



Town of Brewster Planning Board

2198 Main St., Brewster, MA 02631
brewplan@brewster-ma.gov
(508) 896-3701 x1133

MEETING AGENDA

2198 Main Street

April 10, 2024 at 6:30 PM

Planning Board

Amanda Bebrin, Chair

Alexander Wentworth
Vice Chair

Robert Michaels
Clerk

Charlotte Degen

Madalyn Hillis-Dineen

Antone Freitas

Elizabeth Taylor

Town Planner

Jonathon Idman

Senior Department Assistant

Lynn St. Cyr

This meeting will be conducted in person at the time and location identified above. This means that at least a quorum of the members of the public body will attend the meeting in person and members of the public are welcome to attend in person as well. **As a courtesy only, access to the meeting is also being provided via remote means in accordance with applicable law. Please note that while an option for remote attendance and/or participation is being provided as a courtesy to the public, the meeting/hearing will not be suspended or terminated if technological problems interrupt the virtual broadcast or affect remote attendance or participation, unless otherwise required by law.** Members of the public with particular interest in any specific item on this agenda, which includes an applicant and its representatives, should make plans for in-person vs. virtual attendance accordingly.

Members of the public who wish to access the meeting may do so in the following manner:

Phone: Call (312) 626-6799 or (301) 715-8592. Webinar ID: 841 0778 1002. Passcode: 612505.
To request to speak: Press *9 and wait to be recognized.

Zoom Webinar: <https://us02web.zoom.us/j/84107781002?pwd=VTVSV1ExaUNCL253NmNZV21Gdmo4dz09>
Passcode: 612505. To request to speak: Tap Zoom "Raise Hand", then wait to be recognized.

When required by law or allowed by the Chair, persons wishing to provide public comment or otherwise participate in the meeting, may do so by accessing the meeting remotely, as noted above. Additionally, the meeting will be broadcast live, in real time, via **Live broadcast** (Brewster Government TV Channel 18), **Livestream** (livestream.brewster-ma.gov), or **Video recording** (tv.brewster-ma.gov).

The Planning Board packet can be found on the Calendar on the Town of Brewster website (www.brewster-ma.gov). Please note that the Planning Board may take official action, including votes, on any item on this agenda.

1. Call to Order.
2. Declaration of a Quorum.
3. Meeting Participation Statement.
4. Recording Statement. As required by the Open Meeting Law we are informing you that the Town will be video and audio taping as well as broadcasting this public meeting. In addition, if anyone else intends to either video or audio tape this meeting they are required to inform the Chair.
5. Public Announcements and Comment. Members of the public may address the Planning Board on matters not on the meeting's agenda for a maximum of 3-5 minutes at the Chair's discretion. The Planning Board will not reply to statements made or answer questions raised during public comment but may add items presented to a future agenda.

PUBLIC HEARINGS:

6. **Special Permit and Site Plan Review Case No. 2024-04:** Applicant/Owner: The Free Sea Turtle, LLC, Paul Wallace, Manager, has applied for Site Plan Review under Brewster Zoning Bylaw Article XII for a new commercial development on an undeveloped lot, and a Special Permit under Brewster Zoning Bylaw Section 179-51 for uses including building and construction trade shop or garage and a full-service restaurant, at 162 Underpass Road (Tax Map 77 Parcel 9), located within the Commercial High Density (CH) Zoning District. The Planning Board will consider and potentially vote whether to grant the Special Permit and Site Plan Approval.



Planning Board

Amanda Bebrin, Chair

Alexander Wentworth
Vice Chair

Robert Michaels
Clerk

Charlotte Degen

Madalyn Hillis-Dineen

Antone Freitas

Elizabeth Taylor

Town Planner
Jonathon Idman

**Senior Department
Assistant**
Lynn St. Cyr

7. **Special Permit and Site Plan Review Case No. 2024-05:** Applicant/Owner: 162 Underpass LLC, Charles Whitcomb III, Manager, has applied for Site Plan Review under Brewster Zoning Bylaw Article XII for a new commercial development on an undeveloped lot, and a Special Permit under Brewster Zoning Bylaw Section 179-51 for uses including building and construction trade shop or garage and (1) accessory commercial dwelling unit, at Underpass Road (Tax Map 77 Parcel 10 and 60), located within the Commercial High Density (CH) Zoning District. The Planning Board will consider and potentially vote whether to grant the Special Permit and Site Plan Approval.
8. Approval of Meeting Minutes: March 27, 2024.
9. Committee Reports.
10. For Your Information.
11. Matters Not Reasonably Anticipated by the Chair.
12. Next Meetings: April 24, 2024 and May 8, 2024.
13. Adjournment.

Date Posted:
04/03/24

Date Revised:

Received by Town Clerk:

2024 APR 04 11:28AM

BREWSTER TOWN CLERK

SPECIAL PERMIT AND SITE PLAN REVIEW
CASE NO. 2024-04

APPLICANT/OWNER: THE FREE SEA TURTLE, LLC
PAUL WALLACE, MANAGER

PROPERTY: 162 UNDERPASS ROAD (MAP 77 PARCEL 9)

AND

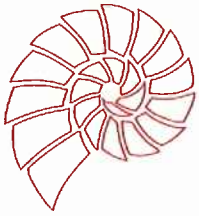
SPECIAL PERMIT AND SITE PLAN REVIEW
CASE NO. 2024-05

APPLICANT/OWNER: 162 UNDERPASS LLC
CHARLES WHITCOMB III, MANAGER

PROPERTY: 0 UNDERPASS ROAD (MAP 77 PARCEL
10&60)

CASE NO. 2024-04 AND CASE NO. 2024-05

DOCUMENTS FOR BOTH APPLICATIONS



J.M. O'REILLY & ASSOCIATES, INC.

PROFESSIONAL ENGINEERING, LAND SURVEYING & ENVIRONMENTAL SERVICES

Site Development • Property Line • Subdivision • Sanitary • Land Court • Environmental Permitting

February 1, 2024

JMO-6125A

Revised March 29, 2024

Brewster Planning Board
2198 Main Street
Brewster, MA 02631

RE: **Site Plan Review and Special Permit Application**

The Free Sea Turtle LLC – Lot 1, 162 Underpass Road, Assessor Map 77, Parcel 9
162 Underpass LLC - Lots 2-3, 0 Underpass Road, Assessor Map 77, Parcel 10 & 60

Dear Board Members,

On behalf of our clients, The Free Sea Turtle, LLC and 162 Underpass LLC, J.M O'REILLY & ASSOCIATES, INC. is submitting the two applications for a Site Plan Review with Special Permit for the proposed construction of commercial buildings on the two separate properties as referenced above. In conjunction with the Site Plan and Special Permit applications we are submitting separate Stormwater Permit Applications, for each parcel for the proposed drainage improvements.

The enclosed plan set includes a Site Plan showing both parcels (Lot 1 and Lot 2-3) along with the details and notes. The site plan addresses the zoning, parking, grading, fire access and drainage of both parcels. The plan set also includes separate DRAFT sewage system plans for each property. The owners have worked with Phillip Cheney, Landscape Architect, for the landscape plans for both parcels, which are also enclosed. Lastly, we have enclosed an emergency swept path plan showing the appropriate vehicle turnaround within the property.

The following narrative should be used to outline the proposed projects.

HISTORY AND EXISTING CONDITIONS – BOTH PARCELS:

The parcels involved are currently vacant. The previous single-family dwelling on what is now Lot 1 has been removed. Over the past year and a half, the two LLCs have worked with the Brewster Conservation Commission and Town of Brewster Planning Department to begin the development of the former 162 Underpass Road site.

The former 162 Underpass Road parcel was subject to an Order of Conditions (SE 9-1920) to allow the site cleanup of the former contractor's yard (Peter's Excavating). The Order of Conditions delineated a limit of future disturbance to 55 feet from the wetland resource. The 55-foot setback allowed for the site cleanup to occur while protecting the resource areas.

In the process of the site cleanup, the required excavation expanded beyond the original scope of the Order of Conditions. As a result of the existing site conditions, both LLCs sought and obtained an Amended Order of Conditions (AOOC SE 9-1920), Spring 2023. Along with the Amended Order of Conditions, the owners sought and obtained a stormwater permit which in turn along with the AOOC allowed for the additional clearing and excavation as needed. The stormwater permit was limited to site grading and excavating as the required disturbed areas exceeded the limitations outlined in the Stormwater Regulations permit thresholds. The Commission granted the Stormwater Permit to allow the site cleanup to continue and be completed, (SWMC2023-01).

The clean-up of the site is just about complete and now the owners are looking to begin the development of both parcels. This past Fall Lot 2-3 (162 Underpass LLC) sought and obtained an Order of Conditions to construct the proposed commercial bay building with a two (2) bedroom apartment. Brewster Project Number OOC SE 9-1962 for the Commission's approval.

NARRATIVE & PROJECT DESCRIPTION:

As an aid to the Board's review, we offer the following points of information for your consideration:

Wetland Resources:

Please refer to the Orders of Conditions (OOC SE 9-1962) for the wetland resource information. The Lot 2-3 site borders on a Bordering Vegetated Wetland (BVW), to the north. Please refer to the Site Plan for the location of the flagging and edge of wetland resources.

Massachusetts Endangered Species Program:

- The parcel is not within a mapped area for endangered species as defined under the Natural Heritage Program.

Zoning:

District:

- The parcels fall within the zoning district of the Commercial High-Density District (CH).

Use:

The project includes the following uses under the Town of Brewster Table 1 Use Regulations.

- Lot 1 – 162 Underpass Road
 - Commercial Uses
 - Use item #3, Antique shop, art gallery. (Permitted use).
 - Use item #9, Business offices and services (Permitted use).
 - Use item #21, Gift shop. (Permitted use).
 - Use item #28, Personal service establishment. (Permitted use).
 - Use item #31, Repair services. (Permitted use).
 - Use item #33, Restaurant – Full Service and lounge. (Special Permit)
 - Use item #35, Retail store. (Permitted Use).
 - Use item #36, Row Commercial. (Permitted use).

- Lot 2-3 – 0 Underpass Road
 - Wholesale, manufacturing and industrial uses:
 - Use item #1, Building and construction trades shop or garage. (Special Permit).
 - Commercial Uses:
 - Use item #40, Storage of materials for a business, including but not limited to pipes, mulch, small or heavy equipment. (Permitted use).
 - Use item #41, Storage of more than 2 commercial vehicles. (Permitted use).
 - Residential Uses:
 - Use item #11, One-family security dwelling. (Permitted use).

Dimensional Requirements:

Lot 1 – 162 Underpass Road

- Area
 - Lot Area – 40,000 sf is required (44,200 sf provided - for Row Commercial)
- Frontage
 - 150 feet of frontage is required (170.00 feet provided)
- Setbacks
 - Front 30 feet is required (49.8 feet provided)
 - Side 20 feet is required (21 feet provided to the south)
 - Rear 20 feet is required (152 feet provided)
- Coverage:
 - 40% Maximum Building Coverage is required (9.1 % provided)

Lot 2-3 – 0 Underpass Road

- Area
 - Lot Area – 40,000 sf is required (64,989 sf provided)
- Frontage
 - 150 feet of frontage is required (160.00 feet provided)
- Setbacks
 - Front 30 feet is required (69.9 feet provided)
 - Side 20 feet is required (48.1 feet provided to the south)
 - Rear 20 feet is required (54.2 feet provided)
- Coverage:
 - 40% Maximum Building Coverage is required (8.3 % provided)

Proposed Project Description – Lot 1; 162 Underpass Road:

The project is to construct one commercial building. The building will be metal framed building type with concrete slab foundation. The metal building will be finished like the other metal buildings along Underpass Road but will incorporate wooden siding to enhance the aesthetic of the building. The metal siding will be dark grey. The building has been located and designed to accommodate the topography of

the parcel, which slopes from the south down to the north on the parcel. The northside entry level of the building is the foundation slab and could be considered a walkout style foundation.

The building has two floors. The top floor has three commercial units while the first floor has a restaurant with access out onto a patio. As the building tenants are currently unknown, the applicant has provided a number of uses that may reside in these units.

Proposed Project – Lot 2-3; 0 Underpass Road:

The project is to construct one commercial building with an attached security dwelling. The building will be a typical contractor bay building with a total of five (5) 50' x 20' Bays. Each Bay will have a large commercial garage door along with a front entry door and a rear egress door. The residential unit will contain 2 bedrooms and will be finished in a similar manner to the larger commercial portion. The entire building will be metal framed building types with a concrete slab foundation. The metal building will be finished like the other metal buildings along Underpass Road.

Associated with Lot 2-3 is a rear portion of the parcel which will be used in conjunction with the building trades within the proposed commercial building. The activities in the rear of the parcel will be material storage, equipment storage and a large drainage facility which serves both parcels. The rear portion of the parcel will also contain a total of six (6) vehicle spaces including the two rear access points for the rear building for Lot 1. The rear portion of the parcel will be finished with gravel.

NOTE: As part of the project, Lots 2 and 3 as shown on a previous Approval Not Required Plan will be combined by preparing an 81X to expunge the common line between the town parcels. The 81X plan will be completed and recorded prior to submission of a building permit, or as directed by the Planning Board.

Proposed Improvement Common to Each Application:

In addition to the two buildings the project includes a paved parking area, associated drainage facilities, sewage system and utilities. The proposed parking area and the drainage facility are being designed to accommodate both proposed uses on the two lots. The owners of each parcel will provide each other with the necessary easements for both parking and drainage improvements. Copies of the executed easements will be provided to the town upon the application for the building permit.

Access Drive:

- The proposed curb cut is being shifted to the south from the existing curb cut on Underpass Road. The shift in the location of access provides improved vehicle sight distances to both the south and north along Underpass. Please refer to the enclosed Traffic Report by VHB.

Parking:

- The proposed parking area will be paved and contain a total of 49 parking spaces. Included with the 49 spaces will be 3 handicapped van accessible spaces. The HP space for lot 2-3 will be adjacent to the building on the east side. The two HP spaces for Lot 1 will be located on the south side of the parking area adjacent to the restaurant building.

- The rear gravel area is also proposed to contain six (6) spaces. These spaces will be designated for employees from either lot. The parking coordination will be coordinated between the two owners.

Bicycles:

- The project for Lot 1 calls for a bike rack adjacent to the buildings on the proposed patio. This bike rack will serve both properties.

Lighting:

- The proposal calls for wall sconces at all entry doors. The sconces will also serve as lighting for the patio area.
- The proposal calls for overhead light fixtures for the garage bays.
- The paved parking area will be illuminated with two (2) sets of double fixture light mounted on a 15' pole. Refer to cut sheets.
- All lighting will be 'Dark-Sky' compliant.

Trash:

- Trash enclosure is proposed on the rear of Lot 2-3.
- The trash area will consist of a concrete pad for the dumpsters and enclosed within a 6-foot-high stockade fence and gate.
- The trash pad area has been sized for two large (8'x8') dumpsters, which will be shared by both properties.

Drainage:

- Site drainage is proposed to be controlled by a series of deep sump catch basins, a Bio-retention swale, an oil/grit separator and a large subsurface leaching facility.
- The stormwater facility is sized to address the 25-year storm.
- The drainage facility also results in the reduction of stormwater flow for the pre versus the post construction for the 100-year storm event.
- The drainage facility is designed to the MA Stormwater Handbook and the Town of Brewster Stormwater Regulations.
- The roof areas of all buildings are also being controlled by the same drainage facility as the parking areas.
- Both projects require a Major Stormwater Permit from the Planning Board.

Landscaping:

- As part of the application, we have enclosed landscape plans for both projects. The plans were prepared by Philip Cheney, Landscape Architect.
- The plan calls for the placement of eight (8) shade trees for the 49-space paved parking area. Six of the trees are proposed within the center landscape island with two additional trees along the roadway. The landscape plan is further enhanced with shrubs and grasses.
- The rear of lot 2-3, adjacent to the Town of Brewster property (Eddy School) will be planted with a row of evergreen trees such as Leland cypress or a green giant type species.
- The remaining disturbed areas shall be loamed and seeded with a drought tolerant grass seed mix.

Sewage Disposal System:

- Each lot will be served by a separate sewage system. Each of the proposed systems is fully compliant with both the State Sanitary Code (Title 5) and the Local Board of Health requirements.
- The sewage system for Lot 1 does include a wastewater treatment unit which is intended to address the reduction of the BOD, TSS, oil/grease and Nitrogen to facilitate the longer life of the leaching facility.
- The sewage system for Lot 1 will require a review by the Board of Health due to the Alternative treatment component of the system.
- All commercial bay units, with vehicle access, will be equipped with floor drains which will be connected to a tight tank (IWHT).

Water:

- The proposed building will be served by municipal water.
- The project proposes a 6-inch water main into the parcel which will feed the buildings with domestic water service, fire suppression service (if required) and provide the capacity to install a single fire hydrant as requested by the Fire Chief. There are two additional fire hydrants within 500' of the proposed development. One on Underpass Road and one at the end of Sara Ann Lane.

PROJECT COMPLIANCE/WAIVER OUTLINE:

Site Plan Approval:

A. Transportation:

- Additional traffic Anticipate: No significant increase in traffic anticipated.
- Level of Service: No changes in Level of Service are anticipated.
- The access curb-cuts are proposed to be shifted to the south to improve site distances to and from the lots.
 - REFER TO THE TRANSPORTATION MEMORANDUM AS PREPARED BY VHB.

B. Trip Reduction:

- The proposal for Lot 1 does provide a bike rack.
- The proposal for Lot 1 includes sidewalks out to Underpass Road and a new sidewalk along the western side of the roadway which will lead to a potential crosswalk just south of the parcel. Refer to Site Plan and VHB Memorandum. The intention of the crosswalk and sidewalks is to allow bike and pedestrian access to the commercial spaces proposed.
 - The proposal for Lot 2-3 does not include any trip reduction given the nature of the use.

C. Access Standards:

- Curb cut: The existing curb cut is being abandoned and the new curb cut is proposed just south of the existing.
- Multiple Driveways: Not Applicable
- Curb cut permit from MASSDOT: Not Applicable
- Pedestrian and bicycle access and site circulation: Refer to trip reduction notes.
- Traffic Study: Refer to Traffic memorandum as prepared by VHB.

D. Parking Design:

- a. Requesting a parking waiver: Possible waiver for required parking spaces.
 - i. The parking demand will vary due to the nature of the uses proposed for both properties.
 1. The employees for the contractor bays will typically come to the property in the morning, leave for the day and return in the late afternoon.
 2. The office/retail uses (potential) will primarily use the parking area during the daytime, with lighter traffic in the evening.
 3. The restaurant use will be the largest user of the parking area. The anticipated busiest time for the restaurant will be late afternoon and into the evening.
 - ii. Both applicants feel the 55 spaces proposed will be sufficient for the use of the properties. The spaces and their dedicated availability will need to be coordinated between the two owners. After discussion with the Board, and if necessary, the Applicants will seek a waiver from the strict parking spaces required, as shown on the plan view.

E. Landscape, Design and Appearance:

- a. The parcel will be landscaped to be in keeping with the surrounding buildings.
- b. The project may need a waiver from the southern abutters. The project does not propose any landscaping to the south of the building on Lot 1 due to the easement from Underpass Road to the Town property.

F. Environmental Protection Requirements:

- a. Stormwater is being controlled on site.
- b. The pre versus post stormwater discharges are compliant with the MA Stormwater Handbook and the Town of Brewster Stormwater Bylaw.
- c. The sewage system for Lot 1 does include an IA component to address the wastewater.

G. Plants and Animals:

- a. The project is not within a mapped priority and estimated habitat area.

H. Lighting:

- a. See above.

I. Noise:

- a. Excessive Noise is not anticipated for the proposed use.

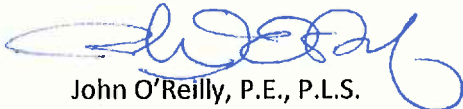
Special Permit Approval:

1. The proposed uses are in keeping with the Brewster Comprehensive Plan.
2. The proposed structures are like the types of commercial buildings along Underpass Road.
3. The sites are more than suitable for the intended use. The uses are in keeping with properties and uses within the area.
4. The project has been designed to provide emergency access to the site. The proposed parking area has been designed to accommodate the emergency vehicles of the town, as requested.
5. Underpass Road is adequate for the type of use proposed. Refer to VHB Memo.
6. Project proposes sufficient parking and loading areas for the intended use.
7. The proposed building will be screened from the abutter to the west (Town).

8. The site will provide suitable disposal of wastewater. Town water is readily available along Underpass Road. The proposed grading and drainage facilities provide suitable means to manage stormwater from the proposed project.
9. All the applicable utilities exist along Underpass.
10. The proposed uses will not degrade the groundwater or coastal water quality.
11. The project does not fall within a mapped priority and estimated species habitat.
12. The proposed uses do comply with the Zoning Bylaw requirements.

We hope this narrative provides guidance to the Board in their review of the Applications. We look forward to meeting with you on April 10, 2024, to discuss the project and to answer any questions the Board may have. In the meantime, if you need any additional information, please contact my office directly.

Very truly yours,
J.M. O'REILLY & ASSOCIATES, INC.



John O'Reilly, P.E., P.L.S.
Principal

CC: The Free Sea Turtle LLC (c/o Paul Wallace)
162 Underpass LLC (c/o Charles Whitcomb)

ZONING TABLE: LOT 1

ZONING DISTRICT: C-H
BUILDING SETBACKS:
 REQUIRED FRONT YARD: 30'; PROPOSED FRONT YARD: 49.9 FEET
 REQUIRED SIDE YARD: 20'; PROPOSED SIDE YARD: 21.0 FEET
 REQUIRED REAR YARD: 20'; PROPOSED REAR YARD: 152.0 FEET

BUILDING COVERAGE:
 PROPOSED BUILDING AREA: FRONT BUILDING = 4,020 SF (INCLUDES CANOPY)
 LOT 1 - UPLAND AREA: 44,200 SF
 PROPOSED BUILDING COVERAGE: (4,020 / 44,200) x 100% = 9.1%

AVERAGE GRADE & BUILDING HEIGHT:

AVERAGE GRADE:
 EXISTING NORTH GRADES: (60.0 + 70.0) / 2 = 65.0
 EXISTING SOUTH GRADES: (71.0 + 71.5) / 2 = 71.2
 AVERAGE GRADE: (65.0 + 71.2) / 2 = **68.1**
 MAXIMUM BUILDING RIDGE: 68.1 + 30 FEET = 98.1
 PROPOSED RIDGE: 60.5 (SLAB) + 24.0 (BUILDING HEIGHT) = 94.5
 94.5 < 98.1

NOTES:

PARKING REQUIREMENTS: LOT 1

RESTAURANT: 75 SEATS x 1 SPACE PER 4 SEATS + 1 SPACE FOR STAFF (8 STAFF) = 27 SPACES
 OFFICE/RETAIL/STUDIO: 2,592 S.F./250 S.F. PER SPACE = 11 SPACES
 TOTAL PARKING SPACES REQUIRED: 38 SPACES

PARKING REQUIREMENTS: LOT 2-3

COMMERCIAL BAYS: 1 SPACE PER EMPLOYEE; 2 EMPLOYEES X 5 BAYS = 10 SPACES
 APARTMENT: 1 SPACE PER BEDROOM; 2 BEDROOMS = 2 SPACES
 TOTAL PARKING SPACES REQUIRED: 12 SPACES
 TOTAL SPACES REQUIRED FOR BOTH PROPERTIES PER POLICY = 50 SPACES WITH 3 HP SPACES REQUIRED

PARKING PROVIDED:

A TOTAL OF 55 SPACES PROVIDED INCLUDING 3 HP SPACES

LIGHTING:

BUILDING LIGHTING:
 GARAGE BAYS: ONE (1) DARK SKY FIXTURE CENTERED OVER GARAGE BAY DOOR (4 FIXTURES)
 ENTRY DOORS: ONE (1) DARK SKY FIXTURE ADJACENT TO THE EACH ENTRY DOOR (8 TO 10 FIXTURES)
 SITE LIGHTING:
 PARKING AREAS: TWO SETS OF DARK SKY FIXTURES, TWO LIGHTS PER SET, MOUNTED ON 15 FOOT LIGHT POLES

LANDSCAPE:

PROPOSED LANDSCAPE WILL BE IN KEEPING WITH THE SURROUNDING AREAS. SEE LANDSCAPE PLAN

INDUSTRIAL WASTEWATER HOLDING TANK:

IF THE BAYS ARE TO BE ACCESSIBLE BY VEHICLE, FLOOR DRAINS WILL BE REQUIRED IN EACH BAY. EACH FLOOR DRAIN WILL NEED TO BE CONNECTED TO AN INDUSTRIAL WASTEWATER HOLDING TANK.

ZONING TABLE: LOT 2

ZONING DISTRICT: C-H

BUILDING SETBACKS:

REQUIRED FRONT YARD: 30'; PROPOSED FRONT YARD: 70.0 FEET
 REQUIRED SIDE YARD: 20'; PROPOSED SIDE YARD: 49.0 FEET
 REQUIRED REAR YARD: 20'; PROPOSED REAR YARD: 51.0 FEET

BUILDING COVERAGE:

PROPOSED BUILDING AREA: 5,000 SF
 LOT 2 - UPLAND AREA: 40,579 SF
 PROPOSED BUILDING COVERAGE: (5,000 / 40,579) x 100% = 12.3%

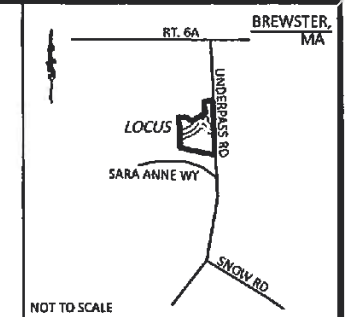
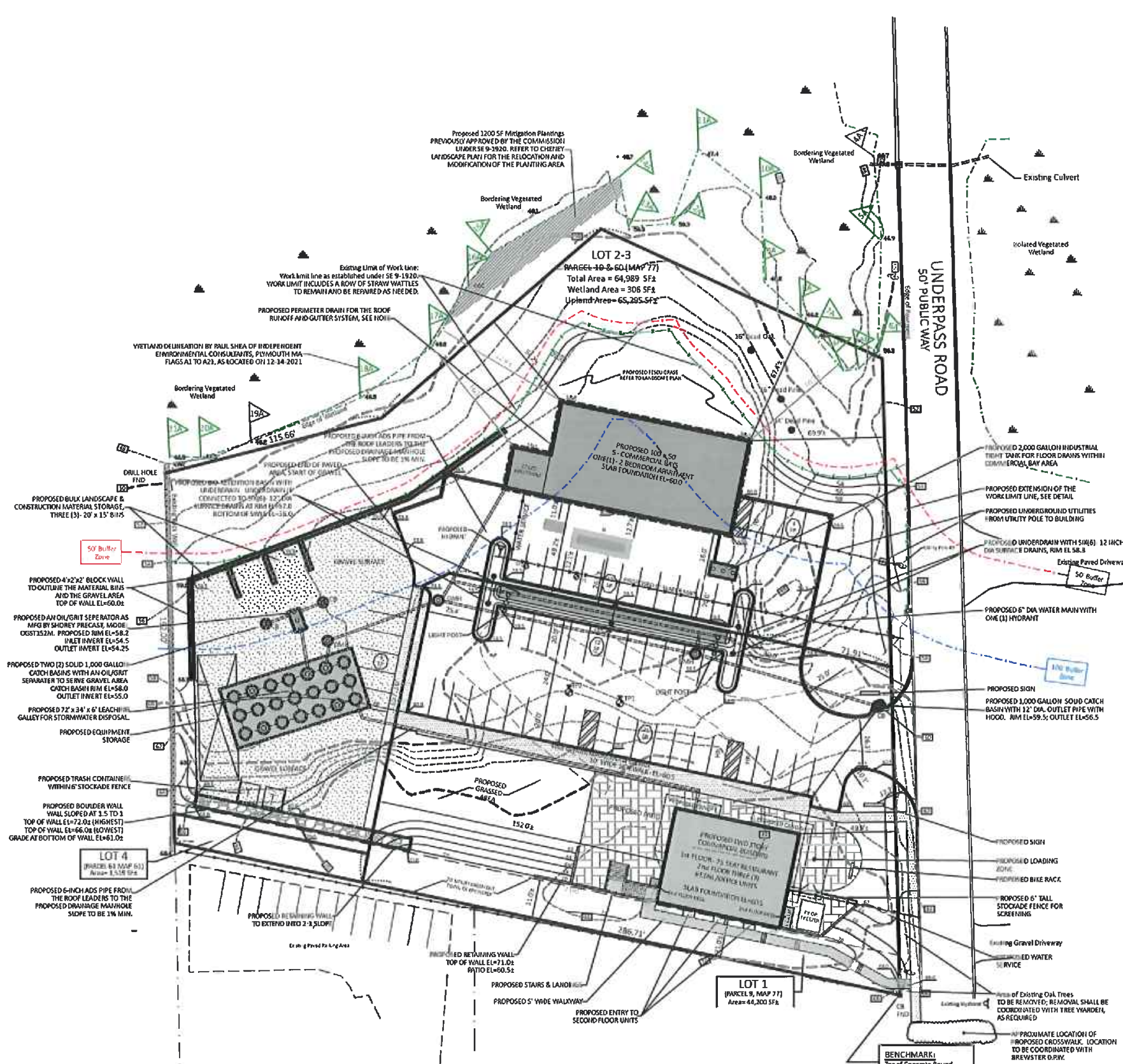
AVERAGE GRADE & BUILDING HEIGHT:

AVERAGE GRADE:
 EXISTING NORTH GRADES: (58.0 + 58.5) / 2 = 58.2
 EXISTING SOUTH GRADES: (59.0 + 58.5) / 2 = 58.7
 AVERAGE GRADE: (58.2 + 58.7) / 2 = **58.5**
 MAXIMUM BUILDING RIDGE: 58.5 + 30 FEET = 88.5
 PROPOSED RIDGE: 60 (SLAB E1) + 28 (BLD HEIGHT) = 88

MAXIMUM BUILDING RIDGE:

60 (SLAB E1) + 28 (BLD HEIGHT) = 88

BUILDING HEIGHT SHALL BE CONFIRMED PRIOR TO BUILDING PERMIT APPLICATION



NOT TO SCALE
 PLAN BOOK 350 DEED BOOK 28878 ASSESSORS' MAP 48
 PAGE 1 PAGE 199 PARCEL 7

LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- EXISTING SPOT GRADE
- PROPOSED SPOT GRADE
- WATER SERVICE LINE
- OVERHEAD UTILITY SERVICE
- UNDERGROUND UTILITY SERVICE
- GAS SERVICE LINE
- TEST HOLE / BORING LOCATION
- SEPTIC TANK
- DISTRIBUTION BOX
- SOIL ABSORPTION SYSTEM
- RESERVED FOR FUTURE
- UTILITY POLE
- CATCH BASIN
- FIRE HYDRANT
- WELL
- DRAINAGE MANHOLE
- CONCRETE BOUND, FOUND
- TOP OF BANK
- LIMIT OF WORK
- FENCE
- EDGE OF CLEARING
- BOULDER

SHEET 1 OF 5

REVISED 3-29-2024: REMOVED REAR BUILDING FROM LOT 1; REVISED THE LAYOUT OF THE FRONT BUILDING ON LOT 1; REVISED LANDSCAPE, GRADING AND GRAVEL AREA AS NEEDED.
 REVISED 2-22-2024: UPDATED BUILDING UNIT DIAGRAM; ADDED EXISTING HYDRANT ON UNDERPASS; NOTED OAK TREE REMOVAL ON UNDERPASS;

THE FREE SEA TURTLE LLC & 162 UNDERPASS, LLC.
 C/O P.O. BOX 444, BREWSTER MA, 02631

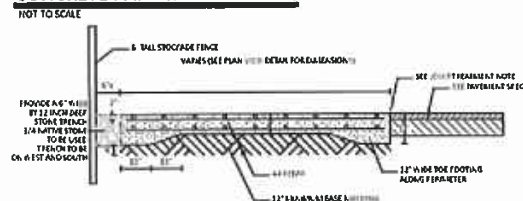
PROPOSED SITE PLAN WITH DRAINAGE
 LOTS 1, 2 AND 3 AT 0 & 152 UNDERPASS ROAD, BREWSTER MA, 02631

J.M. O'REILLY & ASSOCIATES, INC.
 Professional Engineering & Land Surveying Services

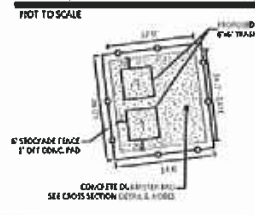
1078 Main Street - Route 4A
 P.O. Box 1778
 Brewster, MA 02601 (603)606-0000 Fax
 DATE: 02/02/2024 SCALE: As Noted BY: JMO/gb CHECK: JMO SUBNUMBER: JMO 6125A



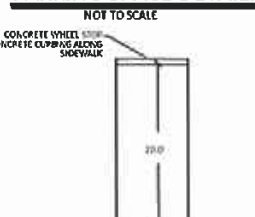
CONCRETE PAD CROSS-SECTION:



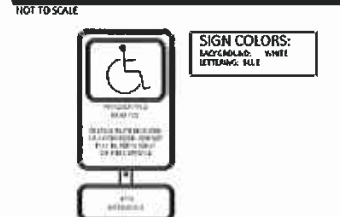
CONCRETE PAD PLAN VIEW:



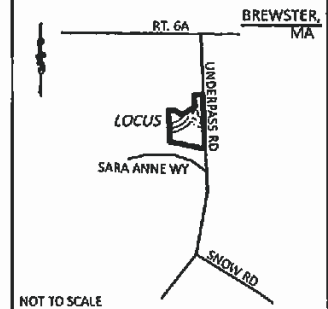
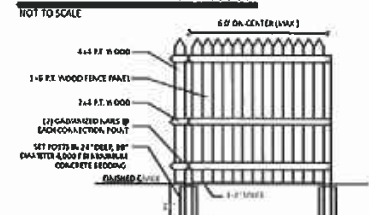
PARKING SPACE DETAIL:



HANDICAP VAN PARKING SIGN DETAIL:



STOCKADE FENCE SECTION:



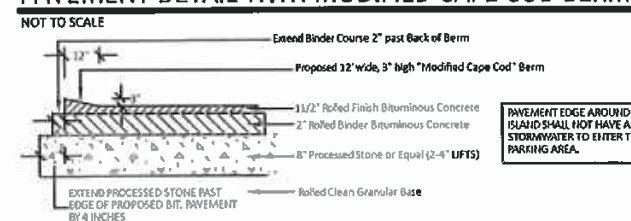
PLAN BOOK 350
DEED BOOK 28376
ASSESSORS' MAP 48

PAGE 1
PAGE 199
PARCEL 7

LEGEND

	EXISTING CONTOUR
	PROPOSED CONTOUR
	EXISTING SPOT GRADE
	PROPOSED SPOT GRADE
	WATER SERVICE LINE
	OVERHEAD UTILITY SERVICE
	UNDERGROUND UTILITY SERVICE
	GAS SERVICE LINE
	TEST HOLE / BORING LOCATION
	DISTRIBUTION BOX
	SOIL ABSORPTION SYSTEM
	RESERVED FOR FUTURE UTILITY POLE
	CATCH BASIN
	FIRE HYDRANT WELL
	DRAINAGE MANHOLE
	CONCRETE BOUND, FOUND
	TOP OF BANK
	LIMIT OF WORK
	FENCE
	EDGE OF CLEARING
	BOULDER

PAVEMENT DETAIL WITH MODIFIED CAPE COD BERM:



PAVEMENT NOTES:

SUBBASE MATERIAL:
THE SUBBASE SHALL CONSIST OF CLEAN SAND, FREE OF ORGANIC MATERIAL AND LOAM.

ROAD BASE MATERIAL:
ALL PAVED AREAS:
TWELVE INCHES (2") LAYER OF DENSE GRADED PROCESSED STONE (MAN AGG, 3/4") UNDER ALL PAVED AREAS. STONE BASE SHALL BE INSTALLED IN TWO (2) 6 INCH LIFTS.

BITUMINOUS CONCRETE PAVING - ALL PARKING AREAS:
BINDER COURSE: 2" INCH LAYER (ROLLED) OF CLASS 1 BINDER COURSE
FINISH COURSE: 1 1/2" LAYER (ROLLED) OF CLASS 1 FINISH COURSE

BITUMINOUS CONCRETE PAVING - SIDEWALK AREAS:
2" MODIFIED DRIVEWAY BIT. CONCRETE MIX OR APPROVED EQUAL

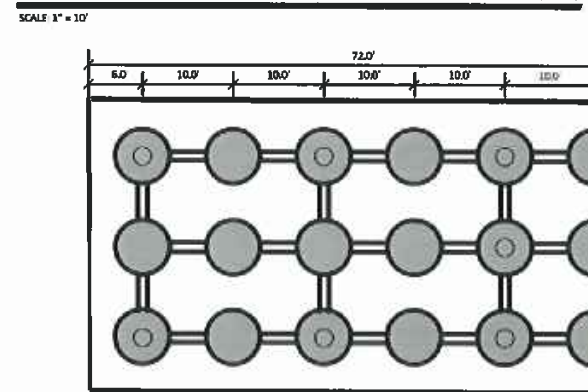
NOTE: THE DRAINAGE AREAS OF THE PARKING AREA AT THE ROADWAYS SHALL BE CONSTRUCTED TO THE POINT OF DISCHARGE OF THE STORMWATER.

CONCRETE RAMP DETAIL 'A':

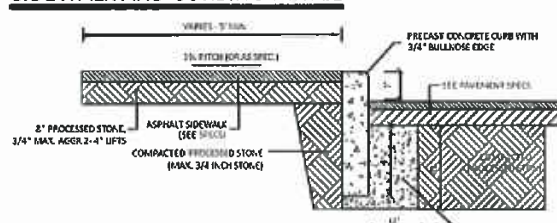


NOTE: The proposed concrete ramps shall be constructed using concrete. The concrete shall be Class B, 4000 psi at 28 days and shall contain 6-6 size gravel, 5 grade. Concrete shall be 6 inches thick.

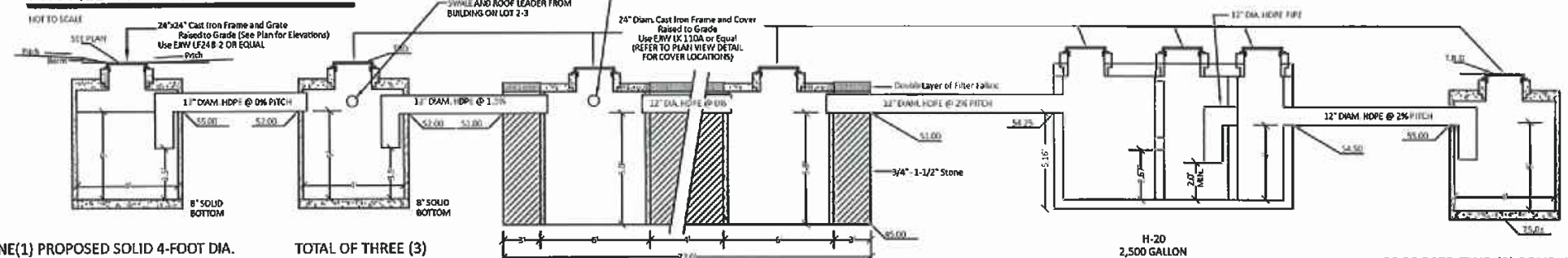
PLAN VIEW OF SUBSURFACE LEACHING FACILITY:



SIDEWALK AND CURBING DETAIL:



PROFILE OF DRAINAGE FACILITY #3:



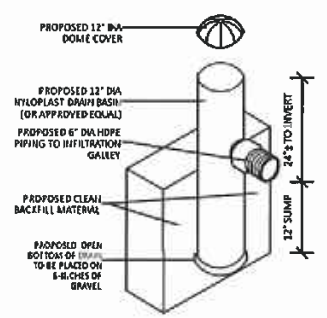
ONE (1) PROPOSED SOLID 4-FOOT DIA. CATCH BASIN AT NORTH SIDE OF ENTRANCE DRIVE
USE SOLID CATCH BASIN WITH BOTTOM AS MFG. BY SHOREY OR EQUAL. 5-FOOT SUMP BELOW INVERT IS REQUIRED.

TOTAL OF THREE (3) PROPOSED SOLID 4-FOOT DIA. MANHOLES (DMH)
USE SOLID CATCH BASIN WITH BOTTOM AS MFG. BY SHOREY OR EQUAL. 5-FOOT SUMP BELOW INVERT IS REQUIRED.

PROPOSED 72' x 34' x 6' LEACHING FACILITY
USE TWENTY ONE (21) - 1000 GALLON PRECAST LEACHING PIT UNITS. H-20 RATED UNITS AS MFG. BY SHOREY PRECAST OR EQUAL.

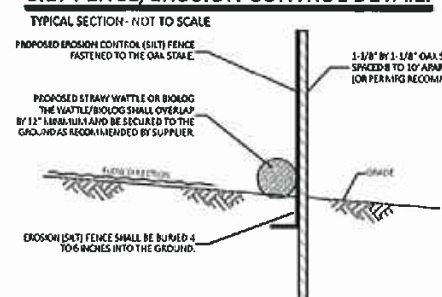
H-20 2,500 GALLON OIL GRIT SEPARATOR TANK
USE OIL GRIT SEPARATOR TANK AS PROVIDED BY SHOREY PRECAST OR EQUAL. USE OGGT252LP TANK AS MFG. BY SHOREY PRECAST.

PROPOSED TWO (2) SOLID 4-FOOT DIA. MANHOLE FOR REAR GRAVEL AREA
USE SOLID CATCH BASIN WITH BOTTOM AS MFG. BY SHOREY OR EQUAL. 5-FOOT SUMP BELOW INVERT IS REQUIRED.

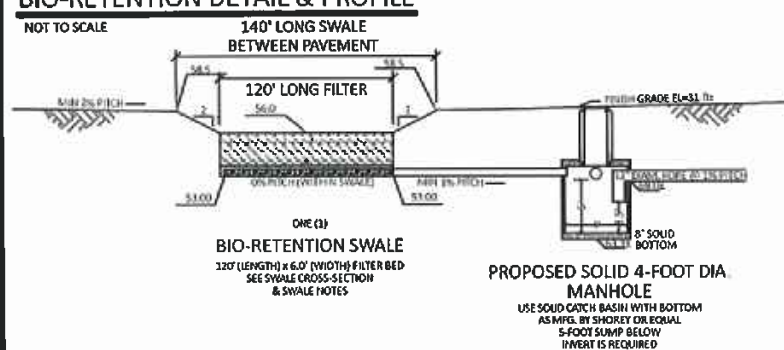


TYPICAL OUTLET DRAIN FROM SWALE INTO MANHOLE AND DRAINAGE SYSTEM
A TOTAL OF SIX (6) PROPOSED
NOT TO SCALE

SILT FENCE/EROSION CONTROL DETAIL:



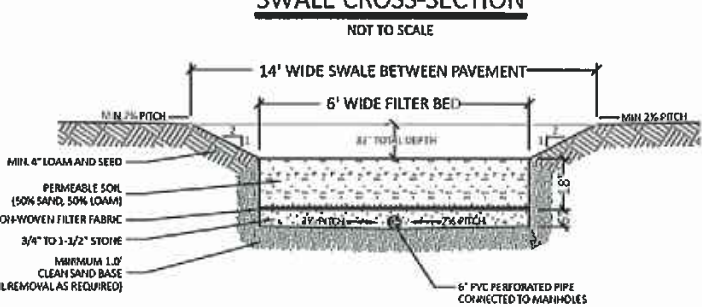
BIO-RETENTION DETAIL & PROFILE:



ONE (1) BIO-RETENTION SWALE
120' LENGTH x 6.0' WIDTH FILTER BED. SEE SWALE CROSS-SECTION & SWALE NOTES.

PROPOSED SOLID 4-FOOT DIA. MANHOLE
USE SOLID CATCH BASIN WITH BOTTOM AS MFG. BY SHOREY OR EQUAL. 5-FOOT SUMP BELOW INVERT IS REQUIRED.

SWALE CROSS-SECTION:



SWALE NOTES:

1.) ALL (3) SWALE SOIL BEDS AND LOWER SLOPED AREAS SHALL BE A MINIMUM OF 18" DEEP AND COMPOSED OF APPROXIMATELY 50% SAND AND 50% LOAM. UPPER SLOPED SWALE AREAS SHALL BE COVERED WITH A MINIMUM OF 4 INCHES OF LOAM. SEE SWALE DETAIL.

2.) ALL SLOPED SWALE AREAS SHALL BE COVERED WITH JUTE NETTING EROSION CLOTH, SECURED IN PLACE. JUTE NETTING SHALL REMAIN IN PLACE UNTIL VEGETATION HAS BEEN ESTABLISHED.

3.) NON-WOVEN FILTER FABRIC LAYER SHALL BE INSTALLED IN BETWEEN THE PERMEABLE SOIL AND STONE LAYERS.

4.) 6" PVC PERFORATED PIPE SHALL BE INSTALLED ALONG THE CENTERLINE OF THE SWALE AT THE BOTTOM OF THE STONE LAYER. PERFORATED PIPE SHALL CONNECT TO 6" SOLID PVC PIPE THAT OUTLETS INTO THE MANHOLE.

SHEET 2 OF 5

THE FREE SEA TURTLE LLC & 162 UNDERPASS, LLC.
C/O P.O. BOX 444, BREWSTER MA, 02631

GRADING- DRAINAGE DETAILS
LOTS 1, 2 AND 3 AT 0 & 162 UNDERPASS ROAD, BREWSTER MA, 02631

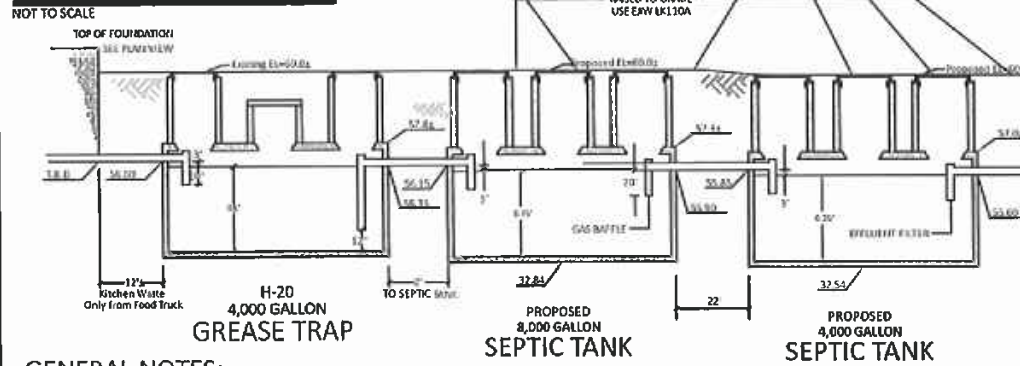
J.M. O'REILLY & ASSOCIATES, INC.
Professional Engineering & Land Surveying Services

DATE	SCALE	BY	CHECK	JOB NUMBER
02/02/2024	As Noted	JMO/gb	JMO	JMO 6125A



G:\Jobs\162Underpass\162Underpass.dwg, PROPOSED SITE PLAN - DRAINAGE.dwg

SCHEMATIC FLOW PROFILE:



GENERAL NOTES:

- A) NEITHER DRIVEWAYS NOR PARKING AREAS ARE ALLOWED OVER SEPTIC SYSTEM UNLESS 18" COMPONENTS ARE USED.
B) THE DESIGNER WILL NOT BE RESPONSIBLE FOR THE SYSTEM AS DESIGNED UNLESS CONSTRUCTED AS SHOWN. ANY CHANGES SHALL BE APPROVED IN WRITING.
C) CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL UNDERGROUND AND OVERHEAD UTILITIES PRIOR TO COMMENCEMENT OF WORK.

CONSTRUCTION NOTES:

- 1) ALL CONSTRUCTION SHALL CONFORM TO THE STATE ENVIRONMENTAL CODE, TITLE 5, AND THE REQUIREMENTS OF THE LOCAL BOARD OF HEALTH.
2) SEPTIC TANKS, GREASE TRAP(S), DOSING CHAMBERS AND DISTRIBUTION BOXES SHALL BE SET ON A LEVEL STABLE BASE WHICH HAS BEEN MECHANICALLY COMPACTED OR ON A 6 INCH CRUSHED STONE BASE.
3) SEPTIC TANK(S) SHALL MEET ASTM STANDARD C1127-93 AND SHALL HAVE AT LEAST THREE 20" DIAMETER MANHOLES. THE MINIMUM DEPTH FROM THE BOTTOM OF THE SEPTIC TANK TO THE FLOW LINE SHALL BE 48".
4) SCHEDULE 40 PVC INLET AND OUTLET TEES SHALL EXTEND A MINIMUM OF 6" ABOVE THE FLOW LINE OF THE SEPTIC TANK AND SHALL BE INSTALLED ON THE CENTERLINE OF THE TANK DIRECTLY UNDER THE CLEANOUT MANHOLE.
5) RAISE COVERS OF THE SEPTIC TANK AND DISTRIBUTION BOX WITH PRECAST CONCRETE WATER TIGHT RISERS OVER INLET AND OUTLET TEES TO WITHIN 6" OF FINISH GRADE, OR AS APPROVED BY THE LOCAL BOARD OF HEALTH AGENT.
6) PIPING SHALL CONSIST OF 4" SCHEDULE 40 PVC OR EQUIVALENT. PIPE SHALL BE Laid ON A MINIMUM CONTINUOUS GRADE OF NOT LESS THAN 1%.
7) DISTRIBUTION LINES FOR SOIL ABSORPTION SYSTEM (AS REQUIRED) SHALL BE 4" DIAMETER SCHEDULE 40 PVC Laid AT 0.005 FT/FT. LINE SHALL BE CAPPED AT 6" OR AS NOTED.
8) OUTLET PIPES FROM DISTRIBUTION BOX SHALL REMAIN LEVEL FOR AT LEAST 2' BEFORE PITCHING TO SOIL ABSORPTION SYSTEM. WATER TEST DISTRIBUTION BOX TO ENSURE EVEN DISTRIBUTION.
9) DISTRIBUTION BOX SHALL HAVE A MINIMUM SLUMP OF 6" MEASURED BELOW THE OUTLET INVERT.
10) BASE AGGREGATE FOR THE LEACHING FACILITY SHALL CONSIST OF 3/4" TO 1-1/2" COARSE WASHED WYTHE STONE FREE OF IRON FINES AND MUST BE INSTALLED BELOW THE CROWN OF THE DISTRIBUTION LINE TO THE BOTTOM OF THE SOIL ABSORPTION SYSTEM. BASE AGGREGATE SHALL BE COVERED WITH A LAYER OF FILTER FABRIC OR APPROVED EQUIVALENT.
11) VENT SOIL ABSORPTION SYSTEM WITH DISTRIBUTION LINES EXCEED 50 FEET, WHEN LOCATED EITHER IN VEHICLE OR IN PART UNDER DRIVEWAYS, PARKING AREAS, TURNING AREAS OR OTHER IMPERVIOUS MATERIAL, OR WHEN PRESSURE DOSED.
12) SOIL ABSORPTION SYSTEM SHALL BE COVERED WITH A MINIMUM OF 9" OF CLEAN MEDIUM SAND (EXCLUDING TOPSOIL).
13) FINISH GRADE SHALL BE A MAXIMUM OF 36" OVER THE TOP OF ALL SYSTEM COMPONENTS, INCLUDING THE SEPTIC TANK, DISTRIBUTION BOX, DOSING CHAMBER AND SOIL ABSORPTION SYSTEM. SEPTIC TANKS SHALL HAVE A MINIMUM COVER OF 9".
14) FROM THE DATE OF INSTALLATION OF THE SOIL ABSORPTION SYSTEM UNTIL RECEIPT OF A CERTIFICATE OF COMPLIANCE, THE PERIMETER OF THE SOIL ABSORPTION SYSTEM SHALL BE STAKED AND FLAGGED TO PREVENT THE USE OF SUCH AREA FOR ALL ACTIVITIES THAT MIGHT DAMAGE THE SYSTEM.
15) SOIL REMOVAL: ALL SANDY LOAM (FIRM) C3 LAYER SHALL BE REMOVED FOR A DISTANCE OF 3' FROM THE SOIL ABSORPTION SYSTEM DOWN TO THE FINE TO MEDIUM SAND LAYER. AREA TO BE BACKFILLED WITH CLEAN SAND AND COMPACTED TO MINIMIZE SETTLING.
16) ENGINEER SHALL INSPECT AND VERIFY SOILS REMOVAL PRIOR TO INSTALLING ANY LEACHING COMPONENTS.
17) THE C2 SOIL FOUND IN TEST PIT 2B WAS SIEVED AND FOUND TO BE A CLASS 1 SOIL SAND. A LOADING RATE OF 0.74 GPD/SF IS APPROPRIATE.

