

Traffic Impact Study

Proposed Retail Marijuana Dispensary

240 Bridge Street
Fairhaven, MA

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Prepared for
SRN

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INTRODUCTION

McMahon Associates has completed a review of the existing traffic operations and potential traffic impacts associated with the proposed retail marijuana dispensary (RMD) located at 240 Bridge Street in Fairhaven, Massachusetts. The purpose of this traffic study is to evaluate existing and projected traffic operations and safety conditions associated with the proposed project within the study area.

The assessment documented in this traffic impact study is based on a review of existing traffic volumes, recent crash data, and the anticipated traffic generating characteristics of the proposed project. The study examines existing and projected traffic operations (both with and without the project) at key intersections in the vicinity of the project site. The study area was selected based on a review of the surrounding roadway network and projected trip generating characteristics of the proposed project. This study provides an analysis of traffic operations and trip generation characteristics during the weekday afternoon and Saturday midday peak hours, when the combination of site-generated traffic and adjacent roadway volumes are anticipated to be greatest.

This report documents the findings of the analysis.

Project Description

The proposed RMD would be located at 240 Bridge Street, in the northeast corner of the intersection of Alden Road at Bridge Street, as shown in Figure 1. The site currently consists of a commercial building comprised of three retail units. Based on the Site Plan prepared by Green Seal Environmental, LLC and dated January 20, 2022, the project would occupy the 1,800 square foot (sf) unit located on the west side of the building (Unit #1). This unit was previously occupied by a cycle studio that closed in the summer of 2021. Access to the site would continue to be provided by two site driveways, one on the north side of Bridge Street and one on the east side of Alden Road, each located approximately 200 feet from the signalized intersection. Based on discussions with the Town of Fairhaven, the site driveway on Bridge Street would restrict left-turns exiting the site during the 4:00-6:00 PM weekday peak period. Left turns exiting the site onto Alden Street would be permitted. The project would maintain the existing parking layout and circulation on the site, which includes 29 parking spaces with two accessible spaces and one-way counterclockwise circulation within the site.



Figure 1
Site Location Map
Proposed Retail Marijuana Dispensary
Fairhaven, MA

Study Methodology

This traffic impact study evaluates existing and projected traffic operations within the study area for the weekday afternoon and Saturday midday peak hour traffic conditions when the combination of the adjacent roadways volumes and projected project trips would be expected to be greatest.

The study was conducted in three steps. The first step consisted of an inventory of existing traffic conditions within the project study area. As part of this inventory, manual turning movement counts (TMC's) were collected in March 2022 at the study area intersections during the weekday afternoon and Saturday midday peak periods. A field visit was completed on Thursday, March 31, 2022, to document intersection and roadway geometries and posted speed limits. Crash data for the study area intersections was obtained from the Massachusetts Department of Transportation (MassDOT) to evaluate existing traffic safety within the study area.

The second step of the study builds upon the data collected in the first step to establish the basis for evaluating potential transportation impacts associated with the projected future conditions. During this second step, the projected traffic demands associated with planned future developments that could influence traffic volumes at the study area intersections were assessed. The 2022 Existing traffic volumes were forecasted to the future year 2029 to determine 2029 No Build (without the project) conditions and 2029 Build (with the project) conditions.

The third step of this study determined if measures were necessary to improve existing or future traffic operations and safety, and minimize potential traffic impacts associated with the proposed project site.

Study Area Intersections

Based on a review of the anticipated traffic-generating characteristics of the project and a review of the adjacent roadways serving the project site, the following study area intersections were selected for analysis:

- Bridge Street at Alden Road
- Bridge Street at Site Driveway
- Alden Road at Site Driveway

The traffic impact study presented below documents existing and future traffic conditions for the study area intersections noted above.

EXISTING CONDITIONS

The existing conditions assessment consists of an inventory of intersection and roadway geometries, existing traffic control devices, the collection of peak period traffic volumes and a review of recent crash data. Based on this information, an assessment of the potential traffic impacts associated with the proposed project has been performed.

Roadway Network

A brief description of the principal roadways providing access to the project site is presented below.

Bridge Street

Bridge Street generally runs in the east-west direction through the Town of Fairhaven. Bridge Street is classified as an urban collector under Town of Fairhaven jurisdiction providing connections to regional routes such as US Route 6 and Route 240. Bridge Street generally provides one travel lane in each direction with a posted speed limit of 35 miles per hour (mph) in both directions. A sidewalk is provided on the south side of Bridge Street. No bicycle facilities are provided along the roadway.

Bridge Street is serviced by the Southeastern Regional Transit Authority (SRTA) Fairhaven route (New Bedford 11). The closest SRTA stop is located just west of the intersection of Bridge Street at Alden Road.

Alden Road

Alden Road generally runs in the north-south direction through the Town of Fairhaven. Alden Road is classified as an urban minor arterial under Town of Fairhaven jurisdiction. Alden Road provides one travel lane in each direction north of Bridge Street and two travel lanes in each direction south of Bridge Street. The posted speed limit is 35 miles per hour (mph) in both directions. A sidewalk is provided on the west side of Alden Road. No bicycle facilities are provided along the roadway.

Signalized Intersection

Bridge Street at Alden Road

The signalized intersection of Bridge Street at Alden Road has four approaches. The eastbound approach on Bridge Street includes an exclusive left-turn lane and a shared through/right-turn lane. The westbound approach on Bridge Street and the northbound and southbound approaches on Alden Road all include an exclusive left-turn lane, a through lane, and an exclusive right-turn lane.

The intersection is controlled by an actuated, un-coordinated traffic signal with four phases for vehicular traffic, including a lead protected phase for northbound and southbound left

turns, a phase for northbound and southbound through traffic, a lead protected phase for eastbound and westbound left turns, and a phase for eastbound and westbound through traffic. The westbound, northbound, and southbound right-turn movements are also serviced with an overlap phase during the protected left-turn phases. Pedestrian traffic is accommodated by a push-button activated exclusive pedestrian phase with crosswalks provided on the western and southern legs of the intersection.

Existing Traffic Volumes

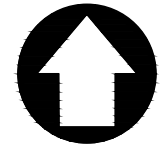
Traffic Data Collection

To assess peak hour traffic conditions, TMCs were conducted at the study area intersections for the weekday afternoon and Saturday midday peak periods. The counts were conducted on Thursday, March 24, 2022, from 4:00 PM to 6:00 PM and on Saturday, March 26, 2022, from 11:00 AM to 2:00 PM. The results of the turning movement counts are tabulated by 15-minute intervals and are provided in Appendix A. The four highest consecutive 15-minute intervals during each of these count periods constitute the peak hours that form the basis of the traffic analysis provided in this report. Based on a review of the peak period traffic data, the weekday afternoon peak hour of adjacent street traffic occurs from 4:00 PM to 5:00 PM and the Saturday midday peak hour occurs from 11:00 AM to 12:00 PM.

Traffic Volume Adjustments

To account for seasonal variation in traffic volumes, the MassDOT 2019 Weekday Seasonal Adjustment Factors were reviewed. Based on the data, traffic volumes collected during the month of March along urban collectors and urban minor arterials are higher than traffic volumes for the average month. To present a conservative analysis, the March volumes were not adjusted downwards to reflect an average month.

The resulting peak hourly traffic flows for the 2022 Existing conditions are depicted in Figure 2 and Figure 3 for the weekday afternoon and Saturday midday peak hours, respectively.



