

# **Transportation Impact Assessment**

Proposed Residential Development  
817 Country Way  
Scituate, Massachusetts

*Prepared for:*

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Kingston, Massachusetts

May 2023

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## **EXECUTIVE SUMMARY**

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### **DESCRIPTION OF PROJECT**

Vanasse & Associates, Inc. (VAI) has prepared this Transportation Impact Assessment (TIA) to identify traffic impacts associated with a proposed residential development to be located at 817 Country Way in Scituate, Massachusetts (the “Project”). The purpose of this TIA is to review existing and future traffic conditions in the vicinity of the site, determine the traffic impact of the proposed Project at key intersections expected to experience increased traffic levels from the Project, and review the need for improvements to mitigate the Project’s traffic impact.

### **PROPOSED PROJECT**

The site is bounded by residential properties to the north, commercial properties to the south, Country Way to the east, and areas of open and wooden space to the west. Currently, the site contains three residential buildings and has one curb cut onto Country Way. The Project entails razing two of the existing residential buildings, renovating the third residential building, and constructing three new residential buildings. The site will consist of a total of 55 multifamily units with 70 parking spaces. Site access will be provided via the existing curb cut.

### **EXISTING CONDITIONS**

An inventory was conducted to collect traffic volumes, operating characteristics, speed limits, and sight distances, as well as land use information. Traffic volumes were collected in March 2023 at the intersections expected to receive the traffic impact from the Project. These are listed below:

- Country Way at Henry Turner Bailey Road and Gannett Road
- Chief Justice Cushing Highway (Route 3A) at Henry Turner Bailey Road

## **FUTURE CONDITIONS**

Traffic volumes within the study area were projected to 2030, which reflects a seven-year planning horizon consistent with State traffic study guidelines. These conditions incorporate traffic growth due to general background traffic increases as well as development projects currently being proposed/permited or under construction and expected to generate traffic in the future. This condition is referred to as the No-Build condition.

## **PROJECT-GENERATED TRAFFIC**

The Project is expected to generate 216 vehicle trips on an average weekday (two-way, 24-hour volume), with 13 vehicle trips (3 entering and 10 exiting) expected during the weekday morning peak hour and 21 vehicle trips (13 entering and 8 exiting) expected during the weekday evening peak hour.

Project-related traffic-volume increases external to the study area relative to 2030 No-Build conditions are anticipated to range from 2 to 6 vehicles or 0.3 to 1.7 percent during the peak periods.

## **TRAFFIC OPERATIONS ANALYSIS**

In future conditions, operations are generally preserved with minor increases in delays and vehicle queue lengths on the various approaches.

## **RECOMMENDATIONS**

Access to the Project site will be provided via the existing driveway onto Country Way. As the site currently has one curb cut onto Country Way, the Project will not increase the number of curb cuts onto Country Way. The following recommendations are offered with respect to the design and operation of the Project site driveway:

- The driveway should be placed under STOP-sign (*Manual on Uniform Traffic Control Devices* (MUTCD)<sup>1</sup> R1-1) control, with a painted STOP-bar included.
- All signs and other pavement markings to be installed within the Project site shall conform to the applicable standards of the current MUTCD.
- Signs and landscaping adjacent to the Project site driveway should be designed and maintained so as not to restrict lines of sight.
- Snow windrows within sight triangle areas of the Project site driveway should be promptly removed where such accumulations would impede sightlines.

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<sup>1</sup>*Manual on Uniform Traffic Control Devices* (MUTCD); Federal Highway Administration; Washington, D.C.; 2009.

## **CONCLUSIONS**

As documented in this study, Project-related traffic increases will not result in significant increases on overall traffic volumes or traffic delays within the study area. The site driveway will provide efficient access to and from the development. In general, Project-related traffic can be adequately accommodated within the existing infrastructure with minimal impact on the traffic operations within the study area.

## **INTRODUCTION**

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Vanasse & Associates, Inc. (VAI) has prepared this Transportation Impact Assessment (TIA) in order to identify the traffic impacts associated with the proposed residential development to be located at 817 Country Way in Scituate, Massachusetts. This report identifies and analyzes existing and future traffic conditions both with and without the Project and reviews access requirements, potential offsite improvements, and safety considerations.

### **STUDY METHODOLOGY**

This study was prepared in accordance with the State guidelines for TIAs and was conducted in three distinct stages.

The first stage involved an assessment of existing conditions in the study area and included an inventory of roadway geometry, observations of traffic flow, and collection of peak-period traffic counts.

In the second stage of the study, future traffic conditions were projected and analyzed. Specific travel demand forecasts for the Project were assessed along with future traffic demands due to expected traffic growth independent of the Project. A seven-year time horizon was selected for these analyses consistent with State guidelines for the preparation of TIAs. The traffic analysis conducted in stage two identifies projected future roadway capacity, traffic safety, and site access issues.

The third stage of the study presents and evaluates measures to address traffic and safety issues, if any are necessary, based on the results from stage two of the study.

## **EXISTING CONDITIONS**

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An inventory of existing conditions within the study area was conducted in February and March 2023. The field investigation consisted of an inventory of existing traffic volumes; and operating characteristics; as well as posted speed limits, sight distance, and land use information within the study area. The study area for the Project contains the major roadway which provides access to the Project, as well as the intersections which are expected to accommodate the majority of Project-related traffic. The study area is listed below and graphically depicted on Figure 1.

- Country Way at Henry Turner Bailey Road and Gannett Road
- Chief Justice Cushing Highway (Route 3A) at Henry Turner Bailey Road

The following describes the study area roadway which provides access/egress to the Project.

## **GEOMETRY**

### **Roadways**

#### **Route 3A**

Route 3A is classified as an urban principal arterial roadway under Massachusetts Department of Transportation (MassDOT) jurisdiction. Route 3A runs in a general north-to-south alignment throughout the study area. Route 3A provides one general-purpose travel lane in each direction separated by a double-yellow centerline with exclusive turn lanes provided at some intersections. The land use along Route 3A throughout the study area generally consist of commercial and residential uses.

#### **Henry Turner Bailey Road**

Henry Turner Bailey Road is classified as an urban minor arterial roadway under Town jurisdiction. Henry Tuner Bailey Road runs in a general east-to-west alignment throughout the study area. Henry Turner Bailey Road provides one general-purpose travel lane in each direction separated by a double-yellow centerline with exclusive turn lanes provided at some intersections. The land use along Country Way throughout the study area generally consist of residential uses.

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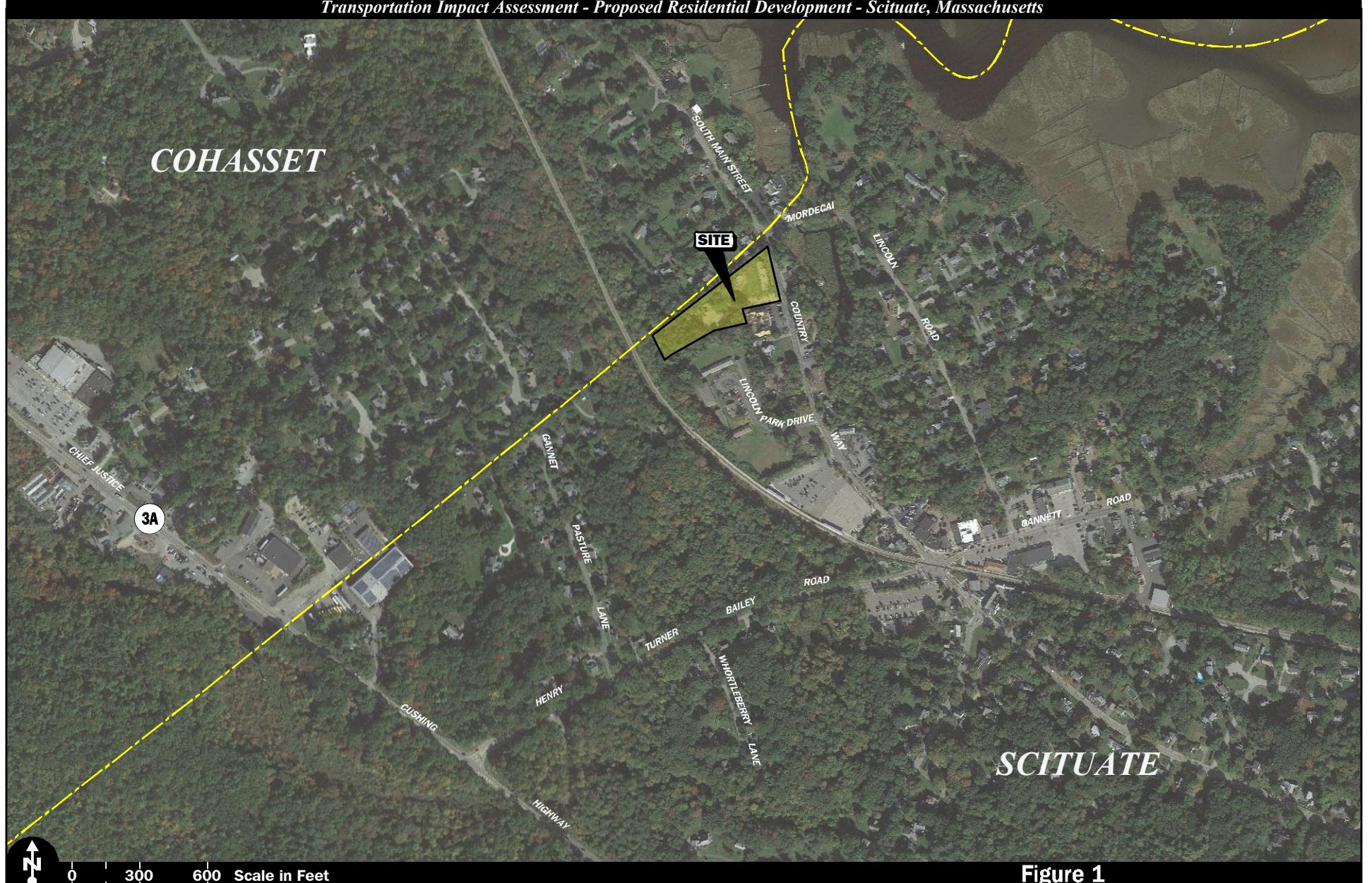


Figure 1  
Site Location Map

**V** Vanasse &  
Associates inc

## **Country Way**

Country Way is classified as an urban minor arterial roadway under Town jurisdiction. Country Way runs in a general north-to-south alignment throughout the study area. Country Way provides one general-purpose travel lane in each direction separated by a double-yellow centerline with exclusive turn lanes provided at some intersections. The land uses along Country Way throughout the study area generally consist of commercial and residential uses.

### **Intersections**

Figure 2 summarizes existing lane use, travel lane widths, and sidewalk and crosswalk locations at the study area intersections.

## **EXISTING TRAFFIC VOLUMES**

In order to establish base traffic-volume demands and flow patterns within the study area, manual turning movement counts (TMCs) were completed in February 2023. The TMCs were conducted during the weekday morning (7:00 to 9:00 AM) and weekday evening (4:00 to 6:00 PM) peak periods. Bicycles and pedestrians were also counted.

### **Traffic-Volume Adjustments**

In order to develop 2023 Existing traffic-volume conditions, MassDOT weekday seasonal factors for Urban Groups 3 (other principal arterials) were reviewed.<sup>2</sup> Based on a review of this data, it was determined that traffic volumes for the month of February are 3 percent *below* average-month conditions. As such, the traffic volumes were adjusted 3 percent up in order to be representative of average-month conditions to provide a conservative analysis.

MassDOT no longer requires pandemic-related adjustment of traffic counts performed after March 2022 except in locations where the predominant land use consists of offices or similar uses.<sup>3</sup> Given that the predominant land use within the study area is residential, no further adjustment (beyond the seasonal adjustment) is necessary.

As can be seen in Table 1, Country Way is observed to carry approximately 2,188 vehicles per day (vpd) with 262 vehicles per hour (vph) during the weekday morning peak hour and 274 vph during the weekday evening peak hour. During the weekday morning peak hour, 56 percent of the traffic is traveling northbound and during the weekday evening peak hour, 59 percent of the traffic is traveling southbound. The existing weekday morning and evening peak-hour traffic volumes for the study area intersections are graphically depicted on Figure 3.

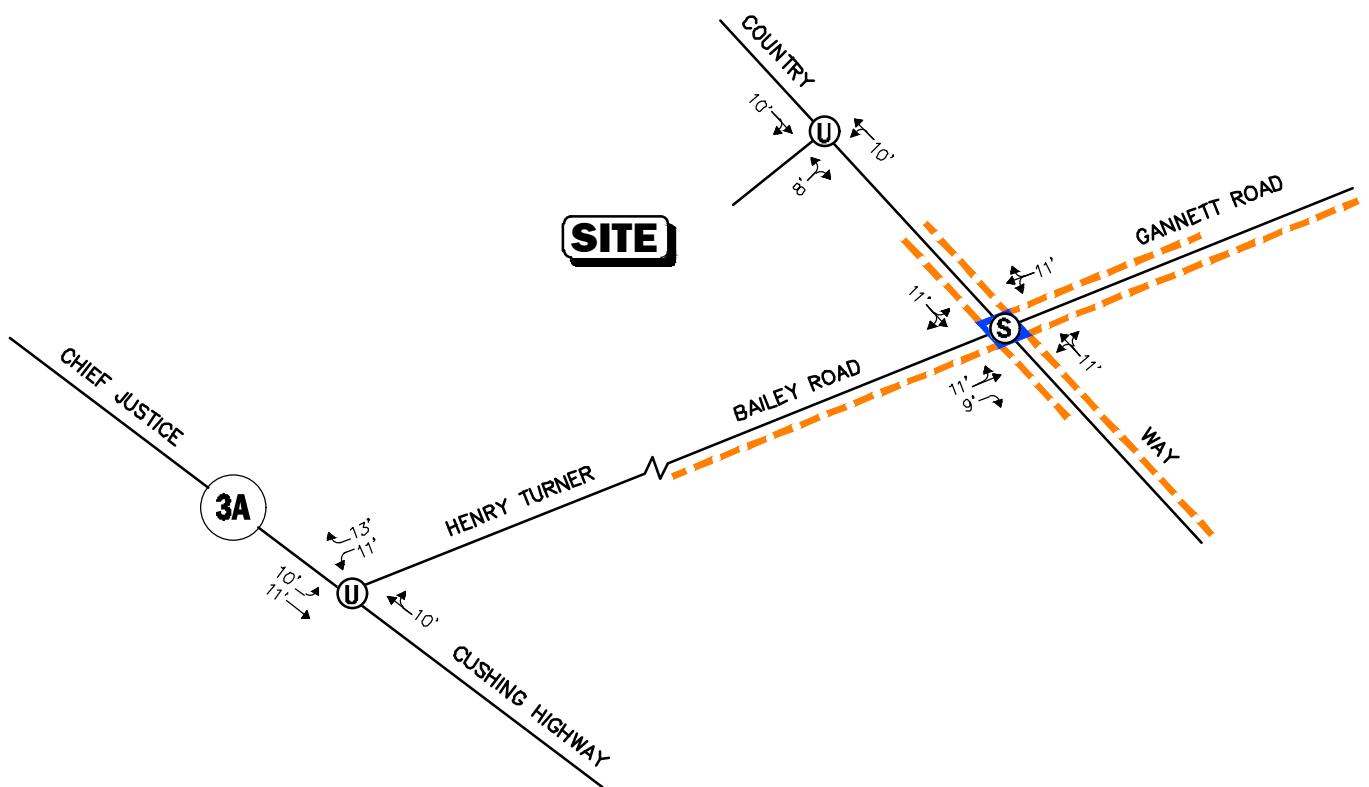
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<sup>2</sup>MassDOT statewide Traffic Data Collection; 2019 Weekday Seasonal Factors, Groups U3.

<sup>3</sup>25% Design Submission Guidelines; MassDOT Highway Division, Traffic and Safety Engineering; Revised May 31, 2022.

**Legend:**

- (S) Signalized Intersection
- (U) Unsignalized Intersection
- Sidewalk
- Crosswalk
- XX' → Lane Use and Travel Lane Width



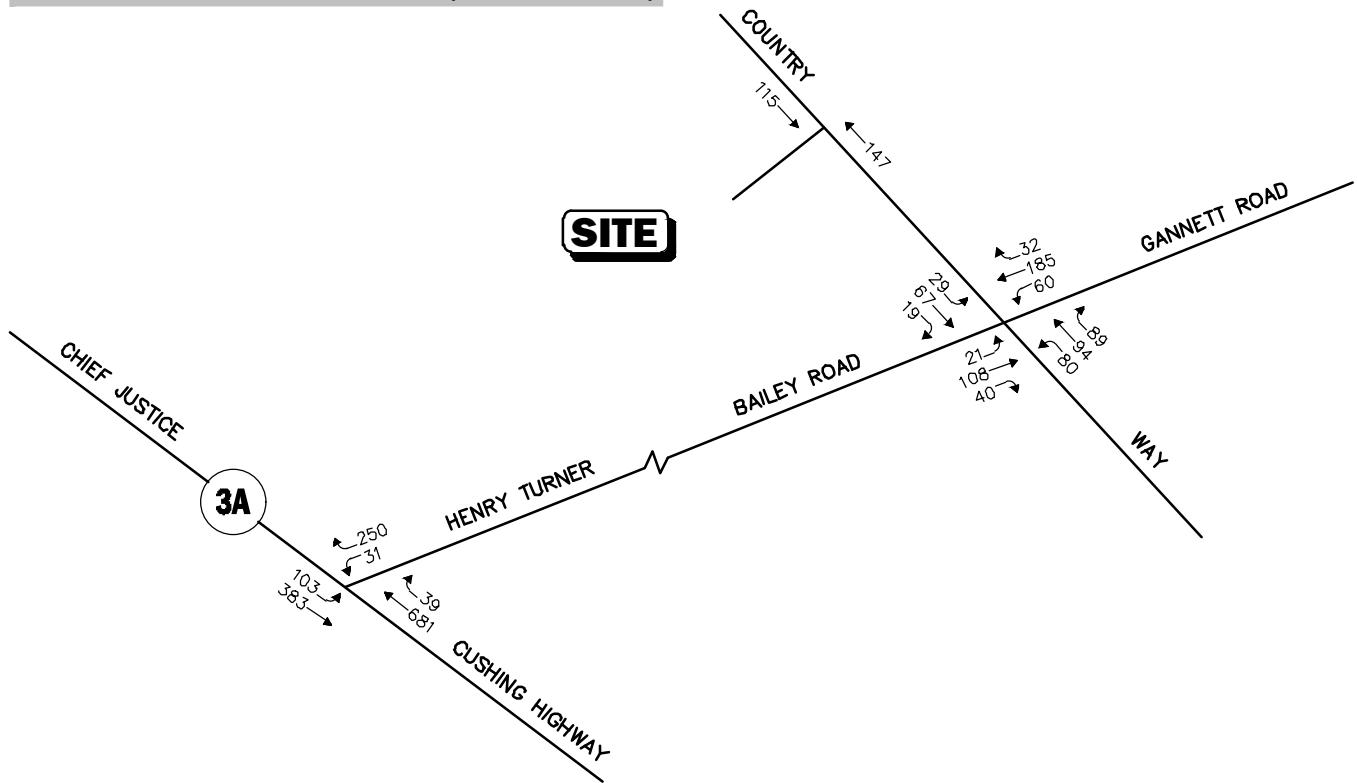
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**Figure 2**

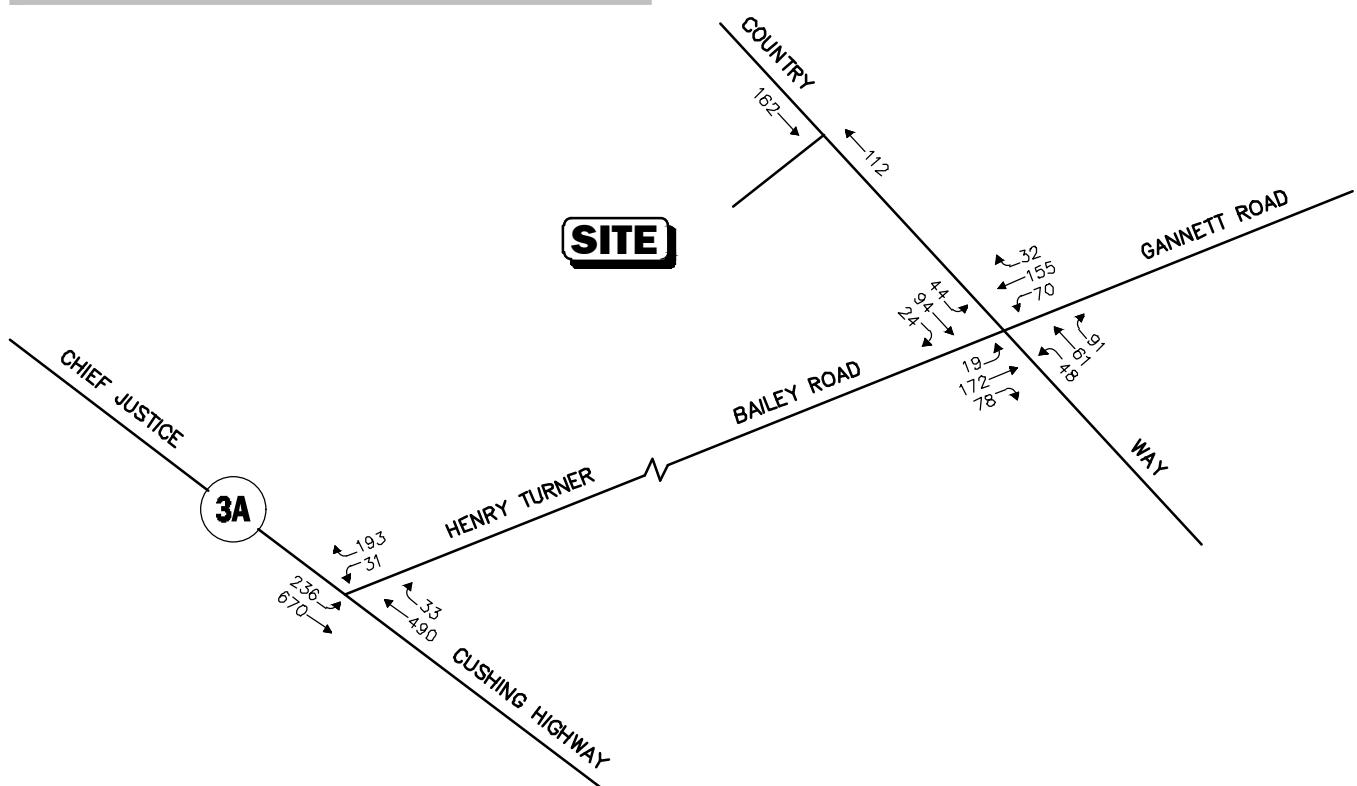
**Existing Intersection Lane Use,  
Travel Lane Width, and  
Pedestrian Facilities**

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WEEKDAY MORNING PEAK HOUR (7:30 - 8:30 AM)



WEEKDAY EVENING PEAK HOUR (4:45 - 5:45 PM)



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Figure 3

2023 Existing  
Peak-Hour Traffic Volumes

**Table 1**  
**2023 EXISTING ROADWAY TRAFFIC-VOLUME SUMMARY**

Location	Weekday	Weekday Morning Peak Hour			Weekday Evening Peak Hour		
	Daily Volume (vpd) <sup>a</sup>	Volume (vph) <sup>b</sup>	Percent of Daily Traffic <sup>c</sup>	Predominant Flow	Volume (vph)	Percent of Daily Traffic	Predominant Flow
Country Way, near 817 Country Way	2,184	262	12.0	56.1% NB	274	12.5	59.1% SB

Note: Includes seasonal correction factors applied to TMCs that were conducted in February 2023.

<sup>a</sup>Two-way daily traffic expressed in vehicles per day, estimated.

<sup>b</sup>Two-way peak-hour volume expressed in vehicles per hour.

<sup>c</sup>The percent of daily traffic that occurs during the peak hour.

NB = northbound, SB = southbound.

### **PEDESTRIAN AND BICYCLE FACILITIES**

An inventory of pedestrian and bicycle facilities within the study area was undertaken in March 2023. The field inventory consisted of a review of the location of sidewalks and pedestrian crossing locations along the study area roadways and at the study area intersections, as well as the location of bicycle facilities. Sidewalks are provided along both sides of Country Way between Henry Turner Bailey Road and Booth Hill Road in the vicinity of the intersection. Sidewalks are not present on Country Way in the vicinity of the site. Crosswalks are provided across all legs of the intersection of Country Way at Henry Turner Bailey Road and Gannett Road.

### **PUBLIC TRANSPORTATION**

Public transportation services are provided within the study area by the Massachusetts Bay Transportation Authority (MBTA) and the Greater Attleboro and Taunton Regional Transit Authority (GATRA). The MBTA provides commuter rail service to South Station in Boston on the Greenbush Line by way of North Scituate Station, which is located at 777 Country Way, approximately 0.2 miles (a 4-minute walk) to the south of the Project site. In addition, the MBTA provides The RIDE paratransit service to eligible persons who cannot use fixed-route transit (bus, subway, trolley) due to physical, cognitive, or mental disability in compliance with the Americans with Disabilities Act (ADA). On-Demand bus service is provided by GATRA within the service area encompassing the majority of the Town of Scituate by the GATRA On Demand Seacoast line that recently began service in January 2023, replacing the Scituate Loop (SLOOP).

Table 2 summarizes the characteristics of these services. The public transportation schedules and fare information are provided in the Appendix.

**Table 2**  
**PUBLIC TRANSPORTATION SERVICES**

Transit	Stop Closest to Site	Distance from Site	Weekday	
			Hours of Operation	Headway (minutes)
GATRA: Seacoast	At site	At site	7:30 AM – 5:30 PM	On-demand service
Commuter Rail: Greenbush	North Scituate	~0.2 miles	5:17 AM – 11:35 PM	57-170

### **MOTOR VEHICLE CRASH DATA**

Motor vehicle crash information for the study area intersections was provided by the MassDOT Safety Management/Traffic Operations Unit for the most recent five-year period available (2016 through 2020) in order to examine motor vehicle crash trends occurring within the study area. The data is summarized in Table 3 by intersection, type, weather condition, lighting condition, pavement condition, and severity.

As can be seen in Table 3, the intersection of Country Way at Henry Turner Bailey Road and Gannett Road experienced 6 accidents over the five-year review period, averaging 1.2 accidents per year. The majority of the accidents were angled and rear-end collisions, occurred on dry pavement, during the daylight, in clear/rainy weather, and caused property damage only. The intersection of Route 3A at Henry Turner Bailey Road experienced 19 accidents over the five-year review period, averaging 3.8 accidents per year. The majority of accidents was rear-end collisions (9 of 19), occurred on dry pavement (15 of 19), during daylight (15 of 19), in clear weather (14 of 19), and caused property damage only (10 of 19). It should be noted that this intersection is scheduled to be placed under traffic signal control as discussed later in this report, which should improve safety and reduce crash occurrences. No fatalities were reported over the five-year period reviewed at any of the locations. The crash rates for the intersections were observed to be lower than the MassDOT District 5 crash rates for unsignalized and signalized intersections.

**Table 3**  
**MOTOR VEHICLE CRASH DATA SUMMARY<sup>a</sup>**

	Country Way/ Henry Turner Bailey Road/ Gannett Road	Route 3A/ Henry Turner Bailey Road
Traffic Control Type: <sup>b</sup>	TS	U
<i>Year:</i>		
2016	1	6
2017	2	8
2018	3	1
2019	0	3
<u>2020</u>	<u>0</u>	<u>1</u>
Total	6	19
Average	1.20	3.80
Crash Rate <sup>c</sup>	0.33	0.57
Significant? <sup>c</sup>	No	No
<i>Type:</i>		
Angle	2	2
Rear-End	3	9
Head-On	0	1
Sideswipe	0	1
Fixed Object	1	5
Pedestrian/Bicycle	0	0
<u>Unknown/Other</u>	<u>0</u>	<u>1</u>
Total	6	19
<i>Conditions:</i>		
Clear	3	14
Cloudy	1	2
Rain	2	3
Fog/Smog/Smoke	0	0
<u>Snow/Ice</u>	<u>0</u>	<u>0</u>
Total	6	19
<i>Lighting:</i>		
Daylight	4	15
Dawn/Dusk	1	0
Dark (Road Lit)	1	4
<u>Dark (Road Unlit)</u>	<u>0</u>	<u>0</u>
Total	6	19
<i>Pavement Conditions :</i>		
Dry	4	15
Wet	2	3
Snow/Ice	0	1
<u>Unknown/Other</u>	<u>0</u>	<u>0</u>
Total	6	19
<i>Severity:</i>		
Property Damage Only	5	10
Personal Injury	1	4
Fatality	0	0
<u>Unknown</u>	<u>0</u>	<u>5</u>
Total	6	19

<sup>a</sup>Average number of crashes over a five-year period.

<sup>b</sup>Crash rate per million entering vehicles (mev).

<sup>c</sup>Significant if crash rate > 0.75 for signalized intersections or > 0.57 for unsignalized intersections (MassDOT District 5 rates).

Source: MassDOT Crash Data, 2016 through 2020.

## **VEHICLE SPEEDS**

Existing vehicle speeds along Country Way, near 817 Country Way, were recorded to determine the average and 85<sup>th</sup> percentile vehicle speeds. The speed limit on Country Way is posted at 30 miles per hour (mph). The results of the speed measurements are shown in Table 4.

**Table 4**  
**OBSERVED VEHICLE SPEEDS – (In Miles Per Hour)**

Location/Direction	Average Speed	85 <sup>th</sup> Percentile Speed <sup>a</sup>
<i>Country Way, near 817 Country Way:</i>		
Northbound	32	37
Southbound	31	35

<sup>a</sup>The 85<sup>th</sup> percentile speed is the speed at which 85 percent of the traffic is traveling at or below. It is commonly used for setting speed limits on roadways.

As can be seen from Table 4, the average speed recorded northbound on Country Way was 32 mph and the 85<sup>th</sup> percentile speed recorded was 37 mph. The average speed recorded southbound was 31 mph and the 85<sup>th</sup> percentile speed was 35 mph.

## **FUTURE CONDITIONS**

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To determine the impact of site-generated traffic volumes on the roadway network under future conditions, existing traffic volumes in the study area were projected to the year 2030. Traffic volumes on the roadway network at that time, in the absence of the Project (that is, the No-Build condition), would include existing traffic, new traffic due to general background traffic growth, and traffic related to specific development by others expected to be completed by 2030. Inclusion of these factors resulted in the development of 2030 No-Build traffic volumes. Anticipated site-generated traffic volumes were then superimposed upon these No-Build traffic-flow networks to develop the 2030 Build traffic-volume conditions.

## **FUTURE TRAFFIC GROWTH**

Traffic growth on area roadways is a function of the expected land development impacting the study area. Several methods are used to estimate this growth. A procedure frequently employed estimates an annual percentage increase in traffic growth and applies that percentage to all existing 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.