SYSTEM DESIGN CALCULATIONS:

RESTAURANT: 75 SEATS x 35 GPD/SEAT = 2,625 GPD
SECOND FLOOR: (3 UNITS x 884 SF) x 75 GPD / 1,000 SF (OFFICE USE) = 195 GPD
TOTAL DESIGN FLOW: 2,820 GPD
SEPTIC TANK CAPACITY REQUIRED: FIRST TANK
DAILY FLOW = 2,820 GPD @ 200% = 5,640 GALLONS REQUIRED
SEPTIC TANK CAPACITY REQUIRED: SECOND TANK
DAILY FLOW = 2,820 GPD @ 100% = 2,820 GALLONS REQUIRED
SEPTIC TANK CAPACITY PROVIDED:
FIRST SEPTIC TANK: 8,000 GALLON = 5,640 GALLONS REQUIRED
SECOND SEPTIC TANK: 4,000 GALLON = 2,820 GALLONS REQUIRED
LEACHING CAPACITY REQUIRED:
2,820 GPD MINIMUM REQUIRED
LEACHING CAPACITY PROVIDED:
TWO (2) 17.5' x 10.83' x 2.0' LEACHING CHAMBER CAN LEACH:
V1 = 2 x (17.5 x 10.83 x 1.175 x 2.0) + (10.83 x 2.0 x 2) x 0.74 GPD/SF = 3,873 GPD
3,873 GPD > 2,820 GPD REQUIRED
NOTE: A GARBAGE DISPOSAL IS NOT PERMITTED WITH THIS DESIGN
INSTALL:
ONE (1) 8,000 GALLON SEPTIC TANK, FIRST TANK
ONE (1) 4,000 GALLON SEPTIC TANK, SECOND TANK
ONE (1) 4,000 GALLON GREASE TRAP (MIN. TANK SIZE = 80 SEATS x 15 GPD = 1,200 GAL)
ONE (1) 8,000 GALLON TREATMENT TANK, 3 COMPARTMENT FOR 4.5 UNIT
ONE (1) S.T.A.A.R. - 4.5 TREATMENT UNIT, INCLUDING ALL INTERNAL WORKS
THREE (3) 30" x 48" ALUM. LEACHING MATCHES FOR TREATMENT UNIT
SIXTEEN (16) 24" DIA. C.I. FRAME AND COVER TO GRADE.
TWO (2) 17.5 x 10.83 x 2.0 LEACH GALLEY. PRESSURE DOSED DISTRIBUTION
TWO (2) PRESSURE DOSE PIPING SYSTEM
ONE (1) FORCE MAIN 2" DIA. DISTRIBUTION LINE AND MANHOLE
ONE (1) 7.1' FOOT - 2" DIA DISTRIBUTION LATERAL 7/16" DIA. PERF. AT 5' O-C

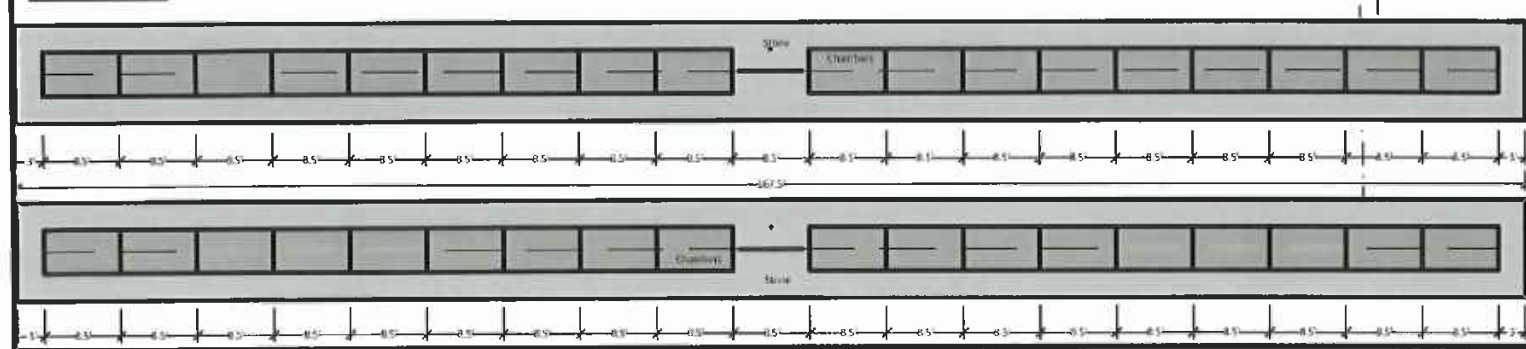
SOIL TEST LOGS:

Table with 5 columns: TEST HOLE NO., DEPTH FROM SURFACE (INCHES), SOIL HORIZON, SOIL TEXTURE (USDA), SOIL MOISTURE (%), SOIL PCT. CLAY (%), OTHER. Includes data for TEST HOLE A1 and TEST HOLE A2.

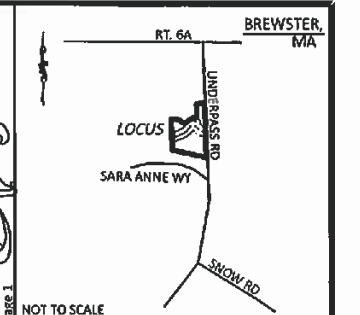
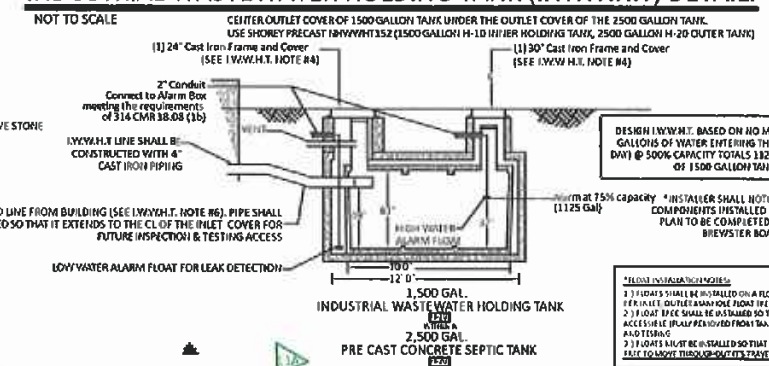
DATE OF TESTING: 9-27-22
PERCUSSION RATE: LESS THAN 5 MIN/INCH IN FINE TO MEDIUM SAND LAYERS.
WITNESSED BY: J. O'REILLY, P.E., J.M. O'REILLY & ASSOCIATES, INC.
NO WATER ENCOUNTERED
USE A LOADING RATE OF 0.74 GPD/SF FOR SIZING OF SOIL ABSORPTION SYSTEM.

SOIL NOTE:
AT THE TIME OF SOIL TESTING THE EXISTING SITE WAS IN THE PROCESS OF BEING CLEARED OF DEBRIS. THE TOPSOIL AND SUBSOILS WERE PREVIOUSLY STRIPPED AND ARE NOT REFLECTED IN THE LOGS ABOVE.

SAS DETAIL:

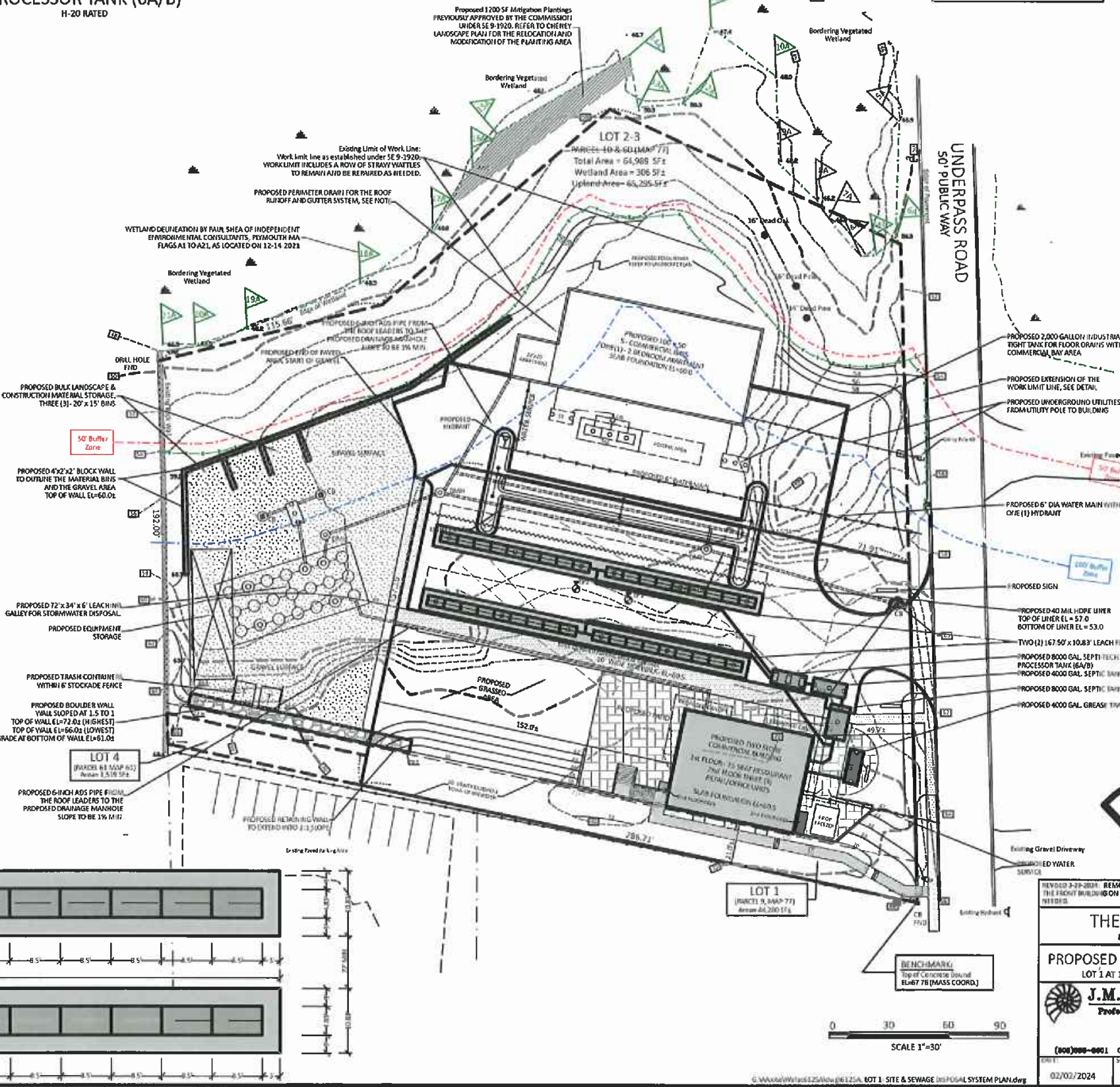


INDUSTRIAL WASTEWATER HOLDING TANK (I.W.W.H.T) DETAIL:



PLAN BOOK 350
DEED BOOK 35532
ASSESSORS' MAP 77
PAGE 1
PAGE 98
PARCEL 9

LEGEND table with symbols for existing contour, proposed spot grade, water service line, overhead utility service, etc.



DRAFT
SHEET 3 OF 5

THE FREE SEA TURTLE LLC
P.O. BOX 444, BREWSTER MA, 02631
PROPOSED SEWAGE DISPOSAL SYSTEM PLAN
LOT 1 AT 162 UNDERPASS ROAD, BREWSTER MA, 02631
J.M. O'REILLY & ASSOCIATES, INC.
Professional Engineering & Land Surveying Services
1079 Main Street - Route 6A
P.O. Box 1777
Brewster, MA 02631
(800)888-0881
02/02/2024
As Noted
JMO/gb
JMO
JMO 6175A

GENERAL NOTES:

- 1) NOTHIN DRIVEWAYS NOR PARKING AREAS ARE ALLOWED OVER SEPTIC SYSTEM UNLESS 20" COMPONENTS ARE USED.
- 2) THE DESIGNER WILL NOT BE RESPONSIBLE FOR THE SYSTEM AS DESIGNED UNLESS CONSTRUCTED AS SHOWN. ANY CHANGES SHALL BE APPROVED BY WRITING.
- 3) CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL UNDERGROUND AND OVERHEAD UTILITIES PRIOR TO COMMENCEMENT OF WORK.

CONSTRUCTION NOTES:

- 1) ALL CONSTRUCTION SHALL CONFORM TO THE STATE ENVIRONMENTAL CODE, TITLES, AND THE REQUIREMENTS OF THE LOCAL BOARD OF HEALTH.
- 2) SEPTIC TANKS, GREASE TRAPS, DOSING CHAMBERS, AND DISTRIBUTION BOXES SHALL BE SET ON A LEVEL STABLE BASE WHICH HAS BEEN MECHANICALLY COMPACTED, OR ON A 4" UNCRUSHED STONE BASE.
- 3) SEPTIC TANKS SHALL MEET ASTM STANDARD C1127-93 AND SHALL HAVE AT LEAST THREE 20" DIAMETER MANHOLES. THE MINIMUM DEPTH FROM THE BOTTOM OF THE SEPTIC TANK TO THE FLOW LINE SHALL BE 48".
- 4) SCHEDULE 40 PVC INLET AND OUTLET TEES SHALL EXTEND A MINIMUM OF 6" ABOVE THE FLOW LINE OF THE SEPTIC TANK AND SHALL BE INSTALLED ON THE CENTERLINE OF THE TANK DIRECTLY UNDER THE CLEANOUT MANHOLE.
- 5) RANGE COVERS OF THE SEPTIC TANK AND DISTRIBUTION BOX WITH PRECAST CONCRETE WATER TIGHT RISERS OVER INLET AND OUTLET TEES TO WITHIN 6" OF FINISH GRADE, OR AS APPROVED BY THE LOCAL BOARD OF HEALTH AGENT.
- 6) PIPING SHALL CONSIST OF 4" SCHEDULE 40 PVC OR EQUIVALENT. PIPE SHALL BE Laid ON A MINIMUM CONTINUOUS GRADE OF NOT LESS THAN 1%.
- 7) DISTRIBUTION LINES FOR SOIL ABSORPTION SYSTEM (AS REQUIRED) SHALL BE 4" DIAMETER SCHEDULE 40 PVC Laid AT 0.005 F/FT. LINE SHALL BE CAPPED AT 6" OR AS NOTED.
- 8) OUTLET PIPES FROM DISTRIBUTION BOX SHALL REMAIN LEVEL FOR AT LEAST 2' BEFORE PITCHING TO SOIL ABSORPTION SYSTEM. WATER TEST DISTRIBUTION BOX TO ENSURE EVEN DISTRIBUTION.
- 9) DISTRIBUTION BOX SHALL HAVE A MINIMUM SLUMP OF 6" MEASURED 6" BELOW THE OUTLET INVERT.
- 10) BASE AGGREGATE FOR THE LEACH NO FACILITY SHALL CONSIST OF 3/4" TO 1-1/2" DOUBLE WASHED NATIVE STONE FREE OF IRON, FIBER AND DUST AND SHALL BE INSTALLED BELOW THE CROWN OF THE DISTRIBUTION LINE TO THE BOTTOM OF THE SOIL ABSORPTION SYSTEM. BASE AGGREGATE SHALL BE COVERED WITH A LAYER OF FILTER FABRIC OR APPROVED EQUIVALENT.
- 11) VERIFY SOIL ABSORPTION SYSTEM WHEN DISTRIBUTION LINES EXCEED 90 FEET, WHEN LOCATED EITHER IN WHOLE OR IN PART UNDER DRIVEWAYS, PARKING AREAS, TURNING AREAS OR OTHER IMPERVIOUS MATERIAL, OR WHEN PRESSURE DOSE.
- 12) SOIL ABSORPTION SYSTEM SHALL BE COVERED WITH A MINIMUM OF 9" OF CLEAN MEDIUM SAND (EXCLUDING TOPSOIL).
- 13) FINISH GRADE SHALL BE A MAXIMUM OF 18" OVER THE TOP OF ALL SYSTEM COMPONENTS, INCLUDING THE SEPTIC TANK, DISTRIBUTION BOX, DOSING CHAMBER AND SOIL ABSORPTION SYSTEM. SEPTIC TANKS SHALL HAVE A MINIMUM COVER OF 9".
- 14) FROM THE DATE OF INSTALLATION OF THE SOIL ABSORPTION SYSTEM UNTIL RECEIPT OF A CERTIFICATE OF COMPLETION, THE PERIMETER OF THE SOIL ABSORPTION SYSTEM SHALL BE STAKED AND FLAGGED TO PREVENT THE USE OF SUCH AREA FOR ALL ACTIVITIES THAT MIGHT DAMAGE THE SYSTEM.

SOIL TEST LOGS:

TEST HOLE NO.	SOIL WORKON	SOIL TEXTURE (S&B)	SOIL COLOR (MUNSHL)	SOIL (L&C)	OTHER
108-108	C1	SANDY LOAM WITH SILT	10YR 5/6	MOIST	NO WATER ENCOUNTERED
108-109	C2	FINE TO MED SAND WITH SILT	10YR 6/6	MOIST	NO WATER ENCOUNTERED

TEST HOLE NO.	SOIL WORKON	SOIL TEXTURE (S&B)	SOIL COLOR (MUNSHL)	SOIL (L&C)	OTHER
108-110	C1	SANDY LOAM WITH SILT	10YR 5/6	MOIST	NO WATER ENCOUNTERED
108-111	C2	FINE TO MED SAND WITH SILT	10YR 6/6	MOIST	NO WATER ENCOUNTERED

DATE OF TESTING: 9-27-22
 PERFORMING RATE: LESS THAN 5 MIN/INCH IN FINE TO MEDIUM SAND LAYER
 WITNESSED BY: J. O'REILLY P.E., J.M. O'REILLY & ASSOCIATES, INC.
 S. MACALOGON, AGENT, BREWSTER HEALTH DEPARTMENT
 NO WATER ENCOUNTERED
 USE A LOADING RATE OF 0.74 GPD/SF FOR SIZING OF SOIL ABSORPTION SYSTEM

SOIL NOTE:
 AT THE TIME OF SOIL TESTING THE EXISTING SITE WAS IN THE PROCESS OF BEING CLEARED OF DEBRIS. THE TOPSOIL AND SUBSOILS WERE PREVIOUSLY STRIPPED AND ARE NOT REFLECTED IN THE LOGS ABOVE.

- 15) SOIL REMOVAL: ALL SANDY LOAM (FRM-D) CLAYER. SHALL BE REMOVED FOR A DISTANCE OF 5' FROM THE SOIL ABSORPTION SYSTEM DOWN TO THE FINE TO MEDIUM SAND LAYER. AREA TO BE BACKFILLED WITH CLEAN SAND AND RECONNECTED TO ORIGINAL SETTING.
- 16) ENGINEER SHALL INSPECT AND VERIFY SOILS REMOVAL PRIOR TO INSTALLING ANY LEACHING COMPONENTS.
- 17) THE C2 SOIL FOUND IN TEST PIT 7A WAS SIFTED AND FOUND TO BE A CLASS 1 SOIL - SAND. A LOADING RATE OF 0.74 GPD/SF IS APPLICABLE.

SYSTEM DESIGN CALCULATIONS:

SEWAGE DESIGN FLOW
 APPROXIMATE: 2 BEDROOM @ 110 GPD = 220 GPD
 BATHS: 1 EMPLOYEE PER DAY @ 20 GPD/EMP = 200 GPD
 LEACHING CAPACITY REQUIRED: 420 GPD REQUIRED

SEPTIC TANK CAPACITY REQUIRED FIRST TANK
 1500 GALLON @ 2.00 F/FT @ 2000 = 300 GPD REQUIRED

LEACHING CAPACITY REQUIRED SECOND TANK
 SEPTIC TANK CAPACITY REQUIRED SECOND TANK
 1500 GALLON @ 2.00 F/FT @ 2000 = 300 GPD REQUIRED

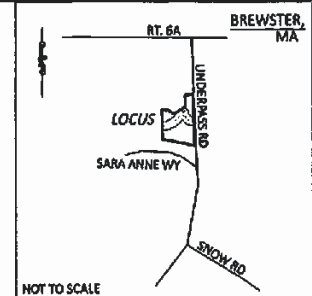
SEPTIC TANK CAPACITY PROVIDED:
 1500 GALLON SEPTIC TANK - 2 COMPARTMENT TANK (18-20 RATED)

LEACHING CAPACITY PROVIDED:
 ONE (1) 15' X 12' X 8' LEACHING CHAMBER CAP LEACH:
 W (E) 1.5' X 2.83' @ (1) 1.5' X 2.83' @ (1) 2.83' X 2.83' @ 0.74 GPD/SF = 430.2 GPD
 430.2 GPD > 420 GPD REQUIRED

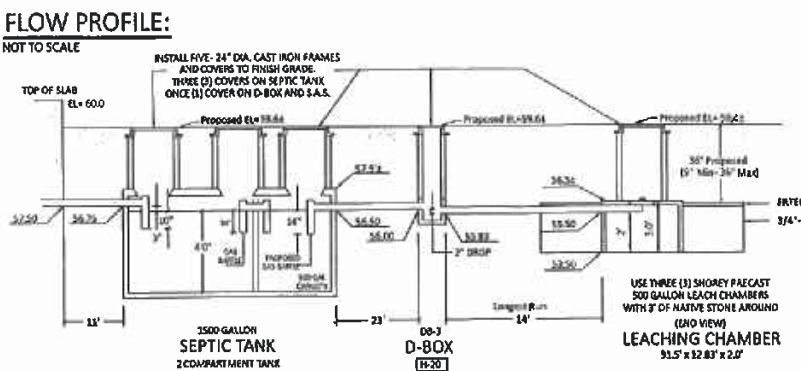
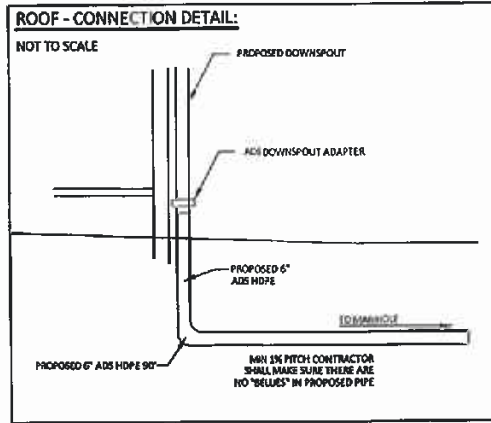
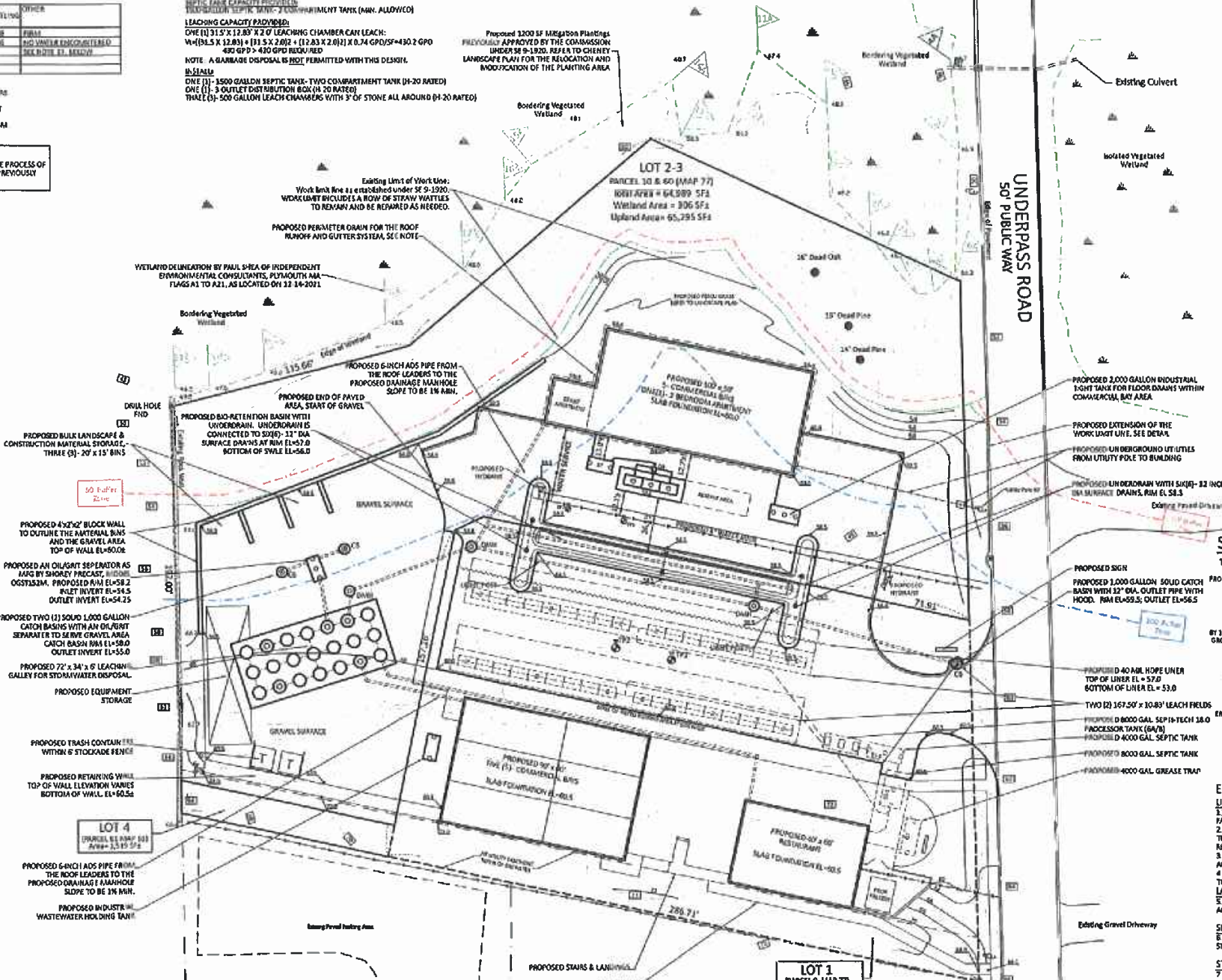
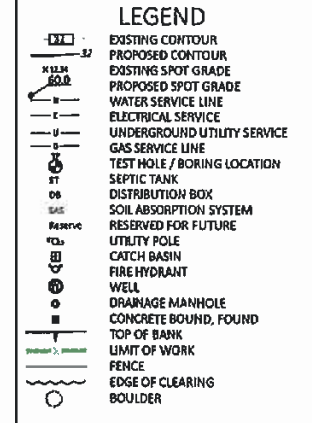
NOTE: A BARRIAGE DISPOSAL IS NOT PERMITTED WITH THIS DESIGN.

3.5' SLEED
 ONE (1) 1500 GALLON SEPTIC TANK - TWO COMPARTMENT TANK (18-20 RATED)
 ONE (1) 3" OUTLET DISTRIBUTION BOX (18-20 RATED)
 THREE (3) 500 GALLON LEACH CHAMBERS WITH 3" OF STONE ALL AROUND (18-20 RATED)

EXISTING CONDITION NOTE:
 THE EXISTING SITE CONDITIONS SHOWN HEREON WERE TAKEN FROM THE EXISTING CONDITION TOPOGRAPHY PLAN AS PREPARED BY MORGAN ENGINEERING, DATED 3-1-2022, IN ASSOCIATION WITH THE ORDER OF CONDITIONS SE 9-1920.



NOT TO SCALE
 PLAN BOOK 698
 DEED BOOK 35532
 ASSESSOR'S MAP 77
 PAGE 25
 PAGE 93
 PARCELS 10 & 60



CONSERVATION COVERAGE TABLE:

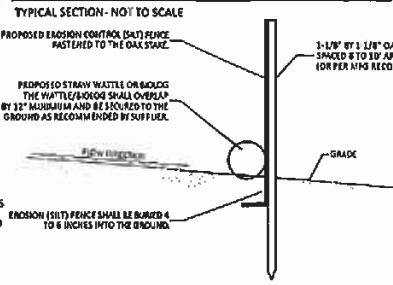
WETLAND RESOURCE:
 - NO WORK IS PROPOSED WITHIN THE RESOURCE AREAS (B/W)

0 TO 50 FOOT BUFFER ZONE:
 - NO WORK IS PROPOSED WITHIN THE 50-FOOT BUFFER OTHER THAN PLANTING. PLEASE REFER TO LANDSCAPE PLAN

50 TO 100 FOOT BUFFER ZONE:

BUILDING	3,000 SF
PAVEMENT	3,475 SF
GRAVEL AREA	5,295 SF
TOTAL:	11,770 SF

SILT FENCE/EROSION CONTROL DETAIL:



EROSION CONTROLS AND SITE MANAGEMENT

- LIMIT OF WORK:**
- 1) THE EXISTING ROW OF WATTLES SHALL REMAIN AS THE LIMIT OF WORK FOR THE PARCEL.
 - 2) THE EXISTING WATTLES SHALL BE PERIODICALLY INSPECTED AND REPAIRED AS NEEDED TO MITIGATE ANY EROSION OR WASHOUT. IF THE WATTLES ARE NEEDING REPAIR, PLEASE REFER TO THE EROSION CONTROL DETAIL FOR CORRECTIVE MEASURES.
 - 3) CONTRACTOR SHALL SUPPLY EXTRA STRAW WATTLES FOR USE DURING GRADING ACTIVITIES. SEE BELOW.
 - 4) THE PROPOSED EXTENDED LIMIT OF WORK LINE SHALL BE INSTALLED ACCORDING TO THE EROSION CONTROL DETAIL ON PLANS.
- LANDSCAPE:**
- 5) DISTURBED AREAS, ONCE FINISH GRADES ARE ESTABLISHED, SHALL BE RESTORED ACCORDING TO THE LANDSCAPE PLAN AS PREPARED BY PHILIP CHENEY 11-30-2023.
- SITE GRADING:**
- 6) THE PROPOSED GRAVEL AREA AND ASPHALT AREAS ARE GRADED TO PITCH THE STORMWATER TO THE SOUTH AND THE PROPOSED STORMWATER SYSTEM.
- STORMWATER:**
- 7) THE STORMWATER SYSTEM CONSISTS OF A BIO-RETENTION BASIN, DEEP SUMP CATCH BASIN, AN OIL/GRIT SEPARATOR AND A SUBSURFACE INFILTRATION SYSTEM.
 - 8) THE STORMWATER FROM THE ROOF AREA IS TO BE MANAGED WITH GUTTERS, DOWNSPOUTS AND 6" DIA. ADS PIPE. THE PIPE IS TO BE CONNECTED TO THE MANHOLE AS SHOWN ON THE PLAN VIEW.
 - 9) THE STORMWATER SYSTEM IS DESIGNED TO ACCOMMODATE THE 100 YEAR STORM EVENT.
- LOCAL STORMWATER PERMIT UNDER CHAPTER 272 IS BEING SUBMITTED TO THE PLANNING BOARD FOR REVIEW AND APPROVAL AS PART OF THE SITE PLAN REVIEW APPLICATION.

SHEET 4 OF 5

162 UNDERPASS, LLC
 C/O CHARLES WHITCOMB - 76 AUNT SOPHIE'S ROAD, BREWSTER MA, 02631

PROPOSED SITE & SEWAGE DISPOSAL PLAN
 LOT 2 & 3 AT 0 UNDERPASS ROAD, BREWSTER MA, 02631

J.M. O'REILLY & ASSOCIATES, INC.
 Professional Engineering & Land Surveying Services

1875 Main Street - Route 6A
 P.O. Box 1779
 Brewster, MA 02631 (800) 966-8608 Fax

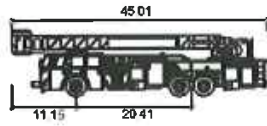
DATE	SCALE	BY	CHECK	JOB NUMBER
2-2-2024	As Noted	JMO/gbo	JMO	JMO-6125A

SCALE 1"=30'

DRAFT

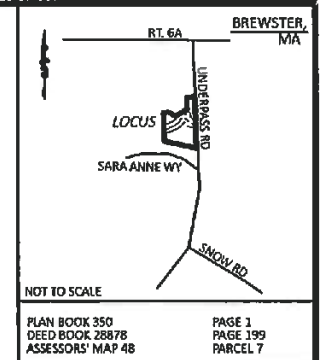
FIRE TRUCK SPECIFICATIONS:

SCALE: 1"=20'



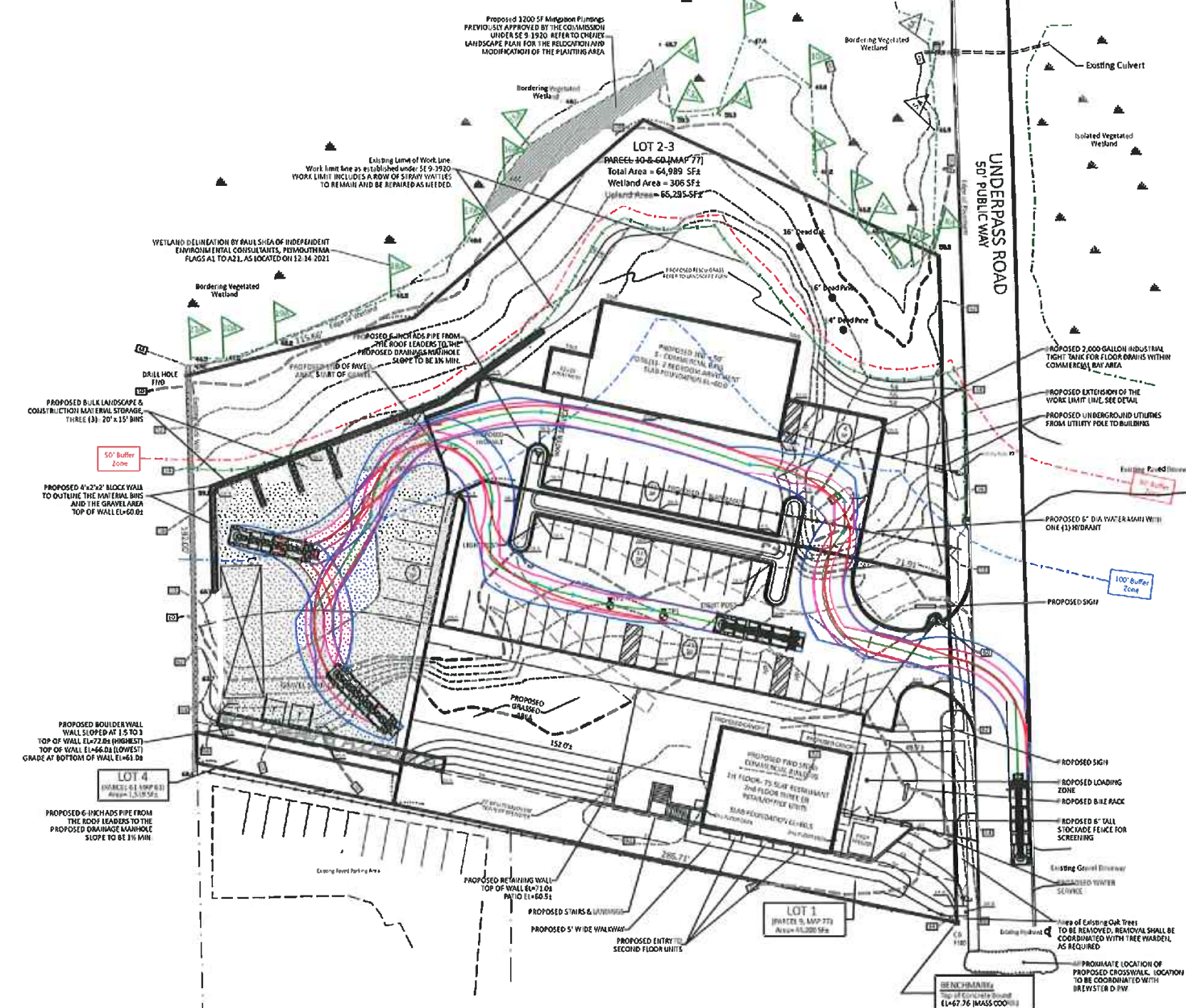
E-One Cyclone II 95 HP

Width: 9'5"
Track: 9'35"
Lock to Lock Time: 6.0 s
Steering Angle: 43.4 deg



LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- EXISTING SPOT GRADE
- PROPOSED SPOT GRADE
- WATER SERVICE LINE
- OVERHEAD UTILITY SERVICE
- UNDERGROUND UTILITY SERVICE
- GAS SERVICE LINE
- TEST HOLE / BORING LOCATION
- SEPTIC TANK
- DISTRIBUTION BOX
- SOIL ABSORPTION SYSTEM
- RESERVED FOR FUTURE
- UTILITY POLE
- CATCH BASIN
- FIRE HYDRANT
- WELL
- DRAINAGE MANHOLE
- CONCRETE BOUND, FOUND
- TOP OF BANK
- LIMIT OF WORK
- FENCE
- EDGE OF CLEARING
- BOULDER
- VEHICLE CENTERLINE & DIRECTION
- FRONT TIRES PATH
- REAR TIRES PATH
- VEHICLE BODY SWEEP PATH



SHEET 5 OF 5
APPROACH FROM SOUTH

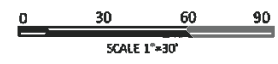
REVISED 3-29-2024: REMOVED REAR BUILDING FROM LOT 1; REVISED THE LAYOUT OF THE FRONT BUILDING ON LOT 1; REVISED LANDSCAPE, GRADING AND GRAVEL AREA AS NEEDED.

THE FREE SEA TURTLE LLC & 162 UNDERPASS, LLC
C/O P.O. BOX 444, BREWSTER MA, 02631

PROPOSED SITE PLAN - FIRE TRUCK PATHWAY
LOTS 1, 2 AND 3 AT 0 & 162 UNDERPASS ROAD, BREWSTER MA, 02631

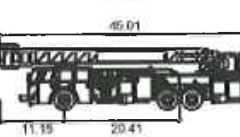
J.M. O'REILLY & ASSOCIATES, INC.
Professional Engineering & Land Surveying Services

DATE	SCALE	BY	CHECK	TITLE
2-2-2024	As Noted	JMO/gb	JMO	JMO-6125A



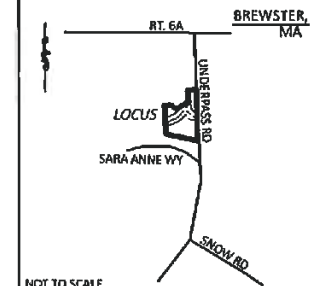
FIRE TRUCK SPECIFICATIONS:

SCALE 1"=20'



E-One Cyclone II 95 HP

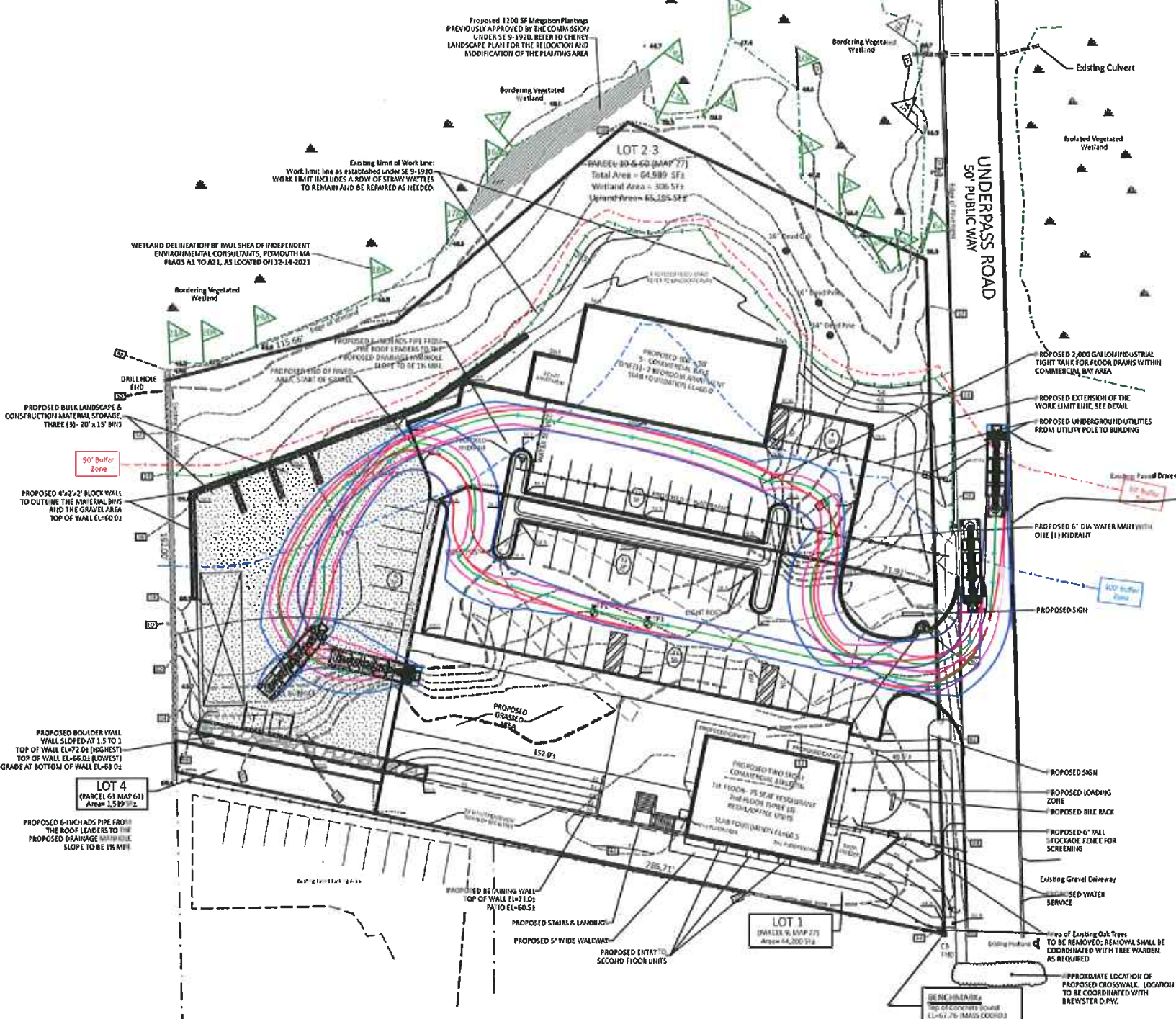
Width : 9.51
Track : 9.38
Lock to Lock Time : 6.0 s
Steering Angle : 43.4 deg



NOT TO SCALE
PLAN BOOK 35D
DEED BOOK 28878
ASSESSOR'S MAP 48
PAGE 1
PAGE 199
PARCEL 7

LEGEND

(Symbol)	EXISTING CONTOUR
(Symbol)	PROPOSED CONTOUR
(Symbol)	EXISTING SPOT GRADE
(Symbol)	PROPOSED SPOT GRADE
(Symbol)	WATER SERVICE LINE
(Symbol)	OVERHEAD UTILITY SERVICE
(Symbol)	UNDERGROUND UTILITY SERVICE
(Symbol)	GAS SERVICE LINE
(Symbol)	TEST HOLE / BORING LOCATION
(Symbol)	SEPTIC TANK
(Symbol)	DISTRIBUTION BOX
(Symbol)	SOIL ABSORPTION SYSTEM
(Symbol)	RESERVED FOR FUTURE
(Symbol)	UTILITY POLE
(Symbol)	CATCH BASIN
(Symbol)	FIRE HYDRANT
(Symbol)	WELL
(Symbol)	DRAINAGE MANHOLE
(Symbol)	CONCRETE BOUND, FOUND
(Symbol)	TOP OF BANK
(Symbol)	LIMIT OF WORK
(Symbol)	FENCE
(Symbol)	EDGE OF CLEARING
(Symbol)	BOULDER
(Symbol)	VEHICLE CENTERLINE & DIRECTION
(Symbol)	FRONT TIRES PATH
(Symbol)	REAR TIRES PATH
(Symbol)	VEHICLE BODY SWEEP PATH



SHEET 5 OF 5
APPROACH FROM NORTH

REVISED 3-29-2024: REMOVED REAR BUILDING FROM LOT 3; REVISED THE LAYOUT OF THE FRONT BUILDING ON LOT 3; REVISED LANDSCAPE, GRADING AND GRAVEL AREAS NEEDED

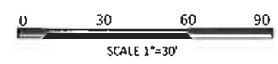
THE FREE SEA TURTLE LLC & 162 UNDERPASS, LLC
C/O P.O. BOX 444, BREWSTER MA, 02631

PROPOSED SITE PLAN- FIRE TRUCK PATHWAY
LOTS 1, 2 AND 3 AT 0 & 162 UNDERPASS ROAD, BREWSTER MA, 02631

J.M. O'REILLY & ASSOCIATES, INC.
Professional Engineering & Land Surveying Services

1979 Main Street - Route 6A
P.O. Box 1178
Brewster, MA 02631 (508) 688-8888 Fax

DATE	SCALE	BY	CHECK	JOB NUMBER
2-2-2024	As Noted	JMO/gbj	JMO	RMO 6125A

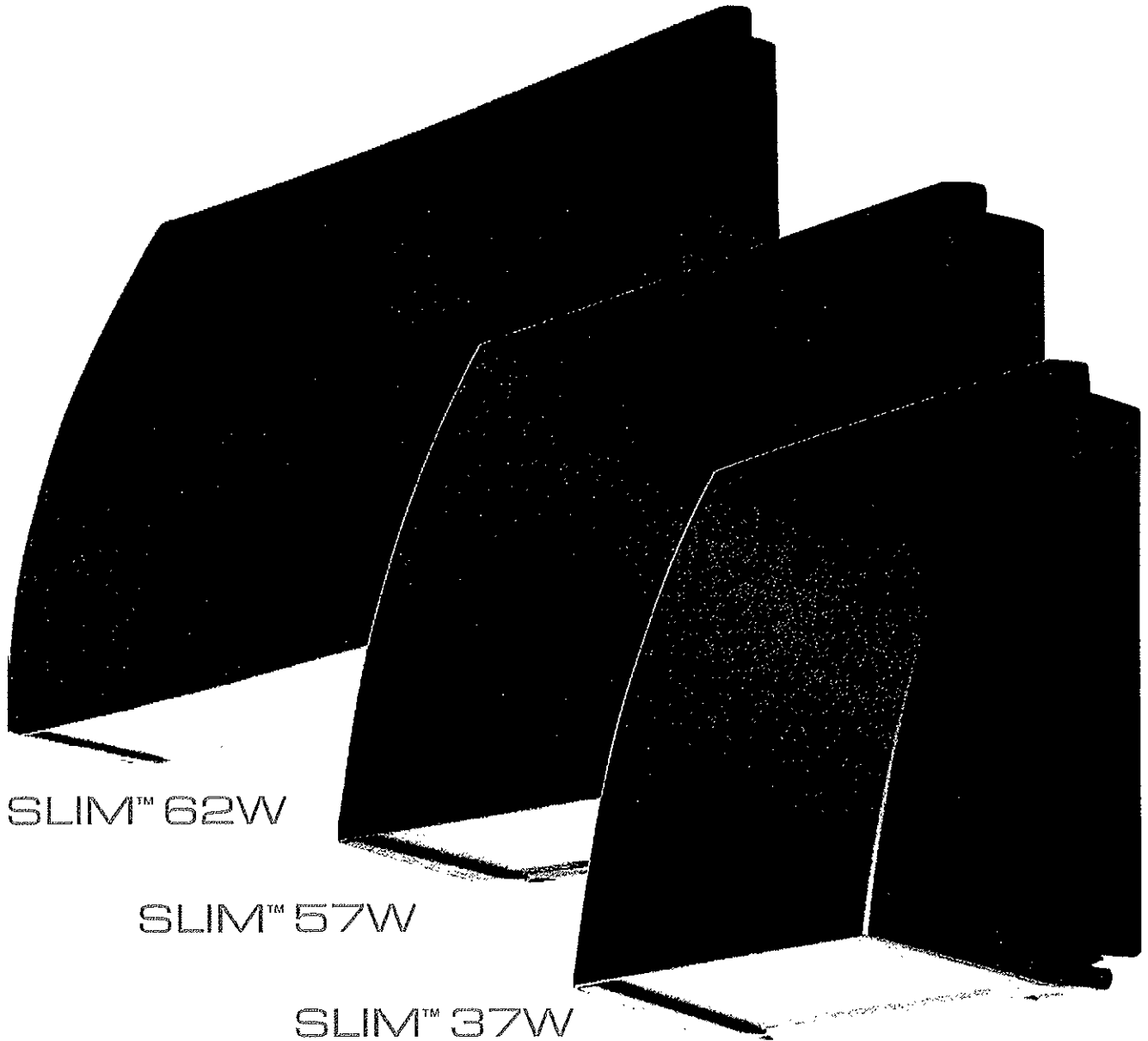


SCALE 1"=30'

G:\A\Jobs\Wallac6125A\dwg\6125A_PROPOSED SITE PLAN_DRAINAGE.dwg

Replace traditional wallpacks with SLIM™ LED.

Same footprint. Better performance.



SLIM™ 62W

SLIM™ 57W

SLIM™ 37W



Visit rabweb.com to see which models
are DLC or DLC Premium listed.