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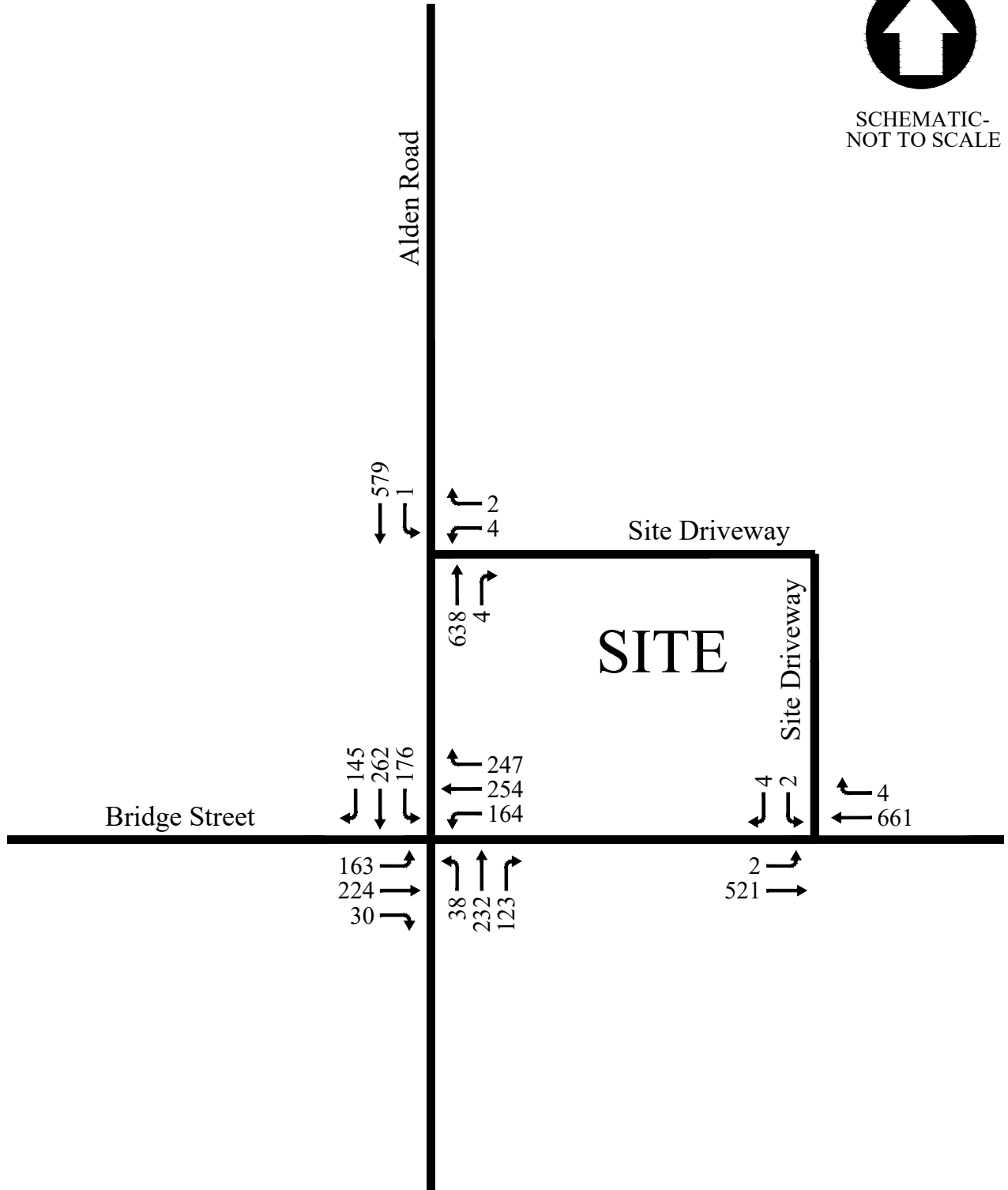
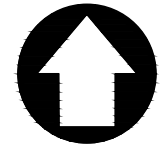


Figure 2
2022 Existing Weekday Afternoon
Peak Hour Traffic Volumes
Proposed RMD
Fairhaven, Massachusetts



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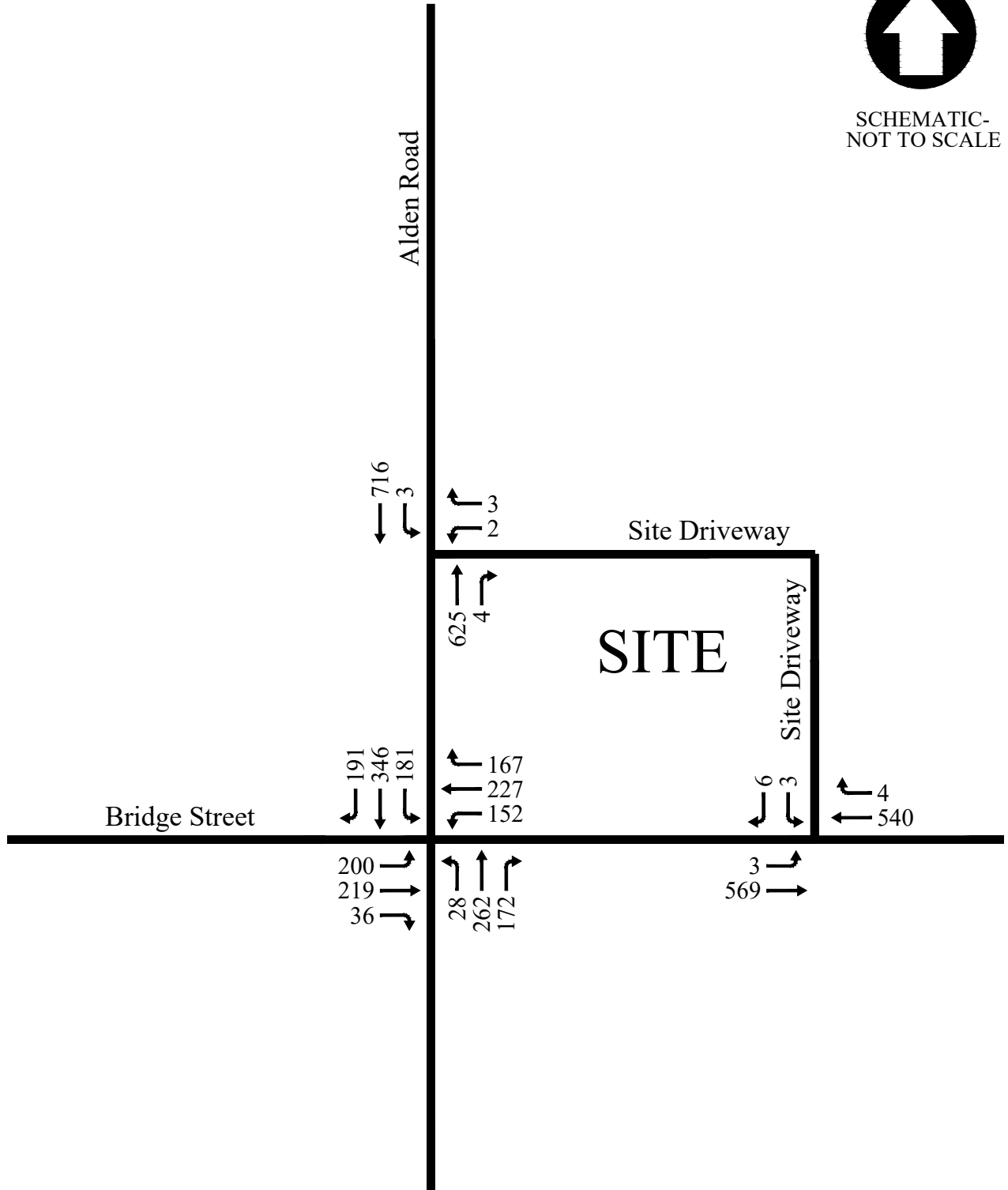


Figure 3
2022 Existing Saturday Midday
Peak Hour Traffic Volumes
Proposed RMD
Fairhaven, Massachusetts

Crash Summary

Crash data for the study area intersections was obtained from MassDOT for the most recent five-year period available. This data includes yearly crash summaries for 2015-2019. A summary of the crash data is presented in Appendix B.

