SUFFOLK COUNTY PAYMENT VOUCHER

Dept.:	Contact: Jade Bienau	Payment Voucher #	Responsible Agency	Entered By, Date
Dept. Address		04981836		

Single Check (Y/N)	Vendor Code (Tax ID)	Accounting Period (mm/yy)	Budget FY (yyyy)	Document Total (Include Cents)

Vendor Name & Mailing Address

AKRF Inc
440 Park Ave. South
7th Floor
New York, NY 10016

Vendor Remit Address (if different)

Ln (02)	Reference Document Cd (2) Number (11) Ln (2)	Com Ln # (3)	Invoice Number (12) Ln (3)	Fund (3)	Dept (3)	Unit (4)	Sub Unit (2)	Actv (4)	Obj (4)	Sub Obj (2)	Rept Cat (4)	Capital Project # (8)
Rev (4)	BS Acct (4)	Description (17)		Amount (Include Cents)							I/D	P/F
01												
02												
03												
04												
05												

Additional Comments AKRF Project No 220227 *FINAL VOUCHER*
Peconic Estuary Program Contract 525-8235-4560-00-00001
Task 3 - Steering Committee Collaboration - $1840.00 100% complete
Task 4 - Engineering Design and Construction Drawing Services $4,125 100% Complete
Task 5 - Permitting Services $14,060.00 -66% complete
Task 6 - Report Submissions $2,178.00 100% complete
CAP8235.119
HSV 126
PEP-NEP
approved 2/20/25 Total: $22,203.00

DEPARTMENT CERTIFICATION: I hereby certify that the materials above specified have been received by me in good condition without substitution. The service properly performed and that the quantities thereof have been verified with the exceptions of discrepancies noted and payment is approved.

SIGNED DATE TITLE

PAYEE CERTIFICATION: I certify that the above expenditures are just, true and correct; that no part thereof has been paid except as stated; that the balance is actually due and owing; that taxes from which the County is exempt are excluded and that I have read and am familiar with the provisions of Local Law 32-1980 as detailed in the payee instruction section of this voucher.

Controller AKRF Inc
PAYEE'S SIGNATURE TITLE NAME OF COMPANY

Form PV Original: Audit & Control Copy: Department Accounting 56-0105 4/12

akrf

Please send your EFT remittance advice to
AR@akrf.com and direct your payments to:
AKRF, Inc.
ConnectOne Bank
Routing: 021213944
Account: 103466215
FEDERAL TAX ID NO. 135331530

Attention: Stacy Lopiccolo
Suffolk County
3500 Sunrise Highway
Suite 124
Great River, NY 11739-9006
UNITED STATES

Invoice : 0000058522
Invoice Date : 2/10/2025
Project : 220277
Project Name : PEP HABITAT RESTORATION DESIGN

For Professional Services Rendered For 4/27/2024 Through 1/31/2025

			Billings		
LS - LS	**Fee**	**% Complete**	**To Date**	**Previous**	**Current**
T1 - QAPP	5,400.00	100.00	5,400.00	5,400.00	0.00
T2 - RESEARCH AND ANALYSIS	32,700.00	100.00	32,700.00	32,700.00	0.00
T3 - STEERING COMMITTEE	9,200.00	100.00	9,200.00	7,360.00	1,840.00
T4 - ENGINEERING	16,500.00	100.00	16,500.00	12,375.00	4,125.00
T5 - PERMITTING	22,800.00	66.67	15,200.00	1,140.00	14,060.00
T6 - REPORTS	13,400.00	100.00	13,400.00	11,222.00	2,178.00

Current Billings 22,203.00
Amount Due This Bill **US** 22,203.00

Raymond L. Hinkle

Peconic Estuary Habitat Restoration Design and Permitting Services for Paul Stoutenburgh Preserve

