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TO:	David Ennis Affirmative Investments, Inc.	DATE:	September 14, 2022
FROM:	Keri Pyke, P.E., PTOE Christa Lucas, P.E.	HSH PROJECT NO.:	2021202.00
SUBJECT:	38 Meshacket Road– Response to Peer Review Comments		

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*Howard Stein Hudson (HSH)* has reviewed the traffic engineering peer review comments from Fuss & O'Neill, dated September 7, 2022. The comments were associated with the Traffic Impact Review Memorandum we prepared for the proposed 38 Meshacket Road residential development. The purpose of this memorandum is to respond to the following comments from Fuss & O'Neill:

- **Comment 1 – Safety.** The proponent should present a more detailed review of available crash data on Meshacket Road and at the intersection of Meshacket Road and Edgartown-West Tisbury Road for the most recent five years of data (2017-2021). The review should be summarized in a table that includes the manner of collision and crash severity.
- **Comment 2 – Trip Generation.** The memorandum indicates that trip generation was estimated based on Land Use Code 223 – Affordable Housing, but the reported trip generation estimates appear to be based on Land Use Code 220 – Multifamily Housing Low-Rise. The proponent should clarify which land use code was selected and justify the selection.
- **Comment 3 – Traffic Impact.** We recommend the proponent develop 2029 No-build and Build volume conditions that are based upon the turning movement counts collected in 2017 at the intersection of Meshacket Road and Edgartown-West Tisbury Road. The future year conditions should incorporate the traffic generated by the proposed development at 139 Meeting House Way.
- **Comment 4 – Traffic Impact.** In order to assess the proposed development's traffic impact, we recommend the proponent conduct capacity and queue analyses at the intersection of Meshacket Road and Edgartown-West Tisbury Road for the 2029 No-build and Build conditions.
- **Comment 5 – Site Plan.** The proponent should clarify the material of the proposed walking paths on site, as the hatch depicted is not included in the legend.

The following sections summarize responses to these comments.



## Safety

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HSH conducted a safety analysis at the intersection of Meshacket Road and Edgartown-West Tisbury Road. The safety analysis was conducted to identify and evaluate possible existing safety issues. Crash data for this corridor was obtained from the Massachusetts Department of Transportation (MassDOT) crash portal database for the most recent period available of closed data (2015-2019) as well as data on record for 2020-2022. **Table 1** summarizes the nine crashes recorded between 2015 and July 2022 at the Meshacket Road/Edgartown-West Tisbury Road intersection.

Most of the crashes reported at the unsignalized intersection are single-vehicle (44%) or angle crashes (33%). Most crashes were reported with dry roadway conditions (67%); during clear weather conditions (67%); and occurred during daylight hours (78%). No fatalities were recorded. No crashes involved school buses. Two crashes involved bicyclists. No crashes involved pedestrians. In more than half of the crashes (5 of 9), contributing circumstances included the driver failing to yield/inattention (3 crashes), driver exceeding the speed limit (1 crash), or driver failing to keep in lane (1 crash).

Crash rates are determined based on the number of crashes at the intersection per million entering vehicles (MEV). The average crash rate at the unsignalized intersections in the study is less than the MassDOT statewide average. Crash data and the crash rate worksheet for the Meshacket Road/Edgartown-West Tisbury Road intersection is provided in the **Appendix**.



**Table 1. Crash Data Summary**

Characteristic	Meshacket Road/ Edgartown-West Tisbury Road
<b>Total Crashes</b>	<b>9</b>
<b>Year</b>	
2015	2
2016	0
2017	1
2018	2
2019	0
2020*	2
2021*	1
2022*	1
<b>Severity</b>	
PDO	4
Non-fatal Injury	4
Unknown	1
Fatality	0
<b>Crash Type</b>	
Single vehicle	4
Angle	3
Rear-end	2
<b>Hit and Run</b>	<b>0</b>
Pedestrian	0
Bicyclist	0
School Bus	0
<b>Weather</b>	
Clear	6
Cloudy	1
Cloudy/Rain	1
Rain/Fog, smog, smoke	1
<b>Roadway Surface</b>	
Dry	6
Wet	2
Unknown/No data	1
<b>Light Conditions</b>	
Daylight	7
Dawn	0
Dusk	2
<b>Crash Rate<sup>1</sup></b>	<b>0.22</b>
<b>Statewide Unsignalized Average</b>	<b>0.57</b>

\* Crash data after 2019 are subject to change at any time and are not to be considered up-to-date or complete.

<sup>1</sup> Crash rate per million entering vehicles (MEV) at the intersection (2015-2019).



## Trip Generation

The traffic expected to be generated by the proposed Project was determined based on industry standards. The trip generation estimates were based on data published within the latest Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 11<sup>th</sup> Edition. The 11<sup>th</sup> Edition includes land uses that were not included in the 10<sup>th</sup> Edition, including affordable housing. The units associated with the Project will be affordable; to assess the range of residential trips associated with the Project, the following land use codes (LUC) were considered:

- **Land Use Code 220 – Multifamily Housing.** Low-rise multifamily housing includes apartments, townhouses, and condominiums located within the same building with at least three other dwelling units and that have two or three floors (levels). Various configurations fit this description, including walkup apartment, mansion apartment, and stacked townhouse.
- **Land Use Code 223 – Affordable Housing.** Affordable housing includes all multifamily housing that is rented at below market rate to households that include at least one employed member. Eligibility to live in affordable housing can be a function of limited household income and/or resident age. Calculations of the number of vehicle trips use ITE's average rate per dwelling unit.

