22.2	0.0		20.0	80.0	0.0		71.7	28.3	0.0		
PHF	0.438	0.500	0.000	0.563	0.500	0.750	0.000	0.833	0.750	0.464	0.000	0.821	0.850
Buses	2	1	0	3	3	2	0	5	3	2	0	5	13
Buses %	28.6	50.0	0.0	33.3	50.0	8.3	0.0	16.7	9.1	15.4	0.0	10.9	15.3
Single-Unit Trucks	5	1	0	6	3	16	0	19	26	10	0	36	61
Single-Unit %	71.4	50.0	0.0	66.7	50.0	66.7	0.0	63.3	78.8	76.9	0.0	78.3	71.8
Articulated Trucks	0	0	0	0	0	6	0	6	4	1	0	5	11
Articulated %	0.0	0.0	0.0	0.0	0.0	25.0	0.0	20.0	12.1	7.7	0.0	10.9	12.9
Buses	2	1	0	3	3	2	0	5	3	2	0	5	13
Single-Unit Trucks	5	1	0	6	3	16	0	19	26	10	0	36	61
Articulated Trucks	0	0	0	0	0	6	0	6	4	1	0	5	11
Total Entering Leg	7	2	0	9	6	24	0	30	33	13	0	46	85
Buses	5				4				4				13
Single-Unit Trucks	13				27				21				61
Articulated Trucks	1				4				6				11
Total Exiting Leg	19				35				31				85

PDI File #: **239200 A**
 Location: **N: Borthwick Avenue**
 Location: **E: Greenland Road (Route 33) W: Greenland Road (Route 33)**
 City, State: **Portsmouth, NH**
 Client: **TFMoran/ J. Porter**
 Site Code: **47528.00**
 Count Date: **Thursday, March 9, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Buses

	Borthwick Avenue				Greenland Road (Route 33)				Greenland Road (Route 33)				Total	
	from North				from East				from West					
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total		
7:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	1	1
7:15 AM	2	1	0	3	1	0	0	1	1	0	2	0	2	6
7:30 AM	0	0	0	0	0	0	0	0	0	2	0	0	2	2
7:45 AM	1	0	0	1	1	0	0	1	1	0	0	0	0	2
Total	3	1	0	4	2	0	0	2	2	3	2	0	5	11
8:00 AM	0	1	0	1	1	1	0	2	2	3	0	0	3	6
8:15 AM	1	0	0	1	0	1	0	1	1	0	1	0	1	3
8:30 AM	0	0	0	0	1	0	0	1	1	0	1	0	1	2
8:45 AM	1	1	0	2	0	1	0	1	1	1	0	0	1	4
Total	2	2	0	4	2	3	0	5	5	4	2	0	6	15
Grand Total	5	3	0	8	4	3	0	7	7	7	4	0	11	26
Approach %	62.5	37.5	0.0		57.1	42.9	0.0			63.6	36.4	0.0		
Total %	19.2	11.5	0.0	30.8	15.4	11.5	0.0	26.9		26.9	15.4	0.0	42.3	
Exiting Leg Total	8				10				8				26	

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:15 AM	Borthwick Avenue				Greenland Road (Route 33)				Greenland Road (Route 33)				Total	
	from North				from East				from West					
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total		
7:15 AM	2	1	0	3	1	0	0	1	1	0	2	0	2	6
7:30 AM	0	0	0	0	0	0	0	0	0	2	0	0	2	2
7:45 AM	1	0	0	1	1	0	0	1	1	0	0	0	0	2
8:00 AM	0	1	0	1	1	1	0	2	2	3	0	0	3	6
Total Volume	3	2	0	5	3	1	0	4	4	5	2	0	7	16
% Approach Total	60.0	40.0	0.0		75.0	25.0	0.0			71.4	28.6	0.0		
PHF	0.375	0.500	0.000	0.417	0.750	0.250	0.000	0.500		0.417	0.250	0.000	0.583	0.667
Entering Leg	3	2	0	5	3	1	0	4	4	5	2	0	7	16
Exiting Leg	5				7				4				16	
Total	10				11				11				32	

PDI File #: **239200 A**
 Location: **N: Borthwick Avenue**
 Location: **E: Greenland Road (Route 33) W: Greenland Road (Route 33)**
 City, State: **Portsmouth, NH**
 Client: **TFMoran/ J. Porter**
 Site Code: **47528.00**
 Count Date: **Thursday, March 9, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Single-Unit Trucks

	Borthwick Avenue				Greenland Road (Route 33)				Greenland Road (Route 33)				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	2	0	2	6	2	0	8	10
7:15 AM	2	0	0	2	0	2	0	2	3	1	0	4	8
7:30 AM	2	1	0	3	1	3	0	4	3	1	0	4	11
7:45 AM	3	0	0	3	0	5	0	5	8	2	0	10	18
Total	7	1	0	8	1	12	0	13	20	6	0	26	47
8:00 AM	0	0	0	0	0	2	0	2	6	0	0	6	8
8:15 AM	1	1	0	2	1	5	0	6	5	6	0	11	19
8:30 AM	1	0	0	1	2	4	0	6	7	2	0	9	16
8:45 AM	4	0	0	4	0	2	0	2	4	3	0	7	13
Total	6	1	0	7	3	13	0	16	22	11	0	33	56
Grand Total	13	2	0	15	4	25	0	29	42	17	0	59	103
Approach %	86.7	13.3	0.0		13.8	86.2	0.0		71.2	28.8	0.0		
Total %	12.6	1.9	0.0	14.6	3.9	24.3	0.0	28.2	40.8	16.5	0.0	57.3	
Exiting Leg Total	21				44				38				103

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:45 AM	Borthwick Avenue				Greenland Road (Route 33)				Greenland Road (Route 33)				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
7:45 AM	3	0	0	3	0	5	0	5	8	2	0	10	18
8:00 AM	0	0	0	0	0	2	0	2	6	0	0	6	8
8:15 AM	1	1	0	2	1	5	0	6	5	6	0	11	19
8:30 AM	1	0	0	1	2	4	0	6	7	2	0	9	16
Total Volume	5	1	0	6	3	16	0	19	26	10	0	36	61
% Approach Total	83.3	16.7	0.0		15.8	84.2	0.0		72.2	27.8	0.0		
PHF	0.417	0.250	0.000	0.500	0.375	0.800	0.000	0.792	0.813	0.417	0.000	0.818	0.803
Entering Leg	5	1	0	6	3	16	0	19	26	10	0	36	61
Exiting Leg	13				27				21				61
Total	19				46				57				122

PDI File #: **239200 A**
 Location: **N: Borthwick Avenue**
 Location: **E: Greenland Road (Route 33) W: Greenland Road (Route 33)**
 City, State: **Portsmouth, NH**
 Client: **TFMoran/ J. Porter**
 Site Code: **47528.00**
 Count Date: **Thursday, March 9, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Articulated Trucks

	Borthwick Avenue				Greenland Road (Route 33)				Greenland Road (Route 33)				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
7:00 AM	1	0	0	1	0	1	0	1	2	0	0	2	4
7:15 AM	0	0	0	0	0	0	0	0	1	0	0	1	1
7:30 AM	1	0	0	1	0	1	0	1	2	0	0	2	4
7:45 AM	0	0	0	0	0	3	0	3	0	1	0	1	4
Total	2	0	0	2	0	5	0	5	5	1	0	6	13
8:00 AM	0	0	0	0	0	0	0	0	2	0	0	2	2
8:15 AM	0	0	0	0	0	1	0	1	2	0	0	2	3
8:30 AM	0	0	0	0	0	2	0	2	0	0	0	0	2
8:45 AM	1	0	0	1	0	0	0	0	0	1	0	1	2
Total	1	0	0	1	0	3	0	3	4	1	0	5	9
Grand Total	3	0	0	3	0	8	0	8	9	2	0	11	22
Approach %	100.0	0.0	0.0		0.0	100.0	0.0		81.8	18.2	0.0		
Total %	13.6	0.0	0.0	13.6	0.0	36.4	0.0	36.4	40.9	9.1	0.0	50.0	
Exiting Leg Total	2				9				11				22

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Borthwick Avenue				Greenland Road (Route 33)				Greenland Road (Route 33)				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
7:00 AM	1	0	0	1	0	1	0	1	2	0	0	2	4
7:15 AM	0	0	0	0	0	0	0	0	1	0	0	1	1
7:30 AM	1	0	0	1	0	1	0	1	2	0	0	2	4
7:45 AM	0	0	0	0	0	3	0	3	0	1	0	1	4
Total Volume	2	0	0	2	0	5	0	5	5	1	0	6	13
% Approach Total	100.0	0.0	0.0		0.0	100.0	0.0		83.3	16.7	0.0		
PHF	0.500	0.000	0.000	0.500	0.000	0.417	0.000	0.417	0.625	0.250	0.000	0.750	0.813
Entering Leg	2	0	0	2	0	5	0	5	5	1	0	6	13
Exiting Leg	1				5				7				13
Total	3				10				13				26

PDI File #: **239200 A**
 Location: **N: Borthwick Avenue**
 Location: **E: Greenland Road (Route 33) W: Greenland Road (Route 33)**
 City, State: **Portsmouth, NH**
 Client: **TFMoran/ J. Porter**
 Site Code: **47528.00**
 Count Date: **Thursday, March 9, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Bicycles (on Roadway and Crosswalks)

	Borthwick Avenue						Greenland Road (Route 33)						Greenland Road (Route 33)						Total
	from North						from East						from West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	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	0.0	0.0		
Total %	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	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total	0						0						0						0

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Borthwick Avenue						Greenland Road (Route 33)						Greenland Road (Route 33)						Total
	from North						from East						from West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	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	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0						0						0						0
Exiting Leg	0						0						0						0
Total	0						0						0						0

PDI File #: **239200 A**
 Location: **N: Borthwick Avenue**
 Location: **E: Greenland Road (Route 33) W: Greenland Road (Route 33)**
 City, State: **Portsmouth, NH**
 Client: **TFMoran/ J. Porter**
 Site Code: **47528.00**
 Count Date: **Thursday, March 9, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Pedestrians

	Borthwick Avenue						Greenland Road (Route 33)						Greenland Road (Route 33)						Total
	from North						from East						from West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg Total	0						0						0						0

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Borthwick Avenue						Greenland Road (Route 33)						Greenland Road (Route 33)						Total
	from North						from East						from West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	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	0.0	0.0	0.0	0.0	0.0	0.0
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg	0						0						0						0
Total	0						0						0						0

PDI File #: **239200 A**
 Location: **N: Borthwick Avenue**
 Location: **E: Greenland Road (Route 33) W: Greenland Road (Route 33)**
 City, State: **Portsmouth, NH**
 Client: **TFMoran/ J. Porter**
 Site Code: **47528.00**
 Count Date: **Thursday, March 9, 2023**
 Start Time: **2:00 PM**
 End Time: **6:00 PM**



Cars and Heavy Vehicles (Combined)

	Borthwick Avenue				Greenland Road (Route 33)				Greenland Road (Route 33)				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
2:00 PM	45	14	0	59	21	122	0	143	109	40	0	149	351
2:15 PM	39	23	0	62	29	108	0	137	128	55	0	183	382
2:30 PM	61	26	0	87	19	130	0	149	108	42	0	150	386
2:45 PM	56	26	0	82	25	111	0	136	160	36	0	196	414
Total	201	89	0	290	94	471	0	565	505	173	0	678	1533
3:00 PM	80	19	0	99	21	133	0	154	134	41	0	175	428
3:15 PM	79	20	0	99	33	153	0	186	144	39	0	183	468
3:30 PM	57	20	0	77	29	174	0	203	154	42	0	196	476
3:45 PM	76	21	0	97	15	156	0	171	134	37	0	171	439
Total	292	80	0	372	98	616	0	714	566	159	0	725	1811
4:00 PM	83	18	0	101	19	147	0	166	163	36	0	199	466
4:15 PM	58	15	0	73	21	133	0	154	151	36	0	187	414
4:30 PM	65	24	0	89	13	158	0	171	154	21	0	175	435
4:45 PM	58	17	0	75	16	160	0	176	154	23	0	177	428
Total	264	74	0	338	69	598	0	667	622	116	0	738	1743
5:00 PM	127	23	0	150	22	181	0	203	172	27	0	199	552
5:15 PM	78	14	0	92	17	149	0	166	134	22	0	156	414
5:30 PM	50	13	0	63	10	124	0	134	133	32	0	165	362
5:45 PM	39	8	0	47	21	110	0	131	160	26	0	186	364
Total	294	58	0	352	70	564	0	634	599	107	0	706	1692
Grand Total	1051	301	0	1352	331	2249	0	2580	2292	555	0	2847	6779
Approach %	77.7	22.3	0.0		12.8	87.2	0.0		80.5	19.5	0.0		
Total %	15.5	4.4	0.0	19.9	4.9	33.2	0.0	38.1	33.8	8.2	0.0	42.0	
Exiting Leg Total				886				2593				3300	6779
Cars	1031	281	0	1312	312	2208	0	2520	2233	540	0	2773	6605
% Cars	98.1	93.4	0.0	97.0	94.3	98.2	0.0	97.7	97.4	97.3	0.0	97.4	97.4
Exiting Leg Total				852				2514				3239	6605
Heavy Vehicles	20	20	0	40	19	41	0	60	59	15	0	74	174
% Heavy Vehicles	1.9	6.6	0.0	3.0	5.7	1.8	0.0	2.3	2.6	2.7	0.0	2.6	2.6
Exiting Leg Total				34				79				61	174

Peak Hour Analysis from 02:00 PM to 06:00 PM begins at:

	Borthwick Avenue				Greenland Road (Route 33)				Greenland Road (Route 33)				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
3:15 PM	79	20	0	99	33	153	0	186	144	39	0	183	468
3:30 PM	57	20	0	77	29	174	0	203	154	42	0	196	476
3:45 PM	76	21	0	97	15	156	0	171	134	37	0	171	439
4:00 PM	83	18	0	101	19	147	0	166	163	36	0	199	466
Total Volume	295	79	0	374	96	630	0	726	595	154	0	749	1849
% Approach Total	78.9	21.1	0.0		13.2	86.8	0.0		79.4	20.6	0.0		
PHF	0.889	0.940	0.000	0.926	0.727	0.905	0.000	0.894	0.913	0.917	0.000	0.941	0.971
Cars	290	73	0	363	89	616	0	705	580	149	0	729	1797
Cars %	98.3	92.4	0.0	97.1	92.7	97.8	0.0	97.1	97.5	96.8	0.0	97.3	97.2
Heavy Vehicles	5	6	0	11	7	14	0	21	15	5	0	20	52
Heavy Vehicles %	1.7	7.6	0.0	2.9	7.3	2.2	0.0	2.9	2.5	3.2	0.0	2.7	2.8
Cars Enter Leg	290	73	0	363	89	616	0	705	580	149	0	729	1797
Heavy Enter Leg	5	6	0	11	7	14	0	21	15	5	0	20	52
Total Entering Leg	295	79	0	374	96	630	0	726	595	154	0	749	1849
Cars Exiting Leg				238				653				906	1797
Heavy Exiting Leg				12				21				19	52
Total Exiting Leg				250				674				925	1849