The crash rates at the study area intersections were calculated to determine whether the crash frequencies at the study area intersections were unusually high given the travel demand. The intersection crash rate is expressed in crashes per million entering vehicles (MEV). The calculated crash rate was then compared to the average rate for signalized and unsignalized intersections statewide and within MassDOT District 5. For signalized intersections, the statewide and MassDOT District 5 crash rates are 0.78 and 0.75 crashes per MEV, respectively. For unsignalized intersections, the statewide and MassDOT District 5 average crash rate is 0.57 crashes per MEV.

The signalized intersection of Alden Road at Bridge Street had a total of 85 reported crashes over the five-year period analyzed, resulting in a crash rate of 1.90 crashes per MEV, which is higher than both the statewide and District 5 averages for a signalized intersection. A total of 62 crashes were read-end collisions, 14 were angle collisions, six were sideswipe collisions, and three were single vehicle collisions. Ten crashes resulted in personal injury, four crashes were of unknown severity, and the remaining 71 crashes were property damage only. No fatal crashes were reported at this location. Intersection improvements were completed at the intersection of Alden Road and Bridge Street (MassDOT project # 605366) in Summer 2012. The improvements included the installation of new traffic signal equipment to accommodate protected left-turn and right-turn overlap phasing, and geometric improvements to accommodate additional turn lanes. This intersection is not listed as a Highway Safety Improvement Program (HSIP) high crash location.

There were no reported crashes at the two existing site driveways on Bridge Street and Alden Street over the five-year period analyzed.

FUTURE CONDITIONS

To determine future traffic demands on the study area roadways and intersections, the 2022 Existing traffic volumes were projected to the future-year 2029. Traffic volumes on the study area roadways in 2029 are considered to include all existing traffic, new traffic resulting from general growth in the study area, and from other planned development projects independent of the proposed project. The potential background traffic growth, unrelated to the proposed project, was considered in the development of the 2029 No Build (without project) peak hour traffic volumes. The estimated traffic increases associated with the proposed project were then added to the 2029 No Build volumes to reflect the 2029 Build (with project) traffic conditions. A more detailed description of the development of the 2029 No Build and 2029 Build traffic volume networks is presented below.

Background Traffic Growth

Traffic growth is generally a function of changes in motor vehicle use and anticipated land development within the area. To predict a rate at which traffic on the study area roadways could be anticipated to grow during the seven-year forecast period (2022 to 2029), both planned area developments and historic traffic growth were reviewed.

Historic Traffic Growth

To establish an annual traffic growth rate in the study area, the Southeastern Regional Planning and Economic Development District (SRPEDD) was contacted. Based on their regional model, SRPEDD indicated that an annual growth rate of 1.0% per year is appropriate for the Town of Fairhaven. This growth rate is considered to capture traffic growth associated with general changes in population, minor developments, and future developments that are not known at this time.

Site-Specific Growth

Based on discussions with the Town of Fairhaven Planning Department, four projects are currently in the approval process. A brief description of each project is provided below:

- The car sales lot at 200 Huttleston Avenue (US Route 6) is planned to be expanded. The expansion of the car sales lot is not anticipated to result in a significant quantity of additional trips.
- A new drive-through carwash is proposed on the corner of Bridge Street and US Route 6. The carwash is not anticipated to result in a significant quantity of additional trips in the vicinity of the proposed RMD project site due to the proposed location.
- A second drive-through lane is proposed to be added at the existing McDonald's at the corner of US Route 6 and Alden Road. The second drive-through is not anticipated to result in a significant quantity of additional trips to the McDonald's and is intended to better serve and reduce queue lengths and wait times for the existing customer base.
- A new Chipotle is proposed at the corner of US Route 6 and Alden Road, on the western side of the existing McDonalds. Access would be provided via the existing

driveways to Alden Road and Washington Street. The Chipotle is anticipated to mainly attract vehicle trips already on the roadway system as pass-by trips, along with internal trips from the existing shopping center, and would likely add only a minimal amount of new vehicle trips at the intersection of Bridge Street and Alden Road.

No site-specific trip generation data has been submitted to date for these projects. In consideration of the four projects noted above, the growth rate presented by SRPEDD has been increased to 2.0% per year within the study area to provide a conservative estimate of future roadway volumes.

Future Roadway Improvements

Planned roadway improvement projects can impact travel patterns and future traffic operations. MassDOT project information and the Town of Fairhaven were consulted to develop an understanding of future area roadway improvement projects.

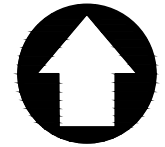
The Town of Fairhaven noted upcoming roadway improvements on Alden Road and Bridge Street. There are roadway improvements that are currently in the design phase for pedestrian and drainage upgrades along Bridge Street. The improvements are funded through the Joint Transportation Bill and currently include the section of Bridge Street from US Route 6 to Alden Road. The Bridge Street improvements may eventually extend to the intersection of Bridge Street at Route 240. Details for the Bridge Street improvements are not known at this time as the design plans are expected to be completed by the end of 2022.

Additional roadway improvement projects include the construction of bike lanes along Alden Road from Whatler's Way, just north of the project site, northerly to Howland Road through a Complete Streets grant. The Town is also considering Zoning modifications along Alden Road, south of Bridge Street, to switch to a 40R Overlay District to allow for high-density mixed-use development.

For the purposes of the traffic analysis completed as part of this review, the traffic pattern changes associated with these future roadway projects are not anticipated to impact the study area.

2029 No Build Traffic Volumes

The 2022 Existing peak hour traffic volumes were grown by 2.0% per year (compounded annually) over the seven-year study horizon (2022 to 2029) to establish the 2029 future traffic volumes. The resulting 2029 No Build peak hour volumes are illustrated in Figure 4 and Figure 5 for the weekday afternoon and Saturday midday peak hours, respectively, and are documented in the traffic projection model presented in Appendix C.



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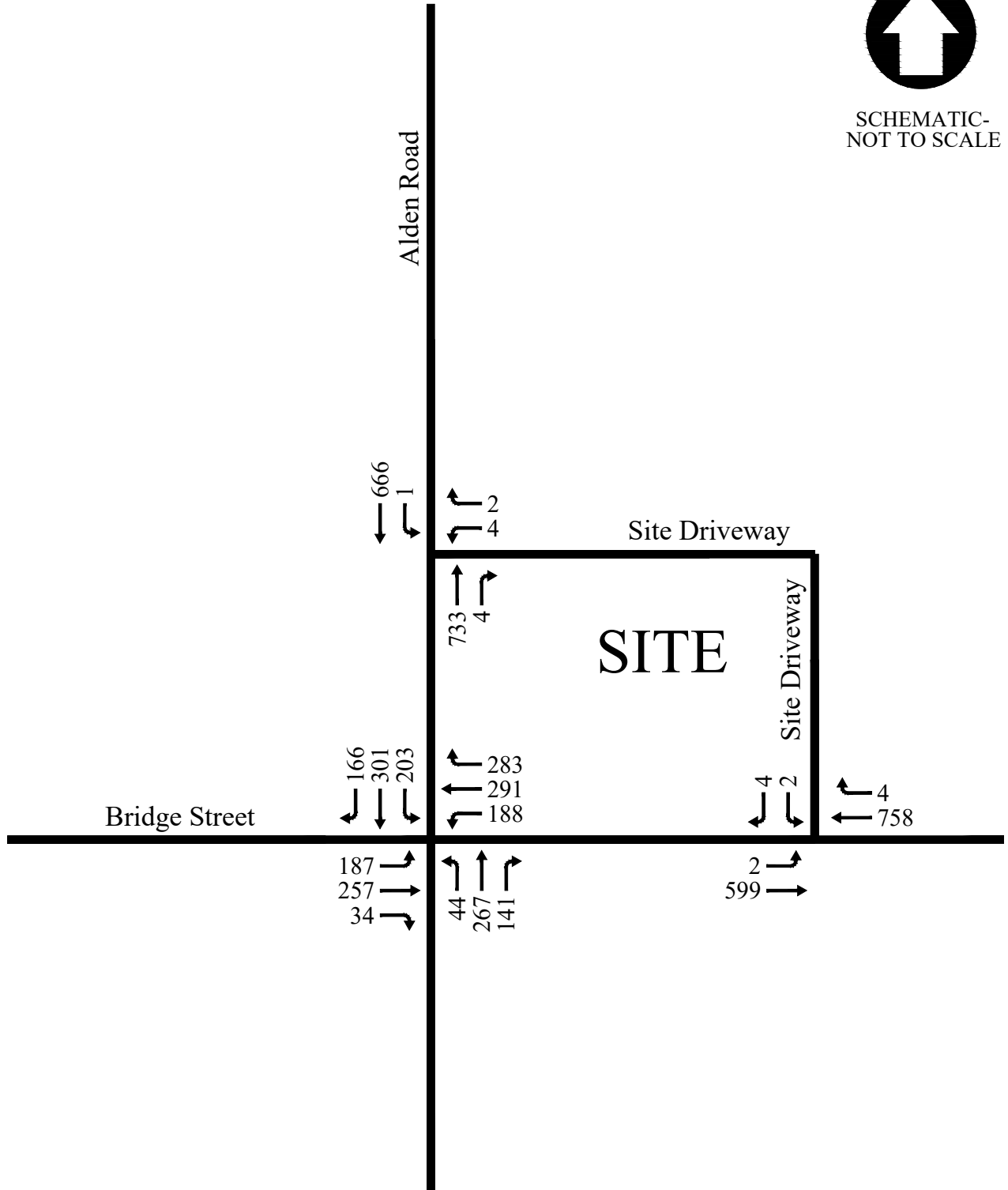
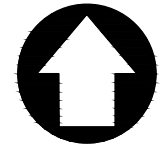


