MEMORANDUM

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Newmarket, NH 03857

FROM: Mr. Jeffrey S. Dirk, P.E.*, PTOE, FITE
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DATE: May 22, 2023

RE: 9626

SUBJECT: Traffic Impact Study
Proposed Multifamily Residential Development – 242 South Main Street (NH Route 152)
Newmarket, New Hampshire

Vanasse & Associates, Inc. (VAI) has conducted a Traffic Impact Study (TIS) in order to determine the potential impacts on the transportation infrastructure associated with the proposed construction of an age-qualified multifamily residential development to be located at 242 South Main Street (NH Route 152) in Newmarket, New Hampshire (hereafter referred to as the "Project"). This study has been completed in accordance with the New Hampshire Department of Transportation (NHDOT) standards for the preparation of a TIS, and evaluates the following specific areas as they relate to the Project: i) access requirements; ii) potential off-site improvements; and iii) safety considerations; and identifies and analyzes existing traffic conditions and future traffic conditions, both with and without the Project. Based on this assessment, we have concluded the following with respect to the Project:

1. Using trip-generation statistics published by the Institute of Transportation Engineer (ITE),[1] the Project is expected to generate approximately 104 vehicle trips on an average weekday (two-way, 24-hour volume), with approximately 6 vehicle trips expected during the weekday morning peak-hour and 8 vehicle trips expected during the weekday evening peak-hour;

2. The Project will not have a significant impact (increase) on motorist delays or vehicle queuing over Existing or anticipated future conditions without the Project (No-Build conditions), with no changes in level-of-service or vehicle queuing predicted to occur as a result of the addition of Project-related traffic and all of the movements at the study area intersections shown to continue operate at a level-of-service (LOS) C or better, where and LOS of "D" or better is generally defined as "acceptable" traffic operations;

3. Exiting movements from the Project site driveway to NH Route 152 are predicted to operate at LOS C or better with negligible vehicle queuing predicted, with all movements along

[1] *Trip Generation*, 11th Edition; Institute of Transportation Engineers; Washington, DC; 2021.

NH Route 152 approaching the driveway shown to operate at LOS A, also with negligible vehicle queuing; and

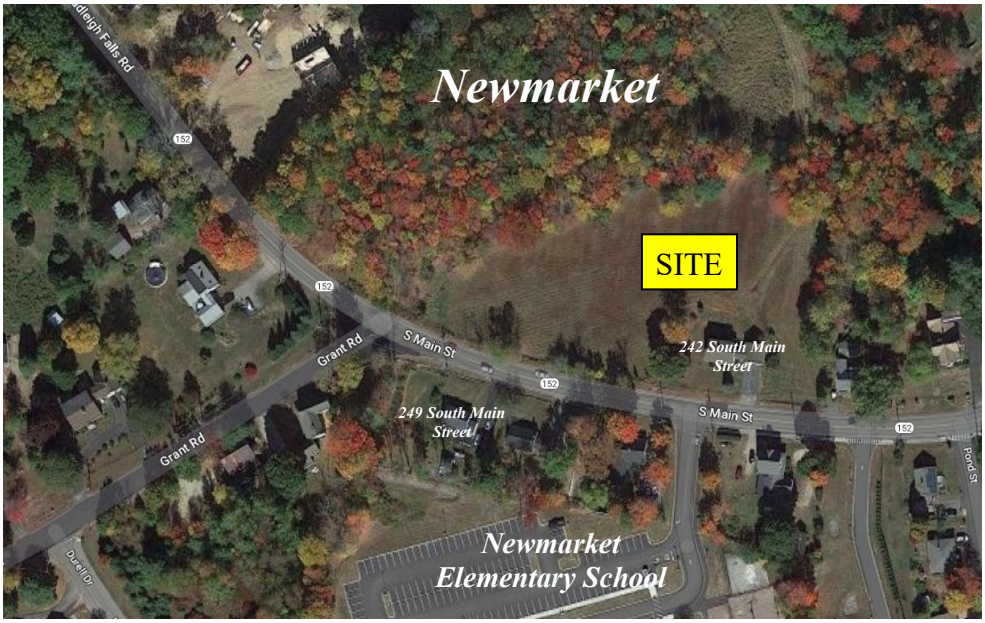
4. Lines of sight at the intersection of NH Route 152 at the Project site driveway were found to exceed the recommended minimum distance for the intersection to operate in a safe manner based on the appropriate approach speed.

In consideration of the above, we have concluded that the Project can be accommodated within the confines of the existing transportation infrastructure in a safe and efficient manner with implementation of the recommendations defined herein.

The following details our assessment of the Project.

PROJECT DESCRIPTION

As proposed, the Project will entail the construction of a three-story building to be located at 242 South Main Street (NH Route 152) in Newmarket, New Hampshire, that will include 32 age-qualified multifamily residential units. The Project site encompasses approximately 7.9± acres of land that is bounded by residential properties and areas of open and wooded space to the north, east and west; and NH Route 152 to the south. The Project site is currently occupied by areas of open and wooded space and an existing single-family home (242 South Main Street) with associated appurtenances that will be removed to accommodate the Project.



Imagery ©2023 Google

Access to the Project site will be provided by way of a full-access driveway that will intersect the north side of NH Route 152 generally opposite the driveway to 249 South Main Street. On-site parking will be provided for 33 vehicles, which exceeds the parking requirements for a similar use (elderly housing) as specified in Chapter 32, Appendix B, §3.02. – *Parking*, of the Municipal Code of the Town of Newmarket.[2]

STUDY METHODOLOGY

This study was prepared in consultation with the Town of Newmarket and NHDOT; was performed in accordance with the NHDOT guidelines for the preparation of Traffic Impact Studies (TISs) and the standards of the Traffic Engineering and Transportation Planning Professions for the preparation of such reports; and was conducted in three distinct stages.

The first stage of the study involved an assessment of existing conditions in the study area and included an inventory of roadway geometrics, pedestrian and bicycle facilities, and public transportation services; observations of traffic flow; and the collection of daily and peak-period traffic counts.

In the second stage of the study, future conditions on the transportation system were projected and analyzed. Specific travel demand forecasts for the Project were assessed along with future demands on the transportation system that are expected due to growth independent of the Project. In accordance with NHDOT guidelines for the preparation of TISs, four future conditions were evaluated: 1) 2024 No-Build conditions *without* the Project; 2) 2024 Opening-Year Build conditions *with* the Project; 3) 2034 No-Build conditions *without* the Project; and 4) 2034 Build conditions (ten-year projection from opening-year) *with* the Project. The analyses conducted in stage two of the study identify existing or projected future roadway capacity and traffic safety issues.

The third stage of the study presents and evaluates measures to address roadway and intersection capacity issues and safety concerns, if any, identified in stages one and two of the study.

EXISTING CONDITIONS

A comprehensive field inventory of existing conditions within the study area was conducted in February 2023. The field investigation consisted of an inventory of existing roadway geometrics; pedestrian and bicycle facilities; public transportation services; traffic volumes; and operating characteristics; as well as posted speed limits and land use information within the study area. The study area that was assessed for the Project consisted of South Main Street (NH Route 152) and the following specific intersections: NH Route 152 at Grant Road and NH Route 152 at the Newmarket Elementary School driveway.

The following describes the study area roadway and intersections.

[2]Ch. 32 §3.02. (A)(1)(a) Residential: 2 spaces per unit; except 1 space per unit for elderly housing or accessory apartment.

Roadway

South Main Street/Wadleigh Falls Road (NH Route 152)

- Two-lane, Tier 5, Class V urban major collector roadway under Town jurisdiction east of Grant Road (South Main Street) and a two-lane, Tier 3, Class II urban major collector roadway under NHDOT jurisdiction west of Grant Road (Wadleigh Falls Road);
- Traverses the study area in a general east-west direction;
- Provides two 11- to 12-foot-wide travel lanes separated by a double yellow centerline with 1-foot-wide marked shoulders provided in the vicinity of the Project site;
- A sidewalk is provided along the south side of NH Route 152 east of the Newmarket Elementary School driveway;
- Illumination is provided intermittently by way of streetlights mounted on wood poles;
- The posted speed limit in the vicinity of the Project site is 30 miles per hour (mph);
- Land use within the study area consists of the Project site, residential properties, areas of open and wooded space and the Newmarket Elementary School.

Intersections

Table 1 and Figure 1 summarize the existing lane use, traffic control, and pedestrian and bicycle accommodations at the study area intersection as observed in February 2023.

Table 1
STUDY AREA INTERSECTION DESCRIPTION

Intersection	Traffic Control Type[a]	No. of Travel Lanes Provided	Shoulder Provided? (Yes/No/Width)	Pedestrian Accommodations? (Yes/No/Description)	Bicycle Accommodations? (Yes/No/Description)
NH Rte. 152/ Grant Rd.	S	1 general-purpose travel lane provided on all approaches	Yes; 1 to 2 feet on NH Rte. 152	No	No
NH Rte. 152/ Newmarket Elementary School Driveway	S	1 general-purpose travel lane provided on all approaches	Yes; 1 to 2 feet on NH Rte. 152	Yes; sidewalks provided along the south side of NH Rte. 152 east of the intersection and along the east side of the Newmarket Elementary School Driveway	No

[a]S = STOP-sign control.

Existing Traffic Volumes

In order to determine existing traffic-volume demands and flow patterns within the study area, automatic traffic recorder (ATR) counts, turning movement counts (TMCs) and vehicle classification counts were completed in February 2023 while public schools were in regular session. The ATR counts were conducted on NH Route 152, east of the Grant Road, on February 1st through 3rd, 2023 (Wednesday through Friday, inclusive), in order to record weekday traffic conditions over an extended period, with weekday morning (7:00 to 9:00 AM), weekday afternoon (2:00 to 4:00 PM) and weekday evening (4:00 to 6:00 PM) peak-

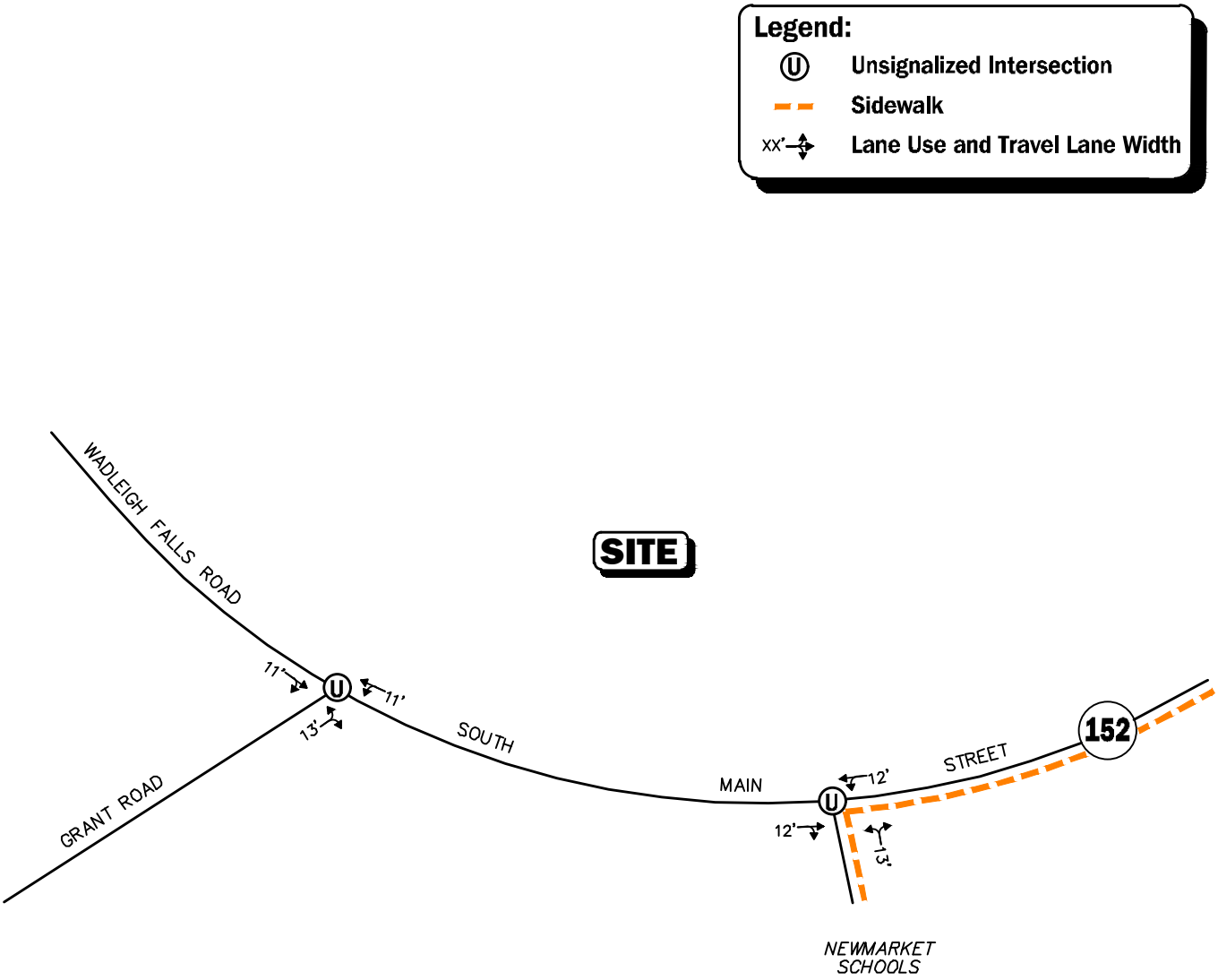


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Figure 1

Existing Intersection Lane Use, Travel Lane Width, and Pedestrian Facilities

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period TMCs performed at the study area intersections on February 2nd, 2023 (Thursday). These time periods were selected for analysis purposes as they are representative of the peak-traffic-volume hours for both the Project, the adjacent roadway network and the Newmarket Elementary School.

Traffic Volume Adjustments

In order to evaluate the potential for seasonal fluctuation of traffic volumes within the study area, 2019 peak-hour and average daily traffic count data were reviewed for NHDOT count station No. 02153001, which is located on NH Route 101, east of NH Route 108 (Exits 11 and 12), in Exeter. Based on a review of this data, it was determined that traffic volumes for the month of February are approximately 34.0 percent below peak-month (July and August) conditions. As such, with the exception of the turning movements entering and exiting the Newmarket Elementary School driveway, the February traffic volumes were adjusted upward by 34.0 percent to be representative of peak-month conditions in accordance with NHDOT standards.

In order to account for the impact on the traffic volumes and trip patterns resulting from the COVID-19 pandemic, historic traffic volume data collected in October 2018 on NH Route 152 east of Grant Road was reviewed. The October 2018 and February 2023 traffic volume counts were adjusted to peak-month conditions using the methodology described herein, with the October 2018 traffic volume counts grown to 2019 using the general background growth rate (discussion follows). Based on this pre- and post-COVID-19 traffic-volume comparison, it was determined that the February 2023 traffic volumes are approximately 10.0 percent below the conditions that existed prior to the COVID-19 pandemic. As such, with the exception of the turning movements entering and exiting the Newmarket Elementary School driveway, the February traffic counts that were collected as a part of this assessment were adjusted upwards by an additional 10.0 percent to be representative of conditions that existed prior to the COVID-19 pandemic.

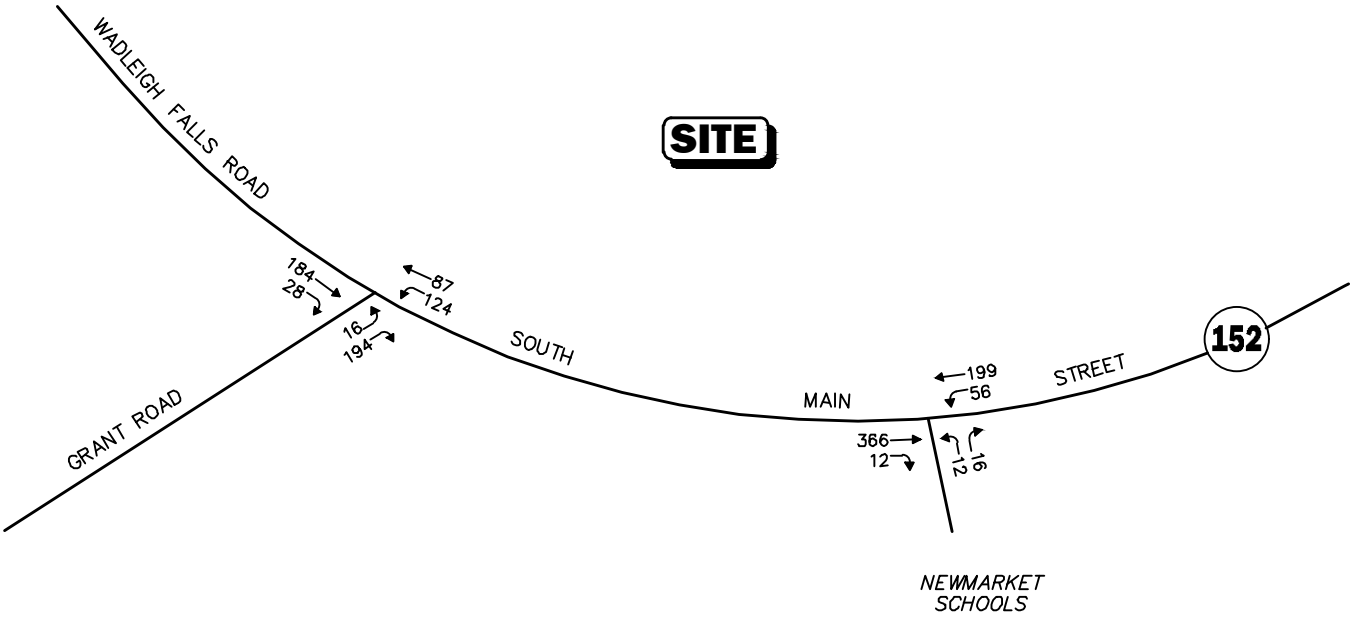
The 2023 Existing peak-month peak-hour traffic volumes are summarized in Table 2, with the weekday morning, weekday afternoon and weekday evening peak-month peak-hour traffic volumes graphically depicted on Figures 2A and 2B. Note that the peak-hour traffic volumes that are presented in Table 2 were obtained from the aforementioned figures.

Table 2
2023 EXISTING TRAFFIC VOLUMES

Location/Peak Hour	AWT[a]	VPH[b]	K Factor[c]	Directional Distribution[d]
NH Route 152, east of Grant Road:	6,900	--	--	--
Weekday Morning (7:15 – 8:15 AM)	--	589	8.5	64.2% EB
Weekday Afternoon (2:30 - 3:30 PM)	--	723	10.5	56.0% WB
Weekday Evening (4:45 – 5:45 PM)	--	682	9.9	53.7% WB

[a]Average weekday traffic in vehicles per day.
[b]Vehicles per hour.
[c]Percent of daily traffic occurring during the peak hour.
[d]Percent traveling in peak direction.
EB = eastbound, WB = westbound.

WEEKDAY MORNING PEAK HOUR (7:15 - 8:15 AM)



WEEKDAY AFTERNOON PEAK HOUR (2:30 - 3:30 PM)

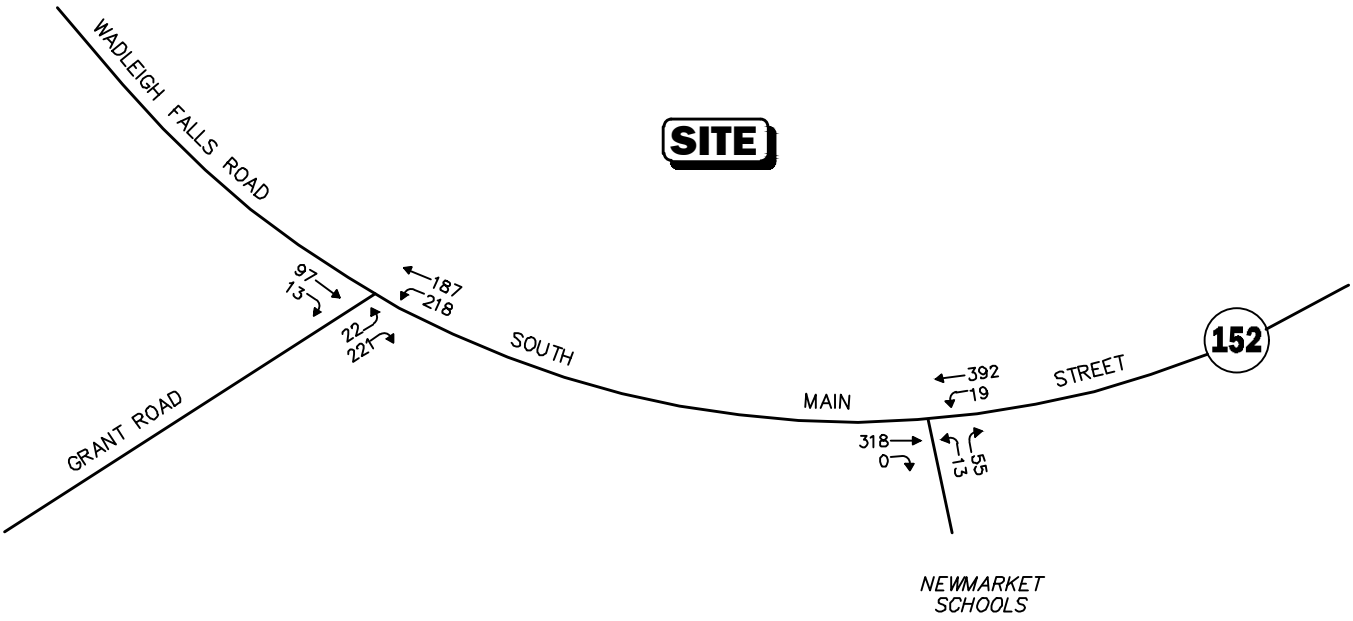


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Figure 2A

2023 Existing Peak-Month Peak-Hour Traffic Volumes

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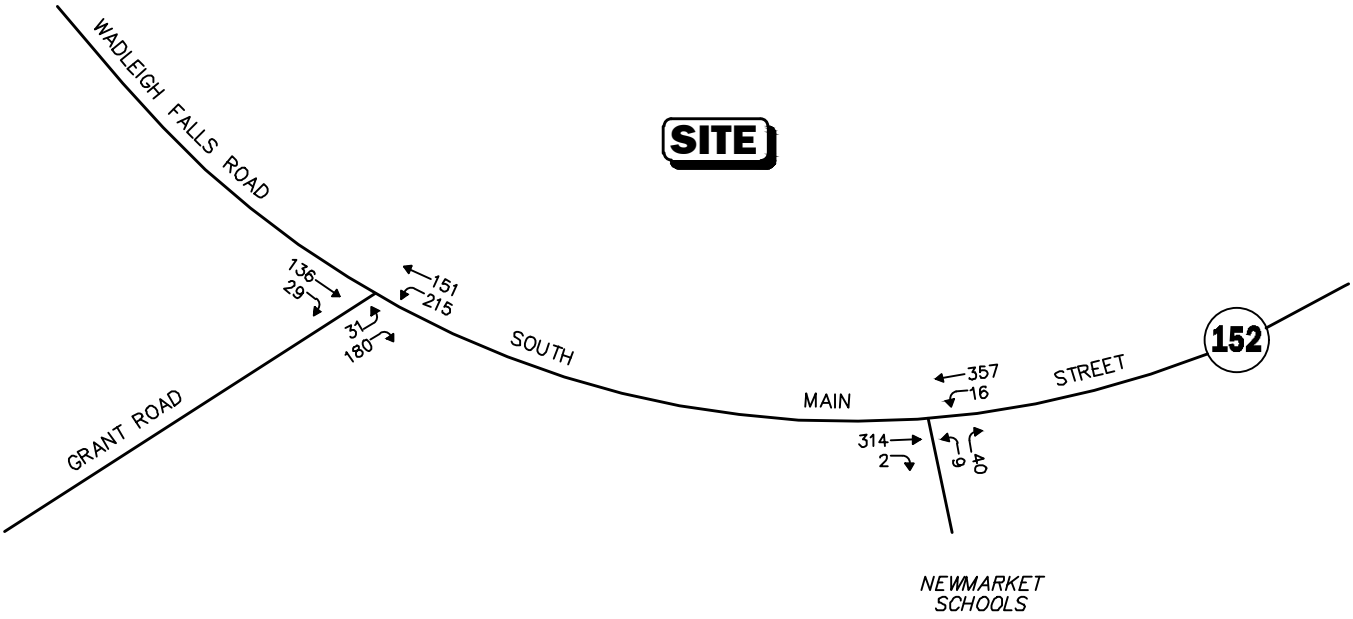

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Figure 2B

2023 Existing
Peak-Month
Weekday Evening
(4:45 - 5:45 PM)
Peak-Hour Traffic Volumes

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As can be seen in Table 2, NH Route 152 in the vicinity of the Project site was found to accommodate approximately 6,900 vehicles on an average weekday (two-way, 24-hour volume), with approximately 589 vehicles per hour (vph) during the weekday morning peak-hour, 723 vph during the weekday afternoon peak-hour and 682 vph during the weekday evening peak-hour.

Pedestrian and Bicycle Facilities

As detailed on Figure 1, sidewalks are provided along the south side of NH Route 152 to the east of the Newmarket Elementary School driveway and along the east side of the Newmarket Elementary School driveway. Formal bicycle facilities are not provided within the study area, and the study area roadways do not generally provide sufficient width on a continuous basis to accommodate bicycle travel in a shared traveled-way configuration (i.e., bicyclists and motor vehicles sharing the traveled-way).[3]

Spot Speed Measurements

Vehicle travel speed measurements were performed on NH Route 152 in the vicinity of the Project site using a radar speed recording device on Wednesday, February 1st and on Friday, February 3rd, 2023, and were collected under clear weather conditions. A total of 50 speed measurements were collected each day in both the eastbound and westbound directions, the results of which are summarized in Table 3.

Table 3
VEHICLE TRAVEL SPEED MEASUREMENTS

	NH Route 152	
	Eastbound	Westbound
Mean Travel Speed (mph)	33	33
85th Percentile Speed (mph)	37	37
Posted Speed Limit (mph)	30	30

mph = miles per hour.

As can be seen in Table 3, the mean vehicle travel speed along NH Route 152 in the vicinity of the Project site was found to be 33 mph in both eastbound and westbound directions. The measured 85th percentile vehicle travel speed, or the speed at which 85 percent of the observed vehicles traveled at or below, was found to be 37 mph in both the eastbound and westbound directions, which is seven (7) mph above the posted speed limit (30 mph) in the vicinity of the Project site. The 85th percentile speed is used as the basis of engineering design and in the evaluation of sight distances and is often used in establishing posted speed limits.

[3]A minimum combined travel lane and paved shoulder width of 14 feet is required to support bicycle travel in a shared traveled-way condition.

Public Transportation Services

Public transportation services are not currently provided within the study area. The Cooperative Alliance For Seacoast Transportation (COAST) provides reservation-only, on-demand, bus services via Route 7, *Newmarket/Exeter*. The Route 7 bus provides service along Exeter Road (NH Route 108) between Newmarket and Exeter.

Motor Vehicle Crash Data

Motor vehicle crash data for the study area intersections has been requested from the Newmarket Police Department in order to examine motor vehicle crash trends occurring within the study area. The data will be summarized in a supplement to this TIS once the data is received.

FUTURE CONDITIONS

Traffic volumes in the study area were projected to the years 2024 and 2034, which reflects the anticipated opening-year of the Project and a ten-year planning horizon from opening-year, respectively, consistent with NHDOT TIS guidelines. The future condition traffic-volume projections incorporate identified specific development projects by others, as well as general background traffic growth as a result of development external to the study area and presently unforeseen projects. Anticipated Project-generated traffic volumes superimposed upon the 2024 and 2034 No-Build traffic volumes reflect the Build conditions with the Project.

Future Traffic Growth

Future traffic growth is a function of the expected land development in the immediate area and the surrounding region. Several methods can be used to estimate this growth. A procedure frequently employed estimates an annual percentage increase in traffic growth and applies that percentage to all traffic volumes under study. The drawback to such a procedure is that some turning volumes may actually grow at either a higher or a lower rate at particular intersections.

An alternative procedure identifies the location and type of planned development, estimates the traffic to be generated, and assigns it to the area roadway network. This procedure produces a more realistic estimate of growth for local traffic; however, potential population growth and development external to the study area would not be accounted for in the resulting traffic projections.

To provide a conservative analysis framework, both procedures were used, the salient components of which are described below.

Specific Development by Others

The Town of Newmarket Planning and Zoning Department was contacted in order to determine if there were any projects planned within the study that would have an impact on future traffic volumes along the study roadways and at the study area intersections. Based on this consultation, the following developments were identified for inclusion in this assessment:

- ***Proposed Residential Development, 3 Railroad Street, Newmarket, New Hampshire.*** This project entails the construction of a three-story, 8±-unit multifamily residential development to be located at 3 Railroad Street to the east of the Project site. Traffic volumes associated with this project

within the study area are expected to be relatively minor and would be reflected in the general background traffic growth rate.

- ***Proposed Mixed-Use Development, 50-56 Exeter Road, Newmarket, New Hampshire.*** This project entails the construction of a three-story mixed-use development to be located at 50-56 Exeter Road in Newmarket, to the east of the Project site, that will contain 28± residential apartment units and approximately 13,885± square feet (sf) of ground floor retail space. Traffic volumes associated with this project were estimated using trip-generation statistics published by the Institute of Transportation Engineers (ITE)[4] and were assigned onto the study area roadway network based on existing traffic patterns.

No other developments were identified at this time that are expected to result in an increase in traffic within the study area beyond the general background traffic growth rate (discussion follows).

General Background Traffic Growth

Traffic-volume data compiled by NHDOT from permanent count stations located in Newmarket were reviewed in order to determine general traffic growth trends in the area. This data indicates that traffic volumes have fluctuated over the 10-year period between 2009 and 2019, with the average traffic growth rate found to be 0.96 percent. As such, a 1.0 percent per year compounded annual background traffic growth rate was used in order to account for future traffic growth and presently unforeseen development within the study area.

Roadway Improvement Projects

The Town of Newmarket and NHDOT were contacted in order to determine if there were any planned roadway improvement projects expected to be completed within the study area. Based on these discussions, no roadway improvement projects aside from routine maintenance activities were identified to be planned within the study area at this time.

No-Build Traffic Volumes

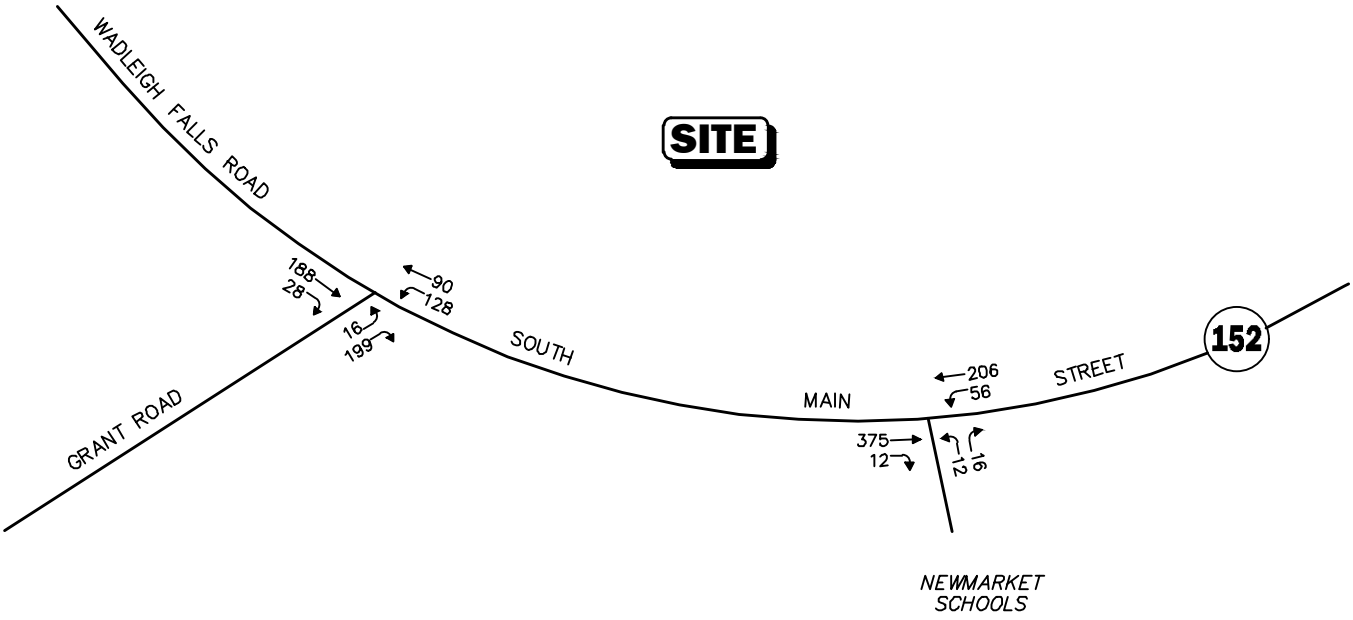
The 2024 and 2034 No-Build peak-month peak-hour traffic volumes were developed by applying the 1.0 percent per year compounded annual background traffic growth rate to the 2023 Existing peak-month peak-hour traffic volumes and then adding the peak-hour traffic volumes associated with the identified specific development project by others (50-56 Exeter Road mixed-use development). The resulting 2024 No-Build weekday morning, weekday afternoon and weekday evening peak-month peak-hour traffic volumes are shown on Figures 3A and 3B, with the corresponding 2034 No-Build peak-month peak-hour traffic volumes shown on Figures 4A and 4B.

Project-Generated Traffic

Design year (2024 and 2034) Build traffic volumes for the study area roadways were determined by estimating Project-generated traffic volumes and assigning those volumes on the study roadways. The following sections describe the methodology used to develop the anticipated traffic characteristics of the Project.

[4]Ibid 1.

