MDM TRANSPORTATION CONSULTANTS, INC. Planners & Engineers

<u>PRINCIPALS</u> Robert J. Michaud, P.E. Daniel J. Mills, P.E., PTOE

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M E M O R A N D U M

DATE: March 9, 2020

TO: Mr. Bob Fox TD Development LLC 38 Benjamin's Gate Plymouth, MA 02360

FROM: Robert J. Michaud, P.E. – Managing Principal Daniel A. Dumais, P.E. – Senior Project Manager

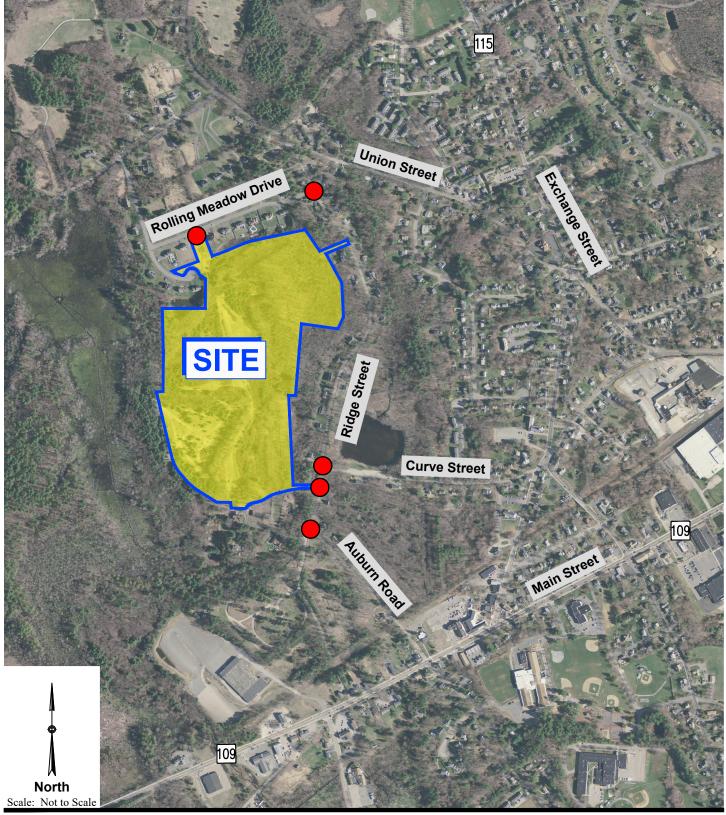
RE: Proposed Residential Development Ridge Street – Millis, Massachusetts

MDM Transportation Consultants, Inc. (MDM) has prepared this traffic impact assessment (TIA) for a proposed residential development to be located along Ridge Street in Millis, Massachusetts. The adjacent study area roadways and intersections are depicted in **Figure 1**. This memorandum describes existing (baseline) traffic conditions for adjacent roadways, trip generation characteristics of the proposed development, quantifies incremental traffic impacts of the site development on area roadways, and evaluates safety-related conditions at key study locations that provide access to the Site.

Key findings of the traffic assessment are as follows:

- Modest Traffic Generation. the development is estimated to generate approximately 32 vehicle trips (8 entering and 24 exiting) during the weekday morning peak hour and 43 vehicle trips (27 entering and 16 exiting) during the weekday evening peak hour. On a daily basis, the development is estimated to generate approximately 408 vehicle trips on a weekday with 50 percent entering and exiting.
- Safety Characteristics. Safe stopping sight distance (SSD) is available for oncoming vehicles to detect, react and stop for vehicles exiting the proposed roadway onto Ridge Street and Rolling Meadow Drive onto Ridge Street based on the observed travel speeds in the immediate area. Improvements are summarized under Conclusions and Recommendations to enhance the intersection sight distance (ISD) looking to the north onto Ridge Street when exiting the proposed roadway and Rolling Meadow Drive. A review of the crash data indicated that no immediate safety countermeasures are warranted based on the crash history at the study intersections.

Traffic Impact Assessment Millis, Massachusetts



MDM TRANSPORTATION CONSULTANTS, INC. Planners & Engineers Figure 1

Site Location

Adequate Roadway Capacity & Operations. Adequate capacity is available along Ridge Street to accommodate modest increases associated with the proposed development. The proposed roadway intersection with Ridge Street will operate below capacity at LOS A or better during the peak hours. The proposed development will not materially impact study area intersections and will not result in any material changes in traffic operations in the study area between future No-Build and Build conditions.

In summary, MDM finds that incremental traffic associated with the proposed development is not expected to materially impact operating conditions at the study intersections. The study intersections exhibit below-average crash rates based on historic crash data; safety countermeasures are therefore not warranted. Implementation of access/egress improvement and a proposed pedestrian connection to Rolling Meadow Drive as summarized under *Conclusions and Recommendations* will establish a framework of minimizing Site traffic impacts.

PROJECT DESCRIPTION

The project site is an approximate 61.2-acre tract of undeveloped land located to the west of Ridge Street and to the south of Rolling Meadow Drive. Under the proposed development plan 43 single family homes will be constructed. Primary access/egress for the project is proposed via a direct connection to the western side of Ridge Street approximately 250 feet south of Curve Street. Secondary access/egress will be provided along Rolling Meadow Drive. The preliminary site layout prepared by Legacy Engineering is presented in **Figure 2**.

STUDY AREA

This TIA evaluates transportation characteristics of roadways and intersections that provide a primary means of access to the Site, and that are likely to sustain a measurable level of traffic impact from the development. The study area includes the following intersections, which are also identified in **Figure 1**:

- □ Ridge Street at Rolling Meadow Drive (Unsignalized)
- □ Ridge Street at Curve Street (Unsignalized)
- □ Ridge Street at Proposed Roadway (Unsignalized)
- □ Ridge Street at Auburn Street (Unsignalized)

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Preliminary Site Plan

EXISTING TRAFFIC & SAFETY CHARACTERISTICS

An overview of existing roadway conditions, traffic volumes and safety characteristics is provided below.

<u>Roadways</u>

Ridge Street

Ridge Street is classified by the Massachusetts Department of Transportation (MassDOT) as a Local roadway and is under local (Town) jurisdiction. Ridge Street is generally a north-south roadway in the project area which connects Nason Hill Road in Sherborn to the north with Auburn Street to the south. The roadway provides a single travel lane in each direction with a marked double yellow centerline and white edge lines. There are not sidewalks along Ridge Street in the project area. Land use along Ridge Street in the immediate project area is primarily residential homes but also includes Richardson's Pond and Prospect Hill Cemetery.

Auburn Street

Auburn Street is classified by the Massachusetts Department of Transportation (MassDOT) as a Local roadway and is under local (Town) jurisdiction. Auburn Street is generally a north-south roadway in the project area which connects Ridge Street to the north with Main Street to the south. The roadway provides a single travel lane in each direction with a marked double yellow centerline. The sidewalk along Auburn Street is limited to the eastern side near the Millis Police Station. Land use along Auburn Street in the immediate project area includes residential homes, Prospect Hill Cemetery, and the Millis Police Department.

Curve Street

Curve Street is classified by the Massachusetts Department of Transportation (MassDOT) as a Local roadway and is under local (Town) jurisdiction. Curve Street is generally an east-west roadway in the project area which connects Ridge Street to the west with Union Street to the east. The roadway provides a single travel lane in each direction with a marked double yellow centerline. There are no sidewalks along Curve Street in the project area. Land use along Curve Street in the immediate project area includes residential homes, Richardson's Pond, and a church.

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Rolling Meadow Drive

Rolling Meadow Drive is classified by the Massachusetts Department of Transportation (MassDOT) as a Local roadway and is under local (Town) jurisdiction. Rolling Meadow Drive is an east-west roadway in the project area which connects Paddock Lane to the west with Ridge Street to the east. The roadway provides a single travel lane in each direction. A sidewalk is provided along the southern side of Rolling Meadow Drive. Land use along Rolling Meadow Drive include single family residential homes.

Intersections

Ridge Street at Curve Street

Ridge Street meets Curve Street to form a three-legged unsignalized intersection. Each approach to the intersection provides a single travel lane. Land uses at the intersection consist of residential homes and Richardson's Pond. The Curve Street approach is under STOP sign control.

Ridge Street at Auburn Street

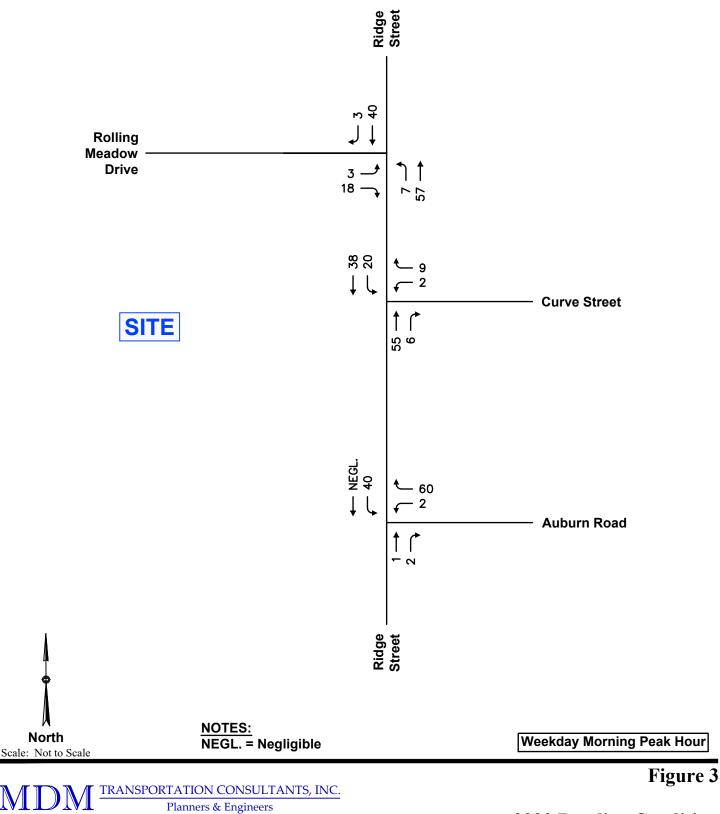
Ridge Street meets Auburn Street to form a three-legged unsignalized intersection. Each approach to the intersection provides a single travel lane. Land uses at the intersection consist of residential homes and Prospect Hill Cemetery. The northbound Ridge Street approach is under STOP control.

Baseline Traffic Data

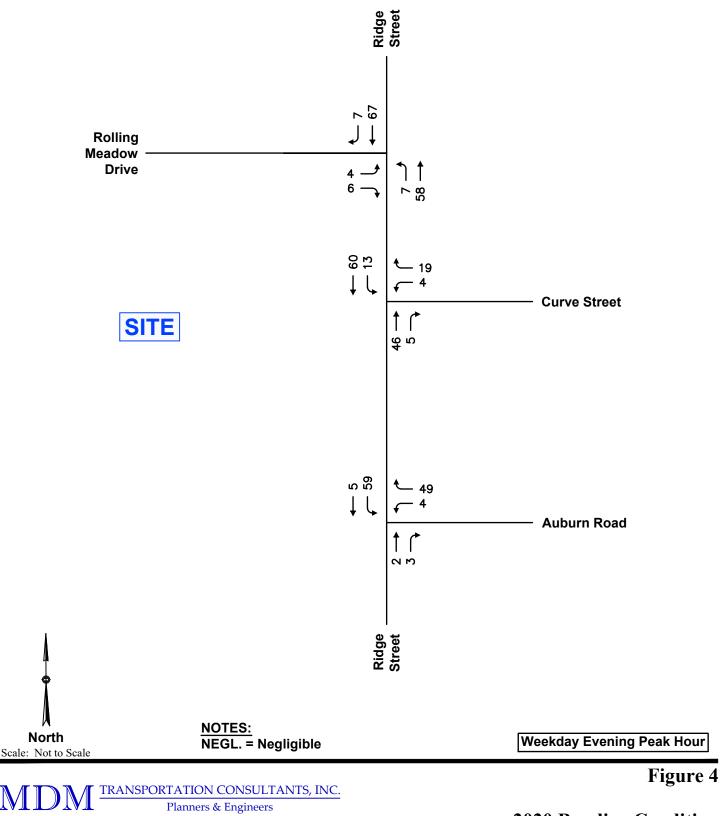
Traffic volume data was collected at the study area intersections during the weekday morning (7:00 AM - 9:00 AM) and weekday evening (4:00 PM – 6:00 PM) periods to coincide with peak traffic activity of the proposed use and the adjacent streets. Traffic data used in this evaluation was collected in October 2019. This data reflects slightly above average traffic conditions (2% above average) based on review of MassDOT permanent count station data for the area. No seasonal adjustment was applied to the observed traffic volumes to represent average conditions. Traffic count data and MassDOT permanent count station data are provided in the **Attachments.** To reflect 2020 Baseline conditions the October 2019 traffic volumes were increased by 1-percent based on MassDOT data for the area. The Baseline weekday morning and weekday evening peak hour traffic volumes for the study intersections are shown in **Figure 3** and **Figure 4**.

Daily traffic volumes along Ridge Street were obtained by mechanical methods using a radarbased traffic recorder. The results of the counts are summarized in **Table 1** and are discussed below.





2020 Baseline Condition Weekday Morning Peak Hour Volumes



2020 Baseline Condition Weekday Evening Peak Hour Volumes

TABLE 1 EXISTING TRAFFIC VOLUME SUMMARY RIDGE STREET SOUTH OF CURVE STREET

					Peak Hour
	Daily	Percent	Peak Hour	Peak Flow	Directional
Time Period	Volume (vpd) ¹	Daily Traffic ²	Volume (vph) ³	Direction ⁴	Volume (vph)
Weekday Morning Peak Hour	1,160	9%	100	57% NB	57
Weekday Evening Peak Hour	1,160	9%	105	58% SB	61

¹Two-way daily traffic expressed in vehicles per day without seasonal adjustment.

²The percent of daily traffic that occurs during the peak hour.

³Two-way peak-hour volume expressed in vehicles per hour.

 ^{4}NB = Northbound, SB = Southbound

As summarized in **Table 1**, the weekday daily traffic volume on Ridge Street to the south of the Curve Street is approximately 1,160 vehicles per day (vpd) on a weekday. Peak hour traffic flow on Ridge Street ranges from approximately 100 vehicles per hour (vph) to 105 vph representing 9 percent of daily traffic flow. Vehicle flow is skewed towards the northbound direction during the weekday morning and skewed towards the southbound direction during the weekday evening peak hour consistent with commuter travel patterns in the area.

Measured Travel Speeds

Vehicle travel speeds were obtained for the Ridge Street northbound and southbound directions using an ATR machine equipped with speed radar. **Table 2** summarizes the regulatory posted speed and observed average and 85th percentile speeds for Ridge Street to the south of Curve Street. Field data are provided in the **Attachments**.

TABLE 2SPEED STUDY RESULTS – RIDGE STREET

		Travel Speed					
	Regulatory		85 th				
Travel Direction	Speed Limit ¹	Average ²	Percentile ³				
Northbound	n/a	25	28				
Southbound	n/a	26	29				

¹Regulatory Posted Speed in miles per hour (mph).

² Arithmetic Mean in mph

³The speed at or below which 85 percent of the vehicles are traveling in mph.

As summarized in **Table 2**, the mean (average) travel speed on Ridge Street in the site vicinity is 25 mph traveling northbound and 26 mph southbound. The 85th percentile travel speed was observed to be 28 mph northbound and 29 mph southbound.

Intersection Crash History

In order to identify crash trends and safety characteristics for study area intersections, crash data were obtained from MassDOT for the Town of Millis for the five-year period 2014 through 2018 (the most recent full year of data currently available). Based on extensive review of MassDOT crash data, there were no crashes reported at the study intersections over the last 5-year period. None of the intersections are listed as a Highway Safety Improvement Project (HSIP) location. No additional safety countermeasures are warranted based on the review of the crash records and associated crash rates.

Sight Line Evaluation

An evaluation of sight lines was conducted at the proposed roadway and the Rolling Meadow intersections with Ridge Street to ensure that minimum recommended sight lines are available. The evaluation documents sight lines under proposed conditions for vehicles as they relate to Ridge Street with comparison to recommended guidelines.

The American Association of State Highway and Transportation Officials' (AASHTO) standards¹ reference two types of sight distance which are relevant at the proposed roadway intersections along Ridge Street: stopping sight distance (SSD) and intersection sight distance (ISD). Sight lines for critical vehicle movements at the proposed site roadway intersections with Ridge Street were compared to minimum SSD and ISD recommendations for the ambient travel speeds recorded along Ridge Street adjacent to the Site.

Stopping Sight Distance

Sight distance is the length of roadway visible to the motorist to a fixed object. The minimum sight distance available on a roadway should be sufficiently long enough to enable a below-average operator, traveling at or near a regulatory speed limit, to stop safely before reaching a stationary object in its path, in this case, a vehicle exiting onto Ridge Street. The SSD criteria are defined by AASHTO based on design and operating speeds, anticipated driver behavior and vehicle performance, as well as physical roadway conditions. SSD includes the length of roadway traveled during the perception and reaction time of a driver to an object, and the distance traveled during brake application on wet level pavement. Adjustment factors are applied to account for roadway grades when applicable.

¹ A policy on Geometric Design of Highways and Streets, American Association of State Highway and Transportation Officials (AASHTO), 2018.



SSD was estimated in the field using AASHTO standards for driver's eye (3.5 feet) and object height equivalent to the taillight height of a passenger car (2.0 feet) for the northbound and southbound Ridge Street approaches to the proposed roadway and to Rolling Meadow Drive. **Table 3** presents a summary of the available SSD as they relate to Ridge Street and AASHTO's recommended SSD based on observed ambient travel speeds along Ridge Street. Speed data is provided in the **Attachments**.

TABLE 3 STOPPING SIGHT DISTANCE SUMMARY RIDGE STREET AT PROPOSED SITE ROADWAYS

		AASHTO Recommended ¹					
Approach/	Available	Average	85 th Percentil				
Travel Direction	SSD	Speed ²	Speed ³				
Ridge Street at Rolling Meado	ow Drive						
Northbound	500± Feet	155 Feet	185 Feet				
Southbound	300± Feet	165 Feet	195 Feet				
Ridge Street at Proposed Site	U U						
Northbound	300± Feet	155 Feet	185 Feet				
Southbound	>500 Feet	165 Feet	195 Feet				

¹Recommended sight distance based on AASHTO, A Policy on Geometric Design of Highways and Streets. Based on driver height of eye of 3.5 feet to object height of 2.0 feet.

²Average Speed; Ridge Street: NB = 25 mph and SB = 26 mph.

³85th Percentile Speed; Ridge Street: NB = 28 mph and SB = 29 mph.

As summarized in **Table 3**, analysis results indicate that the existing available sight lines exceed AASHTO's recommended SSD criteria for both travel directions along Ridge Street. Stopping sight distance calculations are provided in the **Attachments**.

Intersection Sight Distance

Clear sight lines provide sufficient sight distance for a stopped driver on a minor-road approach to depart from the intersection and enter or cross the major road. As stated under AASHTO's Intersection Sight Distance (ISD) considerations, "...If the available sight distance for an entering ...vehicle is at least equal to the appropriate stopping sight distance for the major road, then drivers have sufficient sight distance to avoid collisions...To enhance traffic operations, intersection sight distances that exceed stopping sight distances are desirable along the major road." AASHTO's ISD criteria are defined into several "cases". In this case, the proposed site egress roadway and Rolling Meadow Drive approaches will be under STOP signal control and the ISD in question relates to the ability to turn left or right onto Ridge Street.

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Available ISD was estimated in the field using AASHTO standards for driver's eye (3.5 feet), object height (3.5 feet) and decision point (between 8 to 14.5 feet back from marked edge lines) for the northbound and southbound directions along Ridge Street. **Table 4** presents a summary of the available ISD for the departures to Ridge Street and AASHTO's recommended ISD.

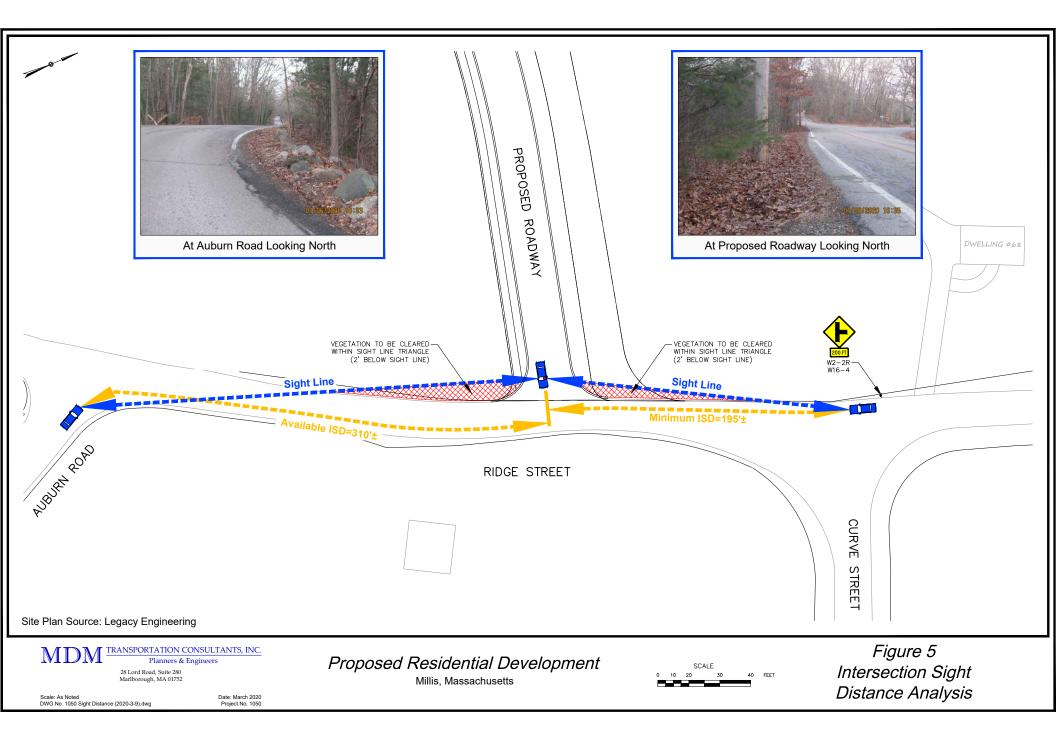
TABLE 4 INTERSECTION SIGHT DISTANCE SUMMARY SITE ROADWAY DEPARTURE TO RIDGE STREET

		AASHTO Minimum ¹	AASHTO Ideal ²		
	Available	85 th Percentile	85th Percentile		
View Direction	ISD	Speed ²	Speed ²		
Ridge Street at Rolling N	Aeadow Drive				
Looking North	200± Feet	195 Feet	280 Feet		
Looking South	500± Feet	185 Feet	310 Feet		
Ridge Street at Proposed	l Site Roadway				
Looking North	195± Feet	195 Feet	280 Feet		
Looking South	310± Feet	185 Feet	310 Feet		

¹Recommended sight distance based on AASHTO, A Policy on Geometric Design of Highways and Streets. Based on driver height of eye of 3.5 feet and an object height of 3.5 feet and adjustments for roadway grade if required. Minimum value as noted represents SSD per AASHTO guidance.