In addition, we identified the location and type of planned development affecting the study area, estimated the traffic to be generated by that development, and assigned it to the area roadway network. This produces a more realistic estimate of growth for local traffic. However, the drawback of this procedure is that the potential growth in population and development external to the study area would not be accounted for in the traffic projections.

To provide a conservative analysis framework, both procedures were used in this TIA.

### **General Background Growth**

Traffic-volume data compiled by MassDOT from permanent count stations and historic traffic counts in the area were reviewed in order to determine general background traffic growth trends. Based on a review of this data and other area traffic studies, it was determined that the traffic volumes are increasing in the area by approximately 0.89 percent per year on average. Therefore, a 1.0 percent per year compounded annual background traffic growth rate was used to account for future traffic growth including presently unforeseen development within the study area.

### **Specific Development by Others**

The Town of Scituate was contacted in order to determine if there are any planned or approved development projects that are expected to influence future traffic volumes within the study area. Based on these discussions, no 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.

### **Planned Roadway Improvements**

The Town of Scituate and MassDOT were contacted in order to determine if there are any planned roadway improvement projects expected to be completed within the study area in the seven-year planning horizon. Based on these discussions, the following project was identified for possible inclusion in this assessment:

***Project 608007 (Route 3A from Beechwood Street to Henry Turner Bailey Road).*** This project entails corridor improvements from the Beechwood Street intersection to the Cohasset/Scituate town line. The Route 3A/Beechwood Street intersection will be upgraded with new traffic signal equipment as well as minor geometric improvements. The Route 3A/Henry Turner Bailey Road intersection will be signalized as well as geometric improvements. Pedestrian and bicycle accommodations will be included along the corridor. This is expected to be completed by 2030; therefore, the Route 3A/Henry Turner Bailey Road intersection signalization and geometric changes were included in the future condition analysis.

No other roadway improvement projects are planned within the study area beyond general maintenance.

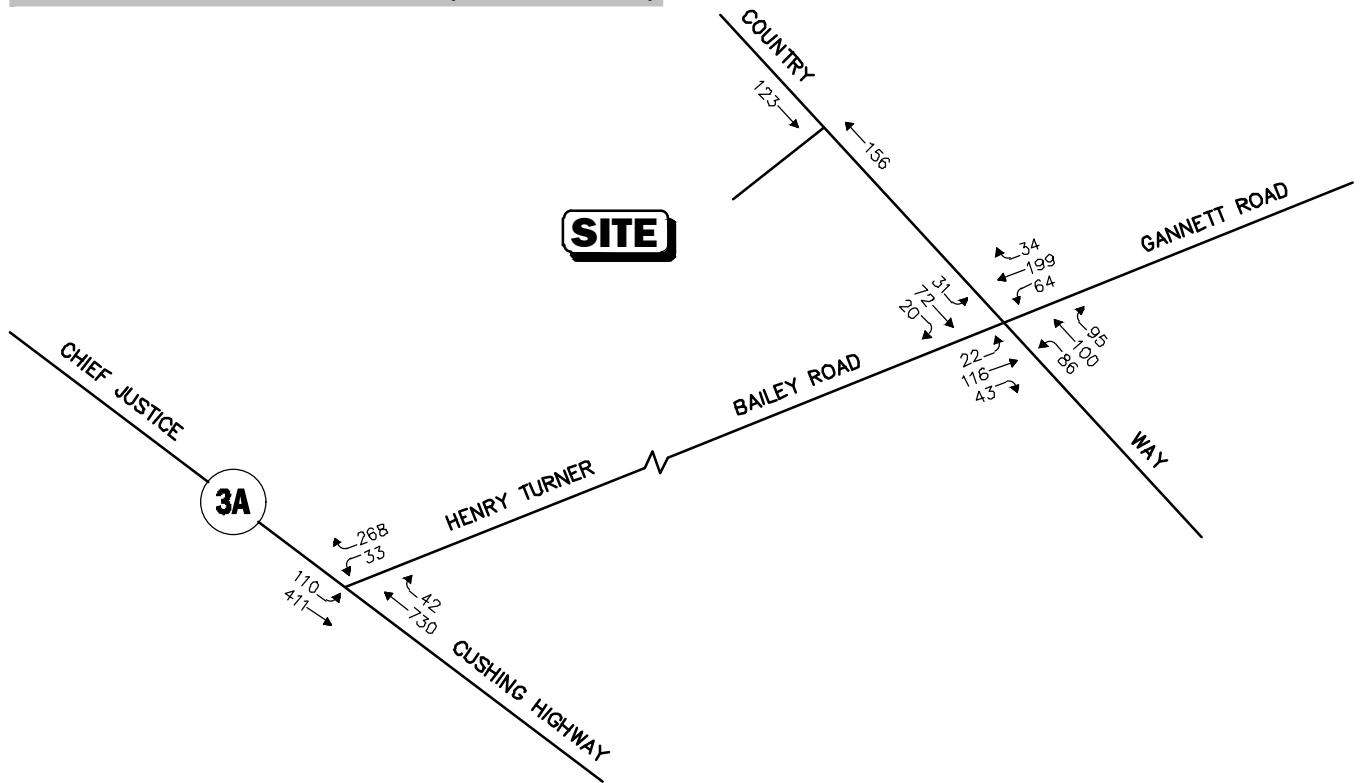
### **No-Build Traffic Volumes**

The 2030 No-Build peak-hour traffic-volume networks were developed by applying the 1.0 percent per year compounded annual background traffic growth rate to the 2023 Existing peak-hour traffic volumes. The resulting 2030 No-Build weekday morning and evening peak-hour traffic-volume networks are shown on Figure 4.

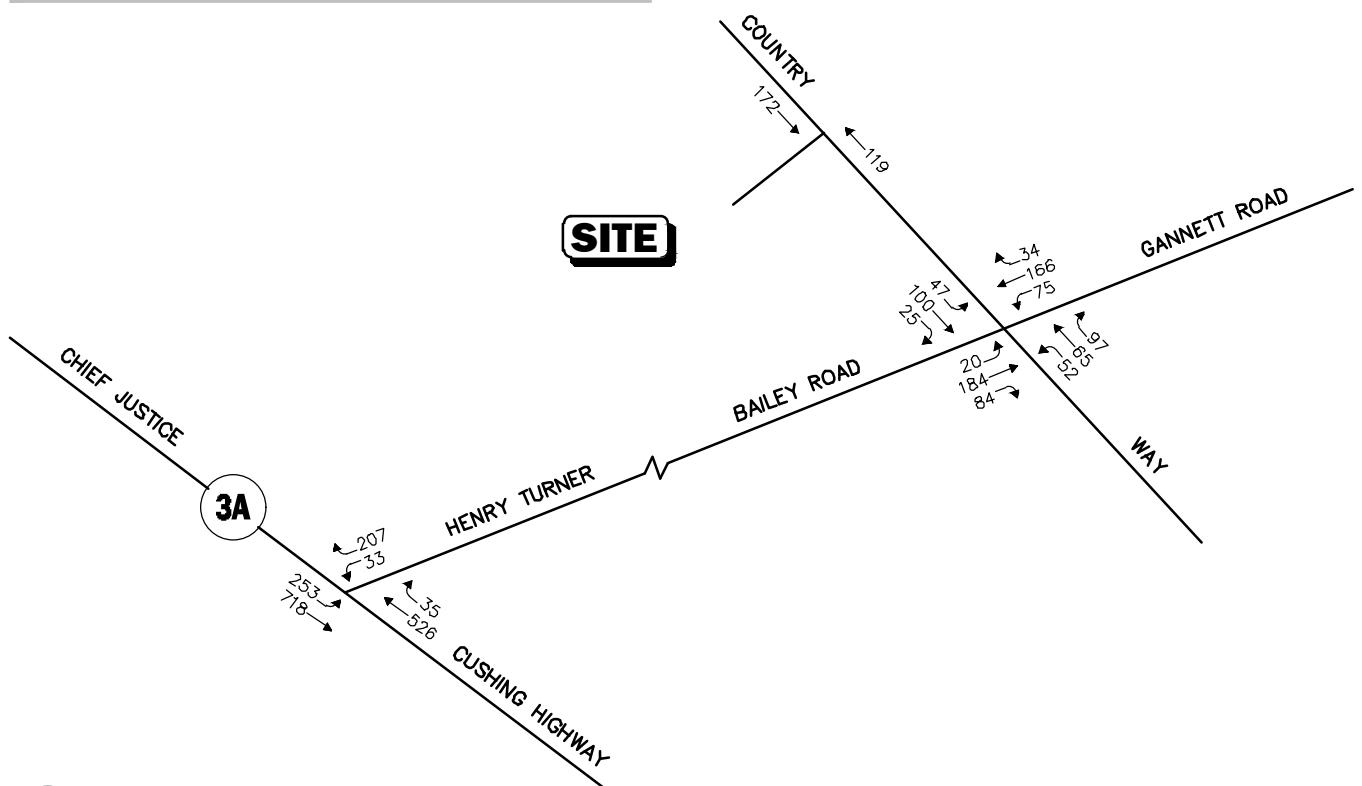
### **PROJECT-GENERATED TRAFFIC**

The Project entails constructing three new residential buildings while retaining one existing residential building, which will collectively have 55 multifamily units (8 units for ages 55+ only). In order to develop the traffic characteristics of the proposed Project, trip-generation statistics published by the ITE for Land Use Code (LUC) 221 *Multifamily Housing (Mid-Rise)* was used.

WEEKDAY MORNING PEAK HOUR (7:30 - 8:30 AM)



WEEKDAY EVENING PEAK HOUR (4:45 - 5:45 PM)



Not To Scale

Figure 4

2030 No-Build  
Peak-Hour Traffic Volumes

**Table 5**  
**PROPOSED SITE TRIP-GENERATION SUMMARY**

Time Period/ Directional Distribution	Multi-Family Residential Building (55 Units) <sup>a</sup>
	Vehicle Trips
Weekday Daily	216
<i>Weekday Morning Peak Hour:</i>	
Entering	3
<u>Exiting</u>	<u>10</u>
Total	13
<i>Weekday Evening Peak Hour:</i>	
Entering	13
<u>Exiting</u>	<u>8</u>
Total	21

<sup>a</sup>Based on ITE LUC 221, *Multifamily Housing (Mid-Rise)*; 55 units.

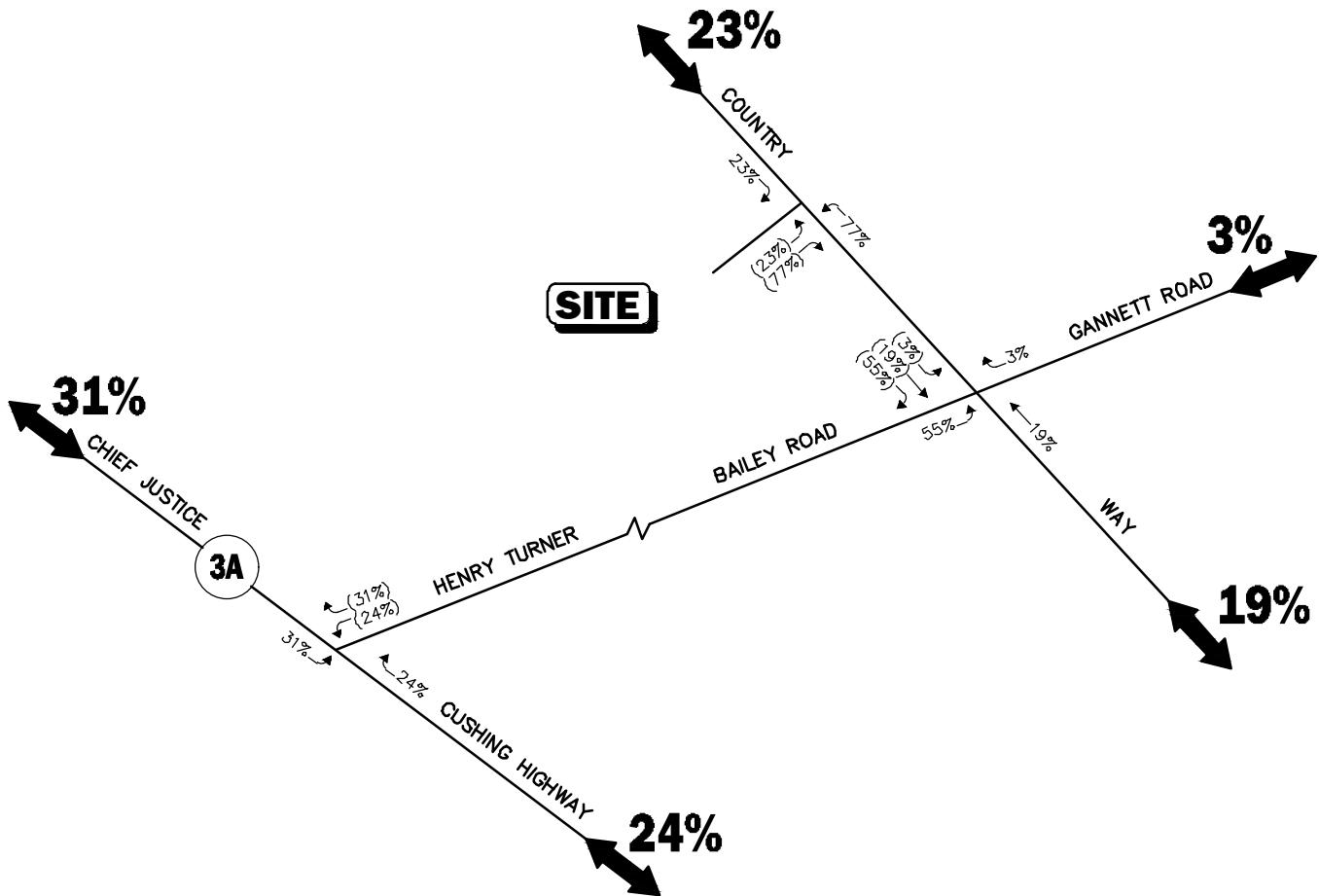
As can be seen in Table 5, the Project is expected to generate 216 vehicle trips on an average weekday (two-way, 24-hour volume), with 13 vehicle trips (3 entering and 10 exiting) expected during the weekday morning peak hour and 21 vehicle trips (13 entering and 8 exiting) expected during the weekday evening peak hour.

### **TRIP DISTRIBUTION AND ASSIGNMENT**

The directional distribution of the site-generated trips to and from the Project was determined based on a combination of a review of existing travel patterns at the study area intersections and census data. The trip distribution for the Project is summarized in Table 6 and graphically depicted on Figure 5. The weekday morning and evening peak-hour traffic volumes expected to be generated by the Project were assigned on the study area roadway network as shown on Figure 6.

**Legend:**

XX Entering Trips  
(XX) Exiting Trips

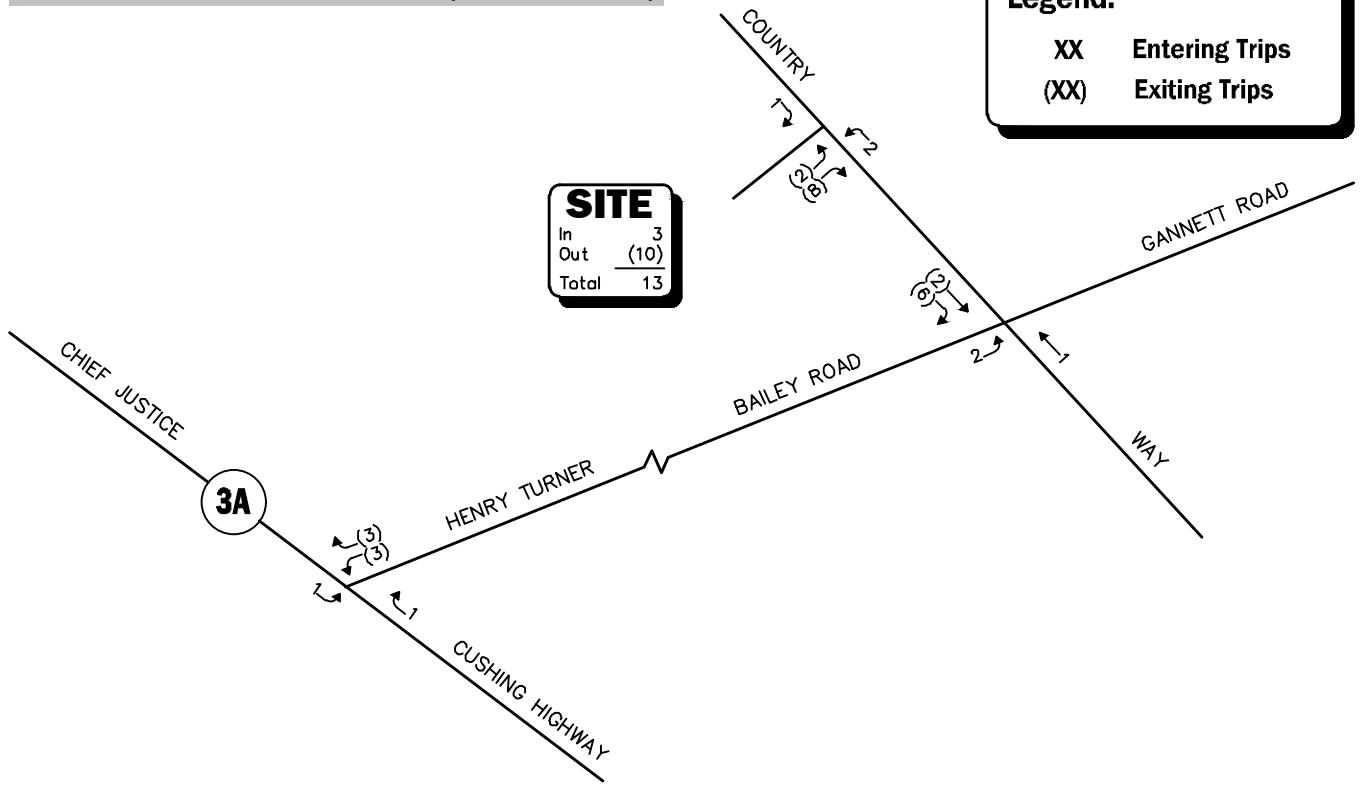


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Figure 5

Trip Distribution Map

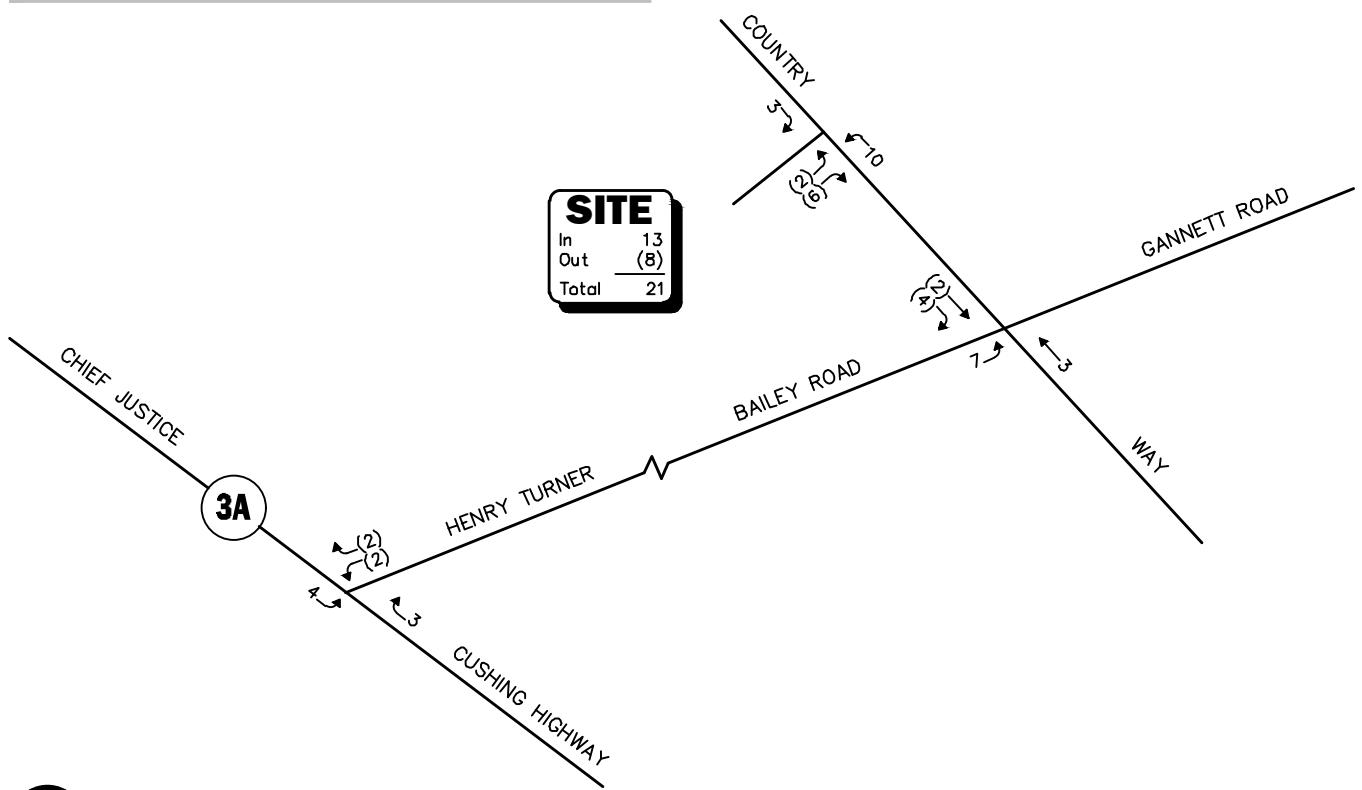
WEEKDAY MORNING PEAK HOUR (7:30 - 8:30 AM)



Legend:

XX Entering Trips  
(XX) Exiting Trips

WEEKDAY EVENING PEAK HOUR (4:45 - 5:45 PM)



Not To Scale

Figure 6

Site-Generated  
Peak-Hour Traffic Volumes

**Table 6**  
**TRIP-DISTRIBUTION SUMMARY**

Roadway	Direction (To/From)	Percent (To/From)
Route 3A	North	31
Route 3A	South	24
Country Way	North	23
Country Way	South	19
Gannett Road	East	<u>3</u>
TOTAL		100

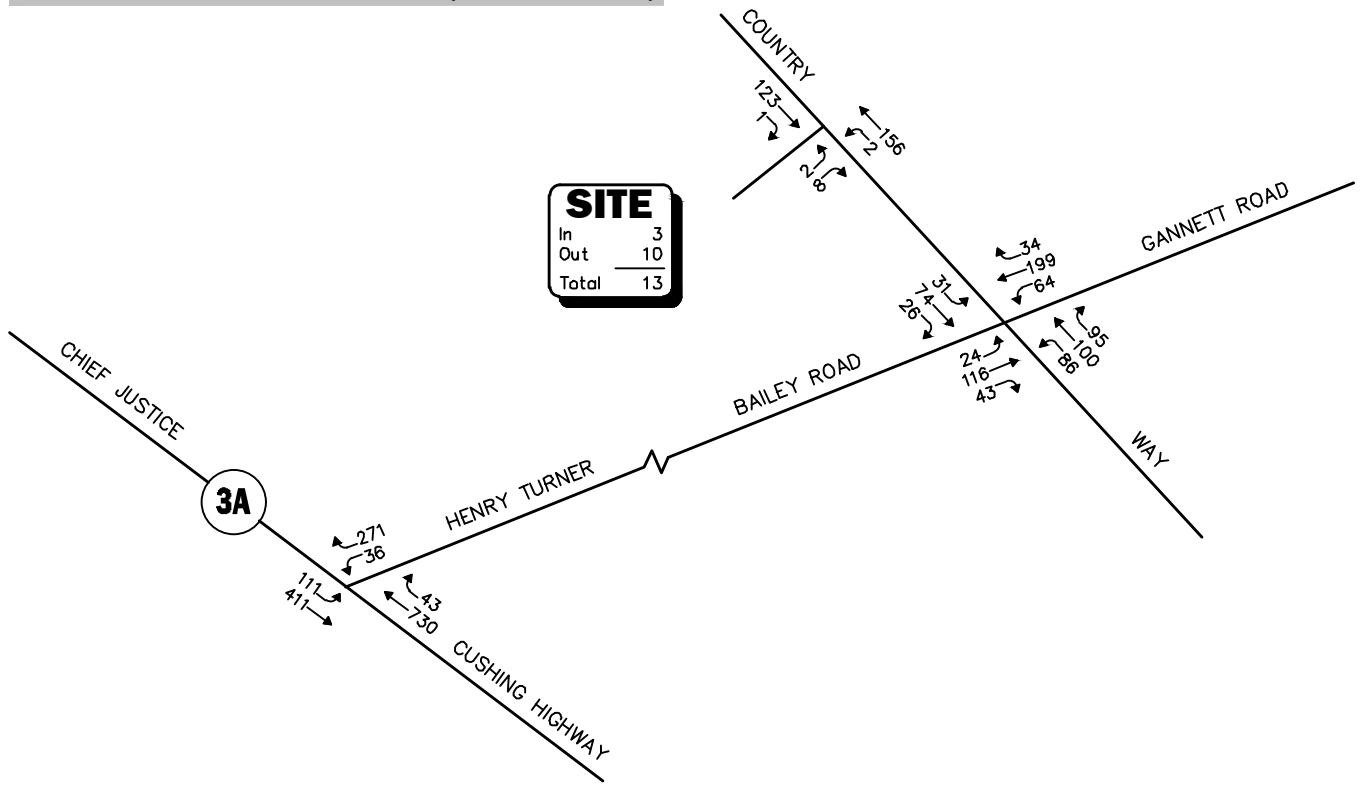
#### **FUTURE TRAFFIC VOLUMES – BUILD CONDITION**

The 2030 Build condition networks consist of the 2030 No-Build traffic volumes with the anticipated Project-generated traffic added to them. The 2030 Build weekday morning and evening peak-hour traffic-volume networks are graphically depicted on Figure 7.

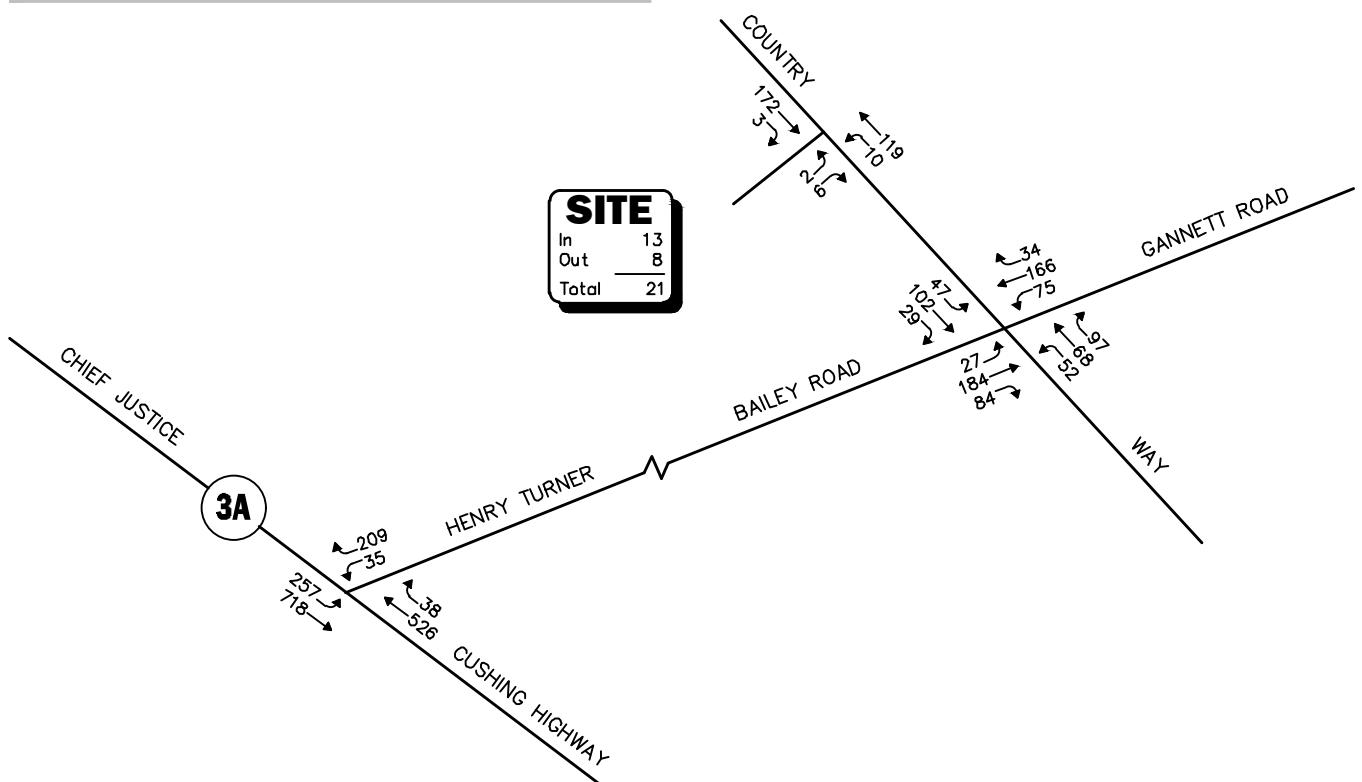
A summary of peak-hour projected traffic-volume increases external to the study area that is the subject of this assessment is shown in Table 7. These volumes are based on the expected increases from the Project.

As shown in Table 7, Project-related traffic-volume increases external to the study area relative to 2030 No-Build conditions are anticipated to range from 2 to 6 vehicles or 0.3 to 1.7 percent during the peak periods.

WEEKDAY MORNING PEAK HOUR (7:30 - 8:30 AM)



WEEKDAY EVENING PEAK HOUR (4:45 - 5:45 PM)



Not To Scale

Figure 7

2030 Build  
Peak-Hour Traffic Volumes

**Table 7**  
**PEAK-HOUR TRAFFIC-VOLUME INCREASES**

Location/Peak Hour	2030 No-Build	2030 Build	Traffic-Volume Increase Over No-Build	Percent Increase Over No-Build
<i>Route 3A, north of Henry Turner Bailey Road:</i>				
Weekday Morning	1,519	1,523	4	0.3
Weekday Evening	1,704	1,710	6	0.4
<i>Route 3A, south of Henry Turner Bailey Road:</i>				
Weekday Morning	1,216	1,220	4	0.3
Weekday Evening	1,312	1,317	5	0.4
<i>Country Way, north of Henry Turner Bailey Road:</i>				
Weekday Morning	279	282	3	1.1
Weekday Evening	291	296	5	1.7
<i>Country Way, south of Henry Turner Bailey Road:</i>				
Weekday Morning	460	462	2	0.4
Weekday Evening	473	478	5	1.1

### **PARKING GENERATION**

A review of potential parking demand for the Project was conducted using industry sources. The following analysis was conducted to provide an estimate of parking demand for this Project. Parking demand was determined by using the ITE *Parking Generation* publication<sup>4</sup> using LUC 221, *Multifamily Housing (Mid-Rise)*. Estimates of parking demand for the Project were calculated and are summarized in Table 8.

