

HARWICH PLANNING BOARD
PUBLIC HEARING NOTICE

The Harwich Planning Board will hold public hearings no earlier than 6:30 PM on Tuesday, January 26, 2021 to consider the following application(s). The meeting is via REMOTE PARTICIPATION ONLY. Anyone having an interest in the application(s) is invited to access the meeting via GoToMeeting.com. Instructions regarding how to access and participate in the meeting will be posted on the Planning Board's Agenda page for the date of the meeting: [2021 Planning Board Meeting Agendas | Harwich MA \(harwich-ma.gov\)](#). The application and plans can be accessed using the same website link posted under Planning Board Legal Notice January 26, 2021 or by emailing the Planning Department staff.

PB2020-33 Main Street Stone Horse, applicant & owner, c/o William F. Riley, Esq. representative, seeks a new Use Special Permit, to convert one of the two dormitory buildings, specifically the building known as 868 Route 28, into twenty two (22) one-bedroom apartments and to amend the previously approved Site Plan Review Special Permit granted under case PB2019-13 with additional parking requirement and other waivers. The application, is pursuant to the Code of the Town of Harwich §325-51.Q (Multifamily Use) and §325-55 (Site Plan Review). The property is located 872 Route 28, Map 25, Parcel A2, is located in the CH-1 zoning district.

PB2020-34 Cool Change LLC, Allen Harbor Marine, applicant & owner, c/o Rob O'Neill, representative, seeks a Site Plan Review and Use Special Permit pursuant to §§325-55; 325-13, Use Table, paragraph IV.19; and 325-51 to construct a 4,102 square foot commercial building for a marine use (boat maintenance and repair) and associated parking at property located at 282 Route 28, Map 12, Parcel G2-1 in the CH-1 zoning district.

Written comments may be submitted to the Planning Board at the address shown below or emailing the Planning Assistant, Elaine Banta, at ebanta@town.harwich.ma.us.

All documents related to the above cases are available on the Planning Board website or may be viewed by **appointment only** at the Planning Department, Town Hall, 732 Main Street, Harwich, MA 02645.

In accordance with state law, this legal notice will also be available electronically at 'www.masspublicnotices.org.' The Town is not responsible for any errors in the electronic posting of this legal notice.

Duncan Berry, Chair

Cape Cod Chronicle Print Dates: January 7 and 14, 2021

Terry W. Eldredge
PROJECT COORDINATOR
Land Development, Site Planning and Design
1038 Main Street
Chatham, Massachusetts 02633

Letter of Transmittal

To: Town of Harwich Planning Department
From: Terry W. Eldredge
Date: December 22, 2020
Subject: THE STONEHORSE Project

Enclosed please find a total of 15 copies of the following:

- This Letter of Transmittal;
1. Special Permit Application;
 2. LLC Business Entity Summary;
 3. Narrative;
 4. List of Waiver Requests;
 5. TOH Checklist for Site Plans;
 6. Site Plan (*3 full size and 11 reduced copies*);
 7. Orthophoto Plan (*3 full size and 11 reduced copies*);
 8. Revised Floor Plans (*3 full size and 11 reduced copies*);
 9. As-Built Septic and Drainage Plan by Moran Associates, LLC (*3 full size and 11 reduced copies*); and
 10. Updated Drainage Calculations, including:
 - A. Area of Contribution Sketch - original; and
 - B. Area of Contribution Sketch – currently proposed.

Y:\Clients\Rudnick, Ron 0539 2891\STONEHORSE\2020 Modifications\Documents to be filed with the PB 2020-12-21 and 22nd\THE STONEHORSE Project LOT.docx

TOWN OF HARWICH PLANNING DEPARTMENT



PLANNING BOARD APPLICATION
SPECIAL PERMITS & SITE PLAN REVIEW **FORM A**

TO THE TOWN CLERK, HARWICH, MA

DATE: December 21, 2020

PART A – APPLICANT INFORMATION/AUTHORIZATION

Applicant Name(s) Main Street Stone Horse, LLC	
Representative/Organization (Who will serve as the primary contact responsible for facilitating this application?)	William F. Riley, Esq. Resident Agent
Mailing address	PO Box 707
Town, ST, Zip	Chatham, MA 02633
Phone	508-945-5400
Fax	
E-mail	<u>billriley@rileyandnorcross.com</u>

The applicant is one of the following: *(please check appropriate box)*

- Owner
 Prospective Buyer*
 Representative for Owner/Tenant/Buyer*
 Tenant*
 Other* _____

****Written permission of the owner(s) and a municipal lien certificate (where applicable) is required.***

All other forms and information as required in the Harwich Code Chapter 400, Rules and Regulations, shall be submitted as part of this application.

Authorization

Your signature hereby asserts, to the best of your knowledge, that the information submitted in this application is true and accurate; that you agree to fully comply with the Town of Harwich Zoning By-laws and the terms and conditions of any approval of this application by the Planning Board; and authorizes the Members of the Planning Board and/or Town Staff to visit and enter upon the subject property for the duration of the consideration of this application.

William F. Riley, Esq. Resident Agent and SOC Signatory

Applicant

Ronald S. Rudnick, Manager

Owner(s) – Authorization must accompany application if the owner is not the applicant.

Official use only:

PLANNING DEPARTMENT	TOWN CLERK
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Case #

PART B – PROJECT LOCATION

Legal Street Address	868 Rte. 28	Village/Zip Code
Title Book/Page or L.C.C. #	Dd Bk 31,890, Pg. 119	
Map(s) / Parcel(s)	Map 25, Parcels A1, A2, and A4-18	
Zoning & Overlay Districts	CH-1	*Historic? NA
Frontage (linear feet)	1,603.75'	
Total land area (s.f.)	113,779 s.f.	
Upland (s.f.)	113,779 s.f.	Wetlands (s.f.) None

PART C – PROJECT DESCRIPTION

Existing Floor Area in Sq. Ft	Gross: 15,606	Net:
Proposed Floor Area in Sq. Ft	Gross: No change	Net:
Change in Sq. Ft + / -	Gross:	Net:
Existing # of parking spaces	17 existing, Proposed # of parking spaces: 33	
Existing Use(s)	42-bedroom dormitory	
Proposed Use(s)	22 one-bedroom apartments in Northerly building, 868 Rte. 28	
<i>Attach a separate narrative if necessary.</i>		

The undersign hereby files an application with the Harwich Planning Board for the following special permits as proposed under the provisions of the Harwich Zoning Code: **(check all that apply)**

Site Plan Review § 325-55:

- Any floor area expansion of any structure or expansion of exterior space, other than parking, serving any of the following: commercial, industrial, multi-family or educational use or personal wireless service facility or the creation of a drive-up or drive-through window
- Expansion or reconfiguration of an existing parking lot and/or driveway(s) serving said parking lot.
- Establishment of any new commercial, industrial, multi-family, educational, fast food/take out restaurant or personal wireless service facility.
- Establishment of any new retail use(s) in the Industrial (IL) Zone.
- Waiver of Site Plan § 325-55.F

Article V, Use Regulations:

- Paragraph____, sub-paragraph #____ Paragraph____, sub-paragraph #____
- Paragraph____, sub-paragraph #____, supplemental regulation #____§ 325-14

Article X, Special Permits:

- Structures w/ gross floor area of 7,500+ s.f. § 325-51
- Structures requiring 20 or more new parking spaces § 325-51
- Accessory Apt./Shared Elderly Housing § 325-51.H Mixed Use § 325-51.M
- Drinking Water Resource Protection § 325-51.C Two Family § 325-51.N
- Village Commercial, Harwich Port § 325-51.L *Harwich Center Overlay § 325-51.O
- Signage § 325-27.F Additional Cluster, Excess SF, Non-entry Facades

Other Special Permits:

- Six Ponds Special District - Article XVI
- Wind Energy Systems - Article XVIII Large Scale Wind Generation – Article XIX
- ✓Other (i.e. Alternate Access § 325-18.P, Special Cases § 325-44.B) Multi Family, § 325-51.Q
- Repetitive Petition (MGL Ch 40A, §16): Proposed project evolved from a previously denied plan submitted to the Planning Board on _____ Year/Case # _____

**Note: Projects within the Harwich Center Overlay District may also be within the Harwich Center Historic District. This requires separate filing with the Historic District and Historical Commission. Please inquire for forms and instructions.*



Revised page 2
of application
PB 2020-33

PART B – PROJECT LOCATION

Legal Street Address	872 Route 28	Village/Zip Code
Title Book/Page or L.C.C. #	Book 31890, Page 119	
Map(s) / Parcel(s)	Map 25, Parcel A2	
Zoning & Overlay Districts	CH-1	*Historic?
Frontage (linear feet)	589.16 ft., 184.65 ft., 679.34 ft.	
Total land area (s.f.)	113,779 sq. ft.	
Upland (s.f.)	113,779 sq. ft.	Wetlands (s.f.) None

PART C – PROJECT DESCRIPTION

Existing Floor Area in Sq. Ft	Gross: 15,606 sq. ft.	Net:
Proposed Floor Area in Sq. Ft	Gross: No change	Net:
Change in Sq. Ft +/-	Gross: No change	Net:
Existing # of parking spaces	17	Proposed # of parking spaces: 31
Existing Use(s)	Dormitory in two Buildings	
Proposed Use(s)	Dormitory in one building; multi family one bedroom apartments in one building.	
<i>Attach a separate narrative if necessary.</i>		

The undersign hereby files an application with the Harwich Planning Board for the following special permits as proposed under the provisions of the Harwich Zoning Code: **(check all that apply)**

Site Plan Review § 325-55:

- Any floor area expansion of any structure or expansion of exterior space, other than parking, serving any of the following: commercial, industrial, multi-family or educational use or personal wireless service facility or the creation of a drive-up or drive-through window
- Expansion or reconfiguration of an existing parking lot and/or driveway(s) serving said parking lot.
- Establishment of any new commercial, industrial, multi-family, educational, fast food/take out restaurant or personal wireless service facility.
- Establishment of any new retail use(s) in the Industrial (IL) Zone.
- Waiver of Site Plan § 325-55.F

Article V, Use Regulations:

- Paragraph _____, sub-paragraph # _____ Paragraph _____, sub-paragraph # _____
- Paragraph _____, sub-paragraph # _____, supplemental regulation # _____ § 325-14

Article X, Special Permits:

- Structures w/ gross floor area of 7,500+ s.f. § 325-51
- Structures requiring 20 or more new parking spaces § 325-51
- Accessory Apt./Shared Elderly Housing § 325-51.H Mixed Use § 325-51.M
- Drinking Water Resource Protection § 325-51.C Two Family § 325-51.N
- Village Commercial, Harwich Port § 325-51.L *Harwich Center Overlay § 325-51.O
- Signage § 325-27.F Additional Cluster, Excess SF, Non-entry Facades

Other Special Permits:

- Six Ponds Special District - Article XVI
- Wind Energy Systems - Article XVIII Large Scale Wind Generation – Article XIX
- Other (i.e. Alternate Access § 325-18.P, Special Cases § 325-44.B) Multi Family, Section 325-51Q
- Repetitive Petition (MGL Ch 40A, §16): Proposed project evolved from a previously denied plan submitted to the Planning Board on _____ Year/Case # _____

**Note: Projects within the Harwich Center Overlay District may also be within the Harwich Center Historic District. This requires separate filing with the Historic District and Historical Commission. Please inquire for forms and instructions.*

Corporations Division

Business Entity Summary

ID Number: 001373329

[Request certificate](#)

[New search](#)

Summary for: MAIN STREET STONE HORSE, LLC

The exact name of the Domestic Limited Liability Company (LLC): MAIN STREET STONE HORSE, LLC

Entity type: Domestic Limited Liability Company (LLC)

Identification Number: 001373329

Date of Organization in Massachusetts:
03-13-2019

Last date certain:

The location or address where the records are maintained (A PO box is not a valid location or address):

Address: 1455 MAIN STREET

City or town, State, Zip code, CHATHAM, MA 02633 USA
Country:

The name and address of the Resident Agent:

Name: WILLIAM F. RILEY

Address: 156 CROWELL ROAD

City or town, State, Zip code, CHATHAM, MA 02633 USA
Country:

The name and business address of each Manager:

Title	Individual name	Address
MANAGER	RONALD S. RUDNICK	1455 MAIN STREET CHATHAM, MA 02633 USA

In addition to the manager(s), the name and business address of the person(s) authorized to execute documents to be filed with the Corporations Division:

Title	Individual name	Address
SOC SIGNATORY	WILLIAM F. RILEY	156 CROWELL ROAD - PO BOX 707 CHATHAM, MA 02633 USA

The name and business address of the person(s) authorized to execute, acknowledge, deliver, and record any recordable instrument purporting to affect an interest in real property:

Title	Individual name	Address
REAL PROPERTY	RONALD S. RUDNICK	1455 MAIN STREET CHATHAM, MA 02633 USA

Consent

**Confidential
Data**

**Merger
Allowed**

Manufacturing

View filings for this business entity:

- ALL FILINGS
- Annual Report
- Annual Report - Professional
- Articles of Entity Conversion
- Certificate of Amendment
- Certificate of Incorporation

[View filings](#)

Comments or notes associated with this business entity:

[New search](#)

NARRATIVE

DATE: December 21, 2020

PROPERTY: 868 Route 28, South Harwich, MA

PETITIONER: Main Street Stone Horse, LLC

SITE PLAN SPECIAL PERMIT

Since the grant of the special permit by the Harwich Planning Board for the construction of two- (2) dormitory buildings and appurtenances on May 14, 2019 (Case No.: PB2019-13), the Applicant has in accordance with the special permits constructed two new dormitory buildings and rehabbed the existing office building with a total of 90 bedrooms and has sustainably completed the hardscape and landscape as shown on the site plan approved by the Board.

The Applicant seeks to modify the north building at 868 Rte 28 from 42 bedrooms to a multi-family structure containing 22 one bedroom apartments.

Due to changes in the economy as a result of the COVID-19 pandemic the building as currently constructed is uneconomic. At the time of the construction of the buildings, many employers of seasonal help entered into an agreement with the Applicant that would utilize all the bedrooms constructed on the site.

As a result of the pandemic regulations closing our borders to foreign workers, the companies with whom the Applicant is working with have suggested that one bedroom apartments would be of greater utility for local year round work force who find it difficult to find housing. In addition, the one bedroom apartments are more desirable for higher level employees.

The modified project will have 20 fewer bedrooms which will reduce sewage flow on the site by 2,200 gallons per day.

The modified project is required to have 5% of the total number of units be handicap accessible. A total of 70 dormitory bedrooms/apartments will exist if this project is approved. Therefore, 4 handicap units must be handicap accessible. The existing office/dormitory building at 875 Rte 28 has **one** handicap bedroom, the south building at 860 Rte 28 has **two** handicap bedrooms and the north building will have **one** handicap apartment for **a total of 4 handicap bedrooms/apartments**.

Under the previously approved Planning Board Special Permit, 20 rooms were approved for year round use. The Applicant now requests that there be 22 bedrooms/apartments approved for year round use.

The nominal number of parking spaces required for the dormitory and apartment use is 83 spaces. The Applicant previously proposed providing 17 spaces as originally approved by the Planning Board; and an additional 16 spaces are now proposed for a total of 33 spaces. A parking waiver is required and is requested as a part of this filing.

There will be no exterior changes to the buildings or the landscaping.

With the increase in hardscape, an addition leach pit will be required for drainage system 1, which handles the runoff from the parking area to be expanded. There will be no changes to the sewage system installed.

The layout of walkways, patios, driveways, and parking areas were field adjusted as shown on the Site Plan.

There are (6) fire hydrants located within 500 feet of the subject property. There are four (4), within 50 feet of the subject property, which includes one (1) installed on the subject property as part of the originally approved project. Also, the new dormitory buildings are both sprinkled for fire safety.

Fire access for apparatus and equipment is provided to all sides of the buildings, from Rte 28, Old County Road, the driveway from Rte 28 to Old County Road and the driveway paralleling Rte 28.

There will be no exterior changes to the property with the exception of additional parking spaces.

THE STONEHORSE PROJECT 868 ROUTE 28
Assessors MAP 25, PARCELS A1, A2, and A4-18
ZONING DISTRICT C-H-1
LIST OF WAIVERS REQUESTED

1. Notations stating approval and/or restrictions of the Board of Health:

Shown on Site Plan.

2. Mark Areas set aside for Conservation and/or Recreational Use:

NA as there are no wetlands on subject site and recreational use will be on the patios and the greenspace of the property.

3. Dumpsters:

A site for two dumpsters are depicted on the Site Plan. While offsets to the property lines have not been shown, the space clearly meets the setbacks as it's so far from any property or street line.

4. Maneuvering Areas:

NA, existing maneuvering area is provided, with the exception of the existing parking along Deep Hole Road.

5. Existing Driveways:

Existing driveways within 100 feet of the site are shown on the Orthophoto Plan.

6. Sidewalks:

Sidewalks are not shown because there are no sidewalks in the area and none are planned.

7. Freestanding Signs:

There is an existing freestanding sign, and no other freestanding signs are requested, with the exception of the handicap signage.

8. Stopping Sight Distance:

The driveways along Route 28 have existed for over 70 years and have been adequate. The only previously proposed driveway that connects Old County Road with Route 28 has more than adequate stopping sight distance.

9. Traffic Circulation:

Traffic will be two way, so circulation arrows are not required.

10. Waterlines:

Town water has been installed at the site and is shown on the Site Plan

11. Electrical:

Electrical service lines had been installed and is shown on the Site Plan.

12. Gas:

Natural gas is not used on the project.

13. Cable:

The cable line is overhead from Route 28 to the Dormitory/Office building and then underground as shown on the Site Plan.

14. Lighting:

Outside lighting has been installed on the buildings and outside ground lighting has been installed for the South building and parking area running parallel to Route 28. The wiring for outside ground lighting has been installed for the North building.

15. Curbing:

Curbing has been installed for the parking area running parallel to Route 28. Six wheel stops are proposed for the northerly parking lot. We request a waiver for any additional curbing or wheel stops.

16. Retaining Wall:

No new retaining walls are planned.

SUBDIVISION OF LAND AND SITE PLAN SPECIAL PERMITS

400 Attachment 4

Town of Harwich

**Appendix 4
Requirements for Applications and Plans**

**Appendix 4.A
Special Permits including Site Plan Review**

	Contents Required	Special Permit and Site Plan Review		
		Existing	Proposed	Site Plan Waiver
General Filing	Two completed applications signed by the owner(s) or an agent authorized in writing by the owner to do so (such written authorization must also be submitted when filing the plan). All applications to the Board are to be signed by the owner of record or his authorized representative. Proof of authorization shall be submitted.		YES	YES
	Two copies of the list of waivers being requested.		YES	
	Two copies of the municipal lien certificate from the Town Treasurer indicating that all taxes, assessments and charges have been paid in full . The applicant shall be responsible for the cost of obtaining such certificate.		YES	YES
	Two copies of notarized affidavit. NA	Accessory apartments/ two-family dwellings only		
	Two copies of covenant for WRPD. NA			
	Two copies of a brief narrative describing the proposed project.		YES	YES
	Six full-size Plans: 24 inches by 36 inches standard, with a 1/4-inch border, at a scale of not smaller than 1-inch equals 40 feet horizontal; 1-inch equals 4 feet vertical on profiles.	YES	YES	
	Eleven reduced copies no smaller than 8 inches by 11 inches and no larger than 11 inches by 17 inches with a 1/4-inch border.		YES	YES

HARWICH CODE

	Contents Required	Special Permit and Site Plan Review		
		Existing	Proposed	Site Plan Waiver
General Filing (cont'd)	Two sets of drainage calculations and drainage area map prepared, stamped and signed by a registered professional engineer designed in compliance with Massachusetts Department of Environmental Protection Phase II Stormwater Regulations Best Management Practice.	YES	YES	
	Six copies of hydrogeologic impact statement. NA	DWRPD		
	A filing fee consistent with the fee schedule.		YES	YES
General Plan Contents	Assessor's map and parcel.	YES	YES	YES
	Zoning districts and boundaries.	YES	YES	YES
	Zoning Compliance Table – see Table 6	YES	YES	YES
	Detailed calculations for required parking – see Article IX of the Zoning Bylaw.		YES	YES
	Legend of all symbols.	YES	YES	YES
	Title block: the respective plan title, date of plan preparation and revisions.	YES	YES	YES
	The name (or names) of the registered professional engineer and/or land surveyor, along with their seal or certification, as applicable, and signatures of each person responsible for the preparation of the plan.	YES	YES	
	Names and addresses of owner(s) of record , petitioner(s) and property deed and plan references.	YES	YES	YES
	Names, deed and plan references of all direct abutters as they appear in the most recent tax list and approximate location of intersecting boundary lines of the abutting land.	YES	YES	

SUBDIVISION OF LAND AND SITE PLAN SPECIAL PERMITS

	Contents Required	Special Permit and Site Plan Review		
		Existing	Proposed	Site Plan Waiver
General Plan Contents (cont'd)	Scaled locus map sufficient to determine the actual location of the property in question and showing the intersection of 2 major roads.	YES	YES	YES
	Plan scale, graphic scale and North arrow.	YES	YES	YES
	If multiple sheets are used, they shall be accompanied by an index showing the entire subdivision. NA, not a sub	YES	YES	YES
	Notations indicating any variances granted for the property. add PB SP	YES	YES	
	Notations stating approval and/or restrictions of the Board of Health. ✓	YES	YES	YES
	Total area and dimensions of the parcel in square feet and acres. ✓	YES	YES	YES
	Gross area of wetlands NA and uplands for the total parcel in square feet, acres and percentage. ✓	YES	YES	YES
	The topography of the land in two-foot increments. one'	YES	YES	
	Mark area(s) subject to the Wetlands Protection Act as defined by MGL c. 131, § 40 within 100 feet of any disturbance or alteration on the site and approval and/or restriction of the Conservation Commission or the Planning Board (Six Ponds Special District) within 100 feet. NA	YES	YES	
	Mark areas set aside for conservation and/or recreational use. NA	YES	YES	
Detailed Plan Contents	Location, dimensions and setbacks for:			
	Structures ✓	YES	YES	
	Parking areas, spaces and facilities add set	YES	YES	
	Dumpsters (to be enclosed by fence) add	YES	YES	
	Service areas NA	YES	YES	
	Loading areas NA	YES	YES	

HARWICH CODE

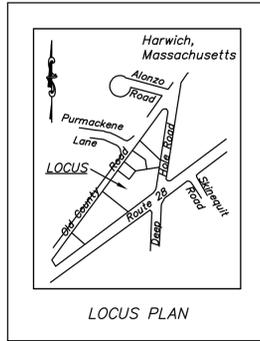
	Contents Required	Special Permit and Site Plan Review		
		Existing	Proposed	Site Plan Waiver
Detailed Plan Contents (cont'd)	Maneuvering areas ✓	YES	YES	
	Driveways and curb cuts ✓	YES	YES	
	Existing driveways within 100 feet of site ✓	YES	YES	
	Sidewalks NA	YES	YES	
	Lighting ✓	YES	YES	
	Easements add	YES	YES	
	Freestanding signs ✓	YES	YES	
	Surface drainage NA	YES	YES	
	Subsurface drainage ✓		YES	
	Drainage facilities ✓		YES	
	Impervious surfaces ✓		YES	
	Subsurface disposal systems ✓		YES	
	Sewage disposal ✓	YES	YES	
	Drainage plan showing the method for disposing of runoff from impervious surfaces ✓		YES	
	Stopping sight distance for all vertical curves and intersections according to Table 1 ✓		YES	
	Traffic circulation arrows NA		YES	
	Utilities			
	§ Waterlines ✓	YES	YES	
	§ Hydrants ✓	YES	YES	
	§ Electrical ✓	YES	YES	
	§ Gas NA	YES	YES	
	§ Cable ✓	YES	YES	
	§ Other	YES	YES	
Specifications, details, cross sections for:				
§ Lighting existing/previously approved		YES		
§ Curbing Rte. 28 parking		YES		

