

MEMORANDUM

TO: Joseph Falzone
Harbor Street Limited Partnership
7B Emery Lane
Stratham, NH 03885

FROM: Mr. Jeffrey S. Dirk, P.E.*, PTOE, FITE
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**Professional Engineer in CT, MA, ME, NH, RI and VA*

DATE: November 14, 2023

RE: 9845

SUBJECT: Traffic Impact Study
Proposed Residential Development – Raymond Road (Route 156)
Nottingham, 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 a residential development to be located off Raymond Road (NH Route 156) in Raymond, New Hampshire (hereafter referred to as the “Project”). This study has been completed in accordance with the New Hampshire Department of Transportation (NHDOT) guidelines for the preparation of TISs as defined in the Driveway Permit Policy, 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 198 vehicle trips on an average weekday (two-way, 24-hour volume), with approximately 15 vehicle trips expected during the weekday morning peak-hour and 19 vehicle trips expected during the weekday evening peak-hour, or one (1) added vehicle every 3 to 4 minutes during the peak hours;
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 all movements at the NH Route 156/Ham Road/Harriman Hill Road intersection shown to continue to operate at a level-of-service (LOS) C or better, where an LOS of “D” or better is generally defined as “acceptable” conditions;

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



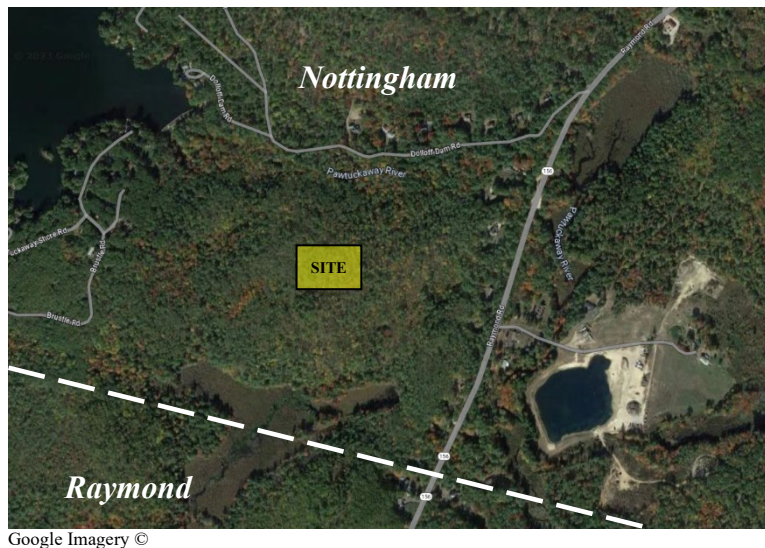
3. All movements exiting the Project site driveway to NH Route 156 are predicted to operate at LOS B or better with negligible vehicle queuing predicted, with all movements along NH Route 156 approaching the driveway shown to operate at LOS A, also with negligible vehicle queuing; and
4. Lines of sight at the intersection of NH Route 156 at the Project site driveway were found to exceed or can be made to exceed the recommended minimum distances for the intersection to operate in a safe and efficient 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

The Project will entail the construction of a residential development to be located off Raymond Road (NH Route 156) in Nottingham, New Hampshire, that will include 17 single-family homes. The Project site encompasses approximately 93.2± acres of land that is bounded by the Pawtuckaway River to the north; wetlands and areas of open and wooded space to the south; NH Route 156 and residential properties to the east; and areas of open and wooded space to the west. The Project site currently contains wetlands and areas of open and wooded space.



Access to the Project site will be provided by way of a driveway that will intersect the west side of NH Route 156 at the location of the existing driveway that serves 209 and 215 Raymond Road. On-site parking will be provided for a minimum of two (2) vehicles per home.



STUDY METHODOLOGY

This study was prepared in consultation with NHDOT and the Towns of Nottingham and Raymond; was performed in accordance with the NHDOT guidelines for the preparation of TISs as defined in the Driveway Permit Policy 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 September and October 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 NH Route 156 and the intersection of NH Route 156 at Ham Road and Harriman Hill Road.

The following describes the study area roadway and intersection.

Roadway

Raymond Road (NH Route 156)

- Two-lane, Tier 3, Class II local roadway under NHDOT District 6 jurisdiction;
- Traverses the study area in a general northeast-southwest direction;
- In the vicinity of the Project site provides two 11- to 12-foot-wide travel lanes separated by a broken-yellow centerline that permits passing in the northbound direction with 1 to 4-foot-wide marked shoulders provided;
- Sidewalks are not provided within the study area;
- Illumination is provided intermittently by way of streetlights mounted on wood poles;
- The posted speed limit in the vicinity of the Project site is 40 miles per hour (mph);



- Land use within the study area consists of the Project site, residential and light industrial properties, and areas of open and wooded space.

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 September 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. 156/ Ham Rd./ Harriman Hill Rd.	S	1 general-purpose travel lane provided on all approaches; the Ham Road approach includes a separate roadway that is off-set to the east from the intersection that accommodates left-turn movements from NH Rte. 156 southbound and right-turn movements from Ham Rd. to NH Route 156 northbound	Yes; 1 to 3 feet on NH Rte. 156	No	No

^aS = 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 October 2023. The ATR counts were conducted on NH Route 156 in the vicinity of the Project site on October 3rd through 4th, 2023 (Tuesday through Wednesday, inclusive), in order to record weekday traffic conditions over an extended period, with weekday morning (7:00 to 9:00 AM) and evening (3:00 to 6:00 PM) peak-period TMCs performed at the study area intersection on October 3, 2023 (Tuesday). These time periods were selected for analysis purposes as they are representative of the peak-traffic-volume hours for both the Project and the adjacent roadway network.

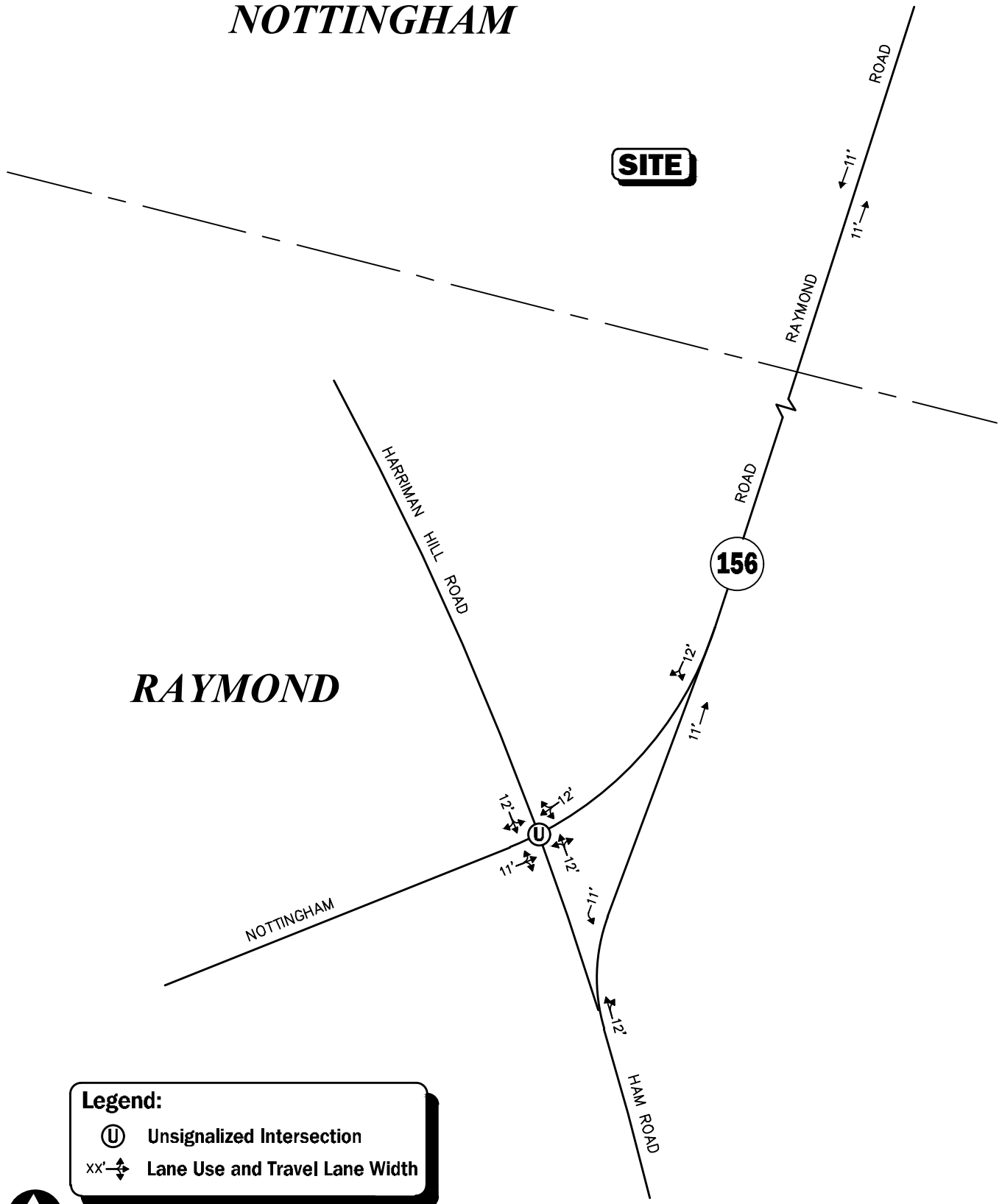
Traffic Volume Adjustments

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 Continuous Count Station No. 02071090, which is located on NH Route 101 at the Raymond town line in Candia. Based on a review of this data, the October traffic volumes were adjusted upward by 14.0 percent in order to be representative of peak-month (August) conditions in accordance with NHDOT standards.

In order to account for the impact on the traffic volume and trip patterns resulting from the COVID-19 pandemic, traffic-volume data collected at NHDOT Continuous Count Station 02071090 was reviewed. At the time of the publication of this assessment, traffic volume data was not available for the subject count station for the full month of October 2023. As such, a comparison between the traffic volumes recorded at



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Legend:

- ⓪ Unsignalized Intersection
- xx' ↔ Lane Use and Travel Lane Width



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Figure 1

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



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the count station in September 2019 and in September 2023 was completed. Based on this pre- and post-COVID-19 comparison, it was determined that the September 2023 traffic volumes are below the conditions that existed prior to the COVID-19 pandemic. As such, the following pandemic-related adjustments were applied to the seasonally adjusted October 2023 traffic volumes:

- *Average Weekday*: +3.2%
- *Weekday Morning Peak-Hour*: +11.9%
- *Weekday Evening Peak-Hour*: +4.5%

The 2023 Existing peak-month peak-hour traffic volumes are summarized in Table 2, with the weekday morning and evening peak-month peak-hour traffic volumes graphically depicted on Figures 2 and 3, respectively. Note that the peak-hour traffic volumes that are presented in Table 2 were obtained from the aforementioned figure.

Table 2
2023 EXISTING TRAFFIC VOLUMES

Location/Peak Hour	AWT ^a	VPH ^b	K Factor ^c	Directional Distribution ^d
<i>NH Route 156, near the Project Site:</i>				
Weekday Morning (7:00 – 8:00 AM)	3,750	--	--	--
Weekday Evening (3:15 – 4:15 PM)	--	335	8.9	67.8% SB
	--	408	10.9	56.1% NB

^aAverage weekday traffic in vehicles per day.

^bVehicles per hour.

^cPercent of daily traffic occurring during the peak hour.

^dPercent traveling in peak direction.

NB = northbound; SB = southbound.

As can be seen in Table 2, NH Route 156 in the vicinity of the Project site was found to accommodate approximately 3,750 vehicles on an average weekday (two-way, 24-hour volume), with approximately 335 vehicles per hour (vph) during the weekday morning peak-hour and 408 vph during the weekday evening peak-hour.

Pedestrian and Bicycle Facilities

As detailed on Figure 1, Pedestrian accommodations (sidewalks and crosswalks) and formal bicycle facilities are not provided within the study area; however, NH Route 156 appears to provide sufficient width (combined travel lane and shoulder) to support bicycle travel in a shared traveled-way configuration (i.e., bicyclists and motor vehicles sharing the traveled-way).²

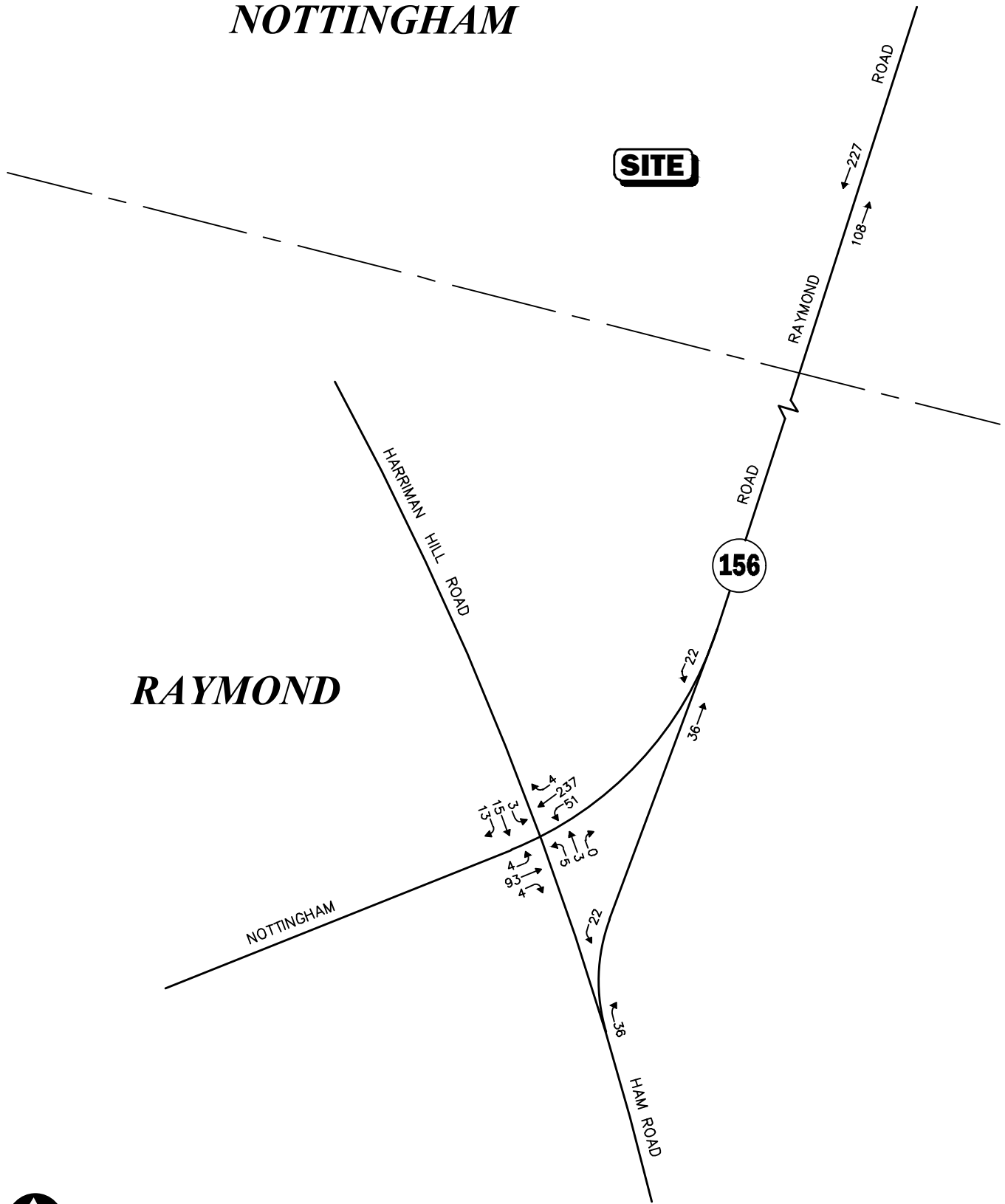
Spot Speed Measurements

Vehicle travel speed measurements were performed on NH Route 156 in the vicinity of the Project site in conjunction with the ATR counts, the results of which are summarized in Table 3.

²A minimum combined travel lane and paved shoulder width of 14 feet is required to support bicycle travel in a shared traveled-way condition.



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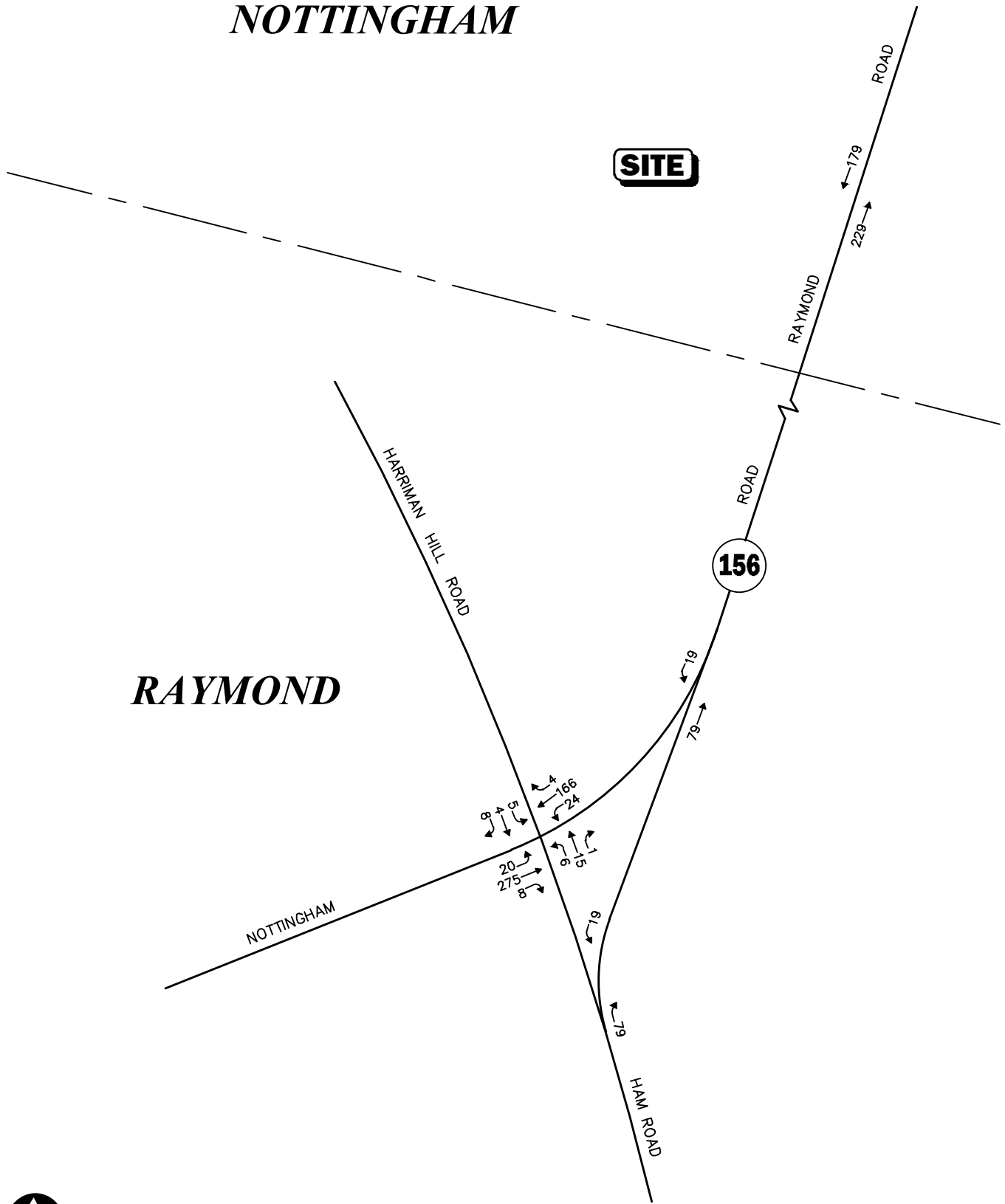


Figure 2

2023 Existing
Weekday Morning
Peak-Hour Traffic Volumes

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Figure 3



2023 Existing Weekday Evening Peak-Hour Traffic Volumes

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Table 3
VEHICLE TRAVEL SPEED MEASUREMENTS

	NH Route 156	
	Northbound	Southbound
Mean Travel Speed (mph)	38	42
85 th Percentile Speed (mph)	43	47
Posted Speed Limit (mph)	40	40

mph = miles per hour.

As can be seen in Table 3, the mean vehicle travel speed along NH Route 156 in the vicinity of the Project site was found to be 38 mph in the northbound direction and 42 mph southbound. 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 43 mph in the northbound direction and 47 mph southbound, which is three (3) to seven (7) mph above the posted speed limit (40 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.

Public Transportation Services

Public transportation services are not currently provided within the towns of Nottingham or Raymond.

Motor Vehicle Crash Data

Motor vehicle crash data for the NH Route 156/Ham Road/Harriman Hill Road intersection was provided by the Raymond Police Department for the period of January 1, 2018, through November 8, 2023, in order to examine motor vehicle crash trends occurring within the study area. The data is summarized in Table 4.

Table 4
MOTOR VEHICLE CRASH DATA SUMMARY^a

Intersection	Total No. of Crashes	Average
<i>NH Route 156 at Ham Road:</i>	10	1.7
<i>NH Route 156 at Hariman Hill Road:</i>	3	0.5
<i>Overall:</i>	13	2.2

^aSource: Raymond Police Department, January 1, 2018 through November 8, 2023.

As can be seen in Table 4, the NH Route 156/Ham Road/Harriman Hill Road intersection was reported to have experienced an average of 2.2 reported motor vehicle crashes per year during the reported period, with the majority of the reported crashes involving vehicles entering or exiting Ham Road.

Motor vehicle crash data for NH Route 156 in the vicinity of the Project site driveway has been requested from the Nottingham Police Department and 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 reflect 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

Both the Town of Nottingham Planning Board and the Town of Raymond Department of Community Development and Planning were 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 these consultations, the following developments were identified for review in conjunction with this assessment:

- ***Proposed Warehouse Building, Industrial Drive, Raymond, New Hampshire.*** This project entails the construction of a 550,025± sf warehouse building to be located off of Industrial Drive to the southwest of the Project site. Traffic volumes associated with this project were obtained from the traffic study prepared for the development.³
- ***Proposed Warehouse Development, Old Manchester Road and Scribner Road, Raymond, New Hampshire.*** This project entails the construction of two warehouse buildings totaling 300,000± sf to be located in the southwest quadrant of the Old Manchester/Scribner Road intersection to the southwest of the Project site. Traffic volumes associated with this project were estimated using trip-generation statistics published by the ITE.⁴
- ***Proposed Mega-X Fueling Facility, Old Manchester Road, Raymond, New Hampshire.*** This project entails the construction of a 6,500± sf convenience store (containing a 1,200± sf coffee shop

³Response to Planning Board Comments; Proposed Warehouse/Distribution Facility, Raymond, New Hampshire; VAI; March 24, 2023.

⁴Institute of Transportation Engineers, op. cit. 1.



with a drive-through window) with accompanying 18-pump vehicle fueling facility to be located within the southwest quadrant of Old Manchester Road/Scribner Road intersection to the southwest of the Project site. Traffic volumes associated with this project were obtained from the traffic study prepared for the development.⁵

- ***Proposed Multifamily Residential Development, 65 and 101 Batchelder Road, Raymond, New Hampshire.*** This project entails the construction of 300± single-family homes to be located between Batchelder Road, Mark Lane and Wendover Lane to the south of the Project site. Traffic volumes associated with this project were obtained from the traffic study prepared for the development.⁶
- ***White Rock Place Multifamily Residential Development, 109 Main Street, Raymond, New Hampshire.*** This project entails the construction of a 156-unit multifamily residential development to be located at 109 Main Street to the southwest of the Project site. Traffic volumes associated with this project were obtained from the traffic study prepared for the development.⁷
- ***Proposed Commercial Development, Silver Fox Lane, Raymond, New Hampshire.*** This project entails the construction of a commercial development to be located off of Silver Fox Lane to the south of the Project site, which includes a Starbucks restaurant, Domino's restaurant, self-storage facility, medical office space and general retail space. Traffic volumes associated with this project were obtained from the traffic study prepared for the development.⁸
- ***Proposed Residential Development, Mooers Road, Nottingham, New Hampshire.*** This project entails the construction of a 7-unit residential subdivision to be located off Mooers Road to the west of the Project site. Traffic volumes associated with this project were estimated using trip-generation statistics published by the ITE⁹ and were applied to the future condition traffic volumes.

With the exception of the proposed residential development off Mooers Road, the traffic volumes associated with the aforementioned projects within the study area of this assessment are expected to be relatively minor and would be reflected in the general background traffic growth rate (discussion follows). 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.

General Background Traffic Growth

Traffic-volume data compiled by NHDOT from permanent count stations located in both Nottingham and Raymond 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 0.67 percent. As such and in order to provide a prudent planning condition, 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.

⁵*Traffic Impact and Access Study*; Proposed MEGA-X Convenience Store (With Gas); Old Manchester Road; Raymond, New Hampshire; Tetra Tech; August 28, 2019.

⁶*Traffic Impact Study*; Proposed Multifamily Residential Development; 65 and 101 Batchelder Road; Raymond, New Hampshire; VAI; August 23, 2023.

⁷*Updated Traffic Impact Study*; White Rock Place Multifamily Residential Development; 109 Main Street; Raymond, New Hampshire; VAI; May 3, 2023, Updated August 17, 2023.

⁸*Traffic Impact and Access Study*; Proposed Commercial Subdivision, Essex Commons, Raymond, New Hampshire; Stephen G. Pernaw & Company, Inc.; November 11, 2021.

⁹Institute of Transportation Engineers, op. cit. 1.



Roadway Improvement Projects

The towns of Nottingham and Raymond were contacted, and the NHDOT Project Information Center was reviewed, in order to determine if there were any planned roadway improvement projects expected to be completed within the study area. Based on this review, 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 (Mooers Road residential development). The resulting 2024 No-Build peak-month peak-hour traffic volumes are shown on Figures 4 and 5, with the corresponding 2034 No-Build peak-month peak-hour traffic volumes shown on Figures 6 and 7.

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.

As proposed, the Project will entail the construction of 17 single-family homes. In order to develop the traffic characteristics of the Project, trip-generation statistics published by the ITE¹⁰ for a similar land use as that proposed were used. ITE Land Use Code (LUC) 210, *Single-Family Detached Housing*, was used to develop the traffic characteristics of the Project, the results of which are summarized in Table 5.

Table 5
TRIP-GENERATION SUMMARY

Time Period	Vehicle Trips ^a		
	Entering	Exiting	Total
<i>Average Weekday:</i>	99	99	198
<i>Weekday Morning Peak-Hour:</i>	4	11	15
<i>Weekday Evening Peak-Hour:</i>	12	7	19

^aBased on ITE LUC 210, *Single-Family Detached Housing* (17 units).

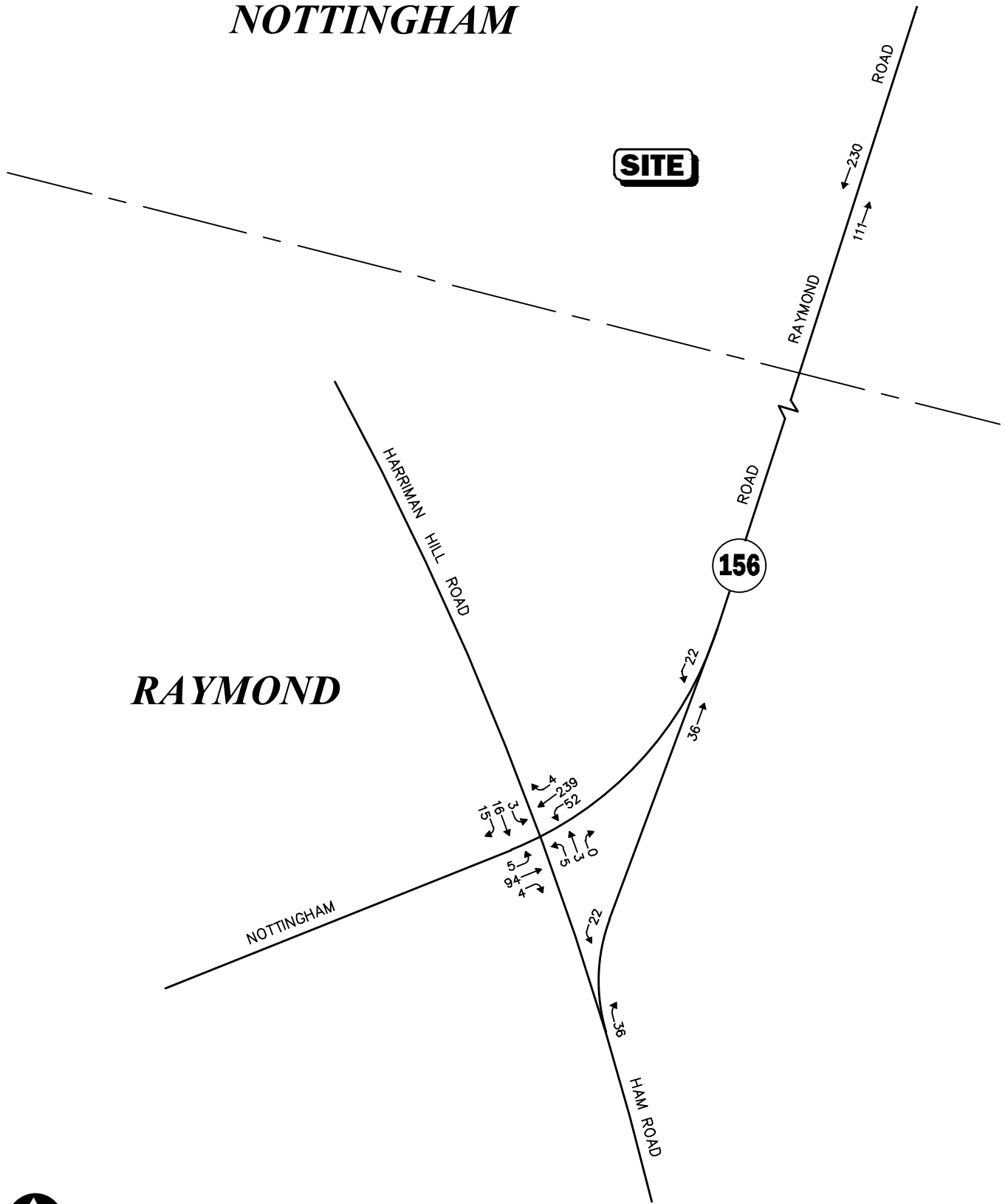
Project-Generated Traffic-Volume Summary

As can be seen in Table 5, using the aforementioned methodology, the Project is expected to generate approximately 198 vehicle trips on an average weekday (two-way, 24-hour volume, or 99 vehicles entering and 99 exiting), with approximately 15 vehicle trips (4 vehicles entering and 11 exiting) expected during the weekday morning peak-hour and 19 vehicle trips (12 vehicles entering and 7 exiting) expected during the weekday evening peak-hour.