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<sup>4</sup>*Parking Generation*, 5th; Institution of Transportation Engineers; Washington, DC; 2020.

**Table 8**  
**PROJECT PARKING DEMAND<sup>a</sup>**

Time Period	Parking Rates		Parking Spaces	
	Average	85 <sup>th</sup> Percentile	Average <sup>c</sup>	85 <sup>th</sup> Percentile <sup>d</sup>
Weekday	0.75 spaces/bed	0.87 spaces/bed	64	74

<sup>a</sup>Based on LUC 221, *Multifamily Housing (Mid-Rise)*, 85 beds.

As can be seen in Table 8, the average rate indicates that the site would require 64 spaces to satisfy the expected demand. The Project is proposing 70 parking spaces for a ratio of 0.82 parking spaces per bed, which is 6 spaces more than the average rate indicated, but less than the 85<sup>th</sup> percentile rate indicated, that would be required. Therefore, the proposed parking supply is sufficient and will accommodate the peak-parking demand of the proposed development.

## **SIGHT DISTANCE EVALUATION**

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Sight distance measurements were performed at the site driveway intersection with Country Way in accordance with MassDOT and American Association of State Highway and Transportation Officials (AASHTO)<sup>5</sup> recommendations. Both stopping sight distance (SSD) and intersection sight distance (ISD) measurements were performed. In brief, SSD is the distance recommended to be provided 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 is the sight distance recommended to be provided 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 recommended 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.

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<sup>5</sup>*A Policy on Geometric Design of Highway and Streets*, 7<sup>th</sup> Edition; American Association of State Highway and Transportation Officials (AASHTO); Washington D.C.; 2018.

**Table 9**  
**SIGHT DISTANCE MEASUREMENTS<sup>a</sup>**

Intersection/Sight Distance Measurement	Recommended Distances (Feet)		Field Measured Distances (Feet)	
	Posted Speed Limit (NB/SB) 35/37 mph on Country Way			
<b>Main Street at South Site Driveway</b>				
<i>Stopping Sight Distance:</i>				
Country Way approaching from the north	246	293		
Country Way approaching from the south	268	500+		
<i>Intersection Sight Distance:<sup>b</sup></i>				
Left turn from Site Driveway (looking north)	386	280		
Left turn from Site Driveway (looking south)	408	500+ <sup>c</sup>		

<sup>a</sup>Recommended values obtained from *A Policy on Geometric Design of Highways and Streets*, 7<sup>th</sup> Edition; American Association of State Highway and Transportation Officials (AASHTO); 2018.

<sup>b</sup>Values shown are the intersection sight distance for a vehicle turning right or left exiting a roadway under STOP control such that motorists approaching the intersection on the major street should not need to adjust their travel speed to less than 70 percent of their initial approach speed.

<sup>c</sup>If the driver is 9 feet back from the edge of the traveled way.

As can be seen in Table 9, the sight distance at the intersection of the site driveway with Country Way was found to exceed the recommended values for SSD based on a speed of 35/37 mph. The site driveway did not meet the recommended value for ISD (looking north) for the 85<sup>th</sup> percentile vehicle travel speed of 35 mph due to the curvature of the traveled way. In addition, a retaining wall exists on the property adjacent to the site to the south that also limits ISD. If the vehicle exiting the driveway pulls forward so that the driver's eye is 9 feet back from the edge of the traveled way instead of 14.5 feet back, the ISD is significantly increased. However, based on AASHTO standards, if the measured ISD is greater than the recommended SSD value the intersection can operate in a safe manner, which is the case with this driveway.

## **TRAFFIC OPERATIONS ANALYSIS**

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Measuring existing and future traffic volumes quantify traffic flow within the study area. To assess quality of flow, roadway capacity, and vehicle queue analyses were conducted under Existing, No-Build, and Build traffic-volume conditions. Capacity analyses provide an indication of how well the roadway 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.

### **METHODOLOGY**

#### **Levels of Service**

A primary result of capacity analyses is the assignment of level of service to traffic facilities under various traffic-flow conditions.<sup>6</sup> The concept of level of service is defined as a qualitative measure describing operational conditions within a traffic stream and their perception by motorists and/or passengers. A level-of-service definition provides an index to quality of traffic flow in terms of such factors as speed, travel time, freedom to maneuver, traffic interruptions, comfort, convenience, and safety.

Six levels of service are defined for each type of facility. They are given letter designations from A to F, with level-of-service (LOS) A representing the best-operating conditions and LOS F representing congested or constrained operating conditions.

Since the level of service of a traffic facility is a function of the traffic 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 year.

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<sup>6</sup>The capacity analysis methodology is based on the concepts and procedures presented in the *Highway Capacity Manual 6<sup>th</sup> Edition*; Transportation Research Board; Washington, DC; 2016.

## **Signalized Intersections**

The six levels of service for signalized intersections may be described as follows:

- *LOS A* describes operations with very low control delay; most vehicles do not stop at all.
- *LOS B* describes operations with relatively low control delay. However, more vehicles stop than LOS A.
- *LOS C* describes operations with higher control delays. Individual cycle failures may begin to appear. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.
- *LOS D* describes operations with control delay in the range where the influence of congestion becomes more noticeable. Many vehicles stop, and individual cycle failures are noticeable.
- *LOS E* describes operations with high control delay values. Individual cycle failures are frequent occurrences.
- *LOS F* describes operations with high control delay values that often occur with oversaturation. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.

Levels of service for signalized intersections were calculated using the Percentile Delay Method implemented as a part of the Synchro™ 11 software as required by MassDOT. The Percentile Delay Method assesses the effects of signal type, timing, phasing, and progression; vehicle mix; and geometrics on “percentile” delay. Level-of-service designations are based on the criterion of percentile delay per vehicle and are a measure of: i) driver discomfort; ii) motorist frustration; and iii) fuel consumption; and include a uniform delay based on percentile volumes using a Poisson arrival pattern, an initial queue move-up time, and a queue interaction delay that accounts for delays resulting from queues extending from adjacent intersections. Table 10 summarizes the relationship between level-of-service and percentile delay and uses the same numerical delay thresholds as the *Highway Capacity Manual*<sup>7</sup> method. The tabulated percentile delay criterion may be applied in assigning level-of-service designations to individual lane groups, individual intersection approaches, or to entire intersections.

**Table 10**  
**LEVEL-OF-SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS**

Level of Service	Percentile Delay Per Vehicle (Seconds)
A	$\leq 10.0$
B	10.1 to 20.0
C	20.1 to 35.0
D	35.1 to 55.0
E	55.1 to 80.0
F	$> 80.0$

<sup>7</sup>*Highway Capacity Manual 6<sup>th</sup> Edition*; Transportation Research Board; Washington, DC; 2016.

## **Unsignalized Intersections**

The six levels of service for unsignalized intersections may be described as follows:

- *LOS A* represents a condition with little or no control delay to minor street traffic.
- *LOS B* represents a condition with short control delays to minor street traffic.
- *LOS C* represents a condition with average control delays to minor street traffic.
- *LOS D* represents a condition with long control delays to minor street traffic.
- *LOS E* represents operating conditions at or near capacity level, with very long control delays to minor street traffic.
- *LOS F* represents a condition where minor street demand volume exceeds capacity of an approach lane, with extreme control delays resulting.

The levels of service of unsignalized intersections are determined by application of a procedure described in the *Highway Capacity Manual 6<sup>th</sup> Edition*. Level of service is measured in terms of average control delay. Mathematically, control delay is a function of the capacity and degree of saturation of the lane group and/or approach under study and is a quantification of motorist delay associated with traffic control devices such as traffic signals and STOP signs. Control delay includes the effects of initial deceleration delay approaching a STOP sign, stopped delay, queue move-up time, and final acceleration delay from a stopped condition. Definitions for level of service at unsignalized intersections are also given in the *Highway Capacity Manual 6<sup>th</sup> Edition*. Table 11 summarizes the relationship between level of service and average control delay for two-way STOP-controlled and all-way STOP-controlled intersections.

**Table 11**  
**LEVEL-OF-SERVICE CRITERIA FOR UNSIGNALIZED INTERSECTIONS<sup>a</sup>**

Level-of-Service by Volume-to-Capacity Ratio v/c ≤ 1.0	v/c > 1.0	Average Control Delay (Seconds Per Vehicle)
A	F	≤10.0
B	F	10.1 to 15.0
C	F	15.1 to 25.0
D	F	25.1 to 35.0
E	F	35.1 to 50.0
F	F	>50.0

<sup>a</sup>Source: *Highway Capacity Manual 6<sup>th</sup> Edition*; Transportation Research Board; Washington, DC; 2016; page 20-6.

## **ANALYSIS RESULTS**

Level-of-service analyses were conducted for 2023 Existing, 2030 No-Build, and 2030 Build conditions for the study area intersections. The results of the intersection capacity analysis within the study area are described below, with a tabular summary provided in Table 12 and Table 13.

### **Signalized Intersections**

#### **Country Way at Henry Turner Bailey Road and Gannett Road**

Under 2023 Existing and 2030 No-Build conditions, this intersection operates at an overall LOS B during the weekday morning and evening peak hours. No changes to overall level of service occur under 2030 Build conditions due to the addition of Project traffic. The vehicle queue lengths increase by less than 1 vehicle with the addition of Project traffic.

#### **Route 3A at Henry Turner Bailey Road**

Under 2030 No-Build conditions, this intersection becomes signalized and operates at an overall LOS B during both the weekday morning and evening peak hours. No changes to overall level of service occur under 2030 Build conditions due to the addition of Project traffic. The vehicle queue lengths increase by less than 1 vehicle with the addition of Project traffic.

**Table 12**  
**SIGNALIZED INTERSECTION CAPACITY ANALYSIS SUMMARY**

Signalized Intersection/ Peak Hour/Movement	2023 Existing				2030 No-Build				2030 Build			
	V/C <sup>a</sup>	Delay <sup>b</sup>	LOS <sup>c</sup>	Queue <sup>d</sup> Avg/95 <sup>th</sup>	V/C	Delay	LOS	Queue Avg/95 <sup>th</sup>	V/C	Delay	LOS	Queue Avg/95 <sup>th</sup>
<b>Country Way at Henry Turner Bailey Road and Gannett Road</b>												
<i>Weekday Morning:</i>												
Henry Turner Bailey Road EB LT/TH	0.28	12.5	B	1/5	0.29	13.0	B	1/5	0.30	13.0	B	1/5
Henry Turner Bailey Road EB RT	0.03	11.2	B	0/1	0.03	11.6	B	0/1	0.03	11.6	B	0/1
Gannett Road WB LT/TH/RT	0.59	15.5	B	2/9	0.62	16.7	B	2/10	0.62	16.6	B	2/11
Country Way NB LT/TH/RT	0.57	15.2	B	2/9	0.59	16.1	B	2/9	0.60	16.2	B	2/9
Country Way SB LT/TH/RT	0.26	12.5	B	1/4	0.27	12.8	B	1/4	0.29	12.9	B	1/4
<b>Overall</b>	--	<b>14.3</b>	<b>B</b>	--	--	<b>15.1</b>	<b>B</b>	--	--	<b>15.1</b>	<b>B</b>	--
<i>Weekday Evening:</i>												
Henry Turner Bailey Road EB LT/TH	0.38	11.8	B	1/5	0.38	11.6	B	2/6	0.39	11.7	B	2/6
Henry Turner Bailey Road EB RT	0.06	10.1	B	0/1	0.07	10.0	B	0/1	0.07	10.0	B	0/1
Gannett Road WB LT/TH/RT	0.52	12.8	B	2/8	0.52	12.8	B	2/8	0.50	12.6	B	2/8
Country Way NB LT/TH/RT	0.42	14.0	B	1/6	0.47	15.4	B	1/6	0.48	15.9	B	1/7
Country Way SB LT/TH/RT	0.45	14.2	B	1/5	0.50	15.7	B	2/6	0.51	16.2	B	2/6
<b>Overall</b>	--	<b>12.9</b>	<b>B</b>	--	--	<b>13.4</b>	<b>B</b>	--	--	<b>13.6</b>	<b>B</b>	--
<b>Route 3A at Henry Turner Bailey Road</b>												
<i>Weekday Morning:</i>												
Henry Turner Bailey Road WB LT					0.11	17.4	B	1/2	0.12	17.5	B	1/2
Henry Turner Bailey Road WB RT					0.31	18.5	B	1/3	0.32	18.6	B	1/4
Route 3A NB TH/RT					0.76	10.7	B	5/13	0.76	10.7	B	5/14
Route 3A SB LT					0.59	10.5	B	1/3	0.61	11.1	B	1/3
Route 3A SB TH					0.48	6.2	A	3/5	0.48	6.2	A	3/5
<b>Overall</b>	<b>Unsignalized Under Existing Conditions</b>				--	<b>10.8</b>	<b>B</b>	--	--	<b>10.9</b>	<b>B</b>	--
<i>Weekday Evening:</i>												
Henry Turner Bailey Road WB LT					0.16	16.5	B	1/1	0.17	16.7	B	1/2
Henry Turner Bailey Road WB RT					0.18	16.6	B	0/1	0.18	176.8	B	0/1
Route 3A NB TH/RT					0.58	7.0	A	3/7	0.58	67.0	A	3/7
Route 3A SB LT					0.70	12.2	B	2/5	0.71	12.7	B	2/6
Route 3A SB TH					0.70	8.8	A	4/10	0.69	8.7	A	4/10
<b>Overall</b>	--	<b>10.0</b>	<b>B</b>	--	--	<b>10.1</b>	<b>B</b>	--	--	<b>10.1</b>	<b>B</b>	--

<sup>a</sup>Volume-to-capacity ratio.

<sup>b</sup>Control (signal) delay per vehicle in seconds.

<sup>c</sup>Level of service.

<sup>d</sup>Queue length in vehicles.

NB = northbound; SB = southbound; EB = eastbound; WB = westbound; LT = left-turning movements; TH = through movements; RT = right-turning movements.

## **Unsignalized Intersection**

### **Route 3A at Henry Turner Bailey Road**

Under 2023 Existing conditions, the critical movements at this intersection operate at LOS E or better during the weekday morning peak hour and at LOS F or better during the weekday evening peak hour. This intersection is assumed to be signalized under future conditions.

### **Country Way at the South Project Driveway**

Under 2030 Build conditions, the critical movements at this intersection operate at LOS A during the weekday morning and evening peak hours.

**Table 13**  
**UNSIGNALIZED INTERSECTION CAPACITY ANALYSIS SUMMARY**

Unsignalized Intersection/ Critical Movement/Peak Hour	2023 Existing				2030 No-Build				2030 Build			
	Demand <sup>a</sup>	Delay <sup>b</sup>	LOS <sup>c</sup>	Queue <sup>d</sup>	Demand	Delay	LOS	Queue	Demand	Delay	LOS	Queue
<b>Route 3A at Henry Turner Bailey Road</b>												
<i>Weekday Morning:</i>												
Henry Turner Bailey Road WB LT	31	47.9	E	1								
Henry Turner Bailey Road WB RT	250	28.4	D	5								
Route 3A SB LT	103	10.1	B	1								
<i>Weekday Evening:</i>												
Henry Turner Bailey Road WB LT	31	>50.0	F	3								
Henry Turner Bailey Road WB RT	193	18.6	C	3								
Route 3A SB LT	236	9.8	A	1								
<b>Country Way at the Project Driveway</b>												
<i>Weekday Morning:</i>												
Country Way NB LT/TH	--	--	--	--	--	--	--	--	158	7.5	A	0
Project Driveway EB LT/RT	--	--	--	--	--	--	--	--	10	9.2	A	0
<i>Weekday Evening:</i>												
Country Way NB LT/TH	--	--	--	--	--	--	--	--	129	7.6	A	0
Project Driveway EB LT/RT	--	--	--	--	--	--	--	--	8	9.6	A	0

<sup>a</sup>Demand in vehicles per hour.

<sup>b</sup>Delay in seconds per vehicle.

<sup>c</sup>Level of service.

<sup>d</sup>95th percentile queue length (veh).

EB = eastbound; WB = westbound; NB = northbound; SB = southbound; LT = left-turning movements; TH = through movements; RT = right-turning movements.

## **RECOMMENDATIONS AND CONCLUSIONS**

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VAI has prepared this TIA in order to evaluate potential traffic impacts associated with the proposed residential development to be located at 817 Country Way in Scituate, Massachusetts. This study was prepared in accordance with MassDOT Guidelines for *Transportation Impact Assessment (TIA)*; and was conducted pursuant to the standards of the traffic engineering and transportation planning professions for the preparation of such reports. Based on the results of this study, the following can be concluded:

- The study area intersection crash rates were observed to be lower than the MassDOT District 5 crash rates for unsignalized and signalized intersections.
- The Project is expected to generate 216 vehicle trips on an average weekday (two-way, 24-hour volume), with 13 vehicle trips (3 entering and 10 exiting) expected during the weekday morning peak hour and 21 vehicle trips (13 entering and 8 exiting) expected during the weekday morning peak hour.
- The analysis has indicated that the Project will generally result in minimal impact on motorist delays and vehicle queue lengths at the study intersection.

## **RECOMMENDATIONS**

The following improvements have been recommended as a part of this evaluation:

### **Project Access**

Access to the Project site will be provided via the existing driveway onto Country Way. As the site currently has one curb cut onto Country Way, the Project will not increase the number of curb cuts onto Country Way. The following recommendations are offered with respect to the design and operation of the Project site driveway:

- The driveway should be placed under STOP-sign (*Manual on Uniform Traffic Control Devices* (MUTCD)<sup>8</sup> R1-1) control, with a painted STOP-bar included.
- All signs and other pavement markings to be installed within the Project site shall conform to the applicable standards of the current MUTCD.
- Signs and landscaping adjacent to the Project site driveway should be designed and maintained so as not to restrict lines of sight.
- Snow windrows within sight triangle areas of the Project site driveway should be promptly removed where such accumulations would impede sightlines.

## **CONCLUSIONS**

As documented in this study, Project-related traffic increases will not result in significant increases on overall traffic volumes or traffic delays within the study area. The site driveway will provide efficient access to and from the development. In general, Project-related traffic can be adequately accommodated within the existing infrastructure with minimal impact on the traffic operations within the study area.

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<sup>8</sup>Ibid 1.

## **APPENDIX**

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TRAFFIC COUNT DATA  
SEASONAL ADJUSTMENT DATA  
PUBLIC TRANSPORTATION SCHEDULES  
MASSDOT CRASH RATE WORKSHEETS  
VEHICLE SPEED DATA  
GROWTH RATE DATA  
TRIP GENERATION DATA  
JOURNEY TO WORK  
CAPACITY ANALYSIS



TRAFFIC COUNT DATA



**Country Way**  
**near #817 Country Way**  
**City, State: Scituate, MA**  
**Client: VAI/S. Kelly**  
**Site Code: 9620**



PDI File #: 239150 ATR A

**Count Date:** Thursday, February 2, 2023  
**Direction:** NB

157 Washington Street, Suite 2  
Hudson, MA 01749  
Office: 508-875-0100 Fax: 508-875-0118

AM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total	PM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	1	0	0	0	1	12:00 PM	0	0	19	0	0	0	19
12:15 AM	0	0	0	0	0	0	0	12:15 PM	0	0	13	0	1	0	14
12:30 AM	0	0	0	0	0	0	0	12:30 PM	0	0	13	0	1	0	14
12:45 AM	0	0	0	0	0	0	0	12:45 PM	0	0	13	0	4	0	17
1:00 AM	0	0	0	0	0	0	0	1:00 PM	0	0	18	0	1	0	19
1:15 AM	0	0	0	0	0	0	0	1:15 PM	0	0	14	0	0	0	14
1:30 AM	0	0	0	0	0	0	0	1:30 PM	0	0	11	0	2	0	13
1:45 AM	0	0	0	0	0	0	0	1:45 PM	0	0	10	0	0	0	10
2:00 AM	0	0	0	0	0	0	0	2:00 PM	0	0	13	0	0	0	13
2:15 AM	0	0	2	0	0	0	2	2:15 PM	0	0	20	0	0	0	20
2:30 AM	0	0	0	0	0	0	0	2:30 PM	0	0	16	0	0	0	16
2:45 AM	0	0	0	0	0	0	0	2:45 PM	0	0	14	0	0	0	14
3:00 AM	0	0	0	0	0	0	0	3:00 PM	0	0	14	1	0	0	15
3:15 AM	0	0	0	0	0	0	0	3:15 PM	0	1	16	0	0	0	17
3:30 AM	0	0	0	0	0	0	0	3:30 PM	1	0	26	1	0	0	28
3:45 AM	0	0	1	0	0	0	1	3:45 PM	0	0	20	1	0	0	21
4:00 AM	0	0	0	0	0	0	0	4:00 PM	0	0	27	0	1	0	28
4:15 AM	0	0	0	0	0	0	0	4:15 PM	0	0	17	0	0	0	17
4:30 AM	0	0	0	0	0	0	0	4:30 PM	0	0	13	1	0	0	14
4:45 AM	0	0	0	0	0	0	0	4:45 PM	0	0	13	0	0	0	13
5:00 AM	0	0	0	0	0	0	0	5:00 PM	0	0	28	0	0	0	28
5:15 AM	0	0	1	0	0	0	1	5:15 PM	0	0	17	0	0	0	17
5:30 AM	0	0	2	0	0	0	2	5:30 PM	0	0	15	0	0	0	15
5:45 AM	0	0	5	0	0	0	5	5:45 PM	0	0	18	0	0	0	18
6:00 AM	0	0	2	0	0	0	2	6:00 PM	0	0	18	0	0	0	18
6:15 AM	0	0	9	0	0	0	9	6:15 PM	0	0	10	0	0	0	10
6:30 AM	0	0	5	0	0	0	5	6:30 PM	0	0	20	0	0	0	20
6:45 AM	0	0	9	0	0	0	9	6:45 PM	0	0	17	0	0	0	17
7:00 AM	0	0	6	0	0	0	6	7:00 PM	0	0	17	0	0	0	17
7:15 AM	0	0	17	1	0	0	18	7:15 PM	0	0	12	0	0	0	12
7:30 AM	0	0	13	0	0	0	13	7:30 PM	0	0	0	0	0	0	0
7:45 AM	0	0	11	0	0	0	11	7:45 PM	0	0	4	0	0	0	4
8:00 AM	0	0	20	1	2	0	23	8:00 PM	0	0	6	0	0	0	6
8:15 AM	0	0	18	0	0	0	18	8:15 PM	0	0	2	0	0	0	2
8:30 AM	0	0	19	0	0	0	19	8:30 PM	0	0	2	0	0	0	2
8:45 AM	0	0	22	1	0	0	23	8:45 PM	0	0	2	0	0	0	2
9:00 AM	0	0	13	0	2	0	15	9:00 PM	0	0	4	0	0	0	4
9:15 AM	0	0	14	0	0	0	14	9:15 PM	0	0	3	0	0	0	3
9:30 AM	0	0	14	0	2	0	16	9:30 PM	0	0	8	0	0	0	8
9:45 AM	0	0	20	0	1	0	21	9:45 PM	0	0	1	0	0	0	1
10:00 AM	0	0	20	0	1	0	21	10:00 PM	0	0	0	0	0	0	0
10:15 AM	0	0	11	0	0	0	11	10:15 PM	0	0	1	0	0	0	1
10:30 AM	0	0	21	0	1	0	22	10:30 PM	0	0	1	0	0	0	1
10:45 AM	0	0	19	0	1	0	20	10:45 PM	0	0	0	0	0	0	0
11:00 AM	1	0	12	0	2	0	15	11:00 PM	0	0	1	0	0	0	1
11:15 AM	0	0	26	0	1	0	27	11:15 PM	0	0	0	0	0	0	0
11:30 AM	0	0	20	0	1	0	21	11:30 PM	0	0	0	0	0	0	0
11:45 AM	0	0	23	0	1	0	24	11:45 PM	0	0	1	0	0	0	1

AM Total	1	0	376	3	15	0	395
Percentage	0.25%	0.00%	95.19%	0.76%	3.80%	0.00%	
AM Peak Volume	10:15 AM	12:00 AM	11:00 AM	7:15 AM	9:00 AM	12:00 AM	11:00 AM
	1	0	81	2	5	0	87

PM Total	1	1	528	4	10	0	544
Percentage	0.18%	0.18%	97.06%	0.74%	1.84%	0.00%	
PM Peak Volume	2:45 PM	2:30 PM	3:30 PM	3:00 PM	12:15 PM	12:00 PM	3:15 PM
	1	1	90	3	7	0	94
Day Total	2	1	904	7	25	0	939
Percentage	0.21%	0.11%	96.27%	0.75%	2.66%	0.00%	

**Country Way**  
**near #817 Country Way**  
**City, State: Scituate, MA**  
**Client: VAI/S. Kelly**  
**Site Code: 9620**



PDI File #: 239150 ATR A

**Count Date:** Thursday, February 2, 2023  
**Direction:** SB

157 Washington Street, Suite 2  
Hudson, MA 01749

Office: 508-875-0100 Fax: 508-875-0118

AM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total	PM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	0	0	0	0	0	12:00 PM	0	0	26	0	0	0	26
12:15 AM	0	0	0	0	0	0	0	12:15 PM	0	0	14	0	2	1	17
12:30 AM	0	0	0	0	0	0	0	12:30 PM	0	0	25	0	0	0	25
12:45 AM	0	0	0	0	0	0	0	12:45 PM	0	0	16	0	1	0	17
1:00 AM	0	0	0	0	0	0	0	1:00 PM	0	2	19	0	2	0	23
1:15 AM	0	0	0	0	0	0	0	1:15 PM	0	0	25	0	1	0	26
1:30 AM	0	0	1	0	0	0	1	1:30 PM	0	0	25	0	3	0	28
1:45 AM	0	0	0	0	0	0	0	1:45 PM	0	0	20	0	0	0	20
2:00 AM	0	0	0	0	0	0	0	2:00 PM	1	0	24	0	0	0	25
2:15 AM	0	0	0	0	0	0	0	2:15 PM	0	0	25	0	2	0	27
2:30 AM	0	0	0	0	0	0	0	2:30 PM	0	0	23	0	1	0	24
2:45 AM	0	0	0	0	0	0	0	2:45 PM	0	0	17	1	0	0	18
3:00 AM	0	0	0	0	0	0	0	3:00 PM	0	0	31	0	0	0	31
3:15 AM	0	0	0	0	0	0	0	3:15 PM	0	0	38	0	0	0	38
3:30 AM	0	0	0	0	0	0	0	3:30 PM	0	0	27	0	0	0	27
3:45 AM	0	0	0	0	0	0	0	3:45 PM	0	0	30	1	1	0	32
4:00 AM	0	0	0	0	0	0	0	4:00 PM	0	0	36	0	0	0	36
4:15 AM	0	0	0	0	0	0	0	4:15 PM	0	0	27	0	0	0	27
4:30 AM	0	0	0	0	0	0	0	4:30 PM	0	0	23	0	0	0	23
4:45 AM	0	0	0	0	0	0	0	4:45 PM	0	0	23	0	0	0	23
5:00 AM	0	0	0	0	1	0	1	5:00 PM	0	0	22	0	1	0	23
5:15 AM	0	0	0	0	0	0	0	5:15 PM	0	0	20	0	0	0	20
5:30 AM	0	0	0	0	0	0	0	5:30 PM	0	0	18	0	0	0	18
5:45 AM	0	0	3	0	0	0	3	5:45 PM	0	0	24	1	0	0	25
6:00 AM	0	0	2	0	0	0	2	6:00 PM	0	0	21	0	0	0	21
6:15 AM	0	0	4	0	0	0	4	6:15 PM	0	0	15	0	1	0	16
6:30 AM	0	0	3	0	0	0	3	6:30 PM	0	0	15	0	0	0	15
6:45 AM	0	0	4	0	0	0	4	6:45 PM	0	0	11	0	0	0	11
7:00 AM	0	0	14	0	0	0	14	7:00 PM	0	0	19	0	0	0	19
7:15 AM	0	0	8	0	0	0	8	7:15 PM	0	0	13	0	0	0	13
7:30 AM	0	0	7	0	0	0	7	7:30 PM	0	0	8	0	0	0	8
7:45 AM	0	0	19	0	0	0	19	7:45 PM	0	0	7	0	0	0	7
8:00 AM	0	0	22	0	1	0	23	8:00 PM	1	0	17	0	0	0	18
8:15 AM	0	0	29	0	2	0	31	8:15 PM	0	0	16	0	0	0	16
8:30 AM	0	0	20	0	1	0	21	8:30 PM	0	0	8	0	0	0	8
8:45 AM	0	0	25	1	0	0	26	8:45 PM	0	0	12	0	0	0	12
9:00 AM	0	0	19	0	2	0	21	9:00 PM	0	0	5	0	0	0	5
9:15 AM	0	0	25	0	0	0	25	9:15 PM	0	0	9	0	0	0	9
9:30 AM	0	0	15	0	1	0	16	9:30 PM	0	0	4	0	0	0	4
9:45 AM	0	0	17	0	1	0	18	9:45 PM	0	0	1	0	0	0	1
10:00 AM	0	0	8	0	1	0	9	10:00 PM	0	0	3	0	0	0	3
10:15 AM	0	0	14	0	1	0	15	10:15 PM	0	0	2	0	0	0	2
10:30 AM	0	0	16	0	0	0	16	10:30 PM	0	0	1	0	0	0	1
10:45 AM	0	0	25	0	2	0	27	10:45 PM	0	0	2	0	0	0	2
11:00 AM	0	0	14	0	2	1	17	11:00 PM	0	0	2	0	0	0	2
11:15 AM	0	0	19	0	3	0	22	11:15 PM	0	0	1	0	0	0	1
11:30 AM	0	0	19	0	0	0	19	11:30 PM	0	0	0	0	0	0	0
11:45 AM	0	0	19	0	1	0	20	11:45 PM	0	0	0	0	0	0	0

AM Total	0	0	371	1	19	1	392
Percentage	0.00%	0.00%	94.64%	0.26%	4.85%	0.26%	

AM Peak Volume	12:00 AM	12:00 AM	8:00 AM	8:00 AM	10:30 AM	10:15 AM	8:00 AM
	0	0	96	1	7	1	101

PM Total	2	2	770	3	15	1	793
Percentage	0.25%	0.25%	97.10%	0.38%	1.89%	0.13%	

PM Peak Volume	1:15 PM	12:15 PM	3:15 PM	2:00 PM	12:45 PM	12:00 PM	3:15 PM
	1	2	131	1	7	1	133

Day Total	2	2	1141	4	34	2	1185
Percentage	0.17%	0.17%	96.29%	0.34%	2.87%	0.17%	

PDI File #: **239150 A**Location: **N: Cushing Hwy (Route 3A) S: Cushing Hwy (Route 3A)**Location: **E: Henry Turner Bailey Road**City, State: **Scituate, MA**Client: **VAI/S. Kelly**Site Code: **9620**Count Date: **Thursday, February 2, 2023**