SUBDIVISION OF LAND AND SITE PLAN SPECIAL PERMITS

	Contents Required	Special Permit and Site Plan Review		
		Existing	Proposed	Site Plan Waiver
Detailed Plan Contents (cont'd)	§ Fencing NA		YES	
	§ Retaining walls NA		YES	
	§ Parking ✓		YES	
	§ Wheel stops shown in northly parking lot		YES	
Landscaping Plans	General location of trees, trees having a caliper of 6 inches or more, landscaping, wetlands or other significant natural features. ✓		YES	
	Detail of proposed landscaping. existing		YES	
	Minimize loss of trees. ✓		YES	
Building Plans	Scaled floor plans ✓		YES	
	§ Proposed apartment, showing floor area by room and the common wall between the 2 units ✓	Accessory apartments/ two-family dwellings only		
	§ Proposed second dwelling showing floor area NA			
	Building elevations, including: existing		YES	
	§ Door and window locations existing		YES	
	§ Building height existing		YES	
	§ Color of surface material existing		YES	
	§ Texture of surface material existing		YES	
§ All entrances to the main dwelling and the accessory apartment/second dwelling e	With accessory apartments/ two-family dwellings only			
Water Resource Protection District	Complete list of the type and quantities of all chemicals, pesticides, fuels and other potentially hazardous or toxic materials to be stored, used or disposed of on site. NA		YES	
	Description of how and where hazardous materials will be stored, with a description of the provisions on how to protect materials from vandalism, corrosion, leakage, etc. NA		YES	
	Description of toxic or hazardous waste or by-products to be generated, showing storage and/or disposal methods. NA		YES	

HARWICH CODE

	Contents Required	Special Permit and Site Plan Review		
		Existing	Proposed	Site Plan Waiver
Water Resource Protection District (cont'd)	For projects where runoff other than typical runoff from parking lots or driveways may occur and/or subsurface disposal of materials other than typical septage waste may occur, the following additional information is required: NA		YES	
	§ Groundwater flow conditions, including description of down-gradient water resources and evaluation of the impact of disposal of accidental spills on such resources. NA		YES	
	§ Description of alleviating measures to eliminate groundwater contamination and backup. NA		YES	



NOTES:

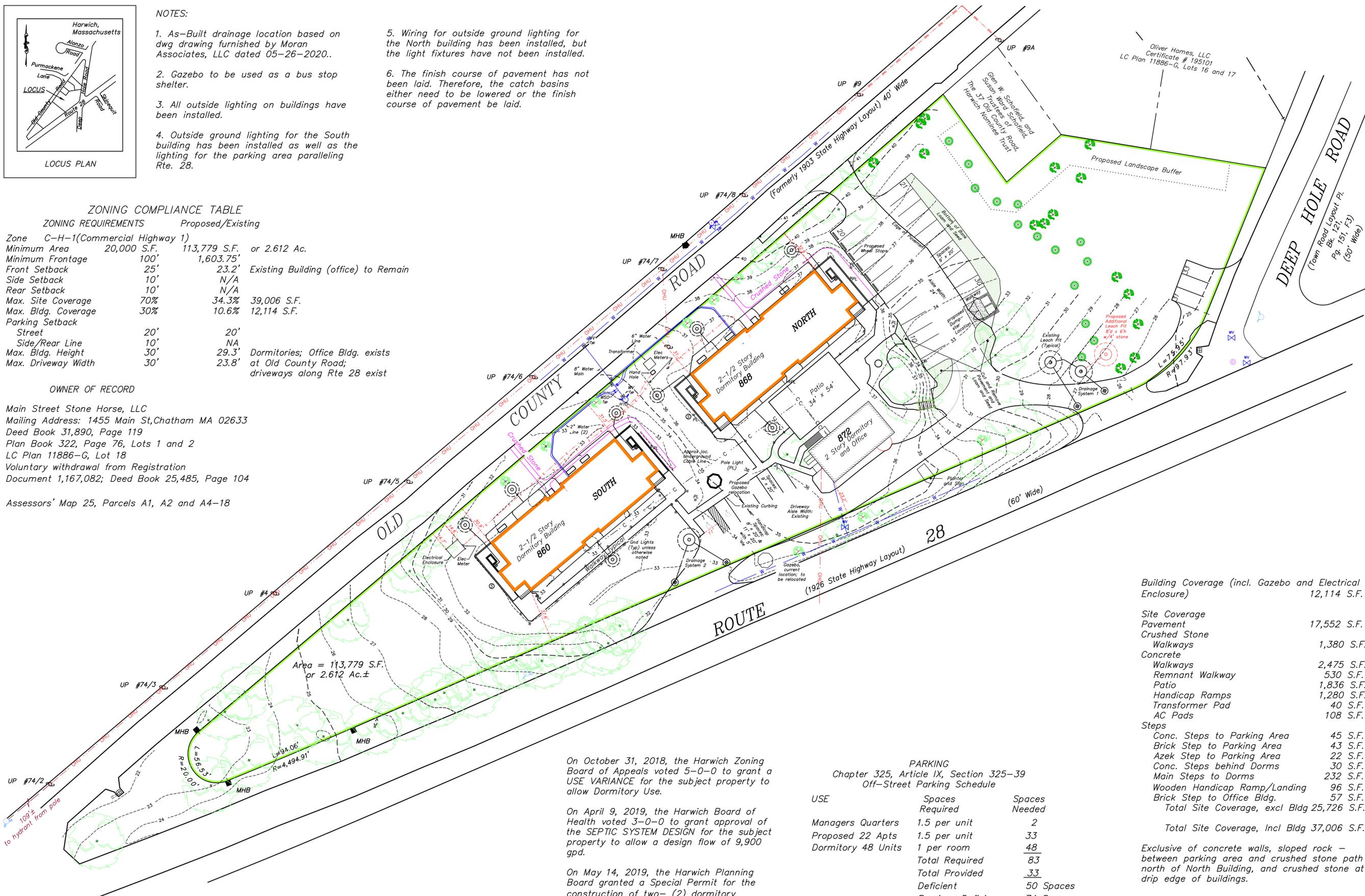
1. As-Built drainage location based on dwg drawing furnished by Moran Associates, LLC dated 05-26-2020.
2. Gazebo to be used as a bus stop shelter.
3. All outside lighting on buildings have been installed.
4. Outside ground lighting for the South building has been installed as well as the lighting for the parking area paralleling Rte. 28.
5. Wiring for outside ground lighting for the North building has been installed, but the light fixtures have not been installed.
6. The finish course of pavement has not been laid. Therefore, the catch basins either need to be lowered or the finish course of pavement be laid.

ZONING COMPLIANCE TABLE

ZONING REQUIREMENTS	Proposed/Existing
Zone C-H-1(Commercial Highway 1)	
Minimum Area	20,000 S.F. 113,779 S.F. or 2.612 Ac.
Minimum Frontage	100' 1,603.75'
Front Setback	25' 23.2' Existing Building (office) to Remain
Side Setback	10' N/A
Rear Setback	10' N/A
Max. Site Coverage	70% 34.3% 39,006 S.F.
Max. Bldg. Coverage	30% 10.6% 12,114 S.F.
Parking Setback	
Street	20' 20'
Side/Rear Line	10' NA
Max. Bldg. Height	30' 29.3' Dormitories; Office Bldg. exists at Old County Road;
Max. Driveway Width	30' 23.8' driveways along Rte 28 exist

OWNER OF RECORD

Main Street Stone Horse, LLC
 Mailing Address: 1455 Main St, Chatham MA 02633
 Deed Book 31,890, Page 119
 Plan Book 322, Page 76, Lots 1 and 2
 LC Plan 11886-G, Lot 18
 Voluntary withdrawal from Registration
 Document 1,167,082; Deed Book 25,485, Page 104
 Assessors' Map 25, Parcels A1, A2 and A4-18



On October 31, 2018, the Harwich Zoning Board of Appeals voted 5-0-0 to grant a USE VARIANCE for the subject property to allow Dormitory Use.

On April 9, 2019, the Harwich Board of Health voted 3-0-0 to grant approval of the SEPTIC SYSTEM DESIGN for the subject property to allow a design flow of 9,900 gpd.

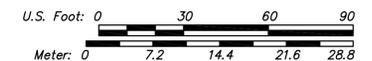
On May 14, 2019, the Harwich Planning Board granted a Special Permit for the construction of two- (2) dormitory buildings and appurtenances (Case No.: PB2019-13)

PARKING
 Chapter 325, Article IX, Section 325-39
 Off-Street Parking Schedule

USE	Spaces Required	Spaces Needed
Managers Quarters	1.5 per unit	2
Proposed 22 Apts	1.5 per unit	33
Dormitory 48 Units	1 per room	48
Total Required		83
Total Provided		33
Deficient		50 Spaces
Previous Deficiency		74 Spaces

Building Coverage (incl. Gazebo and Electrical Enclosure)	12,114 S.F.
Site Coverage	
Pavement	17,552 S.F.
Crushed Stone	
Walkways	1,380 S.F.
Concrete	
Walkways	2,475 S.F.
Remnant Walkway	530 S.F.
Patio	1,836 S.F.
Handicap Ramps	1,280 S.F.
Transformer Pad	40 S.F.
AC Pads	108 S.F.
Steps	
Conc. Steps to Parking Area	45 S.F.
Brick Step to Parking Area	43 S.F.
Azek Step to Parking Area	22 S.F.
Conc. Steps behind Dorms	30 S.F.
Main Steps to Dorms	232 S.F.
Wooden Handicap Ramp/Landing	96 S.F.
Brick Step to Office Bldg.	57 S.F.
Total Site Coverage, excl Bldg	25,726 S.F.
Total Site Coverage, Incl Bldg	37,006 S.F.

Exclusive of concrete walls, sloped rock - between parking area and crushed stone path north of North Building, and crushed stone at drip edge of buildings.



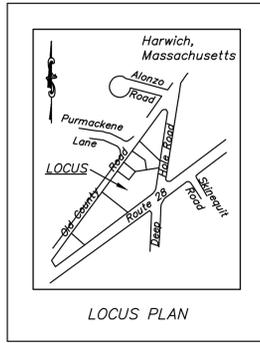
SITE PLAN

Date	Description of Revision

THE STONEHORSE
 Terry W. Eldredge, dba
ELDRIDGE SURVEYING
 1038 Main Street, Chatham, MA; (508) 776-4129; Fax: (508) 945-5885



Date: 12-21-2020
 Scale: 1" = 30'
 Project No.: H-2891-85.0



NOTES:

1. The underlying aerial orthophotograph mosaic was flown by EastSouth East, LLC on April 21, 2020.

ZONING COMPLIANCE TABLE		
ZONING REQUIREMENTS	Proposed/Existing	
Zone	C-H-1(Commercial Highway 1)	
Minimum Area	20,000 S.F.	113,779 S.F. or 2.612 Ac.
Minimum Frontage	100'	1,603.75'
Front Setback	25'	23.2' Existing Building (office) to Remain
Side Setback	10'	N/A
Rear Setback	10'	N/A
Max. Site Coverage	70%	34.3% 39,006 S.F.
Max. Bldg. Coverage	30%	10.6% 12,114 S.F.
Parking Setback		
Street	20'	20'
Side/Rear Line	10'	NA
Max. Bldg. Height	30'	29.3' Dormitories; Office Bldg. exists at Old County Road;
Max. Driveway Width	30'	23.8' driveways along Rte 28 exist

OWNER OF RECORD

Main Street Stone Horse, LLC
 Mailing Address: 1455 Main St, Chatham, MA 02633
 Deed Book 31,890, Page 119
 Plan Book 322, Page 76, Lots 1 and 2
 LC Plan 11886-G, Lot 18
 Voluntary withdrawal from Registration
 Document 1,167,082; Deed Book 25,485, Page 104
 Assessors' Map 25, Parcels A1, A2 and A4-18



ORTHO PHOTO PLAN

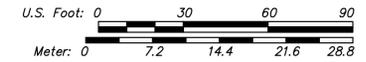
Rev. #	Date	Description of Revision

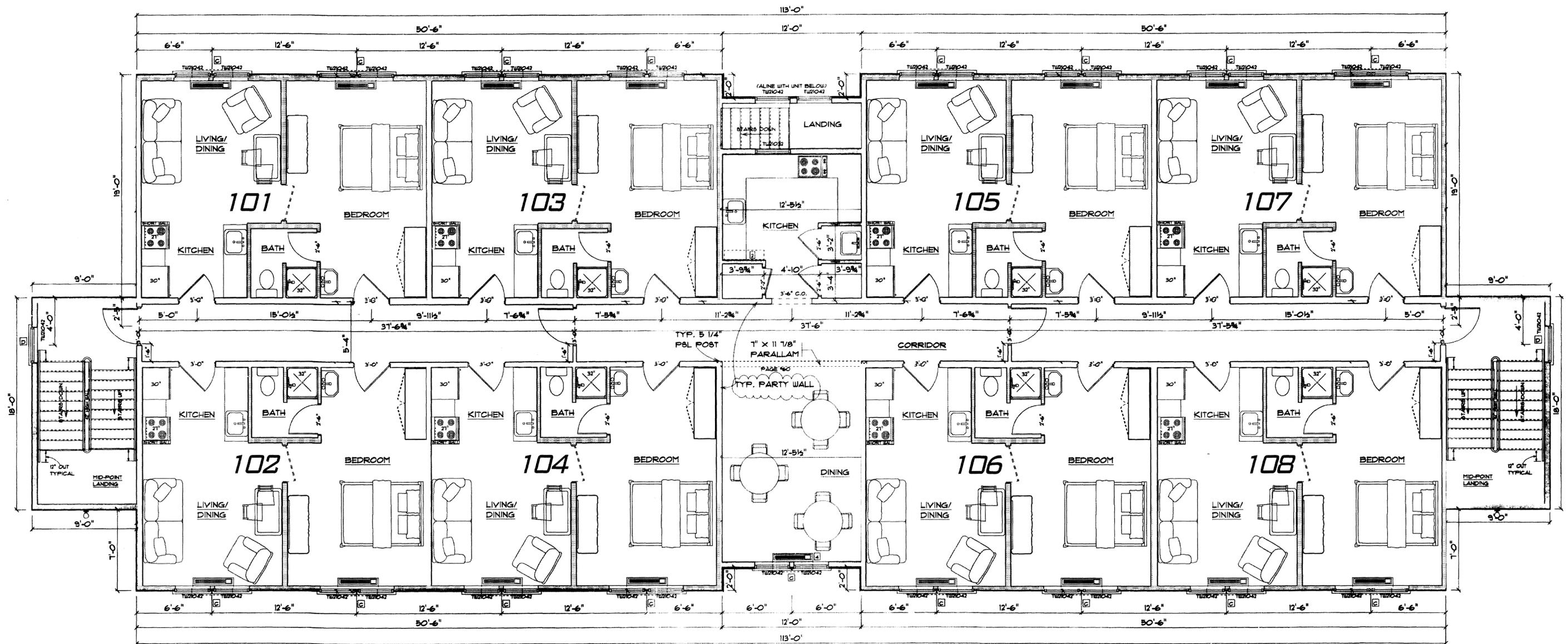
THE STONEHORSE

Terry W. Eldredge, dba
ELDRIDGE SURVEYING
 1038 Main Street, Chatham, MA; (508) 776-4129; Fax: (508) 945-5885



Date: 12-21-2020
 Scale: 1" = 30'
 Project No.: H-2891-85.0





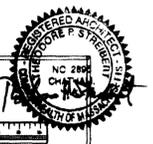
FIRST LEVEL PLAN

- 1 14 6K HEAT PUMP UNITS
- 2 1 9K HEAT PUMP UNITS
- 3 2 12K HEAT PUMP UNITS

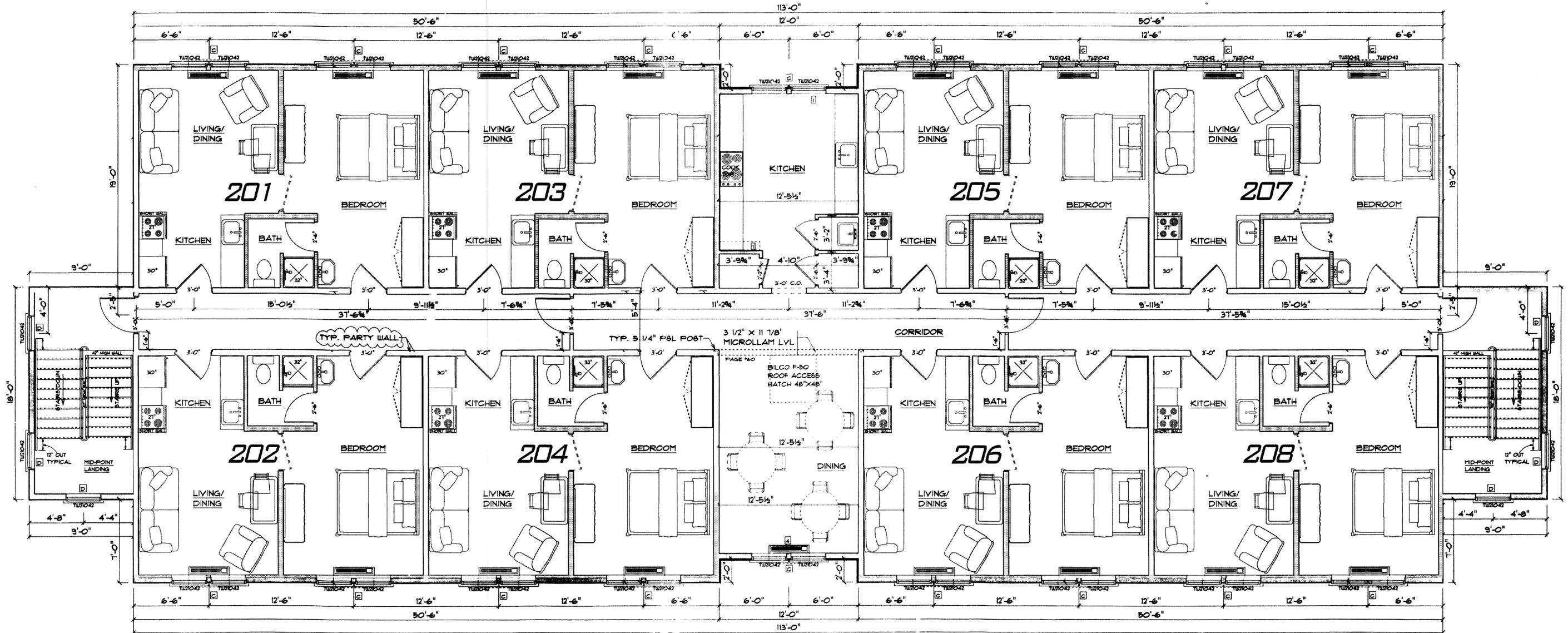
Revised 12-16-2020

Revisions include importing apartment layouts and renumbering units in the same format as the previous bedroom layout was numbered

BUILDER THE STONEHORSE 868 ROUTE 28 HARWICH MA.	JOB ADDRESS NORTH BUILDING PROPOSED 2 1/2 STORY DORMITORY BUILDING.	DESIGN WWW.JBHOMEDESIGNS.COM	DATE 11-20-19	REVISION #6	DRAWN BY JB	PAGE 5 OF 12	SCALE 1/4"=1'-0"	JB Designs P.O. BOX 288 WEST BARNSTABLE MA 02668 (508) 494-9534
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(1) PURCHASE OF DRAWINGS LEAVES PURCHASER RESPONSIBLE FOR COMPLIANCE WITH ALL LOCAL BUILDING CODES AND ORDINANCES. JB DESIGNS MAY NOT BE HELD RESPONSIBLE FOR SITE CONDITIONS OR FOR THE USE OF THESE DRAWINGS DURING CONSTRUCTION.
 (2) EXACT SIZE AND REINFORCEMENT OF ALL CONCRETE FOOTINGS MUST BE DETERMINED BY LOCAL SOIL CONDITIONS AND ACCEPTABLE PRACTICES OF CONSTRUCTION. VERIFY DESIGN WITH LOCAL ENGINEER.
 (3) ALL FOOTINGS SHALL EXTEND BELOW PROCLINE VERIFY DEPTH.
 (4) VERIFY STRUCTURAL ELEMENTS FOR DESIGN 4 SIZE WITH LOCAL ENGINEER AND BUILDING OFFICIALS.



SECOND LEVEL PLAN

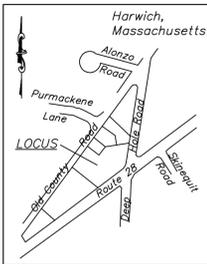
[] 11 6K HEAT PUMP UNIT
 [] 1 12K HEAT PUMP UNIT

Revised 12-16-2020

Revisions include importing apartment layouts and renumbering units in the same format as the previous bedroom layout was numbered

BUILDER THE STONEHORSE 868 ROUTE 28 HARWICH MA.	JOB ADDRESS NORTH BUILDING PROPOSED 2 1/2 STORY DORMITORY BUILDING.	DESIGN WWW.JBHOMEDESIGNS.COM	DATE 11-20-19	REVISION #6	DRAWN BY JB	PAGE 6 OF 12	SCALE 1/4"=1'-0"	<p> JB Designs P.O. BOX 288 WEST BARNSTABLE MA, 02868 (508) 494-8534 </p>
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(1) PURCHASE OF DRAWINGS LEAVES PURCHASER RESPONSIBLE FOR COMPLIANCE WITH ALL LOCAL BUILDING CODES AND ORDINANCES. AS DESIGNS MAY NOT BE HELD RESPONSIBLE FOR SITE CONDITIONS OR FOR THE USE OF THESE DRAWINGS DURING CONSTRUCTION.
 (2) EXACT SIZE AND REINFORCEMENT OF ALL CONCRETE FOOTINGS MUST BE DETERMINED BY LOCAL SOIL CONDITIONS AND ACCEPTABLE PRACTICES OF CONSTRUCTION. VERIFY DESIGN WITH LOCAL ENGINEER.
 (3) ALL FOOTINGS SHALL EXTEND BELOW FROSTLINE VERIFY DEPTH.
 (4) VERIFY STRUCTURAL ELEMENTS FOR DESIGN & SIZE WITH LOCAL ENGINEER AND BUILDING OFFICIALS.