²85th Percentile Speed; Ridge Street: NB = 28 mph and SB = 29 mph.

The results of the ISD analysis presented in **Table 4** indicate that with clearing and re-grading within the sight line triangles associated with the installation of the proposed roadway, the available ISD looking north and south from the proposed site roadway onto Ridge Street will satisfy the minimum AASHTO requirement for safety but is limited by the right-of-way to the north as shown in **Figure 5**. The available ISD looking north from Rolling Meadow Drive satisfies minimum AASHTO requirement for safety but is limited to $200\pm$ feet by a mature tree immediately adjacent to Ridge Street on its western side Independent of the project, it is recommended that to the extent possible the tree should be removed to enhance sight lines. MDM recommends that an advanced intersection warning sign (W2-2) and a supplemental warning plaque (W16-2P – 200 feet) should be installed on the southbound approach to Rolling Meadow Drive and on the southbound approach to the proposed roadway. MDM recommends that any plantings (shrubs, bushes) or physical landscape features to be located within the sight lines should also be maintained at a height of 2 feet or less to ensure unobstructed lines of sight.



PROJECTED FUTURE TRAFFIC CONDITIONS

Evaluation of the proposed development impacts requires the establishment of a future baseline analysis condition. This section estimates future roadway and traffic conditions with and without the proposed development. For this evaluation, a five-year planning horizon (year 2025) was selected consistent with standard-industry practice.

To determine the impact of site-generated traffic volumes on the roadway network under future conditions, baseline traffic volumes in the study area were projected to a future year condition. Traffic volumes on the roadway network at that time, in the absence of the development (that is, the No-Build condition), includes existing traffic, new traffic due to general background traffic growth, and traffic related to specific developments by others that are currently under review at the local and/or state level. Consideration of these factors resulted in the development of No-Build traffic volumes. Anticipated site-generated traffic volumes were then superimposed upon these No-Build traffic-flow networks to develop future Build conditions.

The following sections provide an overview of the future traffic volumes.

Background Growth

Background traffic includes demand generated by other planned developments in the area as well as demand increases caused by external factors. External factors are general increases in traffic not attributable to a specific development and are determined using historical data.

Nearby permanent count station data published by MassDOT indicates a 0.5-percent per year growth rate. For purposes of this evaluation, a 1.0-percent compounded annual growth rate was used (5.1. percent increase over a 5-year horizon). This growth rate is slightly higher than historic rates, and, as such, is also expected to account for any small fluctuation in hourly traffic as may occur from time to time in the study area and traffic associated with other potential small developments or vacancies in the area. MassDOT permanent count station data and background growth calculations are provided in the **Attachments**.

Based on review of Massachusetts Environmental Policy Act (MEPA) files, there are no projects planned for the area likely to generate a significant level of traffic through the study intersections.

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2025 No-Build Traffic Volume Networks

In summary, to account for future traffic growth in the study area future No-Build traffic volumes are developed by increasing the 2020 Baseline volumes by approximately 5.1 percent (1.0 percent compounded annually over 5 years). The resulting 2025 No-Build traffic volumes are displayed in **Figure 6** and **Figure 7**.

Site Traffic

The trip generation estimates for the proposed development are provided for the weekday morning and weekday evening periods, which correspond to the critical analysis and periods for the proposed uses and adjacent street traffic flow. New traffic generated by the project was estimated using trip rates published in ITE's *Trip Generation*² for the Land Use Code (LUC) 210 – Single Family Detached Housing.

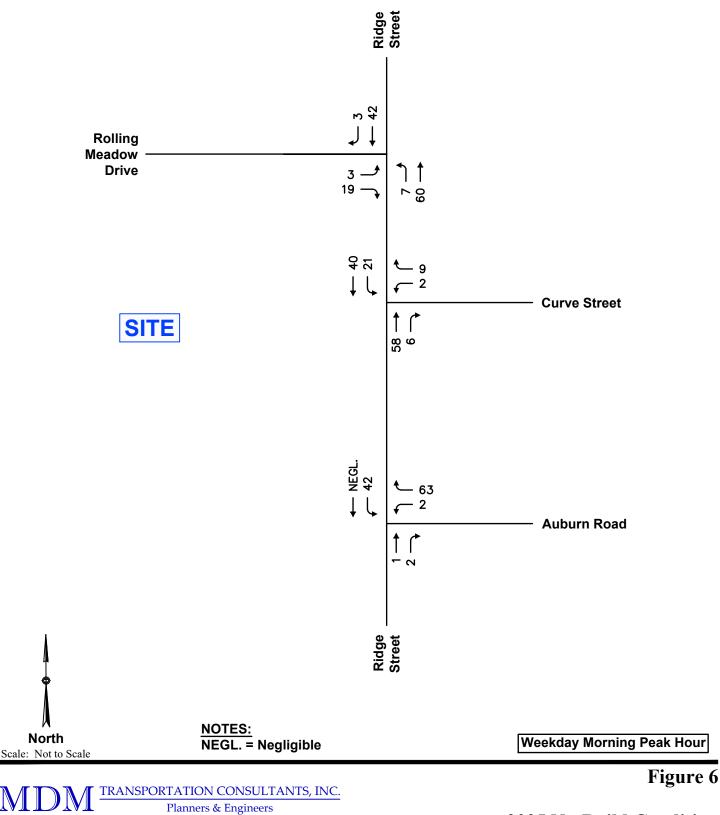
Table 5 presents the trip-generation estimate for the proposed development based on ITEmethodology.

TABLE 5 TRIP-GENERATION SUMMARY

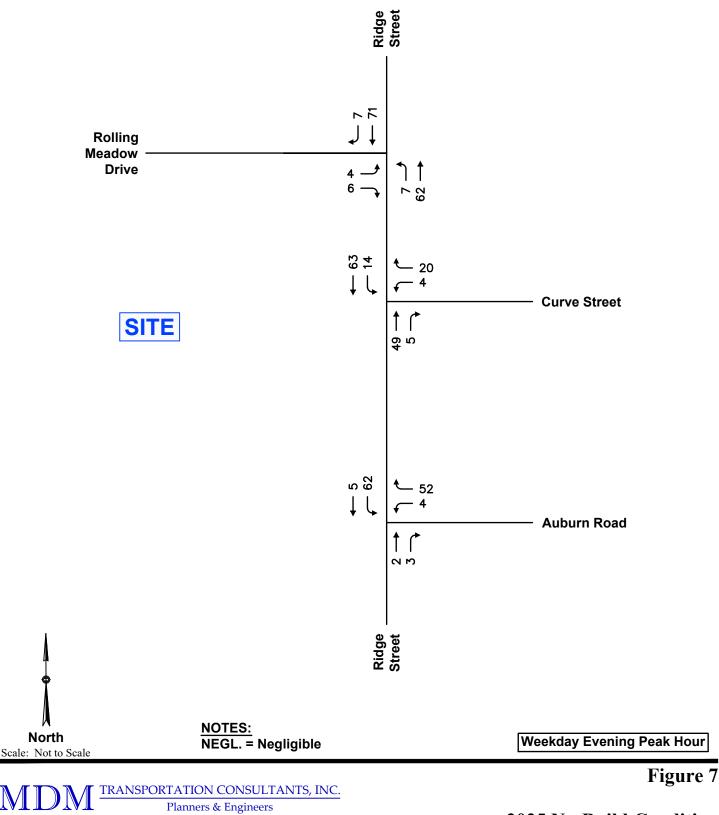
Period/Direction	Singe Family (43-Units) ¹
Weekday Morning Peak Hour	
Entering	8
Exiting	<u>24</u>
Total	32
Weekday Evening Peak Hour	
Entering	27
Exiting	<u>16</u>
Total	43
Weekday Daily	408

¹Based on ITE LUC 210 trip rates applied to 43 Units.

²*Trip Generation*, 10th Edition; Institute of Transportation Engineers; Washington, DC; 2017.



2025 No-Build Condition Weekday Morning Peak Hour Volumes



2025 No-Build Condition Weekday Evening Peak Hour Volumes As summarized in **Table 5**, the development is estimated to generate approximately 32 vehicle trips (8 entering and 24 exiting) during the weekday morning peak hour and 43 vehicle trips (27 entering and 16 exiting) during the weekday evening peak hour. On a daily basis, the development is estimated to generate approximately 408 vehicle trips on a weekday with 50 percent entering and exiting. Trip generation calculations are provided in the **Attachments**.

Trip Distribution

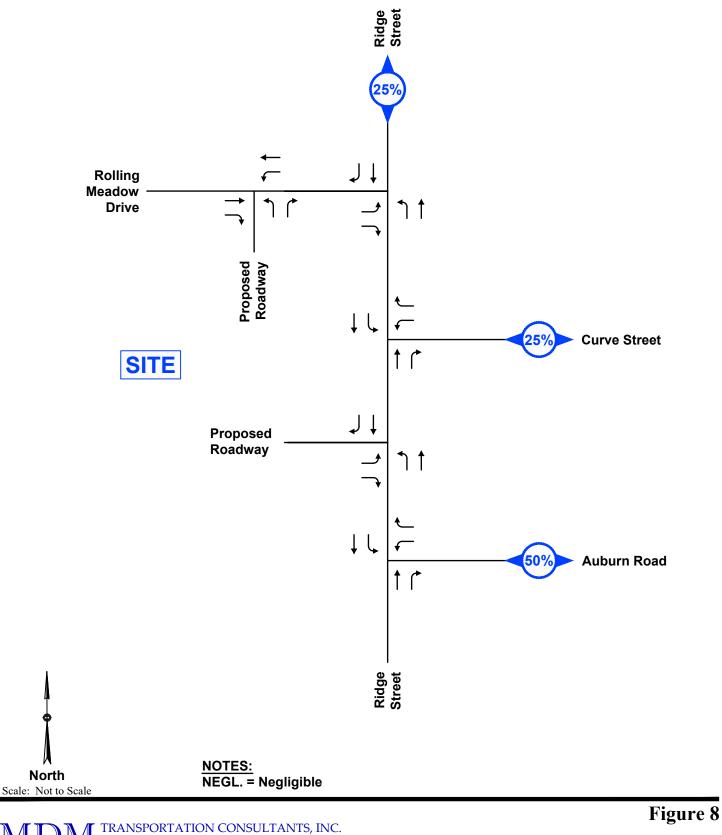
The distribution for projected traffic for the proposed development is based primarily on Journey to Work Census data for persons living within the Town of Millis. The resulting trip distribution for new trips is presented in **Figure 8**. Trip distribution calculations are provided in the **Attachments**.

Development-related trips for the proposed development are assigned to the roadway network using the ITE trip-generation estimates shown in **Table 5** and the distribution patterns presented in **Figure 8**. Development-related trips at each intersection approach for the weekday morning and weekday evening peak hours are quantified in **Figure 9** and **Figure 10**.

2025 Build Traffic Conditions

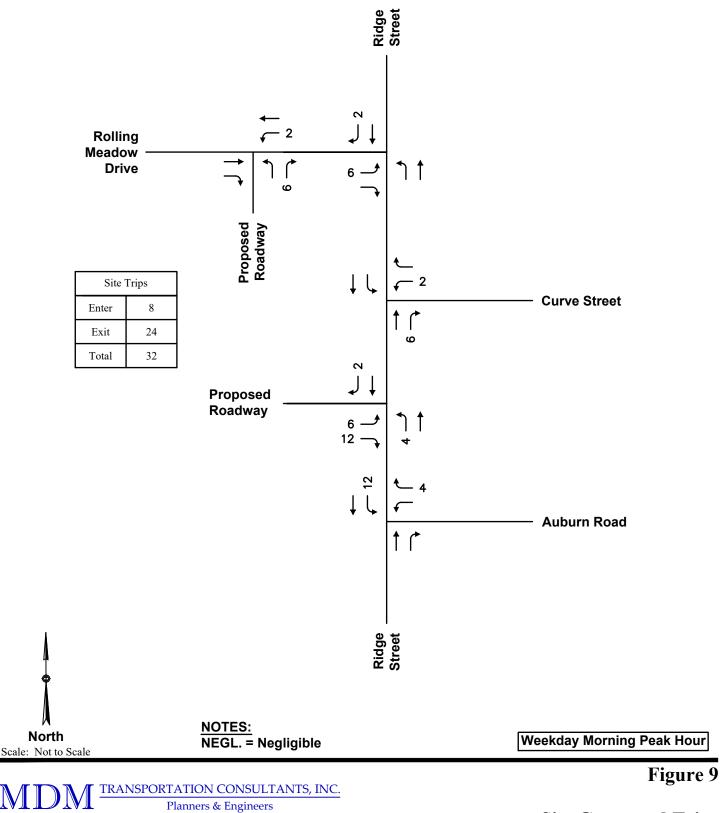
2025 Build condition traffic volumes are derived by adding the incremental traffic increases for development to the 2025 No-Build conditions. **Figure 11** and **12** present the 2025 Build condition traffic-volume networks for the weekday morning and weekday evening peak hours.



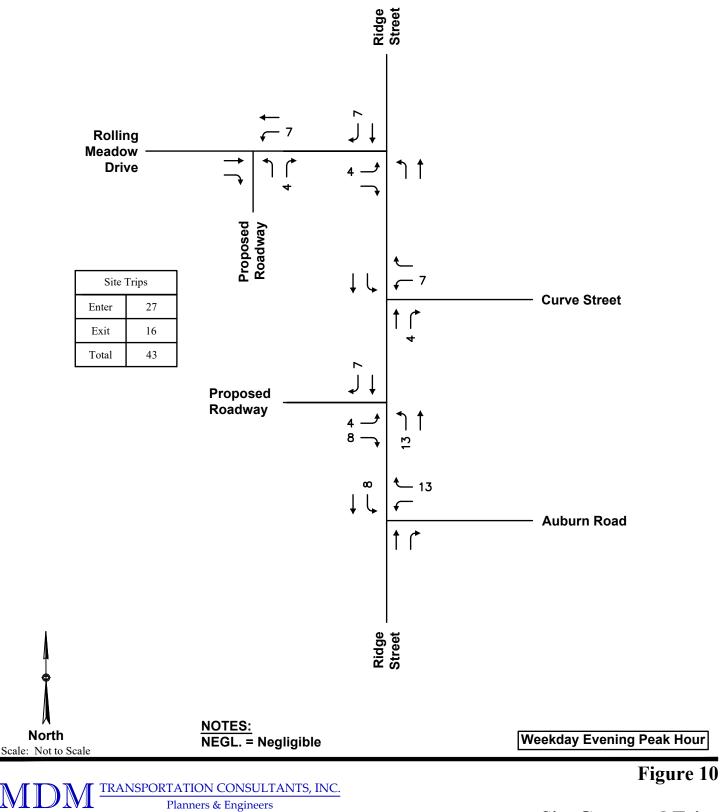


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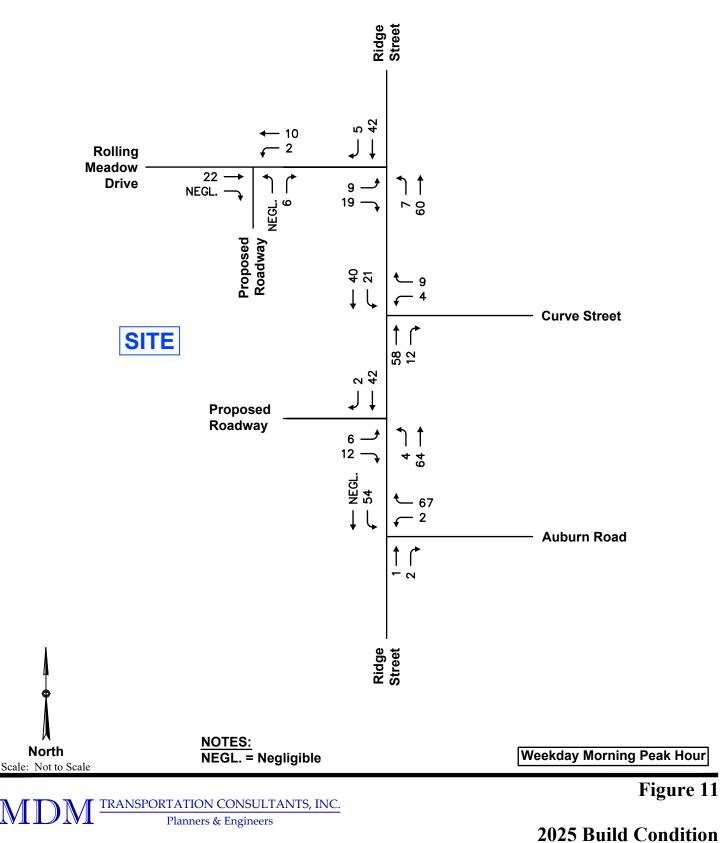
Trip Distribution



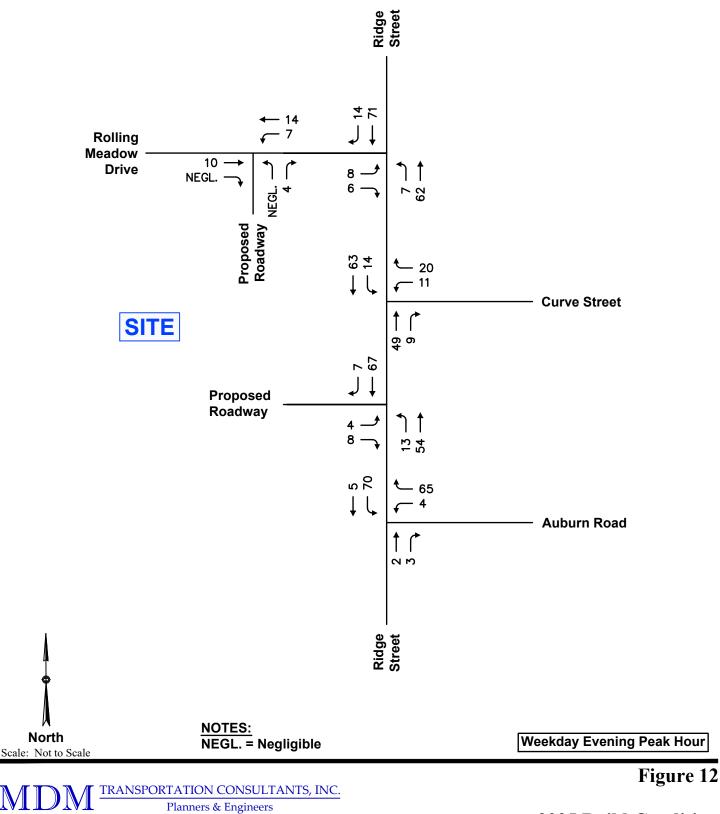
Site Generated Trips Weekday Morning Peak Hour Volumes



Site Generated Trips Weekday Evening Peak Hour Volumes



Weekday Morning Peak Hour Volumes



2025 Build Condition Weekday Evening Peak Hour Volumes

OPERATIONS ANALYSIS

This section provides an overview of operational analysis methodology, an assessment of roadway operations under Baseline and projected future No-Build and Build conditions.

Analysis Methodology

Intersection capacity analyses are presented in this section for the Baseline, No-Build, and Build traffic-volume conditions. Capacity analyses, conducted in accordance with EEA/MassDOT guidelines, provide an index of how well the roadway facilities serve the traffic demands placed upon them. The operational results provide the basis for recommended access and roadway improvements in the following section.

Capacity analysis of intersections is developed using the Synchro® computer software, which implements the methods of the 2010 Highway Capacity Manual (HCM). The resulting analysis presents a level-of-service (LOS) designation for individual intersection movements. The LOS is a letter designation that provides a qualitative measure of operating conditions based on several factors including roadway geometry, speeds, ambient traffic volumes, traffic controls, and driver characteristics. Since the LOS of a traffic facility is a function of the traffic flows placed upon it, such a facility may operate at a wide range of LOS, depending on the time of day, day of week, or period of year. A range of six levels of service are defined on the basis of average delay, ranging from LOS A (the least delay) to LOS F (delays greater than 50 seconds for unsignalized movements). The specific control delays and associated LOS designations are presented in the **Attachments**.

Analysis Results

Level-of-Service (LOS) analyses were conducted for the Baseline, No-Build, and Build conditions for the study intersections. The results of the intersection capacity are summarized below in **Table 6** and **Table 7**. Detailed analysis results are presented in the **Attachments**.