WEEKDAY MORNING PEAK HOUR (7:15 - 8:15 AM)



WEEKDAY AFTERNOON PEAK HOUR (2:30 - 3:30 PM)

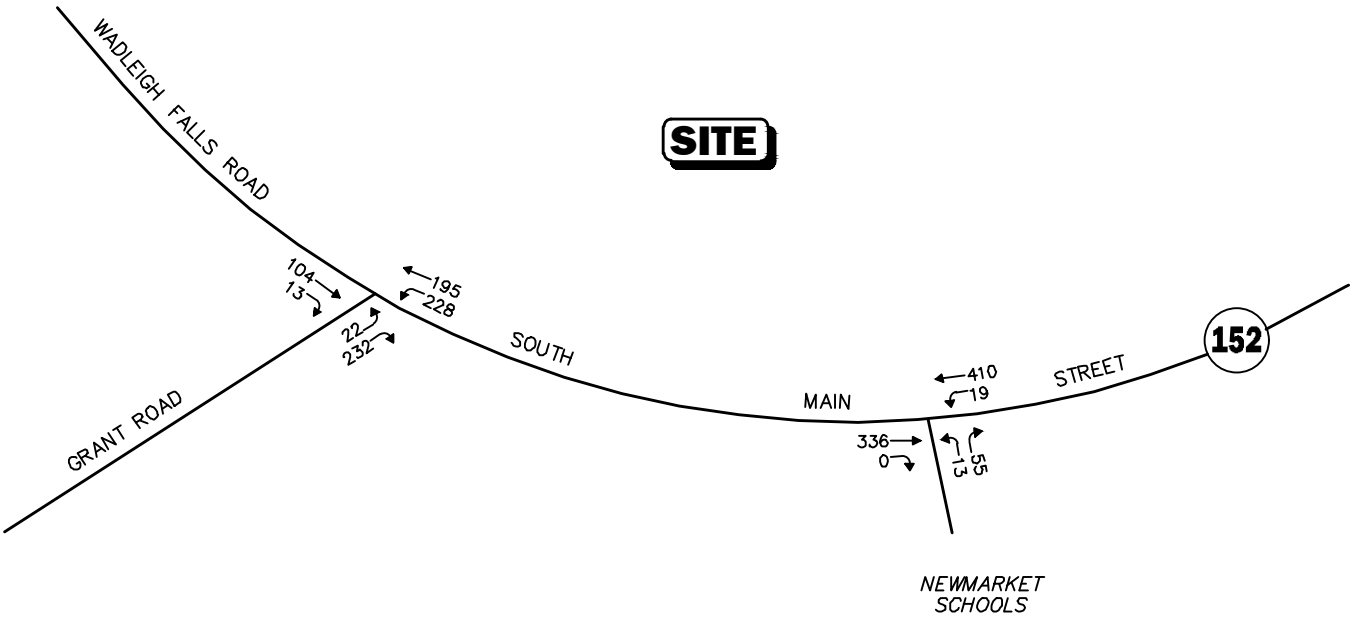


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Figure 3A

2024 No-Build
Peak-Month
Peak-Hour Traffic Volumes

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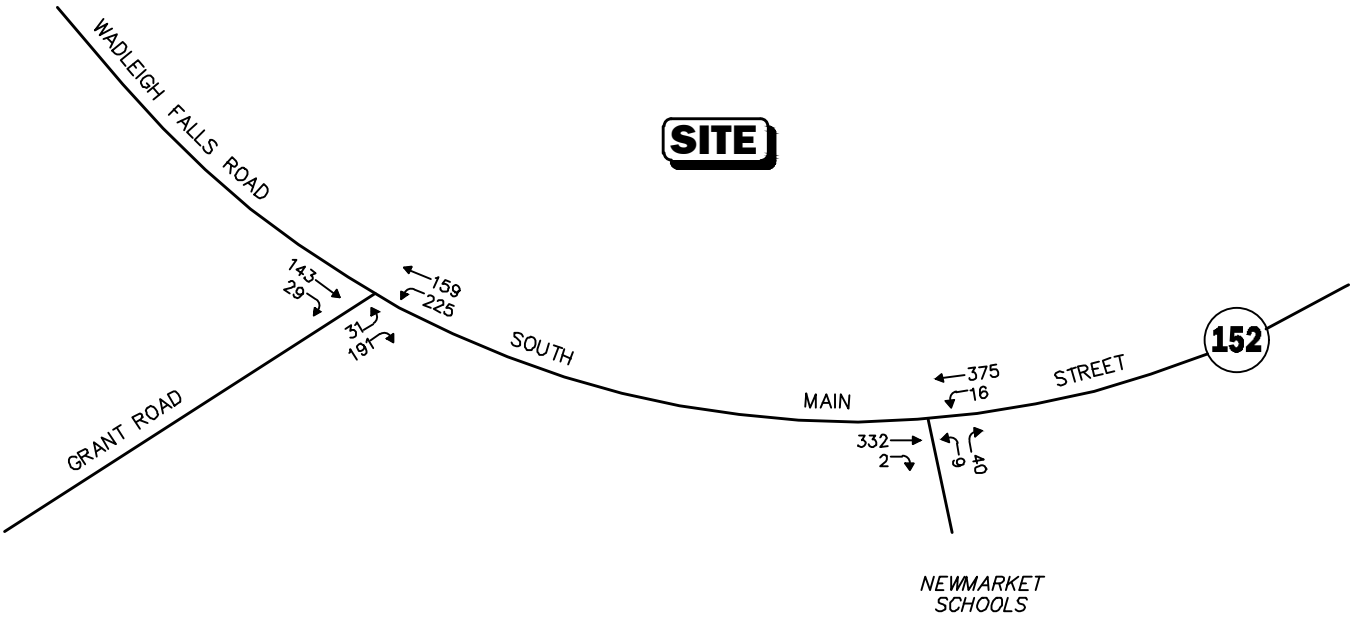

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Figure 3B

2024 No-Build
Peak-Month
Weekday Evening
(4:45 - 5:45 PM)
Peak-Hour Traffic Volumes

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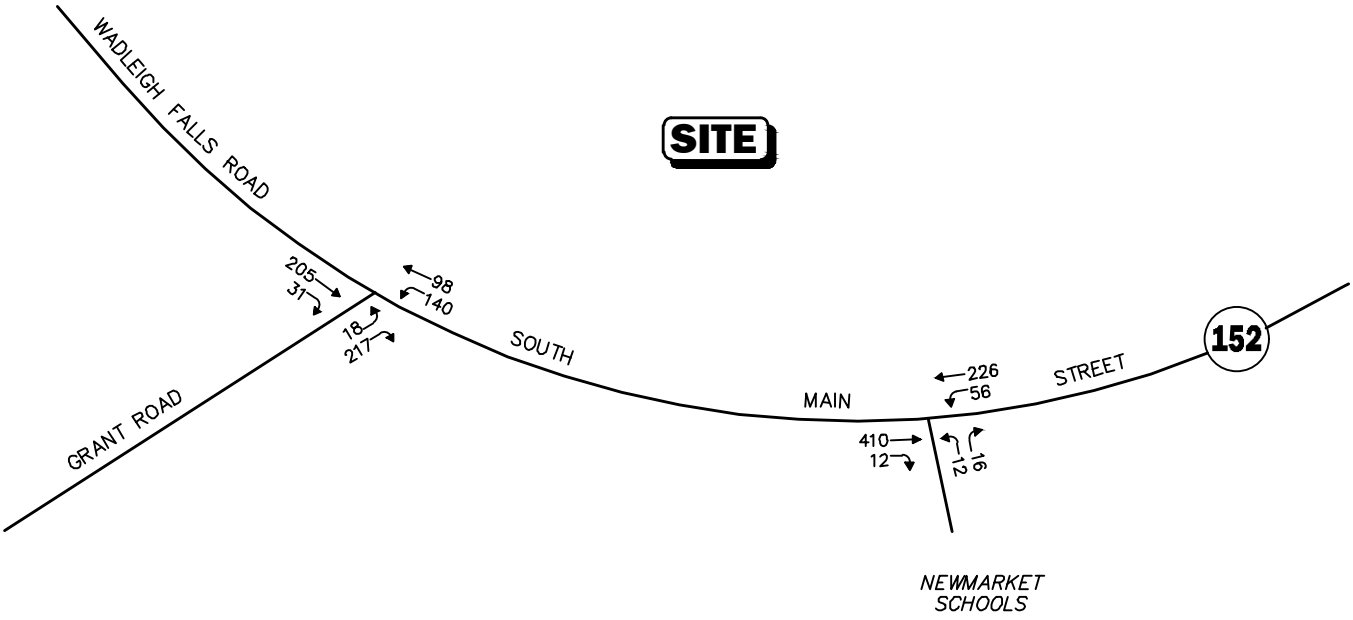
WEEKDAY MORNING PEAK HOUR (7:15 - 8:15 AM)



WEEKDAY AFTERNOON PEAK HOUR (2:30 - 3:30 PM)

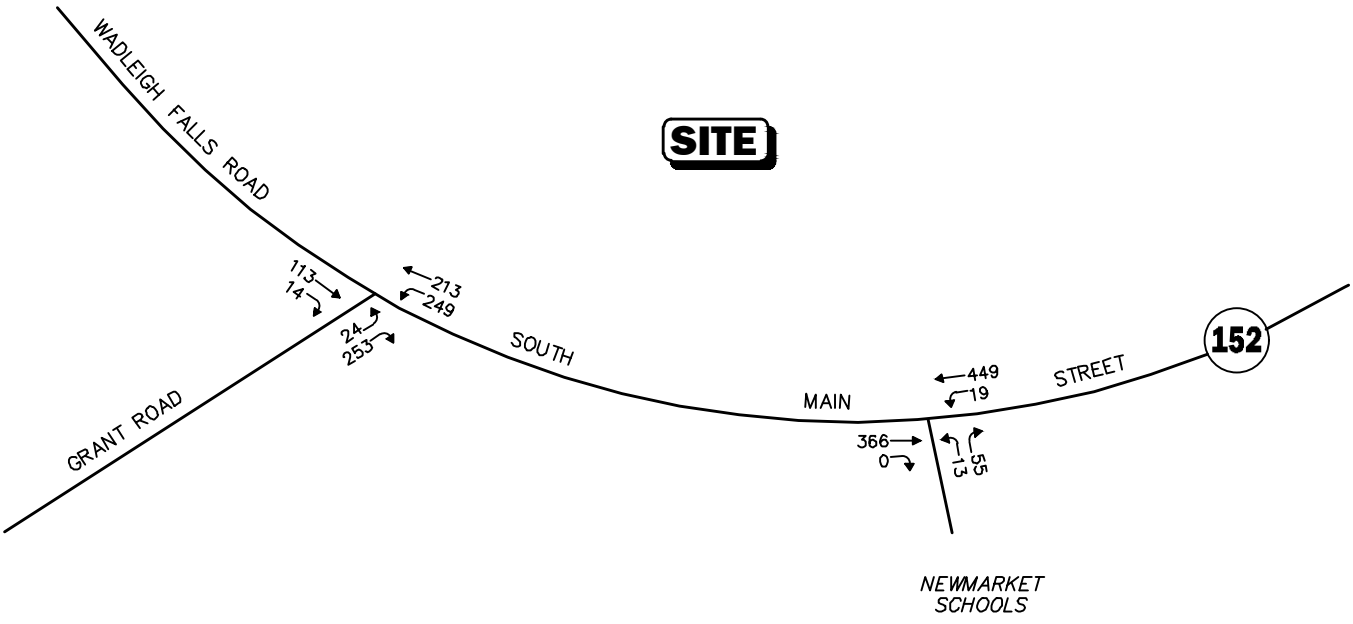


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Figure 4A

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2034 No-Build
Peak-Month
Peak-Hour Traffic Volumes

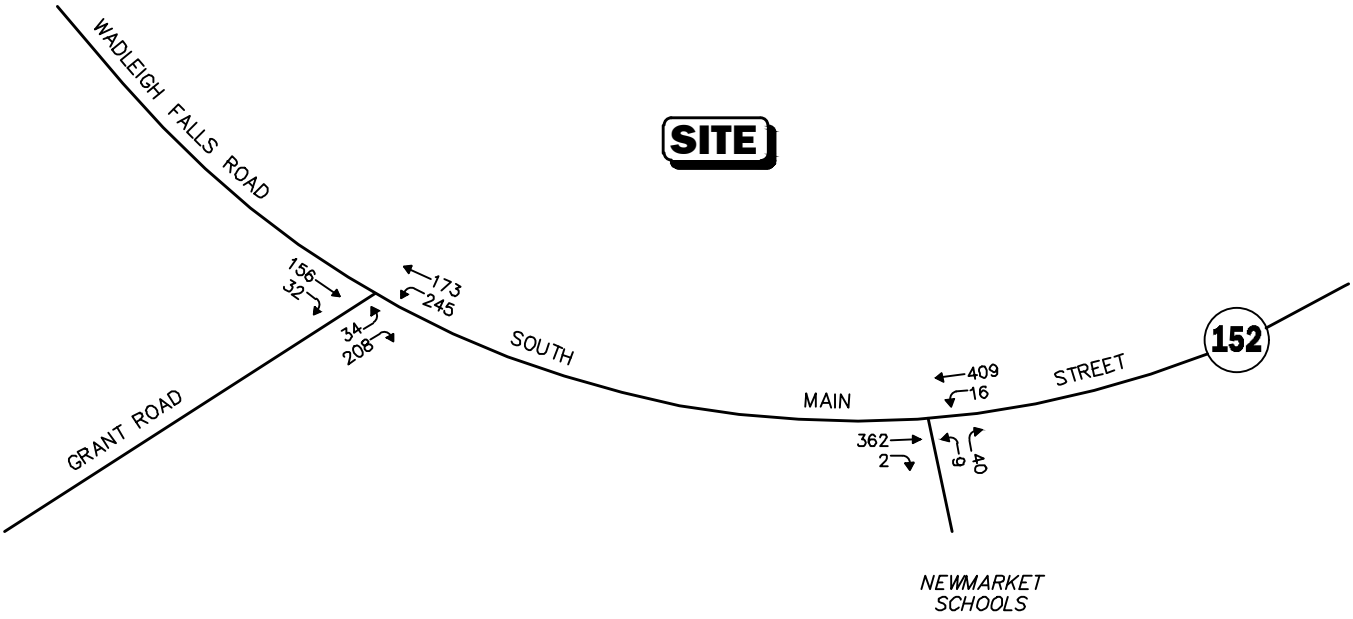

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Figure 4B

2034 No-Build
Peak-Month
Weekday Evening
(4:45 - 5:45 PM)
Peak-Hour Traffic Volumes

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As proposed, the Project will entail the construction of a 32±-unit, age-qualified, multifamily residential development. In order to develop the traffic characteristics of the Project, trip-generation statistics published by the ITE[5] for a similar land use as that proposed were used. ITE Land Use Code (LUC) 252, *Senior Adult Housing – Multifamily*, was used to develop the traffic characteristics of the Project, the results of which are summarized in Table 4.

Table 4
TRIP-GENERATION SUMMARY

Time Period	Vehicle Trips[a]		
	Entering	Exiting	Total
Average Weekday:	52	52	104
Weekday Morning Peak-Hour:	2	4	6
Weekday Evening Peak-Hour:	4	4	8

[a]Based on ITE LUC 252, *Senior Adult Housing – Multifamily* (32 units).

Project-Generated Traffic-Volume Summary

As can be seen in Table 4, using the aforementioned methodology, the Project is expected to generate approximately 104 vehicle trips on an average weekday (two-way, 24-hour volumes), with approximately 6 vehicle trips (2 vehicles entering and 4 exiting) expected during the weekday morning peak-hour and 8 vehicle trips (4 vehicles entering and 4 exiting) expected during the weekday evening peak-hour.

For the purpose of this assessment, it was assumed that the Project would generate 8 vehicle trips (4 vehicles entering and 4 exiting) during the weekday afternoon peak-hour, similar to the number of trips generated by the Project during the weekday evening peak-hour.

Trip Distribution and Assignment

The directional distribution of generated trips to and from the Project site was determined based on a review of U.S. Census Journey-to-Work data for residents of the Town of Newmarket and then refined based on a review of existing traffic patterns within the study area. The general trip distribution for the Project is graphically depicted on Figure 5, with the additional traffic expected to be generated by the Project assigned onto the study area roadway network as shown on Figure 6.

Build Traffic Volumes

The 2024 Opening-Year Build and 2034 Build condition traffic volumes were developed by adding the peak-hour Project-generated traffic to the corresponding 2024 and 2034 No-Build peak-month peak-hour traffic volumes. The resulting 2024 Opening-Year Build condition weekday morning, weekday afternoon and weekday evening peak-month peak-hour traffic volumes are graphically depicted on Figures 7A and 7B, with the corresponding 2034 Build condition peak-month peak-hour traffic volumes depicted on Figures 8A and 8B.

[5]Ibid 1.

Legend:

XX	Entering Trips
(XX)	Exiting Trips

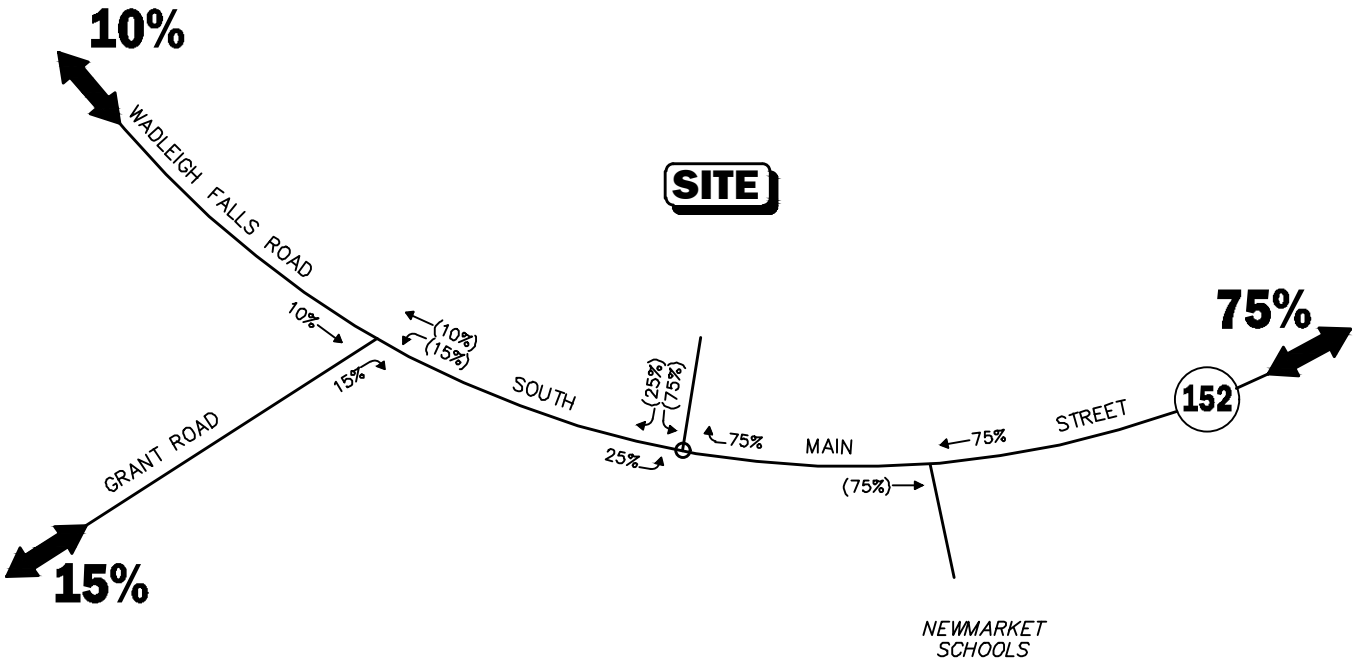

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Figure 5

Trip Distribution Map

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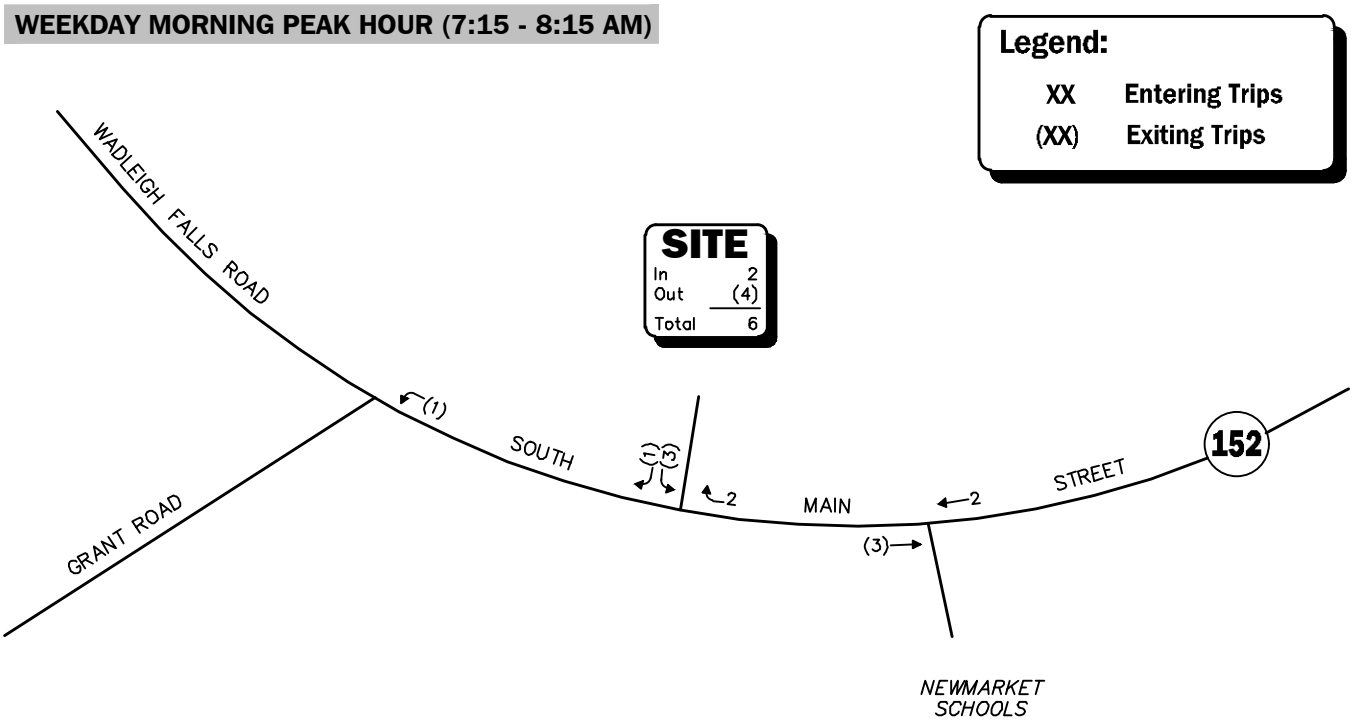
WEEKDAY MORNING PEAK HOUR (7:15 - 8:15 AM)



WEEKDAY AFTERNOON PEAK HOUR (2:30 - 3:30 PM)

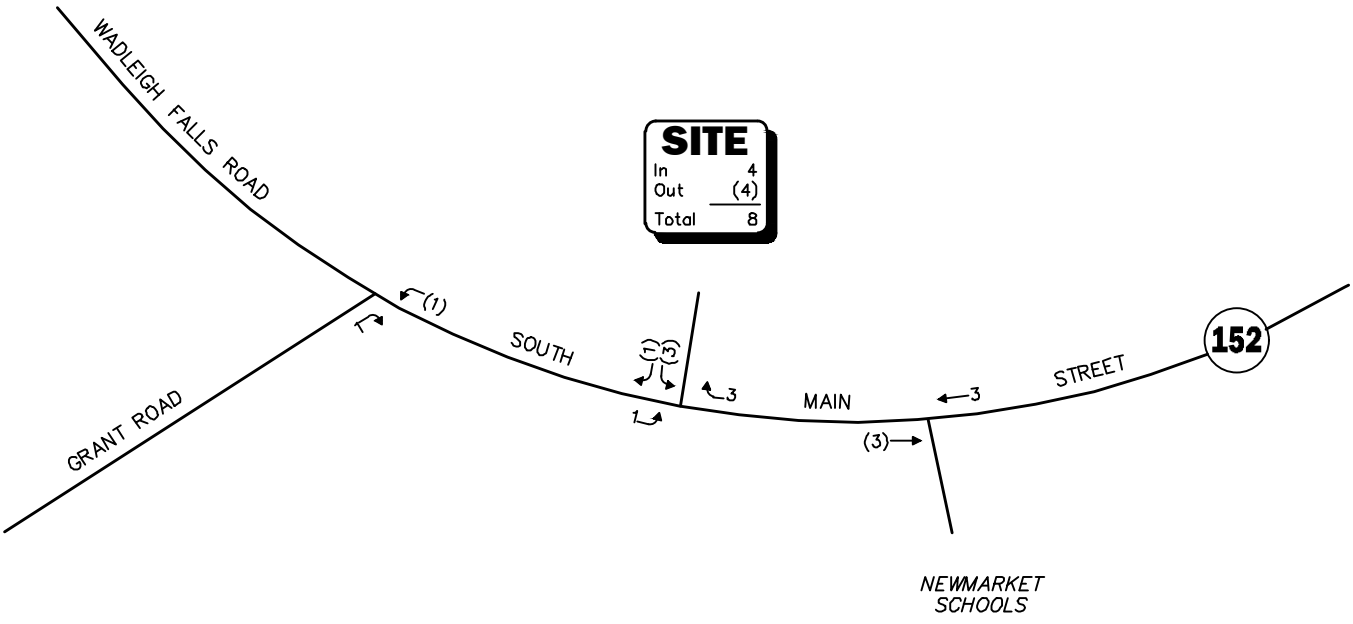


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Figure 6A

Project-Generated Peak-Hour Traffic Volumes

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Legend:

XX	Entering Trips
(XX)	Exiting Trips

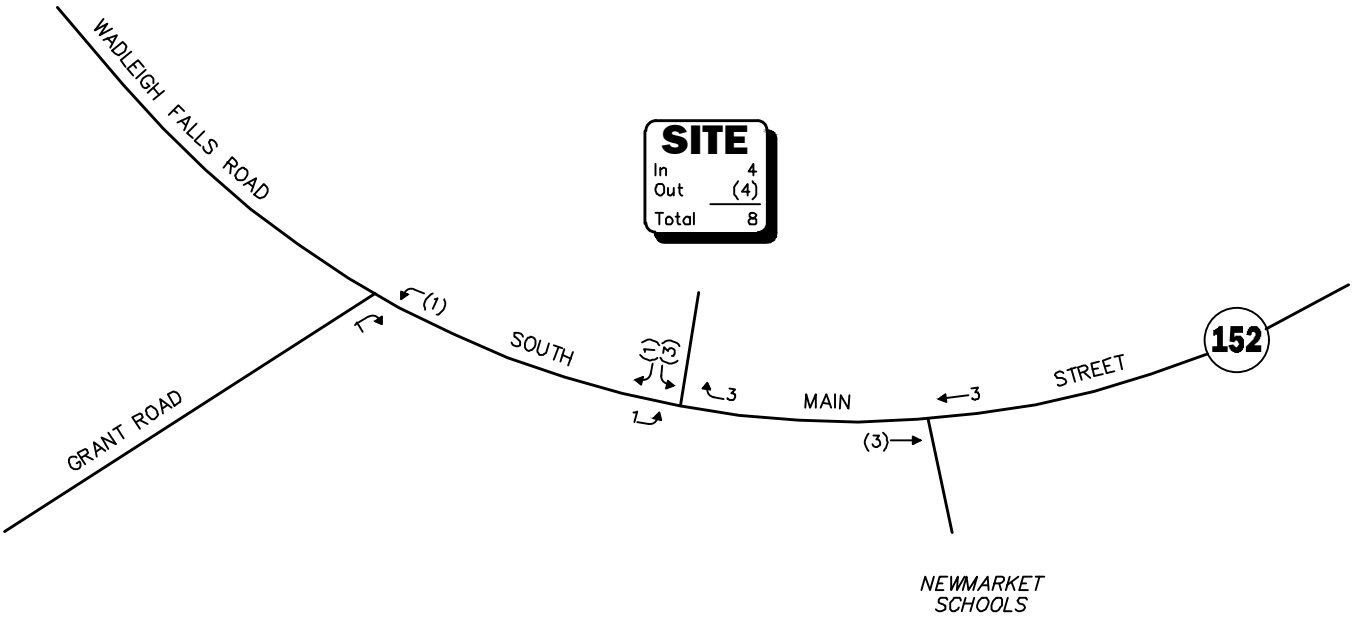

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Figure 6B

Project-Generated Weekday Evening (4:45 - 5:45 PM) Peak-Hour Traffic Volumes

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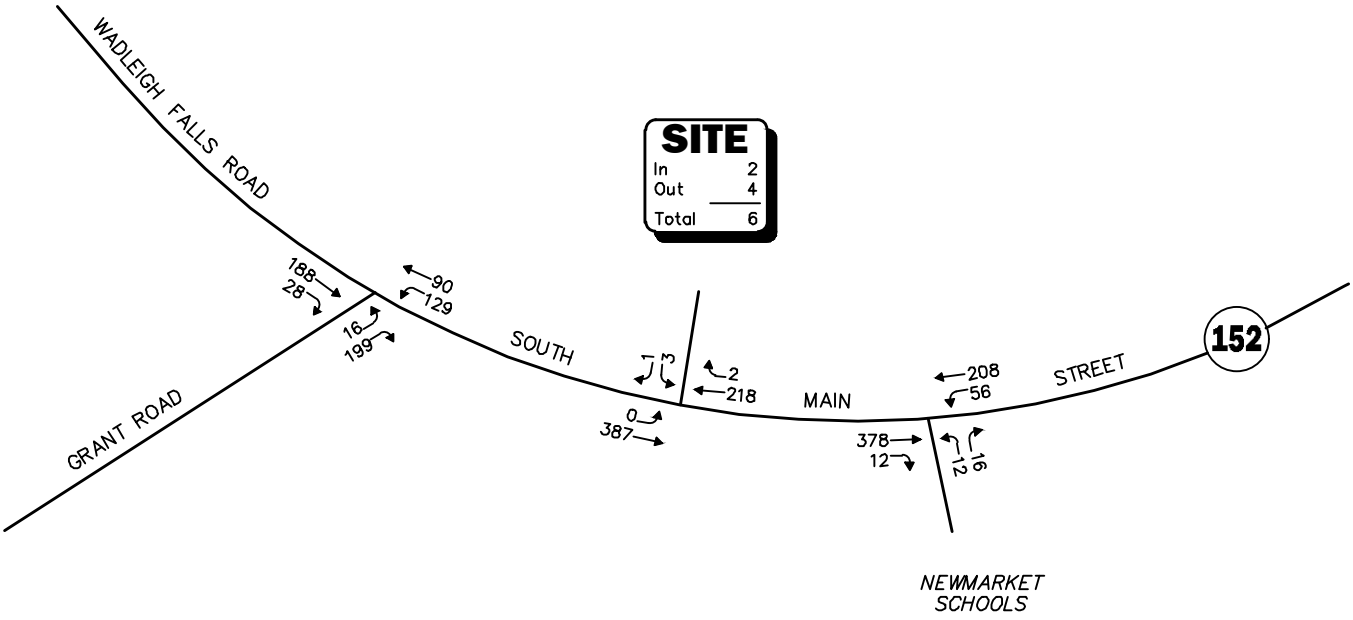
WEEKDAY MORNING PEAK HOUR (7:15 - 8:15 AM)



WEEKDAY AFTERNOON PEAK HOUR (2:30 - 3:30 PM)

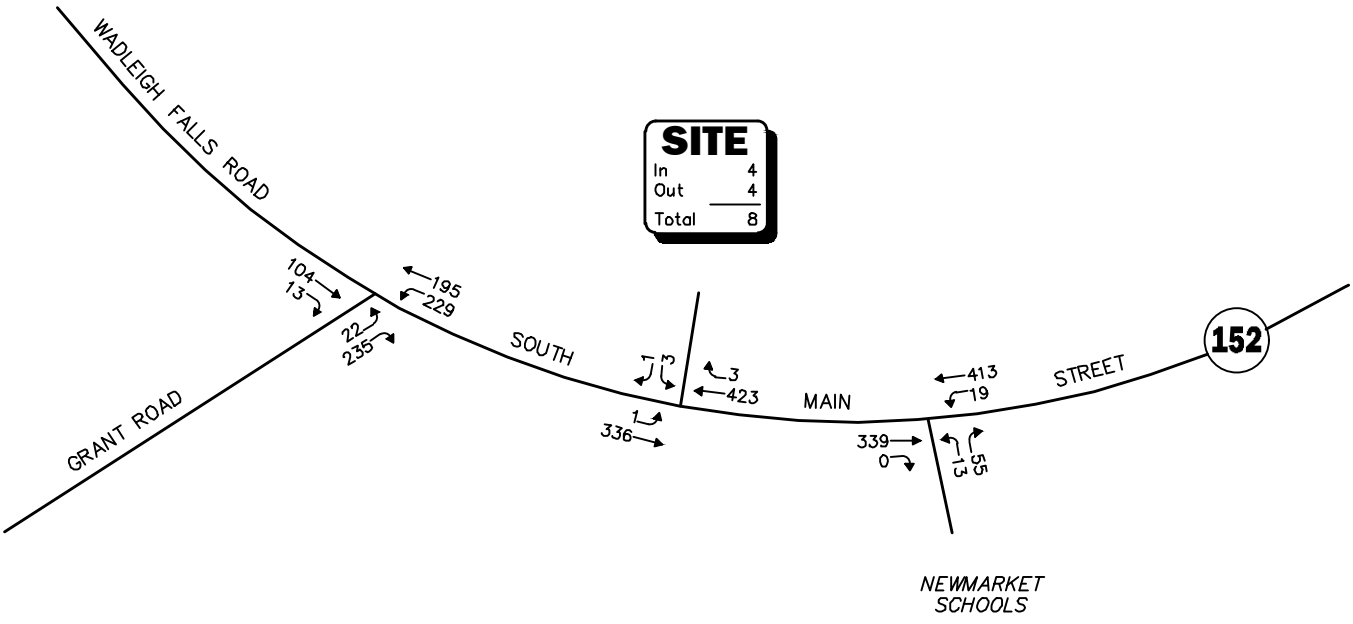


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Figure 7A

2024 Build
Peak-Month
Peak-Hour Traffic Volumes

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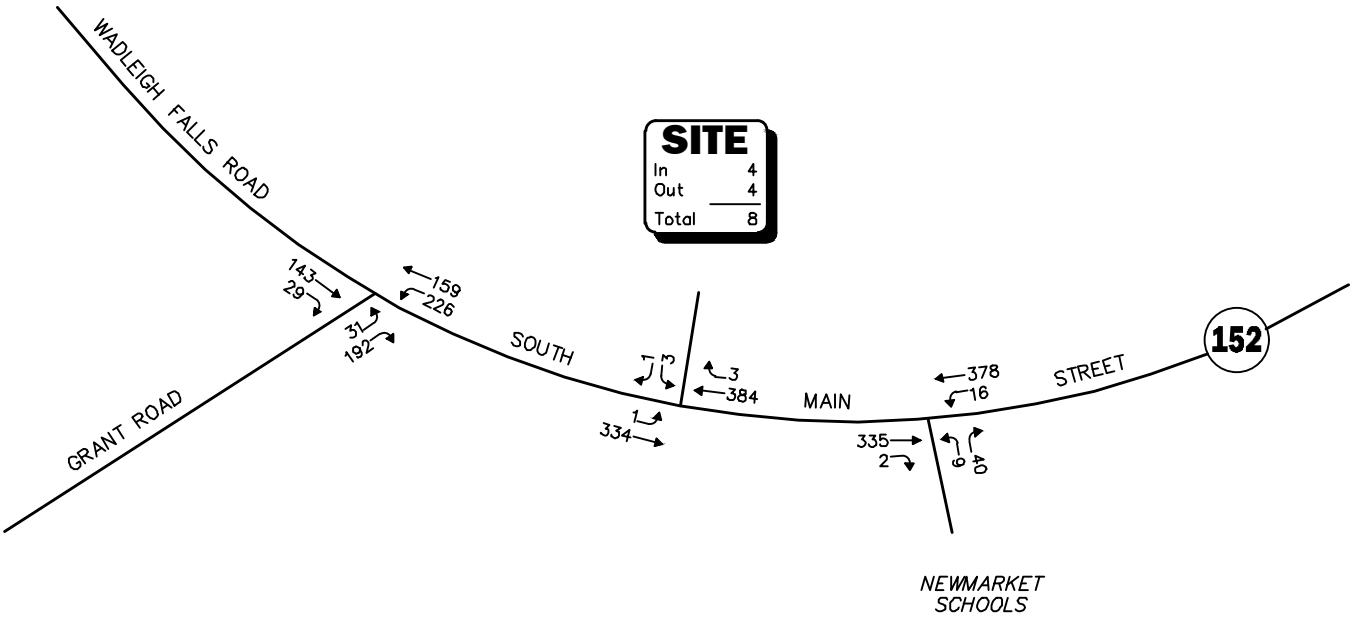

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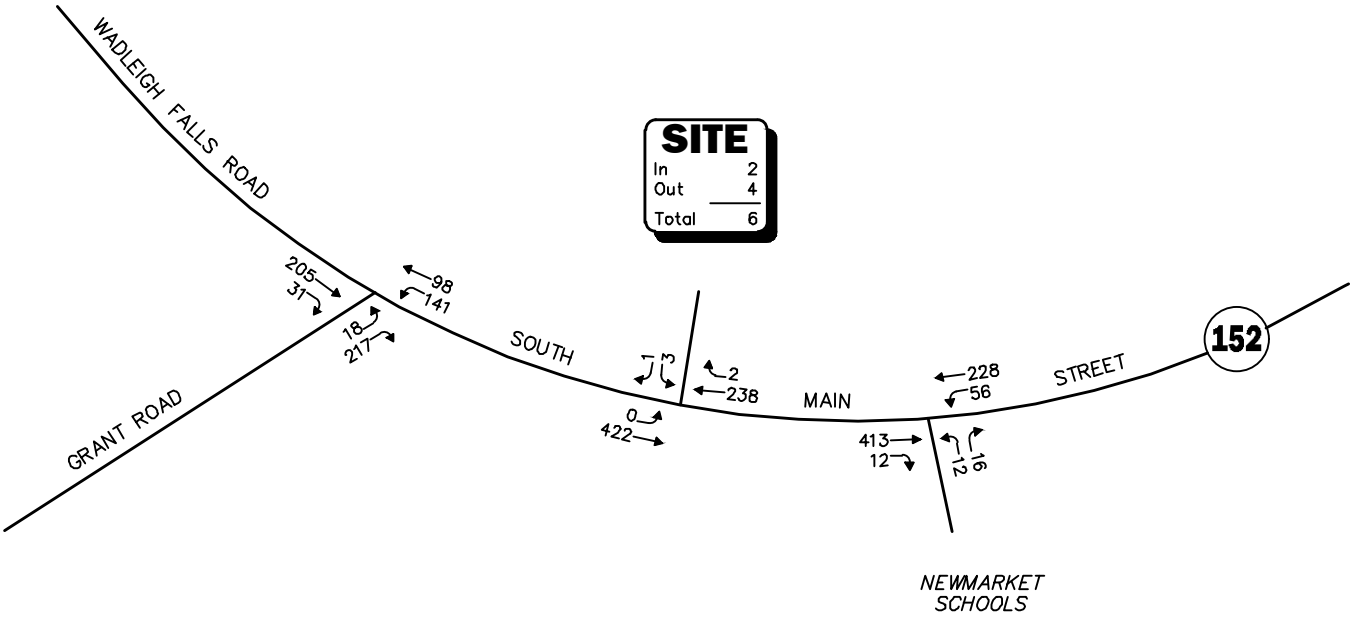
Figure 7B