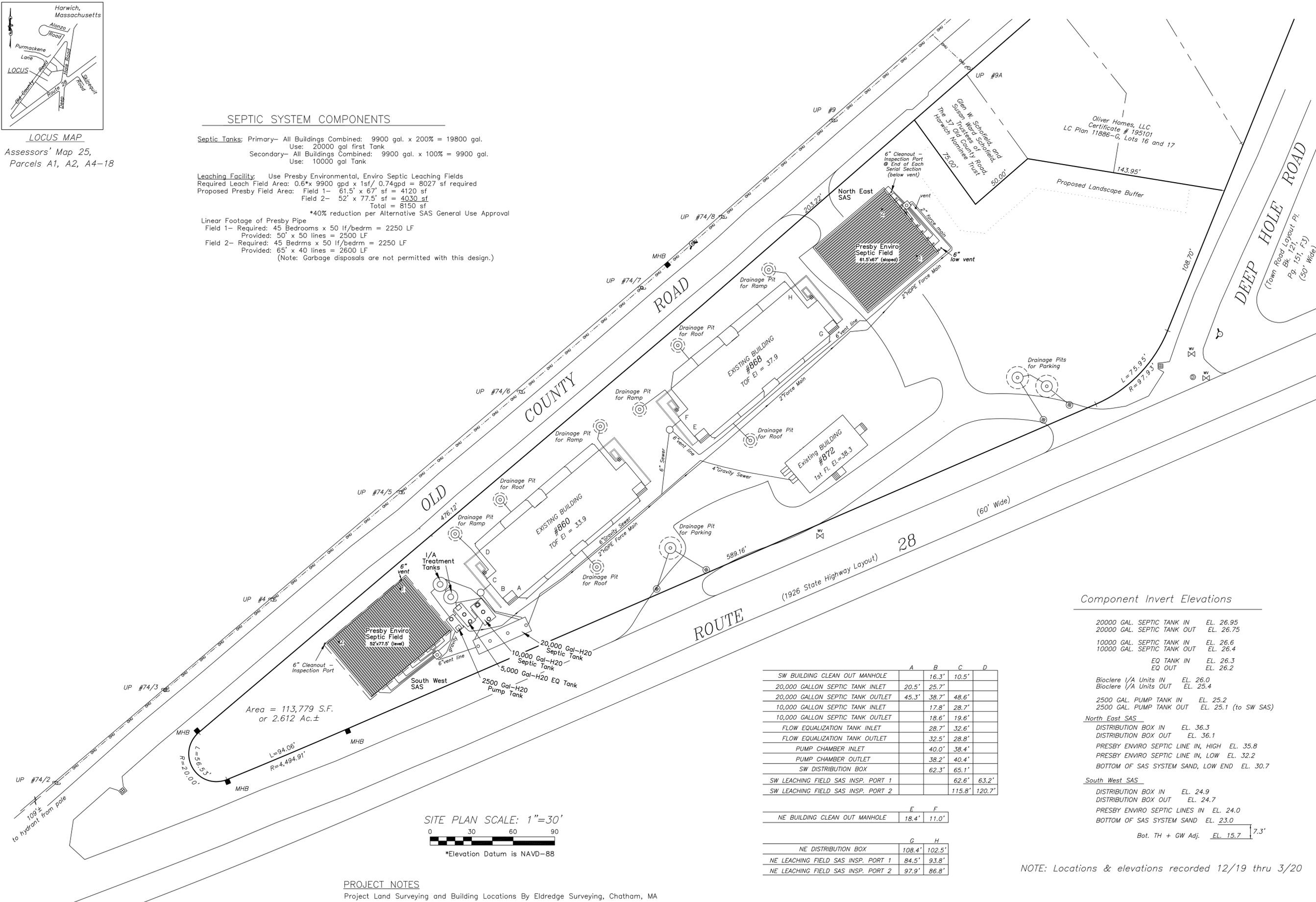
LOCUS MAP
Assessors' Map 25,
Parcels A1, A2, A4-18

SEPTIC SYSTEM COMPONENTS

Septic Tanks: Primary- All Buildings Combined: 9900 gal. x 200% = 19800 gal.
Use: 20000 gal first Tank
Secondary- All Buildings Combined: 9900 gal. x 100% = 9900 gal.
Use: 10000 gal Tank

Leaching Facility: Use Presby Environmental, Enviro Septic Leaching Fields
Required Leach Field Area: $0.6 \times 9900 \text{ gpd} \times 1 \text{ sf} / 0.74 \text{ gpd} = 8027 \text{ sf}$ required
Proposed Presby Field Area: Field 1- $61.5' \times 67' \text{ sf} = 4120 \text{ sf}$
Field 2- $52' \times 77.5' \text{ sf} = 4030 \text{ sf}$
Total = 8150 sf
*40% reduction per Alternative SAS General Use Approval

Linear Footage of Presby Pipe
Field 1- Required: 45 Bedrooms x 50 lf/bedrm = 2250 LF
Provided: 50' x 50 lines = 2500 LF
Field 2- Required: 45 Bedrms x 50 lf/bedrm = 2250 LF
Provided: 65' x 40 lines = 2600 LF
(Note: Garbage disposals are not permitted with this design.)



Area = 113,779 S.F.
or 2.612 Ac.±

SITE PLAN SCALE: 1"=30'



*Elevation Datum is NAVD-88

PROJECT NOTES

Project Land Surveying and Building Locations By Eldredge Surveying, Chatham, MA

Component Invert Elevations

20000 GAL. SEPTIC TANK IN	EL. 26.95
20000 GAL. SEPTIC TANK OUT	EL. 26.75
10000 GAL. SEPTIC TANK IN	EL. 26.6
10000 GAL. SEPTIC TANK OUT	EL. 26.4
EQ TANK IN	EL. 26.3
EQ TANK OUT	EL. 26.2
Bioclere I/A Units IN	EL. 26.0
Bioclere I/A Units OUT	EL. 25.4
2500 GAL. PUMP TANK IN	EL. 25.2
2500 GAL. PUMP TANK OUT	EL. 25.1 (to SW SAS)
North East SAS	
DISTRIBUTION BOX IN	EL. 36.3
DISTRIBUTION BOX OUT	EL. 36.1
PRESBY ENVIRO SEPTIC LINE IN, HIGH	EL. 35.8
PRESBY ENVIRO SEPTIC LINE IN, LOW	EL. 32.2
BOTTOM OF SAS SYSTEM SAND, LOW END	EL. 30.7
South West SAS	
DISTRIBUTION BOX IN	EL. 24.9
DISTRIBUTION BOX OUT	EL. 24.7
PRESBY ENVIRO SEPTIC LINES IN	EL. 24.0
BOTTOM OF SAS SYSTEM SAND	EL. 23.0
Bot. TH + GW Adj.	EL. 15.7

	A	B	C	D
SW BUILDING CLEAN OUT MANHOLE		16.3'	10.5'	
20,000 GALLON SEPTIC TANK INLET	20.5'	25.7'		
20,000 GALLON SEPTIC TANK OUTLET	45.3'	38.7'	48.6'	
10,000 GALLON SEPTIC TANK INLET		17.8'	28.7'	
10,000 GALLON SEPTIC TANK OUTLET		18.6'	19.6'	
FLOW EQUALIZATION TANK INLET		28.7'	32.6'	
FLOW EQUALIZATION TANK OUTLET		32.5'	28.8'	
PUMP CHAMBER INLET		40.0'	38.4'	
PUMP CHAMBER OUTLET		38.2'	40.4'	
SW DISTRIBUTION BOX		62.3'	65.1'	
SW LEACHING FIELD SAS INSP. PORT 1			62.6'	63.2'
SW LEACHING FIELD SAS INSP. PORT 2			115.8'	120.7'

	E	F
NE BUILDING CLEAN OUT MANHOLE	18.4'	11.0'

	G	H
NE DISTRIBUTION BOX	108.4'	102.5'
NE LEACHING FIELD SAS INSP. PORT 1	84.5'	93.8'
NE LEACHING FIELD SAS INSP. PORT 2	97.9'	86.8'

NOTE: Locations & elevations recorded 12/19 thru 3/20



Septic System As-Built Plan

THE STONEHORSE
872 Route 28, So. Harwich, MA

MORAN ENGINEERING ASSOC., LLC
941 Route 28, So. Harwich, MA; (508) 432-2878; MoranEng@gmail.com

Date: 5/26/20
Scale: 1" = 30'

Date	Description of Revision

MORAN ENGINEERING ASSOCIATES, LLC

941 ROUTE 28, HARWICH

P.O. BOX 183
South Harwich, MA 02661

moraneng@gmail.com

O: 508-432-2878
F: 508-432-3501

December 21, 2020

REVISED DRAINAGE CALCULATIONS

Stonehorse Work-Force Housing @ 872 Route 28, South Harwich, Ma

Proposed Conditions: Runoff for 25-Year Storm Peak Flow

Using NOAA Atlas 14, Vol 10, Ver 2 for 25 yr, 15min duration => 1.13 inch/15min
=> 1.13x4 = 4.52 in/hr

Revised calculations for increase in paved parking.

Revised contribution area per project surveyor, Terry Eldredge, sketch attached.

Catch Basins Contribution Drainage Area - 1

	Area	C
Paved Driveway & Parking	= 13,500 sf	0.95
Walks & Hardscape = 1244 sf/2 + 76sf	= 698 sf	0.95
Landscaping	= 6022 sf	0.5

Peak Runoff = $(0.95 \times (13,500 + 698 \text{ sf}) + 0.5 \times 6022 \text{ sf}) \times 4.52 \text{ in/hr} \times 1 \text{ ft}/12 \text{ in} = 6215 \text{ cf/hr}$
 $6215 \text{ cf/hr} \times 1 \text{ hr}/60 \text{ min} = 103.6 \text{ cf/min} (= 1.73 \text{ cf/sec})$

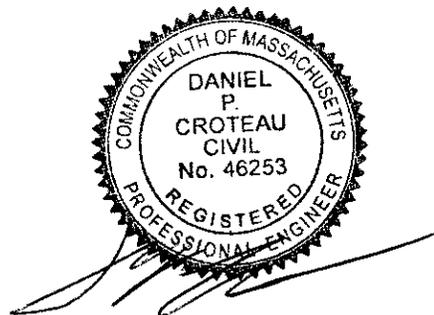
$Q \text{ gal/min} = 103.6 \text{ cf/min} \times 7.48 \text{ gal/cf} = 775 \text{ gal/min}$

Required Leaching Area = $775 \text{ gal/min} \times 1 \text{ sf} / 0.7 \text{ gal/min} = 1107 \text{ sf}$ Required

Provided Leaching Area : 3-Leach Pits (8'diam x 5'deep w/4'stone)

= $3 \times (\pi 16' \times 5' + \pi 8' \times 8') = 1357 \text{ sf}$ Provided

Storage Volume: $3 \times (\pi 3.67' \times 3.67' \times 6' + 0.3(\pi 8' \times 8' \times 6' - \pi 3.67' \times 3.67' \times 6')) = 1619 \text{ cf}$



Catch basins **Contribution Area - 1 - CURRENTLY PROPOSED**

Chady

	Currently Proposed	s.f.	C
Paved Driveway and Parking:	13,500	0.95	
Walks and Hardscape:	698	0.95	
Grass Parking:	0	0.7	
Landscaping:	6,022	0.5	

Peak Runoff:

	0.95	x	14,198	"="	13,488			
plus	0.7	x	0	"="	0			
plus	0.5	x	6,022	"="	3,011			
			TOTAL		16,499			
Total	16,499	x	4.52	inch/hour	x	1 ft/12 in	"="	6,215 c.f./hr.
			1 hr./60					
	6,215 c.f./hr.	x	min	"="	103.6 c.f./min			
Q gal/min	"="		103.6 c.f./min	x	7.48 gal/c.f.	"="		775 gal/min

Required Leaching

Area = 775 gal/min x 1 s.f./0.7 gal/min **"=" 1107 s.f. Required**

Proposed: 2 Leach Pits, 8' diam, 5' Deep with 4' Stone (total diameter = 16'):

	(Pi	x	Total Diameter	x	Height	"="	Surface Area
Leaching Area Provided	3.14158	x	16	x	5	"="	251
	(Pi	x	radius	x	radius		
Plus	3.14158	x	8	x	8	"="	201
			TOTAL				452 s.f. per pit
			Additional Pit Proposed	x # of Pits			3
				"="			1,357 s.f.
					Which is greater than		1107 s.f. Required
					by		250 s.f.

Storage Volume:

# of Pits	((Pi	x Inside Radius	x Inside Radius	x Inside height)	+	(% Voids	x	<i>cont. below</i>	
3	3.14159	3.67	3.67	6		30%			
	x Outside Radius	x Outside Radius	x Inside height)	-	(Pi	x Inside Radius	x Inside Radius	x Inside height))))	
	3.14159	8	8	6	3.14159	3.67	3.67	6	1,619

STORMWATER RUNOFF DRAINAGE CALCULATIONS

THE STONEHORSE PROJECT - RTE 28 SOUTH HARWICH

Proposed Conditions: Runoff for 25-Year Storm Peak Flow

Using NOAA Atlas 14, Vol 10. Ver 2 for 25 yr., 15 min => 1.13 inch/15 min => (1.13 x 4) = 4.52 in/hr.

Catch basins Contribution Area - 1 - PREVIOUSLY PROPOSED

				Previously Proposed s.f.	C		
				Paved Driveway and Parking:	7,255	0.95	
				Walks and Hardscape:	698	0.95	
				Grass Parking:	3,175	0.7	
				Landscaping:	6,022	0.5	
Peak Runoff:							
	0.95	x	7,953	"="	7,555		
plus	0.7	x	3,175	"="	2,223		
plus	0.5	x	6,022	"="	3,011		
			TOTAL		12,789		
Total	12,789	x	4.52	inch/hour	x	1 ft/12 in	"=" 4,817 c.f./hr.
			1 hr./60				
4,817 c.f./hr.		x	min	"="	80.3 c.f./min		
Q gal/min	"="		80.3 c.f./min	x	7.48 gal/c.f.	"="	601 gal/min

Charly

Required Leaching Area = 601 gal/min x 1 s.f./0.7 gal/min " = " **858 s.f. Required**

Proposed: 2 Leach Pits, 8' diam, 5' Deep with 4' Stone (total diameter = 16'):

	(Pi	x	Total Diameter	x	Height	"="	Surface Area
Leaching Area Provided							
:	3.14158	x	16	x	5	"="	251
	(Pi	x	radius	x	radius		
Plus	3.14158	x	8	x	8	"="	201
					TOTAL		452 s.f. per pit
					x # of Pits		2
					"="		905 s.f.

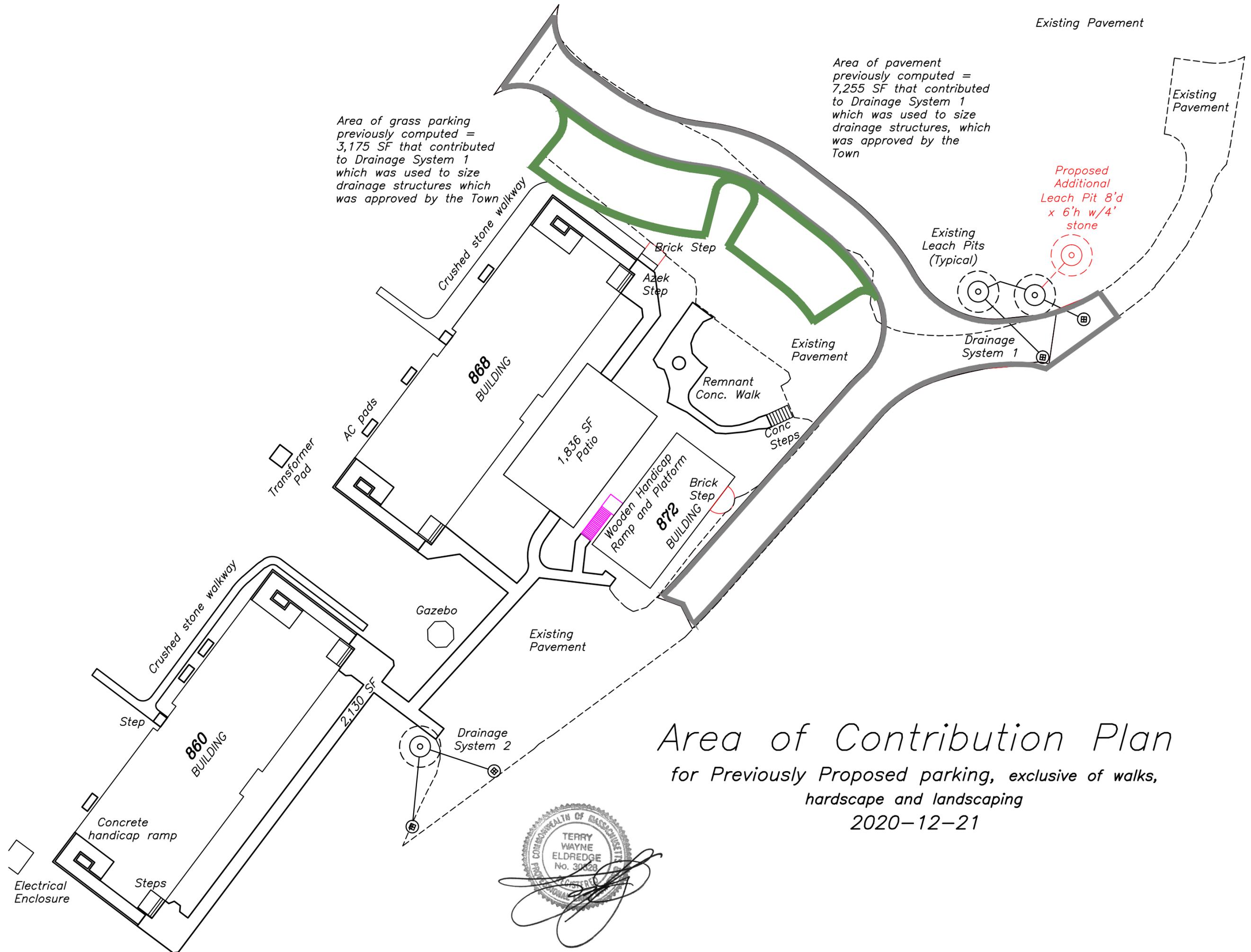
Storage Volume: Which is greater than 858 s.f. Required

# of Pits	((Pi	x Inside Radius	x Inside Radius	x Inside height)	+	(% Voids	x	cont. below
2	3.14159	3.67	3.67	6		30%		
	x Outside Radius	x Outside Radius	x Inside height)	-	(Pi	x Inside Radius	x Inside Radius	x Inside height))))) " = " CF
	3.14159	8	8	6	3.14159	3.67	3.67	6 1,079

Existing Pavement

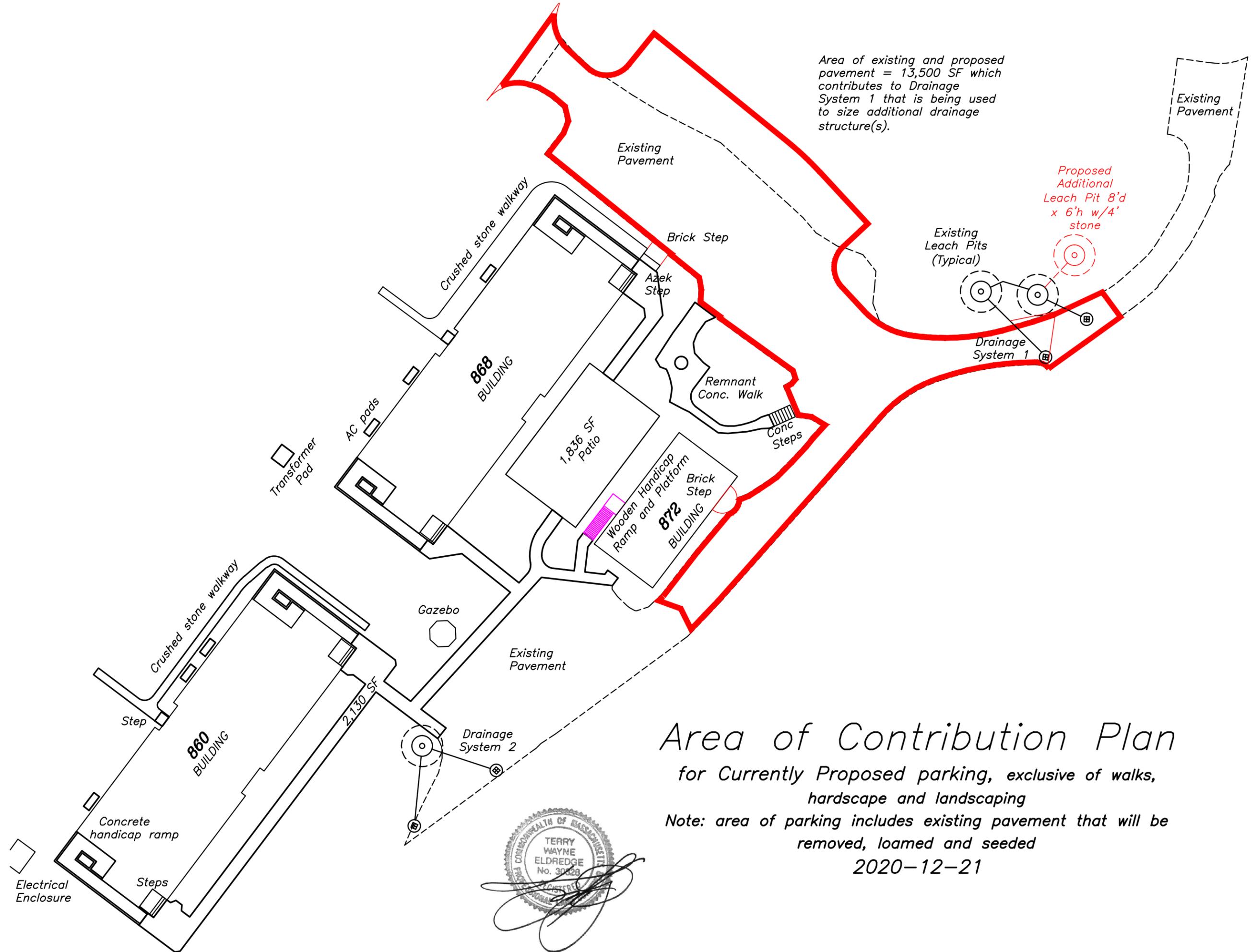
Area of grass parking previously computed = 3,175 SF that contributed to Drainage System 1 which was used to size drainage structures which was approved by the Town

Area of pavement previously computed = 7,255 SF that contributed to Drainage System 1 which was used to size drainage structures, which was approved by the Town



Area of Contribution Plan
 for Previously Proposed parking, exclusive of walks,
 hardscape and landscaping
 2020-12-21





Area of existing and proposed pavement = 13,500 SF which contributes to Drainage System 1 that is being used to size additional drainage structure(s).