157 Washington Street, Suite 2  
Hudson, MA 01749  
Office: 508-875-0100 Fax: 508-875-0118

Start Time: **7:00 AM**End Time: **9:00 AM**

Class:

**Cars and Heavy Vehicles (Combined)**

	Cushing Highway (Route 3A)				Henry Turner Bailey Road				Cushing Highway (Route 3A)				Total	
	from North				from East				from South					
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total		
7:00 AM	46	13	0	59	49	1	0	50	7	108	0	115	224	
7:15 AM	56	22	0	78	49	5	0	54	3	142	0	145	277	
7:30 AM	81	18	0	99	52	8	0	60	4	173	0	177	336	
7:45 AM	66	24	0	90	67	7	0	74	12	172	0	184	348	
<b>Total</b>	<b>249</b>	<b>77</b>	<b>0</b>	<b>326</b>	<b>217</b>	<b>21</b>	<b>0</b>	<b>238</b>	<b>26</b>	<b>595</b>	<b>0</b>	<b>621</b>	<b>1185</b>	
8:00 AM	120	29	0	149	55	9	0	64	16	153	0	169	382	
8:15 AM	105	29	0	134	69	6	0	75	6	163	0	169	378	
8:30 AM	84	37	0	121	61	5	0	66	7	129	0	136	323	
8:45 AM	73	32	0	105	62	8	0	70	3	132	0	135	310	
<b>Total</b>	<b>382</b>	<b>127</b>	<b>0</b>	<b>509</b>	<b>247</b>	<b>28</b>	<b>0</b>	<b>275</b>	<b>32</b>	<b>577</b>	<b>0</b>	<b>609</b>	<b>1393</b>	
Grand Total	631	204	0	835	464	49	0	513	58	1172	0	1230	2578	
Approach %	75.6	24.4	0.0		90.4	9.6	0.0		4.7	95.3	0.0			
Total %	24.5	7.9	0.0	32.4	18.0	1.9	0.0	19.9	2.2	45.5	0.0	47.7		
Exiting Leg Total				1636				262				680	2578	
Cars	605	188	0	793	454	48	0	502	54	1141	0	1195	2490	
% Cars	95.9	92.2	0.0	95.0	97.8	98.0	0.0	97.9	93.1	97.4	0.0	97.2	96.6	
Exiting Leg Total				1595				242				653	2490	
Heavy Vehicles	26	16	0	42	10	1	0	11	4	31	0	35	88	
% Heavy Vehicles	4.1	7.8	0.0	5.0	2.2	2.0	0.0	2.1	6.9	2.6	0.0	2.8	3.4	
Exiting Leg Total				41				20				27	88	

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

7:30 AM	Cushing Highway (Route 3A)				Henry Turner Bailey Road				Cushing Highway (Route 3A)				Total	
	from North				from East				from South					
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total		
7:30 AM	81	18	0	99	52	8	0	60	4	173	0	177	336	
7:45 AM	66	24	0	90	67	7	0	74	12	172	0	184	348	
8:00 AM	120	29	0	149	55	9	0	64	16	153	0	169	382	
8:15 AM	105	29	0	134	69	6	0	75	6	163	0	169	378	
Total Volume	372	100	0	472	243	30	0	273	38	661	0	699	1444	
% Approach Total	78.8	21.2	0.0		89.0	11.0	0.0		5.4	94.6	0.0			
PHF	0.775	0.862	0.000	0.792	0.880	0.833	0.000	0.910	0.594	0.955	0.000	0.950	0.945	
Cars	353	93	0	446	240	30	0	270	37	640	0	677	1393	
Cars %	94.9	93.0	0.0	94.5	98.8	100.0	0.0	98.9	97.4	96.8	0.0	96.9	96.5	
Heavy Vehicles	19	7	0	26	3	0	0	3	1	21	0	22	51	
Heavy Vehicles %	5.1	7.0	0.0	5.5	1.2	0.0	0.0	1.1	2.6	3.2	0.0	3.1	3.5	
Cars Enter Leg	353	93	0	446	240	30	0	270	37	640	0	677	1393	
Heavy Enter Leg	19	7	0	26	3	0	0	3	1	21	0	22	51	
Total Entering Leg	372	100	0	472	243	30	0	273	38	661	0	699	1444	
Cars Exiting Leg				880				130				383	1393	
Heavy Exiting Leg				24				8				19	51	
Total Exiting Leg				904				138				402	1444	

PDI File #: **239150 A**Location: **N: Cushing Hwy (Route 3A) S: Cushing Hwy (Route 3A)**Location: **E: Henry Turner Bailey Road**City, State: **Scituate, MA**Client: **VAI/S. Kelly**Site Code: **9620**Count Date: **Thursday, February 2, 2023**

157 Washington Street, Suite 2  
Hudson, MA 01749  
Office: 508-875-0100 Fax: 508-875-0118

Start Time: **7:00 AM**End Time: **9:00 AM**

Class:

**Cars**

	Cushing Highway (Route 3A)				Henry Turner Bailey Road				Cushing Highway (Route 3A)				Total	
	from North				from East				from South					
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total		
7:00 AM	45	13	0	58	48	1	0	49	6	108	0	114	221	
7:15 AM	55	18	0	73	47	4	0	51	3	137	0	140	264	
7:30 AM	79	17	0	96	51	8	0	59	4	167	0	171	326	
7:45 AM	62	21	0	83	67	7	0	74	12	166	0	178	335	
<b>Total</b>	<b>241</b>	<b>69</b>	<b>0</b>	<b>310</b>	<b>213</b>	<b>20</b>	<b>0</b>	<b>233</b>	<b>25</b>	<b>578</b>	<b>0</b>	<b>603</b>	<b>1146</b>	
8:00 AM	111	28	0	139	54	9	0	63	16	147	0	163	365	
8:15 AM	101	27	0	128	68	6	0	74	5	160	0	165	367	
8:30 AM	81	35	0	116	59	5	0	64	6	126	0	132	312	
8:45 AM	71	29	0	100	60	8	0	68	2	130	0	132	300	
<b>Total</b>	<b>364</b>	<b>119</b>	<b>0</b>	<b>483</b>	<b>241</b>	<b>28</b>	<b>0</b>	<b>269</b>	<b>29</b>	<b>563</b>	<b>0</b>	<b>592</b>	<b>1344</b>	
Grand Total	605	188	0	793	454	48	0	502	54	1141	0	1195	2490	
Approach %	76.3	23.7	0.0		90.4	9.6	0.0		4.5	95.5	0.0			
Total %	24.3	7.6	0.0	31.8	18.2	1.9	0.0	20.2	2.2	45.8	0.0	48.0		
Exiting Leg Total				<b>1595</b>				<b>242</b>				<b>653</b>	<b>2490</b>	

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

7:30 AM	Cushing Highway (Route 3A)				Henry Turner Bailey Road				Cushing Highway (Route 3A)				Total	
	from North				from East				from South					
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total		
7:30 AM	79	17	0	96	51	8	0	59	4	167	0	171	326	
7:45 AM	62	21	0	83	67	7	0	74	12	166	0	178	335	
8:00 AM	111	28	0	139	54	9	0	63	16	147	0	163	365	
8:15 AM	101	27	0	128	68	6	0	74	5	160	0	165	367	
Total Volume	353	93	0	446	240	30	0	270	37	640	0	677	1393	
% Approach Total	79.1	20.9	0.0		88.9	11.1	0.0		5.5	94.5	0.0			
PHF	0.795	0.830	0.000	0.802	0.882	0.833	0.000	0.912	0.578	0.958	0.000	0.951	0.949	
Entering Leg	353	93	0	446	240	30	0	270	37	640	0	677	1393	
Exiting Leg				880				130				383	1393	
Total				1326				400				1060	2786	

PDI File #: 239150 A

Location: N: Cushing Hwy (Route 3A) S: Cushing Hwy (Route 3A)

Location: E: Henry Turner Bailey Road

City, State: Scituate, MA

Client: VAI/S. Kelly

Site Code: 9620

Count Date: Thursday, February 2, 2023



157 Washington Street, Suite 2  
Hudson, MA 01749  
Office: 508-875-0100 Fax: 508-875-0118

Start Time: 7:00 AM

End Time: 9:00 AM

Class:

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

	Cushing Highway (Route 3A)				Henry Turner Bailey Road				Cushing Highway (Route 3A)				Total	
	from North				from East				from South					
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total		
7:00 AM	1	0	0	1	1	0	0	1	1	0	0	1	3	
7:15 AM	1	4	0	5	2	1	0	3	0	5	0	5	13	
7:30 AM	2	1	0	3	1	0	0	1	0	6	0	6	10	
7:45 AM	4	3	0	7	0	0	0	0	0	6	0	6	13	
<b>Total</b>	<b>8</b>	<b>8</b>	<b>0</b>	<b>16</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>5</b>	<b>1</b>	<b>17</b>	<b>0</b>	<b>18</b>	<b>39</b>	
8:00 AM	9	1	0	10	1	0	0	1	0	6	0	6	17	
8:15 AM	4	2	0	6	1	0	0	1	1	3	0	4	11	
8:30 AM	3	2	0	5	2	0	0	2	1	3	0	4	11	
8:45 AM	2	3	0	5	2	0	0	2	1	2	0	3	10	
<b>Total</b>	<b>18</b>	<b>8</b>	<b>0</b>	<b>26</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>3</b>	<b>14</b>	<b>0</b>	<b>17</b>	<b>49</b>	
Grand Total	26	16	0	42	10	1	0	11	4	31	0	35	88	
Approach %	61.9	38.1	0.0		90.9	9.1	0.0		11.4	88.6	0.0			
Total %	29.5	18.2	0.0	47.7	11.4	1.1	0.0	12.5	4.5	35.2	0.0	39.8		
Exiting Leg Total				41				20				27	88	
Buses	1	4	0	5	1	0	0	1	1	3	0	4	10	
% Buses	3.8	25.0	0.0	11.9	10.0	0.0	0.0	9.1	25.0	9.7	0.0	11.4	11.4	
Exiting Leg Total				4				5				1	10	
Single-Unit Trucks	20	7	0	27	8	1	0	9	3	24	0	27	63	
% Single-Unit	76.9	43.8	0.0	64.3	80.0	100.0	0.0	81.8	75.0	77.4	0.0	77.1	71.6	
Exiting Leg Total				32				10				21	63	
Articulated Trucks	5	5	0	10	1	0	0	1	0	4	0	4	15	
% Articulated	19.2	31.3	0.0	23.8	10.0	0.0	0.0	9.1	0.0	12.9	0.0	11.4	17.0	
Exiting Leg Total				5				5				5	15	

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

7:15 AM	Cushing Highway (Route 3A)				Henry Turner Bailey Road				Cushing Highway (Route 3A)				Total	
	from North				from East				from South					
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total		
7:15 AM	1	4	0	5	2	1	0	3	0	5	0	5	13	
7:30 AM	2	1	0	3	1	0	0	1	0	6	0	6	10	
7:45 AM	4	3	0	7	0	0	0	0	0	6	0	6	13	
8:00 AM	9	1	0	10	1	0	0	1	0	6	0	6	17	
<b>Total Volume</b>	<b>16</b>	<b>9</b>	<b>0</b>	<b>25</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>23</b>	<b>0</b>	<b>23</b>	<b>53</b>	
% Approach Total	64.0	36.0	0.0		80.0	20.0	0.0		0.0	100.0	0.0			
PHF	0.444	0.563	0.000	0.625	0.500	0.250	0.000	0.417	0.000	0.958	0.000	0.958	0.779	
Buses	1	3	0	4	1	0	0	1	0	3	0	3	8	
Buses %	6.3	33.3	0.0	16.0	25.0	0.0	0.0	20.0	0.0	13.0	0.0	13.0	15.1	
Single-Unit Trucks	12	4	0	16	2	1	0	3	0	17	0	17	36	
Single-Unit %	75.0	44.4	0.0	64.0	50.0	100.0	0.0	60.0	0.0	73.9	0.0	73.9	67.9	
Articulated Trucks	3	2	0	5	1	0	0	1	0	3	0	3	9	
Articulated %	18.8	22.2	0.0	20.0	25.0	0.0	0.0	20.0	0.0	13.0	0.0	13.0	17.0	
Buses	1	3	0	4	1	0	0	1	0	3	0	3	8	
Single-Unit Trucks	12	4	0	16	2	1	0	3	0	17	0	17	36	
Articulated Trucks	3	2	0	5	1	0	0	1	0	3	0	3	9	
<b>Total Entering Leg</b>	<b>16</b>	<b>9</b>	<b>0</b>	<b>25</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>23</b>	<b>0</b>	<b>23</b>	<b>53</b>	
Buses				4				3				1	8	
Single-Unit Trucks				19				4				13	36	
Articulated Trucks				4				2				3	9	
<b>Total Exiting Leg</b>				27				9				17	53	

PDI File #: **239150 A**Location: **N: Cushing Hwy (Route 3A) S: Cushing Hwy (Route 3A)**Location: **E: Henry Turner Bailey Road**City, State: **Scituate, MA**Client: **VAI/S. Kelly**Site Code: **9620**Count Date: **Thursday, February 2, 2023**

157 Washington Street, Suite 2  
Hudson, MA 01749  
Office: 508-875-0100 Fax: 508-875-0118

Start Time: **7:00 AM**End Time: **9:00 AM**

Class:

**Buses**

	Cushing Highway (Route 3A)				Henry Turner Bailey Road				Cushing Highway (Route 3A)				Total	
	from North				from East				from South					
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:15 AM	0	3	0	3	1	0	0	1	0	2	0	2	6	
7:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	1	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Total</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>7</b>	
8:00 AM	1	0	0	1	0	0	0	0	0	0	0	0	1	
8:15 AM	0	0	0	0	0	0	0	0	1	0	0	1	1	
8:30 AM	0	1	0	1	0	0	0	0	0	0	0	0	1	
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Total</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>3</b>	
<b>Grand Total</b>	<b>1</b>	<b>4</b>	<b>0</b>	<b>5</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>4</b>	<b>10</b>	
Approach %	20.0	80.0	0.0		100.0	0.0	0.0		25.0	75.0	0.0			
Total %	10.0	40.0	0.0	50.0	10.0	0.0	0.0	10.0	10.0	30.0	0.0	40.0		
<b>Exiting Leg Total</b>				<b>4</b>				<b>5</b>				<b>1</b>	<b>10</b>	

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

7:15 AM	Cushing Highway (Route 3A)				Henry Turner Bailey Road				Cushing Highway (Route 3A)				Total	
	from North				from East				from South					
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total		
7:15 AM	0	3	0	3	1	0	0	1	0	2	0	2	6	
7:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	1	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:00 AM	1	0	0	1	0	0	0	0	0	0	0	0	1	
<b>Total Volume</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>8</b>	
% Approach Total	25.0	75.0	0.0		100.0	0.0	0.0		0.0	100.0	0.0			
PHF	0.250	0.250	0.000	0.333	0.250	0.000	0.000	0.250	0.000	0.375	0.000	0.375	0.333	
Entering Leg	1	3	0	4	1	0	0	1	0	3	0	3	8	
Exiting Leg				4				3				1	8	
<b>Total</b>				<b>8</b>				<b>4</b>				<b>4</b>	<b>16</b>	

PDI File #: **239150 A**Location: **N: Cushing Hwy (Route 3A) S: Cushing Hwy (Route 3A)**Location: **E: Henry Turner Bailey Road**City, State: **Scituate, MA**Client: **VAI/S. Kelly**Site Code: **9620**Count Date: **Thursday, February 2, 2023**

157 Washington Street, Suite 2  
Hudson, MA 01749  
Office: 508-875-0100 Fax: 508-875-0118

Start Time: **7:00 AM**End Time: **9:00 AM**

Class:

**Single-Unit Trucks**

	Cushing Highway (Route 3A)				Henry Turner Bailey Road				Cushing Highway (Route 3A)				Total	
	from North				from East				from South					
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total		
7:00 AM	1	0	0	1	1	0	0	1	1	0	0	1	3	
7:15 AM	1	1	0	2	0	1	0	1	0	3	0	3	6	
7:30 AM	1	1	0	2	1	0	0	1	0	4	0	4	7	
7:45 AM	3	1	0	4	0	0	0	0	0	4	0	4	8	
<b>Total</b>	<b>6</b>	<b>3</b>	<b>0</b>	<b>9</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>1</b>	<b>11</b>	<b>0</b>	<b>12</b>	<b>24</b>	
8:00 AM	7	1	0	8	1	0	0	1	0	6	0	6	15	
8:15 AM	2	2	0	4	1	0	0	1	0	3	0	3	8	
8:30 AM	3	0	0	3	2	0	0	2	1	2	0	3	8	
8:45 AM	2	1	0	3	2	0	0	2	1	2	0	3	8	
<b>Total</b>	<b>14</b>	<b>4</b>	<b>0</b>	<b>18</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>2</b>	<b>13</b>	<b>0</b>	<b>15</b>	<b>39</b>	
<b>Grand Total</b>	<b>20</b>	<b>7</b>	<b>0</b>	<b>27</b>	<b>8</b>	<b>1</b>	<b>0</b>	<b>9</b>	<b>3</b>	<b>24</b>	<b>0</b>	<b>27</b>	<b>63</b>	
Approach %	74.1	25.9	0.0		88.9	11.1	0.0		11.1	88.9	0.0			
Total %	31.7	11.1	0.0	42.9	12.7	1.6	0.0	14.3	4.8	38.1	0.0	42.9		
<b>Exiting Leg Total</b>				<b>32</b>				<b>10</b>				<b>21</b>	<b>63</b>	

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

7:45 AM	Cushing Highway (Route 3A)				Henry Turner Bailey Road				Cushing Highway (Route 3A)				Total	
	from North				from East				from South					
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total		
7:45 AM	3	1	0	4	0	0	0	0	0	4	0	4	8	
8:00 AM	7	1	0	8	1	0	0	1	0	6	0	6	15	
8:15 AM	2	2	0	4	1	0	0	1	0	3	0	3	8	
8:30 AM	3	0	0	3	2	0	0	2	1	2	0	3	8	
<b>Total Volume</b>	<b>15</b>	<b>4</b>	<b>0</b>	<b>19</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>1</b>	<b>15</b>	<b>0</b>	<b>16</b>	<b>39</b>	
% Approach Total	78.9	21.1	0.0		100.0	0.0	0.0		6.3	93.8	0.0			
PHF	0.536	0.500	0.000	0.594	0.500	0.000	0.000	0.500	0.250	0.625	0.000	0.667	0.650	
Entering Leg	15	4	0	19	4	0	0	4	1	15	0	16	39	
Exiting Leg				19				5				15	39	
<b>Total</b>				<b>38</b>				<b>9</b>				<b>31</b>	<b>78</b>	

PDI File #: **239150 A**Location: **N: Cushing Hwy (Route 3A) S: Cushing Hwy (Route 3A)**Location: **E: Henry Turner Bailey Road**City, State: **Scituate, MA**Client: **VAI/S. Kelly**Site Code: **9620**Count Date: **Thursday, February 2, 2023**

157 Washington Street, Suite 2  
Hudson, MA 01749  
Office: 508-875-0100 Fax: 508-875-0118

Start Time: **7:00 AM**End Time: **9:00 AM**

Class:

**Articulated Trucks**

	Cushing Highway (Route 3A)				Henry Turner Bailey Road				Cushing Highway (Route 3A)				Total	
	from North				from East				from South					
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:15 AM	0	0	0	0	1	0	0	1	0	0	0	0	1	
7:30 AM	1	0	0	1	0	0	0	0	0	1	0	1	2	
7:45 AM	1	2	0	3	0	0	0	0	0	2	0	2	5	
<b>Total</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>8</b>	
8:00 AM	1	0	0	1	0	0	0	0	0	0	0	0	1	
8:15 AM	2	0	0	2	0	0	0	0	0	0	0	0	2	
8:30 AM	0	1	0	1	0	0	0	0	0	1	0	1	2	
8:45 AM	0	2	0	2	0	0	0	0	0	0	0	0	2	
<b>Total</b>	<b>3</b>	<b>3</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>7</b>	
<b>Grand Total</b>	<b>5</b>	<b>5</b>	<b>0</b>	<b>10</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>4</b>	<b>15</b>	
Approach %	50.0	50.0	0.0		100.0	0.0	0.0		0.0	100.0	0.0			
Total %	33.3	33.3	0.0	66.7	6.7	0.0	0.0	6.7	0.0	26.7	0.0	26.7		
<b>Exiting Leg Total</b>				<b>5</b>				<b>5</b>				<b>5</b>	<b>15</b>	

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

7:30 AM	Cushing Highway (Route 3A)				Henry Turner Bailey Road				Cushing Highway (Route 3A)				Total	
	from North				from East				from South					
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total		
7:30 AM	1	0	0	1	0	0	0	0	0	1	0	1	2	
7:45 AM	1	2	0	3	0	0	0	0	0	2	0	2	5	
8:00 AM	1	0	0	1	0	0	0	0	0	0	0	0	1	
8:15 AM	2	0	0	2	0	0	0	0	0	0	0	0	2	
<b>Total Volume</b>	<b>5</b>	<b>2</b>	<b>0</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>10</b>	
% Approach Total	71.4	28.6	0.0		0.0	0.0	0.0		0.0	100.0	0.0			
PHF	0.625	0.250	0.000	0.583	0.000	0.000	0.000	0.000	0.000	0.375	0.000	0.375	0.500	
Entering Leg	5	2	0	7	0	0	0	0	0	3	0	3	10	
Exiting Leg				<b>3</b>				<b>2</b>				<b>5</b>	<b>10</b>	
<b>Total</b>				<b>10</b>				<b>2</b>				<b>8</b>	<b>20</b>	

PDI File #: **239150 A**Location: **N: Cushing Hwy (Route 3A) S: Cushing Hwy (Route 3A)**Location: **E: Henry Turner Bailey Road**City, State: **Scituate, MA**Client: **VAI/S. Kelly**Site Code: **9620**Count Date: **Thursday, February 2, 2023**

157 Washington Street, Suite 2  
Hudson, MA 01749  
Office: 508-875-0100 Fax: 508-875-0118

Start Time: **7:00 AM**End Time: **9:00 AM**

Class:

**Bicycles (on Roadway and Crosswalks)**

	Cushing Highway (Route 3A)						Henry Turner Bailey Road						Cushing Highway (Route 3A)						Total
	from North						from East						from South						Total
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1
8:45 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	1	0	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0	2
Grand Total	0	1	0	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0	2
Approach %	0.0	100.0	0.0	0.0	0.0		100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total %	0.0	50.0	0.0	0.0	0.0	50.0	50.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total						1						1						0	2

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

8:00 AM	Cushing Highway (Route 3A)						Henry Turner Bailey Road						Cushing Highway (Route 3A)						Total	
	from North						from East						from South							
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total		
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:30 AM	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1	
8:45 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	
Total Volume	0	1	0	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0	2	
% Approach Total	0.0	100.0	0.0	0.0	0.0		100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.250	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.500		
Entering Leg	0	1	0	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0	2	
Exiting Leg						1						1						0	2	
Total						2						2						0	4	

PDI File #: 239150 A

Location: N: Cushing Hwy (Route 3A) S: Cushing Hwy (Route 3A)

Location: E: Henry Turner Bailey Road

City, State: Scituate, MA

Client: VAI/S. Kelly

Site Code: 9620

Count Date: Thursday, February 2, 2023



157 Washington Street, Suite 2  
Hudson, MA 01749  
Office: 508-875-0100 Fax: 508-875-0118

Start Time: 7:00 AM

End Time: 9:00 AM

Class:

**Pedestrians**

	Cushing Highway (Route 3A)						Henry Turner Bailey Road						Cushing Highway (Route 3A)						Total
	from North						from East						from South						Total
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:45 AM	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	
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Approach %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Exiting Leg Total	0						0						0						0

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

7:00 AM	Cushing Highway (Route 3A)						Henry Turner Bailey Road						Cushing Highway (Route 3A)						Total	
	from North						from East						from South							
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Exiting Leg						0						0						0		
Total	0						0						0						0	

PDI File #: **239150 A**Location: **N: Cushing Hwy (Route 3A) S: Cushing Hwy (Route 3A)**Location: **E: Henry Turner Bailey Road**City, State: **Scituate, MA**Client: **VAI/S. Kelly**Site Code: **9620**Count Date: **Thursday, February 2, 2023**

157 Washington Street, Suite 2  
Hudson, MA 01749  
Office: 508-875-0100 Fax: 508-875-0118

Start Time: **4:00 PM**End Time: **6:00 PM**

Class:

**Cars and Heavy Vehicles (Combined)**

	Cushing Highway (Route 3A)				Henry Turner Bailey Road				Cushing Highway (Route 3A)				Total	
	from North				from East				from South					
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total		
4:00 PM	189	48	0	237	59	17	0	76	5	113	0	118	431	
4:15 PM	171	60	0	231	36	8	0	44	10	129	0	139	414	
4:30 PM	147	50	0	197	42	1	0	43	6	113	0	119	359	
4:45 PM	143	71	0	214	50	4	0	54	11	121	0	132	400	
Total	650	229	0	879	187	30	0	217	32	476	0	508	1604	
5:00 PM	187	46	0	233	59	5	0	64	7	104	0	111	408	
5:15 PM	167	60	0	227	39	15	0	54	2	117	0	119	400	
5:30 PM	158	65	0	223	38	7	0	45	4	100	0	104	372	
5:45 PM	132	45	0	177	27	4	0	31	4	88	0	92	300	
Total	644	216	0	860	163	31	0	194	17	409	0	426	1480	
Grand Total	1294	445	0	1739	350	61	0	411	49	885	0	934	3084	
Approach %	74.4	25.6	0.0		85.2	14.8	0.0		5.2	94.8	0.0			
Total %	42.0	14.4	0.0	56.4	11.3	2.0	0.0	13.3	1.6	28.7	0.0	30.3		
Exiting Leg Total				1235				494				1355	3084	
Cars	1279	444	0	1723	347	60	0	407	47	876	0	923	3053	
% Cars	98.8	99.8	0.0	99.1	99.1	98.4	0.0	99.0	95.9	99.0	0.0	98.8	99.0	
Exiting Leg Total				1223				491				1339	3053	
Heavy Vehicles	15	1	0	16	3	1	0	4	2	9	0	11	31	
% Heavy Vehicles	1.2	0.2	0.0	0.9	0.9	1.6	0.0	1.0	4.1	1.0	0.0	1.2	1.0	
Exiting Leg Total				12				3				16	31	

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Cushing Highway (Route 3A)				Henry Turner Bailey Road				Cushing Highway (Route 3A)				Total	
	from North				from East				from South					
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total		
4:00 PM	189	48	0	237	59	17	0	76	5	113	0	118	431	
4:15 PM	171	60	0	231	36	8	0	44	10	129	0	139	414	
4:30 PM	147	50	0	197	42	1	0	43	6	113	0	119	359	
4:45 PM	143	71	0	214	50	4	0	54	11	121	0	132	400	
Total Volume	650	229	0	879	187	30	0	217	32	476	0	508	1604	
% Approach Total	73.9	26.1	0.0		86.2	13.8	0.0		6.3	93.7	0.0			
PHF	0.860	0.806	0.000	0.927	0.792	0.441	0.000	0.714	0.727	0.922	0.000	0.914	0.930	
Cars	643	228	0	871	185	29	0	214	30	468	0	498	1583	
Cars %	98.9	99.6	0.0	99.1	98.9	96.7	0.0	98.6	93.8	98.3	0.0	98.0	98.7	
Heavy Vehicles	7	1	0	8	2	1	0	3	2	8	0	10	21	
Heavy Vehicles %	1.1	0.4	0.0	0.9	1.1	3.3	0.0	1.4	6.3	1.7	0.0	2.0	1.3	
Cars Enter Leg	643	228	0	871	185	29	0	214	30	468	0	498	1583	
Heavy Enter Leg	7	1	0	8	2	1	0	3	2	8	0	10	21	
Total Entering Leg	650	229	0	879	187	30	0	217	32	476	0	508	1604	
Cars Exiting Leg				653				258				672	1583	
Heavy Exiting Leg				10				3				8	21	
Total Exiting Leg				663				261				680	1604	

PDI File #: **239150 A**Location: **N: Cushing Hwy (Route 3A) S: Cushing Hwy (Route 3A)**Location: **E: Henry Turner Bailey Road**City, State: **Scituate, MA**Client: **VAI/S. Kelly**Site Code: **9620**Count Date: **Thursday, February 2, 2023**

157 Washington Street, Suite 2  
Hudson, MA 01749  
Office: 508-875-0100 Fax: 508-875-0118

Start Time: **4:00 PM**End Time: **6:00 PM**

Class:

**Cars**

	Cushing Highway (Route 3A)				Henry Turner Bailey Road				Cushing Highway (Route 3A)				Total	
	from North				from East				from South					
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total		
4:00 PM	186	48	0	234	59	17	0	76	4	109	0	113	423	
4:15 PM	170	59	0	229	35	8	0	43	10	127	0	137	409	
4:30 PM	146	50	0	196	41	0	0	41	6	112	0	118	355	
4:45 PM	141	71	0	212	50	4	0	54	10	120	0	130	396	
<b>Total</b>	<b>643</b>	<b>228</b>	<b>0</b>	<b>871</b>	<b>185</b>	<b>29</b>	<b>0</b>	<b>214</b>	<b>30</b>	<b>468</b>	<b>0</b>	<b>498</b>	<b>1583</b>	
5:00 PM	182	46	0	228	59	5	0	64	7	104	0	111	403	
5:15 PM	165	60	0	225	38	15	0	53	2	116	0	118	396	
5:30 PM	157	65	0	222	38	7	0	45	4	100	0	104	371	
5:45 PM	132	45	0	177	27	4	0	31	4	88	0	92	300	
<b>Total</b>	<b>636</b>	<b>216</b>	<b>0</b>	<b>852</b>	<b>162</b>	<b>31</b>	<b>0</b>	<b>193</b>	<b>17</b>	<b>408</b>	<b>0</b>	<b>425</b>	<b>1470</b>	
Grand Total	1279	444	0	1723	347	60	0	407	47	876	0	923	3053	
Approach %	74.2	25.8	0.0		85.3	14.7	0.0		5.1	94.9	0.0			
Total %	41.9	14.5	0.0	56.4	11.4	2.0	0.0	13.3	1.5	28.7	0.0	30.2		
Exiting Leg Total				<b>1223</b>				<b>491</b>				<b>1339</b>	<b>3053</b>	