The Project-generated vehicle trips are summarized in **Table 2**.

**Table 2. Project-generated Vehicle Trip Comparisons**

Time Period	Direction	Vehicle Trips	
		Multifamily (LUC 220)	Affordable (LUC 223)
Daily	In	135	96
	Out	135	96
	Total	270	192
a.m. Peak Hour	In	3	4
	Out	11	10
	Total	14	14
p.m. Peak Hour	In	13	11
	Out	8	8
	Total	21	19

Trip generation for multifamily housing (LUC 220) was minimally higher than trip generation for affordable housing. For a conservative analysis, the land use with the higher number of trips, LUC 220 – Multifamily Housing, was used for the Project.



## Traffic Impact

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### INTERSECTION DESCRIPTION

*Edgartown-West Tisbury Road/Meshacket Road* is an unsignalized intersection with three approaches under MassDOT jurisdiction. The Edgartown-West Tisbury Road eastbound approach consists of a shared through/right-turn lane. The Edgartown-West Tisbury Road westbound approach consists of a shared left-turn/through lane. The Meshacket Road northbound approach consists of a shared left-turn/right-turn lane that is stop controlled. Crosswalks are not marked across any of the approaches; however, there is a shared use path/sidewalk along the south side of Edgartown-West Tisbury Road that runs across the Meshacket Road approach. This path is at street level; therefore, ADA ramps are not provided. A stop line is marked across the Meshacket Road northbound approach.

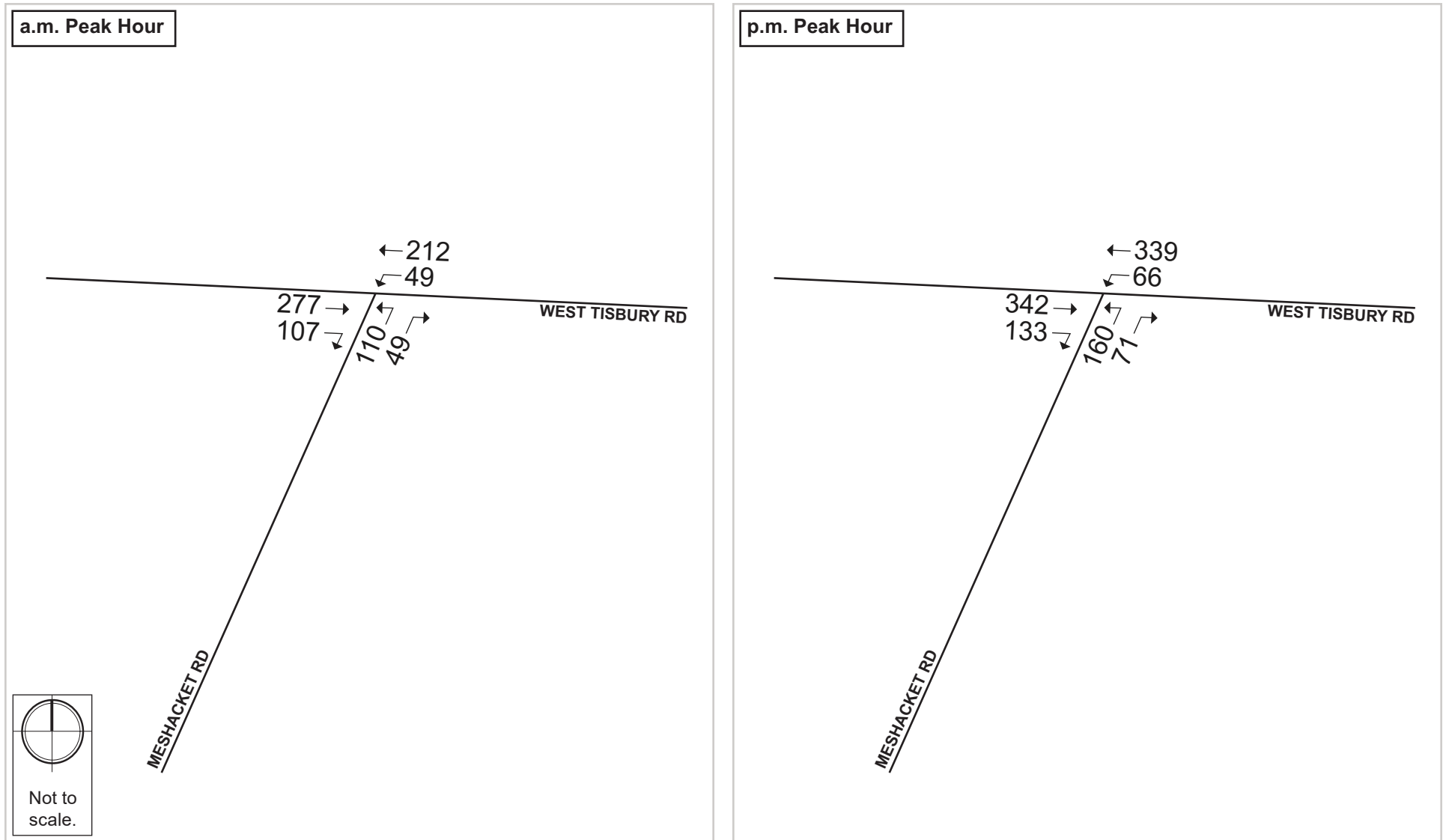
### TRAFFIC DATA COLLECTION

Historic 2017 Turning Movement Counts (TMCs) were used from a nearby project. The 2017 counts included Automated Traffic Recorders (ATR) data. New 2022 ATR data was also provided by the Martha's Vineyard Commission (MVC) for Meshacket Road. Comparing the two sets of ATR counts shows that 2022 data is approximately 21% lower than the 2017 data. Conservatively, the 2017 TMC data will not be adjusted, but will be used to directly represent the Existing (2022) Condition.