RAB[®]
LIGHTING
RABWEB.COM • 888 722-1000

SLIM™



- Covers footprint of most traditional wallpacks
- 37W replaces 200W MH; 57W replaces 250W MH; 62W replaces 320W MH
- Easy installation with hinged access, bubble level and multiple conduit entries
- Ultra-high efficiency, up to 115 lm/W
- Available as cutoffs or full cutoffs
- Tight-lock gasket keeps elements out
- 100,000-Hour LED lifespan

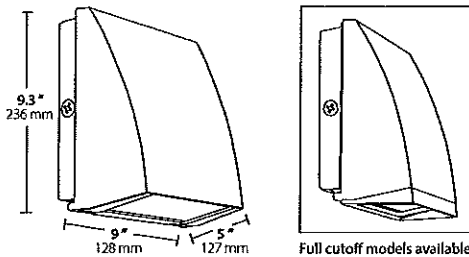


Full Cutoff Models Only

IP66
RATING

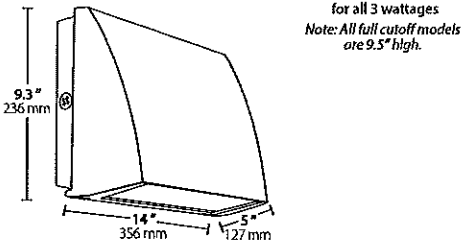
Dimensions and weight

SLIM™ 37W
Weight: 7.5 lbs



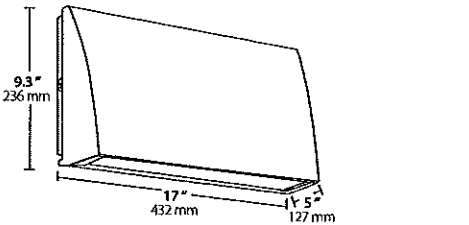
RAB WP1 wallpack
measures 8.5" x 8.6"

SLIM™ 57W
Weight: 11 lbs



RAB WP2 wallpack
measures 14" x 9"

SLIM™ 62W
Weight: 13 lbs



RAB WP3 wallpack
measures 17" x 9"
RAB WP4 wallpack
measures 17 1/8" x 9"

Full cutoff models available
for all 3 wattages
Note: All full cutoff models
are 9.5" high.

Specifications

UL: Suitable for wet locations. Wall mount only.

LEDs: Long-life, high-efficiency, micro-power, surface mount LEDs; binned and mixed for uniform light output and color.

Lifespan: 100,000-hour LED lifespan based on IES LM-80 results & TM-21 calculations

Drivers: Constant Current, Class 2, 100-277V and 480V, 50/60Hz

37W: 0.6A,

57W: Constant Current, Class 2, 100-277V and 480V, 50/60Hz, 100-277VAC: 0.8A,
62W: Constant Current, Class 2, 100-277V and 480V, 50/60Hz, 100-277VAC: 0.6A,

5000K Color Temperature

Nominal Watts	37W	57W	62W
Output Lumens (cutoff models)	3905	5579	6395
Lumens per Watt (cutoff models)	111	115	106
Color Accuracy (CRI)	73	73	73

4000K Color Temperature

Nominal Watts	37W	57W	62W
Output Lumens (cutoff models)	3873	5422	6215
Lumens per Watt (cutoff models)	112	114	106
Color Accuracy (CRI)	73	73	73

3000K Color Temperature

Nominal Watts	37W	57W	62W
Output Lumens (cutoff models)	3657	4977	6145
Lumens per Watt (cutoff models)	104	100	108
Color Accuracy (CRI)	71	72	72

Bi-Level Operation (Optional): Allows 50% and 100% output modes

Cold Weather Starting: Minimum starting temperature is -40°F / -40°C

Thermal Management: Superior thermal management with internal Air-Flow fins

Housing: Precision die-cast aluminum housing and door frame

Mounting: Die-cast back box with four (4) conduit entry points and knockout pattern for junction box or direct wall mounting. Hinged housing for hands-free installation.

Cutoff Options: Full Cutoff (0°) or Cutoff (10°)

Lens: Microprismatic diffusion lens for smooth and even light distribution

Reflector: Specular thermoplastic

Gaskets: High-temperature silicone

Finish: Our environmentally friendly polyester powder coatings are formulated for high-durability and long-lasting color, and contain no VOC or toxic heavy metals.

Color Stability: LED color temperature warranted not to shift more than 200K in CCT in 5 years

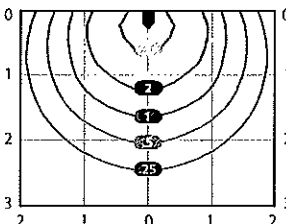
Color Uniformity: RAB's range of CCT (Correlated Color Temperature) follows the guidelines of the American National Standard for Specifications for the Chromaticity of Solid State Lighting (SSL) Products, ANSI C78.377-2015.

Green Technology: Mercury and UV free, and RoHS compliant. Polyester powder coat finish formulated without the use of VOC or toxic heavy metals.

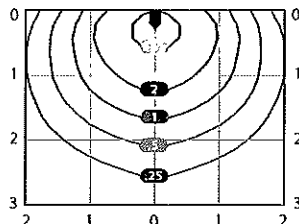
IESNA LM-79 & LM-80 Testing: RAB LED luminaires have been tested by an independent laboratory in accordance with IESNA LM-79 and LM-80, and have received the Department of Energy "Lighting Facts" label.

Photometrics

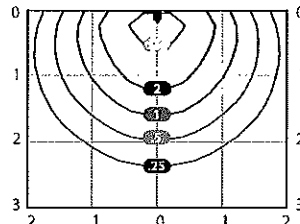
37W - 15' Mounting Height



57W - 18' Mounting Height



62W - 20' Mounting Height



Grid Scale: Multiples of Mounting Height
Values Shown in Footcandles
Photometric Reports RAB02437, RAB02604
and RAB02946MODS0

Ordering information

Product Family	Cutoff	Wattage	Color Temp	Finish	Driver Options	Photocell Options
SLIM	Blank Cutoff (10°) FC Full Cutoff (0°)	37 37W 57 57W 62 62W	Blank 5000K N 4000K Y 3000K	Blank Bronze W White	/BL Bi-Level /480 480V	/PC 120V Photocell /PC2 277V Photocell /PCS 120V Swivel Photocell /PCS2 277V Swivel Photocell /PCS4 480V Swivel Photocell

Date : 30 Sep 2019

Title : Enter the title here...

desc : Enter the description here...

For : Client's name or company...

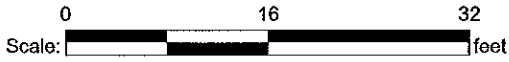
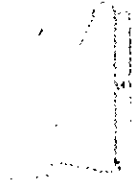
By : Your name or company...

Luminaire

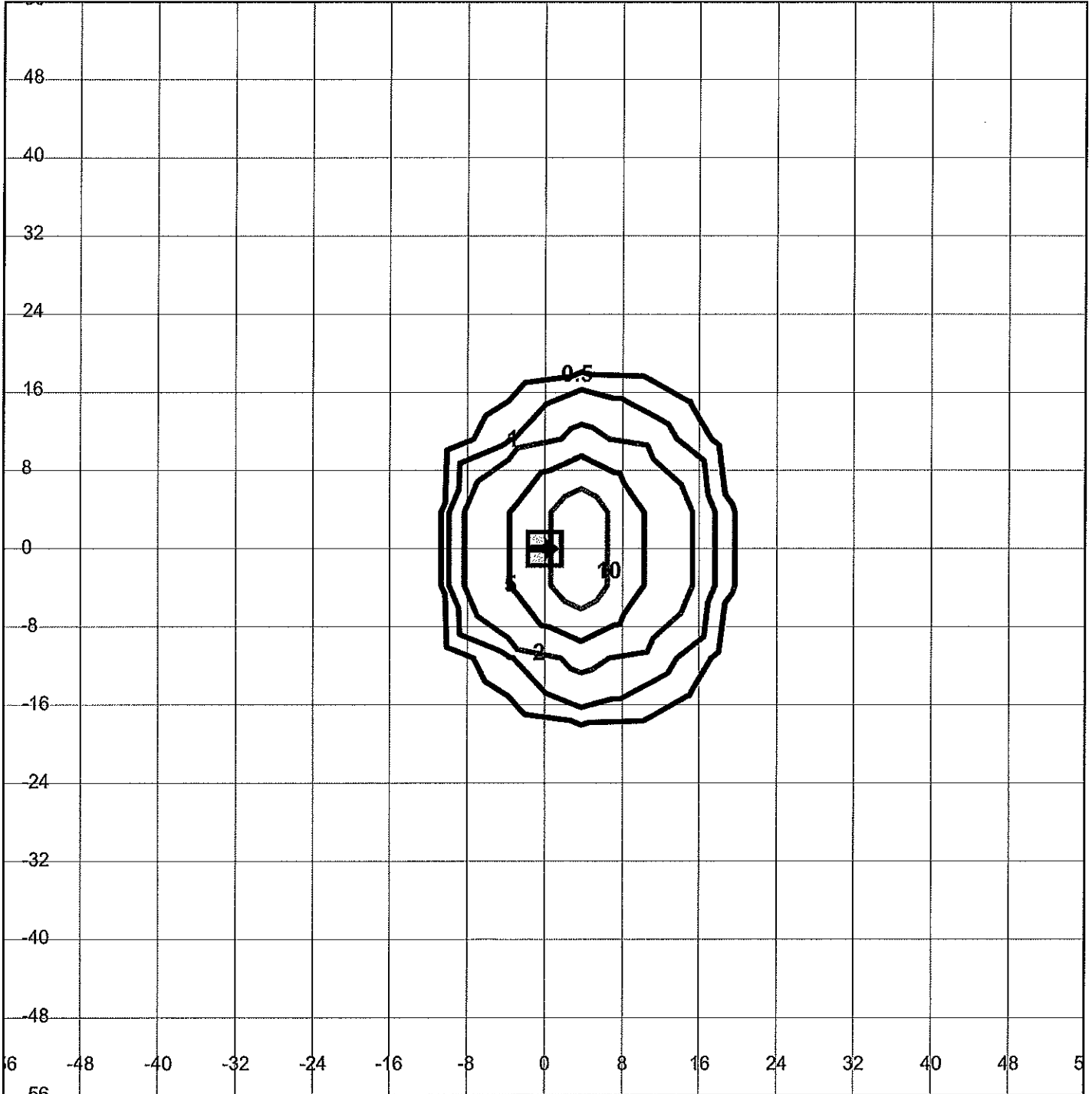
IES Filename : rab02611mod50.ies

Description : SLIMFC37 (FULL CUT-OFF HOOD)
CAST BROWN PAINTED METAL HOUSING,
EXTRUDED 2-PIECE DIFFUSE
SIXTEEN WHITE MULTI-CHIP LIGHT EMITTING

Light Loss Factor : 1.00
Number of Lamps : 16
Lamp Lumens : -1 lms
Luminaire Watts : 37 W



Arrangement Magnification: 100 %



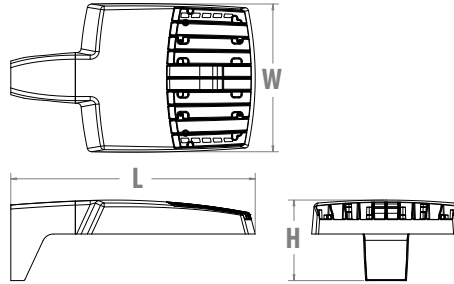


RSX1 LED Area Luminaire



Specifications

EPA (ft²@0°):	0.57 ft ² (0.05 m ²)
Length:	21.8" (55.4 cm) (SPA mount)
Width:	13.3" (33.8 cm)
Height:	3.0" (7.6 cm) Main Body 7.2" (18.4 cm) Arm
Weight: (SPA mount):	22.0 lbs (10.0 kg)



Catalog Number
Notes
Type

Hit the Tab key or mouse over the page to see all interactive elements.

Introduction

The new RSX LED Area family delivers maximum value by providing significant energy savings, long life and outstanding photometric performance at an affordable price. The RSX1 delivers 7,000 to 17,000 lumens allowing it to replace 70W to 400W HID luminaires.

The RSX features an integral universal mounting mechanism that allows the luminaire to be mounted on most existing drill hole patterns. This "no-drill" solution provides significant labor savings. An easy-access door on the bottom of mounting arm allows for wiring without opening the electrical compartment. A mast arm adaptor, adjustable integral slipfitter and other mounting configurations are available.

Ordering Information

EXAMPLE: RSX1 LED P4 40K R3 MVOLT SPA DDBXD

RSX1 LED						
Series	Performance Package	Color Temperature	Distribution	Voltage	Mounting	
RSX1 LED	P1	30K 3000K	R2 Type 2 Wide	MVOLT (120V-277V) ²	SPA Square pole mounting (3.0" min. SQ pole for 1 at 90°, 3.5" min. SQ pole for 2, 3, 4 at 90°)	
	P2	40K 4000K	R3 Type 3 Wide	HVOLT (347V-480V) ³	RPA Round pole mounting (3.2" min. dia. RND pole for 2, 3, 4 at 90°, 3.0" min. dia. RND pole for 1 at 90°, 2 at 180°, 3 at 120°)	
	P3	50K 5000K	R3S Type 3 Short	XVOLT (277V-480V) ⁴	MA Mast arm adaptor (fits 2-3/8" OD horizontal tenon)	
	P4		R4 Type 4 Wide	(use specific voltage for options as noted)		IS Adjustable slipfitter (fits 2-3/8" OD tenon) ⁶
			R4S Type 4 Short			WBA Wall bracket ¹
			R5 Type 5 Wide ¹			WBASC Wall bracket with surface conduit box
	R5S Type 5 Short ¹	208 ³ 347 ⁵	AASP Adjustable tilt arm square pole mounting ⁶			
	AFR Automotive Front Row	208 ³ 347 ⁵	AARP Adjustable tilt arm round pole mounting ⁶			
	AFRR90 Automotive Front Row Right Rotated	240 ³ 480 ⁵	AAWB Adjustable tilt arm with wall bracket ⁶			
	AFRL90 Automotive Front Row Left Rotated		AAWSC Adjustable tilt arm wall bracket and surface conduit box ⁶			

Options		Finish
Shipped Installed	Shipped Installed	DDBXD Dark Bronze
HS House-side shield ⁷	*Standalone and Networked Sensors/Controls (factory default settings, see table page 9)	DBLXD Black
PE Photocontrol, button style ^{8,9}	NLTAIR2 PIRHN nLight AIR generation 2, with Networked, Bi-Level motion/ambient sensor ^{9,12,13,14}	DNAXD Natural Aluminum
PER7 Seven-wire twist-lock receptacle only (no controls) ^{9,10,11}	BAA Buy America(n) Act Compliant	DWHXD White
SF Single fuse (120, 277, 347) ⁵	CCE Coastal Construction ¹⁵	DOBTDX Textured Dark Bronze
DF Double fuse (208, 240, 480) ⁵	*Note: NLTAIR2 PIRHN with nLight Air can be used as a standalone or networked solution. Sensor coverage pattern is affected when luminaire is tilted.	DBLBXD Textured Black
SPD20KV 20KV Surge pack (10KV standard)	Shipped Separately (requires some field assembly)	DNATXD Textured Natural Aluminum
FAO Field adjustable output ⁹	EGS External glare shield ⁷	DWHGXD Textured White
DMG 0-10V dimming extend out back of housing for external control (control ordered separate) ⁹	EGFV External glare full visor (360° around light aperture) ⁷	
	BS Bird spikes ¹⁶	



Ordering Information

Accessories

Ordered and shipped separately.

RSX1HS	RSX1 House side shield (includes 1 shield)
RSX1HSAFRU	RSX1 House side shield for AFR rotated optics (includes 1 shield)
RSX1EGS (FINISH) U	External glare shield (specify finish)
RSX1EGFV (FINISH) U	External glare full visor (specify finish)
RSXRPA (FINISH) U	RSX Universal round pole adaptor plate (specify finish)
RSXWBA (FINISH) U	RSX WBA wall bracket (specify finish) ¹
RSXSCB (FINISH) U	RSX Surface conduit box (specify finish, for use with WBA, WBA not included)
DLL127F 1.5 JU	Photocell -SSL twist-lock (120-277V) ¹⁷
DLL347F 1.5 CUL JU	Photocell -SSL twist-lock (347V) ¹⁷
DLL480F 1.5 CUL JU	Photocell -SSL twist-lock (480V) ¹⁷
DSHORT SBK U	Shorting cap ¹⁷

NOTES

- Any Type 5 distribution, is not available with WBA.
- MVOLT driver operates on any line voltage from 120-277V (50/60 Hz).
- HVOLT driver operates on any line voltage from 347-480V (50/60 Hz).
- XVOLT driver not available with P1 or P2. XVOLT driver operates on any line voltage from 277V-480V (50/60 Hz). XVOLT not available with fusing (SF or DF) and not available with PE.
- Single fuse (SF) requires 120V, 277V or 347V. Double fuse (DF) requires 208V, 240V or 480V.
- Maximum tilt is 90° above horizontal.
- It may be ordered as an accessory.
- Requires MVOLT or 347V.
- Two or more of the following options cannot be combined including PE, DMG, PER7, FAO and NLTAIR2 PIRHN. (Exception: PE and FAO can be combined; also PE and DMG can be combined.)
- Compatible with standard twist-lock photocells for dusk to dawn operation or advanced control nodes that provide 0-10V dimming

- signals. Wire 4/Wire 5 wired to dimming leads on driver. Wire 6/Wire 7 capped inside luminaire. Twistlock photocell ordered and shipped as a separate line item from Acuity Brands Controls. See accessories. Shorting Cap included.
- For units with option PER7, the mounting must be restricted to +/- 45° from horizontal aim per ANSI C136.10-2010.
 - Must be ordered with PIRHN.
 - Requires MVOLT or HVOLT.
 - Must be ordered with NLTAIR2. For additional information on PIRHN visit [here](#).
 - CCE option not available with WBA, WBASC, AASP, AARP, AAWB, AAWBSC, EGS, EGFV and BS.
 - Must be ordered with fixture for factory pre-drilling.
 - Requires luminaire to be specified with PER7 option. Ordered and shipped as a separate line item from Acuity Brands Controls.

External Shields



House Side Shield



External Glare Shield

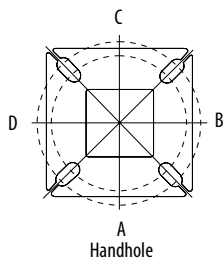


External 360 Full Visor

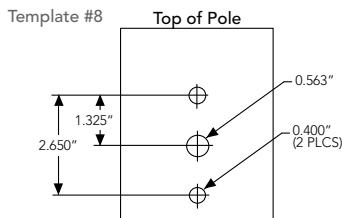
Pole/Mounting Information

Accessories including bullhorns, cross arms and other adapters are available under the accessories tab at Lithonia's Outdoor Poles and Arms product page. Click here to visit [Accessories](#).

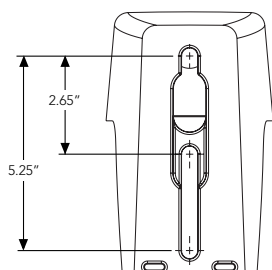
HANDHOLE ORIENTATION



RSX POLE DRILLING



RSX STANDARD ARM & ADJUSTABLE ARM



Round Tenon Mount - Pole Top Slipfitters

Tenon O.D.	RSX Mounting	Single	2 @ 180°	2 @ 90°	3 @ 120°	3 @ 90°	4 @ 90°
2 - 3/8"	RPA, AARP	AS3-5 190	AS3-5 280	AS3-5 290	AS3-5 320	AS3-5 390	AS3-5 490
2 - 7/8"	RPA, AARP	AST25-190	AST25-280	AST25-290	AST25-320	AST25-390	AST25-490
4"	RPA, AARP	AST35-190	AST35-280	AST35-290	AST35-320	AST35-390	AST35-490

Drill/Side Location by Configuration Type

Drilling Template	Mounting Option	Single	2 @ 180	2 @ 90	3 @ 120	3 @ 90	4 @ 90
#8	Head Location	Side B	Side B & D	Side B & C	Round Pole Only	Side B, C & D	Side A, B, C & D
#8	Drill Nomenclature	DM19AS	DM28AS	DM29AS	DM32AS	DM39AS	DM49AS

RSX1 - Luminaire EPA

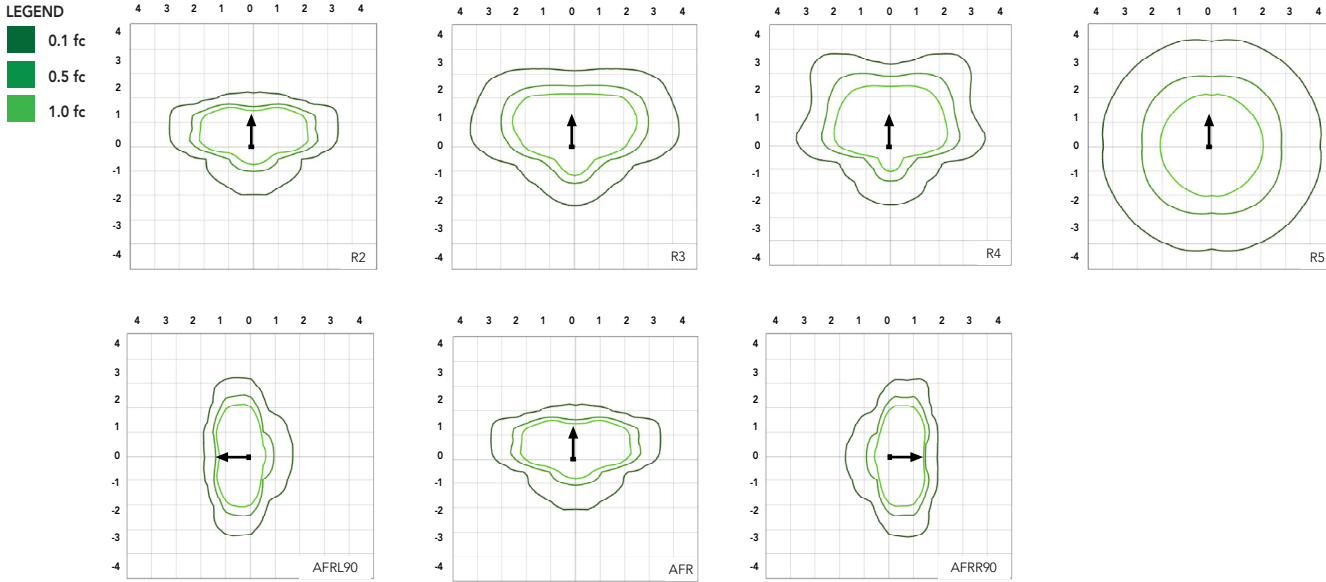
*Includes luminaire and integral mounting arm. Other tenons, arms, brackets or other accessories are not included in this EPA data.

Fixture Quantity & Mounting Configuration	Single	2 @ 90	2 @ 180	3 @ 90	3 @ 120	4 @ 90	2 Side by Side	3 Side by Side	4 Side by Side
SPA - Square Pole Adaptor	0.57	1.03	1.05	1.52	1.36	2.03	1.31	1.7	2.26
RPA - Round Pole Adaptor	0.62	1.08	1.15	1.62	1.46	2.13	1.36	1.8	2.36
MA - Mast Arm Adaptor	0.49	0.95	0.89	1.36	1.2	1.87	1.23	1.54	2.1
IS - Integral Slipfitter AASP/AARP - Adjustable Arm Square/Round Pole	0°	0.57	1.03	1.05	1.52	1.36	2.03	1.31	1.7
	10°	0.68	1.34	1.33	2	1.74	2.64	1.35	2.03
	20°	0.87	1.71	1.73	2.56	2.26	3.42	1.75	2.62
	30°	1.24	2.19	2.3	3.21	2.87	4.36	2.49	3.73
	40°	1.81	2.68	2.98	3.85	3.68	5.30	3.62	5.43
	45°	2.11	2.92	3.44	4.2	4.08	5.77	4.22	6.33
	50°	2.31	3.17	3.72	4.52	4.44	6.26	4.62	6.94
	60°	2.71	3.66	4.38	5.21	5.15	7.24	5.43	8.14
	70°	2.78	3.98	4.54	5.67	5.47	7.91	5.52	8.27
	80°	2.76	4.18	4.62	5.97	5.76	8.31	5.51	8.27
90°	2.73	4.25	4.64	6.11	5.91	8.47	5.45	8.18	

Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's [RSX Area homepage](#).

Isofootcandle plots for the RSX1 LED P4 40K. Distances are in units of mounting height (20').



Performance Data

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-50°C (32-122°F).

Ambient	Ambient	Lumen Multiplier
0°C	32°F	1.05
5°C	41°F	1.04
10°C	50°F	1.03
15°C	59°F	1.02
20°C	68°F	1.01
25°C	77°F	1.00
30°C	86°F	0.99
35°C	95°F	0.98
40°C	104°F	0.97
45°C	113°F	0.96
50°C	122°F	0.95

Electrical Load

Performance Package	System Watts (W)	Current (A)					
		120V	208V	240V	277V	347V	480V
P1	51W	0.42	0.25	0.21	0.19	0.14	0.11
P2	72W	0.60	0.35	0.30	0.26	0.21	0.15
P3	109W	0.91	0.52	0.45	0.39	0.31	0.23
P4	133W	1.11	0.64	0.55	0.48	0.38	0.27

Projected LED Lumen Maintenance

Operating Hours	50,000	75,000	100,000
Lumen Maintenance Factor	>0.97	>0.95	>0.92

Values calculated according to IESNA TM-21-11 methodology and valid up to 40°C.



COMMERCIAL OUTDOOR

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

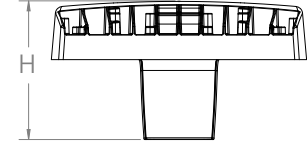
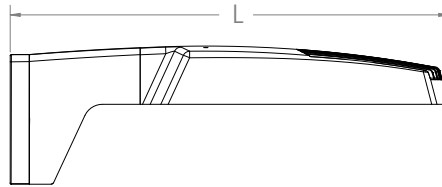
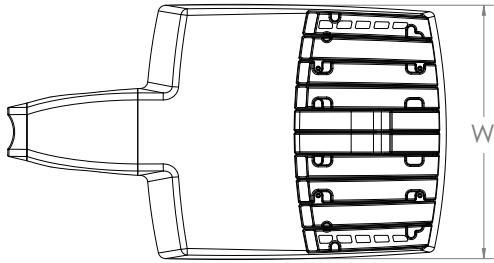
Performance Package	System Watts	Distribution Type	30K (3000K, 70 CRI)					40K (4000K, 70 CRI)					50K (5000K, 70 CRI)				
			Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
P1	51W	R2	6,482	1	0	1	126	7,121	1	0	1	139	7,121	1	0	1	139
		R3	6,459	1	0	2	127	7,096	1	0	2	139	7,096	1	0	2	139
		R35	6,631	1	0	1	129	7,286	1	0	2	142	7,286	1	0	2	142
		R4	6,543	1	0	2	128	7,189	1	0	2	141	7,189	1	0	2	141
		R45	6,313	1	0	1	124	6,936	1	0	1	136	6,936	1	0	1	136
		R5	6,631	3	0	2	130	7,286	3	0	2	143	7,286	3	0	2	143
		R55	6,807	3	0	1	133	7,479	3	0	1	147	7,479	3	0	1	147
		AFR	6,473	1	0	1	127	7,112	1	0	1	139	7,112	1	0	1	139
		AFRR90	6,535	2	0	2	127	7,179	2	0	2	140	7,179	2	0	2	140
AFRL90	6,562	2	0	1	128	7,210	2	0	2	140	7,210	2	0	2	140		
P2	72W	R2	8,991	2	0	1	123	9,878	2	0	1	135	9,878	2	0	1	135
		R3	8,959	2	0	2	124	9,843	2	0	2	137	9,843	2	0	2	137
		R35	9,198	2	0	2	126	10,106	2	0	2	139	10,106	2	0	2	139
		R4	9,077	2	0	2	126	9,972	2	0	2	139	9,972	2	0	2	139
		R45	8,757	1	0	2	122	9,622	2	0	2	134	9,622	2	0	2	134
		R5	9,198	4	0	2	128	10,106	4	0	2	140	10,106	4	0	2	140
		R55	9,443	3	0	1	131	10,374	3	0	1	144	10,374	3	0	1	144
		AFR	8,979	2	0	1	125	9,865	2	0	1	137	9,865	2	0	1	137
		AFRR90	9,064	3	0	2	124	9,959	3	0	2	137	9,959	3	0	2	137
AFRL90	9,102	3	0	2	125	10,001	3	0	2	137	10,001	3	0	2	137		
P3	109W	R2	12,808	2	0	1	117	14,072	2	0	2	129	14,072	2	0	2	129
		R3	12,763	2	0	2	117	14,023	2	0	2	129	14,023	2	0	2	129
		R35	13,104	2	0	2	120	14,397	2	0	2	132	14,397	2	0	2	132
		R4	12,930	2	0	2	119	14,206	2	0	2	130	14,206	2	0	2	130
		R45	12,475	2	0	2	114	13,707	2	0	2	126	13,707	2	0	2	126
		R5	13,104	4	0	2	120	14,397	4	0	2	132	14,397	4	0	2	132
		R55	13,452	3	0	2	123	14,779	3	0	2	136	14,779	3	0	2	136
		AFR	12,791	2	0	1	117	14,053	2	0	2	129	14,053	2	0	2	129
		AFRR90	12,913	3	0	3	118	14,187	3	0	3	130	14,187	3	0	3	130
AFRL90	12,967	3	0	2	118	14,247	3	0	3	130	14,247	3	0	3	130		
P4	133W	R2	14,943	2	0	2	112	16,417	2	0	2	123	16,417	2	0	2	123
		R3	14,890	2	0	3	112	16,360	2	0	3	123	16,360	2	0	3	123
		R35	15,287	2	0	2	115	16,796	2	0	2	126	16,796	2	0	2	126
		R4	15,085	2	0	3	113	16,574	2	0	3	125	16,574	2	0	3	125
		R45	14,554	2	0	2	109	15,991	2	0	2	120	15,991	2	0	2	120
		R5	15,287	4	0	2	115	16,796	4	0	2	126	16,796	4	0	2	126
		R55	15,693	4	0	2	118	17,242	4	0	2	130	17,242	4	0	2	130
		AFR	14,923	2	0	2	112	16,395	2	0	2	123	16,395	2	0	2	123
		AFRR90	15,065	3	0	3	113	16,551	3	0	3	124	16,551	3	0	3	124
AFRL90	15,128	3	0	3	114	16,621	3	0	3	125	16,621	3	0	3	125		

Dimensions & Weights

Luminaire Weight by Mounting Type

Mounting Configuration	Total Luminaire Weight
SPA	22 lbs
RPA	24 lbs
MA	22 lbs
WBA	25 lbs
WBASC	28 lbs
IS	25 lbs
AASP	25 lbs
AARP	27 lbs
AAWB	28 lbs
AAWSC	31 lbs

RSX1 with Round Pole Adapter (RPA)

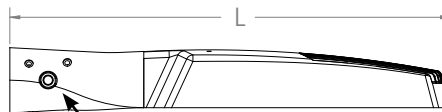
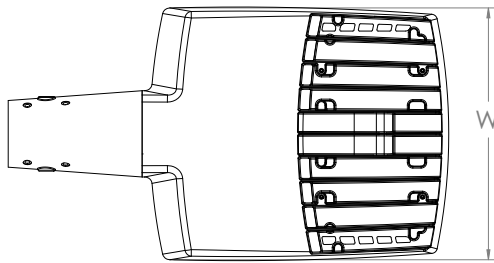


Note: RPA — Round Pole mount can also be used to mount on square poles by omitting the round pole adapter plate shown here.



Length: 22.8" (57.9 cm)
 Width: 13.3" (33.8 cm)
 Height: 3.0" (7.6 cm) Main Body
 7.2" (18.4 cm) Arm

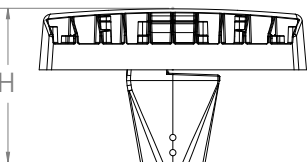
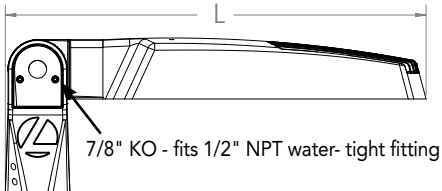
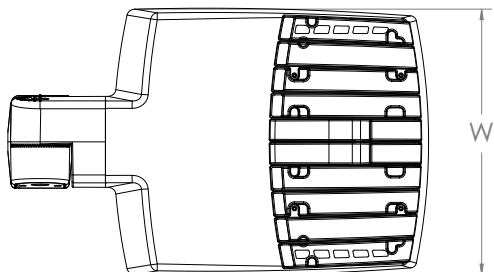
RSX1 with Mast Arm Adapter (MA)



7/16" locking thru bolt/nut provided

Length: 23.2" (59.1 cm)
 Width: 13.3" (33.8 cm)
 Height: 3.0" (7.6 cm) Main Body
 3.5" (8.9 cm) Arm

RSX1 with Adjustable Slipfitter (IS)

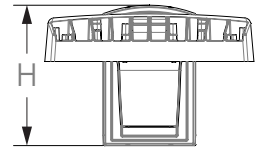
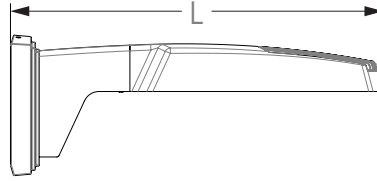
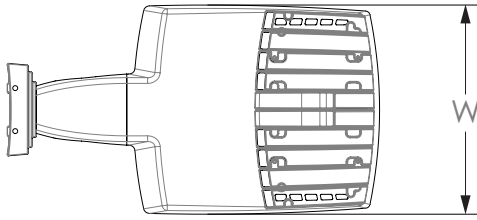


7/8" KO - fits 1/2" NPT water-tight fitting

Length: 20.7" (52.7 cm)
 Width: 13.3" (33.8 cm)
 Height: 3.0" (7.6 cm) Main Body
 7.6" (19.3 cm) Arm

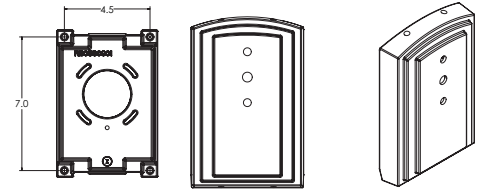
Dimensions

RSX1 with Wall Bracket (WBA)

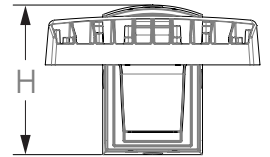
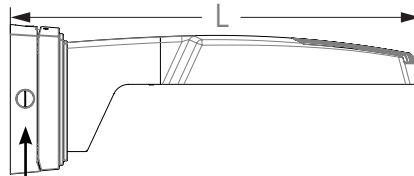
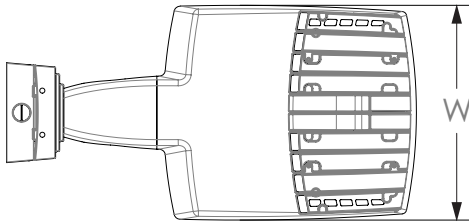


Length: 23.6" (59.9 cm)
 Width: 13.3" (33.8 cm)
 Height: 3.0" (7.6 cm) Main Body
 8.9" (22.6 cm) Arm

Wall Bracket (WBA) Mounting Detail



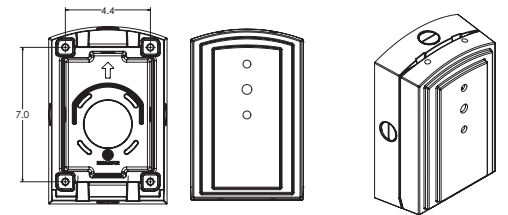
RSX1 with Wall Bracket with Surface Conduit Box (WBASC)



3/4" NPT taps with plugs - Qty (4) provided

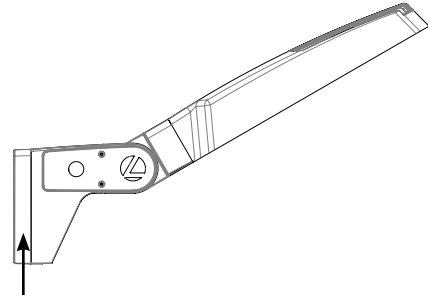
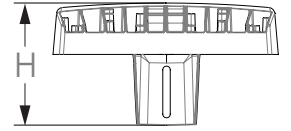
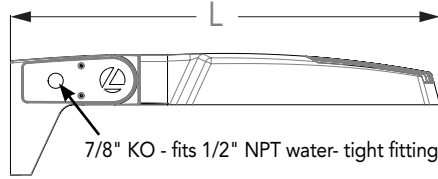
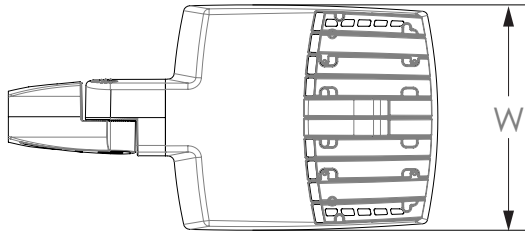
Length: 25.3" (64.3 cm)
 Width: 13.3" (33.8 cm)
 Height: 3.0" (7.6 cm) Main Body
 9.2" (23.4 cm) Arm

Surface Conduit Box (SCB) Mounting Detail



Dimensions

RSX1 with Adjustable Tilt Arm - Square or Round Pole (AASP or AARP)



NOTE:
RPA - Round Pole mount can also be used to mount on square poles by omitting the round pole adapter plate shown here.



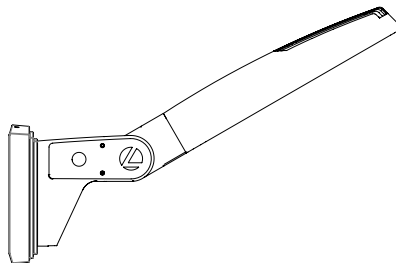
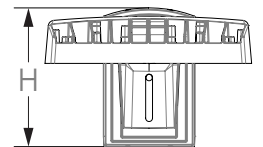
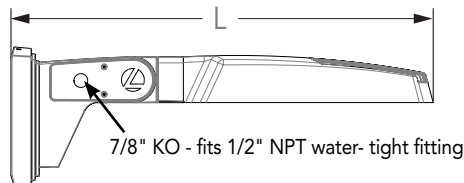
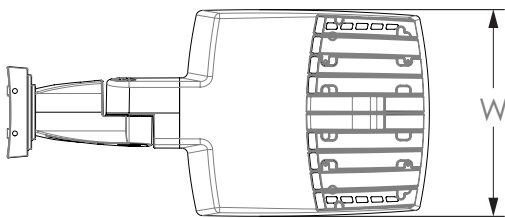
Length: 25.3" (65.3 cm) **AASP**
26.3" (66.8 cm) **AARP**
Width: 13.3" (33.8 cm)
Height: 3.0" (7.6 cm) Main Body
7.2" (18.2 cm) Arm

Notes

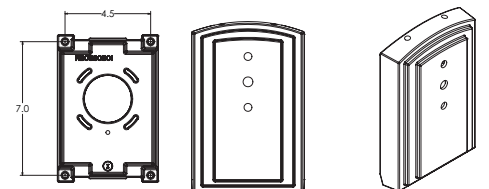
AASP: Requires 3.0" min. square pole for 1 at 90°. Requires 3.5" min. square pole for mounting 2, 3, 4 at 90°.

AARP: Requires 3.2" min. dia. round pole for 2, 3, 4 at 90°. Requires 3.0" min. dia. round pole for mounting 1 at 90°, 2 at 180°, 3 at 120°.

RSX1 with Adjustable Tilt Arm with Wall Bracket (AAWB)



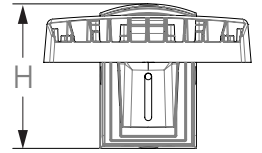
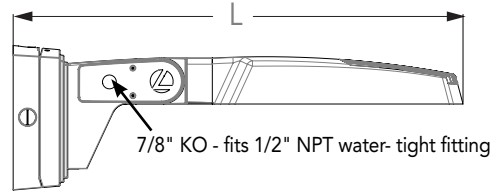
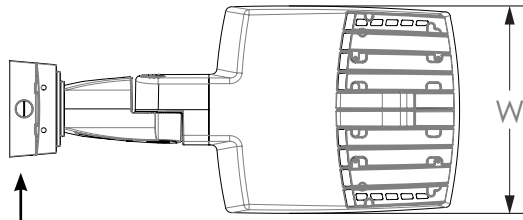
Wall Bracket (WBA) Mounting Detail



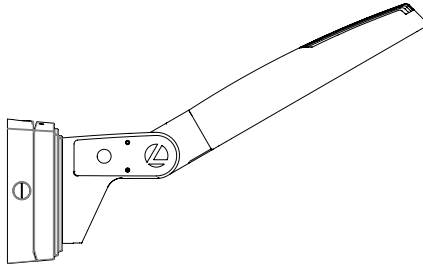
Length: 27.1" (68.8 cm)
Width: 13.3" (33.8 cm)
Height: 3.0" (7.6 cm) Main Body
8.9" (22.6 cm) Arm

Dimensions

RSX1 with Adjustable Tilt Arm with Wall Bracket and Surface Conduit Box (AAWSC)

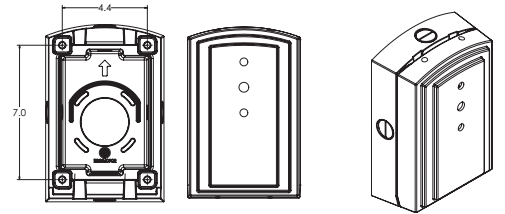


3/4" NPT taps
with plugs - Qty (4)
provided

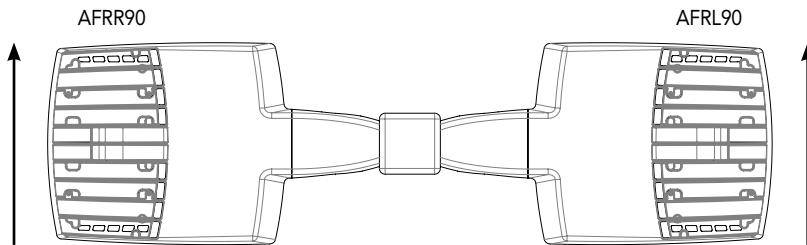


Length: 28.8" (73.2 cm)
Width: 13.3" (33.8 cm)
Height: 3.0" (7.6 cm) Main Body
9.2" (23.4 cm) Arm

Surface Conduit Box (SCB) Mounting Detail



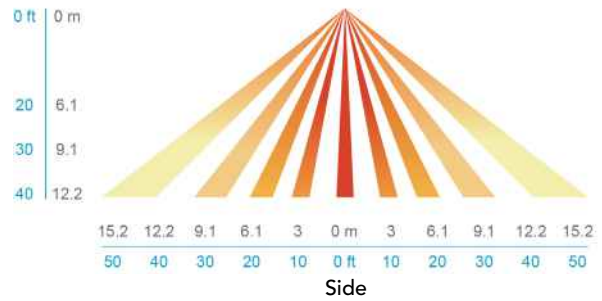
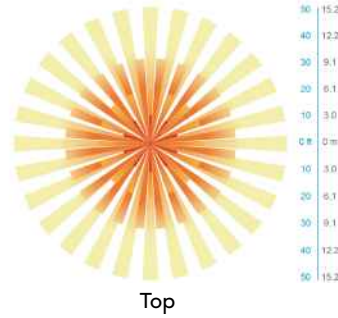
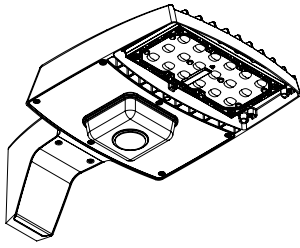
Automotive Front Row - Rotated Optics (AFRR90/R90)



(Example: 2@180 - arrows indicate direction of light exiting the luminaire)

nLight Sensor Coverage Pattern

NLTAIR2 PIRHN



Motion Sensor Default Settings - Option PIRHN						
Option	Dimmed State (unoccupied)	High Level (when occupied)	Photocell Operation	Dwell Time (occupancy time delay)	Ramp-up Time (from unoccupied to occupied)	Ramp-down Time (from occupied to unoccupied)
NLTAIR2 PIRHN	Approx. 30% Output	100% Output	Enabled @ 1.5FC	7.5 minutes	3 seconds	5 minutes

*Note: NLTAIR2 PIRHN default settings including photocell set-point, high/low dim rates, and occupancy sensor time delay are all configurable using the Clarity Pro App. Sensor coverage pattern shown with luminaire at 0°. Sensor coverage pattern is affected when luminaire is tilted.

FEATURES & SPECIFICATIONS

INTENDED USE

The RSX LED area family is designed to provide a long-lasting, energy-efficient solution for the one-for-one replacement of existing metal halide or high pressure sodium lighting. The RSX1 delivers 7,000 to 17,000 lumens and is ideal for replacing 70W to 400W HID pole-mounted luminaires in parking lots and other area lighting applications.

CONSTRUCTION

The RSX LED area luminaire features a rugged die-cast aluminum main body that uses heat-dissipating fins and flow-through venting to provide optimal thermal management that both enhances LED performance and extends component life. Integral "no drill" mounting arm allows the luminaire to be mounted on existing pole drillings, greatly reducing installation labor. The light engines and housing are sealed against moisture and environmental contaminants to IP66. The low-profile design results in a low EPA, allowing pole optimization. All mountings are rated for minimum 1.5 G vibration load per ANSI C136.31. 3G Mountings: Include SPA, RPA, MA, IS, AASP, and AARP rated for 3G vibration. 1.5G Mountings: Include WBA, WBASC, AAWB and AAWSC rated for 1.5G vibration.

FINISH

Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures superior adhesion as well as a minimum finish thickness of 3 mils. The result is a high-quality finish that is warranted not to crack or peel.

COASTAL CONSTRUCTION (CCE)

Optional corrosion resistant construction is engineered with added corrosion protection in materials and/or pre-treatment of base material under superDurable paint. Provides additional corrosion protection for applications near coastal areas. Finish is salt spray tested to over 5,000 hours per ASTM B117 with cribe rating of 10. Additional lead-times apply.

OPTICS

Precision acrylic refractive lenses are engineered for superior application efficiency, distributing the light to where it is needed most. Available in short and wide pattern distributions including Type 2, Type 3, Type 3S, Type 4, Type 4S, Type 5, Type 5S, AFR (Automotive Front Row), and AFR rotated AFR90 and ARFL90.

ELECTRICAL

Light engine(s) configurations consist of high-efficacy LEDs mounted on metal-core circuit boards and aluminum heat sinks to maximize heat dissipation. Light engines are IP66 rated. LED lumen maintenance is >L92/100,000 hours. CCT's of 3000K, 4000K and 5000K (minimum 70 CRI) are available. Fixtures ship standard with 0-10v dimming driver. Class 1 electronic drivers ensure system power factor >90% and THD <20%. Easily serviceable 10kV surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).

STANDARD CONTROLS

The RSX LED area luminaire has a wide assortment of control options. Dusk to dawn controls include MVOLT and 347V button-type photocells and NEMA twist-lock photocell receptacles.

nLIGHT AIR CONTROLS

The RSX LED area luminaire is also available with nLight® AIR for the ultimate in wireless control. This powerful controls platform provides out-of-the-box basic motion sensing with photocontrol functionality and is suitable for mounting heights up to 40 feet. No commissioning is required when using factory default settings that provide basic stand-alone motion occupancy dimming that is switched on and off with a built-in photocell. See chart above for motion sensor default out-of-box settings. For more advanced wireless functionality, such as group dimming, nLight AIR can be commissioned using a smartphone and the easy-to-use CLAIRITY app. nLight AIR equipped luminaires can be grouped, resulting in motion sensor and photocell group response without the need for additional equipment. Scheduled dimming with motion sensor over-ride can be achieved when used with the nLight Eclipse. Additional information about nLight Air can be found [here](#).

INSTALLATION

Integral "no-drill" mounting arm allows for fast, easy mounting using existing pole drillings. Select the "SPA" option for square poles and the "RPA" option to mount to round poles. Note, the RPA mount can also be used for mounting to square poles by omitting the RPA adapter plate. Select the "MA" option to attach the luminaire to a 2 3/8" horizontal mast arm or the "IS" option for an adjustable slipfitter that mounts on a 2 3/8" OD tenon. The adjustable slipfitter has an integral junction box and offers easy installation. Can be tilted up to 90° above horizontal. Additional mountings are available including a wall bracket, adjustable tilt arm for direct-to-pole and wall and a surface conduit box for wall mount applications.

LISTINGS

CSA Certified to meet U.S. and Canadian standards. Suitable for wet locations. Rated for -40°C minimum ambient. DesignLights Consortium® (DLC) Premium qualified product and DLC qualified product. Not all versions of this product may be DLC Premium qualified or DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

International Dark-Sky Association (IDA) Fixture Seal of Approval (FSA) is available for all products on this page utilizing 3000K color temperature only. U.S. Patent No. D882, 146S

BUY AMERICAN ACT

Product with the BAA option is assembled in the USA and meets the Buy America(n) government procurement requirements under FAR, DFARS and DOT regulations. Please refer to www.acuitybrands.com/buy-american for additional information.

WARRANTY

5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at:

www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

To: Town of Brewster

Date: March 29, 2024

Project #: 15934.00

From: Randall Hart, Principal

Re: Proposed Commercial Development
Traffic Assessment

Introduction

On behalf of the Proponent, Vanasse Hangen Brustlin, Inc. (VHB) has prepared a transportation assessment of the proposed Commercial Development to be located at 162 Underpass Road in Brewster, Massachusetts. The following memo provides review of existing accident history along Underpass Road at the proposed site driveway and adjacent intersections, projections of traffic for the subdivision proposed, and review of site distance for the proposed driveway, future condition operational analyses of the driveway, and a proposed traffic demand management initiative for the site.

Crash Summary

A detailed crash analysis was conducted to identify potential vehicle accident trends and/or roadway deficiencies in the immediate area of the proposed site driveway. The most current vehicle accident data for the traffic study area intersections were obtained from MassDOT for the years 2015 to 2020. The MassDOT database is comprised of crash data from the Massachusetts Registry of Motor Vehicles (RMV) Division primarily for use in traffic studies and safety evaluations. Data files are provided for an entire city or town for an entire year, though it is possible that some crash records may be omitted either due to individual crashes not being reported, or the city crash records not being provided in a compatible format for RMV use.

Crash rates are calculated based on the number of accidents at an intersection and the volume of traffic traveling through that intersection on a daily basis. Rates that exceed MassDOT's average for accidents at intersections in the MassDOT district in which the town or city is located could indicate safety or geometric issues for a particular intersection. For our study area, the calculated crash rates for the study area intersections were compared to the MassDOT District 5 (the MassDOT district for Brewster) average. The current MassDOT average crash rate for unsignalized and signalized intersections in District 5 is 0.57 and 0.75 crashes per million entering vehicles, respectively. In other words, on average, 0.57 crashes occurred per million vehicles entering unsignalized intersections throughout District 5.

No crashes were reported at the intersections of Underpass Road at Sara Ann Lane, Underpass Road at Site Driveway, or on Underpass Road in between Sara Ann Lane and the Site Driveway.

Highway Safety Improvement Program

In addition to calculating the crash rate, study area intersections should also be reviewed in the MassDOT's Highway Safety Improvement Program (HSIP) database. An HSIP-eligible cluster is one in which the total number of "equivalent property damage only"¹ crashes in the area is within the top 5% of all clusters in that region. Being HSIP-eligible makes the location eligible for FHWA and MassDOT funds to address the identified safety issues at these locations. As part of this effort, VHB reviewed this database and found that the intersections referenced above are not HSIP locations.

Trip Generation

The rate at which any development generates traffic is dependent upon a number of factors such as size, location, and concentration of surrounding developments. The site is currently vacant. The proposed development consists of two lots, each with one building. The north lots building is proposed to have five contractor bays at 1,000 square feet each, and one single family attached apartment. The south building is proposed to have three upstairs business units totaling 2,592 square feet and will be used for retail, business office and services or artist galleries. There will be one downstairs unit containing a fast casual restaurant with 3,300 square feet or 75 seats.

