

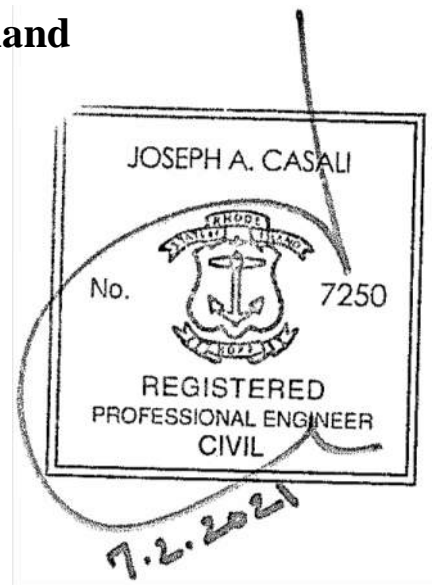
Project Narrative

For a Proposed

Union Fire District of S. Kingstown Station 7: Matunuck 5,500± Sq. Ft. Fire Station & 1,890± Sq. Ft. Ambulance Building

Located at

49 Matunuck School House Road
South Kingstown, Rhode Island
AP 86-2, Lot 32



Prepared for:

Union Fire District of South Kingstown
131 Asa Pond Road
Wakefield, RI 02879

Submission Date:

July 2021

Submitted by:

JCE

JOE CASALI ENGINEERING, INC.
CIVIL · SITE DEVELOPMENT · TRANSPORTATION
DRAINAGE · WETLANDS · ISDS · TRAFFIC · FLOODPLAIN
300 POST ROAD, WARWICK, RI 02888
(401) 944-1300 (401) 944-1313 FAX WWW.JOECASALI.COM

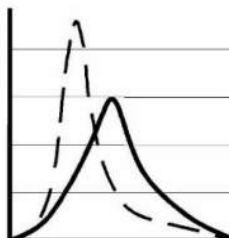


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- Appendix B: Freshwater Wetland Determination Letter, prepared by Natural Resource Services, Inc., October 2013
- Appendix C: Site Layout with Vehicle Turning Templates
- Appendix D: Architectural Plans, prepared by Aharonian and Associates, Inc.

1 INTRODUCTION

On behalf of the Union Fire District of South Kingstown, Joe Casali Engineering, Inc. (JCE) has prepared the following Project Narrative to identify existing and proposed site conditions related to the design and construction of a new 5,500± square foot Fire Station and an auxiliary 1,890± square foot Ambulatory Building to replace the existing Matunuck Fire Station (Station 7), located at 49 Matunuck School House Road in South Kingstown, Rhode Island.

2 SITE LOCATION AND PHYSICAL DESCRIPTION

According to a March 2014 Class I Property Line Survey and Class III Topographic Survey performed by Pinch Land Surveying of Wakefield, RI, the total area of AP 86-2, Lot 32 is approximately 31,718.75 square feet (0.73 acres). Lot 32 is comprised of the existing fire station and associated parking lot. The remainder of the parcel is undeveloped. The subject parcel is bound by Matunuck School House Road to the south, AP 80-3, Lot 11 to the east (vacant farmland), Lot 29 to the north (multiple residential dwellings), and Lot 28 to the west (single-family dwelling), as shown below in Figure 1 – Locus Map.



Figure 1 - Locus Map

NOT TO SCALE

2.1 Soil Classification

According to *Web Soil Survey (WSS)* operated by the US Department of Agriculture Natural Resources Conservation Service (NRCS), produced by the National Cooperative Soil Survey, the soils on-site consist of Narragansett very stony silt loam, 0 to 8 percent slopes (NbB) and Ninigret fine sandy loam, 0 to 3 percent slopes (Nt). NbB soils generally consist of coarse-loamy eolian deposits over sandy and gravelly melt-out till derived from gneiss and/or schist and/or granite. These soils are generally well drained and have a hydrologic soil group B. Nt soils consist of coarse-loamy eolian deposits over sandy and gravelly glaciofluvial deposits derived from gneiss, granite, schist, and/or phyllite. These soils are also classified as prime farmland and a belong to hydrologic soil group C.

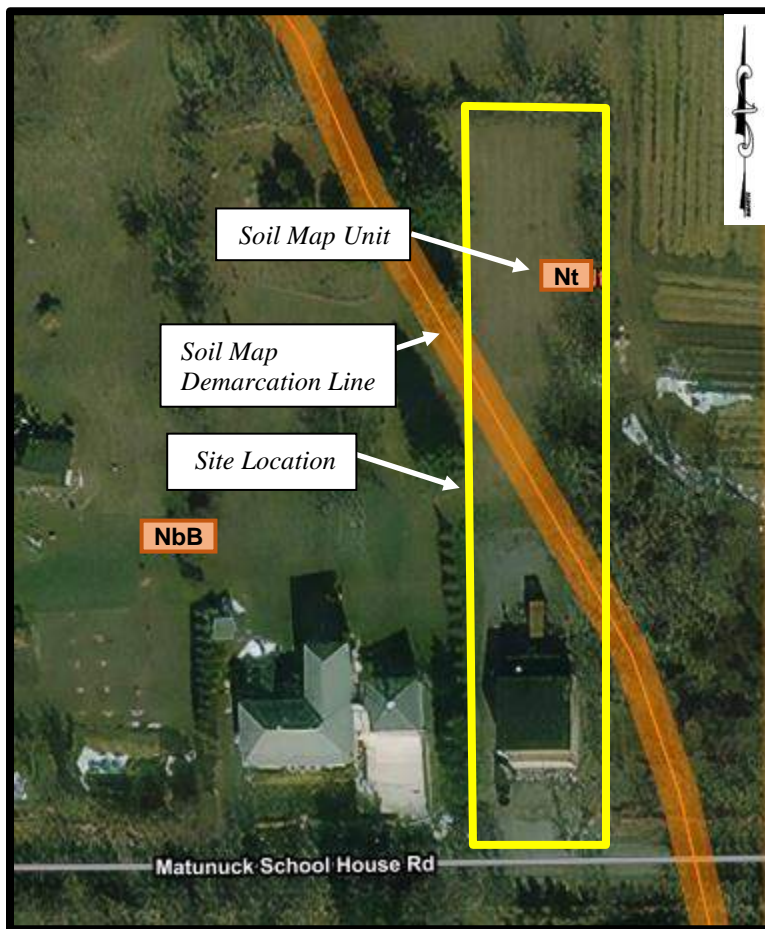


Figure 2 - Soils Map

NOT TO SCALE

Soil evaluations, witnessed by RIDEM, were performed by Natural Resource Services, Inc. in September 2013. Test pits were advanced with an excavator and were observed and logged by a Class IV Soil Evaluator in addition to being witnessed by RIDEM. Three (3) test holes were completed at the approximate locations shown on the plan in Appendix A.

Soil evaluations revealed a water table depth at ten feet for two of the test holes. One test hole consisted of human transported material and therefore the seasonal high groundwater table could not be determined.

2.2 Flood Zone Classification

The site is located on the Flood Insurance Rate Map for the Washington County, Rhode Island, Map Number 44009C0193J, effective date October 16, 2013. Based on this FEMA Flood Insurance Rate Map, the subject property and all adjacent properties, are identified as lying within FEMA Flood Zone X - areas determined to be outside the 0.2% annual-chance flood elevation.