**Figure 1** shows the existing vehicular traffic volumes at the study area intersection during the weekday morning and evening peak hours.



Figure 1. *Existing (2022) Condition Vehicle Volumes, Weekday a.m. and p.m. Peak Hours*





## Vehicle Operations Analysis

Traffic operations are determined through an analysis of intersection Level of Service (LOS) calculations. The analysis was performed using Synchro 11.0, which is based on the traffic operational analysis methodology of the Transportation Research Board's (TRB's) *Highway Capacity Manual* (HCM). The LOS and delay (in seconds) are based on intersection geometry and traffic volumes. **Table 3**, an excerpt from the HCM, provides LOS criteria for both signalized and unsignalized intersections. LOS A defines the most favorable condition, with minimum traffic delay. LOS F represents the worst condition, with significant traffic delay. LOS D is generally considered acceptable.

**Table 3.** *Level of Service Criteria*

Level of Service	Average Stopped Delay (sec.)
	Unsignalized Intersections
<b>A</b>	0.0–10.0
<b>B</b>	10.1–15.0
<b>C</b>	15.1–25.0
<b>D</b>	25.1–35.0
<b>E</b>	35.1–50.0
<b>F</b>	>50.0

The No-build Condition will include project trips from the nearby development at 139 Meeting House Way. No additional growth rate will be proposed given that the comparison of the 2017 and 2022 ATR data reflected a declining trend in trips.

**Figure 2** shows the future No-build (2029) Condition Vehicular Traffic Volumes during the morning and evening peak hours. **Figure 3** shows the Project-generated trips. Project-generated vehicle trips were added to the No-build (2029) Condition vehicle volumes to produce the Build (2029) Condition a.m. and p.m. peak hour vehicle volumes as shown in **Figure 4**.



Figure 2. *No-build (2029) Condition Vehicle Volumes, Weekday a.m. and p.m. Peak Hours*