Trip generation estimates for the proposed use were projected using trip generation rates published by the Institute of Transportation Engineers (ITE) *Trip Generation, 11th Edition*². The number of vehicle-trips generated by the residential units were estimated based on ITE LUC 215 (Single-Family Attached Housing), the number of vehicle-trips generated by the restaurant were estimated based on ITE LUC 930 (Fast Casual Restaurant), and the number of vehicle-trips generated by the retail portion were estimated based on ITE LUC 822 (Strip Retail Plaza). The estimated trip generation for the proposed project is presented below in Table 1.

1 "Equivalent property damage only" is a method of combining the number of crashes with the severity of the crashes based on a weighted scale. Crashes involving property damage only are reported at a minimal level of importance, while collisions involving personal injury (or fatalities) are weighted more heavily.

2 Trip Generation, 11th Edition, Institute of Transportation Engineers, Washington D.C., 2021.

Table 1 Trip Generation Summary

	Residential Vehicle Trips a	Retail Vehicle Trips b	Fast Casual Restaurant Vehicle Trips c	Contractor Bays d	New Vehicle Trips
Weekday Morning Peak Hour					
Enter	-	4	2	6	12
<u>Exit</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>2</u>	<u>8</u>
Total	1	6	5	8	20
Weekday Evening Peak Hour					
Enter	1	9	23	3	36
<u>Exit</u>	<u>-</u>	<u>9</u>	<u>19</u>	<u>7</u>	<u>35</u>
Total	1	18	41	10	70
Saturday Midday Peak Hour					
Enter	-	9	59	6	74
<u>Exit</u>	<u>1</u>	<u>8</u>	<u>44</u>	<u>2</u>	<u>55</u>
Total	1	17	108	8	133

- a. Trip Generation estimate based ITE LUC 215 (Single Family Attached Housing) for 1 unit.
- b. Trip Generation estimate based on ITE LUC 822 Strip Retail Plaza (<40k) with 2,592 square feet.
- c. Trip Generation estimate based on ITE LUC 930 Fast Casual Restaurant with 3,300 square feet.
- d. Five contractor bays 1,000 sf each based on ITE LUC .180 Specialty Contractor. Data for Sat is not available, assumed AM peak volumes for that period (likely conservative)

As shown in Table 1, the development is expected to generate approximately 20trips (12 entering/ 8 exiting) during the weekday morning peak hour, 70 trips (36 entering/ 35 exiting) during the evening peak hour, and 133 trips (67 entering/ 55 exiting) during the Saturday midday peak hour. As noted below, the project will include a transportation demand management program for the site which will attempt to reduce reliance on single occupancy motor vehicle access to the site. While these initiatives are likely to lessen the actual traffic generation to the proposed facility, no

credit has been taken in the trip generation estimates or the operational analysis provided below. This represents a conservative approach to reviewing potential project impacts.

Site Driveway Intersection Capacity Analysis

VHB conducted capacity analyses at the site driveway for the 2025 Build Condition in order to analyze the Level of Service (LOS). A 2025 Build Condition was developed using February 2023 Automatic Traffic Recorder (ATR) data along Underpass Road for a weekday and adjusted to reflect peak summer traffic conditions for Cape Cod. Saturday ATR data was not previously collected along Underpass Road. However, review of data at nearby permanent count stations on Route 124 (Harwich Road) south of Route 137, Route 137 (Long Pond Road) west of Route 124 (both approximately 1 mile southwest of the site) had both weekday and Saturday data which was reviewed. Traffic counts for average weekdays were compared to Saturday counts in August 2023 from the permanent count stations, and it was determined that Saturday data was slightly lower than weekday data for both of these locations. To provide a conservative LOS analysis for this project – weekday pm traffic data for Underpass Road was used as an estimate for Saturday midday traffic volumes at the driveway as the weekday data was observed to be higher than typical Saturday. This results in a highly conservative assessment of Saturday midday driveway operations. The nearby permanent count station data is provided in the appendix for reference. The 2023 data was then grown to 2025 to reflect a future build year. The ITE Trip Generation entering and exiting volumes were then added to the 2025 future build condition.

The evaluation criteria used to analyze area intersections in this traffic study are based on the percentile delay method for signalized intersections and the Highway Capacity Manual (HCM), 6th Edition³ for unsignalized intersections. The term 'Level of Service' (LOS) is used to denote the different operating conditions that occur on a given roadway segment under various traffic volume loads. It is a qualitative measure that considers several factors including roadway geometry, speed, travel delay and freedom to maneuver. LOS provides an index to the operational qualities of a roadway segment or an intersection. LOS designations range from A to F, with LOS A representing the best operating conditions and LOS F representing the worst operating conditions.

In addition to LOS, two other measures of effectiveness (MOEs) are typically used to quantify the traffic operations at intersections; volume-to-capacity ratio (v/c) and delay (expressed in seconds per vehicle). For example, an existing v/c ratio of 0.90 for an intersection indicates that the intersection is operating at 90-percent of its available capacity. A delay of 15 seconds for a particular vehicular movement or approach indicates that vehicles on the movement or approach will experience an average additional travel time of 15 seconds. For a given LOS letter designation there may be a wide range of values for both v/c ratios and delay. Comparison of intersection capacity results therefore requires that, in addition to the LOS, the other MOEs should also be considered.

The LOS designations, which are based on delay, are reported differently for signalized and unsignalized intersections. For signalized intersections, the analysis considers the operation of all traffic entering the intersection and the LOS designation is for overall conditions at the intersection. For unsignalized intersections, however, the analysis assumes that traffic on the mainline is not affected by traffic on the side streets. Thus, the LOS designation is for the critical movement exiting the side street, which is generally the left turn out of the side street or site driveway. Table 2 shows the LOS criteria for both signalized intersections and unsignalized intersections.

It should be noted that the analytical methodologies typically used for the analysis of unsignalized intersections use conservative analysis parameters, such as long critical gaps. Actual field observations indicate that drivers on minor streets generally accept shorter gaps in traffic than those used in the analysis procedures and therefore experience less delay than reported by the analysis software. The analysis methodologies also do not fully take into account the

³ *Highway Capacity Manual, 6th Edition*, Transportation Research Board, Washington, D.C., 2016.

beneficial grouping effects caused by nearby signalized intersections. The net effect of these analysis procedures is the over-estimation of calculated delays at unsignalized intersections in the study area. Cautious judgment should therefore be exercised when interpreting the capacity analysis results at unsignalized intersections.

Table 2 Level-of-Service Criteria

Level of Service	Delay – Signalized Intersection	Delay – Unsignalized Intersection
A	0 to 10 seconds	0 to 10 seconds
B	10 to 20 seconds	10 to 15 seconds
C	20 to 35 seconds	15 to 25 seconds
D	35 to 55 seconds	25 to 35 seconds
E	55 to 80 seconds	35 to 50 seconds
F	Greater than 80 seconds	Greater than 50 seconds

Source: Highway Capacity Manual, 6th Edition.

Capacity Analysis results for the Site Driveway at Underpass Road are shown in Table 3 below.

Table 3 Unsignalized Intersection Capacity Analysis (Peak Summer Season)

Location / Movement	2025 Build Conditions				
	D ^a	v/c ^b	Del ^c	LOS ^d	95 Q ^e
Underpass Road at Site Driveway					
<i>Weekday Morning</i>					
EB L/R	10	0.02	10	B	0
NB L	5	0.00	8	A	0
<i>Weekday Evening</i>					
EB L/R	40	0.07	12	B	5
NB L	20	0.02	8	A	3
<i>Saturday Midday</i>					
EB L/R	60	0.12	12	B	10
NB L	35	0.03	8	A	3

- a Demand
- b Volume to capacity ratio.
- c Average total delay, in seconds per vehicle.
- d Level-of-service.
- e 95th percentile queue, in feet.
- # 95th percentile volume exceeds capacity, queue may be longer.
- m Volume for 95th percentile queue is metered by upstream signal.

As shown in Table 3, all movements at the study area intersection operate at LOS B or better during the critical weekday morning, weekday evening, and Saturday midday peak hours for the 2025 Build Conditions.

Sight Distance

Access to the site is proposed via a single access driveway off Underpass Road north of Sara Ann Lane.

VHB conducted a sight distance analysis, conforming to guidelines of the American Association of State Highway and Transportation Officials (AASHTO)⁴, at the location of the proposed site driveway at 162 Underpass Lane. Sight distance is generally divided into two categories: Stopping Sight Distance (SSD) and Intersection Sight Distance (ISD). Stopping Sight Distance (SSD) is the distance required for a vehicle approaching an intersection from either direction to perceive, react and come to a complete stop before colliding with an object in the road, in this case the exiting vehicle from a driveway. In this respect, SSD can be considered as the minimum visibility criterion for the safe operation of an unsignalized intersection.

Intersection Sight Distance (ISD) is based on the time required for perception, reaction, and completion of the desired critical exiting maneuver once the driver on a minor street or driveway approach decided to execute the maneuver. Calculation for the critical ISD includes the time to (1) turn left, and to clear the half of the intersection without conflicting with the vehicles approaching from the left; and (2) accelerate to the operating speed of the roadway without causing approaching vehicles to unduly reduce their speed. In this context, ISD can be considered as a desirable visibility criterion for the safe operation of an unsignalized intersection. Essentially, while SSD is the minimum distance needed to avoid collisions, ISD is the minimum distance needed so that mainline motorists will not have to substantially reduce their speed due to turning vehicles. To maintain the safe operation of an unsignalized intersection, ISD only needs to be equal to the stopping sight distance, though it is desirable to meet ISD requirements by themselves.

To calculate the required SSD and ISD at the proposed unsignalized Site driveway intersections, a 40 miles-per-hour (mph) design speed was used based on the observed speed limit. Table 4 summarizes the sight distance analysis.

Table 4 Sight Distance Analysis Summary

	Stopping Sight Distance (ft) ^a			Intersection Sight Distance (ft) ^a		
	Traveling	Required	Measured	Turning	Desired	Measured
Underpass Road at Site Driveway	Northbound	325	330±	Looking Left	465	>500±
	Southbound	295	>500±	Looking Right	395	285±

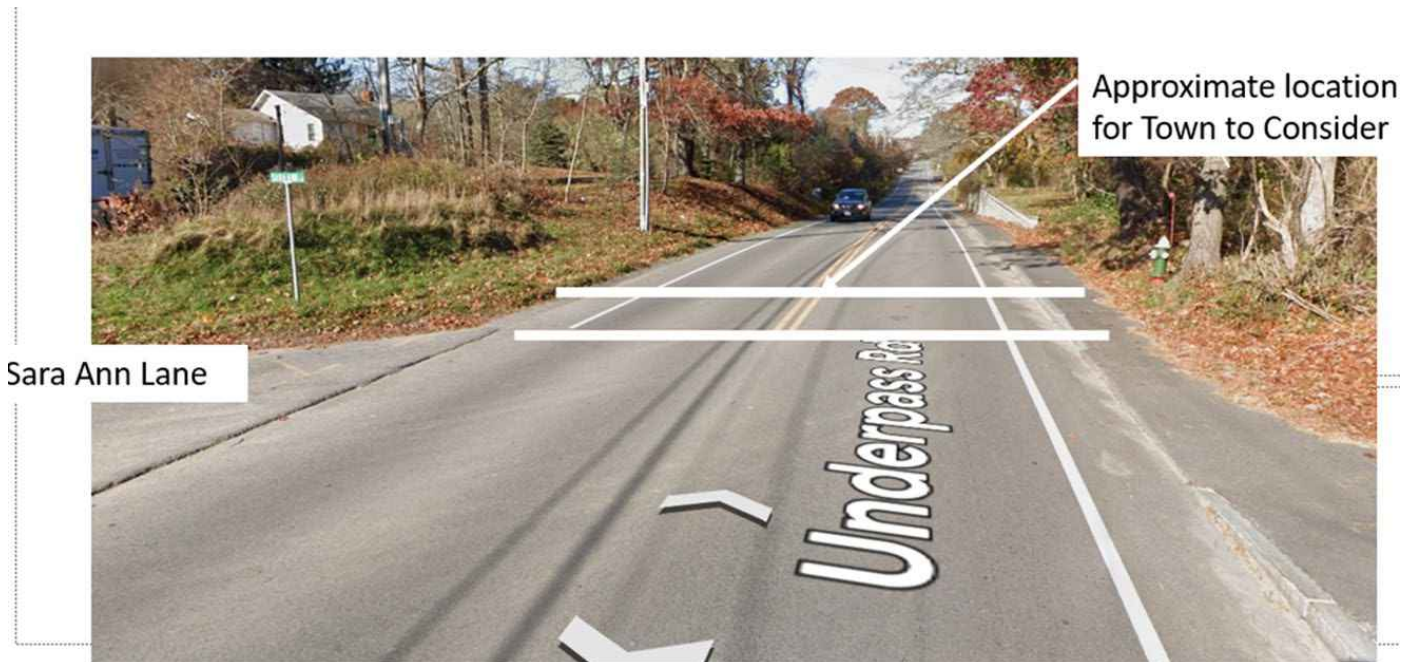
^a Based on guidelines established in A Policy on the Geometric Design of Highways and Streets, Seventh Edition(2nd Printing), American Association of State Highway and Transportation Officials (AASHTO), an observed 85th percentile speed of 42 mph NB and 41 mph SB was used (based on a February 2023 ATR conducted at the site driveway)

As shown in Table 3, the minimum stopping sight distance (SSD), meets or exceeds the minimum requirements. It should be noted that meeting or exceeding SSD is necessary for sight distance to ensure adequate sight lines are available. As shown in the table, the desirable intersection sight distance (ISD) is met for looking left but not looking right. Meeting ISD is desirable but not necessarily a requirement. The ISD is not met for the right-turn condition due to horizontal curvature in the roadway. To the south of the driveway there is currently some vegetation and overhanging trees that will eventually have an influence on the sight distance. With that in mind, we suggest the area be trimmed back including the overhanging tree canopies. In addition, to raise awareness of the proposed driveway as well as the driveway to the north on the east side of the street, VHB recommends the installation of intersection ahead signage on the northbound approach. The sign should be placed per M.U.T.C.D guidelines.

⁴ A Policy on the Geometric Design of Highways and Streets, American Association of State Highway and Transportation Officials, 2011.

Sidewalk and Crosswalk

VHB has been told that the town is requesting that the proponent construct a sidewalk along the site frontage and a crosswalk across Underpass Road to the sidewalk that exists on the east side of the roadway. With this in mind, VHB has assessed the potential location of a crosswalk given the vertical curves in the roadway. Based on in field measurements and review of geometry, it appears that the most appropriate place for a crosswalk is at the northwest corner of Sara Ann Lane which is at the crest of the vertical curve (shown below).



Review of sight distance in this area suggests that good visibility is available in both directions for both ISD and SSD. The approximately values are presented in Table 5 below.

Table 5 Sight Distance Analysis Summary

	Stopping Sight Distance (ft) ^a			Intersection Sight Distance (ft) ^a		
	Traveling	Required	Measured	Turning	Desired	Measured
Underpass Road at Site Driveway	Northbound	325	>1,000±	Looking Left	465	>1,000±
	Southbound	295	>1,000±	Looking Right	395	>1,000±

^a Based on guidelines established in A Policy on the Geometric Design of Highways and Streets, Seventh Edition(2nd Printing), American Association of State Highway and Transportation Officials (AASHTO), an observed 85th percentile speed of 42 mph NB and 41 mph SB was used (based on a February 2023 ATR conducted at the site driveway)

The location of the crosswalk will need to be approved by the Town of Brewster and all pavement markings and signage will need to conform to the M.U.T.C.D guidelines. Trimming of brush in the sight line quadrants and overhead should be performed regularly to ensure that sight lines are maintained in the future.

Transportation Demand Management Plan (TDM)

Implementation of Traffic Demand Measures (TDM) will offer alternatives to traveling in single occupancy vehicles to arrive and depart the site. This is geared toward reducing traffic and parking demand on the Site. As part of the proposed project, the following TDM measures will be implemented on Site:

- Establish a Transportation Demand Management (TDM) Program coordinator that will be responsible for the program as well as surveys of programs identified below.
- Upon moving in, all tenants will be provided a welcome package that will include descriptions of all TDM initiatives that are offered on-site. This will include a map of existing pedestrian and bicycle infrastructure in the area.
- Bike Racks will be provided in a central location on-site.
- Implement an onsite car-pool rideshare program with guaranteed ride home for employees.
- By virtue of the variety of uses on site, varied work hours would be expected by the various uses.
- Pending approval of the project, a TDM Implementation Plan will be developed for use by the transportation coordinator.

Attachments



ZONING TABLE: LOT 1

ZONING DISTRICT: C-H
BUILDING SETBACKS:
 REQUIRED FRONT YARD: 30'; PROPOSED FRONT YARD: 49.9 FEET
 REQUIRED SIDE YARD: 20'; PROPOSED SIDE YARD: 21.0 FEET
 REQUIRED REAR YARD: 20'; PROPOSED REAR YARD: 152.0 FEET
BUILDING COVERAGE:
 PROPOSED BUILDING AREA: FRONT BUILDING = 4,020 SF (INCLUDES CANOPY)
 LOT 1 - UPLAND AREA: 44,200 SF
 PROPOSED BUILDING COVERAGE: (4,020 / 44,200) x 100% = 9.1%±
AVERAGE GRADE & BUILDING HEIGHT:
 AVERAGE GRADE: (60.0 + 70.0) / 2 = 65.0
 EXISTING NORTH GRADES: (71.0 + 71.5) / 2 = 71.2
 AVERAGE GRADE: (65.0 + 71.2) / 2 = 68.1±
 MAXIMUM BUILDING RIDGE: 68.1 + 30 FEET = 98.1±
 PROPOSED RIDGE: 60.5 (SLAB) + 34.0 (BUILDING HEIGHT) = 94.5±
 94.5± < 98.1±

NOTES:

PARKING REQUIREMENTS: LOT 1
 RESTAURANT: 75 SEATS x 1 SPACE PER 4 SEATS + 1- SPACES FOR STAFF (8 STAFF) = 27 SPACES
 OFFICE/RETAIL/STUDIO: 2,592 S.F./250 S.F. PER SPACE = 11 SPACES
 TOTAL PARKING SPACES REQUIRED: 38 SPACES
 BUILDING HEIGHT SHALL BE CONFIRMED PRIOR TO BUILDING PERMIT APPLICATION

PARKING REQUIREMENTS: LOT 2-3
 COMMERCIAL BAYS: 1 SPACE PER EMPLOYEE; 2 EMPLOYEES X 5 BAYS = 10 SPACES
 APARTMENT: 1 SPACE PER BEDROOM; 2 BEDROOMS = 2 SPACES
 TOTAL PARKING SPACES REQUIRED: 12 SPACES
 TOTAL SPACES REQUIRED FOR BOTH PROPERTIES PER POLICY = 50 SPACES WITH 3 HP SPACES REQUIRED

PARKING PROVIDED:
 A TOTAL OF 55 SPACES PROVIDED INCLUDING 3 HP SPACES.

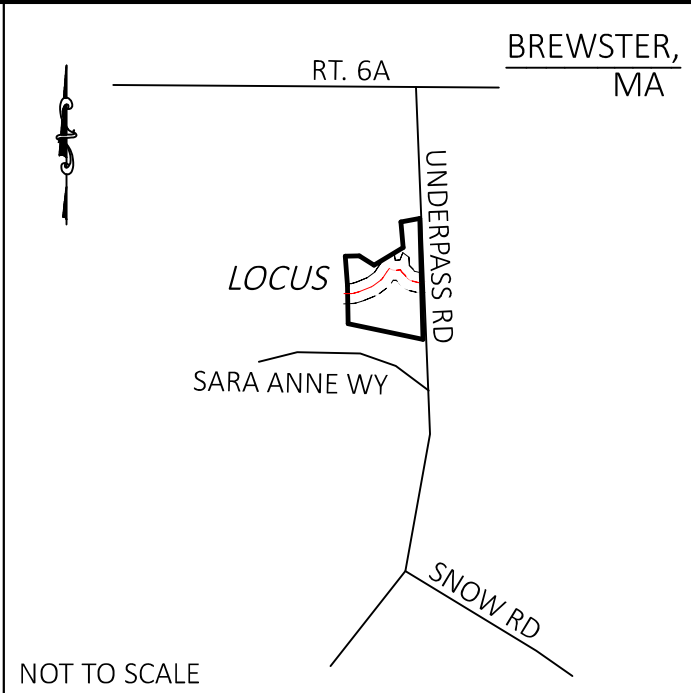
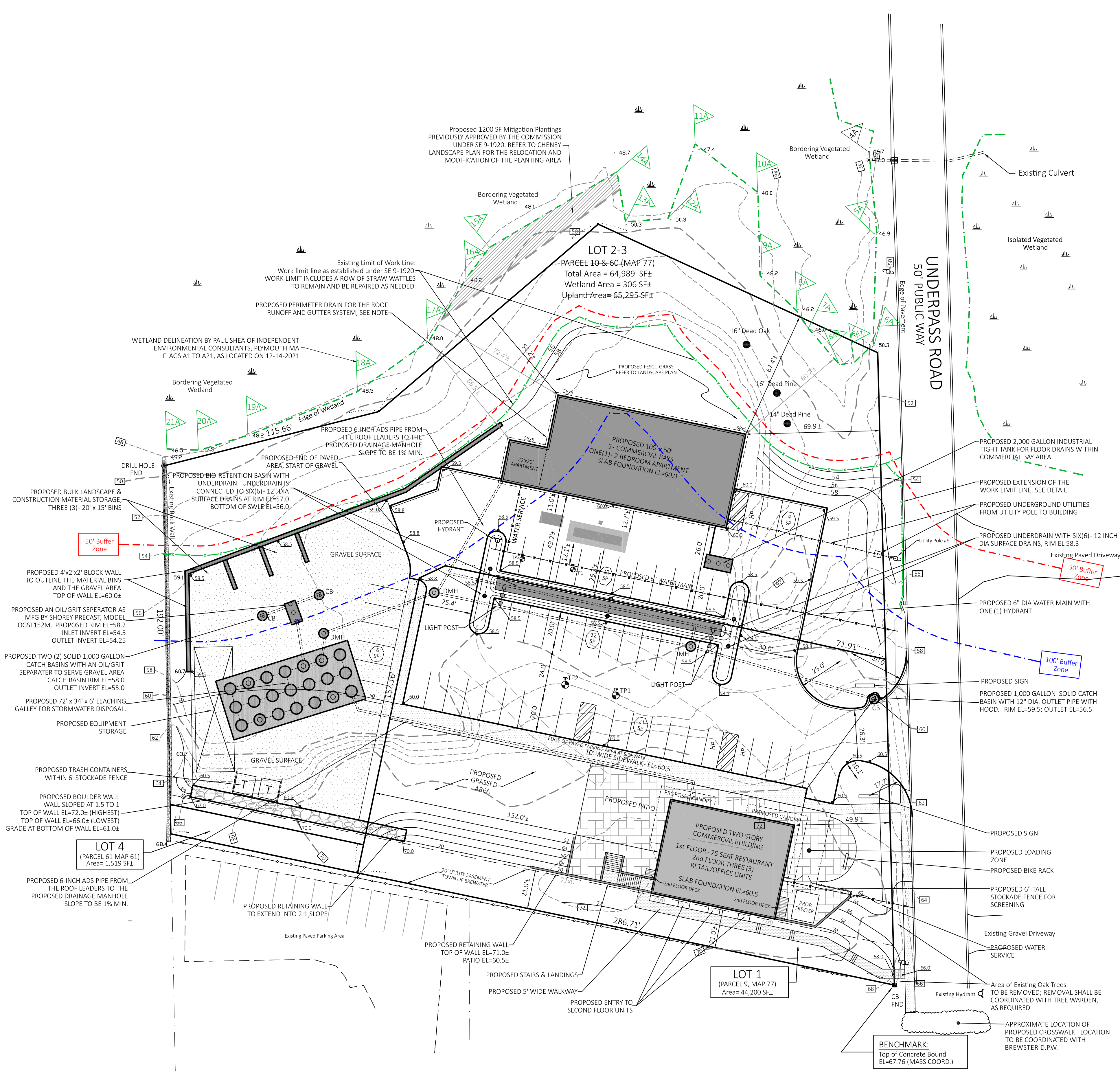
LIGHTING:
 BUILDING LIGHTING: ONE (1) - DARK SKY FIXTURE CENTERED OVER GARAGE BAY DOOR (4 FIXTURES)
 GARAGE BAYS: ONE (1) - DARK SKY FIXTURE ADJACENT TO THE EACH ENTRY DOOR (8 TO 10 FIXTURES)
 ENTRY DOORS: ONE (1) - DARK SKY FIXTURE ADJACENT TO THE EACH ENTRY DOOR (8 TO 10 FIXTURES)
 SITE LIGHTING: TWO SETS OF DARK SKY FIXTURES, TWO LIGHTS PER SET, MOUNTED ON 15 FOOT LIGHT POLES.
 PARKING AREAS: TWO SETS OF DARK SKY FIXTURES, TWO LIGHTS PER SET, MOUNTED ON 15 FOOT LIGHT POLES.

LANDSCAPE:
 PROPOSED LANDSCAPE WILL BE IN KEEPING WITH THE SURROUNDING AREAS. SEE LANDSCAPE PLAN

INDUSTRIAL WASTEWATER HOLDING TANK:
 IF THE BAYS ARE TO BE ACCESSIBLE BY VEHICLE, FLOOR DRAINS WILL BE REQUIRED IN EACH BAY. EACH FLOOR DRAIN WILL NEED TO BE CONNECTED TO AN INDUSTRIAL WASTEWATER HOLDING TANK.

ZONING TABLE: LOT 2

ZONING DISTRICT: C-H
BUILDING SETBACKS:
 REQUIRED FRONT YARD: 30'; PROPOSED FRONT YARD: 70.0 FEET
 REQUIRED SIDE YARD: 20'; PROPOSED SIDE YARD: 49.0 FEET
 REQUIRED REAR YARD: 20'; PROPOSED REAR YARD: 51.0 FEET
BUILDING COVERAGE:
 PROPOSED BUILDING AREA: 5,000 SF
 LOT 2 - UPLAND AREA: 40,579 SF
 PROPOSED BUILDING COVERAGE: (5,000 / 40,579) x 100% = 12.3%±
AVERAGE GRADE & BUILDING HEIGHT:
 AVERAGE GRADE: (58.0 + 58.5) / 2 = 58.2
 EXISTING NORTH GRADES: (59.0 + 58.5) / 2 = 58.7
 AVERAGE GRADE: (58.2 + 58.7) / 2 = 58.5±
 MAXIMUM BUILDING RIDGE: 58.5 + 30 FEET = 88.5
 PROPOSED RIDGE: 60 (SLAB EL) + 28 (BLD HEIGHT) = 88



PLAN BOOK 350
 DEED BOOK 28878
 ASSESSORS' MAP 48
 PAGE 1
 PAGE 199
 PARCEL 7

LEGEND

— 32 —	EXISTING CONTOUR
— 32 —	PROPOSED CONTOUR
X 12.34	EXISTING SPOT GRADE
24x5	PROPOSED SPOT GRADE
— O —	WATER SERVICE LINE
— U —	OVERHEAD UTILITY SERVICE
— U —	UNDERGROUND UTILITY SERVICE
— U —	GAS SERVICE LINE
⊕	TEST HOLE / BORING LOCATION
⊕	SEPTIC TANK
⊕	DISTRIBUTION BOX
⊕	SAS
⊕	RESERVED FOR FUTURE
⊕	UTILITY POLE
⊕	CATCH BASIN
⊕	FIRE HYDRANT
⊕	WELL
⊕	DRAINAGE MANHOLE
⊕	CONCRETE BOUND, FOUND
⊕	TOP OF BANK
⊕	LIMIT OF WORK
⊕	FENCE
⊕	EDGE OF CLEARING
⊕	BOULDER

SHEET 1 OF 5

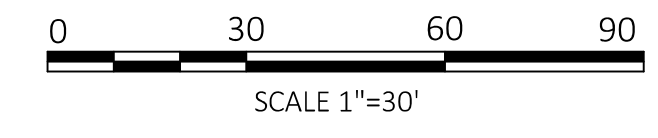
REVISED 3-29-2024: REMOVED REAR BUILDING FROM LOT 1; REVISED THE LAYOUT OF THE FRONT BUILDING ON LOT 1; REVISED LANDSCAPE, GRADING AND GRAVEL AREA AS NEEDED.
 REVISED 2-22-2024: UPDATED BUILDING UNIT DIAGRAM; ADDED EXISTING HYDRANT ON UNDERPASS; NOTED OAK TREE REMOVAL ON UNDERPASS.

THE FREE SEA TURTLE LLC & 162 UNDERPASS, LLC.
 C/O P.O. BOX 444, BREWSTER MA, 02631

PROPOSED SITE PLAN WITH DRAINAGE
 LOTS 1, 2 AND 3 AT 0 & 162 UNDERPASS ROAD, BREWSTER MA, 02631

J.M. O'REILLY & ASSOCIATES, INC.
 Professional Engineering & Land Surveying Services

1573 Main Street - Route 6A
 P.O. Box 1770
 Brewster, MA 02631
 (508)896-6601 Office (508)896-6602 Fax
 DATE: 02/02/2024 SCALE: As Noted BY: JMO/gb CHECK: JMO JOB NUMBER: JMO-6125A





ITE TRIP GENERATION WORKSHEET
(11th Edition, Updated 2021)

LANDUSE: Specialty Trade Contractor
LANDUSE CODE: 180
SETTING/LOCATION: General Urban/Suburban
JOB NAME:
JOB NUMBER:

Independent Variable --- 1,000 Sq. Feet Gross Floor Area

FLOOR AREA (KSF): 5.00

WEEKDAY

RATES:	# Studies	R^2	Total Trip Ends			Independent Variable Range			Directional Distribution	
			Average	Low	High	Average	Low	High	Enter	Exit
DAILY	20	--	9.82	3.00	43.33	6.000	1.458	12.000	50%	50%
AM PEAK OF GENERATOR	20	--	1.98	0.47	11.25	6.000	1.458	12.000	77%	23%
PM PEAK OF GENERATOR	20	--	2.18	0.85	10.83	6.000	1.458	12.000	38%	62%
AM PEAK (ADJACENT ST)	20	--	1.66	0.12	9.17	6.000	1.458	12.000	74%	26%
PM PEAK (ADJACENT ST)	19	--	1.93	0.38	10.83	6.000	1.458	12.000	32%	68%

TRIPS:	BY AVERAGE			BY REGRESSION		
	Total	Enter	Exit	Total	Enter	Exit
DAILY	50	25	25	--	--	--
AM PEAK OF GENERATOR	10	8	2	--	--	--
PM PEAK OF GENERATOR	11	4	7	--	--	--
AM PEAK (ADJACENT ST)	8	6	2	--	--	--
PM PEAK (ADJACENT ST)	10	3	7	--	--	--

SATURDAY

RATES:	# Studies	R^2	Total Trip Ends			Independent Variable Range			Directional Distribution	
			Average	Low	High	Average	Low	High	Enter	Exit
DAILY	--	--	--	--	--	--	--	--	--	--
PEAK OF GENERATOR	--	--	--	--	--	--	--	--	--	--

TRIPS:	BY AVERAGE			BY REGRESSION		
	Total	Enter	Exit	Total	Enter	Exit
DAILY	--	--	--	--	--	--
PEAK OF GENERATOR	--	--	--	--	--	--

SUNDAY

RATES:	# Studies	R^2	Total Trip Ends			Independent Variable Range			Directional Distribution	
			Average	Low	High	Average	Low	High	Enter	Exit
DAILY	--	--	--	--	--	--	--	--	--	--
PEAK OF GENERATOR	--	--	--	--	--	--	--	--	--	--

TRIPS:	BY AVERAGE			BY REGRESSION		
	Total	Enter	Exit	Total	Enter	Exit
DAILY	--	--	--	--	--	--
PEAK OF GENERATOR	--	--	--	--	--	--

ITE TRIP GENERATION WORKSHEET
(11th Edition, Updated 2021)

LANDUSE: Single-Family Attached Housing
LANDUSE CODE: 215
SETTING/LOCATION: General Urban / Suburban
JOB NAME:
JOB NUMBER:

Independent Variable --- Number of Units
1 units

WEEKDAY

RATES:	# Studies	R^2	Total Trip Ends			Independent Variable Range			Directional Distribution	
			Average	Low	High	Average	Low	High	Enter	Exit
DAILY	22	0.94	7.20	4.70	10.97	120	8	585	50%	50%
AM PEAK OF GENERATOR	31	0.91	0.55	0.35	0.97	110	8	452	25%	75%
PM PEAK OF GENERATOR	34	0.87	0.61	0.29	1.25	110	8	452	62%	38%
AM PEAK (ADJACENT ST)	46	0.92	0.48	0.12	0.74	135	8	700	25%	75%
PM PEAK (ADJACENT ST)	51	0.91	0.57	0.17	1.25	136	8	700	59%	41%

TRIPS:	BY AVERAGE			BY REGRESSION		
	Total	Enter	Exit	Total	Enter	Exit
DAILY	7	4	4	-43	-21	-21
AM PEAK OF GENERATOR	1	0	0	1	0	1
PM PEAK OF GENERATOR	1	0	0	1	1	0
AM PEAK (ADJACENT ST)	0	0	0	-5	-1	-4
PM PEAK (ADJACENT ST)	1	0	0	-3	-2	-1

SATURDAY

RATES:	# Studies	R^2	Total Trip Ends			Independent Variable Range			Directional Distribution	
			Average	Low	High	Average	Low	High	Enter	Exit
DAILY	5	0.91	8.76	6.75	11.40	100	48	147	50%	50%
PEAK OF GENERATOR	7	0.91	0.57	0.46	0.93	182	48	462	48%	52%

TRIPS:	BY AVERAGE			BY REGRESSION		
	Total	Enter	Exit	Total	Enter	Exit
DAILY	9	4	4	-431	-216	-216
PEAK OF GENERATOR	1	0	0	2	1	1

SUNDAY

RATES:	# Studies	R^2	Total Trip Ends			Independent Variable Range			Directional Distribution	
			Average	Low	High	Average	Low	High	Enter	Exit
DAILY	5	0.93	7.17	5.52	8.41	100	48	147	50%	50%
PEAK OF GENERATOR	5	0.83	0.79	0.54	1.07	100	48	147	N/A	N/A

TRIPS:	BY AVERAGE			BY REGRESSION		
	Total	Enter	Exit	Total	Enter	Exit
DAILY	7	4	4	-252	-126	-126
PEAK OF GENERATOR	1	N/A	N/A	12	N/A	N/A

ITE TRIP GENERATION WORKSHEET
(11th Edition, Updated 2021)

LANDUSE: Strip Retail Plaza (<40k)
LANDUSE CODE: 822
SETTING/LOCATION: General Urban/Suburban
JOB NAME:
JOB NUMBER:

Independent Variable ---

FLOOR AREA (KSF): 2.590

WEEKDAY

RATES:	# Studies	R^2	Total Trip Ends			Independent Variable Range			Directional Distribution	
			Average	Low	High	Average	Low	High	Enter	Exit
DAILY	4	0.96	54.45	47.86	65.07	19	9	35	50%	50%
AM PEAK OF GENERATOR	6	--	7.60	2.40	21.30	16	8	24	50%	50%
PM PEAK OF GENERATOR	5	--	13.24	6.27	24.11	16	8	24	54%	46%
AM PEAK (ADJACENT ST)	5	0.57	2.36	1.60	3.73	18	9	35	60%	40%
PM PEAK (ADJACENT ST)	25	0.56	6.59	2.81	15.20	21	3	39	50%	50%

TRIPS:	BY AVERAGE			BY REGRESSION		
	Total	Enter	Exit	Total	Enter	Exit
DAILY	142	71	71	340	170	170
AM PEAK OF GENERATOR	20	10	10	--	--	--
PM PEAK OF GENERATOR	34	19	16	--	--	--
AM PEAK (ADJACENT ST)	6	4	2	12	7	5
PM PEAK (ADJACENT ST)	18	9	9	30	15	15

SATURDAY

RATES:	# Studies	R^2	Total Trip Ends			Independent Variable Range			Directional Distribution	
			Average	Low	High	Average	Low	High	Enter	Exit
DAILY	--	--	--	--	--	--	--	--	--	--
PEAK OF GENERATOR	12	--	6.57	1.88	14.23	27	8	39	51%	49%

TRIPS:	BY AVERAGE			BY REGRESSION		
	Total	Enter	Exit	Total	Enter	Exit
DAILY	--	--	--	--	--	--
PEAK OF GENERATOR	17	9	8	--	--	--

SUNDAY

RATES:	# Studies	R^2	Total Trip Ends			Independent Variable Range			Directional Distribution	
			Average	Low	High	Average	Low	High	Enter	Exit
DAILY	--	--	--	--	--	--	--	--	--	--
PEAK OF GENERATOR	--	--	--	--	--	--	--	--	--	--

TRIPS:	BY AVERAGE			BY REGRESSION		
	Total	Enter	Exit	Total	Enter	Exit
DAILY	--	--	--	--	--	--
PEAK OF GENERATOR	--	--	--	--	--	--

ITE TRIP GENERATION WORKSHEET
(11th Edition, Updated 2021)

LANDUSE: Fast Casual Restaurant
LANDUSE CODE: 930
SETTING/LOCATION: General Urban/Suburban
JOB NAME:
JOB NUMBER:

Independent Variable --- 1,000 Sq. Feet Gross Floor Area

FLOOR AREA (KSF): 3.3

WEEKDAY

RATES:	# Studies	R^2	Total Trip Ends			Independent Variable Range			Directional Distribution	
			Average	Low	High	Average	Low	High	Enter	Exit
DAILY	1	--	97.14	97.14	97.14	1.40	1.40	1.40	50%	50%
AM PEAK OF GENERATOR	1	--	5.71	5.71	5.71	1.40	1.40	1.40	63%	37%
PM PEAK OF GENERATOR	1	--	18.57	18.57	18.57	1.40	1.40	1.40	62%	38%
AM PEAK (ADJACENT ST)	1	--	1.43	1.43	1.43	1.40	1.40	1.40	50%	50%
PM PEAK (ADJACENT ST)	15	0.65	12.55	5.94	27.40	3.00	1.40	5.02	55%	45%

TRIPS:

	BY AVERAGE			BY REGRESSION		
	Total	Enter	Exit	Total	Enter	Exit
DAILY	321	160	160	--	--	--
AM PEAK OF GENERATOR	19	12	7	--	--	--
PM PEAK OF GENERATOR	61	38	23	--	--	--
AM PEAK (ADJACENT ST)	5	2.360	2.36	--	--	--
PM PEAK (ADJACENT ST)	41	23	19	43	24	19

SATURDAY

RATES:	# Studies	R^2	Total Trip Ends			Independent Variable Range			Directional Distribution	
			Average	Low	High	Average	Low	High	Enter	Exit
DAILY	--	--	--	--	--	--	--	--	--	--
PEAK OF GENERATOR	2	--	32.64	32.26	33.00	5.00	4.65	5.00	55%	45%

TRIPS:

	BY AVERAGE			BY REGRESSION		
	Total	Enter	Exit	Total	Enter	Exit
DAILY	--	--	--	--	--	--
PEAK OF GENERATOR	108	59	48	--	--	--

SUNDAY

RATES:	# Studies	R^2	Total Trip Ends			Independent Variable Range			Directional Distribution	
			Average	Low	High	Average	Low	High	Enter	Exit
DAILY	--	--	--	--	--	--	--	--	--	--
PEAK OF GENERATOR	--	--	--	--	--	--	--	--	--	--

TRIPS:

	BY AVERAGE			BY REGRESSION		
	Total	Enter	Exit	Total	Enter	Exit
DAILY	--	--	--	--	--	--
PEAK OF GENERATOR	--	--	--	--	--	--





Nearby Permanent Count Station Data

Location ID: 7143

Harwich Road south of Route 137

Tuesday (8/22/2023)	Wednesday (8/23/2023)	Weekday Average	Saturday (8/26/2023)
3506	3631	3568.5	3244

Location ID: 7142

Route 137 (Long Pond Road) west of Route 124

Tuesday (8/22/2023)	Wednesday (8/23/2023)	Weekday Average	Saturday (8/26/2023)
3970	3872	3921	3562

Location Info		Count Data Info	
Location ID	7142	Start Date	8/26/2023
Type	I-SECTION	End Date	8/27/2023
Functional Class	4	Start Time	12:00 PM
Located On	LONG POND ROAD	End Time	12:00 PM
WEST OF	Rt 124	Direction	
Direction	2-WAY	Notes	
Community	Brewster	Count Source	
MPO_ID		File Name	
HPMS ID	41000203560	Weather	
Agency	Massachusetts Highway Department	Study	
		Owner	tdcms
		QC Status	Accepted

Interval: 15 mins					
Time	15 Min				Hourly Count
	1st	2nd	3rd	4th	
00:00 - 01:00	3	4	2	5	14
01:00 - 02:00	3	2	1	1	7
02:00 - 03:00	1	3	3	2	9
03:00 - 04:00	0	0	2	1	3
04:00 - 05:00	0	2	0	4	6
05:00 - 06:00	2	2	3	5	12
06:00 - 07:00	14	7	8	27	56
07:00 - 08:00	18	18	26	25	87
08:00 - 09:00	53	65	43	35	196
09:00 - 10:00	40	58	74	93	265
10:00 - 11:00	66	43	70	63	242
11:00 - 12:00	75	70	84	98	327
12:00 - 13:00	83	90	84	73	330
13:00 - 14:00	89	95	87	79	350
14:00 - 15:00	74	104	85	80	343
15:00 - 16:00	78	76	86	73	313
16:00 - 17:00	76	65	53	71	265
17:00 - 18:00	68	60	46	50	224
18:00 - 19:00	52	47	40	24	163
19:00 - 20:00	39	36	36	25	136
20:00 - 21:00	17	21	22	23	83
21:00 - 22:00	17	13	8	13	51
22:00 - 23:00	16	17	13	10	56
23:00 - 24:00	6	9	5	4	24
TOTAL					3562

Location Info		Count Data Info	
Location ID	7142	Start Date	8/23/2023
Type	I-SECTION	End Date	8/24/2023
Functional Class	4	Start Time	12:00 PM
Located On	LONG POND ROAD	End Time	12:00 PM
WEST OF	Rt 124	Direction	
Direction	2-WAY	Notes	
Community	Brewster	Count Source	
MPO_ID		File Name	
HPMS ID	41000203560	Weather	
Agency	Massachusetts Highway Department	Study	
		Owner	tdcms
		QC Status	Accepted

Interval: 15 mins					
Time	15 Min				Hourly Count
	1st	2nd	3rd	4th	
00:00 - 01:00	1	3	4	2	10
01:00 - 02:00	0	1	0	0	1
02:00 - 03:00	0	1	1	2	4
03:00 - 04:00	2	0	1	1	4
04:00 - 05:00	0	0	1	5	6
05:00 - 06:00	7	5	5	13	30
06:00 - 07:00	6	10	17	25	58
07:00 - 08:00	26	51	52	57	186
08:00 - 09:00	52	61	78	75	266
09:00 - 10:00	65	65	66	67	263
10:00 - 11:00	67	83	91	84	325
11:00 - 12:00	88	75	97	67	327
12:00 - 13:00	79	79	69	78	305
13:00 - 14:00	71	65	70	58	264
14:00 - 15:00	69	76	83	78	306
15:00 - 16:00	73	85	72	87	317
16:00 - 17:00	87	101	71	86	345
17:00 - 18:00	79	66	78	47	270
18:00 - 19:00	72	56	52	43	223
19:00 - 20:00	34	38	45	27	144
20:00 - 21:00	31	23	25	19	98
21:00 - 22:00	26	14	10	23	73
22:00 - 23:00	21	10	1	5	37
23:00 - 24:00	5	2	2	1	10
TOTAL					3872

Location Info		Count Data Info	
Location ID	7142	Start Date	8/22/2023
Type	I-SECTION	End Date	8/23/2023
Functional Class	4	Start Time	12:00 PM
Located On	LONG POND ROAD	End Time	12:00 PM
WEST OF	Rt 124	Direction	
Direction	2-WAY	Notes	
Community	Brewster	Count Source	
MPO_ID		File Name	
HPMS ID	41000203560	Weather	
Agency	Massachusetts Highway Department	Study	
		Owner	tdcms
		QC Status	Accepted

Interval: 15 mins					
Time	15 Min				Hourly Count
	1st	2nd	3rd	4th	
00:00 - 01:00	2	0	1	4	7
01:00 - 02:00	1	2	0	1	4
02:00 - 03:00	0	1	1	0	2
03:00 - 04:00	0	3	0	3	6
04:00 - 05:00	1	0	2	3	6
05:00 - 06:00	10	5	6	12	33
06:00 - 07:00	13	12	22	19	66
07:00 - 08:00	26	46	71	55	198
08:00 - 09:00	59	58	63	83	263
09:00 - 10:00	69	75	84	80	308
10:00 - 11:00	64	61	75	88	288
11:00 - 12:00	76	90	85	75	326
12:00 - 13:00	88	71	95	79	333
13:00 - 14:00	78	74	70	67	289
14:00 - 15:00	78	83	93	80	334
15:00 - 16:00	63	86	81	87	317
16:00 - 17:00	80	74	65	72	291
17:00 - 18:00	82	80	93	65	320
18:00 - 19:00	48	66	57	43	214
19:00 - 20:00	23	41	30	28	122
20:00 - 21:00	41	25	28	26	120
21:00 - 22:00	19	22	14	13	68
22:00 - 23:00	15	13	7	6	41
23:00 - 24:00	6	3	0	5	14
TOTAL					3970

Location Info		Count Data Info	
Location ID	7143	Start Date	8/22/2023
Type	I-SECTION	End Date	8/23/2023
Functional Class	3	Start Time	12:00 PM
Located On	HARWICH ROAD	End Time	12:00 PM
SOUTH OF	Rt 137	Direction	
Direction	2-WAY	Notes	
Community	Brewster	Count Source	
MPO_ID		File Name	
HPMS ID	41000802110	Weather	
Agency	Massachusetts Highway Department	Study	
		Owner	tdcms
		QC Status	Accepted

Interval: 15 mins					
Time	15 Min				Hourly Count
	1st	2nd	3rd	4th	
00:00 - 01:00	3	1	3	5	12
01:00 - 02:00	1	0	1	2	4
02:00 - 03:00	2	3	0	0	5
03:00 - 04:00	1	3	1	1	6
04:00 - 05:00	1	0	3	7	11
05:00 - 06:00	3	9	7	7	26
06:00 - 07:00	12	11	17	27	67
07:00 - 08:00	25	28	53	51	157
08:00 - 09:00	44	47	44	61	196
09:00 - 10:00	58	65	72	58	253
10:00 - 11:00	64	70	58	75	267
11:00 - 12:00	56	72	74	73	275
12:00 - 13:00	71	65	64	53	253
13:00 - 14:00	57	68	60	62	247
14:00 - 15:00	62	76	52	66	256
15:00 - 16:00	71	75	78	57	281
16:00 - 17:00	73	69	71	70	283
17:00 - 18:00	68	89	67	64	288
18:00 - 19:00	55	49	51	49	204
19:00 - 20:00	37	36	36	44	153
20:00 - 21:00	45	29	18	24	116
21:00 - 22:00	26	17	26	17	86
22:00 - 23:00	18	11	6	9	44
23:00 - 24:00	6	7	2	1	16
TOTAL					3506

Location Info		Count Data Info	
Location ID	7143	Start Date	8/23/2023
Type	I-SECTION	End Date	8/24/2023
Functional Class	3	Start Time	12:00 PM
Located On	HARWICH ROAD	End Time	12:00 PM
SOUTH OF	Rt 137	Direction	
Direction	2-WAY	Notes	
Community	Brewster	Count Source	
MPO_ID		File Name	
HPMS ID	41000802110	Weather	
Agency	Massachusetts Highway Department	Study	
		Owner	tdcms
		QC Status	Accepted

Interval: 15 mins					
Time	15 Min				Hourly Count
	1st	2nd	3rd	4th	
00:00 - 01:00	1	3	4	2	10
01:00 - 02:00	2	2	0	2	6
02:00 - 03:00	2	2	0	1	5
03:00 - 04:00	1	0	0	0	1
04:00 - 05:00	1	0	0	6	7
05:00 - 06:00	5	7	7	6	25
06:00 - 07:00	18	17	20	26	81
07:00 - 08:00	25	40	44	44	153
08:00 - 09:00	58	47	55	64	224
09:00 - 10:00	60	49	67	63	239
10:00 - 11:00	73	81	78	67	299
11:00 - 12:00	63	62	70	53	248
12:00 - 13:00	68	73	65	68	274
13:00 - 14:00	59	66	66	63	254
14:00 - 15:00	63	79	74	58	274
15:00 - 16:00	74	78	68	68	288
16:00 - 17:00	71	80	75	81	307
17:00 - 18:00	79	59	52	53	243
18:00 - 19:00	61	52	63	55	231
19:00 - 20:00	48	45	49	42	184
20:00 - 21:00	40	33	34	28	135
21:00 - 22:00	26	19	21	15	81
22:00 - 23:00	21	13	4	7	45
23:00 - 24:00	6	4	4	3	17
TOTAL					3631

Location Info		Count Data Info	
Location ID	7143	Start Date	8/26/2023
Type	I-SECTION	End Date	8/27/2023
Functional Class	3	Start Time	12:00 PM
Located On	HARWICH ROAD	End Time	12:00 PM
SOUTH OF	Rt 137	Direction	
Direction	2-WAY	Notes	
Community	Brewster	Count Source	
MPO_ID		File Name	
HPMS ID	41000802110	Weather	
Agency	Massachusetts Highway Department	Study	
		Owner	tdcms
		QC Status	Accepted

Interval: 15 mins					
Time	15 Min				Hourly Count
	1st	2nd	3rd	4th	
00:00 - 01:00	7	6	6	6	25
01:00 - 02:00	3	1	4	5	13
02:00 - 03:00	1	1	5	2	9
03:00 - 04:00	3	1	1	2	7
04:00 - 05:00	0	0	0	2	2
05:00 - 06:00	0	2	3	2	7
06:00 - 07:00	5	6	9	14	34
07:00 - 08:00	14	13	15	20	62
08:00 - 09:00	12	47	46	47	152
09:00 - 10:00	40	33	68	80	221
10:00 - 11:00	59	42	46	50	197
11:00 - 12:00	64	67	56	68	255
12:00 - 13:00	59	74	59	73	265
13:00 - 14:00	64	87	68	69	288
14:00 - 15:00	65	62	65	63	255
15:00 - 16:00	67	80	77	73	297
16:00 - 17:00	77	58	61	67	263
17:00 - 18:00	64	64	46	49	223
18:00 - 19:00	43	47	63	51	204
19:00 - 20:00	47	47	42	30	166
20:00 - 21:00	26	22	36	26	110
21:00 - 22:00	37	25	30	11	103
22:00 - 23:00	16	22	10	12	60
23:00 - 24:00	12	5	3	6	26
TOTAL					3244



Stopping Sight Distance and Intersection Sight Distance Calculator [v0.97] **Based on 'A Policy on Geometric Design of Highways and Streets', AASHTO, 2004**

Complete three sections - Sections I, II, and III - on the 'Summary' tab

Read Section IV for guidance

Enter data into cells shaded in **light green only**

Review/adjust *all* drop-down values

Ideally: Effort should be made to meet or exceed the desirable ISD measurement.