TABLE 6INTERSECTION CAPACITY ANALYSIS RESULTSWEEKDAY MORNING PEAK HOUR

		2	020 Baselin	ne	20	025 No-Bui	ild	2025 Build		
Period	Approach	v/c^1	Delay ²	LOS ³	v/c	Delay	LOS	v/c	Delay	LOS
Ridge Street at	Northbound	0.01	<5	А	0.01	<5	А	0.01	<5	А
Rolling Meadow Drive	Southbound	0.00	<5	А	0.00	<5	А	0.00	<5	А
	EB L/R Exit	0.03	9	А	0.03	9	А	0.04	9	А
Ridge Street at	Northbound	0.00	<5	А	0.00	<5	А	0.00	<5	А
Curve Street	Southbound	0.02	<5	А	0.02	<5	А	0.02	<5	А
	WB L/R Exit	0.01	9	А	0.01	9	А	0.02	9	А
Ridge Street at	Northbound	n/a	n/a	n/a	n/a	n/a	n/a	0.00	<5	А
Proposed Site Roadway	Southbound	n/a	n/a	n/a	n/a	n/a	n/a	0.00	<5	А
	EB L/R Exit	n/a	n/a	n/a	n/a	n/a	n/a	0.02	9	А
Ridge Street at	Northbound	0.00	<5	А	0.00	<5	А	0.00	<5	А
Auburn Street	Southbound	0.00	<5	А	0.00	<5	А	0.00	<5	А
	EB L/R Exit	0.00	<5	А	0.00	<5	А	0.00	<5	А

¹Volume-to-capacity ratio

²Average control delay per vehicle (in seconds)

³Level of service

 $^{4}n/a = not applicable$

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TABLE 7 INTERSECTION CAPACITY ANALYSIS RESULTS WEEKDAY EVENING PEAK HOUR

		2	020 Baselin	ne	20	025 No-Bui	ild	2025 Build			
Period	Approach	v/c^1	Delay ²	LOS ³	v/c	Delay	LOS	v/c	Delay	LOS	
Ridge Street at	Northbound	0.01	<5	А	0.01	<5	А	0.01	<5	А	
Rolling Meadow Drive	Southbound	0.00	<5	А	0.00	<5	А	0.00	<5	А	
	EB L/R Exit	0.02	9	А	0.02	9	А	0.02	9	А	
Ridge Street at	Northbound	0.00	<5	А	0.00	<5	А	0.00	<5	А	
Curve Street	Southbound	0.01	<5	А	0.01	<5	А	0.01	<5	А	
	WB L/R Exit	0.03	9	А	0.04	9	А	0.05	9	А	
Ridge Street at	Northbound	n/a	n/a	n/a	n/a	n/a	n/a	0.01	<5	А	
Proposed Site Roadway	Southbound	n/a	n/a	n/a	n/a	n/a	n/a	0.00	<5	А	
	EB L/R Exit	n/a	n/a	n/a	n/a	n/a	n/a	0.02	9	А	
Ridge Street at	Northbound	0.01	8	А	0.01	8	А	0.01	8	А	
Auburn Street	Southbound	0.00	<5	А	0.00	<5	А	0.00	<5	А	
	EB L/R Exit	0.00	<5	А	0.00	<5	А	0.00	<5	А	

¹Volume-to-capacity ratio ²Average control delay per vehicle (in seconds)

³Level of service

 $^{4}n/a = not applicable$



As summarized in **Table 6** and **Table 7**:

- □ *Ridge Street at Curve Street.* The Curve Street approach to Ridge Street will continue to operate below capacity at LOS A during the peak hours. Mainline operations are expected to operate unimpeded at LOS A operations during peak hours.
- *Ridge Street at Auburn Street.* The Auburn Street approach to Ridge Street will continue to operate below capacity at LOS A or better during the peak hours.
 Mainline operations are expected to operate unimpeded at LOS A operations during peak hours.
- *Ridge Street at Rolling Meadow Drive.* The Rolling Meadow Drive approach to Ridge Street will continue to operate below capacity at LOS A during the peak hours. Mainline operations are expected to operate unimpeded at LOS A operations during peak hours.
- □ *Ridge Street at Proposed Site Roadway.* The proposed roadway along Ridge Street will operate below capacity at LOS A or better during the peak hours. Mainline operations are expected to operate unimpeded at LOS A operations during peak hours.

In summary, the proposed development is not expected to materially impact study area intersections and will not result in any material changes in traffic operations in the study area between future No-Build and Build conditions. Therefore, no off-site mitigation is required at area intersections.

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CONCLUSIONS AND RECOMMENDATIONS

Redevelopment of the site will generate modest traffic increases of 32 and 43 vehicular trips during weekday morning and weekday evening peak hours, respectively. The proposed development is not expected to materially impact operating conditions at the study intersections during peak hours with only nominal delay increases anticipated. Proposed access improvements as described below will provide ample capacity to accommodate site-generated traffic while also enhancing safety and capacity.

MDM finds that the following access related improvements will enhance traffic operations and/or travel safety:

- Signage and Markings. A STOP sign (R1-1) and STOP line pavement markings should be installed on the proposed roadway and the Rolling Meadow Drive approaches to Ridge Street. The signs and pavement markings shall be compliant with the Manual on Uniform Traffic Control Devices (MUTCD).
- □ *Roadway Design.* Roadway alignment, widths and curb radii should be designed to achieve (a) approximate perpendicular orientation at Ridge Street; (b) total minimum width to facilitate full access/egress; and (c) minimum curb radii as required to accommodate the largest design vehicle (delivery truck) and the Town's largest fire apparatus (ladder truck). Roadway grading and orientation should meet or exceed minimum recommended stopping sight distance presented herein.
- □ Sight Line Triangles. The sight lines should be cleared and graded within the right-ofway with the construction of the proposed roadway approach to Ridge Street. The available ISD looking north from the proposed site roadway onto Ridge Street satisfies the minimum AASHTO requirement for safety but is limited to 195± feet by the right-ofway. MDM recommends the installation of an advanced intersection warning sign (W2-2) and supplemental warning plaque (W16-2P – 200 feet) be installed on the southbound approach to the proposed roadway. Similarly, the available ISD looking north from Rolling Meadow Drive onto Ridge Street satisfies the minimum AASHTO requirement for safety but is limited to 200± feet by a mature tree immediately adjacent to Ridge Street on its western side. Independent of the project, it is recommended that to the extent possible the tree should be removed to enhance sight lines. MDM recommends the installation of an advanced intersection warning sign (W2-2) and supplemental warning plaque (W16-2P - 200 feet) be installed on the southbound approach to Rolling Meadow Drive. Any new plantings (shrubs, bushes) or physical landscape features to be located within the proposed roadway sight lines should also be maintained at a height of 2 feet or less above the adjacent roadway grade to ensure unobstructed lines of sight.

□ *Sidewalk Connections.* A pedestrian sidewalk connection should be provided between the Site and the existing sidewalk system along Rolling Meadow Drive. MDM recommends that any proposed sidewalks and ramps be ADA-compliant.

In summary, MDM finds that incremental traffic associated with the proposed development is not expected to materially impact operating conditions at the study intersections. The study intersections exhibit below-average crash rates based on historic crash data; safety countermeasures are therefore not warranted. Implementation of access/egress improvement and a proposed pedestrian connection to Rolling Meadow Drive will establish a framework of minimizing Site traffic impacts.



ATTACHMENTS

- □ Traffic Volume Data
- Seasonal/Yearly Growth Data
- □ Speed Data
- Sight Distance Calculations
- □ Trip Generation
- □ Trip Distribution Calculations
- Capacity Analysis

□ Traffic Volume Data

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N/S: Ridge Street South of Curve Street Millis, MA

MDM TRANSPORTATION CONSULTANTS, INC. Planners & Engineers

28 Lord Road, Suite 280 Marlborough, MA 01752

Site Code: 1050

Start	29-Oct-19	North	nbound	Hour	Totals	Sout	hbound	Hour	Totals	Combin	ed Totals
Time	Tue	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		2	13	v		1	10				
12:15		0	6			1	6				
12:30		0	5			0	13				
12:45		1	6	3	30	0	8	2	37	5	67
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03:30		0	9			0	13				<u></u>
03:45		0	13	0	44	0	19	1	50		94
04:00		0	9			0	10	an an airth ann a comaraig		en la linte esta en visita estra	a katan barta akabarta a
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06:30		4	14			10	3				
06:45		9	8	23	51	10	8	22	36	45	87
07:00		7	5			11	5				
07:15		13	4			11	80.08051			a kekan	
07:30		19	5			8	4				
07:45		18	4	57	18	10	10	40	20	97	38
08:00		7	7			11	3	ana a a manana a			
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08:30		17	7			5	4		10	85	33
08:45		9	1	49	20	13 11	4	36	13	00 (- College (1997)
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10:45		7	0.000	28	5	9	3	28	7	56	12
11:00		7	1			2	3				
11:15		9	1			6	1				
11:30		16	0			7	0			manana na mini <u>a m</u> a	
11:45		12	0	44	2	6	0	21	4	65	6
Total		238	362			188				426	730
Percent		39.7%	60.3%			33.8%	66.2%			<u>36.9%</u> 426	63.1% 730
Total		238				188				426 36.9%	
Percent		39.7%	60.3%			33.8%					
Combined		6	00			:	556			1	156
Total											

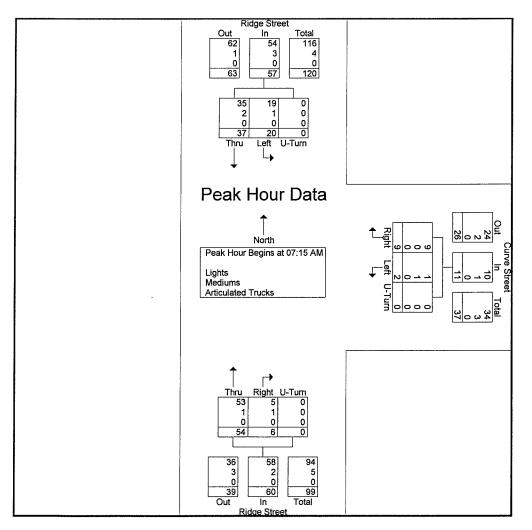
MDM TRANSPORTATION CONSULTANTS, INC. Planners & Factor

28 Lord Road, Suite 280 Marlborough, MA

N/S: Ridge Street WB: Curve Street Millis, MA

File Name : 1050 Ridge at Curve Site Code : 1050 Start Date : 10/29/2019 Page No : 2

	Ridge Street From North						Street East		Ridge Street From South				
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis	From 07:0	DO AM to	08:00 AN	I - Peak 1 of	1								f
Peak Hour for Entire	e Intersect	ion Begin	s at 07:18	5 AM									
07:15 AM	10	5	0	15	1	0	0	1	3	11	0	14	30
07:30 AM	8	9	0	17	2	0	0	2	1	18	0	19	38
07:45 AM	10	4	0	14	2	1	0	3	0	19	0	19	36
08:00 AM	9	2	0	11	4	1	0	5	2	6	0	8	24
Total Volume	37	20	0	57	9	2	0	11	6	54	0	60	128
% App. Total	64.9	35.1	0		81.8	18.2	0		10	90	0		
PHF	.925	.556	.000	.838	.563	.500	.000	.550	.500	.711	.000	.789	.842
Lights	35	19	0	54	9	1	0	10	5	53	0	58	122
% Lights	94.6	95.0	0	94.7	100	50.0	0	90.9	83.3	98.1	0	96.7	95.3
Mediums	2	1	0	3	0	1	0	1	1	1	0	2	6
% Mediums	5.4	5.0	0	5.3	0	50.0	0	9.1	16.7	1.9	0	3.3	4.7
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0



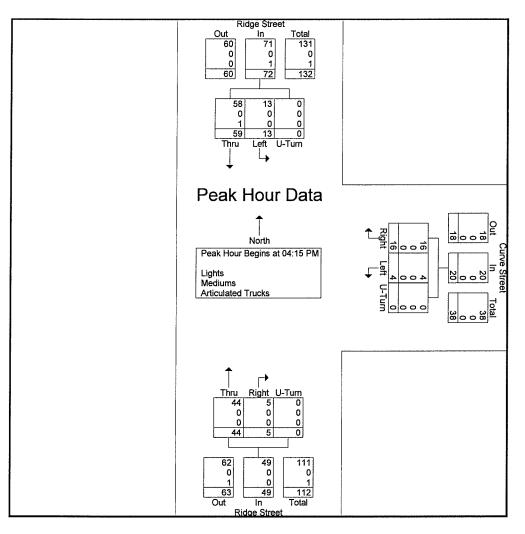
MDM TRANSPORTATION CONSULTANTS, INC.

28 Lord Road, Suite 280 Marlborough, MA

N/S: Ridge Street WB: Curve Street Millis, MA

File Name : 1050 Ridge at Curve Site Code : 1050 Start Date : 10/29/2019 Page No : 3

			Street North				Street		Ridge Street From South				
Start Time	Thru			App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
Peak Hour Analysis					1								
Peak Hour for Entire	e Intersecti	on Begin	s at 04:15	PM									
04:15 PM	14	1	0	15	5	0	0	5	0	12	0	12	32
04:30 PM	24	7	0	31	5	2	0	7	1	11	0	12	50
04:45 PM	7	1	0	8	2	2	0	4	3	7	0	10	22
05:00 PM	14	4	0	18	4	0	0	4	1	14	0	15	37
Total Volume	59	13	0	72	16	4	0	20	5	44	0	49	141
% App. Total	81.9	18.1	0		80	20	0		10.2	89.8	0		
PHF	.615	.464	.000	.581	.800	.500	.000	.714	.417	.786	.000	.817	.705
Lights	58	13	0	71	16	4	0	20	5	44	0	49	140
% Lights	98.3	100	0	98.6	100	100	0	100	100	100	0	100	99.3
Mediums	0	0	0	0	0	0	0	0	0	0	0	0	0
% Mediums	0	0	0	0	0	0	0	0	0	0	0	0	0
Articulated Trucks	1	0	0	1	0	0	0	0	0	0	0	0	1
% Articulated Trucks	1.7	0	0	1.4	0	0	0	0	0	0	0	0	0.7



28 Lord Road, Suite 280 Mariborough, MA

N/S: Ridge Street WB: Curve Street Millis, MA

File Name : 1050 Ridge at Curve Site Code : 1050 Start Date : 10/29/2019 Page No : 1

				Groups Pr	rinted- Ligh			ticulated Tru	icks				
			Street				e Street				Street		
			North				n East				South		
Start Time	Thru	Left	U-Turn		Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
07:00 AM	11	5	0	16	0	0	0	0	1	6	0	7	23
07:15 AM	10	5	0	15	1	0	0	1	3	11	0	14	30
07:30 AM	8	9	0	17	2	0	0	2	1	18	0	19	38
07:45 AM	10	4	0	14	2	1	0	3	0	19	0	19	36
Total	39	23	0	62	5	1	0	6	5	54	0	59	127
08:00 AM	9	2	0	11	4	1	0	5	2	6	0	8	24
08:15 AM	6	6	0	12	3	0	0	3	2	14	0	16	31
08:30 AM	4	2	0	6	2	0	0	2	3	16	0	19	27
08:45 AM	11	6	0	17	2	2	0	4	2	6	0	8	29
Total	30	16	0	46	11	3	0	14	9	42	0	51	111
04:00 PM	11	7	0	18	1	0	0	4	2	8	0	11	30
04:15 PM	14	1	0 0	10	5	0	0 0	5	3 0	12	0	12	
04:30 PM	24	7	0	31	5	0 2	0	5	1	12	0	12	32 50
04:45 PM	24	1	0	8	2	2	0	4	3	7	0	12	22
Total	56	16	0	72	13	4	0	17		38	0	45	134
1	50	10	0	12	15	4	Ū	17	1	50	Ū	40	104
05:00 PM	14	4	0	18	4	0	0	4	1	14	0	15	37
05:15 PM	15	5	0	20	2	0	0	2	5	3	0	8	30
05:30 PM	15	1	0	16	1	1	0	2	2	8	0	10	28
05:45 PM	15	1	0	16	2	3	0	5	2	11	0	13	34
Total	59	11	0	70	9	4	0	13	10	36	0	46	129
Grand Total	184	66	0	250	38	12	0	50	31	170	0	201	501
Apprch %	73.6	26.4	0		76	24	0		15.4	84.6	0		
Total %	36.7	13.2	0	49.9	7.6	2.4	0	10	6.2	33.9	0	40.1	
Lights	179	63	0	242	37	11	0	48	30	169	0	199	489
% Lights	97.3	95.5	0	96.8	97.4	91.7	0	96	96.8	99.4	0	99	97.6
Mediums	4	3	0	7	1	1	0	2	1	1	0	2	11
% Mediums	2.2	4.5	0	2.8	2.6	8.3	0	4	3.2	0.6	0	1	2.2
Articulated Trucks	1	0	0	1	0	0	0	0	0	0	0	0	1
% Articulated Trucks	0.5	0	0	0.4	0	0	0	0	0	0	0	0	0.2

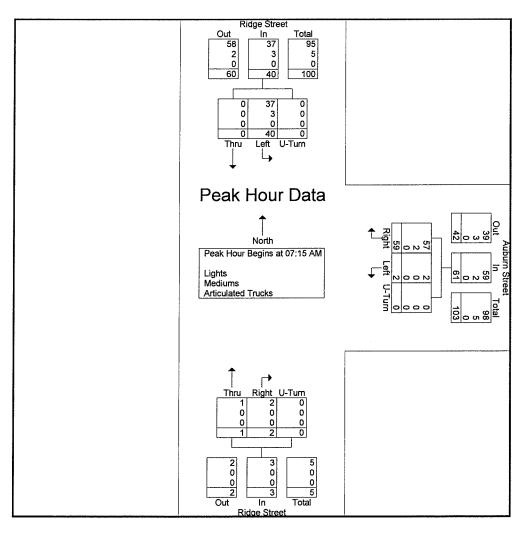
MDM TRANSPORTATION CONSULTANTS, INC. Planners & E-c²

28 Lord Road, Suite 280 Marlborough, MA

N/S: Ridge Street WB: Auburn Street Millis, MA

File Name : 1050 Ridge at Auburn Site Code : 1050 Start Date : 10/29/2019 Page No : 2

			e Street North				n Street n East				e Street South		
Start Time	Thru			App. Total	Right	Left		App. Total	Right		U-Turn	App. Total	Int. Total
Peak Hour Analysis	From 07:0	0 AM to	11:45 AM	I - Peak 1 of	1		•						
Peak Hour for Entire	e Intersecti	on Begin	s at 07:15	5 AM									
07:15 AM	0	11	0	11	13	1	0	14	0	1	0	1	26
07:30 AM	0	8	0	8	19	1	0	20	0	0	0	0	28
07:45 AM	0	10	0	10	18	0	0	18	2	0	0	2	30
08:00 AM	0	11	0	11	9	0	0	9	0	0	0	0	20
Total Volume	0	40	0	40	59	2	0	61	2	1	0	3	104
% App. Total	0	100	0		96.7	3.3	0		66.7	33.3	0		
PHF	.000	.909	.000	.909	.776	.500	.000	.763	.250	.250	.000	.375	.867
Lights	0	37	0	37	57	2	0	59	2	1	0	3	99
% Lights	0	92.5	0	92.5	96.6	100	0	96.7	100	100	0	100	95.2
Mediums	0	3	0	3	2	0	0	2	0	0	0	0	5
% Mediums	0	7.5	0	7.5	3.4	0	0	3.3	0	0	0	0	4.8
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0

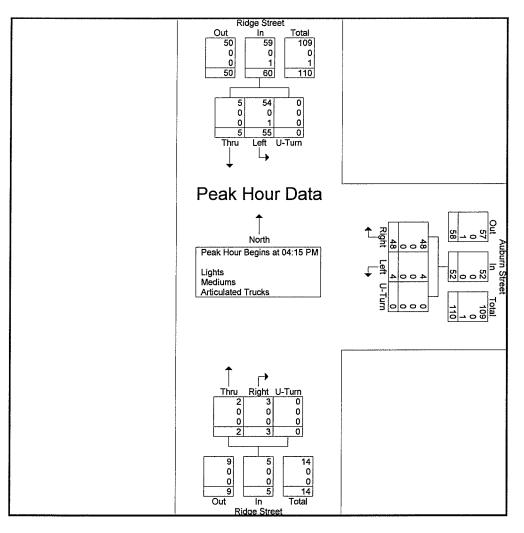


28 Lord Road, Suite 280 Marlborough, MA

N/S: Ridge Street WB: Auburn Street Millis, MA

File Name : 1050 Ridge at Auburn Site Code : 1050 Start Date : 10/29/2019 Page No : 3

			Street North				n Street n East	E			Street South		
Start Time	Thru			App. Total	Right		U-Turn	App. Total	Right		U-Turn	App. Total	Int. Total
Peak Hour Analysis	From 12:0	0 PM to	05:45 PM -	Peak 1 of	1	·····							
Peak Hour for Entire	e Intersecti	on Begin	s at 04:15	PM									
04:15 PM	0	14	0	14	12	0	0	12	0	0	0	0	26
04:30 PM	4	22	0	26	12	2	0	14	2	0	0	2	42
04:45 PM	1	7	0	8	9	2	0	11	0	2	0	2	21
05:00 PM	0	12	0	12	15	0	0	15	1	0	0	1	28
Total Volume	5	55	0	60	48	4	0	52	3	2	0	5	117
% App. Total	8.3	91.7	0		92.3	7.7	0		60	40	0		
PHF	.313	.625	.000	.577	.800	.500	.000	.867	.375	.250	.000	.625	.696
Lights	5	54	0	59	48	4	0	52	3	2	0	5	116
% Lights	100	98.2	0	98.3	100	100	0	100	100	100	0	100	99.1
Mediums	0	0	0	0	0	0	0	0	0	0	0	0	0
% Mediums	0	0	0	0	0	0	0	0	0	0	0	0	0
Articulated Trucks	0	1	0	1	0	0	0	0	0	0	0	0	1
% Articulated Trucks	0	1.8	0	1.7	0	0	0	0	0	0	0	0	0.9



28 Lord Road, Suite 280 Marlborough, MA

N/S: Ridge Street WB: Auburn Street Millis, MA

File Name : 1050 Ridge at Auburn Site Code : 1050 Start Date : 10/29/2019 Page No : 1