2024 Build
Peak-Month
Weekday Evening
(4:45 - 5:45 PM)
Peak-Hour Traffic Volumes

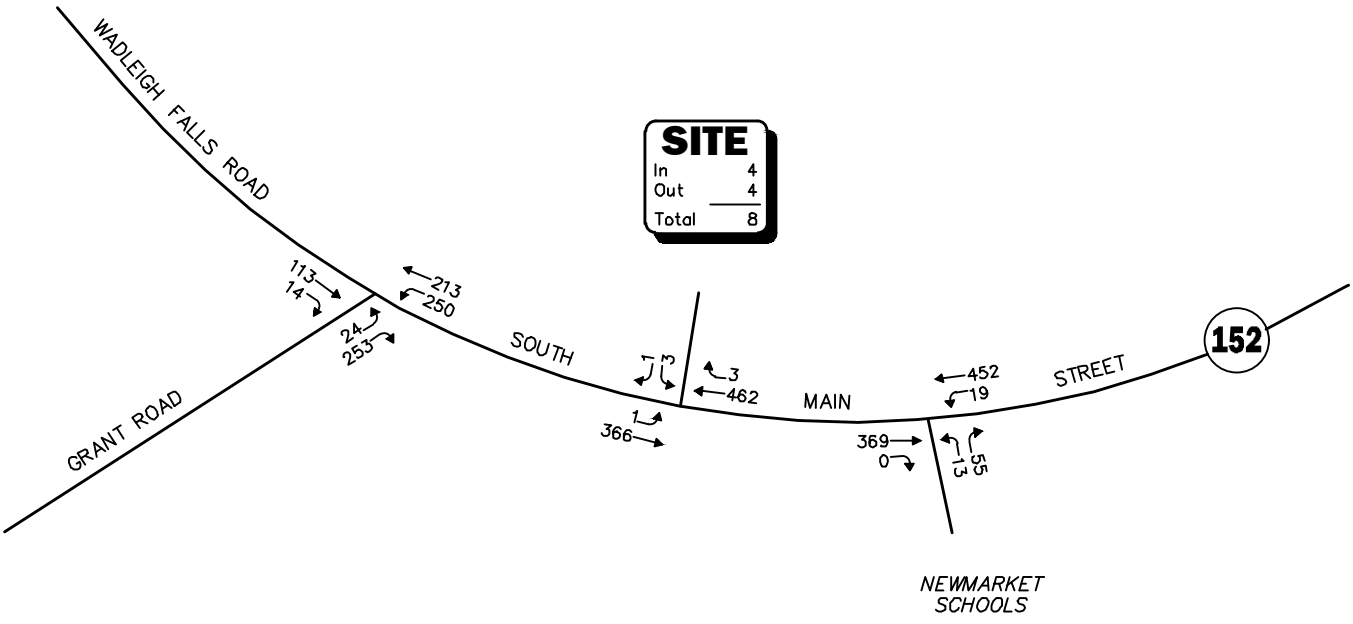
Vanasse & Associates inc

R:\9626\9626NT1.dwg, 3/15/2023 3:06:32 PM

WEEKDAY MORNING PEAK HOUR (7:15 - 8:15 AM)



WEEKDAY AFTERNOON PEAK HOUR (2:30 - 3:30 PM)



Not To Scale

Figure 8A

2034 Build
Peak-Month
Peak-Hour Traffic Volumes

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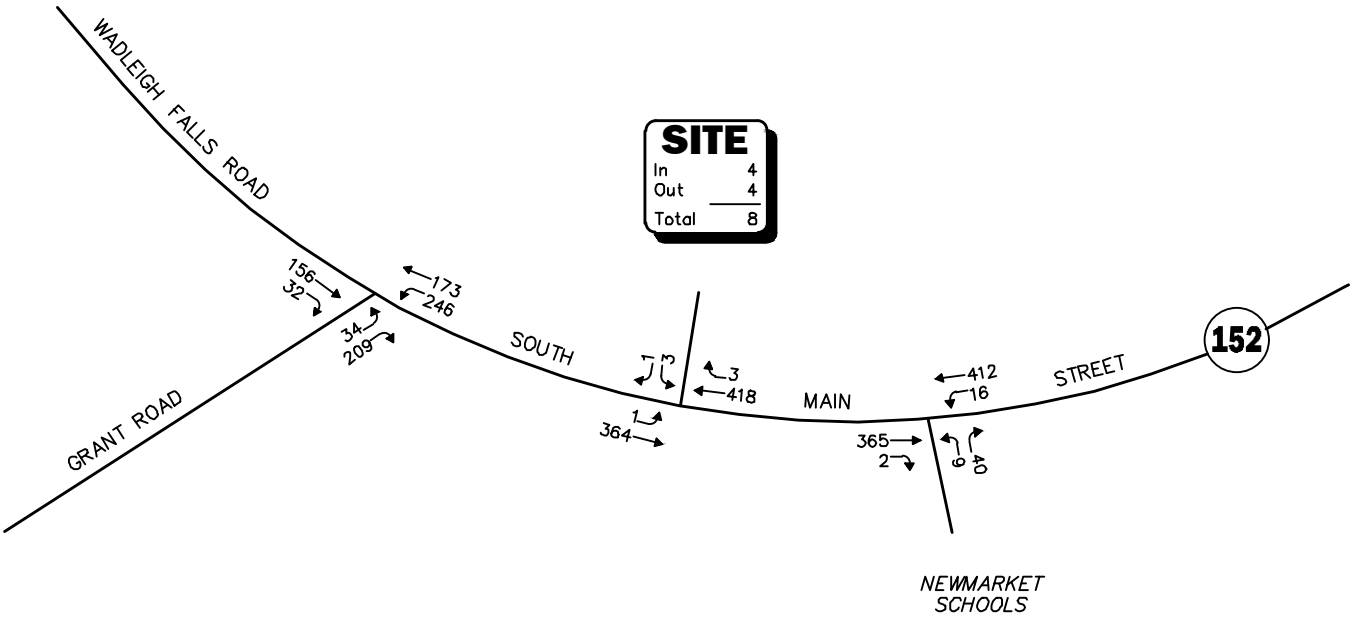


Not To Scale

Figure 8B

Vanasse & Associates inc

2034 Build
Peak-Month
Weekday Evening
(4:45 - 5:45 PM)
Peak-Hour Traffic Volumes

TRAFFIC OPERATIONS ANALYSIS

In order to assess the potential impact of the Project on the roadway network, a detailed traffic operations analysis (motorist delays, vehicle queuing, and level of service) was performed at the study area intersections. Capacity analyses provide an indication of how well transportation facilities serve the traffic demands placed upon them, with vehicle queue analyses providing a secondary measure of the operational characteristics of an intersection or section of roadway under study.

In brief, six levels of service are defined for each type of facility. They are given letter designations ranging from A to F, with LOS "A" representing the best operating conditions and LOS "F" representing congested or constrained operations. An LOS of "E" is representative of a transportation facility that is operating at its design capacity with an LOS of "D" generally defined as the limit of "acceptable" traffic operations. Since the level of service of a traffic facility is a function of the flows placed upon it, such a facility may operate at a wide range of levels of service depending on the time of day, day of week, or period of the year. The Synchro® 11 intersection capacity analysis software, which is based on the analysis methodologies and procedures presented in the HCM 6th Edition[6] for unsignalized intersections was used to complete the level-of-service and vehicle queue analyses.

Analysis Results

Level-of-service and vehicle queue analyses were conducted for 2023 Existing, 2024 and 2034 No-Build, and 2024 Opening-Year Build and 2034 Build conditions for the intersections within the study area. The results of the intersection capacity and vehicle queue analyses are summarized in Table 5, with the detailed analysis results presented in the Appendix.

The following is a summary of the level-of-service and vehicle queue analyses for the intersections within the study area. For context, we note that an LOS of "D" or better is generally defined as "acceptable" operating conditions.

NH Route 152 at Grant Road

No change in level-of-service or vehicle queuing is predicted to occur over both 2024 No-Build or 2034 No-Build conditions with the addition of Project-related traffic (i.e., 2024 Opening-Year Build and 2034 Build conditions), with Project-related impacts generally defined as a predicted increase in average motorist delay of less than 1.0 seconds. All movements at the intersection are predicted to continue to operate at LOS C or better with vehicle queues of up to seven (7) vehicles (Grant Road approach).

NH Route 152 at the Newmarket Elementary School Driveway

No change in level-of-service or vehicle queuing is predicted to occur over both 2024 No-Build or 2034 No-Build conditions with the addition of Project-related traffic, with Project-related impacts generally defined as a predicted increase in average motorist delay of less than 1.0 seconds. All movements at the intersection are predicted to continue to operate at LOS C or better with vehicle queues of up to one (1) vehicle.

[6] *Highway Capacity Manual*; Transportation Research Board; Washington, DC; 2016.

NH Route 152 at the Project Site Driveway

Under 2024 Opening-Year Build and 2034 Build conditions, the Project site driveway approach to NH Route 152 was shown to operate at LOS C or better with negligible vehicle queuing. All movements along NH Route 152 approaching the Project site driveway were shown to operate at LOS A, also with negligible vehicle queuing.

Table 5
UNSIGNALIZED INTERSECTION LEVEL-OF-SERVICE AND VEHICLE QUEUE SUMMARY

Unsignalized Intersection/Peak Hour/Movement	2023 Existing				2024 No-Build				2024 Opening-Year Build				2034 No-Build				2034 Build			
	Demand[a]	Delay[b]	LOS[c]	Queue[d] 95th	Demand	Delay	LOS	Queue 95th	Demand	Delay	LOS	Queue 95th	Demand	Delay	LOS	Queue 95th	Demand	Delay	LOS	Queue 95th
NH Route 152 at Grant Road																				
Weekday Morning:																				
NH Route 152 EB TH/RT	212	0.0	A	0	216	0.0	A	0	216	0.0	A	0	236	0.0	A	0	236	0.0	A	0
NH Route 152 WB LT/TH	211	4.8	A	1	218	4.8	A	1	219	4.9	A	1	238	4.9	A	1	239	5.0	A	1
Grant Road NB LT/RT	210	18.2	C	5	215	19.0	C	5	215	19.1	C	5	235	24.3	C	7	235	24.3	C	7
Weekday Afternoon:																				
NH Route 152 EB TH/RT	110	0.0	A	0	117	0.0	A	0	117	0.0	A	0	127	0.0	A	0	127	0.0	A	0
NH Route 152 WB LT/TH	405	4.4	A	1	423	4.4	A	1	424	4.4	A	1	462	4.5	A	1	463	4.5	A	1
Grant Road NB LT/RT	243	12.9	B	2	254	13.4	B	2	255	13.5	B	2	277	14.9	B	3	277	15.0	B	3
Weekday Evening:																				
NH Route 152 EB TH/RT	165	0.0	A	0	172	0.0	A	0	172	0.0	A	0	188	0.0	A	0	188	0.0	A	0
NH Route 152 WB LT/TH	366	4.7	A	1	384	4.8	A	1	385	4.8	A	1	418	4.8	A	1	419	4.8	A	1
Grant Road NB LT/RT	211	13.7	B	2	222	14.3	B	2	223	14.3	B	2	242	16.1	C	3	243	16.2	C	3
NH Route 152 at the Newmarket Elementary School Driveway																				
Weekday Morning:																				
NH Route 152 EB TH/RT	378	0.0	A	0	387	0.0	A	0	390	0.0	A	0	422	0.0	A	0	425	0.0	A	0
NH Route 152 WB LT/TH	255	2.0	A	1	262	2.0	A	1	264	2.0	A	1	282	1.9	A	1	284	1.9	A	1
Elementary School Driveway NB LT/RT	28	19.2	C	1	28	19.8	C	1	28	19.9	C	1	28	22.0	C	1	28	22.2	C	1
Weekday Afternoon:																				
NH Route 152 EB TH/RT	318	0.0	A	0	336	0.0	A	0	339	0.0	A	0	366	0.0	A	0	369	0.0	A	0
NH Route 152 WB LT/TH	411	0.4	A	0	429	0.4	A	0	432	0.4	A	0	468	0.3	A	0	471	0.3	A	0
Elementary School Driveway NB LT/RT	68	15.7	C	2	68	16.3	C	2	68	16.4	C	2	68	17.7	C	2	68	17.8	C	2
Weekday Evening:																				
NH Route 152 EB TH/RT	316	0.0	A	0	334	0.0	A	0	337	0.0	A	0	364	0.0	A	0	367	0.0	A	0
NH Route 152 WB LT/TH	373	0.4	A	0	391	0.3	A	0	394	0.3	A	0	425	0.3	A	0	428	0.3	A	0
Elementary School Driveway NB LT/RT	49	13.3	B	1	49	13.7	B	1	49	13.7	B	1	49	14.5	B	1	49	14.5	B	1
NH Route 152 at the Project Site Driveway																				
Weekday Morning:																				
NH Route 152 EB LT/TH	--	--	--	--	--	--	--	--	387	0.0	A	0	--	--	--	--	422	0.0	A	0
NH Route 152 WB TH/RT	--	--	--	--	--	--	--	--	220	0.0	A	0	--	--	--	--	240	0.0	A	0
Project Site Driveway SB LT/RT	--	--	--	--	--	--	--	--	4	15.0	C	0	--	--	--	--	4	16.1	C	0
Weekday Afternoon:																				
NH Route 152 EB LT/TH	--	--	--	--	--	--	--	--	337	0.0	A	0	--	--	--	--	367	0.0	A	0
NH Route 152 WB TH/RT	--	--	--	--	--	--	--	--	426	0.0	A	0	--	--	--	--	465	0.0	A	0
Project Site Driveway SB LT/RT	--	--	--	--	--	--	--	--	4	15.5	C	0	--	--	--	--	4	16.7	C	0
Weekday Evening:																				
NH Route 152 EB LT/TH	--	--	--	--	--	--	--	--	335	0.0	A	0	--	--	--	--	365	0.0	A	0
NH Route 152 WB TH/RT	--	--	--	--	--	--	--	--	387	0.0	A	0	--	--	--	--	421	0.0	A	0
Project Site Driveway SB LT/RT	--	--	--	--	--	--	--	--	4	14.9	B	0	--	--	--	--	4	15.9	C	0

[a]Demand in vehicles per hour.
[b]Average control delay per vehicle (in seconds).
[c]Level of service.
[d]Queue length in vehicles.
NB = northbound; SB = southbound; EB = eastbound; WB = westbound; LT = left-turning movements; TH = through movements; RT = right-turning movements.

SIGHT DISTANCE ASSESSMENT

Sight distance measurements were performed at the intersection of NH Route 152 at the Project site driveway in accordance with American Association of State Highway and Transportation Officials (AASHTO)[7] requirements. Both stopping sight distance (SSD) and intersection sight distance (ISD) measurements were performed. In brief, SSD is the distance required by a vehicle traveling at the design speed of a roadway, on wet pavement, to stop prior to striking an object in its travel path. ISD or corner sight distance (CSD) is the sight distance required by a driver entering or crossing an intersecting roadway to perceive an on-coming vehicle and safely complete a turning or crossing maneuver with on-coming traffic. In accordance with AASHTO standards, if the measured ISD is at least equal to the required SSD value for the appropriate design speed, the intersection can operate in a safe manner. Table 6 presents the measured SSD and ISD at the subject intersection.

Table 6
SIGHT DISTANCE MEASUREMENTS[a]

Intersection/Sight Distance Measurement	Feet		
	Required Minimum (SSD)	Desirable (ISD)[b]	Measured
NH Route 152 at the Project Site Driveway			
Stopping Sight Distance:			
NH Route 152 approaching from the east	305	--	500+
NH Route 152 approaching from the west	305	--	354
Intersection Sight Distance:			
Looking to the east from the Project site driveway	305	385	105/500+[c]
Looking to the west from the Project site driveway	305	445	383[c]

[a]Recommended minimum values obtained from *A Policy on Geometric Design of Highways and Streets,* 7th Edition; American Association of State Highway and Transportation Officials (AASHTO); 2018; and based on an approach speed of 40 mph along NH Route 152.
[b]Values shown are the intersection sight distance for a vehicle turning right or left exiting a roadway under STOP control such that motorists approaching the intersection on the major street should not need to adjust their travel speed to less than 70 percent of their initial approach speed.
[c]Available sight distance with the selective trimming/removal of trees and vegetation located within the sight triangle areas of the Project site driveway.

As can be seen in Table 6, with the selective trimming/removal of trees and vegetation located within the sight triangle areas of the Project site driveway, the available lines of sight to and from the Project site driveway intersection with NH Route 152 were found to exceed the recommended minimum sight distance to function in a safe manner (SSD) based on a 40 mph approach speed along NH Route 152, which is above both the measured 85th percentile vehicle travel speed (37 mph) and with the posted speed limit (30 mph) in the vicinity of the Project site.

[7]*A Policy on Geometric Design of Highway and Streets,* 7th Edition; American Association of State Highway and Transportation Officials (AASHTO); Washington D.C.; 2018.

SUMMARY

VAI has completed a detailed assessment of the potential impacts on the transportation infrastructure associated with the proposed construction of an age-qualified multifamily residential development to be located at 242 South Main Street (NH Route 152) in Newmarket, New Hampshire. This study has been completed in accordance with NHDOT standards for the preparation of a TIS and includes an evaluation of the following specific areas as they relate to the Project: i) access requirements; ii) potential off-site improvements; and iii) safety considerations; under existing and future conditions, both with and without the Project. Based on this assessment, we have concluded the following with respect to the Project:

1. Using trip-generation statistics published by the ITE,[8] the Project is expected to generate approximately 104 vehicle trips on an average weekday (two-way, 24-hour volume), with approximately 6 vehicle trips expected during the weekday morning peak-hour and 8 vehicle trips expected during the weekday evening peak-hour;

2. The Project will not have a significant impact (increase) on motorist delays or vehicle queuing over Existing or anticipated future conditions without the Project (No-Build conditions), with no changes in level-of-service or vehicle queuing predicted to occur as a result of the addition of Project-related traffic and all of the movements at the study area intersections shown to continue operate at LOS C or better, where and LOS of "D" or better is generally defined as "acceptable" traffic operations;

3. Exiting movements from the Project site driveway to NH Route 152 are predicted to operate at LOS C or better with negligible vehicle queuing predicted, with all movements along NH Route 152 approaching the driveway shown to operate at LOS A, also with negligible vehicle queuing; and

4. Lines of sight at the intersection of NH Route 152 at the Project site driveway were found to exceed the recommended minimum distance for the intersection to operate in a safe manner based on the appropriate approach speed.

In consideration of the above, we have concluded that the Project can be accommodated within the confines of the existing transportation infrastructure in a safe and efficient manner with the implementation of the recommendations that follow.

RECOMMENDATIONS

Project Access

Access to the Project site will be provided by way of a full-access driveway that will intersect the north side of NH Route 152 generally opposite the driveway to 249 South Main Street. The following recommendations are offered with respect to the design and operation of the Project site access and internal circulation, many of which are reflected on the Site Plan:

- The Project site driveway will be a minimum of 24 feet in width and designed to accommodate the turning and maneuvering requirements of the largest anticipated responding emergency vehicle.

[8]Ibid 1.

- Where perpendicular parking is proposed, the drive aisle behind the parking will be a minimum of 23 feet in order to facilitate parking maneuvers (24-feet is proposed).
- Vehicles exiting the Project site to NH Route 152 should be placed under STOP-sign control with a marked STOP-line provided.
- All signs and pavement markings to be installed as a part of the Project will conform to the applicable standards of the *Manual on Uniform Traffic Control Devices* (MUTCD).[9]
- Americans with Disabilities Act (ADA) compliant wheelchair ramps will be provided at all pedestrian crossings to be constructed or modified in conjunction with the Project.
- Existing trees and vegetation located within the sight triangle areas of the Project site driveway should be selectively trimmed and removed in order to provided the necessary sight lines for safe operation of the driveway.
- Signs and landscaping to be installed as a part of the Project within the intersection sight triangle areas will be designed and maintained so as not to restrict lines of sight.
- Snow accumulation (windrows) within sight triangle areas of the Project site driveway will be promptly removed where such accumulations would impede sight lines.

With implementation of the aforementioned recommendations, safe and efficient access will be provided to the Project site and the Project can be accommodated within the confines of the existing and improved transportation system.

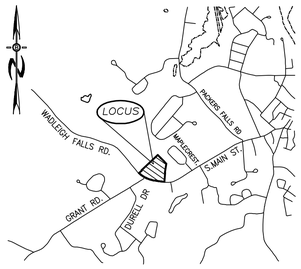
cc: File

[9]*Manual on Uniform Traffic Control Devices (MUTCD)*; Federal Highway Administration; Washington, D.C.; 2009.

ATTACHMENTS

PROJECT SITE PLAN
AUTOMATIC TRAFFIC RECORDER COUNT DATA
TURNING MOVEMENT COUNT DATA
SEASONAL ADJUSTMENT DATA
COVID ADJUSTMENT DATA
VEHICLE TRAVEL SPEED DATA
GENERAL BACKGROUND TRAFFIC GROWTH
BACKGROUND DEVELOPMENT NETWORKS
TRIP-GENERATION CALCULATIONS
TRIP DISTRIBUTION
CAPACITY ANALYSIS WORKSHEETS

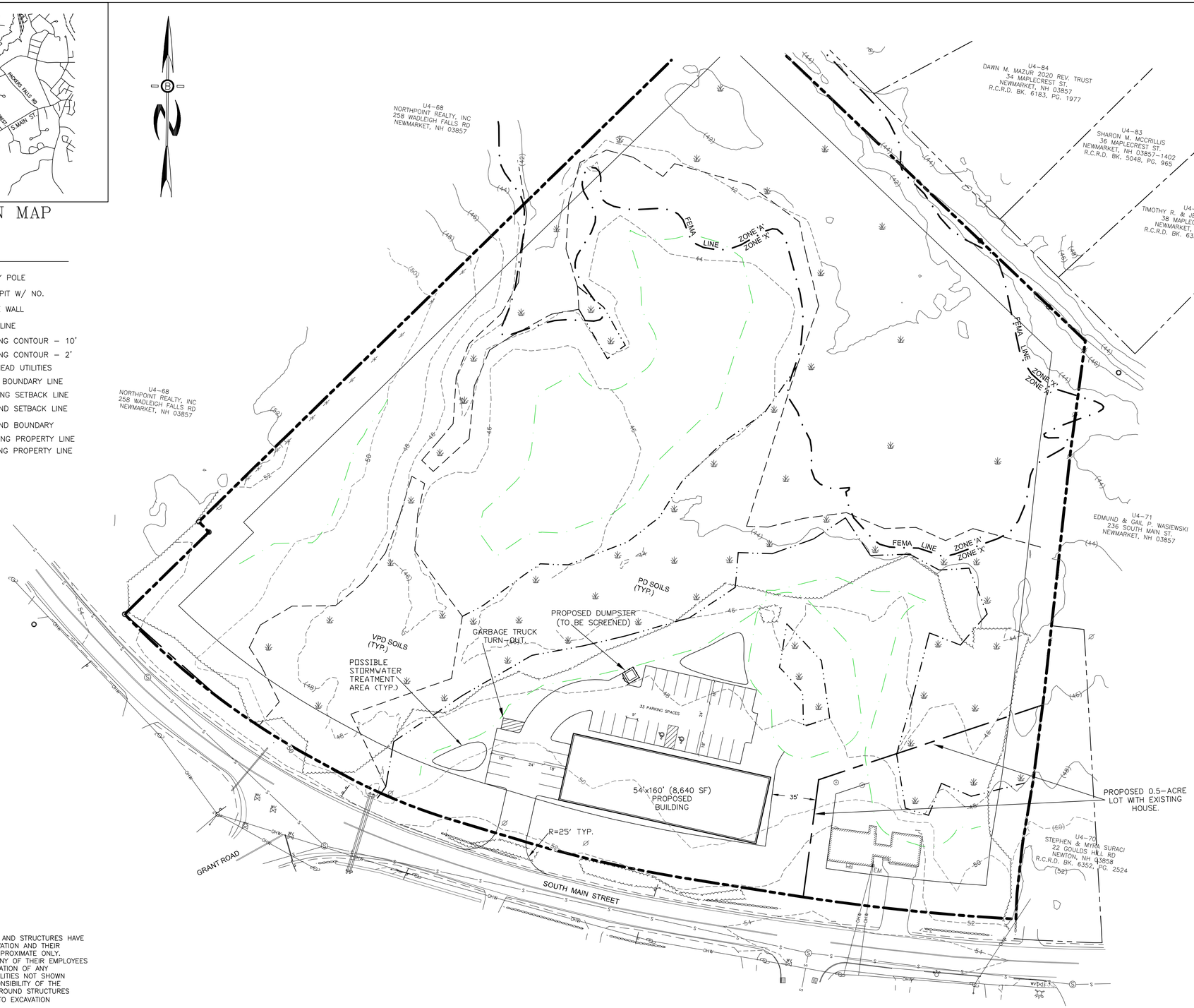
PROJECT SITE PLAN



LOCATION MAP

LEGEND

- UTILITY POLE
- TP#1A — TEST PIT W/ NO.
- STONE WALL
- TREE LINE
- EXISTING CONTOUR – 10'
- EXISTING CONTOUR – 2'
- OHW — OVERHEAD UTILITIES
- SOILS BOUNDARY LINE
- BUILDING SETBACK LINE
- WETLAND SETBACK LINE
- WETLAND BOUNDARY
- ABUTTING PROPERTY LINE
- EXISTING PROPERTY LINE



UNDERGROUND FACILITIES, UTILITIES AND STRUCTURES HAVE BEEN PLOTTED FROM FIELD OBSERVATION AND THEIR LOCATION MUST BE CONSIDERED APPROXIMATE ONLY. NEITHER BEALS ASSOCIATES, NOR ANY OF THEIR EMPLOYEES TAKE RESPONSIBILITY FOR THE LOCATION OF ANY UNDERGROUND STRUCTURES OR UTILITIES NOT SHOWN THAT MAY EXIST. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE ALL UNDERGROUND STRUCTURES AND/OR UTILITIES LOCATED PRIOR TO EXCAVATION

WORK BY CALLING 1–888–DIG–SAFE (1–888–344–7233).

PREPARED FOR:

DR LEMIUEX BUILDERS, INC.
76 EXETER ROAD
NEWMARKET, NH 03857

BEALS ASSOCIATES, PLLC
70 PORTSMOUTH AVE,
THIRD FLOOR, SUITE 2
STRATHAM, N.H. 03885
PHONE: 603-583-4860,
FAX. 603-583-4863

NOTES

1. UNDERGROUND FACILITIES, UTILITIES AND STRUCTURES HAVE BEEN LOCATED FROM FIELD OBSERVATIONS AND THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. BEALS ASSOCIATES OR ANY OF THEIR EMPLOYEES TAKE NO RESPONSIBILITY FOR THE LOCATION OF ANY UNDERGROUND STRUCTURES OR UTILITIES NOT SHOWN, THAT MAY EXIST. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE ALL UNDERGROUND UTILITIES OR STRUCTURES LOCATED PRIOR TO EXCAVATION WORK BY CALLING 1–888–DIG–SAFE
2. THIS PLAN HAS BEEN PREPARED FOR MUNICIPAL AND STATE APPROVALS AND FOR CONSTRUCTION BASED ON DATA OBTAINED FROM ON–SITE FIELD SURVEY AND EXISTING MUNICIPAL RECORDS. THROUGHOUT THE CONSTRUCTION PROCESS, THE CONTRACTOR SHALL INFORM THE ENGINEER IMMEDIATELY OF ANY FIELD DISCREPANCY FROM DATA AS SHOWN ON THE DESIGN PLANS. THIS INCLUDES ANY UNFORESEEN CONDITIONS, SUBSURFACE OR OTHERWISE, FOR EVALUATION AND RECOMMENDATIONS. ANY CONTRADICTION BETWEEN ITEMS OF THIS PLAN/PLAN SET, OR BETWEEN THE PLANS AND ON–SITE CONDITIONS MUST BE RESOLVED BEFORE RELATED CONSTRUCTION HAS BEEN INITIATED.
3. THE INTENT OF THIS PROPOSAL CONSISTS OF A PROPOSED 31 UNIT AGE RESTRICTED BUILDING AND ASSOCIATED PARKING.
4. ALL ROAD AND DRAINAGE WORK TO CONFORM TO TOWN STANDARD SPECIFICATIONS FOR CONSTRUCTION.
5. ALL PROPOSED SIGNS SHALL CONFORM TO THE TOWN ZONING REGULATIONS.
6. PROJECT IS BASED ON USGS DATUM NAVD 1988.
7. THE LANDOWNER IS RESPONSIBLE FOR COMPLYING WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL WETLAND REGULATIONS, INCLUDING ANY PERMITTING AND SETBACK REQUIREMENTS REQUIRED UNDER THESE REGULATIONS.
8. SEE DETAIL SHEET FOR STANDARD CONSTRUCTION NOTES AND DETAILS.

ZONING REQUIREMENTS

ZONE: R2

MIN. LOT SIZE =	1/2 ACRE
MIN. FRONTAGE =	100'
MAX. HEIGHT =	35'
BUILDING SETBACKS:	
FRONT	25'
SIDE & REAR	15'
WETLANDS	50'

PLANNING BOARD APPROVAL BLOCK

REVISIONS:	DATE:

CONCEPT SITE PLAN 2

RESIDENTIAL DEVELOPMENT
TAX MAP U4, LOT 69
242 SOUTH MAIN STREET
NEWMARKET, NEW HAMPSHIRE

DATE:	JAN 2023	SCALE:	1"=40'
PROJ. NO:	NH-1449	SHEET NO.	2

AUTOMATIC TRAFFIC RECORDER COUNT DATA

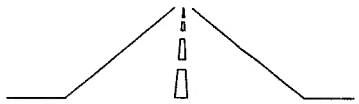
CALCULATION SHEET

Stephen G. Pernaw & Company, Inc.

Project:	Residential Development	Job Number:	2248A
Calculated By:		Date:	
Checked By:		Date:	
Sheet No:		Of:	
Subject:	ATR Data - W. of Elementary School Dwy, Newmarket, NH		

Automatic Traffic Recorder Count Data - Wednesday, 10:45 AM February 1, 2023 - Friday, 10:45 AM February 3, 2023

S Main Street (West of Elementary School Driveway), Newmarket, New Hampshire

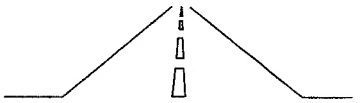


Stephen G. Pernaw & Company, Inc.

Study Name 2248A ATR
Start Date 02/01/2023
Start Time 10:45 AM
Weather: Clear & Cold
Collected By: MV
Location: S Main Street, W. of School Dwy
Town/State: Newmarket, New Hampshire

	CARS		TRUCKS			
	Westbound	Eastbound	Westbound	Eastbound	Total	
10:45 AM	29	21	2	3	55	2/1/2023
11:00 AM	27	27	4	4	62	
11:15 AM	27	31	3	4	65	
11:30 AM	27	31	2	2	62	
11:45 AM	25	28	5	2	60	
12:00 PM	37	26	1	1	65	
12:15 PM	26	26	3	4	59	
12:30 PM	33	29	5	1	68	
12:45 PM	30	28	4	3	65	
1:00 PM	32	23	3	4	62	
1:15 PM	31	27	1	2	61	
1:30 PM	33	40	4	3	80	
1:45 PM	32	53	1	5	91	
2:00 PM	73	45	4	5	127	
2:15 PM	47	64	3	0	114	
2:30 PM	47	55	3	1	106	
2:45 PM	35	40	1	0	76	
3:00 PM	52	44	0	2	98	
3:15 PM	37	42	0	4	83	
3:30 PM	68	40	1	2	111	
3:45 PM	71	37	1	0	109	
4:00 PM	47	38	1	0	86	
4:15 PM	46	41	1	1	89	
4:30 PM	77	51	1	0	129	
4:45 PM	55	60	1	2	118	
5:00 PM	78	51	0	0	129	
5:15 PM	62	53	0	2	117	
5:30 PM	52	60	0	0	112	
5:45 PM	42	53	0	0	95	
6:00 PM	30	37	1	0	68	
6:15 PM	41	35	0	2	78	
6:30 PM	40	27	0	1	68	
6:45 PM	36	32	0	0	68	
7:00 PM	35	33	0	0	68	
7:15 PM	30	20	0	0	50	
7:30 PM	32	20	0	0	52	
7:45 PM	17	14	0	0	31	
8:00 PM	39	19	0	1	59	
8:15 PM	27	11	0	0	38	
8:30 PM	16	5	0	0	21	
8:45 PM	19	8	1	0	28	
9:00 PM	16	9	0	0	25	
9:15 PM	11	13	0	0	24	
9:30 PM	10	4	0	0	14	

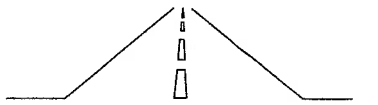
9:45 PM	6	6	0	0	12	
10:00 PM	2	11	0	0	13	
10:15 PM	7	3	0	0	10	
10:30 PM	9	3	0	0	12	
10:45 PM	2	1	0	0	3	
11:00 PM	3	1	0	0	4	
11:15 PM	4	1	0	0	5	
11:30 PM	0	1	0	0	1	
11:45 PM	2	1	0	0	3	
12:00 AM	0	1	0	0	1	2/2/2023
12:15 AM	2	1	0	0	3	
12:30 AM	1	2	0	0	3	
12:45 AM	0	0	0	0	0	
1:00 AM	2	0	0	0	2	
1:15 AM	1	0	0	0	1	
1:30 AM	1	0	0	0	1	
1:45 AM	0	0	0	0	0	
2:00 AM	0	0	0	0	0	
2:15 AM	2	0	0	0	2	
2:30 AM	0	0	0	0	0	
2:45 AM	0	0	0	0	0	
3:00 AM	0	1	0	0	1	
3:15 AM	1	1	0	0	2	
3:30 AM	1	2	0	0	3	
3:45 AM	1	1	0	0	2	
4:00 AM	1	1	0	0	2	
4:15 AM	1	7	0	0	8	
4:30 AM	1	4	0	0	5	
4:45 AM	2	5	0	0	7	
5:00 AM	2	7	0	0	9	
5:15 AM	3	7	0	0	10	
5:30 AM	3	9	0	0	12	
5:45 AM	5	12	0	0	17	
6:00 AM	4	17	1	0	22	
6:15 AM	13	21	0	1	35	
6:30 AM	8	45	0	2	55	
6:45 AM	20	50	2	2	74	
7:00 AM	21	43	1	1	66	
7:15 AM	43	104	2	4	153	
7:30 AM	49	50	3	1	103	
7:45 AM	22	42	3	0	67	
8:00 AM	18	49	1	1	69	
8:15 AM	24	52	5	7	88	
8:30 AM	28	113	6	0	147	
8:45 AM	28	46	2	2	78	
9:00 AM	17	28	6	2	53	
9:15 AM	20	22	1	3	46	
9:30 AM	26	23	2	3	54	
9:45 AM	26	32	3	1	62	
10:00 AM	21	21	5	5	52	
10:15 AM	22	30	2	0	54	
10:30 AM	18	35	2	5	60	
Total	2170 vpd	2363 vpd	104 vpd	101 vpd	4738 vpd	



Stephen G. Pernaw & Company, Inc.