PDI File #: **239200 A**
 Location: **N: Borthwick Avenue**
 Location: **E: Greenland Road (Route 33) W: Greenland Road (Route 33)**
 City, State: **Portsmouth, NH**
 Client: **TFMoran/ J. Porter**
 Site Code: **47528.00**
 Count Date: **Thursday, March 9, 2023**
 Start Time: **2:00 PM**
 End Time: **6:00 PM**
 Class:



Cars

	Borthwick Avenue				Greenland Road (Route 33)				Greenland Road (Route 33)				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
2:00 PM	44	14	0	58	21	120	0	141	101	40	0	141	340
2:15 PM	39	21	0	60	25	102	0	127	125	51	0	176	363
2:30 PM	58	21	0	79	17	127	0	144	102	42	0	144	367
2:45 PM	55	23	0	78	23	104	0	127	157	36	0	193	398
Total	196	79	0	275	86	453	0	539	485	169	0	654	1468
3:00 PM	80	17	0	97	19	131	0	150	131	39	0	170	417
3:15 PM	78	20	0	98	30	150	0	180	140	38	0	178	456
3:30 PM	54	17	0	71	27	167	0	194	151	42	0	193	458
3:45 PM	76	19	0	95	15	154	0	169	129	35	0	164	428
Total	288	73	0	361	91	602	0	693	551	154	0	705	1759
4:00 PM	82	17	0	99	17	145	0	162	160	34	0	194	455
4:15 PM	53	15	0	68	20	133	0	153	150	36	0	186	407
4:30 PM	64	24	0	88	12	155	0	167	148	20	0	168	423
4:45 PM	57	17	0	74	16	160	0	176	151	22	0	173	423
Total	256	73	0	329	65	593	0	658	609	112	0	721	1708
5:00 PM	126	22	0	148	22	181	0	203	170	26	0	196	547
5:15 PM	76	14	0	90	17	147	0	164	133	22	0	155	409
5:30 PM	50	12	0	62	10	123	0	133	131	31	0	162	357
5:45 PM	39	8	0	47	21	109	0	130	154	26	0	180	357
Total	291	56	0	347	70	560	0	630	588	105	0	693	1670
Grand Total	1031	281	0	1312	312	2208	0	2520	2233	540	0	2773	6605
Approach %	78.6	21.4	0.0		12.4	87.6	0.0		80.5	19.5	0.0		
Total %	15.6	4.3	0.0	19.9	4.7	33.4	0.0	38.2	33.8	8.2	0.0	42.0	
Exiting Leg Total				852				2514				3239	6605

Peak Hour Analysis from 02:00 PM to 06:00 PM begins at:

	Borthwick Avenue				Greenland Road (Route 33)				Greenland Road (Route 33)				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
4:30 PM	64	24	0	88	12	155	0	167	148	20	0	168	423
4:45 PM	57	17	0	74	16	160	0	176	151	22	0	173	423
5:00 PM	126	22	0	148	22	181	0	203	170	26	0	196	547
5:15 PM	76	14	0	90	17	147	0	164	133	22	0	155	409
Total Volume	323	77	0	400	67	643	0	710	602	90	0	692	1802
% Approach Total	80.8	19.3	0.0		9.4	90.6	0.0		87.0	13.0	0.0		
PHF	0.641	0.802	0.000	0.676	0.761	0.888	0.000	0.874	0.885	0.865	0.000	0.883	0.824
Entering Leg	323	77	0	400	67	643	0	710	602	90	0	692	1802
Exiting Leg				157				679				966	1802
Total				557				1389				1658	3604

PDI File #: 239200 A
 Location: N: Borthwick Avenue
 Location: E: Greenland Road (Route 33) W: Greenland Road (Route 33)
 City, State: Portsmouth, NH
 Client: TFMoran/ J. Porter
 Site Code: 47528.00
 Count Date: Thursday, March 9, 2023
 Start Time: 2:00 PM
 End Time: 6:00 PM



Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Borthwick Avenue				Greenland Road (Route 33)				Greenland Road (Route 33)				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
2:00 PM	1	0	0	1	0	2	0	2	8	0	0	8	11
2:15 PM	0	2	0	2	4	6	0	10	3	4	0	7	19
2:30 PM	3	5	0	8	2	3	0	5	6	0	0	6	19
2:45 PM	1	3	0	4	2	7	0	9	3	0	0	3	16
Total	5	10	0	15	8	18	0	26	20	4	0	24	65
3:00 PM	0	2	0	2	2	2	0	4	3	2	0	5	11
3:15 PM	1	0	0	1	3	3	0	6	4	1	0	5	12
3:30 PM	3	3	0	6	2	7	0	9	3	0	0	3	18
3:45 PM	0	2	0	2	0	2	0	2	5	2	0	7	11
Total	4	7	0	11	7	14	0	21	15	5	0	20	52
4:00 PM	1	1	0	2	2	2	0	4	3	2	0	5	11
4:15 PM	5	0	0	5	1	0	0	1	1	0	0	1	7
4:30 PM	1	0	0	1	1	3	0	4	6	1	0	7	12
4:45 PM	1	0	0	1	0	0	0	0	3	1	0	4	5
Total	8	1	0	9	4	5	0	9	13	4	0	17	35
5:00 PM	1	1	0	2	0	0	0	0	2	1	0	3	5
5:15 PM	2	0	0	2	0	2	0	2	1	0	0	1	5
5:30 PM	0	1	0	1	0	1	0	1	2	1	0	3	5
5:45 PM	0	0	0	0	0	1	0	1	6	0	0	6	7
Total	3	2	0	5	0	4	0	4	11	2	0	13	22
Grand Total	20	20	0	40	19	41	0	60	59	15	0	74	174
Approach %	50.0	50.0	0.0		31.7	68.3	0.0		79.7	20.3	0.0		
Total %	11.5	11.5	0.0	23.0	10.9	23.6	0.0	34.5	33.9	8.6	0.0	42.5	
Exiting Leg Total				34				79				61	174
Buses	5	3	0	8	4	1	0	5	4	4	0	8	21
% Buses	25.0	15.0	0.0	20.0	21.1	2.4	0.0	8.3	6.8	26.7	0.0	10.8	12.1
Exiting Leg Total				8				7				6	21
Single-Unit Trucks	12	16	0	28	14	38	0	52	50	7	0	57	137
% Single-Unit	60.0	80.0	0.0	70.0	73.7	92.7	0.0	86.7	84.7	46.7	0.0	77.0	78.7
Exiting Leg Total				21				66				50	137
Articulated Trucks	3	1	0	4	1	2	0	3	5	4	0	9	16
% Articulated	15.0	5.0	0.0	10.0	5.3	4.9	0.0	5.0	8.5	26.7	0.0	12.2	9.2
Exiting Leg Total				5				6				5	16

Peak Hour Analysis from 02:00 PM to 06:00 PM begins at:

2:00 PM	Borthwick Avenue				Greenland Road (Route 33)				Greenland Road (Route 33)				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
2:00 PM	1	0	0	1	0	2	0	2	8	0	0	8	11
2:15 PM	0	2	0	2	4	6	0	10	3	4	0	7	19
2:30 PM	3	5	0	8	2	3	0	5	6	0	0	6	19
2:45 PM	1	3	0	4	2	7	0	9	3	0	0	3	16
Total Volume	5	10	0	15	8	18	0	26	20	4	0	24	65
% Approach Total	33.3	66.7	0.0		30.8	69.2	0.0		83.3	16.7	0.0		
PHF	0.417	0.500	0.000	0.469	0.500	0.643	0.000	0.650	0.625	0.250	0.000	0.750	0.855
Buses	2	2	0	4	2	0	0	2	3	1	0	4	10
Buses %	40.0	20.0	0.0	26.7	25.0	0.0	0.0	7.7	15.0	25.0	0.0	16.7	15.4
Single-Unit Trucks	3	7	0	10	6	17	0	23	14	0	0	14	47
Single-Unit %	60.0	70.0	0.0	66.7	75.0	94.4	0.0	88.5	70.0	0.0	0.0	58.3	72.3
Articulated Trucks	0	1	0	1	0	1	0	1	3	3	0	6	8
Articulated %	0.0	10.0	0.0	6.7	0.0	5.6	0.0	3.8	15.0	75.0	0.0	25.0	12.3
Buses	2	2	0	4	2	0	0	2	3	1	0	4	10
Single-Unit Trucks	3	7	0	10	6	17	0	23	14	0	0	14	47
Articulated Trucks	0	1	0	1	0	1	0	1	3	3	0	6	8
Total Entering Leg	5	10	0	15	8	18	0	26	20	4	0	24	65
Buses				3				5				2	10
Single-Unit Trucks				6				21				20	47
Articulated Trucks				3				4				1	8
Total Exiting Leg				12				30				23	65

PDI File #: **239200 A**
 Location: **N: Borthwick Avenue**
 Location: **E: Greenland Road (Route 33) W: Greenland Road (Route 33)**
 City, State: **Portsmouth, NH**
 Client: **TFMoran/ J. Porter**
 Site Code: **47528.00**
 Count Date: **Thursday, March 9, 2023**
 Start Time: **2:00 PM**
 End Time: **6:00 PM**
 Class:



Buses

	Borthwick Avenue				Greenland Road (Route 33)				Greenland Road (Route 33)				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	1	0	0	1	0	1	0	1	2
2:30 PM	1	1	0	2	1	0	0	1	3	0	0	3	6
2:45 PM	1	1	0	2	0	0	0	0	0	0	0	0	2
Total	2	2	0	4	2	0	0	2	3	1	0	4	10
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	1	0	0	1	0	1	0	1	0	1	0	1	3
3:30 PM	0	1	0	1	1	0	0	1	0	0	0	0	2
3:45 PM	0	0	0	0	0	0	0	0	1	0	0	1	1
Total	1	1	0	2	1	1	0	2	1	1	0	2	6
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	1	0	0	1	1	0	0	1	0	0	0	0	2
4:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	1	1	0	0	1	0	1	0	1	3
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	1	0	0	1	0	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	1	0	0	0	0	0	1	0	1	2
Grand Total	5	3	0	8	4	1	0	5	4	4	0	8	21
Approach %	62.5	37.5	0.0		80.0	20.0	0.0		50.0	50.0	0.0		
Total %	23.8	14.3	0.0	38.1	19.0	4.8	0.0	23.8	19.0	19.0	0.0	38.1	
Exiting Leg Total				8				7				6	21

Peak Hour Analysis from 02:00 PM to 06:00 PM begins at:

	Borthwick Avenue				Greenland Road (Route 33)				Greenland Road (Route 33)				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
2:30 PM	1	1	0	2	1	0	0	1	3	0	0	3	6
2:45 PM	1	1	0	2	0	0	0	0	0	0	0	0	2
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	1	0	0	1	0	1	0	1	0	1	0	1	3
Total Volume	3	2	0	5	1	1	0	2	3	1	0	4	11
% Approach Total	60.0	40.0	0.0		50.0	50.0	0.0		75.0	25.0	0.0		
PHF	0.750	0.500	0.000	0.625	0.250	0.250	0.000	0.500	0.250	0.250	0.000	0.333	0.458
Entering Leg	3	2	0	5	1	1	0	2	3	1	0	4	11
Exiting Leg				2				5				4	11
Total				7				7				8	22

PDI File #: **239200 A**
 Location: **N: Borthwick Avenue**
 Location: **E: Greenland Road (Route 33) W: Greenland Road (Route 33)**
 City, State: **Portsmouth, NH**
 Client: **TFMoran/ J. Porter**
 Site Code: **47528.00**
 Count Date: **Thursday, March 9, 2023**
 Start Time: **2:00 PM**
 End Time: **6:00 PM**
 Class:



Single-Unit Trucks

	Borthwick Avenue				Greenland Road (Route 33)				Greenland Road (Route 33)				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
2:00 PM	1	0	0	1	0	2	0	2	7	0	0	7	10
2:15 PM	0	2	0	2	3	6	0	9	2	0	0	2	13
2:30 PM	2	3	0	5	1	3	0	4	2	0	0	2	11
2:45 PM	0	2	0	2	2	6	0	8	3	0	0	3	13
Total	3	7	0	10	6	17	0	23	14	0	0	14	47
3:00 PM	0	2	0	2	2	2	0	4	2	2	0	4	10
3:15 PM	0	0	0	0	3	2	0	5	4	0	0	4	9
3:30 PM	1	2	0	3	0	7	0	7	3	0	0	3	13
3:45 PM	0	2	0	2	0	2	0	2	4	2	0	6	10
Total	1	6	0	7	5	13	0	18	13	4	0	17	42
4:00 PM	1	1	0	2	2	2	0	4	3	2	0	5	11
4:15 PM	3	0	0	3	0	0	0	0	1	0	0	1	4
4:30 PM	1	0	0	1	1	3	0	4	5	0	0	5	10
4:45 PM	1	0	0	1	0	0	0	0	3	1	0	4	5
Total	6	1	0	7	3	5	0	8	12	3	0	15	30
5:00 PM	1	1	0	2	0	0	0	0	2	0	0	2	4
5:15 PM	1	0	0	1	0	1	0	1	1	0	0	1	3
5:30 PM	0	1	0	1	0	1	0	1	2	0	0	2	4
5:45 PM	0	0	0	0	0	1	0	1	6	0	0	6	7
Total	2	2	0	4	0	3	0	3	11	0	0	11	18
Grand Total	12	16	0	28	14	38	0	52	50	7	0	57	137
Approach %	42.9	57.1	0.0		26.9	73.1	0.0		87.7	12.3	0.0		
Total %	8.8	11.7	0.0	20.4	10.2	27.7	0.0	38.0	36.5	5.1	0.0	41.6	
Exiting Leg Total				21				66				50	137

Peak Hour Analysis from 02:00 PM to 06:00 PM begins at:

2:00 PM	Borthwick Avenue				Greenland Road (Route 33)				Greenland Road (Route 33)				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
2:00 PM	1	0	0	1	0	2	0	2	7	0	0	7	10
2:15 PM	0	2	0	2	3	6	0	9	2	0	0	2	13
2:30 PM	2	3	0	5	1	3	0	4	2	0	0	2	11
2:45 PM	0	2	0	2	2	6	0	8	3	0	0	3	13
Total Volume	3	7	0	10	6	17	0	23	14	0	0	14	47
% Approach Total	30.0	70.0	0.0		26.1	73.9	0.0		100.0	0.0	0.0		
PHF	0.375	0.583	0.000	0.500	0.500	0.708	0.000	0.639	0.500	0.000	0.000	0.500	0.904
Entering Leg	3	7	0	10	6	17	0	23	14	0	0	14	47
Exiting Leg				6				21				20	47
Total				16				44				34	94

PDI File #: **239200 A**
 Location: **N: Borthwick Avenue**
 Location: **E: Greenland Road (Route 33) W: Greenland Road (Route 33)**
 City, State: **Portsmouth, NH**
 Client: **TFMoran/ J. Porter**
 Site Code: **47528.00**
 Count Date: **Thursday, March 9, 2023**
 Start Time: **2:00 PM**
 End Time: **6:00 PM**
 Class:



Articulated Trucks

	Borthwick Avenue				Greenland Road (Route 33)				Greenland Road (Route 33)				Total	
	from North				from East				from West					
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total		
2:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	1	1
2:15 PM	0	0	0	0	0	0	0	0	0	1	3	0	4	4
2:30 PM	0	1	0	1	0	0	0	0	0	1	0	0	1	2
2:45 PM	0	0	0	0	0	1	0	1	1	0	0	0	0	1
Total	0	1	0	1	0	1	0	1	1	3	3	0	6	8
3:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	1	1
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	2	0	0	2	1	0	0	1	1	0	0	0	0	3
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	2	0	0	2	1	0	0	1	1	1	0	0	1	4
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	1	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	1	0	0	0	0	0	1	0	0	1	2
5:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	1
5:15 PM	0	0	0	0	0	1	0	1	1	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	1	0	1	0	1	2
Grand Total	3	1	0	4	1	2	0	3	3	5	4	0	9	16
Approach %	75.0	25.0	0.0		33.3	66.7	0.0			55.6	44.4	0.0		
Total %	18.8	6.3	0.0	25.0	6.3	12.5	0.0	18.8		31.3	25.0	0.0	56.3	
Exiting Leg Total				5				6					5	16

Peak Hour Analysis from 02:00 PM to 06:00 PM begins at:

2:00 PM	Borthwick Avenue				Greenland Road (Route 33)				Greenland Road (Route 33)				Total	
	from North				from East				from West					
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total		
2:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	1	1
2:15 PM	0	0	0	0	0	0	0	0	0	1	3	0	4	4
2:30 PM	0	1	0	1	0	0	0	0	0	1	0	0	1	2
2:45 PM	0	0	0	0	0	1	0	1	1	0	0	0	0	1
Total Volume	0	1	0	1	0	1	0	1	1	3	3	0	6	8
% Approach Total	0.0	100.0	0.0		0.0	100.0	0.0			50.0	50.0	0.0		
PHF	0.000	0.250	0.000	0.250	0.000	0.250	0.000	0.250		0.750	0.250	0.000	0.375	0.500
Entering Leg	0	1	0	1	0	1	0	1		3	3	0	6	8
Exiting Leg				3				4					1	8
Total				4				5					7	16

PDI File #: **239200 A**
 Location: **N: Borthwick Avenue**
 Location: **E: Greenland Road (Route 33) W: Greenland Road (Route 33)**
 City, State: **Portsmouth, NH**
 Client: **TFMoran/ J. Porter**
 Site Code: **47528.00**
 Count Date: **Thursday, March 9, 2023**
 Start Time: **2:00 PM**
 End Time: **6:00 PM**
 Class: **Bicycles (on Roadway and Crosswalks)**



	Borthwick Avenue						Greenland Road (Route 33)						Greenland Road (Route 33)						Total	
	from North						from East						from West							
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total		
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1
Approach %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total	0						0						1						1	

Peak Hour Analysis from 02:00 PM to 06:00 PM begins at:

4:00 PM	Borthwick Avenue						Greenland Road (Route 33)						Greenland Road (Route 33)						Total	
	from North						from East						from West							
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250
Entering Leg	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1
Exiting Leg	0						0						1						1	
Total	0						1						1						2	

PDI File #: **239200 A**
 Location: **N: Borthwick Avenue**
 Location: **E: Greenland Road (Route 33) W: Greenland Road (Route 33)**
 City, State: **Portsmouth, NH**
 Client: **TFMoran/ J. Porter**
 Site Code: **47528.00**
 Count Date: **Thursday, March 9, 2023**
 Start Time: **2:00 PM**
 End Time: **6:00 PM**
 Class:



Pedestrians

	Borthwick Avenue						Greenland Road (Route 33)						Greenland Road (Route 33)						Total	
	from North						from East						from West							
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total		
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg Total	0						0						0						0	

Peak Hour Analysis from 02:00 PM to 06:00 PM begins at:

	Borthwick Avenue						Greenland Road (Route 33)						Greenland Road (Route 33)						Total	
	from North						from East						from West							
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total		
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg	0						0						0						0	
Total	0						0						0						0	

PDI File #: **239200 B**
 Location: **S: Borthwick Avenue**
 Location: **E: Borthwick Avenue W: Greenland Road**
 City, State: **Portsmouth, NH**
 Client: **TFMoran/ J. Porter**
 Site Code: **47528.00**
 Count Date: **Thursday, March 9, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



157 Washington Street, Suite 2
 Hudson, MA 01749
 508-875-0100 datarequests@pdillc.com
 Email: datarequests@pdillc.com

Cars and Heavy Vehicles (Combined)

	Borthwick Avenue				Borthwick Avenue				Greenland Road				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:00 AM	5	15	0	20	57	8	0	65	15	3	0	18	103
7:15 AM	5	22	0	27	60	12	0	72	28	2	0	30	129
7:30 AM	5	21	0	26	70	16	0	86	30	6	0	36	148
7:45 AM	3	27	0	30	122	21	0	143	36	10	0	46	219
Total	18	85	0	103	309	57	0	366	109	21	0	130	599
8:00 AM	7	18	0	25	76	20	0	96	33	8	0	41	162
8:15 AM	7	26	0	33	73	30	0	103	22	10	0	32	168
8:30 AM	4	27	0	31	69	13	0	82	18	5	0	23	136
8:45 AM	4	31	0	35	65	20	0	85	13	5	0	18	138
Total	22	102	0	124	283	83	0	366	86	28	0	114	604
Grand Total	40	187	0	227	592	140	0	732	195	49	0	244	1203
Approach %	17.6	82.4	0.0		80.9	19.1	0.0		79.9	20.1	0.0		
Total %	3.3	15.5	0.0	18.9	49.2	11.6	0.0	60.8	16.2	4.1	0.0	20.3	
Exiting Leg Total				641				382				180	1203
Cars	39	170	0	209	570	128	0	698	188	47	0	235	1142
% Cars	97.5	90.9	0.0	92.1	96.3	91.4	0.0	95.4	96.4	95.9	0.0	96.3	94.9
Exiting Leg Total				617				358				167	1142
Heavy Vehicles	1	17	0	18	22	12	0	34	7	2	0	9	61
% Heavy Vehicles	2.5	9.1	0.0	7.9	3.7	8.6	0.0	4.6	3.6	4.1	0.0	3.7	5.1
Exiting Leg Total				24				24				13	61

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:30 AM	Borthwick Avenue				Borthwick Avenue				Greenland Road				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:30 AM	5	21	0	26	70	16	0	86	30	6	0	36	148
7:45 AM	3	27	0	30	122	21	0	143	36	10	0	46	219
8:00 AM	7	18	0	25	76	20	0	96	33	8	0	41	162
8:15 AM	7	26	0	33	73	30	0	103	22	10	0	32	168
Total Volume	22	92	0	114	341	87	0	428	121	34	0	155	697
% Approach Total	19.3	80.7	0.0		79.7	20.3	0.0		78.1	21.9	0.0		
PHF	0.786	0.852	0.000	0.864	0.699	0.725	0.000	0.748	0.840	0.850	0.000	0.842	0.796
Cars	22	85	0	107	330	80	0	410	117	33	0	150	667
Cars %	100.0	92.4	0.0	93.9	96.8	92.0	0.0	95.8	96.7	97.1	0.0	96.8	95.7
Heavy Vehicles	0	7	0	7	11	7	0	18	4	1	0	5	30
Heavy Vehicles %	0.0	7.6	0.0	6.1	3.2	8.0	0.0	4.2	3.3	2.9	0.0	3.2	4.3
Cars Enter Leg	22	85	0	107	330	80	0	410	117	33	0	150	667
Heavy Enter Leg	0	7	0	7	11	7	0	18	4	1	0	5	30
Total Entering Leg	22	92	0	114	341	87	0	428	121	34	0	155	697
Cars Exiting Leg				363				202				102	667
Heavy Exiting Leg				12				11				7	30
Total Exiting Leg				375				213				109	697

PDI File #: **239200 B**
 Location: **S: Borthwick Avenue**
 Location: **E: Borthwick Avenue W: Greenland Road**
 City, State: **Portsmouth, NH**
 Client: **TFMoran/ J. Porter**
 Site Code: **47528.00**
 Count Date: **Thursday, March 9, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



157 Washington Street, Suite 2
 Hudson, MA 01749
 508-875-0100 datarequests@pdillc.com

Cars

	Borthwick Avenue				Borthwick Avenue				Greenland Road				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:00 AM	5	14	0	19	55	8	0	63	15	3	0	18	100
7:15 AM	5	19	0	24	58	10	0	68	26	2	0	28	120
7:30 AM	5	18	0	23	69	15	0	84	29	6	0	35	142
7:45 AM	3	25	0	28	119	18	0	137	34	10	0	44	209
Total	18	76	0	94	301	51	0	352	104	21	0	125	571
8:00 AM	7	17	0	24	76	18	0	94	32	7	0	39	157
8:15 AM	7	25	0	32	66	29	0	95	22	10	0	32	159
8:30 AM	4	26	0	30	66	11	0	77	18	5	0	23	130
8:45 AM	3	26	0	29	61	19	0	80	12	4	0	16	125
Total	21	94	0	115	269	77	0	346	84	26	0	110	571
Grand Total	39	170	0	209	570	128	0	698	188	47	0	235	1142
Approach %	18.7	81.3	0.0		81.7	18.3	0.0		80.0	20.0	0.0		
Total %	3.4	14.9	0.0	18.3	49.9	11.2	0.0	61.1	16.5	4.1	0.0	20.6	
Exiting Leg Total				617				358				167	1142

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

	Borthwick Avenue				Borthwick Avenue				Greenland Road				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:30 AM	5	18	0	23	69	15	0	84	29	6	0	35	142
7:45 AM	3	25	0	28	119	18	0	137	34	10	0	44	209
8:00 AM	7	17	0	24	76	18	0	94	32	7	0	39	157
8:15 AM	7	25	0	32	66	29	0	95	22	10	0	32	159
Total Volume	22	85	0	107	330	80	0	410	117	33	0	150	667
% Approach Total	20.6	79.4	0.0		80.5	19.5	0.0		78.0	22.0	0.0		
PHF	0.786	0.850	0.000	0.836	0.693	0.690	0.000	0.748	0.860	0.825	0.000	0.852	0.798
Entering Leg	22	85	0	107	330	80	0	410	117	33	0	150	667
Exiting Leg				363				202				102	667
Total				470				612				252	1334

PDI File #: 239200 B
 Location: S: Borthwick Avenue
 Location: E: Borthwick Avenue W: Greenland Road
 City, State: Portsmouth, NH
 Client: TFMoran/ J. Porter
 Site Code: 47528.00
 Count Date: Thursday, March 9, 2023
 Start Time: 7:00 AM
 End Time: 9:00 AM



157 Washington Street, Suite 2
 Hudson, MA 01749
 508-875-0100 datarequests@pdillc.com

Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)

	Borthwick Avenue				Borthwick Avenue				Greenland Road				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:00 AM	0	1	0	1	2	0	0	2	0	0	0	0	3
7:15 AM	0	3	0	3	2	2	0	4	2	0	0	2	9
7:30 AM	0	3	0	3	1	1	0	2	1	0	0	1	6
7:45 AM	0	2	0	2	3	3	0	6	2	0	0	2	10
Total	0	9	0	9	8	6	0	14	5	0	0	5	28
8:00 AM	0	1	0	1	0	2	0	2	1	1	0	2	5
8:15 AM	0	1	0	1	7	1	0	8	0	0	0	0	9
8:30 AM	0	1	0	1	3	2	0	5	0	0	0	0	6
8:45 AM	1	5	0	6	4	1	0	5	1	1	0	2	13
Total	1	8	0	9	14	6	0	20	2	2	0	4	33
Grand Total	1	17	0	18	22	12	0	34	7	2	0	9	61
Approach %	5.6	94.4	0.0		64.7	35.3	0.0		77.8	22.2	0.0		
Total %	1.6	27.9	0.0	29.5	36.1	19.7	0.0	55.7	11.5	3.3	0.0	14.8	
Exiting Leg Total	24				24				13				61
Buses	0	3	0	3	3	7	0	10	5	1	0	6	19
% Buses	0.0	17.6	0.0	16.7	13.6	58.3	0.0	29.4	71.4	50.0	0.0	66.7	31.1
Exiting Leg Total	4				8				7				19
Single-Unit Trucks	1	11	0	12	17	5	0	22	2	1	0	3	37
% Single-Unit	100.0	64.7	0.0	66.7	77.3	41.7	0.0	64.7	28.6	50.0	0.0	33.3	60.7
Exiting Leg Total	18				13				6				37
Articulated Trucks	0	3	0	3	2	0	0	2	0	0	0	0	5
% Articulated	0.0	17.6	0.0	16.7	9.1	0.0	0.0	5.9	0.0	0.0	0.0	0.0	8.2
Exiting Leg Total	2				3				0				5