				Groups Pr	inted- Ligh			ticulated Tru	icks				
			Street				n Street				Street		
			North				n East				South		
Start Time	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	Int. Total
07:00 AM	0	10	0	10	7	0	0	7	1	0	0	1	18
07:15 AM	0	11	0	11	13	1	0	14	0	1	0	1	26
07:30 AM	0	8	0	8	19	1	0	20	0	0	0	0	28
07:45 AM	0	10	0	10	18	0	0	18	2	0	0	2	30
Total	0	39	0	39	57	2	0	59	3	1	0	4	102
08:00 AM	0	11	0	11	9	0	0	9	0	0	0	0	20
08:15 AM	0	6	0	6	17	2	0	19	0	0	0	0	25
08:30 AM	0	5	0	5	18	1	0	19	0	0	0	0	24
08:45 AM	1	12	0	13	8	0	0	8	2	0	0	2	23
Total	1	34	0	35	52	3	0	55	2	0	0	2	92
04:00 PM	0	11	0	11	10	0	0	10	1	1	0	2	23
04:15 PM	ŏ	14	ŏ	14	12	ŏ	ŏ	12	O	ò	õ	õ	26
04:30 PM	4	22	Ő	26	12	2	õ	14	2	ŏ	õ	2	42
04:45 PM	1	7	ŏ	8	9	2	õ	11	ō	2	Ō	2	21
Total	5	54	0	59	43	4	0	47	3	3	0	6	112
05:00 PM	0	12	0	12	15	0	0	15	1	0	0	1	28
05:15 PM	0	15	0	15	7	0	0	7	0	1	0	1	23
05:30 PM	0	16	0	16	9	3	0	12	0	1	0	1	29
05:45 PM	1	17	0	18	13	0	0	13	1	1	0	2	33
Total	1	60	0	61	44	3	0	47	2	3	0	5	113
Grand Total	7	187	0	194	196	12	0	208	10	7	0	17	419
Apprch %	3.6	96.4	0		94.2	5.8	0		58.8	41.2	0		
Total %	1,7	44.6	0	46.3	46.8	2.9	0	49.6	2.4	1.7	0	4.1	
Lights	7	183	0	190	194	12	0	206	10	7	0	17	413
% Lights	100	97.9	0	97.9	99	100	0	99	100	100	0	100	98.6
Mediums	0	3	0	3	2	0	0	2	0	0	0	0	5
% Mediums	0	1.6	0	1.5	1	0	0	1	0	0	0	0	1.2
Articulated Trucks	0	1	0	1	0	0	0	0	0	0	0	0	1
% Articulated Trucks	0	0.5	0	0.5	0	0	0	0	0	0	0	0	0.2

28 Lord Road, Suite 280 Marlborough, MA

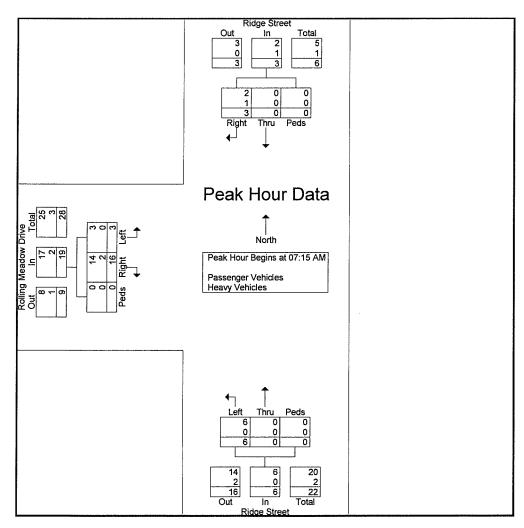
N/S: Ridge Street E/W: Rolling Meadow Drive Millis, MA

File Name : 1050 Ridge at Rolling Meadow AM

- Site Code : 1050
- Start Date : 1/7/2020

Page No : 2

			Street North				Street South		R		adow Drive West	•	
Start Time	Right	Thru	Peds	App. Total	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Int. Total
Peak Hour Analysis	From 07:	15 AM to	08:00 AM -	- Peak 1 of	1								
Peak Hour for Entire	e Intersect	ion Begin	s at 07:15.	AM									
07:15 AM	0	0	0	0	0	2	0	2	1	1	0	2	4
07:30 AM	1	0	0	1	0	0	0	0	8	1	0	9	10
07:45 AM	0	0	0	0	0	4	0	4	2	0	0	2	6
08:00 AM	2	0	0	2	0	0	0	0	5	1	0	6	8
Total Volume	3	0	0	3	0	6	0	6	16	3	0	19	28
% App. Total	100	0	0		0	100	0		84.2	15.8	0		
PHF	.375	.000	.000	.375	.000	.375	.000	.375	.500	.750	.000	.528	.700
Passenger Vehicles	2	0	0	2	0	6	0	6	14	3	0	17	25
% Passenger Vehicles	66.7	0	0	66.7	0	100	0	100	87.5	100	0	89.5	89.3
Heavy Vehicles	1	0	0	1	0	0	0	0	2	0	0	2	3
% Heavy Vehicles	33.3	0	0	33.3	0	0	0	0	12.5	0	0	10.5	10.7



28 Lord Road, Suite 280 Marlborough, MA

N/S: Ridge Street E/W: Rolling Meadow Drive Millis, MA

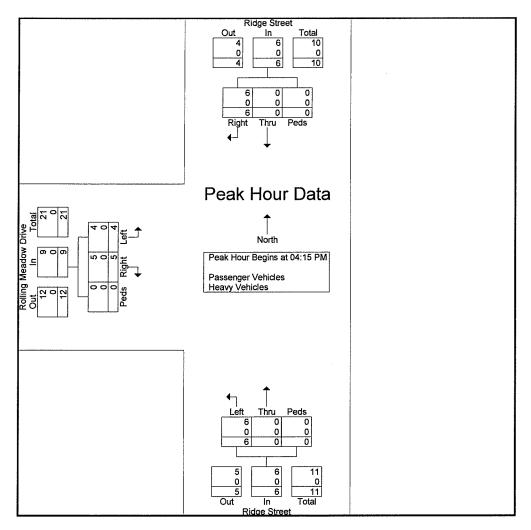
File Name : 1050 Ridge at Rolling Meadow PM

Site Code : 1050

Start Date : 1/7/2020

Page No : 2

			Street North				Street South		R		adow Drive West		
Start Time	Right	Thru	Peds	App. Total	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Int. Total
Peak Hour Analysis	From 04:	15 PM to (05:00 PM ·	- Peak 1 of	1								
Peak Hour for Entire	e Intersect	ion Begin	s at 04:15	PM									
04:15 PM	1	0	0	1	0	0	0	0	1	0	0	1	2
04:30 PM	1	0	0	1	0	0	0	0	0	1	0	1	2
04:45 PM	1	0	0	1	0	5	0	5	1	1	0	2	8
05:00 PM	3	0	0	3	0	1	0	1	3	2	0	5	9
Total Volume	6	0	0	6	0	6	0	6	5	4	0	9	21
% App. Total	100	0	0		0	100	0		55.6	44.4	0		
PHF	.500	.000	.000	.500	.000	.300	.000	.300	.417	.500	.000	.450	.583
Passenger Vehicles	6	0	0	6	0	6	0	6	5	4	0	9	21
% Passenger Vehicles	100	0	0	100	0	100	0	100	100	100	0	100	100
Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0
% Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0



Seasonal/Yearly Crash Data

ITALICS = ESTIMATED DATA MADT

Average Growth Rate 0.5%

	1441		MAD	APR	MAY	NUL	JUL	AUG	SEP	OCT	NON	DEC	YEAR
YR Se		11 051				007 01	010 01						
R	2%2	74°	%C-	7%7	70E-	-1% -1%	700'04	70V	265 DC	961 'NC	20,043	260'025	49,534
07	47,505	47,283	49,268	49,136	50,000	52,000	53,000	52,322	49,031	50,571	49,662	47,007	49,732
	-4%	-2%	-3%	1%	1%	-4%	-8%	-7%	-1%	-3%	4%	-1%	-3%
38	45,614	46,112	47,829	49,816	50,518	49,936	48,629	48,759	48,531	49,009	47,490	46,696	48,245
60	44 103	46.434	-3% 46 455	%7- %7-	9/2- 0/2-	40 034 %0	47.638	-3% 47 056	-2% 47 762	-1% 29 662	%0 %0	2% 47 EC 4	-1%
	-1%	%0	2%	%0	%0	1%	-1%	1%	1%	1%	2 IC' IT	100'F	1%1
Ξ	43,244	46,150	48,016	48,943	49,781	50,525	46,812	48,234	48,825	49,198	49,151	49,888	48,231
	%2	2%	1%	-1%	1%	-1%	3%	4%	%0	2%	2%	-5%	1%
12	46.381	46,883	48,608	48,662	50,126	49,961	48,380	49,941	48,882	50,056	50,015	47,600	48,791
	46 393	46 220	0/ 7- 1 CV ZV	10 350	ED EE7	0/6- 16 870	507 0¥	%	%7 %7	%D 03	%1-	%7	%0
2	1%	1%	2%		ou,uu 1%	40'070 6%	%U	1%1	49,940 %0	170'nc	49,001	46,441 1%	48,562
16 teasonal Adiustment Factr [—]	47,447	47,570	50,342 1 01	50,977	52,259	53,476	49,724	50,789	50,057	51,035	51,749	50,442	50,489
(to average month)	10.1	3-	10.1	66°D	10.0	10.0	B .	0.33	0.00	0.30	0.33	LUI Growth	706 0
			•									Growth	-0.2%
					-								
	51A110N 3180 - MILFORD - RTE. 495		(D - RTE.1-45		WAY T.L.								
4¥		FEB	MAR	APR 70.00	MAY 20, 200	NUL 12			SEP	001	Nov	DEC	YEAR
2	700"	1.140	140,01	200° 0 /	00'400	707/100	106,40	69,393 201	83,740	810,08	/9/40B	/6,386	/9,930
20	70 749	70 432	73 596	76.751	85 024	AR NOD	88 401	91 080 P	005 E8	87 771	01 2- 01 2-	-77 367	70 080
	-2%	%e-	3%	%l-	%2-	-8%	-4%	5%	-5%	%E-	5	7no 17 1	500'e /
98	69,200	68,456	76,000	75,934	79,352	81,166	84,701	86,189	78,778	79,645	73,861	70.747	77.002
	-5%	1%	-8%	1%	-1%	-1%	-1%	1%	6%	%0	2%	3%	%0
60	65,444	69,136	69,739	76,913	78,876	80'700	84,000	86,829	83,273	79,419	75,486	73,169	76,915
0	3%E	-1% CD EOE	5% 73 E 4 4	77 005	-1%	427 30 %/	4%	4%	%0	4%	3%	3%	3%
2	924' ID	560'DD	150,07	-1%	76°	au, /0/ 1%	01,120 -1%	267'D6	03,403 1%	02'2 4 4	01C'//	517'CI	010's/
-	65,217	69,804	73,992	77,115	80,458	87,344	86,859	87,108	84,288	£73 80,223	79,773	76.729	79.076
	8%	2%	1%	1%	2%	%0	-1%	4%	-1%	3%	%0	-2%	1%
13	70,333	71,280	74,372	78,117	81,707 221	87,015	85,909	90,589	83,100	82,647	79,570	74,989	79,969
17	-1% 66.101	76 AE7	2% BU EUO	2% B5 67.4	2%	2% 06 164	2% 03 peu	27 277 27 277	2%	2%	2%	2%	2%
easonal Adjustment Fact	1.17	1.13	1.07	1.02	0.98	0.92	0.92	0.89	0.95	0.97	1.01	1.06	100,00
ſ												Growth	0.3%
STATION 6647 - PI AINVI	11 F - RTF 1	- SOUTH	JE RTE 152										
YR JAN	JAN	FEB	MAR	APR	MAY	NUL	JUL	AUG	SEP	OCT	NON	DEC	YEAR
96	, 16,136	16,177	16,793	16,635	16,763	17,137	16,432	16,995	17,013	17,067	17,113	17,769	16,836
	-1%	-2%	3%	2%	%2	4%	3%	2%	-2%	%0	1%	-5%	1%
20	15,944	15,859	17,304	17,030	17,864	17,901	16,906 1%	17,416	16,727	17,138	17,324	16,879 50/	17,024
BC C	-1%	-1% 15.698	-3% 16.800	-1%	17 171	17 178	-1%	17 340	17 202	476 17 760	17 07 2	0%C	16 951
2	1%	4%	2%	4%	5%	2%2	2%2	5%	5%	3%	7%	8%	2%
60	16,043	16,380	17,174	17,667	17,999	18,392	17,996	18,129	18,133	18,217	18,190	19,022	17 779
	%9	-3%	1%	4%	6%	%9	1%	3%	2%	3%	%0	%6 -	2%
13	16,927	15,836 20/	17,405	18,408 09/	19,117	19,419 20/	18,199 40/	18,723 407	18,472	18,737	18,205 201	17,328	18,065
14	-1 %	3.0 16 233	4 M	18.472	19.522	49 772 00	18.390	18.870	270 18 813	1 7/0 1 R R C 7	0.0 18 248	10 311	18 376
-	5%	-6%	-1%	2%	-1%	%0	2%	0%	%0	0%	1%	3%	%0
15	16,524	15,242	17,452	18,866	19,424	19,678.00	18,842	18,863	18,782	18,894	18,426	19,907	18,408
Ç	4%	9%	1%	0%0	1%	0% 0	-1%	0%	-1%	0%	1%	-4%	1%
i / lasconal Adiustment Factr	1 00	1 10	1/1313	000	90 0	0.05	1 00	0.08	6/C'01	0.08		107'01	000'0
(to average month)	201		201	22-2	22.2	22.2	22.1	222	2000	22.2	20.0	Growth	1.4%
Average	JAN	FEB	MAR	APR	MAY	NUL	JUL	AUG	SEP	OCT	NOV	DEC	
easonal Adjustment Facto		1 00	1 2 4			100							

 \Box Speed Data

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MDM TRANSPORTATION CONSULTANTS, INC. Planners & Engineers

28 Lord Road, Suite 280 Marlborough, MA 01752

Site Code: 0000000000000001032

Page 1

85th	rercent	23	24	*		19	61	28	28	. 28	27	28	27	27	28	28	28	27	28	28	28	27	28	28	24	
Toto Loto	10(8)	ო	٢	0	0			23	57	49	31	28	44	30	44	46	44	44	45	51	18	20	13	5	2	600
76	929	0	0	0	0	• 0	Ō	• •	• 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
71 75	0)	0	0	0	0	0	Ō	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
66 70	2	0	0	0	0	0	Õ	0	0	0	0	0	0	0	0	0	•	0	0	0	0	0	0	0	0	0
61 65	60	0	0	0	0	0	Ō	0	0	0	0	0	0	0	0	0	0	0	•	0	0	0	0	0	0	0
56 60	3	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51 55	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	•	0	0	0
46 50	3	o	•	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
41 45	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36 40	2	c	0	0	0	0	0	0	0	0	0	0	0	0	•	0	0	0	0	0	0	0	0	0	0	0
31 35	3	5	0	0	0	0	0	~	•	~	0		0	0	Ţ	~~	Ļ	~	1	~~	-	0	•	0	0	11
26 30	3	0	0	0	0	0	0	7	32	26	10	ი	13	10	4	26	22	13	15	21	7	7	7	0	0	241
21 25	30	N	-	0	0	0	0	15	24	20	20	12	25	20	27	18	20	27	25	21	5	10	2	ო	2	306
16 20	2	-	•	0	0	-	t	0	0	-	-	9	9	0	~	~		ო	4	g	~	-	-	0	0	36
15	2	Ð	0	0	0	0	0	0	0	┭	0	0	0	0	-	0	•	0	0	2	0	2	0	0	0	9
Start Time	21111	61/67/01	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	00:60	10:00	11:00	12 PM	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	Total

MDM TRANSPORTATION CONSULTANTS, INC. Planners & Engineers

28 Lord Road, Suite 280 Marlborough, MA 01752

Site Code: 0000000000000001032

Page 2

85th	Percent	29	24	*		УC	28	28	28	28	28	28	28	28	28	28	28	28	28	27	27	28	29	28	24					
	Total	4		0	0	ſ	1 00	28	47	46	21	32	36	35	36	40	39	68	58	42	23	19	12	ო		596				
76	666	0	0	0	0	c	ò	0	Õ	• 0	0	0	0	0	•	0	•	0	0	0	0	0	0	0	0	0				
71	75	0	0	0	0	c	ò	0	Ō	0	0	0	0	0	0	0	0	0	0	0	•	0	0	0	0	0				
99	70	0	0	0	0	c	, O	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
61	65	0	0	0	•	C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	•	0	0	0	0	0				
56	60	0	0	0	0	c	, 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
51	55	0	0	0	0	c	0	0	0	0	o	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
46	50	0	0	0	0	С	<u>o</u>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
41	45	0	0	0	0	С	, 0	0	0	0	0	0	0	0	0	0	•	0	•	0	0	0	0	0	0	0				
36	40	0	0	0	0	C	Ō	0	0	0	•	0	0	0	•	0	0	0	0	0	0	0	0	0	0	o				
31	35	0	0	0	•	0	ō	0		2	0	0	1	0	0		2	ო	T	~	Ļ	~-	-	0	0	15	HdW	24 MPH	MPH	МРН
26	30	4	0	0	0	0	Ż	16	23	23	11	12	13	16	15	15		33	22	11	9	7	2	2	0	247	201	241	281	167
21	25	0	~	0	•	2	_ 0	12	23	17	თ	17	18	15	19	22	22	28	30	26	15	11	9	Ţ	L	295	5th Percentile .	Percentile :	85th Percentile :	ercentile :
16	20	0	0	0	0	0		0	0	4	Ļ	ო	e	4	8	2	4	ო	З	4	-	0	0	0	0	35	15th F	50th F	85th F	
-	15	0	0	0	0	0	Ō	0	0	0	0	0	1	0	0	0	0	-	7	0	0	0	0	0	0	4				
Start	Time	10/30/19	01:00	02:00	03:00	04:00	05:00	00:90	07:00	08:00	00:60	10:00	11:00	12 PM	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	Total				

21-30 MPH 1089 91.1% 514 43.0% 25 MPH

10 MPH Pace Speed : Number in Pace : Percent in Pace : Number of Vehicles > 25 MPH : Percent of Vehicles > 25 MPH :

Statistics

Mean Speed(Average) :

MDM TRANSPORTATION CONSULTANTS, INC. Planners & Engineers

28 Lord Road, Suite 280 Marlborough, MA 01752

Site Code: 00000000000000001032

85th	Percent	28	*	24	24	33	29	28	30	29	29	29	32	29	28	28	29	29	29	29	30	28	31	28	28
	Total	2	0	~		2	7	22	40	36	28	28	21	37	37	35	50	61	59	36	20	13	6	7	4
76	666	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
71	75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	•
<u>66</u>	70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61	65	0	0	0	0	0	0	0	0	0	•	0	•	0	0	0	0	0	0	0	•	0	0	0	0
56	60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	•	0	0	0	0	0	•
46	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
41	45	0	•	0	0	0	0	0	•	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36	40	0	•	0	0	0	0	0	0	0	•	0	•	0	0	0	L.	0	0	0	0	0	0	0	0
31	35	0	0	0	0	-	,	~	9	ო	2	7	4	ഹ	2	-	9	4	ß	0	e		2	0	0
26	30	~	0	0	0	-	3	11	17	16	19	;	10	21	15	17	26	32	33	2	10	4	5	ო	2
21	25	0	0	~	Ļ	0	N	თ	16	13	7	13	3	თ	4	14	12	21	20	12	ø	9	2	ო	N
16 20	20	-	0	0	0	0	L.	-	-	7	0	2	2	2	•	ო	3	ო	e	0	•	~	0		0
i	15	0	0	0	0	0	0	0	•	7	0	0		0	5	0	2	-	0	~~	0	-	0	0	0
Start	ne	0/29/19	01:00	32:00	33:00	04:00	35:00	36:00	00:20	08:00	00:60	10:00	11:00	2 PM	13:00	14:00	15:00	6:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00

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MDM TRANSPORTATION CONSULTANTS, INC. Planners & Engineers

28 Lord Road, Suite 280 Marlborough, MA 01752

Site Code: 0000000000000001032

 15th Percentile:
 21 MPH

 50th Percentile:
 25 MPH

 50th Percentile:
 25 MPH

 85th Percentile:
 29 MPH

 95th Percentile:
 21-30 MPH

 Number of Vehicles > 25 MPH
 85.3%

 Number of Vehicles > 25 MPH
 85.3%

 Percent of Vehicles > 25 MPH
 57.5%

 Mean Speed(Average):
 26 MPH

Sight Distribution Calculations

Stopping Sight Distance - Regulatory

Approaches to Site Driveway

		SPEED (MPH)	BRAKE REACTION DISTANCE (FT)	BRAKING DISTANCE (FT)	CALCULATED STOPPING SIGHT DISTANCE (FT)
Direction 1	NB	30	110.25	86.3	196.5
Direction 2	SB	30	110.25	86.3	196.5

INPUTS	Direction 1	Direction 2
Travel Direction	NB	SB
Speed	30	30
Grade	0	0
t	2.5	2.5
a	11.2	11.2

Stopping Sight Distance (SSD) - Source: AASHTO

SSD = Reaction Distance + Brake Distance

Reaction Distance = 1.47 x t x V

Brake Distance = $V^2 / (30 \times ((a/32.2)+G))$

Where:

t = reaction time (sec)

V = travel speed (mph)

G= roadway grade a - deceleration rate (ft/sec^2)

Stopping Sight Distance - Observed 85th Percentile

Approaches to Site Driveway

		SPEED (MPH)	BRAKE REACTION DISTANCE (FT)	BRAKING DISTANCE (FT)	CALCULATED STOPPING SIGHT DISTANCE (FT)
Direction 1	NB	27	99.225	69.9	169
Direction 2	SB	29	106.575	80.6	187

INPUTS	Direction 1	Direction 2
Travel Direction	NB	SB
Speed	27	29
Grade	0	0
t	2.5	2.5
а	11.2	11.2

Stopping Sight Distance (SSD) - Source: AASHTO SSD = Reaction Distance + Brake Distance

Reaction Distance = 1.47 x t x V

Brake Distance = $V^2 / (30 \times ((a/32.2)+G))$

Where:

t = reaction time (sec)

V = travel speed (mph) G= roadway grade a - deceleration rate (ft/sec^2)

Intersection Sight Distance Calculations

Source: A Policy on Geometric Design of Highways and Street, 6th Edition; AASHTO; 2011.