Area of Contribution Plan

for Currently Proposed parking, exclusive of walks, hardscape and landscaping

Note: area of parking includes existing pavement that will be removed, loamed and seeded

2020-12-21



PART B – PROJECT LOCATION

Legal Street Address	282 Rt 28	Village/Zip Code	02671
Title Book/Page or L.C.C. #	BK 33205 Page 156 #44388		
Map(s) / Parcel(s)	12/G2-1		
Zoning & Overlay Districts	C-H-1	*Historic?	n/a
Frontage (linear feet)	277.78		
Total land area (s.f.)	21,995		
Upland (s.f.)	21,995	Wetlands (s.f.)	n/a

PART C – PROJECT DESCRIPTION

Existing Floor Area in Sq. Ft	Gross:	Net:
Proposed Floor Area in Sq. Ft	Gross: 4102	Net:
Change in Sq. Ft + / -	Gross:	Net:
Existing # of parking spaces	Proposed # of parking spaces: 18	
Existing Use(s)		
Proposed Use(s)	See attached narrative.	
<i>Attach a separate narrative if necessary.</i>		

The undersign hereby files an application with the Harwich Planning Board for the following special permits as proposed under the provisions of the Harwich Zoning Code: **(check all that apply)**

Site Plan Review § 325-55:

- Any floor area expansion of any structure or expansion of exterior space, other than parking, serving any of the following: commercial, industrial, multi-family or educational use or personal wireless service facility or the creation of a drive-up or drive-through window
- Expansion or reconfiguration of an existing parking lot and/or driveway(s) serving said parking lot.
- Establishment of any new commercial, industrial, multi-family, educational, fast food/take out restaurant or personal wireless service facility.
- Establishment of any new retail use(s) in the Industrial (IL) Zone.
- Waiver of Site Plan § 325-55.F

Article V, Use Regulations:

- Paragraph____, sub-paragraph #____ Paragraph____, sub-paragraph #____
- Paragraph____, sub-paragraph #____, supplemental regulation #____ § 325-14

Article X, Special Permits:

- Structures w/ gross floor area of 7,500+ s.f. § 325-51
- Structures requiring 20 or more new parking spaces § 325-51
- Accessory Apt./Shared Elderly Housing § 325-51.H Mixed Use § 325-51.M
- Drinking Water Resource Protection § 325-51.C Two Family § 325-51.N
- Village Commercial, Harwich Port § 325-51.L *Harwich Center Overlay § 325-51.O
- Signage § 325-27.F Additional Cluster, Excess SF, Non-entry Facades

Other Special Permits:

- Six Ponds Special District - Article XVI
- Wind Energy Systems - Article XVIII Large Scale Wind Generation – Article XIX
- Other (i.e. Alternate Access § 325-18.P, Special Cases § 325-44.B) Marine Use
- Repetitive Petition (MGL Ch 40A, §16): Proposed project evolved from a previously denied plan submitted to the Planning Board on _____ Year/Case # _____

**Note: Projects within the Harwich Center Overlay District may also be within the Harwich Center Historic District. This requires separate filing with the Historic District and Historical Commission. Please inquire for forms and instructions.*

GENCON

December 18, 2020

Harwich Zoning Board of Appeals
732 Main Street
Harwich, MA 02645

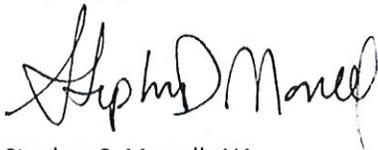
Re: Site Plan Review Application Narrative
Proposed Boat Maintenance and Repair Building
282 MA Route 28
Harwich, MA

The proposed use for the lot is for boat maintenance and repair. The owner is proposing a structure to house these activities in lieu of having the boats and accompanying work out in the open. It is believed this structure would benefit the abutters both aesthetically and via a major reduction of the noise associated with the work on the boats. There is a parking easement that has been granted to the adjacent restaurant which restricts the buildable area of the lot.

The proposed building will be 60'x78'. It will be 25' above average grade at its highest point. This parking area will be used by patrons during the restaurant's operating hours and by the owner's employees at all other times. There will be no boat storage on the property except for inside the building. There will be no signage on the building and lighting is limited to one parking lot light on the south façade and convenience lighting at the west man-doors.

Site work will include but not be limited to minor grading, 3 new parking spaces, a new septic system, a tight tank, and a rain garden. As per the Zoning Board appeal agreement, there will be an 8' stockade fence along the property along the NW corner of the lot.

Very truly yours,



Stephen S. Morrell, AIA
Lead Architect

GENERAL CONSTRUCTION NOTES

- ALL SITE PREPARATION NECESSARY TO COMPLETE THIS PROJECT ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- THE CONTRACTOR SHALL COORDINATE ALL NECESSARY POLICE DETAILS WITH THE LOCAL POLICE DEPARTMENT.
- ALL CONSTRUCTION AND CONTRACTOR VEHICLES ARE TO BE PARKED WITHIN THE SITE PROPERTY. PARKING OF ANY CONSTRUCTION VEHICLE OUTSIDE OF THE SITE LIMITS IS PROHIBITED.
- THE CONTRACTOR SHALL MAKE ALL NECESSARY CONSTRUCTION NOTIFICATIONS AND APPLY FOR AND OBTAIN ALL REQUIRED CONSTRUCTION PERMITS. ALL FEES INCLUDING POLICE DETAILS AND POSTING OF BONDS ARE TO BE PAID BY THE CONTRACTOR, AND COORDINATED WITH THE OWNER AND THE ENGINEER.
- ALL EXISTING CONDITIONS SHOWN SHALL BE CONSIDERED APPROXIMATE AND ARE BASED ON THE BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THAT THE PROPOSED CONDITIONS SHOWN ON THE PLANS DO NOT CONFLICT WITH ANY KNOWN EXISTING OR OTHER PROPOSED IMPROVEMENTS. IF ANY CONFLICTS ARE DISCOVERED, THE CONTRACTOR SHALL NOTIFY THE OWNER AND THE ENGINEER PRIOR TO CONDUCTING ANY WORK.
- THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AND STRUCTURES AS SHOWN ON THESE PLANS ARE BASED ON RECORDS OF PREVIOUS OWNERS, VARIOUS UTILITY COMPANIES, AND WHEREVER POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT GUARANTEED AS BEING EXACT OR COMPLETE. THE LOCATION OF ALL UNDERGROUND UTILITIES AND STRUCTURES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR MUST CONTACT THE APPROPRIATE UTILITY COMPANIES, ANY GOVERNING PERMITTING AUTHORITIES, AND "DIGSAFE" AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION WORK IN PREVIOUSLY UNALTERED AREAS TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RESOLVE CONFLICTS BETWEEN THE PROPOSED UTILITIES AND FIELD-LOCATED UTILITIES AND SHALL REPORT ANY DISCREPANCIES TO THE ENGINEER IMMEDIATELY. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES OMITTED, INCOMPLETELY OR INACURATELY SHOWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ACCURATE RECORDS OF THE LOCATION AND ELEVATION OF ALL WORK INSTALLED AND EXISTING UTILITIES FOUND DURING CONSTRUCTION FOR THE PREPARATION OF THE AS-BUILT PLAN.
- THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL EXISTING UTILITIES IN WORKING ORDER AND FREE FROM DAMAGE DURING THE ENTIRE DURATION OF THE PROJECT. ALL COSTS RELATED TO THE REPAIR OF UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. EXCAVATION REQUIRED WITHIN THE PROXIMITY OF EXISTING UTILITY LINES SHALL BE DONE BY HAND. CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING UTILITY LINES OR STRUCTURES INCURRED DURING CONSTRUCTION OPERATIONS AT NO COST TO THE OWNER.
- THE CONTRACTOR SHALL UTILIZE ALL PRECAUTIONS AND MEASURES TO ENSURE THE SAFETY OF THE PUBLIC, ALL PERSONAL AND PROPERTY DURING CONSTRUCTION IN ACCORDANCE WITH OSHA STANDARDS, INCLUDING BARRICADES, SAFETY LIGHTING, CONES, POLICE DETAIL AND/OR FLAGMEN AS DETERMINED NECESSARY BY THE ENGINEER AND/OR OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF POLICE DETAIL AND FOR COORDINATING WITH THE LOCAL OR STATE POLICE DEPARTMENT FOR ALL REQUIRED POLICE DETAIL.
- ALL TRENCHING WORK WITHIN A PUBLIC OR PRIVATE ROADWAY SHALL BE COORDINATED WITH THE OWNER AND/OR PROPER LOCAL & STATE AGENCIES. TRENCH SAFETY AND RELATED PERMITS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THIS WORK MAY BE REQUIRED TO TAKE PLACE OUTSIDE OF NORMAL HOURS OF OPERATION FOR THE FACILITY.
- ALL TRENCH WORK WITHIN EXISTING PAVEMENT SHALL BE NEATLY SAWCUT PER THE APPLICABLE DETAILS. TRENCH BACKFILL SHALL BE PLACED AND COMPACTED IN 8-INCH LIFTS OR AS OTHERWISE INDICATED ON PLANS. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY SETTLING DUE TO INADEQUATE COMPACTION AS DETERMINED BY THE ENGINEER WITHIN THE WARRANTY PERIOD.
- THE CONTRACTOR SHALL MAKE ALL CONNECTION ARRANGEMENTS WITH UTILITY COMPANIES, AS NECESSARY, INCLUDING NOTIFICATIONS TO THE CITY AND UTILITIES PRIOR TO ANY WORK.
- ALL IMPORTED MATERIAL SHALL BE CLEAN AND FREE OF ANY HAZARDOUS WASTE OR OTHER CHEMICAL CONTAMINATION. NO MATERIAL WILL BE ACCEPTED FROM AN EXISTING OR FORMER 21E SITE AS DEFINED BY THE MASSACHUSETTS CONTINGENCY PLAN 310 CMR 40.0000.
- SITE LAYOUT SURVEY REQUIRED FOR CONSTRUCTION WILL BE PROVIDED BY THE CONTRACTOR AND SHALL BE CONDUCTED BY A MASSACHUSETTS REGISTERED PROFESSIONAL LAND SURVEYOR. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE SURVEYOR FOR ALL SITE SURVEY WORK. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING AN AS-BUILT PLAN OF THE SITE CONDUCTED BY A REGISTERED PROFESSIONAL LAND SURVEYOR AND APPROVED BY THE ENGINEER. AS-BUILTS ARE REQUIRED TO OBTAIN MASSDEP AUTHORIZATION TO OPERATE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING ALL HORIZONTAL AND VERTICAL CONTROL POINTS DURING CONSTRUCTION INCLUDING BENCHMARK LOCATIONS AND ELEVATIONS AT CRITICAL AREAS. THE LOCATION OF ALL CONTROL POINTS AND BENCHMARKS SHALL BE COORDINATED WITH THE ENGINEER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL GRADE STAKES AND MONUMENTATION. GRADE STAKES SHALL REMAIN IN PLACE UNTIL A FINAL INSPECTION OF THE SITE HAS BEEN COMPLETED BY THE ENGINEER. ANY RE-STAKING OF PREVIOUSLY SURVEYED SITE FEATURES SHALL BE THE RESPONSIBILITY (INCLUDING COST) OF THE CONTRACTOR.
- UNLESS OTHERWISE SPECIFIED ON THE PLANS AND DETAILS/SPECIFICATIONS, ALL SITE CONSTRUCTION MATERIALS AND METHODOLOGIES ARE TO CONFORM TO THE MOST RECENT VERSION OF THE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION (MASSACHUSETTS HIGHWAY DEPARTMENT) STANDARD SPECIFICATIONS (THE MASSACHUSETTS HIGHWAY DEPARTMENT 1988 STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, THE 2002 SUPPLEMENTAL SPECIFICATIONS, AND THE 2005 STANDARD SPECIAL PROVISIONS).
- CONSTRUCTION AND/OR DEMOLITION SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE LAWS AND REGULATIONS REGARDING NOISE, VIBRATION, DUST, SEDIMENTATION CONTAINMENT, HAZARDOUS WASTES, AND TRENCH WORK.
- SOLID WASTES AND/OR CONSTRUCTION OR DEMOLITION DEBRIS SHALL BE COLLECTED AND STORED IN A SECURED DUMPSTER. THE DUMPSTER SHALL MEET ALL LOCAL AND STATE SOLID WASTE MANAGEMENT REGULATIONS.
- THE CONTRACTOR SHALL RESTORE ALL SITE SURFACES TO THEIR ORIGINAL CONDITION OR BETTER AFTER CONSTRUCTION IS COMPLETE. AREAS NOT DISTURBED BY CONSTRUCTION SHALL BE LEFT NATURAL. THE CONTRACTOR SHALL TAKE CARE TO PREVENT DAMAGE TO SHRUBS, TREES, OTHER LANDSCAPING AND/OR NATURAL FEATURES. IF THE PLANS FAIL TO IDENTIFY ALL LANDSCAPE FEATURES, EXISTING CONDITIONS MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF ANY WORK.
- UNPAVED AREAS DISTURBED BY THE WORK SHALL HAVE A MINIMUM OF 4-INCHES OF LOAM (OR MORE AS SHOWN ON PLAN DETAILS) AND HYDROSEEDDED AS SHOWN ON THE PLAN AND/OR DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR WATERING ANY LOAMED AND SEEDDED AREAS UNTIL GROWTH IS ESTABLISHED AND APPROVED BY THE ENGINEER AND/OR OWNER.
- ALL PROPOSED STRUCTURES AND COMPONENTS SHALL BE DESIGNED BY THEIR MANUFACTURERS TO WITHSTAND AASHTO H-20 LOADING. PRECAST CONCRETE SHALL HAVE A MINIMUM 28-DAY STRENGTH OF 4,000 PSI UNLESS OTHERWISE SPECIFIED BY THE ENGINEER.
- THE CONTRACTOR SHALL PROVIDE A UNIT PRICE COST IN CUBIC YARD MEASURE FOR LEDGE AND/OR BOULDER REMOVAL. LEDGE AND/OR BOULDERS LESS THAN 1 CUBIC YARD IN SIZE BASED ON THE AVERAGE DIMENSIONS WILL NOT BE CONSIDERED PAYABLE ROCK. UNIT PRICE SHALL BE GIVEN FOR BOTH ON AND OFF SITE DISPOSAL. COST OF REPLACEMENT MATERIAL SHALL BE INCLUDED IF ADDITIONAL FILL MATERIAL IS REQUIRED.
- DEVIATION OR ALTERATION OF THE PROPOSED WORK IS TO BE VERIFIED BY THE ENGINEER AND OWNER PRIOR TO CONDUCTING THE WORK.
- AT THE END OF CONSTRUCTION, THE CONTRACTOR SHALL REMOVE ALL CONSTRUCTION DEBRIS AND SURPLUS MATERIALS FROM THE SITE. A THOROUGH INSPECTION OF THE WORK SITE AND PERIMETER IS TO BE MADE AND ALL DISCARDED MATERIALS AND WIND BLOWN OR WATER CARRIED DEBRIS SHALL BE COLLECTED AND REMOVED FROM THE SITE.

GENERAL GRADING AND DRAINAGE NOTES

- ALL CUT AND FILL SLOPES SHALL BE 3H:1V OR FLATTER UNLESS OTHERWISE NOTED ON THE PLANS.
- CONTRACTOR SHALL ADJUST AND/OR NEATLY SAWCUT EXISTING PAVEMENT AS NECESSARY TO ENSURE A SMOOTH TRANSITION AND CONTINUOUS GRADE. A CONSTRUCTION PAVEMENT TRANSITION DETAIL IS PROVIDED ON THE PLAN SET.
- CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE AWAY FROM BUILDINGS FOR ALL NATURAL AND PAVED AREAS UNLESS OTHERWISE DIRECTED BY ENGINEER OR NOTED ON THE PLANS.
- PROPOSED ELEVATIONS ARE SHOWN TO FINISHED PAVEMENT OR GRADE UNLESS OTHERWISE SPECIFIED.
- PARKING AREAS AND TRAVEL LANES ARE NOT TO BE PAVED UNTIL THE ENTIRE PROPOSED DRAINAGE SYSTEM HAS BEEN INSTALLED, COMPACTED PROPERLY, AND ALL PIPE CONNECTIONS COMPLETE.
- DRAINAGE PIPING SHALL BE DOUBLE WALLED CORRUGATED PLASTIC PIPE, ADS-N12 OR EQUAL UNLESS OTHERWISE NOTED ON THE PLANS.
- BACKFILL ADJACENT TO PIPES AND STRUCTURES SHALL BE OF THE TYPE AND QUALITY CONFORMING TO THAT AS SPECIFIED. BACKFILL SHALL BE PLACED IN LIFTS NOT TO EXCEED 8 INCHES IN THICKNESS AND COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY WITH A MOISTURE CONTENT WITHIN +/- 2% OF OPTIMUM. ALL COMPACTION IS TO BE DETERMINED BY AASHTO METHOD T-99 OR ASTM D698/1557 AND ASTM D2434 FOR IN PLACE TESTING. TESTING OF BACKFILL MATERIAL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND WILL BE INSPECTED BY THE ENGINEER.
- ALL DRAINAGE STRUCTURES AND PIPES MUST BE PROPERLY CONNECTED TO THE DRAINAGE SYSTEM PRIOR TO THE INSTALLATION OF ANY PAVEMENT. THIS INCLUDES THE STABILIZATION OF ALL DISTURBED AREAS CONTRIBUTING TO THE DRAINAGE SYSTEMS AND ANY STORMWATER DRAINAGE BASIN FLOORS AND SIDE SLOPES.
- AT SUBSTANTIAL COMPLETION, ANY LOW LYING AREAS (NON-STORMWATER FEATURES) FOUND TO CREATE PONDING SHALL HAVE LOAM OR SURFACE TREATMENT REMOVED AND THE SUBGRADE MATERIAL SHALL BE REPAIRED AND REGRADED WITH GRANULAR NATIVE BACKFILL MATERIAL. AFTER BACKFILL, LOAM SHALL BE REPLACED AND RESEDED. NO TOP DRESSING SHALL BE ALLOWED. REGRADED AREAS SHALL BE HOSE TESTED TO ENSURE POSITIVE DRAINAGE AND THE PONDING PROBLEM TO BE ALLEVIATED.

STORMWATER FACILITY OPERATION & MAINTENANCE:

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSPECTION AND MAINTENANCE OF ALL EROSION CONTROL AND STORMWATER MANAGEMENT FACILITIES UNTIL THE PROJECT IS DEEMED COMPLETE BY THE OWNER AND ENGINEER.
- THE CONTRACTOR SHALL INSPECT AND CLEAR ALL INLETS, MANHOLES, DRAINAGE BASINS, AND OTHER STRUCTURES OF SEDIMENT AND DEBRIS PRIOR TO THE OWNER'S ACCEPTANCE.
- THE CONTRACTOR SHALL PROPERLY DISPOSE OF ALL SEDIMENT AND DEBRIS IN A PRE-APPROVED LOCATION AND IN ACCORDANCE WITH APPLICABLE LAWS.
- IF REQUIRED, THE CONTRACTOR SHALL REFER TO THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) FOR INFORMATION REGARDING STORMWATER FACILITY OPERATION AND MAINTENANCE REQUIREMENTS. THE CONTRACTOR SHALL MAINTAIN A WORKING COPY OF THE SWPPP ON SITE AT ALL TIMES.
- THE CONTRACTOR SHALL INSPECT ALL STORMWATER FACILITIES AFTER EVERY MAJOR RAINFALL EVENT FOR THE ENTIRE DURATION OF THE CONSTRUCTION PROJECT AND THE FIRST 3-MONTHS AFTER COMPLETION TO MONITOR SYSTEM OPERATION.