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

	Borthwick Avenue				Borthwick Avenue				Greenland Road				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
8:00 AM	0	1	0	1	0	2	0	2	1	1	0	2	5
8:15 AM	0	1	0	1	7	1	0	8	0	0	0	0	9
8:30 AM	0	1	0	1	3	2	0	5	0	0	0	0	6
8:45 AM	1	5	0	6	4	1	0	5	1	1	0	2	13
Total Volume	1	8	0	9	14	6	0	20	2	2	0	4	33
% Approach Total	11.1	88.9	0.0		70.0	30.0	0.0		50.0	50.0	0.0		
PHF	0.250	0.400	0.000	0.375	0.500	0.750	0.000	0.625	0.500	0.500	0.000	0.500	0.635
Buses	0	2	0	2	2	3	0	5	2	1	0	3	10
Buses %	0.0	25.0	0.0	22.2	14.3	50.0	0.0	25.0	100.0	50.0	0.0	75.0	30.3
Single-Unit Trucks	1	5	0	6	10	3	0	13	0	1	0	1	20
Single-Unit %	100.0	62.5	0.0	66.7	71.4	50.0	0.0	65.0	0.0	50.0	0.0	25.0	60.6
Articulated Trucks	0	1	0	1	2	0	0	2	0	0	0	0	3
Articulated %	0.0	12.5	0.0	11.1	14.3	0.0	0.0	10.0	0.0	0.0	0.0	0.0	9.1
Buses	0	2	0	2	2	3	0	5	2	1	0	3	10
Single-Unit Trucks	1	5	0	6	10	3	0	13	0	1	0	1	20
Articulated Trucks	0	1	0	1	2	0	0	2	0	0	0	0	3
Total Entering Leg	1	8	0	9	14	6	0	20	2	2	0	4	33
Buses	3				4				3				10
Single-Unit Trucks	11				5				4				20
Articulated Trucks	2				1				0				3
Total Exiting Leg	16				10				7				33

PDI File #: **239200 B**
 Location: **S: Borthwick Avenue**
 Location: **E: Borthwick Avenue W: Greenland Road**
 City, State: **Portsmouth, NH**
 Client: **TFMoran/ J. Porter**
 Site Code: **47528.00**
 Count Date: **Thursday, March 9, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



157 Washington Street, Suite 2
 Hudson, MA 01749
 508-875-0100 datarequests@pdillc.com

Buses

	Borthwick Avenue				Borthwick Avenue				Greenland Road				Total	
	from East				from South				from West					
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	1	0	1	1	2	0	3	2	0	0	2	6	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:45 AM	0	0	0	0	0	2	0	2	1	0	0	1	3	
Total	0	1	0	1	1	4	0	5	3	0	0	3	9	
8:00 AM	0	0	0	0	0	1	0	1	1	1	0	2	3	
8:15 AM	0	1	0	1	1	0	0	1	0	0	0	0	2	
8:30 AM	0	0	0	0	1	1	0	2	0	0	0	0	2	
8:45 AM	0	1	0	1	0	1	0	1	1	0	0	1	3	
Total	0	2	0	2	2	3	0	5	2	1	0	3	10	
Grand Total	0	3	0	3	3	7	0	10	5	1	0	6	19	
Approach %	0.0	100.0	0.0		30.0	70.0	0.0		83.3	16.7	0.0			
Total %	0.0	15.8	0.0	15.8	15.8	36.8	0.0	52.6	26.3	5.3	0.0	31.6		
Exiting Leg Total				4				8				7	19	

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:15 AM	Borthwick Avenue				Borthwick Avenue				Greenland Road				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:15 AM	0	1	0	1	1	2	0	3	2	0	0	2	6
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	2	0	2	1	0	0	1	3
8:00 AM	0	0	0	0	0	1	0	1	1	1	0	2	3
Total Volume	0	1	0	1	1	5	0	6	4	1	0	5	12
% Approach Total	0.0	100.0	0.0		16.7	83.3	0.0		80.0	20.0	0.0		
PHF	0.000	0.250	0.000	0.250	0.250	0.625	0.000	0.500	0.500	0.250	0.000	0.625	0.500
Entering Leg	0	1	0	1	1	5	0	6	4	1	0	5	12
Exiting Leg				2				5				5	12
Total				3				11				10	24

PDI File #: **239200 B**
 Location: **S: Borthwick Avenue**
 Location: **E: Borthwick Avenue W: Greenland Road**
 City, State: **Portsmouth, NH**
 Client: **TFMoran/ J. Porter**
 Site Code: **47528.00**
 Count Date: **Thursday, March 9, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



157 Washington Street, Suite 2
 Hudson, MA 01749
 508-875-0100 datarequests@pdillc.com

Single-Unit Trucks

	Borthwick Avenue				Borthwick Avenue				Greenland Road				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:00 AM	0	0	0	0	2	0	0	2	0	0	0	0	2
7:15 AM	0	2	0	2	1	0	0	1	0	0	0	0	3
7:30 AM	0	2	0	2	1	1	0	2	1	0	0	1	5
7:45 AM	0	2	0	2	3	1	0	4	1	0	0	1	7
Total	0	6	0	6	7	2	0	9	2	0	0	2	17
8:00 AM	0	1	0	1	0	1	0	1	0	0	0	0	2
8:15 AM	0	0	0	0	5	1	0	6	0	0	0	0	6
8:30 AM	0	1	0	1	2	1	0	3	0	0	0	0	4
8:45 AM	1	3	0	4	3	0	0	3	0	1	0	1	8
Total	1	5	0	6	10	3	0	13	0	1	0	1	20
Grand Total	1	11	0	12	17	5	0	22	2	1	0	3	37
Approach %	8.3	91.7	0.0		77.3	22.7	0.0		66.7	33.3	0.0		
Total %	2.7	29.7	0.0	32.4	45.9	13.5	0.0	59.5	5.4	2.7	0.0	8.1	
Exiting Leg Total	18				13				6				37

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:30 AM	Borthwick Avenue				Borthwick Avenue				Greenland Road				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:30 AM	0	2	0	2	1	1	0	2	1	0	0	1	5
7:45 AM	0	2	0	2	3	1	0	4	1	0	0	1	7
8:00 AM	0	1	0	1	0	1	0	1	0	0	0	0	2
8:15 AM	0	0	0	0	5	1	0	6	0	0	0	0	6
Total Volume	0	5	0	5	9	4	0	13	2	0	0	2	20
% Approach Total	0.0	100.0	0.0		69.2	30.8	0.0		100.0	0.0	0.0		
PHF	0.000	0.625	0.000	0.625	0.450	1.000	0.000	0.542	0.500	0.000	0.000	0.500	0.714
Entering Leg	0	5	0	5	9	4	0	13	2	0	0	2	20
Exiting Leg	9				7				4				20
Total	14				20				6				40

PDI File #: **239200 B**
 Location: **S: Borthwick Avenue**
 Location: **E: Borthwick Avenue W: Greenland Road**
 City, State: **Portsmouth, NH**
 Client: **TFMoran/ J. Porter**
 Site Code: **47528.00**
 Count Date: **Thursday, March 9, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



PRECISION
 D A T A
 INDUSTRIES, LLC

157 Washington Street, Suite 2
 Hudson, MA 01749
 508-875-0100 datarequests@pdillc.com

Articulated Trucks

	Borthwick Avenue				Borthwick Avenue				Greenland Road				Total	
	from East				from South				from West					
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total		
7:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	0	2	0	0	0	0	0	0	0	0	0	2
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	1	0	0	1	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	1	0	1	1	0	0	1	0	0	0	0	0	2
Total	0	1	0	1	2	0	0	2	0	0	0	0	0	3
Grand Total	0	3	0	3	2	0	0	2	0	0	0	0	0	5
Approach %	0.0	100.0	0.0		100.0	0.0	0.0		0.0	0.0	0.0			
Total %	0.0	60.0	0.0	60.0	40.0	0.0	0.0	40.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total				2				3					0	5

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	Borthwick Avenue				Borthwick Avenue				Greenland Road				Total	
	from East				from South				from West					
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total		
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	1	0	0	1	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	1	0	1	1	0	0	1	0	0	0	0	0	2
Total Volume	0	1	0	1	2	0	0	2	0	0	0	0	0	3
% Approach Total	0.0	100.0	0.0		100.0	0.0	0.0		0.0	0.0	0.0			
PHF	0.000	0.250	0.000	0.250	0.500	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.375
Entering Leg	0	1	0	1	2	0	0	2	0	0	0	0	0	3
Exiting Leg				2				1					0	3
Total				3				3					0	6

PDI File #: **239200 B**
 Location: **S: Borthwick Avenue**
 Location: **E: Borthwick Avenue W: Greenland Road**
 City, State: **Portsmouth, NH**
 Client: **TFMoran/ J. Porter**
 Site Code: **47528.00**
 Count Date: **Thursday, March 9, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



157 Washington Street, Suite 2
 Hudson, MA 01749
 508-875-0100 datarequests@pdillc.com

Bicycles (on Roadway and Crosswalks)

	Borthwick Avenue						Borthwick Avenue						Greenland Road						Total
	from East						from South						from West						
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	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	0.0	0.0		
Total %	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	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total	0						0						0						0

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

	Borthwick Avenue						Borthwick Avenue						Greenland Road						Total
	from East						from South						from West						
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	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	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0						0						0						0
Exiting Leg	0						0						0						0
Total	0						0						0						0

PDI File #: **239200 B**
 Location: **S: Borthwick Avenue**
 Location: **E: Borthwick Avenue W: Greenland Road**
 City, State: **Portsmouth, NH**
 Client: **TFMoran/ J. Porter**
 Site Code: **47528.00**
 Count Date: **Thursday, March 9, 2023**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



157 Washington Street, Suite 2
 Hudson, MA 01749
 508-875-0100 datarequests@pdillc.com

Pedestrians

	Borthwick Avenue						Borthwick Avenue						Greenland Road						Total
	from East						from South						from West						
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg Total	0						0						0						0

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Borthwick Avenue						Borthwick Avenue						Greenland Road						Total
	from East						from South						from West						
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	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	0.0	0.0	0.0	0.0	0.0	0.0
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg	0						0						0						0
Total	0						0						0						0

PDI File #: **239200 B**
 Location: **S: Borthwick Avenue**
 Location: **E: Borthwick Avenue W: Greenland Road**
 City, State: **Portsmouth, NH**
 Client: **TFMoran/ J. Porter**
 Site Code: **47528.00**
 Count Date: **Thursday, March 9, 2023**
 Start Time: **2:00 PM**
 End Time: **6:00 PM**
 Class:



157 Washington Street, Suite 2
 Hudson, MA 01749
 508-875-0100 datarequests@pdillc.com

Cars and Heavy Vehicles (Combined)

	Borthwick Avenue				Borthwick Avenue				Greenland Road				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
2:00 PM	4	43	0	47	41	21	0	62	14	6	0	20	129
2:15 PM	3	45	0	48	53	27	0	80	15	11	0	26	154
2:30 PM	9	68	0	77	44	20	0	64	23	7	0	30	171
2:45 PM	5	59	0	64	43	23	0	66	16	8	0	24	154
Total	21	215	0	236	181	91	0	272	68	32	0	100	608
3:00 PM	4	81	0	85	46	16	0	62	22	1	0	23	170
3:15 PM	9	80	0	89	41	31	1	73	18	4	0	22	184
3:30 PM	8	63	0	71	46	24	0	70	18	12	0	30	171
3:45 PM	9	69	0	78	30	21	0	51	24	7	0	31	160
Total	30	293	0	323	163	92	1	256	82	24	0	106	685
4:00 PM	6	82	0	88	33	22	0	55	23	3	0	26	169
4:15 PM	4	59	0	63	24	36	0	60	21	3	0	24	147
4:30 PM	8	59	0	67	20	13	0	33	24	7	0	31	131
4:45 PM	10	51	0	61	17	23	0	40	27	7	0	34	135
Total	28	251	0	279	94	94	0	188	95	20	0	115	582
5:00 PM	6	119	0	125	28	20	0	48	29	10	0	39	212
5:15 PM	2	68	0	70	19	21	0	40	25	2	0	27	137
5:30 PM	5	37	0	42	19	22	1	42	23	5	0	28	112
5:45 PM	4	33	0	37	27	19	0	46	18	6	0	24	107
Total	17	257	0	274	93	82	1	176	95	23	0	118	568
Grand Total	96	1016	0	1112	531	359	2	892	340	99	0	439	2443
Approach %	8.6	91.4	0.0		59.5	40.2	0.2		77.4	22.6	0.0		
Total %	3.9	41.6	0.0	45.5	21.7	14.7	0.1	36.5	13.9	4.1	0.0	18.0	
Exiting Leg Total				630				1358				455	2443
Cars	92	993	0	1085	506	349	2	857	329	96	0	425	2367
% Cars	95.8	97.7	0.0	97.6	95.3	97.2	100.0	96.1	96.8	97.0	0.0	96.8	96.9
Exiting Leg Total				602				1324				441	2367
Heavy Vehicles	4	23	0	27	25	10	0	35	11	3	0	14	76
% Heavy Vehicles	4.2	2.3	0.0	2.4	4.7	2.8	0.0	3.9	3.2	3.0	0.0	3.2	3.1
Exiting Leg Total				28				34				14	76

Peak Hour Analysis from 02:00 PM to 06:00 PM begins at:

	Borthwick Avenue				Borthwick Avenue				Greenland Road				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
3:00 PM	4	81	0	85	46	16	0	62	22	1	0	23	170
3:15 PM	9	80	0	89	41	31	1	73	18	4	0	22	184
3:30 PM	8	63	0	71	46	24	0	70	18	12	0	30	171
3:45 PM	9	69	0	78	30	21	0	51	24	7	0	31	160
Total Volume	30	293	0	323	163	92	1	256	82	24	0	106	685
% Approach Total	9.3	90.7	0.0		63.7	35.9	0.4		77.4	22.6	0.0		
PHF	0.833	0.904	0.000	0.907	0.886	0.742	0.250	0.877	0.854	0.500	0.000	0.855	0.931
Cars	29	285	0	314	154	89	1	244	79	23	0	102	660
Cars %	96.7	97.3	0.0	97.2	94.5	96.7	100.0	95.3	96.3	95.8	0.0	96.2	96.4
Heavy Vehicles	1	8	0	9	9	3	0	12	3	1	0	4	25
Heavy Vehicles %	3.3	2.7	0.0	2.8	5.5	3.3	0.0	4.7	3.7	4.2	0.0	3.8	3.6
Cars Enter Leg	29	285	0	314	154	89	1	244	79	23	0	102	660
Heavy Enter Leg	1	8	0	9	9	3	0	12	3	1	0	4	25
Total Entering Leg	30	293	0	323	163	92	1	256	82	24	0	106	685
Cars Exiting Leg				177				365				118	660
Heavy Exiting Leg				10				11				4	25
Total Exiting Leg				187				376				122	685

PDI File #: **239200 B**
 Location: **S: Borthwick Avenue**
 Location: **E: Borthwick Avenue W: Greenland Road**
 City, State: **Portsmouth, NH**
 Client: **TFMoran/ J. Porter**
 Site Code: **47528.00**
 Count Date: **Thursday, March 9, 2023**
 Start Time: **2:00 PM**
 End Time: **6:00 PM**
 Class:



157 Washington Street, Suite 2
 Hudson, MA 01749
 508-875-0100 datarequests@pdillc.com

Cars

	Borthwick Avenue				Borthwick Avenue				Greenland Road				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
2:00 PM	4	42	0	46	40	21	0	61	14	6	0	20	127
2:15 PM	3	43	0	46	48	25	0	73	15	11	0	26	145
2:30 PM	9	63	0	72	43	19	0	62	21	6	0	27	161
2:45 PM	5	57	0	62	41	23	0	64	15	8	0	23	149
Total	21	205	0	226	172	88	0	260	65	31	0	96	582
3:00 PM	4	79	0	83	42	16	0	58	22	1	0	23	164
3:15 PM	9	80	0	89	38	30	1	69	17	4	0	21	179
3:30 PM	8	59	0	67	45	22	0	67	16	11	0	27	161
3:45 PM	8	67	0	75	29	21	0	50	24	7	0	31	156
Total	29	285	0	314	154	89	1	244	79	23	0	102	660
4:00 PM	6	82	0	88	31	20	0	51	22	3	0	25	164
4:15 PM	3	57	0	60	24	35	0	59	20	2	0	22	141
4:30 PM	8	59	0	67	18	13	0	31	24	7	0	31	129
4:45 PM	8	51	0	59	16	23	0	39	26	7	0	33	131
Total	25	249	0	274	89	91	0	180	92	19	0	111	565
5:00 PM	6	118	0	124	27	20	0	47	28	10	0	38	209
5:15 PM	2	66	0	68	19	20	0	39	25	2	0	27	134
5:30 PM	5	37	0	42	18	22	1	41	22	5	0	27	110
5:45 PM	4	33	0	37	27	19	0	46	18	6	0	24	107
Total	17	254	0	271	91	81	1	173	93	23	0	116	560
Grand Total	92	993	0	1085	506	349	2	857	329	96	0	425	2367
Approach %	8.5	91.5	0.0		59.0	40.7	0.2		77.4	22.6	0.0		
Total %	3.9	42.0	0.0	45.8	21.4	14.7	0.1	36.2	13.9	4.1	0.0	18.0	
Exiting Leg Total				602				1324				441	2367

Peak Hour Analysis from 02:00 PM to 06:00 PM begins at:

	Borthwick Avenue				Borthwick Avenue				Greenland Road				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
3:00 PM	4	79	0	83	42	16	0	58	22	1	0	23	164
3:15 PM	9	80	0	89	38	30	1	69	17	4	0	21	179
3:30 PM	8	59	0	67	45	22	0	67	16	11	0	27	161
3:45 PM	8	67	0	75	29	21	0	50	24	7	0	31	156
Total Volume	29	285	0	314	154	89	1	244	79	23	0	102	660
% Approach Total	9.2	90.8	0.0		63.1	36.5	0.4		77.5	22.5	0.0		
PHF	0.806	0.891	0.000	0.882	0.856	0.742	0.250	0.884	0.823	0.523	0.000	0.823	0.922
Entering Leg	29	285	0	314	154	89	1	244	79	23	0	102	660
Exiting Leg				177				365				118	660
Total				491				609				220	1320

PDI File #: 239200 B
 Location: S: Borthwick Avenue
 Location: E: Borthwick Avenue W: Greenland Road
 City, State: Portsmouth, NH
 Client: TFMoran/ J. Porter
 Site Code: 47528.00
 Count Date: Thursday, March 9, 2023
 Start Time: 2:00 PM
 End Time: 6:00 PM



PRECISION
 D A T A
 INDUSTRIES, LLC

157 Washington Street, Suite 2
 Hudson, MA 01749
 508-875-0100 datarequests@pdillc.com

Class: Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)

	Borthwick Avenue				Borthwick Avenue				Greenland Road				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
2:00 PM	0	1	0	1	1	0	0	1	0	0	0	0	2
2:15 PM	0	2	0	2	5	2	0	7	0	0	0	0	9
2:30 PM	0	5	0	5	1	1	0	2	2	1	0	3	10
2:45 PM	0	2	0	2	2	0	0	2	1	0	0	1	5
Total	0	10	0	10	9	3	0	12	3	1	0	4	26
3:00 PM	0	2	0	2	4	0	0	4	0	0	0	0	6
3:15 PM	0	0	0	0	3	1	0	4	1	0	0	1	5
3:30 PM	0	4	0	4	1	2	0	3	2	1	0	3	10
3:45 PM	1	2	0	3	1	0	0	1	0	0	0	0	4
Total	1	8	0	9	9	3	0	12	3	1	0	4	25
4:00 PM	0	0	0	0	2	2	0	4	1	0	0	1	5
4:15 PM	1	2	0	3	0	1	0	1	1	1	0	2	6
4:30 PM	0	0	0	0	2	0	0	2	0	0	0	0	2
4:45 PM	2	0	0	2	1	0	0	1	1	0	0	1	4
Total	3	2	0	5	5	3	0	8	3	1	0	4	17
5:00 PM	0	1	0	1	1	0	0	1	1	0	0	1	3
5:15 PM	0	2	0	2	0	1	0	1	0	0	0	0	3
5:30 PM	0	0	0	0	1	0	0	1	1	0	0	1	2
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	3	0	3	2	1	0	3	2	0	0	2	8
Grand Total	4	23	0	27	25	10	0	35	11	3	0	14	76
Approach %	14.8	85.2	0.0		71.4	28.6	0.0		78.6	21.4	0.0		
Total %	5.3	30.3	0.0	35.5	32.9	13.2	0.0	46.1	14.5	3.9	0.0	18.4	
Exiting Leg Total				28				34				14	76
Buses	0	3	0	3	2	6	0	8	5	2	0	7	18
% Buses	0.0	13.0	0.0	11.1	8.0	60.0	0.0	22.9	45.5	66.7	0.0	50.0	23.7
Exiting Leg Total				4				8				6	18
Single-Unit Trucks	4	17	0	21	17	2	0	19	5	1	0	6	46
% Single-Unit	100.0	73.9	0.0	77.8	68.0	20.0	0.0	54.3	45.5	33.3	0.0	42.9	60.5
Exiting Leg Total				18				22				6	46
Articulated Trucks	0	3	0	3	6	2	0	8	1	0	0	1	12
% Articulated	0.0	13.0	0.0	11.1	24.0	20.0	0.0	22.9	9.1	0.0	0.0	7.1	15.8
Exiting Leg Total				6				4				2	12

Peak Hour Analysis from 02:00 PM to 06:00 PM begins at:

2:15 PM	Borthwick Avenue				Borthwick Avenue				Greenland Road				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
2:15 PM	0	2	0	2	5	2	0	7	0	0	0	0	9
2:30 PM	0	5	0	5	1	1	0	2	2	1	0	3	10
2:45 PM	0	2	0	2	2	0	0	2	1	0	0	1	5
3:00 PM	0	2	0	2	4	0	0	4	0	0	0	0	6
Total Volume	0	11	0	11	12	3	0	15	3	1	0	4	30
% Approach Total	0.0	100.0	0.0		80.0	20.0	0.0		75.0	25.0	0.0		
PHF	0.000	0.550	0.000	0.550	0.600	0.375	0.000	0.536	0.375	0.250	0.000	0.333	0.750
Buses	0	1	0	1	0	3	0	3	3	1	0	4	8
Buses %	0.0	9.1	0.0	9.1	0.0	100.0	0.0	20.0	100.0	100.0	0.0	100.0	26.7
Single-Unit Trucks	0	8	0	8	8	0	0	8	0	0	0	0	16
Single-Unit %	0.0	72.7	0.0	72.7	66.7	0.0	0.0	53.3	0.0	0.0	0.0	0.0	53.3
Articulated Trucks	0	2	0	2	4	0	0	4	0	0	0	0	6
Articulated %	0.0	18.2	0.0	18.2	33.3	0.0	0.0	26.7	0.0	0.0	0.0	0.0	20.0
Buses	0	1	0	1	0	3	0	3	3	1	0	4	8
Single-Unit Trucks	0	8	0	8	8	0	0	8	0	0	0	0	16
Articulated Trucks	0	2	0	2	4	0	0	4	0	0	0	0	6
Total Entering Leg	0	11	0	11	12	3	0	15	3	1	0	4	30
Buses				1				4				3	8
Single-Unit Trucks				8				8				0	16
Articulated Trucks				4				2				0	6
Total Exiting Leg				13				14				3	30

PDI File #: **239200 B**
 Location: **S: Borthwick Avenue**
 Location: **E: Borthwick Avenue W: Greenland Road**
 City, State: **Portsmouth, NH**
 Client: **TFMoran/ J. Porter**
 Site Code: **47528.00**
 Count Date: **Thursday, March 9, 2023**
 Start Time: **2:00 PM**
 End Time: **6:00 PM**
 Class:



157 Washington Street, Suite 2
 Hudson, MA 01749
 508-875-0100 datarequests@pdillc.com

Buses

	Borthwick Avenue				Borthwick Avenue				Greenland Road				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	2	0	2	0	0	0	0	2
2:30 PM	0	1	0	1	0	1	0	1	2	1	0	3	5
2:45 PM	0	0	0	0	0	0	0	0	1	0	0	1	1
Total	0	1	0	1	0	3	0	3	3	1	0	4	8
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	1	0	1	1	0	0	1	2
3:30 PM	0	0	0	0	0	1	0	1	1	0	0	1	2
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	2	0	2	2	0	0	2	4
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	1	0	1	0	1	0	1	0	1	0	1	3
4:30 PM	0	0	0	0	1	0	0	1	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	1	1	0	2	0	1	0	1	4
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	1	0	0	1	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	1	0	0	1	0	0	0	0	2
Grand Total	0	3	0	3	2	6	0	8	5	2	0	7	18
Approach %	0.0	100.0	0.0		25.0	75.0	0.0		71.4	28.6	0.0		
Total %	0.0	16.7	0.0	16.7	11.1	33.3	0.0	44.4	27.8	11.1	0.0	38.9	
Exiting Leg Total				4				8				6	18

Peak Hour Analysis from 02:00 PM to 06:00 PM begins at:

2:00 PM	Borthwick Avenue				Borthwick Avenue				Greenland Road				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	2	0	2	0	0	0	0	2
2:30 PM	0	1	0	1	0	1	0	1	2	1	0	3	5
2:45 PM	0	0	0	0	0	0	0	0	1	0	0	1	1
Total Volume	0	1	0	1	0	3	0	3	3	1	0	4	8
% Approach Total	0.0	100.0	0.0		0.0	100.0	0.0		75.0	25.0	0.0		
PHF	0.000	0.250	0.000	0.250	0.000	0.375	0.000	0.375	0.375	0.250	0.000	0.333	0.400
Entering Leg	0	1	0	1	0	3	0	3	3	1	0	4	8
Exiting Leg				1				4				3	8
Total				2				7				7	16

PDI File #: **239200 B**
 Location: **S: Borthwick Avenue**
 Location: **E: Borthwick Avenue W: Greenland Road**
 City, State: **Portsmouth, NH**
 Client: **TFMoran/ J. Porter**
 Site Code: **47528.00**
 Count Date: **Thursday, March 9, 2023**
 Start Time: **2:00 PM**
 End Time: **6:00 PM**
 Class:



**PRECISION
D A T A
INDUSTRIES, LLC**

157 Washington Street, Suite 2
 Hudson, MA 01749
 508-875-0100 datarequests@pdillc.com

Single-Unit Trucks

	Borthwick Avenue				Borthwick Avenue				Greenland Road				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
2:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	1
2:15 PM	0	2	0	2	2	0	0	2	0	0	0	0	4
2:30 PM	0	2	0	2	1	0	0	1	0	0	0	0	3
2:45 PM	0	2	0	2	2	0	0	2	0	0	0	0	4
Total	0	7	0	7	5	0	0	5	0	0	0	0	12
3:00 PM	0	2	0	2	3	0	0	3	0	0	0	0	5
3:15 PM	0	0	0	0	3	0	0	3	0	0	0	0	3
3:30 PM	0	3	0	3	1	0	0	1	0	1	0	1	5
3:45 PM	1	2	0	3	1	0	0	1	0	0	0	0	4
Total	1	7	0	8	8	0	0	8	0	1	0	1	17
4:00 PM	0	0	0	0	2	1	0	3	1	0	0	1	4
4:15 PM	1	1	0	2	0	0	0	0	1	0	0	1	3
4:30 PM	0	0	0	0	1	0	0	1	0	0	0	0	1
4:45 PM	2	0	0	2	1	0	0	1	1	0	0	1	4
Total	3	1	0	4	4	1	0	5	3	0	0	3	12
5:00 PM	0	1	0	1	0	0	0	0	1	0	0	1	2
5:15 PM	0	1	0	1	0	1	0	1	0	0	0	0	2
5:30 PM	0	0	0	0	0	0	0	0	1	0	0	1	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	0	2	0	1	0	1	2	0	0	2	5
Grand Total	4	17	0	21	17	2	0	19	5	1	0	6	46
Approach %	19.0	81.0	0.0		89.5	10.5	0.0		83.3	16.7	0.0		
Total %	8.7	37.0	0.0	45.7	37.0	4.3	0.0	41.3	10.9	2.2	0.0	13.0	
Exiting Leg Total				18				22				6	46

Peak Hour Analysis from 02:00 PM to 06:00 PM begins at:

2:45 PM	Borthwick Avenue				Borthwick Avenue				Greenland Road				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
2:45 PM	0	2	0	2	2	0	0	2	0	0	0	0	4
3:00 PM	0	2	0	2	3	0	0	3	0	0	0	0	5
3:15 PM	0	0	0	0	3	0	0	3	0	0	0	0	3
3:30 PM	0	3	0	3	1	0	0	1	0	1	0	1	5
Total Volume	0	7	0	7	9	0	0	9	0	1	0	1	17
% Approach Total	0.0	100.0	0.0		100.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.000	0.583	0.000	0.583	0.750	0.000	0.000	0.750	0.000	0.250	0.000	0.250	0.850
Entering Leg	0	7	0	7	9	0	0	9	0	1	0	1	17
Exiting Leg				10				7				0	17
Total				17				16				1	34

PDI File #: **239200 B**
 Location: **S: Borthwick Avenue**
 Location: **E: Borthwick Avenue W: Greenland Road**
 City, State: **Portsmouth, NH**
 Client: **TFMoran/ J. Porter**
 Site Code: **47528.00**
 Count Date: **Thursday, March 9, 2023**
 Start Time: **2:00 PM**
 End Time: **6:00 PM**
 Class:



157 Washington Street, Suite 2
 Hudson, MA 01749
 508-875-0100 datarequests@pdillc.com

Articulated Trucks

	Borthwick Avenue				Borthwick Avenue				Greenland Road				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
2:00 PM	0	0	0	0	1	0	0	1	0	0	0	0	1
2:15 PM	0	0	0	0	3	0	0	3	0	0	0	0	3
2:30 PM	0	2	0	2	0	0	0	0	0	0	0	0	2
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	0	2	4	0	0	4	0	0	0	0	6
3:00 PM	0	0	0	0	1	0	0	1	0	0	0	0	1
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	1	0	1	0	1	0	1	1	0	0	1	3
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	1	1	0	2	1	0	0	1	4
4:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	0	0	0	0	1
5:00 PM	0	0	0	0	1	0	0	1	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	1	0	0	1	0	0	0	0	1
Grand Total	0	3	0	3	6	2	0	8	1	0	0	1	12
Approach %	0.0	100.0	0.0		75.0	25.0	0.0		100.0	0.0	0.0		
Total %	0.0	25.0	0.0	25.0	50.0	16.7	0.0	66.7	8.3	0.0	0.0	8.3	
Exiting Leg Total				6				4				2	12

Peak Hour Analysis from 02:00 PM to 06:00 PM begins at:

2:00 PM	Borthwick Avenue				Borthwick Avenue				Greenland Road				Total
	from East				from South				from West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
2:00 PM	0	0	0	0	1	0	0	1	0	0	0	0	1
2:15 PM	0	0	0	0	3	0	0	3	0	0	0	0	3
2:30 PM	0	2	0	2	0	0	0	0	0	0	0	0	2
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	2	0	2	4	0	0	4	0	0	0	0	6
% Approach Total	0.0	100.0	0.0		100.0	0.0	0.0		0.0	0.0	0.0		
PHF	0.000	0.250	0.000	0.250	0.333	0.000	0.000	0.333	0.000	0.000	0.000	0.000	0.500
Entering Leg	0	2	0	2	4	0	0	4	0	0	0	0	6
Exiting Leg				4				2				0	6
Total				6				6				0	12

PDI File #: **239200 B**
 Location: **S: Borthwick Avenue**
 Location: **E: Borthwick Avenue W: Greenland Road**
 City, State: **Portsmouth, NH**
 Client: **TFMoran/ J. Porter**
 Site Code: **47528.00**
 Count Date: **Thursday, March 9, 2023**
 Start Time: **2:00 PM**
 End Time: **6:00 PM**
 Class: **Bicycles (on Roadway and Crosswalks)**



157 Washington Street, Suite 2
 Hudson, MA 01749
 508-875-0100 datarequests@pdillc.com

Bicycles (on Roadway and Crosswalks)

	Borthwick Avenue						Borthwick Avenue						Greenland Road						Total	
	from East						from South						from West							
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total		
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total %	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total	0						0						0						0	

Peak Hour Analysis from 02:00 PM to 06:00 PM begins at:

2:00 PM	Borthwick Avenue						Borthwick Avenue						Greenland Road						Total	
	from East						from South						from West							
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total		
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg	0						0						0						0	
Total	0						0						0						0	

PDI File #: **239200 B**
 Location: **S: Borthwick Avenue**
 Location: **E: Borthwick Avenue W: Greenland Road**
 City, State: **Portsmouth, NH**
 Client: **TFMoran/ J. Porter**
 Site Code: **47528.00**
 Count Date: **Thursday, March 9, 2023**
 Start Time: **2:00 PM**
 End Time: **6:00 PM**
 Class:



157 Washington Street, Suite 2
 Hudson, MA 01749
 508-875-0100 datarequests@pdillc.com

Pedestrians

	Borthwick Avenue						Borthwick Avenue						Greenland Road						Total
	from East						from South						from West						
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total	
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg Total	0						0						0						0

Peak Hour Analysis from 02:00 PM to 06:00 PM begins at:

	Borthwick Avenue						Borthwick Avenue						Greenland Road						Total
	from East						from South						from West						
	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	U-Turn	CW-NB	CW-SB	Total	
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	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	0.0	0.0	0.0	0.0	0.0	0.0
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg	0						0						0						0
Total	0						0						0						0

Sherburne Road
 south of School Driveway
 City, State: Portsmouth, NH
 Client: TF Moran/ J. Porter
 Site Code: 47528



PRECISION
 DATA
 INDUSTRIES, LLC
 157 Washington Street, Suite 2
 Hudson, MA 01749
 508-875-0100 datarequests@pdillc.com
 Email: datarequests@pdillc.com

PDI File #: 239200 ATR-A

Count Date: Thursday, March 9, 2023
 Direction: NB

AM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	5	0	0	0	5
12:15 AM	0	0	1	0	0	0	1
12:30 AM	0	0	1	0	0	0	1
12:45 AM	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0
1:15 AM	0	0	0	0	0	0	0
1:30 AM	0	0	0	0	0	0	0
1:45 AM	0	0	0	0	0	0	0
2:00 AM	0	0	3	0	0	0	3
2:15 AM	0	0	0	0	0	0	0
2:30 AM	0	0	0	0	0	0	0
2:45 AM	0	0	2	0	0	0	2
3:00 AM	0	0	1	0	0	0	1
3:15 AM	0	0	0	0	0	0	0
3:30 AM	0	0	0	0	0	0	0
3:45 AM	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0
4:15 AM	0	0	0	0	1	0	1
4:30 AM	0	0	0	0	0	0	0
4:45 AM	0	0	0	0	0	0	0
5:00 AM	0	0	2	0	0	0	2
5:15 AM	0	0	1	0	0	0	1
5:30 AM	0	0	0	0	0	0	0
5:45 AM	0	0	0	0	0	0	0
6:00 AM	0	0	3	0	0	0	3
6:15 AM	0	0	2	0	0	0	2
6:30 AM	0	0	4	0	0	0	4
6:45 AM	0	0	5	0	0	0	5
7:00 AM	0	0	7	0	0	0	7
7:15 AM	0	0	9	2	0	0	11
7:30 AM	0	0	12	0	1	0	13
7:45 AM	0	0	11	2	0	0	13
8:00 AM	0	0	10	1	0	0	11
8:15 AM	0	0	16	0	1	0	17
8:30 AM	0	0	7	1	1	0	9
8:45 AM	0	0	6	0	0	0	6
9:00 AM	0	0	13	0	1	0	14
9:15 AM	0	0	9	0	0	0	9
9:30 AM	0	0	5	0	0	0	5
9:45 AM	0	0	7	1	0	0	8
10:00 AM	0	0	8	0	3	0	11
10:15 AM	0	0	10	0	0	0	10
10:30 AM	0	0	9	0	0	0	9
10:45 AM	0	0	8	1	1	0	10
11:00 AM	0	0	5	0	2	0	7
11:15 AM	0	0	13	1	0	0	14
11:30 AM	0	0	6	1	0	0	7
11:45 AM	0	0	11	0	0	0	11

PM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	0	0	13	0	0	0	13
12:15 PM	0	0	19	0	0	0	19
12:30 PM	0	0	16	0	0	0	16
12:45 PM	0	0	22	1	0	0	23
1:00 PM	0	0	18	0	0	0	18
1:15 PM	0	0	10	0	0	0	10
1:30 PM	0	0	15	0	1	0	16
1:45 PM	0	0	14	0	0	0	14
2:00 PM	0	0	17	0	0	0	17
2:15 PM	0	0	20	2	1	0	23
2:30 PM	0	0	18	1	0	0	19
2:45 PM	0	0	16	0	0	0	16
3:00 PM	0	0	13	0	0	0	13
3:15 PM	0	0	25	1	0	0	26
3:30 PM	0	0	21	1	0	1	23
3:45 PM	0	0	20	0	1	0	21
4:00 PM	0	0	15	0	1	0	16
4:15 PM	0	0	33	1	0	0	34
4:30 PM	0	0	14	0	0	0	14
4:45 PM	0	0	22	0	0	0	22
5:00 PM	0	0	19	0	0	0	19
5:15 PM	0	0	17	0	0	0	17
5:30 PM	0	0	24	0	0	0	24
5:45 PM	0	0	17	0	0	0	17
6:00 PM	0	0	18	0	0	0	18
6:15 PM	0	0	20	0	0	0	20
6:30 PM	0	0	15	0	0	0	15
6:45 PM	0	0	17	0	0	0	17
7:00 PM	1	0	17	0	0	0	18
7:15 PM	0	0	7	0	0	0	7
7:30 PM	0	0	13	0	0	0	13
7:45 PM	0	0	8	0	0	0	8
8:00 PM	0	0	10	0	0	0	10
8:15 PM	0	0	11	0	0	0	11
8:30 PM	0	0	7	0	0	0	7
8:45 PM	0	0	7	0	0	0	7
9:00 PM	0	0	7	0	0	0	7
9:15 PM	0	0	5	0	0	0	5
9:30 PM	0	0	4	0	0	0	4
9:45 PM	0	0	9	0	0	0	9
10:00 PM	0	0	6	0	0	0	6
10:15 PM	0	0	4	0	0	0	4
10:30 PM	0	0	1	0	0	0	1
10:45 PM	0	0	2	0	0	0	2
11:00 PM	0	0	3	0	0	0	3
11:15 PM	0	0	0	0	0	0	0
11:30 PM	0	0	1	0	0	0	1
11:45 PM	0	0	1	0	0	0	1

AM Total 0 0 212 10 11 0 233
 Percentage 0.00% 0.00% 90.99% 4.29% 4.72% 0.00%

AM Peak 12:00 AM 12:00 AM 7:30 AM 7:15 AM 10:00 AM 12:00 AM 7:30 AM
 Volume 0 0 49 5 4 0 54

PM Total 1 0 631 7 4 1 644
 Percentage 0.16% 0.00% 97.98% 1.09% 0.62% 0.16%

PM Peak 6:15 PM 12:00 PM 3:30 PM 1:45 PM 1:30 PM 2:45 PM 3:30 PM
 Volume 1 0 89 3 2 1 94

Day Total 1 0 843 17 15 1 877
 Percentage 0.11% 0.00% 96.12% 1.94% 1.71% 0.11%

Sherburne Road
 south of School Driveway
 City, State: Portsmouth, NH
 Client: TF Moran/ J. Porter
 Site Code: 47528



PRECISION
 DATA
 INDUSTRIES, LLC
 157 Washington Street, Suite 2
 Hudson, MA 01749
 508-875-0100 datarequests@pdillc.com
 Email: datarequests@pdillc.com

PDI File #: 239200 ATR-A

Count Date: Thursday, March 9, 2023
 Direction: SB

AM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total	PM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	0	0	0	0	0	12:00 PM	0	0	13	0	0	0	13
12:15 AM	0	0	0	0	0	0	0	12:15 PM	0	0	9	0	0	0	9
12:30 AM	0	0	1	0	0	0	1	12:30 PM	0	0	13	0	0	0	13
12:45 AM	0	0	1	0	0	0	1	12:45 PM	0	0	14	0	3	0	17
1:00 AM	0	0	0	0	0	0	0	1:00 PM	0	0	17	0	0	0	17
1:15 AM	0	0	0	0	0	0	0	1:15 PM	0	0	11	0	0	0	11
1:30 AM	0	0	1	0	0	0	1	1:30 PM	0	0	13	0	0	0	13
1:45 AM	0	0	0	0	0	0	0	1:45 PM	0	0	14	0	1	0	15
2:00 AM	0	0	1	0	0	0	1	2:00 PM	0	0	15	0	0	0	15
2:15 AM	0	0	1	0	0	0	1	2:15 PM	0	0	18	0	0	0	18
2:30 AM	0	0	1	0	0	0	1	2:30 PM	0	0	16	2	0	0	18
2:45 AM	0	0	0	0	0	0	0	2:45 PM	0	0	9	1	0	0	10
3:00 AM	0	0	0	0	0	0	0	3:00 PM	0	0	10	0	0	0	10
3:15 AM	0	0	2	0	0	0	2	3:15 PM	0	0	15	1	0	0	16
3:30 AM	0	0	0	0	0	0	0	3:30 PM	0	0	17	1	0	1	19
3:45 AM	0	0	1	0	0	0	1	3:45 PM	0	0	17	0	0	0	17
4:00 AM	0	0	1	0	0	0	1	4:00 PM	0	0	14	0	1	0	15
4:15 AM	0	0	0	0	1	0	1	4:15 PM	0	0	9	1	0	0	10
4:30 AM	0	0	3	0	0	0	3	4:30 PM	0	0	19	0	0	0	19
4:45 AM	0	0	3	0	0	0	3	4:45 PM	0	0	15	0	0	0	15
5:00 AM	0	0	4	0	0	0	4	5:00 PM	0	0	16	0	0	0	16
5:15 AM	0	0	5	0	0	0	5	5:15 PM	0	0	17	0	0	0	17
5:30 AM	0	0	3	0	0	0	3	5:30 PM	0	0	14	0	0	0	14
5:45 AM	0	0	14	0	0	0	14	5:45 PM	0	0	12	0	0	0	12
6:00 AM	0	0	3	0	0	0	3	6:00 PM	0	0	5	0	0	0	5
6:15 AM	0	0	12	0	0	0	12	6:15 PM	0	0	12	0	0	0	12
6:30 AM	0	0	9	0	0	0	9	6:30 PM	0	0	12	0	0	0	12
6:45 AM	0	0	10	0	0	0	10	6:45 PM	0	0	12	0	0	0	12
7:00 AM	0	0	16	0	0	0	16	7:00 PM	0	0	9	0	0	0	9
7:15 AM	0	0	24	2	0	0	26	7:15 PM	0	0	11	0	0	0	11
7:30 AM	0	0	29	0	1	0	30	7:30 PM	0	0	8	0	0	0	8
7:45 AM	0	0	38	1	1	0	40	7:45 PM	0	0	5	0	0	0	5
8:00 AM	0	0	31	2	0	0	33	8:00 PM	0	0	4	0	0	0	4
8:15 AM	0	0	29	0	0	0	29	8:15 PM	0	0	3	0	0	0	3
8:30 AM	0	0	16	0	1	0	17	8:30 PM	0	0	2	0	0	0	2
8:45 AM	0	0	14	1	1	0	16	8:45 PM	0	0	2	0	0	0	2
9:00 AM	0	0	11	0	0	0	11	9:00 PM	0	0	2	0	0	0	2
9:15 AM	0	0	14	0	0	0	14	9:15 PM	0	0	5	0	0	0	5
9:30 AM	0	0	13	0	0	0	13	9:30 PM	0	0	3	0	0	0	3
9:45 AM	0	0	13	1	0	0	14	9:45 PM	0	0	1	0	0	0	1
10:00 AM	0	0	9	0	0	0	9	10:00 PM	0	0	3	0	0	0	3
10:15 AM	0	0	4	0	0	0	4	10:15 PM	0	0	0	0	0	0	0
10:30 AM	0	0	13	0	0	0	13	10:30 PM	0	0	1	0	0	0	1
10:45 AM	0	0	17	1	0	0	18	10:45 PM	0	0	0	0	0	0	0
11:00 AM	0	0	4	0	1	0	5	11:00 PM	0	0	2	0	0	0	2
11:15 AM	0	0	12	1	2	0	15	11:15 PM	0	0	0	0	0	0	0
11:30 AM	0	0	14	1	0	0	15	11:30 PM	0	0	3	0	0	0	3
11:45 AM	0	0	9	0	0	0	9	11:45 PM	0	0	1	0	0	0	1