Study Name 2248A ATR
Start Date 02/02/2023
Start Time 10:45 AM
Weather: Clear & Cold
Collected By: MV
Location: S Main Street, W. of School Dwy
Town/State: Newmarket, New Hampshire

	CARS		TRUCKS			
	Westbound	Eastbound	Westbound	Eastbound	Total	
10:45 AM	21	32	0	3	56	2/2/2023
11:00 AM	30	22	6	1	59	
11:15 AM	29	27	2	0	58	
11:30 AM	30	33	1	6	70	
11:45 AM	36	27	2	0	65	
12:00 PM	23	23	1	4	51	
12:15 PM	26	21	3	0	50	
12:30 PM	38	33	4	2	77	
12:45 PM	26	23	2	2	53	
1:00 PM	43	21	6	1	71	
1:15 PM	28	23	4	2	57	
1:30 PM	20	30	3	4	57	
1:45 PM	28	35	2	5	70	
2:00 PM	25	28	4	3	60	
2:15 PM	37	47	1	2	87	
2:30 PM	77	57	7	2	143	
2:45 PM	58	54	2	0	114	
3:00 PM	62	60	4	2	128	
3:15 PM	59	37	4	3	103	
3:30 PM	57	45	3	4	109	
3:45 PM	48	46	2	3	99	
4:00 PM	62	49	1	0	112	
4:15 PM	69	52	1	3	125	
4:30 PM	57	43	0	0	100	
4:45 PM	57	45	2	1	105	
5:00 PM	66	65	0	1	132	
5:15 PM	61	54	0	0	115	
5:30 PM	63	39	0	0	102	
5:45 PM	49	42	0	0	91	
6:00 PM	32	52	0	0	84	
6:15 PM	48	32	0	0	80	
6:30 PM	36	29	0	0	65	
6:45 PM	38	25	1	0	64	
7:00 PM	20	24	0	0	44	
7:15 PM	30	26	0	0	56	
7:30 PM	24	25	0	0	49	
7:45 PM	48	26	0	0	74	
8:00 PM	23	12	0	0	35	
8:15 PM	16	16	0	0	32	
8:30 PM	12	17	0	0	29	
8:45 PM	18	7	0	0	25	
9:00 PM	14	8	0	0	22	
9:15 PM	18	10	0	0	28	
9:30 PM	5	8	0	0	13	



9:45 PM	9	11	0	0	20	
10:00 PM	8	4	0	0	12	
10:15 PM	9	5	0	0	14	
10:30 PM	7	3	0	0	10	
10:45 PM	3	2	0	0	5	
11:00 PM	3	3	0	0	6	
11:15 PM	4	1	0	0	5	
11:30 PM	1	2	0	0	3	
11:45 PM	2	0	0	0	2	
12:00 AM	0	0	0	0	0	2/3/2023
12:15 AM	2	0	0	0	2	
12:30 AM	0	0	0	0	0	
12:45 AM	1	0	0	0	1	
1:00 AM	1	0	0	0	1	
1:15 AM	1	0	0	0	1	
1:30 AM	1	0	0	0	1	
1:45 AM	2	0	0	0	2	
2:00 AM	3	0	0	0	3	
2:15 AM	1	0	0	0	1	
2:30 AM	0	0	0	0	0	
2:45 AM	1	0	0	0	1	
3:00 AM	0	0	0	0	0	
3:15 AM	1	0	0	0	1	
3:30 AM	1	0	0	0	1	
3:45 AM	2	0	0	0	2	
4:00 AM	2	0	0	0	2	
4:15 AM	0	0	0	0	0	
4:30 AM	2	1	0	1	4	
4:45 AM	2	3	1	0	6	
5:00 AM	2	5	0	0	7	
5:15 AM	6	3	0	0	9	
5:30 AM	4	10	1	0	15	
5:45 AM	4	1	0	0	5	
6:00 AM	2	1	0	0	3	
6:15 AM	8	12	0	1	21	
6:30 AM	9	39	2	3	53	
6:45 AM	17	48	2	3	70	
7:00 AM	15	48	0	0	63	
7:15 AM	44	102	2	3	151	
7:30 AM	39	49	3	4	95	
7:45 AM	23	46	2	1	72	
8:00 AM	20	30	1	1	52	
8:15 AM	18	47	3	0	68	
8:30 AM	24	138	8	2	172	
8:45 AM	27	33	3	2	65	
9:00 AM	19	28	1	0	48	
9:15 AM	31	26	1	0	58	
9:30 AM	32	30	1	3	66	
9:45 AM	14	35	1	0	50	
10:00 AM	24	24	0	1	49	
10:15 AM	25	20	0	1	46	
10:30 AM	20	28	3	1	52	
Total	2163 vpd	2268 vpd	103 vpd	81 vpd	4615 vpd	

TURNING MOVEMENT COUNT DATA

CALCULATION SHEET

Stephen G. Pernaw & Company, Inc.

Project:	Residential Development	Job Number:	2248A
Calculated By:		Date:	
Checked By:		Date:	
Sheet No:		Of:	
Subject:	Intersection A TMC - Thursday AM, School & PM Peak Hours		

Turning Movement Count Data - Intersection A (Thursday, February 2, 2023)

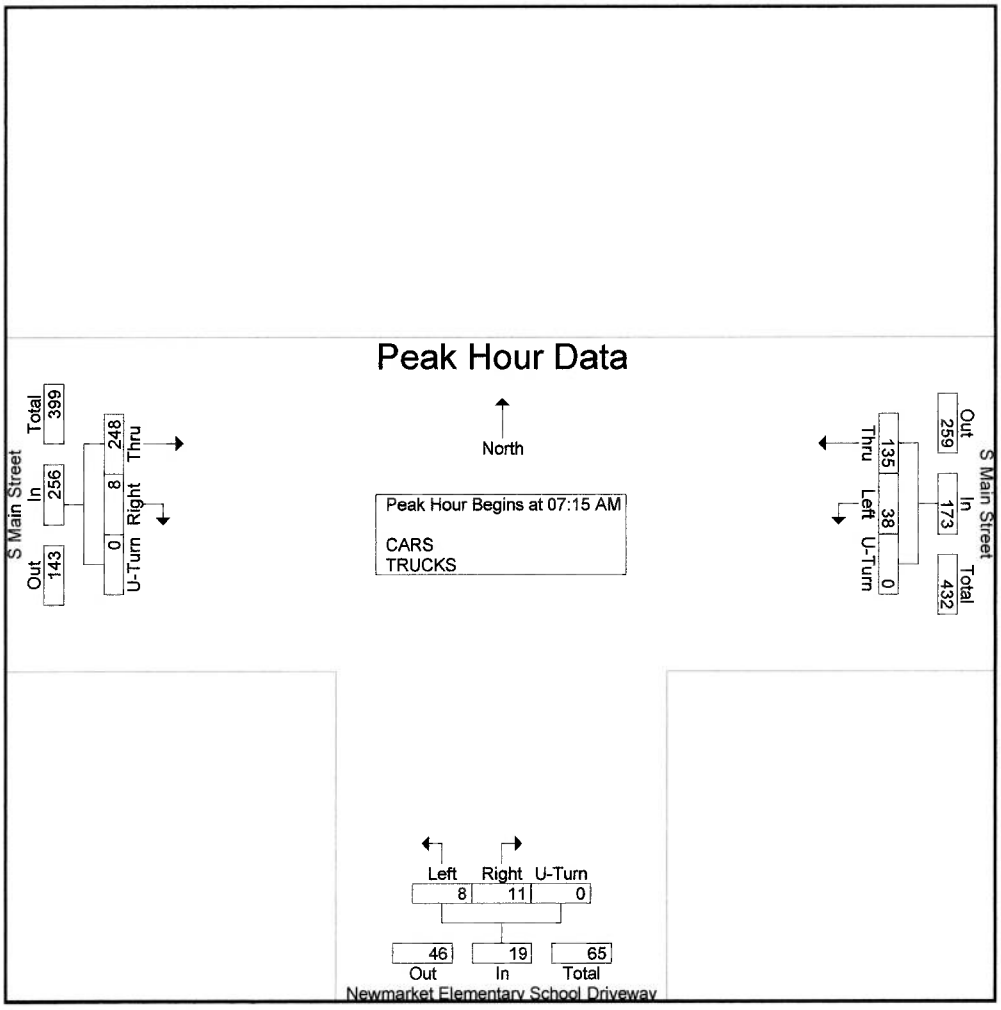
S Main Street / Newmarket Elementary School Driveway, Newmarket, New Hampshire

AM, School & PM Peak Hour

Stephen G. Pernaw & Company, Inc.
P.O. Box 1721
Concord, New Hampshire 03302

File Name : 2248A_INT_A__AM_&_PM
Site Code : 2248A
Start Date : 2/2/2023
Page No : 2

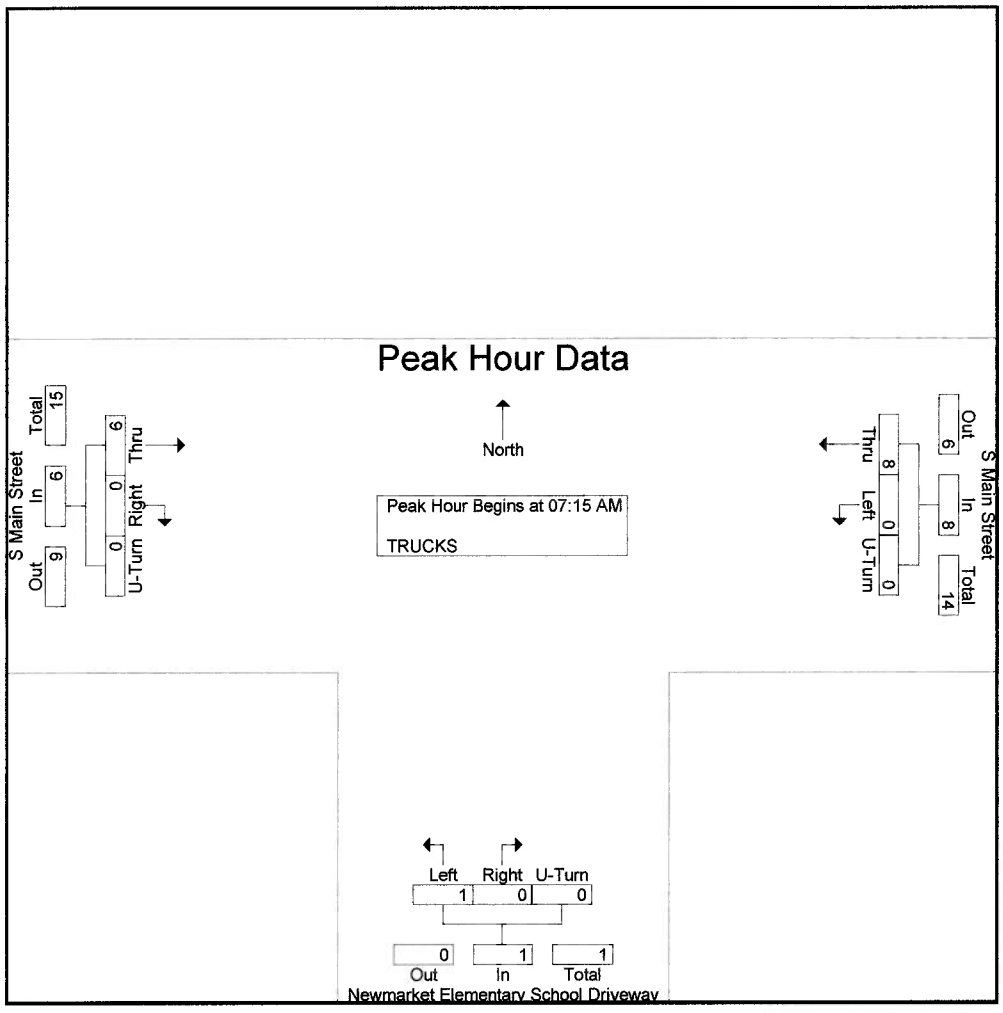
	S Main Street From East				Newmarket Elementary School Driveway From South				S Main Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:15 AM													
07:15 AM	41	8	0	49	**7**	1	0	8	1	**111**	0	**112**	**169**
07:30 AM	**49**	8	0	**57**	3	**7**	0	**10**	**4**	47	0	51	118
07:45 AM	25	10	0	35	0	0	0	0	2	41	0	43	78
08:00 AM	20	**12**	0	32	1	0	0	1	1	49	0	50	83
Total Volume	135	38	0	173	11	8	0	19	8	248	0	256	448
% App. Total	78	22	0		57.9	42.1	0		3.1	96.9	0		
PHF	.689	.792	.000	.759	.393	.286	.000	.475	.500	.559	.000	.571	.663



Stephen G. Pernaw & Company, Inc.
P.O. Box 1721
Concord, New Hampshire 03302

File Name : 2248A_INT_A__AM_&_PM
Site Code : 2248A
Start Date : 2/2/2023
Page No : 2

	S Main Street From East				Newmarket Elementary School Driveway From South				S Main Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:15 AM													
07:15 AM	2	0	0	2	0	0	0	0	0	**4**	0	**4**	**6**
07:30 AM	1	0	0	1	0	**1**	0	**1**	0	1	0	1	3
07:45 AM	**4**	0	0	**4**	0	0	0	0	0	0	0	0	4
08:00 AM	1	0	0	1	0	0	0	0	0	1	0	1	2
Total Volume	8	0	0	8	0	1	0	1	0	6	0	6	15
% App. Total	100	0	0		0	100	0		0	100	0		
PHF	.500	.000	.000	.500	.000	.250	.000	.250	.000	.375	.000	.375	.625



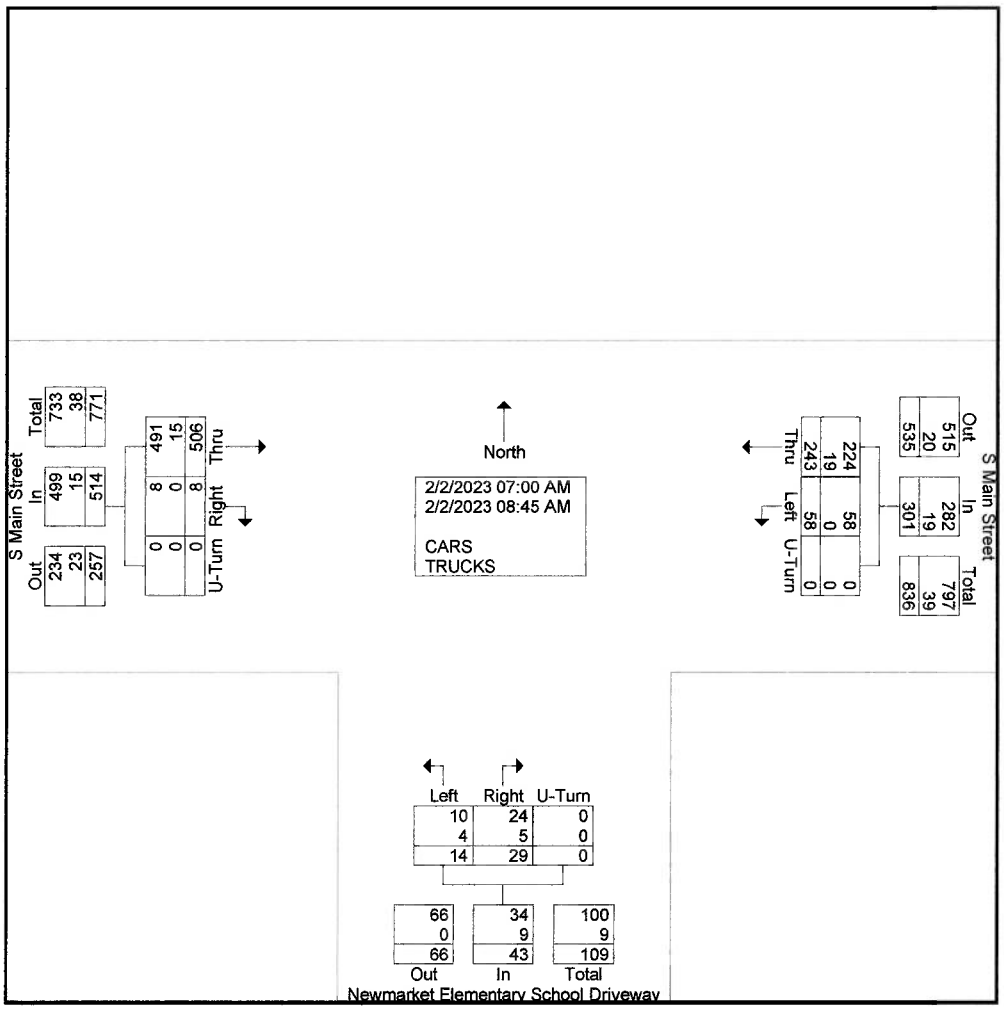
Stephen G. Pernaw & Company, Inc.
P.O. Box 1721
Concord, New Hampshire 03302

Weather: Clear
Coolected By: MV
Job Number: 2248A
Town/State: Newmarket, NH

File Name : 2248A_INT_A__AM_&_PM
Site Code : 2248A
Start Date : 2/2/2023
Page No : 1

Groups Printed- CARS - TRUCKS

	S Main Street From East				Newmarket Elementary School Driveway From South				S Main Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
07:00 AM	21	4	0	25	2	1	0	3	0	41	0	41	69
07:15 AM	41	8	0	49	7	1	0	8	1	111	0	112	169
07:30 AM	49	8	0	57	3	7	0	10	4	47	0	51	118
07:45 AM	25	10	0	35	0	0	0	0	2	41	0	43	78
Total	136	30	0	166	12	9	0	21	7	240	0	247	434
08:00 AM	20	12	0	32	1	0	0	1	1	49	0	50	83
08:15 AM	29	9	0	38	1	0	0	1	0	54	0	54	93
08:30 AM	30	3	0	33	7	3	0	10	0	116	0	116	159
08:45 AM	28	4	0	32	8	2	0	10	0	47	0	47	89
Total	107	28	0	135	17	5	0	22	1	266	0	267	424
Grand Total	243	58	0	301	29	14	0	43	8	506	0	514	858
Apprch %	80.7	19.3	0		67.4	32.6	0		1.6	98.4	0		
Total %	28.3	6.8	0	35.1	3.4	1.6	0	5	0.9	59	0	59.9	
CARS	224	58	0	282	24	10	0	34	8	491	0	499	815
% CARS	92.2	100	0	93.7	82.8	71.4	0	79.1	100	97	0	97.1	95
TRUCKS	19	0	0	19	5	4	0	9	0	15	0	15	43
% TRUCKS	7.8	0	0	6.3	17.2	28.6	0	20.9	0	3	0	2.9	5



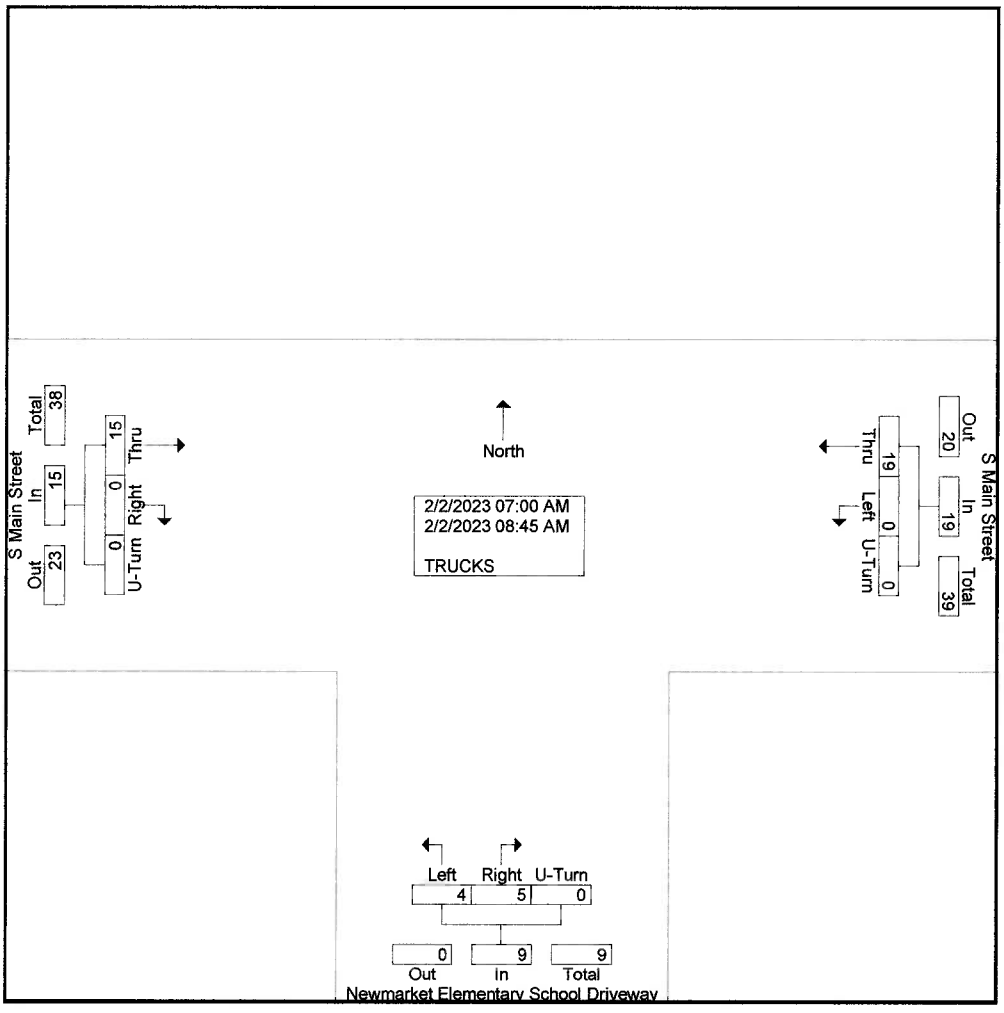
Stephen G. Pernaw & Company, Inc.
P.O. Box 1721
Concord, New Hampshire 03302

Weather: Clear
Coolected By: MV
Job Number: 2248A
Town/State: Newmarket, NH

File Name : 2248A_INT_A__AM_&_PM
Site Code : 2248A
Start Date : 2/2/2023
Page No : 1

Groups Printed- TRUCKS

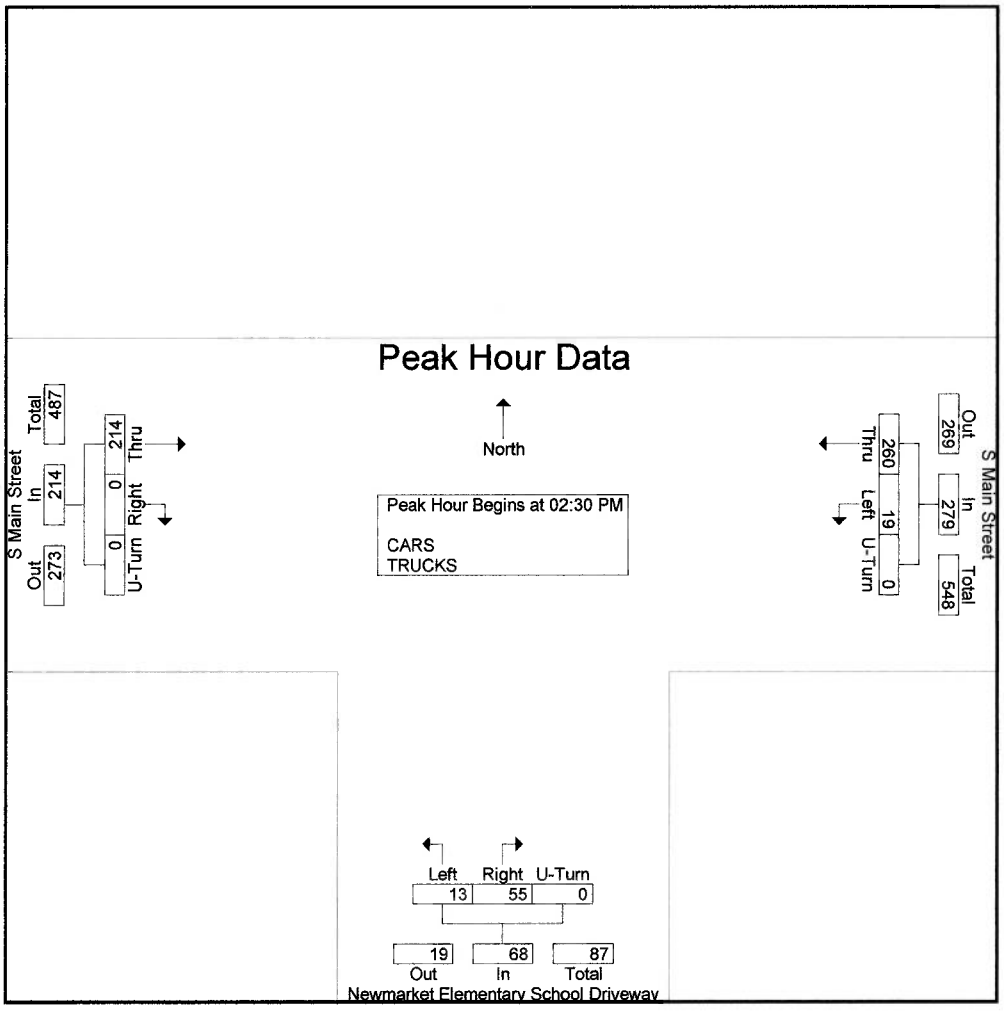
	S Main Street From East				Newmarket Elementary School Driveway From South				S Main Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
07:00 AM	1	0	0	1	0	0	0	0	0	1	0	1	2
07:15 AM	2	0	0	2	0	0	0	0	0	4	0	4	6
07:30 AM	1	0	0	1	0	1	0	1	0	1	0	1	3
07:45 AM	4	0	0	4	0	0	0	0	0	0	0	0	4
Total	8	0	0	8	0	1	0	1	0	6	0	6	15
08:00 AM	1	0	0	1	0	0	0	0	0	1	0	1	2
08:15 AM	5	0	0	5	0	0	0	0	0	6	0	6	11
08:30 AM	3	0	0	3	4	3	0	7	0	0	0	0	10
08:45 AM	2	0	0	2	1	0	0	1	0	2	0	2	5
Total	11	0	0	11	5	3	0	8	0	9	0	9	28
Grand Total	19	0	0	19	5	4	0	9	0	15	0	15	43
Apprch %	100	0	0		55.6	44.4	0		0	100	0		
Total %	44.2	0	0	44.2	11.6	9.3	0	20.9	0	34.9	0	34.9	



Stephen G. Pernaw & Company, Inc.
P.O. Box 1721
Concord, New Hampshire 03302

File Name : 2248A_INT_A__AM_&_PM
Site Code : 2248A
Start Date : 2/2/2023
Page No : 2

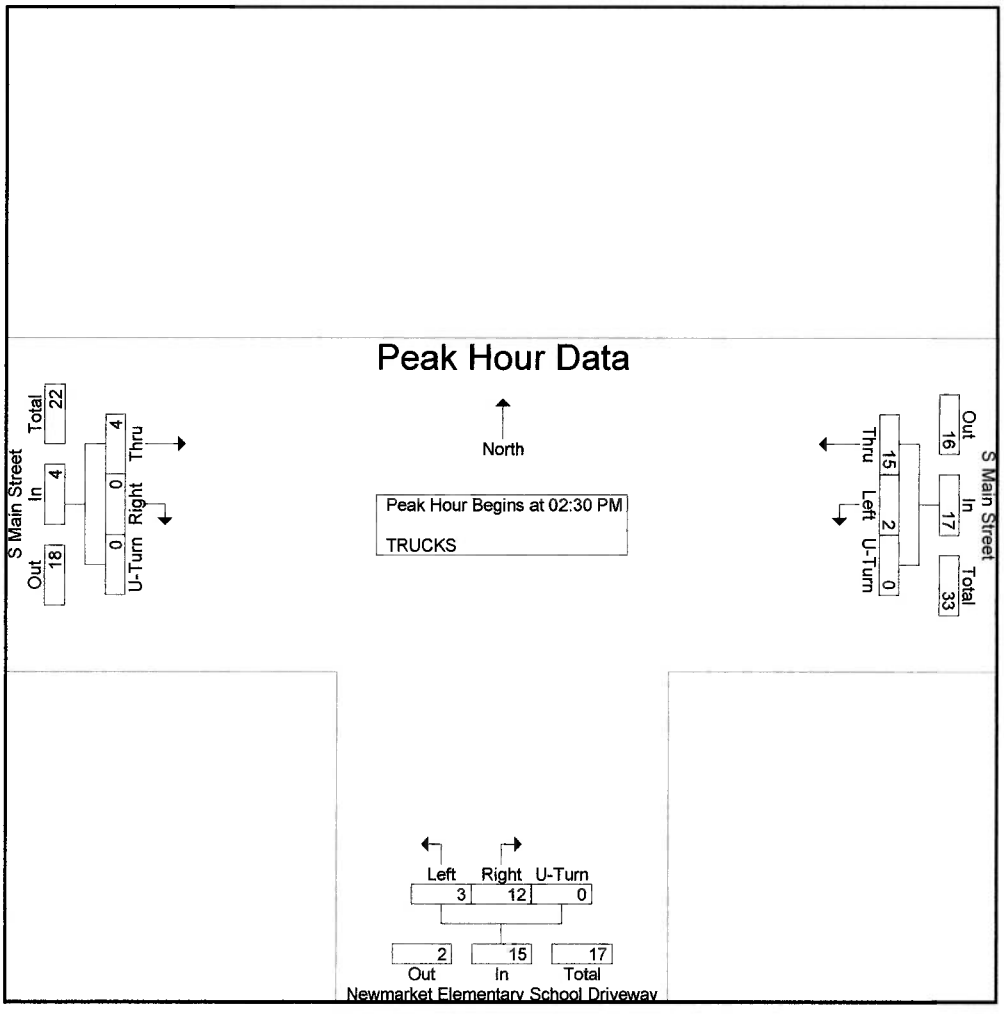
	S Main Street From East				Newmarket Elementary School Driveway From South				S Main Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 02:30 PM													
02:30 PM	**85**	4	0	**89**	5	1	0	6	0	59	0	59	**154**
02:45 PM	59	4	0	63	8	2	0	10	0	52	0	52	125
03:00 PM	62	**8**	0	70	12	2	0	14	0	**63**	0	**63**	147
03:15 PM	54	3	0	57	**30**	**8**	0	**38**	0	40	0	40	135
Total Volume	260	19	0	279	55	13	0	68	0	214	0	214	561
% App. Total	93.2	6.8	0		80.9	19.1	0		0	100	0		
PHF	.765	.594	.000	.784	.458	.406	.000	.447	.000	.849	.000	.849	.911



Stephen G. Pernaw & Company, Inc.
P.O. Box 1721
Concord, New Hampshire 03302

File Name : 2248A_INT_A__AM_&_PM
Site Code : 2248A
Start Date : 2/2/2023
Page No : 2

	S Main Street From East				Newmarket Elementary School Driveway From South				S Main Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 02:30 PM to 03:15 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 02:30 PM													
02:30 PM	**6**	0	0	**6**	3	0	0	3	0	1	0	1	**10**
02:45 PM	2	**1**	0	3	3	**1**	0	4	0	0	0	0	7
03:00 PM	3	0	0	3	**4**	1	0	**5**	0	1	0	1	9
03:15 PM	4	1	0	5	2	1	0	3	0	**2**	0	**2**	10
Total Volume	15	2	0	17	12	3	0	15	0	4	0	4	36
% App. Total	88.2	11.8	0		80	20	0		0	100	0		
PHF	.625	.500	.000	.708	.750	.750	.000	.750	.000	.500	.000	.500	.900



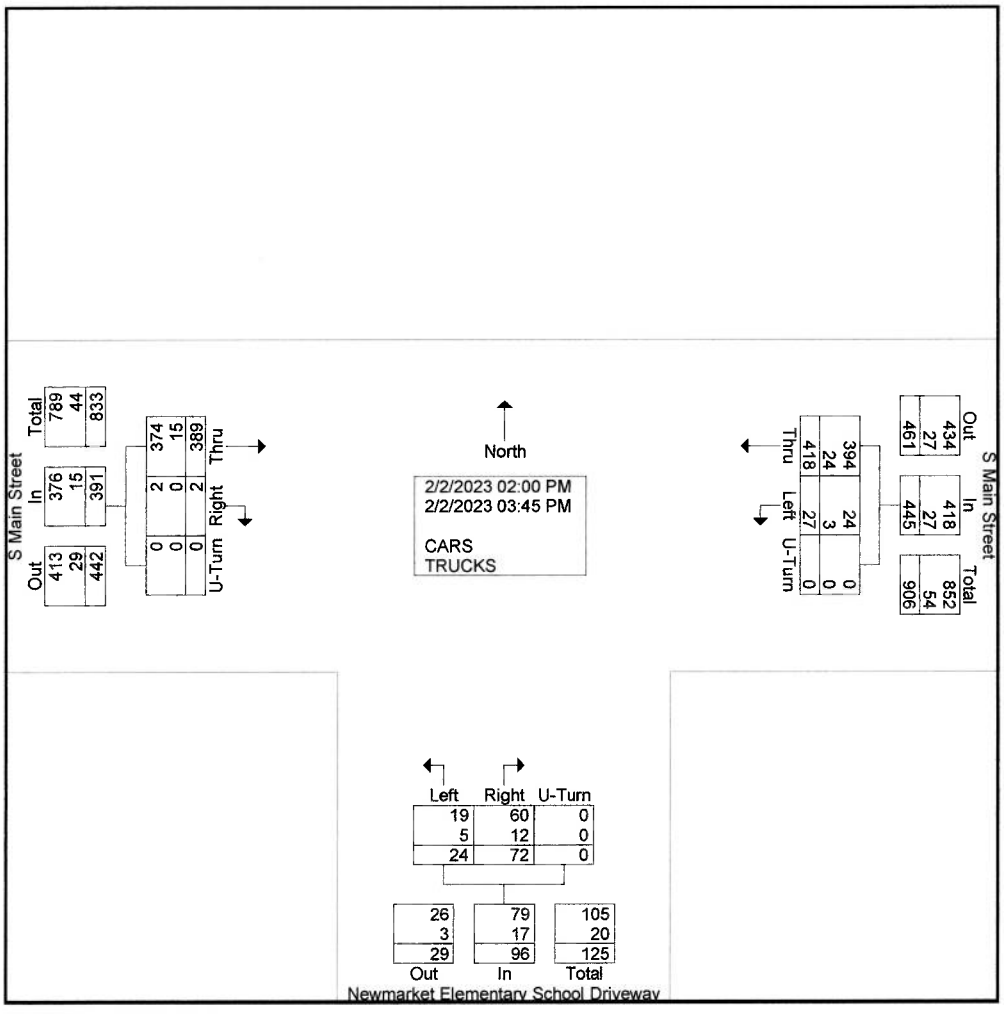
Stephen G. Pernaw & Company, Inc.
P.O. Box 1721
Concord, New Hampshire 03302

Weather: Clear
Coolected By: MV
Job Number: 2248A
Town/State: Newmarket, NH

File Name : 2248A_INT_A__AM_&_PM
Site Code : 2248A
Start Date : 2/2/2023
Page No : 1

Groups Printed- CARS - TRUCKS

	S Main Street From East				Newmarket Elementary School Driveway From South				S Main Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
02:00 PM	26	1	0	27	1	2	0	3	0	26	0	26	56
02:15 PM	35	0	0	35	2	0	0	2	0	55	0	55	92
02:30 PM	85	4	0	89	5	1	0	6	0	59	0	59	154
02:45 PM	59	4	0	63	8	2	0	10	0	52	0	52	125
Total	205	9	0	214	16	5	0	21	0	192	0	192	427
03:00 PM	62	8	0	70	12	2	0	14	0	63	0	63	147
03:15 PM	54	3	0	57	30	8	0	38	0	40	0	40	135
03:30 PM	53	3	0	56	8	6	0	14	2	48	0	50	120
03:45 PM	44	4	0	48	6	3	0	9	0	46	0	46	103
Total	213	18	0	231	56	19	0	75	2	197	0	199	505
Grand Total	418	27	0	445	72	24	0	96	2	389	0	391	932
Apprch %	93.9	6.1	0		75	25	0		0.5	99.5	0		
Total %	44.8	2.9	0	47.7	7.7	2.6	0	10.3	0.2	41.7	0	42	
CARS	394	24	0	418	60	19	0	79	2	374	0	376	873
% CARS	94.3	88.9	0	93.9	83.3	79.2	0	82.3	100	96.1	0	96.2	93.7
TRUCKS	24	3	0	27	12	5	0	17	0	15	0	15	59
% TRUCKS	5.7	11.1	0	6.1	16.7	20.8	0	17.7	0	3.9	0	3.8	6.3