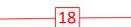
EROSION & SEDIMENT CONTROL NOTES

- THE SITE CONSTRUCTION FOREMAN SHALL BE RESPONSIBLE FOR THE DAILY INSPECTION AND MAINTENANCE OF ALL SEDIMENTATION AND EROSION CONTROL BARRIERS AND SHALL IMPLEMENT ALL NECESSARY MEASURES TO CONTROL EROSION AND PREVENT SEDIMENT FROM LEAVING THE SITE.
- THE CONTRACTOR SHALL INSTALL ALL SEDIMENTATION AND EROSION CONTROL BARRIERS AS SHOWN ON THE PLANS AND AS DETERMINED NECESSARY IN THE FIELD BY THE ENGINEER BEFORE ANY CONSTRUCTION ACTIVITIES ARE TO BEGIN. THESE MEASURES SHALL BE INSPECTED, MAINTAINED AND REPLACED AS NECESSARY DURING THE ENTIRE CONSTRUCTION PERIOD OF THE PROJECT. PERIMETER EROSION AND SEDIMENTATION CONTROL BARRIERS SHALL REPRESENT THE LIMIT OF WORK AND ALL WORKERS SHALL BE INFORMED THAT NO CONSTRUCTION ACTIVITY IS TO OCCUR BEYOND THE LIMIT OF WORK AT ANY TIME THROUGH THE CONSTRUCTION PERIOD.
- A MINIMUM SURPLUS OF 25-FEET OF SEDIMENTATION AND EROSION CONTROL BARRIER (SILT FENCE, STRAW BALE, &/OR SILT SOCK) SHALL BE STORED ONSITE AT ALL TIMES.
- THE CONTRACTOR SHALL PREVENT ANY SEDIMENT TRANSPORT TO THE ADJACENT PROPERTIES DURING CONSTRUCTION AND UNTIL ACCEPTANCE BY THE OWNER/ENGINEER.
- A CONSTRUCTION ENTRANCE SHALL BE CONSTRUCTED AS SHOWN IN THE DETAILS TO SHED DIRT FROM CONSTRUCTION VEHICLE TIRES. THE CRUSHED STONE PAD WILL BE REPLACED/CLEANED AS NEEDED TO MAINTAIN ITS EFFECTIVENESS AND RECONSTRUCTED AS NECESSARY DURING SEPARATE PHASES OF THE PROJECT.
- THE LIMIT OF ALL CLEARING, GRADING AND DISTURBANCE SHALL BE KEPT TO A MINIMUM WITHIN THE PROPOSED AREA OF CONSTRUCTION. THE CONTRACTOR SHALL PHASE THE SITE WORK IN A MANNER TO MINIMIZE AREAS OF EXPOSED OR UNSTABILIZED SOIL. IF TREES ARE TO BE CUT ON THE ENTIRE SITE, ONLY THOSE AREAS WHICH ARE ACTIVELY UNDER CONSTRUCTION SHALL BE GRUBBED. THE REQUIRED SEDIMENTATION CONTROL FACILITIES MUST BE PROPERLY ESTABLISHED, CLEARLY VISIBLE AND IN OPERATION PRIOR TO INITIATING ANY LAND CLEARING ACTIVITY AND/OR OTHER CONSTRUCTION RELATED WORK.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO MONITOR LOCAL WEATHER REPORTS DURING CONSTRUCTION AND PRIOR TO SCHEDULING EARTHMOVING OR OTHER CONSTRUCTION ACTIVITIES WHICH WILL LEAVE LARGE DISTURBED AREAS UNSTABILIZED. IF INCLEMENT WEATHER IS FORECAST, THE CONTRACTOR SHALL USE THEIR BEST PROFESSIONAL JUDGEMENT WHEN SCHEDULING CONSTRUCTION ACTIVITIES AND SHALL BE RESPONSIBLE FOR ENSURING THE NECESSARY SEDIMENTATION AND EROSION CONTROL BARRIERS ARE INSTALLED AND FUNCTIONING PROPERLY TO MINIMIZE EROSION FROM ANY IMPENDING WEATHER EVENTS.
- SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSPECTED AND MAINTAINED ON WEEKLY BASIS AND AFTER EACH RAINFALL EVENT OF 0.25 INCH OR GREATER DURING CONSTRUCTION TO ENSURE THAT THE EROSION AND SEDIMENTATION CONTROL MEASURES ARE OPERATING/FUNCTIONING PROPERLY. IDENTIFIED DEFICIENCIES SHALL BE CORRECTED IMMEDIATELY AND NO LATER THAN 24 HOURS AFTER IDENTIFICATION.
- SOIL STOCKPILES LEFT OVERNIGHT SHALL BE SURROUNDED ON THEIR PERIMETERS WITH SILT SOCK, SILT FENCE, STRAW BALES, OR A COMBINATION OF SILT FENCE WITH STRAW BALES.
- DISTURBED AREAS AND SLOPES SHALL NOT BE LEFT UNATTENDED OR EXPOSED FOR EXCESSIVE PERIODS OF TIME SUCH AS DURING THE INACTIVE WINTER SEASON. THE CONTRACTOR SHOULD PROVIDE APPROPRIATE STABILIZATION PRACTICES ON ALL DISTURBED AREAS AS SOON AS POSSIBLE BUT NOT MORE THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT AREA HAS TEMPORARILY OR PERMANENTLY CEASED. TEMPORARY AREAS HAVING A SLOPE GREATER THAN 4H:1V SHALL BE REINFORCED WITH EROSION BLANKETS OR APPROVED EQUAL UNTIL THE SITE IS PROPERLY STABILIZED. TEMPORARY SWALES MAY ALSO BE REQUIRED IF DETERMINED NECESSARY IN THE FIELD BY THE ENGINEER.
- THE CONTRACTOR SHALL INSTALL A SILT SACK OR APPROVED EQUIVALENT IN EACH EXISTING CATCH BASIN RECEIVING RUNOFF FROM THE SITE. UPON THE INSTALLATION OF ANY NEW CATCH BASIN, THE CONTRACTOR SHALL INSTALL A SILT SACK OR APPROVED EQUIVALENT. THESE ARE TO BE INSPECTED AFTER EACH SIGNIFICANT STORM EVENT AND EMPTIED AS NEEDED DURING THE ENTIRE CONSTRUCTION PERIOD.
- SMALL SEDIMENTATION BASINS MAY BE CONSTRUCTED ON AN AS-NEEDED BASIS DURING CONSTRUCTION TO AID IN THE CAPTURE OF SITE RUNOFF AND SEDIMENT. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR, IN CONSULTATION WITH THE ENGINEER, TO SIZE AND CONSTRUCT THESE BASINS IN APPROPRIATE LOCATIONS.
- ALL EXITS FROM THE SITE SHALL BE SWEEP AS NECESSARY, INCLUDING ANY TRACKING TO ENSURE SEDIMENT IS CONTAINED ONSITE. PAVED AREAS SHALL BE SWEEP AS NEEDED TO REMOVE SEDIMENT OR POTENTIAL POLLUTANTS WHICH MAY ACCUMULATE DURING CONSTRUCTION ACTIVITIES.
- ACCUMULATED SEDIMENT SHALL BE COLLECTED AND DISPOSED OF IN A PRE-APPROVED LOCATION BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER.
- THE CONTRACTOR SHALL PROVIDE ON SITE OR MAKE READILY AVAILABLE THE NECESSARY EQUIPMENT AND SITE PERSONNEL DURING CONSTRUCTION HOURS FOR THE DURATION OF THE PROJECT TO ENSURE ALL EROSION AND SEDIMENTATION CONTROL DEVICES ARE PROPERLY MAINTAINED AND REPAIRED IN A TIMELY AND RESPONSIBLE MANNER. IF SITE WORK IS SUSPENDED DURING THE WINTER MONTHS THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE PERSONNEL AND EQUIPMENT EITHER ON SITE OR MAKE READILY AVAILABLE TO ENSURE ALL EROSION AND SEDIMENTATION CONTROL DEVICES ARE PROPERLY MAINTAINED AND REPAIRED IN A TIMELY AND RESPONSIBLE MANNER.
- IF DEWATERING IS NECESSARY DURING CONSTRUCTION, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO IMPLEMENT PROPER MEASURES INCLUDING DEWATERING BAGS, TEMPORARY STRAW BALES, SILT FENCES, SILT SOCKS AND/OR OTHER APPROVED DEVICES. THE DEWATERING MEASURES SHALL BE APPROVED BY THE ENGINEER. DEWATERING BASINS SHALL NOT BE CONSTRUCTED WITHIN ANY RESOURCE AREAS OR BUFFER ZONES.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTROL DUST BY WATERING OR OTHER APPROVED METHODS AS NECESSARY, OR AS DIRECTED BY THE ENGINEER AT NO EXTRA COST TO THE OWNER.
- THE CONTRACTOR SHALL ROUTINELY INSPECT THE PERIMETER OF THE SITE PROPERTY TO GATHER AND REMOVE CONSTRUCTION DEBRIS BEFORE IT LEAVES THE SITE. ALL DEMOLITION DEBRIS SHALL BE PROMPTLY REMOVED FROM THE SITE AND PROPERLY DISPOSED OF. ALL TRUCKS AND CONTAINERS LEAVING THE SITE SHALL BE COVERED.
- BURIAL OF ANY STUMPS, SOLID DEBRIS, AND/OR STONES/BOULDERS ONSITE IS PROHIBITED UNLESS OTHERWISE INDICATED BY THE ENGINEER. NO ROAD SALT, SAND, OR OTHER DE-ICING CHEMICALS SHALL BE USED ON THE ACCESS ROADWAYS.
- THE CONTRACTOR IS RESPONSIBLE FOR ROUTINE INSPECTION AND MAINTENANCE DURING CONSTRUCTION OF ALL STORMWATER FACILITIES INSTALLED OR IMPACTED BY THE PROJECT. ANY SEDIMENT OR DEBRIS COLLECTED WITHIN THESE FACILITIES FROM THE PROJECT WORK SHALL BE REMOVED PRIOR TO THE OWNER'S ACCEPTANCE.
- SEDIMENTATION AND EROSION CONTROL BARRIERS AND INSPECTION REQUIREMENTS SHALL BE IN ACCORDANCE WITH ANY TOWN PERMIT CONDITIONS AND NPDES CONSTRUCTION GENERAL PERMIT.
- SLOPES EQUAL OR GREATER THAN 2H:1V SHALL BE HYDROSEEDDED THEN STABILIZED WITH EROSION CONTROL FABRIC UNLESS NOTED OTHERWISE ON THE PLANS.

BASIC CONSTRUCTION SEQUENCE

- SURVEY AND DELINEATE THE PROPOSED LIMIT OF DISTURBANCE AND LIMIT OF PERIMETER EROSION AND SEDIMENTATION CONTROL BARRIERS.
- STAKE OUT THE LOCATIONS FOR EROSION AND SEDIMENTATION CONTROL BARRIERS (STRAW BALES, SILT FENCE, ETC.) AND INSTALL ACCORDING TO THE PLANS AND ANY APPLICABLE CITY PERMITS. IN NO CASE IS THE LIMIT OF WORK TO EXTEND BEYOND THE EROSION AND SEDIMENTATION CONTROL BARRIERS WHICH REPRESENTS THE LIMIT OF DISTURBANCE AS SHOWN ON THE APPROVED PROJECT PLANS. INSTALL SILT SACS AND HAVE EROSION AND SEDIMENTATION CONTROL BARRIERS INSPECTED BY ENGINEER AND ANY TOWN DEPARTMENTS, IF NECESSARY.
- INSTALL TEMPORARY CONSTRUCTION ENTRANCES ONLY IN LOCATIONS INDICATED ON PLANS. NO OTHER ENTRANCES SHALL BE USED TO GAIN ACCESS TO THE SITE BY ANY CONSTRUCTION OR DELIVERY VEHICLES.
- SURVEY AND STAKE OUT CLEARING LIMITS AND ACCESS DRIVEWAY.
- BEGIN NECESSARY CLEARING, GRUBBING, TREE REMOVAL, AND SITE PREPARATION.
- INSTALL TEMPORARY CONVEYANCE DEVICES (SWALES, PIPES, ETC.) AS NECESSARY TO CONVEY RUNOFF TO TREATMENT AREAS.
- BEGIN ROUGH SITE GRADING AND BRING TO SUBGRADE ELEVATIONS. WORK SHALL PROGRESS DILIGENTLY TO MINIMIZE TIME SOILS ARE UN-STABILIZED.
- BEGIN TO CONSTRUCT BUILDING, WALL, STORMWATER MANAGEMENT SYSTEM, AND UTILITIES. ANY EROSION CONTROL DEVICE DISTURBED DURING THE UNDERGROUND UTILITY CONSTRUCTION SHALL BE IMMEDIATELY REPAIRED OR REPLACED IN KIND AND STABILIZED. MODIFY TEMPORARY CONVEYANCE DEVICES AS NECESSARY TO CONVEY RUNOFF TO TREATMENT AREAS.
- DO NOT OVER COMPACT SOILS IN AREAS OF PROPOSED INFILTRATION AND AVOID INFILTRATION AREAS WITH CONSTRUCTION EQUIPMENT. CONTRACTOR RESPONSIBLE FOR OVER EXCAVATION OF INFILTRATION AREAS IF CONSTRUCTION TRAFFIC ROUTES OCCUR THROUGH PROPOSED INFILTRATION AREAS. PARTICULAR CARE SHALL BE TAKEN TO PROTECT THE UNDERGROUND DRAINAGE BASINS FROM SEDIMENT.
- PERMANENTLY SEED ALL DISTURBED AREAS OUTSIDE OF THE AREA TO BE PAVED. SEEDING SHALL OCCUR WITHIN EITHER THE SPRING OR FALL GROWING SEASON.
- ONCE ALL UNDERGROUND UTILITIES HAVE BEEN CONSTRUCTED, PLACE COMPACTED GRAVEL FOUNDATION AND ROUGH GRADE THE ROADWAYS/PARKING AREAS IN ACCORDANCE WITH THE SITE PLANS AND IN ACCORDANCE WITH APPLICABLE STATE AND LOCAL REGULATIONS.
- BEGIN DRIVEWAY, PARKING, MILLINGS YARD CONSTRUCTION PER SITE PLANS AND IN ACCORDANCE WITH APPLICABLE STATE AND LOCAL REGULATIONS. DRIVEWAY AND PARKING AREAS ARE NOT TO BE PAVED UNTIL THE ENTIRE PERMANENT DRAINAGE SYSTEM HAS BEEN INSTALLED AND ALL PIPE CONNECTIONS ARE COMPLETE.
- FINISH PERMANENT STABILIZATION; SWEEP THE DRIVEWAY TO REMOVE ALL SEDIMENTS; THE CONTRACTOR SHALL CLEAN AND FLUSH THE DRAINAGE STRUCTURES AND PIPES AT THE END OF CONSTRUCTION AND ALL ACCUMULATED SEDIMENTS IN THE DRAINAGE BASINS SHALL BE REMOVED. CONTRACTOR SHALL INSPECT THE DRAINAGE NETWORK AND REPAIR ANY DAMAGE IMMEDIATELY.
- COMPLETE ALL REMAINING PLANTING, SEEDING, AND FENCING.
- REMOVAL OF ALL TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROL MEASURES FOLLOWING VEGETATIVE ESTABLISHMENT OF ALL DISTURBED AREAS SHALL BE APPROVED BY THE ENGINEER AND THE TOWN, IF APPLICABLE AND WHEN THE CONTRIBUTING AREA HAS REACHED A MINIMUM OF 80% STABILIZATION.

LEGEND

	CATCH BASIN
CONC	CONCRETE
	CONCRETE BOUND WITH DRILL HOLE
EOP	EDGE OF PAVEMENT
ERAP	EDGE OF RECYCLED ASPHALT PAVEMENT
	ELECTRIC METER
	EROSION CONTROL BARRIER
	EXISTING CONTOUR
	FLOOD ZONE LIMIT
F	FOUND
	GAS LINE
	HYDRANT
	IRON PIN
LSA	LANDSCAPED AREA
	OVERHEAD WIRE
	PROPERTY LINE
	PROPOSED CONTOUR
	SOIL CLASS BOUNDARY
	TEST PIT
	UTILITY POLE

LIST OF DRAWINGS

DRAWING	SHEET
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DigSafe
MA-ME-NH-RI-VT
CONTRACTOR TO VERIFY ACTUAL LOCATION OF EXISTING UTILITY SERVICES IN THE FIELD PRIOR TO CONSTRUCTION.



323 Manley Street
W. Bridgewater, MA
www.GenConDB.com



Green Seal Environmental, Inc.
114 State Road, Building B
Sagamore Beach, MA 02562
Tel: (508) 888-6034 www.gseenv.com



NOT FOR CONSTRUCTION

No.	Date	Description

owner: ALLEN HARBOR MARINE

project: 335 LOWER COUNTY RD, HARWICH PORT, MA

ALLEN HARBOR MARINE BLDG

282 ROUTE 28, HARWICH PORT, MA

STUART D. CLARK CIVIL No. 40697

PROFESSIONAL SEAL

scale: NTS

date: December 17, 2020

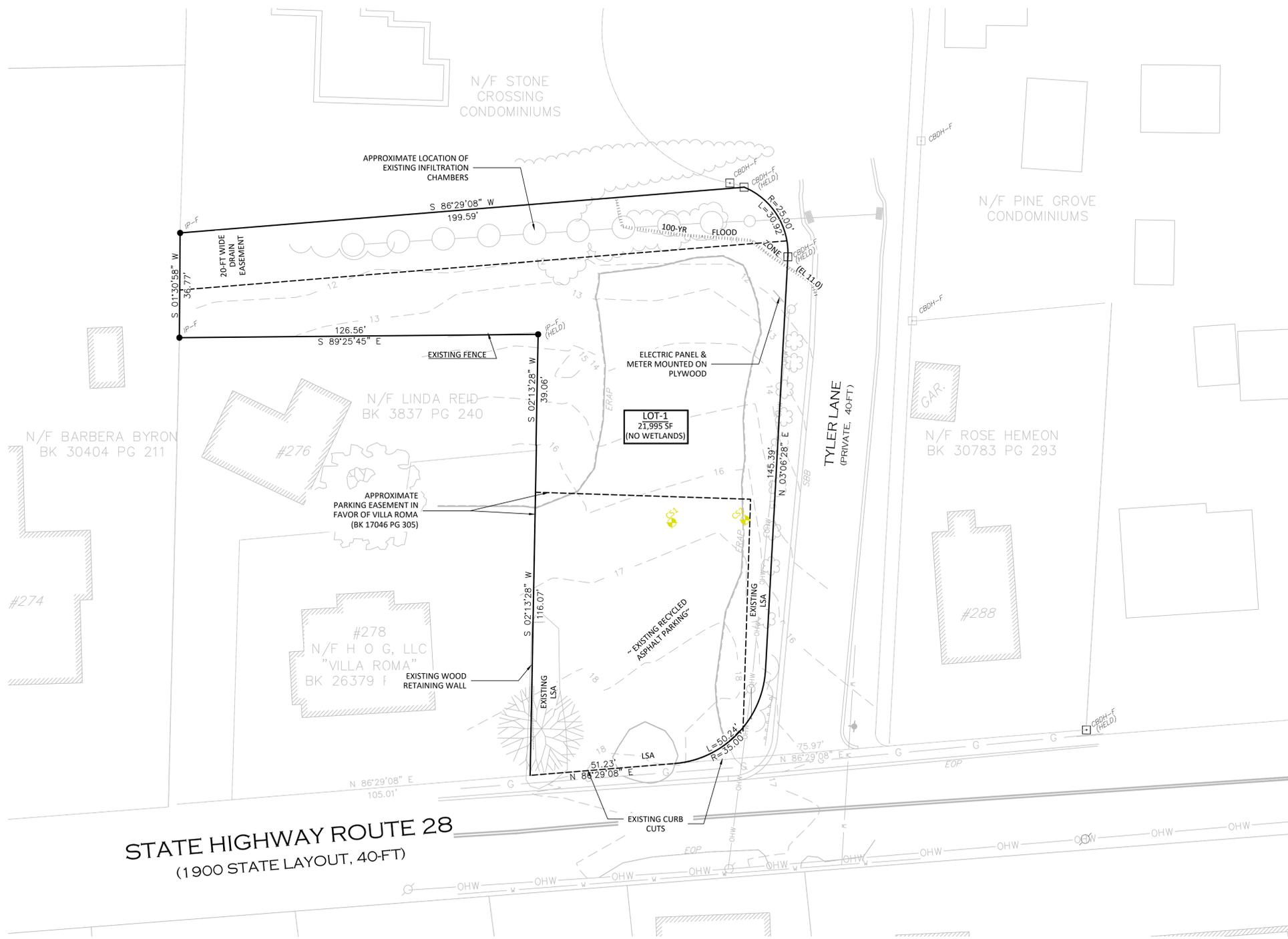
project: 20458

drawn by: SDC/NHE

checked by: SDC

GENERAL NOTES AND LEGEND

G-00

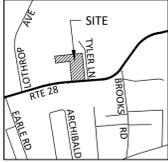


NOTES

- OWNER OF RECORD:
STONE CROSSING REALTY TRUST
MICHAEL SABINA, TRUSTEE
10 BARSTOW DRIVE
BRIANTREE, MA 02184
- DEED REFERENCE:
- BOOK 19374, PAGE 246
BARNSTABLE REGISTRY OF DEEDS
- PLAN REFERENCE:
PLAN BOOK 596, PAGE 23 (LOT -1)
BARNSTABLE REGISTRY OF DEEDS
- HORIZONTAL DATUM IS BASED UPON MASSACHUSETTS
MAINLAND STATE PLANE COORDINATE SYSTEM, NAD83, IN US
SURVEY FEET.
- VERTICAL DATUM IS BASED UPON NAVD88, IN US SURVEY
FEET.
- UNDERGROUND UTILITIES DEPICTED HEREON ARE BASED
UPON VISIBLE, ABOVE GROUND EVIDENCE AND RECORD
INFORMATION AND ARE ONLY APPROXIMATE. CONTRACTOR IS
RESPONSIBLE FOR TAKING ALL NECESSARY PRECAUTIONS
BEFORE BEGINNING ANY EXCAVATION. (DIGSAFE
1-888-344-7233)
- PARCEL AND RIGHT OF WAY LINES WERE OBTAINED WITH AN
ON THE GROUND SURVEY PERFORMED BY GREEN SEAL
ENVIRONMENTAL, INC. ON OCTOBER 20, 2020.
- A PORTION OF THIS SITE IS LOCATED IN FEMA FLOOD ZONE
AE WITH A BFE OF 11.00 NAVD88 AS SHOWN ON FIRM
25001C0611J, EFFECTIVE JULY 16, 2014.
- NO CERTIFIED VERNAL POOLS, ESTIMATED HABITATS OF RARE
WILDLIFE, OR PRIORITY HABITATS OF RARE SPECIES ARE
LOCATED ON OR WITHIN 500 FEET OF THE SITE.
- NO SIGNIFICANT SOIL IMPORT OR EXPORT IS PROPOSED AS
PART OF THIS SITE DEVELOPMENT.
- ALL PROPOSED SLOPES ARE 3:1 OR LESS AND WILL BE
STABILIZED BY LANDSCAPING.
- CONSTRUCTION MATERIALS WILL BE USED PROMPTLY AFTER
DELIVERY AND ANY WASTE MATERIALS WILL BE STORED IN
CONTAINERS AND PROPERLY REMOVED FROM THE SITE AND
DISPOSED OF. DUE TO THE SMALL SIZE OF THE SITE, NO
EXTENDED STORAGE OF MATERIALS WILL OCCUR.
- ALL CONSTRUCTION VEHICLES SHALL PARK ON SITE.
PARKING OF CONSTRUCTION VEHICLES OUTSIDE OF SITE
PROPERTY IS PROHIBITED

GENCON
323 Manley Street
W. Bridgewater, MA
www.GenConDB.com

Green Seal Environmental, Inc.
114 State Road, Building B
Sagamore Beach, MA 02562
Tel: (508) 888-6034 www.gseenv.com



NOT FOR CONSTRUCTION

No.	Date	Description
1		OWNER
2		PROJECT
3		DISCIPLINE

ALLEN HARBOR MARINE
335 LOWER COUNTY RD, HARWICH PORT, MA

ALLEN HARBOR MARINE BLDG
282 ROUTE 28, HARWICH PORT, MA

STUART D. CLARK
CIVIL
No. 40697
REGISTERED PROFESSIONAL ENGINEER

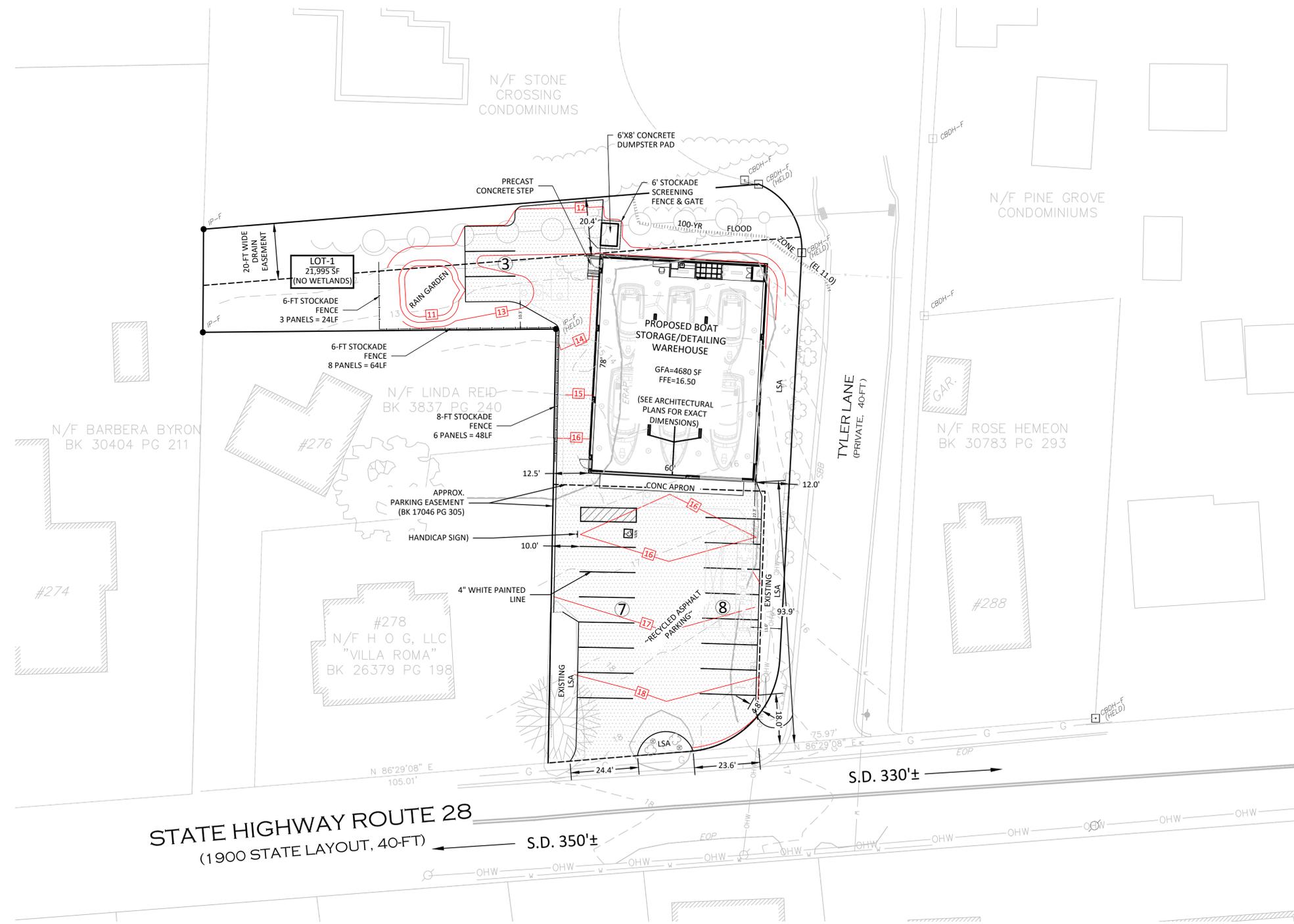
scale	1"=20'
date	December 17, 2020
project	20458
drawn by	SDC/NHE
checked by	SDC