Figure 4
2029 No Build Weekday Afternoon
Peak Hour Traffic Volumes
Proposed RMD
Fairhaven, Massachusetts



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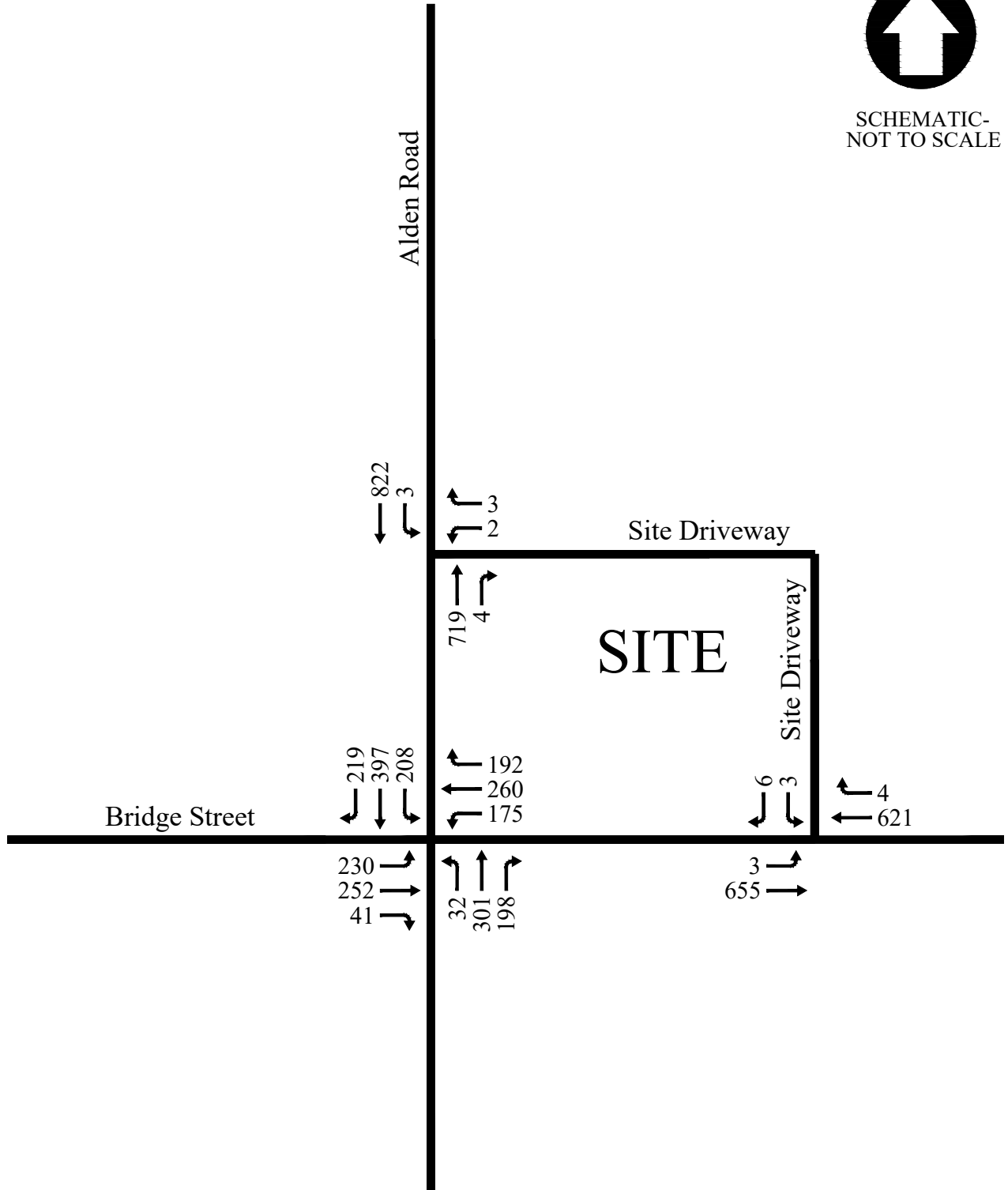


Figure 5
2029 No Build Saturday Midday
Peak Hour Traffic Volumes
Proposed RMD
Fairhaven, Massachusetts

Site-Generated Traffic

To estimate the number of vehicle trips associated with the project, the Institute of Transportation Engineers’ (ITE) publication, *Trip Generation Manual, 11th Edition*, was referenced. Vehicle trip estimates for the proposed RMD were developed based on data presented in this publication for Land Use Code 882 (Marijuana Dispensary). ITE establishes vehicle trip rates (in this case expressed in trips per square foot) based on actual traffic counts conducted at similar types of existing land uses.

Former Cycle Studio

The proposed project would occupy the 1,800 square foot (sf) unit within the existing building previously occupied by a cycle studio that closed in the summer of 2021. Since the cycle studio was closed at the time of the traffic data collection, no credit was provided for the former use.

Table 1 below provides a comparison of the vehicle trip estimates for the proposed RMD and for the cycle studio that previously occupied the site. The trip generation estimates for the cycle studio were developed based on data presented in the ITE publication for LUC 492 (Health/Fitness Club).

Table 1: Vehicular Trip Generation Comparison

Description	Weekday PM			Saturday Midday		
	In	Out	Total	In	Out	Total
Marijuana Dispensary ⁽¹⁾	17	17	34	26	26	52
- Previous Cycle Studio Land Use ⁽²⁾	-10	-7	-17	-3	-3	-6
Total New Trips	7	10	17	23	23	46

(1) ITE Land Use Code 882 (Marijuana Dispensary), based on 1,800 s.f.

(2) ITE Land Use Code 492 (Health/Fitness Club), based on 1,800 s.f.

Internal Capture Trips

A portion of the trips between units in the existing building, including to and from the proposed RMD, could be considered to be shared among the different uses. Trips drawn from one unit to another are considered to be “internal capture” trips as they are already on the project site. To present a conservative estimate of project trips, no internal capture trips were applied.

Table 2 presents the total projected new trips associated with the project for the weekday afternoon and Saturday midday peak hours.

Table 2: Vehicular Trip Generation

Description	Size	Weekday PM			Saturday Midday		
		In	Out	Total	In	Out	Total
Proposed Marijuana Facility Trips ⁽¹⁾	1,800 sf	17	17	34	26	26	52

(1) ITE Land Use Code 882 - Marijuana Dispensary based on 1,800 sf.