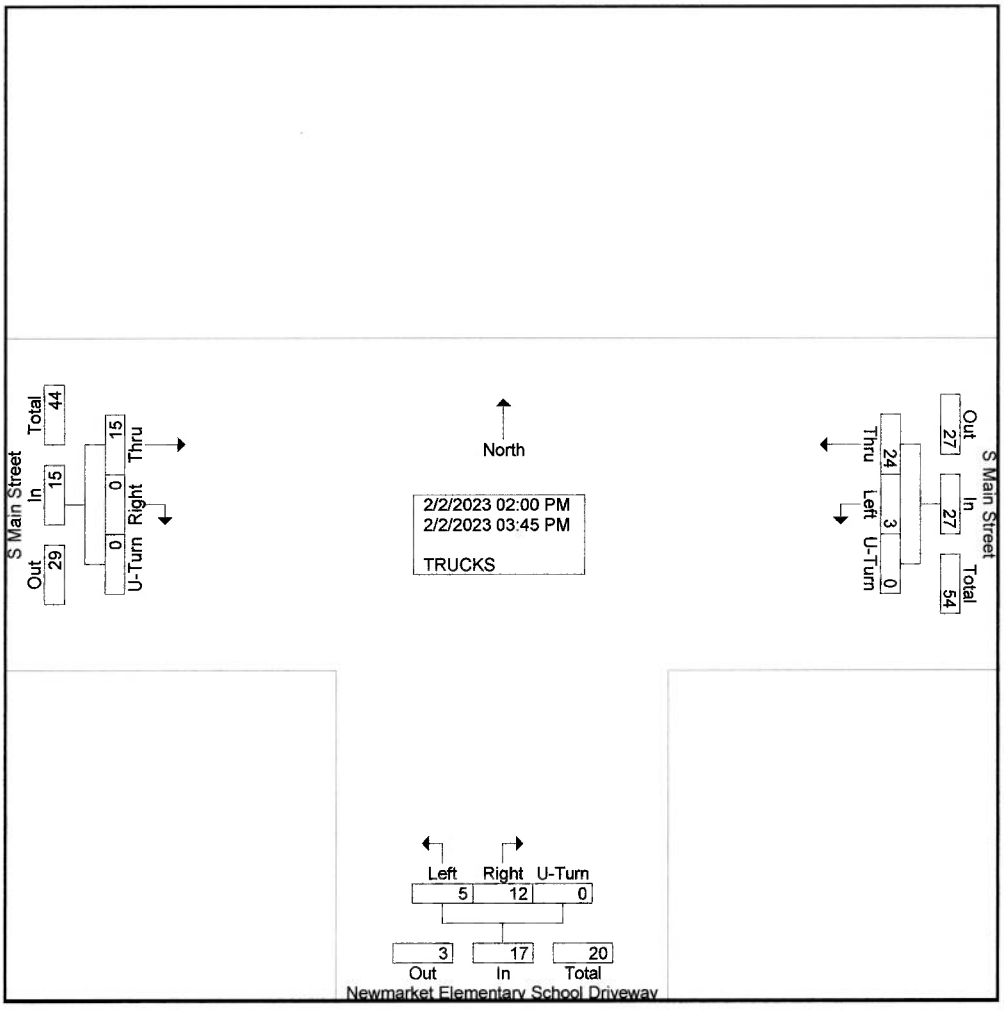
Stephen G. Pernaw & Company, Inc.
P.O. Box 1721
Concord, New Hampshire 03302

Weather: Clear
Coolected By: MV
Job Number: 2248A
Town/State: Newmarket, NH

File Name : 2248A_INT_A__AM_&_PM
Site Code : 2248A
Start Date : 2/2/2023
Page No : 1

Groups Printed- TRUCKS

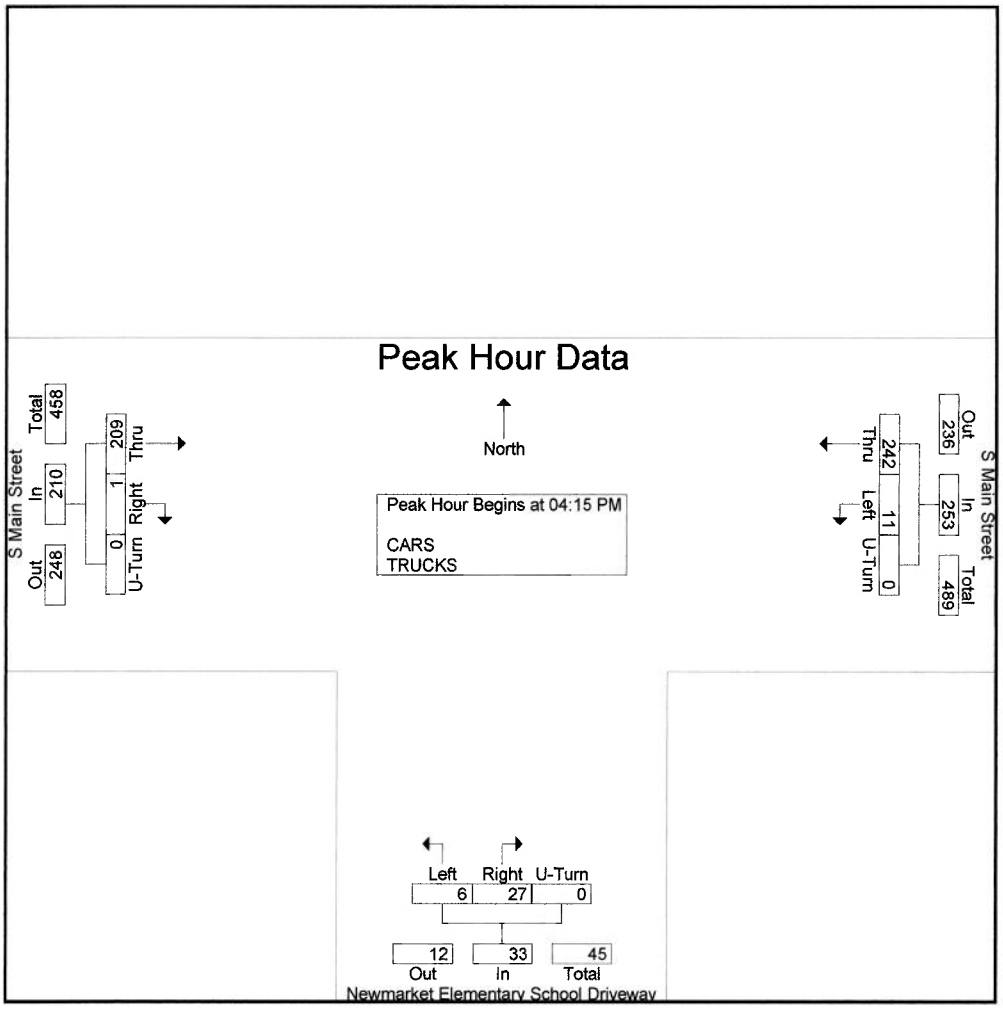
	S Main Street From East				Newmarket Elementary School Driveway From South				S Main Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
02:00 PM	4	0	0	4	0	0	0	0	0	3	0	3	7
02:15 PM	2	0	0	2	0	0	0	0	0	2	0	2	4
02:30 PM	6	0	0	6	3	0	0	3	0	1	0	1	10
02:45 PM	2	1	0	3	3	1	0	4	0	0	0	0	7
Total	14	1	0	15	6	1	0	7	0	6	0	6	28
03:00 PM	3	0	0	3	4	1	0	5	0	1	0	1	9
03:15 PM	4	1	0	5	2	1	0	3	0	2	0	2	10
03:30 PM	1	1	0	2	0	2	0	2	0	4	0	4	8
03:45 PM	2	0	0	2	0	0	0	0	0	2	0	2	4
Total	10	2	0	12	6	4	0	10	0	9	0	9	31
Grand Total	24	3	0	27	12	5	0	17	0	15	0	15	59
Apprch %	88.9	11.1	0		70.6	29.4	0		0	100	0		
Total %	40.7	5.1	0	45.8	20.3	8.5	0	28.8	0	25.4	0	25.4	



Stephen G. Pernaw & Company, Inc.
P.O. Box 1721
Concord, New Hampshire 03302

File Name : 2248A_INT_A__AM_&_PM
Site Code : 2248A
Start Date : 2/2/2023
Page No : 2

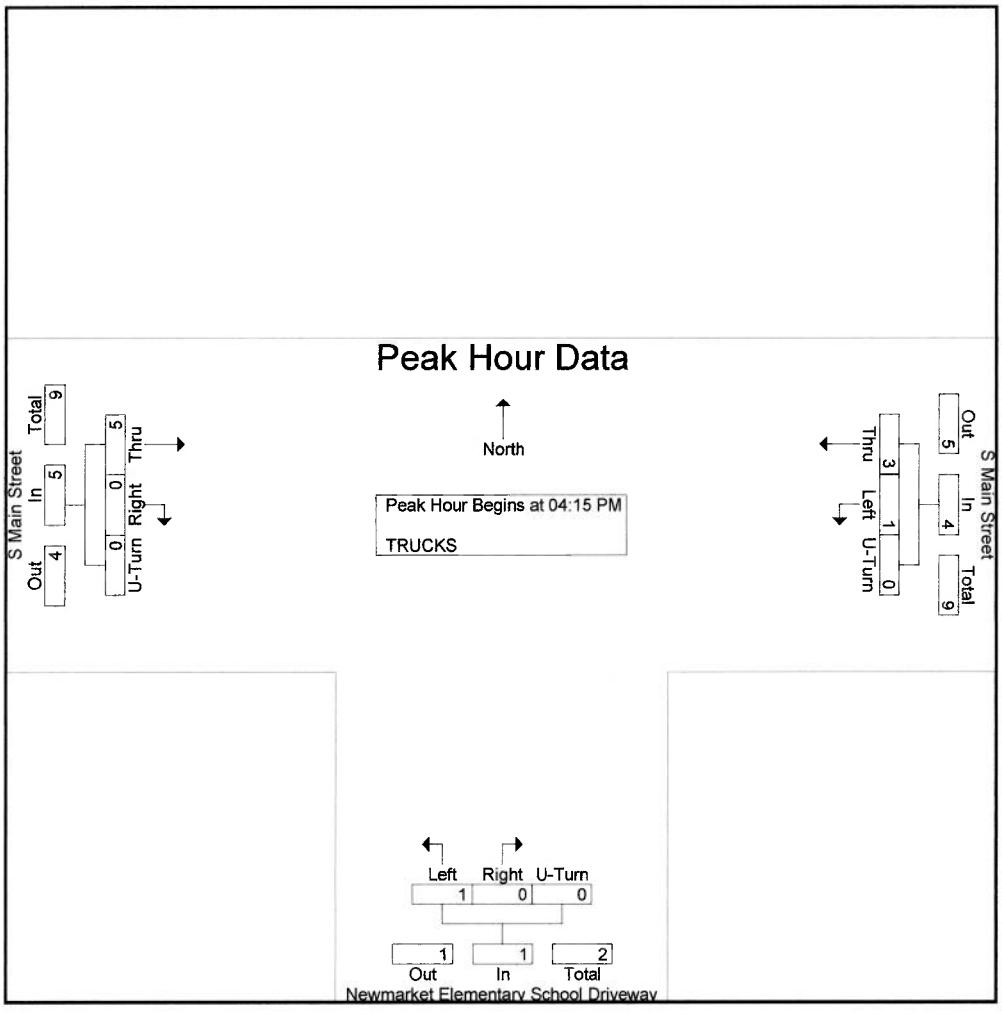
	S Main Street From East				Newmarket Elementary School Driveway From South				S Main Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:15 PM													
04:15 PM	**68**	**5**	0	**73**	**17**	2	0	**19**	0	54	0	54	**146**
04:30 PM	53	2	0	55	5	**3**	0	8	**1**	45	0	46	109
04:45 PM	54	2	0	56	4	0	0	4	0	45	0	45	105
05:00 PM	67	2	0	69	1	1	0	2	0	**65**	0	**65**	136
Total Volume	242	11	0	253	27	6	0	33	1	209	0	210	496
% App. Total	95.7	4.3	0		81.8	18.2	0		0.5	99.5	0		
PHF	.890	.550	.000	.866	.397	.500	.000	.434	.250	.804	.000	.808	.849



Stephen G. Pernaw & Company, Inc.
P.O. Box 1721
Concord, New Hampshire 03302

File Name : 2248A_INT_A__AM_&_PM
Site Code : 2248A
Start Date : 2/2/2023
Page No : 2

	S Main Street From East				Newmarket Elementary School Driveway From South				S Main Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:15 PM													
04:15 PM	1	0	0	1	0	0	0	0	0	**3**	0	**3**	**4**
04:30 PM	0	**1**	0	1	0	**1**	0	**1**	0	0	0	0	2
04:45 PM	**2**	0	0	**2**	0	0	0	0	0	1	0	1	3
05:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
Total Volume	3	1	0	4	0	1	0	1	0	5	0	5	10
% App. Total	75	25	0		0	100	0		0	100	0		
PHF	.375	.250	.000	.500	.000	.250	.000	.250	.000	.417	.000	.417	.625



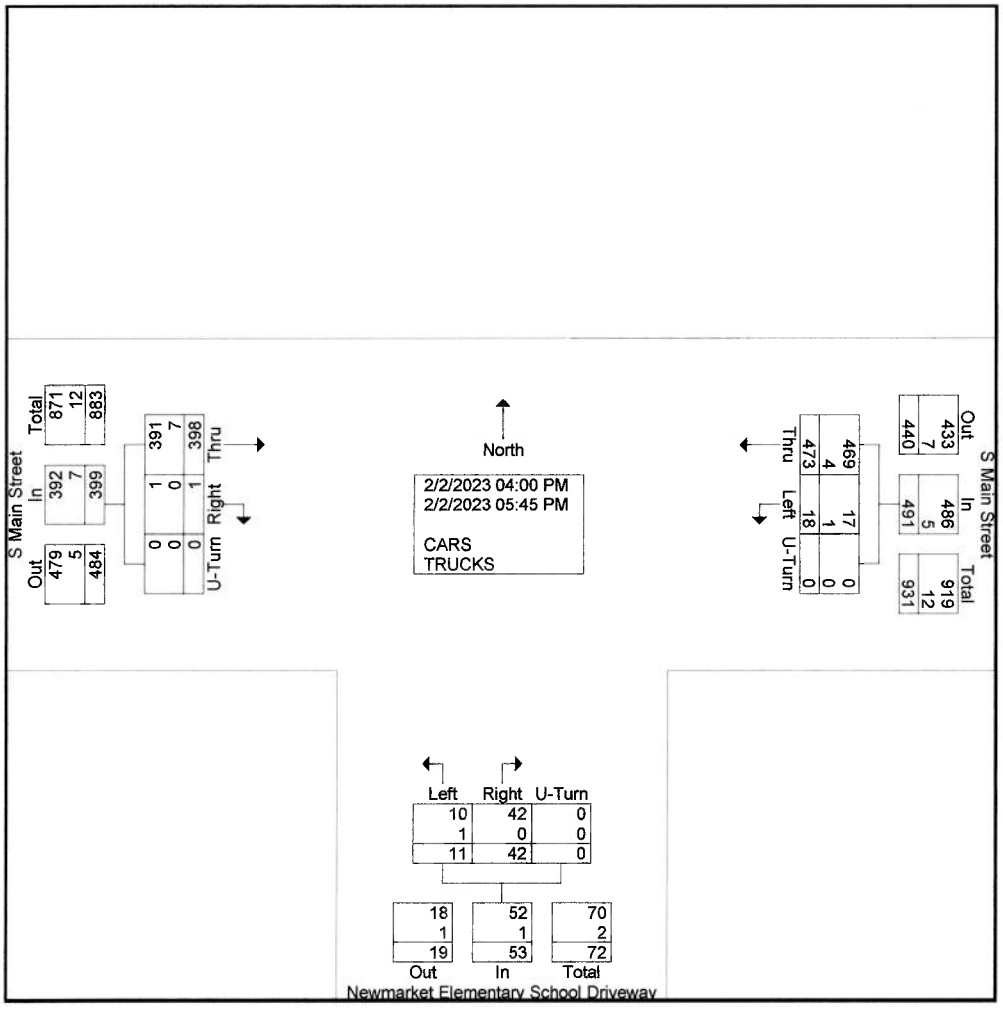
Stephen G. Pernaw & Company, Inc.
P.O. Box 1721
Concord, New Hampshire 03302

Weather: Clear
Coolected By: MV
Job Number: 2248A
Town/State: Newmarket, NH

File Name : 2248A_INT_A__AM_&_PM
Site Code : 2248A
Start Date : 2/2/2023
Page No : 1

Groups Printed- CARS - TRUCKS

	S Main Street From East				Newmarket Elementary School Driveway From South				S Main Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
04:00 PM	57	5	0	62	11	4	0	15	0	50	0	50	127
04:15 PM	68	5	0	73	17	2	0	19	0	54	0	54	146
04:30 PM	53	2	0	55	5	3	0	8	1	45	0	46	109
04:45 PM	54	2	0	56	4	0	0	4	0	45	0	45	105
Total	232	14	0	246	37	9	0	46	1	194	0	195	487
05:00 PM	67	2	0	69	1	1	0	2	0	65	0	65	136
05:15 PM	61	1	0	62	1	1	0	2	0	52	0	52	116
05:30 PM	65	1	0	66	2	0	0	2	0	51	0	51	119
05:45 PM	48	0	0	48	1	0	0	1	0	36	0	36	85
Total	241	4	0	245	5	2	0	7	0	204	0	204	456
Grand Total	473	18	0	491	42	11	0	53	1	398	0	399	943
Apprch %	96.3	3.7	0		79.2	20.8	0		0.3	99.7	0		
Total %	50.2	1.9	0	52.1	4.5	1.2	0	5.6	0.1	42.2	0	42.3	
CARS	469	17	0	486	42	10	0	52	1	391	0	392	930
% CARS	99.2	94.4	0	99	100	90.9	0	98.1	100	98.2	0	98.2	98.6
TRUCKS	4	1	0	5	0	1	0	1	0	7	0	7	13
% TRUCKS	0.8	5.6	0	1	0	9.1	0	1.9	0	1.8	0	1.8	1.4



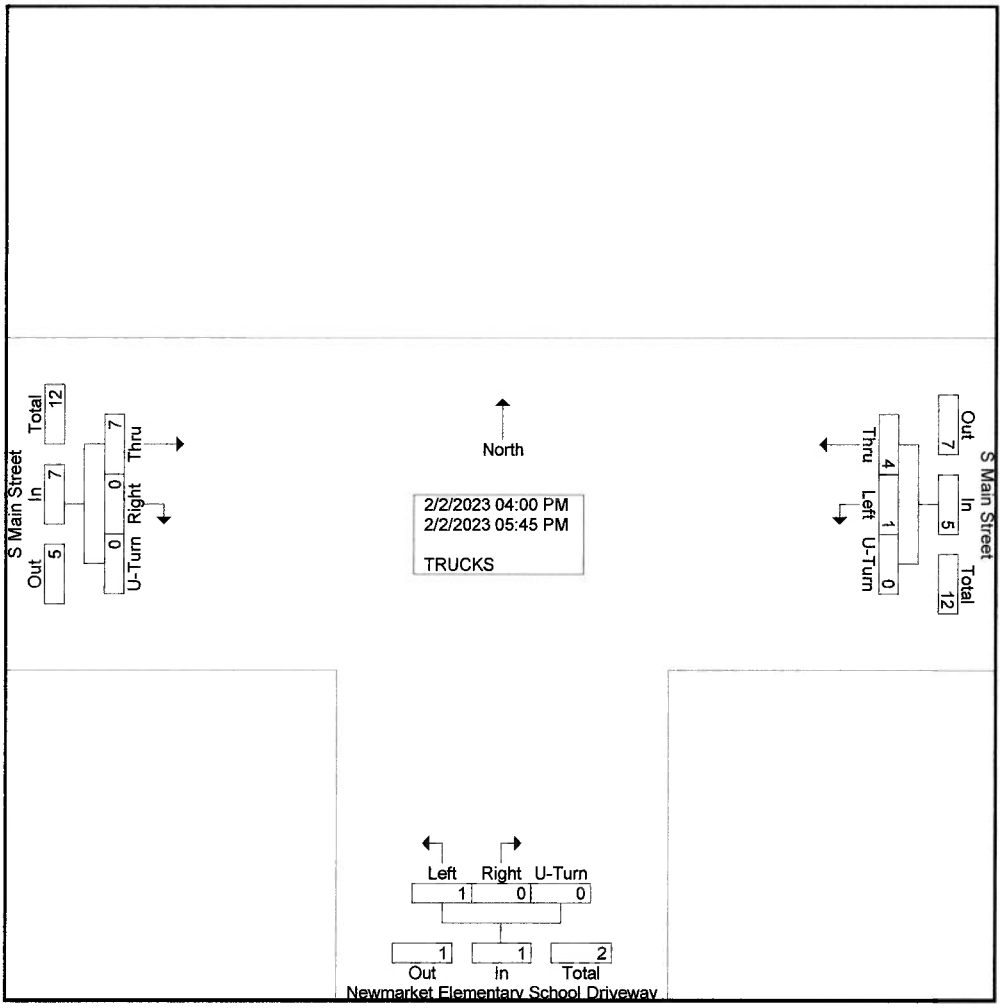
Stephen G. Pernaw & Company, Inc.
P.O. Box 1721
Concord, New Hampshire 03302

Weather: Clear
Coolected By: MV
Job Number: 2248A
Town/State: Newmarket, NH

File Name : 2248A_INT_A__AM_&_PM
Site Code : 2248A
Start Date : 2/2/2023
Page No : 1

Groups Printed- TRUCKS

	S Main Street From East				Newmarket Elementary School Driveway From South				S Main Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
04:00 PM	1	0	0	1	0	0	0	0	0	1	0	1	2
04:15 PM	1	0	0	1	0	0	0	0	0	3	0	3	4
04:30 PM	0	1	0	1	0	1	0	1	0	0	0	0	2
04:45 PM	2	0	0	2	0	0	0	0	0	1	0	1	3
Total	4	1	0	5	0	1	0	1	0	5	0	5	11
05:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	2	0	2	2
Grand Total	4	1	0	5	0	1	0	1	0	7	0	7	13
Apprch %	80	20	0		0	100	0		0	100	0		
Total %	30.8	7.7	0	38.5	0	7.7	0	7.7	0	53.8	0	53.8	



CALCULATION SHEET

Stephen G. Pernaw & Company, Inc.

Project:	Residential Development	Job Number:	2248A
Calculated By:		Date:	
Checked By:		Date:	
Sheet No:		Of:	
Subject:	Intersection B TMC - Thursday AM, School & PM Peak Hours		

Turning Movement Count Data - Intersection B (Thursday, February 2, 2023)

S Main Street / Grant Road, Newmarket, New Hampshire

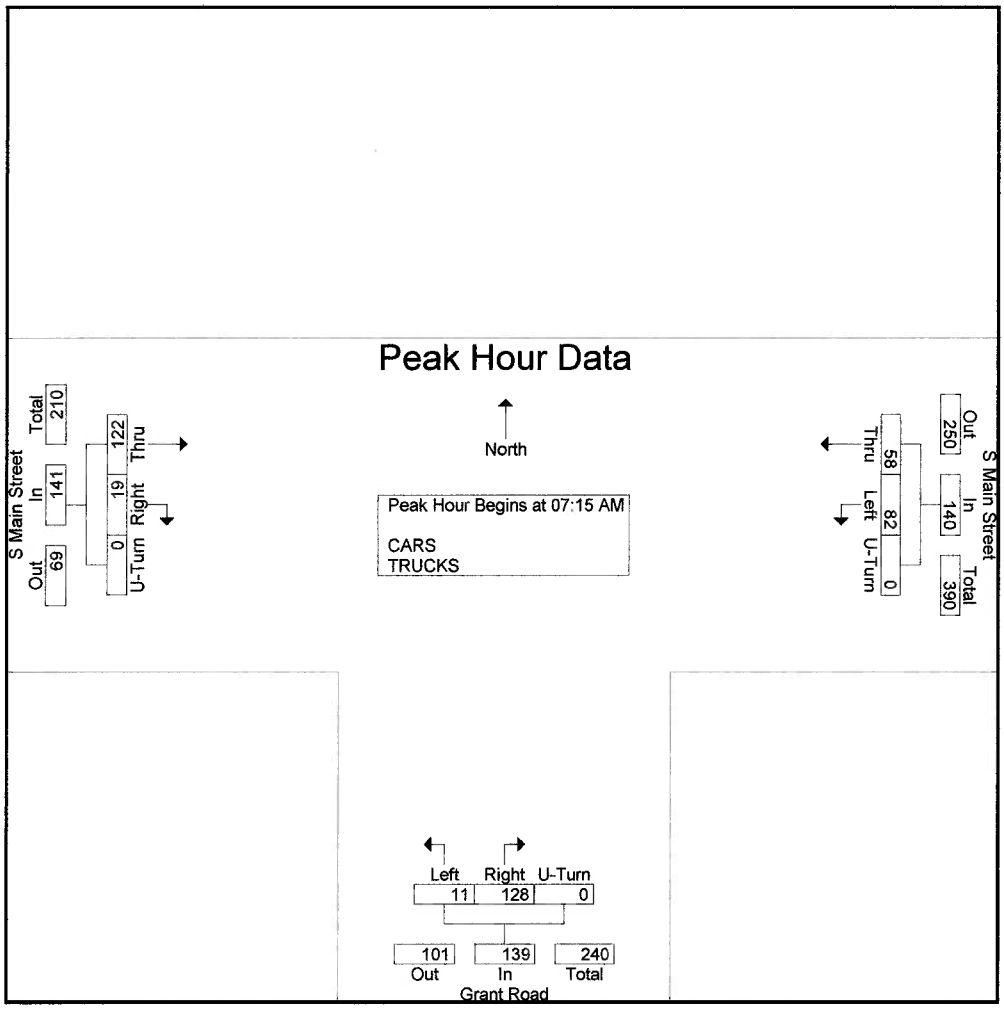
AM, School & PM Peak Hour

Stephen G. Pernaw & Company, Inc.
P.O. Box 1721
Concord, New Hampshire 03302

Weather: Clear
Collected By: MV
Job Number: 2248A
Town/State: Newmarket, NH

File Name : 2248A_INT_B__AM_&_PM
Site Code : 2248A
Start Date : 2/2/2023
Page No : 2

	S Main Street From East				Grant Road From South				S Main Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:15 AM													
07:15 AM	13	30	0	43	**72**	4	0	**76**	5	**37**	0	**42**	**161**
07:30 AM	17	**35**	0	**52**	17	1	0	18	3	32	0	35	105
07:45 AM	**19**	7	0	26	15	1	0	16	5	27	0	32	74
08:00 AM	9	10	0	19	24	**5**	0	29	**6**	26	0	32	80
Total Volume	58	82	0	140	128	11	0	139	19	122	0	141	420
% App. Total	41.4	58.6	0		92.1	7.9	0		13.5	86.5	0		
PHF	.763	.586	.000	.673	.444	.550	.000	.457	.792	.824	.000	.839	.652



Stephen G. Pernaw & Company, Inc.
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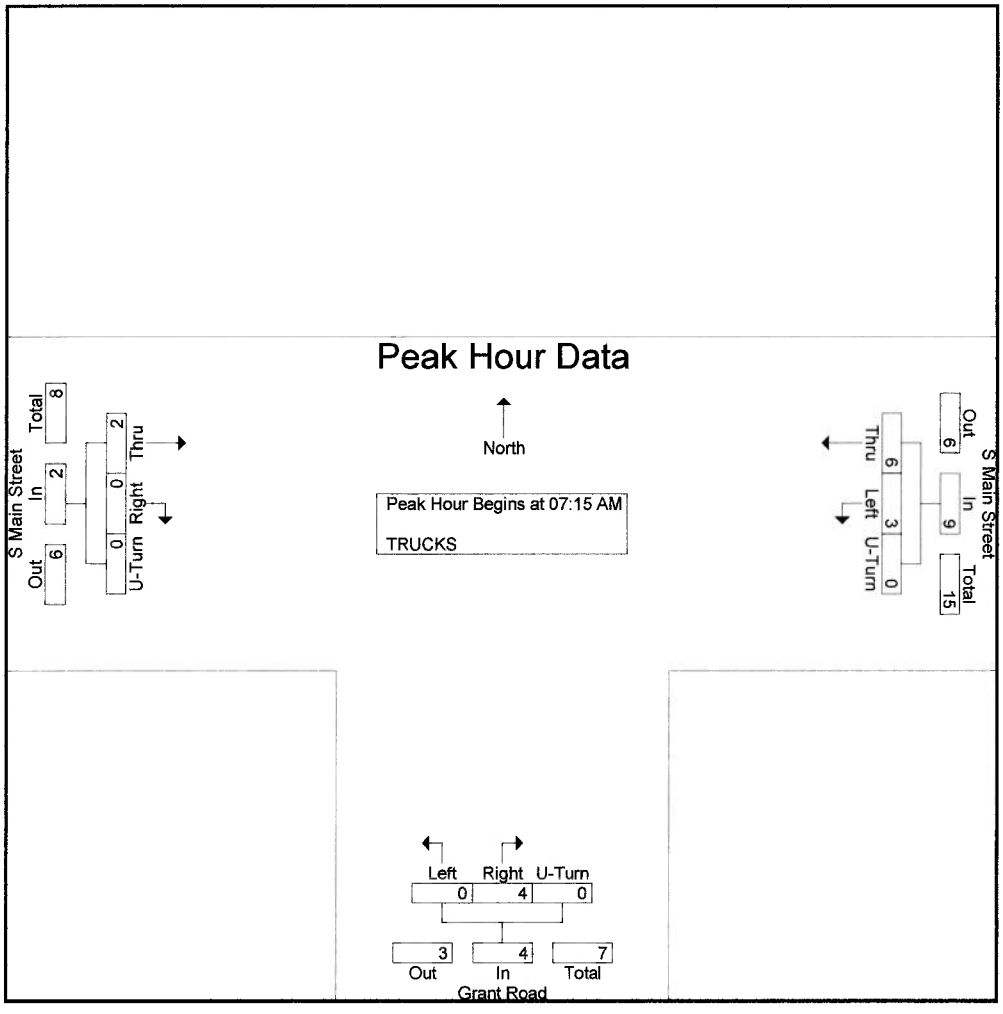
Weather: Clear
Collected By: MV
Job Number: 2248A
Town/State: Newmarket, NH

File Name : 2248A_INT_B__AM_&_PM
Site Code : 2248A
Start Date : 2/2/2023
Page No : 2

	S Main Street From East				Grant Road From South				S Main Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:15 AM													
07:15 AM	2	0	0	2	**3**	0	0	**3**	0	**1**	0	**1**	**6**
07:30 AM	0	**2**	0	2	0	0	0	0	0	1	0	1	3
07:45 AM	**3**	1	0	**4**	0	0	0	0	0	0	0	0	4
08:00 AM	1	0	0	1	1	0	0	1	0	0	0	0	2
Total Volume	6	3	0	9	4	0	0	4	0	2	0	2	15
% App. Total	66.7	33.3	0		100	0	0		0	100	0		
PHF	.500	.375	.000	.563	.333	.000	.000	.333	.000	.500	.000	.500	.625



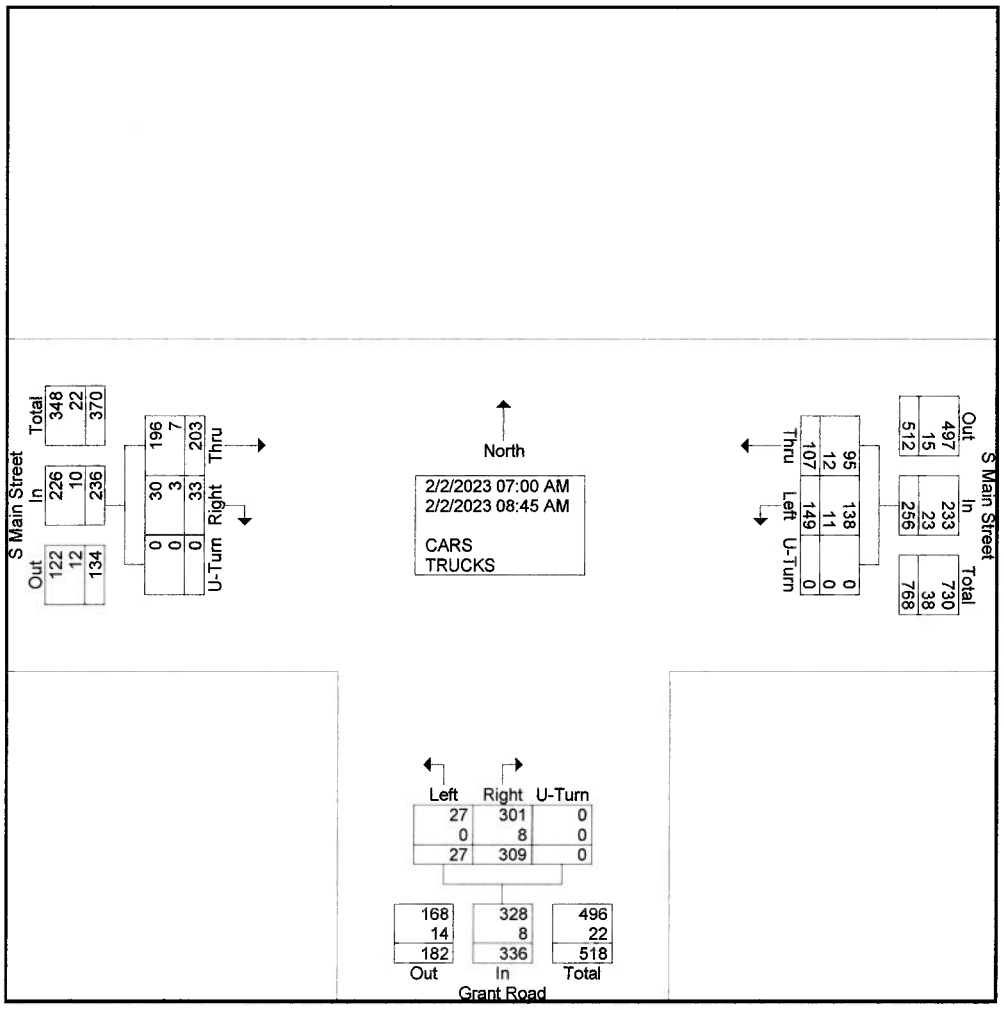
Stephen G. Pernaw & Company, Inc.
P.O. Box 1721
Concord, New Hampshire 03302

Weather: Clear
Collected By: MV
Job Number: 2248A
Town/State: Newmarket, NH

File Name : 2248A_INT_B__AM_&_PM
Site Code : 2248A
Start Date : 2/2/2023
Page No : 1

Groups Printed- CARS - TRUCKS

	S Main Street From East				Grant Road From South				S Main Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
07:00 AM	11	12	0	23	26	3	0	29	4	18	0	22	74
07:15 AM	13	30	0	43	72	4	0	76	5	37	0	42	161
07:30 AM	17	35	0	52	17	1	0	18	3	32	0	35	105
07:45 AM	19	7	0	26	15	1	0	16	5	27	0	32	74
Total	60	84	0	144	130	9	0	139	17	114	0	131	414
08:00 AM	9	10	0	19	24	5	0	29	6	26	0	32	80
08:15 AM	11	18	0	29	34	0	0	34	7	23	0	30	93
08:30 AM	10	24	0	34	95	11	0	106	2	18	0	20	160
08:45 AM	17	13	0	30	26	2	0	28	1	22	0	23	81
Total	47	65	0	112	179	18	0	197	16	89	0	105	414
Grand Total	107	149	0	256	309	27	0	336	33	203	0	236	828
Apprch %	41.8	58.2	0		92	8	0		14	86	0		
Total %	12.9	18	0	30.9	37.3	3.3	0	40.6	4	24.5	0	28.5	
CARS	95	138	0	233	301	27	0	328	30	196	0	226	787
% CARS	88.8	92.6	0	91	97.4	100	0	97.6	90.9	96.6	0	95.8	95
TRUCKS	12	11	0	23	8	0	0	8	3	7	0	10	41
% TRUCKS	11.2	7.4	0	9	2.6	0	0	2.4	9.1	3.4	0	4.2	5