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Cushing Highway (Route 3A)				Henry Turner Bailey Road				Cushing Highway (Route 3A)				Total	
	from North				from East				from South					
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total		
4:00 PM	186	48	0	234	59	17	0	76	4	109	0	113	423	
4:15 PM	170	59	0	229	35	8	0	43	10	127	0	137	409	
4:30 PM	146	50	0	196	41	0	0	41	6	112	0	118	355	
4:45 PM	141	71	0	212	50	4	0	54	10	120	0	130	396	
Total Volume	643	228	0	871	185	29	0	214	30	468	0	498	1583	
% Approach Total	73.8	26.2	0.0		86.4	13.6	0.0		6.0	94.0	0.0			
PHF	0.864	0.803	0.000	0.931	0.784	0.426	0.000	0.704	0.750	0.921	0.000	0.909	0.936	
Entering Leg	643	228	0	871	185	29	0	214	30	468	0	498	1583	
Exiting Leg				653				258				672	1583	
Total				1524				472				1170	3166	



PDI File #: **239150 A**Location: **N: Cushing Hwy (Route 3A) S: Cushing Hwy (Route 3A)**Location: **E: Henry Turner Bailey Road**City, State: **Scituate, MA**Client: **VAI/S. Kelly**Site Code: **9620**Count Date: **Thursday, February 2, 2023**

157 Washington Street, Suite 2  
Hudson, MA 01749  
Office: 508-875-0100 Fax: 508-875-0118

Start Time: **4:00 PM**End Time: **6:00 PM**

Class:

**Buses**

	Cushing Highway (Route 3A)				Henry Turner Bailey Road				Cushing Highway (Route 3A)				Total	
	from North				from East				from South					
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total		
4:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	1	
4:15 PM	0	1	0	1	0	0	0	0	0	1	0	1	2	
4:30 PM	0	0	0	0	1	0	0	1	0	0	0	0	1	
4:45 PM	1	0	0	1	0	0	0	0	0	0	0	0	1	
Total	1	1	0	2	1	0	0	1	0	2	0	2	5	
5:00 PM	2	0	0	2	0	0	0	0	0	0	0	0	2	
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	2	0	0	2	0	0	0	0	0	0	0	0	2	
Grand Total	3	1	0	4	1	0	0	1	0	2	0	2	7	
Approach %	75.0	25.0	0.0		100.0	0.0	0.0		0.0	100.0	0.0			
Total %	42.9	14.3	0.0	57.1	14.3	0.0	0.0	14.3	0.0	28.6	0.0	28.6		
Exiting Leg Total				3				1				3	7	

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:15 PM	Cushing Highway (Route 3A)				Henry Turner Bailey Road				Cushing Highway (Route 3A)				Total	
	from North				from East				from South					
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total		
4:15 PM	0	1	0	1	0	0	0	0	0	1	0	1	2	
4:30 PM	0	0	0	0	1	0	0	1	0	0	0	0	1	
4:45 PM	1	0	0	1	0	0	0	0	0	0	0	0	1	
5:00 PM	2	0	0	2	0	0	0	0	0	0	0	0	2	
Total Volume	3	1	0	4	1	0	0	1	0	1	0	1	6	
% Approach Total	75.0	25.0	0.0		100.0	0.0	0.0		0.0	100.0	0.0			
PHF	0.375	0.250	0.000	0.500	0.250	0.000	0.000	0.250	0.000	0.250	0.000	0.250	0.750	
Entering Leg	3	1	0	4	1	0	0	1	0	1	0	1	6	
Exiting Leg				2				1				3	6	
Total				6				2				4	12	

PDI File #: **239150 A**Location: **N: Cushing Hwy (Route 3A) S: Cushing Hwy (Route 3A)**Location: **E: Henry Turner Bailey Road**City, State: **Scituate, MA**Client: **VAI/S. Kelly**Site Code: **9620**Count Date: **Thursday, February 2, 2023**

157 Washington Street, Suite 2  
Hudson, MA 01749  
Office: 508-875-0100 Fax: 508-875-0118

Start Time: **4:00 PM**End Time: **6:00 PM**

Class:

**Single-Unit Trucks**

	Cushing Highway (Route 3A)				Henry Turner Bailey Road				Cushing Highway (Route 3A)				Total	
	from North				from East				from South					
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total		
4:00 PM	3	0	0	3	0	0	0	0	1	1	0	2	5	
4:15 PM	1	0	0	1	1	0	0	1	0	1	0	1	3	
4:30 PM	1	0	0	1	0	1	0	1	0	1	0	1	3	
4:45 PM	1	0	0	1	0	0	0	0	1	1	0	2	3	
Total	6	0	0	6	1	1	0	2	2	4	0	6	14	
5:00 PM	3	0	0	3	0	0	0	0	0	0	0	0	3	
5:15 PM	2	0	0	2	1	0	0	1	0	1	0	1	4	
5:30 PM	1	0	0	1	0	0	0	0	0	0	0	0	1	
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	6	0	0	6	1	0	0	1	0	1	0	1	8	
Grand Total	12	0	0	12	2	1	0	3	2	5	0	7	22	
Approach %	100.0	0.0	0.0		66.7	33.3	0.0		28.6	71.4	0.0			
Total %	54.5	0.0	0.0	54.5	9.1	4.5	0.0	13.6	9.1	22.7	0.0	31.8		
Exiting Leg Total				7				2				13	22	

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Cushing Highway (Route 3A)				Henry Turner Bailey Road				Cushing Highway (Route 3A)				Total	
	from North				from East				from South					
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total		
4:00 PM	3	0	0	3	0	0	0	0	1	1	0	2	5	
4:15 PM	1	0	0	1	1	0	0	1	0	1	0	1	3	
4:30 PM	1	0	0	1	0	1	0	1	0	1	0	1	3	
4:45 PM	1	0	0	1	0	0	0	0	1	1	0	2	3	
Total Volume	6	0	0	6	1	1	0	2	2	4	0	6	14	
% Approach Total	100.0	0.0	0.0		50.0	50.0	0.0		33.3	66.7	0.0			
PHF	0.500	0.000	0.000	0.500	0.250	0.250	0.000	0.500	0.500	1.000	0.000	0.750	0.700	
Entering Leg	6	0	0	6	1	1	0	2	2	4	0	6	14	
Exiting Leg				5				2				7	14	
Total				11				4				13	28	

PDI File #: **239150 A**Location: **N: Cushing Hwy (Route 3A) S: Cushing Hwy (Route 3A)**Location: **E: Henry Turner Bailey Road**City, State: **Scituate, MA**Client: **VAI/S. Kelly**Site Code: **9620**Count Date: **Thursday, February 2, 2023**

157 Washington Street, Suite 2  
Hudson, MA 01749  
Office: 508-875-0100 Fax: 508-875-0118

Start Time: **4:00 PM**End Time: **6:00 PM**

Class:

**Articulated Trucks**

	Cushing Highway (Route 3A)				Henry Turner Bailey Road				Cushing Highway (Route 3A)				Total	
	from North				from East				from South					
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total		
4:00 PM	0	0	0	0	0	0	0	0	0	2	0	2	2	
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	2	0	2	2	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	
Grand Total	0	0	0	0	0	0	0	0	0	2	0	2	2	
Approach %	0.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0			
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0		
Exiting Leg Total				2				0				0	2	

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Cushing Highway (Route 3A)				Henry Turner Bailey Road				Cushing Highway (Route 3A)				Total	
	from North				from East				from South					
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total		
4:00 PM	0	0	0	0	0	0	0	0	0	2	0	2	2	
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total Volume	0	0	0	0	0	0	0	0	0	2	0	2	2	
% Approach Total	0.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0			
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.250	
Entering Leg	0	0	0	0	0	0	0	0	0	2	0	2	2	
Exiting Leg				2				0			0	0	2	
Total				2				0			0	0	4	

PDI File #: 239150 A

Location: N: Cushing Hwy (Route 3A) S: Cushing Hwy (Route 3A)

Location: E: Henry Turner Bailey Road

City, State: Scituate, MA

Client: VAI/S. Kelly

Site Code: 9620

Count Date: Thursday, February 2, 2023



157 Washington Street, Suite 2  
Hudson, MA 01749  
Office: 508-875-0100 Fax: 508-875-0118

Start Time: 4:00 PM

End Time: 6:00 PM

Class:

**Bicycles (on Roadway and Crosswalks)**

	Cushing Highway (Route 3A)						Henry Turner Bailey Road						Cushing Highway (Route 3A)						Total
	from North						from East						from South						Total
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	0						0						0						0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Cushing Highway (Route 3A)						Henry Turner Bailey Road						Cushing Highway (Route 3A)						Total	
	from North						from East						from South							
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0			
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Exiting Leg	0						0						0						0	
Total	0						0						0						0	

PDI File #: 239150 A

Location: N: Cushing Hwy (Route 3A) S: Cushing Hwy (Route 3A)

Location: E: Henry Turner Bailey Road

City, State: Scituate, MA

Client: VAI/S. Kelly

Site Code: 9620

Count Date: Thursday, February 2, 2023

157 Washington Street, Suite 2

Hudson, MA 01749

Office: 508-875-0100 Fax: 508-875-0118

Start Time: 4:00 PM

End Time: 6:00 PM

Class:

**Pedestrians**

		Cushing Highway (Route 3A)						Henry Turner Bailey Road						Cushing Highway (Route 3A)						
		from North						from East						from South						
		Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	Total
4:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total %		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg Total		0						0						0						0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Cushing Highway (Route 3A)						Henry Turner Bailey Road						Cushing Highway (Route 3A)						Total	
	from North						from East						from South							
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Exiting Leg						0						0							0	
Total						0						0							0	









PDI File #: **239150 B**Location: **N: Country Way S: Country Way**Location: **E: Gannett Road W: Henry Turner Bailey Road**City, State: **Scituate, MA**Client: **VAI/S. Kelly**Site Code: **9620**Count Date: **Thursday, February 2, 2023**Start Time: **7:00 AM**End Time: **9:00 AM**

Class:



157 Washington Street, Suite 2  
Hudson, MA 01749

Office: 508-875-0100 Fax: 508-875-0118

**Single-Unit Trucks**

	Country Way					Gannett Road					Country Way					Henry Turner Bailey Road					Total	
	from North					from East					from South					from West						
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total		
7:00 AM	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	0	0	0	0	0	2	
7:15 AM	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	2	0	0	0	4	
7:30 AM	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	2	
7:45 AM	0	0	0	0	0	0	0	0	0	0	1	2	0	0	3	1	0	0	0	1	4	
Total	0	0	0	0	0	0	3	2	0	5	2	2	0	0	4	1	2	0	0	3	12	
8:00 AM	0	0	0	0	0	2	1	0	0	3	1	0	0	0	1	0	2	0	0	0	6	
8:15 AM	1	1	0	0	2	0	1	0	0	1	0	0	0	0	0	1	1	0	0	0	5	
8:30 AM	0	3	0	0	3	1	1	0	0	2	0	0	0	0	0	0	1	0	0	0	6	
8:45 AM	1	0	0	0	1	0	1	0	0	1	3	1	0	0	4	0	2	0	0	2	8	
Total	2	4	0	0	6	3	4	0	0	7	4	1	0	0	5	1	6	0	0	7	25	
Grand Total	2	4	0	0	6	3	7	2	0	12	6	3	0	0	9	2	8	0	0	10	37	
Approach %	33.3	66.7	0.0	0.0		25.0	58.3	16.7	0.0		66.7	33.3	0.0	0.0		20.0	80.0	0.0	0.0			
Total %	5.4	10.8	0.0	0.0	16.2	8.1	18.9	5.4	0.0	32.4	16.2	8.1	0.0	0.0	24.3	5.4	21.6	0.0	0.0	27.0		
Exiting Leg Total					6					14					8					9	37	

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

8:00 AM	Country Way					Gannett Road					Country Way					Henry Turner Bailey Road					Total	
	from North					from East					from South					from West						
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total		
8:00 AM	0	0	0	0	0	2	1	0	0	3	1	0	0	0	1	0	2	0	0	2	6	
8:15 AM	1	1	0	0	2	0	1	0	0	1	0	0	0	0	0	1	1	0	0	2	5	
8:30 AM	0	3	0	0	3	1	1	0	0	2	0	0	0	0	0	0	1	0	0	1	6	
8:45 AM	1	0	0	0	1	0	1	0	0	1	3	1	0	0	4	0	2	0	0	2	8	
Total Volume	2	4	0	0	6	3	4	0	0	7	4	1	0	0	5	1	6	0	0	7	25	
% Approach Total	33.3	66.7	0.0	0.0		42.9	57.1	0.0	0.0		80.0	20.0	0.0	0.0		14.3	85.7	0.0	0.0			
PHF	0.500	0.333	0.000	0.000	0.500	0.375	1.000	0.000	0.000	0.583	0.333	0.250	0.000	0.000	0.313	0.250	0.750	0.000	0.000	0.875	0.781	
Entering Leg	2	4	0	0	6	3	4	0	0	7	4	1	0	0	5	1	6	0	0	7	25	
Exiting Leg					4					10					5					6	25	
Total					10					17					10					13	50	

PDI File #: **239150 B**Location: **N: Country Way S: Country Way**Location: **E: Gannett Road W: Henry Turner Bailey Road**City, State: **Scituate, MA**Client: **VAI/S. Kelly**Site Code: **9620**Count Date: **Thursday, February 2, 2023**Start Time: **7:00 AM**End Time: **9:00 AM**

Class:



157 Washington Street, Suite 2  
Hudson, MA 01749  
Office: 508-875-0100 Fax: 508-875-0118

**Articulated Trucks**

	Country Way					Gannett Road					Country Way					Henry Turner Bailey Road						
	from North					from East					from South					from West						
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total	
7:00 AM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	
7:15 AM	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	1	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2	
<b>Total</b>	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	2	0	0	0	2	4
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
<b>Total</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	3
<b>Grand Total</b>	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	2	3	0	0	5	7
<b>Approach %</b>	0.0	0.0	0.0	0.0	0.0	0.0	50.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40.0	60.0	0.0	0.0	0.0	0.0	
<b>Total %</b>	0.0	0.0	0.0	0.0	0.0	0.0	14.3	14.3	0.0	28.6	0.0	0.0	0.0	0.0	0.0	28.6	42.9	0.0	0.0	71.4		
<b>Exiting Leg Total</b>	0					3					3					1					7	

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

7:00 AM	Country Way					Gannett Road					Country Way					Henry Turner Bailey Road					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2
<b>Total Volume</b>	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	2	0	0	0	2	4
<b>% Approach Total</b>	0.0	0.0	0.0	0.0	0.0	0.0	50.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	
<b>PHF</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.250	0.500
<b>Entering Leg</b>	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	2	0	0	0	2	4
<b>Exiting Leg</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	1	4
<b>Total</b>	0					2					3					3					8



PDI File #: **239150 B**  
 Location: **N: Country Way S: Country Way**  
 Location: **E: Gannett Road W: Henry Turner Bailey Road**  
 City, State: **Scituate, MA**  
 Client: **VAI/S. Kelly**  
 Site Code: **9620**  
 Count Date: **Thursday, February 2, 2023**  
 Start Time: **7:00 AM**  
 End Time: **9:00 AM**  
 Class:



### Pedestrians

	Country Way							Gannett Road							Country Way							Henry Turner Bailey Road						
	from North							from East							from South							from West						
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total
7:00 AM	0	0	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	5
7:15 AM	0	0	0	0	1	1	2	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	1	5	6	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0	1	8
8:00 AM	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	2	0	2
8:15 AM	0	0	0	0	0	1	1	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1
8:30 AM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	2
Total	0	0	0	0	0	4	4	0	0	0	0	1	1	2	0	0	0	0	1	0	1	0	0	0	0	3	1	11
Grand Total	0	0	0	0	1	9	10	0	0	0	0	2	1	3	0	0	0	0	1	0	1	0	0	0	0	4	1	19
Approach %	0	0	0	0	10	90		0	0	0	0	66.7	33.3		0	0	0	0	100	0		0	0	0	0	80	20	
Total %	0	0	0	0	5.26	47.4	52.6	0	0	0	0	10.5	5.26	15.8	0	0	0	0	5.26	0	5.26	0	0	0	0	21.1	5.26	26.3
Exiting Leg Total							10							3													5	19

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

8:00 AM	Country Way							Gannett Road							Country Way							Henry Turner Bailey Road						
	from North							from East							from South							from West						
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total
8:00 AM	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	2	0	2
8:15 AM	0	0	0	0	0	1	1	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1
8:30 AM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	2
Total Volume	0	0	0	0	0	4	4	0	0	0	0	1	1	2	0	0	0	0	1	0	1	0	0	0	0	3	1	11
% Approach Total	0.0	0.0	0.0	0.0	0.0	100.0		0.0	0.0	0.0	0.0	50.0	50.0		0.0	0.0	0.0	0.0	100.0	0.0		0.0	0.0	0.0	0.0	75.0	25.0	
PHF	0.000	0.000	0.000	0.000	0.000	0.500	0.500	0.000	0.000	0.000	0.000	0.250	0.250	0.500	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.000	0.000	0.000	0.000	0.375	0.250	0.500
Entering Leg	0	0	0	0	0	4	4	0	0	0	0	1	1	2	0	0	0	0	1	0	1	0	0	0	0	3	1	11
Exiting Leg							4							2						1		1				4		11
Total							8							4						2		2				8		22



PDI File #: **239150 B**  
 Location: **N: Country Way S: Country Way**  
 Location: **E: Gannett Road W: Henry Turner Bailey Road**  
 City, State: **Scituate, MA**  
 Client: **VAI/S. Kelly**  
 Site Code: **9620**  
 Count Date: **Thursday, February 2, 2023**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**



Class:

**Cars**

	Country Way					Gannett Road					Country Way					Henry Turner Bailey Road					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	12	30	16	0	58	11	42	20	0	73	19	23	21	0	63	17	34	4	0	55	249
4:15 PM	3	20	7	0	30	5	30	23	0	58	16	10	10	0	36	14	47	3	0	64	188
4:30 PM	3	26	8	0	37	6	22	11	0	39	16	9	13	0	38	12	40	3	0	55	169
4:45 PM	4	13	10	0	27	8	39	18	0	65	30	10	14	0	54	14	60	6	0	80	226
<b>Total</b>	<b>22</b>	<b>89</b>	<b>41</b>	<b>0</b>	<b>152</b>	<b>30</b>	<b>133</b>	<b>72</b>	<b>0</b>	<b>235</b>	<b>81</b>	<b>52</b>	<b>58</b>	<b>0</b>	<b>191</b>	<b>57</b>	<b>181</b>	<b>16</b>	<b>0</b>	<b>254</b>	<b>832</b>
5:00 PM	10	25	16	0	51	10	39	19	0	68	18	22	13	0	53	13	30	4	0	47	219
5:15 PM	6	34	9	0	49	5	37	16	0	58	21	12	11	0	44	22	42	4	0	68	219
5:30 PM	3	18	8	0	29	8	34	14	0	56	19	15	9	0	43	27	34	4	0	65	193
5:45 PM	2	19	7	1	29	13	21	16	0	50	23	15	10	0	48	14	38	1	0	53	180
<b>Total</b>	<b>21</b>	<b>96</b>	<b>40</b>	<b>1</b>	<b>158</b>	<b>36</b>	<b>131</b>	<b>65</b>	<b>0</b>	<b>232</b>	<b>81</b>	<b>64</b>	<b>43</b>	<b>0</b>	<b>188</b>	<b>76</b>	<b>144</b>	<b>13</b>	<b>0</b>	<b>233</b>	<b>811</b>
Grand Total	43	185	81	1	310	66	264	137	0	467	162	116	101	0	379	133	325	29	0	487	1643
Approach %	13.9	59.7	26.1	0.3		14.1	56.5	29.3	0.0		42.7	30.6	26.6	0.0		27.3	66.7	6.0	0.0		
Total %	2.6	11.3	4.9	0.1	18.9	4.0	16.1	8.3	0.0	28.4	9.9	7.1	6.1	0.0	23.1	8.1	19.8	1.8	0.0	29.6	
Exiting Leg Total					212					568					455					408	1643

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:45 PM	Country Way					Gannett Road					Country Way					Henry Turner Bailey Road					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:45 PM	4	13	10	0	27	8	39	18	0	65	30	10	14	0	54	14	60	6	0	80	226
5:00 PM	10	25	16	0	51	10	39	19	0	68	18	22	13	0	53	13	30	4	0	47	219
5:15 PM	6	34	9	0	49	5	37	16	0	58	21	12	11	0	44	22	42	4	0	68	219
5:30 PM	3	18	8	0	29	8	34	14	0	56	19	15	9	0	43	27	34	4	0	65	193
Total Volume	23	90	43	0	156	31	149	67	0	247	88	59	47	0	194	76	166	18	0	260	857
% Approach Total	14.7	57.7	27.6	0.0		12.6	60.3	27.1	0.0		45.4	30.4	24.2	0.0		29.2	63.8	6.9	0.0		
PHF	0.575	0.662	0.672	0.000	0.765	0.775	0.955	0.882	0.000	0.908	0.733	0.670	0.839	0.000	0.898	0.704	0.692	0.750	0.000	0.813	0.948
Entering Leg	23	90	43	0	156	31	149	67	0	247	88	59	47	0	194	76	166	18	0	260	857
Exiting Leg					108					297					233					219	857
Total					264					544					427					479	1714



PDI File #: **239150 B**Location: **N: Country Way S: Country Way**Location: **E: Gannett Road W: Henry Turner Bailey Road**City, State: **Scituate, MA**Client: **VAI/S. Kelly**Site Code: **9620**Count Date: **Thursday, February 2, 2023**Start Time: **4:00 PM**End Time: **6:00 PM**

Class:



157 Washington Street, Suite 2  
Hudson, MA 01749

Office: 508-875-0100 Fax: 508-875-0118

**Buses**

	Country Way					Gannett Road					Country Way					Henry Turner Bailey Road					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	0	0	1	2
4:30 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	1	0	0	0	1	3
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
<b>Total</b>	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
<b>Grand Total</b>	0	1	0	0	1	1	1	0	0	2	0	0	0	0	0	1	0	0	0	1	4
<b>Approach %</b>	0.0	100.0	0.0	0.0		50.0	50.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	
<b>Total %</b>	0.0	25.0	0.0	0.0	25.0	25.0	25.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0	0.0	25.0	
<b>Exiting Leg Total</b>					1					0					2					1	4

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Country Way					Gannett Road					Country Way					Henry Turner Bailey Road					
	from North					from East					from South					from West					Total
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	0	0	1	2
4:30 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Volume</b>	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	1	0	0	0	1	3
<b>% Approach Total</b>	0.0	0.0	0.0	0.0		50.0	50.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	
<b>PHF</b>	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.250	0.375	
<b>Entering Leg</b>	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	1	0	0	0	1	3
<b>Exiting Leg</b>					1					0				1						1	3
<b>Total</b>					1					2				1						2	6

PDI File #: **239150 B**Location: **N: Country Way S: Country Way**Location: **E: Gannett Road W: Henry Turner Bailey Road**City, State: **Scituate, MA**Client: **VAI/S. Kelly**Site Code: **9620**Count Date: **Thursday, February 2, 2023**Start Time: **4:00 PM**End Time: **6:00 PM**

Class:



157 Washington Street, Suite 2  
Hudson, MA 01749

Office: 508-875-0100 Fax: 508-875-0118

**Single-Unit Trucks**

	Country Way					Gannett Road					Country Way					Henry Turner Bailey Road							
	from North					from East					from South					from West							
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1		
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1		
4:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1		
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1		
<b>Total</b>	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	0	2	0	0	0	2	4	
5:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
5:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	
5:30 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	
<b>Total</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Grand Total</b>	0	1	0	0	1	0	2	1	0	3	0	0	1	0	1	0	2	0	0	2	7		
<b>Approach %</b>	0.0	100.0	0.0	0.0		0.0	66.7	33.3	0.0		0.0	0.0	100.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0		
<b>Total %</b>	0.0	14.3	0.0	0.0	14.3	0.0	28.6	14.3	0.0	42.9	0.0	0.0	14.3	0.0	14.3	0.0	28.6	0.0	0.0	28.6			
<b>Exiting Leg Total</b>						0																3	7

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Country Way					Gannett Road					Country Way					Henry Turner Bailey Road							
	from North					from East					from South					from West							
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1		
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1		
4:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1		
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1		
<b>Total Volume</b>	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	0	2	0	0	2	4		
<b>% Approach Total</b>	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0		
<b>PHF</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.250	0.000	0.250	0.000	0.500	0.000	0.000	0.500	1.000		
<b>Entering Leg</b>	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	0	2	0	0	2	4		
<b>Exiting Leg</b>						0						2						0					
<b>Total</b>						0						3						1					

PDI File #: **239150 B**Location: **N: Country Way S: Country Way**Location: **E: Gannett Road W: Henry Turner Bailey Road**City, State: **Scituate, MA**Client: **VAI/S. Kelly**Site Code: **9620**Count Date: **Thursday, February 2, 2023**Start Time: **4:00 PM**End Time: **6:00 PM**

Class:



157 Washington Street, Suite 2  
Hudson, MA 01749

Office: 508-875-0100 Fax: 508-875-0118

**Articulated Trucks**

	Country Way					Gannett Road					Country Way					Henry Turner Bailey Road						
	from North					from East					from South					from West						
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	
<b>Grand Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	
<b>Approach %</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	
<b>Total %</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	
<b>Exiting Leg Total</b>					<b>0</b>					<b>0</b>					<b>0</b>				<b>0</b>		<b>0</b>	

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Country Way					Gannett Road					Country Way					Henry Turner Bailey Road					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total Volume</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>															
<b>% Approach Total</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>															
<b>PHF</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>																
<b>Entering Leg</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>															
<b>Exiting Leg</b>					<b>0</b>					<b>0</b>				<b>0</b>				<b>0</b>		<b>0</b>	<b>0</b>
<b>Total</b>					<b>0</b>					<b>0</b>				<b>0</b>				<b>0</b>		<b>0</b>	<b>0</b>



PDI File #: **239150 B**  
 Location: **N: Country Way S: Country Way**  
 Location: **E: Gannett Road W: Henry Turner Bailey Road**  
 City, State: **Scituate, MA**  
 Client: **VAI/S. Kelly**  
 Site Code: **9620**  
 Count Date: **Thursday, February 2, 2023**  
 Start Time: **4:00 PM**  
 End Time: **6:00 PM**  
 Class:



### Pedestrians

	Country Way							Gannett Road							Country Way							Henry Turner Bailey Road							
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	0	0	0	0	0	1	1	0	0	0	0	1	0	1	0	0	0	0	0	1	1	0	0	0	0	0	4	4	7
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2	2	0	0	0	0	0	0	0	3
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	1	0	1	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Total	0	0	0	0	1	1	2	0	0	0	0	4	1	5	0	0	0	0	0	3	3	0	0	0	0	0	4	4	14
5:00 PM	0	0	0	0	3	1	4	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	6
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	0	0	0	3	3	6	0	0	0	0	0	0	0	0	0	0	0	2	1	3	0	0	0	0	0	0	0	9
Grand Total	0	0	0	0	4	4	8	0	0	0	0	4	1	5	0	0	0	0	2	4	6	0	0	0	0	0	4	4	23
Approach %	0	0	0	0	50	50		0	0	0	0	80	20		0	0	0	0	33.3	66.7		0	0	0	0	0	100		
Total %	0	0	0	0	17.4	17.4	34.8	0	0	0	0	17.4	4.35	21.7	0	0	0	0	8.7	17.4	26.1	0	0	0	0	0	17.4	17.4	
Exiting Leg Total							8							5							6						4	23	

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Country Way							Gannett Road							Country Way							Henry Turner Bailey Road							Total
	from North							from East							from South							from West							Total
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	0	0	0	0	0	1	1	0	0	0	0	1	0	1	0	0	0	0	0	1	1	0	0	0	0	0	4	4	7
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2	2	0	0	0	0	0	0	0	3
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	1	0	1	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Total Volume	0	0	0	0	1	1	2	0	0	0	0	4	1	5	0	0	0	0	0	3	3	0	0	0	0	0	4	4	14
% Approach Total	0.0	0.0	0.0	0.0	50.0	50.0		0.0	0.0	0.0	0.0	80.0	20.0		0.0	0.0	0.0	0.0	0.0	100.0		0.0	0.0	0.0	0.0	0.0	100.0		
PHF	0.000	0.000	0.000	0.000	0.250	0.250	0.500	0.000	0.000	0.000	0.000	1.000	0.250	0.625	0.000	0.000	0.000	0.000	0.000	0.375	0.375	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.500
Entering Leg	0	0	0	0	1	1	2	0	0	0	0	4	1	5	0	0	0	0	0	3	3	0	0	0	0	0	4	4	14
Exiting Leg							2					5		5						3						4		14	
Total							4							10							6						8		28

SEASONAL ADJUSTMENT DATA



Massachusetts Highway Department  
Statewide Traffic Data Collection  
2019 Weekday Seasonal Factors

Factor Group	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Axle Factor
R1	1.22	1.14	1.12	1.06	1.00	0.96	0.87	0.85	0.96	0.99	1.04	1.12	0.85
R2	0.95	0.96	0.98	0.97	0.97	0.93	0.97	0.94	0.96	0.90	0.92	0.93	0.96
R3	1.15	1.06	1.07	1.00	0.89	0.88	0.89	0.89	0.95	0.92	1.02	1.01	0.97
R4-R7	1.09	1.09	1.11	1.02	0.96	0.92	0.89	0.89	0.99	0.98	1.09	1.13	0.98
U1-Boston	1.03	1.01	0.98	0.94	0.94	0.92	0.95	0.93	0.94	0.94	0.97	1.04	0.96
U1-Essex	1.09	1.06	1.03	0.99	0.94	0.90	0.88	0.86	0.93	0.94	0.99	1.06	0.93
U1-Southeast	1.06	1.05	1.01	0.97	0.95	0.93	0.93	0.90	0.94	0.94	0.98	1.04	0.98
U1-West	1.19	1.14	1.09	0.95	0.92	0.89	0.89	0.86	0.91	0.95	0.97	1.07	0.84
U1-Worcester	1.02	1.04	0.97	0.94	0.93	0.91	0.95	0.91	0.93	0.92	0.95	1.10	0.88
U2	1.01	1.00	0.94	0.93	0.91	0.89	0.93	0.90	0.90	0.91	0.94	1.02	0.99
U3	1.06	1.03	0.98	0.94	0.93	0.91	0.95	0.91	0.92	0.93	0.97	1.00	0.98
U4-U7	1.01	1.00	0.95	0.92	0.88	0.86	0.92	0.91	0.92	0.94	0.99	1.04	0.99
Rec - East	1.04	1.16	1.12	0.98	0.92	0.88	0.77	0.81	0.94	1.02	1.08	1.12	0.99
Rec - West	1.30	1.23	1.32	1.18	0.95	0.82	0.70	0.69	0.97	0.96	1.16	1.15	0.98

Round off:

0-999 = 10

>1000 = 100

U = Urban

R = Rural

1 - Interstate

2 - Freeway and Expressway

3 - Other Principal Arterial

4 - Minor Arterial

5 - Major Collector

6 - Minor Collector

7 - Local Road and Street

**Recreational - East Group** - Cape Cod (all towns) including the town of Plymouth south of Route 3A (stations 7014, 7079, 7080, 7090, 7091, 7092, 7093, 7094, 7095, 7096, 7097, 7108 and 7178), Martha's Vineyard and Nantucket.