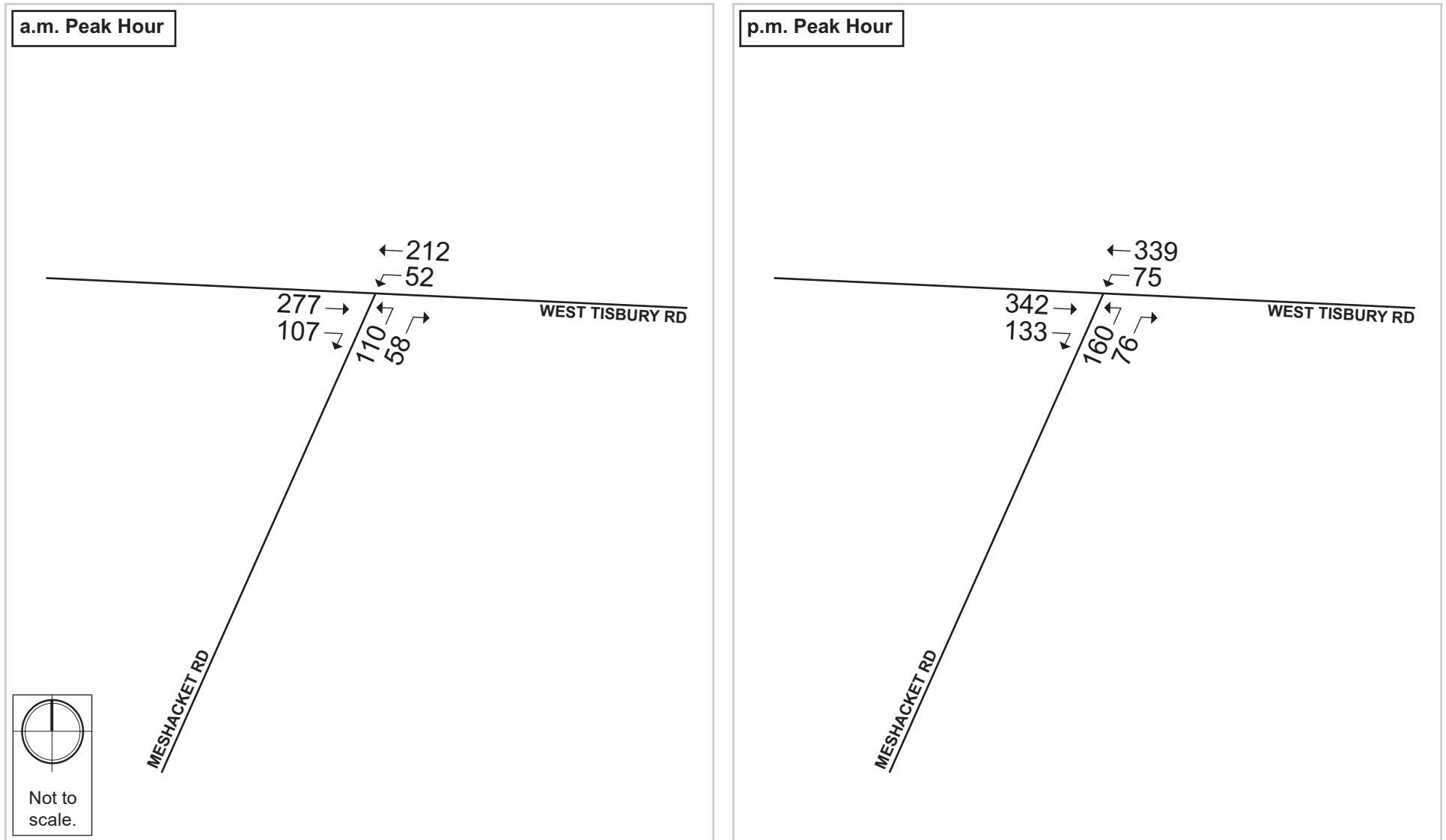






Figure 3. *Project-generated Vehicle Volumes, Weekday a.m. and p.m. Peak Hours*

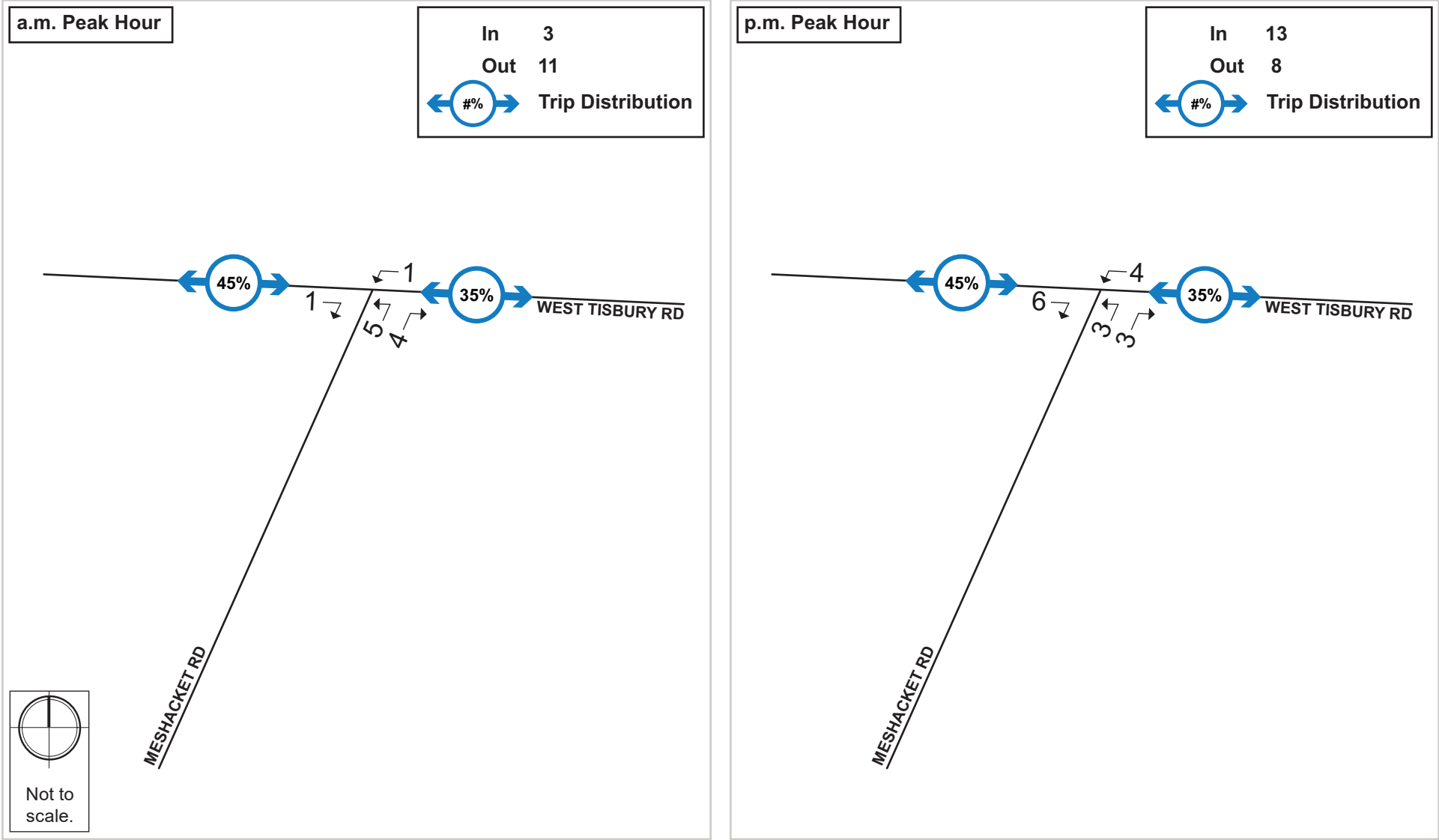
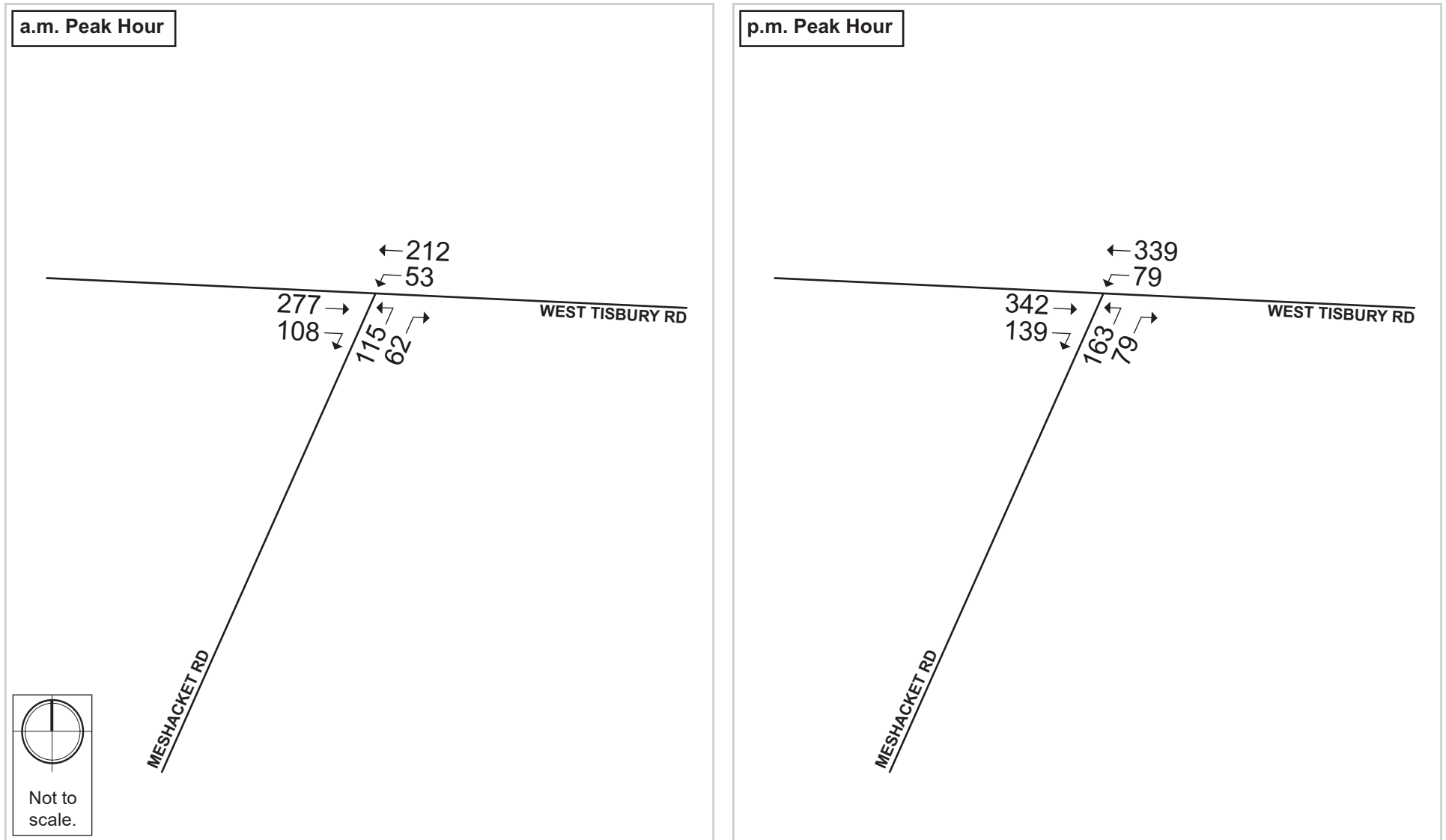