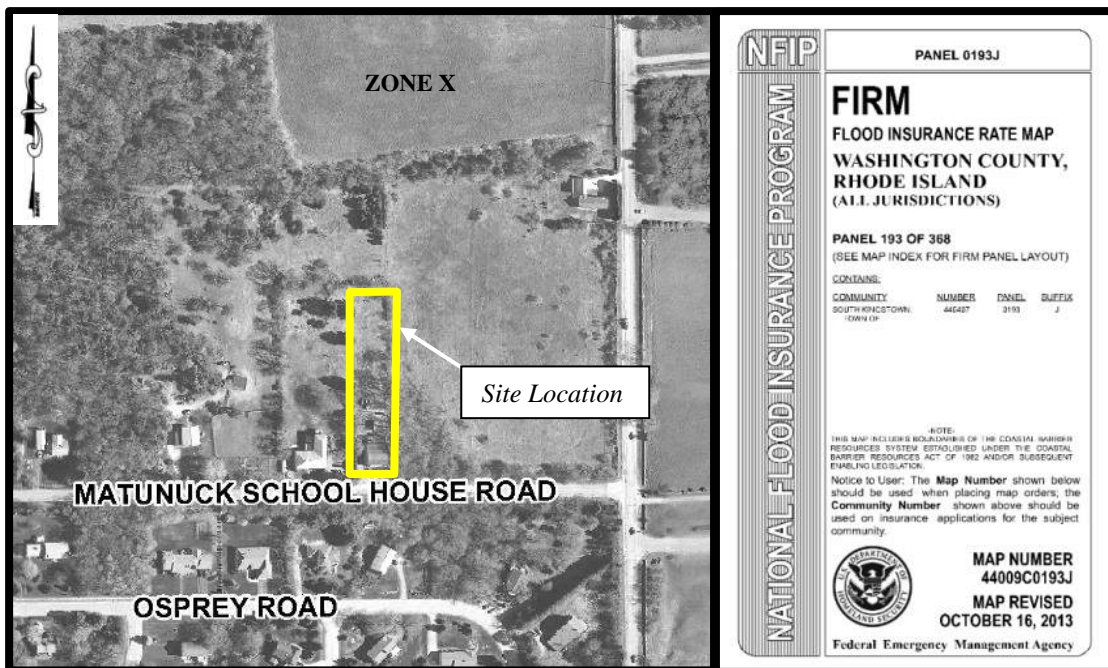


Figure 3 - Flood Map

NOT TO SCALE

2.3 Wetland Resources

According to a Freshwater Wetland Site Inspection completed by Natural Resource Services, Inc. (NRS) on September 23, 2013 (Appendix B), there are no regulated wetland features present on the subject property or adjacent to the site that would incur any setbacks onto the lot.

2.4 Zoning

According to the Town of South Kingstown Zoning Maps, the site is currently zoned as GI (Government and Institutional) District. The purpose of this district is to recognize the extent of public and semipublic land holdings and to provide guidance to utilization of

these lands should they be sold or otherwise transferred to private ownership. In general, the GI Zoning District does not have any dimensional requirements.

2.5 Easements

Based on a March 2014 Class I Property Survey performed by Pinch Land Surveying, there are no known easements located on the subject parcel.

2.6 Utilities

Water: There is an existing 8" water main located within Matunuck Schoolhouse Road, owned and maintained by South Kingstown Water Division.

Sewer: Public sewers are not available in this area.

Electric/Communications: Telephone and electric services run overhead along the north side of Matunuck School House Road.

3 PROPOSED DEVELOPMENT OF LAND

3.1 General

The proposed project includes the construction of a new 5,500± square foot fire station and an auxiliary 1,890± square foot ambulance building to replace the existing fire station with associated improvements to the property for parking, site drainage, and wastewater treatment. The fire station is proposed to include a 3,750 sq. ft. main floor, consisting of the fire truck bays, offices and sleeping quarters, and a 1,750 sq. ft. basement storage area. The existing on-site cesspool will be abandoned, and a new innovative/alternative septic system will be installed. Three (3) underground infiltration chamber systems are proposed to treat stormwater runoff to provide water quality treatment to impervious areas associated with the new parking lot areas and rooftop areas. In addition, a new domestic water service (and if necessary, fire protection service) will be provided to each building.

Per the Town Zoning Ordinance, public service buildings require one parking spaces per 350 square feet of floor area. The proposed buildings consist of a total of 5,640 sq. ft. of floor area (excluding closet/storage and utility spaces). Accordingly, per Zoning, a total of 16 parking spaces are required to service the site. However, based on the programmatic needs of Union Fire, the proposed rescue facility will house two (2) employees max.; the proposed fire station will house six (6) employees max.; with two (2) visitor spaces for a total programmatic need of ten (10) parking spaces. As currently designed, twelve (12) total parking spaces are proposed, slightly exceeding the programmatic needs of UFD, but slightly less than required per the Town's Zoning Ordinance. In addition, three (3) of the

proposed twelve (12) parking spaces have been designed with slightly less than the required parking space dimensional requirements (350 sq. ft. required; 342 sq. ft. proposed). Given the tight geometry of the site and building code requirements, the building width has been minimized to the maximum extent practicable, to provide as much area for parking and travel aisles as possible.

Given the awkward and tight geometry of the site, we have prepared several figures showing various vehicle turning templates navigating through the site. While we understand these are only models and may not necessarily represent real world conditions, it is important to note that this proposed facility is a public safety facility and most of the traffic navigating through the site is employees and staff of Union Fire District. There is generally little to no visitor traffic daily. Figures with the proposed site layout and various turning templates are included in Appendix C.

The site design has taken into consideration the neighboring property to the west by minimizing earthwork adjacent to the existing stand of mature arborvitae trees, maintaining the existing screening to the maximum extent practicable. In addition, the proposed fire station has been sited further back on the site when compared to the existing condition to reduce view of the station from the neighboring property. Landscaping has been provided through the site; however, given this is a public safety facility, the design generally does not meet the requirements of the South Kingstown Land Development Regulations. A detailed breakdown of landscaping waiver requests is provided on the Site Plans.

3.2 Utilities

Water: A new domestic water service and if necessary, fire protection service, will be provided to the new building from the existing main within Matunuck Schoolhouse Road.

Sewer: A new on-site wastewater treatment system will be designed to replace the existing cesspool servicing the existing fire station. Based on the soil evaluation test holes, the grading of the site, and the anticipated wastewater loads, a bottomless sand filter with Advantex pre-treatment pod(s) appears most suitable for this site.

Electric/Communications: Electric and telecommunications exist along Matunuck School House Road. Existing connections are proposed to be utilized to service the new buildings.

3.3 Drainage

Stormwater runoff from the new rooftops and pavement are proposed to be routed to one of two (2) underground infiltration systems that will ultimately discharge to an existing drainage system within Matunuck Schoolhouse Road or offsite to the north, mimicking existing conditions. A small above-ground basin is proposed at the rear to treat and

infiltrate runoff from the northern-most parking/paved area. Soil erosion and sedimentation controls are proposed throughout the duration of construction to protect the adjacent roadway and properties.

4 PERMIT REQUIREMENTS

4.1 Town of South Kingstown Permit Requirements

4.1.1 Planning Board of Review

The project will need to be reviewed and approved by the Planning Board of Review as a Major Land Development Project. The project will require four (4) stages of review: Pre-Application Concept Review, Master Plan, Preliminary Plan, and Final Plan. Anticipated waiver requests at the Master Plan stage include landscape relief, as detailed on the Conceptual Landscape Plan. In addition, the Applicant is respectfully requesting the Master Plan and Preliminary Plan stages of review be combined.

4.1.2 Zoning Board

The project will require review and approval by the Zoning Board for several instances of dimensional relief from the requirements of the South Kingstown Zoning Ordinance, including the following:

- Article 7, Section 711: Minimum Off-Street Parking Requirements: Parking space, including aisles, shall be no less than 350 sq. ft. per vehicle.
 - Required = 350 sq. ft.; Proposed = 342 sq. ft.; **Relief Requested = 8 ft.**
- Article 7, Section 711: Minimum Off-Street Parking Requirements:
 - Required: 16 spaces; Proposed = 12 spaces; **Relief Requested = 4 spaces.**

4.1.3 Building Permit

A Building Permit will be required from the Town of South Kingstown Building Official for construction of the proposed addition.