¹⁰Institute of Transportation Engineers, op. cit. 1



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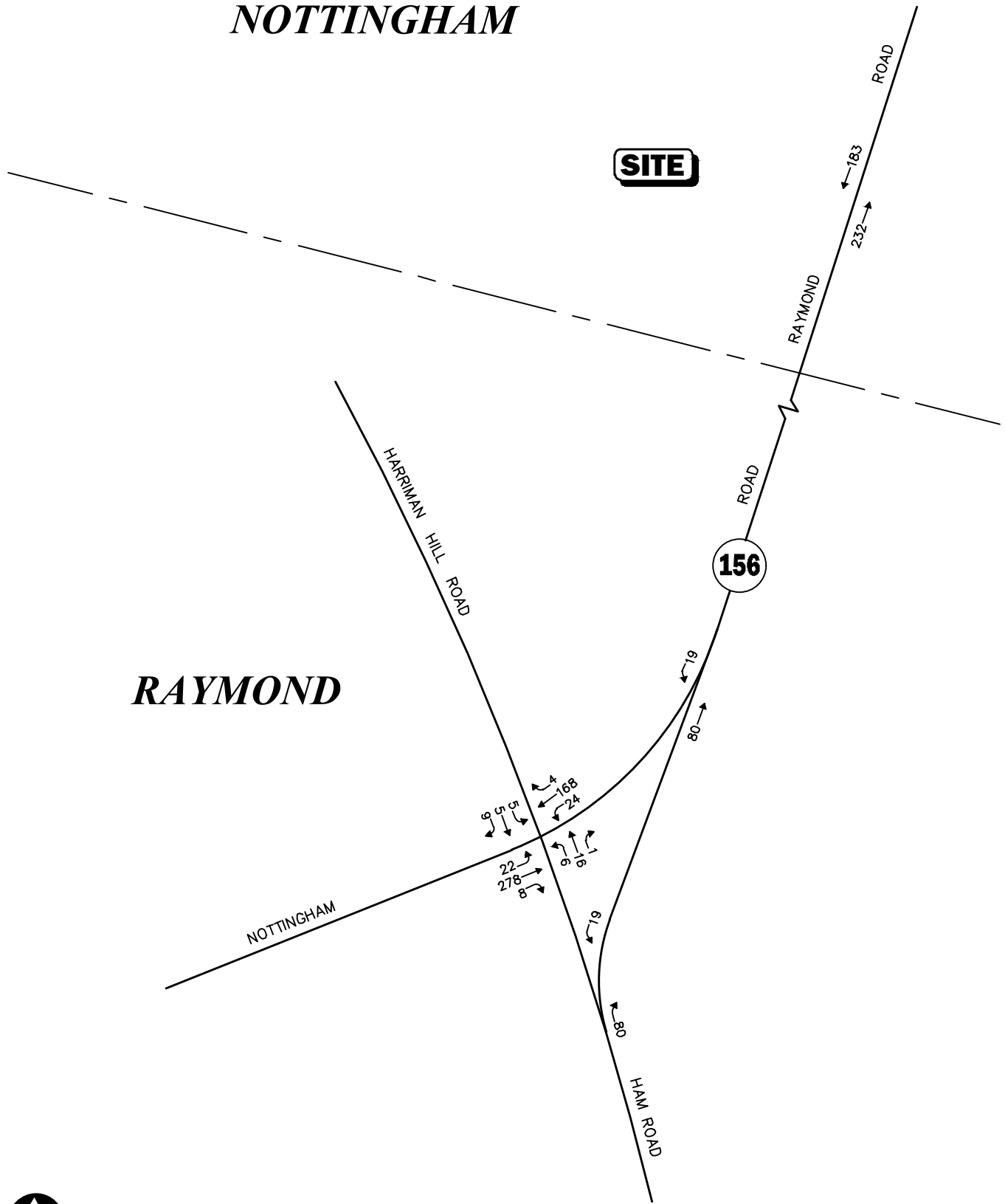


Figure 4

**2024 No-Build
Weekday Morning
Peak-Hour Traffic Volumes**

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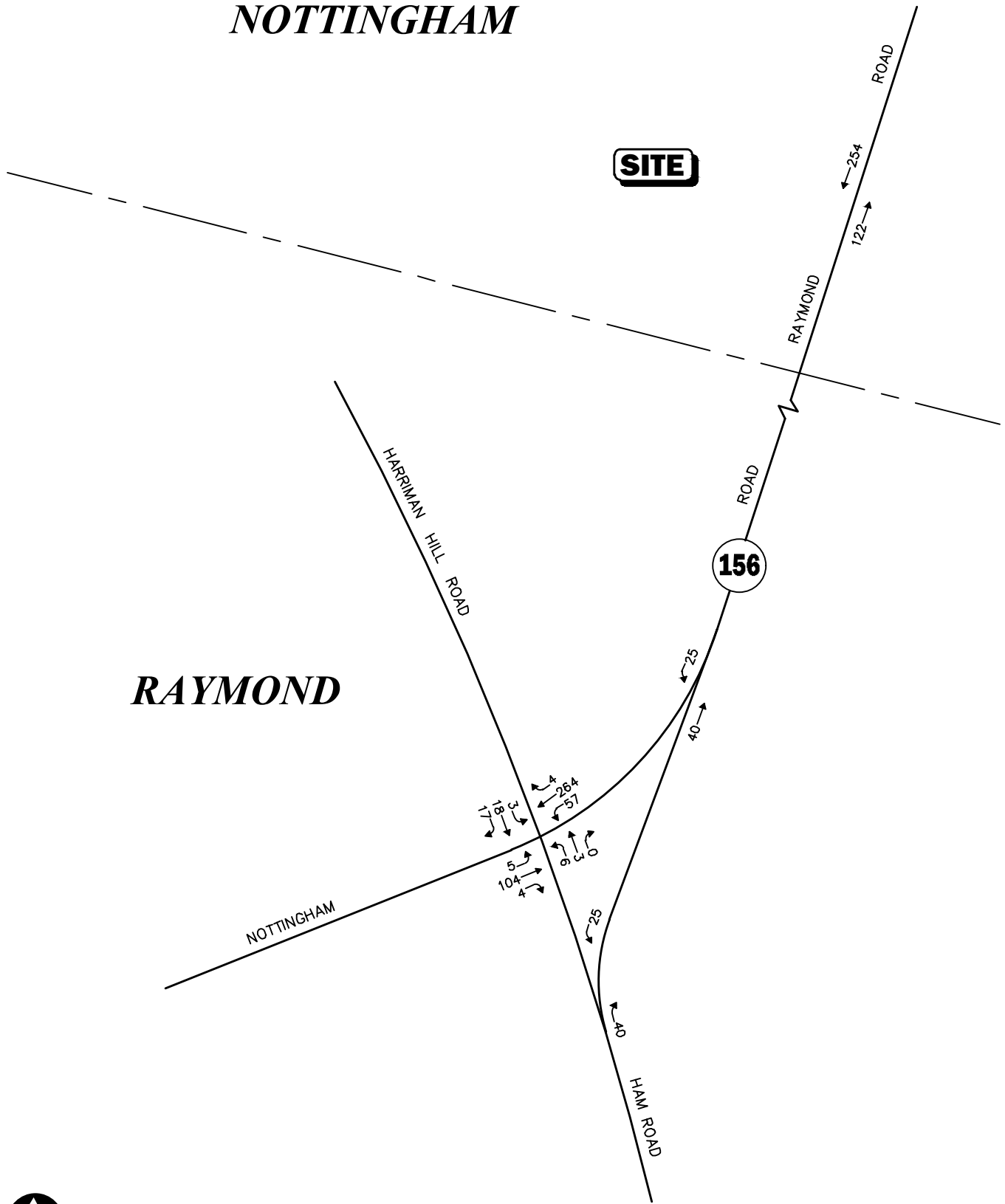
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Figure 5

2024 No-Build
Weekday Evening
Peak-Hour Traffic Volumes

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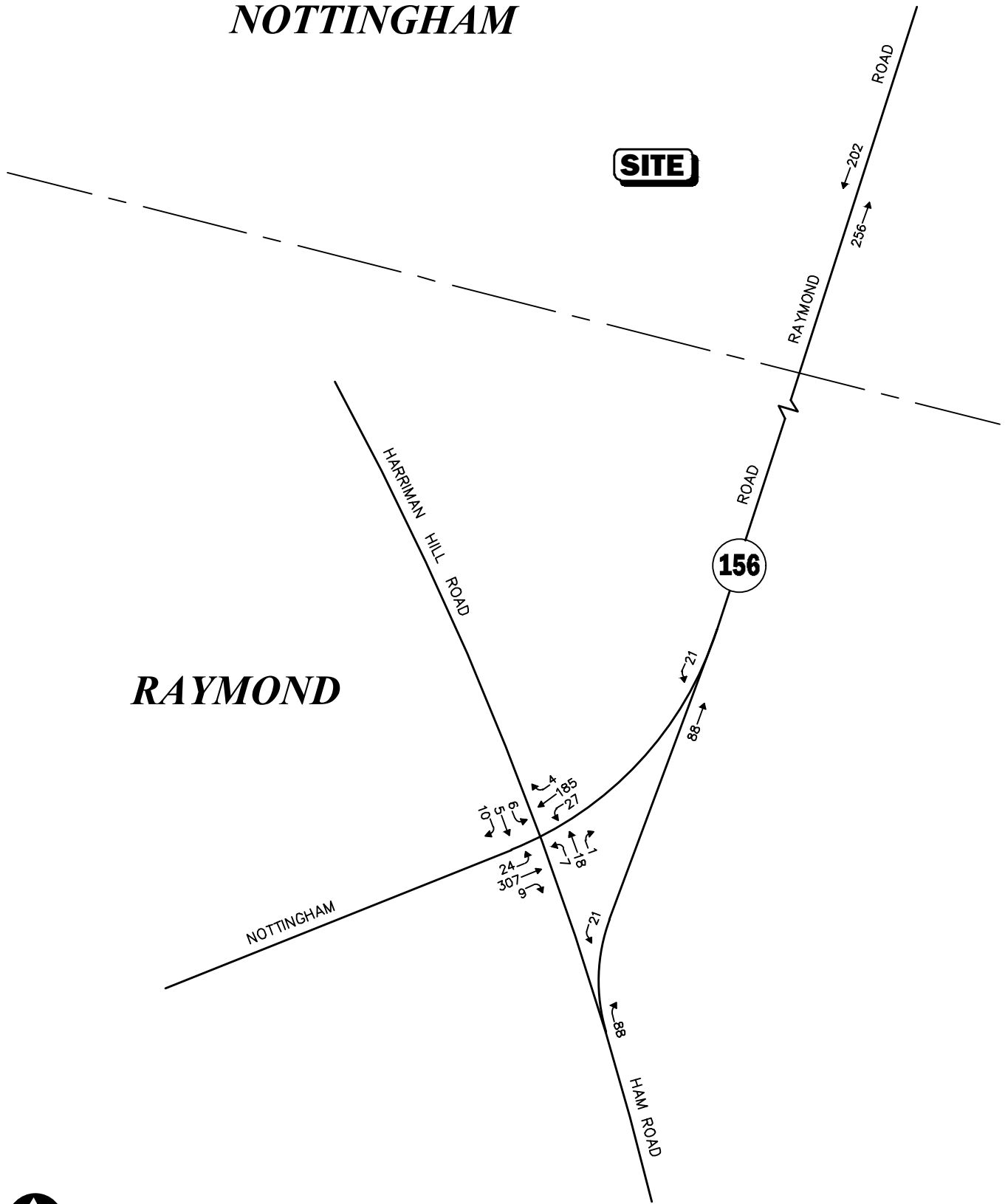
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Figure 6

2034 No-Build
Weekday Morning
Peak-Hour Traffic Volumes

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RAYMOND

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Figure 7

2034 No-Build
Weekday Evening
Peak-Hour Traffic Volumes

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 Nottingham 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 8, with the additional traffic expected to be generated by the Project assigned onto the study area roadway network as shown on Figures 9 and 10.

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 peak-month peak-hour traffic volumes are graphically depicted on Figures 11 and 12 for the weekday morning and evening peak hours, respectively, with the corresponding 2034 Build condition peak-month peak-hour traffic volumes depicted on Figures 13 and 14.

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 Edition¹¹ for unsignalized intersections was used to complete the level-of-service and vehicle queue analyses.

Analysis Results

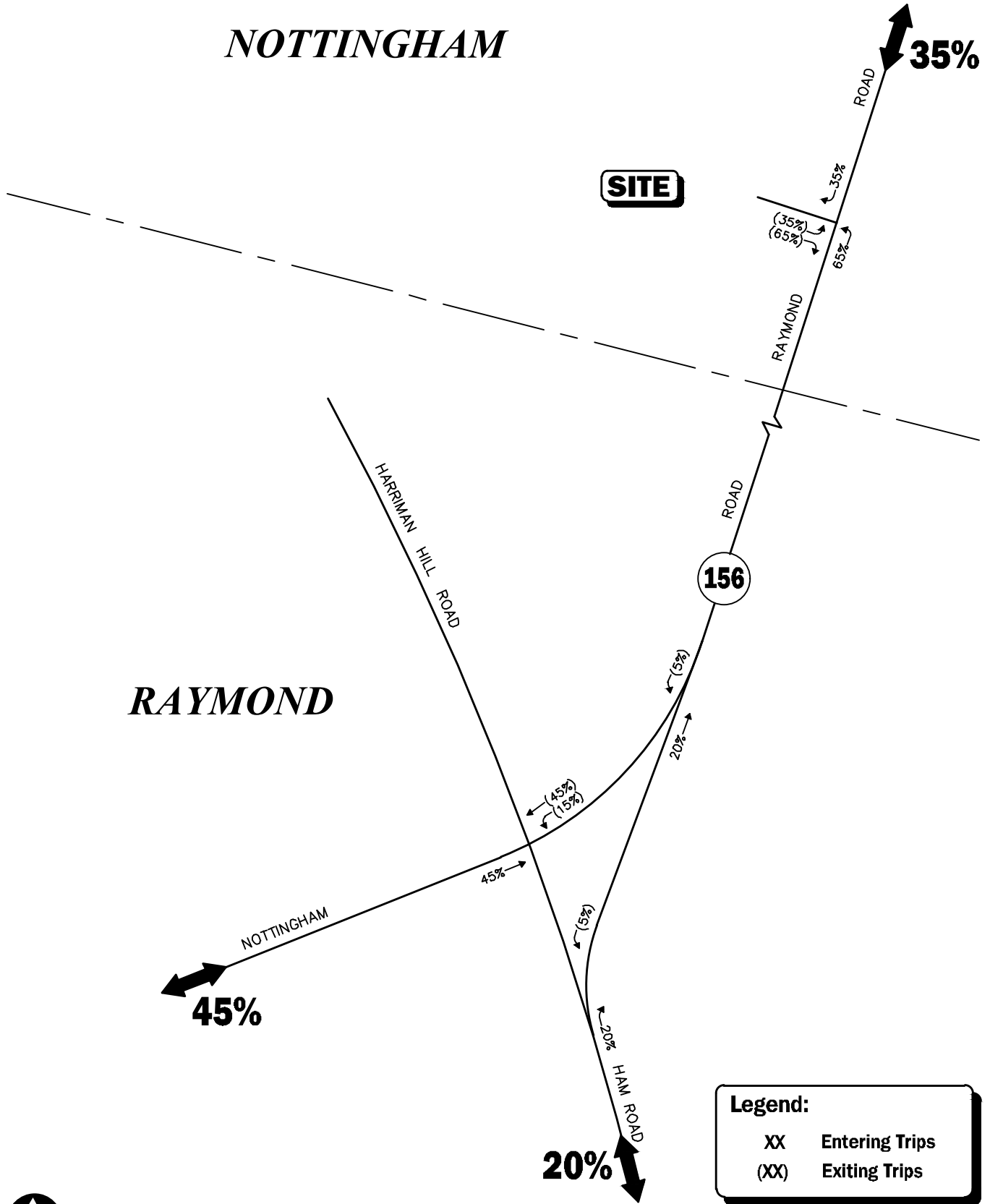
Level-of-service and vehicle queue analyses were conducted for 2023 Existing, 2024 and 2034 No-Build, and 2024 Opening-Year Build and 2034 Build conditions for the intersections within the study area. The results of the intersection capacity and vehicle queue analyses are summarized in Table 6, with the detailed analysis results presented in the Appendix. For the purpose of this analysis, the NH Route 156/Ham Road/Harriman Hill Road intersection was analyzed as three separate intersections.

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.

¹¹*Highway Capacity Manual*; Transportation Research Board; Washington, DC; 2016.



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Legend:

- XX Entering Trips
- (XX) Exiting Trips

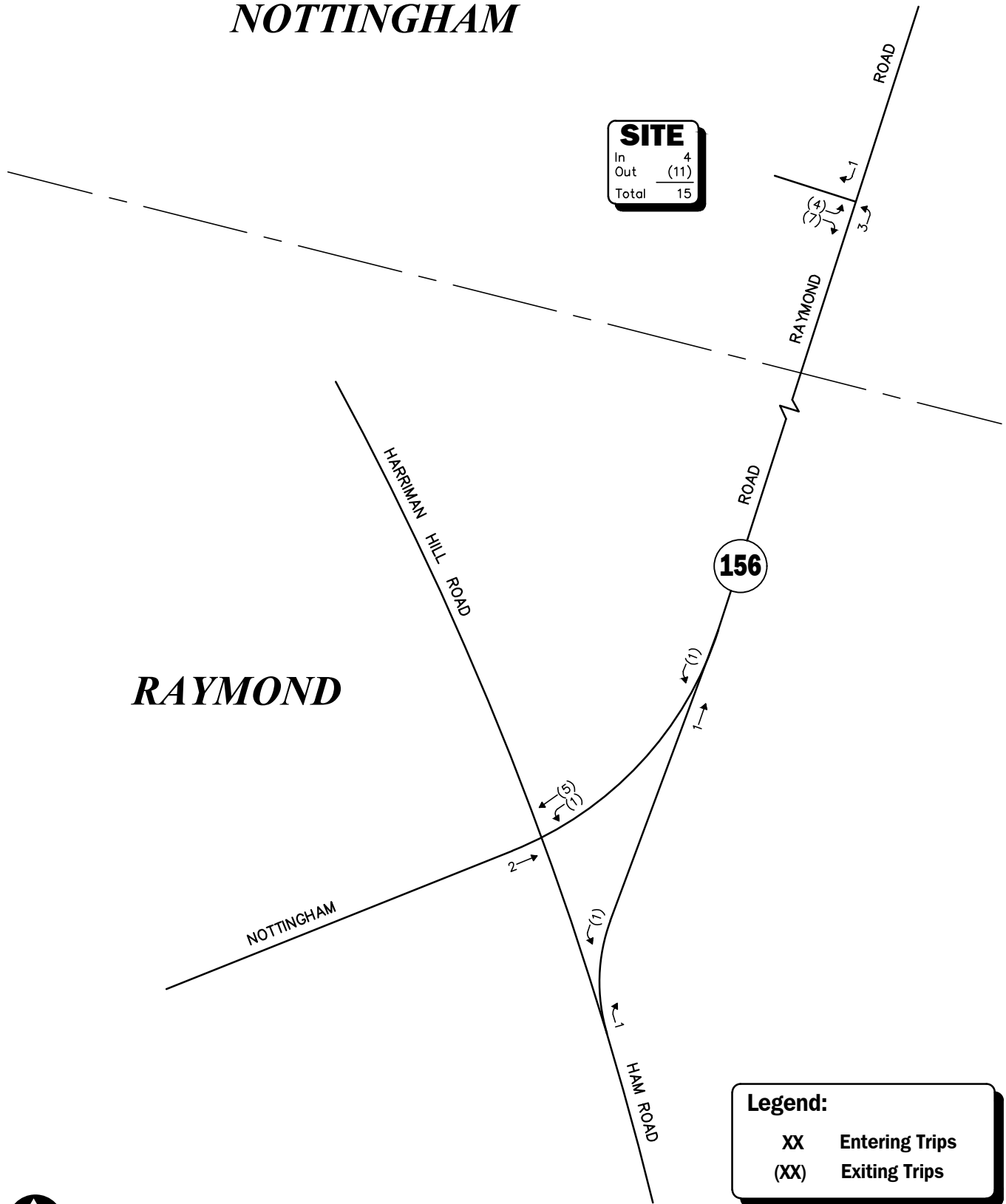
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Figure 8
Trip Distribution Map



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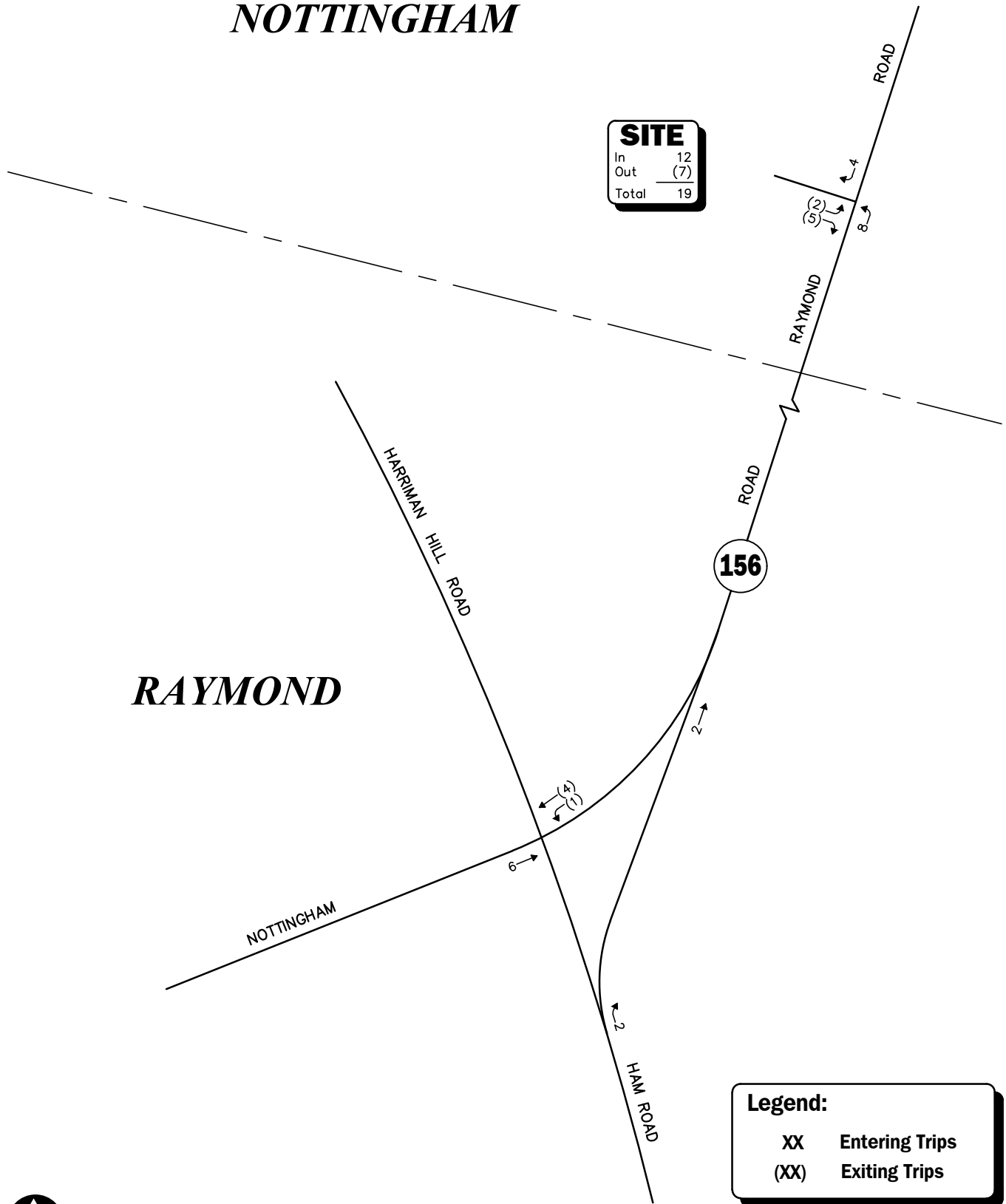
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Figure 9



Project-Generated
Weekday Morning
Peak-Hour Traffic Volumes

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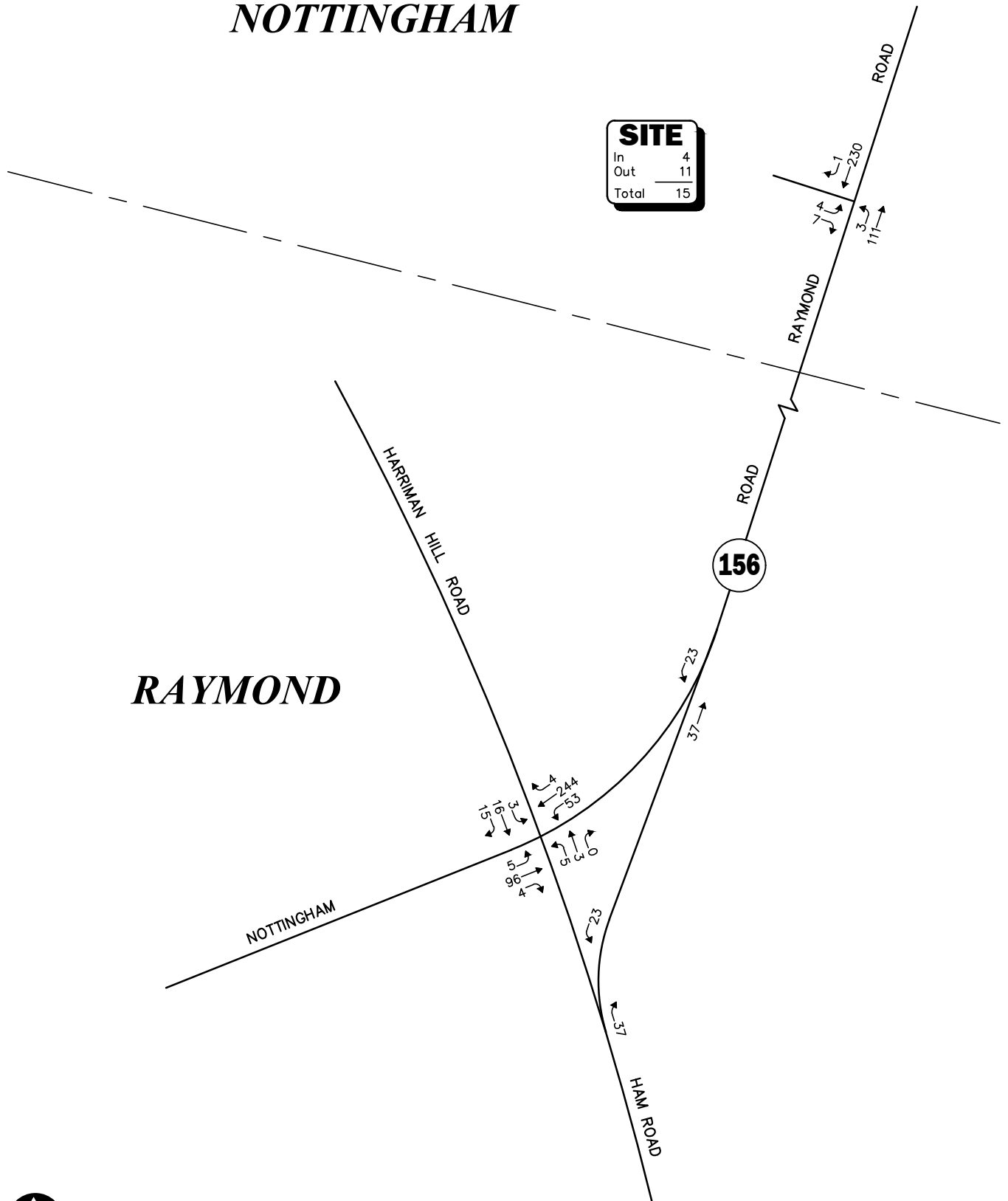
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Figure 10



Project-Generated
Weekday Evening
Peak-Hour Traffic Volumes

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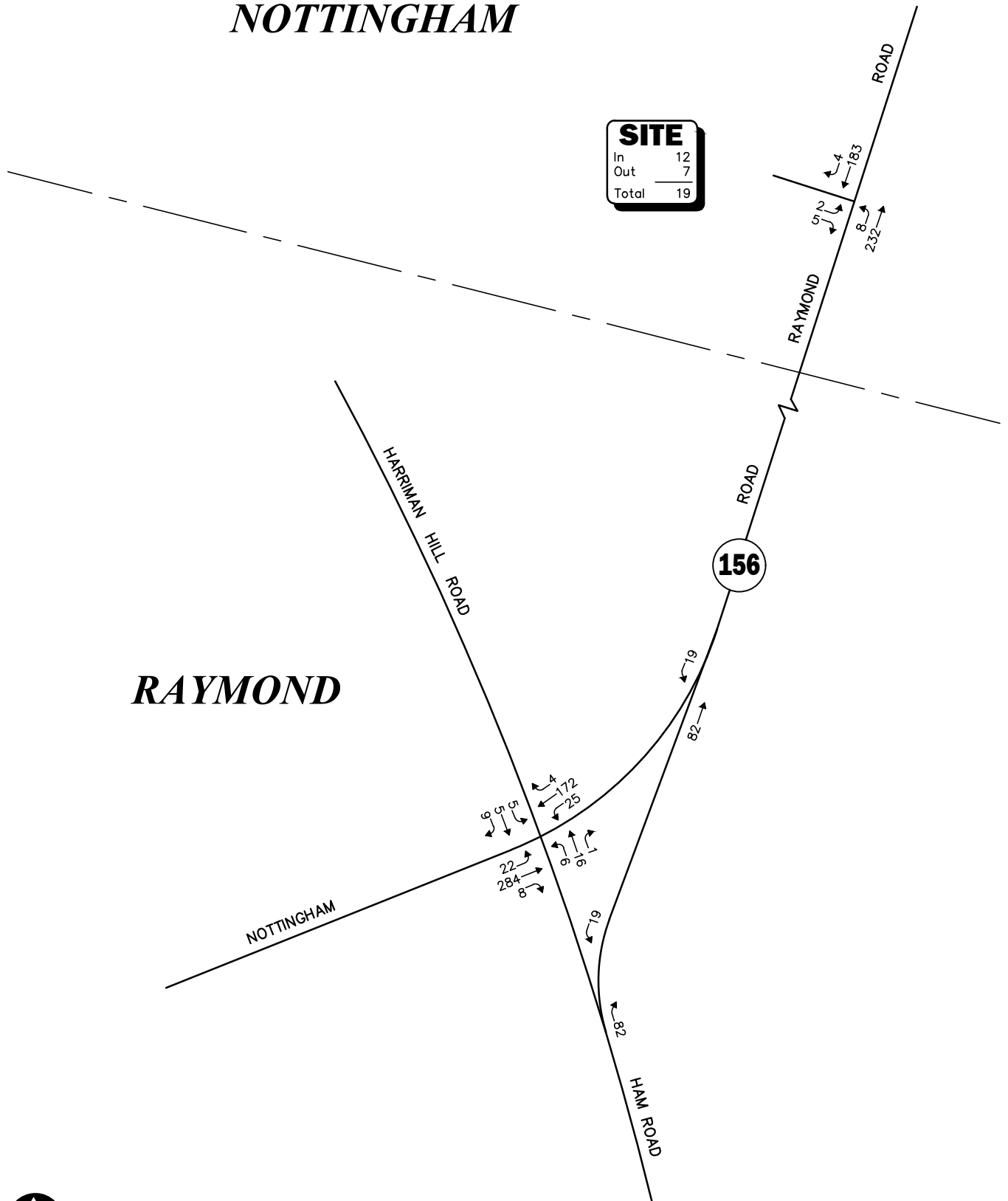
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Figure 11



**2024 Build
Weekday Morning
Peak-Hour Traffic Volumes**

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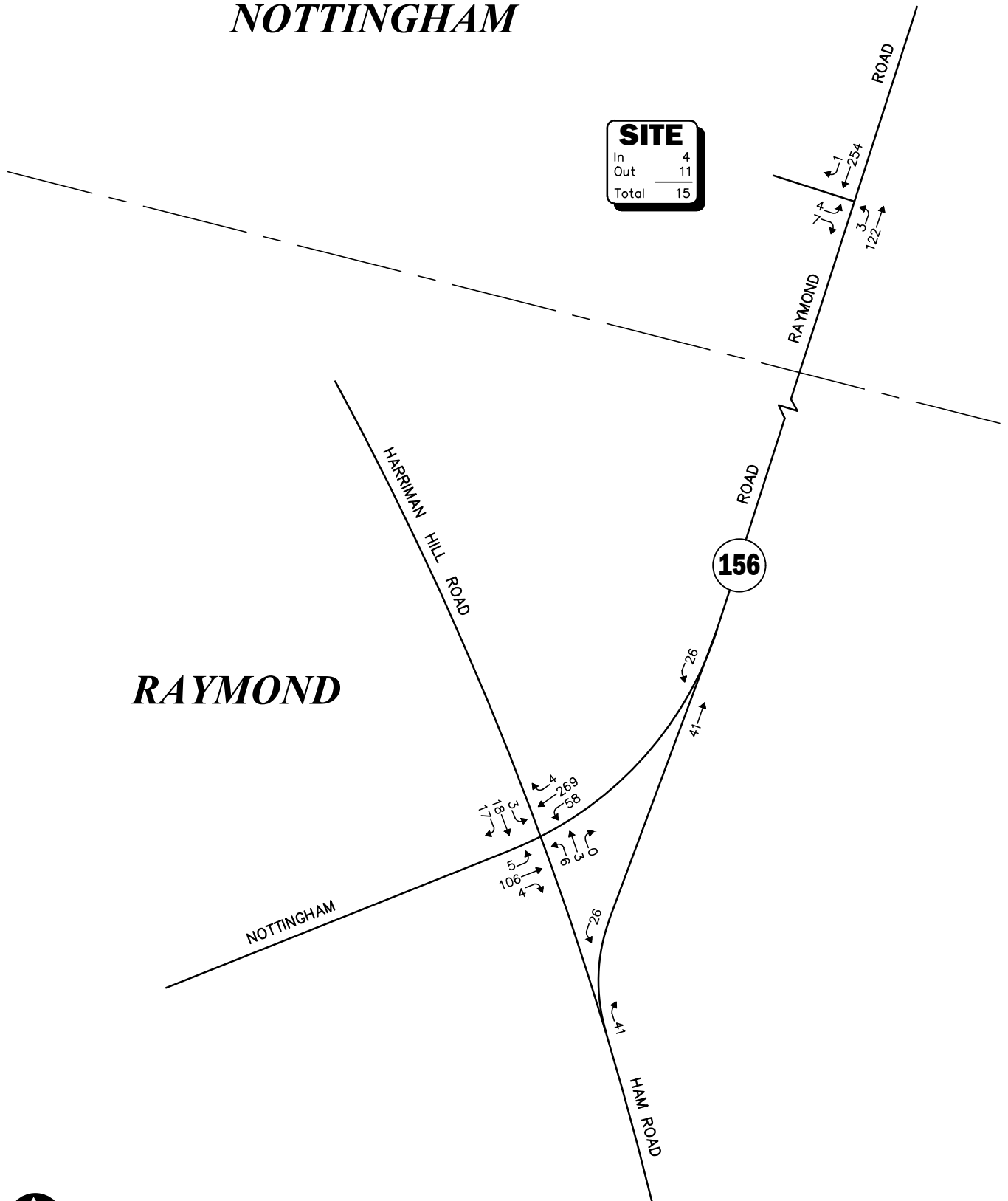
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Figure 12



**2024 Build
Weekday Evening
Peak-Hour Traffic Volumes**

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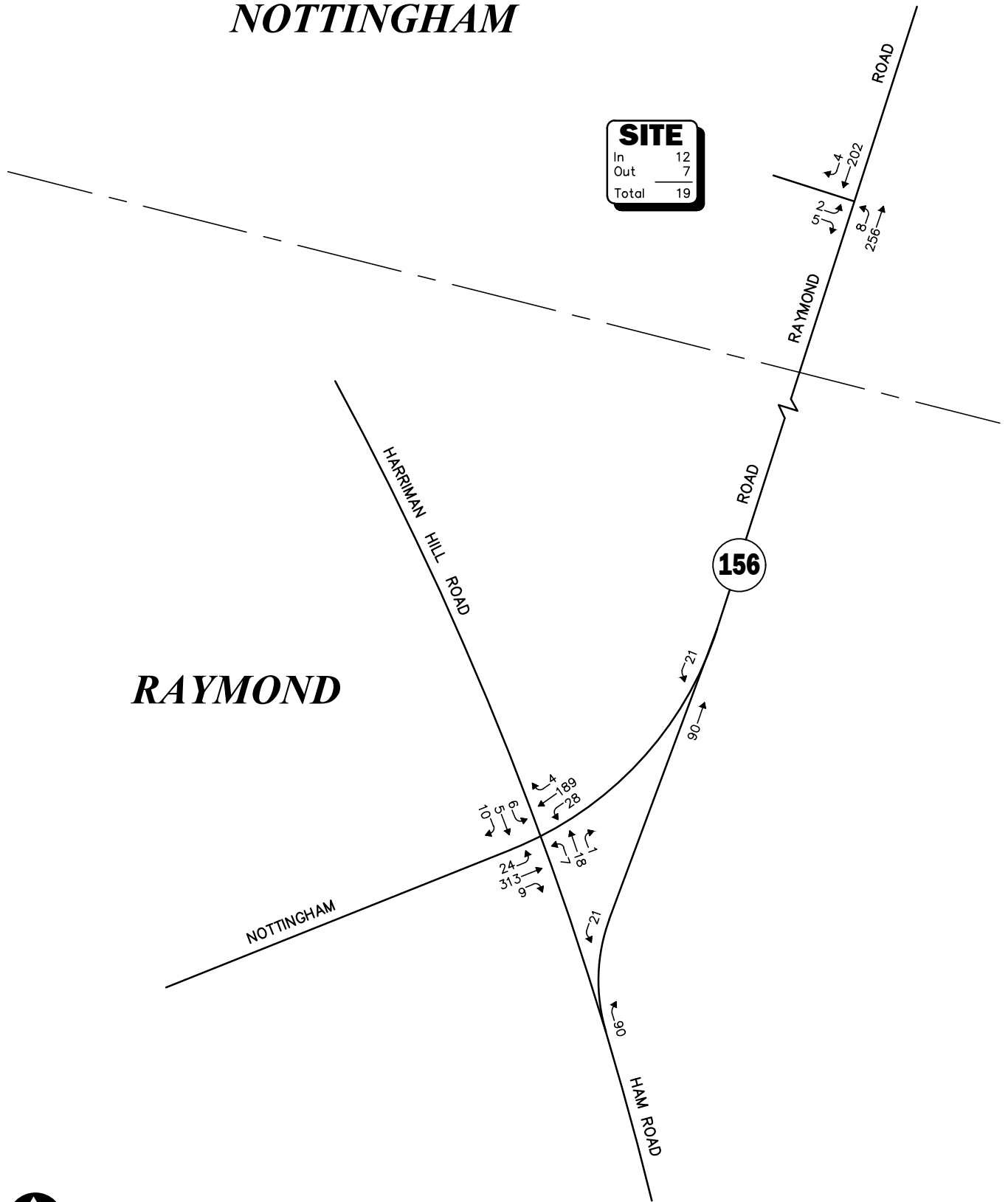
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Figure 13



**2034 Build
Weekday Morning
Peak-Hour Traffic Volumes**

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Figure 14



**2034 Build
 Weekday Evening
 Peak-Hour Traffic Volumes**

NH Route 156 at Ham Road and Harriman Hill Road

Under 2024 Opening-Year and 2034 Build peak-month conditions, no change in level of service or vehicle queuing is predicted to occur over 2024 or 2034 No-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 operate at LOS C or better with the addition of Project-related traffic under all analysis conditions.