Figure 4. *Build (2029) Condition Vehicle Volumes, Weekday a.m. and p.m. Peak Hours*





In accordance with MassDOT guidelines, the peak 15 minutes of data collected during the peak hour were isolated to calculate the peak-hour factors (PHFs) for each approach. The percentage of heavy vehicles was calculated for each peak hour turning movement. For the No-build (2029) and Build (2029) Conditions, peak hour factors were set to a default value of 0.92 per MassDOT guidelines. **Table 4** summarizes the Existing (2022) Condition, No-build (2029) Condition, and Build (2029) Condition LOS, delay, volume to capacity (v/c) ratio, and queue analysis during the a.m. and p.m. peak hours. Detailed analysis sheets are provided in the appendix.

## OPERATIONS ANALYSIS SUMMARY

As shown in **Table 4**, the Edgartown-West Tisbury Road approaches operate at LOS A during all conditions. The Meshacket Road approach operates at LOS C during the a.m. peak hour and LOS F during the p.m. peak hour. LOS E and F are typical for stop-controlled approaches at unsignalized intersections. The No-build Condition shows similar operations to Existing Condition. The Build Condition also has similar operations to the No-build Condition with changes in delay estimated at 1-8 seconds higher. Queue lengths increase by less than one additional vehicle because of the Project. The impacts due to the added trips from the Project are minimal on vehicle operations.