AM Total	0	0	406	10	8	0	424
Percentage	0.00%	0.00%	95.75%	2.36%	1.89%	0.00%	
AM Peak	12:00 AM	12:00 AM	7:30 AM	7:15 AM	10:30 AM	12:00 AM	7:30 AM
Volume	0	0	127	5	3	0	132

PM Total	0	0	443	6	5	1	455
Percentage	0.00%	0.00%	97.36%	1.32%	1.10%	0.22%	
PM Peak	12:00 PM	12:00 PM	4:30 PM	2:30 PM	12:00 PM	2:45 PM	3:15 PM
Volume	0	0	67	4	3	1	67

Day Total	0	0	849	16	13	1	879
Percentage	0.00%	0.00%	96.59%	1.82%	1.48%	0.11%	

Sherburne Road
 just south of School Driveway
 City, State: Portsmouth, NH
 Client: TF Moran/ J. Porter
 Site Code: 47528.00



PDI File #: 239200 ATR-A (Speed)

Count Date
 Thursday, March 9, 2023

Speed (60-minute)

NB																
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	1	1	3	2	0	0	0	0	0	0	0	7	35.1	30.0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
2:00 AM	1	0	1	4	0	0	0	0	0	0	0	0	0	6	28.3	23.3
3:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	1	29.0	29.0
4:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	1	22.0	22.0
5:00 AM	0	0	1	1	1	0	0	0	0	0	0	0	0	3	29.2	25.3
6:00 AM	0	0	1	5	7	1	0	0	0	0	0	0	0	14	34.0	30.1
7:00 AM	0	0	9	21	10	1	0	0	0	0	0	0	0	41	31.0	27.7
8:00 AM	0	0	12	23	8	0	0	0	0	0	0	0	0	43	30.0	26.5
9:00 AM	0	0	4	19	14	0	0	0	0	0	0	0	0	37	32.0	28.5
10:00 AM	0	1	6	23	8	1	1	0	0	0	0	0	0	40	30.2	27.1
11:00 AM	1	0	5	15	15	1	0	0	0	0	0	0	0	37	32.6	27.9
12:00 PM	0	1	14	28	25	1	0	0	0	0	0	0	0	69	32.0	27.9
1:00 PM	0	1	6	19	25	3	0	0	0	0	0	0	0	54	33.0	29.4
2:00 PM	0	1	10	38	22	1	0	0	0	0	0	0	0	72	33.0	27.9
3:00 PM	0	1	7	37	33	3	0	0	0	0	0	0	0	81	32.0	28.8
4:00 PM	0	0	12	39	24	3	1	0	0	0	0	0	0	79	32.0	28.4
5:00 PM	0	0	12	26	33	4	0	0	0	0	0	0	0	75	32.9	29.0
6:00 PM	0	0	8	34	19	5	0	0	0	0	0	0	0	66	32.0	28.7
7:00 PM	0	0	5	25	15	0	0	0	0	0	0	0	0	45	31.4	28.1
8:00 PM	1	0	8	16	7	1	1	0	0	0	0	0	0	34	31.0	27.2
9:00 PM	0	0	6	11	6	1	0	0	0	0	0	0	0	24	31.6	27.1
10:00 PM	0	0	0	8	4	1	0	0	0	0	0	0	0	13	31.2	29.2
11:00 PM	0	0	2	2	0	1	0	0	0	0	0	0	0	5	33.0	27.8
Total	3	5	131	396	279	30	3	0	0	0	0	0	0	847	32.0	28.2
Percent	0.35%	0.59%	15.47%	46.75%	32.94%	3.54%	0.35%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%			

AM Peak	2:00 AM	10:00 AM	8:00 AM	8:00 AM	11:00 AM	12:00 AM	10:00 AM									8:00 AM
Volume	1	1	12	23	15	2	1	0	0	0	0	0	0	0	0	43
PM Peak	8:00 PM	12:00 PM	12:00 PM	4:00 PM	3:00 PM	6:00 PM	4:00 PM									3:00 PM
Volume	1	1	14	39	33	5	1	0	0	0	0	0	0	0	81	

15th Percentile:	24.0 MPH	Average Speed:	28.2 MPH	Posted Speed Limit:	25 MPH
50th Percentile:	28.0 MPH	10 MPH Pace:	24 to 33 MPH	Number of Vehicles > 25 MPH:	649
85th Percentile:	32.0 MPH	Number in Pace:	696	Percent of Vehicles > 25 MPH:	76.6%
95th Percentile:	34.0 MPH	Percent in Pace:	82.2%		

Sherburne Road
just south of School Driveway
City, State: Portsmouth, NH
Client: TF Moran/ J. Porter
Site Code: 47528.00



PDI File #: 239200 ATR-A (Speed)

Count Date
Thursday, March 9, 2023

Speed (60-minute)

SB																
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	2	26.6	25.5
1:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	1	25.0	25.0
2:00 AM	0	0	2	1	0	0	0	0	0	0	0	0	0	3	24.7	23.3
3:00 AM	0	0	2	0	1	0	0	0	0	0	0	0	0	3	28.2	25.3
4:00 AM	0	1	3	3	0	0	0	0	0	0	0	0	0	7	28.0	24.3
5:00 AM	0	3	10	9	4	1	0	0	0	0	0	0	0	27	30.0	25.0
6:00 AM	0	1	13	17	3	1	0	0	0	0	0	0	0	35	29.0	25.8
7:00 AM	2	5	45	48	9	2	0	0	1	0	0	0	0	112	28.0	25.2
8:00 AM	2	6	38	38	6	3	0	0	0	0	0	0	0	93	28.2	24.9
9:00 AM	0	2	24	21	4	0	0	0	0	0	0	0	0	51	28.0	24.9
10:00 AM	0	2	18	18	5	1	0	0	0	0	0	0	0	44	29.0	25.2
11:00 AM	2	6	16	17	4	0	0	1	0	0	0	0	0	46	29.0	24.5
12:00 PM	0	8	24	22	2	2	0	0	0	0	0	0	0	58	28.0	24.4
1:00 PM	0	2	30	18	4	2	0	0	0	0	0	0	0	56	29.0	25.1
2:00 PM	1	9	28	13	10	0	0	0	0	0	0	0	0	61	30.0	23.9
3:00 PM	2	7	27	17	2	0	0	0	0	0	0	0	0	55	26.0	22.6
4:00 PM	1	3	29	20	7	0	0	0	0	0	0	0	0	60	29.0	24.5
5:00 PM	0	2	32	22	1	4	0	0	0	0	0	0	0	61	28.0	24.9
6:00 PM	1	6	20	11	3	1	0	0	0	0	0	0	0	42	27.0	23.3
7:00 PM	0	0	17	14	2	0	0	0	0	0	0	0	0	33	28.0	25.2
8:00 PM	0	2	5	4	1	0	0	0	0	0	0	0	0	12	27.0	23.6
9:00 PM	0	0	7	4	0	0	0	0	0	0	0	0	0	11	26.5	24.3
10:00 PM	0	0	2	2	0	0	0	0	0	0	0	0	0	4	26.6	25.0
11:00 PM	0	0	4	2	0	0	0	0	0	0	0	0	0	6	27.3	24.8
Total	11	65	397	323	68	17	0	1	1	0	0	0	0	883	28.0	24.6
Percent	1.25%	7.36%	44.96%	36.58%	7.70%	1.93%	0.00%	0.11%	0.11%	0.00%	0.00%	0.00%	0.00%			

AM Peak	7:00 AM	8:00 AM	7:00 AM	7:00 AM	7:00 AM	8:00 AM		11:00 AM	7:00 AM						7:00 AM
Volume	2	6	45	48	9	3	0	1	1	0	0	0	0	0	112
PM Peak	3:00 PM	2:00 PM	5:00 PM	12:00 PM	2:00 PM	5:00 PM									2:00 PM
Volume	2	9	32	22	10	4	0	0	0	0	0	0	0	0	61

15th Percentile:	21.0 MPH	Average Speed:	24.6 MPH	Posted Speed Limit:	25 MPH
50th Percentile:	24.0 MPH	10 MPH Pace:	20 to 29 MPH	Number of Vehicles > 25 MPH:	341
85th Percentile:	28.0 MPH	Number in Pace:	720	Percent of Vehicles > 25 MPH:	38.6%
95th Percentile:	32.0 MPH	Percent in Pace:	81.5%		

Sherburne Road
just south of School Driveway
City, State: Portsmouth, NH
Client: TF Moran/ J. Porter
Site Code: 47528.00



PDI File #: 239200 ATR-A (Speed)

Count Date
Thursday, March 9, 2023

Speed (60-minute)

Combined NB and SB

Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	2	2	3	2	0	0	0	0	0	0	0	9	34.2	29.0
1:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	1	25.0	25.0
2:00 AM	1	0	3	5	0	0	0	0	0	0	0	0	0	9	27.6	23.3
3:00 AM	0	0	2	1	1	0	0	0	0	0	0	0	0	4	29.6	26.3
4:00 AM	0	1	4	3	0	0	0	0	0	0	0	0	0	8	28.0	24.0
5:00 AM	0	3	11	10	5	1	0	0	0	0	0	0	0	30	30.0	25.1
6:00 AM	0	1	14	22	10	2	0	0	0	0	0	0	0	49	31.0	27.0
7:00 AM	2	5	54	69	19	3	0	0	1	0	0	0	0	153	29.2	25.8
8:00 AM	2	6	50	61	14	3	0	0	0	0	0	0	0	136	29.0	25.4
9:00 AM	0	2	28	40	18	0	0	0	0	0	0	0	0	88	31.0	26.4
10:00 AM	0	3	24	41	13	2	1	0	0	0	0	0	0	84	30.0	26.1
11:00 AM	3	6	21	32	19	1	0	1	0	0	0	0	0	83	31.0	26.0
12:00 PM	0	9	38	50	27	3	0	0	0	0	0	0	0	127	31.0	26.3
1:00 PM	0	3	36	37	29	5	0	0	0	0	0	0	0	110	32.0	27.2
2:00 PM	1	10	38	51	32	1	0	0	0	0	0	0	0	133	31.0	26.0
3:00 PM	2	8	34	54	35	3	0	0	0	0	0	0	0	136	31.0	26.3
4:00 PM	1	3	41	59	31	3	1	0	0	0	0	0	0	139	31.0	26.7
5:00 PM	0	2	44	48	34	8	0	0	0	0	0	0	0	136	31.0	27.1
6:00 PM	1	6	28	45	22	6	0	0	0	0	0	0	0	108	31.0	26.6
7:00 PM	0	0	22	39	17	0	0	0	0	0	0	0	0	78	30.5	26.9
8:00 PM	1	2	13	20	8	1	1	0	0	0	0	0	0	46	31.0	26.3
9:00 PM	0	0	13	15	6	1	0	0	0	0	0	0	0	35	30.0	26.2
10:00 PM	0	0	2	10	4	1	0	0	0	0	0	0	0	17	31.0	28.2
11:00 PM	0	0	6	4	0	1	0	0	0	0	0	0	0	11	28.5	26.2
Total	14	70	528	719	347	47	3	1	1	0	0	0	0	1730	31.0	26.3
Percent	0.81%	4.05%	30.52%	41.56%	20.06%	2.72%	0.17%	0.06%	0.06%	0.00%	0.00%	0.00%	0.00%			

AM Peak	11:00 AM	8:00 AM	7:00 AM	7:00 AM	7:00 AM	7:00 AM	10:00 AM	11:00 AM	7:00 AM							7:00 AM
Volume	3	6	54	69	19	3	1	1	1	0	0	0	0	0	0	153
PM Peak	3:00 PM	2:00 PM	5:00 PM	4:00 PM	3:00 PM	5:00 PM	4:00 PM									4:00 PM
Volume	2	10	44	59	35	8	1	0	0	0	0	0	0	0	139	

15th Percentile:	22.0 MPH	Average Speed:	26.3 MPH	Posted Speed Limit:	25 MPH
50th Percentile:	26.0 MPH	10 MPH Pace:	22 to 31 MPH	Number of Vehicles > 25 MPH:	990
85th Percentile:	31.0 MPH	Number in Pace:	1327	Percent of Vehicles > 25 MPH:	57.2%
95th Percentile:	33.0 MPH	Percent in Pace:	76.7%		

Sherburne Road
south of School Driveway
City, State: Portsmouth, NH
Client: TF Moran/ J. Porter
Site Code: 47528

Count Date: Thursday, March 9, 2023

URNS COUNTED BY VIDEO OBSERVATION

EXISTING SCHOOL DRIVEWAY						
AM	WBL	WBR	NBT	NBR	SBL	SBT
7:30 AM	1,		11	1, 1,		29
7:45 AM	1 (LBus),	-	9	1, 1, 1, 1(LBus),	-	39
8:00 AM	1, 1, 1(BBus),	-	7	1, 1(BBus), 1, 1,	-	30
8:15 AM	1, 1, 1, 1, 1, 1, 1, 1,	1,	10	1, 1, 1, 1, 1, 1, 1,	-	21
AM Total	13	1	37	17	0	119
PM	WBL	WBR	NBT	NBR	SBL	SBT
3:30 PM	1, 1,	-	22	1,	-	17
3:45 PM	1, 1, 1, 1,	-	20	1,	-	13
4:00 PM	-	-	16	-	-	15
4:15 PM	-	-	33	1,	-	10
PM Total	6	0	91	3	0	55

NB							
AM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
7:30 AM	0	0	12	0	1	0	13
7:45 AM	0	0	11	2	0	0	13
8:00 AM	0	0	10	1	0	0	11
8:15 AM	0	0	16	0	1	0	17
AM Total	0	0	49	3	2	0	54
PM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
3:30 PM	0	0	21	1	0	1	23
3:45 PM	0	0	20	0	1	0	21
4:00 PM	0	0	15	0	1	0	16
4:15 PM	0	0	33	1	0	0	34
PM Total	0	0	89	2	2	1	94