Minimally: Every intersection must meet the required SSD measurement, which in turn will equal the minimum ISD requirement.

Values in **cyan cells** are calculated, based on the guidelines in the 2004 AASHTO 'Greenbook'

You may want to adjust the zoom percentage for a comfortable viewing area

Stopping Sight Distance and Intersection Sight Distance Calculator [v0.97]

Based on 'A Policy on Geometric Design of Highways and Streets', AASHTO, 2004

Section I	Section III																																							
Project Information	ISD and SSD Calculations (rounded up to the next highest 5 feet) [sources: SSD - AASHTO, pp.110-117; ISD - AASHTO, pp. 650 - 664]																																							
<table style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Project Number: 15934.00</td> <td style="width: 30%;">Analyst: VHB</td> </tr> <tr> <td>City/Town, State: Brewster, MA</td> <td>Client: Town of Brewster</td> </tr> <tr> <td>Location: 162 Underpass Road</td> <td></td> </tr> </table>	Project Number: 15934.00	Analyst: VHB	City/Town, State: Brewster, MA	Client: Town of Brewster	Location: 162 Underpass Road		<p>Cases are described in detail on subsequent pages. In summary...</p> <p>B1: left turn from minor road, from stop control B2: right turn from minor road, from stop control B3: crossing maneuver from minor road, from stop control, assuming left- and right turns are not permitted [otherwise, case B1 or B2 would supercede]</p>																																	
Project Number: 15934.00	Analyst: VHB																																							
City/Town, State: Brewster, MA	Client: Town of Brewster																																							
Location: 162 Underpass Road																																								
Street Names and Directions																																								
<table style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 60%;">Major Street name: Underpass Road</td> <td style="width: 5%;">NB/SB</td> <td style="width: 5%;">▼</td> </tr> <tr> <td>Minor Street name: Site Driveway</td> <td>EB/WB</td> <td>▼</td> </tr> <tr> <td>Minor Street intersects from the: west</td> <td></td> <td>▼</td> </tr> <tr> <td>The minor street predominantly serves...</td> <td>Passenger</td> <td>▼</td> </tr> <tr> <td>Sight distance location intersection is...</td> <td>Eviction</td> <td>▼</td> </tr> <tr> <td>Total number of lanes on Major Street is...</td> <td>2</td> <td>▼</td> </tr> </table>	Major Street name: Underpass Road	NB/SB	▼	Minor Street name: Site Driveway	EB/WB	▼	Minor Street intersects from the: west		▼	The minor street predominantly serves...	Passenger	▼	Sight distance location intersection is...	Eviction	▼	Total number of lanes on Major Street is...	2	▼																						
Major Street name: Underpass Road	NB/SB	▼																																						
Minor Street name: Site Driveway	EB/WB	▼																																						
Minor Street intersects from the: west		▼																																						
The minor street predominantly serves...	Passenger	▼																																						
Sight distance location intersection is...	Eviction	▼																																						
Total number of lanes on Major Street is...	2	▼																																						
Grade Information [enter down slope as a negative number]																																								
<table style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Major Street Approach Grade:</td> <td style="width: 20%;">0.50%</td> <td style="width: 10%;">NB</td> </tr> <tr> <td></td> <td>4.70%</td> <td>SB</td> </tr> <tr> <td>Minor Street Approach Grade:</td> <td>0.00%</td> <td>NB</td> </tr> <tr> <td></td> <td>0.00%</td> <td>SB</td> </tr> </table>	Major Street Approach Grade:	0.50%	NB		4.70%	SB	Minor Street Approach Grade:	0.00%	NB		0.00%	SB																												
Major Street Approach Grade:	0.50%	NB																																						
	4.70%	SB																																						
Minor Street Approach Grade:	0.00%	NB																																						
	0.00%	SB																																						
Major Street Speed Information																																								
<table style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 20%;"></td> <td style="width: 10%; text-align: center;"><i>Posted</i></td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> <td style="width: 10%; text-align: center;"><i>Observed *</i></td> </tr> <tr> <td></td> <td style="text-align: center;">35</td> <td></td> <td style="text-align: center;">NB</td> <td style="text-align: center;">42</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">35</td> <td></td> <td style="text-align: center;">SB</td> <td style="text-align: center;">41</td> <td></td> </tr> </table> <p style="text-align: right; font-size: small;">* note: off-peak 85th percentile speeds</p>		<i>Posted</i>				<i>Observed *</i>		35		NB	42			35		SB	41																							
	<i>Posted</i>				<i>Observed *</i>																																			
	35		NB	42																																				
	35		SB	41																																				
Section II	Section IV																																							
ISD and SSD Observations	AASHTO Guidance																																							
<p>Instructions on how to observe and measure ISD and SSD are included on subsequent pages.</p> <p>ISD - Intersection sight distance is the distance that is based on the time required for perception, reaction and completion of the desired critical exiting maneuver [typically, a left turn] once the driver on a minor street approach [or a site drive] decides to execute the maneuver. Calculation for the critical ISD includes the time to [1] turn left, and to clear the near half of the intersection without conflicting with the vehicles approaching from the left; and [2] upon turning left, to accelerate to the operating speed on the roadway without causing approaching vehicles on the main road to unduly reduce their speed. In this context, ISD can be considered as a <i>desirable</i> visibility criterion for the safe operation of an unsignalized intersection.</p> <p>SSD - Stopping sight distance is the distance required for a vehicle approaching an intersection from either direction to perceive, react, and come to a complete stop before colliding with the exiting vehicle from a driveway. In this respect, SSD can be considered as the <i>minimum</i> visibility criterion for the safe operation of an unsignalized intersection.</p>	<p>Refer to AASHTO for specific guidance on SSD and ISD if presented with an unusual/atypical case.</p> <p>Adequate ISD is not needed at signalized intersections, assuming traffic signal heads are visible on all approaches.</p> <p>Any object that would obstruct the driver's view should be removed or lowered, if practical. Such objects include buildings, parked cars, highway structures, hedges/vegetation/trees/bushes/unmowed lawn, walls, fences, and terrain.</p> <p>For ISD, an object should be considered an obstruction if it obstructs the vision of a driver whose eye height is 3.5 feet above the roadway surface and the object to be seen is 3.5 feet above the surface of the intersecting road.</p> <p>Where horizontal sight restrictions occur on downgrades, particularly at the ends of long downgrades, it is desirable to provide SSD that exceeds those values indicated above (refer to page 114 of AASHTO).</p>																																							
Limiting Factors:																																								
<table style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">Observed ISD:</td> <td style="width: 10%;">>500</td> <td style="width: 10%;">looking left [north]</td> <td style="width: 10%;">Vertical Curvature</td> </tr> <tr> <td>(rounded to nearest 5 feet)</td> <td>>285</td> <td>looking right [south]</td> <td>N/A</td> </tr> <tr> <td>Observed SSD:</td> <td>330</td> <td>traveling NB</td> <td>Vertical Curvature</td> </tr> <tr> <td>(rounded to nearest 5 feet)</td> <td>>500</td> <td>traveling SB</td> <td>N/A</td> </tr> </table>	Observed ISD:	>500	looking left [north]	Vertical Curvature	(rounded to nearest 5 feet)	>285	looking right [south]	N/A	Observed SSD:	330	traveling NB	Vertical Curvature	(rounded to nearest 5 feet)	>500	traveling SB	N/A																								
Observed ISD:	>500	looking left [north]	Vertical Curvature																																					
(rounded to nearest 5 feet)	>285	looking right [south]	N/A																																					
Observed SSD:	330	traveling NB	Vertical Curvature																																					
(rounded to nearest 5 feet)	>500	traveling SB	N/A																																					
<table style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Desirable Calculated...</td> <td style="width: 30%;"></td> <td style="width: 20%;">Condition Met?</td> </tr> <tr> <td>... ISD, case B1:</td> <td style="text-align: center;">465</td> <td style="text-align: center;">Yes</td> </tr> <tr> <td>... ISD, case B2:</td> <td style="text-align: center;">395</td> <td style="text-align: center;">Yes</td> </tr> <tr> <td>... ISD, case B3:</td> <td style="text-align: center;">405</td> <td style="text-align: center;">Yes</td> </tr> </table> <p style="text-align: center; font-size: small;">[note: if number of lanes crossed exceeds 6, or if grades are steep, consult the manual]</p> <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Minimum Calculated ...</td> <td style="width: 30%;"></td> <td style="width: 20%;">Condition Met?</td> </tr> <tr> <td>... ISD, case B1:</td> <td style="text-align: center;">325</td> <td style="text-align: center;">Yes</td> </tr> <tr> <td>... ISD, case B2:</td> <td style="text-align: center;">295</td> <td style="text-align: center;">Yes</td> </tr> <tr> <td>... ISD, case B3:</td> <td style="text-align: center;">325</td> <td style="text-align: center;">Yes</td> </tr> </table> <p style="text-align: center; font-size: small;">[note: minimum ISD is equal to required SSD]</p> <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Calculated ...</td> <td style="width: 30%;"></td> <td style="width: 20%;">Condition Met?</td> </tr> <tr> <td>... SSD:</td> <td style="text-align: center;">325</td> <td style="text-align: center;">Yes</td> </tr> <tr> <td></td> <td style="text-align: center;">295</td> <td style="text-align: center;">Yes</td> </tr> <tr> <td></td> <td style="text-align: center;">traveling NB</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">traveling SB</td> <td></td> </tr> </table>		Desirable Calculated...		Condition Met?	... ISD, case B1:	465	Yes	... ISD, case B2:	395	Yes	... ISD, case B3:	405	Yes	Minimum Calculated ...		Condition Met?	... ISD, case B1:	325	Yes	... ISD, case B2:	295	Yes	... ISD, case B3:	325	Yes	Calculated ...		Condition Met?	... SSD:	325	Yes		295	Yes		traveling NB			traveling SB	
Desirable Calculated...		Condition Met?																																						
... ISD, case B1:	465	Yes																																						
... ISD, case B2:	395	Yes																																						
... ISD, case B3:	405	Yes																																						
Minimum Calculated ...		Condition Met?																																						
... ISD, case B1:	325	Yes																																						
... ISD, case B2:	295	Yes																																						
... ISD, case B3:	325	Yes																																						
Calculated ...		Condition Met?																																						
... SSD:	325	Yes																																						
	295	Yes																																						
	traveling NB																																							
	traveling SB																																							

Stopping Sight Distance and Intersection Sight Distance Calculator [v0.97] Based on 'A Policy on Geometric Design of Highways and Streets', AASHTO, 2004

ISD - Intersection sight distance is the distance that is based on the time required for perception, reaction and completion of the desired critical exiting maneuver [typically, a left turn] once the driver on a minor street approach [or a side drive] decides to execute the maneuver. Calculation for the critical ISD includes the time to [1] turn left, and to clear the near half of the intersection without conflicting with the vehicles approaching from the left; and [2] upon turning left, to accelerate to the operating speed on the roadway without causing approaching vehicles on the main road to unduly reduce their speed. In this context, ISD can be considered as a desirable visibility criterion for the safe operation of an unsignalized intersection.

SSD - Stopping sight distance is the distance required for a vehicle approaching an intersection from either direction to perceive, react, and come to a complete stop before colliding with the exiting vehicle from a driveway. In this respect, SSD can be considered as the minimum visibility criterion for the safe operation of an unsignalized intersection.

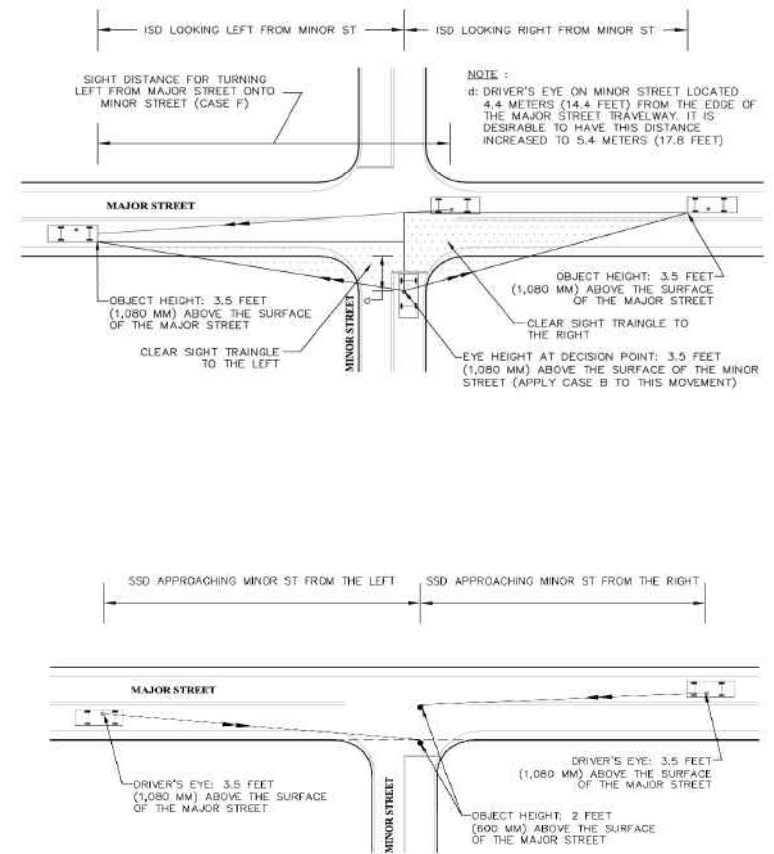
B1
(left turn from minor road)
Required ISD is the distance to a vehicle on the major street (either to the left or the right), required for a stopped vehicle on the side street to safely turn left, accelerate, and complete a left turn without unduly interfering with the major street traffic operations. Sight distances shown for case B1 should be provided in both directions for all minor street approaches with no turn restrictions.

B2
(right turn from the minor road)
Required ISD is the distance to a vehicle on the major street (to the left), required for a stopped vehicle on the side street to safely turn right, accelerate, and complete a right turn without unduly interfering with the major street traffic operations. Case B2 is sufficient only if left turns are restricted out of the minor street approach. Use Case B1 if left turns are allowed from the minor street approach.

B3
(crossing maneuver from the minor road)
Required ISD is the distance to a vehicle on the major street, required for a stopped vehicle on the side street to safely cross the major street without unduly interfering with the major street traffic operations. Case B3 is sufficient only if left turns are restricted out of the minor street approach. Use Case B1 if left turns are allowed from the minor street approach.

F
(left turns from the major road)
Required ISD is the distance to a vehicle on the major street required for an opposing, left-turning vehicle on the major street to safely complete a left turn without unduly interfering with the opposing major street traffic operations

Note: 'unduly': When intersection sight distances in conformance with B1, B2, and B3 are available, most drivers on the major street should not need to reduce their speed to less than 70% of their initial speed





Town of Brewster

2198 Main Street
Brewster, MA 02631-1898
Phone: (508) 896-3701
Fax: (508) 896-8089

Office of:
Planning Board
Planning Dept.

REPORT

TO: 162 Underpass, LLC
The Free Sea Turtle, LLC
FROM: Jon Idman, Town Planner
RE: Staff Review ##s 23-5 and 23-6, Second Round
Brewster Code Chapter 83, Section 4(D)
162 Underpass Road, Lot 1 (Map 77, Parcel 9)
0 Underpass Road, Lot 2 (Map 77, Parcel 10) and Lot 3 (Map 77, Parcel 60)
Lots 1, 2 & 3 Plan Book 698 Page 25
DATE: August 11, 2023

Proposed multi-building/ multi-unit commercial development with accessory commercial dwelling units on separate development sites along with supporting improvements (Lot 1 and Lot 2). Shared development infrastructure (parking, stormwater, etc.) on Lot 3.

CH commercial district.

Preliminary site plans for staff review 2 prepared by J.M. O'Reilly, dated 7/13/23 for Lot 1 and dated 7/14/23 for Lots 2 and 3, proposed to be combined.

As separately owned/ controlled developments on separate lots, the proposed development as depicted would not require mandatory DRI referral/ review by the Cape Cod Commission.

The Staff Review meeting was held 8/4/23 at Town Hall, Room B with the following representatives of the Applicant:

- Paul Wallace
- John O'Reilly, PE, PLS

Town Staff in attendance

- Jim Gallagher- Deputy Assessor
- Bill Grafton – Conservation Administrator
- Jon Idman – Town Planner
- Amy von Hone – Health Director
- Chris Miller – Natural Resources Director
- Robert Moran- Fire Chief
- Alex Provos- Asst. Water Superintendent
- Davis Walters – Building Commissioner
- Griffin Ryder – DPW Director
- Donna Kalinick - Asst. Town Manager

Comments

Conservation

1. Under the current Order of Conditions and Amended OOC/SE9-1920 a required mitigation is located in a well vegetated buffer zone about 20 feet from the wetlands and potential vernal

- pool. Chris Miller and I reviewed this in the field with Paul Wallace. It appears that this mitigation might be better located within the disturbed 0-50 foot setback.
2. Some of the conservation objectives may dovetail with the stormwater objectives by adding additional mitigation plantings where the plants might reduce stormwater adverse effects.
 3. Coordinating the relocation of the current and new mitigation plantings on the site plans to be submitted to Conservation for the new NOI and to Planning for the new SWMP Permit would ensure the success of the plantings, reduce any adverse effects and help the project meet the stormwater requirements.
 4. Conservation mitigation might also include some sort of berm or elevated hill extending from the existing storage corrals to prevent untreated stormwater from sheeting into the wetlands and potential vernal pool. Conservation markers might be a helpful reminder to the business owners about the presence of the wetlands and potential vernal pool.
 5. The Order of Conditions/SE9-1920 and SE9-1920 Amended should be closed with a Certificate of Compliance after the Conservation Commission has approved and issued the new Order of Conditions and proof of recording has been provided to the Conservation Administrator.
 6. The SWMC2023-01 (stormwater permit through Conservation) should be closed out with a Certificate of Compliance after the Planning Board has approved and issued the new SWMP Permit.
 7. Below are common standard Special Conditions within the Order of Conditions that are included and should be considered by the applicants for project design purposes.

A11. Any debris, fill or excavated material on site shall be stockpiled away from designated wetlands. Unsuitable or excess excavated material shall be properly stabilized or removed from the site.

A12. All structures, facilities and equipment, as part of this project, shall be continually operated and maintained so as to comply with this permit. This provision applies specifically to all equipment used on this project. Any leakage of oil, hydraulic fluid, fuel, or any other pollutant shall be cleaned up immediately, and the defective equipment responsible for said leakage shall be immediately repaired or taken off site.

A13. Mulch shall not be a substitute for groundcover or shrubs in jurisdictional areas.

A14. Any fertilizers used within 100 feet of any wetland resources shall be listed by or comprised of organic ingredients consistent with the United States Department of Agriculture National Organic Program (NOP). Organic fertilizers shall be used in an appropriate manner for the conditions of the subject property, and applied in accordance to the manufacturer's specifications.

A15. Pesticides, herbicides and fungicides shall be prohibited within 100 feet of any wetlands.

A16. Installation of in-ground irrigation systems shall be prohibited within 100 feet of any wetland resource areas. Any components of the existing in-ground irrigation system within 100 feet of the wetland resource areas shall be removed. Temporary above ground irrigation systems may be used to establish mitigation plantings.

A17. Spotlights and floodlights shall not be installed within the 100 foot buffer zone of a resource area; nor shall any spotlight or floodlight penetrate a resource area or 100 foot buffer zone. Any existing spotlights or flood lights within 100 feet of the wetland resource areas shall be removed. Any existing spotlights or flood lights which may illuminate the 100 foot buffer shall be directed downward and shielded so the light does not illuminate wildlife habitat in jurisdictional areas.

Planning/Zoning

1. It makes sense to do a single stormwater permit (major) that applies to both properties because it is a shared system per plan. I think it makes sense for the PB to review the SWM permit. The SWM permit can be coordinated with PB site plan review and special permit review processes.
2. I'd suggest there's an opportunity for LID in the SWM system design by introducing a raingarden or swale into the parking island, which would then convey to the subsurface leaching facility. The two proposed 'stormceptor' subsurface treatment units could probably be eliminated in favor of natural WQ treatment from a raingarden or the like.
3. Submission of a copy of the drainage/ access/ parking cross-easement will be a condition of the PI Bd permit.
4. If desired by applicants, they could request a reduction in spaces because of shared parking. Cite shared parking provision of zoning bylaw in zoning application/s.
5. Please add a plan note that Lot 4 is not part of the proposal.
6. Preferably conservation commission review would occur prior to Planning Board review.
7. An 81X plan will be done/ recorded to merge lots 2&3. Ideally this is done before planning board review.
8. The Master Sign approval goes through the Bldg Comm unless an increase in size is requested (which requires a PI Bd special permit).
9. Bike racks should be added (maybe on the patio?)
10. The zoning application/s should provide lighting fixture 'cut' sheets.
11. The zoning application/s should address the zoning standards for parking spaces 20 spaces or greater (wheelstops, etc).
12. The transportation study should address why the proposed driveway location is in the best possible location.
13. If no loading spaces are proposed, the reasoning should be addressed in the zoning applications.
14. A trip generation study should be conducted based on the full development of both properties.
15. Landscape should focus on the Underpass Road frontage. Consider using natives. I'm not sure there's a reason for landscaping/ screening the southern property (or the north of the site unless wetlands mitigation planting). Landscape screening should be considered for the town (school) property to the west.
16. If a fence between the properties is proposed to separate the contractor from commercial/ restaurant uses, it should be placed where it makes sense for this function rather than the property line necessarily.
17. Wallace: A special permit is needed for restaurant use (please specify full or limited service, or both. Limited service has a higher parking and more frequent trip demand generally). Add a loading area for the restaurant? If outside tables or other amenities are proposed (which would be a benefit IMO), the plan should show them. I imagine that the PB will be interested in building design, at least and primarily for the restaurant building. Bollards might be proposed to prevent crashing into the bays. Ice cream is considered a limited service restaurant use.
18. Whitcomb: A special permit is needed for construction/ trades building use. **Note: only four businesses/ buildings are allowed for this use as defined under the zoning bylaw.** Also please list all related proposed zoning uses for completeness of application even if allowed by right, e.g. parking of two or more commercial vehicles, material/ equipment storage. **Note: in the CH district, material/ equipment storage must be related and accessory to the businesses on site. Outside storage or wholesale material sales as a stand- alone/ principal use are not permitted.**
19. The landscaping/ stormwater plans for the proposed developments should consider management of existing or potential import of invasive species.

20. Consider a shared septic system (which would be I/A under local health regulations because gallonage would be greater than 2000 gpd)?
21. Discuss Lot 5 (northerly wetlands lot under common ownership) with BCT? (BCT owns abutting land and has a trail to the former e-Spa property on Main Street).

Health

Wallace:

1. This parcel of land lies outside the Zone II, and the District of Critical Planning Concern (DCPC) and has access to town water. The property is located within an Environmentally Sensitive Area (ESA) per our local BoH regulation. The Property would be restricted to 110 gpd/10,000 sf of land area if there are any variances required for the proposed septic system. The total land area is 42,200 SF +/-.
2. Based on the current proposal total daily flow required is 3,470 gpd, the proposed plan shows 4,736 gpd is proposed. Since the total daily flow is greater than 2,000 gpd, local BoH regulations (Small Wastewater Treatment Facilities) requires a denitrification system to meet the 10 ppm (Nitrogen 10mg/l, Nitrate Nitrogen 19 mg/l) due to lot size. A dinitrogen system has been proposed on the current plan. Soil testing and evaluation was conducted on September 27, 2022.
3. The restaurant service will require a grease trap as part of the septic system. A grease trap is represented on the plan but is not listed in the notes.
4. The plan design lists a 74-seat restaurant and a 76- seat restaurant. The plan notes list one 76-84 seat restaurant X 35 gpd/seat = 2,660 gpd. The actual number of seats will need to be determined for final review.
5. If the bays are to be accessible by vehicles, floor drains will be required in each bay and each floor drain will need to be connected to an industrial wastewater holding tank.
6. Any proposed hazardous material storage or disposal must meet appropriate requirements.
7. Prior to construction, septic plans and a Building Waiver Application will need to be submitted to the Health Department for full department review prior to final approval.
8. Septic design to be revised to accommodate 8 Bays total.
9. Any proposed outdoor seating with waiter/waitress service for the proposed restaurant must be included in the total septic capacity. Additionally, proposed outdoor food service will require approval of an Outdoor Café license through the Board of Health.
10. Nitrogen loading calculations to be submitted with the septic design and building permit applications for review (maximum 10 ppm Total Nitrogen).
11. Full Board of Health review of the proposed I/A technology system will be required.

Whitcomb:

1. This parcel of land lies outside the Zone II, and the District of Critical Planning Concern (DCPC) and has access to town water. The property is located within an Environmentally Sensitive Area (ESA) per our local BoH regulation. The Property would be restricted to 110 gpd/10,000 sf of land area if there are any variances required for the proposed septic system. The total land area is 40,675 +/- SF, wetland area is 306 SF +/-, and upland area is 40,579 SF +/-.
2. Based on the current proposal, total daily flow required is 370 gpd, the proposed plan shows 444 gpd is proposed. Soil testing and evaluation was conducted on September 27, 2022.
3. If the bays are to be accessible by vehicles, floor drains will be required in each bay and each floor drain will need to be connected to an industrial wastewater holding tank.
4. Any proposed hazardous material storage or disposal must meet appropriate requirements.
5. Prior to construction, septic plans and a Building Waiver Application will need to be submitted to the Health Department for full department review prior to final approval.

Fire

See attached comments.

DPW

1. DPW suggests evaluating the proposed stormwater system to determine if a non-structural, vegetated treatment (potentially a rain garden or bioretention area) in lieu of the stormceptor water quality units could be incorporated into the design.
2. An additional catch basin may be required to collect the stormwater runoff generated from the gravel surface area.
3. The delineation between the gravel surface and bituminous should be clearly identified on the plans.
4. DPW recommends that a sidewalk be incorporated to connect the site to the existing sidewalk across the street. This connection would include the review and location of a new crosswalk with accessible curb ramps. This work would need to be coordinated with the DPW and would be at the expense of the developer/applicant.
5. Please double check the parking counts included on each of the plans.
6. The plans for the southern development indicate 5 commercial bays, however in the staff meeting it was clarified to be 8 bays. This should be corrected on the plans and the wastewater calculations.
7. Access to the bays on the southern development are impeded by the proposed parking as currently designed. Full access to the bays may result in the loss of parking.
8. It should be noted that the maximum vehicle size accessing the commercial bays for the northern development appears to be limited by the parking and the drive aisle in front of the bays.

Town Administration

1. Administration requests that a site visit occur with the proponents, Town staff and school staff to discuss screening/security measures where the land borders school property.
2. Administration needs to further explore the existing town easement that borders the proponent's development.
3. There was discussion about a potential crosswalk being placed near the new proposed development. This would require traffic study, coordination with Public Works and would be at the expense of the developer, not the Town.
4. Discussion about the importance of landscaping and some type of buffer between the two proposed developments took place; we expect that this will be defined during the Planning Board process.

ENC



Brewster Planning Department
 2198 Main Street
 Brewster, MA 02631-1898
 508-896-3701 x1133
 brewplan@brewster-ma.gov

**Staff Review
 Data Transmittal Sheet**

- | | |
|---|---|
| <input type="checkbox"/> James Gallagher, Assessor's Department | <input type="checkbox"/> Jill Scalise, Housing Office |
| <input type="checkbox"/> Davis Walters, Building Department/HDC | <input type="checkbox"/> Chris Miller, Natural Resources Department |
| <input type="checkbox"/> Bill Grafton, Conservation Department | <input type="checkbox"/> Jon Idman, Planning Department |
| <input type="checkbox"/> Griffin Ryder, Department of Public Works | <input type="checkbox"/> Lt. Charles Mawn, Police Dept |
| <input type="checkbox"/> Chief Robert Moran, Fire Department | <input type="checkbox"/> Peter Lombardi, Town Manager's Office |
| <input type="checkbox"/> Deputy Chief Kevin Varley, Fire Department | <input type="checkbox"/> Donna Kalinick, Town Manager's Office |
| <input type="checkbox"/> Amy von Hone, Health Department/WQRC | <input type="checkbox"/> Paul Anderson, Water Department |

Date Submitted July 20, 2023 Application Number 23-05

Date Transmitted July 24, 2023

Applicant Paul Wallace

Proposal The Applicant proposes to construct a new 90' x 60' building with five (5) commercial bays and a new 40' x 60' building for use as a restaurant.

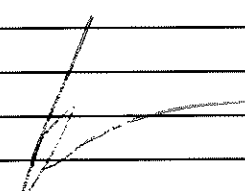
Development Location 162 Underpass Road Lot 1 (Map 77, Lot 9)

Is application material complete for your preliminary review? Yes No

If no, please indicate what additional material, documentation, or information you may wish to see prior to the meeting:

Additional Comments:

PLEASE SEE ATTACHED PD COMMENTS

Signature 

Comments may be e-mailed to Lynn St. Cyr, lstcyr@brewster-ma.gov and provided at the Staff Review meeting on Friday, August 4, 2023 at 10:00 am in Room B. Thank you.

Fire Department Comments Underpass Road Wallace Staff Review

1. Commercial bay building and restaurant shall be protected by fire detection and automatic sprinkler systems in accordance with the provisions of the State Building and Fire Code.
2. The facility shall meet all requirements contained within 527 CMR 1.00 Massachusetts Comprehensive Fire Safety Code including Chapter 18 Fire Department Access (attached) and all referenced NFPA Standards.
3. A computer-generated apparatus swept path and turn simulation analysis shall be provided to the fire department for review and approval. Apparatus length for use in swept path analysis shall be 45'9".
4. Fire department access roads including roadways, fire lanes, and parking lot lanes shall be no less than 20' in width.
5. Minimum inside turning radius of fire department access roads shall be 25'. The developer may be required to increase this minimum turning radius to accommodate fire department apparatus.
6. North side of entrance shall be reduced to allow fire apparatus right and left turn access to north side of parking area.
7. Size of parking lot islands may require reduced sizing to allow fire department access.
8. All vehicles shall be parked in designated parking spaces only. Parking for restaurant food pick-up service on interior parking lot lanes shall not be allowed.
9. Dead end fire department access roads more than 150' in length shall be provided with approved provisions for fire apparatus to turn around (west side of building).
10. All access and interior parking lot lanes shall be designated as fire lanes. All signage and road markings shall be approved by the fire department prior to installation and issuance of a certificate of occupancy.
11. Area in front of garage bays shall be designated as a fire lane. Parking shall not be allowed.

12. A graded gravel pathway no less than 25' in width shall be installed on the exterior south side of the building to allow fire department access for fire suppression operations.
13. The developer shall install two (2) fire hydrants. The location shall be approved by the fire department prior to installation.
14. The fire department shall approve the location and type of fire department connections for the automatic sprinkler system prior to installation.
15. The fire department shall approve the location of all fire and carbon monoxide detection system reporting panels required under the State Building Code prior to installation.
16. An Emergency Responder Radio Communication System shall be installed in the building per section 916.1 of the Massachusetts State Building Code.
17. A Knox box key vault shall be installed on both buildings. Location and type shall be approved by the fire department prior to installation and issuance of a certificate of occupancy.
18. Street address and building unit numbers shall be approved by the fire department and installed prior to the issuance of a certificate of occupancy.
19. Dependent on occupancy and use of contractor bays, special fire protection/detection systems meeting the State Building and Fire Code may be required.
20. Storage of any hazardous, flammable, combustible, or explosive materials in the contractor bays shall meet the requirements set forth in 527 CMR 1.00 Massachusetts Comprehensive Fire Safety Code.
21. Placement of snow shall not impede fire department access to or travel through parking lot area.

16.8.2 **Permits.** Permits, where required, shall comply with Section 1.12.

16.8.3 **Signs.** Approved signs shall be posted at the entrance, exit and exit access door, decontamination areas, and waste disposal areas for asbestos removal operations.

16.8.3.1 The signs shall state that asbestos is being removed from the area, that asbestos is a suspected carcinogen, and that proper respiratory protection is required.

16.8.3.2 Signs shall have a reflective surface, and lettering shall be a minimum of 2 in. (51 mm) high.

16.9 Floor Finishing or Refinishing. See M.G.L. c. 94, § 329 relating to the prohibition of the sale and use of certain lacquer sealers (including additives) during the course of commercial wood floor finishing operations.

16.9.1 General. Floor finishing or refinishing requirements shall apply, to persons, or other entities that engage in sanding, finishing, or refinishing wood floors, with or without compensation, in any building or structure. No person or entity shall apply or otherwise use any flammable floor finishing product during the course of any activity relating to the refinishing or finishing of the surface of a wood floor. This shall be in addition to the prohibitions of M.G.L. c. 94, § 329 relating to the sale and use of certain lacquer sealers during the course of commercial wood floor finishing operations.

16.9.2 Flammable Floor Finishing Product. Flammable floor finishing product, as used herein shall mean any clear or pigmented wood finish, formulated with nitrocellulose or synthetic resins to dry by evaporation and without chemical reaction, having a flashpoint below 100°F, and having a vapor pressure not exceeding 40 psi at 100°F, including clear lacquer sanding sealers.

16.9.3 Fire Safety Requirements. No person shall sand, strip or re-finish wood floors where such sanding, stripping or vapor would create an explosive atmosphere from dust or vapor that when dispersed could be ignited in the air without first complying with the following fire/explosion safety requirements. The requirements in (1) and (3) are not applicable if ventilation or a dust collection equipment system is used continuously to reduce vapor or dust from accumulating in concentrations that could cause ignition or explosion:

(1) Sources of Ignition. All fires, open flames or other sources of ignition, including smoking materials, spotlights, halogen lights or appliance pilot lights shall be eliminated from the area or unit.

(2) Electrical Permit Required. An electrical permit is required when connecting any floor-refinishing machine directly to the electrical panel in accordance with 527 CMR 12.00:

(3) Warning Signs. Any person or other entity sanding or stripping floors in a building containing more than one dwelling unit shall post suitable warning signs indicating the danger of dust and fire/explosion hazard and shall be conspicuously pasted on all doors and entrances to the building and/or unit. Such notice is to be printed in contrasting colors and shall have lettering at least two inches high and should state the name of the operator in charge, the date and time of the operation and the area or -unit where work is to be performed. Warning signs shall be posted at least 24 hours prior to engaging in such work.

(4) No Smoking signs, featuring the international pictograph prohibiting smoking, must be posted at all entrances to the

house or building before floor sanding or finishing begins and until 24 hours after the end of all floor sanding and finishing activities.

16.9.3.4 Waste Materials. A metal waste-can with a self closing cover shall be provided for all waste materials, including wood dust, and rags. All such materials shall be removed from the building and disposed of daily.

Chapter 17 Wildlife Urban Interface

Delete Chapter 17 in its entirety.

Chapter 18 Fire Department Access and Water Supply

18.1 **General.** Fire department access and water supplies shall comply with this chapter.

18.1.1 **Application.**

18.1.1.1 This chapter shall apply to public and privately owned fire apparatus access roads.

18.1.1.2 This chapter shall apply to public and privately owned fire hydrant systems.

18.1.1.3 The fire apparatus access road plans must include an analysis and evaluation of fire apparatus maneuvers throughout the access roads created by swept path analysis and turn simulation software.

18.1.1.4 The fire apparatus access plans shall bear the seal and signature of the responsible registered professional engineer.

18.1.1.5 Nothing in this Section shall reduce the requirements established by cities or towns under M.G.L. 40A and planning and zoning by-laws.

18.1.2 **Permits.** Permits, where required, shall comply with Section 1.12.

18.1.3 **Plans.**

18.1.3.1 **Fire Apparatus Access.** Plans for fire apparatus access roads shall be submitted to the fire department for review and approval prior to construction.

18.1.3.2 **Fire Hydrant Systems.** Plans and specifications for fire hydrant systems shall be submitted to the fire department for review and approval prior to construction.

18.2 **Fire Department Access.**

18.2.1 Fire department access and fire department access roads shall be provided and maintained in accordance with Section 18.2.

18.2.2* **Access to Structures or Areas.**

18.2.2.1 **Access Box(es).** The AHJ shall have the authority to require an access box(es) to be installed in an accessible location where access to or within a structure or area is difficult because of security. The access box(es) shall be of an approved type listed in accordance with UL 1037.

18.2.2.1.1 Approval of access roads shall be subject to the AHJ and capable of supporting the imposed loads of fire apparatus and shall be provided with an all-weather driving surface and shall be maintained as provided.

18.2.2.2 **Access to Gated Subdivisions or Developments.** The AHJ shall have the authority to require fire department access be provided to gated subdivisions or developments through the use of an approved device or system.

18.2.2.3 Access Maintenance. The owner or occupant of a structure or area, with required fire department access as specified in 18.2.2.1 or 18.2.2.2, shall notify the AHJ when the access is modified, ~~in a manner that could prevent fire department access.~~

M
A

18.2.3 Fire Department Access Roads.

18.2.3.1 Required Access.

18.2.3.1.1 Approved fire department access roads shall be provided for every facility, building, or portion of a building hereafter constructed or relocated.

18.2.3.1.2 Fire department access roads shall consist of roadways, fire lanes, parking lot lanes, or a combination thereof.

18.2.3.1.3* The provisions of 18.2.3.1 through 18.2.3.2.2.1 shall be permitted to be modified by the AHJ where any of the following conditions exists:

- (1) One- and two-family dwellings protected by an approved automatic sprinkler system in accordance with Section 13.1
- (2) Existing one- and two-family dwellings
- (3) Private garages having an area not exceeding 400 ft²
- (4) Carports having an area not exceeding 400 ft²
- (5) Agricultural buildings having an area not exceeding 400 ft²
- (6) Sheds and other detached buildings having an area not exceeding 400 ft²

18.2.3.1.4 When fire department access roads cannot be installed due to location on property, topography, waterways, nonnegotiable grades, or other similar conditions, the AHJ shall be authorized to require additional fire protection features.

M
A

18.2.3.2 Access to Buildings and Facilities.

18.2.3.2.1 A fire department access road shall extend to within 50 ft (15 m) of at least one exterior door that can be opened from the outside and that provides access to the interior of the building.

18.2.3.2.1.1 Where a one- or two-family dwelling, or townhouse, is protected with an approved automatic sprinkler system that is installed in accordance with NFPA 13D or NFPA 13R, as applicable, the distance in 18.2.3.2.1 shall be permitted to be increased to 150 ft (46 m).

18.2.3.2.2 Fire department access roads shall be provided such that any portion of the facility or any portion of an exterior wall of the first story of the building is located not more than 150 ft (46 m) from fire department access roads as measured by an approved route around the exterior of the building or facility.

M
A
M
A
A

18.2.3.2.2.1 When buildings are protected throughout with an approved automatic sprinkler system that is installed in accordance with NFPA 13, ~~NFPA 13D, or NFPA 13R, the distance in 18.2.3.2.2 shall be permitted to be increased to 450 ft (137 m).~~ ~~the distance in 18.2.3.2.2 shall be permitted to be increased to 250 feet.~~

18.2.3.3 Multiple Access Roads. More than one fire department access road shall be provided when it is determined by the AHJ that access by a single road could be impaired by vehicle congestion, condition of terrain, climatic conditions, or other factors that could limit access.

18.2.3.4 Specifications.

18.2.3.4.1 Dimensions.

M
A
M
A

18.2.3.4.1.1 Fire department access roads shall have an unobstructed width of not less than 20 ft (6.1 m). Fire department access roads constructed in the boulevard-style shall be allowed where each lane is less than 20 feet but not less than ten feet when they do not provide access to a building or structure.

18.2.3.4.1.2 Fire department access roads shall have an unobstructed vertical clearance of not less than 13 ft 6 in. (4.1 m).

18.2.3.4.1.2.1 Vertical clearance shall be permitted to be reduced, provided such reduction does not impair access by fire

apparatus, and approved signs are installed and maintained indicating the established vertical clearance when approved.

18.2.3.4.1.2.2 Vertical clearances or widths shall be increased when vertical clearances or widths are not adequate to accommodate fire apparatus.

18.2.3.4.2 Surface. Fire department access roads shall be designed and maintained to support the imposed loads of fire apparatus and shall be provided with an all-weather driving surface.

18.2.3.4.2.1 Permeable drivable surfaces, that meet loading of 18.2.3.4.2, are allowed when approved by the AHJ. When approved, the permeable surfaces shall be identified by a method acceptable to the AHJ.

M
A
M
A

18.2.3.4.3 Turning Radius.

~~18.2.3.4.3.1 The turning radius of a fire department access road shall be as approved by the AHJ.~~

M
A

18.2.3.4.3.1 The minimum inside turning radius of a fire department access road shall be 25 feet. The AHJ shall have the ability to increase the minimum inside turning radius to accommodate the AHJ's apparatus.

M
A
M
A

18.2.3.4.3.2 Turns in fire department access roads shall maintain the minimum road width.

18.2.3.4.4 Dead Ends. Dead-end fire department access roads in excess of 150 ft (46 m) in length shall be provided with approved provisions for the fire apparatus to turn around.

18.2.3.4.5 Bridges.

18.2.3.4.5.1 When a bridge is required to be used as part of a fire department access road, it shall be constructed and maintained in accordance with nationally recognized standards.

18.2.3.4.5.2 The bridge shall be designed for a live load sufficient to carry the imposed loads of fire apparatus.

18.2.3.4.5.3 Vehicle load limits shall be posted at both entrances to bridges, where required by the AHJ.

18.2.3.4.6 Grade.

18.2.3.4.6.1 The gradient for a fire department access road shall not exceed ~~the maximum approved, 10%, unless approved in writing by the AHJ.~~

M
A

18.2.3.4.6.2* The angle of approach and departure for any means of fire department access road shall not exceed 1 ft drop in 20 ft (0.3 m drop in 6 m) or the design limitations of the fire apparatus of the fire department, and shall be subject to approval by the AHJ.

18.2.3.4.6.3 Fire department access roads connecting to roadways shall be provided with curb cuts extending at least 2 ft (0.61 m) beyond each edge of the fire lane.

18.2.3.4.7 Traffic Calming Devices. The design and use of traffic calming devices shall be approved by the AHJ.

18.2.3.4.8 Travel in the Opposing Lane. The use of the opposite travel lane is prohibited in the design of all new fire apparatus access roads.

M
A
M

18.2.3.5 Marking of Fire Apparatus Access Road.

18.2.3.5.1 Where required by the AHJ, approved signs, approved roadway surface markings, or other approved notices shall be provided and maintained to identify fire department access roads or to prohibit the obstruction thereof or both.

18.2.3.5.2 A marked fire apparatus access road shall also be known as a fire lane.

18.5 Fire Hydrants.

18.5.1* The number and type of fire hydrants and connections to other approved water supplies shall be capable of delivering the required fire flow and shall be provided at approved locations.

18.5.2 Fire hydrants and connections to other approved water supplies shall be accessible to the fire department.

18.5.3 Clear Space Around Hydrants. A 36 in. (914 mm) clear space shall be maintained around the circumference of fire hydrants except as otherwise required or approved.

18.5.4 Private water supply systems shall be tested and maintained in accordance with NFPA 25.

18.5.5 Where required by the AHJ, fire hydrants subject to vehicular damage shall be protected unless located within a public right of way.

18.5.6 Where water supplies or fire hydrants are out of service for maintenance or repairs, a visible indicator acceptable to the AHJ shall be used to indicate that the hydrant is out of service.

18.5.7 Marking of Hydrants.

~~**18.5.7.1** Fire hydrants shall be marked with an approved reflector affixed to the roadway surface where required by the AHJ.~~

~~**18.5.7.2** Fire hydrants shall be marked with an approved flag or other device affixed to or proximate to the fire hydrant where required by the AHJ.~~

~~**18.5.7.3*** Where required by the AHJ, fire hydrants shall be color-coded or otherwise marked with an approved system indicating the available flow capacity.~~

extinguishment can be accomplished before compacting, covering, or other disposal activity is carried out. (See Section 10.11 for additional guidance.)

19.1.6 Electrical Wiring.

19.1.6.1 Electrical wiring and equipment in any combustible fiber storage room or building shall be installed in accordance with the requirements of Section 11.1 and NFPA 70, *National Electrical Code*, for Class III hazardous locations.

19.1.6.2 The AHJ shall be responsible for designating the areas that require hazardous location electrical classifications and shall classify the areas in accordance with the classification system set forth in NFPA 70.

19.1.7 No Smoking.

19.1.7.1 No smoking or open flame shall be permitted in any area where combustible fibers are handled or stored or within 50 ft (15 m) of any uncovered pile of such fibers.

19.1.7.2 "No Smoking" signs shall be posted.

19.1.8 Vehicles or Conveyances Used to Transport Combustible Waste or Refuse.

19.1.8.1 Vehicles or conveyances used to transport combustible waste or refuse over public thoroughfares shall have all cargo space covered and maintained light enough to ensure against ignition from external fire sources and the scattering of burning and combustible debris that can come in contact with ignition sources.

19.1.8.2 Transporting burning waste or refuse shall be prohibited.

19.1.8.3 Trucks or automobiles, other than mechanical handling equipment and approved industrial trucks as listed in NFPA 505, *Fire Safety Standard for Powered Industrial Trucks Including Type Designations, Areas of Use, Conversions, Maintenance, and Operations*, shall not enter any fiber storage room or building but shall be permitted to be used at loading platforms.

19.2 Combustible Waste and Refuse.**19.2.1 Rubbish Containers.**

19.2.1.1 General. Rubbish containers kept outside of rooms or vaults shall not exceed 40.5 ft³ (1.15 m³) capacity.

19.2.1.1.1 Containers exceeding a capacity of 5½ ft³ [40 gal (0.15 m³)] shall be provided with lids.

19.2.1.1.2 Such containers and lids as described in 19.2.1.1.1 shall be constructed of noncombustible materials or nonmetallic materials complying with 19.2.1.2.

19.2.1.2 Nonmetallic Containers.

19.2.1.2.1* Nonmetallic rubbish containers exceeding a capacity of 5½ ft³ [40 gal (0.15 m³)] shall be manufactured of materials having a peak rate of heat release not exceeding 300 kW/m² at a flux of 50 kW/m² when tested in the horizontal orientation, at a thickness as used in the container but not less than 0.25 in. (6 mm), in accordance with ASTM E 1354, *Test Method for Heat and Visible Smoke Release Rates for Materials and Products Using an Oxygen Consumption Calorimeter*, or NFPA 271, *Standard Method of Test for Heat and Visible Smoke Release Rates for Materials and Products Using an Oxygen Consumption Calorimeter*.

Chapter 19 Combustible Waste and Refuse**19.1 General.**

19.1.1 Permits. Permits, where required, shall comply with Section 1.12.

19.1.2 Persons owning or having control of any property shall not allow any combustible waste material to accumulate in any area or in any manner that creates a fire hazard to life or property.

19.1.3 Combustible waste or refuse shall be properly stored or disposed of to prevent unsafe conditions.

19.1.4 Fire extinguishing capabilities approved by the AHJ including, but not limited to, fire extinguishers, water supply and hose, and earth-moving equipment shall be provided at waste disposal sites.

19.1.5 Burning debris shall not be dumped at a waste disposal site except at a remote location on the site where fire extinguishment can be accomplished before compacting, covering, or other disposal activity is carried out. (See Section 10.11 for additional guidance.)

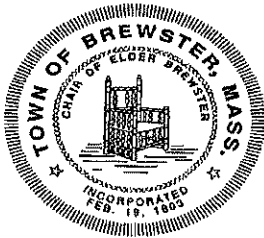
19.1.6 Electrical Wiring.

19.1.6.1 Electrical wiring and equipment in any combustible fiber storage room or building shall be installed in accordance with the requirements of Section 11.1 and NFPA 70, *National Electrical Code*, for Class III hazardous locations.

19.1.3 Combustible waste or refuse shall be properly stored or disposed of to prevent unsafe conditions.

19.1.4 Fire extinguishing capabilities approved by the AHJ including, but not limited to, fire extinguishers, water supply and hose, and earth-moving equipment shall be provided at waste disposal sites.

19.1.5 Burning debris shall not be dumped at a waste disposal site except at a remote location on the site where fire



Brewster Planning Department

2198 Main Street
Brewster, MA 02631-1898
508-896-3701 x1133
brewplan@brewster-ma.gov

**Staff Review
Data Transmittal Sheet**

- James Gallagher, Assessor's Department
- Davis Walters, Building Department/HDC
- Bill Grafton, Conservation Department
- Griffin-Ryder, Department of Public Works
- Chief Robert Moran, Fire Department
- Deputy Chief Kevin Varley, Fire Department
- Amy von Hone, Health Department/WQRC
- Jill Scalise, Housing Office
- Chris Miller, Natural Resources Department
- Jon Idman, Planning Department
- Lt. Charles Mawn, Police Dept
- Peter Lombardi, Town Manager's Office
- Donna Kalinick, Town Manager's Office
- Paul Anderson, Water Department

Date Submitted July 20, 2023 Application Number 23-06

Date Transmitted July 24, 2023

Applicant Charlie Whitcomb

Proposal The Applicant proposes to construct a new 100' x 50' building with five (5) commercial bays and one (1) security dwelling (22' x 20').

Development Location 0 Underpass Road Lots 2 and 3 (Map 77, Lots 10 and 60)

Is application material complete for your preliminary review? Yes No

If no, please indicate what additional material, documentation, or information you may wish to see prior to the meeting:

Additional Comments:

PLEASE SEE ATTACHED FD COMMENTS

Signature

Comments may be e-mailed to Lynn St. Cyr, lstcyr@brewster-ma.gov and provided at the Staff Review meeting on Friday, August 4, 2023 at 10:30 am in Room B. Thank you.

Fire Department Comments Underpass Road Whitcomb Staff Review

1. Commercial bay building with security apartment shall be protected by fire detection and automatic sprinkler systems in accordance with the provisions of the State Building and Fire Code.
2. The facility shall meet all requirements contained within 527 CMR 1.00 Massachusetts Comprehensive Fire Safety Code including Chapter 18 Fire Department Access (attached) and all referenced NFPA Standards.
3. A computer-generated apparatus swept path and turn simulation analysis shall be provided to the fire department for review and approval. Apparatus length for use in swept path analysis shall be 45'9".
4. Fire department access roads including roadways, fire lanes, and parking lot lanes shall be no less than 20' in width.
5. Minimum inside turning radius of fire department access roads shall be 25'. The developer may be required to increase this minimum turning radius to accommodate fire department apparatus.
6. North side of entrance shall be reduced to allow fire apparatus right and left turn access to north side of parking area.
7. Size of parking lot islands may require reduced sizing to allow fire department access.
8. All vehicles shall be parked in designated parking spaces only.
9. Dead end fire department access roads more than 150' in length shall be provided with approved provisions for fire apparatus to turn around (west side of building).
10. All access and interior parking lot lanes and roads shall be designated as fire lanes. All signage and road markings shall be approved by the fire department prior to installation and issuance of a certificate of occupancy.
11. Area in front of garage bays shall be designated as a fire lane. Parking shall not be allowed.
12. A graded gravel pathway no less than 25' in width shall be installed on the exterior north side of the building to allow fire department access for fire suppression operations.