**Table 4. Capacity Analysis Summary, a.m. and p.m. Peak Hours**

Intersection/Movement	Existing (2022) Condition				No-build (2029) Condition				Build (2029) Condition			
	LOS	Delay (s)	V/C Ratio	95 <sup>th</sup> % Queues (ft)	LOS	Delay (s)	V/C Ratio	95 <sup>th</sup> % Queues (ft)	LOS	Delay (s)	V/C Ratio	95 <sup>th</sup> % Queues (ft)
<b>a.m. Peak Hour</b>												
<b>Meshacket Road/Edgartown-West Tisbury Road</b>	-	-	-	-	-	-	-	-	-	-	-	-
West Tisbury Rd EB thru/right	A	0	0	0	A	0	0	0	A	0	0	0
West Tisbury Rd WB left/thru	A	8.7	0.05	5	A	8.5	0.05	5	A	8.5	0.05	5
Meshacket Rd NB left/right	C	23.9	0.51	70	C	19.9	0.43	53	C	20.6	0.46	58
<b>p.m. Peak Hour</b>												
<b>Meshacket Road/Edgartown-West Tisbury Road</b>	-	-	-	-	-	-	-	-	-	-	-	-
West Tisbury Rd EB thru/right	A	0	0	0	A	0	0	0	A	0	0	0
West Tisbury Rd WB left/thru	A	8.9	0.07	5	A	8.9	0.08	8	A	9.0	0.09	8
Meshacket Rd NB left/right	F	66.0	0.89	208	F	70.1	0.90	205	F	78.3	0.94	223

# = 95<sup>th</sup> percentile volume exceeds capacity; queue may be longer. Queue shown is maximum after 2 cycles.

Grey = Indicates a lane movement that decreased to LOS E or LOS F from the Existing Condition to the No-build Condition or decreased to LOS E or LOS F from the No-build Condition to the Build Condition.



## Site Plan

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Walking paths and sidewalks on the Site will be constructed of compacted stone dust.



**HOWARD STEIN HUDSON**

Engineers + Planners

## Appendix

## INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Edgartown, MA COUNT DATE : 8/9/2017

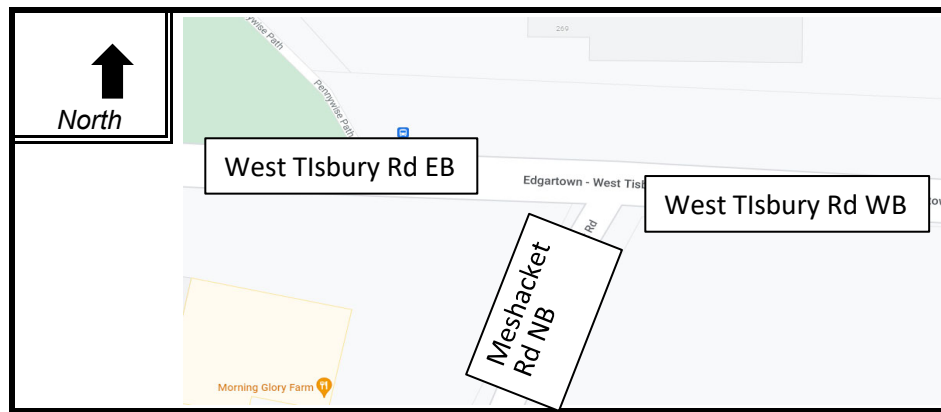
DISTRICT : 5 UNSIGNALIZED : ☒ **Yes** SIGNALIZED : ☐

### ~ INTERSECTION DATA ~

MAJOR STREET : West Tisbury Road

MINOR STREET(S) : Meshacket Road

**INTERSECTION  
DIAGRAM**  
(Label Approaches)



### PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	EB	WB	NB			
PEAK HOURLY VOLUMES (AM/PM) :	475	405	231			1,111

" K " FACTOR :

**0.090**

INTERSECTION ADT ( V ) = TOTAL DAILY APPROACH VOLUME :

**12,344**

TOTAL # OF CRASHES :

5

# OF YEARS :

5

AVERAGE # OF CRASHES PER YEAR ( A ) :

**1.00**

CRASH RATE CALCULATION :