EXISTING
CONDITIONS

C-00



DRAWING SCALE: 1" = 20'



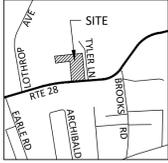
STATE HIGHWAY ROUTE 28
(1900 STATE LAYOUT, 40-FT)

ZONING TABLE		
ZONE: COMMERCIAL HIGHWAY (C-H-1)		
PROPOSED USE: MARINE STORAGE (PERMITTED)		
MIN FRONTAGE	REQUIRED	PROPOSED
FRONT YARD SETBACK	25'	12' TYLER LN 94.4' RTE 28
SIDE YARD SETBACK	10'	12.5'
REAR YARD SETBACK	10'	20.4'
FRONT PARKING SETBACK	20'	4.8' TYLER LN 18' RTE 28
SIDE/REAR PARKING SETBACK	10'	10'
MAX BUILDING COVERAGE	30%	21%
MAX LOT COVERAGE	70%	58%
MAXIMUM BUILDING HEIGHT	30'	25.5'

VARIANCE GRANTED
CASE # 2020-41

PARKING CALCULATION

MARINA OR BOAT YARD USE:
1 PER EMPLOYEE MAXIMUM SHIFT, PLUS 1 PER SLIP, OR 1 SPACE PER DRY STORAGE CAPACITY, WHICHEVER IS GREATER, AND 1 PER EACH 2 MOORINGS ASSIGNED TO THE MARINA OR BOAT YARD
EMPLOYEES (4) = 4
BOAT STORAGE (6) = 6
10 REQUIRED (18 PROVIDED)
521 CMR 23.00 ACCESSIBLE SPACE REQUIREMENT
(1 TO 25 SPACES) = 1 WITH 1 VAN ACCESSIBLE (1 VAN ACCESSIBLE PROVIDED)

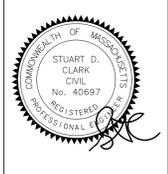


NOT FOR CONSTRUCTION

No.	Date	Description
1		OWNER
2		PROJECT

ALLEN HARBOR MARINE
335 LOWER COUNTY RD, HARWICH PORT, MA

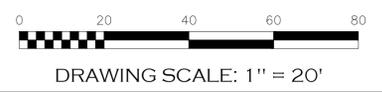
ALLEN HARBOR MARINE BLDG
282 ROUTE 28, HARWICH PORT, MA



scale: **1"=20'**
date: **December 17, 2020**
project: **20458**
drawn by: **SDC/NHE**
checked by: **SDC**

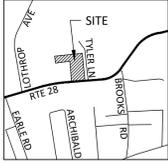
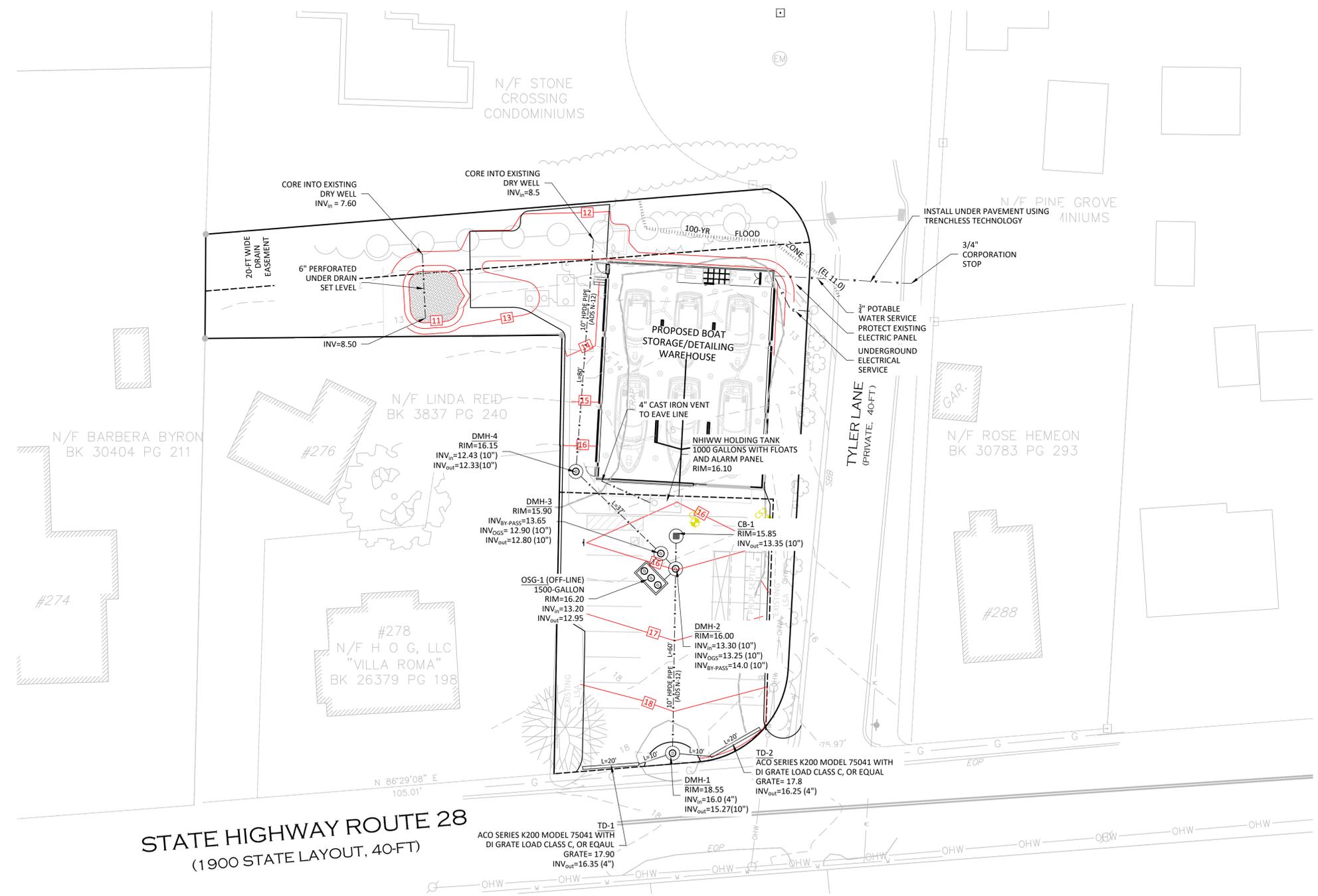
SITE PLAN

C-01



DRAWING SCALE: 1" = 20'

S:\GENCON\GENCON CONSTRUCTION, LLC\2020-2021 (HARWICH)\CAD\DWG\17/2020_P-33.dwg



NOT FOR CONSTRUCTION

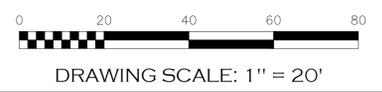
No.	Date	Description
1		OWNER ALLEN HARBOR MARINE 335 LOWER COUNTY RD, HARWICH PORT, MA
2		PROJECT ALLEN HARBOR MARINE BLDG 282 ROUTE 28, HARWICH PORT, MA



scale	1"=20'
date	December 17, 2020
project	20458
drawn by	SDC/NHE
checked by	SDC

UTILITIES PLAN

C-02



DRAWING SCALE: 1" = 20'

S:\GENCON\GENCON CONSTRUCTION, LLC\GENCON-0001 (HARWICH)\CAD\DWG\17/2020 P.03 AM



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Tel: (508) 888-6034 www.gseenv.com



NOT FOR CONSTRUCTION

ALLEN HARBOR MARINE
335 LOWER COUNTY RD, HARWICH PORT, MA
PROJECT
ALLEN HARBOR MARINE BLDG
282 ROUTE 28, HARWICH PORT, MA



scale: **AS NOTED**
date: **December 17, 2020**
project: **20458**
drawn by: **SDC/NHE**
checked by: **SDC**

**ON-SITE
SANITARY
DISPOSAL
SYSTEM**

C-03

TEST PIT INFORMATION
DEEP OBSERVATION HOLE #CS1
SURFACE EL=16.51 NAVD88

DEPTH FROM SURFACE FEET	INCHES	SOIL HORIZON	SOIL TEXTURE (USDA)	SOIL COLOR (MUNSELL)	OTHER (STRUCTURE, STONES, BOULDERS)	SOIL MOTTLING	PERC
1	0-15"	A	LOAMY SAND	10YR 4/2			
2	15-33"	B	LOAMY SAND	10YR 5/6			
3	33-58"	C1	FINE TO MEDIUM SAND	2.5Y 6/6			
4							SAS LOCATION
5							PERC
6							
7							
8	58-132"	C2	FINE TO MEDIUM SAND	10YR 6/8			
9							
10							
11							

NO GROUNDWATER ENCOUNTERED
SHGW: BOTTOM OF HOLE = EL 5.5 NAVD88
TEST PERFORMED: 12/20/19
SOIL EVALUATOR: C. SHORT
WITNESS: M. LADUE

TEST PIT INFORMATION
DEEP OBSERVATION HOLE #CS2
SURFACE EL=16.25 NAVD88

DEPTH FROM SURFACE FEET	INCHES	SOIL HORIZON	SOIL TEXTURE (USDA)	SOIL COLOR (MUNSELL)	OTHER (STRUCTURE, STONES, BOULDERS)	SOIL MOTTLING	PERC
1	0-12"	A	LOAMY SAND	10YR 4/2			
2	12-36"	B	LOAMY SAND	10YR 5/6			
3	36-132"	C1	MED TO COARSE SAND	10YR 6/8			
4							PERC
5							
6							
7							
8							
9							
10							
11							

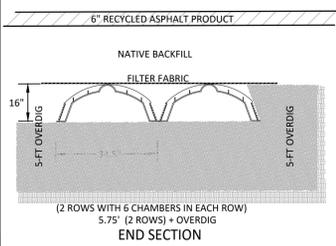
EL 11.08
BOTTOM OF HOLE=5.25

GENERAL SEPTIC NOTES:

- ALL RISERS TO BE WATERTIGHT.
- ALL JOINTS TO BE WATERTIGHT.
- ALL PIPES TO BE SCHEDULE 40.
- THE SYSTEM WILL BE AGGREGATE FREE.
- ALL COMPONENTS TO HAVE A MINIMUM OF 12" AND A MAXIMUM OF 36" OF COVER.
- CONTRACTOR TO VERIFY ALL ELEVATIONS AND UTILITY LOCATIONS PRIOR TO CONSTRUCTION. ANY DIFFERENCES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
- ALL SEPTIC SYSTEM COMPONENTS TO BE MARKED WITH MAGNETIC MARKING TAPE.
- THERE ARE NO KNOWN CONFLICTS WITH TITLE V, SECTION 15.220(4)(K) (LOCATION OF PUBLIC AND PRIVATE WATER SUPPLIES)
- THERE ARE NO KNOWN SOURCES OF WATER SUPPLY, STREAMS OR DRAINS WITHIN 100' OF THE PREMISES.
- THE EXISTING SEPTIC SYSTEM IS TO BE REMOVED IN ACCORDANCE WITH TITLE 5.
- A ZABEL FILTER IS TO BE INSTALLED AT THE OUTLET THE OF THE SEPTIC TANK.
- THE ZABEL FILTER IS TO BE CLEANED ON AN ANNUAL BASIS.
- USE (12) ARC36HC IN AN AGGREGATE FREE BED. (SEE DEP APPROVAL LETTER X264258) DATED JUNE 12, 2015.
- COMPONENTS NOT TO BE BACKFILLED OR CONCEALED WITHOUT INSPECTION BY BOH AND PERMISSION OBTAINED FROM BOH.
- THE UTILITY INFORMATION SHOWN ON THIS PLAN HAS BEEN COMPILED FROM SURFACE EVIDENCE AND RECORD PLANS. BEFORE CONSTRUCTION, THE APPROPRIATE UTILITY COMPANY AND DIG-SAFE 888-DIG-SAFE SHOULD BE CONTACTED.
- STOCK PILING OF MATERIALS, PARKING OR VEHICULAR TRAFFIC PROHIBITED OVER THE LEACHING AREA DURING CONSTRUCTION.
- SYSTEM AREA TO BE STAKE AND FLAGGED UNTIL A CERTIFICATE OF COMPLIANCE IS ISSUED.
- THE SYSTEM IS NOT LOCATED ON A NITROGEN SENSITIVE AREA.

ELEVATION SCHEDULE

TOP OF FOUNDATION	18.00
INVERT @ FOUNDATION	10.50
INVERT INTO SEPTIC TANK	10.25
INVERT OUT OF SEPTIC TANK	10.00
INVERT INTO PUMP CHAMBER	9.90
INVERT INTO DISTRIBUTION BOX	13.82
INVERT OUT OF DISTRIBUTION BOX	13.65
BOTTOM OF S.A.S.	12.67
BREAKOUT ELEVATION (TOP OF CHAMBER)	115.43
ESTIMATED SEASONAL HIGH GROUNDWATER (TEST PIT CS1)	5.51



PUMP ELEVATION SCHEDULE

	EL.
CHAMBER FLOOR	5.23
LEAD/LAG PUMP OFF	5.73
LEAD PUMP ON	6.23
LAG PUMP ON	6.73
HIGH-WATER ALARM	7.23
EMERGENCY STORAGE (PUMP ON TO INVERT)	1160 GAL
DOSE VOLUME	160 GAL
DOSES PER DAY	1
APPROXIMATE PUMP RUN TIME	8 MIN
TDH	15.5'

DESIGN CALCULATIONS

DESIGN FLOW: 310CMR15.203
FACTORY, INDUSTRIAL PLANT, WAREHOUSE OR DRY STORAGE SPACE WITHOUT CAFETERIA
15 GPD PER EMPLOYEE
DESIGN FLOW= 6 EMPLOYEES x 15 GPD/EMPLOYEE=90 GPD (USE DESIGN FLOW OF 200 GPD)

SEPTIC TANK: 310CMR15.223
DESIGN FLOW = 200 GPD
X 200%
REQUIRED SIZE = 400 GAL

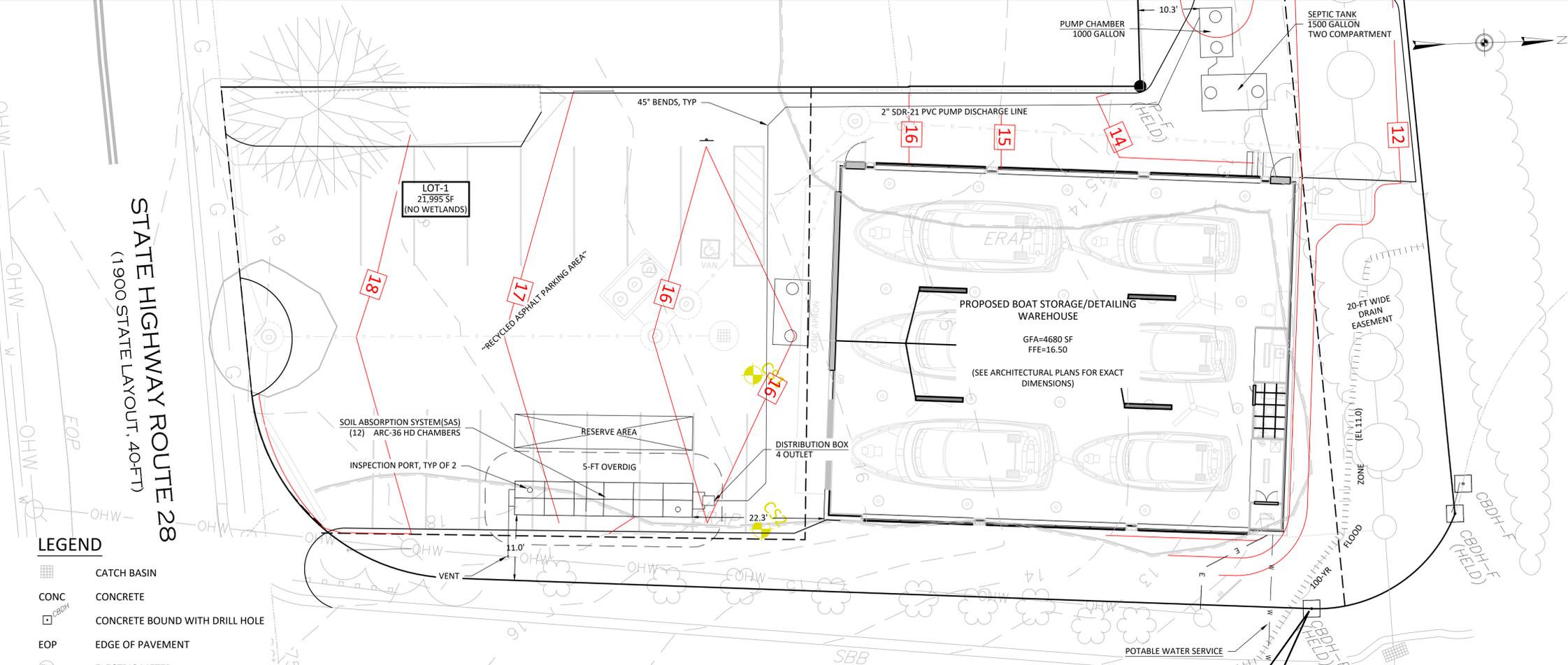
USE 2 COMPARTMENT TANK
COMPARTMENT 1 TANK 1,000 GAL
COMPARTMENT 2 TANK 500 GAL
1500 GAL

SOIL ABSORPTION SYSTEM 310CMR15.242
DESIGN PERCOLATION RATE: <5 MPI
SOIL TEXTURAL CLASS: CLASS I
LONG TERM ACCEPTANCE RATE (LTAR): 0.74 GPD/SF

AREA REQUIRED: 200 GPD/0.74 GPD/SF = 270 SF
USE ARC-36 HIGH CAPACITY INFILTRATOR CHAMBERS AGGREGATE FREE - BED CONFIGURATION

NUMBER OF CHAMBERS REQUIRED:
270 SF/4.80 SF/LF = 56 LF
56 LF/(5 LF/CHAMBER) = 11 CHAMBERS

USE 2 ROWS OF 6 CHAMBERS = 12 CHAMBERS TOTAL
12 x 5 LF x 4.80 SF/LF x 0.74 GPD/SF = 213 GPD
SYSTEM IS NOT DESIGNED FOR A GARBAGE GRINDER



LEGEND

- CATCH BASIN
- CONCRETE
- CONCRETE BOUND WITH DRILL HOLE
- EDGE OF PAVEMENT
- ELECTRIC METER
- EXISTING CONTOUR
- FLOOD ZONE LIMIT
- FOUND
- GAS LINE
- HYDRANT
- IRON PIN
- LANDSCAPED AREA
- OVERHEAD WIRE
- PROPOSED CONTOUR
- TEST PIT
- UTILITY POLE

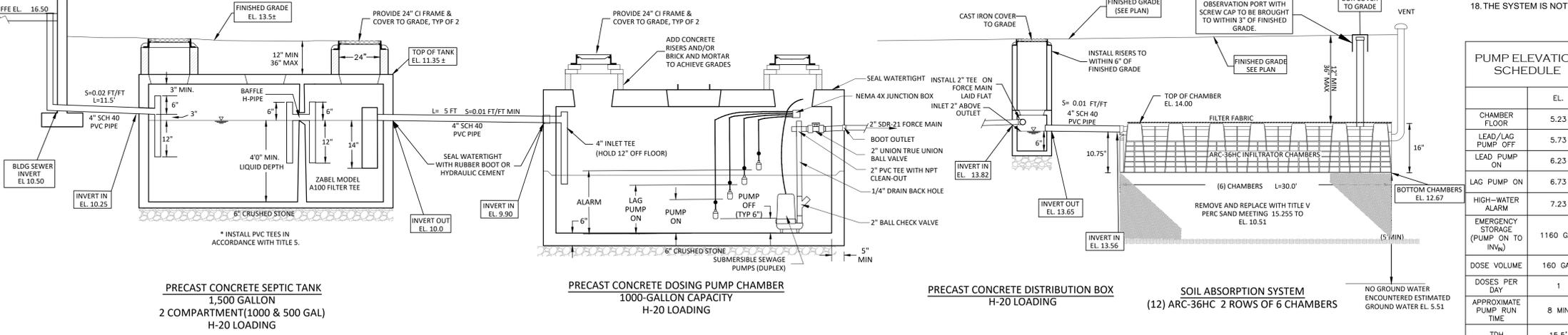
GENERAL NOTES

THE SANITARY DISPOSAL SHALL BE CONSTRUCTED IN STRICT CONFORMANCE WITH THE STATE ENVIRONMENTAL CODE, TITLE V, AND REGULATION OF THE LOCAL BOARD OF HEALTH.

WHERE REQUIRED, ALL UNSUITABLE MATERIAL SHALL BE REMOVED AND REPLACED TO THE LIMITS SHOWN OR NOTED ON THE PLAN. REPLACEMENT FILL SHALL CONFORM WITH REQUIREMENTS OF 310CMR15.255(3).

ALL BENCHMARKS SHOWN HEREON MUST BE VERIFIED FOR CONSISTENCY BY THE CONTRACTOR PRIOR TO CONSTRUCTION. ANY DISCREPANCIES MUST BE RESOLVED BY THE DESIGN ENGINEER PRIOR TO CONSTRUCTION.

UNDERGROUND UTILITIES SHOWN HEREON HAVE BEEN COMPILED FROM RECORD PLANS AND BEST AVAILABLE INFORMATION. THESE UTILITIES HAVE NOT BEEN FIELD VERIFIED AND THE ACTUAL LOCATION IS NOT GUARANTEED. THE CONTRACTOR SHALL FIELD VERIFY ALL UTILITIES AND OTHER SUBSURFACE STRUCTURES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT DIG-SAFE AT 1-888-344-7233 A MINIMUM OF 72-HOURS PRIOR TO EXCAVATION FOR UTILITY MARK OUT. THE CONTRACTOR SHALL ALSO CONTACT VARIOUS LOCAL COMPANIES AND/OR AGENCIES WHO DO NOT PARTICIPATE IN THE DIG-SAFE PROGRAM FOR ADDITIONAL UTILITY MARK OUT.