NH Route 156 at Ham Road Connector

Under 2024 Opening-Year and 2034 Build peak-month conditions, no change in level of service or vehicle queuing is predicted to occur over 2024 or 2034 No-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 operate at LOS B or better with the addition of Project-related traffic under all analysis conditions.

Ham Road at Ham Road Connector

Under 2024 Opening-Year and 2034 Build peak-month conditions, no change in level of service or vehicle queuing is predicted to occur over 2024 or 2034 No-Build conditions, with all movements at the intersection continuing to operate at LOS A under all analysis conditions.

NH Route 156 at the Project Site Driveway

Under 2024 Opening-Year and 2034 Build peak-month conditions, all movements exiting the Project site are predicted to operate at LOS B during both the weekday morning and evening peak hours with negligible vehicle queuing. All movements along NH Route 156 approaching the driveway are predicted to operate at LOS A under all analysis conditions, also with negligible vehicle queuing predicted.



**Table 6
UNIGNALIZED 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 95 th	Demand	Delay	LOS	Queue 95 th	Demand	Delay	LOS	Queue 95 th	Demand	Delay	LOS	Queue 95 th	Demand	Delay	LOS	Queue 95 th
NH Route 156 at Ham Road and Harriman Hill Road																				
<i>Weekday Morning:</i>																				
NH Route 156 EB LT/TH/RT	101	0.3	A	0	103	0.4	A	0	105	0.4	A	0	113	0.3	A	0	115	0.3	A	0
NH Route 156 WB LT/TH/RT	292	1.3	A	0	295	1.3	A	0	301	1.3	A	0	325	1.3	A	0	331	1.3	A	0
Ham Road NB LT/TH/RT	8	13.5	B	0	8	13.7	B	0	8	13.9	B	0	9	14.7	B	0	9	14.9	B	0
Harriman Hill Road SB LT/TH/RT	31	12.2	B	1	34	12.3	B	1	34	12.4	B	1	38	12.9	B	1	38	13.0	B	1
<i>Weekday Evening:</i>																				
NH Route 156 EB LT/TH/RT	303	0.5	A	0	308	0.5	A	0	314	0.5	A	0	340	0.5	A	0	346	0.5	A	0
NH Route 156 WB LT/TH/RT	194	1.0	A	0	196	1.0	A	0	201	1.0	A	0	216	1.0	A	0	221	1.0	A	0
Ham Road NB LT/TH/RT	22	14.9	B	1	23	15.2	C	1	23	15.4	C	1	26	16.5	C	1	26	16.8	C	1
Harriman Hill Road SB LT/TH/RT	17	12.4	B	0	19	12.6	B	0	19	12.7	B	0	21	13.4	B	1	21	13.6	B	1
NH Route 156 at Ham Road Connector																				
<i>Weekday Morning:</i>																				
NH Route 156 EB TH	96	0.0	A	0	97	0.0	A	0	99	0.0	A	0	107	0.0	A	0	109	0.0	A	0
NH Route 156 WB LT/TH	314	0.5	A	0	317	0.5	A	0	324	0.5	A	0	350	0.5	A	0	357	0.5	A	0
Ham Road Connector NEB RT	36	9.1	A	0	36	9.1	A	0	37	9.1	A	0	40	9.2	A	0	41	9.2	A	0
<i>Weekday Evening:</i>																				
NH Route 156 EB TH	281	0.0	A	0	284	0.0	A	0	290	0.0	A	0	314	0.0	A	0	320	0.0	A	0
NH Route 156 WB LT/TH	213	0.7	A	0	215	0.7	A	0	220	0.7	A	0	237	0.7	A	0	242	0.7	A	0
Ham Road Connector NEB RT	79	10.8	B	1	80	10.9	B	1	82	11.0	B	1	88	11.3	B	1	90	11.4	B	1
Ham Road at the Ham Road Connector																				
<i>Weekday Morning:</i>																				
Ham Road NB TH/RT	44	0.0	A	0	44	0.0	A	0	45	0.0	A	0	49	0.0	A	0	50	0.0	A	0
Ham Road SB TH	70	0.0	A	0	72	0.0	A	0	73	0.0	A	0	79	0.0	A	0	80	0.0	A	0
Ham Road Connector SWB LT	22	9.2	A	0	22	9.2	A	0	23	9.2	A	0	25	9.3	A	0	26	9.3	A	0
<i>Weekday Evening:</i>																				
Ham Road NB TH/RT	101	0.0	A	0	103	0.0	A	0	105	0.0	A	0	114	0.0	A	0	116	0.0	A	0
Ham Road SB TH	36	0.0	A	0	37	0.0	A	0	38	0.0	A	0	41	0.0	A	0	42	0.0	A	0
Ham Road Connector SWB LT	19	9.3	A	0	19	9.3	A	0	19	9.3	A	0	21	9.4	A	0	21	9.4	A	0
NH Route 156 at the Project Site Driveway																				
<i>Weekday Morning:</i>																				
Project Site Driveway EB LT/RT	--	--	--	--	--	--	--	--	11	10.3	B	0	--	--	--	--	11	10.5	B	0
NH Route 156 NB LT/TH	--	--	--	--	--	--	--	--	114	0.2	A	0	--	--	--	--	125	0.2	A	0
NH Route 156 SB TH/RT	--	--	--	--	--	--	--	--	231	0.0	A	0	--	--	--	--	255	0.0	A	0
<i>Weekday Evening:</i>																				
Project Site Driveway EB LT/RT	--	--	--	--	--	--	--	--	7	10.4	B	0	--	--	--	--	7	10.7	B	0
NH Route 156 NB LT/TH	--	--	--	--	--	--	--	--	240	0.3	A	0	--	--	--	--	264	0.2	A	0
NH Route 156 SB TH/RT	--	--	--	--	--	--	--	--	187	0.0	A	0	--	--	--	--	206	0.0	A	0

^aDemand in vehicles per hour.

^bAverage control delay per vehicle (in seconds).

^cLevel of service.

^dQueue length in vehicles.

NB = northbound; SB = southbound; EB = eastbound; WB = westbound; NEB = northeastbound; SWB = southwestbound; 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 156 at the Project site driveway in accordance with American Association of State Highway and Transportation Officials (AASHTO)¹² 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 7 presents the measured SSD and ISD at the subject intersection.

Table 7
SIGHT DISTANCE MEASUREMENTS^a

Intersection/Sight Distance Measurement	Feet		
	Required Minimum (SSD)	Desirable (ISD) ^b	Measured
<i>NH Route 156 at the Project Site Driveway</i>			
<i>Stopping Sight Distance:</i>			
NH Route 156 approaching from the north	425	--	500+
NH Route 156 approaching from the south	360	--	500+
<i>Intersection Sight Distance:</i>			
Looking to the north from the Project site driveway	425	480	248/500+ ^c
Looking to the south from the Project site driveway	360	500	195/500+ ^c

^aRecommended 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 45 mph along NH Route 156 in the northbound direction and 50 mph in the southbound direction.

^bValues 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.

^cAvailable sight distance with the selective trimming/removal of trees and vegetation located within the sight triangle areas and regrading of the embankment area.

As can be seen in Table 7, with the selective trimming/removal of trees and vegetation located within the sight triangle areas of Project site driveway and the regrading of the embankment, the available lines of sight to and from the Project site driveway intersection with NH Route 156 will exceed the recommended minimum sight distances to function in a safe (SSD) and efficient (ISD) manner based on a 45 mph approach speed along NH Route 156 in the northbound direction and 50 mph in the southbound direction, which are above both the measured 85th percentile vehicle travel speeds (43/47 mph) and the posted speed limit (40 mph) in the vicinity of the Project site.

¹²*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 a residential development to be located off NH Route 156 in Raymond, 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,¹³ the Project is expected to generate approximately 198 vehicle trips on an average weekday (two-way, 24-hour volume), with approximately 15 vehicle trips expected during the weekday morning peak-hour and 19 vehicle trips expected during the weekday evening peak-hour, or one (1) added vehicle every 3 to 4 minutes during the peak hours;
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 all movements at the NH Route 156/Ham Road/Harriman Hill Road intersection shown to continue to operate at LOS C or better, where an LOS of “D” or better is generally defined as “acceptable” conditions;
3. All movements exiting the Project site driveway to NH Route 156 are predicted to operate at LOS B or better with negligible vehicle queuing predicted, with all movements along NH Route 156 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 156 at the Project site driveway were found to exceed or can be made to exceed the recommended minimum distances for the intersection to operate in a safe and efficient 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 driveway that will intersect the west side of NH Route 156 at the location of the existing driveway that serves 209 and 215 Raymond Road. The following recommendations are offered with respect to the design and operation of the Project site access and internal circulation:

- The Project site driveway should be a minimum of 22 feet in width and designed to accommodate the turning and maneuvering requirements of the largest anticipated responding emergency vehicle.

¹³Institute of Transportation Engineers, op. cit. 1.



- Vehicles exiting the Project site to NH Route 156 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)*.¹⁴
- 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.
- Existing trees and vegetation located within the sight triangle areas of the Project site driveway should be selectively trimmed or removed and maintained, and the embankment along the west side of NH Route 156 should be regraded as necessary so as to provide the necessary sight lines for the driveway to operate in a safe manner.
- Snow accumulation (windrows) within sight triangle areas of the Project site driveway should 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 transportation system.

cc: File

¹⁴*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 DATA
CAPACITY ANALYSIS WORKSHEETS

PROJECT SITE PLAN



EXIST:
112941 SF.
2.59 AC.

PROPOSED:
122752 SF.
2.82 AC.

AUTOMATIC TRAFFIC RECORDER COUNT DATA

Accurate Counts
978-664-2565

Location : at 215 Raymond Road
Location :
City/State: Nottingham, NH

Site Code: 98450001

10/3/2023 Time	NB		Hour Totals		SB		Hour Totals		Combined Totals	
	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	0	21			0	17				
12:15	0	17			0	18				
12:30	1	27			0	29				
12:45	0	23	1	88	0	26	0	90	1	178
1:00	1	17			1	16				
1:15	1	33			0	18				
1:30	0	18			1	12				
1:45	0	27	2	95	0	25	2	71	4	166
2:00	0	25			1	27				
2:15	1	37			0	40				
2:30	1	20			1	33				
2:45	0	22	2	104	0	39	2	139	4	243
3:00	0	34			2	16				
3:15	0	38			4	53				
3:30	0	51			4	40				
3:45	0	55	0	178	2	30	12	139	12	317
4:00	1	48			3	27				
4:15	1	38			7	34				
4:30	1	45			17	31				
4:45	0	52	3	183	7	25	34	117	37	300
5:00	2	39			11	38				
5:15	3	41			16	39				
5:30	5	44			14	24				
5:45	8	33	18	157	17	31	58	132	76	289
6:00	6	28			21	19				
6:15	10	29			24	23				
6:30	17	17			36	19				
6:45	23	16	56	90	38	26	119	87	175	177
7:00	17	18			51	15				
7:15	29	23			41	16				
7:30	20	16			45	9				
7:45	19	8	85	65	41	5	178	45	263	110
8:00	14	12			40	9				
8:15	14	12			27	3				
8:30	13	11			29	7				
8:45	12	11	53	46	19	7	115	26	168	72
9:00	18	8			21	1				
9:15	22	4			17	6				
9:30	14	2			12	0				
9:45	15	3	69	17	22	0	72	7	141	24
10:00	12	3			20	1				
10:15	14	5			20	2				
10:30	21	4			25	3				
10:45	21	1	68	13	36	1	101	7	169	20
11:00	21	1			17	1				
11:15	33	2			17	0				
11:30	14	0			20	1				
11:45	15	0	83	3	29	0	83	2	166	5
Total	440	1039			776	862			1216	1901
Percent	29.7%	70.3%			47.4%	52.6%			39.0%	61.0%

Accurate Counts
978-664-2565

Location : at 215 Raymond Road
Location :
City/State: Nottingham, NH

Site Code: 98450001

10/4/2023	NB		Hour Totals		SB		Hour Totals		Combined Totals		
	Time	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		2	22			0	16				
12:15		0	17			1	18				
12:30		0	30			0	18				
12:45		2	15	4	84	1	29	2	81	6	165
1:00		1	31			2	18				
1:15		1	29			1	18				
1:30		3	18			1	15				
1:45		2	17	7	95	0	26	4	77	11	172
2:00		3	27			2	20				
2:15		1	23			0	19				
2:30		2	21			2	27				
2:45		0	19	6	90	1	37	5	103	11	193
3:00		0	32			0	28				
3:15		2	51			2	47				
3:30		2	50			4	38				
3:45		1	50	5	183	5	40	11	153	16	336
4:00		0	44			5	31				
4:15		0	44			12	37				
4:30		0	38			12	37				
4:45		0	38	0	164	8	40	37	145	37	309
5:00		3	52			14	34				
5:15		2	39			12	33				
5:30		2	49			18	38				
5:45		6	39	13	179	18	18	62	123	75	302
6:00		5	25			18	19				
6:15		9	31			29	30				
6:30		23	25			32	18				
6:45		16	17	53	98	36	25	115	92	168	190
7:00		20	13			50	15				
7:15		23	19			38	15				
7:30		18	10			47	12				
7:45		17	27	78	69	52	10	187	52	265	121
8:00		26	14			48	8				
8:15		7	17			31	9				
8:30		16	8			25	3				
8:45		14	16	63	55	26	4	130	24	193	79
9:00		19	13			29	2				
9:15		18	7			33	4				
9:30		25	9			21	7				
9:45		16	3	78	32	25	2	108	15	186	47
10:00		19	1			19	1				
10:15		14	1			28	3				
10:30		19	2			35	2				
10:45		23	1	75	5	24	2	106	8	181	13
11:00		24	3			22	1				
11:15		18	1			22	1				
11:30		18	0			26	1				
11:45		14	3	74	7	22	1	92	4	166	11
Total		456	1061			859	877			1315	1938
Percent		30.1%	69.9%			49.5%	50.5%			40.4%	59.6%
Grand Total		896	2100			1635	1739			2531	3839
Percent		29.9%	70.1%			48.5%	51.5%			39.7%	60.3%

ADT

ADT: 3,185

AADT: 3,185

Accurate Counts
978-664-2565

Location : at 215 Raymond Road
Location :
City/State: Nottingham, NH

Site Code: 98450001

10/2/2023 Time	Monday		Tuesday		Wednesday		Thursday		Friday		Saturday		Sunday		Week Average	
	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB
12:00 AM	*	*	1	0	4	2	*	*	*	*	*	*	*	*	2	1
1:00	*	*	2	2	7	4	*	*	*	*	*	*	*	*	4	3
2:00	*	*	2	2	6	5	*	*	*	*	*	*	*	*	4	4
3:00	*	*	0	12	5	11	*	*	*	*	*	*	*	*	2	12
4:00	*	*	3	34	0	37	*	*	*	*	*	*	*	*	2	36
5:00	*	*	18	58	13	62	*	*	*	*	*	*	*	*	16	60
6:00	*	*	56	119	53	115	*	*	*	*	*	*	*	*	54	117
7:00	*	*	85	178	78	187	*	*	*	*	*	*	*	*	82	182
8:00	*	*	53	115	63	130	*	*	*	*	*	*	*	*	58	122
9:00	*	*	69	72	78	108	*	*	*	*	*	*	*	*	74	90
10:00	*	*	68	101	75	106	*	*	*	*	*	*	*	*	72	104
11:00	*	*	83	83	74	92	*	*	*	*	*	*	*	*	78	88
12:00 PM	*	*	88	90	84	81	*	*	*	*	*	*	*	*	86	86
1:00	*	*	95	71	95	77	*	*	*	*	*	*	*	*	95	74
2:00	*	*	104	139	90	103	*	*	*	*	*	*	*	*	97	121
3:00	*	*	178	139	183	153	*	*	*	*	*	*	*	*	180	146
4:00	*	*	183	117	164	145	*	*	*	*	*	*	*	*	174	131
5:00	*	*	157	132	179	123	*	*	*	*	*	*	*	*	168	128
6:00	*	*	90	87	98	92	*	*	*	*	*	*	*	*	94	90
7:00	*	*	65	45	69	52	*	*	*	*	*	*	*	*	67	48
8:00	*	*	46	26	55	24	*	*	*	*	*	*	*	*	50	25
9:00	*	*	17	7	32	15	*	*	*	*	*	*	*	*	24	11
10:00	*	*	13	7	5	8	*	*	*	*	*	*	*	*	9	8
11:00	*	*	3	2	3	1	*	*	*	*	*	*	*	*	3	2
Total	0	0	1479	1638	1513	1733	0	0	0	0	0	0	0	0	1495	1689
Day	0		3117		3246		0	0	0	0	0	0	0		3184	
AM Peak			7:00	7:00	7:00	7:00									7:00	7:00
Volume			85	178	78	187									82	182
PM Peak			4:00	2:00	3:00	3:00									3:00	3:00
Volume			183	139	183	153									180	146
Comb Total	0		3117		3246		0	0	0	0	0	0	0		3184	
ADT	ADT: 3,185		AADT: 3,185													

TURNING MOVEMENT COUNT DATA

Accurate Counts

978-664-2565

N/S Street : Nottingham Road
 E/W Street : Ham Rd / Harriman Hill Rd
 City/State : Raymond, NH
 Weather : Clear

File Name : 9845001A
 Site Code : 98450001
 Start Date : 10/3/2023
 Page No : 1

Groups Printed- Cars - Trucks

Start Time	Nottingham Rd From North				Ham Rd From East				Nottingham Rd From South			Harriman Hill Rd From West			Int. Total
	Left	Thru	Right	Wide Left Turn	Left	Thru	Right	Wide Right Turn	Left	Thru	Right	Left	Thru	Right	
07:00 AM	10	54	2	3	1	0	0	8	1	18	2	1	1	3	104
07:15 AM	12	46	0	5	3	1	0	8	1	19	0	1	4	5	105
07:30 AM	12	55	0	3	0	0	0	10	1	19	1	0	5	1	107
07:45 AM	6	31	1	6	0	1	0	2	0	17	0	0	2	1	67
Total	40	186	3	17	4	2	0	28	3	73	3	2	12	10	383
08:00 AM	10	37	0	7	2	1	0	6	0	14	2	0	3	0	82
08:15 AM	7	31	0	3	3	1	0	5	2	14	2	0	1	3	72
08:30 AM	8	29	1	1	2	1	0	1	1	17	0	0	3	1	65
08:45 AM	4	16	1	2	1	2	0	4	0	13	0	0	3	2	48
Total	29	113	2	13	8	5	0	16	3	58	4	0	10	6	267
Grand Total	69	299	5	30	12	7	0	44	6	131	7	2	22	16	650
Apprch %	17.1	74.2	1.2	7.4	19	11.1	0	69.8	4.2	91	4.9	5	55	40	
Total %	10.6	46	0.8	4.6	1.8	1.1	0	6.8	0.9	20.2	1.1	0.3	3.4	2.5	
Cars	68	287	5	30	12	7	0	40	6	125	7	2	22	16	627
% Cars	98.6	96	100	100	100	100	0	90.9	100	95.4	100	100	100	100	96.5
Trucks	1	12	0	0	0	0	0	4	0	6	0	0	0	0	23
% Trucks	1.4	4	0	0	0	0	0	9.1	0	4.6	0	0	0	0	3.5

Start Time	Nottingham Rd From North					Ham Rd From East					Nottingham Rd From South				Harriman Hill Rd From West				Int. Total
	Left	Thru	Right	Wide Left Turn	App. Total	Left	Thru	Right	Wide Right Turn	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 03:30 PM																			
03:30 PM	7	37	1	7	52	0	3	1	14	18	4	59	1	64	1	0	1	2	136
03:45 PM	5	36	0	2	43	2	3	0	27	32	8	48	1	57	0	2	4	6	138
04:00 PM	3	30	1	3	37	2	4	0	11	17	2	59	1	62	2	0	2	4	120
04:15 PM	5	36	1	4	46	1	3	0	14	18	3	65	4	72	1	1	0	2	138
Total Volume	20	139	3	16	178	5	13	1	66	85	17	231	7	255	4	3	7	14	532
% App. Total	11.2	78.1	1.7	9		5.9	15.3	1.2	77.6		6.7	90.6	2.7		28.6	21.4	50		
PHF	.714	.939	.750	.571	.856	.625	.813	.250	.611	.664	.531	.888	.438	.885	.500	.375	.438	.583	.964
Cars	20	137	2	16	175	5	13	1	65	84	17	228	7	252	4	3	7	14	525
% Cars	100	98.6	66.7	100	98.3	100	100	100	98.5	98.8	100	98.7	100	98.8	100	100	100	100	98.7
Trucks	0	2	1	0	3	0	0	0	1	1	0	3	0	3	0	0	0	0	7
% Trucks	0	1.4	33.3	0	1.7	0	0	0	1.5	1.2	0	1.3	0	1.2	0	0	0	0	1.3

Accurate Counts

978-664-2565

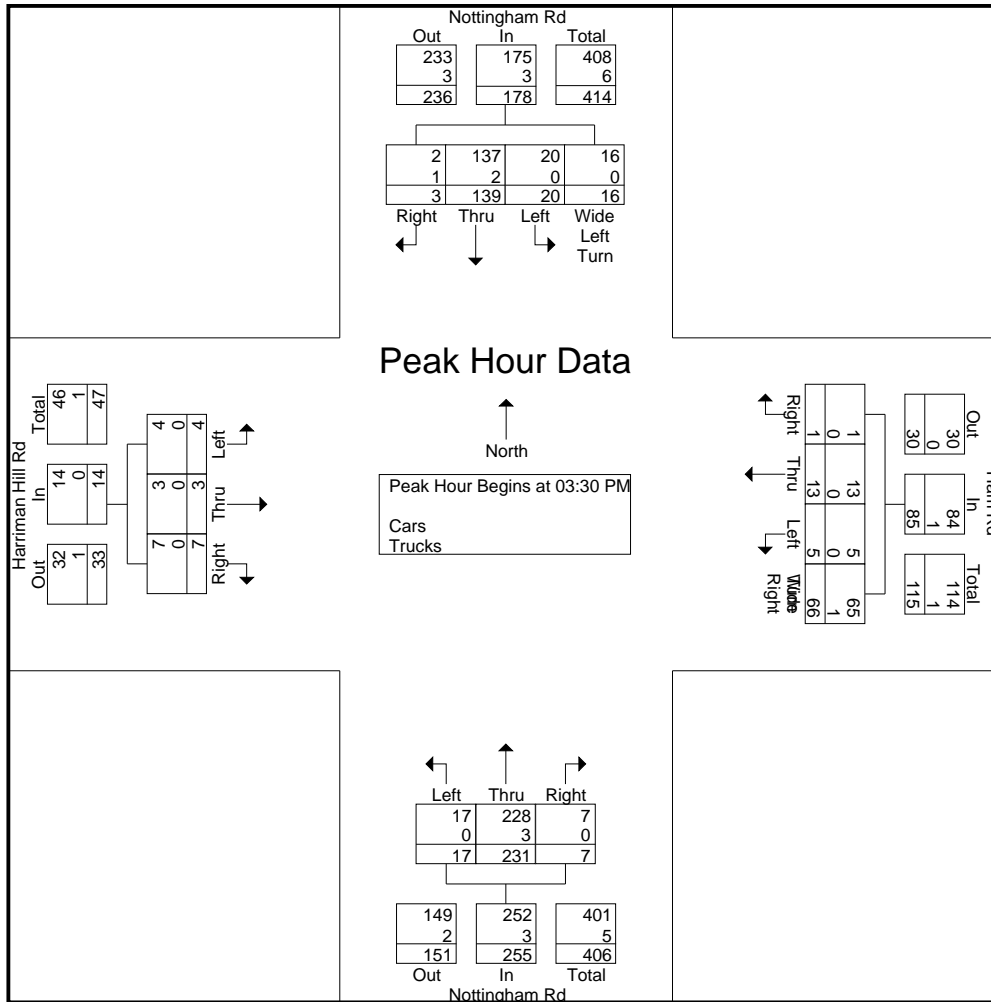
File Name : 9845001A

Site Code : 98450001

Start Date : 10/3/2023

Page No : 2

N/S Street : Nottingham Road
 E/W Street : Ham Rd / Harriman Hill Rd
 City/State : Raymond, NH
 Weather : Clear



Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	03:15 PM					04:45 PM					03:30 PM				04:45 PM			
+0 mins.	9	36	2	9	56	0	3	0	22	25	4	59	1	64	0	5	2	7
+15 mins.	7	37	1	7	52	2	1	0	17	20	8	48	1	57	2	1	0	3
+30 mins.	5	36	0	2	43	0	3	0	21	24	2	59	1	62	0	0	1	1
+45 mins.	3	30	1	3	37	1	5	0	20	26	3	65	4	72	1	6	1	8
Total Volume	24	139	4	21	188	3	12	0	80	95	17	231	7	255	3	12	4	19
% App. Total	12.8	73.9	2.1	11.2		3.2	12.6	0	84.2		6.7	90.6	2.7		15.8	63.2	21.1	
PHF	.667	.939	.500	.583	.839	.375	.600	.000	.909	.913	.531	.888	.438	.885	.375	.500	.500	.594
Cars	23	137	3	21	184	3	12	0	80	95	17	228	7	252	3	12	4	19
% Cars	95.8	98.6	75	100	97.9	100	100	0	100	100	100	98.7	100	98.8	100	100	100	100
Trucks	1	2	1	0	4	0	0	0	0	0	0	3	0	3	0	0	0	0
% Trucks	4.2	1.4	25	0	2.1	0	0	0	0	0	0	1.3	0	1.2	0	0	0	0

Accurate Counts

978-664-2565

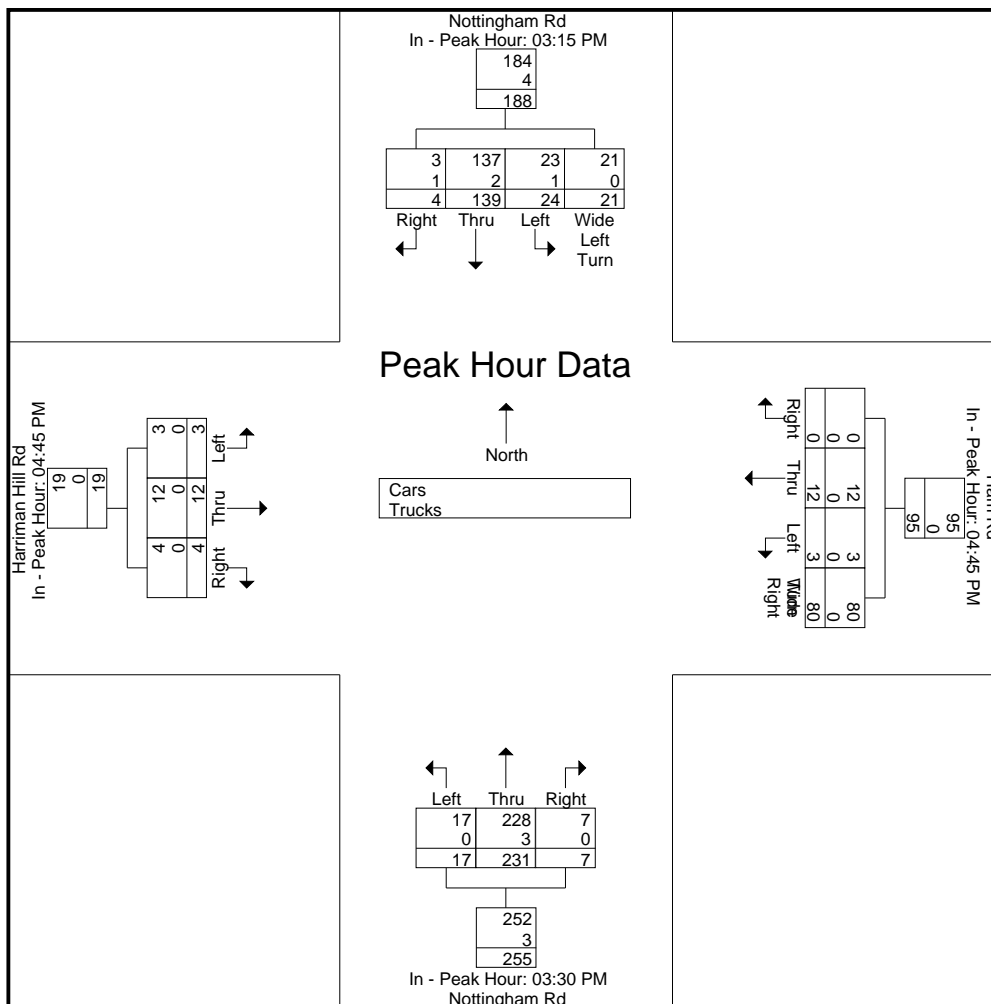
File Name : 9845001A

Site Code : 98450001

Start Date : 10/3/2023

Page No : 3

N/S Street : Nottingham Road
 E/W Street : Ham Rd / Harriman Hill Rd
 City/State : Raymond, NH
 Weather : Clear



Accurate Counts

978-664-2565

N/S Street : Nottingham Road
 E/W Street : Ham Rd / Harriman Hill Rd
 City/State : Raymond, NH
 Weather : Clear

File Name : 9845001A
 Site Code : 98450001
 Start Date : 10/3/2023
 Page No : 1

Groups Printed- Cars

Start Time	Nottingham Rd From North				Ham Rd From East				Nottingham Rd From South			Harriman Hill Rd From West			Int. Total
	Left	Thru	Right	Wide Left Turn	Left	Thru	Right	Wide Right Turn	Left	Thru	Right	Left	Thru	Right	
07:00 AM	10	52	2	3	1	0	0	8	1	18	2	1	1	3	102
07:15 AM	11	43	0	5	3	1	0	7	1	19	0	1	4	5	100
07:30 AM	12	55	0	3	0	0	0	9	1	17	1	0	5	1	104
07:45 AM	6	27	1	6	0	1	0	2	0	17	0	0	2	1	63
Total	39	177	3	17	4	2	0	26	3	71	3	2	12	10	369
08:00 AM	10	37	0	7	2	1	0	5	0	13	2	0	3	0	80
08:15 AM	7	31	0	3	3	1	0	4	2	13	2	0	1	3	70
08:30 AM	8	28	1	1	2	1	0	1	1	16	0	0	3	1	63
08:45 AM	4	14	1	2	1	2	0	4	0	12	0	0	3	2	45
Total	29	110	2	13	8	5	0	14	3	54	4	0	10	6	258
Grand Total	68	287	5	30	12	7	0	40	6	125	7	2	22	16	627
Apprch %	17.4	73.6	1.3	7.7	20.3	11.9	0	67.8	4.3	90.6	5.1	5	55	40	
Total %	10.8	45.8	0.8	4.8	1.9	1.1	0	6.4	1	19.9	1.1	0.3	3.5	2.6	

Start Time	Nottingham Rd From North					Ham Rd From East					Nottingham Rd From South				Harriman Hill Rd From West				Int. Total
	Left	Thru	Right	Wide Left Turn	App. Total	Left	Thru	Right	Wide Right Turn	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 03:30 PM																			
03:30 PM	7	36	0	7	50	0	3	1	14	18	4	58	1	63	1	0	1	2	133
03:45 PM	5	35	0	2	42	2	3	0	26	31	8	48	1	57	0	2	4	6	136
04:00 PM	3	30	1	3	37	2	4	0	11	17	2	57	1	60	2	0	2	4	118
04:15 PM	5	36	1	4	46	1	3	0	14	18	3	65	4	72	1	1	0	2	138
Total Volume	20	137	2	16	175	5	13	1	65	84	17	228	7	252	4	3	7	14	525
% App. Total	11.4	78.3	1.1	9.1		6	15.5	1.2	77.4		6.7	90.5	2.8		28.6	21.4	50		
PHF	.714	.951	.500	.571	.875	.625	.813	.250	.625	.677	.531	.877	.438	.875	.500	.375	.438	.583	.951

Accurate Counts

978-664-2565

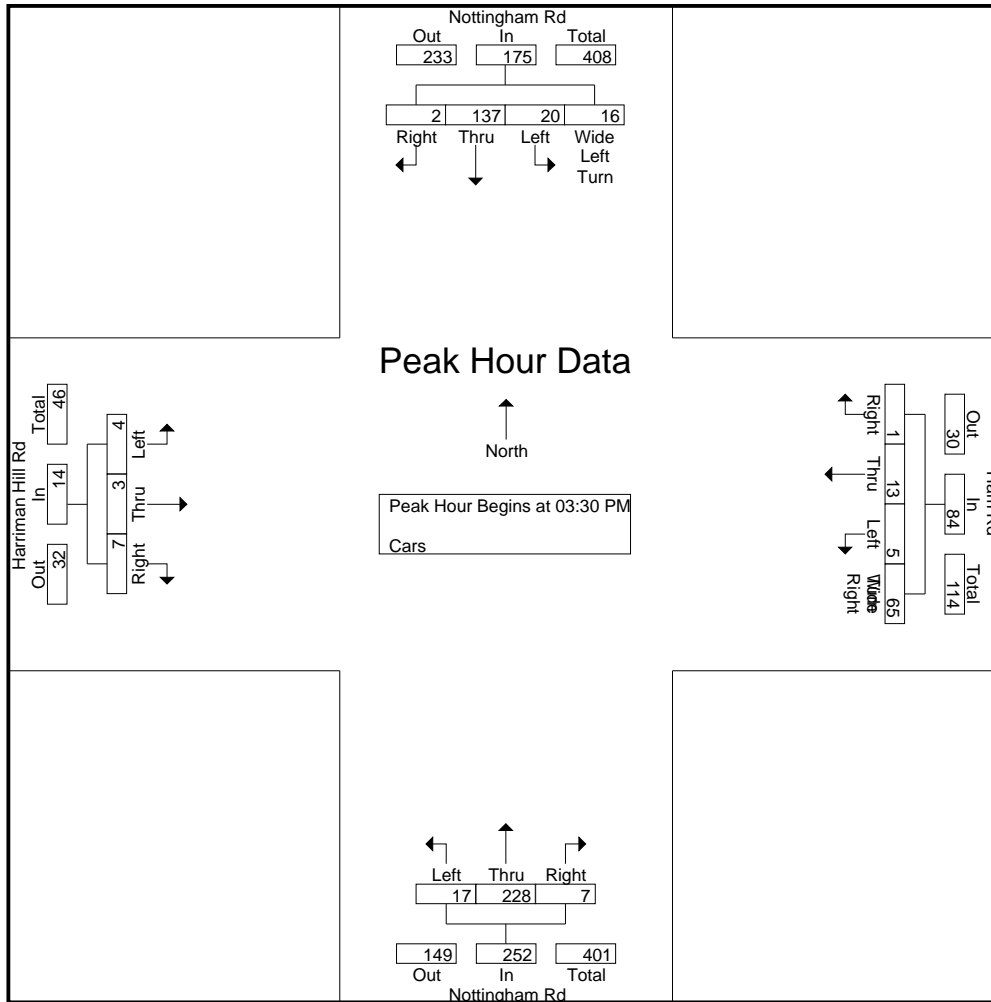
File Name : 9845001A

Site Code : 98450001

Start Date : 10/3/2023

Page No : 2

N/S Street : Nottingham Road
 E/W Street : Ham Rd / Harriman Hill Rd
 City/State : Raymond, NH
 Weather : Clear



Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	03:15 PM					04:45 PM					03:30 PM				04:45 PM			
+0 mins.	8	36	2	9	55	0	3	0	22	25	4	58	1	63	0	5	2	7
+15 mins.	7	36	0	7	50	2	1	0	17	20	8	48	1	57	2	1	0	3
+30 mins.	5	35	0	2	42	0	3	0	21	24	2	57	1	60	0	0	1	1
+45 mins.	3	30	1	3	37	1	5	0	20	26	3	65	4	72	1	6	1	8
Total Volume	23	137	3	21	184	3	12	0	80	95	17	228	7	252	3	12	4	19
% App. Total	12.5	74.5	1.6	11.4		3.2	12.6	0	84.2		6.7	90.5	2.8		15.8	63.2	21.1	
PHF	.719	.951	.375	.583	.836	.375	.600	.000	.909	.913	.531	.877	.438	.875	.375	.500	.500	.594

Accurate Counts

978-664-2565

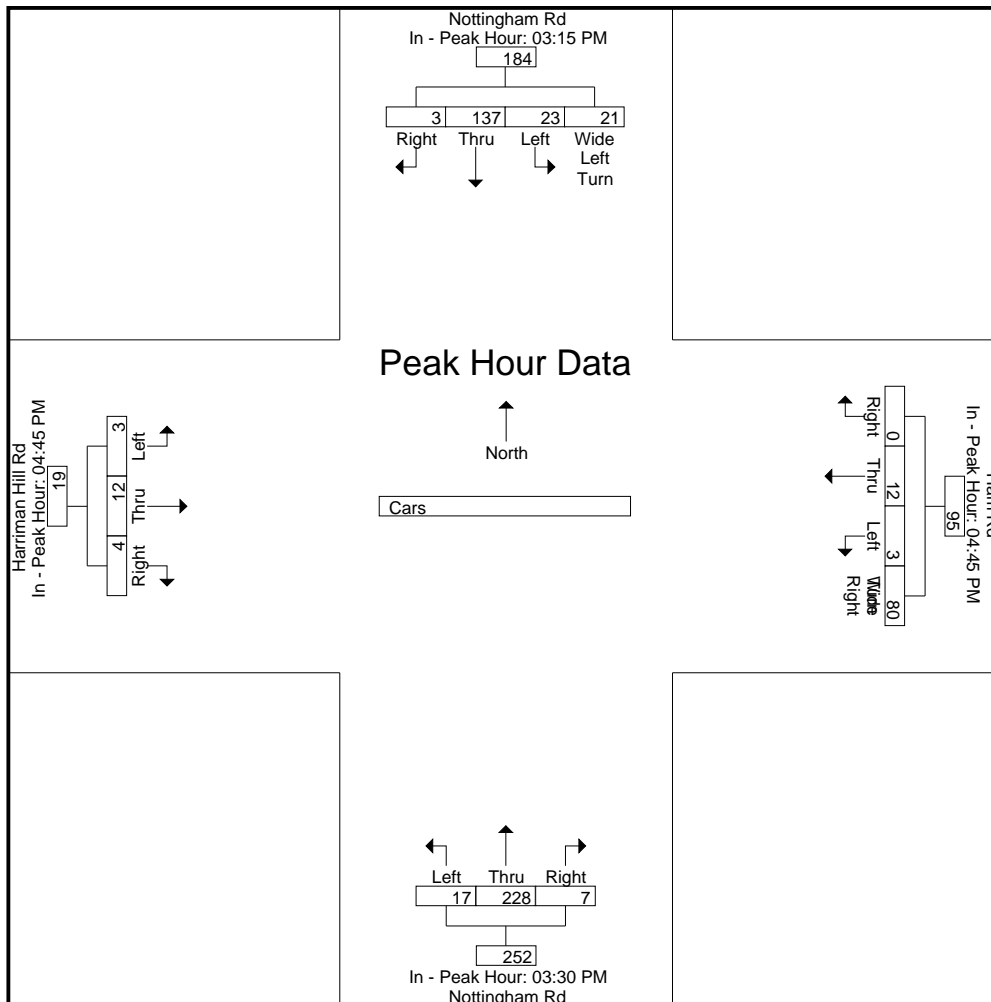
File Name : 9845001A

Site Code : 98450001

Start Date : 10/3/2023

Page No : 3

N/S Street : Nottingham Road
E/W Street : Ham Rd / Harriman Hill Rd
City/State : Raymond, NH
Weather : Clear



Accurate Counts

978-664-2565

N/S Street : Nottingham Road
 E/W Street : Ham Rd / Harriman Hill Rd
 City/State : Raymond, NH
 Weather : Clear

File Name : 9845001A
 Site Code : 98450001
 Start Date : 10/3/2023
 Page No : 1

Groups Printed- Trucks

Start Time	Nottingham Rd From North				Ham Rd From East				Nottingham Rd From South			Harriman Hill Rd From West			Int. Total
	Left	Thru	Right	Wide Left Turn	Left	Thru	Right	Wide Right Turn	Left	Thru	Right	Left	Thru	Right	
07:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
07:15 AM	1	3	0	0	0	0	0	1	0	0	0	0	0	0	5
07:30 AM	0	0	0	0	0	0	0	1	0	2	0	0	0	0	3
07:45 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
Total	1	9	0	0	0	0	0	2	0	2	0	0	0	0	14
08:00 AM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	2
08:15 AM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	2
08:30 AM	0	1	0	0	0	0	0	0	0	1	0	0	0	0	2
08:45 AM	0	2	0	0	0	0	0	0	0	1	0	0	0	0	3
Total	0	3	0	0	0	0	0	2	0	4	0	0	0	0	9
Grand Total	1	12	0	0	0	0	0	4	0	6	0	0	0	0	23
Apprch %	7.7	92.3	0	0	0	0	0	100	0	100	0	0	0	0	
Total %	4.3	52.2	0	0	0	0	0	17.4	0	26.1	0	0	0	0	

Start Time	Nottingham Rd From North					Ham Rd From East					Nottingham Rd From South				Harriman Hill Rd From West				Int. Total
	Left	Thru	Right	Wide Left Turn	App. Total	Left	Thru	Right	Wide Right Turn	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 03:00 PM																			
03:00 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0	2
03:15 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
03:30 PM	0	1	1	0	2	0	0	0	0	0	0	1	0	1	0	0	0	0	3
03:45 PM	0	1	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	2
Total Volume	1	3	1	0	5	0	0	0	1	1	0	2	0	2	0	0	0	0	8
% App. Total	20	60	20	0		0	0	0	100		0	100	0		0	0	0		
PHF	.250	.750	.250	.000	.625	.000	.000	.000	.250	.250	.000	.500	.000	.500	.000	.000	.000	.000	.667

Accurate Counts

978-664-2565

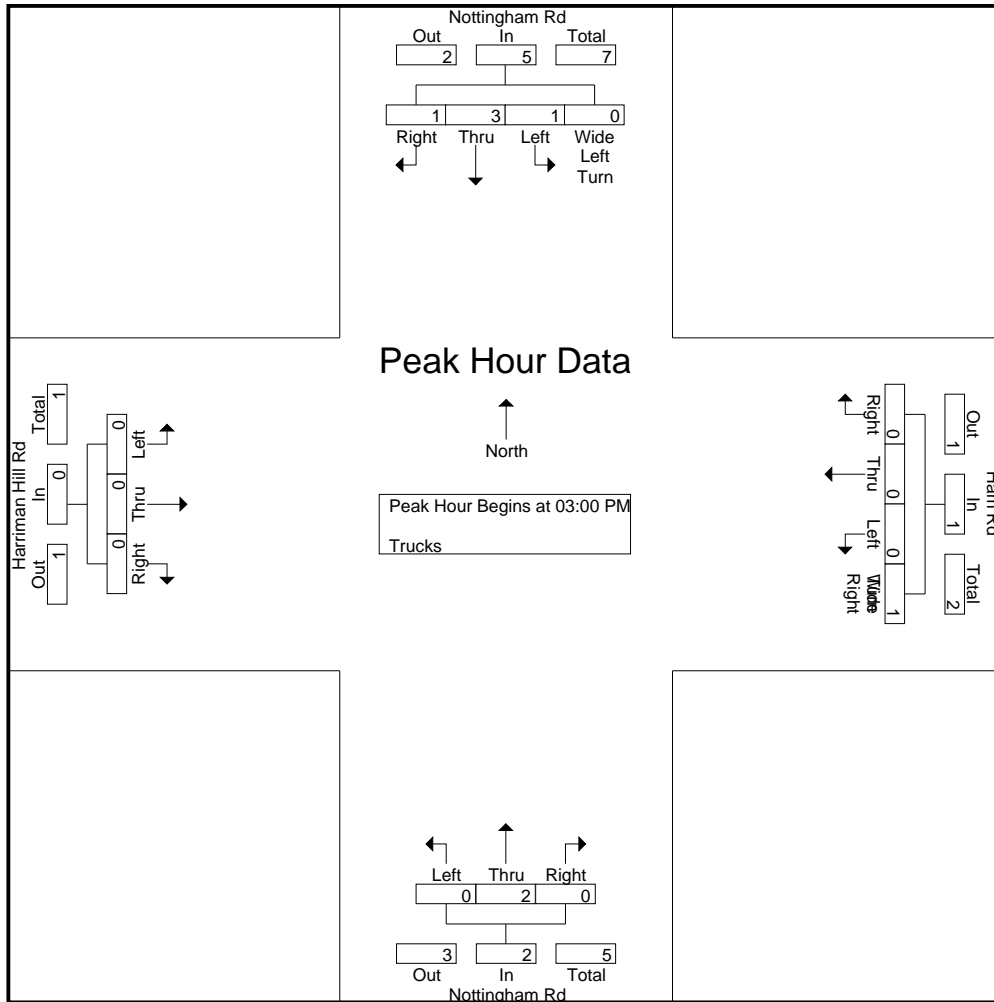
File Name : 9845001A

Site Code : 98450001

Start Date : 10/3/2023

Page No : 2

N/S Street : Nottingham Road
 E/W Street : Ham Rd / Harriman Hill Rd
 City/State : Raymond, NH
 Weather : Clear



Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	03:00 PM					03:00 PM					03:15 PM				03:00 PM			
+0 mins.	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	1	0	0	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0
+30 mins.	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	1	0	0	1	0	0	0	1	1	0	2	0	2	0	0	0	0
Total Volume	1	3	1	0	5	0	0	0	1	1	0	3	0	3	0	0	0	0
% App. Total	20	60	20	0		0	0	0	100		0	100	0		0	0	0	
PHF	.250	.750	.250	.000	.625	.000	.000	.000	.250	.250	.000	.375	.000	.375	.000	.000	.000	.000

Accurate Counts

978-664-2565

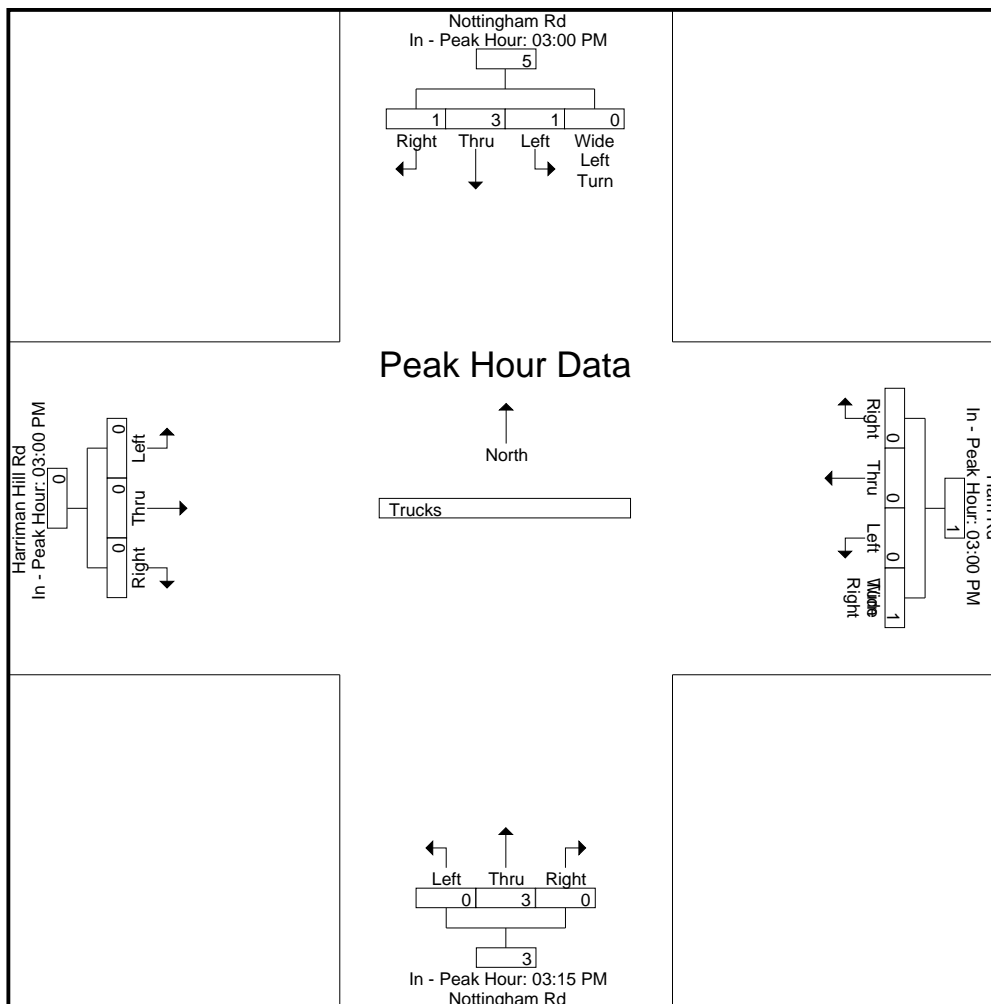
File Name : 9845001A

Site Code : 98450001

Start Date : 10/3/2023

Page No : 3

N/S Street : Nottingham Road
 E/W Street : Ham Rd / Harriman Hill Rd
 City/State : Raymond, NH
 Weather : Clear



Accurate Counts

978-664-2565

N/S Street : Nottingham Road
 E/W Street : Ham Rd / Harriman Hill Rd
 City/State : Raymond, NH
 Weather : Clear

File Name : 9845001A
 Site Code : 98450001
 Start Date : 10/3/2023
 Page No : 1

Groups Printed- Bikes Peds

Start Time	Nottingham Rd From North				Ham Rd From East				Nottingham Rd From South				Harriman Hill Rd From West				Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds			
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Total %																	0	0	

Start Time	Nottingham Rd From North					Ham Rd From East					Nottingham Rd From South				Harriman Hill Rd From West				Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 03:30 PM																			
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
% App. Total	0	100	0	0		0	0	0	0		0	0	0		0	0	0		
PHF	.000	.250	.000	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250

Accurate Counts

978-664-2565

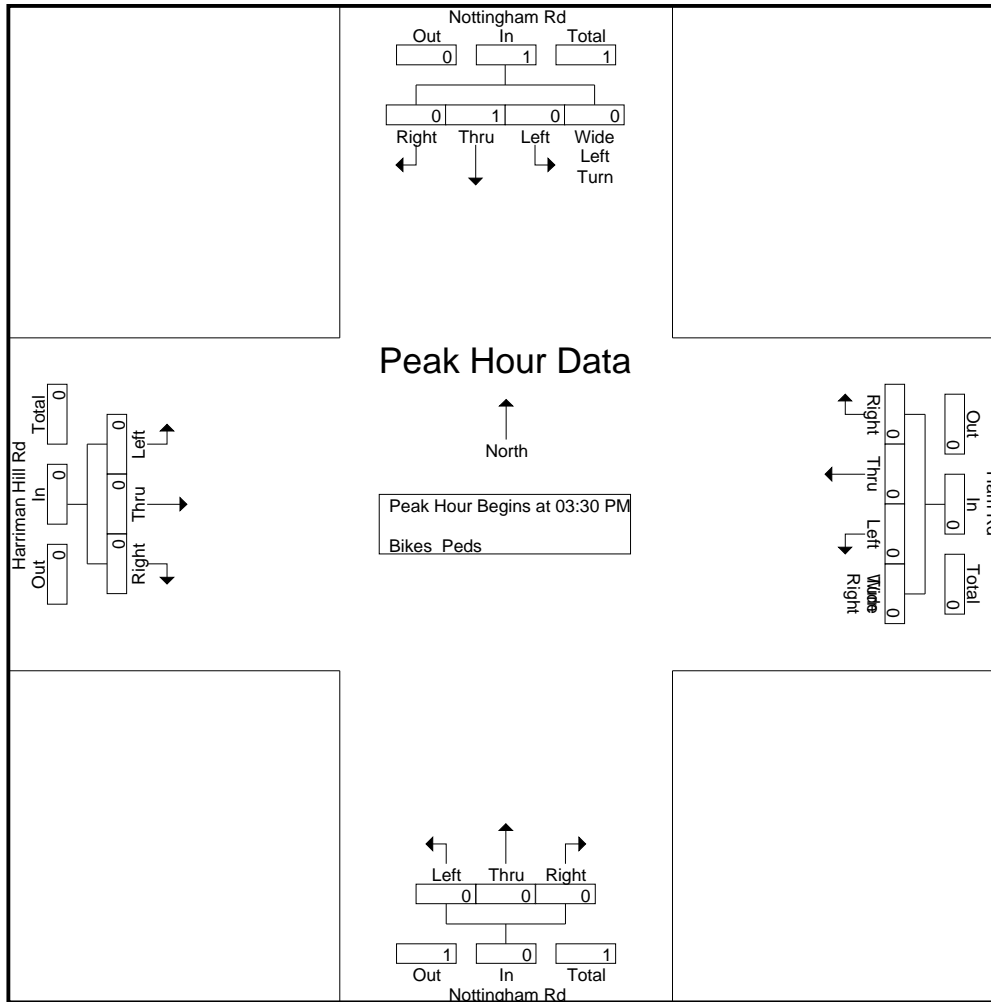
File Name : 9845001A

Site Code : 98450001

Start Date : 10/3/2023

Page No : 2

N/S Street : Nottingham Road
 E/W Street : Ham Rd / Harriman Hill Rd
 City/State : Raymond, NH
 Weather : Clear



Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	03:30 PM					03:00 PM					03:00 PM					03:00 PM				
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	100	0	0		0	0	0	0		0	0	0	0		0	0	0	0	
PHF	.000	.250	.000	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	

Accurate Counts

978-664-2565

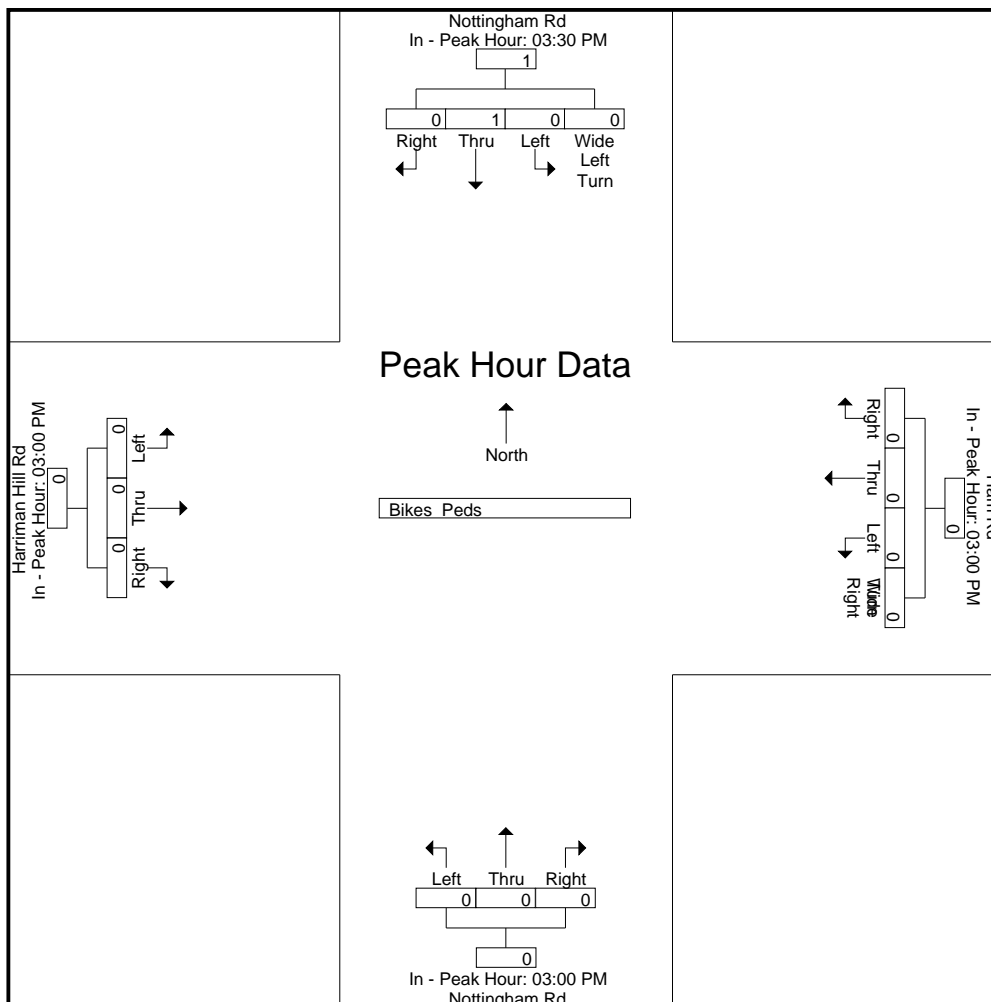
File Name : 9845001A

Site Code : 98450001

Start Date : 10/3/2023

Page No : 3

N/S Street : Nottingham Road
 E/W Street : Ham Rd / Harriman Hill Rd
 City/State : Raymond, NH
 Weather : Clear



Accurate Counts

978-664-2565

N/S Street : Nottingham Road
 E/W Street : Ham Rd / Harriman Hill Rd
 City/State : Raymond, NH
 Weather : Clear

File Name : 9845001A
 Site Code : 98450001
 Start Date : 10/3/2023
 Page No : 1

Groups Printed- Cars - Trucks

Start Time	Nottingham Rd From North				Ham Rd From East				Nottingham Rd From South			Harriman Hill Rd From West			Int. Total
	Left	Thru	Right	Wide Left Turn	Left	Thru	Right	Wide Right Turn	Left	Thru	Right	Left	Thru	Right	
03:00 PM	5	17	2	2	0	1	0	8	1	43	2	0	2	1	84
03:15 PM	9	36	2	9	2	2	0	9	6	41	1	0	3	2	122
03:30 PM	7	37	1	7	0	3	1	14	4	59	1	1	0	1	136
03:45 PM	5	36	0	2	2	3	0	27	8	48	1	0	2	4	138
Total	26	126	5	20	4	9	1	58	19	191	5	1	7	8	480
04:00 PM	3	30	1	3	2	4	0	11	2	59	1	2	0	2	120
04:15 PM	5	36	1	4	1	3	0	14	3	65	4	1	1	0	138
04:30 PM	3	28	0	4	1	4	0	4	2	50	2	1	1	1	101
04:45 PM	3	27	3	4	0	3	0	22	5	53	1	0	5	2	128
Total	14	121	5	15	4	14	0	51	12	227	8	4	7	5	487
05:00 PM	6	26	1	6	2	1	0	17	3	57	1	2	1	0	123
05:15 PM	10	30	0	10	0	3	0	21	1	47	2	0	0	1	125
05:30 PM	7	39	0	2	1	5	0	20	2	45	3	1	6	1	132
05:45 PM	5	27	1	1	1	1	1	11	2	36	3	2	1	1	93
Total	28	122	2	19	4	10	1	69	8	185	9	5	8	3	473
Grand Total	68	369	12	54	12	33	2	178	39	603	22	10	22	16	1440
Apprch %	13.5	73.4	2.4	10.7	5.3	14.7	0.9	79.1	5.9	90.8	3.3	20.8	45.8	33.3	
Total %	4.7	25.6	0.8	3.8	0.8	2.3	0.1	12.4	2.7	41.9	1.5	0.7	1.5	1.1	
Cars	67	362	11	54	12	33	2	177	39	597	22	10	22	16	1424
% Cars	98.5	98.1	91.7	100	100	100	100	99.4	100	99	100	100	100	100	98.9
Trucks	1	7	1	0	0	0	0	1	0	6	0	0	0	0	16
% Trucks	1.5	1.9	8.3	0	0	0	0	0.6	0	1	0	0	0	0	1.1

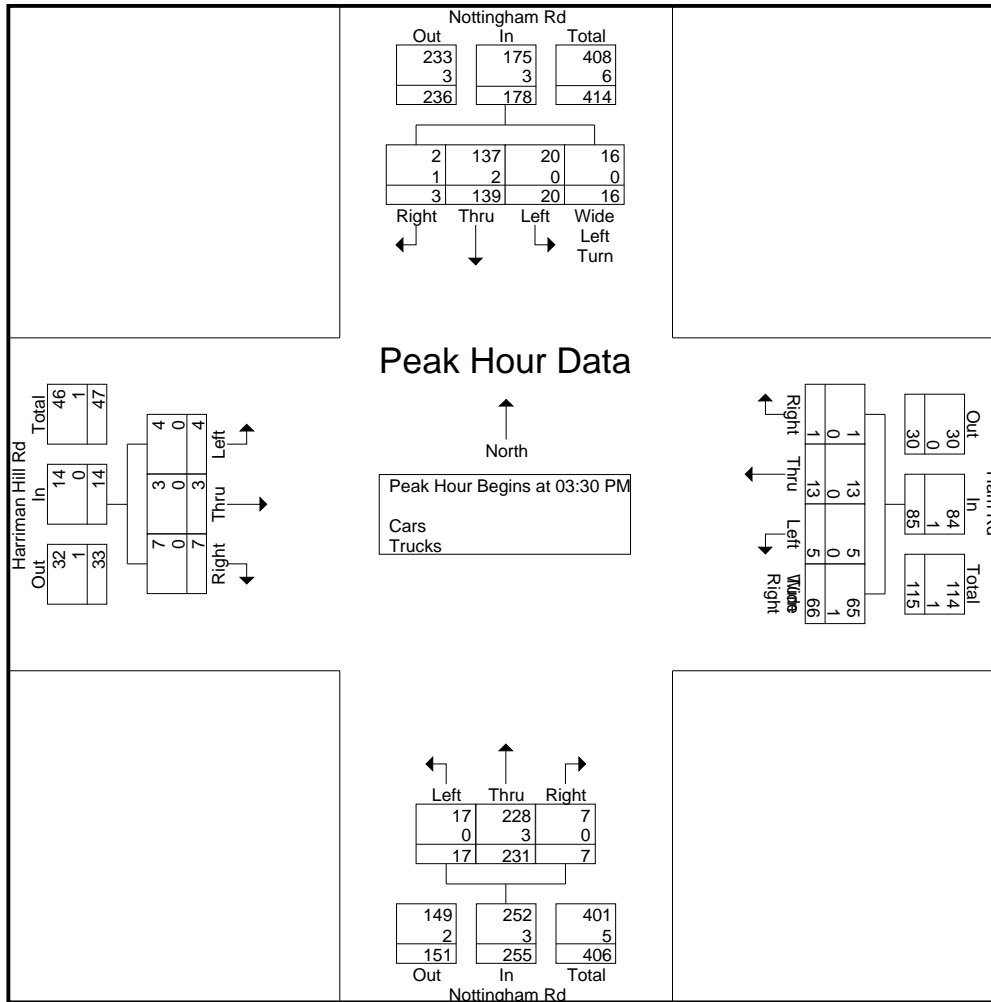
Start Time	Nottingham Rd From North					Ham Rd From East					Nottingham Rd From South				Harriman Hill Rd From West				Int. Total
	Left	Thru	Right	Wide Left Turn	App. Total	Left	Thru	Right	Wide Right Turn	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 03:30 PM																			
03:30 PM	7	37	1	7	52	0	3	1	14	18	4	59	1	64	1	0	1	2	136
03:45 PM	5	36	0	2	43	2	3	0	27	32	8	48	1	57	0	2	4	6	138
04:00 PM	3	30	1	3	37	2	4	0	11	17	2	59	1	62	2	0	2	4	120
04:15 PM	5	36	1	4	46	1	3	0	14	18	3	65	4	72	1	1	0	2	138
Total Volume	20	139	3	16	178	5	13	1	66	85	17	231	7	255	4	3	7	14	532
% App. Total	11.2	78.1	1.7	9		5.9	15.3	1.2	77.6		6.7	90.6	2.7		28.6	21.4	50		
PHF	.714	.939	.750	.571	.856	.625	.813	.250	.611	.664	.531	.888	.438	.885	.500	.375	.438	.583	.964
Cars	20	137	2	16	175	5	13	1	65	84	17	228	7	252	4	3	7	14	525
% Cars	100	98.6	66.7	100	98.3	100	100	100	98.5	98.8	100	98.7	100	98.8	100	100	100	100	98.7
Trucks	0	2	1	0	3	0	0	0	1	1	0	3	0	3	0	0	0	0	7
% Trucks	0	1.4	33.3	0	1.7	0	0	0	1.5	1.2	0	1.3	0	1.2	0	0	0	0	1.3

Accurate Counts

978-664-2565

N/S Street : Nottingham Road
 E/W Street : Ham Rd / Harriman Hill Rd
 City/State : Raymond, NH
 Weather : Clear

File Name : 9845001A
 Site Code : 98450001
 Start Date : 10/3/2023
 Page No : 2



Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	03:15 PM					04:45 PM					03:30 PM				04:45 PM			
+0 mins.	9	36	2	9	56	0	3	0	22	25	4	59	1	64	0	5	2	7
+15 mins.	7	37	1	7	52	2	1	0	17	20	8	48	1	57	2	1	0	3
+30 mins.	5	36	0	2	43	0	3	0	21	24	2	59	1	62	0	0	1	1
+45 mins.	3	30	1	3	37	1	5	0	20	26	3	65	4	72	1	6	1	8
Total Volume	24	139	4	21	188	3	12	0	80	95	17	231	7	255	3	12	4	19
% App. Total	12.8	73.9	2.1	11.2		3.2	12.6	0	84.2		6.7	90.6	2.7		15.8	63.2	21.1	
PHF	.667	.939	.500	.583	.839	.375	.600	.000	.909	.913	.531	.888	.438	.885	.375	.500	.500	.594
Cars	23	137	3	21	184	3	12	0	80	95	17	228	7	252	3	12	4	19
% Cars	95.8	98.6	75	100	97.9	100	100	0	100	100	100	98.7	100	98.8	100	100	100	100
Trucks	1	2	1	0	4	0	0	0	0	0	0	3	0	3	0	0	0	0
% Trucks	4.2	1.4	25	0	2.1	0	0	0	0	0	0	1.3	0	1.2	0	0	0	0

Accurate Counts

978-664-2565

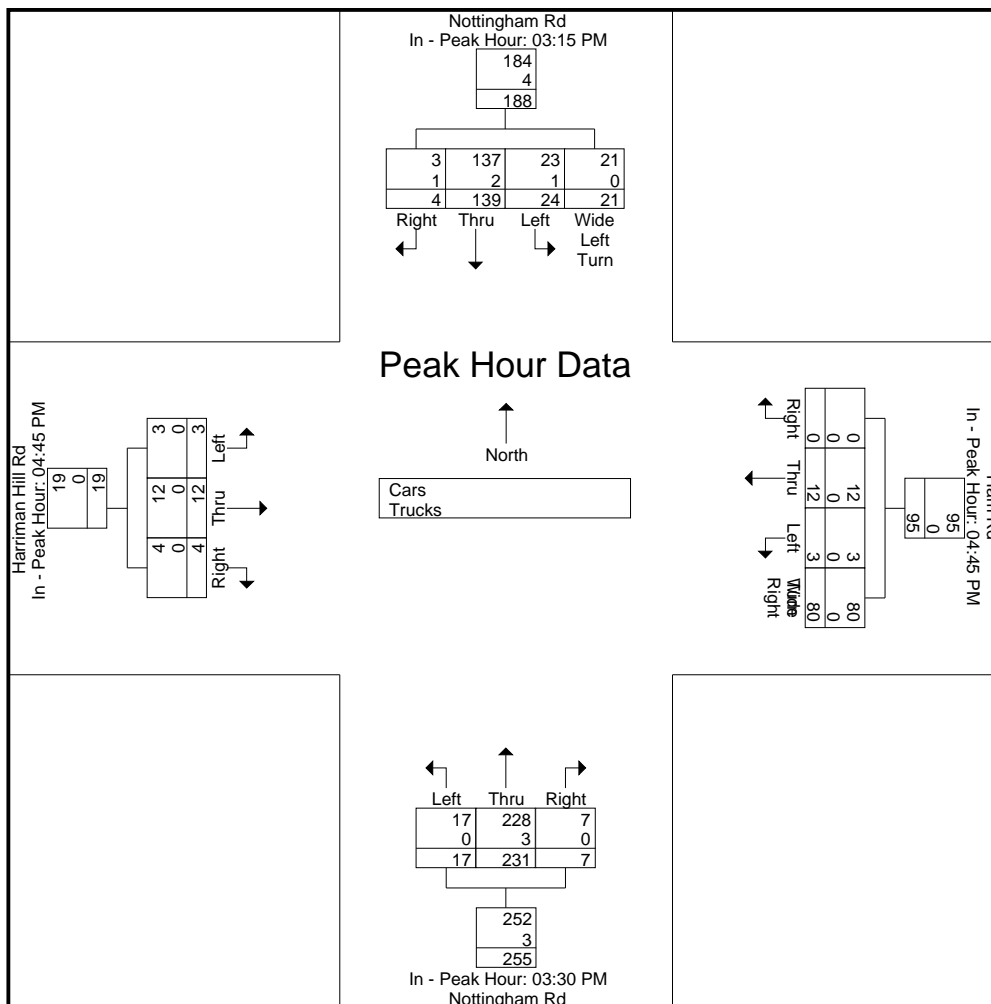
File Name : 9845001A

Site Code : 98450001

Start Date : 10/3/2023

Page No : 3

N/S Street : Nottingham Road
 E/W Street : Ham Rd / Harriman Hill Rd
 City/State : Raymond, NH
 Weather : Clear



Accurate Counts

978-664-2565

N/S Street : Nottingham Road
 E/W Street : Ham Rd / Harriman Hill Rd
 City/State : Raymond, NH
 Weather : Clear