SB							
AM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
7:30 AM	0	0	29	0	1	0	30
7:45 AM	0	0	38	1	1	0	40
8:00 AM	0	0	31	2	0	0	33
8:15 AM	0	0	29	0	0	0	29
AM Total	0	0	127	3	2	0	132
PM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
3:30 PM	0	0	17	1	0	1	19
3:45 PM	0	0	17	0	0	0	17
4:00 PM	0	0	14	0	1	0	15
4:15 PM	0	0	9	1	0	0	10
PM Total	0	0	57	2	1	1	61

Intersection of Sherburne Road and School Driveway in Portsmouth, NH

Date of Observation: 9-Mar-23
 Sherburne Road Peak Hour: 7:45 AM & 4:15 PM

TFM Job # 47258.00

Cars and Heavy Vehicles (Combined)										
	SB			WB			NB			
Time	Right	Through	Left	Right	Through	Left	Right	Through	Left	Right
7:30 AM		29	0	0		1	2	11		
7:45 AM		39	0	0		1	4	9		
8:00 AM		30	0	0		3	4	7		
8:15 AM		21	0	1		8	7	10		
Sum=	0	119	0	1	0	13	17	37	0	0

AM PEAK HOUR	0	119	0	1	0	13	17	37	0	0
---------------------	----------	------------	----------	----------	----------	-----------	-----------	-----------	----------	----------

	SB			WB			NB			
Time	Right	Through	Left	Right	Through	Left	Right	Through	Left	Right
3:30 PM		17	0	0		2	1	22		
3:45 PM		13	0	0		4	1	20		
4:00 PM		15	0	0		0	0	16		
4:15 PM		10	0	0		0	1	33		
Sum=	0	55	0	0	0	6	3	91	0	0

PM PEAK HOUR	0	55	0	0	0	6	3	91	0	0
---------------------	----------	-----------	----------	----------	----------	----------	----------	-----------	----------	----------

Intersection of Sherburne Road

Date of Observation: 9-Mar-23
 Sherburne Road Peak Hour: 7:45 AM & 4:15 P

EB		Totals
Through	Left	Sum
		43
		53
		44
		47
0	0	187

0	0	187
----------	----------	------------

EB		Totals
Through	Left	Sum
		42
		38
		31
		44
0	0	155

0	0	155
----------	----------	------------

AM ROADWAY PEAK					
TIME	SB			App TTI	
	Right	Through	Left	APPR.	Right
7:30 AM	0	29	0	29	0
7:45 AM	0	39	0	39	0
8:00 AM	0	30	0	30	0
8:15 AM	0	21	0	21	1
AVE. 15 MIN	0	29.75	0	29.75	0.25
Peak 15 Min	0	39	0	39	1
APPROACH PHF				0.763	

PM ROADWAY PEAK					
TIME	SB			App TTI	
	Right	Through	Left	APPR.	Right
3:30 PM	0	17	0	17	0
3:45 PM	0	13	0	13	0
4:00 PM	0	15	0	15	0
4:15 PM	0	10	0	10	0
AVE. 15 MIN	0	13.75	0	13.75	0
Peak 15 Min	0	17	0	17	0
APPROACH PHF				0.809	

d and School Driveway in Portsmouth, NH

TFM Job # 47258.00

PM

WB		App TTI	NB			App TTI	EB			App TTI
Through	Left	APPR.	Right	Through	Left	APPR.	Right	Through	Left	APPR.
0	1	1	2	11	0	13	0	0	0	0
0	1	1	4	9	0	13	0	0	0	0
0	3	3	4	7	0	11	0	0	0	0
0	8	9	7	10	0	17	0	0	0	0
0	3.25	3.5	4.25	9.25	0	13.5	0	0	0	0
0	8	9	7	11	0	17	0	0	0	0
		0.389				0.794				#DIV/0!

WB		App TTI	NB			App TTI	EB			App TTI
Through	Left	APPR.	Right	Through	Left	APPR.	Right	Through	Left	APPR.
0	2	2	1	22	0	23	0	0	0	0
0	4	4	1	20	0	21	0	0	0	0
0	0	0	0	16	0	16	0	0	0	0
0	0	0	1	33	0	34	0	0	0	0
0	1.5	1.5	0.75	22.75	0	23.5	0	0	0	0
0	4	4	1	33	0	34	0	0	0	0
		0.375				0.691				#DIV/0!

APPENDIX J

NH DOT - SEQUENCE AND TIMING CHART

3/13/2023 9:48:46 AM

CITY/TOWN: PORTSMOUTH

SIGNAL ID#: S-379-14

LOCATION: NH 33

INTERSECT: BORTHWICK AVE

CABINET TYPE: P TYPE-1 Peek

METER NUMBER 27 415 153 ES

CONTROLLER INFO PEEK 3000E

and MFR:

INSTALL DATE: 10/14/1963

FIRE PREEMPT 3M Opticom Model 754

CONTROLLER TIMINGS

	PH 1	PH 2	PH 3	PH 6
INITIAL	8	8	8	8
PASSAGE	4	4	4	4
YELLOW	4	4	4	4
ALL RED	2	2	2	2
MAXIMUM 1	15	25	50	25
MAXIMUM 2	30	40	30	40
MAXIMUM 3				
MAXIMUM EXT				
RECALL	NL	MIN	NL	MIN
WALK				
DON'T WALK				
FL YEL ARROW				
MOVEMENT	ELT	33W	BORTH	33E
TIME TO REDUCE				
REDUCE BY				
MIN GAP				
DYN MAX LIM1				
DYN MAX STEP				

NOTES:

PRE-EMPT 3M 760 OPTI-COM
 PEEK CLP SYSTEM
 SYS LOCAL ID 5

M - F 06:00 1/1/1
 07:00 2/1/1
 09:00 3/1/1
 16:00 4/1/1
 18:00 1/1/1

1/1/1 80 OFF = 72
 24s 28s 28s; 52s 28s

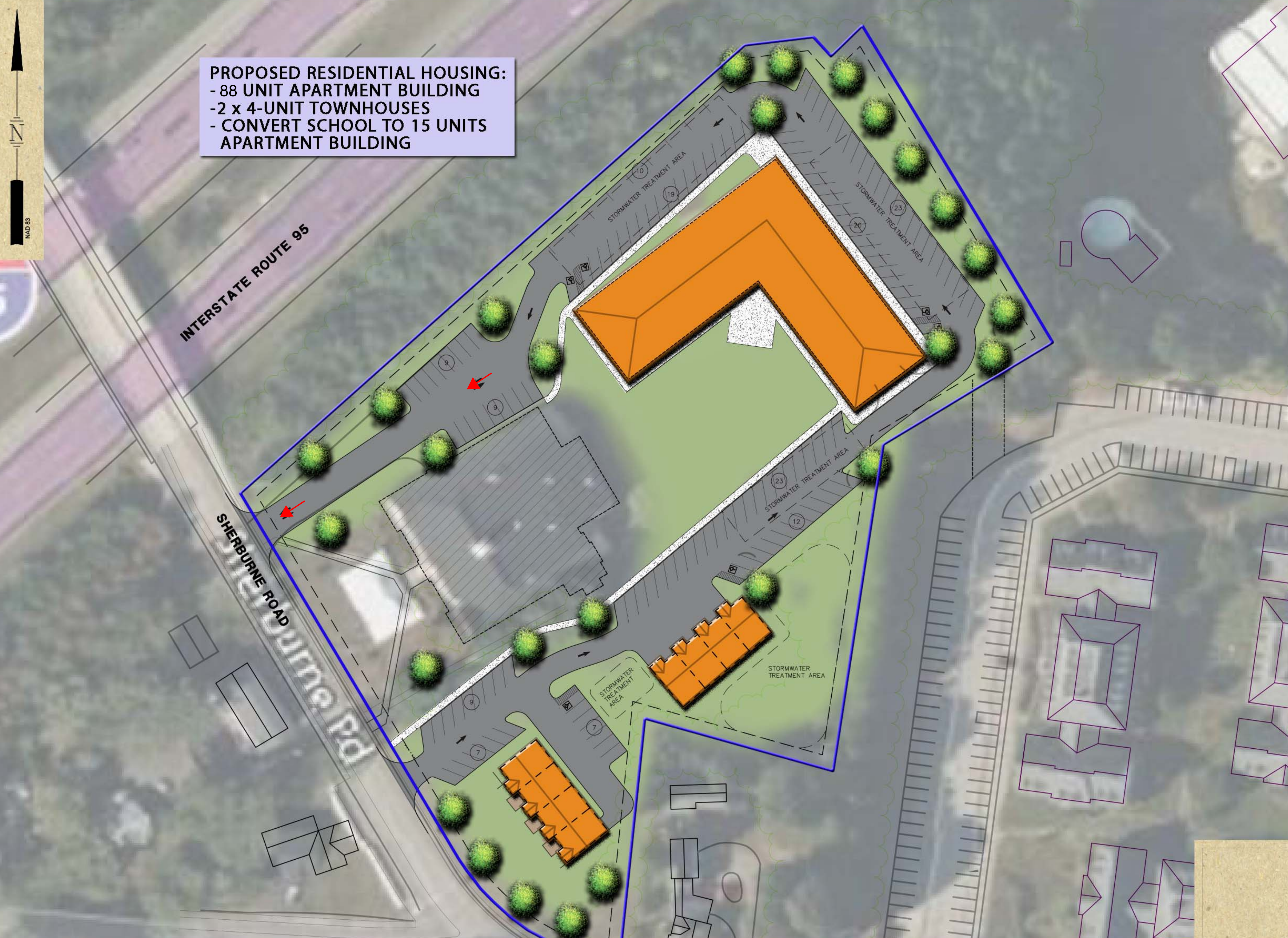
2/1/1 90 OFF = 51
 36, 31, 23, 67, 23

SAT 10:00 3/1/1

3/1/1 80 OFF = 75
 26s 28s 26s; 54s 26s

SUN 11:00 3/1/1

APPENDIX K



PROPOSED RESIDENTIAL HOUSING:
 - 88 UNIT APARTMENT BUILDING
 - 2 x 4-UNIT TOWNHOUSES
 - CONVERT SCHOOL TO 15 UNITS APARTMENT BUILDING

SITE DATA

OWNER OF RECORD OF MAP 259 LOT 10: CITY OF PORTSMOUTH SCHOOLS, PO BOX 628, PORTSMOUTH, NH 03802
 DEED REFERENCE TO PARCEL IS BK 2389 PG 1272
 AREA OF PARCEL = 232,175± SF OR 5.33± ACRES

ZONED: MUNICIPAL
 EXISTING USE: SCHOOL
 PROPOSED USE: MIXED USE

THE PURPOSE OF THIS PLAN IS TO CONCEPTUALIZE AN APARTMENT BUILDING BEHIND THE EXISTING SCHOOL. ASSOCIATED IMPROVEMENTS INCLUDE AND ARE NOT LIMITED TO ACCESS, GRADING, STORMWATER MANAGEMENT SYSTEMS, UTILITIES, LIGHTING, AND LANDSCAPING.

PARCELS WITHIN THE MUNICIPAL ZONE ARE EXEMPT FROM ALL DIMENSIONAL AND INTENSITY REGULATIONS.

PARKING REQUIREMENTS

PARKING SPACES (SEE CALCULATION)	149 SPACES	149 SPACES
*ACCESSIBLE SPACES (REQ'D BY ADA)	5 SPACES	6 SPACES
PARKING SPACE SIZE	8.5 FT X 19 FT	8.5 FT X 19 FT
AISE WIDTH	24 FT	24 FT

PARKING CALCULATIONS

REQUIRED PARKING RATIO:
 RESIDENTIAL: 1.3 SPACES PER UNIT > 750 SF
 SCHOOL: 1 VISITOR SPACE PER 5 UNITS OR PORTION THEREOF
 PARKING ANALYSIS - 17 SPACES NEEDED

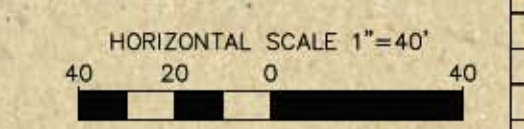
TOTAL REQUIRED = 96 UNITS * 1.3 SPACE/UNITS	= 125 SPACES +
96 UNITS * 1 SPACE/5 UNITS	= 20 SPACES +
17 SPACES FOR EXISTING SCHOOL	= 17 SPACES
TOTAL	= 162 SPACES

TOTAL NUMBER OF SPACES REQUIRED USING MIXED USE PARKING OCCUPANCY RATES FOR MIXED USE DEVELOPMENT (ZONING ORDINANCE 10.112.61) IS 149 SPACES.

SITE DEVELOPMENT PLANS

TAX MAP 259 LOT 10
CONCEPT C
PROPOSED HOUSING DEVELOPMENT
35 SHERBURNE ROAD
PORTSMOUTH, NEW HAMPSHIRE
 OWNED BY
CITY OF PORTSMOUTH SCHOOLS
 PREPARED FOR
PORTSMOUTH HOUSING AUTHORITY
1"=80' (11"X17")
SCALE: 1"=40' (22"X34") **FEBRUARY 9, 2023**

THIS PLAN IS A PRELIMINARY CONCEPTUAL DESIGN FOR SITE LOCATION FEASIBILITY AND DISCUSSION PURPOSES ONLY. ADDITIONAL PERMITS, WAIVERS, AND VARIANCE MAY BE REQUIRED UPON FURTHER DESIGN, REVIEW, AND COORDINATION WITH THE TOWN.



REV	DATE	DESCRIPTION	DR	CK

TFM Civil Engineers
 Structural Engineers
 Traffic Engineers
 Land Surveyors
 Landscape Architects
 Scientists

48 Constitution Drive
 Bedford, NH 03110
 Phone (603) 472-4488
 Fax (603) 472-9747
 www.tfmoran.com

FILE: 47528.00 DR FB
 CK - - - - -
 CONCEPT-C

Feb 14, 2023 - 3:25pm \\TFM-BEDFORD\Projects\Civil-Survey\MSC Projects\47528 Sherburne Road, Portsmouth, NH\47528-00 Sherburne Road, Portsmouth, NH\Design\Concepts\XREF\47528-00_Concept-M-Design-One-Way.dwg

Copyright 2023 ©TFMoran, Inc.
 48 Constitution Drive, Bedford, N.H. 03110

All rights reserved. These plans and materials may not be copied, duplicated, replicated or otherwise reproduced in any form whatsoever without the prior written permission of TFMoran, Inc.

This plan is not effective unless signed by a duly authorized officer of TFMoran, Inc.