**Recreational - West Group** - Continuous Stations 2 and 189 including stations

1066, 1067, 1083, 1084, 1085, 1086, 1087, 1088, 1089, 1090, 1091, 1092, 1093, 1094, 1095, 1096, 1097, 1098, 1099, 1100, 1101, 1102, 1103, 1104, 1105, 1106, 1107, 1108, 1113, 1114, 1116, 2196, 2197 and 2198.

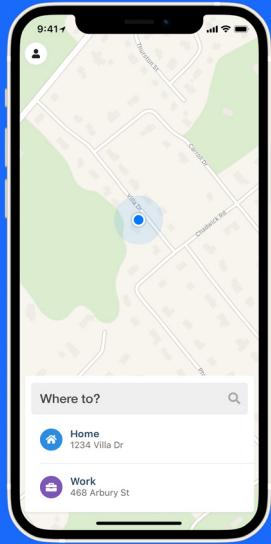
PUBLIC TRANSPORTATION SCHEDULES





# GATRA ON DEMAND SEACOAST

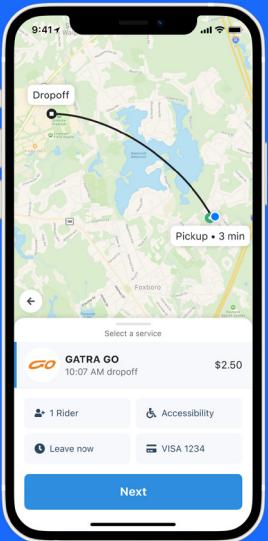
GATRA GO Seacoast is an on-demand, same day, affordable, and accessible public transit service serving the Town of Scituate



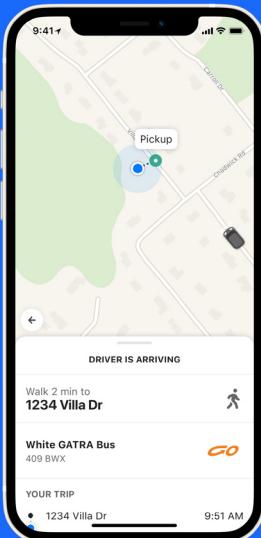
Download the app on iOS or Android



Search for GATRA GO



Schedule a ride with the tap of a button



Get picked up where you want

BOOK YOUR TRIP USING THE APP OR CALL

800-698-7676

Public Transit just got personal.

## FARES

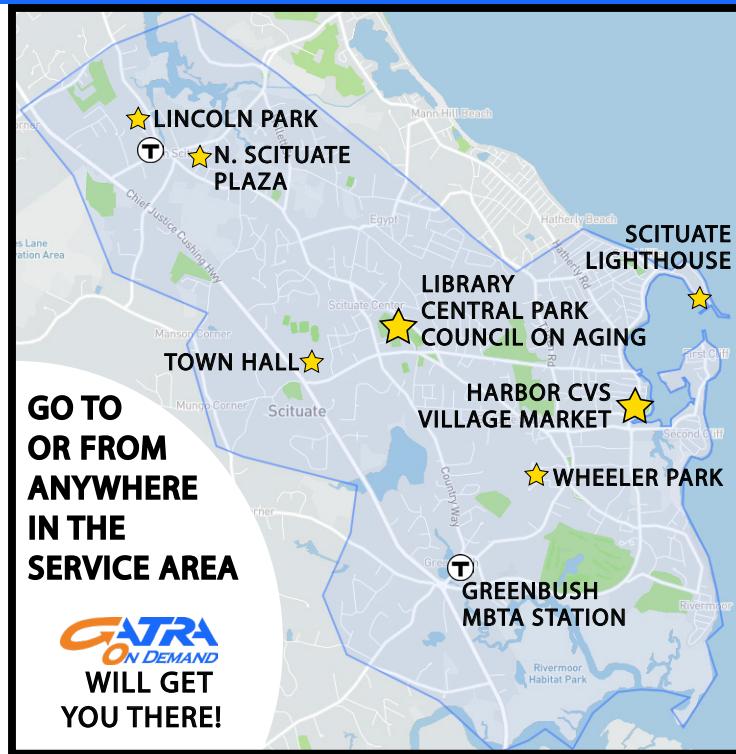
FREE until February 28th  
then \$2.00 a ride  
Children under 6 free

## HOURS

Monday - Friday	7:30AM - 5:30PM
Saturday	9:00AM - 5:00PM
Sunday	12:00PM - 5:00PM



800-483-2500  
[www.GATRA.org](http://www.GATRA.org)



MASSDOT CRASH RATE WORKSHEETS



## INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Scituate COUNT DATE : 2/2/2023

DISTRICT : 5 UNSIGNALIZED :  SIGNALIZED :

### ~ INTERSECTION DATA ~

MAJOR STREET : Country Way

MINOR STREET(S) : Henry Turner Bailey Road and Gannett Road

**INTERSECTION  
DIAGRAM  
(Label Approaches)**



### PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	SB	EB	WB		
PEAK HOURLY VOLUMES (PM) :	200	162	269	257		888

"K" FACTOR :  INTERSECTION ADT (V) = TOTAL DAILY APPROACH VOLUME :

TOTAL # OF CRASHES :	<input type="text" value="6"/>	# OF YEARS :	<input type="text" value="5"/>	AVERAGE # OF CRASHES PER YEAR (A) :	<input type="text" value="1.20"/>
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CRASH RATE CALCULATION :  RATE = 
$$\frac{(A * 1,000,000)}{(V * 365)}$$

Comments : Below MassDOT Statewide and District Average Crash Rates

Project Title & Date: Residential



## INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Scituate COUNT DATE : 2/2/2023

DISTRICT : 5 UNSIGNALIZED :  SIGNALIZED :

### ~ INTERSECTION DATA ~

MAJOR STREET : Route 3A

MINOR STREET(S) : Country Way

INTERSECTION  
DIAGRAM  
(Label Approaches)



### PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	SB	EB	WB		
PEAK HOURLY VOLUMES (PM) :	523	906		224		1,653

"K" FACTOR :	0.090	INTERSECTION ADT (V) = TOTAL DAILY APPROACH VOLUME :	18,367
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TOTAL # OF CRASHES :	19	# OF YEARS :	5	AVERAGE # OF CRASHES PER YEAR (A) :	3.80
----------------------	----	--------------	---	-------------------------------------	------

CRASH RATE CALCULATION : **0.57** RATE = 
$$\frac{(A * 1,000,000)}{(V * 365)}$$

Comments : Below MassDOT Statewide and District Average Crash Rates

Project Title & Date: Residential

VEHICLE SPEED DATA



Country Way  
near #817 Country Way  
City, State: Scituate, MA  
Client: VAI/S. Kelly  
Site Code: 9620



PDI File #: 239150 ATR A (speed)

157 Washington Street, Suite 2  
Hudson, MA 01749  
Office: 508-875-0100 Fax: 508-875-0118

Count Date

Thursday, February 2, 2023

### Speed (60-minute)

NB

Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	1	33.0	33.0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
2:00 AM	0	0	0	1	0	1	0	0	0	0	0	0	0	2	36.4	32.5
3:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	1	22.0	22.0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
5:00 AM	0	0	0	0	3	4	1	0	0	0	0	0	0	8	39.0	36.3
6:00 AM	0	0	0	2	12	7	4	1	0	0	0	0	0	26	40.3	35.0
7:00 AM	0	1	4	8	25	14	5	0	0	0	0	0	0	57	37.0	32.6
8:00 AM	0	0	3	17	40	22	2	1	0	0	0	0	0	85	36.0	32.6
9:00 AM	0	0	2	19	28	18	1	0	0	0	0	0	0	68	36.0	31.9
10:00 AM	0	0	5	5	33	26	3	1	0	0	0	0	0	73	37.0	33.3
11:00 AM	1	3	5	23	40	14	4	0	0	0	0	0	0	90	35.0	30.6
12:00 PM	0	0	0	13	35	16	6	0	0	0	0	0	0	70	36.0	32.9
1:00 PM	1	2	2	6	30	13	4	0	0	0	0	0	0	58	36.0	32.0
2:00 PM	0	0	3	9	32	18	6	0	0	0	0	0	0	68	38.0	32.9
3:00 PM	2	0	8	15	42	18	2	0	0	0	0	0	0	87	35.0	31.0
4:00 PM	0	0	1	14	40	15	1	0	0	0	0	0	0	71	35.5	32.0
5:00 PM	0	0	3	17	39	14	5	0	0	0	0	0	0	78	36.0	32.0
6:00 PM	0	0	5	10	32	15	5	0	0	0	0	0	0	67	37.1	32.4
7:00 PM	0	0	1	6	16	9	0	0	0	0	0	0	0	32	36.0	32.5
8:00 PM	0	0	0	4	4	2	1	0	0	0	0	0	0	11	36.0	31.8
9:00 PM	0	0	1	4	7	5	0	0	0	0	0	0	0	17	35.0	31.4
10:00 PM	0	0	0	0	2	1	0	0	0	0	0	0	0	3	37.2	34.0
11:00 PM	0	0	0	1	2	0	0	0	0	0	0	0	0	3	31.4	29.7
Total	4	6	44	174	463	232	50	3	0	0	0	0	0	976	37.0	32.2
Percent	0.41%	0.61%	4.51%	17.83%	47.44%	23.77%	5.12%	0.31%	0.00%	0.00%	0.00%	0.00%	0.00%			

AM Peak	11:00 AM	11:00 AM	10:00 AM	11:00 AM	8:00 AM	10:00 AM	7:00 AM	6:00 AM							11:00 AM
Volume	1	3	5	23	40	26	5	1	0	0	0	0	0	90	

PM Peak	3:00 PM	1:00 PM	3:00 PM	5:00 PM	3:00 PM	2:00 PM	12:00 PM								3:00 PM
Volume	2	2	8	17	42	18	6	0	0	0	0	0	0	87	

15th Percentile:	28.0 MPH	Average Speed:	32.2 MPH	Posted Speed Limit:	30 MPH
50th Percentile:	32.0 MPH	10 MPH Pace:	28 to 37 MPH	Number of Vehicles > 30 MPH:	673
85th Percentile:	37.0 MPH	Number in Pace:	739	Percent of Vehicles > 30 MPH:	69.0%
95th Percentile:	40.0 MPH	Percent in Pace:	75.7%		

Country Way  
near #817 Country Way  
City, State: Scituate, MA  
Client: VAI/S. Kelly  
Site Code: 9620



PDI File #: 239150 ATR A (speed)

157 Washington Street, Suite 2  
Hudson, MA 01749  
Office: 508-875-0100 Fax: 508-875-0118

Count Date

Thursday, February 2, 2023

### Speed (60-minute)

Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
1:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	1	40.0	40.0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
5:00 AM	0	1	0	1	2	0	0	0	0	0	0	0	0	4	31.1	27.0
6:00 AM	0	0	2	4	3	7	0	0	0	0	0	0	0	16	37.8	31.8
7:00 AM	3	0	1	15	18	15	3	0	0	0	0	0	0	55	37.0	31.3
8:00 AM	0	0	7	31	45	18	3	2	0	0	0	0	0	106	36.0	31.1
9:00 AM	0	0	2	22	42	14	4	0	0	0	0	0	0	84	35.0	31.9
10:00 AM	0	0	5	20	30	13	1	0	0	0	0	0	0	69	35.0	30.9
11:00 AM	2	0	6	25	38	11	3	0	0	0	0	0	0	85	35.0	30.1
12:00 PM	0	2	6	19	39	18	5	0	0	0	0	0	0	89	37.0	31.2
1:00 PM	1	1	5	30	46	15	1	1	0	0	0	0	0	100	35.0	30.6
2:00 PM	1	2	3	27	47	14	2	0	0	0	0	0	0	96	35.0	30.7
3:00 PM	0	1	8	39	66	16	5	0	0	0	0	0	0	135	34.9	30.7
4:00 PM	0	0	4	26	67	19	2	0	0	0	0	0	0	118	35.5	31.4
5:00 PM	0	1	6	21	51	13	5	1	0	0	0	0	0	98	35.0	31.6
6:00 PM	0	0	3	16	35	12	3	1	0	0	0	0	0	70	35.0	31.6
7:00 PM	0	0	2	8	29	9	3	1	0	0	0	0	0	52	36.0	32.1
8:00 PM	0	0	1	12	28	11	2	0	0	0	0	0	0	54	36.1	31.9
9:00 PM	0	0	2	1	11	6	0	0	0	0	0	0	0	20	36.2	31.9
10:00 PM	0	0	1	2	0	3	1	0	0	0	0	0	0	7	38.2	32.7
11:00 PM	0	0	0	0	3	1	0	0	0	0	0	0	0	4	34.2	32.5
Total	7	8	64	319	600	215	44	6	0	0	0	0	0	1263	35.0	31.2
Percent	0.55%	0.63%	5.07%	25.26%	47.51%	17.02%	3.48%	0.48%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

AM Peak Volume 7:00 AM 5:00 AM 8:00 AM 8:00 AM 8:00 AM 9:00 AM 8:00 AM 8:00 AM 8:00 AM 8:00 AM

Volume 3 1 7 31 45 18 4 2 0 0 0 0 0 106

PM Peak Volume 1:00 PM 12:00 PM 3:00 PM 3:00 PM 4:00 PM 4:00 PM 12:00 PM 1:00 PM 1:00 PM

3:00 PM 1 2 8 39 67 19 5 1 0 0 0 0 0 135

15th Percentile:	27.0 MPH	Average Speed:	31.2 MPH	Posted Speed Limit:	30 MPH
50th Percentile:	31.0 MPH	10 MPH Pace:	27 to 36 MPH	Number of Vehicles > 30 MPH:	732
85th Percentile:	35.0 MPH	Number in Pace:	966	Percent of Vehicles > 30 MPH:	58.0%
95th Percentile:	39.0 MPH	Percent in Pace:	76.5%		

GROWTH RATE DATA



**General Background Traffic Growth - Daily Traffic Volumes**

<b>CITY/TOWN</b>	<b>ROUTE/STREET</b>	<b>LOCATION</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>Average Annual</b>
Scituate	Country Way	At Cohasset Town Line	2,474	2,449	2,512	3,045	3,056	3,151	3,223	3,423	3,481	4,359	4,342	<b>1.85%</b>
Scituate	First Parish Road	South of Beaver Dam Road	4,500	4,455	7,916	8,306	8,241	6,003	6,141	6,338	6,465	6,730		<b>-1.55%</b>
Scituate	Beaver Dam Road	West of Branch Street	4,965	5,000	5,491	5,751	5,426	5,594	5,723	5,886	5,986	6,004	5,267	<b>2.21%</b>

TRIP GENERATION DATA



# Multifamily Housing (Mid-Rise)

## Not Close to Rail Transit (221)

**Vehicle Trip Ends vs: Dwelling Units**  
**On a: Weekday**

**Setting/Location:** General Urban/Suburban

Number of Studies: 11

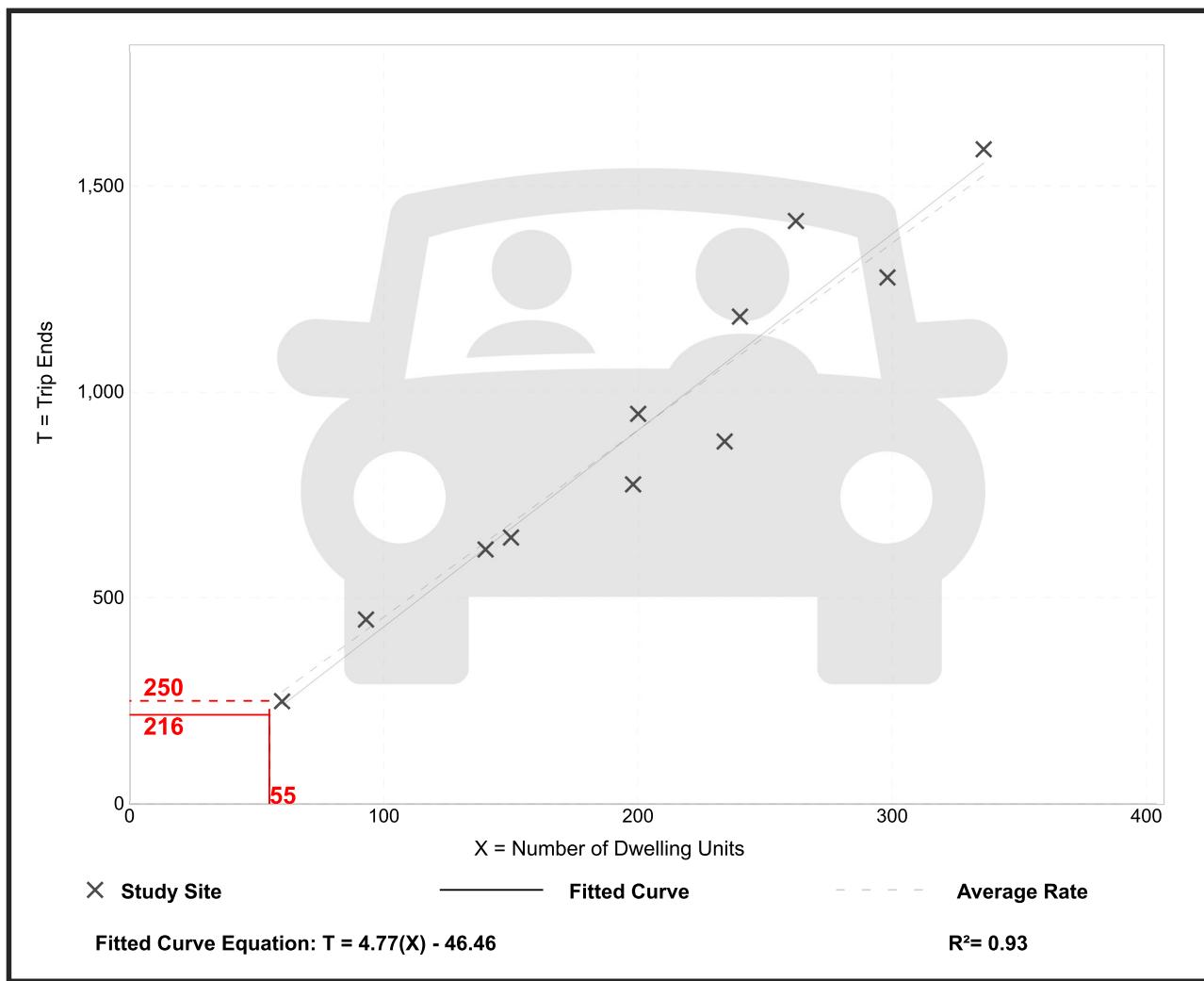
Avg. Num. of Dwelling Units: 201

Directional Distribution: 50% entering, 50% exiting

### Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
4.54	3.76 - 5.40	0.51

### Data Plot and Equation



## Multifamily Housing (Mid-Rise) Not Close to Rail Transit (221)

**Vehicle Trip Ends vs:** Dwelling Units

**On a:** Weekday,

**Peak Hour of Adjacent Street Traffic,**

**One Hour Between 7 and 9 a.m.**

**Setting/Location:** General Urban/Suburban

Number of Studies: 30

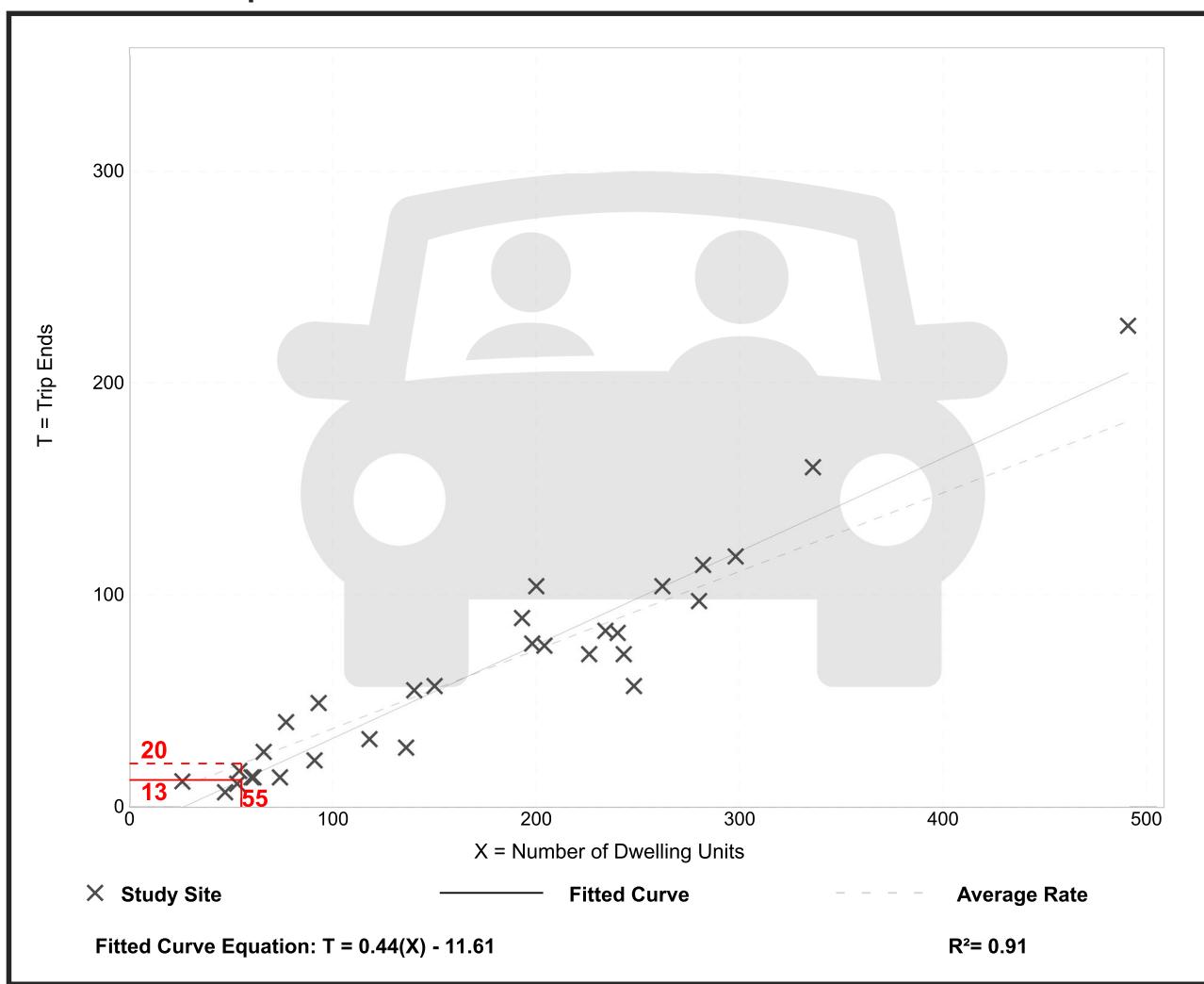
Avg. Num. of Dwelling Units: 173

Directional Distribution: 23% entering, 77% exiting

### Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.37	0.15 - 0.53	0.09

### Data Plot and Equation



## Multifamily Housing (Mid-Rise) Not Close to Rail Transit (221)

**Vehicle Trip Ends vs:** Dwelling Units

**On a:** Weekday,

**Peak Hour of Adjacent Street Traffic,**

**One Hour Between 4 and 6 p.m.**

**Setting/Location:** General Urban/Suburban

Number of Studies: 31

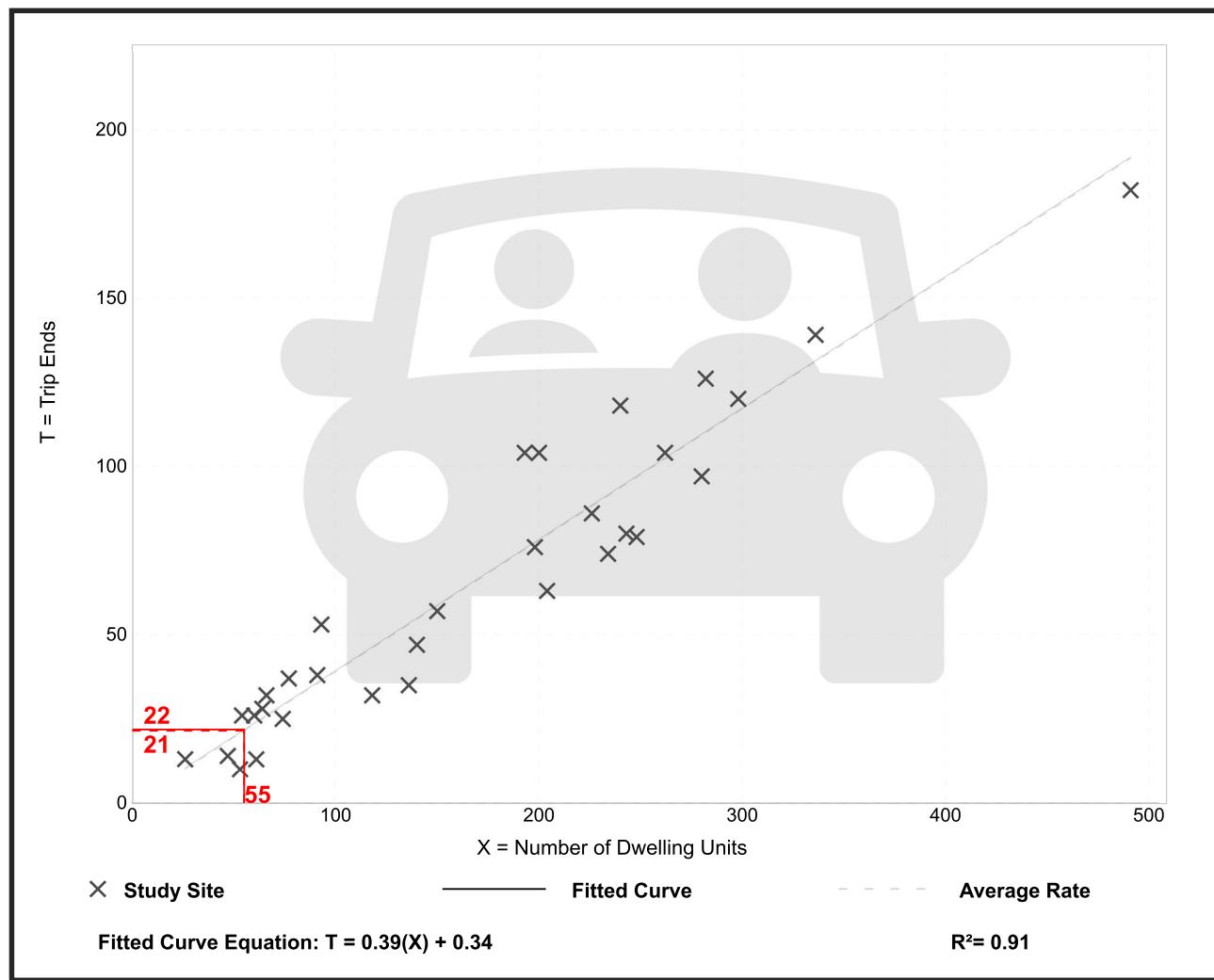
Avg. Num. of Dwelling Units: 169

Directional Distribution: 61% entering, 39% exiting

### Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.39	0.19 - 0.57	0.08

### Data Plot and Equation



JOURNEY TO WORK



**Proposed Residential Development**  
Scituate, Massachusetts

Residence	Workplace	Number	Country Way (North)	Gannett Road (East)	Country Way (South)	Route 3A (North)	Route 3A (South)
Scituate town	Scituate town	1,923	7%	135	14%	269	11% 38% 731 30% 577
Scituate town	Boston city	1,727	30%	518	0	20% 345	30% 518 20% 345
Scituate town	Hingham town	681	50%	341	0	0 50% 341	0
Scituate town	Quincy city	360	50%	180	0	0 50% 180	0
Scituate town	Cohasset town	314	50%	157	0	0 50% 157	0
Scituate town	Braintree Town city	280	25%	70	0	25% 70 25%	70
Scituate town	Weymouth Town city	248	50%	124	0	0 50% 124	0
Scituate town	Hanover town	235		0	0	50% 118	0 50% 118
Scituate town	Norwell town	209		0	0	50% 105	0 50% 105
Scituate town	Cambridge city	202	25%	51	0	25% 51	25% 51
Scituate town	Marshfield town	167		0	0	50% 84	0 50% 84
Scituate town	Canton town	117	25%	29	0	25% 29	25% 29
Scituate town	Brockton city	113		0	0	50% 57	0 50% 57
Scituate town	Wellesley town	109	25%	27	0	25% 27	25% 27
Scituate town	Plymouth town	109		0	0	50% 55	0 50% 55
Scituate town	Rockland town	106		0	0	50% 53	0 50% 53
Scituate town	Duxbury town	80		0	0	50% 40	0 50% 40
Scituate town	Newton city	77	25%	19	0	25% 19	25% 19
Scituate town	Kingston town	77		0	0	50% 39	0 50% 39
Scituate town	Needham town	54	25%	14	0	25% 14	25% 14
Scituate town	Norwood town	52	25%	13	0	25% 13	25% 13
Scituate town	Waltham city	50	25%	13	0	25% 13	25% 13
Scituate town	Abington town	47		0	0	50% 24	0 50% 24
Scituate town	Somerville city	45	30%	14	0	20% 9 30%	14 20% 9
Scituate town	Lexington town	44	30%	13	0	20% 9 30%	13 20% 9
			0	0	0	0	0
			0	0	0	0	0
			0	0	0	0	0
			0	0	0	0	0
			0	0	0	0	0
			0	0	0	0	0
			0	0	0	0	0
			0	0	0	0	0
			0	0	0	0	0
			0	0	0	0	0
			0	0	0	0	0
			0	0	0	0	0
			0	0	0	0	0
			0	0	0	0	0
			0	0	0	0	0
			0	0	0	0	0

7,426                    1,716                    269                    1,381                    2,312                    1,747  
SAY                  23.1%                  23%                  3.6%                  3%                  18.6%                  31.1%                  31%                  23.5%                  24%

## CAPACITY ANALYSIS

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2023 Existing Weekday Morning Peak Hour  
2023 Existing Weekday Evening Peak Hour  
2030 No-Build Weekday Morning Peak Hour  
2030 No-Build Weekday Evening Peak Hour  
2030 Build Weekday Morning Peak Hour  
2030 Build Weekday Evening Peak Hour



2023 Existing Weekday Morning Peak Hour



Intersection						
Int Delay, s/veh	6.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	31	250	681	39	103	383
Future Vol, veh/h	31	250	681	39	103	383
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	100	-	-	330	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	95	95	79	79
Heavy Vehicles, %	0	1	3	3	7	5
Mvmt Flow	34	275	717	41	130	485
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1483	738	0	0	758	0
Stage 1	738	-	-	-	-	-
Stage 2	745	-	-	-	-	-
Critical Hdwy	6.4	6.21	-	-	4.17	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.309	-	-	2.263	-
Pot Cap-1 Maneuver	139	420	-	-	831	-
Stage 1	476	-	-	-	-	-
Stage 2	473	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	117	420	-	-	831	-
Mov Cap-2 Maneuver	117	-	-	-	-	-
Stage 1	476	-	-	-	-	-
Stage 2	399	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	30.6	0	2.1			
HCM LOS	D					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	117	420	831	-
HCM Lane V/C Ratio	-	-	0.291	0.654	0.157	-
HCM Control Delay (s)	-	-	47.9	28.4	10.1	-
HCM Lane LOS	-	-	E	D	B	-
HCM 95th %tile Q(veh)	-	-	1.1	4.5	0.6	-