13. The developer shall install two (2) fire hydrants. The location shall be approved by the fire department prior to installation.
14. The fire department shall approve the location and type of fire department connections for the automatic sprinkler system (if required) prior to installation.
15. The fire department shall approve the location of all fire and carbon monoxide detection system reporting panels required under the State Building Code prior to installation.
16. An Emergency Responder Radio Communication System shall be installed in the building per section 916.1 of the Massachusetts State Building Code.
17. A Knox box key vault shall be installed on the building. Location and type shall be approved by the fire department prior to installation and issuance of a certificate of occupancy.
18. Street address and building unit numbers shall be approved by the fire department and installed prior to the issuance of a certificate of occupancy.
19. Dependent on occupancy and use of contractor bays, special fire protection/detection systems meeting the State Building and Fire Code may be required.
20. Storage of any hazardous, flammable, combustible, or explosive materials in the contractor bays shall meet the requirements set forth in 527 CMR 1.00 Massachusetts Comprehensive Fire Safety Code.
21. Placement of snow shall not impede fire department access to or travel through parking lot area.

16.8.2 **Permits.** Permits, where required, shall comply with Section 1.12.

16.8.3 **Signs.** Approved signs shall be posted at the entrance, exit and access door, decontamination areas, and waste disposal areas for asbestos removal operations.

16.8.3.1 The signs shall state that asbestos is being removed from the area, that asbestos is a suspected carcinogen, and that proper respiratory protection is required.

16.8.3.2 Signs shall have a reflective surface, and lettering shall be a minimum of 2 in. (51 mm) high.

16.9 Floor Finishing or Refinishing. See M.G.L. c. 94, § 329 relating to the prohibition of the sale and use of certain lacquer sealers (including additives) during the course of commercial wood floor finishing operations.

16.9.1 General. Floor finishing or refinishing requirements shall apply, to persons, or other entities that engage in sanding, finishing, or refinishing wood floors, with or without compensation, in any building or structure. No person or entity shall apply or otherwise use any flammable floor finishing product during the course of any activity relating to the refinishing or finishing of the surface of a wood floor. This shall be in addition to the prohibitions of M.G.L. c. 94, § 329 relating to the sale and use of certain lacquer sealers during the course of commercial wood floor finishing operations.

16.9.2 Flammable Floor Finishing Product. Flammable floor finishing product, as used herein shall mean any clear or pigmented wood finish, formulated with nitrocellulose or synthetic resins to dry by evaporation and without chemical reaction, having a flashpoint below 100°F, and having a vapor pressure not exceeding 40 psi at 100°F, including clear lacquer sanding sealers.

16.9.3 Fire Safety Requirements. No person shall sand, strip or re-finish wood floors where such sanding, stripping or vapor would create an explosive atmosphere from dust or vapor that when dispersed could be ignited in the air without first complying with the following fire/explosion safety requirements. The requirements in (1) and (3) are not applicable if ventilation or a dust collection equipment system is used continuously to reduce vapor or dust from accumulating in concentrations that could cause ignition or explosion:

- (1) Sources of Ignition. All fires, open flames or other sources of ignition, including smoking materials, spotlights, halogen lights or appliance pilot lights shall be eliminated from the area or unit.
- (2) Electrical Permit Required. An electrical permit is required when connecting any floor-refinishing machine directly to the electrical panel in accordance with 527 CMR 12.00:
- (3) Warning Signs. Any person or other entity sanding or stripping floors in a building containing more than one dwelling unit shall post suitable warning signs indicating the danger of dust and fire/explosion hazard and shall be conspicuously pasted on all doors and entrances to the building and/or unit. Such notice is to be printed in contrasting colors and shall have lettering at least two inches high and should state the name of the operator in charge, the date and time of the operation and the area or unit where work is to be performed. Warning signs shall be posted at least 24 hours prior to engaging in such work.
- (4) No Smoking signs, featuring the international pictograph prohibiting smoking, must be posted at all entrances to the

house or building before floor sanding or finishing begins and until 24 hours after the end of all floor sanding and finishing activities.

16.9.3.4 Waste Materials. A metal waste-can with a self closing cover shall be provided for all waste materials, including wood dust, and rags. All such materials shall be removed from the building and disposed of daily.

Chapter 17 Wildlife Urban Interface

Delete Chapter 17 in its entirety.

Chapter 18 Fire Department Access and Water Supply

18.1 **General.** Fire department access and water supplies shall comply with this chapter.

18.1.1 **Application.**

18.1.1.1 This chapter shall apply to public and privately owned fire apparatus access roads.

18.1.1.2 This chapter shall apply to public and privately owned fire hydrant systems.

18.1.1.3 The fire apparatus access road plans must include an analysis and evaluation of fire apparatus maneuvers throughout the access roads created by swept path analysis and turn simulation software.

18.1.1.4 The fire apparatus access plans shall bear the seal and signature of the responsible registered professional engineer.

18.1.1.5 Nothing in this Section shall reduce the requirements established by cities or towns under M.G.L. 40A and planning and zoning by-laws.

18.1.2 **Permits.** Permits, where required, shall comply with Section 1.12.

18.1.3 **Plans.**

18.1.3.1 **Fire Apparatus Access.** Plans for fire apparatus access roads shall be submitted to the fire department for review and approval prior to construction.

18.1.3.2 **Fire Hydrant Systems.** Plans and specifications for fire hydrant systems shall be submitted to the fire department for review and approval prior to construction.

18.2 **Fire Department Access.**

18.2.1 Fire department access and fire department access roads shall be provided and maintained in accordance with Section 18.2.

18.2.2* **Access to Structures or Areas.**

18.2.2.1 **Access Box(es).** The AHJ shall have the authority to require an access box(es) to be installed in an accessible location where access to or within a structure or area is difficult because of security. The access box(es) shall be of an approved type listed in accordance with UL 1037.

18.2.2.1.1 Approval of access roads shall be subject to the AHJ and capable of supporting the imposed loads of fire apparatus and shall be provided with an all-weather driving surface and shall be maintained as provided.

18.2.2.2 **Access to Gated Subdivisions or Developments.** The AHJ shall have the authority to require fire department access be provided to gated subdivisions or developments through the use of an approved device or system.

18.2.2.3 Access Maintenance. The owner or occupant of a structure or area, with required fire department access as specified in 18.2.2.1 or 18.2.2.2, shall notify the AHJ when the access is modified. ~~in a manner that could prevent fire department access.~~

M
A

18.2.3 Fire Department Access Roads.

18.2.3.1 Required Access.

18.2.3.1.1 Approved fire department access roads shall be provided for every facility, building, or portion of a building hereafter constructed or relocated.

18.2.3.1.2 Fire department access roads shall consist of roadways, fire lanes, parking lot lanes, or a combination thereof.

18.2.3.1.3* The provisions of 18.2.3.1 through 18.2.3.2.2.1 shall be permitted to be modified by the AHJ where any of the following conditions exists:

- (1) One- and two-family dwellings protected by an approved automatic sprinkler system in accordance with Section 13.1
- (2) Existing one- and two-family dwellings
- (3) Private garages having an area not exceeding 400 ft²
- (4) Carports having an area not exceeding 400 ft²
- (5) Agricultural buildings having an area not exceeding 400 ft²
- (6) Sheds and other detached buildings having an area not exceeding 400 ft²

18.2.3.1.4 When fire department access roads cannot be installed due to location on property, topography, waterways, nonnegotiable grades, or other similar conditions, the AHJ shall be authorized to require additional fire protection features.

M A 18.2.3.2 Access to Buildings and Facilities.

18.2.3.2.1 A fire department access road shall extend to within 50 ft (15 m) of at least one exterior door that can be opened from the outside and that provides access to the interior of the building.

18.2.3.2.1.1 Where a one- or two-family dwelling, or townhouse, is protected with an approved automatic sprinkler system that is installed in accordance with NFPA 13D or NFPA 13R, as applicable, the distance in 18.2.3.2.1 shall be permitted to be increased to 150 ft (46 m).

18.2.3.2.2 Fire department access roads shall be provided such that any portion of the facility or any portion of an exterior wall of the first story of the building is located not more than 150 ft (46 m) from fire department access roads as measured by an approved route around the exterior of the building or facility.

18.2.3.2.2.1 When buildings are protected throughout with an approved automatic sprinkler system that is installed in accordance with NFPA 13, ~~NFPA 13D, or NFPA 13R, the distance in 18.2.3.2.2 shall be permitted to be increased to 450 ft (137 m).~~ the distance in 18.2.3.2.2 shall be permitted to be increased to 250 feet.

M
A
M
A

18.2.3.3 Multiple Access Roads. More than one fire department access road shall be provided when it is determined by the AHJ that access by a single road could be impaired by vehicle congestion, condition of terrain, climatic conditions, or other factors that could limit access.

18.2.3.4 Specifications.

18.2.3.4.1 Dimensions.

18.2.3.4.1.1 Fire department access roads shall have an unobstructed width of not less than 20 ft (6.1 m). Fire department access roads constructed in the boulevard-style shall be allowed where each lane is less than 20 feet but not less than ten feet when they do not provide access to a building or structure.

M
A
M
A

18.2.3.4.1.2 Fire department access roads shall have an unobstructed vertical clearance of not less than 13 ft 6 in. (4.1 m).

18.2.3.4.1.2.1 Vertical clearance shall be permitted to be reduced, provided such reduction does not impair access by fire

apparatus, and approved signs are installed and maintained indicating the established vertical clearance when approved.

18.2.3.4.1.2.2 Vertical clearances or widths shall be increased when vertical clearances or widths are not adequate to accommodate fire apparatus.

18.2.3.4.2 Surface. Fire department access roads shall be designed and maintained to support the imposed loads of fire apparatus and shall be provided with an all-weather driving surface.

18.2.3.4.2.1 Permeable drivable surfaces, that meet loading of 18.2.3.4.2, are allowed when approved by the AHJ. When approved, the permeable surfaces shall be identified by a method acceptable to the AHJ.

M
A
M
A

18.2.3.4.3 Turning Radius.

~~18.2.3.4.3.1 The turning radius of a fire department access road shall be as approved by the AHJ.~~

M
A

18.2.3.4.3.1 The minimum inside turning radius of a fire department access road shall be 25 feet. The AHJ shall have the ability to increase the minimum inside turning radius to accommodate the AHJ's apparatus.

M
A
M
A

18.2.3.4.3.2 Turns in fire department access roads shall maintain the minimum road width.

18.2.3.4.4 Dead Ends. Dead-end fire department access roads in excess of 150 ft (46 m) in length shall be provided with approved provisions for the fire apparatus to turn around.

18.2.3.4.5 Bridges.

18.2.3.4.5.1 When a bridge is required to be used as part of a fire department access road, it shall be constructed and maintained in accordance with nationally recognized standards.

18.2.3.4.5.2 The bridge shall be designed for a live load sufficient to carry the imposed loads of fire apparatus.

18.2.3.4.5.3 Vehicle load limits shall be posted at both entrances to bridges, where required by the AHJ.

18.2.3.4.6 Grade.

18.2.3.4.6.1 The gradient for a fire department access road shall not exceed ~~the maximum approved, 10%, unless approved in writing by the AHJ.~~

M
A

18.2.3.4.6.2* The angle of approach and departure for any means of fire department access road shall not exceed 1 ft drop in 20 ft (0.3 m drop in 6 m) or the design limitations of the fire apparatus of the fire department, and shall be subject to approval by the AHJ.

18.2.3.4.6.3 Fire department access roads connecting to roadways shall be provided with curb cuts extending at least 2 ft (0.61 m) beyond each edge of the fire lane.

18.2.3.4.7 Traffic Calming Devices. The design and use of traffic calming devices shall be approved by the AHJ.

18.2.3.4.8 Travel in the Opposing Lane. The use of the opposite travel lane is prohibited in the design of all new fire apparatus access roads.

M
A
M

18.2.3.5 Marking of Fire Apparatus Access Road.

18.2.3.5.1 Where required by the AHJ, approved signs, approved roadway surface markings, or other approved notices shall be provided and maintained to identify fire department access roads or to prohibit the obstruction thereof or both.

18.2.3.5.2 A marked fire apparatus access road shall also be known as a fire lane.

18.5 Fire Hydrants.

18.5.1* The number and type of fire hydrants and connections to other approved water supplies shall be capable of delivering the required fire flow and shall be provided at approved locations.

18.5.2 Fire hydrants and connections to other approved water supplies shall be accessible to the fire department.

18.5.3 Clear Space Around Hydrants. A 36 in. (914 mm) clear space shall be maintained around the circumference of fire hydrants except as otherwise required or approved.

18.5.4 Private water supply systems shall be tested and maintained in accordance with NFPA 25.

18.5.5 Where required by the AHJ, fire hydrants subject to vehicular damage shall be protected unless located within a public right of way.

18.5.6 Where water supplies or fire hydrants are out of service for maintenance or repairs, a visible indicator acceptable to the AHJ shall be used to indicate that the hydrant is out of service.

18.5.7 Marking of Hydrants.

~~**18.5.7.1** Fire hydrants shall be marked with an approved reflector affixed to the roadway surface where required by the AHJ.~~

~~**18.5.7.2** Fire hydrants shall be marked with an approved flag or other device affixed to or proximate to the fire hydrant where required by the AHJ.~~

~~**18.5.7.3*** Where required by the AHJ, fire hydrants shall be color-coded or otherwise marked with an approved system indicating the available flow capacity.~~

extinguishment can be accomplished before compacting, covering, or other disposal activity is carried out. (See Section 10.11 for additional guidance.)

19.1.6 Electrical Wiring.

19.1.6.1 Electrical wiring and equipment in any combustible fiber storage room or building shall be installed in accordance with the requirements of Section 11.1 and NFPA 70, *National Electrical Code*, for Class III hazardous locations.

19.1.6.2 The AHJ shall be responsible for designating the areas that require hazardous location electrical classifications and shall classify the areas in accordance with the classification system set forth in NFPA 70.

19.1.7 No Smoking.

19.1.7.1 No smoking or open flame shall be permitted in any area where combustible fibers are handled or stored or within 50 ft (15 m) of any uncovered pile of such fibers.

19.1.7.2 "No Smoking" signs shall be posted.

19.1.8 Vehicles or Conveyances Used to Transport Combustible Waste or Refuse.

19.1.8.1 Vehicles or conveyances used to transport combustible waste or refuse over public thoroughfares shall have all cargo space covered and maintained light enough to ensure against ignition from external fire sources and the scattering of burning and combustible debris that can come in contact with ignition sources.

19.1.8.2 Transporting burning waste or refuse shall be prohibited.

19.1.8.3 Trucks or automobiles, other than mechanical handling equipment and approved industrial trucks as listed in NFPA 505, *Fire Safety Standard for Powered Industrial Trucks Including Type Designations, Areas of Use, Conversions, Maintenance, and Operations*, shall not enter any fiber storage room or building but shall be permitted to be used at loading platforms.

19.2 Combustible Waste and Refuse.**19.2.1 Rubbish Containers.**

19.2.1.1 General. Rubbish containers kept outside of rooms or vaults shall not exceed 40.5 ft³ (1.15 m³) capacity.

19.2.1.1.1 Containers exceeding a capacity of 5½ ft³ [40 gal (0.15 m³)] shall be provided with lids.

19.2.1.1.2 Such containers and lids as described in 19.2.1.1.1 shall be constructed of noncombustible materials or nonmetallic materials complying with 19.2.1.2.

19.2.1.2 Nonmetallic Containers.

19.2.1.2.1* Nonmetallic rubbish containers exceeding a capacity of 5½ ft³ [40 gal (0.15 m³)] shall be manufactured of materials having a peak rate of heat release not exceeding 300 kW/m² at a flux of 50 kW/m² when tested in the horizontal orientation, at a thickness as used in the container but not less than of 0.25 in. (6 mm), in accordance with ASTM E 1354, *Test Method for Heat and Visible Smoke Release Rates for Materials and Products Using an Oxygen Consumption Calorimeter*, or NFPA 271, *Standard Method of Test for Heat and Visible Smoke Release Rates for Materials and Products Using an Oxygen Consumption Calorimeter*.

Chapter 19 Combustible Waste and Refuse**19.1 General.**

19.1.1 Permits. Permits, where required, shall comply with Section 1.12.

19.1.2 Persons owning or having control of any property shall not allow any combustible waste material to accumulate in any area or in any manner that creates a fire hazard to life or property.

19.1.3 Combustible waste or refuse shall be properly stored or disposed of to prevent unsafe conditions.

19.1.4 Fire extinguishing capabilities approved by the AHJ including, but not limited to, fire extinguishers, water supply and hose, and earth-moving equipment shall be provided at waste disposal sites.

19.1.5 Burning debris shall not be dumped at a waste disposal site except at a remote location on the site where fire extinguishment can be accomplished before compacting, covering, or other disposal activity is carried out. (See Section 10.11 for additional guidance.)

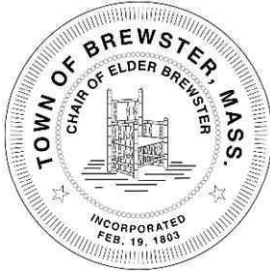
19.1.6 Electrical Wiring.

19.1.6.1 Electrical wiring and equipment in any combustible fiber storage room or building shall be installed in accordance with the requirements of Section 11.1 and NFPA 70, *National Electrical Code*, for Class III hazardous locations.

19.1.3 Combustible waste or refuse shall be properly stored or disposed of to prevent unsafe conditions.

19.1.4 Fire extinguishing capabilities approved by the AHJ including, but not limited to, fire extinguishers, water supply and hose, and earth-moving equipment shall be provided at waste disposal sites.

19.1.5 Burning debris shall not be dumped at a waste disposal site except at a remote location on the site where fire



Town of Brewster

2198 Main Street
Brewster, MA 02631-1898
Phone: (508) 896-3701
Fax: (508) 896-8089

Office of:
Planning Board
Planning Dept.

REPORT

TO: 162 Underpass, LLC
The Free Sea Turtle, LLC
FROM: Jon Idman, Town Planner
RE: Staff Review ##s 23-2 and 23-3, Brewster Code Chapter 83, Section 4(D)
162 Underpass Road (Map 77, Lot 9)
Lots 1, 2 & 3 Plan Book 698 Page 25
DATE: January 18, 2023

Proposed multi-building/ multi-unit commercial development with accessory commercial dwelling units on separate development sites along with supporting improvements (Lot 1 and Lot 2). Shared development infrastructure (parking, stormwater, etc.) on Lot 3.

CH commercial district

Preliminary site plans for staff review (separate for Lot 1 and Lot 2) prepared by J.M. O'Reilly, dated 1/6/23

As separately owned/ controlled developments on separate lots, the proposed development as depicted would not require mandatory DRI referral/ review by the Cape Cod Commission.

The Staff Review meeting was held 1/20/23 at Town Hall, Room B with the following representatives of the Applicant:

- Charlie Whitcomb
- Paul Wallace
- John O'Reilly, PE, PLS

Town Staff in attendance

- Bill Grafton – Conservation Administrator
- Jon Idman – Town Planner
- Sherrie McCullough – Asst. Health Director
- Chris Miller – Natural Resources Director
- Robert Moran- Fire Chief
- Alex Provos- Asst. Water Superintendent

Comments

- See attached written comments from DPW, the Fire Department, and the Health Department.
- A major stormwater permit will be required for proposed development on each Lot 1 and Lot 2. ConsCom will likely be the authority for Lot 2, and Planning Board for Lot 1, because of wetlands jurisdiction.
- Another major stormwater permit may be required prior to any proposed development or permitting for the same, in order to do site work in advance. Such stormwater permit will deal exclusively with erosion control rather than permanent stormwater BMPs and facilities because no impervious surface would be proposed with the initial major stormwater permit for site work/ land disturbance.

- Zoning
 - Contractor and Trades Building use has to be done in its own separate building/s on the site rather than as Row Commercial. The foregoing are separate and distinct uses. The lots are large enough/ have minimum lot area for either Row Commercial and/ or Contractor and Trades Building uses. The restaurant could not be located in the same trades use building proposed on lot 1 but would have to be in a separate building.
 - It was confirmed that the restaurant use did not contain a brewery, which is a manufacturing use.
 - Lot 1 shows a multi-family dwelling as defined in the Bylaw because three or more dwelling units are proposed in the building. That said, the Bylaw does not limit ACDUs to one per site as is the case with ADUs. ACDUs could be dispersed in various buildings on site per the total number of commercial units or operations proposed per Lot.
 - Lot 3 is proposed to be developed with supporting infrastructure for both Lots 1 and 2. Per the definition of “Lot” in the Bylaw, Lot 3 would have to be joined with either Lot 1 or Lot 2, or split between them, through an ANR or perimeter plan, as applicable. Shared infrastructure could be accomplished through easements.
- Even if uses are allowed by right in the district, the application should specifically request them, e.g. outside storage, commercial vehicle parking, etc.
- Site plan review will be required for each Lot development.
 - Staff would recommend to the planning board that some level of transportation study be provided dealing with trip generation, access, and turning movements.
 - Driveway separation from other drives and roads should be provided per the site plan review standards. As is proposed, a single shared access point is generally preferred and to accommodate the same, the Bylaw allows for setback waivers for parking spaces, etc.
 - Some landscape buffering will be required though it may not necessarily mean a continuous vegetated buffer of at least 10’ around the entirety of the Lots.
- Development on Lot 2 should be mindful of wetlands and the conservancy district (including soils) to the north. As is proposed, minimum required zoning distance from a building to a wetland is 50’.
- We expect to have more detailed discussion including about parking and site plan review standards as the proposed development comes more into focus.

ENC



Brewster Planning Department
2198 Main Street
Brewster, MA 02631-1898
508-896-3701 x1133
brewplan@brewster-ma.gov

RECEIVED

JAN 20 2023

**Staff Review
Data Transmittal Sheet**

BREWSTER PLANNING BOARD
ZONING BOARD OF APPEALS

- James Gallagher, Assessor's Department
- Davis Walters, Building Department/HDC
- Bill Grafton, Conservation Department
- Griffin Ryder, Department of Public Works
- Chief Robert Moran, Fire Department
- Deputy Chief Kevin Varley, Fire Department
- Amy von Hone, Health Department/WQRC
- Jill Scalise, Housing Office
- Chris Miller, Natural Resources Department
- Jon Idman, Planning Department
- Lt. Charles Mawn, Police Dept
- Peter Lombardi, Town Administration
- Donna Kalinick, Town Administration
- Paul Anderson, Water Department

Date Submitted January 10, 2023 Application Number 23-02
 Date Transmitted January 13, 2023

Applicant Paul Wallace
 Proposal The Applicant proposes to construct a new 140' x 60' building with five (5) commercial bays, one (1) restaurant space, one (1) two-bedroom security dwelling and four (4) one-bedroom accessory commercial dwelling units.

Development 162 Underpass Road Lot 1 (Map 77, Lot 9)
 Location

Is application material complete for your preliminary review? Yes No

If no, please indicate what additional material, documentation, or information you may wish to see prior to the meeting:

Additional Comments:

*A DRIVEWAY/CURB CUT PERMIT WILL BE REQUIRED FROM THE DPW.
 THE DRIVEWAY ACROSS THE STREET ON UNDERPASS ROAD SHOULD BE SHOWN ON THE PLANS
 SO THE ALIGNMENT OF THE DRIVEWAY CAN BE REVIEWED. AS PART OF THE SITE PLAN REVIEW
 A TRAFFIC IMPACT AND ACCESS STUDY SHOULD BE SUBMITTED TO CALCULATE TRIP GENERATION AND DOCUMENT
 THAT THE DRIVEWAY IS SAFE.*

[Signature]

 Signature

Comments may be e-mailed to Lynn St. Cyr, lstcyr@brewster-ma.gov and/or provided at the Staff Review meeting on Friday, January 20, 2023 at 10:00 am in Room A. Thank you.

Lynn St. Cyr

From: Sherrie McCullough
Sent: Thursday, January 19, 2023 12:40 PM
To: Lynn St. Cyr
Subject: Staff Review Application #23-02 for 162 Underpass Road, Lot 1, Map 77 Parcel 9

Applicant Paul Wallace proposes to construct a new 140' X 60' building with five (5) commercial bays, restaurant space with 76 seats, one (1) two-bedroom security dwelling, and four (4) one-bedroom commercial accessory dwelling unit (ADU's)

Health Department comments based on information provided at this time.

- This parcel of land lies outside the Zone II, and the District of Critical Planning Concern (DCPC) and has access to town water. The property is located within an Environmentally Sensitive Area (ESA) per our local BoH regulation. The Property would be restricted to 110 gpd/10,000 sf of land area if there are any variances required for the proposed septic system. The total land area is 42,200 SF +/-
- Based on the current proposal total daily flow required is 3,470 gpd, the proposed plan shows 4,736 gpd is proposed. Since the total daily flow is greater than 2,000 gpd, local BoH regulations (Small Wastewater Treatment Facilities) requires a denitrification system to meet the 10 ppm (Nitrogen 10mg/l, Nitrate Nitrogen 19 mg/l) due to lot size. A dinitrogen system has been proposed on the current plan. Soil testing and evaluation was conducted on September 27, 2022.
- The restaurant service will require a grease trap as part of the septic system. A grease trap is represented on the plan but is not listed in the notes.
- The plan design lists a 74-seat restaurant and a 76- seat restaurant. The plan notes list one 76-84 seat restaurant X 35 gpd/seat = 2,660 gpd. The actual number of seats will need to be determined for final review.
- If the bays are to be accessible by vehicles, floor drains will be required in each bay and each floor drain will need to be connected to an industrial wastewater holding tank.
- Any proposed hazardous material storage or disposal must meet appropriate requirements.
- Prior to construction, septic plans and a Building Waiver Application will need to be submitted to the Health Department for full department review prior to final approval.

Respectfully submitted,

Sherrie

Sherrie McCullough R.S.

Assistant Health Director
Town of Brewster

Beginning March 21, Brewster Town Offices will be open to the public Monday through Thursday from 8:30 to 4:00pm, and by appointment on Fridays. For the latest updates on Town services, please visit www.brewster-ma.gov.



Brewster Planning Department
2198 Main Street
Brewster, MA 02631-1898
508-896-3701 x1133
brewplan@brewster-ma.gov

RECEIVED

JAN 13 2023

BREWSTER PLANNING DEPARTMENT
ZONING BOARD OF APPEALS

**Staff Review
Data Transmittal Sheet**

- | | |
|---|---|
| <input type="checkbox"/> James Gallagher, Assessor's Department | <input type="checkbox"/> Jill Scalise, Housing Office |
| <input type="checkbox"/> Davis Walters, Building Department/HDC | <input type="checkbox"/> Chris Miller, Natural Resources Department |
| <input type="checkbox"/> Bill Grafton, Conservation Department | <input type="checkbox"/> Jon Idman, Planning Department |
| <input type="checkbox"/> Griffin Ryder, Department of Public Works | <input type="checkbox"/> Lt. Charles Mawn, Police Dept |
| <input type="checkbox"/> Chief Robert Moran, Fire Department | <input type="checkbox"/> Peter Lombardi, Town Administration |
| <input type="checkbox"/> Deputy Chief Kevin Varley, Fire Department | <input type="checkbox"/> Donna Kalinick, Town Administration |
| <input type="checkbox"/> Amy von Hone, Health Department/WQRC | <input type="checkbox"/> Paul Anderson, Water Department |

Date Submitted January 10, 2023 Application Number 23-02

Date Transmitted January 13, 2023

Applicant Paul Wallace

Proposal The Applicant proposes to construct a new 140' x 60' building with five (5) commercial bays, one (1) restaurant space, one (1) two-bedroom security dwelling and four (4) one-bedroom accessory commercial dwelling units.

Development 162 Underpass Road Lot 1 (Map 77, Lot 9)
Location

Is application material complete for your preliminary review? Yes No

If no, please indicate what additional material, documentation, or information you may wish to see prior to the meeting:

Additional Comments:

SEE FD COMMENTS ATTACHED

Signature

Comments may be e-mailed to Lynn St. Cyr, lstcyr@brewster-ma.gov and/or provided at the Staff Review meeting on Friday, January 20, 2023 at 10:00 am in Room A. Thank you.

Fire Department Comments Underpass Road Wallace Staff Review

1. Per MGL Chapter 48 Section 26G buildings totaling more than 7,500 gross square feet shall be protected by an adequate system of automatic sprinklers in accordance with the provisions of the State Building Code.
2. The facility shall meet all requirements contained within 527 CMR 1.00 Massachusetts Comprehensive Fire Safety Code including all referenced NFPA Standards.
3. A computer-generated apparatus swept path and turn simulation analysis shall be provided to the fire department for review and approval.
4. Fire department access roads including roadways, fire lanes, and parking lot lanes shall be no less than 20' in width.
5. Minimum inside turning radius of fire department access roads shall be 25'. The developer may be required to increase this minimum turning radius to accommodate fire department apparatus.
6. All vehicles shall be parked in designated parking spaces only. Parking for restaurant food pick-up service on interior parking lot lanes shall not be allowed.
7. Dead end fire department access roads in excess of 150' in length shall be provided with approved provisions for fire apparatus to turn around (west side of building).
8. All access and interior parking lot lanes shall be designated as fire lanes. All signage and road markings shall be approved by the fire department prior to installation and issuance of a certificate of occupancy.
9. Area in front of garage bays shall be designated as a fire lane. Parking shall not be allowed.
10. A graded gravel pathway no less than 25' in width shall be installed on the exterior south side of the building to allow fire department access for fire suppression operations.
11. The developer shall install two (2) fire hydrants. The location shall be approved by the fire department prior to installation.
12. The fire department shall approve the location and type of fire department connections for the automatic sprinkler system prior to installation.

13. The fire department shall approve the location of all fire and carbon monoxide detection system reporting panels required under the State Building Code prior to installation.
14. An Emergency Responder Radio Communication System shall be installed in the building per section 916.1 of the Massachusetts State Building Code.
15. A Knox box key vault shall be installed on the building. Location and type shall be approved by the fire department prior to installation and issuance of a certificate of occupancy.
16. Street address and building unit numbers shall be approved by the fire department and installed prior to the issuance of a certificate of occupancy.
17. Dependent on occupancy and use of contractor bays special fire protection/detection systems meeting the State Building Code may be required.
18. Storage of any hazardous, flammable, combustible, or explosive materials in the contractor bays shall meet the requirements set forth in 527 CMR 1.00 Massachusetts Comprehensive Fire Safety Code.



Brewster Planning Department

2198 Main Street
Brewster, MA 02631-1898
508-896-3701 x1133
brewplan@brewster-ma.gov

RECEIVED

JAN 20 2023

**Staff Review
Data Transmittal Sheet**

BREWSTER PLANNING BOARD
ZONING BOARD OF APPEALS

- James Gallagher, Assessor's Department
- Davis Walters, Building Department/HDC
- Bill Grafton, Conservation Department
- Griffin Ryder, Department of Public Works
- Chief Robert Moran, Fire Department
- Deputy Chief Kevin Varley, Fire Department
- Amy von Hone, Health Department/WQRC
- Jill Scalise, Housing Office
- Chris Miller, Natural Resources Department
- Jon Idman, Planning Department
- Lt. Charles Mawn, Police Dept
- Peter Lombardi, Town Administration
- Donna Kalinick, Town Administration
- Paul Anderson, Water Department

Date Submitted January 10, 2023 Application Number 23-03

Date Transmitted January 13, 2023

Applicant Charlie Whitcomb

Proposal The Applicant proposes to construct a new 100' x 50' building with five (5) commercial bays and one (1) security dwelling.

Development 162 Underpass Road Lot 2 (Map 77, Lot 9)
Location

Is application material complete for your preliminary review? Yes No

If no, please indicate what additional material, documentation, or information you may wish to see prior to the meeting:

Additional Comments:

*A DRIVEWAY / CURB CUT PERMIT WILL BE REQUIRED FROM THE DPW.
THE DRIVEWAY ACROSS THE STREET ON UNDERPASS ROAD SHOULD BE SHOWN ON THE PLANS SO THE ALIGNMENT OF THE DRIVEWAYS CAN BE REVIEWED AS PART OF THE SITE PLAN REVIEW. A TRAFFIC IMPACT AND ACCESS STUDY SHOULD BE SUBMITTED TO CALCULATE TRIP GENERATION AND DOCUMENT THAT THE DRIVEWAY LOCATION IS SAFE.*

[Signature]

Signature

Comments may be e-mailed to Lynn St. Cyr, lstcyr@brewster-ma.gov and/or provided at the Staff Review meeting on Friday, January 20, 2023 at 11:00 am in Room A. Thank you.

Lynn St. Cyr

From: Sherrie McCullough
Sent: Thursday, January 19, 2023 12:47 PM
To: Lynn St. Cyr
Subject: Staff Review Application #23-03 for 162 Underpass Road, Lot 2, Map 77 Parcel 9

Applicant Charlie Whitcomb proposes to construct a new 100' X 50' building with five (5) commercial bays for trade shop or garage use, and one (1) two-bedroom security dwelling.

Health Department comments based on information provided at this time.

- This parcel of land lies outside the Zone II, and the District of Critical Planning Concern (DCPC) and has access to town water. The property is located within an Environmentally Sensitive Area (ESA) per our local BoH regulation. The Property would be restricted to 110 gpd/10,000 sf of land area if there are any variances required for the proposed septic system. The total land area is 40,675 +/- SF, wetland area is 306 SF +/-, and upland area is 40,579 SF +/-.
- Based on the current proposal, total daily flow required is 370 gpd, the proposed plan shows 444 gpd is proposed. Soil testing and evaluation was conducted on September 27, 2022.
- If the bays are to be accessible by vehicles, floor drains will be required in each bay and each floor drain will need to be connected to an industrial wastewater holding tank.
- Any proposed hazardous material storage or disposal must meet appropriate requirements.
- Prior to construction, septic plans and a Building Waiver Application will need to be submitted to the Health Department for full department review prior to final approval.

Respectfully submitted,

Sherrie

Sherrie McCullough R.S.

Assistant Health Director
Town of Brewster

Beginning March 21, Brewster Town Offices will be open to the public Monday through Thursday from 8:30 to 4:00pm, and by appointment on Fridays. For the latest updates on Town services, please visit www.brewster-ma.gov.



Brewster Planning Department
2198 Main Street
Brewster, MA 02631-1898
508-896-3701 x1133
brewplan@brewster-ma.gov

RECEIVED

JAN 13 2023

FILED IN ROOM 1133
PLANNING DEPARTMENT

**Staff Review
Data Transmittal Sheet**

- | | |
|---|---|
| <input type="checkbox"/> James Gallagher, Assessor's Department | <input type="checkbox"/> Jill Scalise, Housing Office |
| <input type="checkbox"/> Davis Walters, Building Department/HDC | <input type="checkbox"/> Chris Miller, Natural Resources Department |
| <input type="checkbox"/> Bill Grafton, Conservation Department | <input type="checkbox"/> Jon Idman, Planning Department |
| <input type="checkbox"/> Griffin Ryder, Department of Public Works | <input type="checkbox"/> Lt. Charles Mawn, Police Dept |
| <input type="checkbox"/> Chief Robert Moran, Fire Department | <input type="checkbox"/> Peter Lombardi, Town Administration |
| <input type="checkbox"/> Deputy Chief Kevin Varley, Fire Department | <input type="checkbox"/> Donna Kalinick, Town Administration |
| <input type="checkbox"/> Amy von Hone, Health Department/WQRC | <input type="checkbox"/> Paul Anderson, Water Department |

Date Submitted January 10, 2023 Application Number 23-03

Date Transmitted January 13, 2023

Applicant Charlie Whitcomb

Proposal The Applicant proposes to construct a new 100' x 50' building with five (5) commercial bays and one (1) security dwelling.

Development Location 162 Underpass Road Lot 2 (Map 77, Lot 9)

Is application material complete for your preliminary review? Yes No

If no, please indicate what additional material, documentation, or information you may wish to see prior to the meeting:

Additional Comments:

* SEE ATTACHED PD COMMENTS

Signature

Comments may be e-mailed to Lynn St. Cyr, lstcyr@brewster-ma.gov and/or provided at the Staff Review meeting on Friday, January 20, 2023 at 11:00 am in Room A. Thank you.

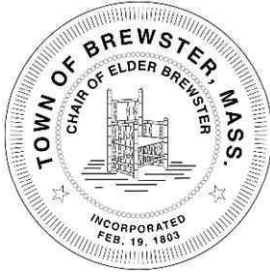
Fire Department Comments Underpass Road Whitcomb Staff Review

1. Occupancy and proposed mixed residential/commercial use of building may require the installation of an automatic sprinkler system in accordance with the provisions of the State Building Code.
2. The facility shall meet all requirements contained within 527 CMR 1.00 Massachusetts Comprehensive Fire Safety Code including all referenced NFPA Standards.
3. A computer-generated apparatus swept path and turn simulation analysis shall be provided to the fire department for review and approval.
4. Fire department access roads including roadways, fire lanes, and parking lot lanes shall be no less than 20' in width.
5. Minimum inside turning radius of fire department access roads shall be 25'. The developer may be required to increase this minimum turning radius to accommodate fire department apparatus.
6. All vehicles shall be parked in designated parking spaces only. Area in front of garage bays shall be designated as a fire lane. Parking shall not be allowed.
7. Dead end fire department access roads in excess of 150' in length shall be provided with approved provisions for fire apparatus to turn around (west end of parking lot lanes and access road)
8. All interior parking lot lanes and roads shall be designated as fire lanes. All signage and road markings shall be approved by the fire department prior to installation and issuance of a certificate of occupancy.
9. The developer shall install one (1) fire hydrant. The location shall be approved by the fire department prior to installation.
10. The fire department shall approve the location and type of fire department connections for any required automatic sprinkler system prior to installation.
11. The fire department shall approve the location of all fire and carbon monoxide detection system reporting panels required under the State Building Code prior to installation.
12. An Emergency Responder Radio Communication System shall be installed in the building per section 916.1 of the Massachusetts State Building Code.

13. A Knox box key vault shall be installed on the building. Location and type shall be approved by the fire department prior to installation and issuance of a certificate of occupancy.
14. Street address and building unit numbers shall be approved by the fire department and installed prior to the issuance of a certificate of occupancy.
15. Dependent on occupancy and use of contractor bays special fire protection/detection systems meeting the State Building Code may be required.
16. Storage of any hazardous, flammable, combustibile, or explosive materials in the contractor bays shall meet the requirements set forth in 527 CMR 1.00 Massachusetts Comprehensive Fire Safety Code.
17. A graded gravel pathway no less than 25' in width shall be installed on the exterior north side of the building to allow fire department access for fire suppression operations.

CASE NO. 2024-04 ONLY

**DOCUMENTS FOR
THE FREE SEA TURTLE, LLC
PAUL WALLACE, MANAGER
162 UNDERPASS ROAD**



Town of Brewster

2198 Main Street
Brewster, MA 02631-1898
Phone: (508) 896-3701
Fax: (508) 896-8089

Office of:
Planning Board
Planning Dept.

STAFF REPORT

TO: Planning Board
FROM: Town Planner
Re: Special Permit & Site Plan Review: Case No. PB24-4
162 Underpass Road (Map 77, Lot 9), The Free Sea Turtle, LLC
Plan Book 698, Page 25, "Lot 1"
DATE: April 2, 2024

This is not intended to be a comprehensive or final report on the project, but rather preliminary comments that will be supplemented and revised throughout the pendency of review. Specifically, I plan to provide my recommendations and opinions about the project's consistency with site plan review and special permit standards later in the hearing/ review period.

Copies of comments from the formal, pre-filing Staff Review process have also been provided to assist the Board, though these comments refer to iterative project designs elements that may now have been revised in the application plan set.

General

- The property is located in the CH (commercial) district.
- A single, two-story building is proposed, with a footprint of 3,300 +/- square feet. Four total units are proposed in the building, one on the ground floor and three on the second floor.
- Because of the new uses and floor area size proposed, the proposed development is subject to site plan review.
- The proposed development underwent formal Staff Review, as required.
- The property is currently vacant, is largely disturbed and was previously used for an excavation business.
- Small "Lot 4" shown on the site plans and Plan Book 698, Page 25 is not included in the development proposal.
- There is a significant change in grade throughout the lot, and a retaining wall is proposed along the property's southern boundary.
- Because of the grade of the lot, access to the second floor of the building is via a walk to the rear of the building.
- No floodplains, impaired watershed, Zone II or wetlands areas are located on the lot.

Uses

- The main site use is “Row Commercial,” which in turn allows individual uses allowed in the district to be undertaken within the constituent units. Row Commercial is allowed by right in the district.
- The full-service restaurant use, proposed to occupy the entire first floor, requires a special permit in the district. Outdoor seasonal dining is proposed on the patio, accessory to the restaurant use.
- The menu of proposed uses for the three, second floor units are allowed by right in the CH district: retail; gift shop; art gallery; antique store; personal services; business offices; and repair services (not automotive).
- Storage of commercial vehicles would also be allowed on the lot, as proposed.
- The plans appear to meet all ROW Commercial requirements set out in Section 179-38 of the Zoning Bylaw, including maximum building coverage (25%) and minimum vegetated ‘green’ area (25%).
- The building appears to meet setback requirements.

Infrastructure

- The proposed development has received a Stormwater Management Permit. The approved stormwater management system is consistent with stormwater management standards under site plan review.
- In addition to stormwater management, the proposed development shares infrastructure and improvements with the development proposed on abutting Lot 2/3 (pending case PB24-5): access and driveways; landscaping; signage; bike rack; dumpsters; and parking.

Landscaping

- The application states that there is a proposed evergreen buffer along the western property line with the abutting town property (Eddy School). This is not shown or referenced on the landscape plan but should be.
- The landscape plan uses native species or species appropriate to the area and context. It appears that in addition to the existing vegetation, the proposed plantings would create a continuous buffer along Underpass Road; the Board should confirm the sufficiency of this buffer.
- The proposed lawn areas should be confirmed as turf-type tall fescue.
- The landscape details sheet in the site plan set should be revised to recognize that the water quality swale will be planted with shrubs, not turf, thus reference to loam and seed should be revised.

Building Design

- Two master signs are proposed, both on ‘Lot 1,’ presumably to serve both Lot 1 and Lot 2/3. The Building Commissioner is the master sign permitting authority. Depending on their proposed size, the master signs may require a special permit from the Planning Board.
- The application generally states the exterior building finishes. The application suggests that the building will be a typical metal space building, but also refers to wood siding. The Board might want more specific details on materials.

- The building design appears to be much more interesting, complex and attractive than a ‘typical’ metal space building.
- The lighting fixtures selected can be ordered as “fully shielded, full cut-off.” Any approval should condition the lighting to be full-shielded and full cut-off.

Parking

- The Zoning Bylaw allows the Board through site plan review to waive or modify parking and drive aisle width requirements (including parking space setbacks and number of spaces), especially useful in cases where parking and access is to be shared. The proposal requests and relies on such flexibility for parking setbacks and driveway width. See Zoning Bylaw Sections 179-23A and 179-66(B) & (D).
- The proposed number of shared spaces proposed between the two abutting developments (55) is consistent with the Board’s parking policy (September 11, 2013), as calculated in the site plan set.
- It appears that parking is curbed, so no wheel stops are necessary.

Traffic/ Access

- The applicant’s engineer has met with the Fire Chief to confirm adequate site access and circulation for emergency service vehicles (see ‘swept path analysis’ in site plan set).
- The Applicant provided a transportation assessment by VHB for the proposed developments, including trip generation, level of service, crash data and sight line analyses. It concludes that the proposed access drive is located in the safest possible location and has sufficient sight lines; there is not a crash history in the area of locus; and that the resulting level of service in the roadways under proposed development conditions remains acceptable.
- Trip reduction measures are proposed to mitigate new trip generation. For trip reduction measures, the Applicant is proposing a travel demand management (TDM) program, which would, as a condition of any approval, be implemented onsite amongst the various tenants/ users when the project is completed and buildings occupied.
- The TDM program would include a proposed sidewalk on-site along Underpass Road, along with a crosswalk, to connect with the sidewalk system along the east side of the road. The proposed new site access drive and crosswalk is towards the southern end of the property, in proximity to the new curb cut/ access drive. A bike rack is also proposed on the restaurant patio. The TDM program should take note that the CCRTA has a fixed route along Underpass Road, with a stop only a short distance to the south of the property at the intersection of Snow Road and Underpass Road.
- The Board might want to consider how many bike rack spaces should be provided, as they will serve both proposed developments.
- The site dumpsters are shared, located on Lot 2/3, and access to them appears adequate.
- A loading zone for the restaurant is provided east of the building, near the proposed outdoor freezer.
- A curbcut/ driveway permit will be required from DPW; construction access and activities (including the proposed sidewalk and crosswalk on Underpass Road) should be coordinated with DPW prior to any commencement of work.

Lynn St. Cyr

From: Victor Staley
Sent: Thursday, March 7, 2024 11:54 AM
To: Lynn St. Cyr
Cc: Richard Leibowitz; Jonathon Idman; Erika Glidden; Victor Staley
Subject: FW: Request for Comments-162 Underpass Road (Map 77, Parcel 9) and Underpass Road (Map 77, Parcel 10 & 60)
Attachments: PB#2024-04 and PB#2024-05 combined application.pdf; Staff Report 23-2 and 23-3 Underpass Rd 011823.pdf; Staff Review Report 23-5 and 23-6 Underpass Rd 081123.pdf

Hello Lynn,

The Building Comments are as follows.

This review does not include the proposed signage as there was not enough information to assist in commenting on Zoning Bylaw compliance. All Sections identified are from the Brewster Zoning Bylaw unless otherwise noted.

Lot 1 application.

1. The list of proposed uses is accurate pursuant to Table 1, Table of Uses. If this petition is considered as Row Commercial, then the maximum building coverage is 25% rather than the 40% as presented. I could not determine if Lot 1 has a minimum of 25% green space. Please refer to Section 38.
2. All buildings and spaces open to the general public (including clients) shall satisfy the accessibility standards of 521 CMR.
3. Depending upon the actual uses to be introduced the MA State Building Code may require the building sprinkled, alarmed, or otherwise protected by fire rated assemblies.
4. The stair system identified at the rear of both buildings shall not exceed four (4) feet in height including hand/guardrail systems. Table 2, Note 5.

Lots 2 & 3 application.

1. The list of proposed uses is accurate pursuant to Table 1, Table of Uses. It would be my opinion that a Building and Construction Trades Shop or Garage (BCTSG) cannot be combined with the other two (2) uses proposed as they are mutually exclusive of each other pursuant to definition in Section 2.
2. There are five (5) bays identified in the plans which gives a confusing aspect to the limitation to having only four (trades) on a property. See definition Section 2.
3. The proposed parking appears to violate setbacks pursuant to Section 23-A.
4. The mixed-use building contains a residential unit which automatically requires the entire building to be sprinkled. MA State Building Code amendments Chapter 9.

Thank you,

Victor

Victor Staley
Alternate Building Commissioner
508-896-3701 ext. 1125

Lynn St. Cyr

From: Sherrie McCullough
Sent: Tuesday, March 5, 2024 9:40 AM
To: Lynn St. Cyr
Subject: Special Permit and Site Plan Review Case No. 2024-04, Map 77, Parcel 9

Hi Lynn,

Health Department comments are as follows based upon information provided at this time.

- This parcel of land lies outside the Zone II, and the District of Critical Planning Concern (DCPC). The parcel lies within the Cape Cod Bay Watershed and has access to town water.
- The proposed septic system shall be fully compliant with both the State Sanitary Code (Title 5) and the Local Brewster Board of Health requirements and may require review by the Brewster Board of Health.
- Any proposed outdoor seating with waiter/waitress service for the proposed restaurant must be included in the total septic capacity. Additionally, any proposed outdoor food service will require approval of an Outdoor Café License through the Board of Health.
- Any proposed hazardous material storage or disposal must meet appropriate requirements.
- Prior to construction, septic plans and a Building Waiver Application will need to be submitted to the Health Department for a full department review prior to final approval.

Respectfully submitted,

Sherrie

Sherrie McCullough R.S.

Assistant Health Director
Town of Brewster

Beginning March 21, Brewster Town Offices will be open to the public Monday through Thursday from 8:30 to 4:00pm, and by appointment on Fridays. For the latest updates on Town services, please visit www.brewster-ma.gov.

Lynn St. Cyr

From: Robert Moran
Sent: Friday, March 1, 2024 3:38 PM
To: Lynn St. Cyr; James Gallagher; Richard Leibowitz; Victor Staley; William Grafton; Griffin Ryder; Kevin Varley; Scott Romer; Amy von Hone; Erika Glidden; Chris Miller; Jonathon Idman; Charles Mawn; Peter Lombardi; Donna Kalinick; Paul Anderson
Subject: RE: Request for Comments-162 Underpass Road (Map 77, Parcel 9) and Underpass Road (Map 77, Parcel 10 & 60)
Attachments: Whitcomb-Staff-Review-Underpass-3-24.docx; Wallace-Staff-Review-Underpass-3-24.docx

Hi Lynn, fd comments remain the same and are attached. I am meeting with John O'Reilly Wednesday regarding parking lot access and egress.

Robert Moran
Fire Chief/Emergency Management Director
Brewster Fire/Rescue Department
1671 Main Street
Brewster, MA 02631
(W) 508-896-7018
(F) 508-896-4245

From: Lynn St. Cyr <lstcyr@brewster-ma.gov>
Sent: Tuesday, February 27, 2024 11:58 AM
To: James Gallagher <jgallagher@brewster-ma.gov>; Richard Leibowitz <rleibowitz@brewster-ma.gov>; Victor Staley <vstaley@brewster-ma.gov>; William Grafton <wgrafton@brewster-ma.gov>; Griffin Ryder <gryder@brewster-ma.gov>; Robert Moran <rmoran@brewster-ma.gov>; Kevin Varley <kvarley@brewster-ma.gov>; Scott Romer <sromer@brewster-ma.gov>; Amy von Hone <avonhone@brewster-ma.gov>; Erika Glidden <eglidden@brewster-ma.gov>; Chris Miller <cmiller@brewster-ma.gov>; Jonathon Idman <jldman@brewster-ma.gov>; Charles Mawn <cmawn@brewster-ma.gov>; Peter Lombardi <plombardi@brewster-ma.gov>; Donna Kalinick <dkalinick@brewster-ma.gov>; Paul Anderson <panderson@brewster-ma.gov>
Subject: Request for Comments-162 Underpass Road (Map 77, Parcel 9) and Underpass Road (Map 77, Parcel 10 & 60)

Good morning,

Attached please find applications for:

Special Permit and Site Plan Review Case No. 2024-04

Applicant The Free Sea Turtle, LLC, Paul Wallace, Manager, for property located at 162 Underpass Road (Map 77, Parcel 9) in the Commercial High Density (CH) Zoning District. The Applicant proposes to construct two commercial buildings. The larger western building is proposed to have two floors and contain eight commercial units. There are several proposed uses for the commercial units. Please see the narrative included with application for further detail on these uses. The second commercial building is proposed as a full-service restaurant and lounge.

Special Permit and Site Plan Review Case No. 2024-05

Applicant 162 Underpass LLC, Charles Whitcomb III, Manager, for property located at Underpass Road (Map 77, Parcel 10&60) in the Commercial High Density (CH) Zoning District. The Applicant proposes one commercial building with five bays with a proposed use of building and construction trades shop or garage. Additionally, outside storage of business materials and more than two commercial vehicles are also proposed on site. An attached two-bedroom security dwelling is also proposed.