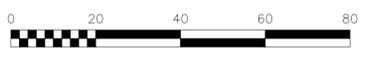
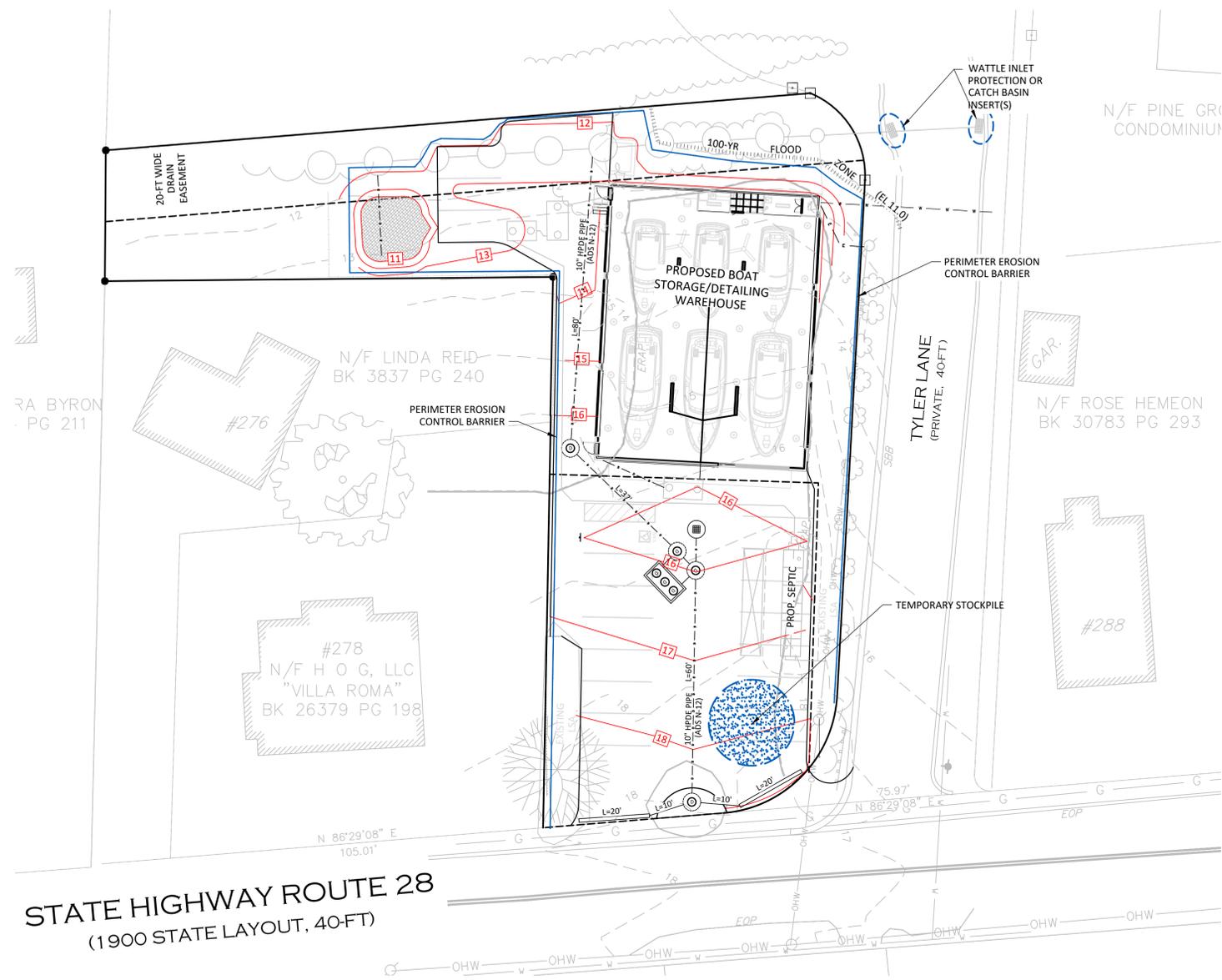


SANITARY SYSTEM PROFILE
NOT TO SCALE

PRECAST CONCRETE NOTES:

- CONCRETE: 5,000 PSI MINIMUM AFTER 28 DAYS.
- DESIGN CONFORMS WITH 310 CMR 15.00 DEP TITLE 5 REGS FOR SEPTIC TANKS.
- ALL REINFORCEMENT PER ASTM C1227
- DESIGNED FOR ASHTO H5-20 LOADING, COVER 1-5 FT.
- TONGUE AND GROOVE JOINT SEALED WITH BUTYL RESIN, INLET HEIGHT MAY INCREASE SLIGHTLY DUE TO THE BUTYL RESIN USED.

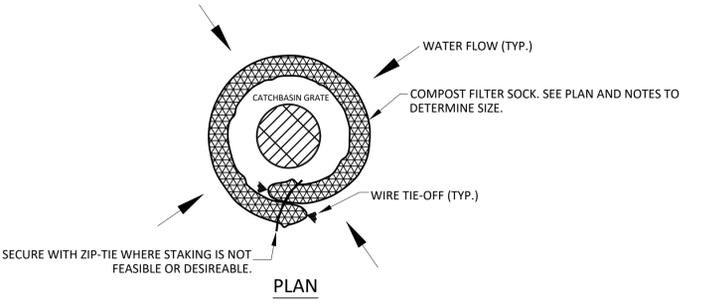
DUPLEX PUMPS SHALL ALTERNATE OPERATION. SUBMERSIBLE SEWAGE PUMPS SHALL BE CAPABLE OF PUMPING 20 GPM AGAINST THE TOTAL DYNAMIC HEAD (TDH) AND SHALL BE CAPABLE OF PASSING A 1" SOLID.



DRAWING SCALE: 1" = 20'

GENERAL CONSTRUCTION SEQUENCE

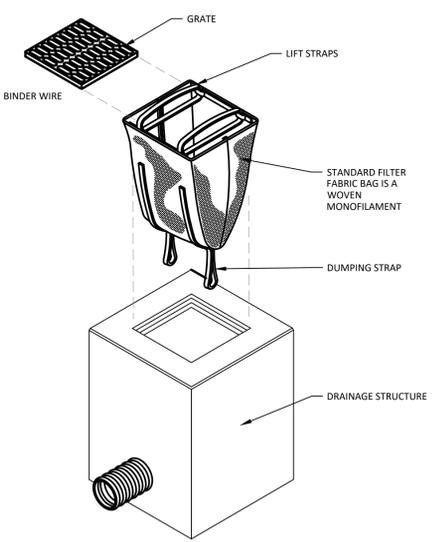
1. INSTALL PERIMETER EROSION CONTROL MEASURES AND CATCH BASIN CONTROLS.
2. INSTALL TEMPORARY CONSTRUCTION FENCE IF DESIRED.
3. SCRAPE AND STOCKPILE EXISTING RECYCLED ASPHALT PAVEMENT. RING WITH WATTLE EROSION CONTROL.
4. EXCAVATE AND INSTALL RAIN GARDEN INCLUDING DRAIN PIPE CONNECTIONS TO EXISTING INFILTRATION.
5. EXCAVATE AND INSTALL SEPTIC TANK AND PUMP CHAMBERS.
6. EXCAVATE AND INSTALL BUILDING FOUNDATION. CONSTRUCT BUILDING.
7. EXCAVATE AND INSTALL REMAINING STORMWATER PIPING AND STRUCTURES, REMAINING SEPTIC COMPONENTS, AND UTILITY CONNECTIONS.
8. SPREAD AND ALIGNMENT RECYCLED ASPHALT PAVEMENT AS NECESSARY. ROLL AND COMPACT.
9. FINAL GRADING AND LANDSCAPING.
10. REMOVE EROSION CONTROLS AFTER SOILS ARE STABILIZED.



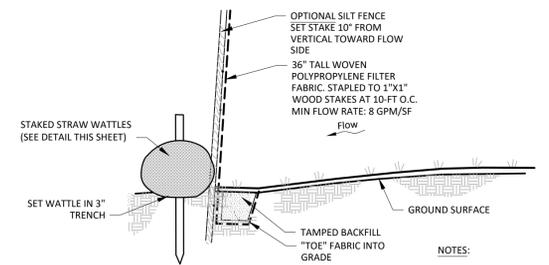
NOTES:

1. OVERLAP ENDS OF SOCK PER MANUFACTURERS RECOMMENDATIONS - ONE FOOT MINIMUM, 3 FEET MAXIMUM.
2. USE 8"-12" DIA. SOCK IN CURBSIDE OR TRAFFICED AREAS.
3. USE 12"-18" DIA. SOCK IN NON-TRAFFICED AREAS.
4. INSPECT AND MAINTAIN THROUGHOUT CONSTRUCTION.
5. SOCK AND COMPOST MATERIAL TO BE REMOVED FROM SITE WHEN CONSTRUCTION IS COMPLETE.

WATTLE INLET PROTECTION
NOT TO SCALE



CATCH BASIN INSERT
NOT TO SCALE



EROSION CONTROL BARRIER
NOT TO SCALE

NOTES:

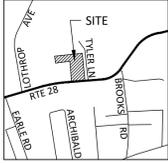
1. WATTLE AND SILT FENCE COMBINATION SHALL BE INSTALLED AS THE PRIMARY PERIMETER EROSION CONTROL DEVICE AT LOCATIONS SHOWN ON SHEET C-02.
2. SILT FENCE AND POSTS FROM APPROVED MANUFACTURER/SUPPLIER SET TO MANUFACTURERS SPECIFICATION.
3. STRAW BALES MAY BE USED AS AN ALTERNATE FOR THE WATTLES AS SHOWN BELOW.



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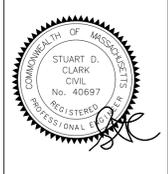


NOT FOR CONSTRUCTION

No.	Date	Description
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owner
ALLEN HARBOR MARINE
335 LOWER COUNTY RD, HARWICH PORT, MA

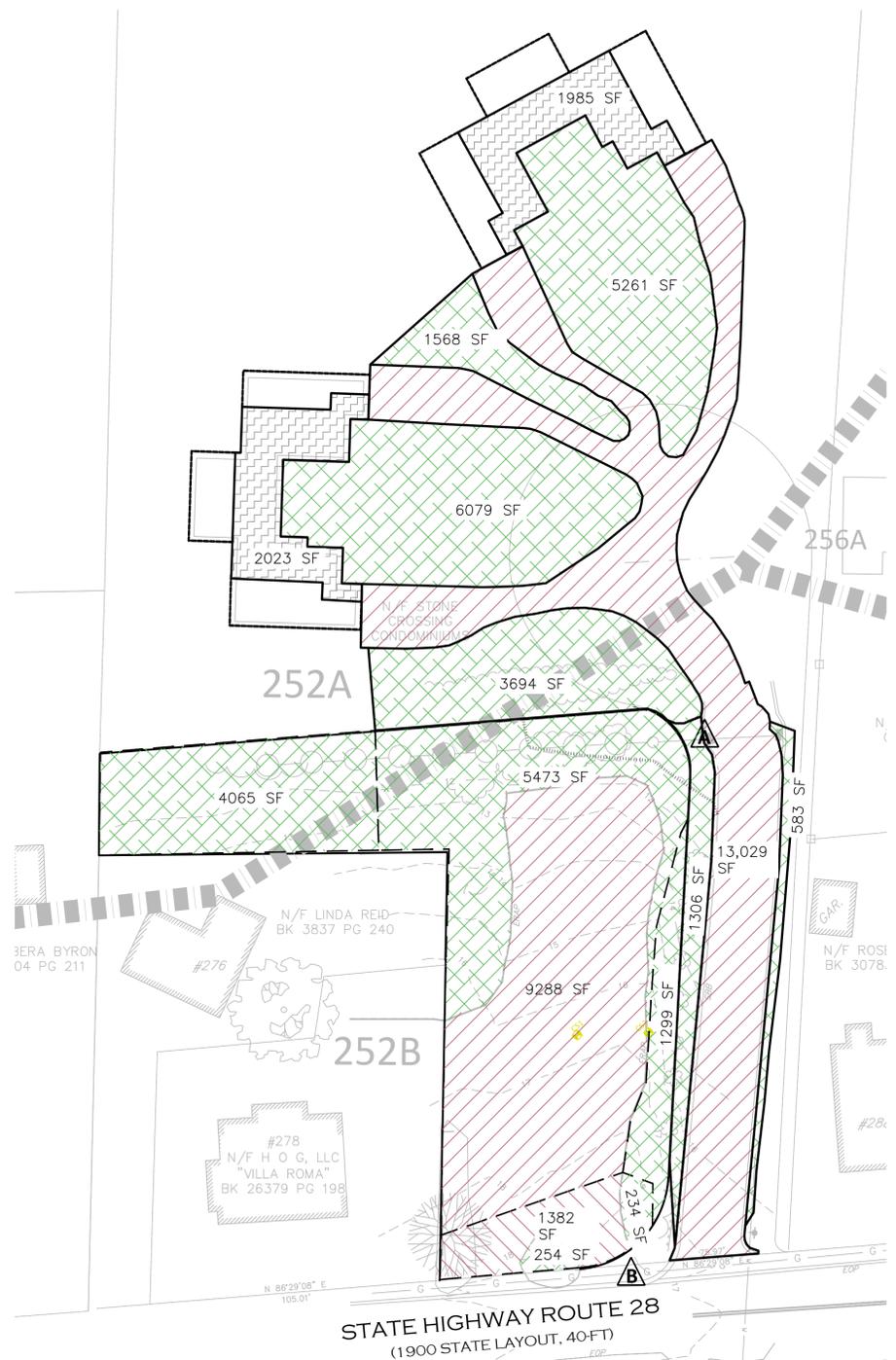
project
ALLEN HARBOR MARINE BLDG
282 ROUTE 28, HARWICH PORT, MA



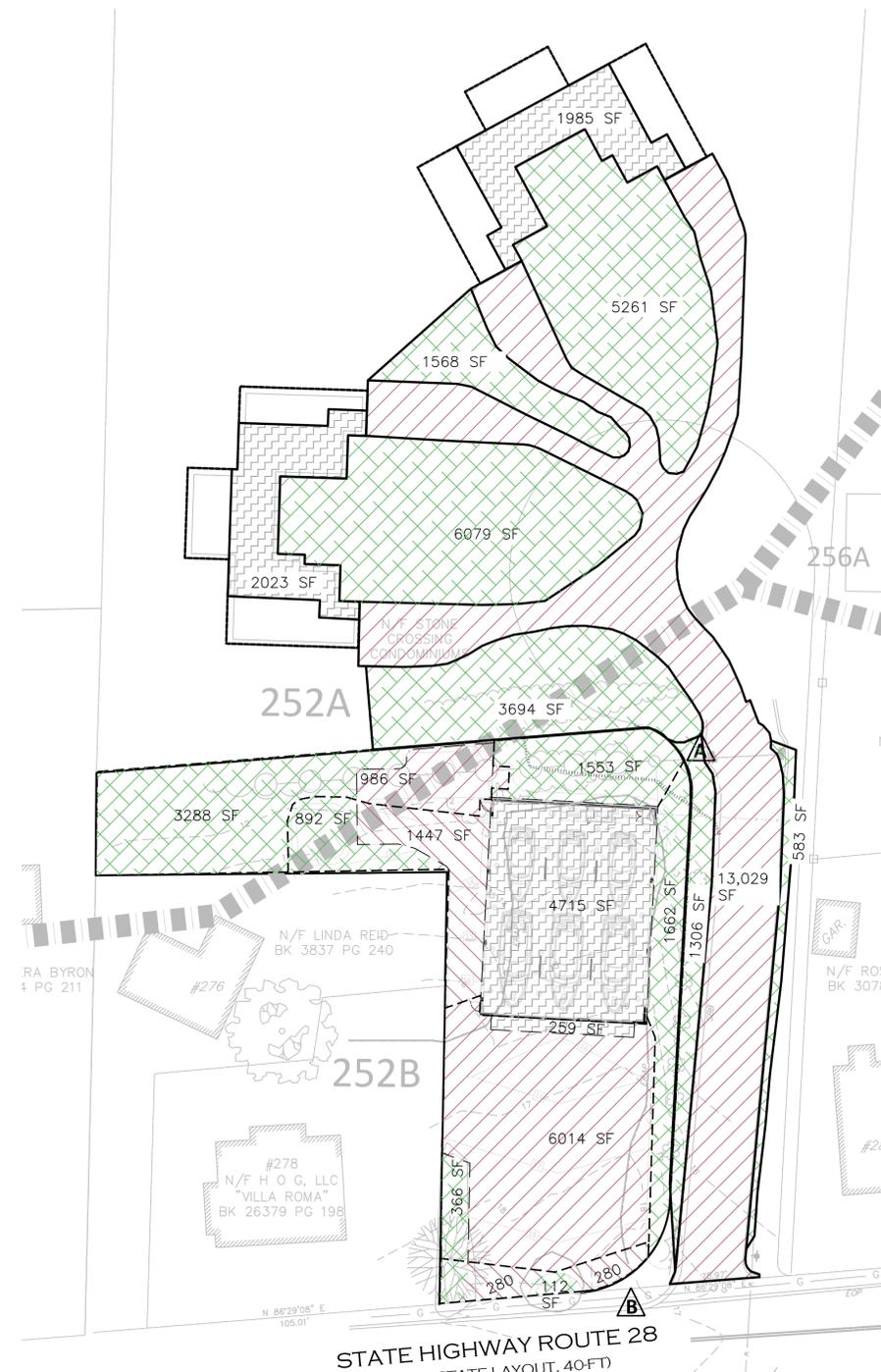
scale	1"=20'
date	December 17, 2020
project	20458
drawn by	SDC/NHE
checked by	SDC

EROSION AND SEDIMENT CONTROL PLAN

C-04

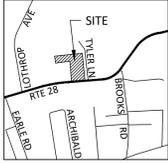


EXISTING CONDITION WATERSHED AREAS



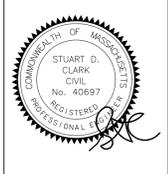
POST DEVELOPMENT WATERSHED AREAS

- RECYCLED APHLALT PRODUCT (CN 96)
- ROOF & APRON AREA (CN 98)
- GRASS/LANDSCAPE



NOT FOR CONSTRUCTION

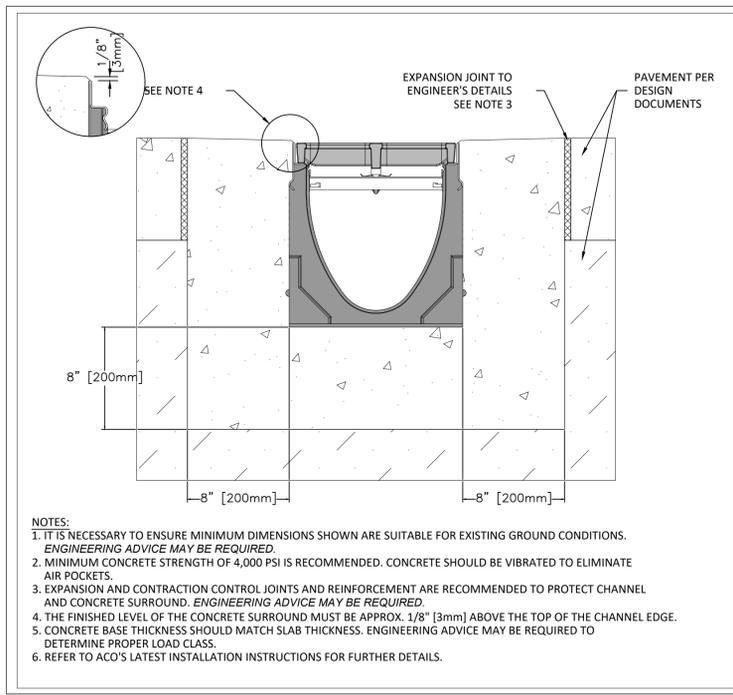
No.	Date	Description
1		ALLEN HARBOR MARINE BLDG 335 LOWER COUNTY RD, HARWICH PORT, MA
2		ALLEN HARBOR MARINE BLDG 282 ROUTE 28, HARWICH PORT, MA



scale	1"=30'
date	December 17, 2020
project	20458
drawn by	SDC/NHE
checked by	SDC

WATERSHED AREAS

C-05



SPECIFICATION CLAUSE
K200 KLASIKDRAIN - LOAD CLASS C

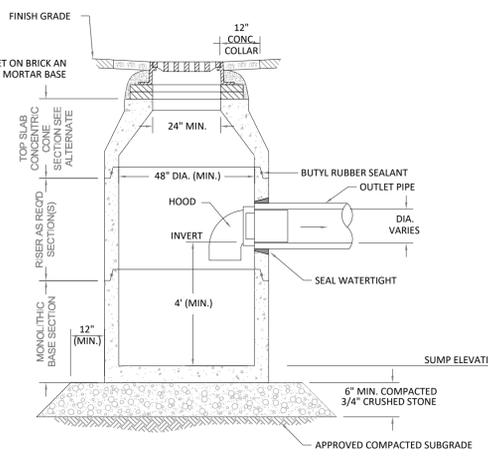
GENERAL
 THE SURFACE DRAINAGE SYSTEM SHALL BE GALYMER CONCRETE K200 CHANNEL SYSTEM WITH GALVANIZED STEEL EDGE RAILS AS MANUFACTURED BY ACO POLYMER PRODUCTS, INC.

MATERIALS
 CHANNELS SHALL BE MANUFACTURED FROM POLYESTER RESIN POLYMER CONCRETE WITH AN INTEGRALLY CAST-IN GALVANIZED STEEL EDGE RAIL. MINIMUM PROPERTIES OF POLYMER CONCRETE WILL BE AS FOLLOWS:
 COMPRESSIVE STRENGTH: 14,000 PSI
 FLEXURAL STRENGTH: 4,000 PSI
 TENSILE STRENGTH: 1,500 PSI
 WATER ABSORPTION: 0.07%
 FROST PROOF: YES
 DILUTE ACID AND ALKALI RESISTANT: YES
 B117 SALT SPRAY TEST COMPLIANT: YES

THE SYSTEM SHALL BE 8" (200mm) NOMINAL INTERNAL WIDTH WITH A 10.2" (260mm) OVERALL WIDTH AND A BUILT-IN SLOPE OF 0.5%. CHANNEL INVERT SHALL HAVE DEVELOPED "M" SHAPE. ALL CHANNELS SHALL BE INTERLOCKING WITH A MALE/FEMALE JOINT.

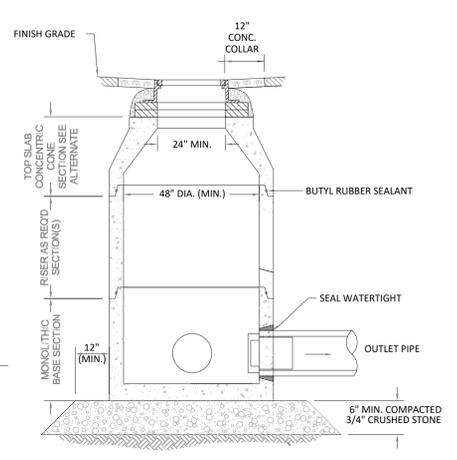
THE COMPLETE DRAINAGE SYSTEM SHALL BE BY ACO POLYMER PRODUCTS, INC. ANY DEVIATION OR PARTIAL SYSTEM DESIGN AND/OR IMPROPER INSTALLATION WILL VOID ANY AND ALL WARRANTIES PROVIDED BY ACO POLYMER PRODUCTS, INC.