Stephen G. Pernaw & Company, Inc.
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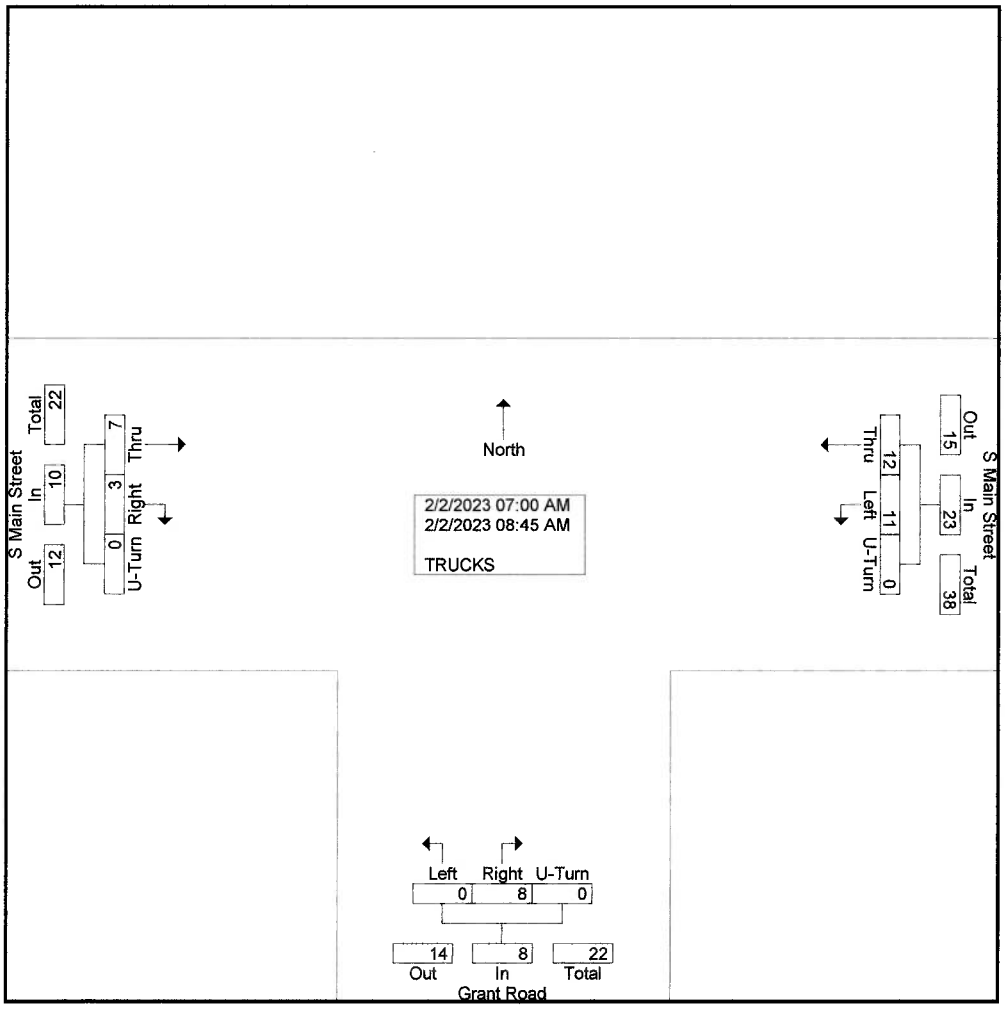
Weather: Clear
Collected By: MV
Job Number: 2248A
Town/State: Newmarket, NH

File Name : 2248A_INT_B__AM_&_PM
Site Code : 2248A
Start Date : 2/2/2023
Page No : 1

Groups Printed- TRUCKS

	S Main Street From East				Grant Road From South				S Main Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
07:00 AM	1	0	0	1	1	0	0	1	0	0	0	0	2
07:15 AM	2	0	0	2	3	0	0	3	0	1	0	1	6
07:30 AM	0	2	0	2	0	0	0	0	0	1	0	1	3
07:45 AM	3	1	0	4	0	0	0	0	0	0	0	0	4
Total	6	3	0	9	4	0	0	4	0	2	0	2	15
08:00 AM	1	0	0	1	1	0	0	1	0	0	0	0	2
08:15 AM	3	2	0	5	2	0	0	2	3	4	0	7	14
08:30 AM	1	5	0	6	0	0	0	0	0	0	0	0	6
08:45 AM	1	1	0	2	1	0	0	1	0	1	0	1	4
Total	6	8	0	14	4	0	0	4	3	5	0	8	26
Grand Total	12	11	0	23	8	0	0	8	3	7	0	10	41
Apprch %	52.2	47.8	0		100	0	0		30	70	0		
Total %	29.3	26.8	0	56.1	19.5	0	0	19.5	7.3	17.1	0	24.4	



Stephen G. Pernaw & Company, Inc.
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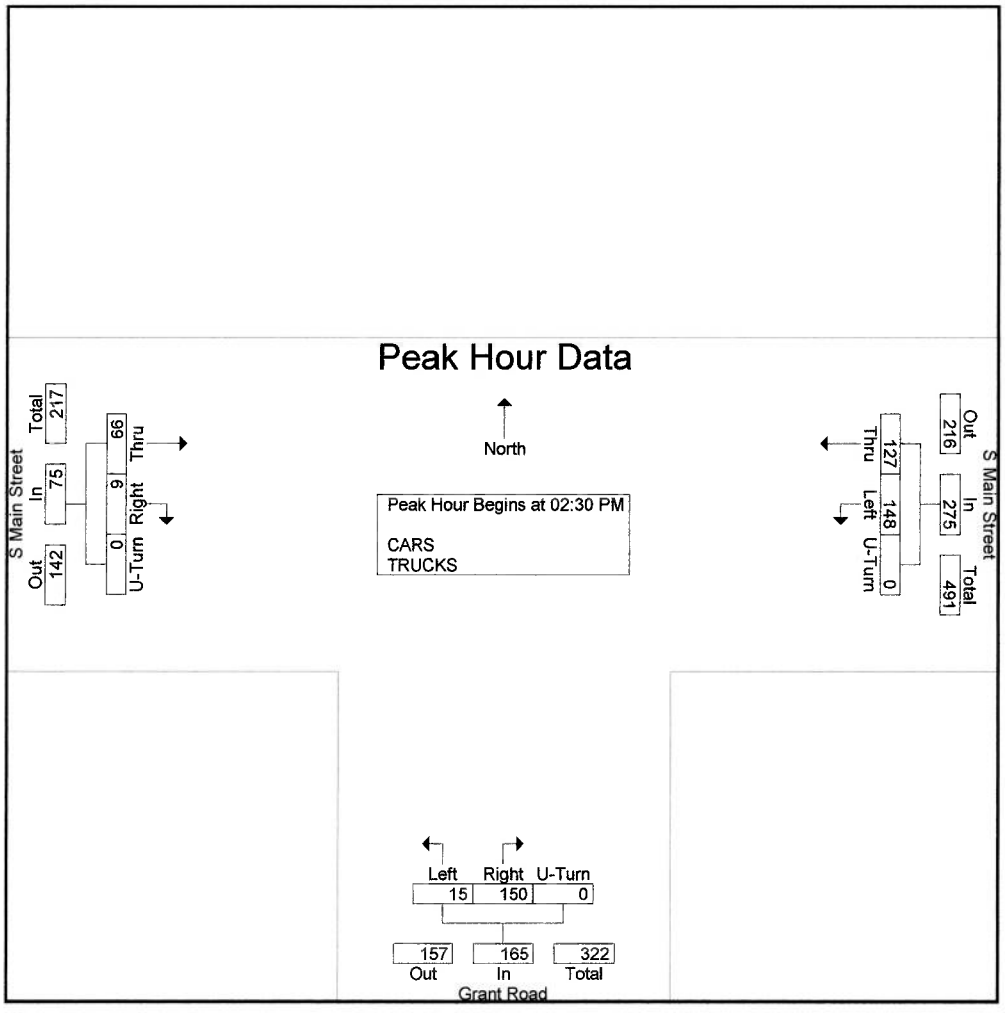
Weather: Clear
Collected By: MV
Job Number: 2248A
Town/State: Newmarket, NH

File Name : 2248A_INT_B__AM_&_PM
Site Code : 2248A
Start Date : 2/2/2023
Page No : 2

	S Main Street From East				Grant Road From South				S Main Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 02:30 PM													
02:30 PM	27	**58**	0	**85**	**44**	2	0	46	1	17	0	18	**149**
02:45 PM	28	32	0	60	43	4	0	**47**	**4**	10	0	14	121
03:00 PM	**36**	30	0	66	39	2	0	41	2	**23**	0	**25**	132
03:15 PM	36	28	0	64	24	**7**	0	31	2	16	0	18	113
Total Volume	127	148	0	275	150	15	0	165	9	66	0	75	515
% App. Total	46.2	53.8	0		90.9	9.1	0		12	88	0		
PHF	.882	.638	.000	.809	.852	.536	.000	.878	.563	.717	.000	.750	.864



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Concord, New Hampshire 03302

Weather: Clear
Collected By: MV
Job Number: 2248A
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File Name : 2248A_INT_B__AM_&_PM
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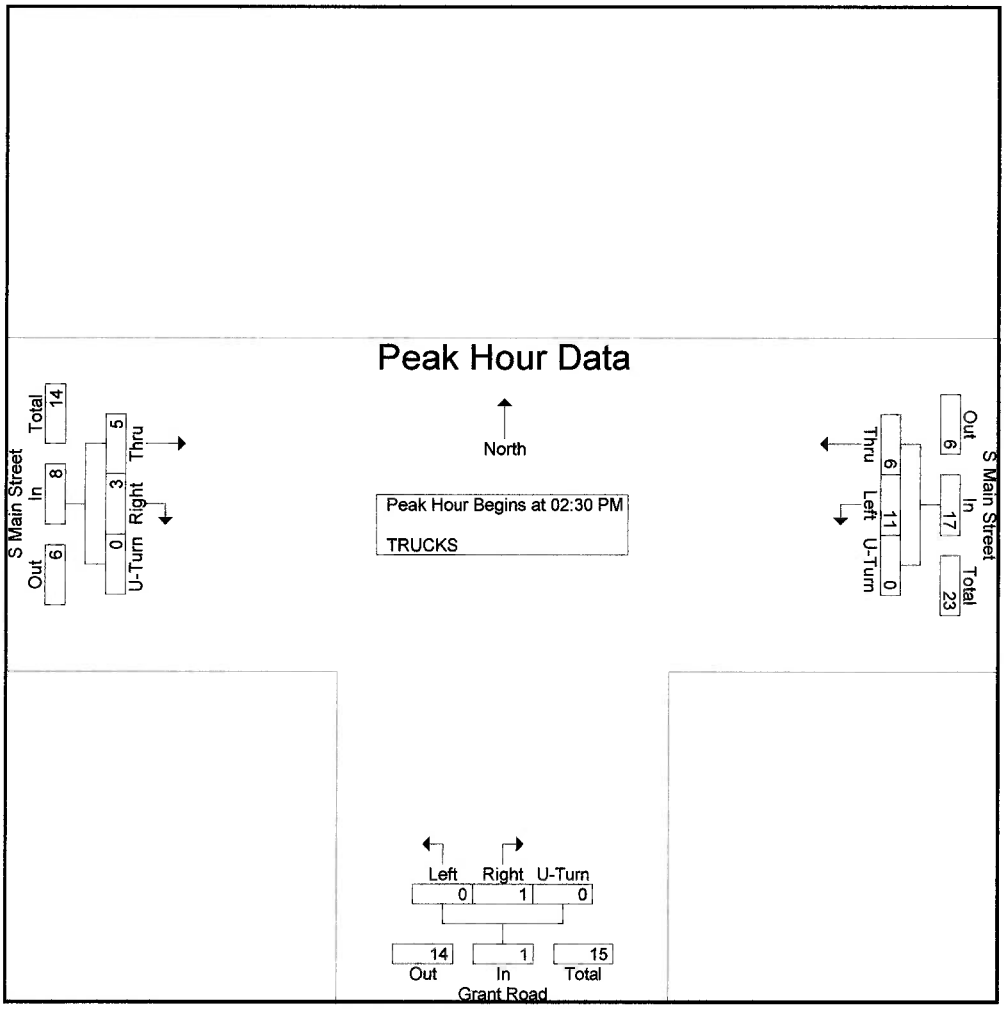
	S Main Street From East				Grant Road From South				S Main Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 02:30 PM to 03:15 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 02:30 PM													
02:30 PM	**2**	**5**	0	**7**	0	0	0	0	0	1	0	1	**8**
02:45 PM	1	1	0	2	0	0	0	0	1	0	0	1	3
03:00 PM	1	3	0	4	0	0	0	0	**2**	**2**	0	**4**	8
03:15 PM	2	2	0	4	**1**	0	0	**1**	0	2	0	2	7
Total Volume	6	11	0	17	1	0	0	1	3	5	0	8	26
% App. Total	35.3	64.7	0		100	0	0		37.5	62.5	0		
PHF	.750	.550	.000	.607	.250	.000	.000	.250	.375	.625	.000	.500	.813



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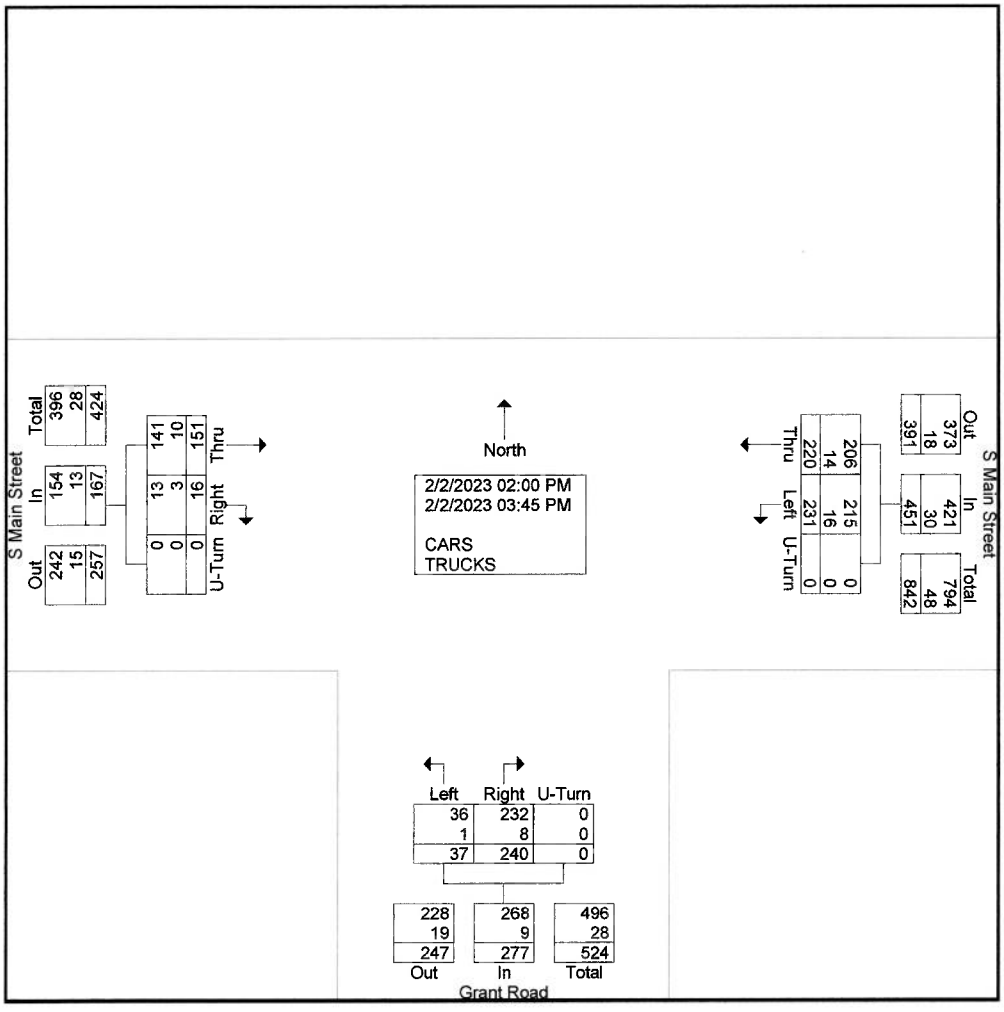
Weather: Clear
Collected By: MV
Job Number: 2248A
Town/State: Newmarket, NH

File Name : 2248A_INT_B__AM_&_PM
Site Code : 2248A
Start Date : 2/2/2023
Page No : 1

Groups Printed- CARS - TRUCKS

	S Main Street From East				Grant Road From South				S Main Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
02:00 PM	15	14	0	29	13	5	0	18	1	17	0	18	65
02:15 PM	21	16	0	37	33	6	0	39	0	17	0	17	93
02:30 PM	27	58	0	85	44	2	0	46	1	17	0	18	149
02:45 PM	28	32	0	60	43	4	0	47	4	10	0	14	121
Total	91	120	0	211	133	17	0	150	6	61	0	67	428
03:00 PM	36	30	0	66	39	2	0	41	2	23	0	25	132
03:15 PM	36	28	0	64	24	7	0	31	2	16	0	18	113
03:30 PM	31	30	0	61	22	6	0	28	2	25	0	27	116
03:45 PM	26	23	0	49	22	5	0	27	4	26	0	30	106
Total	129	111	0	240	107	20	0	127	10	90	0	100	467
Grand Total	220	231	0	451	240	37	0	277	16	151	0	167	895
Apprch %	48.8	51.2	0		86.6	13.4	0		9.6	90.4	0		
Total %	24.6	25.8	0	50.4	26.8	4.1	0	30.9	1.8	16.9	0	18.7	
CARS	206	215	0	421	232	36	0	268	13	141	0	154	843
% CARS	93.6	93.1	0	93.3	96.7	97.3	0	96.8	81.2	93.4	0	92.2	94.2
TRUCKS	14	16	0	30	8	1	0	9	3	10	0	13	52
% TRUCKS	6.4	6.9	0	6.7	3.3	2.7	0	3.2	18.8	6.6	0	7.8	5.8



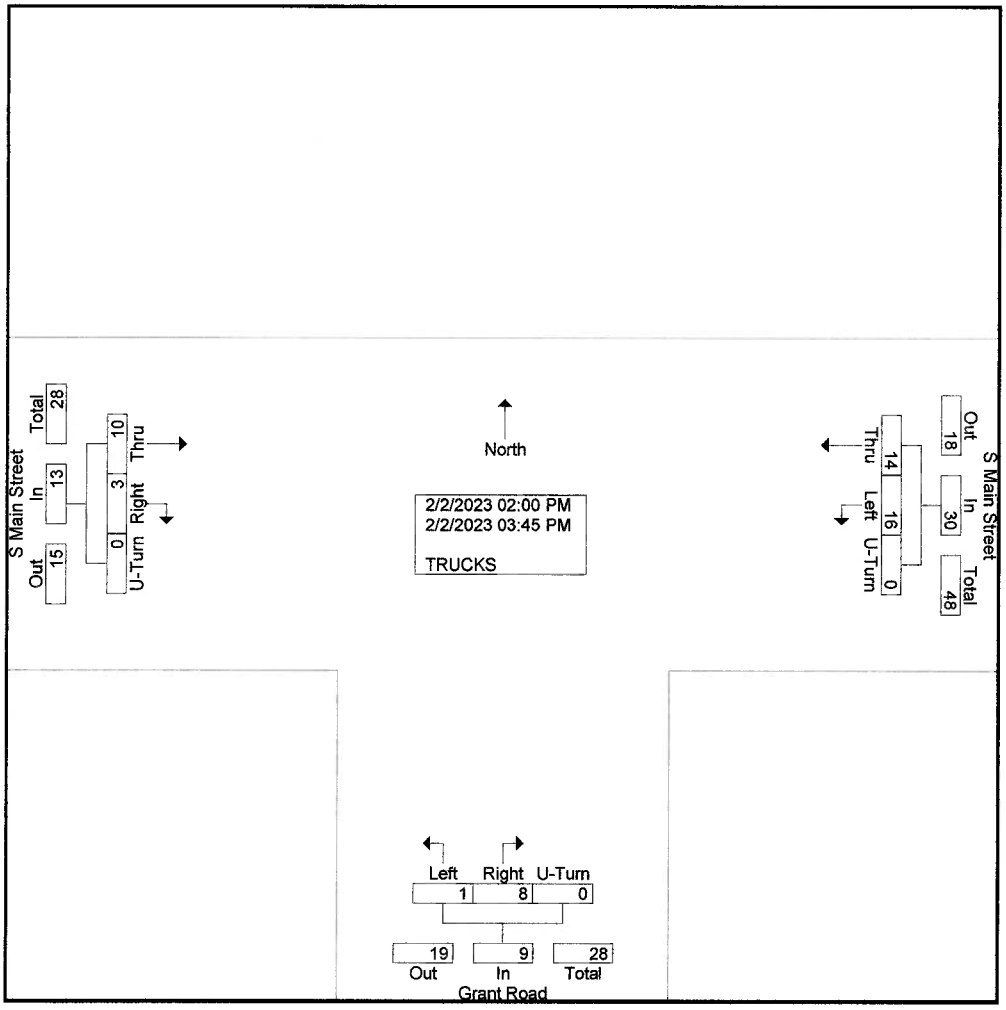
Stephen G. Pernaw & Company, Inc.
P.O. Box 1721
Concord, New Hampshire 03302

Weather: Clear
Collected By: MV
Job Number: 2248A
Town/State: Newmarket, NH

File Name : 2248A_INT_B__AM_&_PM
Site Code : 2248A
Start Date : 2/2/2023
Page No : 1

Groups Printed- TRUCKS

	S Main Street From East				Grant Road From South				S Main Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
02:00 PM	3	1	0	4	2	1	0	3	0	2	0	2	9
02:15 PM	2	0	0	2	1	0	0	1	0	1	0	1	4
02:30 PM	2	5	0	7	0	0	0	0	0	1	0	1	8
02:45 PM	1	1	0	2	0	0	0	0	1	0	0	1	3
Total	8	7	0	15	3	1	0	4	1	4	0	5	24
03:00 PM	1	3	0	4	0	0	0	0	2	2	0	4	8
03:15 PM	2	2	0	4	1	0	0	1	0	2	0	2	7
03:30 PM	2	3	0	5	3	0	0	3	0	1	0	1	9
03:45 PM	1	1	0	2	1	0	0	1	0	1	0	1	4
Total	6	9	0	15	5	0	0	5	2	6	0	8	28
Grand Total	14	16	0	30	8	1	0	9	3	10	0	13	52
Apprch %	46.7	53.3	0		88.9	11.1	0		23.1	76.9	0		
Total %	26.9	30.8	0	57.7	15.4	1.9	0	17.3	5.8	19.2	0	25	

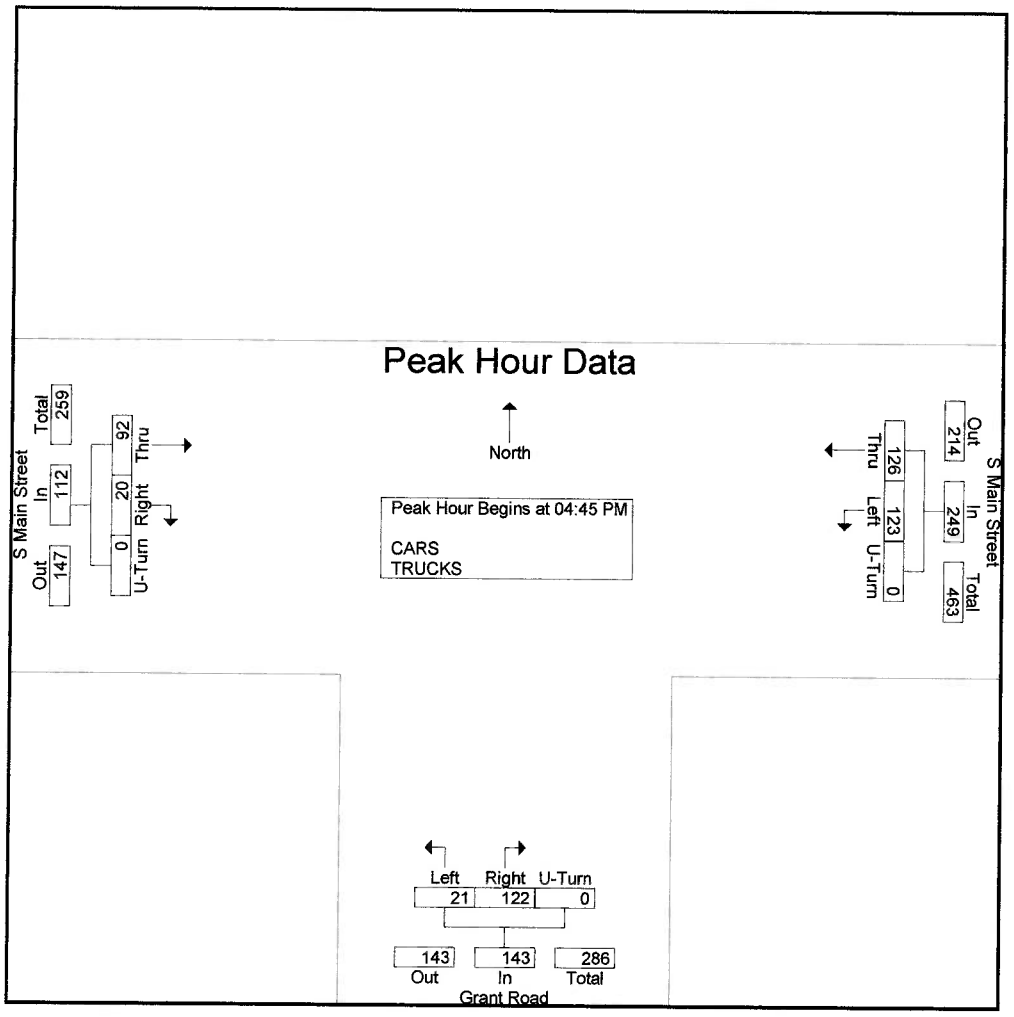


Stephen G. Pernaw & Company, Inc.
P.O. Box 1721
Concord, New Hampshire 03302

Weather: Clear
Collected By: MV
Job Number: 2248A
Town/State: Newmarket, NH

File Name : 2248A_INT_B__AM_&_PM
Site Code : 2248A
Start Date : 2/2/2023
Page No : 2

	S Main Street From East				Grant Road From South				S Main Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:45 PM													
04:45 PM	26	**35**	0	61	25	2	0	27	**8**	22	0	30	118
05:00 PM	33	32	0	**65**	**39**	**9**	0	**48**	3	**28**	0	**31**	**144**
05:15 PM	33	28	0	61	36	5	0	41	5	17	0	22	124
05:30 PM	**34**	28	0	62	22	5	0	27	4	25	0	29	118
Total Volume	126	123	0	249	122	21	0	143	20	92	0	112	504
% App. Total	50.6	49.4	0		85.3	14.7	0		17.9	82.1	0		
PHF	.926	.879	.000	.958	.782	.583	.000	.745	.625	.821	.000	.903	.875

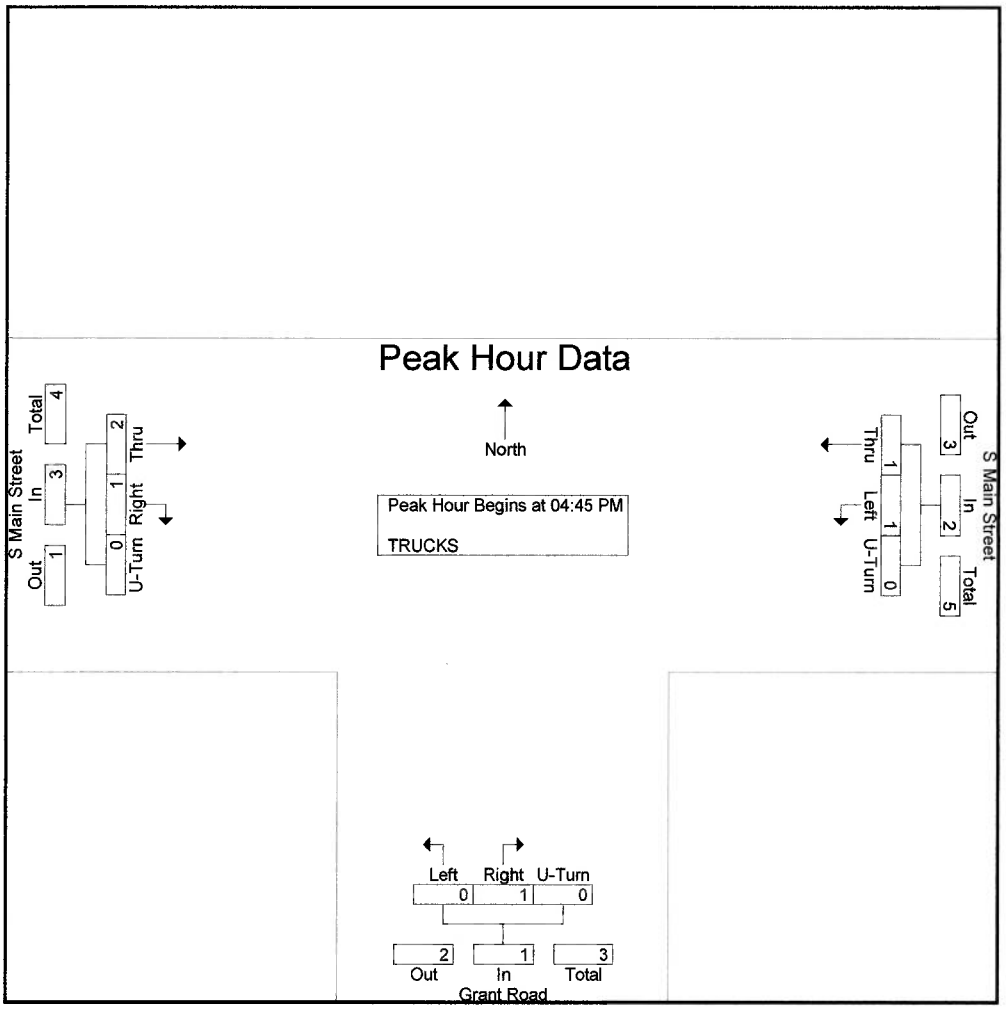


Stephen G. Pernaw & Company, Inc.
P.O. Box 1721
Concord, New Hampshire 03302

Weather: Clear
Collected By: MV
Job Number: 2248A
Town/State: Newmarket, NH

File Name : 2248A_INT_B__AM_&_PM
Site Code : 2248A
Start Date : 2/2/2023
Page No : 2

	S Main Street From East				Grant Road From South				S Main Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:45 PM													
04:45 PM	**1**	**1**	0	**2**	0	0	0	0	0	**1**	0	**1**	**3**
05:00 PM	0	0	0	0	**1**	0	0	**1**	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	**1**	0	0	1	1
05:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
Total Volume	1	1	0	2	1	0	0	1	1	2	0	3	6
% App. Total	50	50	0		100	0	0		33.3	66.7	0		
PHF	.250	.250	.000	.250	.250	.000	.000	.250	.250	.500	.000	.750	.500



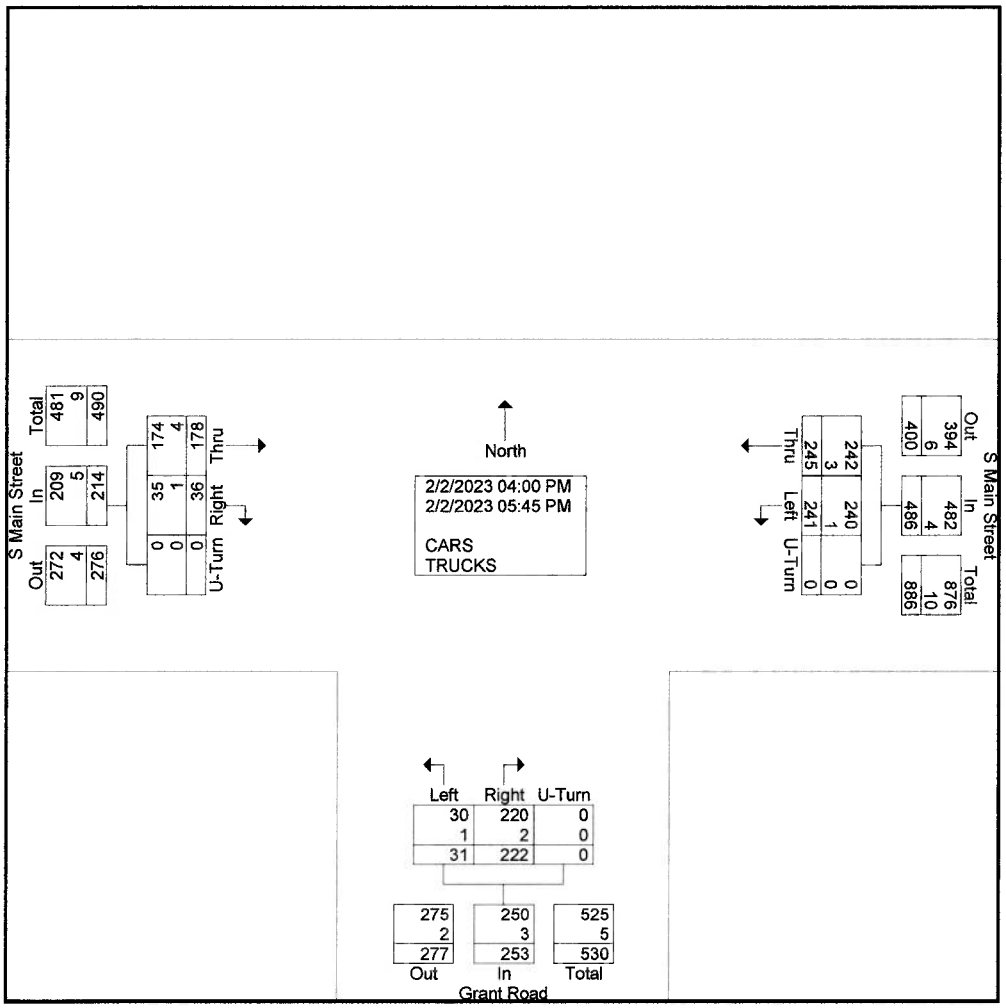
Stephen G. Pernaw & Company, Inc.
P.O. Box 1721
Concord, New Hampshire 03302

Weather: Clear
Collected By: MV
Job Number: 2248A
Town/State: Newmarket, NH

File Name : 2248A_INT_B__AM_&_PM
Site Code : 2248A
Start Date : 2/2/2023
Page No : 1

Groups Printed- CARS - TRUCKS

	S Main Street From East				Grant Road From South				S Main Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
04:00 PM	27	35	0	62	29	3	0	32	3	21	0	24	118
04:15 PM	31	39	0	70	33	3	0	36	5	20	0	25	131
04:30 PM	33	23	0	56	17	2	0	19	4	26	0	30	105
04:45 PM	26	35	0	61	25	2	0	27	8	22	0	30	118
Total	117	132	0	249	104	10	0	114	20	89	0	109	472
05:00 PM	33	32	0	65	39	9	0	48	3	28	0	31	144
05:15 PM	33	28	0	61	36	5	0	41	5	17	0	22	124
05:30 PM	34	28	0	62	22	5	0	27	4	25	0	29	118
05:45 PM	28	21	0	49	21	2	0	23	4	19	0	23	95
Total	128	109	0	237	118	21	0	139	16	89	0	105	481
Grand Total	245	241	0	486	222	31	0	253	36	178	0	214	953
Apprch %	50.4	49.6	0		87.7	12.3	0		16.8	83.2	0		
Total %	25.7	25.3	0	51	23.3	3.3	0	26.5	3.8	18.7	0	22.5	
CARS	242	240	0	482	220	30	0	250	35	174	0	209	941
% CARS	98.8	99.6	0	99.2	99.1	96.8	0	98.8	97.2	97.8	0	97.7	98.7
TRUCKS	3	1	0	4	2	1	0	3	1	4	0	5	12
% TRUCKS	1.2	0.4	0	0.8	0.9	3.2	0	1.2	2.8	2.2	0	2.3	1.3