Fire Department Comments Underpass Road Wallace Staff Review

1. Per MGL Chapter 48 Section 26G buildings totaling more than 7,500 gross square feet shall be protected by an adequate system of automatic sprinklers in accordance with the provisions of the State Building Code.
2. The facility shall meet all requirements contained within 527 CMR 1.00 Massachusetts Comprehensive Fire Safety Code including all referenced NFPA Standards.
3. A computer-generated apparatus swept path and turn simulation analysis shall be provided to the fire department for review and approval.
4. Fire department access roads including roadways, fire lanes, and parking lot lanes shall be no less than 20' in width.
5. Minimum inside turning radius of fire department access roads shall be 25'. The developer may be required to increase this minimum turning radius to accommodate fire department apparatus.
6. All vehicles shall be parked in designated parking spaces only. Parking for restaurant food pick-up service on interior parking lot lanes shall not be allowed.
7. Dead end fire department access roads in excess of 150' in length shall be provided with approved provisions for fire apparatus to turn around (west side of building).
8. All access and interior parking lot lanes shall be designated as fire lanes. All signage and road markings shall be approved by the fire department prior to installation and issuance of a certificate of occupancy.
9. Area in front of garage bays shall be designated as a fire lane. Parking shall not be allowed.
10. A graded gravel pathway no less than 25' in width shall be installed on the exterior south side of the building to allow fire department access for fire suppression operations.
11. The developer shall install two (2) fire hydrants. The location shall be approved by the fire department prior to installation.
12. The fire department shall approve the location and type of fire department connections for the automatic sprinkler system prior to installation.

13. The fire department shall approve the location of all fire and carbon monoxide detection system reporting panels required under the State Building Code prior to installation.
14. An Emergency Responder Radio Communication System shall be installed in the building per section 916.1 of the Massachusetts State Building Code.
15. A Knox box key vault shall be installed on the building. Location and type shall be approved by the fire department prior to installation and issuance of a certificate of occupancy.
16. Street address and building unit numbers shall be approved by the fire department and installed prior to the issuance of a certificate of occupancy.
17. Dependent on occupancy and use of contractor bays special fire protection/detection systems meeting the State Building Code may be required.
18. Storage of any hazardous, flammable, combustible, or explosive materials in the contractor bays shall meet the requirements set forth in 527 CMR 1.00 Massachusetts Comprehensive Fire Safety Code.

Lynn St. Cyr

From: Charles Mawn
Sent: Friday, March 1, 2024 1:50 PM.
To: Lynn St. Cyr
Subject: Re: Request for Comments-162 Underpass Road (Map 77, Parcel 9) and Underpass Road (Map 77, Parcel 10 & 60)

Lynn,

Police Dept. has no comments

Lt. Charles Mawn
Brewster Police Dept.
631 Harwich Rd.
Brewster, MA. 02631
Phone: (508) 896-7011
Fax: (508) 896-4525
Email: cmawn@brewster-ma.gov



From: Lynn St. Cyr <lstcyr@brewster-ma.gov>
Sent: Tuesday, February 27, 2024 11:57 AM
To: James Gallagher <jgallagher@brewster-ma.gov>; Richard Leibowitz <rleibowitz@brewster-ma.gov>; Victor Staley <vstaley@brewster-ma.gov>; William Grafton <>wgrafton@brewster-ma.gov>; Griffin Ryder <gryder@brewster-ma.gov>; Robert Moran <rmoran@brewster-ma.gov>; Kevin Varley <kvarley@brewster-ma.gov>; Scott Romer <sromer@brewster-ma.gov>; Amy von Hone <avonhone@brewster-ma.gov>; Erika Glidden <eglidden@brewster-ma.gov>; Chris Miller <cmiller@brewster-ma.gov>; Jonathon Idman <jldman@brewster-ma.gov>; Charles Mawn <cmawn@brewster-ma.gov>; Peter Lombardi <plombardi@brewster-ma.gov>; Donna Kalinick <dkalinick@brewster-ma.gov>; Paul Anderson <panderson@brewster-ma.gov>
Subject: Request for Comments-162 Underpass Road (Map 77, Parcel 9) and Underpass Road (Map 77, Parcel 10 & 60)

Good morning,

Attached please find applications for:

Special Permit and Site Plan Review Case No. 2024-04

Applicant The Free Sea Turtle, LLC, Paul Wallace, Manager, for property located at 162 Underpass Road (Map 77, Parcel 9) in the Commercial High Density (CH) Zoning District. The Applicant proposes to construct two commercial buildings. The larger western building is proposed to have two floors and contain eight commercial units. There are several proposed uses for the commercial units. Please see the narrative included with application for further detail on these uses. The second commercial building is proposed as a full-service restaurant and lounge.

Special Permit and Site Plan Review Case No. 2024-05

Applicant 162 Underpass LLC, Charles Whitcomb III, Manager, for property located at Underpass Road (Map 77, Parcel 10&60) in the Commercial High Density (CH) Zoning District. The Applicant proposes one commercial building with five bays with a proposed use of building and construction trades shop or garage. Additionally, outside storage of business materials and more than two commercial vehicles are also proposed on site. An attached two-bedroom security dwelling is also proposed.

The Applicants have submitted separate applications, building plans, and landscaping plans for their projects. They have submitted a joint plan set, traffic memorandum, and lighting specifications for their projects. All are included in the attached "PB#2024-04 and PB#2024-05 combined application" pdf.

Also attached for reference are the staff reports from the two previous staff review meetings (January 2023 and August 2023) on these projects.

All referenced documents are also available for review in the Planning Department.

These applications have been scheduled for hearing before the Planning Board on **Wednesday, March 13, 2024**. If possible, please provide your comments on these applications by **Friday, March 8, 2024**.

Thank you,
Lynn

Lynn St. Cyr
Senior Department Assistant, Planning Department
Town of Brewster
2198 Main Street, Brewster, MA 02631
T: 508-896-3701 x1233

Brewster Town Offices will be open to the public Monday through Thursday from 8:30 am to 4:00 pm, and by appointment on Fridays. For the latest updates on Town services, please visit www.brewster-ma.gov.

Lynn St. Cyr

From: Chris Miller
Sent: Tuesday, February 27, 2024 12:20 PM
To: Lynn St. Cyr
Subject: RE: Request for Comments-162 Underpass Road (Map 77, Parcel 9) and Underpass Road (Map 77, Parcel 10 & 60)

Hi Lynn, no specific comments from Natural Resources; Bill will respond separately for Conservation.

--
Chris Miller, Director
Brewster Department of Natural Resources
508-896-4546 x4244
cmiller@brewster-ma.gov

Brewster Town Offices are open to the public Monday through Thursday from 8:30 am to 4:00 pm, and by appointment on Fridays. For the latest updates on Town services, please visit www.brewster-ma.gov

From: Lynn St. Cyr <lstcyr@brewster-ma.gov>
Sent: Tuesday, February 27, 2024 11:58 AM
To: James Gallagher <jgallagher@brewster-ma.gov>; Richard Leibowitz <rleibowitz@brewster-ma.gov>; Victor Staley <vstaley@brewster-ma.gov>; William Grafton <wgrafton@brewster-ma.gov>; Griffin Ryder <gryder@brewster-ma.gov>; Robert Moran <rmoran@brewster-ma.gov>; Kevin Varley <kvarley@brewster-ma.gov>; Scott Romer <sromer@brewster-ma.gov>; Amy von Hone <avonhone@brewster-ma.gov>; Erika Glidden <eglidden@brewster-ma.gov>; Chris Miller <cmiller@brewster-ma.gov>; Jonathon Idman <jdman@brewster-ma.gov>; Charles Mawn <cmawn@brewster-ma.gov>; Peter Lombardi <plombardi@brewster-ma.gov>; Donna Kalinick <dkalinick@brewster-ma.gov>; Paul Anderson <panderson@brewster-ma.gov>
Subject: Request for Comments-162 Underpass Road (Map 77, Parcel 9) and Underpass Road (Map 77, Parcel 10 & 60)

Good morning,

Attached please find applications for:

Special Permit and Site Plan Review Case No. 2024-04

Applicant The Free Sea Turtle, LLC, Paul Wallace, Manager, for property located at 162 Underpass Road (Map 77, Parcel 9) in the Commercial High Density (CH) Zoning District. The Applicant proposes to construct two commercial buildings. The larger western building is proposed to have two floors and contain eight commercial units. There are several proposed uses for the commercial units. Please see the narrative included with application for further detail on these uses. The second commercial building is proposed as a full-service restaurant and lounge.

Special Permit and Site Plan Review Case No. 2024-05

Applicant 162 Underpass LLC, Charles Whitcomb III, Manager, for property located at Underpass Road (Map 77, Parcel 10&60) in the Commercial High Density (CH) Zoning District. The Applicant proposes one commercial building with five bays with a proposed use of building and construction trades shop or garage. Additionally, outside storage of business materials and more than two commercial vehicles are also proposed on site. An attached two-bedroom security dwelling is also proposed.

The Applicants have submitted separate applications, building plans, and landscaping plans for their projects. They have submitted a joint plan set, traffic memorandum, and lighting specifications for their projects. All are included in the attached "PB#2024-04 and PB#2024-05 combined application" pdf.

Also attached for reference are the staff reports from the two previous staff review meetings (January 2023 and August 2023) on these projects.

All referenced documents are also available for review in the Planning Department.

These applications have been scheduled for hearing before the Planning Board on **Wednesday, March 13, 2024**. If possible, please provide your comments on these applications by **Friday, March 8, 2024**.

Thank you,
Lynn

Lynn St. Cyr
Senior Department Assistant, Planning Department
Town of Brewster
2198 Main Street, Brewster, MA 02631
T: 508-896-3701 x1233

Brewster Town Offices will be open to the public Monday through Thursday from 8:30 am to 4:00 pm, and by appointment on Fridays. For the latest updates on Town services, please visit www.brewster-ma.gov.



Town of Brewster
Planning Board
Ch. 179 Application Cover Sheet

FOR TOWN OFFICIAL USE ONLY

TOWN CLERK RECEIVED:

24 FEB 5 10 16 AM

BREWSTER TOWN CLERK

PERMIT NUMBER ASSIGNED:

FB# 2024-04

Project Location:

162 Underpass Road

Street Address

Map 77, Parcel 9

Assessors Map(s) and Parcel(s)

Book 35532, Page 98

Deed/ Title Reference

Zone CH

Zoning District(s)

Applicant:

The Free Sea Turtle, LLC

Name

21 Crosby Lane, Brewster, MA 02631

Mailing Address

508-246-2892

Phone Number

paulwallace@outerbarco.com

Email Address

Property Owner (if different than Applicant):

Same

Name

Mailing Address

Phone Number

Email Address

Professional Representative:

John O'Reilly, P.E., P.L.S., of J.M. O'REILLY & ASSOCIATES, INC.

Name

P.O. Box 1773, Brewster, MA 02631

Mailing Address

508-896-6601

Phone Number

joreilly@jmoreillyassoc.com

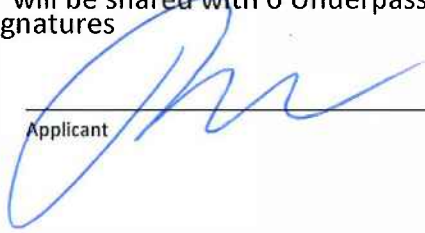
Email Address

Type of Application (Check as applicable):

- Special Permit
(Zoning Bylaw Section 179-51 or list other or different Zoning Bylaw Sections, as applicable, below)
- Site Plan Review (Zoning Bylaw Section 179-63)
- Decision Modification (Provide relevant case number/s below)
- Decision Extension (Provide relevant case number/s below)
- Other (List Zoning Bylaw Section/s below)

Brief Project Description: The project proposes two commercial buildings along with associated parking and landscape. The proposed uses on the parcel are a restaurant space (front Building) and a second building for Commercial spaces / contractor bay (rear building). The parking area

will be shared with 0 Underpass Road (162 Underpass LLC)
Signatures

 _____ Date 2/2/2024

Property Owner (if different than Applicant) _____ Date

 _____ Date 2-2-2024

If the Applicant is not the Owner, the Application materials shall include the Owner’s written consent or authorization to make application, or evidence that the Applicant’s interest in the property is sufficient to make application (e.g. lease, P&S Agreement, etc.).

The burden is on the applicant to provide accurate, sufficient and complete information in the application. Attached is a checklist of materials and information required to be submitted for a complete application. Incompleteness could be cause for delays in review or denial of an application.

By making application, the Owner and Applicant hereby authorize the Planning Board and its agents to conduct site visits, at reasonable times, to assist in review of the application.

Please refer to current Planning Board schedule for application filing deadlines and associated meeting dates. The Board will make best efforts to work within this filing schedule but is not obligated to do so; the Board’s review timelines are established under the Brewster Code and Massachusetts General Laws. In its discretion, the Board may agenda matters, which do not require public hearings, for the next available meeting even if received after the respective filing deadline.

**Submit to: Brewster Planning Department
Town Offices- 2198 Main Street
Brewster, Massachusetts 02631-1898
(508) 896-3701 x 1133
brewplan@brewster-ma.gov**

N O T N O T
A N A N
O F F I C I A L O F F I C I A L
C O P Y QUITCLAIM DEED C O P Y

Both, **162 UNDERPASS LLC**, a Massachusetts Limited Liability Company with a mailing address of 76 Aunt Sophie's Road, Brewster, MA 02631 and **THE FREE SEA TURTLE LLC**, a Massachusetts Limited Liability Company with a mailing address of 21 Crosby Lane, Brewster, MA 02631,

for consideration paid in the amount **ONE and 00/100 (\$1.00) DOLLAR,**

grant to **THE FREE SEA TURTLE LLC**, a Massachusetts Limited Liability Company with a mailing address of 21 Crosby Lane, Brewster, MA 02631,

WITH QUITCLAIM COVENANTS, the land, with buildings thereon, situated in Brewster, Barnstable County, Massachusetts, described as follows:

**LOT 1
PLAN BOOK 698, PAGE 25**

Containing an area of 44,200 square feet of land, more or less, and being shown as **Lot 1** on Plan entitled, "Plan of Land in Brewster Massachusetts at 162 Underpass Road" as surveyed and prepared for The Free Sea Turtle, LLC and 162 Underpass, LLC Scale 1 in. = 30 ft. October 19, 2022, J.M. O'Reilly & Associates, Inc., 1573 Main Street, P.O. Box 1773, Brewster, Massachusetts 02631", recorded with Barnstable County Registry of Deeds in Plan Book 698, Page 25.

The above-described premises are conveyed subject to and together with the benefit of any rights, rights of way, reservations, restrictions, easements and other matters of record, insofar as the same are in force and applicable.

For title, see Deeds recorded with Barnstable County Registry of Deeds in Book 35100, Page 13.

Grantors release any and all homestead rights to the within premises, whether created by declaration or operation of law, and further states under the pains and penalties of perjury that the herein described premises were not the primary residence of the grantors or their spouses and that there are no other individuals entitled to homestead rights to the property being conveyed herein.

Property Address: 162 Underpass Road, Brewster, Massachusetts 02631

N O T
A N
O F F I C I A L
C O P Y

N O T
A N
O F F I C I A L
C O P Y

Executed as a sealed instrument under the pains and penalties of perjury this 2nd day of
December, 2022

N O T
A N
O F F I C I A L
C O P Y

N O T
A N
O F F I C I A L
C O P Y

162 UNDERPASS LLC



Charles Whitcomb, III, Manager

COMMONWEALTH OF MASSACHUSETTS

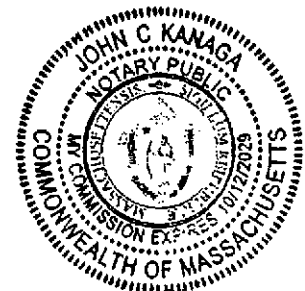
Barnstable, ss
(County)

December 2, 2022

On the above date, before me, the undersigned notary public, personally appeared **Charles Whitcomb, III, Manager of 162 Underpass LLC** who proved to me through satisfactory evidence of identification, which was a photographic identification with signature issued by a federal or state governmental agency, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he signed it voluntarily for its stated purpose and who swore or affirmed to me that the contents of the attached document are truthful and accurate to the best of his knowledge and belief.



Notary Public
My commission expires:



N O T
A N
O F F I C I A L
C O P Y

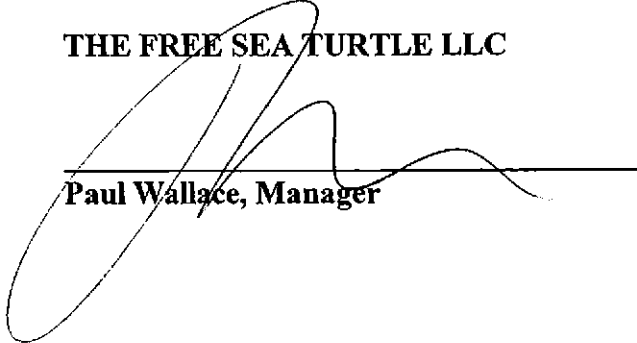
N O T
A N
O F F I C I A L
C O P Y

Executed as a sealed instrument under the pains and penalties of perjury this 2nd day of
December, 2022

N O T
A N
O F F I C I A L
C O P Y

N O T
A N
O F F I C I A L
C O P Y

THE FREE SEA TURTLE LLC



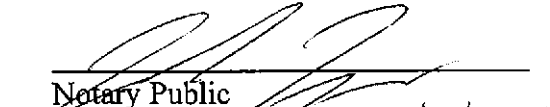
Paul Wallace, Manager

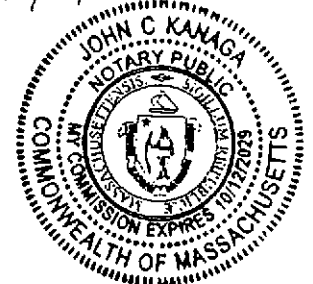
COMMONWEALTH OF MASSACHUSETTS

Barnstable, ss
(County)

December 2, 2022

On the above date, before me, the undersigned notary public, personally appeared **Charles Whitcomb, III, Manager of 162 Underpass LLC** who proved to me through satisfactory evidence of identification, which was a photographic identification with signature issued by a federal or state governmental agency, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he signed it voluntarily for its stated purpose and who swore or affirmed to me that the contents of the attached document are truthful and accurate to the best of his knowledge and belief.


Notary Public
My commission expires: 10/12/2029





The Commonwealth of Massachusetts

Secretary of the Commonwealth

State House, Boston, Massachusetts 02133

COPY COPY

William Francis Galvin
Secretary of the
Commonwealth

NOT NOT

AN AN
December 5, 2022

OFFICIAL OFFICIAL

TO WHOM IT MAY CONCERN: COPY

I hereby certify that a certificate of organization of a Limited Liability Company was filed in this office by

162 UNDERPASS LLC

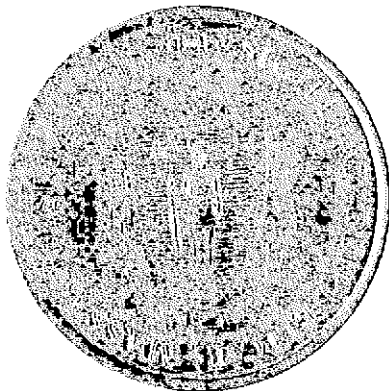
in accordance with the provisions of Massachusetts General Laws Chapter 156C on **May 5, 2022.**

I further certify that said Limited Liability Company has filed all annual reports due and paid all fees with respect to such reports; that said Limited Liability Company has not filed a certificate of cancellation; that there are no proceedings presently pending under the Massachusetts General Laws Chapter 156C, § 70 for said Limited Liability Company's dissolution; and that said Limited Liability Company is in good standing with this office.

I also certify that the names of all managers listed in the most recent filing are:
CHARLES WHITCOMB III

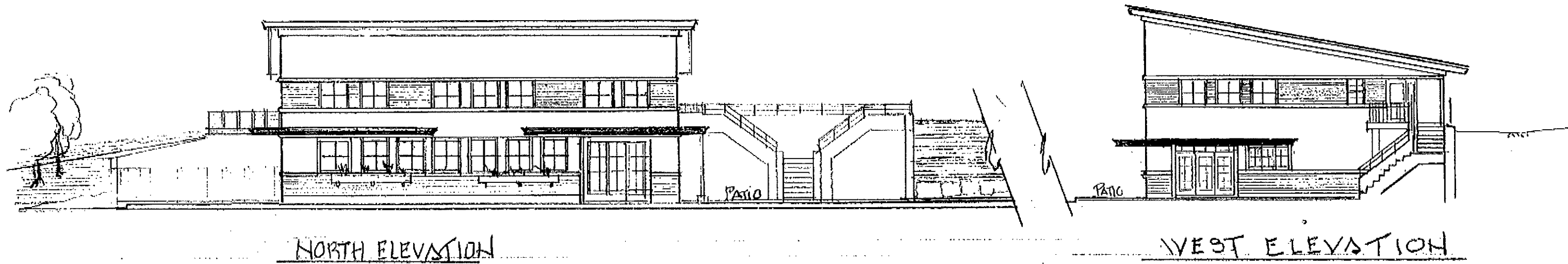
I further certify, the names of all persons authorized to execute documents filed with this office and listed in the most recent filing are: **CHARLES WHITCOMB III**

The names of all persons authorized to act with respect to real property listed in the most recent filing are: **CHARLES WHITCOMB III**



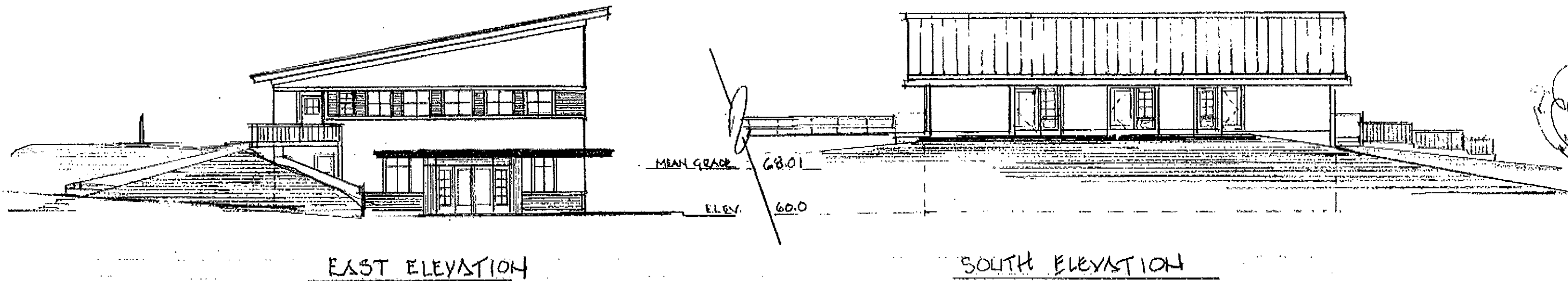
In testimony of which,
I have hereunto affixed the
Great Seal of the Commonwealth
on the date first above written.

William Francis Galvin
Secretary of the Commonwealth



NORTH ELEVATION

WEST ELEVATION

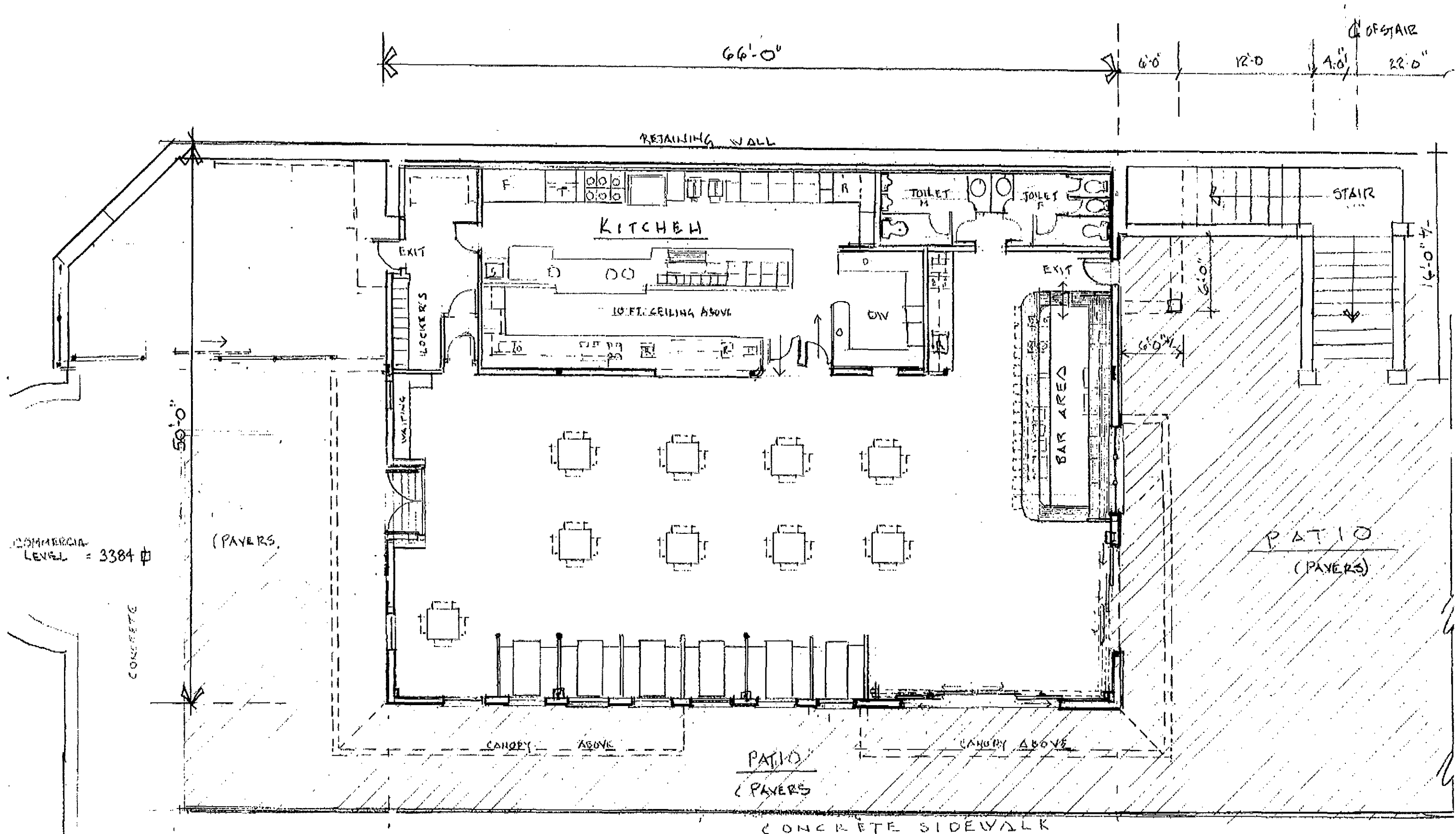


EAST ELEVATION

SOUTH ELEVATION

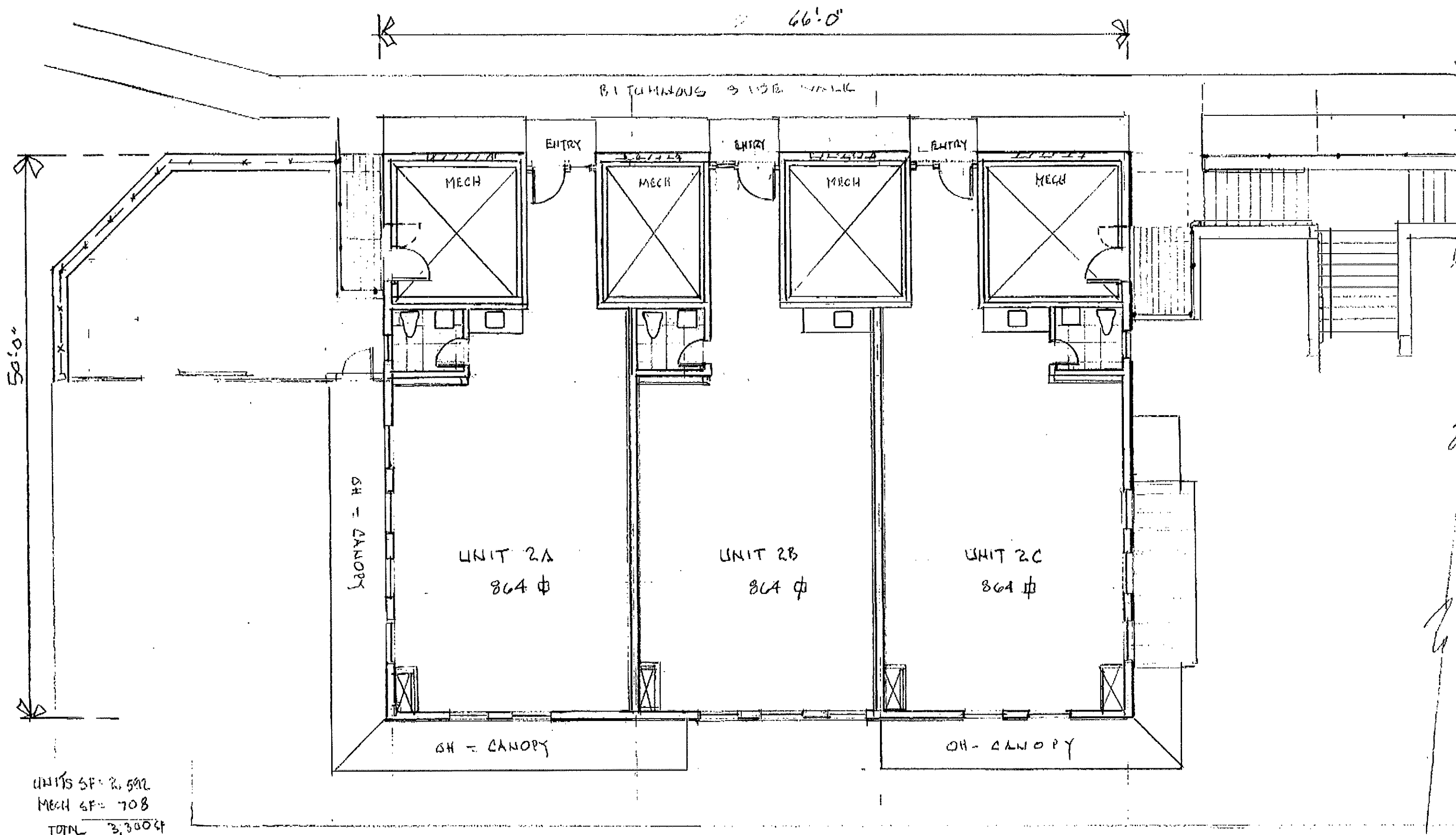
PROPOSED COMMERCIAL BUILDING EXTERIOR ELEVATIONS @ 162 UNDERPASS ROAD, BREWSTER MA. 02631
 SCALE: 1/16" = 1'-0"

OWNER
 THE FREE TURTLE LLC
 DATE: 3.20.2024



PROPOSE COMMERCIAL LEVEL GROUND FLOOR @ 162 UNDERPASS ROAD, BREVSTER, MA 02631
 SCALE 1/8"=1'-0"

OWNER
 THE FREE TURTLE LLC
 DATE 3.20.2024



66'-0"

50'-0"

BI TURNINGS TO USE WALK

UNIT 2A
864 ϕ

UNIT 2B
864 ϕ

UNIT 2C
864 ϕ

OH - CANOPY

OH - CANOPY

OH - CANOPY

UNITS SF: 2,592
MECH SF: 708
TOTAL 3,300 SF

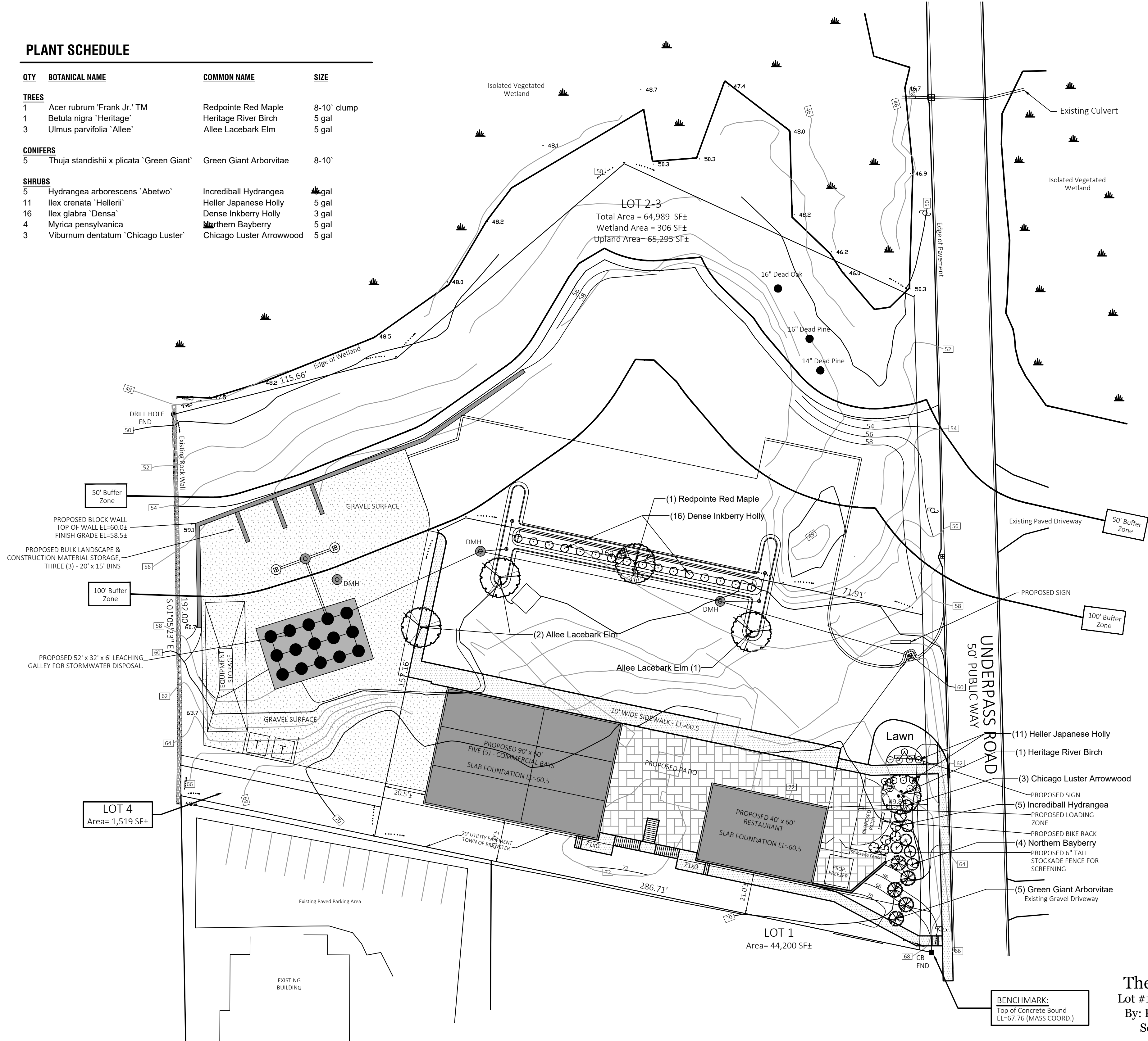
PROPOSED COMMERCIAL LEVEL UPPER FLOOR @ 162 UNDERPASS ROAD, BREWSTER MA 02631
SCALE 1/8" = 1'-0"

CURB LINE

OWNER
THE FREE TURTLE LLC
DATE 3-20-2024

PLANT SCHEDULE

QTY	BOTANICAL NAME	COMMON NAME	SIZE
TREES			
1	Acer rubrum 'Frank Jr.' TM	Redpointe Red Maple	8-10' clump
1	Betula nigra 'Heritage'	Heritage River Birch	5 gal
3	Ulmus parvifolia 'Allee'	Allee Lacebark Elm	5 gal
CONIFERS			
5	Thuja standishii x plicata 'Green Giant'	Green Giant Arborvitae	8-10'
SHRUBS			
5	Hydrangea arborescens 'Abetwo'	Incrediball Hydrangea	5 gal
11	Ilex crenata 'Hellerii'	Heller Japanese Holly	5 gal
16	Ilex glabra 'Densa'	Dense Inkberry Holly	3 gal
4	Myrica pensylvanica	Northern Bayberry	5 gal
3	Viburnum dentatum 'Chicago Luster'	Chicago Luster Arrowwood	5 gal



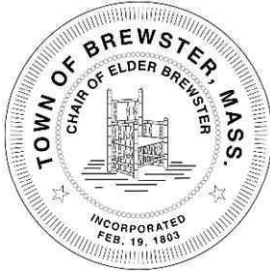
Landscape Plan

The Free Sea Turtle, LLC
 Lot #1 @162 Underpass Rd., Brewster
 By: Philip L. Cheney 508-394-1373
 Scale: 1" = 30'-0" 2/20/2024

BENCHMARK:
 Top of Concrete Bound
 EL=67.76 (MASS COORD.)

CASE NO. 2024-05 ONLY

**DOCUMENTS FOR
162 UNDERPASS LLC
CHARLES WHITCOMB III, MANAGER
0 UNDERPASS ROAD**



Town of Brewster

2198 Main Street
Brewster, MA 02631-1898
Phone: (508) 896-3701
Fax: (508) 896-8089

Office of:
Planning Board
Planning Dept.

STAFF REPORT

TO: Planning Board
FROM: Town Planner
Re: Case No. PB24-5: Special Permit & Site Plan Review
0 Underpass Road (M 77 PCLs 10 & 60), 162 Underpass, LLC
Plan Book 698, Page 25, Lots 2 & 3 (“Lot 2/3”)
DATE: April 2, 2024

This is not intended to be a comprehensive or final report on the project, but rather preliminary comments that will be supplemented and revised throughout the pendency of review. Specifically, I plan to provide my recommendations and opinions about the project’s consistency with site plan review and special permit standards later in the hearing/ review period.

Copies of comments from the formal, pre-filing Staff Review process have also been provided to assist the Board, though these comments refer to iterative project designs elements that may now have been revised in the application plan set.

General

- The property is located in the CH (commercial) district.
- Because of the new uses and floor area proposed, the proposed development is subject to site plan review.
- The proposed development underwent formal Staff Review, as required.
- The development lot is composed of Lots 2&3 shown on Plan Book 698, Page 25. As a condition of any approval, the applicant will be required to prepare a so-called “81X” perimeter plan of the property to effectively merge the parcels.
- Wetlands and wetland buffer zones exist onsite. The proposed development has received an Order of Conditions from the Conservation Commission.
- Efforts have been made to place as much development as possible outside wetlands buffer areas; the septic system is located entirely outside the wetlands buffer.
- No floodplains, impaired marine watershed area, or Zone II areas are located on the lot.
- Some of the lot has mapped conservancy soils; however, building development is not proposed within these mapped areas.
- There is a significant change in grade throughout the property, and a retaining wall is proposed along the property’s western boundary.
- The property is currently vacant, is largely disturbed and was previously used for an excavation business.
- Small “Lot 4” shown on the site plans and Plan Book 698, Page 25 is not included in the development proposal.

Uses

- The proposed uses are allowed in the CH district: Building and Construction Trades (special permit) & security dwelling (by right).
- One, single story 5000 sq ft gfa building is proposed (exclusive of the security dwelling which is proposed to be connected/ joined to the metal space building). 5 contractor units/ bays are proposed (1000 sq ft each).
- The security dwelling is limited to use and occupancy (owner/ caretaker) as described in the Zoning Bylaw.
- The Building and Construction Trades use¹ allows up to four contractor businesses on a site, in one or more buildings of no more than 6000 sq ft floor area total. Five bays/ units are proposed. Thus, any approval should be conditioned that there be no more than four building and construction trades businesses on-site.
- Material and equipment storage is also proposed, accessory to the principal contractor uses. As shown on the site plan, there is what appears to be three bulk material storage bins (formed with retaining walls), as well as ‘equipment storage,’ in the western part of the lot.
- The Planning Board will need to decide whether the material bins constitute storage as allowed in the CH district and/ or as part of a defined Building and Construction Trades use.²
- If the materials storage bins are deemed allowed and appropriate, it appears that some or all of the six gravel parking spaces proposed should be eliminated or relocated to avoid space or safety conflicts. It is my opinion that even without these six spaces, there are sufficient shared spaces proposed (49) to serve the abutting developments, and that the Board would have the authority to approve the same. The Board may also consider whether trees/ shrubs should be proposed to buffer the materials bin, perhaps along the curb shown abutting the proposed gravel parking spaces.
- In addition, the Applicant should clarify/ provide details about the “proposed equipment storage” shown on the plan. The storage should be enclosed, such as in a storage container, and as such is also subject to yard setback requirements, compliance with which should be confirmed.
- At any rate, it appears that as might be allowed, the equipment and material storage needs to be related to a contractor business on the site, rather than operate as a separate or independent use or business.
- Storage of commercial vehicles would also be allowed on the lot, as proposed.

¹ **BUILDING AND CONSTRUCTION TRADES SHOP OR GARAGE:** *A single structure or up to four separate structures, the combined square footage of which shall not exceed 6,000 square feet, housing up to four building-trade-related businesses, such as construction, electrical, heating or plumbing contracting, but not including excavation or septic installer. **All business activities shall be confined to within the structure(s).** (Emphasis added.)*

² **Open** storage of construction equipment and structures for storing such equipment” are allowed in the Industrial District but not the CH district. (Emphasis added.) “Storage of materials for a business, including but not limited to pipes, mulch, small or heavy equipment” is allowed both in the Industrial and CH Districts.

Infrastructure

- The proposed development has received a Stormwater Management Permit. The approved stormwater management system is consistent with stormwater management standards under site plan review.
- In addition to stormwater management, the proposed development shares infrastructure and improvements with the development proposed on abutting Lot 1 (pending case PB24-4): access and driveways; landscaping; signage; bike rack; dumpsters; and parking.

Landscaping

- The application states that there is a proposed evergreen buffer along the western property line with the abutting town property (Eddy School). This is not shown or referenced on the landscape plan but should be.
- There are infill plantings proposed within the area of the former curbcut to be abandoned (which is north of the new proposed curbcut).
- The landscape plan includes restoration planting of the wetlands buffer, as reviewed and approved by the Conservation Commission.
- The landscape plan uses native species or species appropriate to the area and context. It appears that in addition to the existing vegetation, the proposed plantings would create a continuous buffer along Underpass Road; the Board should confirm the sufficiency of this buffer.
- The proposed lawn areas should be confirmed as turf-type tall fescue.
- The landscape details sheet in the site plan set should be revised to recognize that the water quality swale will be planted with shrubs, not turf, thus reference to loam and seed should be revised.

Building Design

- Two master signs are proposed, both on 'Lot 1,' presumably to serve both Lot 1 and Lot 2/3. The Building Commissioner is the master sign permitting authority. Depending on their proposed size, the master signs may require a special permit from the Planning Board.
- The application generally states the exterior building finishes. The Board might want more specific details on materials.
- The lighting fixtures selected can be ordered as "fully shielded, full cut-off." Any approval should condition the lighting to be fully shielded and full cut-off.

Parking

- The Zoning Bylaw allows the Board through site plan review to waive or modify parking and drive aisle width requirements (including parking space setbacks and number of spaces), especially useful in cases where parking and access is to be shared. The proposal requests and relies on such flexibility for parking setbacks and driveway width. See Zoning Bylaw Sections 179-23A and 179-66(B) & (D).
- The proposed number of shared spaces proposed between the two abutting developments (55) is consistent with the Board's parking policy (September 11, 2013), as calculated in the site plan set.
- It appears that parking is curbed, so no wheel stops are necessary.
- All units will have overhead doors, which is sufficient for required loading zones.

Traffic/ Access

- The applicant's engineer has met with the Fire Chief to confirm adequate site access and circulation for emergency service vehicles (see 'swept path analysis' in site plan set).
- The Applicant provided a transportation assessment by VHB for the proposed developments, including trip generation, level of service, crash data and sight line analyses. It concludes that the proposed access drive is located in the safest possible location and has sufficient sight lines; there is not a crash history in the area of locus; and that the resulting level of service in the roadways under proposed development conditions remains acceptable.
- Trip reduction measures are proposed to mitigate new trip generation. For trip reduction measures, the Applicant is proposing a travel demand management (TDM) program, which would, as a condition of any approval, be implemented onsite amongst the various tenants/ users when the project is completed and buildings occupied.
- The TDM program would include a proposed sidewalk on-site along Underpass Road, along with a crosswalk, to connect with the sidewalk system along the east side of the road. The proposed new site access drive and crosswalk is towards the southern end of the property, in proximity to the new curb cut/ access drive. A bike rack is also proposed on the restaurant patio. The TDM program should take note that the CCRTA has a fixed route along Underpass Road, with a stop only a short distance to the south of the property at the intersection of Snow Road and Underpass Road.
- The Board might want to consider how many bike rack spaces should be provided, as they will serve both proposed developments.
- The site dumpsters are shared, located on Lot 2/3, and access to them appears adequate.
- A curbcut/ driveway permit will be required from DPW; construction access and activities (including the proposed sidewalk and crosswalk on Underpass Road) should be coordinated with DPW prior to any commencement of work.

Lynn St. Cyr

From: William Grafton
Sent: Monday, March 11, 2024 12:29 PM
To: Lynn St. Cyr
Cc: Jonathon Idman
Subject: RE: Request for Comments-162 Underpass Road (Map 77, Parcel 9) and Underpass Road (Map 77, Parcel 10 & 60)

Lynn, sorry for the delayed response.

The applicants submitted a new Notice of Intent that was approved by the Brewster Conservation Commission as Order of Conditions/SE9-1962. This application was for the development of the property as summarized: The approved work includes the construction of a commercial building and stormwater features as well mitigation plantings associated with SE9-1920. A review of the approved Conservation Commission site plan dated 11/22/2023 prepared by J.M. O'Reilly & Associates, Inc. signed and stamped by John O'Reilly, PLS & RPE to the submitted site plan/Sheet 1 of 5 dated 02/02/2024 prepared by J.M. O'Reilly & Associates, Inc. indicates that the proposed work/activity within the 100-foot buffer to the wetlands does not require any further Conservation Permitting than what is already in place.

8. Final Approved Plans and Other Documents (attach additional plan or document references as needed):

<u>Proposed Site & Sewage Disposal Plan (Lot 2 & 3 at 0 Underpass Road, Brewster, MA)</u>	
a. Plan Title	
J.M. O'Reilly & Associates, Inc.	John O'Reilly, PLS & RPE
b. Prepared By	c. Signed and Stamped by
11/22/2023	As Noted
d. Final Revision Date	e. Scale
Landscape/Mitigation 162 Underpass, LLC Lot 2 @ 162	11/202/2023
Underpass Road, Brewster prepared by Philip L. Cheney	g. Date

The following SE9-1962/OOC Special Conditions are good reminders:

A13. Heavy equipment is permitted for use in the placement of fill and landscape grading. Vegetation management shall be completed by hand or with hand tools. No machinery shall be operated on the wetland side of the limit of work.

A22. Any fill materials used for project activities shall be clean. Fill shall not contain any trash, refuse, rubbish, or debris. The source, volume, and characterization of these materials shall be submitted prior to placement.

A23. After grading activities are completed, the areas of open soil shall be seeded with native grasses/plantings and stabilized. See the Vegetation Notes on the approved site plan dated 3/31/2023 referenced in A. General Information Item 8 of this Order of Conditions/WPA Form 5 SE9-1920 Amended for guidance.

A24. Mitigation plantings shall be in accordance with the approved mitigation planting plan and protocols referenced in A. General Information, Item 8 of these Order of Conditions (WPA Form 5/SE9-1962). The (38) thirty-eight native trees and shrubs shall be planted the first planting season following the completion of the commercial building within Conservation jurisdictional boundaries.

These Conservation Comments from the August 11, 2023 Staff Review are still relevant.

5. The Order of Conditions/SE9-1920 and SE9-1920 Amended should be closed with a Certificate of Compliance after the Conservation Commission has approved and issued the new Order of Conditions and proof of recording has been provided to the Conservation Administrator.
6. The SWMC2023-01 (stormwater permit through Conservation) should be closed out with a Certificate of Compliance after the Planning Board has approved and issued the new SWMP Permit.

Hope this is helpful.

Respectfully,

Bill Grafton
Brewster Conservation Administrator
1657 Main Street
Brewster, MA 02631
Phone (508) 896-4546 ext. 4242

Brewster Town Offices are open to the public Monday through Thursday from 8:30 to 4:00pm, and by appointment on Fridays. For the latest updates on Town services, please visit www.brewster-ma.gov

From: Lynn St. Cyr <lstcyr@brewster-ma.gov>

Sent: Tuesday, February 27, 2024 11:58 AM

To: James Gallagher <jgallagher@brewster-ma.gov>; Richard Leibowitz <rleibowitz@brewster-ma.gov>; Victor Staley <vstaley@brewster-ma.gov>; William Grafton <wgrafton@brewster-ma.gov>; Griffin Ryder <gryder@brewster-ma.gov>; Robert Moran <rmoran@brewster-ma.gov>; Kevin Varley <kvarley@brewster-ma.gov>; Scott Romer <sromer@brewster-ma.gov>; Amy von Hone <avonhone@brewster-ma.gov>; Erika Glidden <eglidden@brewster-ma.gov>; Chris Miller <cmiller@brewster-ma.gov>; Jonathon Idman <jldman@brewster-ma.gov>; Charles Mawn <cmawn@brewster-ma.gov>; Peter Lombardi <plombardi@brewster-ma.gov>; Donna Kalinick <dkalinick@brewster-ma.gov>; Paul Anderson <panderson@brewster-ma.gov>

Subject: Request for Comments-162 Underpass Road (Map 77, Parcel 9) and Underpass Road (Map 77, Parcel 10 & 60)

Good morning,

Attached please find applications for:

Special Permit and Site Plan Review Case No. 2024-04

Applicant The Free Sea Turtle, LLC, Paul Wallace, Manager, for property located at 162 Underpass Road (Map 77, Parcel 9) in the Commercial High Density (CH) Zoning District. The Applicant proposes to construct two commercial buildings. The larger western building is proposed to have two floors and contain eight commercial units. There are several proposed uses for the commercial units. Please see the narrative included with application for further detail on these uses. The second commercial building is proposed as a full-service restaurant and lounge.

Special Permit and Site Plan Review Case No. 2024-05

Applicant 162 Underpass LLC, Charles Whitcomb III, Manager, for property located at Underpass Road (Map 77, Parcel 10&60) in the Commercial High Density (CH) Zoning District. The Applicant proposes one commercial building with five bays with a proposed use of building and construction trades shop or garage. Additionally, outside storage of business materials and more than two commercial vehicles are also proposed on site. An attached two-bedroom security dwelling is also proposed.

The Applicants have submitted separate applications, building plans, and landscaping plans for their projects. They have submitted a joint plan set, traffic memorandum, and lighting specifications for their projects. All are included in the attached "PB#2024-04 and PB#2024-05 combined application" pdf.

Also attached for reference are the staff reports from the two previous staff review meetings (January 2023 and August 2023) on these projects.

All referenced documents are also available for review in the Planning Department.

These applications have been scheduled for hearing before the Planning Board on **Wednesday, March 13, 2024**. If possible, please provide your comments on these applications by **Friday, March 8, 2024**.

Thank you,
Lynn

Lynn St. Cyr
Senior Department Assistant, Planning Department
Town of Brewster
2198 Main Street, Brewster, MA 02631
T: 508-896-3701 x1233

Brewster Town Offices will be open to the public Monday through Thursday from 8:30 am to 4:00 pm, and by appointment on Fridays. For the latest updates on Town services, please visit www.brewster-ma.gov.