ISD = 1.47 * V * t

V = speed t = time gap

t = 7.5 s for a passenger car for Left Turn from a Stop t = 6.5 s for a passenger car for Right Turn from a Stop

Ridge St Driveway

ISD = 1.47 * 30 * 7.5 = 331 ft **SAY 335 ft** (left-turn from a stop)

ISD = 1.47 * 30 * 6.5 = 287 ft **SAY 290 ft** (right-turn from a stop)

Intersection Sight Distance Calculations

Source: A Policy on Geometric Design of Highways and Street, 6th Edition; AASHTO; 2011.

ISD = 1.47 * V * t

V = speed t = time gap

t = 7.5 s for a passenger car for Left Turn from a Stop t = 6.5 s for a passenger car for Right Turn from a Stop

Ridge St Driveway (85th)

ISD = 1.47 * 27 * 7.5 = 298 ft **SAY 300 ft** (left-turn from a stop)

ISD = 1.47 * 29 * 6.5 = 277 ft **SAY 280 ft** (right-turn from a stop) □ Trip Generation

Institute of Transportation Engineers (ITE) 10th Edition Land Use Code (LUC) 210 - Single-Family Detached Housing

Average Vehicle Trips Ends vs:Dwelling UnitsIndependent Variable (X):43

AVERAGE WEEKDAY DAILY

WEEKDAY MORNING PEAK HOUR OF ADJACENT STREET TRAFFIC

T = 0.74* (X)

 $\begin{array}{ll} T = 0.74 & & 43 \\ T = 31.82 & & \\ T = 32 & & \text{vehicle trips} \\ & & \text{with 25\%} (& 8 & \text{vph}) \text{ entering and 75\%} (& 24 & \text{vph}) \text{ exiting.} \end{array}$

WEEKDAY EVENING PEAK HOUR OF ADJACENT STREET TRAFFIC

 $\begin{array}{ll} T = 0.99^{*} \ (X) \\ T = 0.99^{*} & 43 \\ T = 42.57 \\ T = 43 & \mbox{vehicle trips} \\ \mbox{with } 63\% \ (& 27 & \mbox{vph}) \ \mbox{entering and } 37\% \ (& 16 & \mbox{vph}) \ \mbox{exiting.} \end{array}$

SATURDAY DAILY

 $T = 9.54^{*} (X)$ $T = 9.54^{*} 43$ T = 410.22 T = 410 vehicle tripswith 50% (205 vph) entering and 50% (205 vph) exiting.

SATURDAY MIDDAY PEAK HOUR OF GENERATOR

 $T = 0.93^*(X)$

T = 0.93* 43

T = 39.99

- T = 40 vehicle trips
 - with 54% (22 vph) entering and 46% (18 vph) exiting.

Trip Distribution Calculations

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Journey-to-Work Distribution US Census Journey-to-Work Data

Residence Town Name	Workplace Town Name	All Workers	% of Total Rounded		3
Millis town	Millis town	642	16.7%		Ξ
Millis town	Boston city	408	10.6%		щ
Millis town	Natick town	251	6.5%		ž
Millis town	Newton city	250	6.5%		ž
Millis town	Framingham town	239	6.2%		Ъ
Millis town	Medfield town	129	3.3%		Ē
Millis town	Wellesley town	98	2.5%		≥
Millis town	Medway town	94	2.4%		ž
Millis town	Needham town	92	2.4%		ž
Millis town	Waltham city	88			3
Millis town	Cambridge city	88	2.3%		Ö
Millis town	Walpole town	86	2.2%		3
Millis town	Canton town	84	2.2%		Ö
Millis town	Norwood town	84	2.2%		ž
Millis town	Norfolk town	77	2.0%		ž
Millis town	Weston town	71			3
Millis town	Franklin Town city	66			ш.
Millis town	Stoughton town	66			5
Millis town	Holliston town	60	1.6%		ī
Millis town	Dover town	53	1.4%		ŏ
Millis town	Westwood town	53			3
Millis town	Weymouth Town city	47			3
Millis town	Mariborough city	40			Σ
Millis town	Dedham town	28			õ
Millis town	Milford town	28			Σ
Millis town	Worcester city	26			3
Millis town	Andover town	25			₹
Millis town	Hartford town	21			Ï
Millis town	Somerville city	20			ŵ.
Millis town	Watertown Town city	20			3
Millis town	Holden town	20			Ī
Millis town	Concord town	19			Ō
Millis town	Avon town	19			خ
Millis town	Blackstone town	19			Ξ.
Millis town	North Attleborough town	18			Ź
Millis town	Nashua city	18	0	89.5%	z
	Sub-Totat	3,448			Š
	Other	403			õ
	Total	3,851	100%		Ĕ

			_0 10	To/From Routes	S		
	Auburn Street	Street	Curve Street	Street	Ridge	Ridge Street	Total
Workplace	(South)	(H)	(East)	st)	(North)	rth)	
Millis town	45%	7.5%	35%	5.8%	20%	3.3%	16.7%
Boston city	20%	5.3%	20%	5.3%		%0.0	10.6%
Natick town		%0.0	50%	3.3%	20%	3.3%	6.5%
Newton city	50%	3.2%	25%	1.6%	25%	1.6%	6.5%
Framingham town		0.0%		%0.0	100%	6.2%	6.2%
Medfield town	75%	2.5%	25%	0.8%		0.0%	3.3%
Wellesley town	50%	1.3%	25%	0.6%	25%	0.6%	2.5%
Medway town	100%	2.4%		%0.0		0.0%	2.4%
Needham town	50%	1.2%	25%	0.6%	25%	%9 .0	2.4%
Waltham city	50%	1.2%	25%	0.6%	25%	%9.0	2.3%
Cambridge city	20%	1.1%	25%	%9 .0	25%	%9 .0	2.3%
Walpole town	100%	2.2%		0.0%		%0.0	2.2%
Canton town	100%	2.2%		0.0%		%0.0	2.2%
Norwood town	20%	1.1%	25%	0.5%	25%	0.5%	2.2%
Norfolk town	100%	2.0%		%0.0		%0.0	2.0%
Weston town		%0.0	20%	0.9%	50%	%6.0	1.8%
Franklin Town city		%0.0	20%	%6.0	50%	%6.0	1.7%
Stoughton town	100%	1.7%		%0.0		%0.0	1.7%
Holliston town		%0.0		%0.0	100%	1.6%	1.6%
Dover town	50%	0.7%	25%	0.3%	25%	0.3%	1.4%
Westwood town	100%	1.4%		%0.0		%0.0	1.4%
Weymouth Town city	100%	1.2%		%0.0		%0.0	1.2%
Mariborough city	20%	0.5%		%0'0	50%	0.5%	1.0%
Dedham town	100%	0.7%		0.0%		%0'0	0.7%
Milford town	20%	0.4%		%0.0	20%	0.4%	0.7%
Worcester city	100%	0.7%		0.0%		%0.0	0.7%
Andover town	50%	0.3%	25%	0.2%	25%	0.2%	0.6%
Hartford town	100%	0.5%		0.0%		0.0%	0.5%
Somerville city	50%	0.3%	25%	0.1%	25%	0.1%	0.5%
Watertown Town city	50%	0.3%	25%	0.1%	25%	0.1%	0.5%
Holden town	100%	0.5%		%0.0		%0.0	0.5%
Concord town		%0.0	20%	0.2%	20%	0.2%	0.5%
Avon town	100%	0.5%		%0.0		%0.0	0.5%
Blackstone town	100%	0.5%		0.0%		0.0%	0.5%
North Attleborough town	100%	0.5%		0.0%		%0.0	0.5%
6 Nashua city	20%	0.2%	25%	0.1%	25%	0.1%	0.5%
Sub-Total		44.1%		22.7%		22.7%	89.5%
Other							
Total		49.3%		25.3%		25.4%	1
	SAY	50%		25%		25%	100%

Capacity Analysis

Intersection						
Int Delay, s/veh	1.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	M			ų	4	
Traffic Vol, veh/h	3	18	7	57	40	3
Future Vol, veh/h	3	18	7	57	40	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	84	84	84	84	84	84
Heavy Vehicles, %	0	12	0	2	5	33
Mvmt Flow	4	21	8	68	48	4
	-					
Majar/Minar N	Aine-O		Voior1	N	Joior?	
	Ainor2		Major1		Major2	
Conflicting Flow All	134	50	52	0	-	0
Stage 1	50	-	-	-	-	-
Stage 2	84	-	-	-	-	-
Critical Hdwy	6.4	6.32	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.408	2.2	-	-	-
Pot Cap-1 Maneuver	864	991	1567	-	-	-
Stage 1	978	-	-	-	-	-
Stage 2	944	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	860	991	1567	-	-	-
Mov Cap-2 Maneuver	860	-	-	-	-	-
Stage 1	973	-	-	-	-	-
Stage 2	944	-	-	-	-	-
01030 -	•••					
Approach	ED		NB		SB	
Approach	EB					
HCM Control Delay, s	8.8		0.8		0	
HCM LOS	A					
Minor Lane/Major Mvm	t	NBL	NBT I	EBLn1	SBT	SBR
Capacity (veh/h)		1567	-	970	-	-
HCM Lane V/C Ratio		0.005	-	0.026	-	-
HCM Control Delay (s)		7.3	0	8.8	-	-
HCM Lane LOS		A	Ā	A	-	-
HCM 95th %tile Q(veh)		0	-	0.1	-	-
		÷		2		

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Intersection						
Int Delay, s/veh	1.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	· · · · · · · · · · · · · · · · · · ·		4Î			र्स
Traffic Vol, veh/h	2	9	55	6	20	38
Future Vol, veh/h	2	9	55	6	20	38
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
Grade, %	0	-	0	-	-	0
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	50	0	2	17	5	5
Mvmt Flow	2	11	65	7	24	45
WALLE LOW	2	11	00	1	24	40
Major/Minor	Minor1	ľ	Major1		Major2	
Conflicting Flow All	162	69	0	0	72	0
Stage 1	69	-	-	-	-	-
Stage 2	93	-	-	-	-	-
Critical Hdwy	6.9	6.2	-	-	4.15	-
Critical Hdwy Stg 1	5.9	-	-	-	-	-
Critical Hdwy Stg 2	5.9	-	-	• _	-	-
Follow-up Hdwy	3.95	3.3	-	-	2.245	-
Pot Cap-1 Maneuver	729	1000	-	-	1509	-
Stage 1	845	-	-	-	-	-
Stage 2	823	-	_	-	-	-
Platoon blocked, %	020		_	_		-
Mov Cap-1 Maneuver	717	1000	-	_	1509	_
		1000	-	-	1509	-
Mov Cap-2 Maneuver	717	-	-	-	-	-
Stage 1	845	-	-	-	-	-
Stage 2	810	-	-	-	-	-
Approach	WB		NB		SB	
HCM Control Delay, s	8.9		0		2.6	
HCM LOS	А					
Minor Lane/Major Mvm	nt	NBT	NBRV	VBLn1	SBL	SBT
Capacity (veh/h)		_	-	933	1509	-
HCM Lane V/C Ratio		-	-	0.014		-
HCM Control Delay (s)	1	-	-	8.9	7.4	0
HCM Lane LOS		_	_	A	A, A	Ă
HCM 95th %tile Q(veh)	۱	-	-	Ô	Ô	
	/	-	-	U	U	-

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Intersection	1
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Int Delay, s/veh	0						
Movement	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations	Y		4			र्भ	
Traffic Vol, veh/h	2	60	1	2	40	0	
Future Vol, veh/h	2	60	1	2	40	0	
Conflicting Peds, #/hr	0	0	0	0	0	0	
Sign Control	Free	Free	Stop	Stop	Free	Free	
RT Channelized	-	None	-	None	-	None	
Storage Length	0	-	-	-	-		
Veh in Median Storage,	# -	-	0	-	-	0	
Grade, %	0	-	0	-	-	0	
Peak Hour Factor	87	87	87	87	87	87	
Heavy Vehicles, %	0	3	0	0	7	0	
Mvmt Flow	2	69	1	2	46	0	

Conflicting Flow All 92 0 0 Stage 1 92 - - Stage 2 0 - - Critical Hdwy 6.5 6.2 4.17 - Critical Hdwy Stg 1 5.5 - - - Critical Hdwy Stg 2 - - - - Conditional Hows Stg 2 - - - - Follow-up Hdwy 4 3.3 2.263 - Pot Cap-1 Maneuver 802 - - - Stage 1 823 - - - Mov Cap-1 Maneuver 0 - - - Stage 1 0 - - - Stag	Major/Minor	Ν	/linor2		Major2		
Stage 2 0 - - - Critical Hdwy 6.5 6.2 4.17 - Critical Hdwy Stg 1 5.5 - - - Critical Hdwy Stg 2 - - - - Follow-up Hdwy 4 3.3 2.263 - Pot Cap-1 Maneuver 802 - - - Stage 1 823 - - - Stage 2 - - - - Pot Cap-1 Maneuver 0 - - - Stage 2 - - - - - Platoon blocked, % - - - - - Mov Cap-1 Maneuver 0 - - - - Stage 1 0 - - - - - Mov Cap-2 Maneuver 0 - - - - - - Stage 2 0 - - - - - - - More Lane/Major Mvmt NBLn1			92			0	
Critical Hdwy 6.5 6.2 4.17 - Critical Hdwy Stg 1 5.5 - - - Critical Hdwy Stg 2 - - - - Follow-up Hdwy 4 3.3 2.263 - Pot Cap-1 Maneuver 802 - - - Stage 1 823 - - - Stage 2 - - - - Platoon blocked, % - - - - Mov Cap-1 Maneuver 0 - - - Mov Cap-2 Maneuver 0 - - - Stage 1 0 - - - Stage 2 0 - - - Stage 2 0 - - - Minor Lane/Major Mvmt NBLn1 SB SB HCM LOS - - - Minor Lane/Major Mvmt NBLn1 SBL SBT Capacity (veh/h) - - - HCM Lane U/C Ratio - -	Stage 1		92	-	-	-	
Critical Hdwy Stg 1 5.5 - - - Critical Hdwy Stg 2 - - - - Follow-up Hdwy 4 3.3 2.263 - Pot Cap-1 Maneuver 802 - - - Stage 1 823 - - - Stage 2 - - - - Platoon blocked, % - - - - Mov Cap-1 Maneuver 0 - - - Mov Cap-1 Maneuver 0 - - - Mov Cap-2 Maneuver 0 - - - Stage 1 0 - - - Stage 2 0 - - - Mov Cap-2 Maneuver 0 - - - Stage 1 0 - - - - Stage 2 0 - - - - Mov Cap-2 Maneuver 0 - - - MCM Control Delay, s - - - - <td>Stage 2</td> <td></td> <td>0</td> <td>-</td> <td>-</td> <td>-</td> <td></td>	Stage 2		0	-	-	-	
Critical Hdwy Stg 2 - - - - Follow-up Hdwy 4 3.3 2.263 - Pot Cap-1 Maneuver 802 - - - Stage 1 823 - - - Stage 1 823 - - - Stage 2 - - - - Platoon blocked, % - - - - Mov Cap-1 Maneuver 0 - - - Mov Cap-2 Maneuver 0 - - - Stage 1 0 - - - Stage 2 0 - - - Mov Cap-2 Maneuver 0 - - - Stage 1 0 - - - Stage 2 0 - - - Minor Lane/Major Mvmt NBLn1 SBL SBT Capacity (veh/h) - - - HCM Lane V/C Ratio - - - HCM Lane LOS - - -	Critical Hdwy			6.2	4.17	-	
Follow-up Hdwy 4 3.3 2.263 - Pot Cap-1 Maneuver 802 - - - Stage 1 823 - - - Stage 2 - - - - Platoon blocked, % - - - - Mov Cap-1 Maneuver 0 - - - Mov Cap-2 Maneuver 0 - - - Stage 1 0 - - - Stage 2 0 - - - Mov Cap-2 Maneuver 0 - - - Stage 1 0 - - - Stage 2 0 - - - Mico Control Delay, s - - - HCM LOS - - - - Minor Lane/Major Mvmt NBLn1 SBL SBT - Capacity (veh/h) - - - - HCM Lane V/C Ratio - - - - HCM Lane LOS -	Critical Hdwy Stg 1		5.5	-	-	-	
Pot Cap-1 Maneuver 802 - - Stage 1 823 - - Stage 2 - - - Platoon blocked, % - - Mov Cap-1 Maneuver 0 - - Mov Cap-1 Maneuver 0 - - Mov Cap-2 Maneuver 0 - - Stage 1 0 - - Stage 2 0 - - Mov Cap-2 Maneuver 0 - - Stage 1 0 - - Stage 2 0 - - Minor Lane/Major Mvmt NBLn1 SBL SBT Capacity (veh/h) - - - HCM Loos - - - HCM Lane V/C Ratio - - - HCM Lane LOS - - -	Critical Hdwy Stg 2		-	-	-	-	
Stage 1 823 - - Stage 2 - - - Platoon blocked, % - - - Mov Cap-1 Maneuver 0 - - Mov Cap-2 Maneuver 0 - - Stage 1 0 - - Stage 2 0 - - Approach NB SB HCM Control Delay, s - - HCM LOS - - Minor Lane/Major Mvmt NBLn1 SBL SBT Capacity (veh/h) - - - HCM Lane V/C Ratio - - - HCM Lane LOS - - -			4	3.3	2.263	-	
Stage 2 - - - - Platoon blocked, % - - - Mov Cap-1 Maneuver 0 - - - Mov Cap-2 Maneuver 0 - - - Stage 1 0 - - - Stage 2 0 - - - Approach NB SB - - HCM Control Delay, s - - - - Minor Lane/Major Mvmt NBLn1 SBL SBT - Capacity (veh/h) - - - - HCM Lane V/C Ratio - - - - HCM Control Delay (s) - - - - HCM Lane LOS - - - -	Pot Cap-1 Maneuver			-	-	-	
Platoon blocked, % - Mov Cap-1 Maneuver 0 - - Mov Cap-2 Maneuver 0 - - Stage 1 0 - - Stage 2 0 - - Approach NB SB HCM Control Delay, s - - HCM LOS - - Minor Lane/Major Mvmt NBLn1 SBL SBT Capacity (veh/h) - - - HCM Lane V/C Ratio - - - HCM Lane LOS - - -			823	-	-	-	
Mov Cap-1 Maneuver 0 - - - Mov Cap-2 Maneuver 0 - - - - Stage 1 0 - - - - - Stage 2 0 - - - - - - Approach NB SB HCM SB - - - Minor Lane/Major Mvmt NBLn1 SBL SBT - <td< td=""><td></td><td></td><td>-</td><td>-</td><td>-</td><td>-</td><td></td></td<>			-	-	-	-	
Mov Cap-2 Maneuver 0 - - - Stage 1 0 - - - - Stage 2 0 - - - - Approach NB SB - HCM Control Delay, s - - - Minor Lane/Major Mvmt NBLn1 SBL SBT Capacity (veh/h) - - - HCM Lane V/C Ratio - - - HCM Control Delay (s) - - - HCM Lane LOS - - -						-	
Stage 1 0 - - Stage 2 0 - - Approach NB SB HCM Control Delay, s - - HCM LOS - - Minor Lane/Major Mvmt NBLn1 SBL SBT Capacity (veh/h) - - HCM Lane V/C Ratio - - HCM Control Delay (s) - - HCM Lane LOS - -				-	-	-	
Stage 2 0 - - Approach NB SB HCM Control Delay, s - HCM LOS - Minor Lane/Major Mvmt NBLn1 SBL SBT Capacity (veh/h) - - HCM Lane V/C Ratio - - HCM Control Delay (s) - - HCM Lane LOS - -				-	-	-	
ApproachNBSBHCM Control Delay, s-HCM LOS-Minor Lane/Major MvmtNBLn1SBLSBTCapacity (veh/h)-Capacity (veh/h)HCM Lane V/C RatioHCM Control Delay (s)HCM Lane LOS				-	-	-	
HCM Control Delay, s HCM LOS - Minor Lane/Major Mvmt NBLn1 SBL SBT Capacity (veh/h) - - - HCM Lane V/C Ratio - - - HCM Control Delay (s) - - - HCM Lane LOS - - -	Stage 2		0	-	-	-	
HCM Control Delay, s HCM LOS - Minor Lane/Major Mvmt NBLn1 SBL SBT Capacity (veh/h) - - - HCM Lane V/C Ratio - - - HCM Control Delay (s) - - - HCM Lane LOS - - -							
HCM Control Delay, s - HCM LOS - Minor Lane/Major Mvmt NBLn1 SBL SBT Capacity (veh/h) - - HCM Lane V/C Ratio - - HCM Control Delay (s) - - HCM Lane LOS - -	Approach		NB		SB		
HCM LOS - Minor Lane/Major Mvmt NBLn1 SBL SBT Capacity (veh/h) - - - HCM Lane V/C Ratio - - - HCM Control Delay (s) - - - HCM Lane LOS - - -							
Minor Lane/Major MvmtNBLn1SBLSBTCapacity (veh/h)HCM Lane V/C RatioHCM Control Delay (s)HCM Lane LOS			-				
Capacity (veh/h)HCM Lane V/C RatioHCM Control Delay (s)HCM Lane LOS							
Capacity (veh/h)HCM Lane V/C RatioHCM Control Delay (s)HCM Lane LOS	Minor Lano/Major Mumt	NDI n1	CDI	CDT			
HCM Lane V/C RatioHCM Control Delay (s)HCM Lane LOS		INDLIII	SDL	SDI			
HCM Control Delay (s) HCM Lane LOS		-	-	-			
HCM Lane LOS		-	-	-			
		-	-	-			
		-	-	-			
	HUM 95th %tile Q(ven)	-	-	-			

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Intersection						
Int Delay, s/veh	1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			ب ا ا	د أ	
Traffic Vol, veh/h	4	6	7	58	67	7
Future Vol, veh/h	4	6	7	58	67	7
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	71	71	71	71	71	71
Heavy Vehicles, %	0	0	0	0	2	0
Mvmt Flow	6	8	10	82	94	10
Major/Minor M	inor2	N	Anior1	N	Major2	
			Major1	0		0
Conflicting Flow All	201	99	104	U	-	U
Stage 1	99	-	-	-	•	-
Stage 2	102	-	-	-	-	-
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	792	962	1500	-	-	-
Stage 1	930	-	-	-	-	-
Stage 2	927	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	786	962	1500	-	-	-
Mov Cap-2 Maneuver	786	-	-	-	-	-
Stage 1	923	-	-	-	-	-
Stage 2	927	-	-	-	-	-
Approach	EB		NB		SB	
HCM Control Delay, s	9.1		0.8		0	
HCM LOS	A		0.0		· ·	
TIOM EOO						
			NOT		007	000
Minor Lane/Major Mvmt		NBL		EBLn1	SBT	SBR
Capacity (veh/h)		1500	-	883	-	-
HCM Lane V/C Ratio		0.007	-	0.016	-	-
HCM Control Delay (s)		7.4	0	9.1	-	-
HCM Lane LOS		A	А	A	-	-
HCM 95th %tile Q(veh)		0	-	0	-	-