4.2 State of Rhode Island Permit Requirements

4.2.1 Rhode Island Department of Environmental Management (RIDEM)

The proposed OWTS system will need to be approved by the Rhode Island Department of Environmental Management's (RIDEM) Office of Water Resources, OWTS Division. In addition, the stormwater management design is likely to include underground infiltration systems; therefore a Construction Stormwater Application (also known as a Groundwater Discharge Permit) will be required from RIDEM's Office of Water Resources.

Appendix A

Soil Evaluations

prepared by Natural Resource Services, Inc., September 2013



STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS

Department of Environmental Management
Office of Water Resources



Site Evaluation Form

Part A - Soil Profile Description

Application Number

Property Owner: The Union Fire District

Property Location: 49 Matunuck Schoolhouse Rd., South Kingstown, RI

Date of Test Hole: 9-23-13

Soil Evaluator: Edward J. Avizimis License Number: 04083

Weather: Sunny - 60's Shaded: Yes No Time: 12:00pm

Table with 12 columns: TH Horizon, Depth, Horizon Boundaries (Dist, Topo), Soil Colors (Matrix, Re-Dox Features), Re-Dox Description (Ab., S., Con.), Texture, Structure, Consistence, Soil Category. Contains two sections of soil profile data (TH 1 and TH 2).

Soil Class: Ice Contact - D Total Depth of each Test Hole: 112"
Depth to Groundwater Seepage: >10' Depth to Impervious or Limiting Layer: >112"
Estimated Seasonal High Water Table: 1:10', 2:10' Comments:




Part B

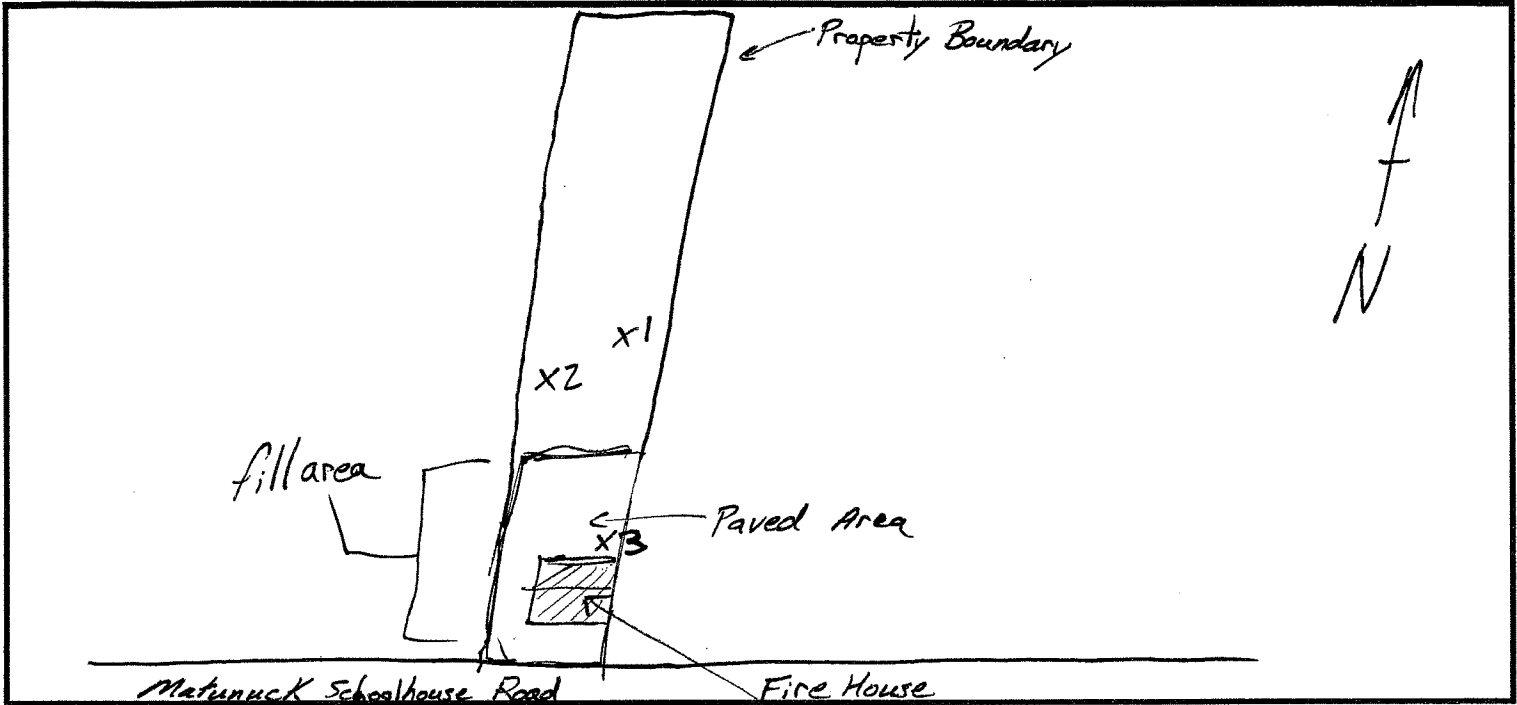
Site Evaluation - to be completed by Class II or III Designer or Soil Evaluator

Please use the area below to locate:

1. Test holes
2. Approximate direction of due north
3. Offsets from test holes to fixed points such as street, utility pole, or other permanent, marked object

Key:

-  Approximate location of test holes
-  Estimated gradient and direction of slope
-  Approximate direction of due north



1. Relief and Slope: 0-3%
2. Presence of any watercourse, wetlands or surface water bodies, within 200 feet of test holes: YES NO If yes, locate on above sketch.
3. Presence of existing or proposed private drinking water wells within 200 feet of test holes: YES NO If yes, locate on above sketch.
4. Public drinking water wells within 500 feet of test holes: YES NO If yes, locate on above sketch.
5. Is site within the watershed of a public drinking water reservoir or other critical area defined in SD 19.00? YES NO
6. Has soil been excavated from or fill deposited on site? YES NO If yes, locate on above sketch.
7. Site's potential for flooding or ponding: NONE SLIGHT MODERATE SEVERE
8. Landscape position: Toe slope
9. Vegetation: lawn
10. Indicate approximate location of property lines and roadways.
11. Additional comments, site constraints or additional information regarding site: _____

Certification

The undersigned hereby certifies that all information on this application and accompanying forms, submittals and sketches are true and accurate and that I have been authorized by the owner(s) to conduct these necessary field investigations and submit this request.

Part A prepared by:

Signature

[Handwritten Signature]

License #

D1083

Part B prepared by:

Signature

License #

FOR OFFICE USE ONLY

Decision: Approved (SD 26.00(f)(1)) Not in compliance, or more information required (SD 26.00(f)(2)) • Disclaimed (SD 27.00(f)(3))

Comments:

Signature Authorized Agent

Date



INSPECTION REPORT

1332-1133

APPLICATION NUMBER: 49 Matunuck Schoolhouse Road

STREET: South Kingstown

CITY/TOWN: 09/23/2013

PLAT/LOT: 86-2 32 POLE NO:

OWTS INSTALLER: Installer XXXXX Designer:

PHONE NO: INSPECTION NUMBER:

INSPECTOR: O'Rourke

INSPECTION DATE:

ARRIVAL TIME:

WEATHER CONDITIONS:

TYPE OF INSPECTION: Dry Season Inspection for Soil

FINDINGS/COMMENTS

scheduled @ 2:00 PM

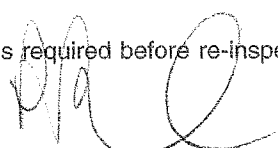
TH1 - 10' Blia Ice Contact

TH2 - 10'

TH3 - 0" Fill

RESULTS OF INSPECTION/ACTION REQUIRED

- CONSTRUCTION - DESIGNER MUST INSPECT/APPROVE PRIOR TO DEM INSPECTION**
 - Bottom inspected
 - Cover inspected
 - Correct items listed
 - (RFA) Address items listed and call for re-inspection.
 - (ASB) Designer must submit As-Builts
 - (RPREQ) Redesign required. Submit new application.
 - (RFAD) Stop Construction. Contact OWTS office. DO NOT CONTINUE.
 - (COC) Designer submit COC
 - (O&M) O&M agreement and permit must be recorded in Land Evidence Records.
 - (Fee) A \$100.00 fee is required before re-inspection.
 - Inspection waived
- SITE TESTING**
 - Soil Evaluation - Concur
 - Soil Evaluation - Do not concur
 - Soil Evaluation - Inconclusive
 - Alteration Test Hole - Verified
 - Alteration Test Hole - Unacceptable
 - Ledge Test
 - Fill Tests
 - Repair Test Hole

Signature of Inspector 

Appendix B

*Freshwater Wetland Determination Letter,
prepared by Natural Resource Services, Inc., October 2013*



Natural Resource Services, Inc.