As shown in Table 2, the proposed RMD is estimated to generate a total of 34 new vehicle trips (17 entering and 17 exiting) during the weekday afternoon peak hour, and 52 new vehicle trips (26 entering and 26 exiting) during the Saturday midday peak hour. The trip generation projections shown in Table 2 above could be reduced by internal capture trips between uses on the project site. Although Table 2 summarizes the new trips to the study area as part of the proposed RMD, the net new trips to the site considering the recent closure of the cycle studio would be anticipated to be less, as shown in Table 1.

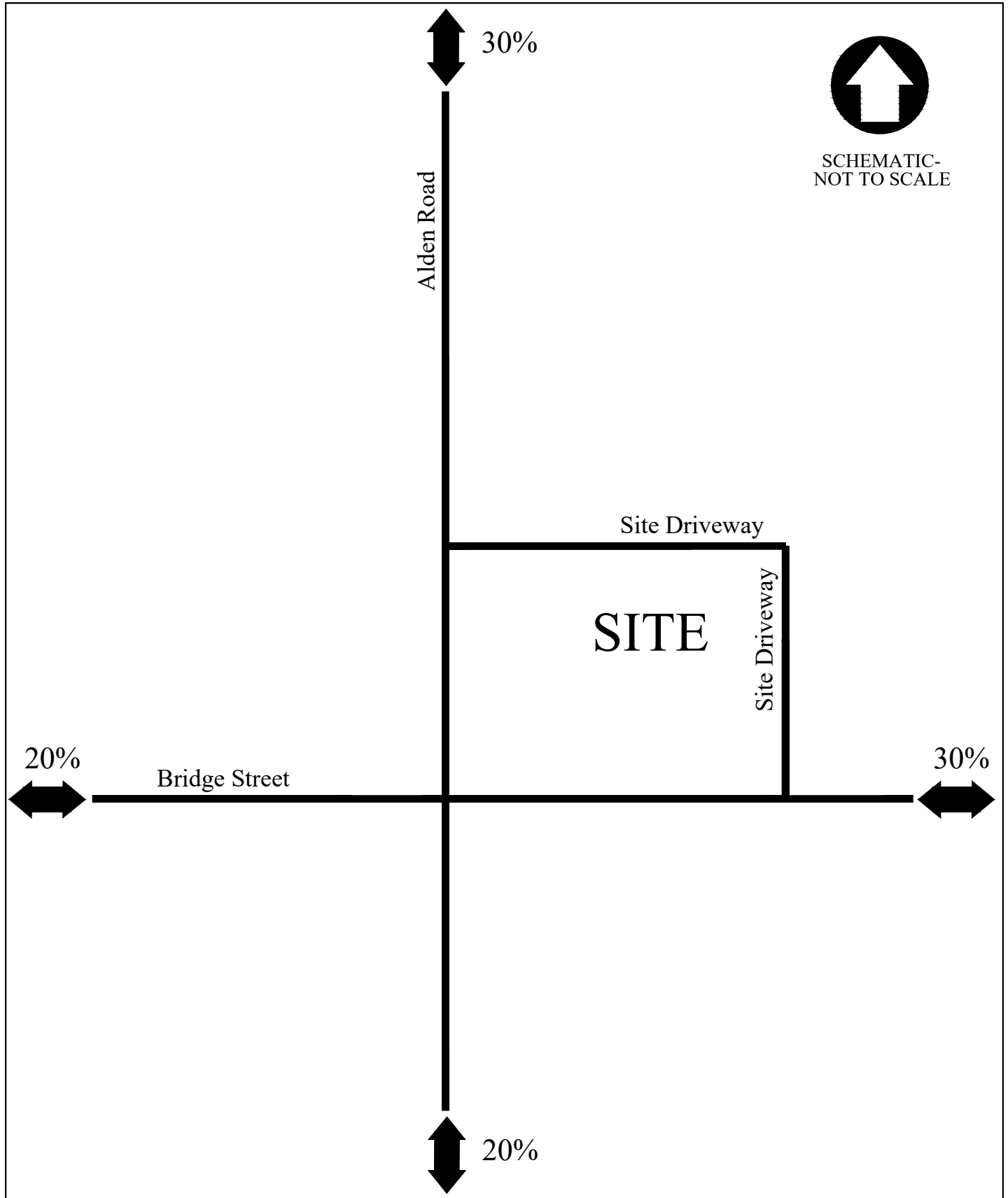
Project Site Distribution and Assignment

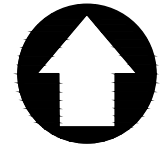
The traffic projected to be generated by the proposed RMD was distributed onto the study area roadways and intersections based on existing travel patterns and logical travel routes. As a result of discussions with the Town of Fairhaven, the site driveway on Bridge Street would restrict left turns exiting the site during the 4:00-6:00 PM weekday peak period. Left turns from the site onto Alden Road would be permitted. Existing left turns from the site onto Bridge Street during the weekday afternoon peak period were re-routed via a left turn onto Alden Road and left turn at the intersection of Bridge Street at Alden Road.

The resulting arrival and departure patterns and the distribution of new project trips are presented in Figure 6 and are documented in the traffic projection model located in Appendix C. The resulting distributed project trips are depicted in Figure 7 and Figure 8 for the weekday afternoon and Saturday midday peak hours, respectively.