File Name : 9845001A
 Site Code : 98450001
 Start Date : 10/3/2023
 Page No : 1

Groups Printed- Cars

Start Time	Nottingham Rd From North				Ham Rd From East				Nottingham Rd From South			Harriman Hill Rd From West			Int. Total
	Left	Thru	Right	Wide Left Turn	Left	Thru	Right	Wide Right Turn	Left	Thru	Right	Left	Thru	Right	
03:00 PM	5	16	2	2	0	1	0	8	1	42	2	0	2	1	82
03:15 PM	8	36	2	9	2	2	0	9	6	41	1	0	3	2	121
03:30 PM	7	36	0	7	0	3	1	14	4	58	1	1	0	1	133
03:45 PM	5	35	0	2	2	3	0	26	8	48	1	0	2	4	136
Total	25	123	4	20	4	9	1	57	19	189	5	1	7	8	472
04:00 PM	3	30	1	3	2	4	0	11	2	57	1	2	0	2	118
04:15 PM	5	36	1	4	1	3	0	14	3	65	4	1	1	0	138
04:30 PM	3	27	0	4	1	4	0	4	2	50	2	1	1	1	100
04:45 PM	3	27	3	4	0	3	0	22	5	53	1	0	5	2	128
Total	14	120	5	15	4	14	0	51	12	225	8	4	7	5	484
05:00 PM	6	26	1	6	2	1	0	17	3	57	1	2	1	0	123
05:15 PM	10	30	0	10	0	3	0	21	1	46	2	0	0	1	124
05:30 PM	7	39	0	2	1	5	0	20	2	45	3	1	6	1	132
05:45 PM	5	24	1	1	1	1	1	11	2	35	3	2	1	1	89
Total	28	119	2	19	4	10	1	69	8	183	9	5	8	3	468
Grand Total	67	362	11	54	12	33	2	177	39	597	22	10	22	16	1424
Apprch %	13.6	73.3	2.2	10.9	5.4	14.7	0.9	79	5.9	90.7	3.3	20.8	45.8	33.3	
Total %	4.7	25.4	0.8	3.8	0.8	2.3	0.1	12.4	2.7	41.9	1.5	0.7	1.5	1.1	

Start Time	Nottingham Rd From North					Ham Rd From East					Nottingham Rd From South				Harriman Hill Rd From West				Int. Total
	Left	Thru	Right	Wide Left Turn	App. Total	Left	Thru	Right	Wide Right Turn	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 03:30 PM																			
03:30 PM	7	36	0	7	50	0	3	1	14	18	4	58	1	63	1	0	1	2	133
03:45 PM	5	35	0	2	42	2	3	0	26	31	8	48	1	57	0	2	4	6	136
04:00 PM	3	30	1	3	37	2	4	0	11	17	2	57	1	60	2	0	2	4	118
04:15 PM	5	36	1	4	46	1	3	0	14	18	3	65	4	72	1	1	0	2	138
Total Volume	20	137	2	16	175	5	13	1	65	84	17	228	7	252	4	3	7	14	525
% App. Total	11.4	78.3	1.1	9.1		6	15.5	1.2	77.4		6.7	90.5	2.8		28.6	21.4	50		
PHF	.714	.951	.500	.571	.875	.625	.813	.250	.625	.677	.531	.877	.438	.875	.500	.375	.438	.583	.951

Accurate Counts

978-664-2565

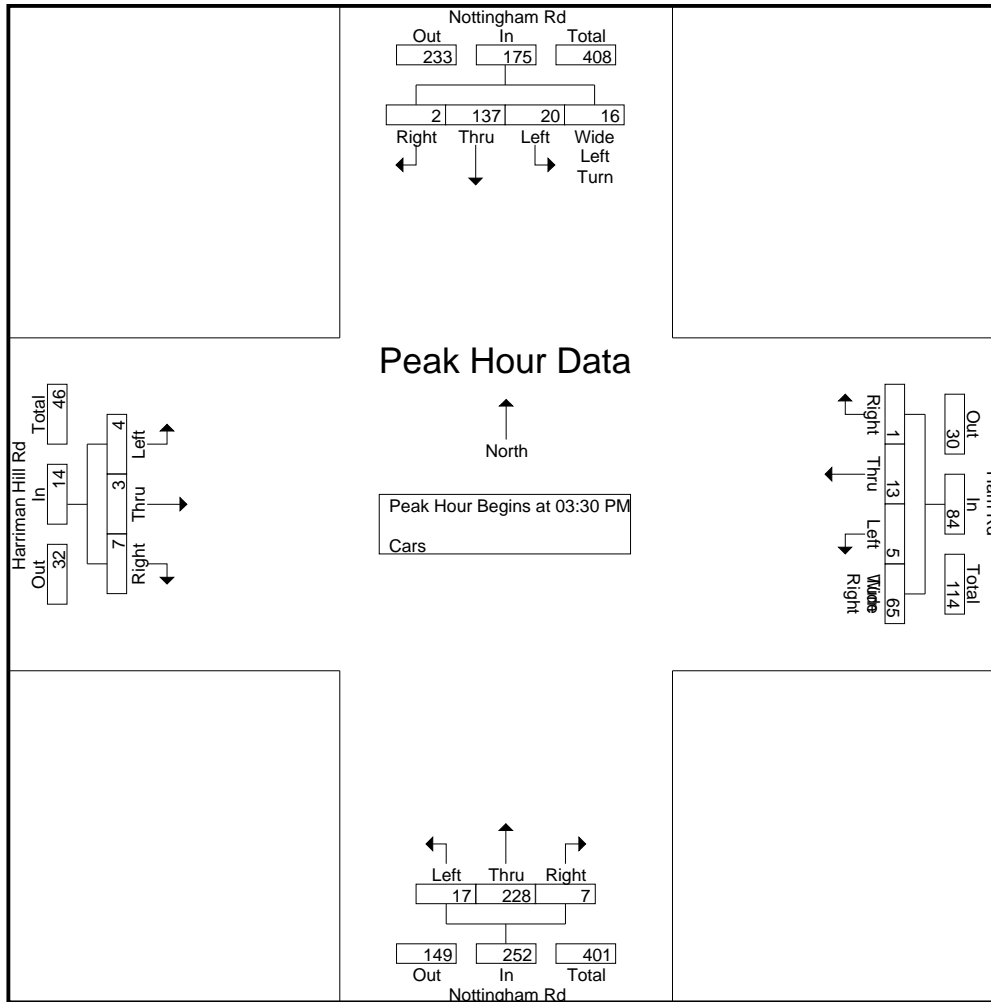
File Name : 9845001A

Site Code : 98450001

Start Date : 10/3/2023

Page No : 2

N/S Street : Nottingham Road
 E/W Street : Ham Rd / Harriman Hill Rd
 City/State : Raymond, NH
 Weather : Clear



Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	03:15 PM					04:45 PM					03:30 PM				04:45 PM			
+0 mins.	8	36	2	9	55	0	3	0	22	25	4	58	1	63	0	5	2	7
+15 mins.	7	36	0	7	50	2	1	0	17	20	8	48	1	57	2	1	0	3
+30 mins.	5	35	0	2	42	0	3	0	21	24	2	57	1	60	0	0	1	1
+45 mins.	3	30	1	3	37	1	5	0	20	26	3	65	4	72	1	6	1	8
Total Volume	23	137	3	21	184	3	12	0	80	95	17	228	7	252	3	12	4	19
% App. Total	12.5	74.5	1.6	11.4		3.2	12.6	0	84.2		6.7	90.5	2.8		15.8	63.2	21.1	
PHF	.719	.951	.375	.583	.836	.375	.600	.000	.909	.913	.531	.877	.438	.875	.375	.500	.500	.594

Accurate Counts

978-664-2565

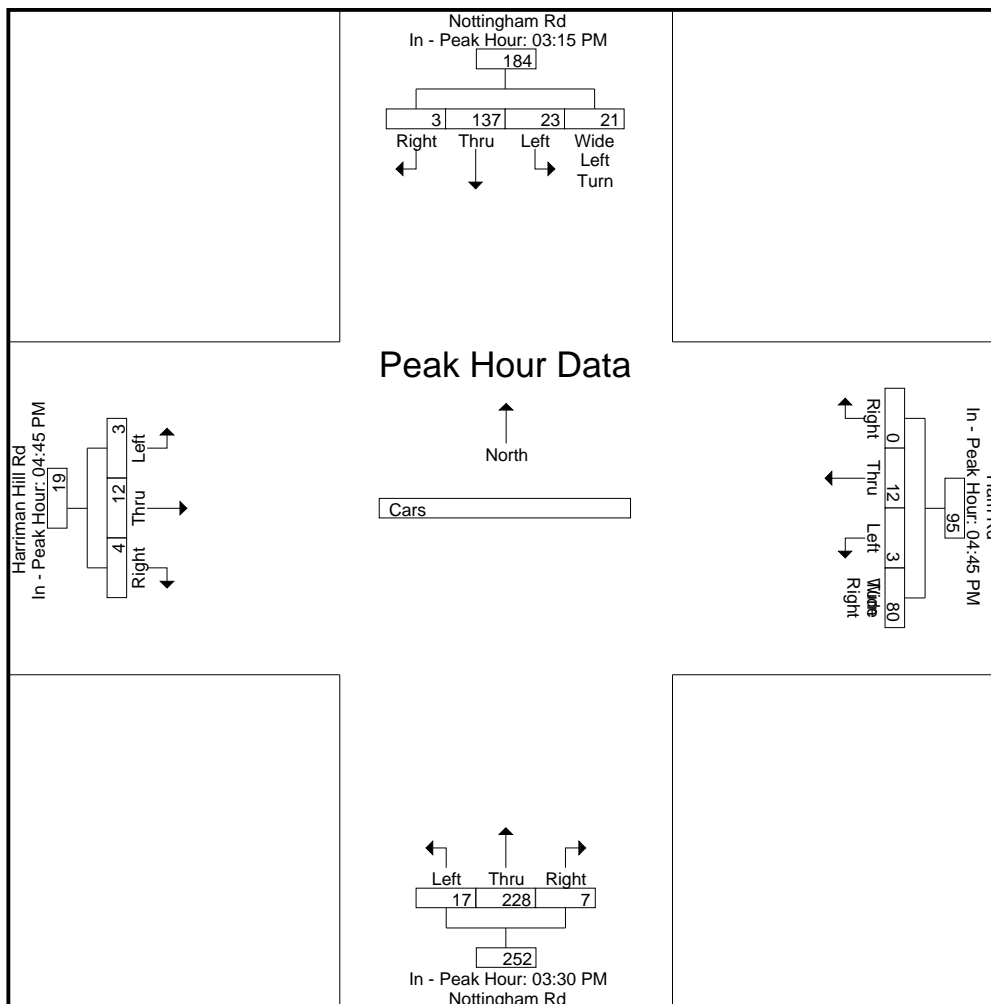
File Name : 9845001A

Site Code : 98450001

Start Date : 10/3/2023

Page No : 3

N/S Street : Nottingham Road
E/W Street : Ham Rd / Harriman Hill Rd
City/State : Raymond, NH
Weather : Clear



Accurate Counts

978-664-2565

N/S Street : Nottingham Road
 E/W Street : Ham Rd / Harriman Hill Rd
 City/State : Raymond, NH
 Weather : Clear

File Name : 9845001A
 Site Code : 98450001
 Start Date : 10/3/2023
 Page No : 1

Groups Printed- Trucks

Start Time	Nottingham Rd From North				Ham Rd From East				Nottingham Rd From South			Harriman Hill Rd From West			Int. Total
	Left	Thru	Right	Wide Left Turn	Left	Thru	Right	Wide Right Turn	Left	Thru	Right	Left	Thru	Right	
03:00 PM	0	1	0	0	0	0	0	0	0	1	0	0	0	0	2
03:15 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
03:30 PM	0	1	1	0	0	0	0	0	0	1	0	0	0	0	3
03:45 PM	0	1	0	0	0	0	0	1	0	0	0	0	0	0	2
Total	1	3	1	0	0	0	0	1	0	2	0	0	0	0	8
04:00 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	0	0	0	0	0	2	0	0	0	0	3
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	3	0	0	0	0	0	0	0	1	0	0	0	0	4
Total	0	3	0	0	0	0	0	0	0	2	0	0	0	0	5
Grand Total	1	7	1	0	0	0	0	1	0	6	0	0	0	0	16
Apprch %	11.1	77.8	11.1	0	0	0	0	100	0	100	0	0	0	0	
Total %	6.2	43.8	6.2	0	0	0	0	6.2	0	37.5	0	0	0	0	

Start Time	Nottingham Rd From North					Ham Rd From East					Nottingham Rd From South				Harriman Hill Rd From West				Int. Total
	Left	Thru	Right	Wide Left Turn	App. Total	Left	Thru	Right	Wide Right Turn	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 03:00 PM																			
03:00 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0	2
03:15 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
03:30 PM	0	1	1	0	2	0	0	0	0	0	0	1	0	1	0	0	0	0	3
03:45 PM	0	1	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	2
Total Volume	1	3	1	0	5	0	0	0	1	1	0	2	0	2	0	0	0	0	8
% App. Total	20	60	20	0		0	0	0	100		0	100	0		0	0	0		
PHF	.250	.750	.250	.000	.625	.000	.000	.000	.250	.250	.000	.500	.000	.500	.000	.000	.000	.000	.667

Accurate Counts

978-664-2565

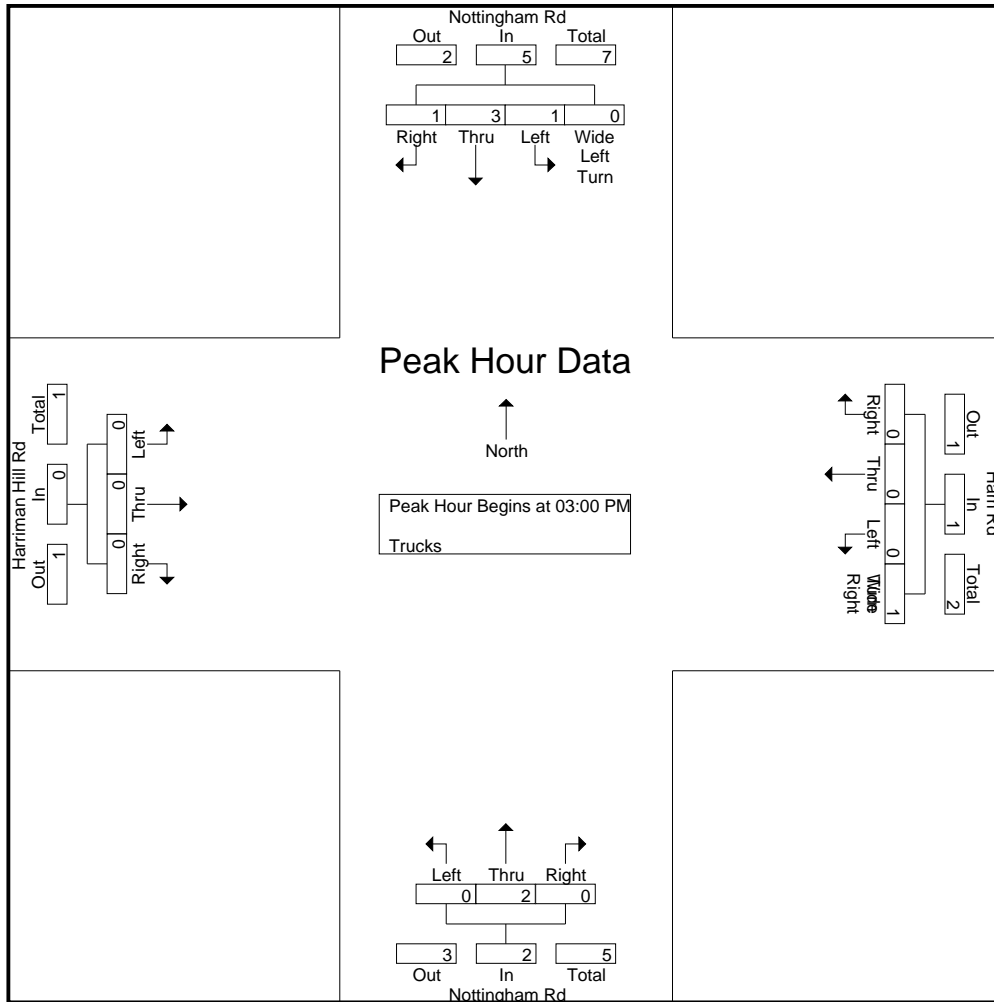
File Name : 9845001A

Site Code : 98450001

Start Date : 10/3/2023

Page No : 2

N/S Street : Nottingham Road
 E/W Street : Ham Rd / Harriman Hill Rd
 City/State : Raymond, NH
 Weather : Clear



Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	03:00 PM					03:00 PM					03:15 PM				03:00 PM			
+0 mins.	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	1	0	0	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0
+30 mins.	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	1	0	0	1	0	0	0	1	1	0	2	0	2	0	0	0	0
Total Volume	1	3	1	0	5	0	0	0	1	1	0	3	0	3	0	0	0	0
% App. Total	20	60	20	0		0	0	0	100		0	100	0		0	0	0	
PHF	.250	.750	.250	.000	.625	.000	.000	.000	.250	.250	.000	.375	.000	.375	.000	.000	.000	.000

Accurate Counts

978-664-2565

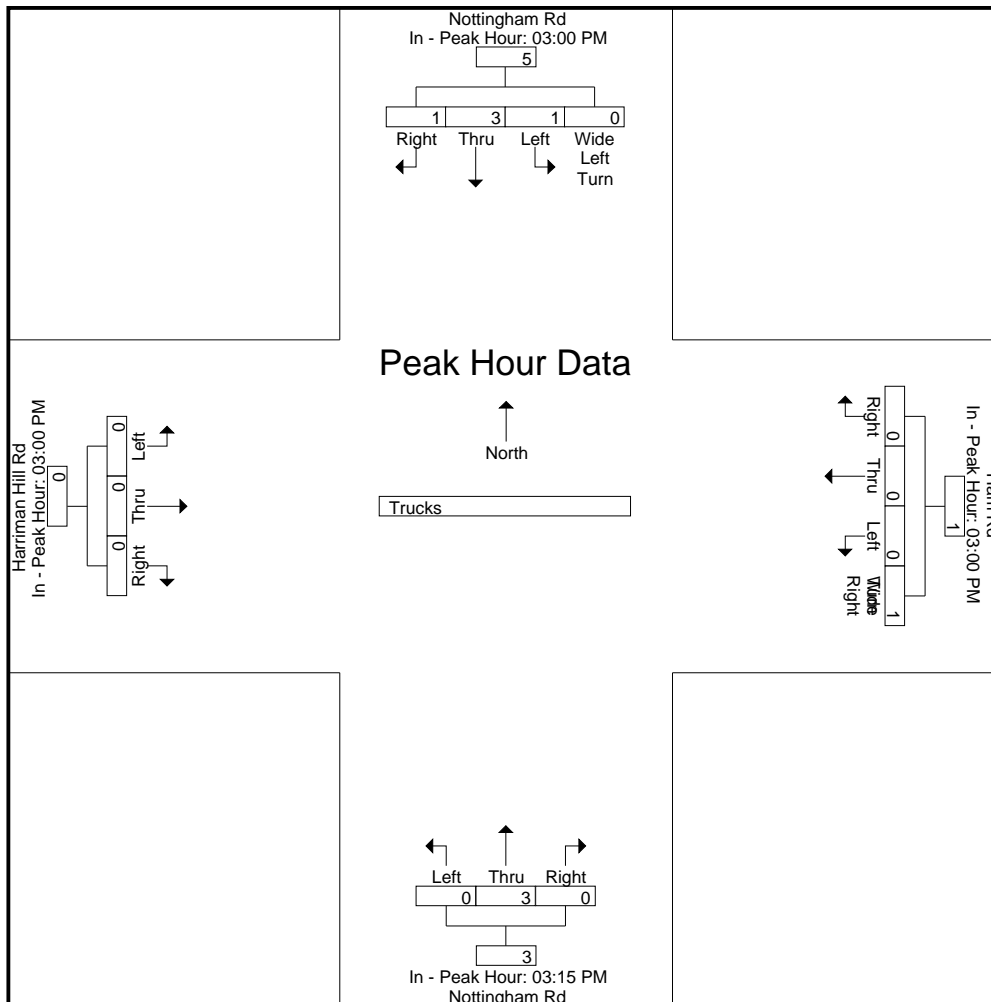
File Name : 9845001A

Site Code : 98450001

Start Date : 10/3/2023

Page No : 3

N/S Street : Nottingham Road
 E/W Street : Ham Rd / Harriman Hill Rd
 City/State : Raymond, NH
 Weather : Clear



Accurate Counts

978-664-2565

N/S Street : Nottingham Road
 E/W Street : Ham Rd / Harriman Hill Rd
 City/State : Raymond, NH
 Weather : Clear

File Name : 9845001A
 Site Code : 98450001
 Start Date : 10/3/2023
 Page No : 1

Groups Printed- Bikes Peds

Start Time	Nottingham Rd From North				Ham Rd From East				Nottingham Rd From South				Harriman Hill Rd From West				Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds			
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	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	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Apprch %	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Total %	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	

Start Time	Nottingham Rd From North					Ham Rd From East					Nottingham Rd From South				Harriman Hill Rd From West				Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 03:30 PM																			
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
% App. Total	0	100	0	0		0	0	0	0		0	0	0		0	0	0		
PHF	.000	.250	.000	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250

Accurate Counts

978-664-2565

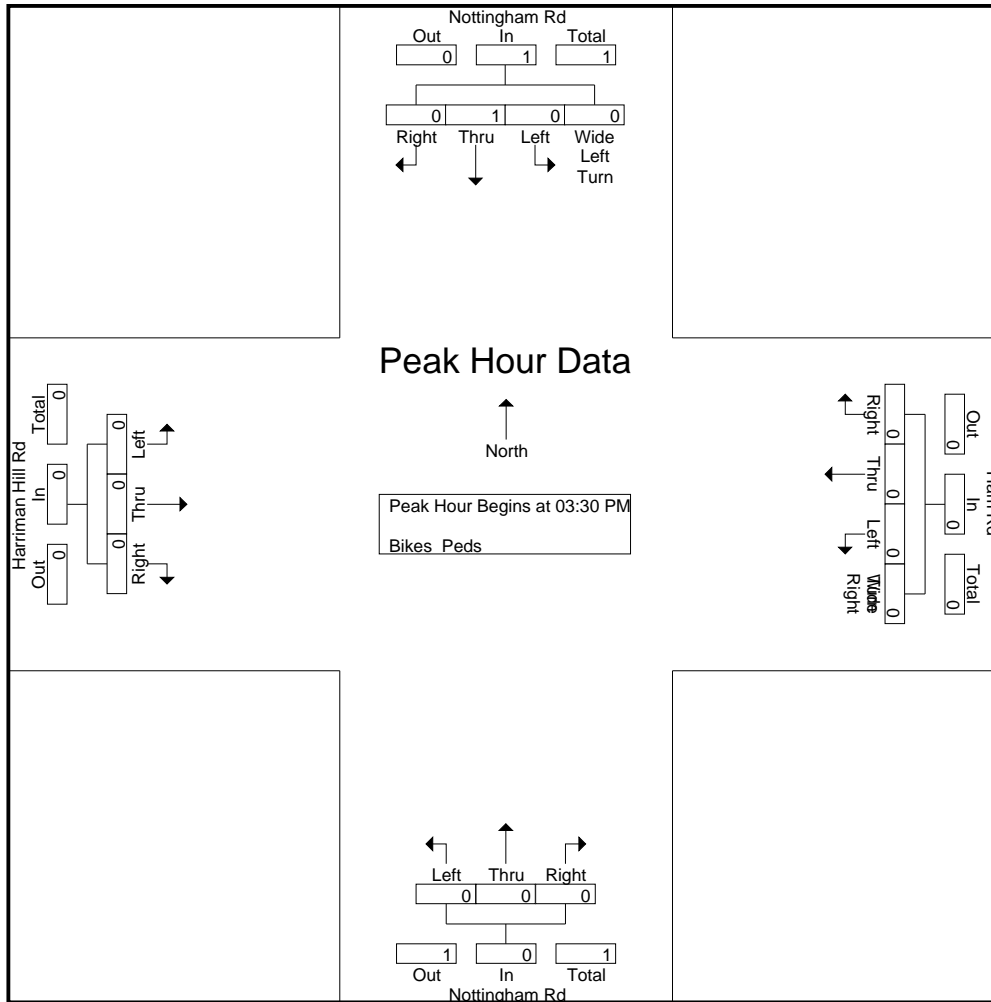
File Name : 9845001A

Site Code : 98450001

Start Date : 10/3/2023

Page No : 2

N/S Street : Nottingham Rd
 E/W Street : Ham Rd / Harriman Hill Rd
 City/State : Raymond, NH
 Weather : Clear



Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	03:30 PM					03:00 PM					03:00 PM					03:00 PM				
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	100	0	0		0	0	0	0		0	0	0	0		0	0	0	0	
PHF	.000	.250	.000	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	

Accurate Counts

978-664-2565

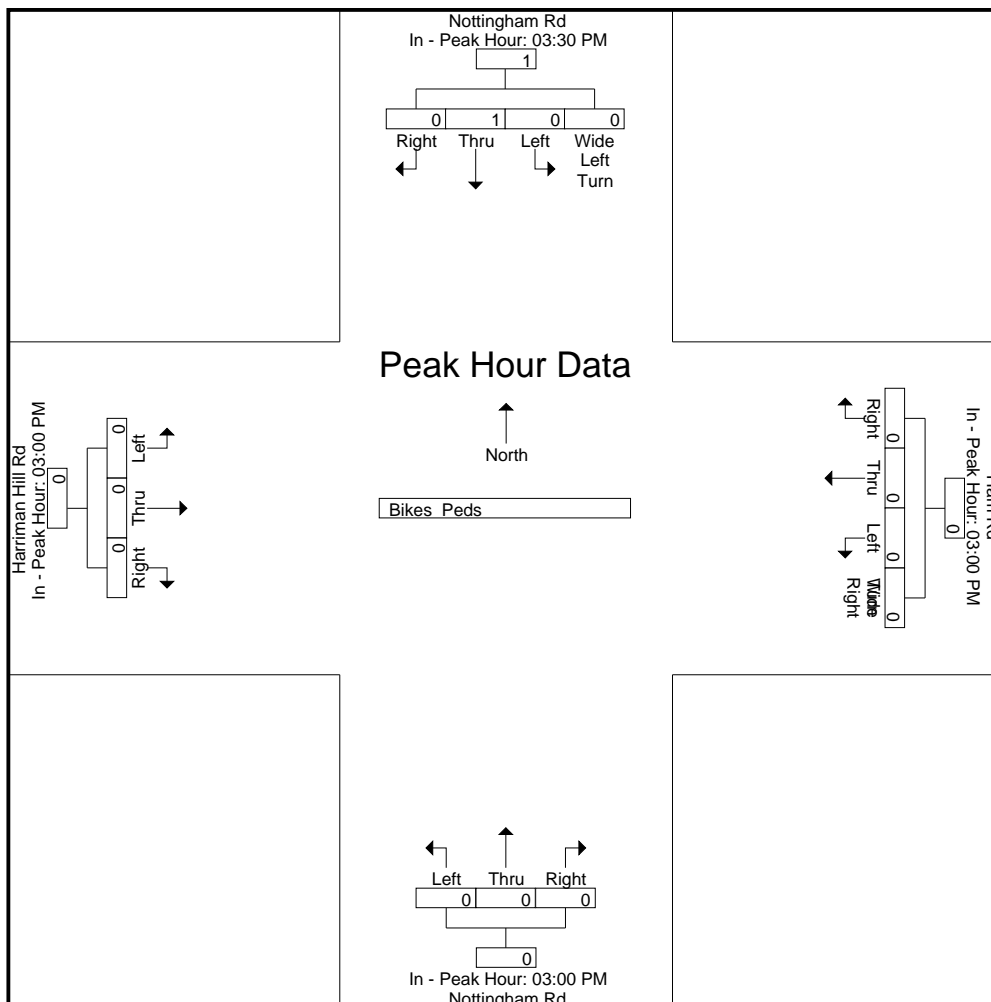
File Name : 9845001A

Site Code : 98450001

Start Date : 10/3/2023

Page No : 3

N/S Street : Nottingham Road
 E/W Street : Ham Rd / Harriman Hill Rd
 City/State : Raymond, NH
 Weather : Clear



SEASONAL ADJUSTMENT DATA

Year 2019 Monthly Data

Town: Candia
Station: 02071090
Location: NH 101 at Raymond TL (Exit 3-4)
Group: 3

<u>Month</u>	<u>ADT</u>	<u>Adjustment to Average</u>	<u>Adjustment to Peak</u>
January	36,493	1.21	1.43
February	38,272	1.15	1.37
March	39,851	1.11	1.31
April	42,655	1.03	1.23
May	46,412	0.95	1.13
June	49,295	0.89	1.06
July	51,629	0.85	1.01
August	52,308	0.84	1.00
September	47,294	0.93	1.11
October	45,996	0.96	1.14
November	41,476	1.06	1.26
December	36,831	1.20	1.42

AADT: 44,064
Peak Month: 52,308

COVID ADJUSTMENT DATA

2019 Average Count Data – Sta. 02071090

September ADT: 47,294

September Weekday Morning ADT: 3,834

September Weekday Evening ADT: 4,274

2023 Average Count Data – Sta. 02071090

September ADT: 45,832

September Weekday Morning ADT: 3,425

September Weekday Evening ADT: 4,090

COVID Adjustment

$$\text{September Adjustment: } \frac{(47,294 - 45,832)}{45,832} = 0.032$$

$$\text{Weekday Morning Adjustment: } \frac{(3,834 - 3,425)}{3,425} = 0.119$$

$$\text{Weekday Evening Adjustment: } \frac{(4,274 - 4,090)}{4,090} = 0.045$$

September 2023 volumes appear to be approximately 3.2 percent below September 2019 daily traffic volumes, 11.9 percent below September 2019 weekday morning volumes, and 4.5 percent below September 2019 weekday evening volumes. Assuming that October 2023 volumes would follow a similar pattern, an adjustment to the raw traffic volume data to account for the COVID-19 pandemic was done using the calculated September adjustments.