**0.22**

$$\text{RATE} = \frac{(A * 1,000,000)}{(V * 365)}$$

Comments : \_\_\_\_\_

Project Title & Date: 38 Meshacket Road, Edgartown, MA

Crash Num	City	Town	Crash Date	Crash Seve	Crash Stah	Crash Time	Crash Year	Max Injury	Number of Police	Age State	Polic Age	of Dri Age	of Dri Age	of Nor Age	of Nor Age	Crash Hou	Driver Con	Driver Dist	First Harm Is	Geocods	Light Cond	Manner of MassDOT	(Non-Moto	Non-Moto	Non-Moto	RMV Docu	Road Surfs	Roadway J	RPA Abbre	Total Fatal	Total Non-Traffic	Con Traffic	way Vehicle Ac	Vehicle Co	Vehicle En	Vehicle To	Vehicle Tr	Weather	C County	Na Crash	Repi	FMCSA Re	FMCSA Re	First Harm	Geocoding	Hit and Ru	Locality	Most Harm	Road Cont	School Bus	Speed Lim	Traffic Con	Vehicle Se	Work Zone	X	Y	Latitude	Longitude
4078948	EDGARTON		4/28/2015	Property d	Closed	5:20 PM	2015	No injury	2	Local police	25-34	55-64					05:00PM t D1: (No improper dri	Not report	Yes	Daylight	Rear-end	5		PW20152	Not report	Not at junc	MVC	0	0	No control	Two-way, \ V1: Travell	V1:(Passenger car) / V2:(Light tr	V1: E / V2: Clear/Clea	DUKES	1.5E+09		Not report	Operator f	No hit and run	V1:(Collisik	Not report	No, school	35	Not report	V1:(Collisi	No	280260.9	793313.2	41.38589	-70.5405								
4079217	EDGARTON		7/23/2015	Property d	Closed	3:00 PM	2015	No injury	2	Local police	21-24	25-34					03:00PM t D1: (Inattention),No	Collision w	Yes	Daylight	Angle	5		PW20152	Dry	T-intersect	MVC	0	0	No control	Two-way, \ V1: Enterir	V1:(Passenger car) / V2:(Unknow	V1: S / V2: Clear/Clea	DUKES	1.5E+09	V2:(No, no No, not fei	Roadway	At Intersec	No hit and run	V2:(Collisik	Not report	No, school	35	No, device	V1:(Collisi	No	280229.6	793314.5	41.38591	-70.5408								
4681606	EDGARTON		5/26/2017	Property d	Closed	12:39 PM	2017	No injury	2	Local police	25-34	45-54					12:00PM to 12:59PM	Collision w	Yes	Daylight	Rear-end	5		PW20190	Wet	T-intersect	MVC	0	0	No control	Two-way, \ V1: Travell	V1:(Passenger car) / \ V1:(Yes, ve	V1: W / V: Cloudy/Ra	DUKES	1.7E+09		Roadway	At Intersec	No hit and run	V1:(Collisik	None	No, school bus not im	No, device	V1:(Collisi	No	280252.1	793313.6	41.3859	-70.5406									
4583182	EDGARTON		2/20/2018	Non-fatal i	Closed	5:29 PM	2018	Non-fatal i	1	Local police	35-44	35-44					05:00PM t D1: (Excee	D1: Not Di	Collision w	Yes	Dusk	Single veh	5		PW20182	Wet	Not at junc	MVC	0	1	No control	Two-way, \ V1: Travell	V1:(Passenger car) V1:(Yes, ve	V1: W Rain/Fog, : DUKES	1.8E+09		Shoulder -	Off Interse	No hit and run	V1:(Collisik	Road surfs	No, school	10	Not report	V1:(Collisi	No	280252.1	793313.6	41.3859	-70.5406								
4589256	EDGARTON		8/10/2018	Non-fatal i	Closed	2:12 PM	2018	Non-fatal i	1	Local police	21-24	21-24	45-54	45-54			02:00PM t D1: (Failed	D1: Not Di	Collision w	Yes	Daylight	Angle	5	P3: Walkir P3: Marke P3: Cyclist	PW20182	Dry	T-intersect	MVC	0	2	Stop signs	Two-way, \ V1: Turnin	V1:(Light truck/van, n	V1:(No) V1: N Clear/Clea	DUKES	1.8E+09		Roadway	At Intersec	No hit and run	V1:(Other)	None	No, school	20	Yes, devic	V1:(Collisi	No	280252.1	793313.6	41.3859	-70.5406							
4824969	EDGARTON		2/21/2020	Unknown	Open	5:36 PM	2020	Unknown	1	Local police	65-74	65-74					05:00PM to 05:59PM	Collision w	Yes	Dusk	Single veh	5		PW20200	Dry	Not at junc	MVC	0	0	No control	Two-way, \ V1: Travell	V1:(Single- V1:(No) V1:(Yes, ve	V1: W Clear DUKES	2E+09	V1:(Unkno	Unknown	Shoulder -	At Address	No hit and run	V1:(Collisik	None	No, school	45	No, device	V1:(Ran of	No	280242	793314	41.3859	-70.5407								
4918133	EDGARTON		8/26/2020	Property d	Open	1:51 PM	2020	No Appare	1	Local police	75-84	75-84					01:00PM t D1: (Physic	D1: Not Di	Collision w	Yes	Daylight	Single veh	5		PW20210	Dry	T-intersect	MVC	0	0	Stop signs	Two-way, \ V1: Travell	V1:(Passer	V1:(No) V1:(No) V1: N Clear DUKES	2E+09		Roadway	At Intersec	No hit and run	V1:(Collisik	None	No, school	35	Yes, devic	V1:(Collisi	No	280252.1	793313.6	41.3859	-70.5406								
4977379	EDGARTON		6/21/2021	Non-fatal i	Open	12:18 PM	2021	Suspected	1	Local police	65-74	65-74	15-Jun	15-Jun			12:00PM t D1: (No im	D1: Not Di	Collision w	Yes	Daylight	Single veh	5	P2: Walkir P2: Non-ir P2: Cyclist	PW20211	Dry	T-intersect	MVC	0	0	No control	Two-way, \ V1: Turnin	V1:(Passer	V1:(No) V1:(No) V1: N Cloudy/Clc	DUKES	2.1E+09		Roadway	Off Interse	No hit and run	V1:(Collisik	None	No, school	10	Not report	V1:(Collisi	No	280252.1	793313.6	41.3859	-70.5406							
5142854	EDGARTON		7/6/2022	Non-fatal i	Open	5:45 PM	2022	Suspected	2	Local police	35-44	45-54					05:00PM t D1: (No im	D1: Not Di	Collision w	Yes	Daylight	Angle	5		PW20222	Dry	T-intersect	MVC	0	0	No control	Two-way, \ V1: Slowin	V1:(Passer	V1:(No) / \ V1:(No) / \ V1: N / V2: Clear DUKES	22000102		Roadway	At Intersec	No hit and run	V1:(Collisik	None	No, school	35	Not report	V1:(Collisi	No	280252.1	793313.6	41.3859	-70.5406								