2024 FINAL REPORT
***ammended summary page**



Prepared for

Suffolk County and the Peconic Estuary Program

100 Veterans Memorial Hwy

Hauppauge, NY 11788

by

1695 Church Street, Unit 3

Holbrook, NY 11741

SUMMARY

AKRF, Inc. (AKRF) led a team of engineers and scientists from Bay Environmental, Inc., BlueShore Engineering, LLC, an MJ Engineering and Land Surveying in assessing alternatives to control the extent of Common Reed (*Phragmites australis*) within a tidally restricted wetland area of the Paul Stoutenburgh Preserve (PSP) in Southold, NY. Increased salinity and water elevation would create conditions that retard Common Reed growth and limit the extent to which it could further occupy this wetland. The wetland area is bordered on the south by the Long Island Railroad (LIRR), which limits normal tidal flows from the Peconic Estuary to exchange through a single 24-inch culvert connection. Tidal follow to this culvert is likewise restricted by the limitations of two downstream culverts - a 24-inch diameter concrete pipe under New Your State Route 25, and an 18-inch diameter poly culvert under Old Main Road. The Old Main Road culvert was installed in 2013 by the Town of Southold following the collapse of the original culvert and resultant blockage of flow from the drainage basin above it. It was the opinion of the Town of Southold that this culvert had been transferred to the town following the realignment of Route 25 in the 1950s.

Monitoring of water elevations above and below each of these culverts documented that the tidal prism above the Old Main Road culvert is muted due to restricted flows through these culverts, with the flow through the 18-inch Old Main Road culvert having the most direct effect on water levels beyond that point because it limits the hydraulic head that moves water through the other culverts and ultimately into the PSP wetland area. Field inspections also found physical obstructions at the LIRR culvert associated with ballast that had accumulated near the culvert opening and a failed headwall on the north side of the Route 25 culvert. The LIRR performed maintenance on the culvert to provide free flow under the railroad grade. The New York State Department of Transportation (NYSDOT) was informed of the condition of the Route 25 culvert. Action on this culvert repair is pending.

The AKRF Team assessed several alternatives that would increase the hydraulic head north of the Old Main Road culvert as a means of delivering more water to the wetland areas above the Route 25 culvert as a means of increasing water levels and salinity in the PSP tidal wetland. These included extending a culvert pipe directly between the Old Main Road and Route 25 culverts, confining tidal flow to a channel extending between the two culverts, and replacing the Old Main Road pipe culvert with an appropriately sized box culvert. In consultation with the Town of Southold, the latter was selected as the preferred alternative.

The AKRF Team performed detailed surveying in the vicinity of the existing Old Main Road culvert that was utilized in the development of design drawings for the installation of n 8 ft wide x 3 ft high concrete box culvert that will efficiently convey tidal flows above Old Main Road and increase the hydraulic head that drives water through the Route 25 culvert and hence the LIRR culvert. Realization of the benefits of this hydraulic change will be dependent upon NYSDOT making repairs to the Route 25 culvert to allow unobstructed flows under the roadway.

New York State Department of Conservation (NYSDEC) and U.S. Army Corps of Engineers (ACOE) permit requirements for the replacement of the Old Main Road culvert were identified and appropriate forms were completed and provided to the Town of Southold to complete and submit. During the review period NYSDOT communicated to AKRF that there is "…*no documentation stating that the ownership of the subject stretch of old NY25 was transferred to the Town, meaning the NYSDOT still owns this road (though maintenance jurisdiction WAS transferred to the Town*)". Thus, any designs for the replacement would be subject to NYSDOT requirements and oversight. The Town of Southold disagreed with the position of NYSDOT that maintenance of Old Main Road and the culvert was transferred without ownership. On this basis the Town of Southold placed a hold on permit submittal until the ownership question is resolved and design/permitting requirements are better understood. AKRF did not receive any further communications from the Town of Southold or NYSDOT with regard to proceeding with submission of the permit submittal in 2024.

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LIST OF APPENDICIES

1.0 INTRODUCTION AND PROJECT TEAM

AKRF, Inc. (AKRF) was selected by Suffolk County to assess factors that are contributing to the establishment and expansion of Common Reed (*Phragmites australis*) and other invasive species within the Town of Southold, NY Paul Stoutenburgh Preserve; and, to develop a design that would provide invasive species control through hydrologic/salinity modifications. AKRF was selected through the recommendations of a Steering Committee that included members representing the Town of Southold, the Peconic Estuary Program, the New York State Department of Environmental Conservation (NYSDEC), and The Nature Conservancy (TNC).