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Intersection						
Int Delay, s/veh	2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		†			ب ا ا
Traffic Vol, veh/h	4	19	46	5	13	60
Future Vol, veh/h	4	19	46	5	13	60
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	F	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage,		-	0	-	-	0
Grade, %	0	-	õ	-	-	Õ
Peak Hour Factor	71	71	71	71	71	71
	0	0	0	0	0	2
Heavy Vehicles, %		27	65	7	18	85
Mvmt Flow	6	21	CO	1	10	60
Major/Minor N	/linor1	P	Major1]	Major2	
Conflicting Flow All	190	69	0	0	72	0
Stage 1	69	-	-	-	-	-
Stage 2	121	-	_	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	_
Critical Hdwy Stg 1	5.4	- 0.2	-	-	-	-
Critical Hdwy Stg 2	5.4	-	_	_	-	-
Follow-up Hdwy	3.5	3.3			2.2	_
		1000	-	-	1541	-
Pot Cap-1 Maneuver	804		-	-	1041	-
Stage 1	959	-	-	-	-	-
Stage 2	909	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	794	1000	-	-	1541	-
Mov Cap-2 Maneuver	794	-	-	-	-	-
Stage 1	959	-	-	-	-	-
Stage 2	898	-	-	-	-	-
U ^a						
Approach	WB		NB		SB	
HCM Control Delay, s	8.9		0		1.3	
HCM LOS	0.9 A		U		1.0	
	м					
					_	
Minor Lane/Major Mvm	t	NBT	NBRV	VBLn1	SBL	SBT
Capacity (veh/h)		-	-	957	1541	-
HCM Lane V/C Ratio		-	-	0.034	0.012	-
HCM Control Delay (s)		-	-	8.9	7.4	0
HCM Lane LOS		-	-	А	А	А
HCM 95th %tile Q(veh)		-	-	0.1	0	-

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	N .4
Movement	WBL
Int Delay, s/veh	0.6
Intersection	

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	¥		ţ,			र्स
Traffic Vol, veh/h	4	49	2	3	59	5
Future Vol, veh/h	4	49	2	3	59	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage	,# -	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	70	70	70	70	70	70
Heavy Vehicles, %	0	0	0	0	2	0
Mvmt Flow	6	70	3	4	84	7

Major/Minor	Ν	/linor2		Major2		
Conflicting Flow All		175	7	0	0	
Stage 1		175	-	-	-	
Stage 2		0	-	-	-	
Critical Hdwy		6.5	6.2	4.12	-	
Critical Hdwy Stg 1		5.5	-	-	-	
Critical Hdwy Stg 2		-	-	-	-	
Follow-up Hdwy		4		2.218	-	
Pot Cap-1 Maneuver		722	1081	-	-	
Stage 1		758	-	-	-	
Stage 2		-	-	-	-	
Platoon blocked, %					-	
Mov Cap-1 Maneuver		0	1081	-	-	
Mov Cap-2 Maneuver		0	-	-	-	
Stage 1		0	-	-	-	
Stage 2		0	-	-	-	
Approach		NB		SB		
HCM Control Delay, s		8.4				
HCM LOS		А				
Minor Lane/Major Mvmt	NBLn1	SBL	SBT			
Capacity (veh/h)	1081	-	-			
HCM Lane V/C Ratio	0.007	-	-			
HCM Control Delay (s)	8.4	-	-			
HCM Lane LOS	A	-	-			
HCM 95th %tile Q(veh)	0	-	-			

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Intersection						
Int Delay, s/veh	1.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	<u> </u>			र्भ	4	
Traffic Vol, veh/h	3	19	7	60	42	3
Future Vol, veh/h	3	19	7	60	42	3
Conflicting Peds, #/hr		0	0	0	0	Ō
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized		None	-	None	-	None
Storage Length	0	-	-		-	-
Veh in Median Storag		-	-	0	0	-
Grade, %	e, # 0 0	-	-	0	Ő	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	04	12	0	2	5	33
	4	23	8	71	50	33 4
Mvmt Flow	4	23	Q	71	50	4
Major/Minor	Minor2		Major1	1	Major2	
Conflicting Flow All	139	52	54	0	-	0
Stage 1	52	-	-	-	-	-
Stage 2	87	-	-	-	-	-
Critical Hdwy	6.4	6.32	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.408	2.2	-	-	-
Pot Cap-1 Maneuver	859	988	1564	-	-	-
Stage 1	976	-		-	-	-
Stage 2	941	-	-	-	-	-
Platoon blocked, %	511			-	-	-
Mov Cap-1 Maneuver	855	988	1564	-	-	-
Mov Cap-1 Maneuver		000	1004	_	-	
	971	-	-	-	-	_
Stage 1		-	-	-	-	-
Stage 2	941	-	-	-	-	-
Approach	EB		NB		SB	
HCM Control Delay, s	8.8		0.8		0	
HCM LOS	А					
Miney Long /Mater Mar	~	יסא	ידרו	-DI -4	ерт	CDD
Minor Lane/Major Mvr	nt	NBL	NRI	EBLn1	SBT	SBR
Capacity (veh/h)		1564	-	967	-	-
HCM Lane V/C Ratio		0.005		0.027	-	· -
HCM Control Delay (s)	7.3	0	8.8	-	-
HCM Lane LOS		А	А	А	-	-
HCM 95th %tile Q(veh	ı)	0	-	0.1	-	-

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Intersection						
Int Delay, s/veh	1.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	M		4			ب ا ا
Traffic Vol, veh/h	2	9	58	6	21	40
Future Vol, veh/h	2	9	58	6	21	40
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
Grade, %	<i>.</i> 0	-	0	-	-	0
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	50	0	2	17	5	5
Mvmt Flow	2	11	69	7	25	48
	2	11	03	1	20	-0
Major/Minor	Minor1	N	Major1		Major2	
Conflicting Flow All	171	73	0	0	76	0
Stage 1	73	-	-	-	-	-
Stage 2	98	-	-	-	-	-
Critical Hdwy	6.9	6.2	-	-	4.15	-
Critical Hdwy Stg 1	5.9	-	-	-	-	-
Critical Hdwy Stg 2	5.9	-	-	-	-	-
Follow-up Hdwy	3.95	3.3	-	-	2.245	-
Pot Cap-1 Maneuver	720	995	-	-	1504	-
Stage 1	841	-	-	-	-	-
Stage 2	819	-	-	-	-	-
Platoon blocked, %	010			-		_
Mov Cap-1 Maneuver	708	995		_	1504	_
	708	990	-	_	1004	_
Mov Cap-2 Maneuver		-	-	-	-	-
Stage 1	841	-	-	-	-	-
Stage 2	805	-	-	-	-	-
Approach	WB		NB		SB	
HCM Control Delay, s	8.9		0		2.6	
HCM LOS	A					
Minor Long/Maine Maine	. +	NDT	NDDW		CDI	CDT
Minor Lane/Major Mvn	IL	NBT		VBLn1	SBL	SBT
Capacity (veh/h)		-	-	927	1504	-
HCM Lane V/C Ratio		-	-	0.014		-
HCM Control Delay (s))	-	-	8.9	7.4	0
HCM Lane LOS		-	-	A	A	А
HCM 95th %tile Q(veh)	-	-	0	0.1	-

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Intersection						
Int Delay, s/veh	0					
·					001	007
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		1	-		र्सु
Traffic Vol, veh/h	2	63	1	2	42	0
Future Vol, veh/h	2	63	1	2	42	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0		-	-	-	-
Veh in Median Storage,	# -		0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	3	0	0	7	0
Mvmt Flow	2	72	1	2	48	0
	~	12	1	2	10	Ũ
Major/Minor		<u> </u>	/linor2		Major2	
Conflicting Flow All			96	0	0	0
Stage 1			96	-	-	-
Stage 2			0	-	-	-
Critical Hdwy			6.5	6.2	4.17	-
Critical Hdwy Stg 1			5.5	_	-	-
Critical Hdwy Stg 2			-	-	-	
Follow-up Hdwy			4	33	2.263	_
Pot Cap-1 Maneuver			798	0.0	2.200	_
			819	-	-	-
Stage 1				-	-	-
Stage 2			-	-	-	-
Platoon blocked, %						-
Mov Cap-1 Maneuver			0	-	-	-
Mov Cap-2 Maneuver			0	-	-	-
Stage 1			0	-	-	-
Stage 2			0	-	-	-
v						
Assess			ып		00	
Approach			NB		SB	
HCM Control Delay, s						
HCM LOS			-			
Minor Lane/Major Mvmt	Ν	VBLn1	SBL	SBT		
Capacity (veh/h)						
		-	-	-		
HCM Lane V/C Ratio		-	-	-		
HCM Control Delay (s)		-	-	-		
HCM Lane LOS		-	-	-		
HCM 95th %tile Q(veh)		-	-	-		

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Int Delay, s/veh 0.9 Movement EBL EBR NBL NBT SBT SBR Lane Configurations Y 4 6 7 62 71 7 Future Vol, veh/h 4 6 7 62 71 7 Conflicting Peds, #/hr 0	Intersection						
Lane Configurations Y 4 6 7 62 71 7 Future Vol, veh/h 4 6 7 62 71 7 Future Vol, veh/h 4 6 7 62 71 7 Conflicting Peds, #/hr 0 0 0 0 0 0 0 Sign Control Stop Stop Free Free Free Free Free RT Channelized - None - None - - - Storage Length 0 - - - 0 0 - Veh in Median Storage, # 0 - - 0 0 - - Grade, % 0 0 0 0 2 0 Mwnt Flow 6 8 10 87 100 10 Major/Minor Minor2 Major1 Major2 - - - - - - - - - - - - - - - - - </td <td>Int Delay, s/veh</td> <td>0.9</td> <td></td> <td></td> <td></td> <td></td> <td></td>	Int Delay, s/veh	0.9					
Lane Configurations Y 4 6 7 62 71 7 Future Vol, veh/h 4 6 7 62 71 7 Future Vol, veh/h 4 6 7 62 71 7 Conflicting Peds, #/hr 0 0 0 0 0 0 0 0 Sign Control Stop Stop Stop Free Free Free Free RT Channelized - None - None None None Storage Length 0 - - 0 0 - - Veh in Median Storage, # 0 - - 0 0 - - - Grade, % 0 0 0 0 2 0 - </td <td>Movement</td> <td>EBL</td> <td>EBR</td> <td>NBL</td> <td>NBT</td> <td>SBT</td> <td>SBR</td>	Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h 4 6 7 62 71 7 Future Vol, veh/h 4 6 7 62 71 7 Conflicting Peds, #/hr 0 0 0 0 0 0 0 Sign Control Stop Stop Free Free Free Free RT Channelized - None - None - None Storage Length 0 - - 0 0 - Veh in Median Storage, # 0 - - 0 0 - Grade, % 0 - - 0 0 - - Peak Hour Factor 71 71 71 71 71 71 71 Heavy Vehicles, % 0 0 0 0 2 0 - - Stage 1 105 - - - - - - - Conflicting Flow All 212 105 110 0 0 0 - - -<							
Conflicting Peds, #/hr 0 0 0 0 0 0 0 Sign Control Stop Stop Free Free Free Free Free RT Channelized - None - None - None Storage Length 0 - - 0 0 - Grade, % 0 - - 0 0 - Peak Hour Factor 71 71 71 71 71 71 Heavy Vehicles, % 0 0 0 2 0 Mymt Flow 6 8 10 87 100 10 Major/Minor Minor2 Major1 Major2 - - - - Conflicting Flow All 212 105 110 0 - 0 - Stage 1 105 - - - - - - - Conflicting Flow All 212 105 110 0 - 0 - - - - <	Traffic Vol, veh/h				62	71	
Sign Control Stop Stop Free None None <td>Future Vol, veh/h</td> <td>4</td> <td>6</td> <td></td> <td></td> <td>71</td> <td></td>	Future Vol, veh/h	4	6			71	
RT Channelized - None - None - None Storage Length 0 - - 0 0 - Veh in Median Storage, # 0 - - 0 0 - Grade, % 0 - - 0 0 - Peak Hour Factor 71 71 71 71 71 71 Heavy Vehicles, % 0 0 0 0 2 0 Mymt Flow 6 8 10 87 100 10 Major/Minor Minor2 Major1 Major2 0 0 0 0 Stage 1 105 - - - - - - - Conflicting Flow All 212 105 110 0 - 0 - Stage 1 105 -		0	0				
Storage Length 0 -		Stop		Free		Free	
Veh in Median Storage, # 0 - - 0 0 - Grade, % 0 - - 0 0 - Peak Hour Factor 71 71 71 71 71 71 Heavy Vehicles, % 0 0 0 0 2 0 Mimor Minor2 Major1 Major2 Conflicting Flow All 212 105 110 0 - 0 Stage 1 105 - <th< td=""><td></td><td></td><td>None</td><td>-</td><td>None</td><td>-</td><td>None</td></th<>			None	-	None	-	None
Grade, % 0 - - 0 0 - Peak Hour Factor 71 71 71 71 71 71 71 Heavy Vehicles, % 0 0 0 0 2 0 Mymt Flow 6 8 10 87 100 10 Major/Minor Minor2 Major1 Major2			-	-	-	-	-
Peak Hour Factor 71<	•		-	-			-
Heavy Vehicles, % 0 0 0 0 2 0 Mymt Flow 6 8 10 87 100 10 Major/Minor Minor2 Major1 Major2 Conflicting Flow All 212 105 110 0 - 0 Stage 1 105 - - - - - 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 - - - Stage 1 924 - - - - - Stage 2 922 - - - - - - Nov Cap-1 Maneuver 776 955 1493 - - - - Mov Cap-2 Maneuver 776 - - - - - - -				-			
Mvmt Flow 6 8 10 87 100 10 Major/Minor Minor2 Major1 Major2 Conflicting Flow All 212 105 110 0 - 0 Stage 1 105 - - - - - - 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 - - - Follow-up Hdwy 3.5 3.3 2.2 - - - Stage 1 924 - - - - - - Stage 2 922 - - - - - - Mov Cap-1 Maneuver 776 955 1493 - - -							
Major/Minor Minor2 Major1 Major2 Conflicting Flow All 212 105 110 0 - 0 Stage 1 105 - - - - - - Critical Hdwy 6.4 6.2 4.1 - - - - Critical Hdwy Stg 1 5.4 - - - - - - Critical Hdwy Stg 2 5.4 - - - - - - Critical Hdwy Stg 2 5.4 - - - - - - Follow-up Hdwy 3.5 3.3 2.2 - - - - Pot Cap-1 Maneuver 781 955 1493 - - - - Stage 1 924 - - - - - - - Mov Cap-1 Maneuver 776 955 1493 - - - - - S							
Conflicting Flow All 212 105 110 0 - 0 Stage 1 105 -	wvmt Flow	6	8	10	87	100	10
Conflicting Flow All 212 105 110 0 - 0 Stage 1 105 -							
Stage 1 105 -	Major/Minor N	/linor2				Major2	
Stage 2 107 -	Conflicting Flow All		105	110	0	-	0
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 781 955 1493 - - - Stage 1 924 - - - - - - Stage 2 922 - - - - - - Platoon blocked, % - - - - - - - Mov Cap-1 Maneuver 776 955 1493 - - - - Stage 1 918 - - - - - - - Stage 2 922 - - - - - - - Approach EB NB SB SB - - - - HCM			-	-	-	-	-
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 781 955 1493 - - Stage 1 924 - - - - Stage 2 922 - - - - Platoon blocked, % - - - - Mov Cap-1 Maneuver 776 955 1493 - - Mov Cap-2 Maneuver 776 - - - - Stage 1 918 - - - - Stage 2 922 - - - - Stage 2 922 - - - - Stage 2 922 - - - - Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR Capacity (veh/h) 1493 - 874 - -				-	-	-	-
Critical Hdwy Stg 2 5.4 -			6.2	4.1	-	-	-
Follow-up Hdwy 3.5 3.3 2.2 - - - Pot Cap-1 Maneuver 781 955 1493 - - - - Stage 1 924 - - - - - - - Stage 2 922 - - - - - - - Platoon blocked, % - - - - - - - - Mov Cap-1 Maneuver 776 955 1493 - - - - Mov Cap-2 Maneuver 776 - - - - - - Stage 1 918 - - - - - - - Stage 2 922 - - - - - - - Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR - - - - - - - - - - - - - - - - - -			-	-	-	-	-
Pot Cap-1 Maneuver 781 955 1493 - - Stage 1 924 - - - - Stage 2 922 - - - - Platoon blocked, % - - - - Mov Cap-1 Maneuver 776 955 1493 - - Mov Cap-2 Maneuver 776 - - - - Stage 1 918 - - - - Stage 2 922 - - - - Mico Control Delay, s 9.2 0.8 0 - HCM LOS A - - - - Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR Capacity (veh/h) 1493 - 874 - - HCM Lane V/C Ratio				-	-	-	-
Stage 1 924 -					-	-	-
Stage 2 922 - - - - Platoon blocked, % - - - - Mov Cap-1 Maneuver 776 955 1493 - - Mov Cap-2 Maneuver 776 - - - - Stage 1 918 - - - - Stage 2 922 - - - - Approach EB NB SB - HCM Control Delay, s 9.2 0.8 0 HCM LOS A - - - Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR Capacity (veh/h) 1493 - 874 - HCM Lane V/C Ratio 0.007 - 0.016 - HCM Lane LOS A A A - -	•		955	1493	-	-	-
Platoon blocked, % - - - Mov Cap-1 Maneuver 776 955 1493 - - Mov Cap-2 Maneuver 776 - - - - Stage 1 918 - - - - Stage 2 922 - - - - Approach EB NB SB - HCM Control Delay, s 9.2 0.8 0 HCM LOS A - - - Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR Capacity (veh/h) 1493 - 874 - HCM Lane V/C Ratio 0.007 - 0.016 - HCM Lane LOS A A A - -			-	-	-	-	-
Mov Cap-1 Maneuver 776 955 1493 - - - Mov Cap-2 Maneuver 776 - <td></td> <td>922</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td>		922	-	-	-	-	-
Mov Cap-2 Maneuver 776 -			~		-	-	-
Stage 1 918 -			955	1493	-	-	-
Stage 2922ApproachEBNBSBHCM Control Delay, s9.20.80HCM LOSAAMinor Lane/Major MvmtNBLNBT EBLn1SBTSBRCapacity (veh/h)1493-874-HCM Lane V/C Ratio0.007-0.016-HCM Control Delay (s)7.409.2-HCM Lane LOSAAA-			-	-	-	-	-
ApproachEBNBSBHCM Control Delay, s9.20.80HCM LOSAAMinor Lane/Major MvmtNBLNBT EBLn1SBTSBRCapacity (veh/h)1493-874-HCM Lane V/C Ratio0.007-0.016-HCM Control Delay (s)7.409.2-HCM Lane LOSAAA-			-	-	-	-	-
HCM Control Delay, s 9.2 0.8 0 HCM LOS A A A Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR Capacity (veh/h) 1493 - 874 - HCM Lane V/C Ratio 0.007 - 0.016 - HCM Control Delay (s) 7.4 0 9.2 - HCM Lane LOS A A - -	Stage 2	922	-	-	-	-	-
HCM Control Delay, s 9.2 0.8 0 HCM LOS A A 0 Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR Capacity (veh/h) 1493 - 874 - HCM Lane V/C Ratio 0.007 - 0.016 - HCM Control Delay (s) 7.4 0 9.2 - HCM Lane LOS A A - -							
HCM Control Delay, s 9.2 0.8 0 HCM LOS A A A Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR Capacity (veh/h) 1493 - 874 - HCM Lane V/C Ratio 0.007 - 0.016 - HCM Control Delay (s) 7.4 0 9.2 - HCM Lane LOS A A - -	Approach	EB		NB		SB	
HCM LOSAMinor Lane/Major MvmtNBLNBT EBLn1SBTSBRCapacity (veh/h)1493-874-HCM Lane V/C Ratio0.007-0.016-HCM Control Delay (s)7.409.2-HCM Lane LOSAAA-		9.2		0.8		0	
Minor Lane/Major MvmtNBLNBT EBLn1SBTSBRCapacity (veh/h)1493-874-HCM Lane V/C Ratio0.007-0.016-HCM Control Delay (s)7.409.2-HCM Lane LOSAAA-							
Capacity (veh/h) 1493 - 874 - - HCM Lane V/C Ratio 0.007 - 0.016 - - HCM Control Delay (s) 7.4 0 9.2 - - HCM Lane LOS A A A - -							
Capacity (veh/h) 1493 - 874 - - HCM Lane V/C Ratio 0.007 - 0.016 - - HCM Control Delay (s) 7.4 0 9.2 - - HCM Lane LOS A A A - -	Minor Lane/Major Mvm	t	NBL	NBTI	EBLn1	SBT	SBR
HCM Lane V/C Ratio 0.007 - 0.016 - - HCM Control Delay (s) 7.4 0 9.2 - - HCM Lane LOS A A A - -							-
HCM Control Delay (s)7.409.2-HCM Lane LOSAAA-				-		-	-
HCM Lane LOS A A A				-		-	-
				A		-	-
	HCM 95th %tile Q(veh)			-		-	-