Lynn St. Cyr

From: Victor Staley
Sent: Thursday, March 7, 2024 11:54 AM
To: Lynn St. Cyr
Cc: Richard Leibowitz; Jonathon Idman; Erika Glidden; Victor Staley
Subject: FW: Request for Comments-162 Underpass Road (Map 77, Parcel 9) and Underpass Road (Map 77, Parcel 10 & 60)
Attachments: PB#2024-04 and PB#2024-05 combined application.pdf; Staff Report 23-2 and 23-3 Underpass Rd 011823.pdf; Staff Review Report 23-5 and 23-6 Underpass Rd 081123.pdf

Hello Lynn,

The Building Comments are as follows.

This review does not include the proposed signage as there was not enough information to assist in commenting on Zoning Bylaw compliance. All Sections identified are from the Brewster Zoning Bylaw unless otherwise noted.

Lot 1 application.

1. The list of proposed uses is accurate pursuant to Table 1, Table of Uses. If this petition is considered as Row Commercial, then the maximum building coverage is 25% rather than the 40% as presented. I could not determine if Lot 1 has a minimum of 25% green space. Please refer to Section 38.
2. All buildings and spaces open to the general public (including clients) shall satisfy the accessibility standards of 521 CMR.
3. Depending upon the actual uses to be introduced the MA State Building Code may require the building sprinkled, alarmed, or otherwise protected by fire rated assemblies.
4. The stair system identified at the rear of both buildings shall not exceed four (4) feet in height including hand/guardrail systems. Table 2, Note 5.

Lots 2 & 3 application.

1. The list of proposed uses is accurate pursuant to Table 1, Table of Uses. It would be my opinion that a Building and Construction Trades Shop or Garage (BCTSG) cannot be combined with the other two (2) uses proposed as they are mutually exclusive of each other pursuant to definition in Section 2.
2. There are five (5) bays identified in the plans which gives a confusing aspect to the limitation to having only four (trades) on a property. See definition Section 2.
3. The proposed parking appears to violate setbacks pursuant to Section 23-A.
4. The mixed-use building contains a residential unit which automatically requires the entire building to be sprinkled. MA State Building Code amendments Chapter 9.

Thank you,

Victor

Victor Staley
Alternate Building Commissioner
508-896-3701 ext. 1125

Lynn St. Cyr

From: Sherrie McCullough
Sent: Monday, March 4, 2024 5:12 PM
To: Lynn St. Cyr
Subject: Special Permit and Site Plan Review Case No. 2024-05, Map 77 Parcel 10 & 60

Hi Lynn,

Health Department comments are as follows based upon information provided at this time.

- This parcel of land lies outside the Zone II, and the District of Critical Planning Concern (DCPC). The parcel lies within the Cape Cod Bay Watershed and has access to town water. The property is located within an Environmentally Sensitive Area (ESA) per our local Board of Health regulation. The Property would be restricted to 110 gpd/10,000 sf of land area if there are any variances required for the for the proposed septic system.
- The proposed septic system shall be fully compliant with both the State Sanitary Code (Title 5) and the Local Brewster Board of Health requirements and may require review by the Brewster Board of Health.
- If the bays are to be accessible by vehicles, floor drains will be required in each bay and each floor drain will need to be connected to an industrial wastewater holding tank.
- Any proposed hazardous material storage or disposal must meet appropriate requirements.
- Prior to construction, septic plans and a Building Waiver Application will need to be submitted to the Health Department for full department review prior to final approval.

Respectfully submitted,

Sherrie

Sherrie McCullough R.S.

Assistant Health Director
Town of Brewster

Beginning March 21, Brewster Town Offices will be open to the public Monday through Thursday from 8:30 to 4:00pm, and by appointment on Fridays. For the latest updates on Town services, please visit www.brewster-ma.gov.

Lynn St. Cyr

From: Robert Moran
Sent: Friday, March 1, 2024 3:38 PM
To: Lynn St. Cyr; James Gallagher; Richard Leibowitz; Victor Staley; William Grafton; Griffin Ryder; Kevin Varley; Scott Romer; Amy von Hone; Erika Glidden; Chris Miller; Jonathon Idman; Charles Mawn; Peter Lombardi; Donna Kalinick; Paul Anderson
Subject: RE: Request for Comments-162 Underpass Road (Map 77, Parcel 9) and Underpass Road (Map 77, Parcel 10 & 60)
Attachments: Whitcomb-Staff-Review-Underpass-3-24.docx; Wallace-Staff-Review-Underpass-3-24.docx

Hi Lynn, fd comments remain the same and are attached. I am meeting with John O'Reilly Wednesday regarding parking lot access and egress.

Robert Moran
Fire Chief/Emergency Management Director
Brewster Fire/Rescue Department
1671 Main Street
Brewster, MA 02631
(W) 508-896-7018
(F) 508-896-4245

From: Lynn St. Cyr <lscyr@brewster-ma.gov>
Sent: Tuesday, February 27, 2024 11:58 AM
To: James Gallagher <jgallagher@brewster-ma.gov>; Richard Leibowitz <rleibowitz@brewster-ma.gov>; Victor Staley <vstaley@brewster-ma.gov>; William Grafton <>wgrafton@brewster-ma.gov>; Griffin Ryder <gryder@brewster-ma.gov>; Robert Moran <rmoran@brewster-ma.gov>; Kevin Varley <kvarley@brewster-ma.gov>; Scott Romer <sromer@brewster-ma.gov>; Amy von Hone <avonhone@brewster-ma.gov>; Erika Glidden <eglidden@brewster-ma.gov>; Chris Miller <cmiller@brewster-ma.gov>; Jonathon Idman <jldman@brewster-ma.gov>; Charles Mawn <cmawn@brewster-ma.gov>; Peter Lombardi <plombardi@brewster-ma.gov>; Donna Kalinick <dkalinick@brewster-ma.gov>; Paul Anderson <panderson@brewster-ma.gov>
Subject: Request for Comments-162 Underpass Road (Map 77, Parcel 9) and Underpass Road (Map 77, Parcel 10 & 60)

Good morning,

Attached please find applications for:

Special Permit and Site Plan Review Case No. 2024-04

Applicant The Free Sea Turtle, LLC, Paul Wallace, Manager, for property located at 162 Underpass Road (Map 77, Parcel 9) in the Commercial High Density (CH) Zoning District. The Applicant proposes to construct two commercial buildings. The larger western building is proposed to have two floors and contain eight commercial units. There are several proposed uses for the commercial units. Please see the narrative included with application for further detail on these uses. The second commercial building is proposed as a full-service restaurant and lounge.

Special Permit and Site Plan Review Case No. 2024-05

Applicant 162 Underpass LLC, Charles Whitcomb III, Manager, for property located at Underpass Road (Map 77, Parcel 10&60) in the Commercial High Density (CH) Zoning District. The Applicant proposes one commercial building with five bays with a proposed use of building and construction trades shop or garage. Additionally, outside storage of business materials and more than two commercial vehicles are also proposed on site. An attached two-bedroom security dwelling is also proposed.

The Applicants have submitted separate applications, building plans, and landscaping plans for their projects. They have submitted a joint plan set, traffic memorandum, and lighting specifications for their projects. All are included in the attached "PB#2024-04 and PB#2024-05 combined application" pdf.

Also attached for reference are the staff reports from the two previous staff review meetings (January 2023 and August 2023) on these projects.

All referenced documents are also available for review in the Planning Department.

These applications have been scheduled for hearing before the Planning Board on **Wednesday, March 13, 2024**. If possible, please provide your comments on these applications by **Friday, March 8, 2024**.

Thank you,
Lynn

Lynn St. Cyr
Senior Department Assistant, Planning Department
Town of Brewster
2198 Main Street, Brewster, MA 02631
T: 508-896-3701 x1233

Brewster Town Offices will be open to the public Monday through Thursday from 8:30 am to 4:00 pm, and by appointment on Fridays. For the latest updates on Town services, please visit www.brewster-ma.gov.

Fire Department Comments Underpass Road Whitcomb Staff Review

1. Occupancy and proposed mixed residential/commercial use of building may require the installation of an automatic sprinkler system in accordance with the provisions of the State Building Code.
2. The facility shall meet all requirements contained within 527 CMR 1.00 Massachusetts Comprehensive Fire Safety Code including all referenced NFPA Standards.
3. A computer-generated apparatus swept path and turn simulation analysis shall be provided to the fire department for review and approval.
4. Fire department access roads including roadways, fire lanes, and parking lot lanes shall be no less than 20' in width.
5. Minimum inside turning radius of fire department access roads shall be 25'. The developer may be required to increase this minimum turning radius to accommodate fire department apparatus.
6. All vehicles shall be parked in designated parking spaces only. Area in front of garage bays shall be designated as a fire lane. Parking shall not be allowed.
7. Dead end fire department access roads in excess of 150' in length shall be provided with approved provisions for fire apparatus to turn around (west end of parking lot lanes and access road)
8. All interior parking lot lanes and roads shall be designated as fire lanes. All signage and road markings shall be approved by the fire department prior to installation and issuance of a certificate of occupancy.
9. The developer shall install one (1) fire hydrant. The location shall be approved by the fire department prior to installation.
10. The fire department shall approve the location and type of fire department connections for any required automatic sprinkler system prior to installation.
11. The fire department shall approve the location of all fire and carbon monoxide detection system reporting panels required under the State Building Code prior to installation.
12. An Emergency Responder Radio Communication System shall be installed in the building per section 916.1 of the Massachusetts State Building Code.

13. A Knox box key vault shall be installed on the building. Location and type shall be approved by the fire department prior to installation and issuance of a certificate of occupancy.
14. Street address and building unit numbers shall be approved by the fire department and installed prior to the issuance of a certificate of occupancy.
15. Dependent on occupancy and use of contractor bays special fire protection/detection systems meeting the State Building Code may be required.
16. Storage of any hazardous, flammable, combustible, or explosive materials in the contractor bays shall meet the requirements set forth in 527 CMR 1.00 Massachusetts Comprehensive Fire Safety Code.
17. A graded gravel pathway no less than 25' in width shall be installed on the exterior north side of the building to allow fire department access for fire suppression operations.

Lynn St. Cyr

From: Charles Mawn
Sent: Friday, March 1, 2024 1:50 PM
To: Lynn St. Cyr
Subject: Re: Request for Comments-162 Underpass Road (Map 77, Parcel 9) and Underpass Road (Map 77, Parcel 10 & 60)

Lynn,

Police Dept. has no comments

Lt. Charles Mawn

Brewster Police Dept.
631 Harwich Rd.
Brewster, MA. 02631
Phone: (508) 896-7011
Fax: (508) 896-4525
Email: cmawn@brewster-ma.gov



From: Lynn St. Cyr <lstcyr@brewster-ma.gov>
Sent: Tuesday, February 27, 2024 11:57 AM
To: James Gallagher <jgallagher@brewster-ma.gov>; Richard Leibowitz <rleibowitz@brewster-ma.gov>; Victor Staley <vstaley@brewster-ma.gov>; William Grafton <wgrafton@brewster-ma.gov>; Griffin Ryder <gryder@brewster-ma.gov>; Robert Moran <rmoran@brewster-ma.gov>; Kevin Varley <kvarley@brewster-ma.gov>; Scott Romer <sromer@brewster-ma.gov>; Amy von Hone <avonhone@brewster-ma.gov>; Erika Glidden <eglidden@brewster-ma.gov>; Chris Miller <cmiller@brewster-ma.gov>; Jonathon Idman <jldman@brewster-ma.gov>; Charles Mawn <cmawn@brewster-ma.gov>; Peter Lombardi <plombardi@brewster-ma.gov>; Donna Kalinick <dkalinick@brewster-ma.gov>; Paul Anderson <panderson@brewster-ma.gov>
Subject: Request for Comments-162 Underpass Road (Map 77, Parcel 9) and Underpass Road (Map 77, Parcel 10 & 60)

Good morning,

Attached please find applications for:

Special Permit and Site Plan Review Case No. 2024-04

Applicant The Free Sea Turtle, LLC, Paul Wallace, Manager, for property located at 162 Underpass Road (Map 77, Parcel 9) in the Commercial High Density (CH) Zoning District. The Applicant proposes to construct two commercial buildings. The larger western building is proposed to have two floors and contain eight commercial units. There are several proposed uses for the commercial units. Please see the narrative included with application for further detail on these uses. The second commercial building is proposed as a full-service restaurant and lounge.

Special Permit and Site Plan Review Case No. 2024-05

Applicant 162 Underpass LLC, Charles Whitcomb III, Manager, for property located at Underpass Road (Map 77, Parcel 10&60) in the Commercial High Density (CH) Zoning District. The Applicant proposes one commercial building with five bays with a proposed use of building and construction trades shop or garage. Additionally, outside storage of business materials and more than two commercial vehicles are also proposed on site. An attached two-bedroom security dwelling is also proposed.

The Applicants have submitted separate applications, building plans, and landscaping plans for their projects. They have submitted a joint plan set, traffic memorandum, and lighting specifications for their projects. All are included in the attached "PB#2024-04 and PB#2024-05 combined application" pdf.

Also attached for reference are the staff reports from the two previous staff review meetings (January 2023 and August 2023) on these projects.

All referenced documents are also available for review in the Planning Department.

These applications have been scheduled for hearing before the Planning Board on **Wednesday, March 13, 2024**. If possible, please provide your comments on these applications by **Friday, March 8, 2024**.

Thank you,
Lynn

Lynn St. Cyr
Senior Department Assistant, Planning Department
Town of Brewster
2198 Main Street, Brewster, MA 02631
T: 508-896-3701 x1233

Brewster Town Offices will be open to the public Monday through Thursday from 8:30 am to 4:00 pm, and by appointment on Fridays. For the latest updates on Town services, please visit www.brewster-ma.gov.

Lynn St. Cyr

From: Chris Miller
Sent: Tuesday, February 27, 2024 12:20 PM
To: Lynn St. Cyr
Subject: RE: Request for Comments-162 Underpass Road (Map 77, Parcel 9) and Underpass Road (Map 77, Parcel 10 & 60)

Hi Lynn, no specific comments from Natural Resources; Bill will respond separately for Conservation.

--

Chris Miller, Director
Brewster Department of Natural Resources
508-896-4546 x4244
cmiller@brewster-ma.gov

Brewster Town Offices are open to the public Monday through Thursday from 8:30 am to 4:00 pm, and by appointment on Fridays. For the latest updates on Town services, please visit www.brewster-ma.gov

From: Lynn St. Cyr <lstcyr@brewster-ma.gov>
Sent: Tuesday, February 27, 2024 11:58 AM
To: James Gallagher <jgallagher@brewster-ma.gov>; Richard Leibowitz <rleibowitz@brewster-ma.gov>; Victor Staley <vstaley@brewster-ma.gov>; William Grafton <>wgrafton@brewster-ma.gov>; Griffin Ryder <gryder@brewster-ma.gov>; Robert Moran <rmoran@brewster-ma.gov>; Kevin Varley <kvarley@brewster-ma.gov>; Scott Romer <sromer@brewster-ma.gov>; Amy von Hone <avonhone@brewster-ma.gov>; Erika Glidden <eglidden@brewster-ma.gov>; Chris Miller <cmiller@brewster-ma.gov>; Jonathon Idman <jldman@brewster-ma.gov>; Charles Mawn <cmawn@brewster-ma.gov>; Peter Lombardi <plombardi@brewster-ma.gov>; Donna Kalinick <dkalinick@brewster-ma.gov>; Paul Anderson <panderson@brewster-ma.gov>
Subject: Request for Comments-162 Underpass Road (Map 77, Parcel 9) and Underpass Road (Map 77, Parcel 10 & 60)

Good morning,

Attached please find applications for:

Special Permit and Site Plan Review Case No. 2024-04

Applicant The Free Sea Turtle, LLC, Paul Wallace, Manager, for property located at 162 Underpass Road (Map 77, Parcel 9) in the Commercial High Density (CH) Zoning District. The Applicant proposes to construct two commercial buildings. The larger western building is proposed to have two floors and contain eight commercial units. There are several proposed uses for the commercial units. Please see the narrative included with application for further detail on these uses. The second commercial building is proposed as a full-service restaurant and lounge.

Special Permit and Site Plan Review Case No. 2024-05

Applicant 162 Underpass LLC, Charles Whitcomb III, Manager, for property located at Underpass Road (Map 77, Parcel 10&60) in the Commercial High Density (CH) Zoning District. The Applicant proposes one commercial building with five bays with a proposed use of building and construction trades shop or garage. Additionally, outside storage of business materials and more than two commercial vehicles are also proposed on site. An attached two-bedroom security dwelling is also proposed.

The Applicants have submitted separate applications, building plans, and landscaping plans for their projects. They have submitted a joint plan set, traffic memorandum, and lighting specifications for their projects. All are included in the attached "PB#2024-04 and PB#2024-05 combined application" pdf.

Also attached for reference are the staff reports from the two previous staff review meetings (January 2023 and August 2023) on these projects.

All referenced documents are also available for review in the Planning Department.

These applications have been scheduled for hearing before the Planning Board on **Wednesday, March 13, 2024**. If possible, please provide your comments on these applications by **Friday, March 8, 2024**.

Thank you,
Lynn

Lynn St. Cyr
Senior Department Assistant, Planning Department
Town of Brewster
2198 Main Street, Brewster, MA 02631
T: 508-896-3701 x1233

Brewster Town Offices will be open to the public Monday through Thursday from 8:30 am to 4:00 pm, and by appointment on Fridays. For the latest updates on Town services, please visit www.brewster-ma.gov.



Town of Brewster
 Planning Board
 Ch. 179 Application Cover Sheet

FOR TOWN OFFICIAL USE ONLY
 TOWN CLERK RECEIVED:
 24 FEB 20 10:59 AM
 BREWSTER TOWN CLERK
 PERMIT NUMBER ASSIGNED:
 PB# 2024-05

Project Location:

0 Underpass Road

Street Address

Map 77, Parcel 10 & 60

Assessors Map(s) and Parcel(s)

Book 35532, Page 93

Deed/ Title Reference

Zone CH

Zoning District(s)

Applicant:

162 Underpass LLC

Name

76 Aunt Sophies Road, Brewster, MA 02631

Mailing Address

774-413-5659

Phone Number

cwhitcomb80@icloud.com

Email Address

Property Owner (if different than Applicant):

Same

Name

Mailing Address

Phone Number

Email Address

Professional Representative:

John O'Reilly, P.E., P.L.S., of J.M. O'REILLY & ASSOCIATES, INC.

Name

P.O. Box 1773, Brewster, MA 02631

Mailing Address

508-896-6601

Phone Number

joreilly@jmoreillyassoc.com

Email Address

Type of Application (Check as applicable):

Special Permit

(Zoning Bylaw Section 179-51 or list other or different Zoning Bylaw Sections, as applicable, below)

Site Plan Review (Zoning Bylaw Section 179-63)


Decision Modification (Provide relevant case number/s below)

Decision Extension (Provide relevant case number/s below)

Other (List Zoning Bylaw Section/s below)

Brief Project Description: The project proposes one commercial building with apartment along with the associated parking and landscape. The proposed use on the parcel will be commercial contractor bay (a total of 5 bays proposed). The parking area will be shared with 162 Underpass (Sea Turtle LLC)

Signatures


Applicant

2/1/24
Date

Property Owner (if different than Applicant)

Date


Professional Representative (as applicable)

2-2-2024
Date

If the Applicant is not the Owner, the Application materials shall include the Owner's written consent or authorization to make application, or evidence that the Applicant's interest in the property is sufficient to make application (e.g. lease, P&S Agreement, etc.).

The burden is on the applicant to provide accurate, sufficient and complete information in the application. Attached is a checklist of materials and information required to be submitted for a complete application. Incompleteness could be cause for delays in review or denial of an application.

By making application, the Owner and Applicant hereby authorize the Planning Board and its agents to conduct site visits, at reasonable times, to assist in review of the application.

Please refer to current Planning Board schedule for application filing deadlines and associated meeting dates. The Board will make best efforts to work within this filing schedule but is not obligated to do so; the Board's review timelines are established under the Brewster Code and Massachusetts General Laws. In Its discretion, the Board may agenda matters, which do not require public hearings, for the next available meeting even if received after the respective filing deadline.

Submit to: **Brewster Planning Department**
Town Offices- 2198 Main Street
Brewster, Massachusetts 02631-1R98
(508) 896-3701 x 1133
brewplan@brewster-ma.gov

QUITCLAIM DEED

Both, **162 UNDERPASS LLC**, a Massachusetts Limited Liability Company with a mailing address of 76 Aunt Sophies Road, Brewster, MA 02631 and **THE FREE SEA TURTLE LLC**, a Massachusetts Limited Liability Company with a mailing address of 21 Crosby Lane, Brewster, MA 02631,

for consideration paid in the amount **ONE and 00/100 (\$1.00) DOLLAR**,

grant to **162 UNDERPASS LLC**, a Massachusetts Limited Liability Company with a mailing address of 76 Aunt Sophies Road, Brewster, MA 02631,

WITH QUITCLAIM COVENANTS, the land, with buildings thereon, situated in Brewster, Barnstable County, Massachusetts, described as follows:

**LOT 2
PLAN BOOK 698, PAGE 25**

Containing an area of 40,675 square feet of land, more or less, and being shown as **Lot 2** on Plan entitled, "Plan of Land in Brewster Massachusetts at 162 Underpass Road" as surveyed and prepared for The Free Sea Turtle, LLC and 162 Underpass, LLC Scale 1 in. = 30 ft. October 19, 2022, J.M. O'Reilly & Associates, Inc., 1573 Main Street, P.O. Box 1773, Brewster, Massachusetts 02631", recorded with Barnstable County Registry of Deeds in Plan Book 698, Page 25.

The above-described premises are conveyed subject to and together with the benefit of any rights, rights of way, reservations, restrictions, easements and other matters of record, insofar as the same are in force and applicable.

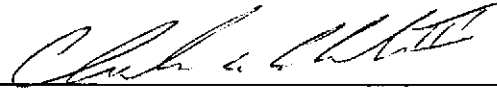
For title, see Deeds recorded with Barnstable County Registry of Deeds in Book 35100, Page 13.

Grantors release any and all homestead rights to the within premises, whether created by declaration or operation of law, and further states under the pains and penalties of perjury that the herein described premises were not the primary residence of the grantors or their spouses and that there are no other individuals entitled to homestead rights to the property being conveyed herein.

Property Address: 162 Underpass Road, Brewster, Massachusetts 02631

Executed as a sealed instrument under the pains and penalties of perjury this 2nd day of December, 2022.

162 UNDERPASS LLC



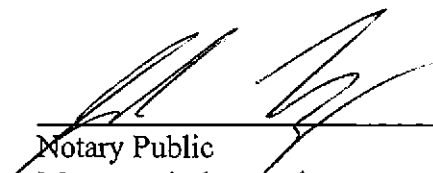
Charles Whitcomb, III, Manager

COMMONWEALTH OF MASSACHUSETTS

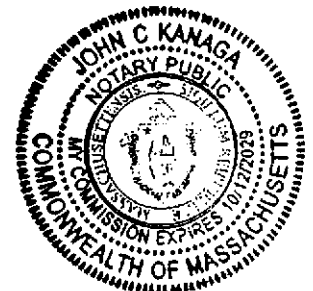
Barnstable, ss
(County)

December 2, 2022

On the above date, before me, the undersigned notary public, personally appeared **Charles Whitcomb, III, Manager of 162 Underpass LLC** who proved to me through satisfactory evidence of identification, which was a photographic identification with signature issued by a federal or state governmental agency, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he signed it voluntarily for its stated purpose and who swore or affirmed to me that the contents of the attached document are truthful and accurate to the best of his knowledge and belief.



Notary Public
My commission expires:



Executed as a sealed instrument under the pains and penalties of perjury this 2nd day of December, 2022.

THE FREE SEA TURTLE LLC



Paul Wallace, Manager

COMMONWEALTH OF MASSACHUSETTS

Barnstable, ss
(County)

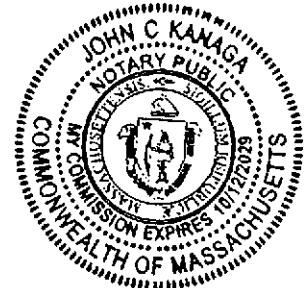
December 2, 2022

On the above date, before me, the undersigned notary public, personally appeared **Charles Whitcomb, III, Manager of 162 Underpass LLC** who proved to me through satisfactory evidence of identification, which was a photographic identification with signature issued by a federal or state governmental agency, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he signed it voluntarily for its stated purpose and who swore or affirmed to me that the contents of the attached document are truthful and accurate to the best of his knowledge and belief.



Notary Public

My commission expires: 10/12/2029





The Commonwealth of Massachusetts
Secretary of the Commonwealth
State House, Boston, Massachusetts 02133

William Francis Galvin
Secretary of the
Commonwealth

December 5, 2022

TO WHOM IT MAY CONCERN:

I hereby certify that a certificate of organization of a Limited Liability Company was filed in this office by

162 UNDERPASS LLC

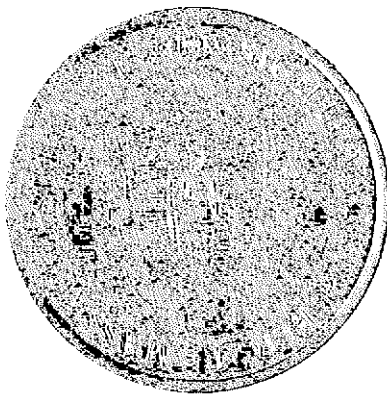
in accordance with the provisions of Massachusetts General Laws Chapter 156C on **May 5, 2022.**

I further certify that said Limited Liability Company has filed all annual reports due and paid all fees with respect to such reports; that said Limited Liability Company has not filed a certificate of cancellation; that there are no proceedings presently pending under the Massachusetts General Laws Chapter 156C, § 70 for said Limited Liability Company's dissolution; and that said Limited Liability Company is in good standing with this office.

I also certify that the names of all managers listed in the most recent filing are:
CHARLES WHITCOMB III

I further certify, the names of all persons authorized to execute documents filed with this office and listed in the most recent filing are: **CHARLES WHITCOMB III**

The names of all persons authorized to act with respect to real property listed in the most recent filing are: **CHARLES WHITCOMB III**



In testimony of which,
I have hereunto affixed the
Great Seal of the Commonwealth
on the date first above written.

William Francis Galvin

Secretary of the Commonwealth



The Commonwealth of Massachusetts
Secretary of the Commonwealth
State House, Boston, Massachusetts 02133

William Francis Galvin
Secretary of the
Commonwealth

December 5, 2022

TO WHOM IT MAY CONCERN:

I hereby certify that a certificate of organization of a Limited Liability Company was filed in this office by

THE FREE SEA TURTLE LLC

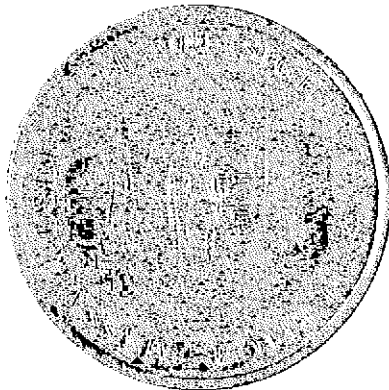
in accordance with the provisions of Massachusetts General Laws Chapter 156C on **April 20, 2022.**

I further certify that said Limited Liability Company has filed all annual reports due and paid all fees with respect to such reports; that said Limited Liability Company has not filed a certificate of cancellation; that there are no proceedings presently pending under the Massachusetts General Laws Chapter 156C, § 70 for said Limited Liability Company's dissolution; and that said Limited Liability Company is in good standing with this office.

I also certify that the names of all managers listed in the most recent filing are: **PAUL WALLACE**

I further certify, the names of all persons authorized to execute documents filed with this office and listed in the most recent filing are: **PAUL WALLACE**

The names of all persons authorized to act with respect to real property listed in the most recent filing are: **PAUL WALLACE**

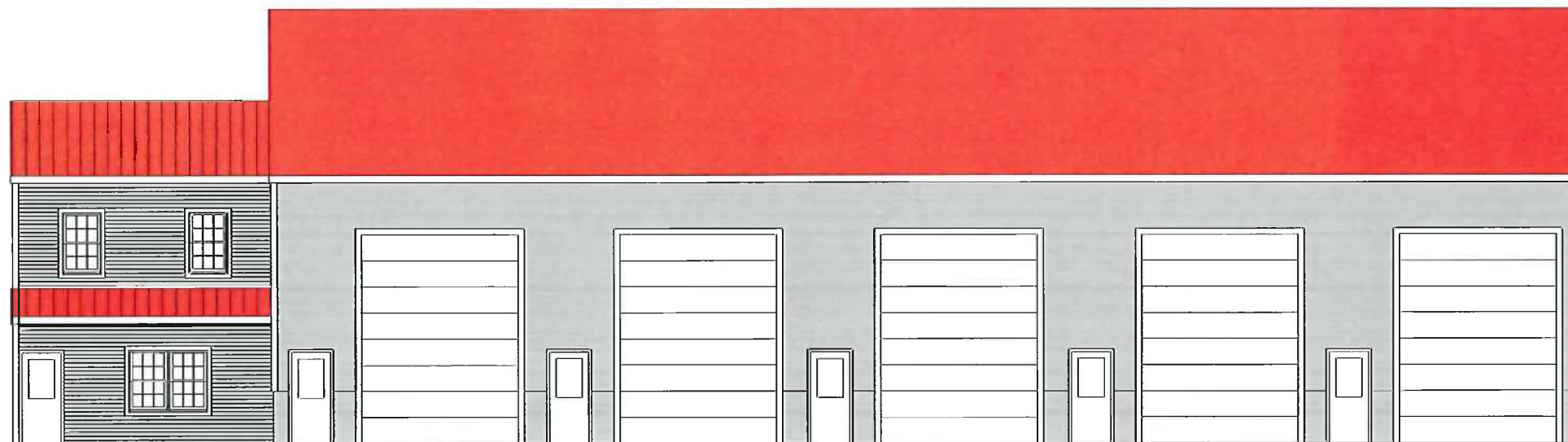


In testimony of which,
I have hereunto affixed the
Great Seal of the Commonwealth
on the date first above written.

William Francis Galvin

Secretary of the Commonwealth

Processed By:TAA



FRONT ELEVATION

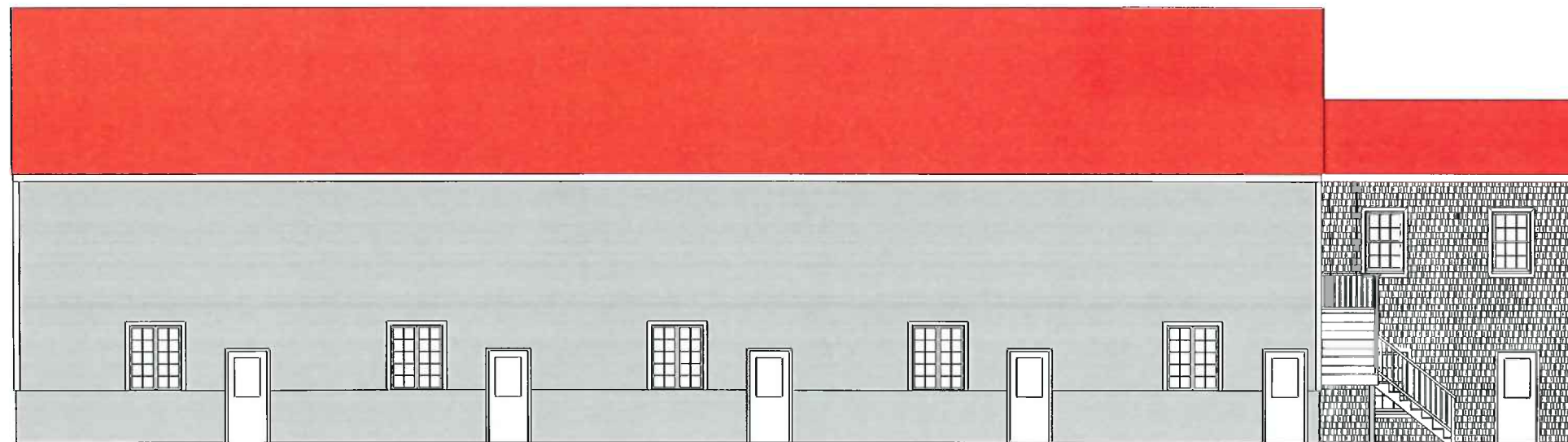
General Notes

No.	Revision/Issue	Date

Firm Name and Address
 WHITCOMB BUILDING &
 REMODELING
 CAD DESIGN TEAM
 P.O. BOX 254
 SANDWICH, MA

Project Name and Address
 WHITCOMB SHOP
 162 UNDERPASS RD.
 BREWSTER MA, 01631

Project	127	Sheet	
Date	01/16/2013		
Scale	$\frac{1}{4}'' = 1'$		



REAR ELEVATION

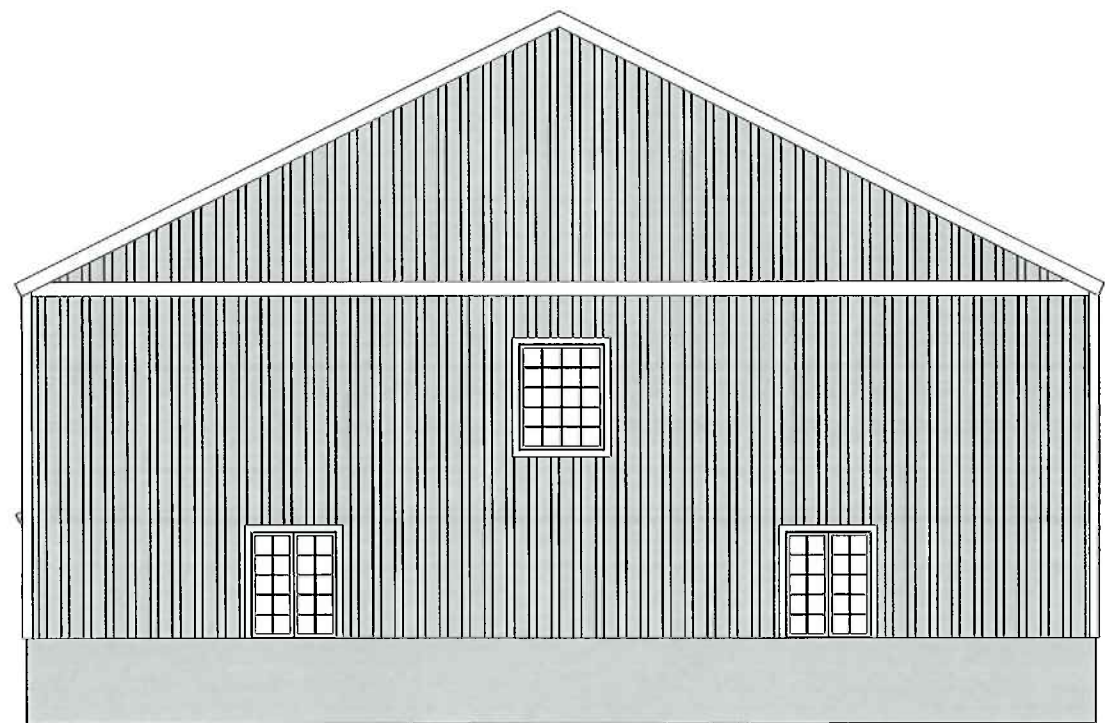
General Notes

No.	Revision/Issue	Date

Firm Name and Address
 WHITCOMB BUILDING &
 REMODELING
 CAD DESIGN TEAM
 P.O. BOX 254
 SANDWICH, MA

Project Name and Address
 WHITCOMB SHOP
 162 UNDERPASS RD.
 BREWSTER MA, 02631

Project	127	Sheet	
Date	01/16/2023		
Scale	1/4" = 1'		



RIGHT SIDE ELEVATION

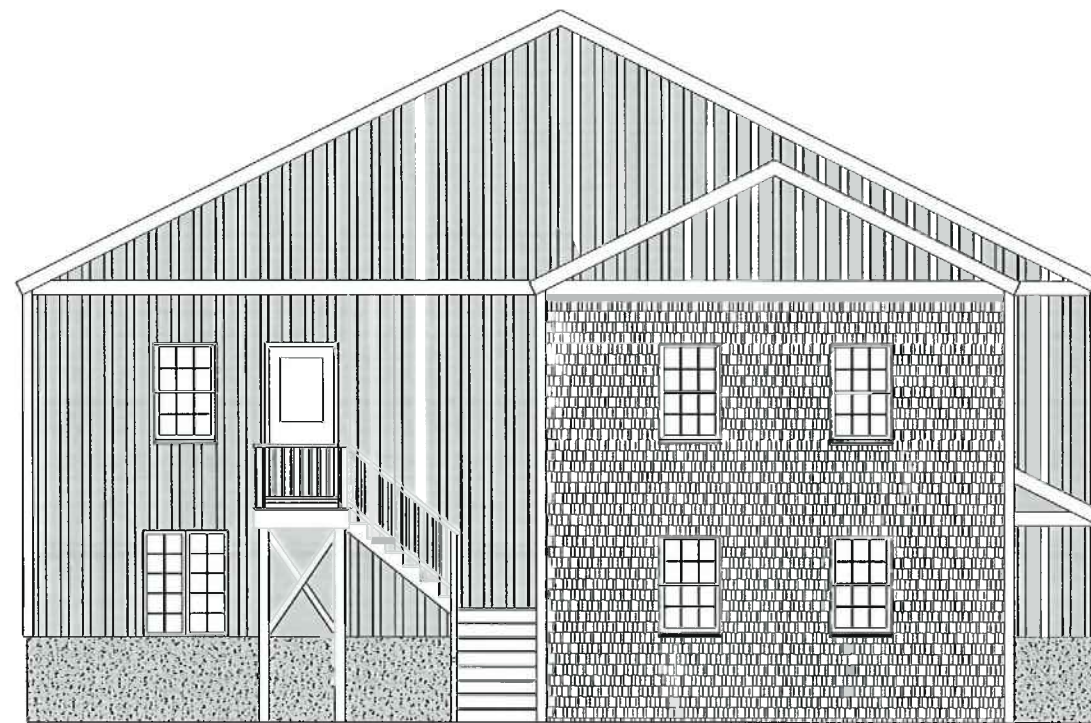
General Notes

No.	Revision/Issue	Date

Firm Name and Address
 WHITCOMB BUILDING &
 REMODELING
 CAD DESIGN TEAM
 P.O. BOX 254
 SANDWICH, MA

Project Name and Address
 WHITCOMB SHOP
 162 UNDERPASS RD.
 BREWSTER MA, 01631

Project	127	Sheet	
Date	01/16/2013		
Scale	1/4" = 1'		



LEFT SIDE ELEVATION

General Notes

No.	Revision/Issue	Date

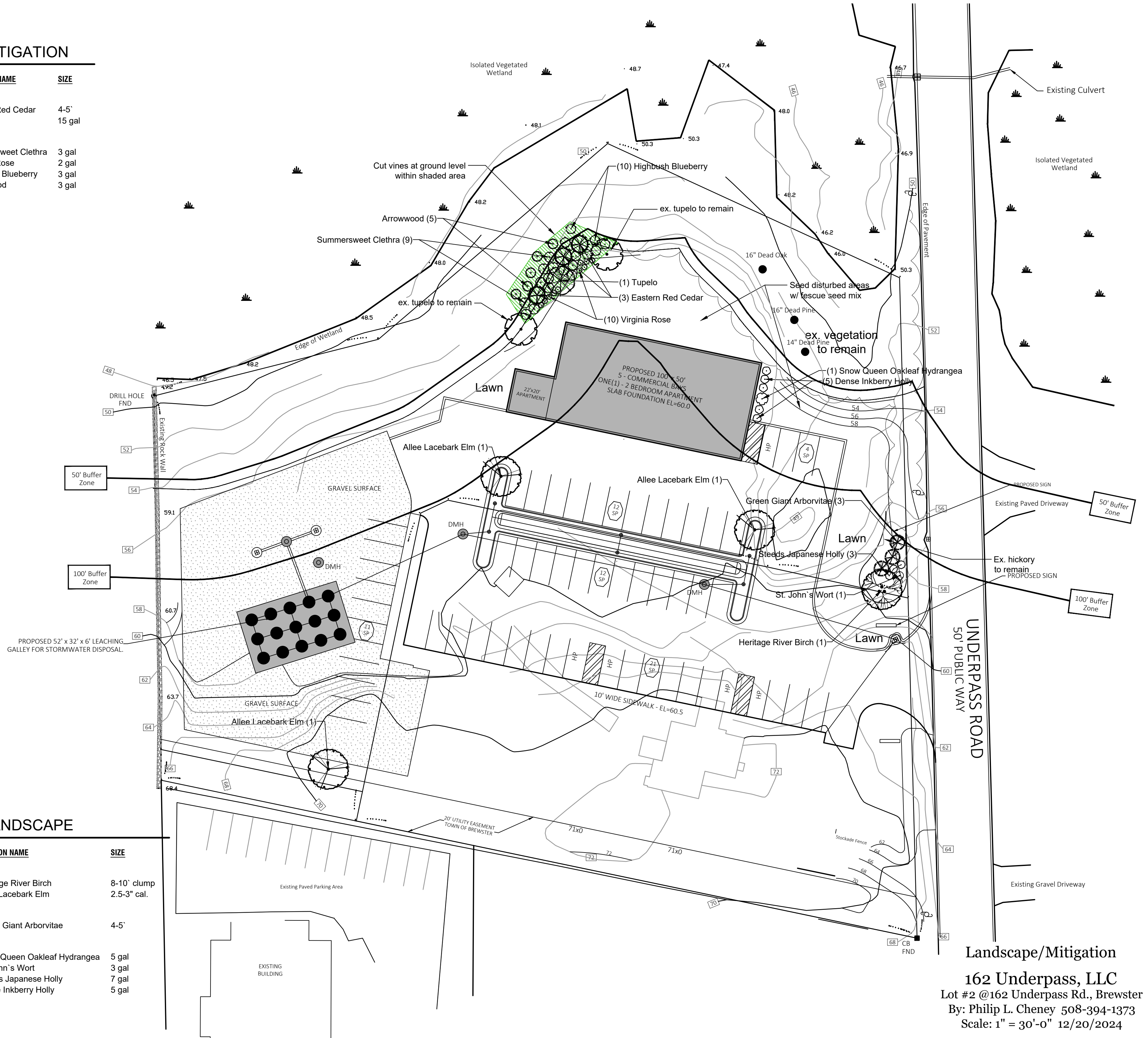
Firm Name and Address
 WHITCOMB BUILDING &
 REMODELING
 CAD DESIGN TEAM
 P.O. BOX 254
 SANDWICH, MA

Project Name and Address
 WHITCOMB SHOP
 162 UNDERPASS RD.
 BREWSTER MA, 02631

Project	127	Sheet	
Date	01/16/2023		
Scale	1/4" = 1'		

PLANT SCHEDULE MITIGATION

QTY	BOTANICAL NAME	COMMON NAME	SIZE
NATIVE TREES			
3	<i>Juniperus virginiana</i>	Eastern Red Cedar	4-5'
1	<i>Nyssa sylvatica</i>	Tupelo	15 gal
NATIVE SHRUBS			
9	<i>Clethra alnifolia</i>	Summersweet Clethra	3 gal
10	<i>Rosa virginiana</i>	Virginia Rose	2 gal
10	<i>Vaccinium corymbosum</i>	Highbush Blueberry	3 gal
5	<i>Viburnum dentatum</i>	Arrowwood	3 gal



PLANT SCHEDULE LOT2 LANDSCAPE

QTY	BOTANICAL NAME	COMMON NAME	SIZE
TREES			
1	<i>Betula nigra</i> 'Heritage'	Heritage River Birch	8-10' clump
3	<i>Ulmus parvifolia</i> 'Allee'	Allee Lacebark Elm	2.5-3" cal.
CONIFERS			
3	<i>Thuja standishii</i> x <i>plicata</i> 'Green Giant'	Green Giant Arborvitae	4-5'
SHRUBS			
1	<i>Hydrangea quercifolia</i> 'Snow Queen'	Snow Queen Oakleaf Hydrangea	5 gal
1	<i>Hypericum patulum</i> 'Hidcote'	St. John's Wort	3 gal
3	<i>Ilex crenata</i> 'Steeds'	Steeds Japanese Holly	7 gal
5	<i>Ilex glabra</i> 'Densa'	Dense Inkberry Holly	5 gal

Landscape/Mitigation

162 Underpass, LLC
 Lot #2 @162 Underpass Rd., Brewster
 By: Philip L. Cheney 508-394-1373
 Scale: 1" = 30'-0" 12/20/2024

**DRAFT MEETING MINUTES
DATED MARCH 27, 2024**



Brewster Planning Board
2198 Main Street
Brewster, MA 02631-1898
(508) 896-3701 x1133
brewplan@brewster-ma.gov
MEETING MINUTES
Wednesday, March 27, 2024 at 6:30 pm
Brewster Town Office Building

Approved:
Vote:

Chair Amanda Bebrin convened a meeting of the Planning Board at 6:31 pm with the following members participating: Charlotte Degen, Tony Freitas, Rob Michaels, Elizabeth Taylor, and Alex Wentworth. Madalyn Hillis-Dineen was not present. Also participating: Jon Idman, Town Planner, and Lynn St. Cyr, Senior Department Assistant. Bebrin declared that a quorum of the Planning Board was present. The Meeting Participation Statement and Recording Statement were read.

6:32 PM PUBLIC ANNOUNCEMENTS AND COMMENT

None.

6:33 PM PUBLIC HEARING

Special Permit and Site Plan Review Case No. 2024-04: Applicant/Owner: The Free Sea Turtle, LLC, Paul Wallace, Manager, has applied for Site Plan Review under Brewster Zoning Bylaw Article XII for a new commercial development on an undeveloped lot, and a Special Permit under Brewster Zoning Bylaw Section 179-51 for uses including building and construction trade shop or garage and a full-service restaurant, at 162 Underpass Road (Tax Map 77 Parcel 9) located within the Commercial High Density (CH) Zoning District.

Documents:

- 03/21/24 Request to Continue

Motion by Degen to Open Public Hearing on Special Permit and Site Plan Review Case No. 2024-04. Second by Michaels. Vote: 6-0-0. Idman stated that an application has been filed but the Applicant has asked to revise the application and is requesting a continuance so he may submit a revised application. **Motion by Michaels to Continue Special Permit and Site Plan Review Case No. 2024-04 to April 10, 2024. Second by Degen. Vote 6-0-0.**

6:36 PM PUBLIC HEARING

Special Permit and Site Plan Review Case No. 2024-05: Applicant/Owner: 162 Underpass LLC, Charles Whitcomb III, Manager, has applied for Site Plan Review under Brewster Zoning Bylaw Article XII for a new commercial development on an undeveloped lot, and a Special Permit under Brewster Zoning Bylaw Section 179-51 for uses including building and construction trade shop or garage and (1) accessory commercial dwelling unit, at Underpass Road (Tax Map 77 Parcel 10 and 60) located within the Commercial High Density (CH) Zoning District.

Documents:

- 03/21/24 Request to Continue

Motion by Degen to Open Public Hearing on Special Permit and Site Plan Review Case No. 2024-05. Second by Wentworth. Vote: 6-0-0. The Planning Board discussed the format for the public hearing as Case Nos. 2024-04 and 2024-05 share infrastructure, access, landscaping, and parking. Idman explained that the applications and public hearings are separate and each application should be considered on its own merits. Idman further stated that since the applications share infrastructure and other elements and because the Applicants are using the same engineer, there may be discussion on both applications at the same time. **Motion by Michaels to Continue Special Permit and Site Plan Review Case No. 2024-05 to April 10, 2024. Second by Wentworth. Vote 6-0-0.**

6:40 PM APPROVAL OF MEETING MINUTES

Approval of Meeting Minutes: March 13, 2024.

The Board reviewed the March 13, 2024 meeting minutes. **Motion by Degen to Approve March 13, 2024 Meeting Minutes. Second by Wentworth. Vote: 6-0-0.**

6:41 PM COMMITTEE REPORTS

Freitas summarized a recent joint meeting of the Affordable Housing Trust and Housing Partnership including an update on the sale of the Yankee Drive property. There was also discussion on future housing opportunities and options. Freitas also mentioned the upcoming book program through the Brewster Ladies Library which will have a segment on housing. He suggested Planning Board members read "Arbitrary Lines" which is a book on the recommended reading list. Bebrin mentioned an upcoming Housing 101 session that would be offered through the Housing Office.

Degen summarized the March 11th Select Board Meeting including approval of a liquor license for a mini golf venue which may be the only mini golf venue with a liquor license in the area; upcoming tours of the Bay and Pond properties; the Brewster Ladies Library community reading program; a salary scale for part time and seasonal employees; Community Preservation Act funds up for vote at Spring Town Meeting; the Senior and Veteran Tax Work Off Program; an Interim Access Policy for the Brewster Pond property; and appointment of alternate committee members.

Taylor stated that the Community Preservation Committee met to discuss warrant articles for the Spring Town Meeting and their project list.

Bebrin mentioned the upcoming tours planned for the Sea Camps properties and noted that registration is required for the Pond Property due to limited parking on site. There will be shuttles available from Captains Golf Course for those interested in attending the tours on April 6th and April 10th. The Bay Property will be open for tours on April 17th and April 27th. There will be two separate warrant articles at Spring Town Meeting one related to the Pond Property and one related to the Bay Property.

6:53 PM FOR YOUR INFORMATION

The Planning Board received mail regarding a proposed seasonal dock at 104 Canoe Pond Drive. Idman noted that under Chapter 91, the Planning Board is required to receive notice of the license application. A public hearing notice from the Harwich Planning Board for April 9, 2024 was also received.

6:53 PM MATTERS NOT REASONABLY ANTICIPATED BY THE CHAIR

None.

Motion by Wentworth to Adjourn. Second by Degen. Vote: 6-0-0. The meeting adjourned at 6:54 PM.

Next Planning Board Meeting Date: April 10, 2024.

Respectfully submitted,

Lynn St. Cyr, Senior Department Assistant, Planning

FOR YOUR INFORMATION

HARWICH PLANNING BOARD
PUBLIC HEARING NOTICE

The Harwich Planning Board will hold public hearings beginning no earlier than **6:30 PM, Tuesday, April 23, 2024**, in the Donn B. Griffin Room, Town Hall, 732 Main Street, Harwich, MA 02645 to consider the following matters. Any member of the public looking to provide testimony on any of these matters should plan on attending. Written comments may also be submitted to the Board prior to the hearing by mailing them to the Planning Department, Town Hall, 732 Main Street, Harwich, MA 02645 or by emailing them to the Planning Assistant, Shelagh Delaney at shelagh.delaney@harwich-ma.gov

Case # PB2024-11 Rowoliver Nominee Trust, David Crosbie & Steven Farnsworth, Trustees, through their agent, **Attorney Benjamin E. Zehnder** seek a Site Plan Review Special Permit for a mixed use, multi-family and to develop a portion of the property as a self-storage unit pursuant to the Harwich Zoning Bylaw Sections 325-55. The property is located at 481 Depot Street, Map 36, Parcel B1 in the IL and RR Zoning Districts.

Documents and plans related to these applications may be viewed on the Planning Board's home page: www.harwich-ma.gov/planning-board and are on file with the Town Clerk and may be viewed at the Planning Department, Town Hall, 732 Main Street, Harwich, MA 02645 during regular Town Hall hours. For additional information contact the Planning Assistant, Shelagh Delaney at sdelaney@harwich-ma.gov

Duncan Berry, Chair

Cape Cod Chronicle Print Dates: April 4 and April 11, 2024

RECEIVED

MAR 28 2024

BREWSTER PLANNING BOARD
ZONING BOARD OF APPEALS