AKRF's proposal to perform the Peconic Estuary Habitat Restoration Design and Permitting Services for the Paul Stoutenburgh Preserve (PSP) included a team of firms with specialties in the services required to complete the project, including:

- AKRF – Project Management and Coordination
- Bay Environmental Consulting, LLC – Ecological and Hydrological Assessment
- BlueShore Engineering, LLC – Engineering Design
- MJ Engineering and Land Surveying, PC – Elevation Surveys and Topographic Mapping

Services by the AKRF Team were initiated in September 2022 and included preparation of a Quality Assurance Project Plan (QAPP) and site investigations that were initiated in November and continuing through the end of 2022. Development of alternatives for achieving the desired hydrologic/salinity modifications occurred following the completion of site investigations, with the preferred alternative recommended to the Steering Committee in October 2023.

Discussions with interested parties, including the Long Island Railroad (LIRR) and the New York State Department of Transportation (NYSDOT) were initiated relative to the condition of culverts under their control. Based on inputs from the Steering Committee and the recommendations of the Town of Southold Engineer, Michael Collins, the alternative of replacing the existing culvert under Old Main Road was selected to develop construction drawings and submit permits for. This report provides historical information relating the tidal wetlands within the PSP that are the target for the control of invasive species such as Common Reed, the results of related field investigations and surveying, the alternative approaches considered for modifying the hydrology/salinity as a means of controlling invasive species, and the permitting requirements for implementing the design.

2.0 HISTORY AND ENVIRONMENTAL SETTING

The 52-acre Paul Stoutenburgh Preserve (PSP) in Greenport, NY was created by the Town of Southold to showcase the diversity of the East End's natural environment: tidal salt marsh meadows, pristine woodlands, vernal freshwater ponds and wetlands. Features of the PSP include Hashamomuck Pond and tidal wetlands that adjoin the pond or are tidally influenced by flows through culverts. Tidal exchange between the open waters of Shelter Island Sound and Hashamomuck Pond is provided by a Long Island Railroad (LIRR) bridge structure and the New York State Department of Transportation (NYSDOT) Route 25 bridge spanning a tidal channel that connects the Pond to the Sound (referred to as the Mill Creek channel). Tidal exchange with Hashamomuck Pond provides for daily tidal inundation and drainage of coastal marshes that occur in the intertidal zone around the Pond, but a wetland area along the LIRR west of the bridge

crossing is separated from tidal flooding from the pond by a strip of upland/high marsh shrubs along the western shoreline.

At the time that the LIRR was constructed in the 1880's, 24-inch culverts were installed at two locations in the southwestern portion of the PSP to provide for tidal flows to/from the coastal wetland north of the railroad grade as well as the discharge of runoff from the watershed surrounding the Pond. These are referred to as LIRR Culverts 21-C-915 (west) and 21-C-917 (east).

When installed, LIRR Culvert 21-C-915 connected to series of open channels within a freshwater wetland north of the railroad and discharged to a coastal wetland between the LIRR and Route 25, then to a culvert installed under Route 25 that discharged to a channel leading to Shelter Island Sound. Continued development of marina facilities in the area has resulted in the elimination of this open channel north of Route 25, and after 2018 (when the south side of the culvert was last inspected by the LIRR and found to be open) the eventual incorporation of the outlet on the south side of the LIRR grade into a subsurface stormwater collection system at Albertson Marine, Inc. (documented by a 2022 LIRR inspection report).

LIRR Culvert 21-C-917, located to the east of Culvert 21-C-915, is connected to channels within an 8-acre Smooth Cordgrass (*Spartina alterniflora*) dominated tidal wetland area north of the LIRR, and on the south to an open channel system through a 2 acre Smooth Cordgrass dominated tidal coastal wetland located between the LIRR and Route 25. Common Reed has established around the perimeters of both of these wetlands and has been expanding into the Smooth Cordgrass areas. LIRR maintenance of this culvert was performed in November of 2022 when ballast was removed from the channels on either side of the culvert and a "power jetter" was utilized to remove debris from the culvert itself.