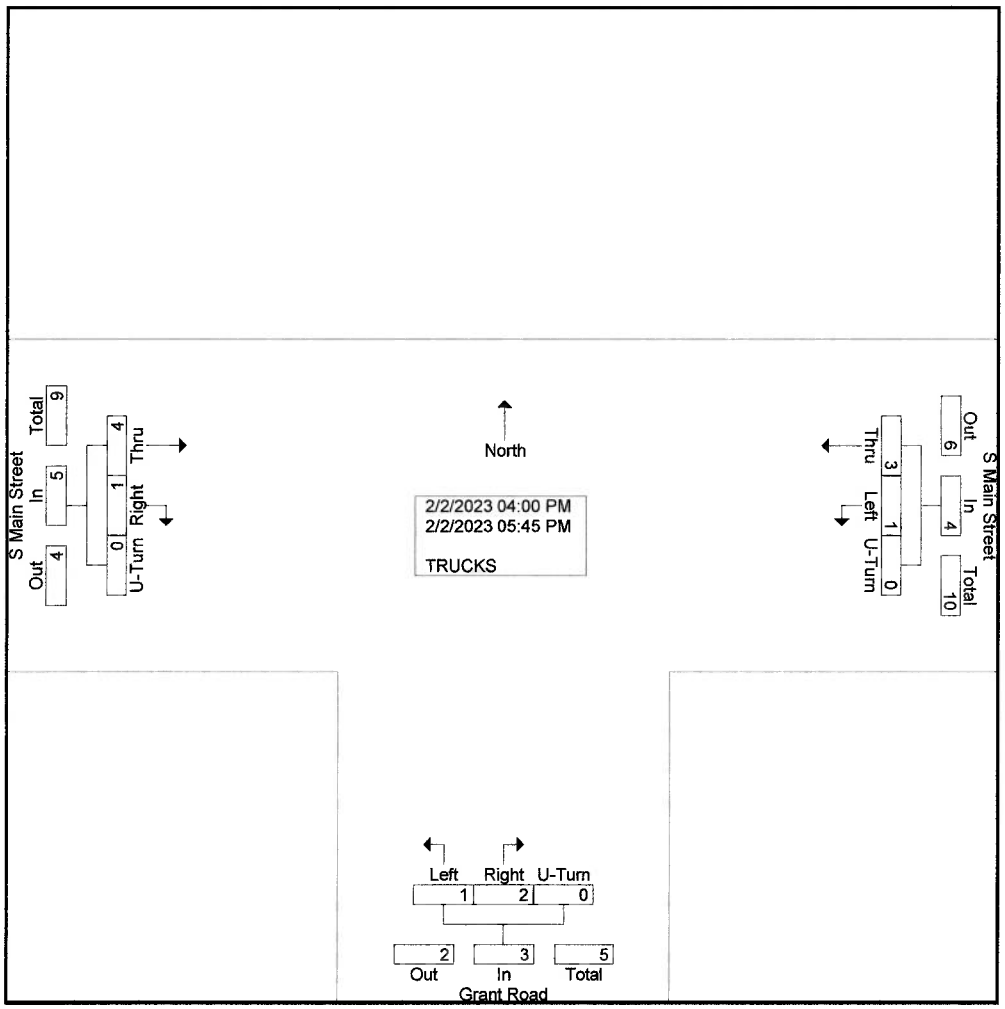
Stephen G. Pernaw & Company, Inc.
P.O. Box 1721
Concord, New Hampshire 03302

Weather: Clear
Collected By: MV
Job Number: 2248A
Town/State: Newmarket, NH

File Name : 2248A_INT_B__AM_&_PM
Site Code : 2248A
Start Date : 2/2/2023
Page No : 1

Groups Printed- TRUCKS

	S Main Street From East				Grant Road From South				S Main Street From West				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
04:00 PM	1	0	0	1	1	0	0	1	0	0	0	0	2
04:15 PM	1	0	0	1	0	0	0	0	0	2	0	2	3
04:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	1
04:45 PM	1	1	0	2	0	0	0	0	0	1	0	1	3
Total	3	1	0	4	1	1	0	2	0	3	0	3	9
05:00 PM	0	0	0	0	1	0	0	1	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	1	0	0	1	1
05:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	1	0	0	1	1	1	0	2	3
Grand Total	3	1	0	4	2	1	0	3	1	4	0	5	12
Apprch %	75	25	0		66.7	33.3	0		20	80	0		
Total %	25	8.3	0	33.3	16.7	8.3	0	25	8.3	33.3	0	41.7	



SEASONAL ADJUSTMENT DATA

Year 2019 Monthly Data

Town: Exeter
Station: 02153001
Location: NH 101 east of NH 108 (Exit 11-12)
Group: 3

Month	ADT	Adjustment to Average	Adjustment to Peak
January	39,195	1.19	1.39
February	40,738	1.15	1.34
March	40,738	1.15	1.34
April	45,759	1.02	1.19
May	48,126	0.97	1.14
June	53,382	0.87	1.02
July	54,640	0.85	1.00
August	54,514	0.86	1.00
September	49,360	0.95	1.11
October	47,463	0.98	1.15
November	43,273	1.08	1.26
December	41,050	1.14	1.33

AADT: 46,686
Peak Month: 54,640

COVID ADJUSTMENT DATA

COVID Adjustment

NH Route 152, east of Grant Road

October 2018 Raw Count: 5,940 vpd

February 2023 Raw Count: 4,677 vpd

Adjustments to Peak-Month Conditions

Oct. 2018: 5,940 x 1.15 x 1.01 (background growth rate to 2019) = 6,899 vpd

February 2023: 4,677 x 1.34 = 6,267 vphd

COVID Adjustment

$$1 - \frac{6{,}899}{6{,}267} = -0.1008$$

Approx. 10% below Pre-COVID conditions

Location Info	
Location ID	82337052
Type	I-SECTION
Functional Class	5
Located On	S Main St
Direction	2-WAY
Community	NEWMARKET
MPO_ID	
HPMS ID	
Agency	New Hampshire DOT

Count Data Info	
Start Date	10/2/2018
End Date	10/3/2018
Start Time	12:00 AM
End Time	12:00 AM
Direction	2-WAY
Notes	nhdot
Count Source	8.23371E+11
File Name	823370523070.prn
Weather	
Study	
Owner	iwong
QC Status	Accepted

Interval: 60 mins	
Time	**Hourly Count**
00:00 - 01:00	19
01:00 - 02:00	4
02:00 - 03:00	4
03:00 - 04:00	13
04:00 - 05:00	29
05:00 - 06:00	64
06:00 - 07:00	258
07:00 - 08:00	644
08:00 - 09:00	511
09:00 - 10:00	293
10:00 - 11:00	319
11:00 - 12:00	306
12:00 - 13:00	305
13:00 - 14:00	299
14:00 - 15:00	425
15:00 - 16:00	552
16:00 - 17:00	517
17:00 - 18:00	481
18:00 - 19:00	314
19:00 - 20:00	233
20:00 - 21:00	154
21:00 - 22:00	95
22:00 - 23:00	73
23:00 - 24:00	28
TOTAL	5940

VEHICLE TRAVEL SPEED DATA

CALCULATION SHEET

Stephen G. Pernaw & Company, Inc.

Project:	Residential Development	Job Number:	2248A
Calculated By:		Date:	
Checked By:		Date:	
Sheet No:		Of:	
Subject:	Speed Survey - W. of Elementary School Dwy, Newmarket, NH		

Speed Survey - Wednesday, February 1, 2023 & Friday, February 3, 2023

S Main Street (West of Elementary School Driveway), Newmarket, New Hampshire

Stephen G. Pernaw & Company

Spot Speed Study

Client:	Proposed Residential Development	**Location:**	S Main Street W. of Elementary School Dwy
Job #:	2248A	**Date:**	Wednesday, February 1, 2023
Town/City:	Newmarket, New Hampshire	**Weather:**	Clear & Cold

I. Recorded Data

Westbound		Eastbound	
Observation	Speed (mph)	Observation	Speed (mph)
1	36.0	1	35.0
2	31.0	2	25.0
3	30.0	3	34.0
4	30.0	4	39.0
5	39.0	5	29.0
6	30.0	6	33.0
7	34.0	7	37.0
8	33.0	8	38.0
9	33.0	9	34.0
10	35.0	10	38.0
11	34.0	11	34.0
12	30.0	12	39.0
13	36.0	13	27.0
14	30.0	14	29.0
15	34.0	15	29.0
16	35.0	16	34.0
17	32.0	17	32.0
18	30.0	18	31.0
19	30.0	19	33.0
20	37.0	20	31.0
21	30.0	21	34.0
22	32.0	22	44.0
23	31.0	23	29.0
24	35.0	24	32.0
25	33.0	25	28.0
26	32.0	26	36.0
27	36.0	27	32.0
28	37.0	28	34.0
29	33.0	29	37.0
30	32.0	30	35.0
31	29.0	31	25.0
32	39.0	32	31.0
33	34.0	33	33.0
34	34.0	34	31.0
35	29.0	35	29.0
36	40.0	36	34.0
37	28.0	37	32.0
38	34.0	38	33.0
39	33.0	39	33.0
40	30.0	40	35.0

Stephen G. Pernaw & Company

Spot Speed Study

Client:	Proposed Residential Development	**Location:**	S Main Street W. of Elementary School Dwy
Job #:	2248A	**Date:**	Wednesday, February 1, 2023
Town/City:	Newmarket, New Hampshire	**Weather:**	Clear & Cold

I. Recorded Data

Westbound		Eastbound	
Observation	Speed (mph)	Observation	Speed (mph)
41	36.0	41	32.0
42	38.0	42	31.0
43	34.0	43	30.0
44	29.0	44	30.0
45	29.0	45	31.0
46	32.0	46	36.0
47	33.0	47	37.0
48	31.0	48	32.0
49	32.0	49	33.0
50	30.0	50	33.0
			Wed

II. Statistical Summaries

Westbound		Eastbound	
Observations =	50 vehicles	Observations =	50 vehicles
High Speed =	40.0 mph	High Speed =	44.0 mph
Low Speed =	28.0 mph	Low Speed =	25.0 mph
Average Speed =	32.9 mph	Average Speed =	32.9 mph
Median Speed =	33.0 mph	Median Speed =	33.0 mph
Standard Deviation =	2.9 mph	Standard Deviation =	3.6 mph
85th Percentile =	36.0 mph	85th Percentile =	36.7 mph
Posted Speed Limit =	30 mph	Posted Speed Limit =	30 mph

Stephen G. Pernaw & Company

Spot Speed Study

Client:	Proposed Residential Development	**Location:**	S Main Street W. of Elementary School Dwy
Job #:	2248A	**Date:**	Friday, February 3, 2023
Town/City:	Newmarket, New Hampshire	**Weather:**	Clear & Cold

I. Recorded Data

Westbound		Eastbound	
Observation	Speed (mph)	Observation	Speed (mph)
1	35.0	1	31.0
2	30.0	2	31.0
3	33.0	3	39.0
4	38.0	4	31.0
5	32.0	5	28.0
6	34.0	6	35.0
7	38.0	7	34.0
8	29.0	8	29.0
9	34.0	9	34.0
10	30.0	10	28.0
11	31.0	11	34.0
12	33.0	12	29.0
13	33.0	13	38.0
14	36.0	14	33.0
15	33.0	15	27.0
16	29.0	16	32.0
17	39.0	17	38.0
18	33.0	18	36.0
19	36.0	19	37.0
20	28.0	20	35.0
21	32.0	21	33.0
22	34.0	22	35.0
23	34.0	23	32.0
24	31.0	24	31.0
25	34.0	25	29.0
26	34.0	26	30.0
27	32.0	27	32.0
28	38.0	28	31.0
29	28.0	29	27.0
30	38.0	30	30.0
31	30.0	31	31.0
32	29.0	32	29.0
33	38.0	33	31.0
34	33.0	34	31.0
35	29.0	35	30.0
36	27.0	36	33.0
37	31.0	37	32.0
38	33.0	38	39.0
39	32.0	39	37.0
40	32.0	40	33.0

Stephen G. Pernaw & Company

Spot Speed Study

Client:	Proposed Residential Development	**Location:**	S Main Street W. of Elementary School Dwy
Job #:	2248A	**Date:**	Friday, February 3, 2023
Town/City:	Newmarket, New Hampshire	**Weather:**	Clear & Cold

I. Recorded Data

Westbound		Eastbound	
Observation	Speed (mph)	Observation	Speed (mph)
41	33.0	41	28.0
42	30.0	42	26.0
43	28.0	43	31.0
44	37.0	44	33.0
45	32.0	45	35.0
46	38.0	46	40.0
47	35.0	47	39.0
48	33.0	48	34.0
49	38.0	49	28.0
50	38.0	50	26.0

II. Statistical Summaries

Westbound		Eastbound	
Observations =	50 vehicles	Observations =	50 vehicles
High Speed =	39.0 mph	High Speed =	40.0 mph
Low Speed =	27.0 mph	Low Speed =	26.0 mph
Average Speed =	33.1 mph	Average Speed =	32.3 mph
Median Speed =	33.0 mph	Median Speed =	32.0 mph
Standard Deviation =	3.2 mph	Standard Deviation =	3.6 mph
85th Percentile =	38.0 mph	85th Percentile =	36.7 mph
Posted Speed Limit =	30 mph	Posted Speed Limit =	30 mph

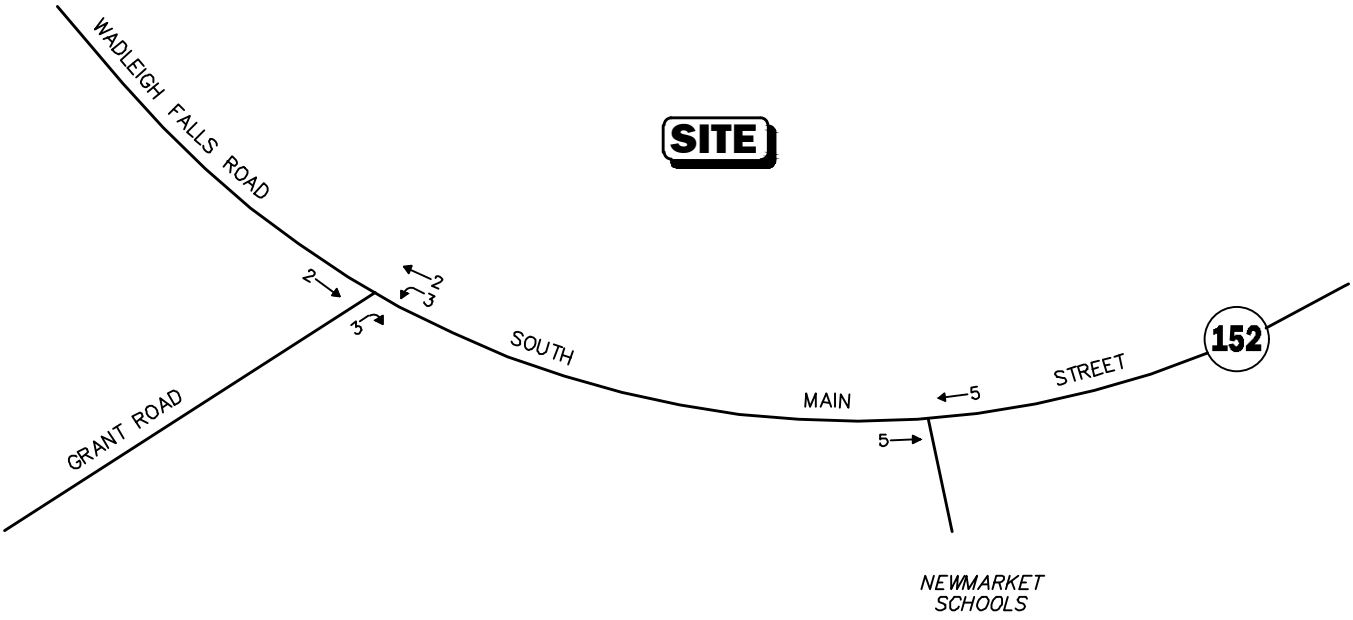
GENERAL BACKGROUND TRAFFIC GROWTH

General Background Traffic Growth - Daily Traffic Volumes

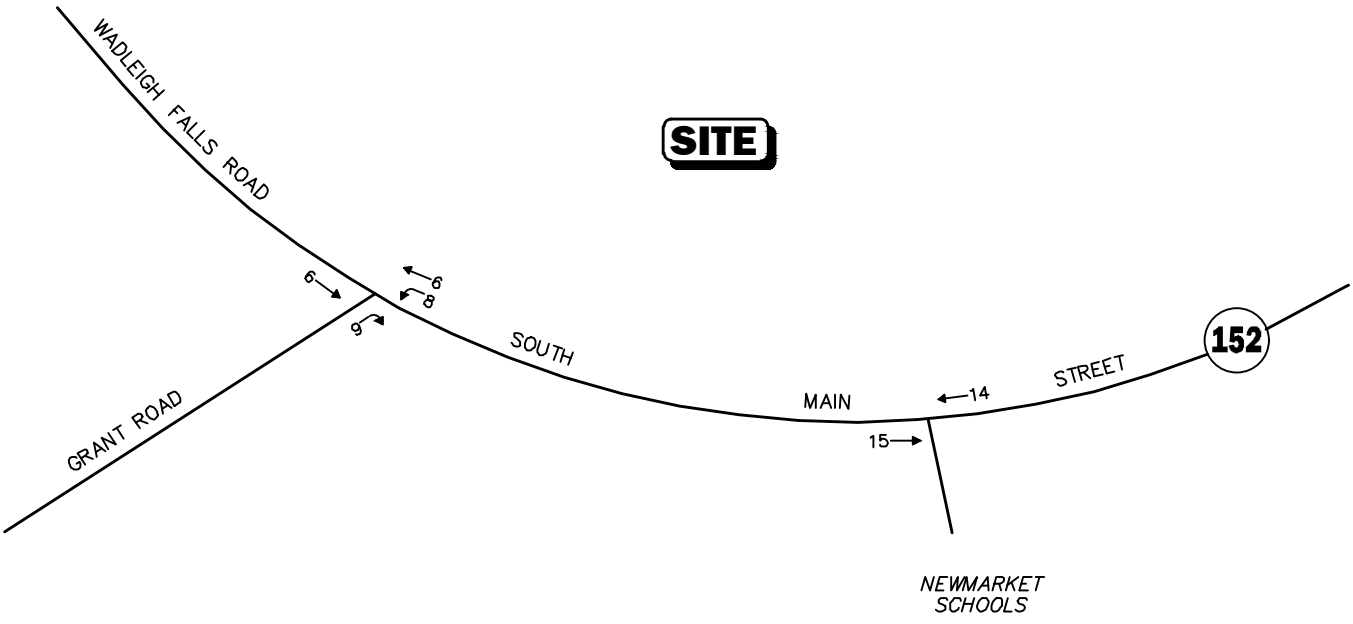
CITY/TOWN	ROUTE/STREET	LOCATION	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Annual Growth
Newmarket	Exeter Road	at Newfields Town Line					17,000	17,374	17,895	18,756	19,131	19,514	19,434	**2.27%**
Newmarket	South Main Street	east of Maplecrest Avenue						5,300	5,459	5,568	5,679	5,588	5,655	**1.32%**
Newmarket	Grant Road	west of NH Route 152						2,964	3,053	2,673	2,726	2,781	3,075	**1.03%**
Newmarket	Main Street	at Lamprey River								11,447	11,676	11,910	11,154	**-0.78%**
														0.96%

BACKGROUND DEVELOPMENT NETWORKS

WEEKDAY MORNING PEAK HOUR (7:15 - 8:15 AM)



WEEKDAY AFTERNOON PEAK HOUR (2:30 - 3:30 PM)

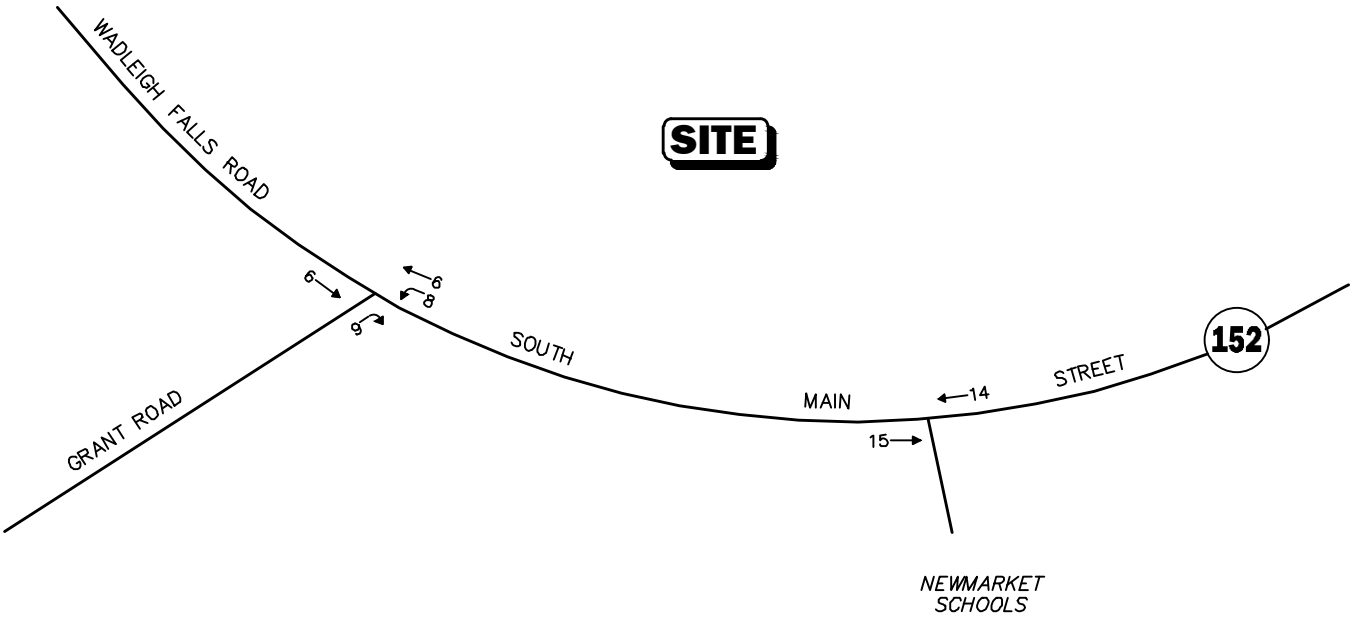


Not To Scale

Figure A-1A

Vanasse & Associates inc

Proposed Mixed-Use Development
50-56 Exeter Road
Peak-Hour Traffic Volumes



Not To Scale

Figure A-1B

Vanasse & Associates inc

Proposed Mixed-Use Development
50-56 Exeter Road
Weekday Evening
(4:45 - 5:45 PM)
Peak-Hour Traffic Volumes

TRIP-GENERATION CALCULATIONS

Graph Look Up

Graph Look Up
How to Use ITETripGen
TGM Desk Reference
TGM Appendices
Support Documents
Add Users
Comments

Query | Filter

DATA SOURCE: Trip Generation Manual, 11th Ed

SEARCH BY LAND USE CODE: 252

LAND USE GROUP: (200-299) Residential

LAND USE : 252 - Senior Adult Housing - Multifamily

LAND USE SUBCATEGORY: All Sites

SETTING/LOCATION: General Urban/Suburban

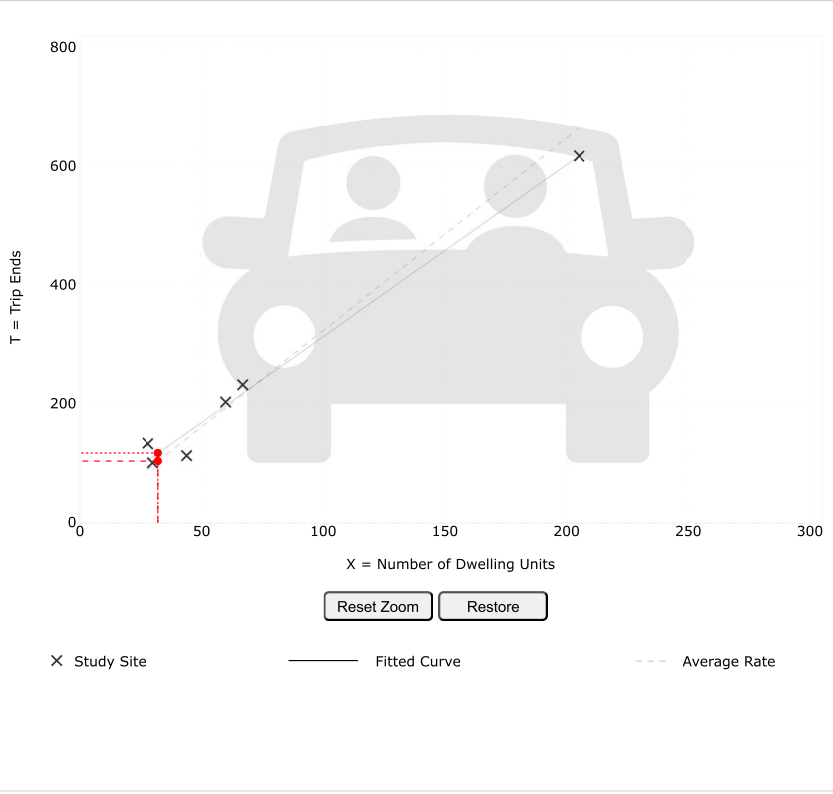
INDEPENDENT VARIABLE (IV): Dwelling Units

TIME PERIOD: Weekday

TRIP TYPE: Vehicle

ENTER IV VALUE TO CALCULATE TRIPS: 32 Calculate

Data Plot and Equation



Use the mouse wheel to Zoom Out or Zoom In.
Hover the mouse pointer on data points to view X and T values.

DATA STATISTICS

Land Use:
Senior Adult Housing - Multifamily (252) Click for Description and Data Plots

Independent Variable:
Dwelling Units

Time Period:
Weekday

Setting/Location:
General Urban/Suburban

Trip Type:
Vehicle

Number of Studies:
6

Avg. Num. of Dwelling Units:
72

Average Rate:
3.24

Range of Rates:
2.59 - 4.79

Standard Deviation:
0.53

Fitted Curve Equation:
T = 2.89(X) + 24.82

R^2:
0.99

Directional Distribution:
50% entering, 50% exiting

Calculated Trip Ends:
Average Rate: 104 (Total), 52 (Entry), 52 (Exit)
Fitted Curve: 117 (Total), 59 (Entry), 58 (Exit)

Add-ons to do more
Try OTISS Pro

Graph Look Up

ITETripGen Web-based App

- Graph Look Up
- How to Use *ITETripGen*
- TGM Desk Reference
- TGM Appendices
- Support Documents
- Add Users
- Comments

Add-ons to do more

Try OTISS Pro

Query | Filter

DATA SOURCE: Trip Generation Manual, 11th Ed

SEARCH BY LAND USE CODE: 252

LAND USE GROUP: (200-299) Residential

LAND USE : 252 - Senior Adult Housing - Multifamily

LAND USE SUBCATEGORY: All Sites

SETTING/LOCATION: General Urban/Suburban

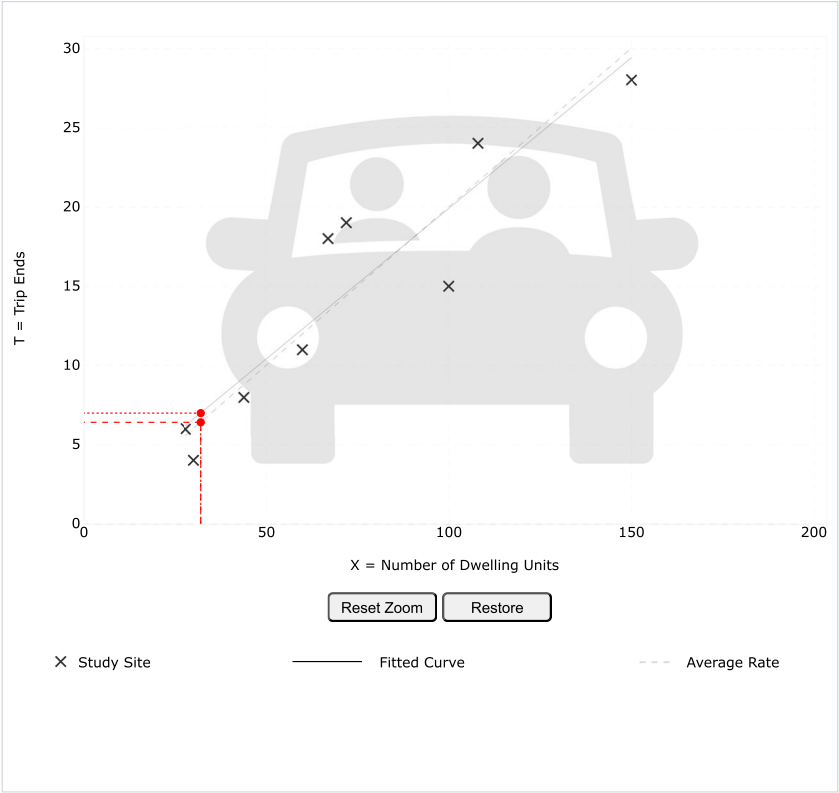
INDEPENDENT VARIABLE (IV): Dwelling Units

TIME PERIOD: Weekday, Peak Hour of Adjacent Street Traffic

TRIP TYPE: Vehicle

ENTER IV VALUE TO CALCULATE TRIPS: 32 Calculate

Data Plot and Equation



Use the mouse wheel to Zoom Out or Zoom In.
Hover the mouse pointer on data points to view X and T values.

DATA STATISTICS

Land Use:
Senior Adult Housing - Multifamily (252) Click for Description and Data Plots

Independent Variable:
Dwelling Units

Time Period:
Weekday
Peak Hour of Adjacent Street Traffic
One Hour Between 7 and 9 a.m.

Setting/Location:
General Urban/Suburban

Trip Type:
Vehicle

Number of Studies:
9

Avg. Num. of Dwelling Units:
73

Average Rate:
0.20

Range of Rates:
0.13 - 0.27

Standard Deviation:
0.04

Fitted Curve Equation:
T = 0.19(X) + 0.90

R^2:
0.85

Directional Distribution:
34% entering, 66% exiting

Calculated Trip Ends:
Average Rate: 6 (Total), 2 (Entry), 4 (Exit)
Fitted Curve: 7 (Total), 2 (Entry), 5 (Exit)

Graph Look Up

ITETripGen Web-based App

- Graph Look Up
- How to Use *ITETripGen*
- TGM Desk Reference
- TGM Appendices
- Support Documents
- Add Users
- Comments

Add-ons to do more

Try OTISS Pro

Query | Filter

DATA SOURCE: Trip Generation Manual, 11th Ed

SEARCH BY LAND USE CODE: 252

LAND USE GROUP: (200-299) Residential

LAND USE : 252 - Senior Adult Housing - Multifamily

LAND USE SUBCATEGORY: All Sites

SETTING/LOCATION: General Urban/Suburban

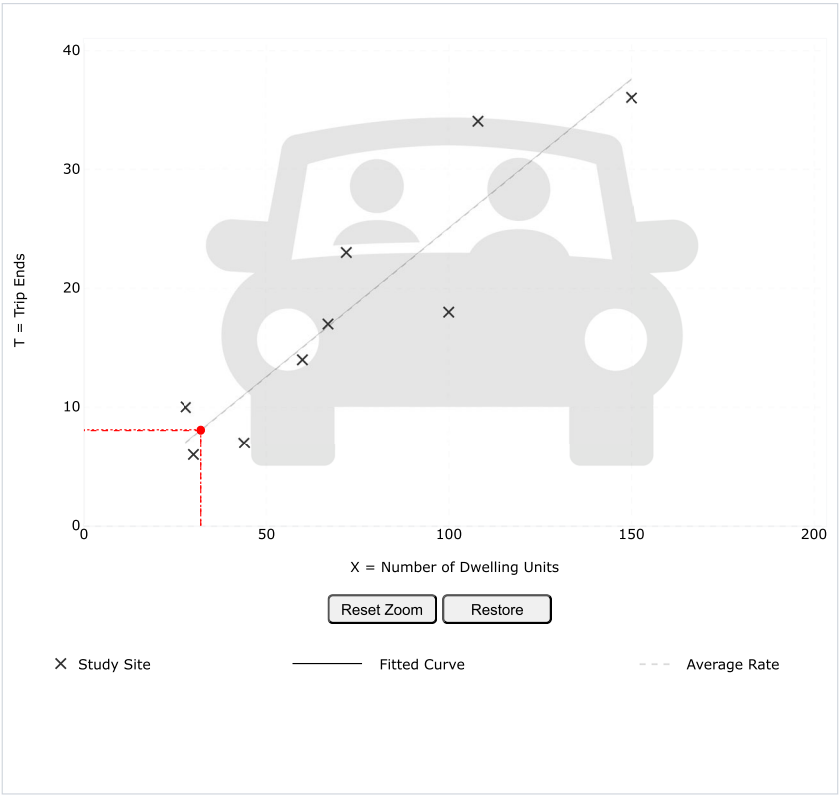
INDEPENDENT VARIABLE (IV): Dwelling Units

TIME PERIOD: Weekday, Peak Hour of Adjacent Street Traffic

TRIP TYPE: Vehicle

ENTER IV VALUE TO CALCULATE TRIPS: 32 Calculate

Data Plot and Equation



Use the mouse wheel to Zoom Out or Zoom In.
Hover the mouse pointer on data points to view X and T values.

DATA STATISTICS

Land Use:
Senior Adult Housing - Multifamily (252) Click for Description and Data Plots

Independent Variable:
Dwelling Units

Time Period:
Weekday
Peak Hour of Adjacent Street Traffic
One Hour Between 4 and 6 p.m.