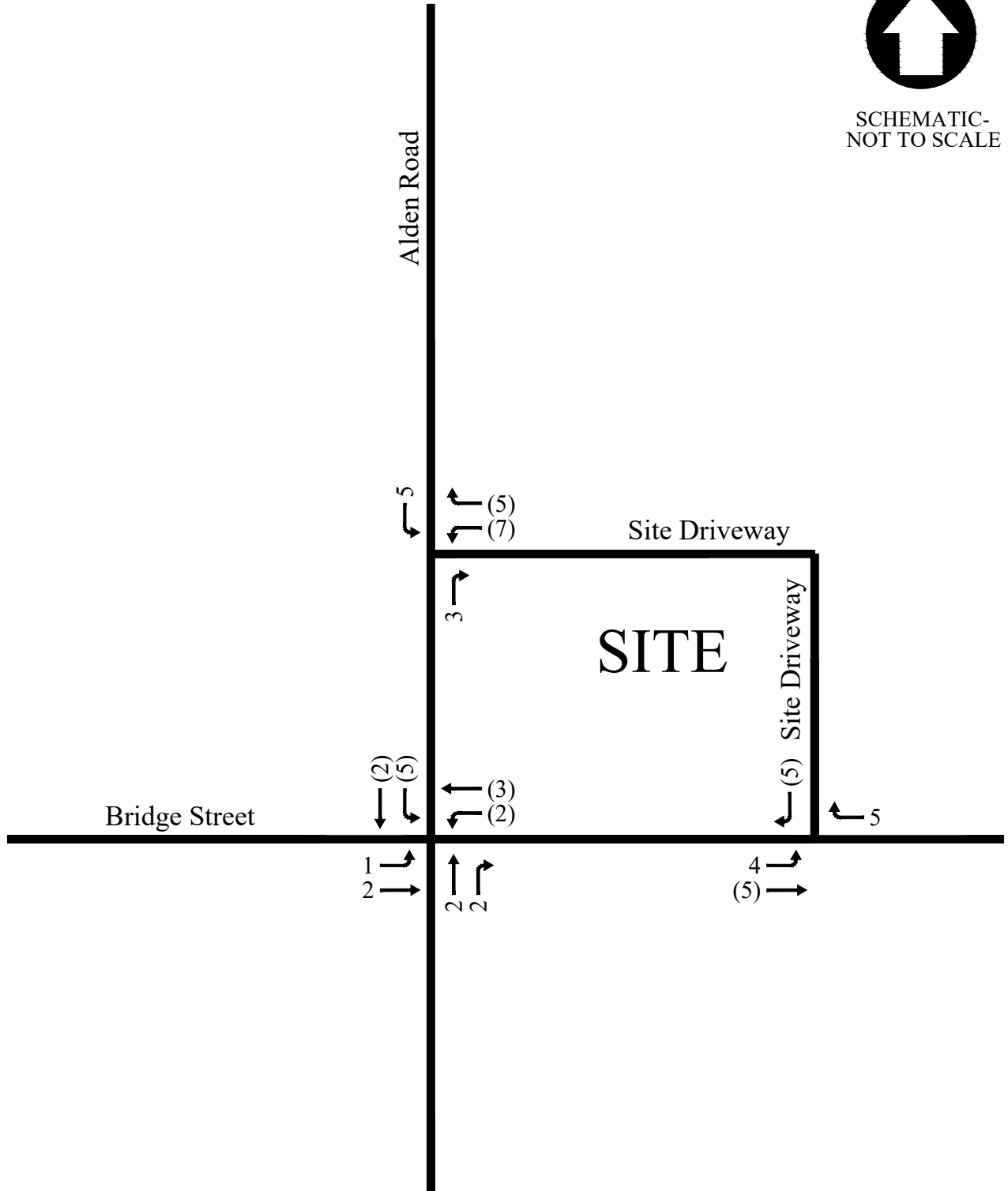
2029 Build Traffic Volumes

To establish the 2029 Build peak hour traffic volumes, the distributed project trips were added to the 2029 No Build peak hour traffic volumes to reflect the 2029 Build peak hour traffic volumes. The resulting 2029 Build peak hour volumes are shown in Figure 9 and Figure 10 for the weekday afternoon and Saturday midday peak hours, respectively, and are documented in the traffic projection model presented in Appendix C.



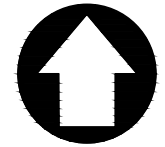


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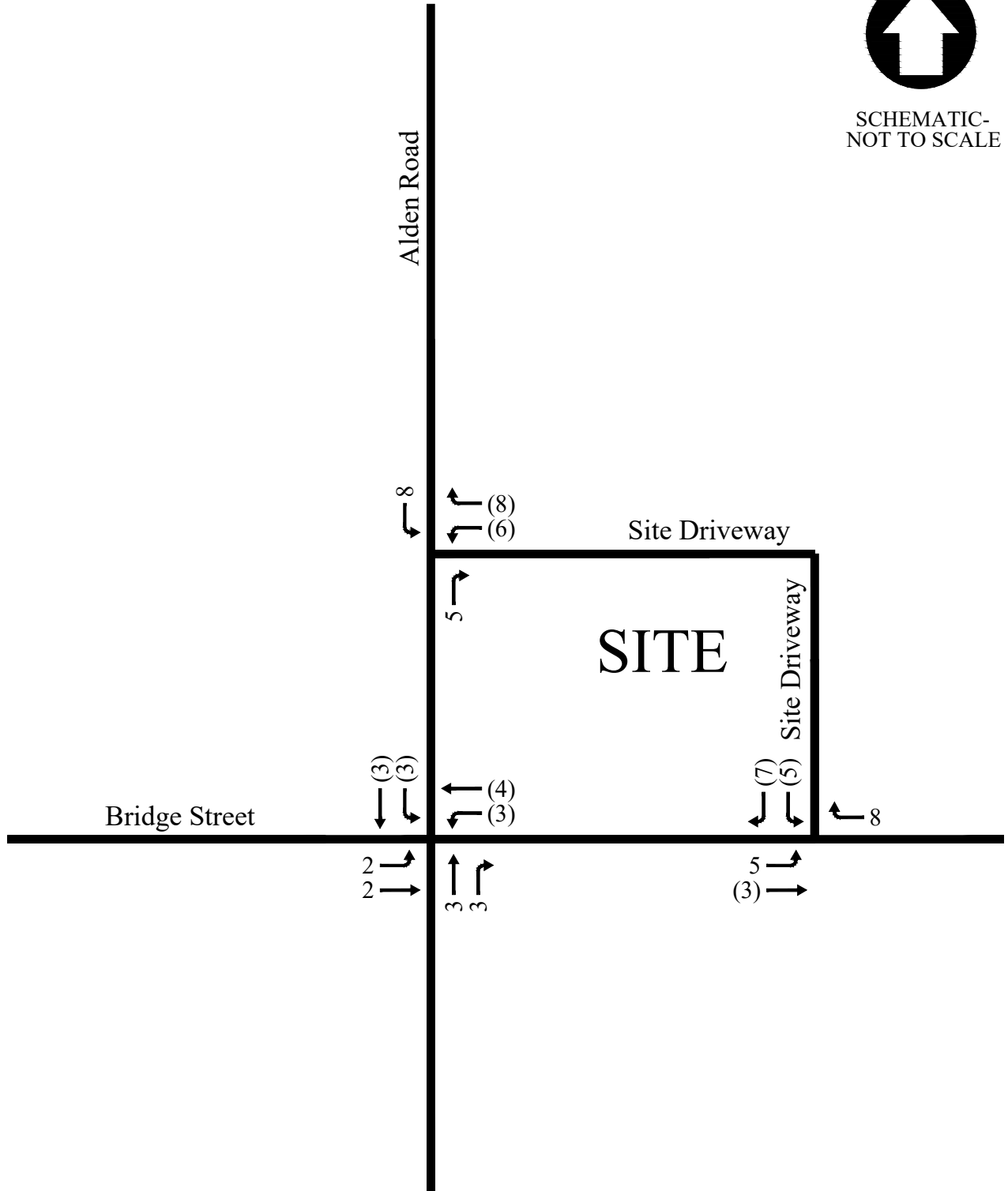


Legend
Entering (Exiting)

Figure 7
Weekday Afternoon Peak Hour
New Project Trips
Proposed RMD
Fairhaven, Massachusetts

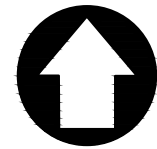


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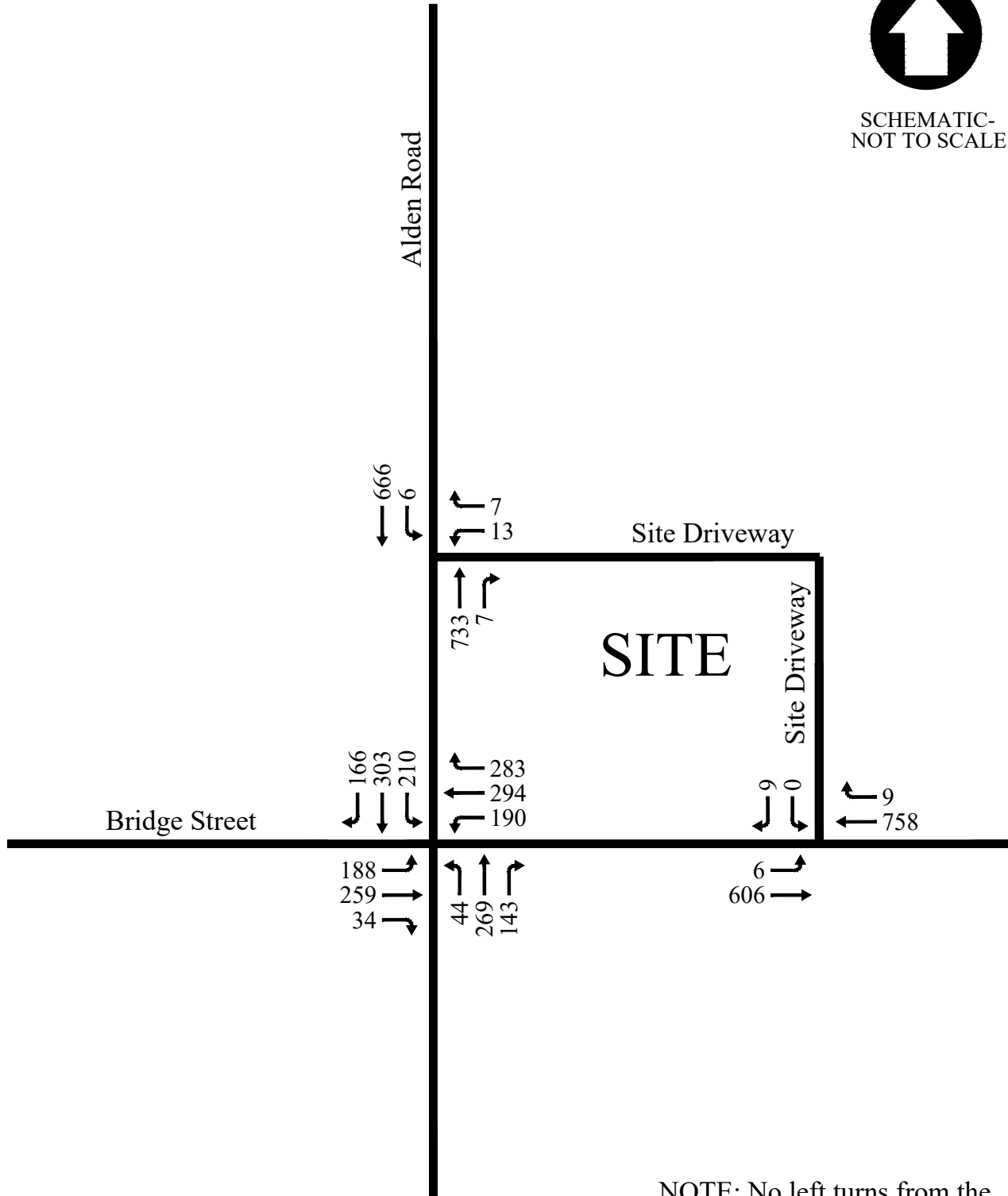