CHANNEL SHALL WITHSTAND LOADING TO PROPER LOAD CLASS AS OUTLINED BY EN 1433. GRATE TYPE SHALL BE APPROPRIATE TO MEET THE SYSTEM LOAD CLASS SPECIFIED AND INTENDED APPLICATION. GRATES SHALL BE SECURED USING "QUICKLOK" BOLTLESS LOCKING SYSTEM. CHANNEL AND GRATE SHALL BE CERTIFIED TO MEET THE SPECIFIED EN 1433 LOAD CLASS. THE SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.

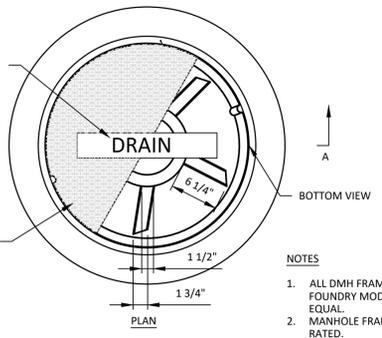


DEEP SUMP HOODED CATCH BASIN
 NOT TO SCALE

- NOTES:
 1. CONCRETE STRENGTH 4,000 PSI @ 28 DAYS.
 2. CEMENT: PORTLAND TYPE II PER ASTM C150.
 3. STEEL REINFORCING: ASTM A-615, Grade 60.
 4. DESIGN LOAD: AASHTO H-20.
 5. USE ECCENTRIC FLAT TOP WITH 24" OPENING WHERE DEPTH TO INVERT IS LESS THAN 5-FT.
 6. STRUCTURE IS TO BE SET ON WELL COMPACTED 12" BED OF CRUSHED STONE.

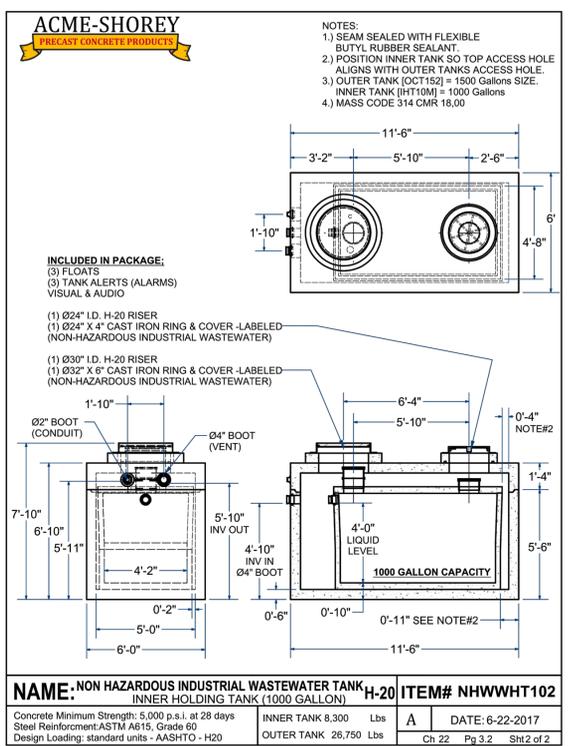


DRAIN MANHOLE
 NOT TO SCALE



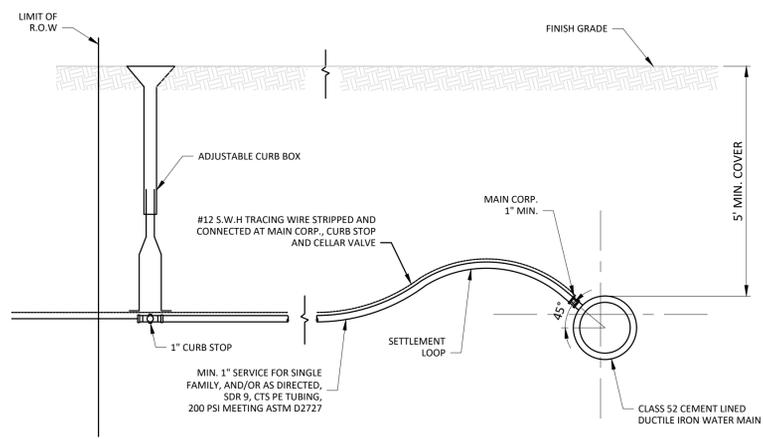
NOTE: COVER RAISED DIAMOND DESIGN

- NOTES:
 1. ALL DMH FRAME AND COVERS TO BE LEBARON FOUNDRY MODEL NO. LK110A DRAIN OR EQUAL.
 2. MANHOLE FRAME AND COVER TO BE H-20 LOAD RATED.
 3. PATTERN NO. S LK110A/L26C2.

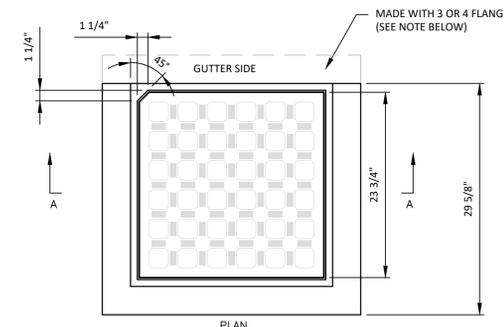


NHWWH TANK
 NOT TO SCALE

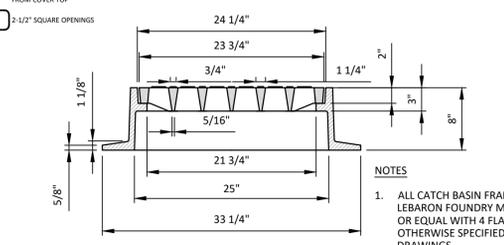
- NOTES:
 1. NON HAZARDOUS INDUSTRIAL WASTEWATER HOLDING (NHWWH) TANKS SHALL CONFORM TO MGI 314 CMR 18.00 AND SPECIFICALLY 18.08.
 2. NHWH TANKS SHALL HAVE AN H-20 LOAD RATING.



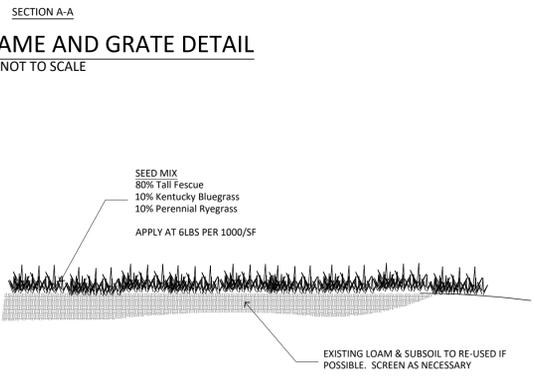
TYPICAL WATER SERVICE CONNECTION DETAIL
 NOT TO SCALE



MANHOLE FRAME AND COVER DETAIL
 NOT TO SCALE

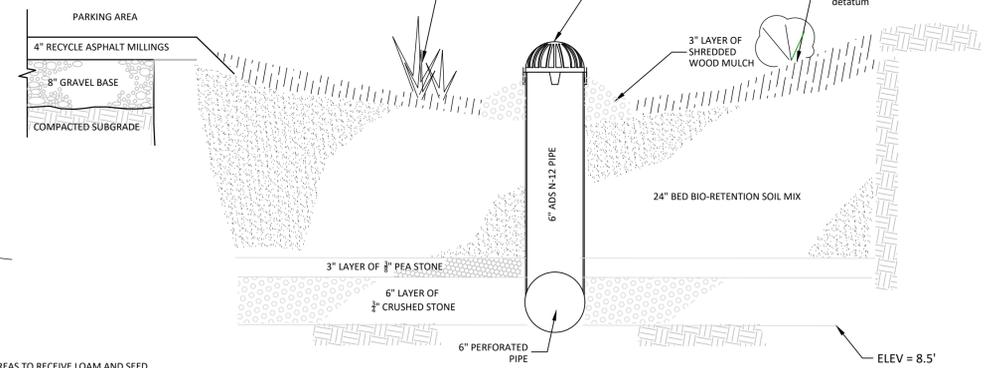


CATCH BASIN FRAME AND GRATE DETAIL
 NOT TO SCALE

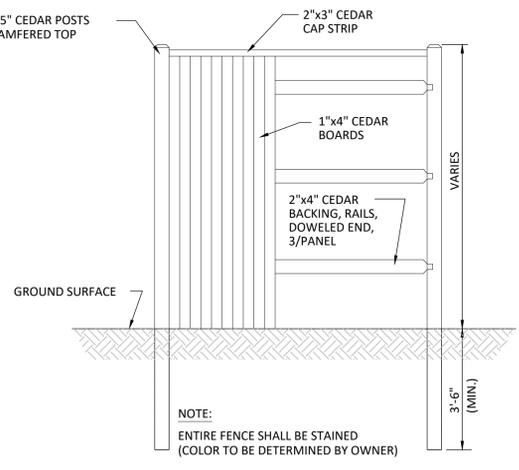


LOAM AND SEED DETAIL
 NOT TO SCALE

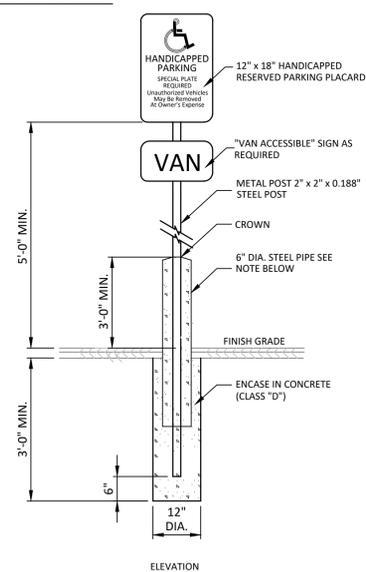
- NOTES:
 1. ALL DISTURBED NON PAVED AREAS TO RECEIVE LOAM AND SEED UNLESS OTHERWISE NOTED.
 2. EROSION CONTROL BLANKET SHALL BE USED ON ALL DISTURBED SLOPES GREATER THAN 2H:1V



RAIN GARDEN DETAIL
 NOT TO SCALE



STOCKADE FENCE DETAIL
 NOT TO SCALE



HANDICAP SIGN DETAIL
 NOT TO SCALE

- NOTES:
 1. SIGN LAYOUT, COLORS, SYMBOL AND LETTERING SHALL BE AASHTO STANDARD.
 2. TO BE LOCATED ON SITE AT ALL HANDICAP SPACES AS SHOWN ON PLAN.
 3. METAL POST SHALL BE MANUFACTURER PAINTED WITH EXTERIOR BLACK ENAMEL OR APPROVED EQUAL.
 4. STEEL PIPE TO BE USED WHERE SIGN IS INSTALLED IN PAVED AREA.



NOT FOR CONSTRUCTION

No.	Date	Description
1		OWNER: ALLEN HARBOR MARINE
2		PROJECT: 335 LOWER COUNTY RD, HARWICH PORT, MA
3		PROJECT: ALLEN HARBOR MARINE BLDG
4		PROJECT: 282 ROUTE 28, HARWICH PORT, MA

scale	AS NOTED
date	December 17, 2020
project	20458
drawn by	SDC/NHE
checked by	SDC

DETAILS

D-00



4 VIEW 4
SCALE: NOT TO SCALE



2 VIEW 2
SCALE: NOT TO SCALE



3 VIEW 3
SCALE: NOT TO SCALE



1 VIEW 1
SCALE: NOT TO SCALE

No.	Date	Description
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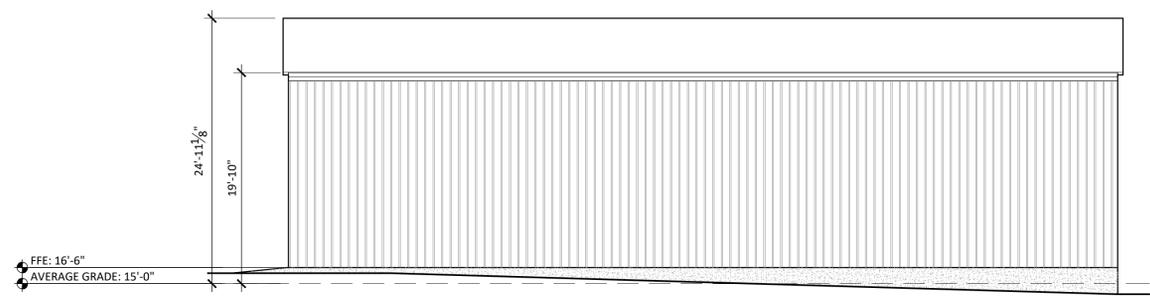
OWNER	ALLEN HARBOR MARINE 335 LOWER COUNTY RD., HARWICH PORT, MA	
PROJECT	ALLEN HARBOR MARINE BLDG 286 MA-28, HARWICH PORT, MA	

scale	AS NOTED
date	12/17/20
project	20458
drawn by	NK
checked by	SM

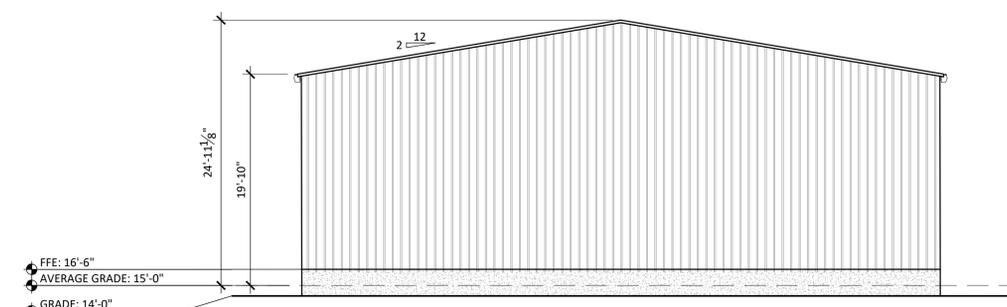
RENDERINGS

A1.2

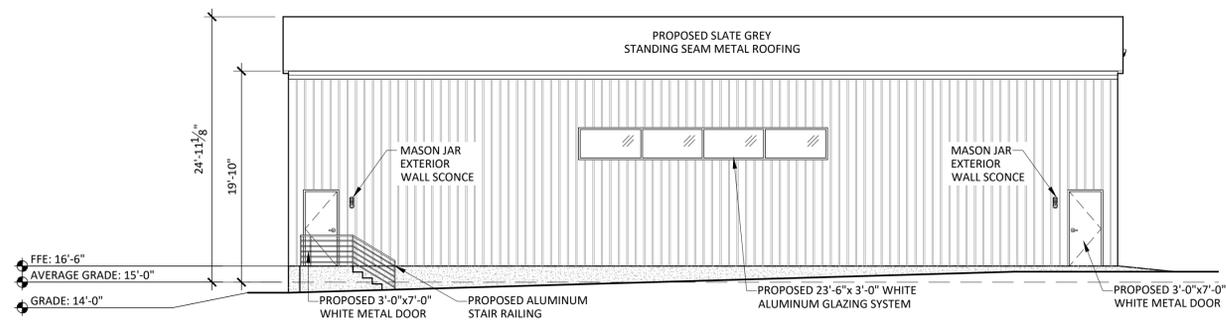
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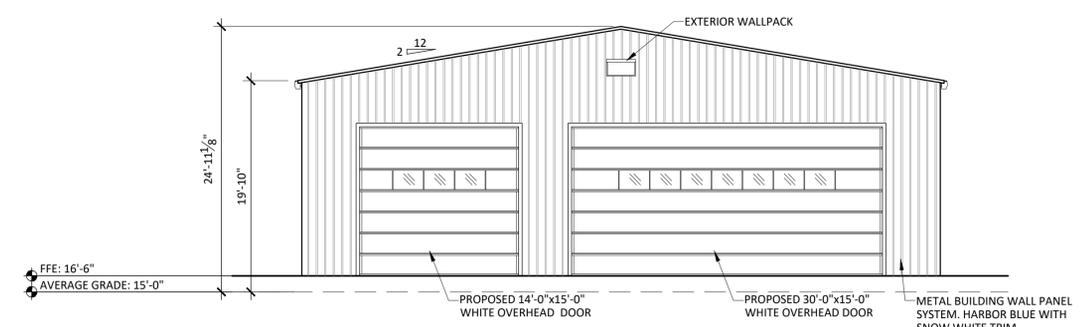
6 EAST ELEVATION
SCALE: 1/8"=1'-0"



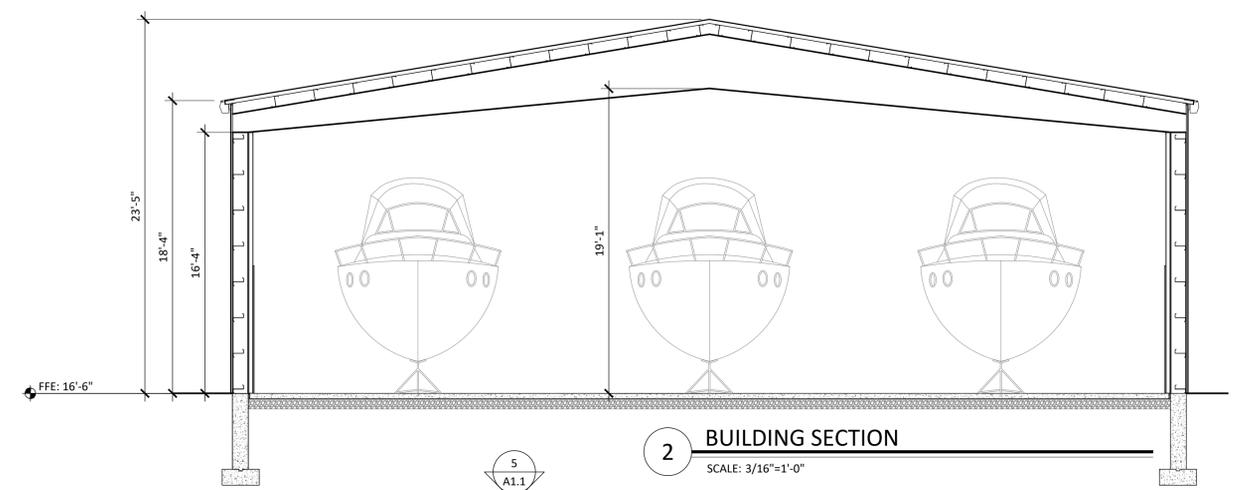
5 REAR ELEVATION
SCALE: 1/8"=1'-0"



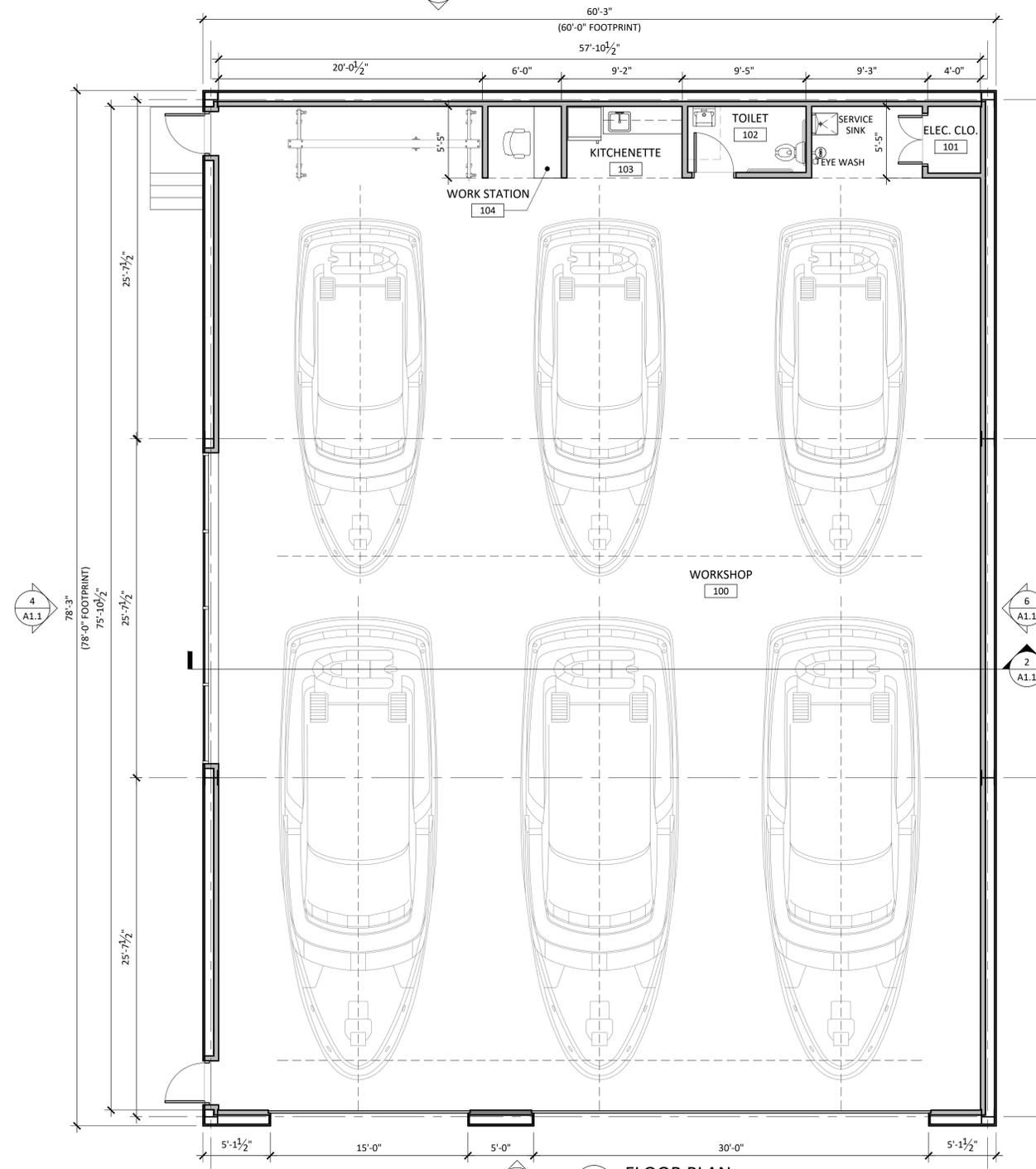
4 WEST ELEVATION
SCALE: 1/8"=1'-0"



3 SOUTH ELEVATION
SCALE: 1/8"=1'-0"



2 BUILDING SECTION
SCALE: 3/16"=1'-0"



1 FLOOR PLAN
SCALE: 3/16"=1'-0"

No.	Date	Description
1		OWNER
2		OWNER
3		OWNER
4		OWNER
5		OWNER
6		OWNER

OWNER	ALLEN HARBOR MARINE 335 LOWER COUNTY RD, HARWICH PORT, MA
PROJECT	ALLEN HARBOR MARINE BLDG 286 MA-28, HARWICH PORT, MA

Scale	AS NOTED
date	12/17/20
project	20458
drawn by	NK
checked by	SM

FLOOR PLAN, SECTION & ELEVATIONS

Please note that a Stormwater Report and Erosion Control Plan were also submitted with this application. Due to the length of the document it is not included in this online application. If you would like a copy of the Stormwater Report and Erosion Control Plan please contact Elaine Banta at ebanta@town.harwich.ma.us or 508-430-7511.

Thanks