2023 Existing Weekday Morning  
2: Country Way & Henry Turner Bailey Road/Gannett Road

04/27/2023

	→	→	→	←	←	↑	↑	↓	↓	←	→	
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	108	40	60	185	32	80	94	89	29	67	19
Future Volume (vph)	21	108	40	60	185	32	80	94	89	29	67	19
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
Fr <sub>t</sub>				0.850		0.984			0.954			0.977
Flt Protected				0.992		0.989			0.985			0.987
Satd. Flow (prot)	0	1740	1396	0	1804	0	0	1738	0	0	1740	0
Flt Permitted				0.905		0.892			0.848			0.859
Satd. Flow (perm)	0	1587	1396	0	1627	0	0	1497	0	0	1514	0
Satd. Flow (RTOR)				63		6			29			11
Adj. Flow (vph)	24	121	45	69	213	37	90	106	100	35	80	23
Lane Group Flow (vph)	0	145	45	0	319	0	0	296	0	0	138	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		10			14			2			6	
Permitted Phases	10		10	14			2			6		
Detector Phase	10	10	10	14	14		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	11.0	11.0	11.0	11.0	11.0		11.0	11.0		11.0	11.0	
Total Split (s)	36.0	36.0	36.0	36.0	36.0		46.0	46.0		46.0	46.0	
Total Split (%)	34.6%	34.6%	34.6%	34.6%	34.6%		44.2%	44.2%		44.2%	44.2%	
Maximum Green (s)	30.0	30.0	30.0	30.0	30.0		40.0	40.0		40.0	40.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0	0.0		0.0			0.0			0.0	
Total Lost Time (s)		6.0	6.0		6.0			6.0			6.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		Min	Min		Min	Min	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
v/c Ratio	0.28	0.09		0.59			0.58			0.27		
Control Delay	16.7	4.2		20.8			19.7			15.7		
Queue Delay	0.0	0.0		0.0			0.0			0.0		
Total Delay	16.7	4.2		20.8			19.7			15.7		
Queue Length 50th (ft)	22	0		53			45			19		
Queue Length 95th (ft)	113	16		235			217			96		
Internal Link Dist (ft)	2036			571			611			482		
Turn Bay Length (ft)		120										
Base Capacity (vph)	1144	1024		1174			1291			1303		
Starvation Cap Reductn	0	0		0			0			0		
Spillback Cap Reductn	0	0		0			0			0		
Storage Cap Reductn	0	0		0			0			0		
Reduced v/c Ratio	0.13	0.04		0.27			0.23			0.11		
Intersection Summary												
Cycle Length: 104												

Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Adj. Flow (vph)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	22.0
Total Split (s)	22.0
Total Split (%)	21%
Maximum Green (s)	19.0
Yellow Time (s)	2.0
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	12.0
Pedestrian Calls (#/hr)	11
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

2023 Existing Weekday Morning  
2: Country Way & Henry Turner Bailey Road/Gannett Road

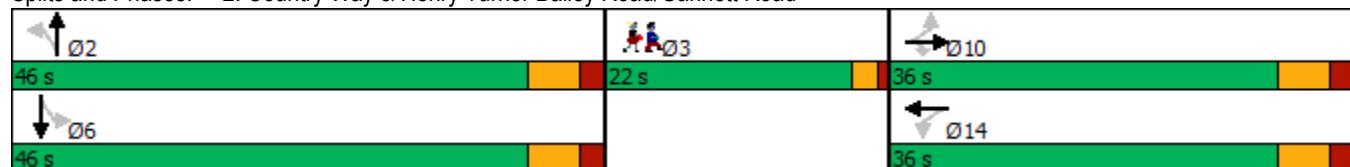
04/27/2023

Actuated Cycle Length: 48.5

Natural Cycle: 60

Control Type: Actuated-Uncoordinated

Splits and Phases: 2: Country Way & Henry Turner Bailey Road/Gannett Road



2023 Existing Weekday Morning  
2: Country Way & Henry Turner Bailey Road/Gannett Road

04/27/2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	108	40	60	185	32	80	94	89	29	67	19
Future Volume (vph)	21	108	40	60	185	32	80	94	89	29	67	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	10	12	12	12	12	12	12	12	12	12
Total Lost time (s)	6.0	6.0		6.0			6.0			6.0		
Lane Util. Factor	1.00	1.00		1.00			1.00			1.00		
Fr <sub>t</sub>	1.00	0.85		0.98			0.95			0.98		
Flt Protected	0.99	1.00		0.99			0.99			0.99		
Satd. Flow (prot)	1739	1396		1805			1739			1741		
Flt Permitted	0.91	1.00		0.89			0.85			0.86		
Satd. Flow (perm)	1587	1396		1627			1496			1515		
Peak-hour factor, PHF	0.89	0.89	0.89	0.87	0.87	0.87	0.89	0.89	0.89	0.84	0.84	0.84
Adj. Flow (vph)	24	121	45	69	213	37	90	106	100	35	80	23
RTOR Reduction (vph)	0	0	30	0	4	0	0	20	0	0	7	0
Lane Group Flow (vph)	0	145	15	0	315	0	0	276	0	0	131	0
Heavy Vehicles (%)	0%	10%	8%	0%	2%	10%	1%	2%	5%	0%	6%	11%
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		10			14			2			6	
Permitted Phases	10		10	14			2			6		
Actuated Green, G (s)	16.1	16.1		16.1			16.0			16.0		
Effective Green, g (s)	16.1	16.1		16.1			16.0			16.0		
Actuated g/C Ratio	0.33	0.33		0.33			0.33			0.33		
Clearance Time (s)	6.0	6.0		6.0			6.0			6.0		
Vehicle Extension (s)	3.0	3.0		3.0			3.0			3.0		
Lane Grp Cap (vph)	520	457		533			487			493		
v/s Ratio Prot												
v/s Ratio Perm	0.09	0.01		c0.19			c0.18			0.09		
v/c Ratio	0.28	0.03		0.59			0.57			0.26		
Uniform Delay, d1	12.2	11.2		13.8			13.7			12.2		
Progression Factor	1.00	1.00		1.00			1.00			1.00		
Incremental Delay, d2	0.3	0.0		1.8			1.5			0.3		
Delay (s)	12.5	11.2		15.5			15.2			12.5		
Level of Service	B	B		B			B			B		
Approach Delay (s)	12.2			15.5			15.2			12.5		
Approach LOS	B			B			B			B		
Intersection Summary												
HCM 2000 Control Delay	14.3			HCM 2000 Level of Service			B					
HCM 2000 Volume to Capacity ratio	0.54											
Actuated Cycle Length (s)	49.1			Sum of lost time (s)			15.0					
Intersection Capacity Utilization	52.9%			ICU Level of Service			A					
Analysis Period (min)	15											

c Critical Lane Group

2023 Existing Weekday Evening Peak Hour



Intersection						
Int Delay, s/veh	7.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖ ↗ ↘ ↖ ↙ ↘					
Traffic Vol, veh/h	31	193	490	33	236	670
Future Vol, veh/h	31	193	490	33	236	670
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	100	-	-	330	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	71	71	91	91	93	93
Heavy Vehicles, %	3	1	2	6	1	1
Mvmt Flow	44	272	538	36	254	720
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1784	556	0	0	574	0
Stage 1	556	-	-	-	-	-
Stage 2	1228	-	-	-	-	-
Critical Hdwy	6.43	6.21	-	-	4.11	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.309	-	-	2.209	-
Pot Cap-1 Maneuver	89	533	-	-	1004	-
Stage 1	572	-	-	-	-	-
Stage 2	275	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	66	533	-	-	1004	-
Mov Cap-2 Maneuver	66	-	-	-	-	-
Stage 1	572	-	-	-	-	-
Stage 2	205	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	34.3	0		2.6		
HCM LOS	D					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	66	533	1004	-
HCM Lane V/C Ratio	-	-	0.662	0.51	0.253	-
HCM Control Delay (s)	-	-	131.8	18.6	9.8	-
HCM Lane LOS	-	-	F	C	A	-
HCM 95th %tile Q(veh)	-	-	2.9	2.9	1	-

2023 Existing Weekday Evening  
2: Country Way & Henry Turner Bailey Road/Gannett Road

04/27/2023

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group												
Lane Configurations												
Traffic Volume (vph)	19	172	78	70	155	32	48	61	91	44	94	24
Future Volume (vph)	19	172	78	70	155	32	48	61	91	44	94	24
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
Fr <sub>t</sub>				0.850		0.983			0.939			0.980
Flt Protected				0.995		0.987			0.988			0.987
Satd. Flow (prot)	0	1874	1507	0	1823	0	0	1763	0	0	1827	0
Flt Permitted				0.946		0.837			0.878			0.864
Satd. Flow (perm)	0	1781	1507	0	1546	0	0	1566	0	0	1599	0
Satd. Flow (RTOR)				96		7			47			10
Adj. Flow (vph)	23	212	96	76	168	35	53	68	101	58	124	32
Lane Group Flow (vph)	0	235	96	0	279	0	0	222	0	0	214	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		10			14			2			6	
Permitted Phases	10		10	14			2			6		
Detector Phase	10	10	10	14	14		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	11.0	11.0	11.0	11.0	11.0		11.0	11.0		11.0	11.0	
Total Split (s)	36.0	36.0	36.0	36.0	36.0		46.0	46.0		46.0	46.0	
Total Split (%)	34.6%	34.6%	34.6%	34.6%	34.6%		44.2%	44.2%		44.2%	44.2%	
Maximum Green (s)	30.0	30.0	30.0	30.0	30.0		40.0	40.0		40.0	40.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0	0.0		0.0			0.0			0.0	
Total Lost Time (s)		6.0	6.0		6.0			6.0			6.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		Min	Min		Min	Min	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
v/c Ratio	0.38	0.16		0.51			0.46			0.46		
Control Delay	15.0	4.8		17.2			16.6			19.3		
Queue Delay	0.0	0.0		0.0			0.0			0.0		
Total Delay	15.0	4.8		17.2			16.6			19.3		
Queue Length 50th (ft)	33	0		40			26			31		
Queue Length 95th (ft)	136	24		190			150			132		
Internal Link Dist (ft)	2036			571			611			482		
Turn Bay Length (ft)		120										
Base Capacity (vph)	1357	1171		1179			1390			1415		
Starvation Cap Reductn	0	0		0			0			0		
Spillback Cap Reductn	0	0		0			0			0		
Storage Cap Reductn	0	0		0			0			0		
Reduced v/c Ratio	0.17	0.08		0.24			0.16			0.15		
Intersection Summary												
Cycle Length: 104												

Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Adj. Flow (vph)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	22.0
Total Split (s)	22.0
Total Split (%)	21%
Maximum Green (s)	19.0
Yellow Time (s)	2.0
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	12.0
Pedestrian Calls (#/hr)	11
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

2023 Existing Weekday Evening  
2: Country Way & Henry Turner Bailey Road/Gannett Road

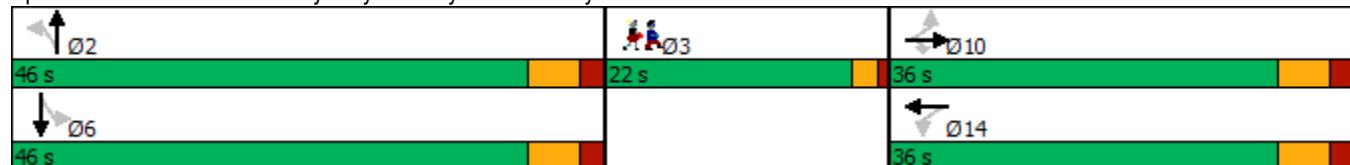
04/27/2023

Actuated Cycle Length: 44.9

Natural Cycle: 60

Control Type: Actuated-Uncoordinated

Splits and Phases: 2: Country Way & Henry Turner Bailey Road/Gannett Road



2023 Existing Weekday Evening  
2: Country Way & Henry Turner Bailey Road/Gannett Road

04/27/2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	172	78	70	155	32	48	61	91	44	94	24
Future Volume (vph)	19	172	78	70	155	32	48	61	91	44	94	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	10	12	12	12	12	12	12	12	12	12
Total Lost time (s)	6.0	6.0		6.0			6.0			6.0		
Lane Util. Factor	1.00	1.00		1.00			1.00			1.00		
Fr <sub>t</sub>	1.00	0.85		0.98			0.94			0.98		
Flt Protected	1.00	1.00		0.99			0.99			0.99		
Satd. Flow (prot)	1874	1507		1822			1762			1826		
Flt Permitted	0.95	1.00		0.84			0.88			0.86		
Satd. Flow (perm)	1781	1507		1545			1566			1600		
Peak-hour factor, PHF	0.81	0.81	0.81	0.92	0.92	0.92	0.90	0.90	0.90	0.76	0.76	0.76
Adj. Flow (vph)	23	212	96	76	168	35	53	68	101	58	124	32
RTOR Reduction (vph)	0	0	63	0	5	0	0	34	0	0	7	0
Lane Group Flow (vph)	0	235	33	0	274	0	0	188	0	0	207	0
Heavy Vehicles (%)	0%	1%	0%	2%	1%	0%	0%	0%	0%	0%	1%	0%
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		10			14			2			6	
Permitted Phases	10		10	14			2			6		
Actuated Green, G (s)	15.7	15.7		15.7			13.0			13.0		
Effective Green, g (s)	15.7	15.7		15.7			13.0			13.0		
Actuated g/C Ratio	0.34	0.34		0.34			0.28			0.28		
Clearance Time (s)	6.0	6.0		6.0			6.0			6.0		
Vehicle Extension (s)	3.0	3.0		3.0			3.0			3.0		
Lane Grp Cap (vph)	611	517		530			445			455		
v/s Ratio Prot												
v/s Ratio Perm	0.13	0.02		c0.18			0.12			c0.13		
v/c Ratio	0.38	0.06		0.52			0.42			0.45		
Uniform Delay, d1	11.3	10.1		12.0			13.3			13.4		
Progression Factor	1.00	1.00		1.00			1.00			1.00		
Incremental Delay, d2	0.4	0.1		0.9			0.7			0.7		
Delay (s)	11.8	10.1		12.8			14.0			14.2		
Level of Service	B	B		B			B			B		
Approach Delay (s)	11.3			12.8			14.0			14.2		
Approach LOS	B			B			B			B		
Intersection Summary												
HCM 2000 Control Delay	12.9				HCM 2000 Level of Service			B				
HCM 2000 Volume to Capacity ratio	0.46											
Actuated Cycle Length (s)	45.7				Sum of lost time (s)			15.0				
Intersection Capacity Utilization	53.7%				ICU Level of Service			A				
Analysis Period (min)	15											

c Critical Lane Group

2030 No-Build Weekday Morning Peak Hour



2030 No-Build Weekday Morning  
1: Route 3A & Henry Turner Bailey Road

05/02/2023



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↑	↑	↑		↑	↑
Traffic Volume (vph)	33	268	730	42	110	411
Future Volume (vph)	33	268	730	42	110	411
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr <sub>t</sub>		0.850	0.993			
Flt Protected	0.950			0.950		
Satd. Flow (prot)	1865	1652	1832	0	1687	1870
Flt Permitted	0.950			0.225		
Satd. Flow (perm)	1865	1652	1832	0	400	1870
Satd. Flow (RTOR)		250	6			
Adj. Flow (vph)	36	295	768	44	139	520
Lane Group Flow (vph)	36	295	812	0	139	520
Turn Type	Prot	Perm	NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases			8			6
Detector Phase	8	8	2		6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	24.0	24.0	24.0		24.0	24.0
Total Split (s)	26.0	26.0	74.0		74.0	74.0
Total Split (%)	26.0%	26.0%	74.0%		74.0%	74.0%
Maximum Green (s)	20.0	20.0	68.0		68.0	68.0
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0		6.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	Min		Min	Min
Walk Time (s)	7.0	7.0	7.0		7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0	0		0	0
v/c Ratio	0.12	0.61	0.77		0.60	0.48
Control Delay	22.2	11.8	13.8		20.2	7.9
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	22.2	11.8	13.8		20.2	7.9
Queue Length 50th (ft)	8	10	131		19	66
Queue Length 95th (ft)	38	86	337		68	134
Internal Link Dist (ft)	2036		531			490
Turn Bay Length (ft)		100		330		
Base Capacity (vph)	801	852	1792		391	1829
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.04	0.35	0.45		0.36	0.28
Intersection Summary						
Cycle Length: 100						

2030 No-Build Weekday Morning  
1: Route 3A & Henry Turner Bailey Road

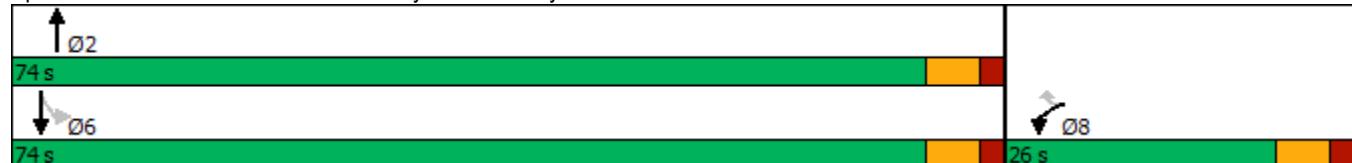
05/02/2023

Actuated Cycle Length: 50

Natural Cycle: 65

Control Type: Actuated-Uncoordinated

Splits and Phases: 1: Route 3A & Henry Turner Bailey Road





Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↑	↑	↑		↑	↑
Traffic Volume (vph)	33	268	730	42	110	411
Future Volume (vph)	33	268	730	42	110	411
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	13	13	12	12	12	13
Total Lost time (s)	6.0	6.0	6.0		6.0	6.0
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00
Fr <sub>t</sub>	1.00	0.85	0.99		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1865	1652	1831		1687	1870
Flt Permitted	0.95	1.00	1.00		0.23	1.00
Satd. Flow (perm)	1865	1652	1831		400	1870
Peak-hour factor, PHF	0.91	0.91	0.95	0.95	0.79	0.79
Adj. Flow (vph)	36	295	768	44	139	520
RTOR Reduction (vph)	0	207	2	0	0	0
Lane Group Flow (vph)	36	88	810	0	139	520
Heavy Vehicles (%)	0%	1%	3%	3%	7%	5%
Turn Type	Prot	Perm	NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases		8			6	
Actuated Green, G (s)	8.4	8.4	28.8		28.8	28.8
Effective Green, g (s)	8.4	8.4	28.8		28.8	28.8
Actuated g/C Ratio	0.17	0.17	0.59		0.59	0.59
Clearance Time (s)	6.0	6.0	6.0		6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	318	282	1071		234	1094
v/s Ratio Prot	0.02		c0.44			0.28
v/s Ratio Perm		c0.05			0.35	
v/c Ratio	0.11	0.31	0.76		0.59	0.48
Uniform Delay, d <sub>1</sub>	17.3	17.9	7.6		6.5	5.9
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d <sub>2</sub>	0.2	0.6	3.1		4.0	0.3
Delay (s)	17.4	18.5	10.7		10.5	6.2
Level of Service	B	B	B		B	A
Approach Delay (s)	18.4		10.7			7.1
Approach LOS	B		B			A
<b>Intersection Summary</b>						
HCM 2000 Control Delay		10.8		HCM 2000 Level of Service		B
HCM 2000 Volume to Capacity ratio		0.65				
Actuated Cycle Length (s)		49.2		Sum of lost time (s)		12.0
Intersection Capacity Utilization		67.6%		ICU Level of Service		C
Analysis Period (min)		15				

c Critical Lane Group

2030 No-Build Weekday Morning  
2: Country Way & Henry Turner Bailey Road/Gannett Road

05/02/2023

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	116	43	64	199	34	86	100	95	31	72	20
Future Volume (vph)	22	116	43	64	199	34	86	100	95	31	72	20
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
Fr <sub>t</sub>				0.850		0.985			0.954			0.978
Flt Protected				0.992		0.989			0.985			0.988
Satd. Flow (prot)	0	1739	1396	0	1806	0	0	1738	0	0	1743	0
Flt Permitted				0.904		0.889			0.843			0.863
Satd. Flow (perm)	0	1585	1396	0	1624	0	0	1488	0	0	1523	0
Satd. Flow (RTOR)				63		6			29			11
Adj. Flow (vph)	25	130	48	74	229	39	97	112	107	37	86	24
Lane Group Flow (vph)	0	155	48	0	342	0	0	316	0	0	147	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		10			14			2			6	
Permitted Phases	10		10	14			2			6		
Detector Phase	10	10	10	14	14		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	11.0	11.0	11.0	11.0	11.0		11.0	11.0		11.0	11.0	
Total Split (s)	36.0	36.0	36.0	36.0	36.0		46.0	46.0		46.0	46.0	
Total Split (%)	34.6%	34.6%	34.6%	34.6%	34.6%		44.2%	44.2%		44.2%	44.2%	
Maximum Green (s)	30.0	30.0	30.0	30.0	30.0		40.0	40.0		40.0	40.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0	0.0		0.0			0.0			0.0	
Total Lost Time (s)		6.0	6.0		6.0			6.0			6.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		Min	Min		Min	Min	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
v/c Ratio	0.29	0.09		0.62			0.60			0.28		
Control Delay	17.3	4.7		22.2			20.5			15.8		
Queue Delay	0.0	0.0		0.0			0.0			0.0		
Total Delay	17.3	4.7		22.2			20.5			15.8		
Queue Length 50th (ft)	25	0		62			52			22		
Queue Length 95th (ft)	123	18		262			234			101		
Internal Link Dist (ft)	2036			571			611			482		
Turn Bay Length (ft)		120										
Base Capacity (vph)	1091	980		1119			1248			1274		
Starvation Cap Reductn	0	0		0			0			0		
Spillback Cap Reductn	0	0		0			0			0		
Storage Cap Reductn	0	0		0			0			0		
Reduced v/c Ratio	0.14	0.05		0.31			0.25			0.12		
Intersection Summary												
Cycle Length: 104												

Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Adj. Flow (vph)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	22.0
Total Split (s)	22.0
Total Split (%)	21%
Maximum Green (s)	19.0
Yellow Time (s)	2.0
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	12.0
Pedestrian Calls (#/hr)	11
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

2030 No-Build Weekday Morning  
2: Country Way & Henry Turner Bailey Road/Gannett Road

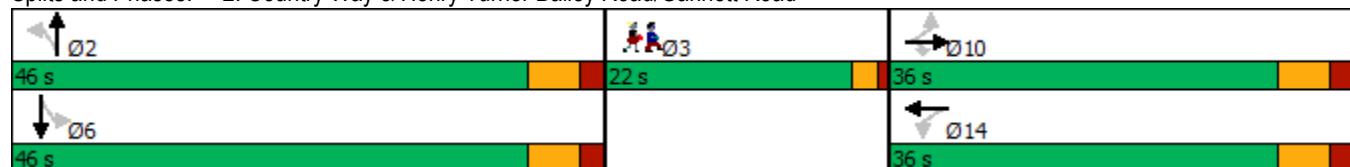
05/02/2023

Actuated Cycle Length: 50.8

Natural Cycle: 60

Control Type: Actuated-Uncoordinated

Splits and Phases: 2: Country Way & Henry Turner Bailey Road/Gannett Road



2030 No-Build Weekday Morning  
2: Country Way & Henry Turner Bailey Road/Gannett Road

05/02/2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	116	43	64	199	34	86	100	95	31	72	20
Future Volume (vph)	22	116	43	64	199	34	86	100	95	31	72	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	10	12	12	12	12	12	12	12	12	12
Total Lost time (s)	6.0	6.0		6.0			6.0			6.0		
Lane Util. Factor	1.00	1.00		1.00			1.00			1.00		
Fr <sub>t</sub>	1.00	0.85		0.98			0.95			0.98		
Flt Protected	0.99	1.00		0.99			0.98			0.99		
Satd. Flow (prot)	1739	1396		1806			1739			1743		
Flt Permitted	0.90	1.00		0.89			0.84			0.86		
Satd. Flow (perm)	1585	1396		1623			1488			1523		
Peak-hour factor, PHF	0.89	0.89	0.89	0.87	0.87	0.87	0.89	0.89	0.89	0.84	0.84	0.84
Adj. Flow (vph)	25	130	48	74	229	39	97	112	107	37	86	24
RTOR Reduction (vph)	0	0	32	0	4	0	0	19	0	0	7	0
Lane Group Flow (vph)	0	155	16	0	338	0	0	297	0	0	140	0
Heavy Vehicles (%)	0%	10%	8%	0%	2%	10%	1%	2%	5%	0%	6%	11%
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		10			14			2			6	
Permitted Phases	10		10	14			2			6		
Actuated Green, G (s)	17.2	17.2		17.2			17.3			17.3		
Effective Green, g (s)	17.2	17.2		17.2			17.3			17.3		
Actuated g/C Ratio	0.33	0.33		0.33			0.34			0.34		
Clearance Time (s)	6.0	6.0		6.0			6.0			6.0		
Vehicle Extension (s)	3.0	3.0		3.0			3.0			3.0		
Lane Grp Cap (vph)	529	466		542			499			511		
v/s Ratio Prot												
v/s Ratio Perm	0.10	0.01		c0.21			c0.20			0.09		
v/c Ratio	0.29	0.03		0.62			0.59			0.27		
Uniform Delay, d1	12.7	11.6		14.4			14.2			12.5		
Progression Factor	1.00	1.00		1.00			1.00			1.00		
Incremental Delay, d2	0.3	0.0		2.2			1.9			0.3		
Delay (s)	13.0	11.6		16.7			16.1			12.8		
Level of Service	B	B		B			B			B		
Approach Delay (s)	12.6			16.7			16.1			12.8		
Approach LOS	B			B			B			B		
Intersection Summary												
HCM 2000 Control Delay	15.1			HCM 2000 Level of Service			B					
HCM 2000 Volume to Capacity ratio	0.58											
Actuated Cycle Length (s)	51.5			Sum of lost time (s)			15.0					
Intersection Capacity Utilization	55.2%			ICU Level of Service			B					
Analysis Period (min)	15											

c Critical Lane Group

2030 No-Build Weekday Evening Peak Hour



2030 No-Build Weekday Morning  
1: Route 3A & Henry Turner Bailey Road

05/02/2023



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↑	↑	↑		↑	↑
Traffic Volume (vph)	33	268	730	42	110	411
Future Volume (vph)	33	268	730	42	110	411
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr <sub>t</sub>		0.850	0.993			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1865	1652	1832	0	1687	1870
Flt Permitted	0.950				0.225	
Satd. Flow (perm)	1865	1652	1832	0	400	1870
Satd. Flow (RTOR)		250	6			
Adj. Flow (vph)	36	295	768	44	139	520
Lane Group Flow (vph)	36	295	812	0	139	520
Turn Type	Prot	Perm	NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases			8			6
Detector Phase	8	8	2		6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	24.0	24.0	24.0		24.0	24.0
Total Split (s)	26.0	26.0	74.0		74.0	74.0
Total Split (%)	26.0%	26.0%	74.0%		74.0%	74.0%
Maximum Green (s)	20.0	20.0	68.0		68.0	68.0
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0		6.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	Min		Min	Min
Walk Time (s)	7.0	7.0	7.0		7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0	0		0	0
v/c Ratio	0.12	0.61	0.77		0.60	0.48
Control Delay	22.2	11.8	13.8		20.2	7.9
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	22.2	11.8	13.8		20.2	7.9
Queue Length 50th (ft)	8	10	131		19	66
Queue Length 95th (ft)	38	86	337		68	134
Internal Link Dist (ft)	2036		531			490
Turn Bay Length (ft)		100			330	
Base Capacity (vph)	801	852	1792		391	1829
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.04	0.35	0.45		0.36	0.28
Intersection Summary						
Cycle Length: 100						