Legend
Entering (Exiting)

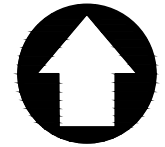
Figure 8
Saturday Midday Peak Hour
New Project Trips
Proposed RMD
Fairhaven, Massachusetts



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NOTE: No left turns from the
Bridge Street Site Driveway
from 4:00 PM to 6:00 PM.



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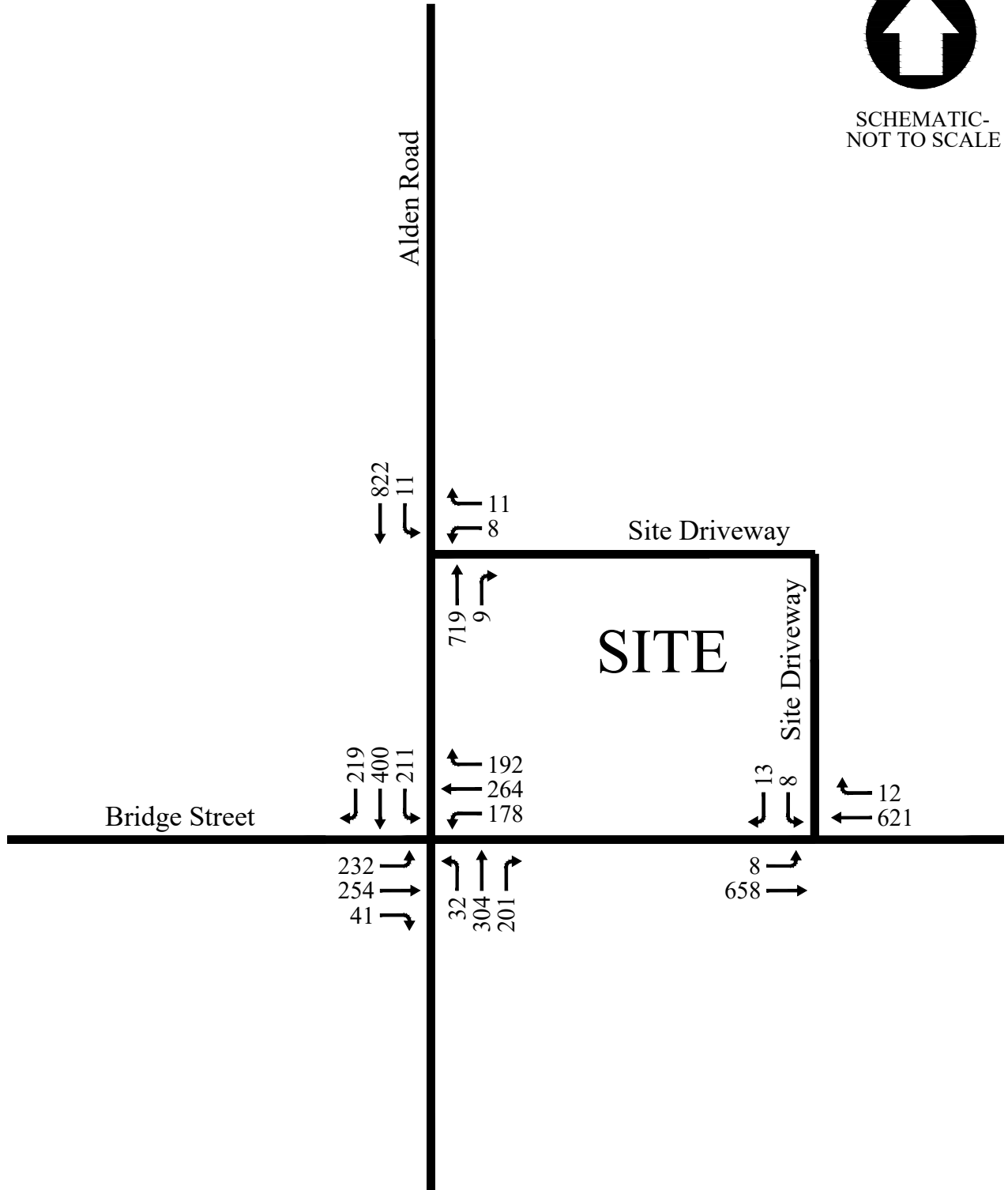


Figure 10
2029 Build Saturday Midday
Peak Hour Traffic Volumes
Proposed RMD
Fairhaven, Massachusetts

TRAFFIC OPERATIONS ANALYSIS

This section describes the overall quality of the traffic flow at the study area intersections. For this assessment, intersection capacity analyses were conducted using the Synchro capacity analysis software at the study area intersections under the 2022 Existing, 2029 No Build and 2029 Build peak hour traffic conditions. The analysis is based on Synchro capacity analysis methodologies and procedures contained in the *2010 Highway Capacity Manual (HCM)*, which is summarized in Appendix D. A discussion of the capacity analyses are presented below.

Capacity Analysis Results

Intersection capacity analyses were conducted using Synchro capacity analysis software for the study area intersections to evaluate the 2022 Existing, 2029 No Build and 2029 Build traffic conditions during the weekday afternoon and Saturday midday peak hours. The peak hour traffic volumes utilized as part of this analysis are provided in the traffic projection model, attached in Appendix C.

The Synchro capacity analysis results for the 2022 Existing, 2029 No Build and 2029 Build traffic conditions are presented in Appendix E, Appendix F, and Appendix G, respectively. The results of the specific capacity analysis at the study area intersections for the weekday afternoon and Saturday midday peak hours are discussed below. A more detailed summary of the capacity analysis for each study area intersection is provided in Appendix H.

The overall capacity analysis results for the signalized intersection of Bridge Street at Alden Road are presented in Table 3.