VEHICLE TRAVEL SPEED DATA

Accurate Counts
978-664-2565

Location : at 215 Raymond Road
Location :
City/State: Nottingham, NH
Direction: NB

Site Code: 98450001

10/3/2023 Time	0 - 15 MPH	> 15 - 20 MPH	> 20 - 25 MPH	> 25 - 30 MPH	> 30 - 35 MPH	> 35 - 40 MPH	> 40 - 45 MPH	> 45 - 50 MPH	> 50 - 55 MPH	> 55 - 60 MPH	> 60 - 65 MPH	> 65 - 70 MPH	> 70 MPH	Total
12:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	1
1:00	0	0	0	0	0	1	0	1	0	0	0	0	0	2
2:00	0	0	0	0	1	1	0	0	0	0	0	0	0	2
3:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00	0	0	0	0	2	0	1	0	0	0	0	0	0	3
5:00	0	0	0	0	8	3	5	1	0	0	1	0	0	18
6:00	0	0	2	3	5	27	15	3	1	0	0	0	0	56
7:00	0	0	2	1	21	40	18	3	0	0	0	0	0	85
8:00	0	0	1	2	13	23	13	1	0	0	0	0	0	53
9:00	0	0	0	7	12	28	17	3	2	0	0	0	0	69
10:00	0	1	1	5	19	24	12	5	1	0	0	0	0	68
11:00	1	2	1	2	17	30	20	5	5	0	0	0	0	83
12:00 PM	0	1	1	4	20	38	16	6	2	0	0	0	0	88
1:00	0	0	1	5	32	29	24	4	0	0	0	0	0	95
2:00	0	0	0	2	22	51	17	9	3	0	0	0	0	104
3:00	0	0	0	16	32	76	46	7	0	0	1	0	0	178
4:00	0	0	1	14	35	73	49	10	1	0	0	0	0	183
5:00	0	2	3	5	17	66	51	12	1	0	0	0	0	157
6:00	0	0	0	4	19	33	26	8	0	0	0	0	0	90
7:00	0	0	1	2	16	22	19	3	2	0	0	0	0	65
8:00	0	0	1	3	17	16	7	2	0	0	0	0	0	46
9:00	0	0	0	2	7	3	3	2	0	0	0	0	0	17
10:00	0	0	0	1	3	1	5	3	0	0	0	0	0	13
11:00	0	0	0	0	2	0	1	0	0	0	0	0	0	3
Total	1	6	15	78	320	586	365	88	18	0	2	0	0	1479

Percentile	15th	50th	85th	95th
Speed	33	38	43	46
Mean Speed (Average)	37.7			
10 MPH Pace Speed	35-44			
Number in Pace	950			
Percent in Pace	64.2%			
Number > 40 MPH	473			
Percent > 40 MPH	32.0%			

Accurate Counts
978-664-2565

Location : at 215 Raymond Road
Location :
City/State: Nottingham, NH
Direction: NB

Site Code: 98450001

10/4/2023 Time	0 - 15 MPH	> 15 - 20 MPH	> 20 - 25 MPH	> 25 - 30 MPH	> 30 - 35 MPH	> 35 - 40 MPH	> 40 - 45 MPH	> 45 - 50 MPH	> 50 - 55 MPH	> 55 - 60 MPH	> 60 - 65 MPH	> 65 - 70 MPH	> 70 MPH	Total
12:00 AM	0	0	0	1	1	0	2	0	0	0	0	0	0	4
1:00	0	0	0	1	2	3	1	0	0	0	0	0	0	7
2:00	0	0	0	0	2	2	1	1	0	0	0	0	0	6
3:00	0	0	0	0	2	1	2	0	0	0	0	0	0	5
4:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00	0	0	0	2	5	5	1	0	0	0	0	0	0	13
6:00	0	0	0	2	19	21	10	1	0	0	0	0	0	53
7:00	0	1	0	5	20	31	17	4	0	0	0	0	0	78
8:00	0	0	0	6	9	32	13	2	1	0	0	0	0	63
9:00	0	0	0	8	24	31	15	0	0	0	0	0	0	78
10:00	0	1	0	7	16	32	14	3	2	0	0	0	0	75
11:00	0	0	1	1	24	23	20	4	1	0	0	0	0	74
12:00 PM	0	0	0	3	21	35	19	6	0	0	0	0	0	84
1:00	0	0	0	2	14	41	24	14	0	0	0	0	0	95
2:00	0	0	2	4	21	32	24	6	1	0	0	0	0	90
3:00	0	0	5	10	36	68	56	6	1	0	1	0	0	183
4:00	0	0	0	4	20	84	40	13	3	0	0	0	0	164
5:00	0	0	1	4	25	88	52	8	1	0	0	0	0	179
6:00	0	0	0	2	19	40	31	5	1	0	0	0	0	98
7:00	0	0	0	6	16	29	9	6	2	1	0	0	0	69
8:00	0	0	4	3	10	20	15	2	1	0	0	0	0	55
9:00	0	0	0	0	4	14	10	4	0	0	0	0	0	32
10:00	0	0	0	2	1	1	1	0	0	0	0	0	0	5
11:00	0	0	0	0	0	2	1	0	0	0	0	0	0	3
Total	0	2	13	73	311	635	378	85	14	1	1	0	0	1513

Percentile	15th	50th	85th	95th
Speed	33	38	43	46
Mean Speed (Average)	37.9			
10 MPH Pace Speed	35-44			
Number in Pace	1012			
Percent in Pace	66.9%			
Number > 40 MPH	479			
Percent > 40 MPH	31.7%			

Grand Total	1	8	28	151	631	1221	743	173	32	1	3	0	0	2992
Percentile				15th	50th	85th	95th							
Speed				33	38	43	46							
Mean Speed (Average)				37.8										
10 MPH Pace Speed				35-44										
Number in Pace				1962										
Percent in Pace				65.6%										
Number > 40 MPH				952										
Percent > 40 MPH				31.8%										

Accurate Counts
978-664-2565

Location : at 215 Raymond Road
Location :
City/State: Nottingham, NH
Direction: SB

Site Code: 98450001

10/3/2023	0 - 15	> 15 -	> 20 -	> 25 -	> 30 -	> 35 -	> 40 -	> 45 -	> 50 -	> 55 -	> 60 -	> 65 -	> 70	Total
Time	MPH	20 MPH	25 MPH	30 MPH	35 MPH	40 MPH	45 MPH	50 MPH	55 MPH	60 MPH	65 MPH	70 MPH	MPH	
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00	0	0	0	0	0	0	2	0	0	0	0	0	0	2
2:00	0	0	0	0	0	0	0	1	1	0	0	0	0	2
3:00	0	0	0	0	0	1	4	7	0	0	0	0	0	12
4:00	0	0	0	0	2	2	9	12	6	3	0	0	0	34
5:00	1	0	0	0	0	1	13	22	17	2	2	0	0	58
6:00	0	0	1	3	6	6	34	59	14	2	0	0	0	119
7:00	0	0	2	3	4	4	35	82	41	9	1	1	0	178
8:00	0	0	1	1	6	16	47	36	7	1	0	0	0	115
9:00	0	0	2	1	2	10	40	12	4	0	0	0	1	72
10:00	0	1	1	2	6	35	33	22	1	0	0	0	0	101
11:00	0	0	1	0	9	19	42	11	1	0	0	0	0	83
12:00 PM	0	0	1	1	3	27	35	16	7	0	0	0	0	90
1:00	0	0	1	1	6	19	31	12	1	0	0	0	0	71
2:00	0	0	0	2	12	53	52	18	1	1	0	0	0	139
3:00	0	0	1	4	19	41	44	25	5	0	0	0	0	139
4:00	0	0	0	0	3	17	67	26	4	0	0	0	0	117
5:00	0	0	0	3	5	38	58	28	0	0	0	0	0	132
6:00	0	0	0	0	7	32	36	11	0	1	0	0	0	87
7:00	0	0	0	0	3	12	14	12	3	1	0	0	0	45
8:00	0	0	0	2	3	11	5	5	0	0	0	0	0	26
9:00	0	0	0	0	0	3	4	0	0	0	0	0	0	7
10:00	0	0	0	0	1	2	0	4	0	0	0	0	0	7
11:00	0	0	0	0	0	0	1	1	0	0	0	0	0	2
Total	1	1	11	25	99	432	692	318	50	7	1	0	1	1638

Percentile	15th	50th	85th	95th
Speed	37	42	47	49
Mean Speed (Average)	41.7			
10 MPH Pace Speed	35-44			
Number in Pace	1112			
Percent in Pace	67.9%			
Number > 40 MPH	1069			
Percent > 40 MPH	65.3%			

Accurate Counts
978-664-2565

Location : at 215 Raymond Road
Location :
City/State: Nottingham, NH
Direction: SB

Site Code: 98450001

10/4/2023 Time	0 - 15 MPH	> 15 - 20 MPH	> 20 - 25 MPH	> 25 - 30 MPH	> 30 - 35 MPH	> 35 - 40 MPH	> 40 - 45 MPH	> 45 - 50 MPH	> 50 - 55 MPH	> 55 - 60 MPH	> 60 - 65 MPH	> 65 - 70 MPH	> 70 MPH	Total
12:00 AM	0	0	0	0	0	2	0	0	0	0	0	0	0	2
1:00	0	0	0	0	1	3	0	0	0	0	0	0	0	4
2:00	0	0	0	1	0	1	1	2	0	0	0	0	0	5
3:00	0	0	0	0	1	3	4	1	2	0	0	0	0	11
4:00	0	0	0	3	1	16	10	5	1	1	0	0	0	37
5:00	0	0	2	0	0	9	30	16	4	0	0	0	1	62
6:00	0	0	1	1	7	34	43	26	3	0	0	0	0	115
7:00	0	0	0	1	7	32	91	44	12	0	0	0	0	187
8:00	0	0	0	0	4	26	55	38	6	1	0	0	0	130
9:00	0	0	0	2	3	37	37	22	4	2	1	0	0	108
10:00	0	0	0	0	8	28	47	16	3	4	0	0	0	106
11:00	1	1	1	2	4	18	40	23	2	0	0	0	0	92
12:00 PM	0	0	0	1	5	23	36	13	2	0	1	0	0	81
1:00	0	0	0	1	4	22	35	14	1	0	0	0	0	77
2:00	0	0	0	1	2	30	53	15	2	0	0	0	0	103
3:00	0	0	1	3	16	40	57	29	7	0	0	0	0	153
4:00	0	0	0	4	6	39	64	28	4	0	0	0	0	145
5:00	0	0	0	3	3	23	59	29	6	0	0	0	0	123
6:00	0	0	2	0	6	25	36	19	4	0	0	0	0	92
7:00	0	0	0	1	4	12	23	12	0	0	0	0	0	52
8:00	0	0	0	0	0	4	10	6	3	1	0	0	0	24
9:00	0	0	0	0	0	2	10	1	2	0	0	0	0	15
10:00	0	0	0	0	0	3	4	1	0	0	0	0	0	8
11:00	0	0	0	0	0	0	0	1	0	0	0	0	0	1
Total	1	1	7	24	82	432	745	361	68	9	2	0	1	1733

Percentile	15th	50th	85th	95th
Speed	38	42	47	50
Mean Speed (Average)	42.1			
10 MPH Pace Speed	35-44			
Number in Pace	1164			
Percent in Pace	67.2%			
Number > 40 MPH	1186			
Percent > 40 MPH	68.4%			

Grand Total	2	2	18	49	181	864	1437	679	118	16	3	0	2	3371
Percentile			15th	50th	85th	95th								
Speed			37	42	47	49								
Mean Speed (Average)			41.9											
10 MPH Pace Speed			35-44											
Number in Pace			2276											
Percent in Pace			67.5%											
Number > 40 MPH			2255											
Percent > 40 MPH			66.9%											

Accurate Counts
978-664-2565

Location : at 215 Raymond Road
Location :
City/State: Nottingham, NH
Direction: Combined

Site Code: 98450001

10/3/2023	0 - 15	> 15 -	> 20 -	> 25 -	> 30 -	> 35 -	> 40 -	> 45 -	> 50 -	> 55 -	> 60 -	> 65 -	> 70	Total
Time	MPH	20 MPH	25 MPH	30 MPH	35 MPH	40 MPH	45 MPH	50 MPH	55 MPH	60 MPH	65 MPH	70 MPH	MPH	
12:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	1
1:00	0	0	0	0	0	3	0	1	0	0	0	0	0	4
2:00	0	0	0	0	1	1	1	1	0	0	0	0	0	4
3:00	0	0	0	0	1	4	7	0	0	0	0	0	0	12
4:00	0	0	0	2	4	9	13	6	3	0	0	0	0	37
5:00	1	0	0	0	9	16	27	18	2	2	1	0	0	76
6:00	0	0	3	6	11	61	74	17	3	0	0	0	0	175
7:00	0	0	4	4	25	75	100	44	9	1	1	0	0	263
8:00	0	0	2	3	19	39	60	37	7	1	0	0	0	168
9:00	0	0	2	8	14	38	57	15	6	0	0	0	1	141
10:00	0	2	2	7	25	59	45	27	2	0	0	0	0	169
11:00	1	2	2	2	26	49	62	16	6	0	0	0	0	166
12:00 PM	0	1	2	5	23	65	51	22	9	0	0	0	0	178
1:00	0	0	2	6	38	48	55	16	1	0	0	0	0	166
2:00	0	0	0	4	34	104	69	27	4	1	0	0	0	243
3:00	0	0	1	20	51	117	90	32	5	0	1	0	0	317
4:00	0	0	1	14	38	90	116	36	5	0	0	0	0	300
5:00	0	2	3	8	22	104	109	40	1	0	0	0	0	289
6:00	0	0	0	4	26	65	62	19	0	1	0	0	0	177
7:00	0	0	1	2	19	34	33	15	5	1	0	0	0	110
8:00	0	0	1	5	20	27	12	7	0	0	0	0	0	72
9:00	0	0	0	2	7	6	7	2	0	0	0	0	0	24
10:00	0	0	0	1	4	3	5	7	0	0	0	0	0	20
11:00	0	0	0	0	2	0	2	1	0	0	0	0	0	5
Total	2	7	26	103	419	1018	1057	406	68	7	3	0	1	3117

Percentile	15th	50th	85th	95th
Speed	34	40	45	48
Mean Speed (Average)	39.8			
10 MPH Pace Speed	35-44			
Number in Pace	2062			
Percent in Pace	66.2%			
Number > 40 MPH	1542			
Percent > 40 MPH	49.5%			

Accurate Counts
978-664-2565

Location : at 215 Raymond Road
Location :
City/State: Nottingham, NH
Direction: Combined

Site Code: 98450001

10/4/2023	0 - 15	> 15 -	> 20 -	> 25 -	> 30 -	> 35 -	> 40 -	> 45 -	> 50 -	> 55 -	> 60 -	> 65 -	> 70	Total
Time	MPH	20 MPH	25 MPH	30 MPH	35 MPH	40 MPH	45 MPH	50 MPH	55 MPH	60 MPH	65 MPH	70 MPH	MPH	
12:00 AM	0	0	0	1	1	2	2	0	0	0	0	0	0	6
1:00	0	0	0	1	3	6	1	0	0	0	0	0	0	11
2:00	0	0	0	1	2	3	2	3	0	0	0	0	0	11
3:00	0	0	0	0	3	4	6	1	2	0	0	0	0	16
4:00	0	0	0	3	1	16	10	5	1	1	0	0	0	37
5:00	0	0	2	2	5	14	31	16	4	0	0	0	1	75
6:00	0	0	1	3	26	55	53	27	3	0	0	0	0	168
7:00	0	1	0	6	27	63	108	48	12	0	0	0	0	265
8:00	0	0	0	6	13	58	68	40	7	1	0	0	0	193
9:00	0	0	0	10	27	68	52	22	4	2	1	0	0	186
10:00	0	1	0	7	24	60	61	19	5	4	0	0	0	181
11:00	1	1	2	3	28	41	60	27	3	0	0	0	0	166
12:00 PM	0	0	0	4	26	58	55	19	2	0	1	0	0	165
1:00	0	0	0	3	18	63	59	28	1	0	0	0	0	172
2:00	0	0	2	5	23	62	77	21	3	0	0	0	0	193
3:00	0	0	6	13	52	108	113	35	8	0	1	0	0	336
4:00	0	0	0	8	26	123	104	41	7	0	0	0	0	309
5:00	0	0	1	7	28	111	111	37	7	0	0	0	0	302
6:00	0	0	2	2	25	65	67	24	5	0	0	0	0	190
7:00	0	0	0	7	20	41	32	18	2	1	0	0	0	121
8:00	0	0	4	3	10	24	25	8	4	1	0	0	0	79
9:00	0	0	0	0	4	16	20	5	2	0	0	0	0	47
10:00	0	0	0	2	1	4	5	1	0	0	0	0	0	13
11:00	0	0	0	0	0	2	1	1	0	0	0	0	0	4
Total	1	3	20	97	393	1067	1123	446	82	10	3	0	1	3246

Percentile	15th	50th	85th	95th
Speed	35	40	45	48
Mean Speed (Average)	40.1			
10 MPH Pace Speed	35-44			
Number in Pace	2175			
Percent in Pace	67.0%			
Number > 40 MPH	1665			
Percent > 40 MPH	51.3%			

Grand Total	3	10	46	200	812	2085	2180	852	150	17	6	0	2	6363
Percentile	15th	50th	85th	95th										
Speed	35	40	45	48										
Mean Speed (Average)	40.0													
10 MPH Pace Speed	35-44													
Number in Pace	4238													
Percent in Pace	66.6%													
Number > 40 MPH	3207													
Percent > 40 MPH	50.4%													

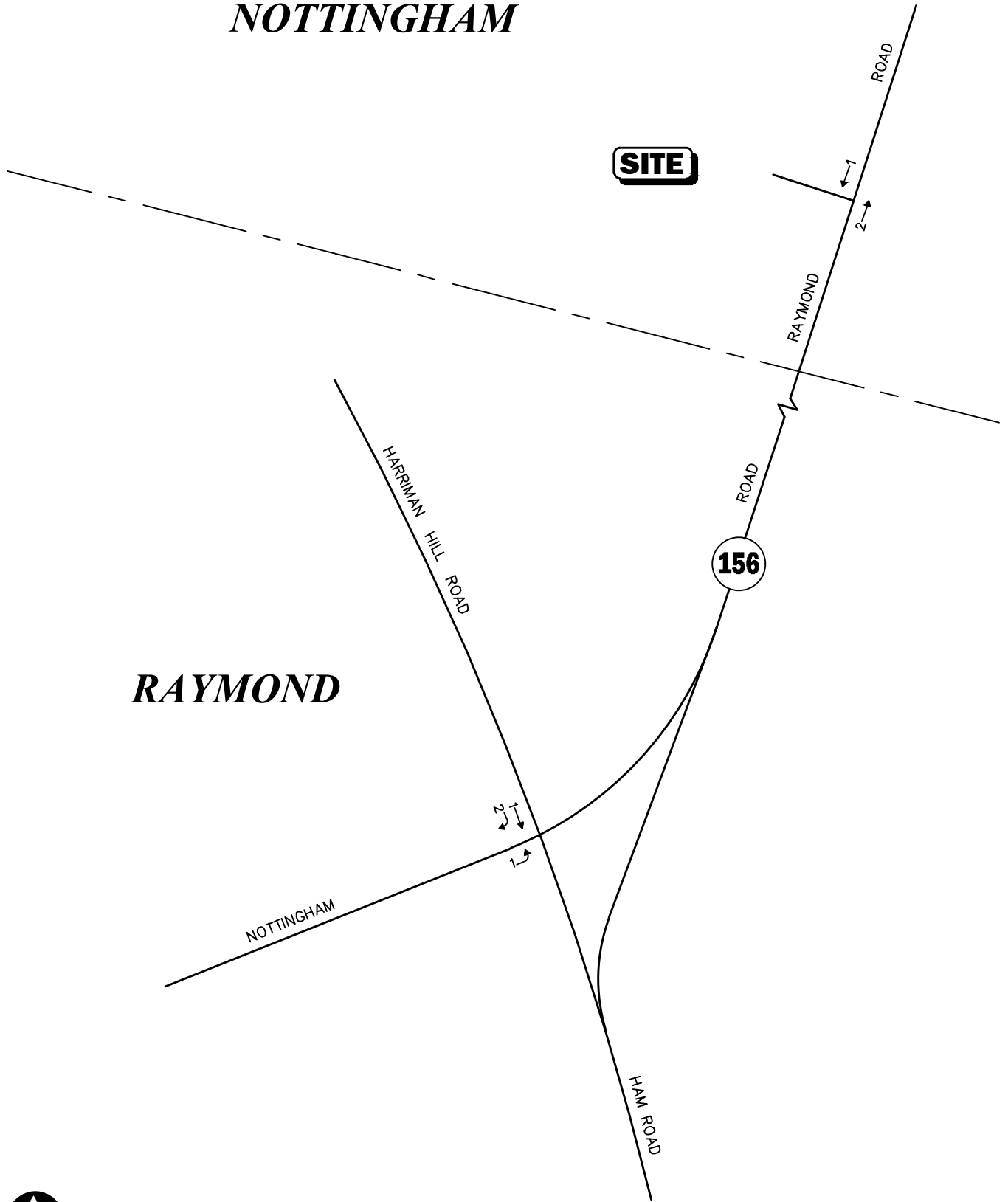
GENERAL BACKGROUND TRAFFIC GROWTH

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
Nottingham	NH Route 156	At Raymond Town Line			2,600			2,400	2,472	2,521	2,859	2,916	2,951	4.32%
Nottingham	Stage Road (NH Route 152)	North of Priest Road			3,200			3,100	3,193	3,257	3,180	3,244	3,283	1.17%
Raymond	NH Route 101	Exit 4 WB Off-Ramp							1,100	1,122	1,144	1,014	1,026	-1.55%
Raymond	NH Route 101	Exit 4 EB On-Ramp							1,300	1,326	1,353	1,186	1,200	-1.78%
Raymond	Scribner Road	east of Gile Road					1,600	1,635	1,684	1,661	1,694	1,725	1,533	-0.58%
Raymond	Main Street	over Lamprey River					3,500	3,577	3,684	3,687	3,761	3,836	3,432	-0.21%
Raymond	NH route 101	between exits 4 and 5							41,000	41,820	42,656	43,951	44,478	2.06%
Nottingham	Harvey Mill Road (NH Route 152)	At Lee Town Line			2,600			2,800	2,884	2,942	2,981	3,041	3,077	1.91%
														0.67%

BACKGROUND DEVELOPMENT NETWORKS

NOTTINGHAM



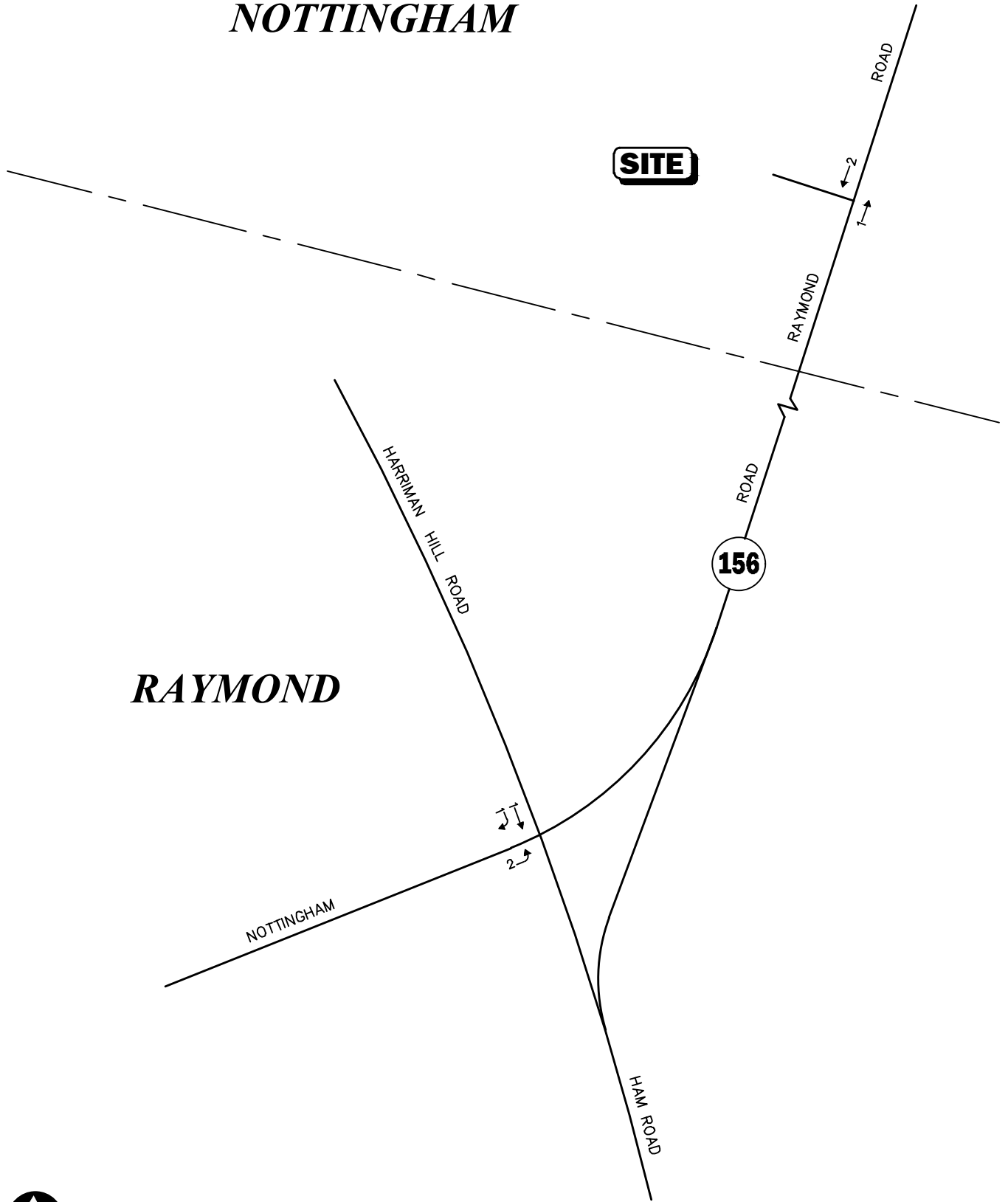
 Not To Scale



Figure A-1

**Proposed Residential Development
Moors Road
Weekday Morning
Peak-Hour Traffic Volumes**

NOTTINGHAM



RAYMOND

 Not To Scale



Figure A-2

Proposed Residential Development
Moors Road
Weekday Evening
Peak-Hour Traffic Volumes

TRIP-GENERATION CALCUALTIONS

Graph Look Up

ITETripGen Web-based App

- 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:
210

LAND USE GROUP:
(200-299) Residential

LAND USE :
210 - Single-Family Detached Housing

LAND USE SUBCATEGORY:
All Sites

SETTING/LOCATION:
General Urban/Suburban

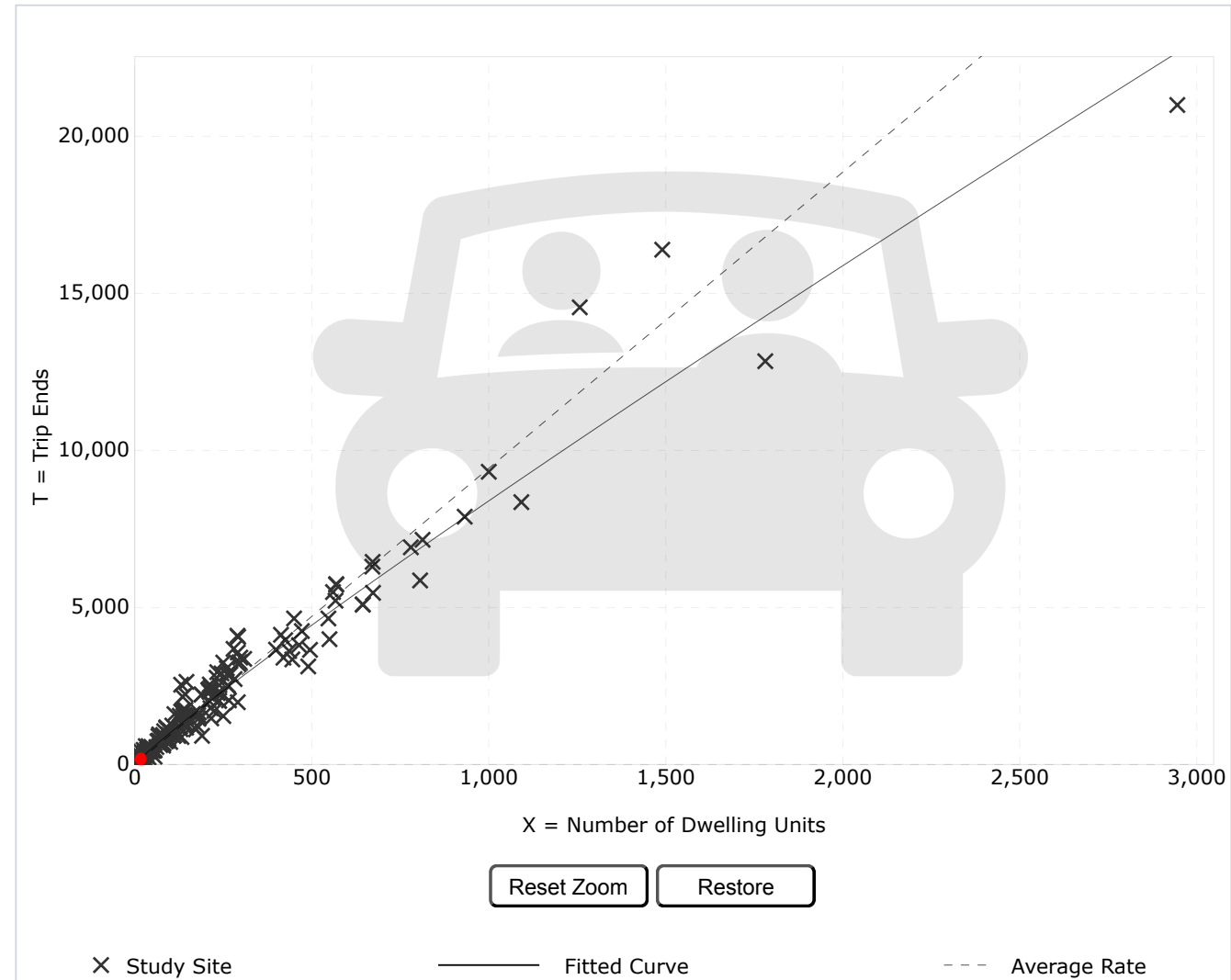
INDEPENDENT VARIABLE (IV):
Dwelling Units

TIME PERIOD:
Weekday

TRIP TYPE:
Vehicle

ENTER IV VALUE TO CALCULATE TRIPS:
17 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:
Single-Family Detached Housing (210) [Click for Description and Data Plots](#)

Independent Variable:
Dwelling Units

Time Period:
Weekday

Setting/Location:
General Urban/Suburban

Trip Type:
Vehicle

Number of Studies:
174

Avg. Num. of Dwelling Units:
246

Average Rate:
9.43

Range of Rates:
4.45 - 22.61

Standard Deviation:
2.13

Fitted Curve Equation:
 $\ln(T) = 0.92 \ln(X) + 2.68$

R²:
0.95

Directional Distribution:
50% entering, 50% exiting

Calculated Trip Ends:
Average Rate: 160 (Total), 80 (Entry), 80 (Exit)
Fitted Curve: 198 (Total), 99 (Entry), 99 (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

Query Filter

DATA SOURCE:
Trip Generation Manual, 11th Ed

SEARCH BY LAND USE CODE:
210

LAND USE GROUP:
(200-299) Residential

LAND USE :
210 - Single-Family Detached Housing

LAND USE SUBCATEGORY:
All Sites

SETTING/LOCATION:
General Urban/Suburban

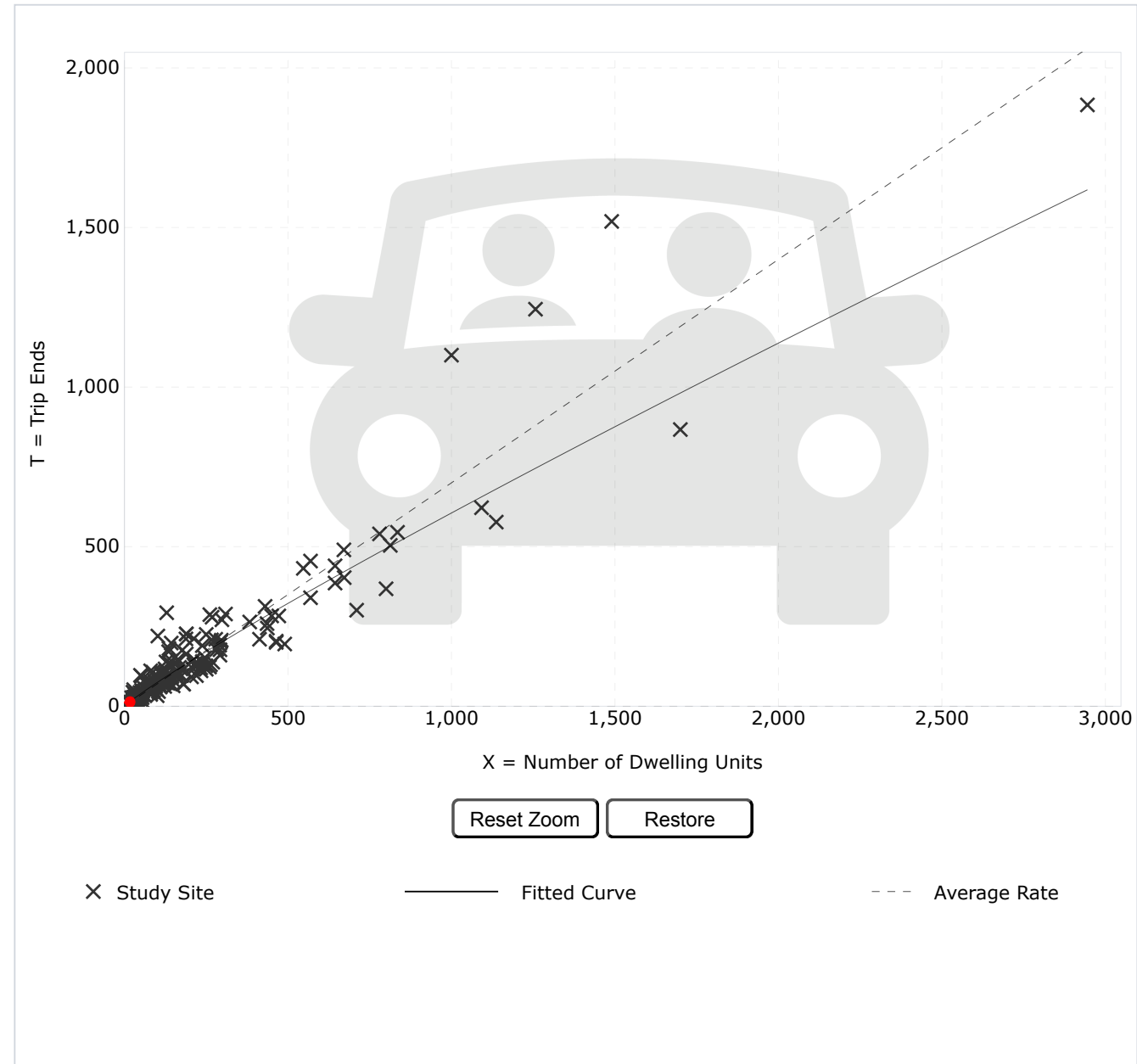
INDEPENDENT VARIABLE (IV):
Dwelling Units

TIME PERIOD:
Weekday, Peak Hour of Adjacent Street Traffic

TRIP TYPE:
Vehicle

ENTER IV VALUE TO CALCULATE TRIPS:
17 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:
Single-Family Detached Housing (210) [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:
192

Avg. Num. of Dwelling Units:
226

Average Rate:
0.70

Range of Rates:
0.27 - 2.27

Standard Deviation:
0.24

Fitted Curve Equation:
 $\ln(T) = 0.91 \ln(X) + 0.12$

R²:
0.90

Directional Distribution:
25% entering, 75% exiting

Calculated Trip Ends:
Average Rate: 12 (Total), 3 (Entry), 9 (Exit)
Fitted Curve: 15 (Total), 4 (Entry), 11 (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

Query Filter

DATA SOURCE:

Trip Generation Manual, 11th Ed

SEARCH BY LAND USE CODE:

210

LAND USE GROUP:

(200-299) Residential

LAND USE :

210 - Single-Family Detached Housing

LAND USE SUBCATEGORY:

All Sites

SETTING/LOCATION:

General Urban/Suburban

INDEPENDENT VARIABLE (IV):

Dwelling Units

TIME PERIOD:

Weekday, Peak Hour of Adjacent Street Traffic

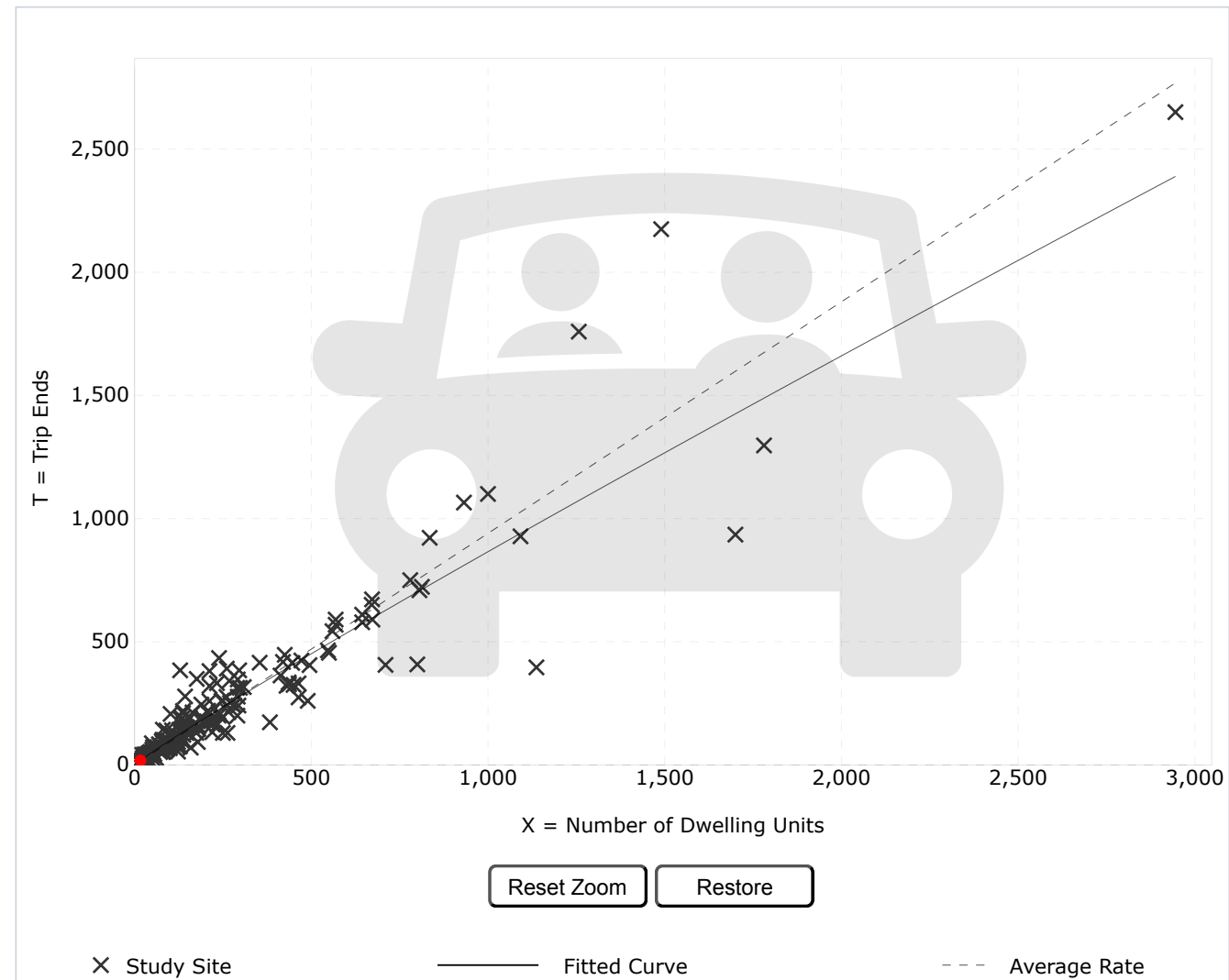
TRIP TYPE:

Vehicle

ENTER IV VALUE TO CALCULATE TRIPS:

17 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:
 Single-Family Detached Housing (210) [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:
 208

Avg. Num. of Dwelling Units:
 248

Average Rate:
 0.94

Range of Rates:
 0.35 - 2.98

Standard Deviation:
 0.31

Fitted Curve Equation:
 $\ln(T) = 0.94 \ln(X) + 0.27$

R²:
 0.92

Directional Distribution:
 63% entering, 37% exiting

Calculated Trip Ends:
 Average Rate: 16 (Total), 10 (Entry), 6 (Exit)
Fitted Curve: 19 (Total), 12 (Entry), 7 (Exit)

Add-ons to do more

Try OTISS Pro

TRIP-DISTRIBUTION DATA

Proposed Residential Development
Nottingham, New Hampshire

Residence	Workplace	Number	Raymond Road (NH Route 156) (North)	Ham Road (Southeast)	Nottingham Road (NH Route 156) (Southwest)	Harriman Hill Road (Northwest)		
Nottingham, NH	Nottingham, NH	444	100%	444	0	0		
Nottingham, NH	Portsmouth, NH	270	0	50%	135	0		
Nottingham, NH	Exeter, NH	216	0	0	100%	216		
Nottingham, NH	Epping, NH	133	0	100%	133	0		
Nottingham, NH	Manchester, NH	108	0	0	100%	108		
Nottingham, NH	Hampton, NH	107	0	50%	54	54		
Nottingham, NH	Lee, NH	92	100%	92	0	0		
Nottingham, NH	Dover, NH	75	50%	38	50%	0		
Nottingham, NH	Northwood, NH	73	100%	73	0	0		
Nottingham, NH	Durham, NH	72	100%	72	0	0		
Nottingham, NH	Bedford, NH	68	0	0	100%	68		
Nottingham, NH	Rochester, NH	67	100%	67	0	0		
Nottingham, NH	Concord, NH	66	0	0	100%	66		
Nottingham, NH	Salem, NH	65	0	0	100%	65		
Nottingham, NH	Londonderry, NH	58	0	0	100%	58		
Nottingham, NH	Stratham, NH	55	0	50%	28	50%	28	
Nottingham, NH	Haverhill, MA	46	0	50%	23	50%	23	
Nottingham, NH	Raymond, NH	44	0	0	80%	35	20%	9
Nottingham, NH	North Hampton, NH	42	0	0	100%	42	0	
Nottingham, NH	Brentwood, NH	37	0	50%	19	50%	19	0
		2,138		786	428	916		9
				36.7%	20.0%	42.8%		0.4%
		<u>SAY</u>		35%	20%	45%		0%

CAPACITY ANALYSIS WORKSHEETS

NH Route 156 at Ham Road and Harriman Hill Road
NH Route 156 at the Ham Road Connector
Ham Road at the Ham Road Connector
NH Route 156 at the Project Site Driveway

NH Route 156 at Ham Road and Harriman Hill Road

2023 Existing Weekday Morning
 1: Ham Road/Harriman Hill Road & NH Route 156

11/01/2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	4	93	4	51	237	4	5	3	0	3	15	13
Future Volume (vph)	4	93	4	51	237	4	5	3	0	3	15	13
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.995			0.998						0.943	
Flt Protected		0.998			0.991			0.969			0.995	
Satd. Flow (prot)	0	1775	0	0	1797	0	0	1841	0	0	1783	0
Flt Permitted		0.998			0.991			0.969			0.995	
Satd. Flow (perm)	0	1775	0	0	1797	0	0	1841	0	0	1783	0
Adj. Flow (vph)	4	99	4	58	269	5	7	4	0	5	25	22
Lane Group Flow (vph)	0	107	0	0	332	0	0	11	0	0	52	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Control Type: Unsignalized

2023 Existing Weekday Morning
1: Ham Road/Harriman Hill Road & NH Route 156

11/01/2023

Intersection												
Int Delay, s/veh	2.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	93	4	51	237	4	5	3	0	3	15	13
Future Vol, veh/h	4	93	4	51	237	4	5	3	0	3	15	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	88	88	88	71	71	71	60	60	60
Heavy Vehicles, %	0	3	0	3	5	0	0	0	2	0	0	0
Mvmt Flow	4	99	4	58	269	5	7	4	0	5	25	22

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	274	0	0	103	0	0	520	499	101	499	499	272
Stage 1	-	-	-	-	-	-	109	109	-	388	388	-
Stage 2	-	-	-	-	-	-	411	390	-	111	111	-
Critical Hdwy	4.1	-	-	4.13	-	-	7.1	6.5	6.22	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.227	-	-	3.5	4	3.318	3.5	4	3.3
Pot Cap-1 Maneuver	1301	-	-	1483	-	-	470	476	954	485	476	772
Stage 1	-	-	-	-	-	-	901	809	-	640	612	-
Stage 2	-	-	-	-	-	-	622	611	-	899	807	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1301	-	-	1483	-	-	422	453	954	464	453	772
Mov Cap-2 Maneuver	-	-	-	-	-	-	422	453	-	464	453	-
Stage 1	-	-	-	-	-	-	898	807	-	638	584	-
Stage 2	-	-	-	-	-	-	552	583	-	892	805	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			1.3			13.5			12.2		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	433	1301	-	-	1483	-	-	549
HCM Lane V/C Ratio	0.026	0.003	-	-	0.039	-	-	0.094
HCM Control Delay (s)	13.5	7.8	0	-	7.5	0	-	12.2
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0.1	-	-	0.3

2023 Existing Weekday Evening
 1: Ham Road/Harriman Hill Road & NH Route 156

11/01/2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	20	275	8	24	166	4	6	15	1	5	4	8
Future Volume (vph)	20	275	8	24	166	4	6	15	1	5	4	8
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996			0.997			0.992			0.937	
Flt Protected		0.997			0.994			0.987			0.985	
Satd. Flow (prot)	0	1807	0	0	1854	0	0	1860	0	0	1754	0
Flt Permitted		0.997			0.994			0.987			0.985	
Satd. Flow (perm)	0	1807	0	0	1854	0	0	1860	0	0	1754	0
Adj. Flow (vph)	22	309	9	28	193	5	9	23	2	9	7	14
Lane Group Flow (vph)	0	340	0	0	226	0	0	34	0	0	30	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Control Type: Unsignalized

2023 Existing Weekday Evening
1: Ham Road/Harriman Hill Road & NH Route 156

11/01/2023

Intersection												
Int Delay, s/veh	2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	20	275	8	24	166	4	6	15	1	5	4	8
Future Vol, veh/h	20	275	8	24	166	4	6	15	1	5	4	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	86	86	86	66	66	66	58	58	58
Heavy Vehicles, %	0	1	0	0	1	33	0	0	0	0	0	0
Mvmt Flow	22	309	9	28	193	5	9	23	2	9	7	14

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	198	0	0	318	0	0	620	612	314	622	614	196
Stage 1	-	-	-	-	-	-	358	358	-	252	252	-
Stage 2	-	-	-	-	-	-	262	254	-	370	362	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1387	-	-	1253	-	-	403	411	731	402	410	850
Stage 1	-	-	-	-	-	-	664	631	-	757	702	-
Stage 2	-	-	-	-	-	-	747	701	-	654	629	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1387	-	-	1253	-	-	378	393	731	371	392	850
Mov Cap-2 Maneuver	-	-	-	-	-	-	378	393	-	371	392	-
Stage 1	-	-	-	-	-	-	651	619	-	743	684	-
Stage 2	-	-	-	-	-	-	709	683	-	617	617	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	1	14.9	12.4
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	397	1387	-	-	1253	-	-	514
HCM Lane V/C Ratio	0.084	0.016	-	-	0.022	-	-	0.057
HCM Control Delay (s)	14.9	7.6	0	-	7.9	0	-	12.4
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.3	0	-	-	0.1	-	-	0.2

2024 No-Build Weekday Morning
 1: Ham Road/Harriman Hill Road & NH Route 156

11/07/2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	5	94	4	52	239	4	5	3	0	3	16	15
Future Volume (vph)	5	94	4	52	239	4	5	3	0	3	16	15
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.995			0.998						0.941	
Flt Protected		0.998			0.991			0.969			0.996	
Satd. Flow (prot)	0	1775	0	0	1797	0	0	1841	0	0	1781	0
Flt Permitted		0.998			0.991			0.969			0.996	
Satd. Flow (perm)	0	1775	0	0	1797	0	0	1841	0	0	1781	0
Adj. Flow (vph)	5	100	4	59	272	5	7	4	0	5	27	25
Lane Group Flow (vph)	0	109	0	0	336	0	0	11	0	0	57	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Control Type: Unsignalized

2024 No-Build Weekday Morning
 1: Ham Road/Harriman Hill Road & NH Route 156

11/07/2023

Intersection												
Int Delay, s/veh	2.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	94	4	52	239	4	5	3	0	3	16	15
Future Vol, veh/h	5	94	4	52	239	4	5	3	0	3	16	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	88	88	88	71	71	71	60	60	60
Heavy Vehicles, %	0	3	0	3	5	0	0	0	2	0	0	0
Mvmt Flow	5	100	4	59	272	5	7	4	0	5	27	25

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	277	0	0	104	0	0	531	507	102	507	507	275
Stage 1	-	-	-	-	-	-	112	112	-	393	393	-
Stage 2	-	-	-	-	-	-	419	395	-	114	114	-
Critical Hdwy	4.1	-	-	4.13	-	-	7.1	6.5	6.22	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.227	-	-	3.5	4	3.318	3.5	4	3.3
Pot Cap-1 Maneuver	1298	-	-	1481	-	-	462	471	953	479	471	769
Stage 1	-	-	-	-	-	-	898	807	-	636	609	-
Stage 2	-	-	-	-	-	-	616	608	-	896	805	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1298	-	-	1481	-	-	410	447	953	457	447	769
Mov Cap-2 Maneuver	-	-	-	-	-	-	410	447	-	457	447	-
Stage 1	-	-	-	-	-	-	894	804	-	633	580	-
Stage 2	-	-	-	-	-	-	542	579	-	888	802	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.4			1.3			13.7			12.3		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	423	1298	-	-	1481	-	-	550
HCM Lane V/C Ratio	0.027	0.004	-	-	0.04	-	-	0.103
HCM Control Delay (s)	13.7	7.8	0	-	7.5	0	-	12.3
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0.1	-	-	0.3

2024 No-Build Weekday Evening
 1: Ham Road/Harriman Hill Road & NH Route 156

11/07/2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	22	278	8	24	168	4	6	16	1	5	5	9
Future Volume (vph)	22	278	8	24	168	4	6	16	1	5	5	9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996			0.997			0.992			0.936	
Flt Protected		0.996			0.994			0.987			0.987	
Satd. Flow (prot)	0	1806	0	0	1854	0	0	1860	0	0	1755	0
Flt Permitted		0.996			0.994			0.987			0.987	
Satd. Flow (perm)	0	1806	0	0	1854	0	0	1860	0	0	1755	0
Adj. Flow (vph)	25	312	9	28	195	5	9	24	2	9	9	16
Lane Group Flow (vph)	0	346	0	0	228	0	0	35	0	0	34	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Control Type: Unsignalized

2024 No-Build Weekday Evening
 1: Ham Road/Harriman Hill Road & NH Route 156

11/07/2023

Intersection												
Int Delay, s/veh	2.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	22	278	8	24	168	4	6	16	1	5	5	9
Future Vol, veh/h	22	278	8	24	168	4	6	16	1	5	5	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	86	86	86	66	66	66	58	58	58
Heavy Vehicles, %	0	1	0	0	1	33	0	0	0	0	0	0
Mvmt Flow	25	312	9	28	195	5	9	24	2	9	9	16

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	200	0	0	321	0	0	633	623	317	634	625	198
Stage 1	-	-	-	-	-	-	367	367	-	254	254	-
Stage 2	-	-	-	-	-	-	266	256	-	380	371	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1384	-	-	1250	-	-	395	405	728	395	404	848
Stage 1	-	-	-	-	-	-	657	626	-	755	701	-
Stage 2	-	-	-	-	-	-	744	699	-	646	623	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1384	-	-	1250	-	-	368	386	728	362	385	848
Mov Cap-2 Maneuver	-	-	-	-	-	-	368	386	-	362	385	-
Stage 1	-	-	-	-	-	-	643	612	-	738	683	-
Stage 2	-	-	-	-	-	-	703	682	-	605	609	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	1	15.2	12.6
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	389	1384	-	-	1250	-	-	508
HCM Lane V/C Ratio	0.09	0.018	-	-	0.022	-	-	0.064
HCM Control Delay (s)	15.2	7.6	0	-	7.9	0	-	12.6
HCM Lane LOS	C	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.3	0.1	-	-	0.1	-	-	0.2

2034 No-Build Weekday Morning
 1: Ham Road/Harriman Hill Road & NH Route 156

11/07/2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	5	104	4	57	264	4	6	3	0	3	18	17
Future Volume (vph)	5	104	4	57	264	4	6	3	0	3	18	17
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.995			0.998						0.940	
Flt Protected		0.998			0.991			0.968			0.996	
Satd. Flow (prot)	0	1775	0	0	1797	0	0	1839	0	0	1779	0
Flt Permitted		0.998			0.991			0.968			0.996	
Satd. Flow (perm)	0	1775	0	0	1797	0	0	1839	0	0	1779	0
Adj. Flow (vph)	5	111	4	65	300	5	8	4	0	5	30	28
Lane Group Flow (vph)	0	120	0	0	370	0	0	12	0	0	63	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Control Type: Unsignalized

2034 No-Build Weekday Morning
 1: Ham Road/Harriman Hill Road & NH Route 156

11/07/2023

Intersection												
Int Delay, s/veh	2.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	104	4	57	264	4	6	3	0	3	18	17
Future Vol, veh/h	5	104	4	57	264	4	6	3	0	3	18	17
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	88	88	88	71	71	71	60	60	60
Heavy Vehicles, %	0	3	0	3	5	0	0	0	2	0	0	0
Mvmt Flow	5	111	4	65	300	5	8	4	0	5	30	28

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	305	0	0	115	0	0	585	558	113	558	558	303
Stage 1	-	-	-	-	-	-	123	123	-	433	433	-
Stage 2	-	-	-	-	-	-	462	435	-	125	125	-
Critical Hdwy	4.1	-	-	4.13	-	-	7.1	6.5	6.22	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.227	-	-	3.5	4	3.318	3.5	4	3.3
Pot Cap-1 Maneuver	1267	-	-	1468	-	-	425	441	940	443	441	741
Stage 1	-	-	-	-	-	-	886	798	-	605	585	-
Stage 2	-	-	-	-	-	-	584	584	-	884	796	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1267	-	-	1468	-	-	370	416	940	420	416	741
Mov Cap-2 Maneuver	-	-	-	-	-	-	370	416	-	420	416	-
Stage 1	-	-	-	-	-	-	882	795	-	603	554	-
Stage 2	-	-	-	-	-	-	503	553	-	876	793	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			1.3			14.7			12.9		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	384	1267	-	-	1468	-	-	518
HCM Lane V/C Ratio	0.033	0.004	-	-	0.044	-	-	0.122
HCM Control Delay (s)	14.7	7.9	0	-	7.6	0	-	12.9
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0.1	-	-	0.4

2034 No-Build Weekday Evening
 1: Ham Road/Harriman Hill Road & NH Route 156

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	24	307	9	27	185	4	7	18	1	6	5	10
Future Volume (vph)	24	307	9	27	185	4	7	18	1	6	5	10
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996			0.997			0.993			0.936	
Flt Protected		0.996			0.994			0.986			0.986	
Satd. Flow (prot)	0	1806	0	0	1855	0	0	1860	0	0	1754	0
Flt Permitted		0.996			0.994			0.986			0.986	
Satd. Flow (perm)	0	1806	0	0	1855	0	0	1860	0	0	1754	0
Adj. Flow (vph)	27	345	10	31	215	5	11	27	2	10	9	17
Lane Group Flow (vph)	0	382	0	0	251	0	0	40	0	0	36	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Control Type: Unsignalized

2034 No-Build Weekday Evening
 1: Ham Road/Harriman Hill Road & NH Route 156

11/07/2023

Intersection												
Int Delay, s/veh	2.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	24	307	9	27	185	4	7	18	1	6	5	10
Future Vol, veh/h	24	307	9	27	185	4	7	18	1	6	5	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	86	86	86	66	66	66	58	58	58
Heavy Vehicles, %	0	1	0	0	1	33	0	0	0	0	0	0
Mvmt Flow	27	345	10	31	215	5	11	27	2	10	9	17

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	220	0	0	355	0	0	697	686	350	699	689	218
Stage 1	-	-	-	-	-	-	404	404	-	280	280	-
Stage 2	-	-	-	-	-	-	293	282	-	419	409	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1361	-	-	1215	-	-	358	373	698	357	371	827
Stage 1	-	-	-	-	-	-	627	603	-	731	683	-
Stage 2	-	-	-	-	-	-	719	681	-	616	600	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1361	-	-	1215	-	-	330	353	698	322	351	827
Mov Cap-2 Maneuver	-	-	-	-	-	-	330	353	-	322	351	-
Stage 1	-	-	-	-	-	-	611	588	-	713	663	-
Stage 2	-	-	-	-	-	-	675	661	-	571	585	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	1	16.5	13.4
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	353	1361	-	-	1215	-	-	467
HCM Lane V/C Ratio	0.112	0.02	-	-	0.026	-	-	0.078
HCM Control Delay (s)	16.5	7.7	0	-	8	0	-	13.4
HCM Lane LOS	C	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.4	0.1	-	-	0.1	-	-	0.3

2024 Build Weekday Morning

1: Ham Road/Harriman Hill Road & NH Route 156

11/07/2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	5	96	4	53	244	4	5	3	0	3	16	15
Future Volume (vph)	5	96	4	53	244	4	5	3	0	3	16	15
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.995			0.998						0.941	
Flt Protected		0.998			0.991			0.969			0.996	
Satd. Flow (prot)	0	1775	0	0	1797	0	0	1841	0	0	1781	0
Flt Permitted		0.998			0.991			0.969			0.996	
Satd. Flow (perm)	0	1775	0	0	1797	0	0	1841	0	0	1781	0
Adj. Flow (vph)	5	102	4	60	277	5	7	4	0	5	27	25
Lane Group Flow (vph)	0	111	0	0	342	0	0	11	0	0	57	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Control Type: Unsignalized

2024 Build Weekday Morning
 1: Ham Road/Harriman Hill Road & NH Route 156

11/07/2023

Intersection												
Int Delay, s/veh	2.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	96	4	53	244	4	5	3	0	3	16	15
Future Vol, veh/h	5	96	4	53	244	4	5	3	0	3	16	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	88	88	88	71	71	71	60	60	60
Heavy Vehicles, %	0	3	0	3	5	0	0	0	2	0	0	0
Mvmt Flow	5	102	4	60	277	5	7	4	0	5	27	25

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	282	0	0	106	0	0	540	516	104	516	516	280
Stage 1	-	-	-	-	-	-	114	114	-	400	400	-
Stage 2	-	-	-	-	-	-	426	402	-	116	116	-
Critical Hdwy	4.1	-	-	4.13	-	-	7.1	6.5	6.22	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.227	-	-	3.5	4	3.318	3.5	4	3.3
Pot Cap-1 Maneuver	1292	-	-	1479	-	-	456	466	951	473	466	764
Stage 1	-	-	-	-	-	-	896	805	-	630	605	-
Stage 2	-	-	-	-	-	-	610	604	-	894	803	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1292	-	-	1479	-	-	404	442	951	451	442	764
Mov Cap-2 Maneuver	-	-	-	-	-	-	404	442	-	451	442	-
Stage 1	-	-	-	-	-	-	892	802	-	627	576	-
Stage 2	-	-	-	-	-	-	536	575	-	886	800	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.4			1.3			13.9			12.4		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	417	1292	-	-	1479	-	-	544
HCM Lane V/C Ratio	0.027	0.004	-	-	0.041	-	-	0.104
HCM Control Delay (s)	13.9	7.8	0	-	7.5	0	-	12.4
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0.1	-	-	0.3

2024 Build Weekday Evening
 1: Ham Road/Harriman Hill Road & NH Route 156

11/14/2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	22	284	8	25	172	4	6	16	1	5	5	9
Future Volume (vph)	22	284	8	25	172	4	6	16	1	5	5	9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.997			0.997			0.992			0.936	
Flt Protected		0.996			0.994			0.987			0.987	
Satd. Flow (prot)	0	1807	0	0	1854	0	0	1860	0	0	1755	0
Flt Permitted		0.996			0.994			0.987			0.987	
Satd. Flow (perm)	0	1807	0	0	1854	0	0	1860	0	0	1755	0
Adj. Flow (vph)	25	319	9	29	200	5	9	24	2	9	9	16
Lane Group Flow (vph)	0	353	0	0	234	0	0	35	0	0	34	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Control Type: Unsignalized

2024 Build Weekday Evening
1: Ham Road/Harriman Hill Road & NH Route 156

11/14/2023

Intersection												
Int Delay, s/veh	2.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	22	284	8	25	172	4	6	16	1	5	5	9
Future Vol, veh/h	22	284	8	25	172	4	6	16	1	5	5	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	86	86	86	66	66	66	58	58	58
Heavy Vehicles, %	0	1	0	0	1	33	0	0	0	0	0	0
Mvmt Flow	25	319	9	29	200	5	9	24	2	9	9	16

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	205	0	0	328	0	0	647	637	324	648	639	203
Stage 1	-	-	-	-	-	-	374	374	-	261	261	-
Stage 2	-	-	-	-	-	-	273	263	-	387	378	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1378	-	-	1243	-	-	387	398	722	386	397	843
Stage 1	-	-	-	-	-	-	651	621	-	748	696	-
Stage 2	-	-	-	-	-	-	737	694	-	641	619	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1378	-	-	1243	-	-	360	379	722	353	378	843
Mov Cap-2 Maneuver	-	-	-	-	-	-	360	379	-	353	378	-
Stage 1	-	-	-	-	-	-	637	607	-	732	678	-
Stage 2	-	-	-	-	-	-	696	676	-	601	605	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	1	15.4	12.7
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	382	1378	-	-	1243	-	-	499
HCM Lane V/C Ratio	0.091	0.018	-	-	0.023	-	-	0.066
HCM Control Delay (s)	15.4	7.7	0	-	8	0	-	12.7
HCM Lane LOS	C	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.3	0.1	-	-	0.1	-	-	0.2

2034 Build Weekday Morning
 1: Ham Road/Harriman Hill Road & NH Route 156

11/07/2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	5	106	4	58	269	4	6	3	0	3	18	17
Future Volume (vph)	5	106	4	58	269	4	6	3	0	3	18	17
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996			0.998						0.940	
Flt Protected		0.998			0.991			0.968			0.996	
Satd. Flow (prot)	0	1776	0	0	1797	0	0	1839	0	0	1779	0
Flt Permitted		0.998			0.991			0.968			0.996	
Satd. Flow (perm)	0	1776	0	0	1797	0	0	1839	0	0	1779	0
Adj. Flow (vph)	5	113	4	66	306	5	8	4	0	5	30	28
Lane Group Flow (vph)	0	122	0	0	377	0	0	12	0	0	63	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Control Type: Unsignalized

2034 Build Weekday Morning
 1: Ham Road/Harriman Hill Road & NH Route 156

11/07/2023

Intersection												
Int Delay, s/veh	2.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	106	4	58	269	4	6	3	0	3	18	17
Future Vol, veh/h	5	106	4	58	269	4	6	3	0	3	18	17
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	88	88	88	71	71	71	60	60	60
Heavy Vehicles, %	0	3	0	3	5	0	0	0	2	0	0	0
Mvmt Flow	5	113	4	66	306	5	8	4	0	5	30	28

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	311	0	0	117	0	0	595	568	115	568	568	309
Stage 1	-	-	-	-	-	-	125	125	-	441	441	-
Stage 2	-	-	-	-	-	-	470	443	-	127	127	-
Critical Hdwy	4.1	-	-	4.13	-	-	7.1	6.5	6.22	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.227	-	-	3.5	4	3.318	3.5	4	3.3
Pot Cap-1 Maneuver	1261	-	-	1465	-	-	419	435	937	437	435	736
Stage 1	-	-	-	-	-	-	884	796	-	599	580	-
Stage 2	-	-	-	-	-	-	578	579	-	882	795	-
Platoon blocked, %		-	-	-	-	-						
Mov Cap-1 Maneuver	1261	-	-	1465	-	-	364	410	937	414	410	736
Mov Cap-2 Maneuver	-	-	-	-	-	-	364	410	-	414	410	-
Stage 1	-	-	-	-	-	-	880	793	-	597	549	-
Stage 2	-	-	-	-	-	-	497	548	-	874	792	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			1.3			14.9			13		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	378	1261	-	-	1465	-	-	512
HCM Lane V/C Ratio	0.034	0.004	-	-	0.045	-	-	0.124
HCM Control Delay (s)	14.9	7.9	0	-	7.6	0	-	13
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0.1	-	-	0.4

2034 Build Weekday Evening
 1: Ham Road/Harriman Hill Road & NH Route 156

11/14/2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	24	313	9	28	189	4	7	18	1	6	5	10
Future Volume (vph)	24	313	9	28	189	4	7	18	1	6	5	10
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.997			0.997			0.993			0.936	
Flt Protected		0.997			0.994			0.986			0.986	
Satd. Flow (prot)	0	1809	0	0	1855	0	0	1860	0	0	1754	0
Flt Permitted		0.997			0.994			0.986			0.986	
Satd. Flow (perm)	0	1809	0	0	1855	0	0	1860	0	0	1754	0
Adj. Flow (vph)	27	352	10	33	220	5	11	27	2	10	9	17
Lane Group Flow (vph)	0	389	0	0	258	0	0	40	0	0	36	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Control Type: Unsignalized

2034 Build Weekday Evening
 1: Ham Road/Harriman Hill Road & NH Route 156

11/14/2023

Intersection												
Int Delay, s/veh	2.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	24	313	9	28	189	4	7	18	1	6	5	10
Future Vol, veh/h	24	313	9	28	189	4	7	18	1	6	5	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	86	86	86	66	66	66	58	58	58
Heavy Vehicles, %	0	1	0	0	1	33	0	0	0	0	0	0
Mvmt Flow	27	352	10	33	220	5	11	27	2	10	9	17

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	225	0	0	362	0	0	713	702	357	715	705	223
Stage 1	-	-	-	-	-	-	411	411	-	289	289	-
Stage 2	-	-	-	-	-	-	302	291	-	426	416	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1356	-	-	1208	-	-	349	365	692	348	363	822
Stage 1	-	-	-	-	-	-	622	598	-	723	677	-
Stage 2	-	-	-	-	-	-	712	675	-	610	595	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1356	-	-	1208	-	-	321	345	692	313	343	822
Mov Cap-2 Maneuver	-	-	-	-	-	-	321	345	-	313	343	-
Stage 1	-	-	-	-	-	-	606	583	-	705	656	-
Stage 2	-	-	-	-	-	-	667	654	-	566	580	-

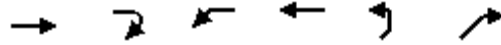
Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	1	16.8	13.6
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	345	1356	-	-	1208	-	-	457
HCM Lane V/C Ratio	0.114	0.02	-	-	0.027	-	-	0.079
HCM Control Delay (s)	16.8	7.7	0	-	8.1	0	-	13.6
HCM Lane LOS	C	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.4	0.1	-	-	0.1	-	-	0.3

NH Route 156 at the Ham Road Connector

2023 Existing Weekday Morning
 2: Ham Road Connector & NH Route 156

11/01/2023



Lane Group	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations	↑			↑		↑
Traffic Volume (vph)	96	0	22	292	0	36
Future Volume (vph)	96	0	22	292	0	36
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.865
Flt Protected				0.997		
Satd. Flow (prot)	1845	0	0	1810	0	1485
Flt Permitted				0.997		
Satd. Flow (perm)	1845	0	0	1810	0	1485
Adj. Flow (vph)	104	0	25	332	0	51
Lane Group Flow (vph)	104	0	0	357	0	51
Sign Control	Free			Free	Stop	

Intersection Summary

Control Type: Unsignalized

2023 Existing Weekday Morning
2: Ham Road Connector & NH Route 156

11/01/2023

Intersection						
Int Delay, s/veh	1.2					
Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations	↑			↓		↑
Traffic Vol, veh/h	96	0	22	292	0	36
Future Vol, veh/h	96	0	22	292	0	36
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	92	88	88	71	71
Heavy Vehicles, %	3	3	0	5	7	7
Mvmt Flow	104	0	25	332	0	51

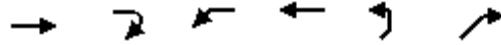
Major/Minor	Major1	Major2	Minor1	Minor2	Minor3	
Conflicting Flow All	0	-	104	0	-	104
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.1	-	-	6.27
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.2	-	-	3.363
Pot Cap-1 Maneuver	-	0	1500	-	0	937
Stage 1	-	0	-	-	0	-
Stage 2	-	0	-	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1500	-	-	937
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NE
HCM Control Delay, s	0	0.5	9.1
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	EBT	WBL	WBT
Capacity (veh/h)	937	-	1500	-
HCM Lane V/C Ratio	0.054	-	0.017	-
HCM Control Delay (s)	9.1	-	7.4	0
HCM Lane LOS	A	-	A	A
HCM 95th %tile Q(veh)	0.2	-	0.1	-

2023 Existing Weekday Evening
 2: Ham Road Connector & NH Route 156

11/01/2023



Lane Group	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations	↑			↑		↑
Traffic Volume (vph)	281	0	19	194	0	79
Future Volume (vph)	281	0	19	194	0	79
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.865
Flt Protected				0.996		
Satd. Flow (prot)	1881	0	0	1875	0	1558
Flt Permitted				0.996		
Satd. Flow (perm)	1881	0	0	1875	0	1558
Adj. Flow (vph)	305	0	22	226	0	120
Lane Group Flow (vph)	305	0	0	248	0	120
Sign Control	Free			Free	Stop	

Intersection Summary

Control Type: Unsignalized

2023 Existing Weekday Evening
2: Ham Road Connector & NH Route 156

11/01/2023

Intersection						
Int Delay, s/veh	2.2					
Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations	↑			↔		↑
Traffic Vol, veh/h	281	0	19	194	0	79
Future Vol, veh/h	281	0	19	194	0	79
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	92	86	86	66	66
Heavy Vehicles, %	1	1	0	1	2	2
Mvmt Flow	305	0	22	226	0	120

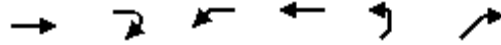
Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	-	305	0	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	-	4.1	-	-
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	-	2.2	-	-
Pot Cap-1 Maneuver	-	0	1267	-	0
Stage 1	-	0	-	-	0
Stage 2	-	0	-	-	0
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1267	-	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	WB	NE
HCM Control Delay, s	0	0.7	10.8
HCM LOS			B

Minor Lane/Major Mvmt	NELn1	EBT	WBL	WBT
Capacity (veh/h)	735	-	1267	-
HCM Lane V/C Ratio	0.163	-	0.017	-
HCM Control Delay (s)	10.8	-	7.9	0
HCM Lane LOS	B	-	A	A
HCM 95th %tile Q(veh)	0.6	-	0.1	-

2024 No-Build Weekday Morning
 2: Ham Road Connector & NH Route 156

11/07/2023



Lane Group	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations	↑			↑		↑
Traffic Volume (vph)	97	0	22	295	0	36
Future Volume (vph)	97	0	22	295	0	36
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.865
Flt Protected				0.997		
Satd. Flow (prot)	1845	0	0	1810	0	1485
Flt Permitted				0.997		
Satd. Flow (perm)	1845	0	0	1810	0	1485
Adj. Flow (vph)	105	0	25	335	0	51
Lane Group Flow (vph)	105	0	0	360	0	51
Sign Control	Free			Free	Stop	

Intersection Summary

Control Type: Unsignalized

2024 No-Build Weekday Morning
2: Ham Road Connector & NH Route 156

11/07/2023

Intersection						
Int Delay, s/veh	1.2					
Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations	↑			↑		↑
Traffic Vol, veh/h	97	0	22	295	0	36
Future Vol, veh/h	97	0	22	295	0	36
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	92	88	88	71	71
Heavy Vehicles, %	3	3	0	5	7	7
Mvmt Flow	105	0	25	335	0	51

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	-	105	0	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	-	4.1	-	-
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	-	2.2	-	-
Pot Cap-1 Maneuver	-	0	1499	-	0
Stage 1	-	0	-	-	0
Stage 2	-	0	-	-	0
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1499	-	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	WB	NE
HCM Control Delay, s	0	0.5	9.1
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	EBT	WBL	WBT
Capacity (veh/h)	936	-	1499	-
HCM Lane V/C Ratio	0.054	-	0.017	-
HCM Control Delay (s)	9.1	-	7.4	0
HCM Lane LOS	A	-	A	A
HCM 95th %tile Q(veh)	0.2	-	0.1	-

2024 No-Build Weekday Evening
 2: Ham Road Connector & NH Route 156

11/07/2023



Lane Group	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations	↑			↑		↑
Traffic Volume (vph)	284	0	19	196	0	80
Future Volume (vph)	284	0	19	196	0	80
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.865
Flt Protected				0.996		
Satd. Flow (prot)	1881	0	0	1875	0	1558
Flt Permitted				0.996		
Satd. Flow (perm)	1881	0	0	1875	0	1558
Adj. Flow (vph)	309	0	22	228	0	121
Lane Group Flow (vph)	309	0	0	250	0	121
Sign Control	Free			Free	Stop	

Intersection Summary

Control Type: Unsignalized

2024 No-Build Weekday Evening
 2: Ham Road Connector & NH Route 156

11/07/2023

Intersection						
Int Delay, s/veh	2.2					
Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations	↑			↑		↑
Traffic Vol, veh/h	284	0	19	196	0	80
Future Vol, veh/h	284	0	19	196	0	80
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	92	86	86	66	66
Heavy Vehicles, %	1	1	0	1	2	2
Mvmt Flow	309	0	22	228	0	121

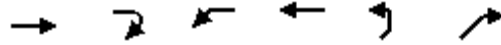
Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	-	309	0	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	-	4.1	-	-
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	-	2.2	-	-
Pot Cap-1 Maneuver	-	0	1263	-	0
Stage 1	-	0	-	-	0
Stage 2	-	0	-	-	0
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1263	-	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	WB	NE
HCM Control Delay, s	0	0.7	10.9
HCM LOS			B

Minor Lane/Major Mvmt	NELn1	EBT	WBL	WBT
Capacity (veh/h)	731	-	1263	-
HCM Lane V/C Ratio	0.166	-	0.017	-
HCM Control Delay (s)	10.9	-	7.9	0
HCM Lane LOS	B	-	A	A
HCM 95th %tile Q(veh)	0.6	-	0.1	-