2030 No-Build Weekday Morning  
1: Route 3A & Henry Turner Bailey Road

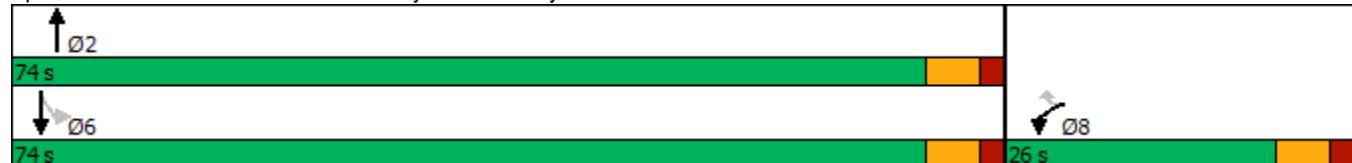
05/02/2023

Actuated Cycle Length: 50

Natural Cycle: 65

Control Type: Actuated-Uncoordinated

Splits and Phases: 1: Route 3A & Henry Turner Bailey Road





Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↑	↑	↑		↑	↑
Traffic Volume (vph)	33	268	730	42	110	411
Future Volume (vph)	33	268	730	42	110	411
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	13	13	12	12	12	13
Total Lost time (s)	6.0	6.0	6.0		6.0	6.0
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00
Fr <sub>t</sub>	1.00	0.85	0.99		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1865	1652	1831		1687	1870
Flt Permitted	0.95	1.00	1.00		0.23	1.00
Satd. Flow (perm)	1865	1652	1831		400	1870
Peak-hour factor, PHF	0.91	0.91	0.95	0.95	0.79	0.79
Adj. Flow (vph)	36	295	768	44	139	520
RTOR Reduction (vph)	0	207	2	0	0	0
Lane Group Flow (vph)	36	88	810	0	139	520
Heavy Vehicles (%)	0%	1%	3%	3%	7%	5%
Turn Type	Prot	Perm	NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases		8			6	
Actuated Green, G (s)	8.4	8.4	28.8		28.8	28.8
Effective Green, g (s)	8.4	8.4	28.8		28.8	28.8
Actuated g/C Ratio	0.17	0.17	0.59		0.59	0.59
Clearance Time (s)	6.0	6.0	6.0		6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	318	282	1071		234	1094
v/s Ratio Prot	0.02		c0.44			0.28
v/s Ratio Perm		c0.05			0.35	
v/c Ratio	0.11	0.31	0.76		0.59	0.48
Uniform Delay, d <sub>1</sub>	17.3	17.9	7.6		6.5	5.9
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d <sub>2</sub>	0.2	0.6	3.1		4.0	0.3
Delay (s)	17.4	18.5	10.7		10.5	6.2
Level of Service	B	B	B		B	A
Approach Delay (s)	18.4		10.7			7.1
Approach LOS	B		B			A
<b>Intersection Summary</b>						
HCM 2000 Control Delay		10.8	HCM 2000 Level of Service		B	
HCM 2000 Volume to Capacity ratio		0.65				
Actuated Cycle Length (s)		49.2	Sum of lost time (s)		12.0	
Intersection Capacity Utilization		67.6%	ICU Level of Service		C	
Analysis Period (min)		15				

c Critical Lane Group

2030 No-Build Weekday Morning  
2: Country Way & Henry Turner Bailey Road/Gannett Road

05/02/2023

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	116	43	64	199	34	86	100	95	31	72	20
Future Volume (vph)	22	116	43	64	199	34	86	100	95	31	72	20
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
Fr <sub>t</sub>				0.850		0.985			0.954			0.978
Flt Protected				0.992		0.989			0.985			0.988
Satd. Flow (prot)	0	1739	1396	0	1806	0	0	1738	0	0	1743	0
Flt Permitted				0.904		0.889			0.843			0.863
Satd. Flow (perm)	0	1585	1396	0	1624	0	0	1488	0	0	1523	0
Satd. Flow (RTOR)				63		6			29			11
Adj. Flow (vph)	25	130	48	74	229	39	97	112	107	37	86	24
Lane Group Flow (vph)	0	155	48	0	342	0	0	316	0	0	147	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		10			14			2			6	
Permitted Phases	10		10	14			2				6	
Detector Phase	10	10	10	14	14		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	11.0	11.0	11.0	11.0	11.0		11.0	11.0		11.0	11.0	
Total Split (s)	36.0	36.0	36.0	36.0	36.0		46.0	46.0		46.0	46.0	
Total Split (%)	34.6%	34.6%	34.6%	34.6%	34.6%		44.2%	44.2%		44.2%	44.2%	
Maximum Green (s)	30.0	30.0	30.0	30.0	30.0		40.0	40.0		40.0	40.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0	0.0		0.0			0.0			0.0	
Total Lost Time (s)		6.0	6.0		6.0			6.0			6.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		Min	Min		Min	Min	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
v/c Ratio	0.29	0.09		0.62			0.60			0.28		
Control Delay	17.3	4.7		22.2			20.5			15.8		
Queue Delay	0.0	0.0		0.0			0.0			0.0		
Total Delay	17.3	4.7		22.2			20.5			15.8		
Queue Length 50th (ft)	25	0		62			52			22		
Queue Length 95th (ft)	123	18		262			234			101		
Internal Link Dist (ft)	2036			571			611			482		
Turn Bay Length (ft)		120										
Base Capacity (vph)	1091	980		1119			1248			1274		
Starvation Cap Reductn	0	0		0			0			0		
Spillback Cap Reductn	0	0		0			0			0		
Storage Cap Reductn	0	0		0			0			0		
Reduced v/c Ratio	0.14	0.05		0.31			0.25			0.12		
Intersection Summary												
Cycle Length: 104												

Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Adj. Flow (vph)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	22.0
Total Split (s)	22.0
Total Split (%)	21%
Maximum Green (s)	19.0
Yellow Time (s)	2.0
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	12.0
Pedestrian Calls (#/hr)	11
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

2030 No-Build Weekday Morning  
2: Country Way & Henry Turner Bailey Road/Gannett Road

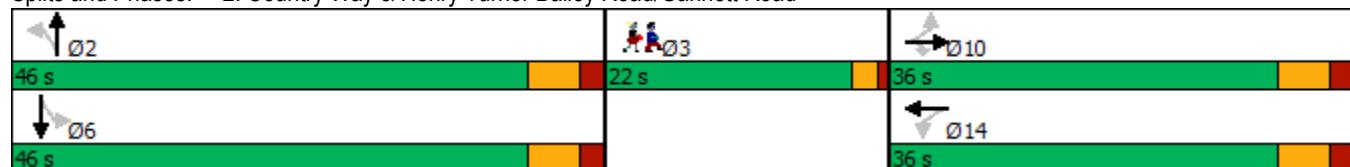
05/02/2023

Actuated Cycle Length: 50.8

Natural Cycle: 60

Control Type: Actuated-Uncoordinated

Splits and Phases: 2: Country Way & Henry Turner Bailey Road/Gannett Road



2030 No-Build Weekday Morning  
2: Country Way & Henry Turner Bailey Road/Gannett Road

05/02/2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	116	43	64	199	34	86	100	95	31	72	20
Future Volume (vph)	22	116	43	64	199	34	86	100	95	31	72	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	10	12	12	12	12	12	12	12	12	12
Total Lost time (s)	6.0	6.0		6.0			6.0			6.0		
Lane Util. Factor	1.00	1.00		1.00			1.00			1.00		
Fr <sub>t</sub>	1.00	0.85		0.98			0.95			0.98		
Flt Protected	0.99	1.00		0.99			0.98			0.99		
Satd. Flow (prot)	1739	1396		1806			1739			1743		
Flt Permitted	0.90	1.00		0.89			0.84			0.86		
Satd. Flow (perm)	1585	1396		1623			1488			1523		
Peak-hour factor, PHF	0.89	0.89	0.89	0.87	0.87	0.87	0.89	0.89	0.89	0.84	0.84	0.84
Adj. Flow (vph)	25	130	48	74	229	39	97	112	107	37	86	24
RTOR Reduction (vph)	0	0	32	0	4	0	0	19	0	0	7	0
Lane Group Flow (vph)	0	155	16	0	338	0	0	297	0	0	140	0
Heavy Vehicles (%)	0%	10%	8%	0%	2%	10%	1%	2%	5%	0%	6%	11%
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		10			14			2			6	
Permitted Phases	10		10	14			2			6		
Actuated Green, G (s)	17.2	17.2		17.2			17.3			17.3		
Effective Green, g (s)	17.2	17.2		17.2			17.3			17.3		
Actuated g/C Ratio	0.33	0.33		0.33			0.34			0.34		
Clearance Time (s)	6.0	6.0		6.0			6.0			6.0		
Vehicle Extension (s)	3.0	3.0		3.0			3.0			3.0		
Lane Grp Cap (vph)	529	466		542			499			511		
v/s Ratio Prot												
v/s Ratio Perm	0.10	0.01		c0.21			c0.20			0.09		
v/c Ratio	0.29	0.03		0.62			0.59			0.27		
Uniform Delay, d1	12.7	11.6		14.4			14.2			12.5		
Progression Factor	1.00	1.00		1.00			1.00			1.00		
Incremental Delay, d2	0.3	0.0		2.2			1.9			0.3		
Delay (s)	13.0	11.6		16.7			16.1			12.8		
Level of Service	B	B		B			B			B		
Approach Delay (s)	12.6			16.7			16.1			12.8		
Approach LOS	B			B			B			B		
Intersection Summary												
HCM 2000 Control Delay	15.1			HCM 2000 Level of Service			B					
HCM 2000 Volume to Capacity ratio	0.58											
Actuated Cycle Length (s)	51.5			Sum of lost time (s)			15.0					
Intersection Capacity Utilization	55.2%			ICU Level of Service			B					
Analysis Period (min)	15											

c Critical Lane Group

2030 Build Weekday Morning Peak Hour





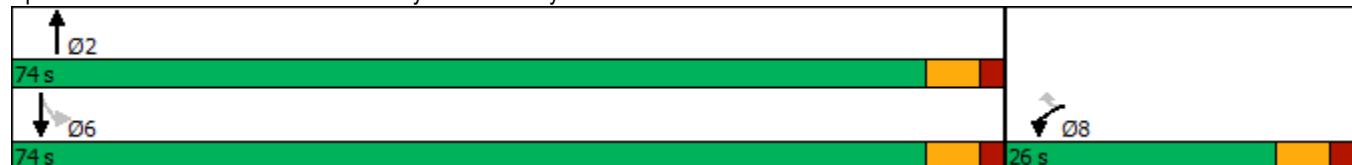
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Volume (vph)	36	271	730	43	111	411
Future Volume (vph)	36	271	730	43	111	411
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr <sub>t</sub>		0.850	0.993			
Flt Protected	0.950			0.950		
Satd. Flow (prot)	1865	1652	1832	0	1687	1870
Flt Permitted	0.950			0.224		
Satd. Flow (perm)	1865	1652	1832	0	398	1870
Satd. Flow (RTOR)		250	7			
Adj. Flow (vph)	40	298	768	45	141	520
Lane Group Flow (vph)	40	298	813	0	141	520
Turn Type	Prot	Perm	NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases			8			6
Detector Phase	8	8	2		6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	24.0	24.0	24.0		24.0	24.0
Total Split (s)	26.0	26.0	74.0		74.0	74.0
Total Split (%)	26.0%	26.0%	74.0%		74.0%	74.0%
Maximum Green (s)	20.0	20.0	68.0		68.0	68.0
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0		6.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	Min		Min	Min
Walk Time (s)	7.0	7.0	7.0		7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0	0		0	0
v/c Ratio	0.13	0.61	0.77		0.62	0.48
Control Delay	22.2	12.0	13.9		21.1	7.9
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	22.2	12.0	13.9		21.1	7.9
Queue Length 50th (ft)	9	11	133		20	66
Queue Length 95th (ft)	41	88	341		70	136
Internal Link Dist (ft)	2036		531			490
Turn Bay Length (ft)		100		330		
Base Capacity (vph)	797	849	1789		389	1826
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.05	0.35	0.45		0.36	0.28
Intersection Summary						
Cycle Length: 100						

Actuated Cycle Length: 50.3

Natural Cycle: 65

Control Type: Actuated-Uncoordinated

Splits and Phases: 1: Route 3A & Henry Turner Bailey Road





Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↑ ↗	↗ ↗	↑ ↘	↗ ↘	↖ ↗	↖ ↗
Traffic Volume (vph)	36	271	730	43	111	411
Future Volume (vph)	36	271	730	43	111	411
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	13	13	12	12	12	13
Total Lost time (s)	6.0	6.0	6.0		6.0	6.0
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00
Fr <sub>t</sub>	1.00	0.85	0.99		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1865	1652	1831		1687	1870
Flt Permitted	0.95	1.00	1.00		0.22	1.00
Satd. Flow (perm)	1865	1652	1831		397	1870
Peak-hour factor, PHF	0.91	0.91	0.95	0.95	0.79	0.79
Adj. Flow (vph)	40	298	768	45	141	520
RTOR Reduction (vph)	0	207	3	0	0	0
Lane Group Flow (vph)	40	91	810	0	141	520
Heavy Vehicles (%)	0%	1%	3%	3%	7%	5%
Turn Type	Prot	Perm	NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases		8		6		
Actuated Green, G (s)	8.5	8.5	28.9		28.9	28.9
Effective Green, g (s)	8.5	8.5	28.9		28.9	28.9
Actuated g/C Ratio	0.17	0.17	0.59		0.59	0.59
Clearance Time (s)	6.0	6.0	6.0		6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	320	284	1071		232	1093
v/s Ratio Prot	0.02		c0.44			0.28
v/s Ratio Perm		c0.06		0.35		
v/c Ratio	0.12	0.32	0.76		0.61	0.48
Uniform Delay, d <sub>1</sub>	17.3	17.9	7.6		6.6	5.9
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d <sub>2</sub>	0.2	0.7	3.1		4.5	0.3
Delay (s)	17.5	18.6	10.7		11.1	6.2
Level of Service	B	B	B		B	A
Approach Delay (s)	18.4		10.7			7.3
Approach LOS	B		B			A
<b>Intersection Summary</b>						
HCM 2000 Control Delay		10.9		HCM 2000 Level of Service		B
HCM 2000 Volume to Capacity ratio		0.66				
Actuated Cycle Length (s)		49.4		Sum of lost time (s)		12.0
Intersection Capacity Utilization		67.8%		ICU Level of Service		C
Analysis Period (min)		15				

c Critical Lane Group

## 2030 Build Weekday Morning

2: Country Way &amp; Henry Turner Bailey Road/Gannett Road

05/08/2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	116	43	64	199	34	86	100	95	31	74	26
Future Volume (vph)	24	116	43	64	199	34	86	100	95	31	74	26
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
Fr <sub>t</sub>				0.850		0.985			0.954			0.973
Flt Protected				0.991		0.989			0.985			0.988
Satd. Flow (prot)	0	1739	1396	0	1806	0	0	1738	0	0	1730	0
Flt Permitted				0.897		0.889			0.840			0.870
Satd. Flow (perm)	0	1574	1396	0	1624	0	0	1482	0	0	1524	0
Satd. Flow (RTOR)				63		6			29			14
Adj. Flow (vph)	27	130	48	74	229	39	97	112	107	37	88	31
Lane Group Flow (vph)	0	157	48	0	342	0	0	316	0	0	156	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		10			14			2			6	
Permitted Phases	10		10	14			2				6	
Detector Phase	10	10	10	14	14		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	11.0	11.0	11.0	11.0	11.0		11.0	11.0		11.0	11.0	
Total Split (s)	36.0	36.0	36.0	36.0	36.0		46.0	46.0		46.0	46.0	
Total Split (%)	34.6%	34.6%	34.6%	34.6%	34.6%		44.2%	44.2%		44.2%	44.2%	
Maximum Green (s)	30.0	30.0	30.0	30.0	30.0		40.0	40.0		40.0	40.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0	0.0		0.0			0.0			0.0	
Total Lost Time (s)		6.0	6.0		6.0			6.0			6.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		Min	Min		Min	Min	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
v/c Ratio	0.29	0.09		0.62			0.60			0.30		
Control Delay	17.4	4.8		22.2			20.5			15.7		
Queue Delay	0.0	0.0		0.0			0.0			0.0		
Total Delay	17.4	4.8		22.2			20.5			15.7		
Queue Length 50th (ft)	26	0		62			52			23		
Queue Length 95th (ft)	125	18		263			235			106		
Internal Link Dist (ft)	2036			571			611			1120		
Turn Bay Length (ft)		120										
Base Capacity (vph)	1081	978		1117			1242			1274		
Starvation Cap Reductn	0	0		0			0			0		
Spillback Cap Reductn	0	0		0			0			0		
Storage Cap Reductn	0	0		0			0			0		
Reduced v/c Ratio	0.15	0.05		0.31			0.25			0.12		
Intersection Summary												
Cycle Length: 104												

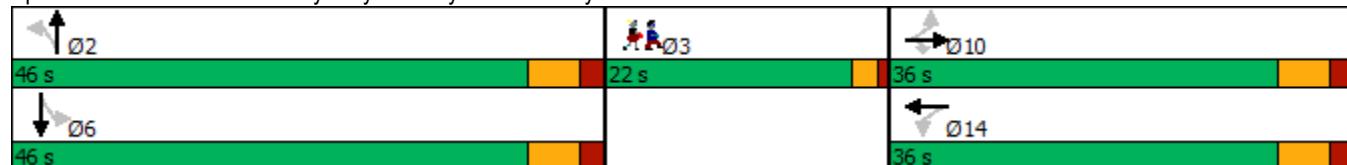
Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Adj. Flow (vph)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	22.0
Total Split (s)	22.0
Total Split (%)	21%
Maximum Green (s)	19.0
Yellow Time (s)	2.0
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	12.0
Pedestrian Calls (#/hr)	11
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

Actuated Cycle Length: 50.9

Natural Cycle: 60

Control Type: Actuated-Uncoordinated

Splits and Phases: 2: Country Way &amp; Henry Turner Bailey Road/Gannett Road





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	116	43	64	199	34	86	100	95	31	74	26
Future Volume (vph)	24	116	43	64	199	34	86	100	95	31	74	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	10	12	12	12	12	12	12	12	12	12
Total Lost time (s)	6.0	6.0		6.0			6.0			6.0		
Lane Util. Factor	1.00	1.00		1.00			1.00			1.00		
Fr <sub>t</sub>	1.00	0.85		0.98			0.95			0.97		
Flt Protected	0.99	1.00		0.99			0.98			0.99		
Satd. Flow (prot)	1740	1396		1806			1739			1731		
Flt Permitted	0.90	1.00		0.89			0.84			0.87		
Satd. Flow (perm)	1574	1396		1622			1482			1524		
Peak-hour factor, PHF	0.89	0.89	0.89	0.87	0.87	0.87	0.89	0.89	0.89	0.84	0.84	0.84
Adj. Flow (vph)	27	130	48	74	229	39	97	112	107	37	88	31
RTOR Reduction (vph)	0	0	32	0	4	0	0	19	0	0	9	0
Lane Group Flow (vph)	0	157	16	0	338	0	0	297	0	0	147	0
Heavy Vehicles (%)	0%	10%	8%	0%	2%	10%	1%	2%	5%	0%	6%	11%
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		10			14			2			6	
Permitted Phases	10		10	14			2			6		
Actuated Green, G (s)	17.3	17.3		17.3			17.3			17.3		
Effective Green, g (s)	17.3	17.3		17.3			17.3			17.3		
Actuated g/C Ratio	0.34	0.34		0.34			0.34			0.34		
Clearance Time (s)	6.0	6.0		6.0			6.0			6.0		
Vehicle Extension (s)	3.0	3.0		3.0			3.0			3.0		
Lane Grp Cap (vph)	527	468		543			496			510		
v/s Ratio Prot												
v/s Ratio Perm	0.10	0.01		c0.21			c0.20			0.10		
v/c Ratio	0.30	0.03		0.62			0.60			0.29		
Uniform Delay, d1	12.7	11.5		14.4			14.3			12.6		
Progression Factor	1.00	1.00		1.00			1.00			1.00		
Incremental Delay, d2	0.3	0.0		2.2			1.9			0.3		
Delay (s)	13.0	11.6		16.6			16.2			12.9		
Level of Service	B	B		B			B			B		
Approach Delay (s)	12.7			16.6			16.2			12.9		
Approach LOS	B			B			B			B		
<b>Intersection Summary</b>												
HCM 2000 Control Delay	15.1			HCM 2000 Level of Service			B					
HCM 2000 Volume to Capacity ratio	0.58											
Actuated Cycle Length (s)	51.6			Sum of lost time (s)			15.0					
Intersection Capacity Utilization	55.2%			ICU Level of Service			B					
Analysis Period (min)	15											

c Critical Lane Group

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W		A	B		
Traffic Vol, veh/h	2	8	2	156	123	1
Future Vol, veh/h	2	8	2	156	123	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	92	92	92	92
Heavy Vehicles, %	0	0	0	3	7	0
Mvmt Flow	2	9	2	170	134	1
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	309	135	135	0	-	0
Stage 1	135	-	-	-	-	-
Stage 2	174	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	687	919	1462	-	-	-
Stage 1	896	-	-	-	-	-
Stage 2	861	-	-	-	-	-
Platoon blocked, %		-	-	-	-	-
Mov Cap-1 Maneuver	686	919	1462	-	-	-
Mov Cap-2 Maneuver	686	-	-	-	-	-
Stage 1	894	-	-	-	-	-
Stage 2	861	-	-	-	-	-
Approach	EB	NB	SB			
HCM Control Delay, s	9.2	0.1	0			
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1462	-	861	-	-	
HCM Lane V/C Ratio	0.001	-	0.013	-	-	
HCM Control Delay (s)	7.5	0	9.2	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

2030 Build Weekday Evening Peak Hour



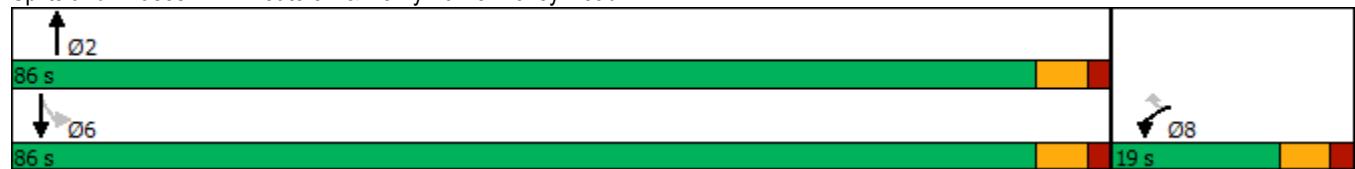
2030 Build Weekday Evening  
1: Route 3A & Henry Turner Bailey Road

05/15/2023



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Volume (vph)	35	209	526	38	257	718
Future Volume (vph)	35	209	526	38	257	718
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr <sub>t</sub>		0.850	0.991			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1811	1652	1841	0	1787	1944
Flt Permitted	0.950				0.362	
Satd. Flow (perm)	1811	1652	1841	0	681	1944
Satd. Flow (RTOR)		294	10			
Adj. Flow (vph)	49	294	578	42	276	772
Lane Group Flow (vph)	49	294	620	0	276	772
Turn Type	Prot	Perm	NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases			8			6
Detector Phase	8	8	2		6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	11.0	11.0	24.0		24.0	24.0
Total Split (s)	19.0	19.0	86.0		86.0	86.0
Total Split (%)	18.1%	18.1%	81.9%		81.9%	81.9%
Maximum Green (s)	13.0	13.0	80.0		80.0	80.0
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0		6.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	Min		Min	Min
v/c Ratio	0.17	0.58	0.59		0.72	0.70
Control Delay	21.5	8.7	8.8		19.2	11.0
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	21.5	8.7	8.8		19.2	11.0
Queue Length 50th (ft)	10	0	80		41	112
Queue Length 95th (ft)	35	22	181		141	250
Internal Link Dist (ft)	2036		531			490
Turn Bay Length (ft)		100			330	
Base Capacity (vph)	538	697	1841		681	1944
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.09	0.42	0.34		0.41	0.40
Intersection Summary						
Cycle Length: 105						
Actuated Cycle Length: 46.1						
Natural Cycle: 60						
Control Type: Actuated-Uncoordinated						

Splits and Phases: 1: Route 3A & Henry Turner Bailey Road





Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	1	1	1	1	1	1
Traffic Volume (vph)	35	209	526	38	257	718
Future Volume (vph)	35	209	526	38	257	718
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	13	13	12	12	12	13
Total Lost time (s)	6.0	6.0	6.0		6.0	6.0
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00
Fr <sub>t</sub>	1.00	0.85	0.99		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1811	1652	1841		1787	1944
Flt Permitted	0.95	1.00	1.00		0.36	1.00
Satd. Flow (perm)	1811	1652	1841		680	1944
Peak-hour factor, PHF	0.71	0.71	0.91	0.91	0.93	0.93
Adj. Flow (vph)	49	294	578	42	276	772
RTOR Reduction (vph)	0	247	4	0	0	0
Lane Group Flow (vph)	49	47	616	0	276	772
Heavy Vehicles (%)	3%	1%	2%	6%	1%	1%
Turn Type	Prot	Perm	NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases		8			6	
Actuated Green, G (s)	7.3	7.3	26.1		26.1	26.1
Effective Green, g (s)	7.3	7.3	26.1		26.1	26.1
Actuated g/C Ratio	0.16	0.16	0.57		0.57	0.57
Clearance Time (s)	6.0	6.0	6.0		6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	291	265	1058		390	1117
v/s Ratio Prot	0.03		0.33			0.40
v/s Ratio Perm		c0.03		c0.41		
v/c Ratio	0.17	0.18	0.58		0.71	0.69
Uniform Delay, d <sub>1</sub>	16.4	16.5	6.2		6.9	6.8
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d <sub>2</sub>	0.3	0.3	0.8		5.8	1.9
Delay (s)	16.7	16.8	7.0		12.7	8.7
Level of Service	B	B	A		B	A
Approach Delay (s)	16.8		7.0			9.7
Approach LOS	B		A			A
<b>Intersection Summary</b>						
HCM 2000 Control Delay		10.1		HCM 2000 Level of Service		B
HCM 2000 Volume to Capacity ratio		0.59				
Actuated Cycle Length (s)		45.4		Sum of lost time (s)		12.0
Intersection Capacity Utilization		63.4%		ICU Level of Service		B
Analysis Period (min)		15				

c Critical Lane Group

2030 Build Weekday Evening  
2: Country Way & Henry Turner Bailey Road/Gannett Road

05/15/2023

	↗	→	↘	↙	←	↖	↑	↗	↘	↓	↙	
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↑		↑	↑		↑	↑		↑	↑
Traffic Volume (vph)	27	184	84	75	166	34	52	68	97	47	102	29
Future Volume (vph)	27	184	84	75	166	34	52	68	97	47	102	29
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
Fr <sub>t</sub>				0.850		0.983			0.940			0.978
Flt Protected				0.994		0.986			0.988			0.987
Satd. Flow (prot)	0	1872	1507	0	1821	0	0	1765	0	0	1824	0
Flt Permitted				0.927		0.833			0.874			0.856
Satd. Flow (perm)	0	1746	1507	0	1538	0	0	1561	0	0	1582	0
Satd. Flow (RTOR)				104		7			45			11
Adj. Flow (vph)	33	227	104	82	180	37	58	76	108	62	134	38
Lane Group Flow (vph)	0	260	104	0	299	0	0	242	0	0	234	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		10			14			2			6	
Permitted Phases	10		10	14			2			6		
Detector Phase	10	10	10	14	14		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	11.0	11.0	11.0	11.0	11.0		11.0	11.0		11.0	11.0	
Total Split (s)	36.0	36.0	36.0	36.0	36.0		46.0	46.0		46.0	46.0	
Total Split (%)	34.6%	34.6%	34.6%	34.6%	34.6%		44.2%	44.2%		44.2%	44.2%	
Maximum Green (s)	30.0	30.0	30.0	30.0	30.0		40.0	40.0		40.0	40.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0	0.0		0.0			0.0			0.0	
Total Lost Time (s)		6.0	6.0		6.0			6.0			6.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		Min	Min		Min	Min	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
v/c Ratio	0.38	0.16		0.50			0.51			0.51		
Control Delay	15.2	4.7		17.0			18.7			21.3		
Queue Delay	0.0	0.0		0.0			0.0			0.0		
Total Delay	15.2	4.7		17.0			18.7			21.3		
Queue Length 50th (ft)	40	0		47			36			42		
Queue Length 95th (ft)	156	26		212			166			143		
Internal Link Dist (ft)	2036			571			611			1101		
Turn Bay Length (ft)		120										
Base Capacity (vph)	1212	1078		1069			1335			1348		
Starvation Cap Reductn	0	0		0			0			0		
Spillback Cap Reductn	0	0		0			0			0		
Storage Cap Reductn	0	0		0			0			0		
Reduced v/c Ratio	0.21	0.10		0.28			0.18			0.17		
Intersection Summary												
Cycle Length: 104												

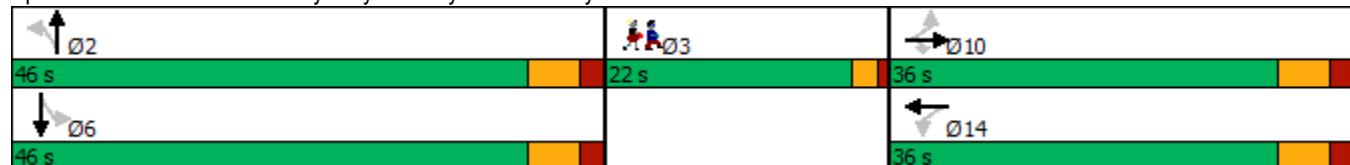
Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Adj. Flow (vph)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	22.0
Total Split (s)	22.0
Total Split (%)	21%
Maximum Green (s)	19.0
Yellow Time (s)	2.0
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	12.0
Pedestrian Calls (#/hr)	11
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

Actuated Cycle Length: 48.9

Natural Cycle: 60

Control Type: Actuated-Uncoordinated

Splits and Phases: 2: Country Way & Henry Turner Bailey Road/Gannett Road





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	184	84	75	166	34	52	68	97	47	102	29
Future Volume (vph)	27	184	84	75	166	34	52	68	97	47	102	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	10	12	12	12	12	12	12	12	12	12
Total Lost time (s)	6.0	6.0		6.0			6.0			6.0		
Lane Util. Factor	1.00	1.00		1.00			1.00			1.00		
Fr <sub>t</sub>	1.00	0.85		0.98			0.94			0.98		
Flt Protected	0.99	1.00		0.99			0.99			0.99		
Satd. Flow (prot)	1872	1507		1822			1764			1824		
Flt Permitted	0.93	1.00		0.83			0.87			0.86		
Satd. Flow (perm)	1746	1507		1538			1561			1581		
Peak-hour factor, PHF	0.81	0.81	0.81	0.92	0.92	0.92	0.90	0.90	0.90	0.76	0.76	0.76
Adj. Flow (vph)	33	227	104	82	180	37	58	76	108	62	134	38
RTOR Reduction (vph)	0	0	64	0	4	0	0	32	0	0	8	0
Lane Group Flow (vph)	0	260	40	0	295	0	0	210	0	0	226	0
Heavy Vehicles (%)	0%	1%	0%	2%	1%	0%	0%	0%	0%	0%	1%	0%
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		10			14			2			6	
Permitted Phases	10		10	14			2			6		
Actuated Green, G (s)	19.0	19.0		19.0			13.9			13.9		
Effective Green, g (s)	19.0	19.0		19.0			13.9			13.9		
Actuated g/C Ratio	0.38	0.38		0.38			0.28			0.28		
Clearance Time (s)	6.0	6.0		6.0			6.0			6.0		
Vehicle Extension (s)	3.0	3.0		3.0			3.0			3.0		
Lane Grp Cap (vph)	663	572		584			433			439		
v/s Ratio Prot												
v/s Ratio Perm	0.15	0.03		c0.19			0.13			c0.14		
v/c Ratio	0.39	0.07		0.50			0.48			0.51		
Uniform Delay, d1	11.3	9.9		11.9			15.1			15.2		
Progression Factor	1.00	1.00		1.00			1.00			1.00		
Incremental Delay, d2	0.4	0.1		0.7			0.9			1.0		
Delay (s)	11.7	9.9		12.6			15.9			16.2		
Level of Service	B	A		B			B			B		
Approach Delay (s)	11.2			12.6			15.9			16.2		
Approach LOS	B			B			B			B		
<b>Intersection Summary</b>												
HCM 2000 Control Delay	13.6			HCM 2000 Level of Service			B					
HCM 2000 Volume to Capacity ratio	0.48											
Actuated Cycle Length (s)	50.0			Sum of lost time (s)			15.0					
Intersection Capacity Utilization	57.1%			ICU Level of Service			B					
Analysis Period (min)	15											

c Critical Lane Group

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W		A	B		
Traffic Vol, veh/h	2	6	10	119	172	3
Future Vol, veh/h	2	6	10	119	172	3
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	92	92	92	92
Heavy Vehicles, %	0	0	0	0	1	0
Mvmt Flow	2	7	11	129	187	3
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	340	189	190	0	-	0
Stage 1	189	-	-	-	-	-
Stage 2	151	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	660	858	1396	-	-	-
Stage 1	848	-	-	-	-	-
Stage 2	882	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	655	858	1396	-	-	-
Mov Cap-2 Maneuver	655	-	-	-	-	-
Stage 1	841	-	-	-	-	-
Stage 2	882	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9.6	0.6		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1396	-	796	-	-	
HCM Lane V/C Ratio	0.008	-	0.011	-	-	
HCM Control Delay (s)	7.6	0	9.6	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	