# HCM 6th TWSC

## 3: Meshacket Road & West Tisbury Road

09/13/2022

### Intersection

Int Delay, s/veh 5.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	277	107	49	212	110	49
Future Vol, veh/h	277	107	49	212	110	49
Conflicting Peds, #/hr	0	26	26	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	87	87	83	83
Heavy Vehicles, %	4	6	2	3	4	2
Mvmt Flow	346	134	56	244	133	59

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	506
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1059
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1033
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-




Approach	EB	WB	NB
HCM Control Delay, s	0	1.6	23.9
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	378	-	-	1033	-
HCM Lane V/C Ratio	0.507	-	-	0.055	-
HCM Control Delay (s)	23.9	-	-	8.7	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	2.8	-	-	0.2	-

# HCM 6th TWSC

## 3: Meshacket Road & West Tisbury Road

09/13/2022

Intersection						
Int Delay, s/veh	15.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	342	133	66	339	160	71
Future Vol, veh/h	342	133	66	339	160	71
Conflicting Peds, #/hr	0	28	28	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	97	97	85	85
Heavy Vehicles, %	4	2	2	2	5	1
Mvmt Flow	372	145	68	349	188	84
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	545	0	958	473
Stage 1	-	-	-	-	473	-
Stage 2	-	-	-	-	485	-
Critical Hdwy	-	-	4.12	-	6.45	6.21
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	-	-	2.218	-	3.545	3.309
Pot Cap-1 Maneuver	-	-	1024	-	282	593
Stage 1	-	-	-	-	621	-
Stage 2	-	-	-	-	613	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	997	-	251	577
Mov Cap-2 Maneuver	-	-	-	-	251	-
Stage 1	-	-	-	-	604	-
Stage 2	-	-	-	-	561	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		1.4		66	
HCM LOS					F	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	304	-	-	997	-	
HCM Lane V/C Ratio	0.894	-	-	0.068	-	
HCM Control Delay (s)	66	-	-	8.9	0	
HCM Lane LOS	F	-	-	A	A	
HCM 95th %tile Q(veh)	8.3	-	-	0.2	-	




# HCM 6th TWSC

## 3: Meshacket Road & West Tisbury Road

09/13/2022

### Intersection

Int Delay, s/veh 4.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	277	107	52	212	110	58
Future Vol, veh/h	277	107	52	212	110	58
Conflicting Peds, #/hr	0	26	26	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	6	2	3	4	2
Mvmt Flow	301	116	57	230	120	63

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	443
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1117
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1089
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-




Approach	EB	WB	NB
HCM Control Delay, s	0	1.7	19.9
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	421	-	-	1089	-
HCM Lane V/C Ratio	0.434	-	-	0.052	-
HCM Control Delay (s)	19.9	-	-	8.5	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	2.1	-	-	0.2	-

# HCM 6th TWSC

## 3: Meshacket Road & West Tisbury Road

09/13/2022

Intersection						
Int Delay, s/veh	15.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	342	133	75	339	160	76
Future Vol, veh/h	342	133	75	339	160	76
Conflicting Peds, #/hr	0	28	28	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	2	2	2	5	1
Mvmt Flow	372	145	82	368	174	83
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	545	0	1005	473
Stage 1	-	-	-	-	473	-
Stage 2	-	-	-	-	532	-
Critical Hdwy	-	-	4.12	-	6.45	6.21
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	-	-	2.218	-	3.545	3.309
Pot Cap-1 Maneuver	-	-	1024	-	264	593
Stage 1	-	-	-	-	621	-
Stage 2	-	-	-	-	583	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	997	-	230	577
Mov Cap-2 Maneuver	-	-	-	-	230	-
Stage 1	-	-	-	-	604	-
Stage 2	-	-	-	-	523	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		1.6		70.1	
HCM LOS					F	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	285	-	-	997	-	
HCM Lane V/C Ratio	0.9	-	-	0.082	-	
HCM Control Delay (s)	70.1	-	-	8.9	0	
HCM Lane LOS	F	-	-	A	A	
HCM 95th %tile Q(veh)	8.2	-	-	0.3	-	




# HCM 6th TWSC

## 3: Meshacket Road & West Tisbury Road

09/13/2022

### Intersection

Int Delay, s/veh 5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	277	108	53	212	115	62
Future Vol, veh/h	277	108	53	212	115	62
Conflicting Peds, #/hr	0	26	26	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	6	2	3	4	2
Mvmt Flow	301	117	58	230	125	67

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	444
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1116
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1088
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.7	20.6
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	420	-	-	1088	-
HCM Lane V/C Ratio	0.458	-	-	0.053	-
HCM Control Delay (s)	20.6	-	-	8.5	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	2.3	-	-	0.2	-




# HCM 6th TWSC

## 3: Meshacket Road & West Tisbury Road

09/13/2022

### Intersection

Int Delay, s/veh 17.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	342	139	79	339	163	79
Future Vol, veh/h	342	139	79	339	163	79
Conflicting Peds, #/hr	0	28	28	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	2	2	2	5	1
Mvmt Flow	372	151	86	368	177	86

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	551
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1019
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	992
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.7	78.3
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	281	-	-	992	-
HCM Lane V/C Ratio	0.936	-	-	0.087	-
HCM Control Delay (s)	78.3	-	-	9	0
HCM Lane LOS	F	-	-	A	A
HCM 95th %tile Q(veh)	8.9	-	-	0.3	-



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