Table 3: Overall Signalized Intersection Capacity Analysis Results

Intersection	Period	2022 Existing			2029 No Build			2029 Build		
		LOS ¹	Delay ²	ICU ³	LOS	Delay	ICU	LOS	Delay	ICU
Bridge Street at	PM	D	40.9	0.65	D	47.4	0.71	D	48.6	0.72
Alden Road	SAT	D	35.8	0.67	D	40.8	0.74	D	41.3	0.74

1 Level-of-Service

2 Average vehicle delay in seconds

3 Intersection capacity utilization ratio

As shown in Table 3, the signalized intersection of Bridge Street at Alden Road is shown to currently operate at overall level-of service (LOS) D during the weekday afternoon and Saturday midday peak hours. Under the 2029 No Build and the 2029 Build conditions, the intersection is shown to continue to operate at overall LOS D during the weekday afternoon and Saturday midday peak hours. The proposed RMD project is not projected to have a significant impact on the operations of the intersection of Bridge Street at Alden Road.

The capacity analysis results for the critical approaches at the unsignalized site driveway intersections are presented in Table 4.

Table 4: Critical Stop-Controlled Movements Capacity Analysis Results

Intersection	Period	Movement	2022 Existing			2029 No Build			2029 Build		
			LOS ¹	Delay ²	V/C ³	LOS	Delay	V/C	LOS	Delay	V/C
Bridge Street at Site Driveway	PM	SB LR	C	15.9	0.02	C	18.1	0.03	B	12.2	0.02
	SAT	SB LR	C	15.4	0.03	C	17.6	0.04	C	19.7	0.10
Alden Road at Site Driveway	PM	WB LR	C	19.2	0.03	C	22.7	0.04	C	24.8	0.12
	SAT	WB LR	C	15.9	0.02	C	18.2	0.03	C	20.2	0.11

1 Level-of-Service

2 Average vehicle delay in seconds

3 Volume to capacity ratio

As shown in Table 4, the stop controlled southbound approach at the unsignalized intersection of Bridge Street at site driveway is shown to currently operate at LOS C during the weekday afternoon and Saturday midday peak hours. Under 2029 No Build conditions, the site driveway southbound approach is projected to continue to operate at LOS C during the weekday afternoon and Saturday midday peak hours. Under 2029 Build conditions, removing the existing left-turn movements during the weekday afternoon peak hour, the site driveway is projected to operate at LOS B during the weekday afternoon peak hour and at LOS C during the Saturday midday peak hour.

The stop controlled westbound approach at the unsignalized intersection of Alden Road at the site driveway is shown to currently operate at LOS C during the weekday afternoon and Saturday midday peak hours. Under 2029 No Build and 2029 Build conditions, the site driveway is projected to continue to operate at LOS C during the weekday afternoon and Saturday midday peak hours.

With the proposed RMD project in place, both site driveways serving the project site are shown to continue operating at acceptable levels-of-service.

Site Access and Circulation

The project would occupy the 1,800 square foot (sf) unit located on the west side of the existing on-site building (Unit #1). This unit was previously occupied by a cycle studio that closed in the summer of 2021.

Access to the site would continue to be provided by two site driveways, one on the north side of Bridge Street and one on the east side of Alden Road, each located approximately 200 feet from the signalized intersection. The site driveway on Bridge Street would restrict left turns exiting the site on weekdays between 4:00 PM and 6:00 PM. To provide the restriction, a W3-2 sign with a

plaque for the timing restrictions would be placed at the site exit of the Bridge Street site driveway.

The project would maintain the one-way counterclockwise circulation on site, and signage would be included to direct patrons towards the Alden Road site driveway during the weekday afternoon (4:00 PM to 6:00 PM) peak period turning restriction at the Bridge Street site driveway.

The existing parking layout would be maintained, which includes 29 parking spaces with two accessible spaces.

Sight Distance

A field review of the available sight distance was conducted at the existing site driveways. The American Association of State Highway and Transportation Officials (AASHTO) publication, *A Policy on Geometric Design, 2018 Edition*, defines minimum and recommended sight distances at intersections. The minimum sight distance is based on the required stopping sight distance (SSD) for vehicles traveling along the main roadway. The recommended intersection sight distance (ISD) allows vehicles to enter the main street traffic flow without requiring the mainline traffic to slow to less than 70% of their speed. According to AASHTO, “If the available sight distance for an entering or crossing vehicle is at least equal to the appropriate stopping sight distance for the major road, then drivers have sufficient time to anticipate and avoid collisions.”

Table 5 summarizes the AASHTO sight distance standards for the posted speed limits on Bridge Street and Alden Road at the site driveways.

Table 5: Sight Distance Evaluation

Site Driveway Location		Looking	Speed		Sight			
			Limit (mph)	SSD ¹ Required	ISD ² Recommended	Distance Measured	Meets SSD?	Meets ISD?
Bridge Street	Left (East)		35	250	335	800+	Yes	Yes
at Site Driveway	Right (West) ³		35	250	440	700+	Yes	Yes
Alden Road	Left (South)		35	250	335	800+	Yes	Yes
at Site Driveway	Right (North)		35	250	390	800+	Yes	Yes

1 Stopping sight distance (see AASHTO equations 3-2 and 3-3) for the posted speed limit.

2 Intersection sight distance (see AASHTO equations 9-1 and 9-2) for the posted speed limit.

3 Sight distance measured from 10-ft back from the edge of the travel lane.

As shown in Table 5, the available sight distance for vehicles looking left onto Bridge Street from the existing site driveway exceeds the AASHTO SSD and recommended ISD for the posted speed limit of 35 mph. Due to the existing hedges along the frontage of the site, the sight lines looking right from the Bridge Street Site Driveway were obstructed when measured at the AASHTO required 14.5 feet back from the edge of the travel lane. It is anticipated that

trimming and maintaining these hedges to a height of 2.5-feet would provide unobstructed sight lines for vehicles looking right from the Bridge Street Site Driveway. As part of the project the hedges are recommended to be trimmed and maintained.

The available sight distance at the Alden Road site driveway exceeds the required AASHTO SSD and recommended ISD for the posted speed limit in both directions.

CONCLUSION

The proposed RMD would be located at 240 Bridge Street, in the northeast corner of the intersection of Alden Road at Bridge Street. The site currently consists of a commercial building comprised of three retail units. The project would occupy the 1,800 square foot (sf) unit located on the west side of the building (Unit #1). This unit was previously occupied by a cycle studio that closed in the summer of 2021. Access to the site would continue to be provided by two site driveways, one on the north side of Bridge Street and one on the east side of Alden Road, each located approximately 200 feet from the signalized intersection. As a result of discussions with the Town of Fairhaven, the site driveway on Bridge Street would restrict left-turns exiting the site during the 4:00-6:00 PM weekday peak period. The project would maintain the existing parking layout and circulation on the site, which includes 29 parking spaces including two accessible spaces and one-way counterclockwise circulation within the site.

To provide a conservative approach to estimating the number of vehicles trips associated with the project, no vehicle trip credit was taken for the former cycle studio or for shared trips that may be present between the different uses on site. Based on trip generation data published by ITE, the proposed marijuana facility is estimated to generate a total of 34 new vehicle trips (17 entering and 17 exiting) during the weekday afternoon peak hour, and 52 new vehicle trips (26 entering and 26 exiting) during the Saturday midday peak hour.

The capacity analyses indicate that the proposed project would have a limited impact on the operations of the adjacent roadways and intersections. The increase in overall delay at the signalized intersection of Bridge Street at Alden Road as a result of the project related traffic is anticipated to be less than two seconds during both the weekday afternoon and Saturday midday peak hours. The increase in delay at the site driveway on Alden Road as a result of the project related traffic is anticipated to be four seconds or less during both the weekday afternoon and Saturday midday peak hours. The average vehicle delay is anticipated to be reduced at the Bridge Street site driveway under weekday afternoon peak hour Build conditions due to the restriction of left turns from the site driveway.

Based on a review of the available sight distance and a comparison to AASHTO recommendations, drivers would have the ability to enter and exit the site with adequate sight distance along Bridge Street and Alden Road with adequate landscaping. Plantings within the sight line of drivers at the site driveways should remain below 2.5-feet in height.

Based on a review of the analysis contained within this traffic impact study, the proposed project is not anticipated to have a significant impact on the traffic operations of the existing site, or the study area roadways and intersections.