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Intersection						
Int Delay, s/veh	2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	¥		4			ب ا
Traffic Vol, veh/h	4	20	49	5	14	63
Future Vol, veh/h	4	20	49	5	14	63
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	71	71	71	71	71	71
Heavy Vehicles, %	0	0	0	0	0	2
Mvmt Flow	6	28	69	7	20	89
	-					
Malan Alana A	Enand		data ad		M=:0	
	<u>Ainor1</u>		Major1		Major2	
Conflicting Flow All	202	73	0	0	76	0
Stage 1	73	-	-	-	-	-
Stage 2	129	-	-	-	-	-
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	791	995	-	-	1536	-
Stage 1	955	-	-	-	-	-
Stage 2	902	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	780	995	-	-	1536	-
Mov Cap-2 Maneuver	780	-	-	-	-	-
Stage 1	955	-	-	-	-	-
Stage 2	889	-	-	-	-	-
Approach	WB		NB		SB	
····			0		1.3	
HCM Control Delay, s	8.9		0		1.3	
HCM LOS	А					
Minor Lane/Major Mvml	t	NBT	NBRV	VBLn1	SBL	SBT
Capacity (veh/h)		-	-	951	1536	-
HCM Lane V/C Ratio		-	-	0.036		-
HCM Control Delay (s)		-	-	8.9	7.4	0
HCM Lane LOS		-	-	A	A	Â
HCM 95th %tile Q(veh)		-	-	0.1	0	-

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Intersection	
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Int Dolov, c/uch	0.6					
Int Delay, s/veh	0.0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	١Ý		4			با
Traffic Vol, veh/h	4	52	2	3	62	5
Future Vol, veh/h	4	52	2	3	62	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage,	# -	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	70	70	70	70	70	70
Heavy Vehicles, %	0	0	0	0	2	0
Mvmt Flow	6	74	3	4	89	7

Major/Minor	Ν	linor2		Major2		
Conflicting Flow All		185	7	0	0	
Stage 1		185	-	-	-	
Stage 2		0	-	-	-	
Critical Hdwy		6.5	6.2	4.12	-	
Critical Hdwy Stg 1		5.5	-	-	-	
Critical Hdwy Stg 2		-	-	-	-	
Follow-up Hdwy		4	3.3	2.218	-	
Pot Cap-1 Maneuver		713	1081	-	-	
Stage 1		751	-	-	-	
Stage 2		-	-	-	-	
Platoon blocked, %					-	
Mov Cap-1 Maneuver		0	1081	-	-	
Mov Cap-2 Maneuver		0	-	-	-	
Stage 1		0	-	-	-	
Stage 2		0	-	-	-	
Approach		NB		SB		
HCM Control Delay, s		8.4				
HCM LOS		А				
Minor Lane/Major Mvmt	NBLn1	SBL	SBT			
Capacity (veh/h)	1081	-	-			
HCM Lane V/C Ratio	0.007	-	-			
HCM Control Delay (s)	8.4	-	-			
HCM Lane LOS	A	-	-			
HCM 95th %tile Q(veh)	0	-	-			
	-					

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Intersection						
Int Delay, s/veh	2.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	¥			4	4	
Traffic Vol, veh/h	9	19	7	60	42	5
Future Vol, veh/h	9	19	7	60	42	5
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	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	0	12	0	2	5	33
Mvmt Flow	11	23	8	71	50	6
	• •		•			
	/linor2		Major1		Major2	
Conflicting Flow All	140	53	56	0	-	0
Stage 1	53	-	-	-	-	-
Stage 2	87	-	-	-	-	-
Critical Hdwy	6.4	6.32	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.408	2.2	-	-	-
Pot Cap-1 Maneuver	858	987	1562	-	-	-
Stage 1	975	-	-	-	-	-
Stage 2	941	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	854	987	1562	-	-	-
Mov Cap-2 Maneuver	854	-	-	-	-	-
Stage 1	970	-	-	-	-	-
Stage 2	941	-	-	-	-	-
Olugo Z	ודס					
Approach	EB		NB		SB	
HCM Control Delay, s	9		0.8		0	
HCM LOS	Α					
Minor Lane/Major Mvm	ł	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	•	1562	-	940		-
HCM Lane V/C Ratio		0.005		0.035	-	-
HCM Control Delay (s)		7.3	- 0	0.035	-	-
HCM Lane LOS			A	A	-	-
HCM 95th %tile Q(veh)		A	А	0.1	-	
		0	-	0.1	-	-

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Int Delay, s/veh 1.9 Movement WBL NBR NBR SBL SBT Lane Configurations Y P 4 1 Traffic Vol, veh/h 4 9 58 12 21 40 Future Vol, veh/h 4 9 58 12 21 40 Conflicting Peds, #hr 0 0 0 0 0 0 Storage Length 0 - - - - - Veh in Median Storage, # 0 - 0 - 0 - 0 Feak Hour Factor 84 84 84 84 84 84 Major/Minor Minor1 Major1 Major2 - - - Conflicting Flow All 174 76 0 0 83 0 Stage 1 76 - - - - - Conflicting Flow All 174 76 0 83	······						
Movement WBL WBL NBT NBT NBL SBL SBT Lane Configurations Y + -	Intersection						
Lane Configurations Y Image: style="text-align: center;">Image: style="text-align: center;">Image: style="text-align: center;">Image: style="text-align: style="text-align: center;">Image: style="text-align: style="tex	Int Delay, s/veh	1.9					
Lane Configurations Y Ip 4 Traffic Vol, veh/h 4 9 58 12 21 40 Future Vol, veh/h 4 9 58 12 21 40 Conflicting Peds, #hr 0 0 0 0 0 0 0 Sign Control Stop Stop Free Free Free Free RT Channelized - None - None - None Storage Length 0 - 0 - 0 - 0 Grade, % 0 - 0 - - 0 - 0 Peak Hour Factor 84 84 84 84 84 84 84 Major/Minor Minor1 Major1 Major2 - - - - Conflicting Flow All 174 76 0 83 0 - - - - - - - - - - - - - - - -	Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h 4 9 58 12 21 40 Future Vol, veh/h 4 9 58 12 21 40 Conflicting Peds, #/hr 0 0 0 0 0 0 Stop Conflicting Peds, #/hr 0 0 0 0 0 0 Stop Conflicting Peds, #/hr 0 - - - - Stop Conflicting Peds, #/hr 0 - - - - Veh in Median Storage, # 0 - 0 - - 0 Free Free Free Free - 0 - 0 Peak Hour Factor 84 84 84 84 84 84 84 Heavy Vehicles, % 50 0 2 17 5 5 Mymt Flow 5 11 69 14 25 48 Major/Minor Minor1 Major1 Major2 - - - Conflicting Flow All 174 76 0 0 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>							
Future Vol, veh/h 4 9 58 12 21 40 Conflicting Peds, #/hr 0 0 0 0 0 0 0 Sign Control Stop Stop Free Free Free Free Free R Channelized - None - - - - - Storage Length 0 - 0 - - - 0 Grade, % 0 - 0 - - 0 Peak Hour Factor 84 84 84 84 84 84 Heavy Vehicles, % 50 0 2 17 5 5 Mymt Flow 5 11 69 14 25 48 Major/Minor Minor1 Major1 Major2 - - Conflicting Flow All 174 76 0 0 83 0 Stage 1 59 - - - - - Critical Hdwy Stg 2 5.9 - - - <td></td> <td>-</td> <td>9</td> <td></td> <td>12</td> <td>21</td> <td></td>		-	9		12	21	
Conflicting Peds, #/hr 0	-				12	21	40
Sign Control Stop Stop Free Free Free Free Free RT Channelized - None - None - None Storage Length 0 - 0 - - - Veh in Median Storage, # 0 - 0 - 0 Grade, % 0 - 0 - 0 Peak Hour Factor 84 84 84 84 Heavy Vehicles, % 50 0 2 17 5 Minort Minor1 Major1 Major2	-	0	0		0	0	0
RT Channelized - None - None Storage Length 0 - - - Veh in Median Storage, # 0 - 0 - 0 Grade, % 0 - 0 - 0 Peak Hour Factor 84 84 84 84 84 84 Heavy Vehicles, % 50 0 2 17 5 5 Major/Minor Minor1 Major1 Major2		Stop	Stop	Free	Free	Free	Free
Storage Length 0 - - - - 0 Veh in Median Storage, # 0 - 0 - - 0 Grade, % 0 - 0 - - 0 Peak Hour Factor 84 84 84 84 84 Heavy Vehicles, % 50 0 2 17 5 5 Mymt Flow 5 11 69 14 25 48 Major/Minor Minor1 Major1 Major2 Conflicting Flow All 174 76 0 0 83 0 Stage 1 76 - - - - - Critical Hdwy 6.9 6.2 - - - - Critical Hdwy Stg 1 5.9 - - - - - Follow-up Hdwy 3.95 3.3 - 2.245 - - Pot Cap-1 Maneuvér 717 991 - 1495 - - - Stage 1 839 <td></td> <td>-</td> <td></td> <td></td> <td>None</td> <td>-</td> <td>None</td>		-			None	-	None
Veh in Median Storage, # 0 - 0 - - 0 Grade, % 0 - 0 - - 0 Peak Hour Factor 84 84 84 84 84 84 Heavy Vehicles, % 50 0 2 17 5 5 Mvmt Flow 5 11 69 14 25 48 Major/Minor Minor1 Major1 Major2 - - Conflicting Flow All 174 76 0 0 83 0 Stage 1 76 - - - - - Critical Hdwy 6.9 6.2 - - 4.15 - Critical Hdwy Stg 1 5.9 - - - - Follow-up Hdwy 3.95 3.3 - 2.245 - Pot Cap-1 Maneuver 717 991 - - - Stage 1 839 - - - - Mov Cap-1 Maneuver 705 - -		0		-	-	-	-
Grade, % 0 - 0 - - 0 Peak Hour Factor 84 84 84 84 84 84 84 Heavy Vehicles, % 50 0 2 17 5 5 Mvmt Flow 5 11 69 14 25 48 Major/Minor Minor1 Major1 Major2			-	0	-	-	0
Peak Hour Factor 84<	•	-	-		-	-	0
Heavy Vehicles, % 50 0 2 17 5 5 Mwmt Flow 5 11 69 14 25 48 Major/Minor Minor1 Major1 Major2 Conflicting Flow All 174 76 0 0 83 0 Stage 1 76 - - - - - Critical Hdwy 6.9 6.2 - 4.15 - - Critical Hdwy Stg 1 5.9 - - - - - Critical Hdwy Stg 2 5.9 - - - - - Follow-up Hdwy 3.95 3.3 - 2.245 - - Pot Cap-1 Maneuver 717 991 - 1495 - - Stage 1 839 - - - - - - Mov Cap-1 Maneuver 705 991 - 1495 - - - Stage 1 839 - - - - - - -			84		84	84	84
Mvmt Flow 5 11 69 14 25 48 Major/Minor Minor1 Major1 Major2 Conflicting Flow All 174 76 0 0 83 0 Stage 1 76 - - - - - - Critical Hdwy 6.9 6.2 - - - - - Critical Hdwy Stg 1 5.9 - - - - - Critical Hdwy Stg 2 5.9 - - - - - Follow-up Hdwy 3.95 3.3 - 2.245 - Pot Cap-1 Maneuver 717 991 - 1495 - Stage 1 839 - - - - Mov Cap-1 Maneuver 705 991 - 1495 - Mov Cap-2 Maneuver 705 9 - - - - Stage 1 839 - -					17	5	5
Major/Minor Minor1 Major1 Major2 Conflicting Flow All 174 76 0 0 83 0 Stage 1 76 - - - - - - Critical Hdwy 6.9 6.2 - 4.15 - - Critical Hdwy Stg 1 5.9 - - - - - Critical Hdwy Stg 2 5.9 - - - - - Critical Hdwy Stg 2 5.9 - - - - - Follow-up Hdwy 3.95 3.3 - 2.245 - Pot Cap-1 Maneuver 717 991 - 1495 - Stage 1 839 - - - - Mov Cap-1 Maneuver 705 991 - 1495 - Mov Cap-2 Maneuver 705 - - - - Stage 1 839 - - - <t< td=""><td></td><td></td><td>11</td><td>69</td><td>14</td><td>25</td><td>48</td></t<>			11	69	14	25	48
Conflicting Flow All 174 76 0 0 83 0 Stage 1 76 - - - - - Stage 2 98 - - - - - Critical Hdwy 6.9 6.2 - - 4.15 - Critical Hdwy Stg 1 5.9 - - - - Critical Hdwy Stg 2 5.9 - - - - Follow-up Hdwy 3.95 3.3 - 2.245 - Follow-up Hdwy 3.95 3.3 - 2.245 - Pot Cap-1 Maneuver 717 991 - 1495 - Stage 1 839 - - - - Stage 2 819 - - - - Mov Cap-1 Maneuver 705 991 - 1495 - Mov Cap-2 Maneuver 705 - - - - Stage 1 839 - - - - - Mor C							
Conflicting Flow All 174 76 0 0 83 0 Stage 1 76 - - - - - Stage 2 98 - - - - - Critical Hdwy 6.9 6.2 - - 4.15 - Critical Hdwy Stg 1 5.9 - - - - Critical Hdwy Stg 2 5.9 - - - - Follow-up Hdwy 3.95 3.3 - 2.245 - Follow-up Hdwy 3.95 3.3 - 2.245 - Pot Cap-1 Maneuver 717 991 - 1495 - Stage 1 839 - - - - Stage 2 819 - - - - Mov Cap-1 Maneuver 705 991 - 1495 - Stage 1 839 - - - - - Stage 2 805 - - - - - <td< td=""><td>Major/Minor</td><td>Minor1</td><td>1</td><td>Maior1</td><td> </td><td>Maior2</td><td></td></td<>	Major/Minor	Minor1	1	Maior1		Maior2	
Stage 1 76 - - - - Stage 2 98 - - - - Critical Hdwy 6.9 6.2 - 4.15 - Critical Hdwy Stg 1 5.9 - - - - Critical Hdwy Stg 2 5.9 - - - - Follow-up Hdwy 3.95 3.3 - 2.245 - Pot Cap-1 Maneuver 717 991 - 1495 - Stage 1 839 - - - - Mov Cap-1 Maneuver 705 991 - 1495 - Mov Cap-2 Maneuver 705 991 - - - Stage 1 839 - - - - Stage 2 805 - - - - Stage 1 839 - - - - Stage 2 805 - - - - Stage 1 839 - - - - <tr< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td>0</td></tr<>							0
Stage 2 98 -<				-	-	-	-
Critical Hdwy 6.9 6.2 - - 4.15 - Critical Hdwy Stg 1 5.9 - - - - - Critical Hdwy Stg 2 5.9 - - - - - Critical Hdwy Stg 2 5.9 - - - - - Follow-up Hdwy 3.95 3.3 - 2.245 - - Pot Cap-1 Maneuver 717 991 - 1495 - - Stage 1 839 - - - - - Platoon blocked, % - - - - - Mov Cap-1 Maneuver 705 991 - - - Stage 1 839 - - - - Stage 2 805 - - - - Stage 2 805 - - - - Minor Lane/Major Mvmt NBT NBRWBLn1 SBL SBT Capacity (veh/h) - - 881 1495 -				-	-	-	-
Critical Hdwy Stg 1 5.9 -					-	4.15	-
Critical Hdwy Stg 2 5.9 -			-	-	-	-	-
Follow-up Hdwy 3.95 3.3 - 2.245 - Pot Cap-1 Maneuver 717 991 - 1495 - Stage 1 839 - - - - Stage 2 819 - - - - Platoon blocked, % - - - - Mov Cap-1 Maneuver 705 991 - 1495 - Mov Cap-2 Maneuver 705 - - - - Stage 1 839 - - - - Stage 2 805 - - - - Approach WB NB SB - HCM Control Delay, s 9.2 0 2.6 HCM LOS A - - 881 1495 HCM Lane V/C Ratio - - 881 1495 - HCM Lane LOS - - 9.2 7.4 0 HCM Lane LOS - - A A			-	· -	-	-	-
Pot Cap-1 Maneuver 717 991 - 1495 - Stage 1 839 - - - - Stage 2 819 - - - - Platoon blocked, % - - - - Mov Cap-1 Maneuver 705 991 - 1495 - Mov Cap-1 Maneuver 705 991 - - - Mov Cap-2 Maneuver 705 - - - - Stage 1 839 - - - - - Stage 2 805 - - - - - Approach WB NB SB - - - HCM LOS A - - - - - Minor Lane/Major Mvmt NBT NBRWBLn1 SBL SBT - Capacity (veh/h) - - 881 1495 - HCM Lane V/C Ratio - - 0.018 0.017 - HCM Los - <td< td=""><td></td><td></td><td>3.3</td><td>-</td><td>-</td><td>2.245</td><td>-</td></td<>			3.3	-	-	2.245	-
Stage 1 839 - - - - Stage 2 819 - - - - Platoon blocked, % - - - - Mov Cap-1 Maneuver 705 991 - 1495 - Mov Cap-2 Maneuver 705 - - - - Stage 1 839 - - - - Stage 2 805 - - - - Approach WB NB SB - - HCM Control Delay, s 9.2 0 2.6 - - Minor Lane/Major Mvmt NBT NBRWBLn1 SBL SBT - Capacity (veh/h) - - 881 1495 - HCM Lane V/C Ratio - - 9.2 7.4 0 HCM Lane LOS - - A A A				-	-	1495	-
Stage 2 819 -	•		-	-	-	-	-
Platoon blocked, % - - - Mov Cap-1 Maneuver 705 991 - 1495 - Mov Cap-2 Maneuver 705 - - - - Stage 1 839 - - - - Stage 2 805 - - - - Approach WB NB SB - - HCM Control Delay, s 9.2 0 2.6 - - Minor Lane/Major Mvmt NBT NBRWBLn1 SBL SBT - Capacity (veh/h) - - 881 1495 - HCM Lane V/C Ratio - - 9.2 7.4 0 HCM Lane LOS - - A A A			-	-	-	-	-
Mov Cap-1 Maneuver 705 991 - - 1495 - Mov Cap-2 Maneuver 705 - - - - - Stage 1 839 - - - - - Stage 2 805 - - - - - Approach WB NB SB - - - HCM Control Delay, s 9.2 0 2.6 - - Minor Lane/Major Mvmt NBT NBRWBLn1 SBL SBT - Capacity (veh/h) - - 881 1495 - HCM Lane V/C Ratio - - 0.018 0.017 - HCM Control Delay (s) - - 9.2 7.4 0 HCM Lane LOS - - A A A				-	-		-
Mov Cap-2 Maneuver 705 -		705	991	-	-	1495	-
Stage 1 839 -		705	-	-	-	-	-
Stage 2 805 - - - Approach WB NB SB HCM Control Delay, s 9.2 0 2.6 HCM LOS A 2.6 Minor Lane/Major Mvmt NBT NBRWBLn1 SBL SBT Capacity (veh/h) - - 881 1495 - HCM Lane V/C Ratio - - 0.018 0.017 - HCM Control Delay (s) - - 9.2 7.4 0 HCM Lane LOS - - A A A		839	-	-	-	-	-
HCM Control Delay, s9.202.6HCM LOSAAMinor Lane/Major MvmtNBTNBRWBLn1SBLSBTSBTSBTCapacity (veh/h)8811495-HCM Lane V/C Ratio0.0180.017-9.27.40HCM Lane LOSAA		805	-	-	-	-	-
HCM Control Delay, s 9.2 0 2.6 HCM LOS A A Minor Lane/Major Mvmt NBT NBRWBLn1 SBL SBT Capacity (veh/h) - - 881 1495 - HCM Lane V/C Ratio - - 0.018 0.017 - HCM Control Delay (s) - - 9.2 7.4 0 HCM Lane LOS - - A A A							
HCM Control Delay, s 9.2 0 2.6 HCM LOS A A A Minor Lane/Major Mvmt NBT NBRWBLn1 SBL SBT Capacity (veh/h) - - 881 1495 - HCM Lane V/C Ratio - - 0.018 0.017 - HCM Control Delay (s) - - 9.2 7.4 0 HCM Lane LOS - - A A A	Approach	WB		NB		SB	
HCM LOS A Minor Lane/Major Mvmt NBT NBRWBLn1 SBL SBT Capacity (veh/h) - - 881 1495 - HCM Lane V/C Ratio - - 0.018 0.017 - HCM Control Delay (s) - - 9.2 7.4 0 HCM Lane LOS - - A A	·	9.2		0		2.6	
Capacity (veh/h) - - 881 1495 - HCM Lane V/C Ratio - - 0.018 0.017 - HCM Control Delay (s) - - 9.2 7.4 0 HCM Lane LOS - - A A A		А					
Capacity (veh/h) - - 881 1495 - HCM Lane V/C Ratio - - 0.018 0.017 - HCM Control Delay (s) - - 9.2 7.4 0 HCM Lane LOS - - A A A							
HCM Lane V/C Ratio - - 0.018 0.017 - HCM Control Delay (s) - - 9.2 7.4 0 HCM Lane LOS - - A A	transmission in the second sec	t	NBT	NBRV			SBT
HCM Control Delay (s)9.27.40HCM Lane LOSAA			-	-			-
HCM Lane LOS A A A			-	-			
			-	-			
HCM 95th %tile Q(veh) 0.1 0.1 -			-	-			А
	HCM 95th %tile Q(veh)		-	-	0.1	0.1	-