9 October 2013

Joe Casali Engineering, Inc.
300 Post Road
Warwick, RI 02888

RE: Wetland consulting services
A.P. 86-2, Lot 32
South Kingstown, RI

Dear Mr. Casali,

Natural Resource Services, Inc. (NRS) has completed its site inspection of the above referenced property. The purpose of this visit was to determine whether or not state regulated freshwater wetlands were present on or immediately adjacent to the subject property. The opinions expressed in this letter are based upon my site visit on September 23, 2013 and my professional understanding of the Rhode Island Coastal Resources Management Program. All opinions expressed by NRS are subject to review and confirmation from the CRMC before being considered final.

The property is currently the site of the local fire department which is located on the south side of the lot adjacent to Matunuck Schoolhouse Road. The remainder of the lot is maintained lawn. In my opinion, there are no regulated wetland features present on the lot or near the lot that would incur any setbacks onto the lot as determined by my site visit on September 23, 2013.

It is important to note however, that the lot is within the Salt Ponds Special Area Management Plan and classified as "Lands of Critical Concern". This may have implications in regards to the design of the potential OWTS. Please do not hesitate to contact me if you have any questions.

Truly yours,

A handwritten signature in blue ink, appearing to read 'Edward J. Avizinis', written in a cursive style.

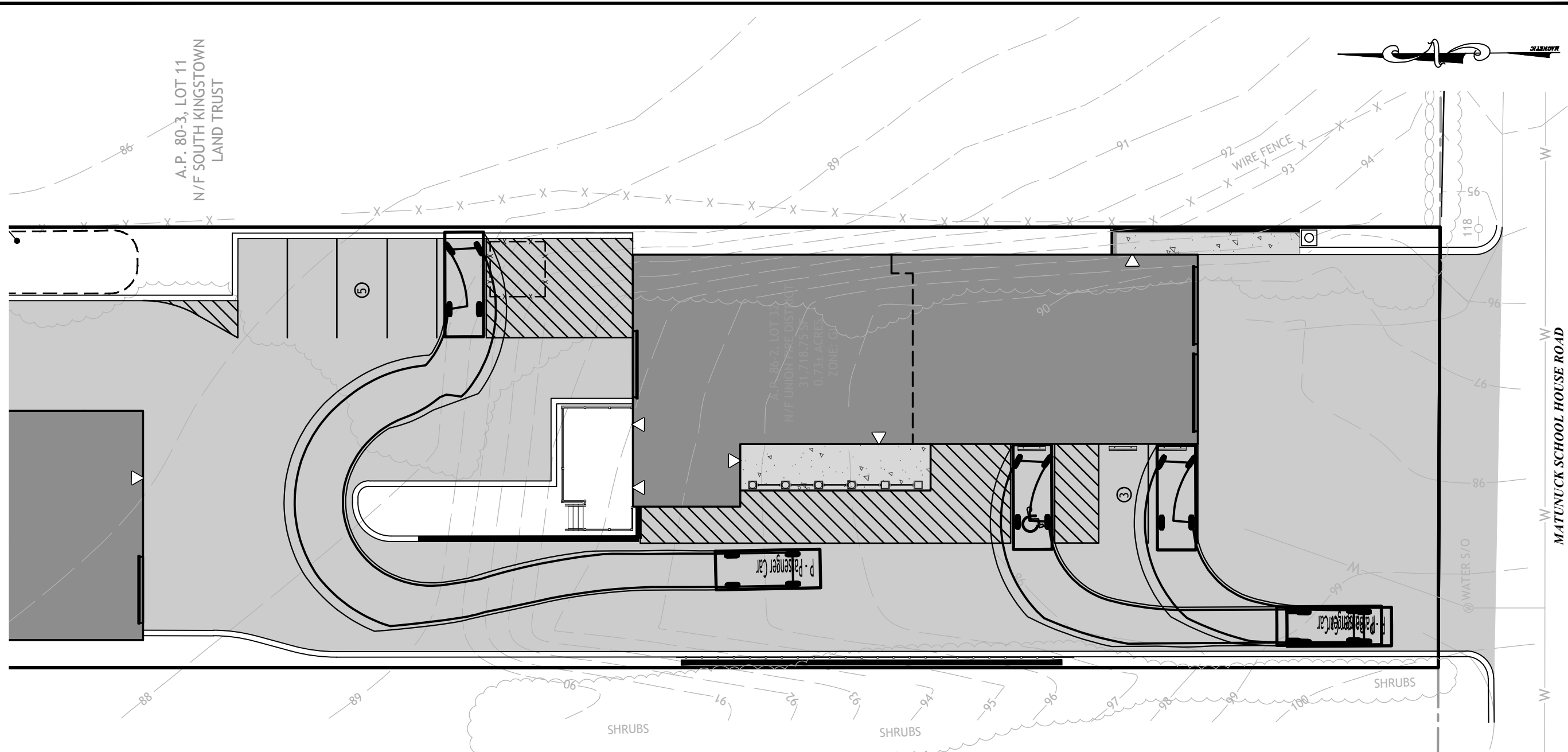
Edward J. Avizinis
Wetland Biologist/Soil Scientist

NRS file #13-177

Appendix C

Site Layout with Vehicle Turning Templates

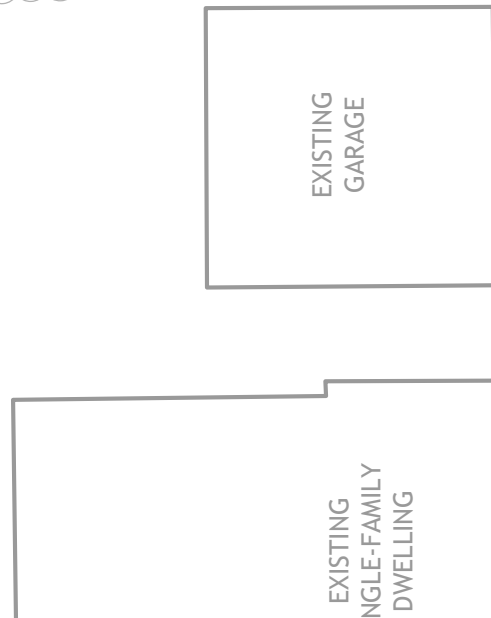
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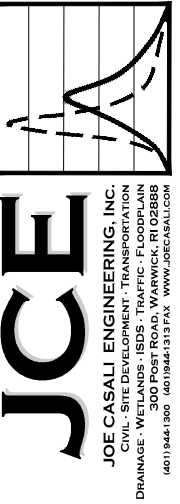
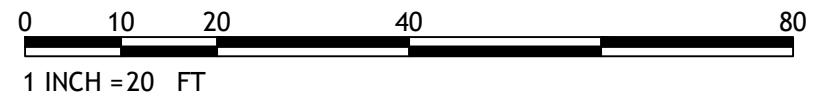
P - Passenger Car