2034 No-Build Weekday Morning
 2: Ham Road Connector & NH Route 156

11/07/2023



Lane Group	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations	↑			↑		↑
Traffic Volume (vph)	107	0	25	325	0	40
Future Volume (vph)	107	0	25	325	0	40
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.865
Flt Protected				0.996		
Satd. Flow (prot)	1845	0	0	1808	0	1485
Flt Permitted				0.996		
Satd. Flow (perm)	1845	0	0	1808	0	1485
Adj. Flow (vph)	116	0	28	369	0	56
Lane Group Flow (vph)	116	0	0	397	0	56
Sign Control	Free			Free	Stop	

Intersection Summary

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	1.3					
Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations	↑			↑		↑
Traffic Vol, veh/h	107	0	25	325	0	40
Future Vol, veh/h	107	0	25	325	0	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	92	92	88	88	71	71
Heavy Vehicles, %	3	3	0	5	7	7
Mvmt Flow	116	0	28	369	0	56

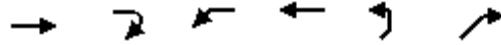
Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	-	116	0	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	-	4.1	-	-
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	-	2.2	-	-
Pot Cap-1 Maneuver	-	0	1485	-	0
Stage 1	-	0	-	-	0
Stage 2	-	0	-	-	0
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1485	-	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	WB	NE
HCM Control Delay, s	0	0.5	9.2
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	EBT	WBL	WBT
Capacity (veh/h)	923	-	1485	-
HCM Lane V/C Ratio	0.061	-	0.019	-
HCM Control Delay (s)	9.2	-	7.5	0
HCM Lane LOS	A	-	A	A
HCM 95th %tile Q(veh)	0.2	-	0.1	-

2034 No-Build Weekday Evening
 2: Ham Road Connector & NH Route 156

11/07/2023



Lane Group	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations	↑			↑		↑
Traffic Volume (vph)	314	0	21	216	0	88
Future Volume (vph)	314	0	21	216	0	88
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.865
Flt Protected				0.996		
Satd. Flow (prot)	1881	0	0	1875	0	1558
Flt Permitted				0.996		
Satd. Flow (perm)	1881	0	0	1875	0	1558
Adj. Flow (vph)	341	0	24	251	0	133
Lane Group Flow (vph)	341	0	0	275	0	133
Sign Control	Free			Free	Stop	

Intersection Summary

Control Type: Unsignalized

2034 No-Build Weekday Evening
 2: Ham Road Connector & NH Route 156

11/07/2023

Intersection						
Int Delay, s/veh	2.3					
Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations	↑			↑		↑
Traffic Vol, veh/h	314	0	21	216	0	88
Future Vol, veh/h	314	0	21	216	0	88
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	92	86	86	66	66
Heavy Vehicles, %	1	1	0	1	2	2
Mvmt Flow	341	0	24	251	0	133

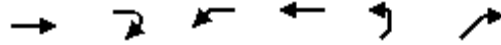
Major/Minor	Major1	Major2	Minor1	Minor2	Minor3	
Conflicting Flow All	0	-	341	0	-	341
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.1	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.2	-	-	3.318
Pot Cap-1 Maneuver	-	0	1229	-	0	701
Stage 1	-	0	-	-	0	-
Stage 2	-	0	-	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1229	-	-	701
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NE
HCM Control Delay, s	0	0.7	11.3
HCM LOS			B

Minor Lane/Major Mvmt	NELn1	EBT	WBL	WBT
Capacity (veh/h)	701	-	1229	-
HCM Lane V/C Ratio	0.19	-	0.02	-
HCM Control Delay (s)	11.3	-	8	0
HCM Lane LOS	B	-	A	A
HCM 95th %tile Q(veh)	0.7	-	0.1	-

2024 Build Weekday Morning
 2: Ham Road Connector & NH Route 156

11/07/2023



Lane Group	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations	↑			↑		↑
Traffic Volume (vph)	99	0	23	301	0	37
Future Volume (vph)	99	0	23	301	0	37
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.865
Flt Protected				0.996		
Satd. Flow (prot)	1845	0	0	1808	0	1485
Flt Permitted				0.996		
Satd. Flow (perm)	1845	0	0	1808	0	1485
Adj. Flow (vph)	108	0	26	342	0	52
Lane Group Flow (vph)	108	0	0	368	0	52
Sign Control	Free			Free	Stop	

Intersection Summary

Control Type: Unsignalized

2024 Build Weekday Morning
2: Ham Road Connector & NH Route 156

11/07/2023

Intersection						
Int Delay, s/veh	1.2					
Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations	↑			↑		↑
Traffic Vol, veh/h	99	0	23	301	0	37
Future Vol, veh/h	99	0	23	301	0	37
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	92	88	88	71	71
Heavy Vehicles, %	3	3	0	5	7	7
Mvmt Flow	108	0	26	342	0	52

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3	
Conflicting Flow All	0	-	108	0	-	108
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.1	-	-	6.27
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.2	-	-	3.363
Pot Cap-1 Maneuver	-	0	1495	-	0	932
Stage 1	-	0	-	-	0	-
Stage 2	-	0	-	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1495	-	-	932
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NE
HCM Control Delay, s	0	0.5	9.1
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	EBT	WBL	WBT
Capacity (veh/h)	932	-	1495	-
HCM Lane V/C Ratio	0.056	-	0.017	-
HCM Control Delay (s)	9.1	-	7.5	0
HCM Lane LOS	A	-	A	A
HCM 95th %tile Q(veh)	0.2	-	0.1	-

2024 Build Weekday Evening
 2: Ham Road Connector & NH Route 156

11/14/2023



Lane Group	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations	↑			↑		↑
Traffic Volume (vph)	290	0	19	201	0	82
Future Volume (vph)	290	0	19	201	0	82
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.865
Flt Protected				0.996		
Satd. Flow (prot)	1881	0	0	1875	0	1558
Flt Permitted				0.996		
Satd. Flow (perm)	1881	0	0	1875	0	1558
Adj. Flow (vph)	315	0	22	234	0	124
Lane Group Flow (vph)	315	0	0	256	0	124
Sign Control	Free			Free	Stop	

Intersection Summary

Control Type: Unsignalized

2024 Build Weekday Evening
2: Ham Road Connector & NH Route 156

11/14/2023

Intersection						
Int Delay, s/veh	2.2					
Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations	↑			↑		↑
Traffic Vol, veh/h	290	0	19	201	0	82
Future Vol, veh/h	290	0	19	201	0	82
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	92	86	86	66	66
Heavy Vehicles, %	1	1	0	1	2	2
Mvmt Flow	315	0	22	234	0	124

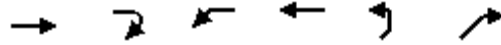
Major/Minor	Major1	Major2	Minor1	Minor2	Minor3	
Conflicting Flow All	0	-	315	0	-	315
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.1	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.2	-	-	3.318
Pot Cap-1 Maneuver	-	0	1257	-	0	725
Stage 1	-	0	-	-	0	-
Stage 2	-	0	-	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1257	-	-	725
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NE
HCM Control Delay, s	0	0.7	11
HCM LOS			B

Minor Lane/Major Mvmt	NELn1	EBT	WBL	WBT
Capacity (veh/h)	725	-	1257	-
HCM Lane V/C Ratio	0.171	-	0.018	-
HCM Control Delay (s)	11	-	7.9	0
HCM Lane LOS	B	-	A	A
HCM 95th %tile Q(veh)	0.6	-	0.1	-

2034 Build Weekday Morning
 2: Ham Road Connector & NH Route 156

11/07/2023



Lane Group	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations	↑			↑		↑
Traffic Volume (vph)	109	0	26	331	0	41
Future Volume (vph)	109	0	26	331	0	41
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.865
Flt Protected				0.996		
Satd. Flow (prot)	1845	0	0	1809	0	1485
Flt Permitted				0.996		
Satd. Flow (perm)	1845	0	0	1809	0	1485
Adj. Flow (vph)	118	0	30	376	0	58
Lane Group Flow (vph)	118	0	0	406	0	58
Sign Control	Free			Free	Stop	

Intersection Summary

Control Type: Unsignalized

2034 Build Weekday Morning
 2: Ham Road Connector & NH Route 156

11/07/2023

Intersection						
Int Delay, s/veh	1.3					
Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations	↑			↑		↑
Traffic Vol, veh/h	109	0	26	331	0	41
Future Vol, veh/h	109	0	26	331	0	41
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	92	88	88	71	71
Heavy Vehicles, %	3	3	0	5	7	7
Mvmt Flow	118	0	30	376	0	58

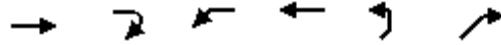
Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	-	118	0	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	-	4.1	-	-
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	-	2.2	-	-
Pot Cap-1 Maneuver	-	0	1483	-	0
Stage 1	-	0	-	-	0
Stage 2	-	0	-	-	0
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1483	-	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	WB	NE
HCM Control Delay, s	0	0.5	9.2
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	EBT	WBL	WBT
Capacity (veh/h)	921	-	1483	-
HCM Lane V/C Ratio	0.063	-	0.02	-
HCM Control Delay (s)	9.2	-	7.5	0
HCM Lane LOS	A	-	A	A
HCM 95th %tile Q(veh)	0.2	-	0.1	-

2034 Build Weekday Evening
 2: Ham Road Connector & NH Route 156

11/14/2023



Lane Group	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations	↑			↑		↑
Traffic Volume (vph)	320	0	21	221	0	90
Future Volume (vph)	320	0	21	221	0	90
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.865
Flt Protected				0.996		
Satd. Flow (prot)	1881	0	0	1875	0	1558
Flt Permitted				0.996		
Satd. Flow (perm)	1881	0	0	1875	0	1558
Adj. Flow (vph)	348	0	24	257	0	136
Lane Group Flow (vph)	348	0	0	281	0	136
Sign Control	Free			Free	Stop	

Intersection Summary

Control Type: Unsignalized

2034 Build Weekday Evening
 2: Ham Road Connector & NH Route 156

11/14/2023

Intersection						
Int Delay, s/veh	2.3					
Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations	↑			↑		↑
Traffic Vol, veh/h	320	0	21	221	0	90
Future Vol, veh/h	320	0	21	221	0	90
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	92	86	86	66	66
Heavy Vehicles, %	1	1	0	1	2	2
Mvmt Flow	348	0	24	257	0	136

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	-	348	0	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	-	4.1	-	-
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	-	2.2	-	-
Pot Cap-1 Maneuver	-	0	1222	-	0
Stage 1	-	0	-	-	0
Stage 2	-	0	-	-	0
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1222	-	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	WB	NE
HCM Control Delay, s	0	0.7	11.4
HCM LOS			B

Minor Lane/Major Mvmt	NELn1	EBT	WBL	WBT
Capacity (veh/h)	695	-	1222	-
HCM Lane V/C Ratio	0.196	-	0.02	-
HCM Control Delay (s)	11.4	-	8	0
HCM Lane LOS	B	-	A	A
HCM 95th %tile Q(veh)	0.7	-	0.1	-

Ham Road at the Ham Road Connector

2023 Existing Weekday Morning
 3: Ham Road & Ham Road Connector

11/01/2023

	↑	↗	↘	↓	↙	↖
Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations	↗			↑	↘	
Traffic Volume (vph)	8	36	0	70	22	0
Future Volume (vph)	8	36	0	70	22	0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.889					
Flt Protected					0.950	
Satd. Flow (prot)	1597	0	0	1925	1745	0
Flt Permitted					0.950	
Satd. Flow (perm)	1597	0	0	1925	1745	0
Adj. Flow (vph)	11	51	0	76	25	0
Lane Group Flow (vph)	62	0	0	76	25	0
Sign Control	Free				Free	Stop
Intersection Summary						
Control Type: Unsignalized						

2023 Existing Weekday Morning
3: Ham Road & Ham Road Connector

11/01/2023

Intersection						
Int Delay, s/veh	1.4					
Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations	↔			↑	↗	
Traffic Vol, veh/h	8	36	0	70	22	0
Future Vol, veh/h	8	36	0	70	22	0
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	71	71	92	92	88	88
Heavy Vehicles, %	0	7	2	2	0	0
Mvmt Flow	11	51	0	76	25	0

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	-	-	113
Stage 1	-	-	-	-	37
Stage 2	-	-	-	-	76
Critical Hdwy	-	-	-	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	-	-	3.5
Pot Cap-1 Maneuver	-	-	0	-	888
Stage 1	-	-	0	-	991
Stage 2	-	-	0	-	952
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	888
Mov Cap-2 Maneuver	-	-	-	-	888
Stage 1	-	-	-	-	991
Stage 2	-	-	-	-	952

Approach	NB	SB	SW
HCM Control Delay, s	0	0	9.2
HCM LOS			A

Minor Lane/Major Mvmt	NBT	NBR	SBT	SWLn1
Capacity (veh/h)	-	-	-	888
HCM Lane V/C Ratio	-	-	-	0.028
HCM Control Delay (s)	-	-	-	9.2
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	0.1

2023 Existing Weekday Evening
 3: Ham Road & Ham Road Connector

11/01/2023

	↑	↗	↘	↓	↙	↖
Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations	↗			↑	↘	
Traffic Volume (vph)	22	79	0	36	19	0
Future Volume (vph)	22	79	0	36	19	0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.894					
Flt Protected					0.950	
Satd. Flow (prot)	1672	0	0	1963	1745	0
Flt Permitted					0.950	
Satd. Flow (perm)	1672	0	0	1963	1745	0
Adj. Flow (vph)	33	120	0	39	22	0
Lane Group Flow (vph)	153	0	0	39	22	0
Sign Control	Free		Free		Stop	
Intersection Summary						
Control Type: Unsignalized						

2023 Existing Weekday Evening
3: Ham Road & Ham Road Connector

11/01/2023

Intersection						
Int Delay, s/veh	1					
Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations	↑			↑	↑	
Traffic Vol, veh/h	22	79	0	36	19	0
Future Vol, veh/h	22	79	0	36	19	0
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	66	66	92	92	86	86
Heavy Vehicles, %	0	2	0	0	0	0
Mvmt Flow	33	120	0	39	22	0

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	-	-	132
Stage 1	-	-	-	-	93
Stage 2	-	-	-	-	39
Critical Hdwy	-	-	-	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	-	-	3.5
Pot Cap-1 Maneuver	-	-	0	-	867
Stage 1	-	-	0	-	936
Stage 2	-	-	0	-	989
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	867
Mov Cap-2 Maneuver	-	-	-	-	867
Stage 1	-	-	-	-	936
Stage 2	-	-	-	-	989

Approach	NB	SB	SW
HCM Control Delay, s	0	0	9.3
HCM LOS			A

Minor Lane/Major Mvmt	NBT	NBR	SBT	SWLn1
Capacity (veh/h)	-	-	-	867
HCM Lane V/C Ratio	-	-	-	0.025
HCM Control Delay (s)	-	-	-	9.3
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	0.1

2024 No-Build Weekday Morning
 3: Ham Road & Ham Road Connector

11/07/2023

	↑	↗	↘	↓	↙	↖
Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations	↗			↑	↘	
Traffic Volume (vph)	8	36	0	72	22	0
Future Volume (vph)	8	36	0	72	22	0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.889					
Flt Protected					0.950	
Satd. Flow (prot)	1597	0	0	1925	1745	0
Flt Permitted					0.950	
Satd. Flow (perm)	1597	0	0	1925	1745	0
Adj. Flow (vph)	11	51	0	78	25	0
Lane Group Flow (vph)	62	0	0	78	25	0
Sign Control	Free				Free	Stop
Intersection Summary						
Control Type: Unsignalized						

2024 No-Build Weekday Morning
3: Ham Road & Ham Road Connector

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Intersection						
Int Delay, s/veh	1.4					
Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations	↔			↑	↗	
Traffic Vol, veh/h	8	36	0	72	22	0
Future Vol, veh/h	8	36	0	72	22	0
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	71	71	92	92	88	88
Heavy Vehicles, %	0	7	2	2	0	0
Mvmt Flow	11	51	0	78	25	0

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	-	-	115
Stage 1	-	-	-	-	37
Stage 2	-	-	-	-	78
Critical Hdwy	-	-	-	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	-	-	3.5
Pot Cap-1 Maneuver	-	-	0	-	886
Stage 1	-	-	0	-	991
Stage 2	-	-	0	-	950
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	886
Mov Cap-2 Maneuver	-	-	-	-	886
Stage 1	-	-	-	-	991
Stage 2	-	-	-	-	950

Approach	NB	SB	SW
HCM Control Delay, s	0	0	9.2
HCM LOS			A

Minor Lane/Major Mvmt	NBT	NBR	SBT	SWLn1
Capacity (veh/h)	-	-	-	886
HCM Lane V/C Ratio	-	-	-	0.028
HCM Control Delay (s)	-	-	-	9.2
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	0.1

2024 No-Build Weekday Evening
 3: Ham Road & Ham Road Connector

11/07/2023

	↑	↗	↘	↓	↙	↖
Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations	↗			↑	↘	
Traffic Volume (vph)	23	80	0	37	19	0
Future Volume (vph)	23	80	0	37	19	0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.895					
Flt Protected					0.950	
Satd. Flow (prot)	1675	0	0	1963	1745	0
Flt Permitted					0.950	
Satd. Flow (perm)	1675	0	0	1963	1745	0
Adj. Flow (vph)	35	121	0	40	22	0
Lane Group Flow (vph)	156	0	0	40	22	0
Sign Control	Free				Free	Stop
Intersection Summary						
Control Type: Unsignalized						

2024 No-Build Weekday Evening
3: Ham Road & Ham Road Connector

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Intersection						
Int Delay, s/veh	0.9					
Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations	↔			↑	↗	
Traffic Vol, veh/h	23	80	0	37	19	0
Future Vol, veh/h	23	80	0	37	19	0
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	66	66	92	92	86	86
Heavy Vehicles, %	0	2	0	0	0	0
Mvmt Flow	35	121	0	40	22	0

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	-	-	136
Stage 1	-	-	-	-	96
Stage 2	-	-	-	-	40
Critical Hdwy	-	-	-	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	-	-	3.5
Pot Cap-1 Maneuver	-	-	0	-	862
Stage 1	-	-	0	-	933
Stage 2	-	-	0	-	988
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	862
Mov Cap-2 Maneuver	-	-	-	-	862
Stage 1	-	-	-	-	933
Stage 2	-	-	-	-	988

Approach	NB	SB	SW
HCM Control Delay, s	0	0	9.3
HCM LOS			A

Minor Lane/Major Mvmt	NBT	NBR	SBT	SWLn1
Capacity (veh/h)	-	-	-	862
HCM Lane V/C Ratio	-	-	-	0.026
HCM Control Delay (s)	-	-	-	9.3
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	0.1

2034 No-Build Weekday Morning
 3: Ham Road & Ham Road Connector

11/07/2023

	↑	↗	↘	↓	↙	↖
Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations	↗			↑	↘	
Traffic Volume (vph)	9	40	0	79	25	0
Future Volume (vph)	9	40	0	79	25	0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.890					
Flt Protected					0.950	
Satd. Flow (prot)	1600	0	0	1925	1745	0
Flt Permitted					0.950	
Satd. Flow (perm)	1600	0	0	1925	1745	0
Adj. Flow (vph)	13	56	0	86	28	0
Lane Group Flow (vph)	69	0	0	86	28	0
Sign Control	Free				Free	Stop
Intersection Summary						
Control Type: Unsignalized						

Intersection						
Int Delay, s/veh	1.4					
Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations	↔			↑	↗	
Traffic Vol, veh/h	9	40	0	79	25	0
Future Vol, veh/h	9	40	0	79	25	0
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	71	71	92	92	88	88
Heavy Vehicles, %	0	7	2	2	0	0
Mvmt Flow	13	56	0	86	28	0

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	-	-	127
Stage 1	-	-	-	-	41
Stage 2	-	-	-	-	86
Critical Hdwy	-	-	-	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	-	-	3.5
Pot Cap-1 Maneuver	-	-	0	-	872
Stage 1	-	-	0	-	987
Stage 2	-	-	0	-	942
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	872
Mov Cap-2 Maneuver	-	-	-	-	872
Stage 1	-	-	-	-	987
Stage 2	-	-	-	-	942

Approach	NB	SB	SW
HCM Control Delay, s	0	0	9.3
HCM LOS			A

Minor Lane/Major Mvmt	NBT	NBR	SBT	SWLn1
Capacity (veh/h)	-	-	-	872
HCM Lane V/C Ratio	-	-	-	0.033
HCM Control Delay (s)	-	-	-	9.3
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	0.1

2034 No-Build Weekday Evening
 3: Ham Road & Ham Road Connector

11/07/2023

	↑	↗	↘	↓	↙	↖
Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations	↗			↑	↘	
Traffic Volume (vph)	26	88	0	41	21	0
Future Volume (vph)	26	88	0	41	21	0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.896					
Flt Protected					0.950	
Satd. Flow (prot)	1676	0	0	1963	1745	0
Flt Permitted					0.950	
Satd. Flow (perm)	1676	0	0	1963	1745	0
Adj. Flow (vph)	39	133	0	45	24	0
Lane Group Flow (vph)	172	0	0	45	24	0
Sign Control	Free				Free	Stop
Intersection Summary						
Control Type: Unsignalized						

2034 No-Build Weekday Evening
3: Ham Road & Ham Road Connector

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Intersection						
Int Delay, s/veh	0.9					
Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	26	88	0	41	21	0
Future Vol, veh/h	26	88	0	41	21	0
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	66	66	92	92	86	86
Heavy Vehicles, %	0	2	0	0	0	0
Mvmt Flow	39	133	0	45	24	0

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	-	-	151
Stage 1	-	-	-	-	106
Stage 2	-	-	-	-	45
Critical Hdwy	-	-	-	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	-	-	3.5
Pot Cap-1 Maneuver	-	-	0	-	846
Stage 1	-	-	0	-	923
Stage 2	-	-	0	-	983
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	846
Mov Cap-2 Maneuver	-	-	-	-	846
Stage 1	-	-	-	-	923
Stage 2	-	-	-	-	983

Approach	NB	SB	SW
HCM Control Delay, s	0	0	9.4
HCM LOS			A

Minor Lane/Major Mvmt	NBT	NBR	SBT	SWLn1
Capacity (veh/h)	-	-	-	846
HCM Lane V/C Ratio	-	-	-	0.029
HCM Control Delay (s)	-	-	-	9.4
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	0.1

2024 Build Weekday Morning
 3: Ham Road & Ham Road Connector

11/07/2023

	↑	↗	↘	↓	↙	↖
Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations	↗			↑	↘	
Traffic Volume (vph)	8	37	0	73	23	0
Future Volume (vph)	8	37	0	73	23	0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.889					
Flt Protected					0.950	
Satd. Flow (prot)	1597	0	0	1925	1745	0
Flt Permitted					0.950	
Satd. Flow (perm)	1597	0	0	1925	1745	0
Adj. Flow (vph)	11	52	0	79	26	0
Lane Group Flow (vph)	63	0	0	79	26	0
Sign Control	Free				Free	Stop
Intersection Summary						
Control Type: Unsignalized						

2024 Build Weekday Morning
 3: Ham Road & Ham Road Connector

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Intersection						
Int Delay, s/veh	1.4					
Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations	↔			↑	↗	
Traffic Vol, veh/h	8	37	0	73	23	0
Future Vol, veh/h	8	37	0	73	23	0
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	71	71	92	92	88	88
Heavy Vehicles, %	0	7	2	2	0	0
Mvmt Flow	11	52	0	79	26	0

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	-	-	116
Stage 1	-	-	-	-	37
Stage 2	-	-	-	-	79
Critical Hdwy	-	-	-	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	-	-	3.5
Pot Cap-1 Maneuver	-	-	0	-	885
Stage 1	-	-	0	-	991
Stage 2	-	-	0	-	949
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	885
Mov Cap-2 Maneuver	-	-	-	-	885
Stage 1	-	-	-	-	991
Stage 2	-	-	-	-	949

Approach	NB	SB	SW
HCM Control Delay, s	0	0	9.2
HCM LOS			A

Minor Lane/Major Mvmt	NBT	NBR	SBT	SWLn1
Capacity (veh/h)	-	-	-	885
HCM Lane V/C Ratio	-	-	-	0.03
HCM Control Delay (s)	-	-	-	9.2
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	0.1

2024 Build Weekday Evening
 3: Ham Road & Ham Road Connector

11/07/2023

	↑	↗	↘	↓	↙	↖
Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations	↗			↑	↘	
Traffic Volume (vph)	23	82	0	38	19	0
Future Volume (vph)	23	82	0	38	19	0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.895					
Flt Protected					0.950	
Satd. Flow (prot)	1674	0	0	1963	1745	0
Flt Permitted					0.950	
Satd. Flow (perm)	1674	0	0	1963	1745	0
Adj. Flow (vph)	35	124	0	41	22	0
Lane Group Flow (vph)	159	0	0	41	22	0
Sign Control	Free				Free	Stop
Intersection Summary						
Control Type: Unsignalized						

2024 Build Weekday Evening
3: Ham Road & Ham Road Connector

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Intersection						
Int Delay, s/veh	0.9					
Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations	↑			↑	↑	
Traffic Vol, veh/h	23	82	0	38	19	0
Future Vol, veh/h	23	82	0	38	19	0
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	66	66	92	92	86	86
Heavy Vehicles, %	0	2	0	0	0	0
Mvmt Flow	35	124	0	41	22	0

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	-	-	138
Stage 1	-	-	-	-	97
Stage 2	-	-	-	-	41
Critical Hdwy	-	-	-	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	-	-	3.5
Pot Cap-1 Maneuver	-	-	0	-	860
Stage 1	-	-	0	-	932
Stage 2	-	-	0	-	987
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	860
Mov Cap-2 Maneuver	-	-	-	-	860
Stage 1	-	-	-	-	932
Stage 2	-	-	-	-	987

Approach	NB	SB	SW
HCM Control Delay, s	0	0	9.3
HCM LOS			A

Minor Lane/Major Mvmt	NBT	NBR	SBT	SWLn1
Capacity (veh/h)	-	-	-	860
HCM Lane V/C Ratio	-	-	-	0.026
HCM Control Delay (s)	-	-	-	9.3
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	0.1

2034 Build Weekday Morning
 3: Ham Road & Ham Road Connector

11/07/2023

	↑	↗	↘	↓	↙	↖
Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations	↗			↑	↘	
Traffic Volume (vph)	9	41	0	80	26	0
Future Volume (vph)	9	41	0	80	26	0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.890					
Flt Protected					0.950	
Satd. Flow (prot)	1600	0	0	1925	1745	0
Flt Permitted					0.950	
Satd. Flow (perm)	1600	0	0	1925	1745	0
Adj. Flow (vph)	13	58	0	87	30	0
Lane Group Flow (vph)	71	0	0	87	30	0
Sign Control	Free				Free	Stop
Intersection Summary						
Control Type: Unsignalized						

Intersection						
Int Delay, s/veh	1.5					
Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations	↔			↑	↗	
Traffic Vol, veh/h	9	41	0	80	26	0
Future Vol, veh/h	9	41	0	80	26	0
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	71	71	92	92	88	88
Heavy Vehicles, %	0	7	2	2	0	0
Mvmt Flow	13	58	0	87	30	0

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	-	-	129
Stage 1	-	-	-	-	42
Stage 2	-	-	-	-	87
Critical Hdwy	-	-	-	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	-	-	3.5
Pot Cap-1 Maneuver	-	-	0	-	870
Stage 1	-	-	0	-	986
Stage 2	-	-	0	-	941
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	870
Mov Cap-2 Maneuver	-	-	-	-	870
Stage 1	-	-	-	-	986
Stage 2	-	-	-	-	941

Approach	NB	SB	SW
HCM Control Delay, s	0	0	9.3
HCM LOS			A

Minor Lane/Major Mvmt	NBT	NBR	SBT	SWLn1
Capacity (veh/h)	-	-	-	870
HCM Lane V/C Ratio	-	-	-	0.034
HCM Control Delay (s)	-	-	-	9.3
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	0.1

2034 Build Weekday Evening
 3: Ham Road & Ham Road Connector

11/07/2023

	↑	↗	↘	↓	↙	↖
Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations	↗			↑	↘	
Traffic Volume (vph)	26	90	0	42	21	0
Future Volume (vph)	26	90	0	42	21	0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.895					
Flt Protected					0.950	
Satd. Flow (prot)	1674	0	0	1963	1745	0
Flt Permitted					0.950	
Satd. Flow (perm)	1674	0	0	1963	1745	0
Adj. Flow (vph)	39	136	0	46	24	0
Lane Group Flow (vph)	175	0	0	46	24	0
Sign Control	Free				Free	Stop
Intersection Summary						
Control Type: Unsignalized						

2034 Build Weekday Evening
 3: Ham Road & Ham Road Connector

11/07/2023

Intersection						
Int Delay, s/veh	0.9					
Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	26	90	0	42	21	0
Future Vol, veh/h	26	90	0	42	21	0
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	66	66	92	92	86	86
Heavy Vehicles, %	0	2	0	0	0	0
Mvmt Flow	39	136	0	46	24	0

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	-	-	153
Stage 1	-	-	-	-	107
Stage 2	-	-	-	-	46
Critical Hdwy	-	-	-	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	-	-	3.5
Pot Cap-1 Maneuver	-	-	0	-	843
Stage 1	-	-	0	-	922
Stage 2	-	-	0	-	982
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	843
Mov Cap-2 Maneuver	-	-	-	-	843
Stage 1	-	-	-	-	922
Stage 2	-	-	-	-	982

Approach	NB	SB	SW
HCM Control Delay, s	0	0	9.4
HCM LOS			A

Minor Lane/Major Mvmt	NBT	NBR	SBT	SWLn1
Capacity (veh/h)	-	-	-	843
HCM Lane V/C Ratio	-	-	-	0.029
HCM Control Delay (s)	-	-	-	9.4
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	0.1

NH Route 156 at the Project Site Driveway

2024 Build Weekday Morning
 4: NH Route 156 & Project Site Driveway

11/14/2023



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	4	7	3	111	230	1
Future Volume (vph)	4	7	3	111	230	1
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.910		0.999			
Flt Protected	0.984		0.999			
Satd. Flow (prot)	1890	0	0	1765	1764	0
Flt Permitted	0.984		0.999			
Satd. Flow (perm)	1890	0	0	1765	1764	0
Adj. Flow (vph)	4	8	4	152	264	1
Lane Group Flow (vph)	12	0	0	156	265	0
Sign Control	Stop			Free	Free	

Intersection Summary

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	4	7	3	111	230	1
Future Vol, veh/h	4	7	3	111	230	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	73	73	87	87
Heavy Vehicles, %	2	2	2	4	4	2
Mvmt Flow	4	8	4	152	264	1

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	425	265	265	0	0
Stage 1	265	-	-	-	-
Stage 2	160	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	586	774	1299	-	-
Stage 1	779	-	-	-	-
Stage 2	869	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	584	774	1299	-	-
Mov Cap-2 Maneuver	584	-	-	-	-
Stage 1	777	-	-	-	-
Stage 2	869	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.3	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1299	-	692	-	-
HCM Lane V/C Ratio	0.003	-	0.017	-	-
HCM Control Delay (s)	7.8	0	10.3	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

2024 Build Weekday Evening
 4: NH Route 156 & Project Site Driveway

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Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	2	5	8	232	183	4
Future Volume (vph)	2	5	8	232	183	4
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.904		0.997			
Flt Protected	0.986		0.998			
Satd. Flow (prot)	1882	0	0	1814	1813	0
Flt Permitted	0.986		0.998			
Satd. Flow (perm)	1882	0	0	1814	1813	0
Adj. Flow (vph)	2	5	9	267	258	6
Lane Group Flow (vph)	7	0	0	276	264	0
Sign Control	Stop			Free	Free	

Intersection Summary

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	2	5	8	232	183	4
Future Vol, veh/h	2	5	8	232	183	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	87	87	71	71
Heavy Vehicles, %	2	2	2	1	1	2
Mvmt Flow	2	5	9	267	258	6

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	546	261	264	0	-	0
Stage 1	261	-	-	-	-	-
Stage 2	285	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	499	778	1300	-	-	-
Stage 1	783	-	-	-	-	-
Stage 2	763	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	495	778	1300	-	-	-
Mov Cap-2 Maneuver	495	-	-	-	-	-
Stage 1	777	-	-	-	-	-
Stage 2	763	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.4	0.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1300	-	669	-	-
HCM Lane V/C Ratio	0.007	-	0.011	-	-
HCM Control Delay (s)	7.8	0	10.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

2034 Build Weekday Morning
 4: NH Route 156 & Project Site Driveway

11/14/2023



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	4	7	3	122	254	1
Future Volume (vph)	4	7	3	122	254	1
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.910					
Flt Protected	0.984			0.999		
Satd. Flow (prot)	1890	0	0	1765	1766	0
Flt Permitted	0.984			0.999		
Satd. Flow (perm)	1890	0	0	1765	1766	0
Adj. Flow (vph)	4	8	4	167	292	1
Lane Group Flow (vph)	12	0	0	171	293	0
Sign Control	Stop			Free	Free	

Intersection Summary

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	4	7	3	122	254	1
Future Vol, veh/h	4	7	3	122	254	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	73	73	87	87
Heavy Vehicles, %	2	2	2	4	4	2
Mvmt Flow	4	8	4	167	292	1

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	468	293	293	0	-	0
Stage 1	293	-	-	-	-	-
Stage 2	175	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	553	746	1269	-	-	-
Stage 1	757	-	-	-	-	-
Stage 2	855	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	551	746	1269	-	-	-
Mov Cap-2 Maneuver	551	-	-	-	-	-
Stage 1	755	-	-	-	-	-
Stage 2	855	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.5	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1269	-	661	-	-
HCM Lane V/C Ratio	0.003	-	0.018	-	-
HCM Control Delay (s)	7.8	0	10.5	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

2034 Build Weekday Evening
 4: NH Route 156 & Project Site Driveway

11/14/2023



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	2	5	8	256	202	4
Future Volume (vph)	2	5	8	256	202	4
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.904		0.997			
Flt Protected	0.986		0.999			
Satd. Flow (prot)	1882	0	0	1816	1813	0
Flt Permitted	0.986		0.999			
Satd. Flow (perm)	1882	0	0	1816	1813	0
Adj. Flow (vph)	2	5	9	294	285	6
Lane Group Flow (vph)	7	0	0	303	291	0
Sign Control	Stop		Free		Free	

Intersection Summary

Control Type: Unsignalized

2034 Build Weekday Evening
4: NH Route 156 & Project Site Driveway

11/14/2023

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	2	5	8	256	202	4
Future Vol, veh/h	2	5	8	256	202	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	87	87	71	71
Heavy Vehicles, %	2	2	2	1	1	2
Mvmt Flow	2	5	9	294	285	6

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	600	288	291	0	0
Stage 1	288	-	-	-	-
Stage 2	312	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	464	751	1271	-	-
Stage 1	761	-	-	-	-
Stage 2	742	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	460	751	1271	-	-
Mov Cap-2 Maneuver	460	-	-	-	-
Stage 1	755	-	-	-	-
Stage 2	742	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.7	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1271	-	636	-	-
HCM Lane V/C Ratio	0.007	-	0.012	-	-
HCM Control Delay (s)	7.9	0	10.7	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-