Setting/Location:
General Urban/Suburban

Trip Type:
Vehicle

Number of Studies:
9

Avg. Num. of Dwelling Units:
73

Average Rate:
0.25

Range of Rates:
0.16 - 0.36

Standard Deviation:
0.06

Fitted Curve Equation:
T = 0.25(X) + 0.07

R^2:
0.84

Directional Distribution:
56% entering, 44% exiting

Calculated Trip Ends:
Average Rate: 8 (Total), 4 (Entry), 4 (Exit)
Fitted Curve: 8 (Total), 5 (Entry), 3 (Exit)

TRIP DISTRIBUTION

General Background Traffic Growth - Daily Traffic Volumes

CITY/TOWN	ROUTE/STREET	LOCATION	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Annual Growth
Newmarket	Exeter Road	at Newfields Town Line					17,000	17,374	17,895	18,756	19,131	19,514	19,434	**2.27%**
Newmarket	South Main Street	east of Maplecrest Avenue						5,300	5,459	5,568	5,679	5,588	5,655	**1.32%**
Newmarket	Grant Road	west of NH Route 152						2,964	3,053	2,673	2,726	2,781	3,075	**1.03%**
Newmarket	Main Street	at Lamprey River								11,447	11,676	11,910	11,154	**-0.78%**
														0.96%

CAPACITY ANALYSIS WORKSHEETS

NH Route 152 at Grant Road
NH Route 152 at the Newmarket Elementary School Driveway
NH Route 152 at the Project Site Driveway

NH Route 152 at Grant Road

Intersection	
Int Delay, s/veh	9.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	184	28	124	87	16	194
Future Vol, veh/h	184	28	124	87	16	194
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	67	67	46	46
Heavy Vehicles, %	2	0	4	10	0	3
Mvmt Flow	219	33	185	130	35	422

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	252	0	736	236
Stage 1	-	-	-	-	236	-
Stage 2	-	-	-	-	500	-
Critical Hdwy	-	-	4.14	-	6.4	6.23
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.236	-	3.5	3.327
Pot Cap-1 Maneuver	-	-	1302	-	389	801
Stage 1	-	-	-	-	808	-
Stage 2	-	-	-	-	613	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1302	-	329	801
Mov Cap-2 Maneuver	-	-	-	-	329	-
Stage 1	-	-	-	-	808	-
Stage 2	-	-	-	-	519	-

Approach	EB	WB	NB
HCM Control Delay, s	0	4.8	18.2
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	722	-	-	1302	-
HCM Lane V/C Ratio	0.632	-	-	0.142	-
HCM Control Delay (s)	18.2	-	-	8.2	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	4.5	-	-	0.5	-

Intersection	
Int Delay, s/veh	6.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	97	13	218	187	22	221
Future Vol, veh/h	97	13	218	187	22	221
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	75	81	81	88	88
Heavy Vehicles, %	8	33	7	5	0	1
Mvmt Flow	129	17	269	231	25	251

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	146	0	907	138
Stage 1	-	-	-	-	138	-
Stage 2	-	-	-	-	769	-
Critical Hdwy	-	-	4.17	-	6.4	6.21
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.263	-	3.5	3.309
Pot Cap-1 Maneuver	-	-	1406	-	309	913
Stage 1	-	-	-	-	894	-
Stage 2	-	-	-	-	461	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1406	-	241	913
Mov Cap-2 Maneuver	-	-	-	-	241	-
Stage 1	-	-	-	-	894	-
Stage 2	-	-	-	-	360	-

Approach	EB	WB	NB
HCM Control Delay, s	0	4.4	12.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	729	-	-	1406	-
HCM Lane V/C Ratio	0.379	-	-	0.191	-
HCM Control Delay (s)	12.9	-	-	8.2	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	1.8	-	-	0.7	-

Intersection	
Int Delay, s/veh	6.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	136	29	215	151	31	180
Future Vol, veh/h	136	29	215	151	31	180
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	96	96	75	75
Heavy Vehicles, %	2	5	1	1	0	0
Mvmt Flow	151	32	224	157	41	240

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	183	0	772	167
Stage 1	-	-	-	-	167	-
Stage 2	-	-	-	-	605	-
Critical Hdwy	-	-	4.11	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.209	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1398	-	371	882
Stage 1	-	-	-	-	867	-
Stage 2	-	-	-	-	549	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1398	-	306	882
Mov Cap-2 Maneuver	-	-	-	-	306	-
Stage 1	-	-	-	-	867	-
Stage 2	-	-	-	-	452	-

Approach	EB	WB	NB
HCM Control Delay, s	0	4.7	13.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	691	-	-	1398	-
HCM Lane V/C Ratio	0.407	-	-	0.16	-
HCM Control Delay (s)	13.7	-	-	8.1	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	2	-	-	0.6	-

Intersection	
Int Delay, s/veh	9.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	188	28	128	90	16	199
Future Vol, veh/h	188	28	128	90	16	199
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	67	67	46	46
Heavy Vehicles, %	2	0	4	10	0	3
Mvmt Flow	224	33	191	134	35	433

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	257	0	757	241
Stage 1	-	-	-	-	241	-
Stage 2	-	-	-	-	516	-
Critical Hdwy	-	-	4.14	-	6.4	6.23
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.236	-	3.5	3.327
Pot Cap-1 Maneuver	-	-	1296	-	378	795
Stage 1	-	-	-	-	804	-
Stage 2	-	-	-	-	603	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1296	-	318	795
Mov Cap-2 Maneuver	-	-	-	-	318	-
Stage 1	-	-	-	-	804	-
Stage 2	-	-	-	-	507	-

Approach	EB	WB	NB
HCM Control Delay, s	0	4.8	19
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	715	-	-	1296	-
HCM Lane V/C Ratio	0.654	-	-	0.147	-
HCM Control Delay (s)	19	-	-	8.3	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	4.9	-	-	0.5	-

Intersection	
Int Delay, s/veh	6.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	104	13	228	195	22	232
Future Vol, veh/h	104	13	228	195	22	232
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	75	81	81	88	88
Heavy Vehicles, %	8	33	7	5	0	1
Mvmt Flow	139	17	281	241	25	264

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	156	0	951	148
Stage 1	-	-	-	-	148	-
Stage 2	-	-	-	-	803	-
Critical Hdwy	-	-	4.17	-	6.4	6.21
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.263	-	3.5	3.309
Pot Cap-1 Maneuver	-	-	1394	-	291	901
Stage 1	-	-	-	-	884	-
Stage 2	-	-	-	-	444	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1394	-	223	901
Mov Cap-2 Maneuver	-	-	-	-	223	-
Stage 1	-	-	-	-	884	-
Stage 2	-	-	-	-	341	-

Approach	EB	WB	NB
HCM Control Delay, s	0	4.4	13.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	713	-	-	1394	-
HCM Lane V/C Ratio	0.405	-	-	0.202	-
HCM Control Delay (s)	13.4	-	-	8.2	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	2	-	-	0.8	-

Intersection	
Int Delay, s/veh	6.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	143	29	225	159	31	191
Future Vol, veh/h	143	29	225	159	31	191
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	96	96	75	75
Heavy Vehicles, %	2	5	1	1	0	0
Mvmt Flow	159	32	234	166	41	255

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	191	0	809	175
Stage 1	-	-	-	-	175	-
Stage 2	-	-	-	-	634	-
Critical Hdwy	-	-	4.11	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.209	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1389	-	353	874
Stage 1	-	-	-	-	860	-
Stage 2	-	-	-	-	532	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1389	-	287	874
Mov Cap-2 Maneuver	-	-	-	-	287	-
Stage 1	-	-	-	-	860	-
Stage 2	-	-	-	-	433	-

Approach	EB	WB	NB
HCM Control Delay, s	0	4.8	14.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	680	-	-	1389	-
HCM Lane V/C Ratio	0.435	-	-	0.169	-
HCM Control Delay (s)	14.3	-	-	8.1	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	2.2	-	-	0.6	-

Intersection	
Int Delay, s/veh	12.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	205	31	140	98	18	217
Future Vol, veh/h	205	31	140	98	18	217
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	67	67	46	46
Heavy Vehicles, %	2	0	4	10	0	3
Mvmt Flow	244	37	209	146	39	472

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	281	0	827	263
Stage 1	-	-	-	-	263	-
Stage 2	-	-	-	-	564	-
Critical Hdwy	-	-	4.14	-	6.4	6.23
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.236	-	3.5	3.327
Pot Cap-1 Maneuver	-	-	1270	-	344	773
Stage 1	-	-	-	-	786	-
Stage 2	-	-	-	-	573	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1270	-	282	773
Mov Cap-2 Maneuver	-	-	-	-	282	-
Stage 1	-	-	-	-	786	-
Stage 2	-	-	-	-	470	-

Approach	EB	WB	NB
HCM Control Delay, s	0	4.9	24.3
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	682	-	-	1270	-
HCM Lane V/C Ratio	0.749	-	-	0.165	-
HCM Control Delay (s)	24.3	-	-	8.4	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	6.8	-	-	0.6	-

Intersection	
Int Delay, s/veh	6.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	113	14	249	213	24	253
Future Vol, veh/h	113	14	249	213	24	253
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	75	81	81	88	88
Heavy Vehicles, %	8	33	7	5	0	1
Mvmt Flow	151	19	307	263	27	288

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	170	0	1038	161
Stage 1	-	-	-	-	161	-
Stage 2	-	-	-	-	877	-
Critical Hdwy	-	-	4.17	-	6.4	6.21
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.263	-	3.5	3.309
Pot Cap-1 Maneuver	-	-	1378	-	258	887
Stage 1	-	-	-	-	873	-
Stage 2	-	-	-	-	410	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1378	-	191	887
Mov Cap-2 Maneuver	-	-	-	-	191	-
Stage 1	-	-	-	-	873	-
Stage 2	-	-	-	-	303	-

Approach	EB	WB	NB
HCM Control Delay, s	0	4.5	14.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	674	-	-	1378	-
HCM Lane V/C Ratio	0.467	-	-	0.223	-
HCM Control Delay (s)	14.9	-	-	8.4	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	2.5	-	-	0.9	-

Intersection	
Int Delay, s/veh	7.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	156	32	245	173	34	208
Future Vol, veh/h	156	32	245	173	34	208
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	96	96	75	75
Heavy Vehicles, %	2	5	1	1	0	0
Mvmt Flow	173	36	255	180	45	277

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	209	0	881	191
Stage 1	-	-	-	-	191	-
Stage 2	-	-	-	-	690	-
Critical Hdwy	-	-	4.11	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.209	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1368	-	320	856
Stage 1	-	-	-	-	846	-
Stage 2	-	-	-	-	502	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1368	-	254	856
Mov Cap-2 Maneuver	-	-	-	-	254	-
Stage 1	-	-	-	-	846	-
Stage 2	-	-	-	-	398	-

Approach	EB	WB	NB
HCM Control Delay, s	0	4.8	16.1
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	642	-	-	1368	-
HCM Lane V/C Ratio	0.503	-	-	0.187	-
HCM Control Delay (s)	16.1	-	-	8.2	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	2.8	-	-	0.7	-

Intersection	
Int Delay, s/veh	10

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	188	28	129	90	16	199
Future Vol, veh/h	188	28	129	90	16	199
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	67	67	46	46
Heavy Vehicles, %	2	0	4	10	0	3
Mvmt Flow	224	33	193	134	35	433

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	257	0	761	241
Stage 1	-	-	-	-	241	-
Stage 2	-	-	-	-	520	-
Critical Hdwy	-	-	4.14	-	6.4	6.23
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.236	-	3.5	3.327
Pot Cap-1 Maneuver	-	-	1296	-	376	795
Stage 1	-	-	-	-	804	-
Stage 2	-	-	-	-	601	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1296	-	315	795
Mov Cap-2 Maneuver	-	-	-	-	315	-
Stage 1	-	-	-	-	804	-
Stage 2	-	-	-	-	504	-

Approach	EB	WB	NB
HCM Control Delay, s	0	4.9	19.1
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	714	-	-	1296	-
HCM Lane V/C Ratio	0.655	-	-	0.149	-
HCM Control Delay (s)	19.1	-	-	8.3	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	4.9	-	-	0.5	-

Intersection	
Int Delay, s/veh	6.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	104	13	229	195	22	233
Future Vol, veh/h	104	13	229	195	22	233
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	75	81	81	88	88
Heavy Vehicles, %	8	33	7	5	0	1
Mvmt Flow	139	17	283	241	25	265

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	156	0	955	148
Stage 1	-	-	-	-	148	-
Stage 2	-	-	-	-	807	-
Critical Hdwy	-	-	4.17	-	6.4	6.21
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.263	-	3.5	3.309
Pot Cap-1 Maneuver	-	-	1394	-	289	901
Stage 1	-	-	-	-	884	-
Stage 2	-	-	-	-	442	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1394	-	221	901
Mov Cap-2 Maneuver	-	-	-	-	221	-
Stage 1	-	-	-	-	884	-
Stage 2	-	-	-	-	339	-

Approach	EB	WB	NB
HCM Control Delay, s	0	4.4	13.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	712	-	-	1394	-
HCM Lane V/C Ratio	0.407	-	-	0.203	-
HCM Control Delay (s)	13.5	-	-	8.2	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	2	-	-	0.8	-

Intersection	
Int Delay, s/veh	6.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	143	29	226	159	31	192
Future Vol, veh/h	143	29	226	159	31	192
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	96	96	75	75
Heavy Vehicles, %	2	5	1	1	0	0
Mvmt Flow	159	32	235	166	41	256

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	191	0	811	175
Stage 1	-	-	-	-	175	-
Stage 2	-	-	-	-	636	-
Critical Hdwy	-	-	4.11	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.209	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1389	-	352	874
Stage 1	-	-	-	-	860	-
Stage 2	-	-	-	-	531	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1389	-	287	874
Mov Cap-2 Maneuver	-	-	-	-	287	-
Stage 1	-	-	-	-	860	-
Stage 2	-	-	-	-	432	-

Approach	EB	WB	NB
HCM Control Delay, s	0	4.8	14.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	681	-	-	1389	-
HCM Lane V/C Ratio	0.437	-	-	0.169	-
HCM Control Delay (s)	14.3	-	-	8.1	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	2.2	-	-	0.6	-

Intersection	
Int Delay, s/veh	12.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	205	31	141	98	18	217
Future Vol, veh/h	205	31	141	98	18	217
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	67	67	46	46
Heavy Vehicles, %	2	0	4	10	0	3
Mvmt Flow	244	37	210	146	39	472

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	281	0	829	263
Stage 1	-	-	-	-	263	-
Stage 2	-	-	-	-	566	-
Critical Hdwy	-	-	4.14	-	6.4	6.23
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.236	-	3.5	3.327
Pot Cap-1 Maneuver	-	-	1270	-	343	773
Stage 1	-	-	-	-	786	-
Stage 2	-	-	-	-	572	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1270	-	281	773
Mov Cap-2 Maneuver	-	-	-	-	281	-
Stage 1	-	-	-	-	786	-
Stage 2	-	-	-	-	469	-

Approach	EB	WB	NB
HCM Control Delay, s	0	5	24.3
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	682	-	-	1270	-
HCM Lane V/C Ratio	0.749	-	-	0.166	-
HCM Control Delay (s)	24.3	-	-	8.4	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	6.8	-	-	0.6	-

Intersection	
Int Delay, s/veh	6.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	113	14	250	213	24	253
Future Vol, veh/h	113	14	250	213	24	253
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	75	81	81	88	88
Heavy Vehicles, %	8	33	7	5	0	1
Mvmt Flow	151	19	309	263	27	288

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	170	0	1042	161
Stage 1	-	-	-	-	161	-
Stage 2	-	-	-	-	881	-
Critical Hdwy	-	-	4.17	-	6.4	6.21
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.263	-	3.5	3.309
Pot Cap-1 Maneuver	-	-	1378	-	257	887
Stage 1	-	-	-	-	873	-
Stage 2	-	-	-	-	408	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1378	-	189	887
Mov Cap-2 Maneuver	-	-	-	-	189	-
Stage 1	-	-	-	-	873	-
Stage 2	-	-	-	-	301	-

Approach	EB	WB	NB
HCM Control Delay, s	0	4.5	15
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	672	-	-	1378	-
HCM Lane V/C Ratio	0.468	-	-	0.224	-
HCM Control Delay (s)	15	-	-	8.4	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	2.5	-	-	0.9	-

Intersection	
Int Delay, s/veh	7.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	156	32	246	173	34	209
Future Vol, veh/h	156	32	246	173	34	209
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	96	96	75	75
Heavy Vehicles, %	2	5	1	1	0	0
Mvmt Flow	173	36	256	180	45	279

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	209	0	883	191
Stage 1	-	-	-	-	191	-
Stage 2	-	-	-	-	692	-
Critical Hdwy	-	-	4.11	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.209	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1368	-	319	856
Stage 1	-	-	-	-	846	-
Stage 2	-	-	-	-	500	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1368	-	253	856
Mov Cap-2 Maneuver	-	-	-	-	253	-
Stage 1	-	-	-	-	846	-
Stage 2	-	-	-	-	396	-

Approach	EB	WB	NB
HCM Control Delay, s	0	4.8	16.2
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	642	-	-	1368	-
HCM Lane V/C Ratio	0.505	-	-	0.187	-
HCM Control Delay (s)	16.2	-	-	8.2	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	2.9	-	-	0.7	-

NH Route 152 at the Newmarket Elementary School Driveway

Intersection	
Int Delay, s/veh	1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	366	12	56	199	12	16
Future Vol, veh/h	366	12	56	199	12	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	57	57	76	76	48	48
Heavy Vehicles, %	2	0	0	6	13	0
Mvmt Flow	642	21	74	262	25	33

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	663	0	1063	653
Stage 1	-	-	-	-	653	-
Stage 2	-	-	-	-	410	-
Critical Hdwy	-	-	4.1	-	6.53	6.2
Critical Hdwy Stg 1	-	-	-	-	5.53	-
Critical Hdwy Stg 2	-	-	-	-	5.53	-
Follow-up Hdwy	-	-	2.2	-	3.617	3.3
Pot Cap-1 Maneuver	-	-	935	-	236	471
Stage 1	-	-	-	-	498	-
Stage 2	-	-	-	-	647	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	935	-	214	471
Mov Cap-2 Maneuver	-	-	-	-	214	-
Stage 1	-	-	-	-	498	-
Stage 2	-	-	-	-	587	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2	19.2
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	311	-	-	935	-
HCM Lane V/C Ratio	0.188	-	-	0.079	-
HCM Control Delay (s)	19.2	-	-	9.2	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.7	-	-	0.3	-

Intersection	
Int Delay, s/veh	2.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	318	0	19	392	13	55
Future Vol, veh/h	318	0	19	392	13	55
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	78	78	45	45
Heavy Vehicles, %	7	0	16	9	38	22
Mvmt Flow	374	0	24	503	29	122

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	374	0	925	374
Stage 1	-	-	-	-	374	-
Stage 2	-	-	-	-	551	-
Critical Hdwy	-	-	4.26	-	6.78	6.42
Critical Hdwy Stg 1	-	-	-	-	5.78	-
Critical Hdwy Stg 2	-	-	-	-	5.78	-
Follow-up Hdwy	-	-	2.344	-	3.842	3.498
Pot Cap-1 Maneuver	-	-	1112	-	258	630
Stage 1	-	-	-	-	623	-
Stage 2	-	-	-	-	512	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1112	-	250	630
Mov Cap-2 Maneuver	-	-	-	-	250	-
Stage 1	-	-	-	-	623	-
Stage 2	-	-	-	-	497	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	15.7
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	488	-	-	1112	-
HCM Lane V/C Ratio	0.31	-	-	0.022	-
HCM Control Delay (s)	15.7	-	-	8.3	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	1.3	-	-	0.1	-

Intersection	
Int Delay, s/veh	1.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	314	2	16	357	9	40
Future Vol, veh/h	314	2	16	357	9	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	81	87	87	43	43
Heavy Vehicles, %	2	0	9	1	17	0
Mvmt Flow	388	2	18	410	21	93

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	390	0	835	389
Stage 1	-	-	-	-	389	-
Stage 2	-	-	-	-	446	-
Critical Hdwy	-	-	4.19	-	6.57	6.2
Critical Hdwy Stg 1	-	-	-	-	5.57	-
Critical Hdwy Stg 2	-	-	-	-	5.57	-
Follow-up Hdwy	-	-	2.281	-	3.653	3.3
Pot Cap-1 Maneuver	-	-	1131	-	318	664
Stage 1	-	-	-	-	653	-
Stage 2	-	-	-	-	615	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1131	-	311	664
Mov Cap-2 Maneuver	-	-	-	-	311	-
Stage 1	-	-	-	-	653	-
Stage 2	-	-	-	-	602	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	13.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	549	-	-	1131	-
HCM Lane V/C Ratio	0.208	-	-	0.016	-
HCM Control Delay (s)	13.3	-	-	8.2	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.8	-	-	0.1	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	375	12	56	206	12	16
Future Vol, veh/h	375	12	56	206	12	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	57	57	76	76	48	48
Heavy Vehicles, %	2	0	0	6	13	0
Mvmt Flow	658	21	74	271	25	33

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	679	0	1088	669
Stage 1	-	-	-	-	669	-
Stage 2	-	-	-	-	419	-
Critical Hdwy	-	-	4.1	-	6.53	6.2
Critical Hdwy Stg 1	-	-	-	-	5.53	-
Critical Hdwy Stg 2	-	-	-	-	5.53	-
Follow-up Hdwy	-	-	2.2	-	3.617	3.3
Pot Cap-1 Maneuver	-	-	923	-	227	461
Stage 1	-	-	-	-	489	-
Stage 2	-	-	-	-	641	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	923	-	206	461
Mov Cap-2 Maneuver	-	-	-	-	206	-
Stage 1	-	-	-	-	489	-
Stage 2	-	-	-	-	581	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2	19.8
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	301	-	-	923	-
HCM Lane V/C Ratio	0.194	-	-	0.08	-
HCM Control Delay (s)	19.8	-	-	9.2	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.7	-	-	0.3	-

Intersection	
Int Delay, s/veh	2.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	336	0	19	410	13	55
Future Vol, veh/h	336	0	19	410	13	55
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	78	78	45	45
Heavy Vehicles, %	7	0	16	9	38	22
Mvmt Flow	395	0	24	526	29	122

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	395	0	969	395
Stage 1	-	-	-	-	395	-
Stage 2	-	-	-	-	574	-
Critical Hdwy	-	-	4.26	-	6.78	6.42
Critical Hdwy Stg 1	-	-	-	-	5.78	-
Critical Hdwy Stg 2	-	-	-	-	5.78	-
Follow-up Hdwy	-	-	2.344	-	3.842	3.498
Pot Cap-1 Maneuver	-	-	1091	-	242	613
Stage 1	-	-	-	-	609	-
Stage 2	-	-	-	-	499	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1091	-	234	613
Mov Cap-2 Maneuver	-	-	-	-	234	-
Stage 1	-	-	-	-	609	-
Stage 2	-	-	-	-	484	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	16.3
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	468	-	-	1091	-
HCM Lane V/C Ratio	0.323	-	-	0.022	-
HCM Control Delay (s)	16.3	-	-	8.4	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	1.4	-	-	0.1	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	332	2	16	375	9	40
Future Vol, veh/h	332	2	16	375	9	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	81	87	87	43	43
Heavy Vehicles, %	2	0	9	1	17	0
Mvmt Flow	410	2	18	431	21	93

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	412	0	878	411
Stage 1	-	-	-	-	411	-
Stage 2	-	-	-	-	467	-
Critical Hdwy	-	-	4.19	-	6.57	6.2
Critical Hdwy Stg 1	-	-	-	-	5.57	-
Critical Hdwy Stg 2	-	-	-	-	5.57	-
Follow-up Hdwy	-	-	2.281	-	3.653	3.3
Pot Cap-1 Maneuver	-	-	1110	-	300	645
Stage 1	-	-	-	-	638	-
Stage 2	-	-	-	-	601	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1110	-	294	645
Mov Cap-2 Maneuver	-	-	-	-	294	-
Stage 1	-	-	-	-	638	-
Stage 2	-	-	-	-	588	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	13.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	529	-	-	1110	-
HCM Lane V/C Ratio	0.215	-	-	0.017	-
HCM Control Delay (s)	13.7	-	-	8.3	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.8	-	-	0.1	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	410	12	56	226	12	16
Future Vol, veh/h	410	12	56	226	12	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	57	57	76	76	48	48
Heavy Vehicles, %	2	0	0	6	13	0
Mvmt Flow	719	21	74	297	25	33

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	740	0	1175	730
Stage 1	-	-	-	-	730	-
Stage 2	-	-	-	-	445	-
Critical Hdwy	-	-	4.1	-	6.53	6.2
Critical Hdwy Stg 1	-	-	-	-	5.53	-
Critical Hdwy Stg 2	-	-	-	-	5.53	-
Follow-up Hdwy	-	-	2.2	-	3.617	3.3
Pot Cap-1 Maneuver	-	-	876	-	201	426
Stage 1	-	-	-	-	458	-
Stage 2	-	-	-	-	623	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	876	-	181	426
Mov Cap-2 Maneuver	-	-	-	-	181	-
Stage 1	-	-	-	-	458	-
Stage 2	-	-	-	-	560	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.9	22
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	270	-	-	876	-
HCM Lane V/C Ratio	0.216	-	-	0.084	-
HCM Control Delay (s)	22	-	-	9.5	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.8	-	-	0.3	-

Intersection	
Int Delay, s/veh	2.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	366	0	19	449	13	55
Future Vol, veh/h	366	0	19	449	13	55
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	78	78	45	45
Heavy Vehicles, %	7	0	16	9	38	22
Mvmt Flow	431	0	24	576	29	122

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	431	0	1055	431
Stage 1	-	-	-	-	431	-
Stage 2	-	-	-	-	624	-
Critical Hdwy	-	-	4.26	-	6.78	6.42
Critical Hdwy Stg 1	-	-	-	-	5.78	-
Critical Hdwy Stg 2	-	-	-	-	5.78	-
Follow-up Hdwy	-	-	2.344	-	3.842	3.498
Pot Cap-1 Maneuver	-	-	1058	-	214	584
Stage 1	-	-	-	-	585	-
Stage 2	-	-	-	-	471	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1058	-	207	584
Mov Cap-2 Maneuver	-	-	-	-	207	-
Stage 1	-	-	-	-	585	-
Stage 2	-	-	-	-	455	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	17.7
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	433	-	-	1058	-
HCM Lane V/C Ratio	0.349	-	-	0.023	-
HCM Control Delay (s)	17.7	-	-	8.5	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	1.5	-	-	0.1	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	362	2	16	409	9	40
Future Vol, veh/h	362	2	16	409	9	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	81	87	87	43	43
Heavy Vehicles, %	2	0	9	1	17	0
Mvmt Flow	447	2	18	470	21	93

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	449	0	954	448
Stage 1	-	-	-	-	448	-
Stage 2	-	-	-	-	506	-
Critical Hdwy	-	-	4.19	-	6.57	6.2
Critical Hdwy Stg 1	-	-	-	-	5.57	-
Critical Hdwy Stg 2	-	-	-	-	5.57	-
Follow-up Hdwy	-	-	2.281	-	3.653	3.3
Pot Cap-1 Maneuver	-	-	1075	-	270	615
Stage 1	-	-	-	-	613	-
Stage 2	-	-	-	-	576	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1075	-	264	615
Mov Cap-2 Maneuver	-	-	-	-	264	-
Stage 1	-	-	-	-	613	-
Stage 2	-	-	-	-	563	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	14.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	494	-	-	1075	-
HCM Lane V/C Ratio	0.231	-	-	0.017	-
HCM Control Delay (s)	14.5	-	-	8.4	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.9	-	-	0.1	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	378	12	56	208	12	16
Future Vol, veh/h	378	12	56	208	12	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	57	57	76	76	48	48
Heavy Vehicles, %	2	0	0	6	13	0
Mvmt Flow	663	21	74	274	25	33

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	684	0	1096	674
Stage 1	-	-	-	-	674	-
Stage 2	-	-	-	-	422	-
Critical Hdwy	-	-	4.1	-	6.53	6.2
Critical Hdwy Stg 1	-	-	-	-	5.53	-
Critical Hdwy Stg 2	-	-	-	-	5.53	-
Follow-up Hdwy	-	-	2.2	-	3.617	3.3
Pot Cap-1 Maneuver	-	-	919	-	225	458
Stage 1	-	-	-	-	487	-
Stage 2	-	-	-	-	639	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	919	-	204	458
Mov Cap-2 Maneuver	-	-	-	-	204	-
Stage 1	-	-	-	-	487	-
Stage 2	-	-	-	-	578	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2	19.9
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	299	-	-	919	-
HCM Lane V/C Ratio	0.195	-	-	0.08	-
HCM Control Delay (s)	19.9	-	-	9.3	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.7	-	-	0.3	-

Intersection	
Int Delay, s/veh	2.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	339	0	19	413	13	55
Future Vol, veh/h	339	0	19	413	13	55
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	78	78	45	45
Heavy Vehicles, %	7	0	16	9	38	22
Mvmt Flow	399	0	24	529	29	122

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	399	0	976	399
Stage 1	-	-	-	-	399	-
Stage 2	-	-	-	-	577	-
Critical Hdwy	-	-	4.26	-	6.78	6.42
Critical Hdwy Stg 1	-	-	-	-	5.78	-
Critical Hdwy Stg 2	-	-	-	-	5.78	-
Follow-up Hdwy	-	-	2.344	-	3.842	3.498
Pot Cap-1 Maneuver	-	-	1088	-	240	609
Stage 1	-	-	-	-	606	-
Stage 2	-	-	-	-	497	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1088	-	233	609
Mov Cap-2 Maneuver	-	-	-	-	233	-
Stage 1	-	-	-	-	606	-
Stage 2	-	-	-	-	482	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	16.4
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	465	-	-	1088	-
HCM Lane V/C Ratio	0.325	-	-	0.022	-
HCM Control Delay (s)	16.4	-	-	8.4	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	1.4	-	-	0.1	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	335	2	16	378	9	40
Future Vol, veh/h	335	2	16	378	9	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	81	87	87	43	43
Heavy Vehicles, %	2	0	9	1	17	0
Mvmt Flow	414	2	18	434	21	93

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	416	0	885	415
Stage 1	-	-	-	-	415	-
Stage 2	-	-	-	-	470	-
Critical Hdwy	-	-	4.19	-	6.57	6.2
Critical Hdwy Stg 1	-	-	-	-	5.57	-
Critical Hdwy Stg 2	-	-	-	-	5.57	-
Follow-up Hdwy	-	-	2.281	-	3.653	3.3
Pot Cap-1 Maneuver	-	-	1106	-	297	642
Stage 1	-	-	-	-	635	-
Stage 2	-	-	-	-	599	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1106	-	291	642
Mov Cap-2 Maneuver	-	-	-	-	291	-
Stage 1	-	-	-	-	635	-
Stage 2	-	-	-	-	586	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	13.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	526	-	-	1106	-
HCM Lane V/C Ratio	0.217	-	-	0.017	-
HCM Control Delay (s)	13.7	-	-	8.3	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.8	-	-	0.1	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	413	12	56	228	12	16
Future Vol, veh/h	413	12	56	228	12	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	57	57	76	76	48	48
Heavy Vehicles, %	2	0	0	6	13	0
Mvmt Flow	725	21	74	300	25	33

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	746	0	1184	736
Stage 1	-	-	-	-	736	-
Stage 2	-	-	-	-	448	-
Critical Hdwy	-	-	4.1	-	6.53	6.2
Critical Hdwy Stg 1	-	-	-	-	5.53	-
Critical Hdwy Stg 2	-	-	-	-	5.53	-
Follow-up Hdwy	-	-	2.2	-	3.617	3.3
Pot Cap-1 Maneuver	-	-	871	-	199	422
Stage 1	-	-	-	-	455	-
Stage 2	-	-	-	-	621	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	871	-	179	422
Mov Cap-2 Maneuver	-	-	-	-	179	-
Stage 1	-	-	-	-	455	-
Stage 2	-	-	-	-	558	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.9	22.2
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	267	-	-	871	-
HCM Lane V/C Ratio	0.218	-	-	0.085	-
HCM Control Delay (s)	22.2	-	-	9.5	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.8	-	-	0.3	-

Intersection	
Int Delay, s/veh	2.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	369	0	19	452	13	55
Future Vol, veh/h	369	0	19	452	13	55
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	78	78	45	45
Heavy Vehicles, %	7	0	16	9	38	22
Mvmt Flow	434	0	24	579	29	122

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	434	0	1061	434
Stage 1	-	-	-	-	434	-
Stage 2	-	-	-	-	627	-
Critical Hdwy	-	-	4.26	-	6.78	6.42
Critical Hdwy Stg 1	-	-	-	-	5.78	-
Critical Hdwy Stg 2	-	-	-	-	5.78	-
Follow-up Hdwy	-	-	2.344	-	3.842	3.498
Pot Cap-1 Maneuver	-	-	1055	-	212	582
Stage 1	-	-	-	-	583	-
Stage 2	-	-	-	-	470	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1055	-	205	582
Mov Cap-2 Maneuver	-	-	-	-	205	-
Stage 1	-	-	-	-	583	-
Stage 2	-	-	-	-	454	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	17.8
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	431	-	-	1055	-
HCM Lane V/C Ratio	0.351	-	-	0.023	-
HCM Control Delay (s)	17.8	-	-	8.5	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	1.6	-	-	0.1	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	365	2	16	412	9	40
Future Vol, veh/h	365	2	16	412	9	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	81	87	87	43	43
Heavy Vehicles, %	2	0	9	1	17	0
Mvmt Flow	451	2	18	474	21	93

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	453	0	962	452
Stage 1	-	-	-	-	452	-
Stage 2	-	-	-	-	510	-
Critical Hdwy	-	-	4.19	-	6.57	6.2
Critical Hdwy Stg 1	-	-	-	-	5.57	-
Critical Hdwy Stg 2	-	-	-	-	5.57	-
Follow-up Hdwy	-	-	2.281	-	3.653	3.3
Pot Cap-1 Maneuver	-	-	1072	-	267	612
Stage 1	-	-	-	-	611	-
Stage 2	-	-	-	-	573	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1072	-	261	612
Mov Cap-2 Maneuver	-	-	-	-	261	-
Stage 1	-	-	-	-	611	-
Stage 2	-	-	-	-	560	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	14.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	491	-	-	1072	-
HCM Lane V/C Ratio	0.232	-	-	0.017	-
HCM Control Delay (s)	14.5	-	-	8.4	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.9	-	-	0.1	-

NH Route 152 at the Project Site Driveway

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	387	218	2	3	1
Future Vol, veh/h	0	387	218	2	3	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	65	74	92	92	92
Heavy Vehicles, %	2	3	6	2	2	2
Mvmt Flow	0	595	295	2	3	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	297	0	-	0	891	296
Stage 1	-	-	-	-	296	-
Stage 2	-	-	-	-	595	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1264	-	-	-	313	743
Stage 1	-	-	-	-	755	-
Stage 2	-	-	-	-	551	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1264	-	-	-	313	743
Mov Cap-2 Maneuver	-	-	-	-	313	-
Stage 1	-	-	-	-	755	-
Stage 2	-	-	-	-	551	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	15
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1264	-	-	-	366
HCM Lane V/C Ratio	-	-	-	-	0.012
HCM Control Delay (s)	0	-	-	-	15
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	336	423	3	3	1
Future Vol, veh/h	1	336	423	3	3	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	84	85	92	92	92
Heavy Vehicles, %	2	3	7	2	2	2
Mvmt Flow	1	400	498	3	3	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	501	0	-	0	902	500
Stage 1	-	-	-	-	500	-
Stage 2	-	-	-	-	402	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1063	-	-	-	308	571
Stage 1	-	-	-	-	609	-
Stage 2	-	-	-	-	676	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1063	-	-	-	308	571
Mov Cap-2 Maneuver	-	-	-	-	308	-
Stage 1	-	-	-	-	608	-
Stage 2	-	-	-	-	676	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	15.5
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1063	-	-	-	348
HCM Lane V/C Ratio	0.001	-	-	-	0.012
HCM Control Delay (s)	8.4	0	-	-	15.5
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	334	384	3	3	1
Future Vol, veh/h	1	334	384	3	3	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	81	86	92	92	92
Heavy Vehicles, %	2	1	1	2	2	2
Mvmt Flow	1	412	447	3	3	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	450	0	-	0	863	449
Stage 1	-	-	-	-	449	-
Stage 2	-	-	-	-	414	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1110	-	-	-	325	610
Stage 1	-	-	-	-	643	-
Stage 2	-	-	-	-	667	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1110	-	-	-	325	610
Mov Cap-2 Maneuver	-	-	-	-	325	-
Stage 1	-	-	-	-	642	-
Stage 2	-	-	-	-	667	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	14.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1110	-	-	-	368
HCM Lane V/C Ratio	0.001	-	-	-	0.012
HCM Control Delay (s)	8.2	0	-	-	14.9
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	422	238	2	3	1
Future Vol, veh/h	0	422	238	2	3	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	65	74	92	92	92
Heavy Vehicles, %	2	3	6	2	2	2
Mvmt Flow	0	649	322	2	3	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	324	0	-	0	972	323
Stage 1	-	-	-	-	323	-
Stage 2	-	-	-	-	649	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1236	-	-	-	280	718
Stage 1	-	-	-	-	734	-
Stage 2	-	-	-	-	520	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1236	-	-	-	280	718
Mov Cap-2 Maneuver	-	-	-	-	280	-
Stage 1	-	-	-	-	734	-
Stage 2	-	-	-	-	520	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	16.1
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1236	-	-	-	330
HCM Lane V/C Ratio	-	-	-	-	0.013
HCM Control Delay (s)	0	-	-	-	16.1
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	366	462	3	3	1
Future Vol, veh/h	1	366	462	3	3	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	84	85	92	92	92
Heavy Vehicles, %	2	3	7	2	2	2
Mvmt Flow	1	436	544	3	3	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	547	0	-	0	984	546
Stage 1	-	-	-	-	546	-
Stage 2	-	-	-	-	438	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1022	-	-	-	275	538
Stage 1	-	-	-	-	580	-
Stage 2	-	-	-	-	651	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1022	-	-	-	275	538
Mov Cap-2 Maneuver	-	-	-	-	275	-
Stage 1	-	-	-	-	579	-
Stage 2	-	-	-	-	651	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	16.7
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1022	-	-	-	313
HCM Lane V/C Ratio	0.001	-	-	-	0.014
HCM Control Delay (s)	8.5	0	-	-	16.7
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	364	418	3	3	1
Future Vol, veh/h	1	364	418	3	3	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	81	86	92	92	92
Heavy Vehicles, %	2	1	1	2	2	2
Mvmt Flow	1	449	486	3	3	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	489	0	-	0	939	488
Stage 1	-	-	-	-	488	-
Stage 2	-	-	-	-	451	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1074	-	-	-	293	580
Stage 1	-	-	-	-	617	-
Stage 2	-	-	-	-	642	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1074	-	-	-	293	580
Mov Cap-2 Maneuver	-	-	-	-	293	-
Stage 1	-	-	-	-	616	-
Stage 2	-	-	-	-	642	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	15.9
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1074	-	-	-	334
HCM Lane V/C Ratio	0.001	-	-	-	0.013
HCM Control Delay (s)	8.4	0	-	-	15.9
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0