Overall Length	19.000ft
Overall Width	7.000ft
Overall Body Height	4.300ft
Min Body Ground Clearance	1.115ft
Track Width	6.000ft
Lock-to-lock time	4.00s
Max Steering Angle (Virtual)	31.60°

A.P. 86-2 LOT 28
N/F SCHWAB, RICHARD L
& KRISTIN E



SCALE (FEET)



UNION FIRE DISTRICT OF S. KINGSTOWN
STATION 7 MATUNUCK
49 MATUNUCK SCHOOLHOUSE ROAD
S. KINGSTOWN, RHODE ISLAND
AP 86-2, LOT 32

NO.	DATE	DESCRIPTION

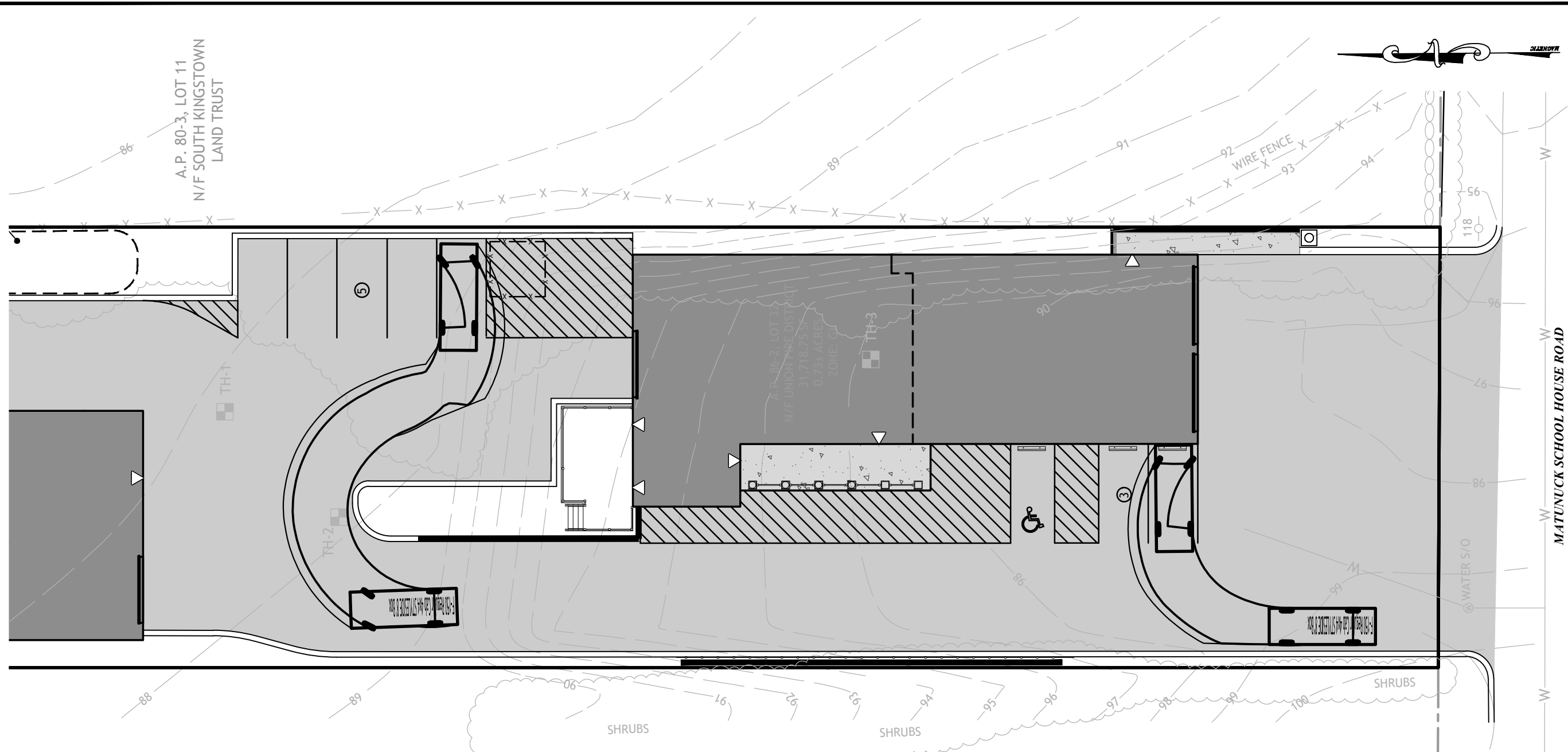
DESIGNED BY: DRD
DRAWN BY: DRD
CHECKED BY: JAC
DATE: JUNE 2021
PROJECT NO: 09-31c

PRELIMINARY, NOT FOR CONSTRUCTION

AUTOTURN MODELING PASSENGER CAR

SHEET 1 OF 3

Q:\09-31 Union Fire Station\09-31c Station 7 - Matunuck\ACAD\Union Fire - Station 7 Matunuck [Working Plan] R4.dwg Jul. 06, 2021 8:49am



A.P. 80-3, LOT 11
N/F SOUTH KINGSTOWN
LAND TRUST

A.P. 86-2 LOT 28
N/F SCHWAB, RICHARD L
& KRISTIN E

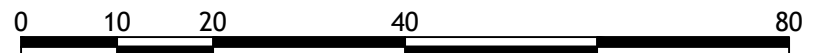
MATUNUCK SCHOOL HOUSE ROAD

F-150 Regular Cab 4x4 STYLESIDE 8'

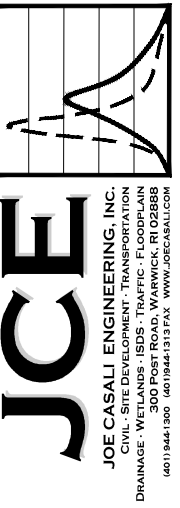
Overall Length	19.308ft
Overall Width	6.575ft
Overall Body Height	6.317ft
Min Body Ground Clearance	0.733ft
Track Width	6.575ft
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	23.500ft



SCALE (FEET)



1 INCH = 20 FT



UNION FIRE DISTRICT OF S. KINGSTOWN
STATION 7 MATUNUCK
49 MATUNUCK SCHOOLHOUSE ROAD
S. KINGSTOWN, RHODE ISLAND
AP 86-2, LOT 32

REVISIONS:

NO.	DATE	DESCRIPTION

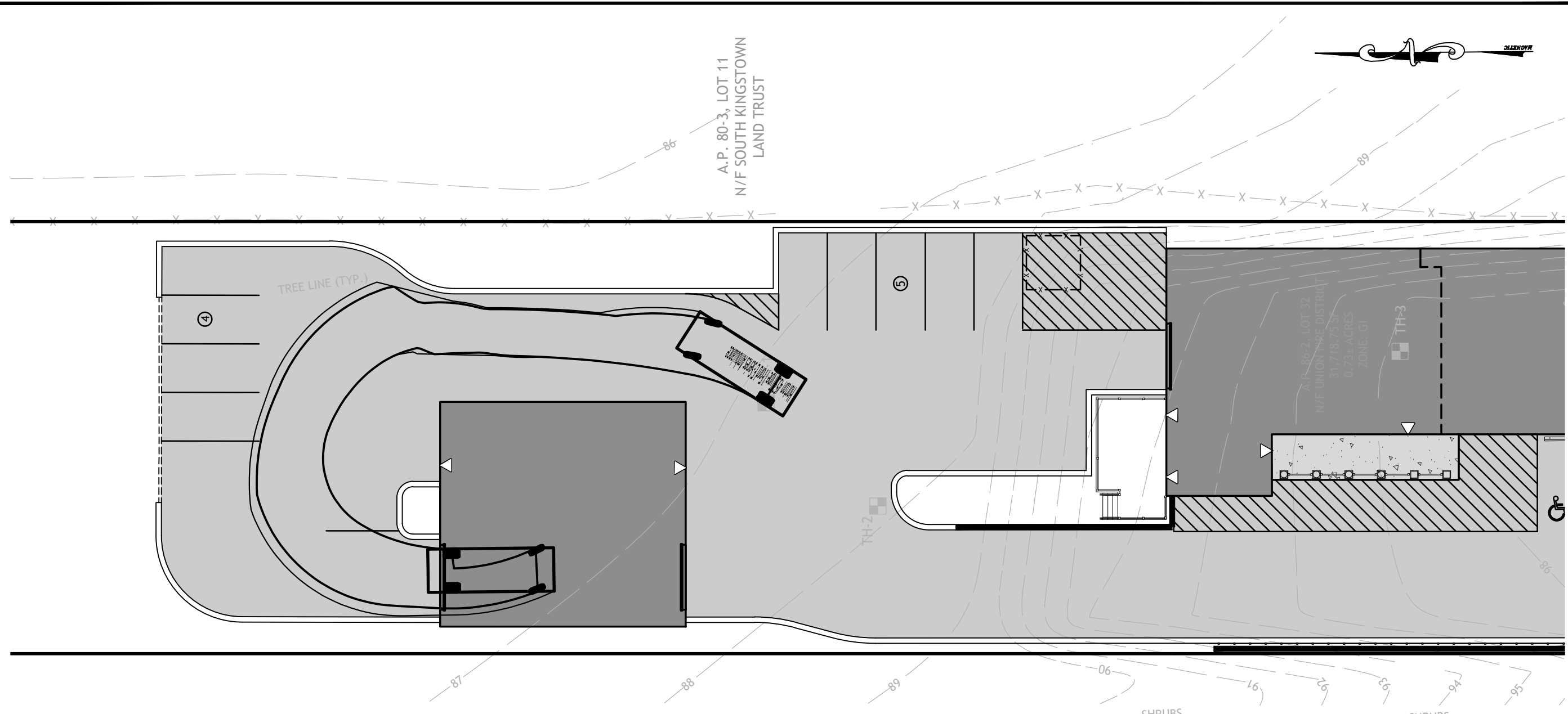
DESIGNED BY: DRD
 DRAWN BY: DRD
 CHECKED BY: JAC
 DATE: JUNE 2021
 PROJECT NO: 09-31c

PRELIMINARY, NOT FOR CONSTRUCTION

**AUTOTURN
MODELING
FORD F-150**

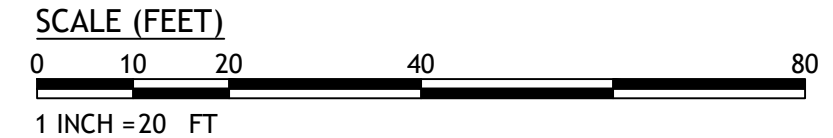
**SHEET
2 OF 3**

Q:\09-31 Union Fire Station\09-31c Station 7 - Matunuck\ACAD\Union Fire - Station 7 Matunuck [Working Plan] R4.dwg Jul. 06, 2021 8:49am



Horton 453 Type I Ford E-Series Ambulance

Overall Length	23.288ft
Overall Width	8.021ft
Overall Body Height	9.000ft
Min Body Ground Clearance	1.075ft
Track Width	8.021ft
Lock-to-lock time	5.00s
Curb to Curb Turning Radius	27.400ft



A.P. 86-2 LOT 28
F. SCHWAB, RICHARD L
& KRISTIN E

JCE
JOE CASALI ENGINEERING, INC.
CIVIL - SITE DEVELOPMENT - TRANSPORTATION
DRAINAGE - WETLANDS - ISDS - TRAFFIC - FLOODPLAIN
300 POST ROAD, WARWICK, RI 02888
(401) 944-1900 (401) 944-1313 FAX WWW.JOECASALI.COM

UNION FIRE DISTRICT OF S. KINGSTOWN
STATION 7 MATUNUCK
49 MATUNUCK SCHOOLHOUSE ROAD
S. KINGSTOWN, RHODE ISLAND
AP 86-2, LOT 32

REVISIONS:

NO.	DATE	DESCRIPTION

DESIGNED BY: DRD
DRAWN BY: DRD
CHECKED BY: JAC
DATE: JUNE 2021
PROJECT NO: 09-31c

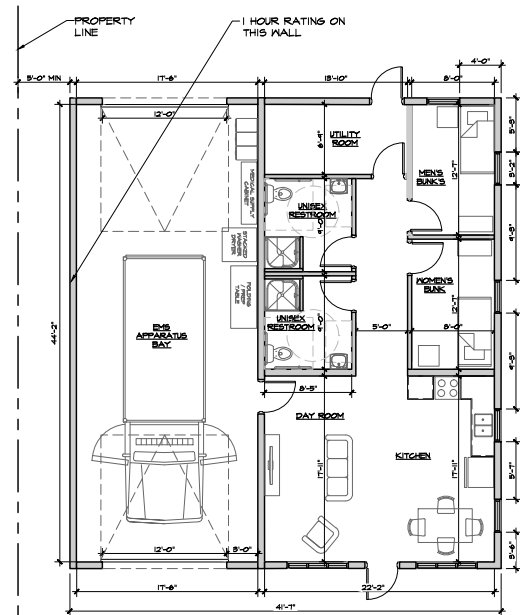
PRELIMINARY, NOT FOR CONSTRUCTION

AUTOTURN MODELING AMBULANCE

SHEET 3 OF 3

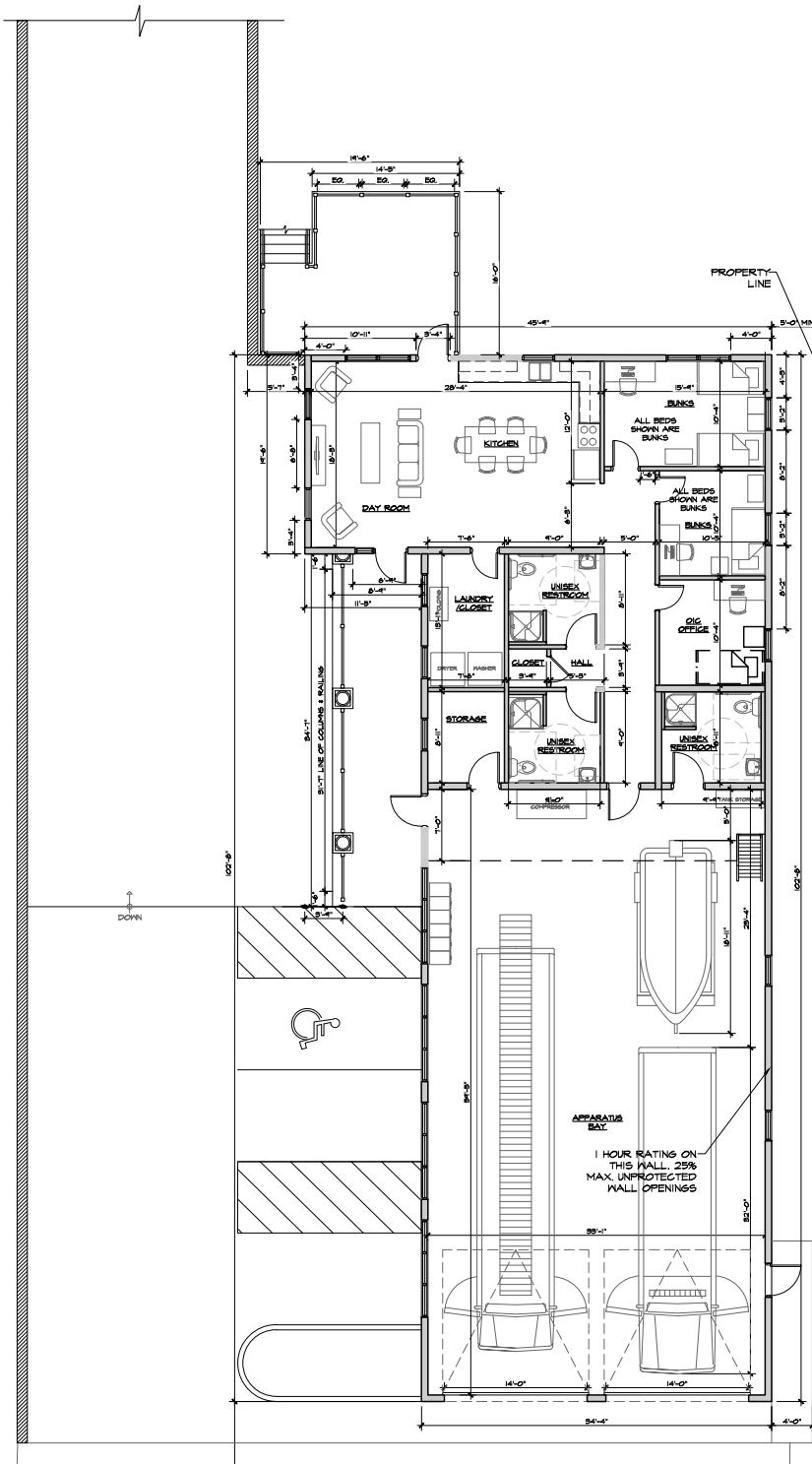
Appendix D

Architectural Plans, prepared by Aharonian and Associates, Inc.



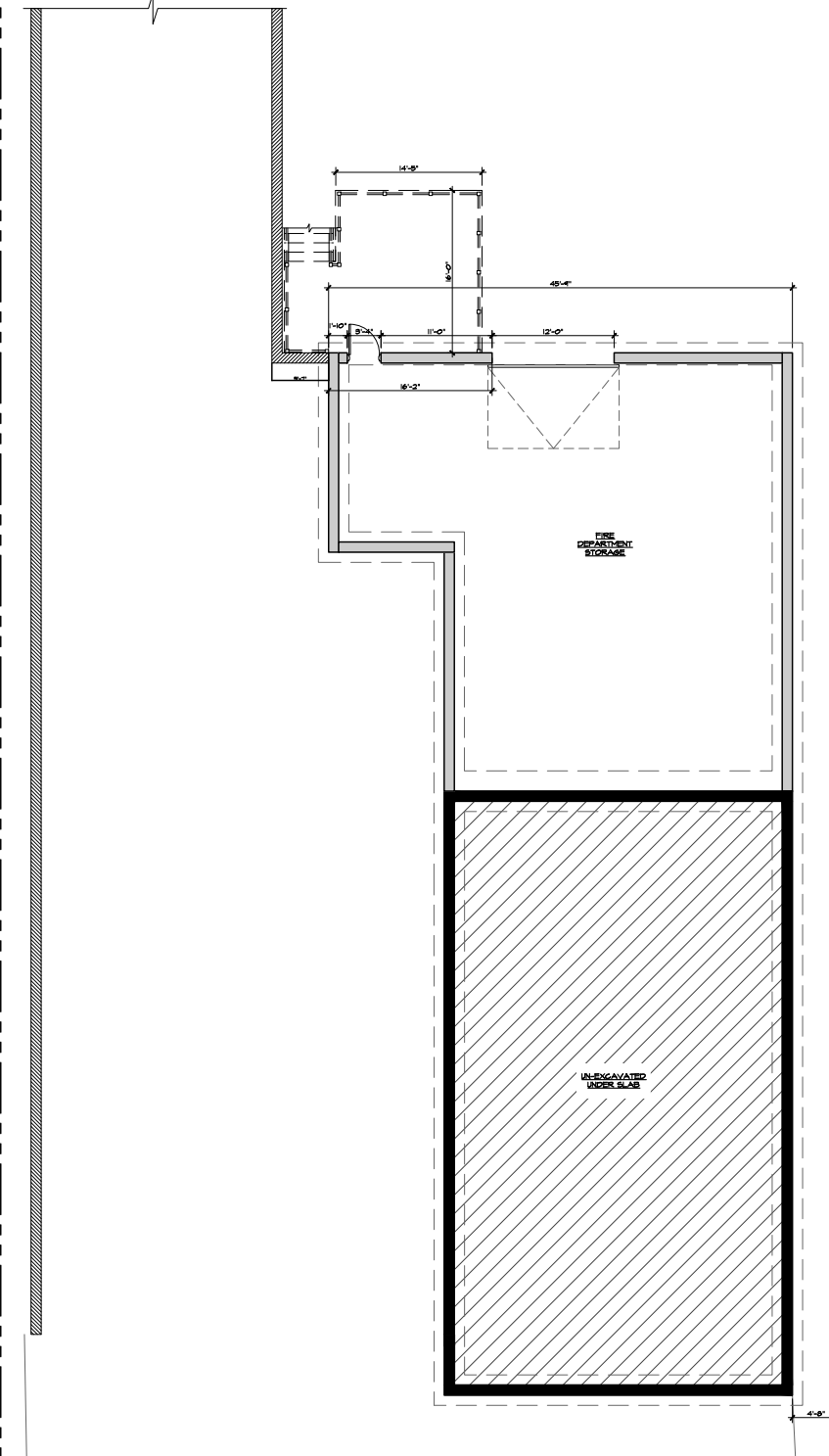
PROPOSED EMS STATION FLOOR PLAN

SCALE: 1/8"=1'-0"
1,891 SQ.FT.



PROPOSED FIRE STATION FLOOR PLAN

SCALE: 1/8"=1'-0"
3,749 SQ.FT.

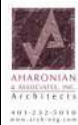


PROPOSED FIRE STATION BASEMENT PLAN

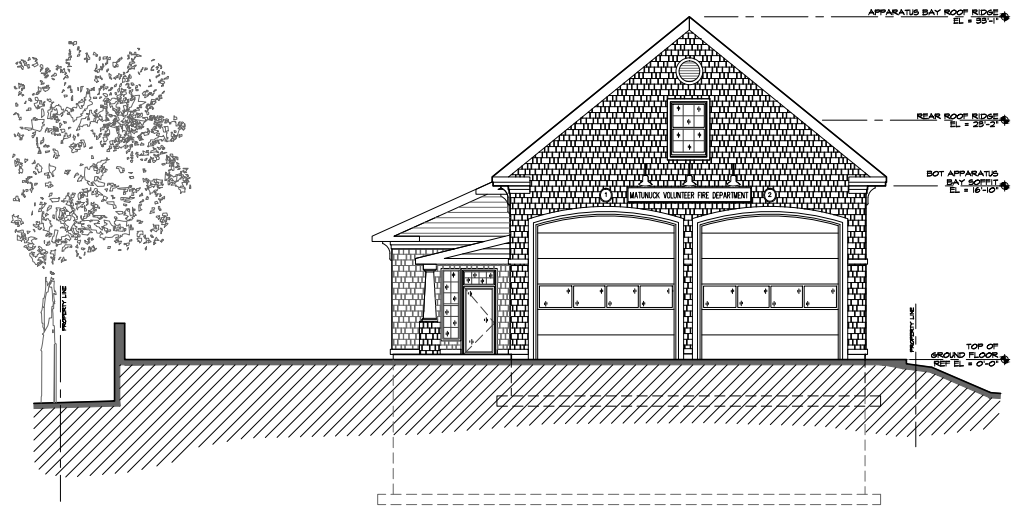
SCALE: 1/8"=1'-0"
1,708 SQ.FT.