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Movement EBL EBR NBL NBT SBT SBR Lane Configurations Y -	Intersection						
Lane Configurations Y 4 1 Traffic Vol, veh/h 6 12 4 64 42 2 Future Vol, veh/h 6 12 4 64 42 2 Future Vol, veh/h 6 12 4 64 42 2 Conflicting Peds, #/hr 0 0 0 0 0 0 0 0 Sign Control Stop Stop Free Free Free Free Free Free Ree None None Storage Length 0 - - 0 0 - Gade, % 0 0 0 2 5 0 Mymmetrized Maior Major Ma	Int Delay, s/veh	1.4					
Traffic Vol, veh/h 6 12 4 64 42 2 Future Vol, veh/h 6 12 4 64 42 2 Conflicting Peds, #/hr 0 0 0 0 0 0 0 Sign Control Stop Stop Free Free Free Free Ree RT Channelized - None - None - None - Storage Length 0 - - - 0 0 - Veh in Median Storage, # 0 - - 0 0 - - Grade, % 0 0 0 2 5 0 - Peak Hour Factor 84 84 84 84 84 84 84 Heavy Vehicles, % 0 0 0 2 5 0 - Conflicting Flow All 137 51 52 0 - 0 - Stage 1 51 - - - - - -			EBR	NBL			SBR
Future Vol, veh/h 6 12 4 64 42 2 Conflicting Peds, #/hr 0 0 0 0 0 0 0 Sign Control Stop Stop Free Free Free Free Free RT Channelized - None - None - None - Storage Length 0 - - 0 0 - - Veh in Median Storage, # 0 - - 0 0 - - Grade, % 0 0 0 2 5 0 Major/ Major Peak Hour Factor 84 84 84 84 84 84 84 Heavy Vehicles, % 0 0 0 2 5 0 Major/Minor Minor2 Major1 Major2 0 - 0 Stage 1 51 - - - - - - - - - - - - - - -				- 0			
Conflicting Peds, #/hr 0 0 0 0 0 0 0 0 Sign Control Stop Stop Free Free Free Free Free RT Channelized - None - None - - Storage Length 0 - - 0 0 - Veh in Median Storage, # 0 - - 0 0 - Grade, % 0 0 - - 0 0 - Peak Hour Factor 84 84 84 84 84 84 84 Heavy Vehicles, % 0 0 0 2 5 0 Major/Minor Minor2 Major1 Major2 - - - - - Conflicting Flow All 137 51 52 0 - 0 Stage 1 51 - - - - - -							
Sign Control Stop Stop Free None None							
RT Channelized - None - None - None Storage Length 0 - - 0 0 - Grade, % 0 - - 0 0 - Grade, % 0 - - 0 0 - Peak Hour Factor 84 84 84 84 84 Heavy Vehicles, % 0 0 2 5 0 Mymt Flow 7 14 5 76 50 2 Major/Minor Minor2 Major1 Major2 -		-		-		-	
Storage Length 0 - 0 0 137 51 52 0 0 0 3 22 - - - - - - - - - - - - - - - 3 3 3 137 51 5							
Veh in Median Storage, # 0 - - 0 0 - Grade, % 0 - - 0 0 - Peak Hour Factor 84 84 84 84 84 84 Heavy Vehicles, % 0 0 0 2 5 0 Mymt Flow 7 14 5 76 50 2 Major/Minor Minor2 Major1 Major2 - 0 Conflicting Flow All 137 51 52 0 - 0 Stage 1 51 - - - - - - - Critical Hdwy 6.4 6.2 4.1 -			None	-	None	-	None
Grade, % 0 - - 0 0 - Peak Hour Factor 84 84 84 84 84 84 84 Heavy Vehicles, % 0 0 0 2 5 0 Mymt Flow 7 14 5 76 50 2 Major/Minor Minor2 Major1 Major2 Conflicting Flow All 137 51 52 0 - 0 Stage 1 51 - - - - - - Conflicting Flow All 137 51 52 0 - 0 Stage 1 51 -			-	-	-	-	
Peak Hour Factor 84 84 84 84 84 84 84 84 Heavy Vehicles, % 0 0 0 2 5 0 Mymt Flow 7 14 5 76 50 2 Major/Minor Minor2 Major1 Major2 - 0 Conflicting Flow All 137 51 52 0 - 0 Stage 1 51 - - - - - 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 - - - - Stage 1 977 - </td <td></td> <td></td> <td>-</td> <td>-</td> <td></td> <td></td> <td></td>			-	-			
Heavy Vehicles, % 0 0 0 2 5 0 Mymt Flow 7 14 5 76 50 2 Major/Minor Minor2 Major/I Major/I Major/I Conflicting Flow All 137 51 52 0 - 0 Stage 1 51 - - - - - 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 - - - Follow-up Hdwy 3.5 3.3 2.2 - - - Stage 1 977 - - - - - Stage 1 977 - - - - - Mov Cap-1 Maneuver 858 1023 1567 - - - Mov Cap-2 Maneuver							
Mvmt Flow 7 14 5 76 50 2 Major/Minor Minor2 Major1 Major2 Conflicting Flow All 137 51 52 0 0 Stage 1 51 - - - - Stage 2 86 - - - - 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 - - Follow-up Hdwy 3.5 3.3 2.2 - - Stage 1 977 - - - - Stage 2 942 - - - - Mov Cap-1 Maneuver 858 1023 1567 - - Mov Cap-2 Maneuver 858 - - -							
Major/Minor Minor2 Major1 Major2 Conflicting Flow All 137 51 52 0 - 0 Stage 1 51 - - - - - - Stage 2 86 - - - - - - Critical Hdwy 6.4 6.2 4.1 - - - - Critical Hdwy Stg 1 5.4 - - - - - - Critical Hdwy Stg 2 5.4 - </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>							
Conflicting Flow All 137 51 52 0 - 0 Stage 1 51 - Follow-up Hdwy 3.5 3.3 2.2 - <td>WWITE FIOW</td> <td>1</td> <td>14</td> <td>5</td> <td>10</td> <td>50</td> <td>2</td>	WWITE FIOW	1	14	5	10	50	2
Conflicting Flow All 137 51 52 0 0 Stage 1 51 - Stage 1 977 -			-		ja Natura		
Stage 1 51 - - - - Stage 2 86 - - - - Critical Hdwy 6.4 6.2 4.1 - - Critical Hdwy Stg 1 5.4 - - - - Critical Hdwy Stg 2 5.4 - - - - Critical Hdwy Stg 2 5.4 - - - - Critical Hdwy Stg 2 5.4 - - - - Follow-up Hdwy 3.5 3.3 2.2 - - - Follow-up Hdwy 3.5 3.3 2.2 - - - Pot Cap-1 Maneuver 861 1023 1567 - - - Stage 2 942 - - - - - - Mov Cap-2 Maneuver 858 1023 1567 - - - - Stage 1 974 - - - - - - - Mtor Lane/Major Mvmt NBL N							
Stage 2 86 - - - - - Critical Hdwy 6.4 6.2 4.1 - - - - Critical Hdwy Stg 1 5.4 - - - - - - Critical Hdwy Stg 2 5.4 - - - - - - Critical Hdwy Stg 2 5.4 - - - - - - Follow-up Hdwy 3.5 3.3 2.2 - - - - Follow-up Hdwy 3.5 3.3 2.2 - - - - Platon blocked, % - - - - - - - Mov Cap-1 Maneuver 858 1023 1567 - - - - Mov Cap-2 Maneuver 858 1023 1567 -				52	0	-	0
Critical Hdwy 6.4 6.2 4.1 - - - Critical Hdwy Stg 1 5.4 - - - - - Critical Hdwy Stg 2 5.4 - - - - - Critical Hdwy Stg 2 5.4 - - - - - Follow-up Hdwy 3.5 3.3 2.2 - - - Pot Cap-1 Maneuver 861 1023 1567 - - - Stage 1 977 - - - - - - Platoon blocked, % - - - - - - - Mov Cap-1 Maneuver 858 1023 1567 - - - - Mov Cap-2 Maneuver 858 - - - - - - Stage 1 974 - - - - - - - Stage 2 942 - - - - - - - HCM LOS				-	-	-	-
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 861 1023 1567 - - Stage 1 977 - - - - Stage 2 942 - - - - Platoon blocked, % - - - - Mov Cap-1 Maneuver 858 1023 1567 - - Mov Cap-2 Maneuver 858 - - - - Stage 1 974 - - - - Stage 2 942 - - - - Stage 2 942 - - - - Stage 2 942 - - - - More Cap-2 Maneuver 8.8 0.4 0 - HCM Control Delay, s 8.8 0.4 0 - HCM LOS	-				-	-	-
Critical Hdwy Stg 2 5.4 -				4.1	-	-	-
Follow-up Hdwy 3.5 3.3 2.2 - - Pot Cap-1 Maneuver 861 1023 1567 - - Stage 1 977 - - - - Stage 2 942 - - - - Platoon blocked, % - - - - Mov Cap-1 Maneuver 858 1023 1567 - - Mov Cap-2 Maneuver 858 - - - - Stage 1 974 - - - - Stage 2 942 - - - - Stage 1 974 - - - - Stage 2 942 - - - - Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR Capacity (veh/h) 1567 - 961 - - HCM Lane V/C Ratio 0.003 - 0.022 - - HCM Control Delay (s) 7.3 0 8.8 - - <td></td> <td></td> <td></td> <td>-</td> <td>-</td> <td>-</td> <td>-</td>				-	-	-	-
Pot Cap-1 Maneuver 861 1023 1567 - - Stage 1 977 - - - - Stage 2 942 - - - - Platoon blocked, % - - - - - Mov Cap-1 Maneuver 858 1023 1567 - - Mov Cap-2 Maneuver 858 - - - - Stage 1 974 - - - - Stage 2 942 - - - - Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR Capacity (veh/h) 1567 - 961 - HCM Lane V/C Ratio 0.003 - 0.022 - HCM Control Delay (s) 7.3 0 8.8 - HCM Lane LOS				-		-	-
Stage 1 977 -					-	-	-
Stage 2 942 - - - - - - - - Platoon blocked, % -	•		1023	100/	-	-	-
Platoon blocked, % - - - Mov Cap-1 Maneuver 858 1023 1567 - - Mov Cap-2 Maneuver 858 - - - - Stage 1 974 - - - - Stage 2 942 - - - - Approach EB NB SB HCM Control Delay, s 8.8 0.4 0 HCM LOS A 0 Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR Capacity (veh/h) 1567 - 961 - - HCM Lane V/C Ratio 0.003 - 0.022 - - HCM Control Delay (s) 7.3 0 8.8 - - HCM Lane LOS A A A - - -			-	-	-	-	-
Mov Cap-1 Maneuver 858 1023 1567 - </td <td></td> <td>942</td> <td></td> <td>-</td> <td>-</td> <td>-</td> <td>-</td>		942		-	-	-	-
Mov Cap-2 Maneuver 858 -		050	1000	1507	-	-	-
Stage 1 974 -			1023	1007	-	-	-
Stage 2 942 - - - Approach EB NB SB HCM Control Delay, s 8.8 0.4 0 HCM LOS A 0 Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR Capacity (veh/h) 1567 - 961 - HCM Lane V/C Ratio 0.003 - 0.022 - HCM Control Delay (s) 7.3 0 8.8 - HCM Lane LOS A A - -			-	-	-	-	-
Approach EB NB SB HCM Control Delay, s 8.8 0.4 0 HCM LOS A 0 Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR Capacity (veh/h) 1567 - 961 - HCM Lane V/C Ratio 0.003 - 0.022 - HCM Control Delay (s) 7.3 0 8.8 - HCM Lane LOS A A - -			-	-	-	-	-
HCM Control Delay, s 8.8 0.4 0 HCM LOS A 0 Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR Capacity (veh/h) 1567 - 961 - HCM Lane V/C Ratio 0.003 - 0.022 - HCM Control Delay (s) 7.3 0 8.8 - HCM Lane LOS A A - -	Slage Z	942	-	-	-	-	-
HCM Control Delay, s 8.8 0.4 0 HCM LOS A Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR Capacity (veh/h) 1567 - 961 HCM Lane V/C Ratio 0.003 - 0.022 HCM Control Delay (s) 7.3 0 8.8 HCM Lane LOS A A A							
HCM LOSAMinor Lane/Major MvmtNBLNBT EBLn1SBTSBRCapacity (veh/h)1567-961-HCM Lane V/C Ratio0.003-0.022-HCM Control Delay (s)7.308.8-HCM Lane LOSAAA-	Approach	_					- 14
Minor Lane/Major MvmtNBLNBT EBLn1SBTSBRCapacity (veh/h)1567-961-HCM Lane V/C Ratio0.003-0.022-HCM Control Delay (s)7.308.8-HCM Lane LOSAAA-	-			0.4		0	
Capacity (veh/h) 1567 - - - HCM Lane V/C Ratio 0.003 - 0.022 - - HCM Control Delay (s) 7.3 0 8.8 - - HCM Lane LOS A A - - -	HCM LOS	А					
Capacity (veh/h) 1567 - 961 - - HCM Lane V/C Ratio 0.003 - 0.022 - - HCM Control Delay (s) 7.3 0 8.8 - - HCM Lane LOS A A A - -							
HCM Lane V/C Ratio 0.003 - 0.022 - - HCM Control Delay (s) 7.3 0 8.8 - - HCM Lane LOS A A A - -	Minor Lane/Major Mvm	t	NBL	NBT	EBLn1	SBT	SBR
HCM Control Delay (s) 7.3 0 8.8 HCM Lane LOS A A A	Capacity (veh/h)		1567		961	-	-
HCM Lane LOS A A A	HCM Lane V/C Ratio		0.003	-	0.022	-	×
	HCM Control Delay (s)		7.3	0	8.8	-	-
HCM 95th %tile Q(veh) 0 - 0.1	HCM Lane LOS		А	А		-	-
	HCM 95th %tile Q(veh)		0	-	0.1	-	×

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Internetion						
Intersection						
Int Delay, s/veh	0					
-	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		VVDIN		MDIN		<u>न</u> ्त
Traffic Vol, veh/h	י ד י 2	67	ት 1	2	54	•• 0
					54 54	
Future Vol, veh/h	2	67	1	2		0
Conflicting Peds, #/hr	0	0	0	0	0	0
0	Free	Free	Stop	Stop	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	. 0	-	-	-	-	-
Veh in Median Storage, a		-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	3	0	0	7	0
Mvmt Flow	2	77	1	2	62	0
Maior/Minor			line=0		Maia-0	
Major/Minor	·		Minor2		Major2	
Conflicting Flow All			124	0	0	0
Stage 1			124	-	-	-
Stage 2			0	-	-	-
Critical Hdwy			6.5	6.2	4.17	-
Critical Hdwy Stg 1			5.5	-	-	-
Critical Hdwy Stg 2			-	-	-	-
Follow-up Hdwy			4	3.3	2.263	-
Pot Cap-1 Maneuver			770	-	-	-
Stage 1			797	-	-	-
Stage 2			-	-	-	-
Platoon blocked, %						-
Mov Cap-1 Maneuver			0	_	_	_
				-	-	-
Mov Cap-2 Maneuver			0	-	-	-
Stage 1			0	-	-	-
Stage 2			0	-	-	-
Approach			NB		SB	
Approach			•			
HCM Control Delay, s			-			
			-			
HCM Control Delay, s HCM LOS			-			
HCM Control Delay, s HCM LOS Minor Lane/Major Mvmt	Ν	NBLn1	- SBL	SBT		
HCM Control Delay, s HCM LOS	N	NBLn1	- SBL	SBT -		
HCM Control Delay, s HCM LOS Minor Lane/Major Mvmt	<u> </u>	<u>VBLn1</u> - -	SBL	SBT		
HCM Control Delay, s HCM LOS Minor Lane/Major Mvmt Capacity (veh/h)	N	<u>IBLn1</u> - -	- SBL - -	SBT - -		
HCM Control Delay, s HCM LOS Minor Lane/Major Mvmt Capacity (veh/h) HCM Lane V/C Ratio HCM Control Delay (s)	Ν	<u>VBLn1</u> - - -	- SBL - - -	<u>SBT</u> - - -	<u>.</u>	
HCM Control Delay, s HCM LOS Minor Lane/Major Mvmt Capacity (veh/h) HCM Lane V/C Ratio	N	<u>VBLn1</u> - - - -	- SBL - - -	<u>SBT</u> - - - -		

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Intersection						
Int Delay, s/veh	1.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	¥1			र्भ	4	
Traffic Vol, veh/h	. 8		7	62	71	14
Future Vol, veh/h	8		7	62	71	14
Conflicting Peds, #/hr	0		0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-		-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage		-	-	0	0	-
Grade, %	0		-	0	0	-
Peak Hour Factor	71	71	71	71	71	71
Heavy Vehicles, %	0		0	0	2	0
Mvmt Flow	11	8	10	87	100	20
		•				
Materia Malancia	<i>I</i> :0		Anton M		Malan 0	
	Minor2		Major1		Major2	
Conflicting Flow All	217	110	120	0	-	0
Stage 1	110	-	-	-	-	-
Stage 2	107	-	-	-	-	-
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	776	949	1480	-	-	-
Stage 1	920	-	-	-	-	-
Stage 2	922	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	771	949	1480	-	-	-
Mov Cap-2 Maneuver	771	-	-	-	-	-
Stage 1	914	-	-	-	-	-
Stage 2	922	-	-	-	-	-
-						
Approach	EB		NB		SB	
	9.4		0.8		0	
HCM Control Delay, s			0.0		U	
HCM LOS	A					
Minor Lane/Major Mvm	t	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)		1480	-	838	-	*
HCM Lane V/C Ratio		0.007	-	0.024	-	-
HCM Control Delay (s)		7.4	0	9.4	-	-
HCM Lane LOS		А	Α	А	-	-
HCM 95th %tile Q(veh)		0	-	0.1	-	-
. ,						

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Intersection						
Int Delay, s/veh	2.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		4			ب
Traffic Vol, veh/h	11	20	49	9	14	63
Future Vol, veh/h	11	20	49	9	14	63
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	e,#0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	71	71	71	71	71	71
Heavy Vehicles, %	0	0	0	0	0	2
Mvmt Flow	15	28	69	13	20	89
Major/Minor	Minor1	r	Major1	,	Major2	
Conflicting Flow All	205	76	0	0	82	0
Stage 1	76	- 10	-	U	02	0
Stage 2	129	-	-	-	_	-
	6.4	6.2	-	-	4.1	-
Critical Hdwy	5.4 5.4		-	-	4.1	-
Critical Hdwy Stg 1		-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	788	991	-	-	1528	-
Stage 1	952	-	-	-	-	-
Stage 2	902	-	-	-	-	-
Platoon blocked, %		~~ /	-	-		-
Mov Cap-1 Maneuver	777	991	-	-	1528	-
Mov Cap-2 Maneuver	777	-	-	-	-	-
Stage 1	952	-	-	-	-	-
Stage 2	889	-	-	-	-	-
Approach	WB		NB		SB	
HCM Control Delay, s	9.2		0		1.3	
HCM LOS	A		-			
Minor Lane/Major Mvm	nt	NBT	NBRV	/BLn1	SBL	SBT
Capacity (veh/h)					1528	- 001
HCM Lane V/C Ratio		-	-	0.048		-
HCM Control Delay (s)		-	-	9.2	7.4	0
HCM Lane LOS		-	-	9.2 A	7.4 A	A
HCM 95th %tile Q(veh)	١	-	-	0.2	0	A
	1	-	-	Ų.Z	U	-

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ntersection							
nt Delay, s/veh	1.3						
Novement	EBL	EBR	NBL	NBT	SBT	SBR	
ane Configurations	Y			र्भ	1≯		
raffic Vol, veh/h	4	8	13	54	67	7	
Future Vol, veh/h	4	8	13	54	67	7	
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	-	-	-	-	-	
/eh in Median Storage,	# 0	-	-	0	0	-	
Grade, %	0	-	-	0	0	-	
Peak Hour Factor	71	71	71	71	71	71	
leavy Vehicles, %	0	0	0	0	2	0	
/vmt Flow	6	11	18	76	94	10	
in a construction of the second s							
/lajor/Minor M	inor2	N	Major1	Ν	/lajor2		
Conflicting Flow All	211	99	104	0		0	
Stage 1	99	- 35	104		-	-	
Stage 2	112	-	_			_	
Critical Hdwy	6.4	6.2	4.1	-	Ū	_	
Critical Hdwy Stg 1	5.4	- 0.2	4.1		1794 Tail	-	
	5.4 5.4			-	-	-	
Critical Hdwy Stg 2	3.5	- 3.3	2.2	-	-	-	
ollow-up Hdwy Pot Cap-1 Maneuver	3.5 782	962	1500	-	-	-	
		902	1500	-		-	
Stage 1	930	-	-	-	-	-	
Stage 2	918	-	-	-	-	9 - 0	
latoon blocked, %	770	000	1500	-	-	-	
Nov Cap-1 Maneuver	772	962	1500		-	-	
lov Cap-2 Maneuver	772	-	-			-	
Stage 1	918	-	-	-	-	-	
Stage 2	918	3 - 0	-	-	-	-	
pproach	EB		NB		SB		
ICM Control Delay, s	9.1		1.4		0		
ICM LOS	А						
linor Lane/Major Mvmt		NBL	NBT E	EBLn1	SBT	SBR	
apacity (veh/h)		1500	-	889	-	-	
CM Lane V/C Ratio		0.012	-	0.019	. =	-	
CM Control Delay (s)		7.4	0	9.1	-	-	
CM Lane LOS		А	А	А	-	-	
CM 95th %tile Q(veh)		0		0.1			

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Intersection						
Int Delay, s/veh	0.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	¥		12			र्भ
Traffic Vol, veh/h	4	65	2	3	70	5
Future Vol, veh/h	4	65	2	3	70	5
Conflicting Peds, #/hr	0	0	0	Õ	0	Õ
Sign Control	Free		Stop	Stop	Free	Free
RT Channelized	-	None		None		None
Storage Length	0	NULLE	-	NUNC	-	NUNG
				-	-	-
Veh in Median Storage		-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	70	70	70	70	70	70
Heavy Vehicles, %	0	0	0	0	2	0
Mvmt Flow	6	93	3	4	100	7
Major/Minor		ĸ	Minor2	1	Maior?	
Major/Minor		l,		7	Major2 0	0
Conflicting Flow All			207	1	U	U
Stage 1			207	-	-	-
Stage 2			0	-	-	-
Critical Hdwy			6.5	6.2	4.12	-
Critical Hdwy Stg 1			5.5	-	-	-
Critical Hdwy Stg 2			-	-	-	-
Follow-up Hdwy			4	3.3	2.218	-
Pot Cap-1 Maneuver			693	1081	-	-
Stage 1			734	-	-	-
Stage 2				-	-	-
Platoon blocked, %			-	-	-	_
			٥	1081		-
Mov Cap-1 Maneuver			0	1001	-	-
Mov Cap-2 Maneuver			0	-	-	-
Stage 1			0	-	-	-
Stage 2			0	-	-	-
Approach			NB		SB	
HCM Control Delay, s			8.4			
HCM LOS			A.			
			~			
Minor Lane/Major Mvm	1 1	NBLn1	SBL	SBT		
	. 1	1081				
Capacity (veh/h)			-	-		
HCM Lane V/C Ratio		0.007	-	-		
HCM Control Delay (s)		8.4	-	-		
HCM Lane LOS		A	-	-		
HCM 95th %tile Q(veh)		0	-	-		

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