PROPOSED PLANS

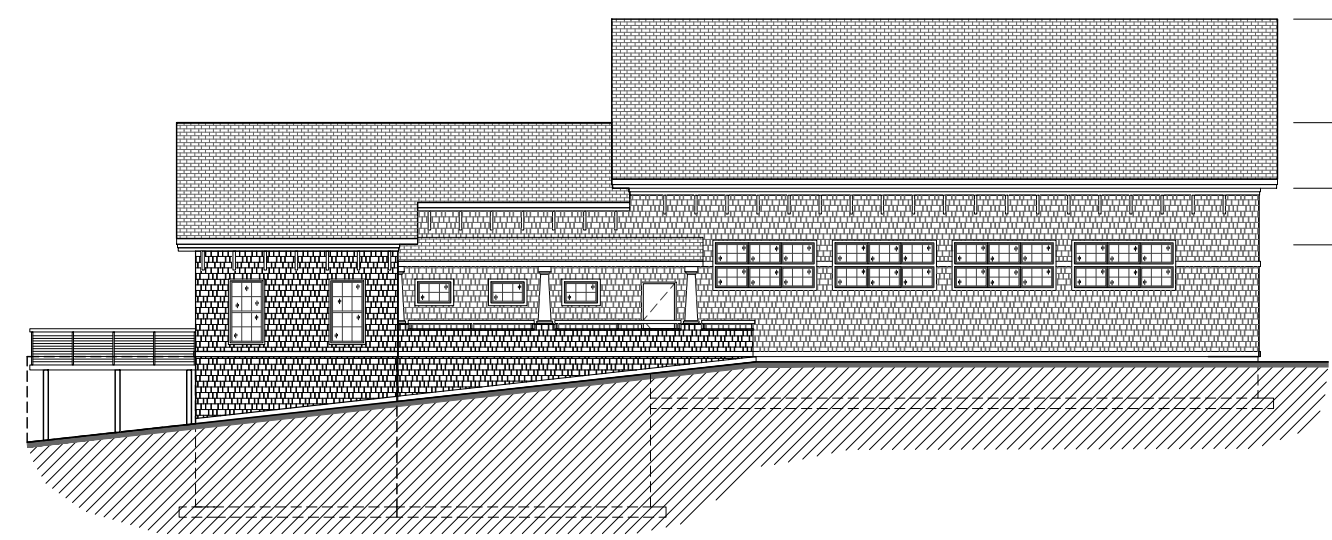
UNION FIRE DISTRICT:
MATUNUCK STATION
49 MATUNUCK SCHOOL HOUSE ROAD
SOUTH KINGSTOWN, RI 02917
JUNE 4, 2021



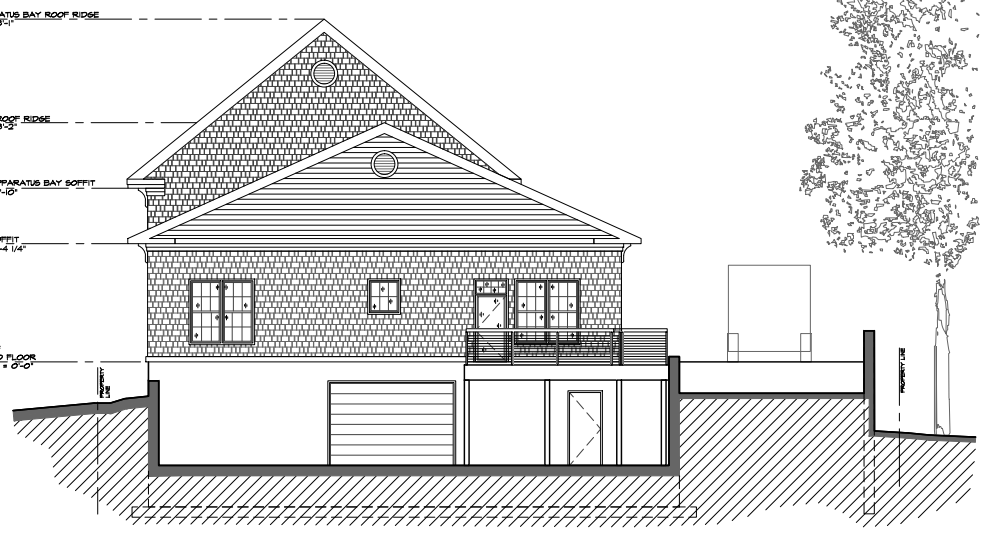
AHARONIAN
& ASSOCIATES, INC.
ARCHITECTS
400 WEST 10TH STREET
PROVIDENCE, RI 02906



SOUTH ELEVATION (STREET SIDE)
SCALE: 1/8"=1'-0"



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

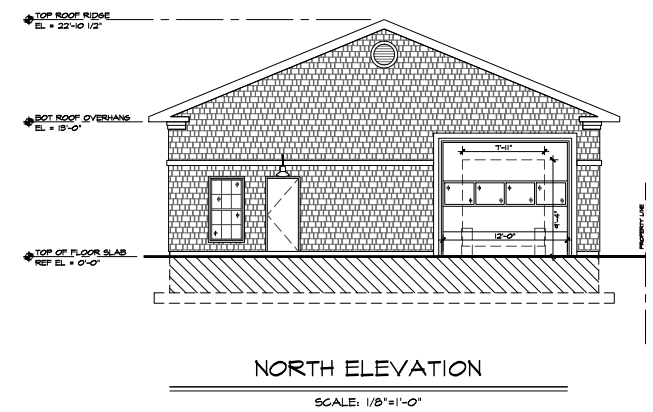
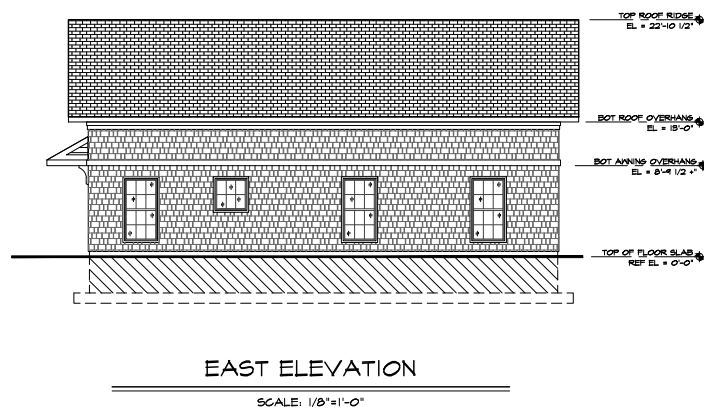
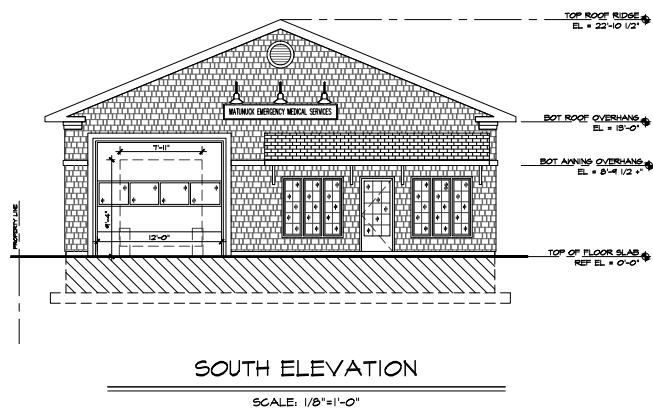


NORTH ELEVATION
SCALE: 1/8"=1'-0"

UNION FIRE DISTRICT - MATUNUCK FIRE
STATION EXTERIOR ELEVATIONS

UNION FIRE DISTRICT:
MATUNUCK STATION
49 MATUNUCK SCHOOL HOUSE ROAD
SOUTH KINGSTOWN, RI 02917
JUNE 30, 2021





UNION FIRE DISTRICT - MATUNUCK EMS
STATION EXTERIOR ELEVATIONS

UNION FIRE DISTRICT:
MATUNUCK STATION
49 MATUNUCK SCHOOL HOUSE ROAD
SOUTH KINGSTOWN, RI 02917
JUNE 30, 2021