Tidal flow to and from the 2-acre wetland between the LIRR and current Route 25 is conveyed from a 1-acre basin/wetland to the south through a 24-inch concrete pipe culvert that was installed when Route 25 was reconstructed in the 1950s. At an uncertain date the headwall and northern terminus of this 24-inch concrete culvert failed and separated from the remaining pipe under the roadway, which has created a partial blockage on the tidal channel on the northern side of culvert. The New York State Department of Transportation (NYSDOT) was informed of the condition of this culvert, which appears to be limiting drainage from areas north of Route 25 and may be responsible for excessive ponding of surface water that occurs in coastal wetlands above this point. This culvert connects to a tidal wetland/basin south of Route 25 and above a segment of the original Route 25 (now referred to as Old Main Road) that crosses the tidal channel that conveys tidal flows to/from Mill Creek. Like the wetlands to the north, Common Reed has encroached around the perimeter of this wetland/tidal basin. A Tidal Crossing Score Summary prepared by The Nature Conservancy for the Route 25 culvert is provided in Appendix A. Email correspondence with NYSDOT regarding the condition of this culvert is provided in Appendix B.

Records indicate that the culvert installed under the original Route 25 (now referred to as Old Main Road) roadbed was a 24-inch square concrete box structure. This culvert collapsed sometime prior to 2013, cutting off tidal flow to the north of the roadbed and leading to the impoundment of freshwater runoff within all the wetlands to the north described above. This situation was alleviated in 2013 by the Town of Southold's replacement of the original failed culvert with an 18 in diameter smooth wall interior culvert pipe. This action allowed impounded freshwater to drain from the wetlands to the north and restored the tidal connection that provides daily inflow of saline

water to them. A Tidal Crossing Score Summary prepared by The Nature Conservancy for this culvert is provided in Appendix A. Email correspondence with NYSDOT regarding the repair and/or replacement of this culvert is provided in Appendix B.

3.0 HYDROLGIC ASSESSMENT

Data Collection

The degree to which the three culverts (Old Main Road, Route 25, and LIRR) between the open estuary and the PSP tidal wetland limit the elevation of water levels was assessed by Bay Environmental Consulting, LLC by the placement of Hobo® recording water level sensors at four locations:

1. PSP tidal wetland north of the LIRR (Location S1)
2. Tidal wetland between Route 25 and the LIRR (Location S2),
3. Tidal basin/wetland between Old Main Road and Route 25 (Location S3), and
4. Open channel below Old Main Road representing Mill Creek (Location S4)

In addition to water level data, salinity measurements were collected at various locations through the wetland and creek system to provide additional data on the impact of tidal and freshwater inputs.

Sensors at S1 and S2 were installed on November 4, 2022, and S3 and S4 were installed on November 18, 2022. All four sensors were retrieved on December 2, 2022. The sensors collected water pressure data every 5 minutes as a reference to water depth. One discrete water depth measurement was recorded at each sensor at the time of installation and used as the reference level for post-processing of the pressure data. Ambient air pressure from the East Hampton weather station was used to compensate for atmospheric changes. The pressure data was converted to water level data using Hoboware Pro® water quality processing software. The fluid density of the water was assumed to be brackish water with a density of 63.052 lb/ft3. Benchmarks, culvert invert elevations and sensor elevations referenced to NAVD 1988 were established by MJ Engineering and Land Surveying, Inc.

Benchmark elevations established are as follows:

- South Culvert Headwall at LIRR: 3.00 ft NAVD88
- South Culvert Headwall at Route 25: 3.51 ft NAVD88
- South Culvert Headwall at Old Main Road: 2.24 ft NAVD88

Culvert pipe invert elevations at each location determined are as follows:

- LIRR Culvert North: - 0.92 ft NAVD88
- LIRR Culvert South: - 0.77 ft NAVD88
- Route 25 Culvert North: - 0.49 ft NAVD88
- Route 25 Culvert South: -1.54 ft NAVD88
- Old Main Road Culvert North: -1.74 ft NAVD88
- Old Main Road Culvert South: -2.26 ft NAVD88

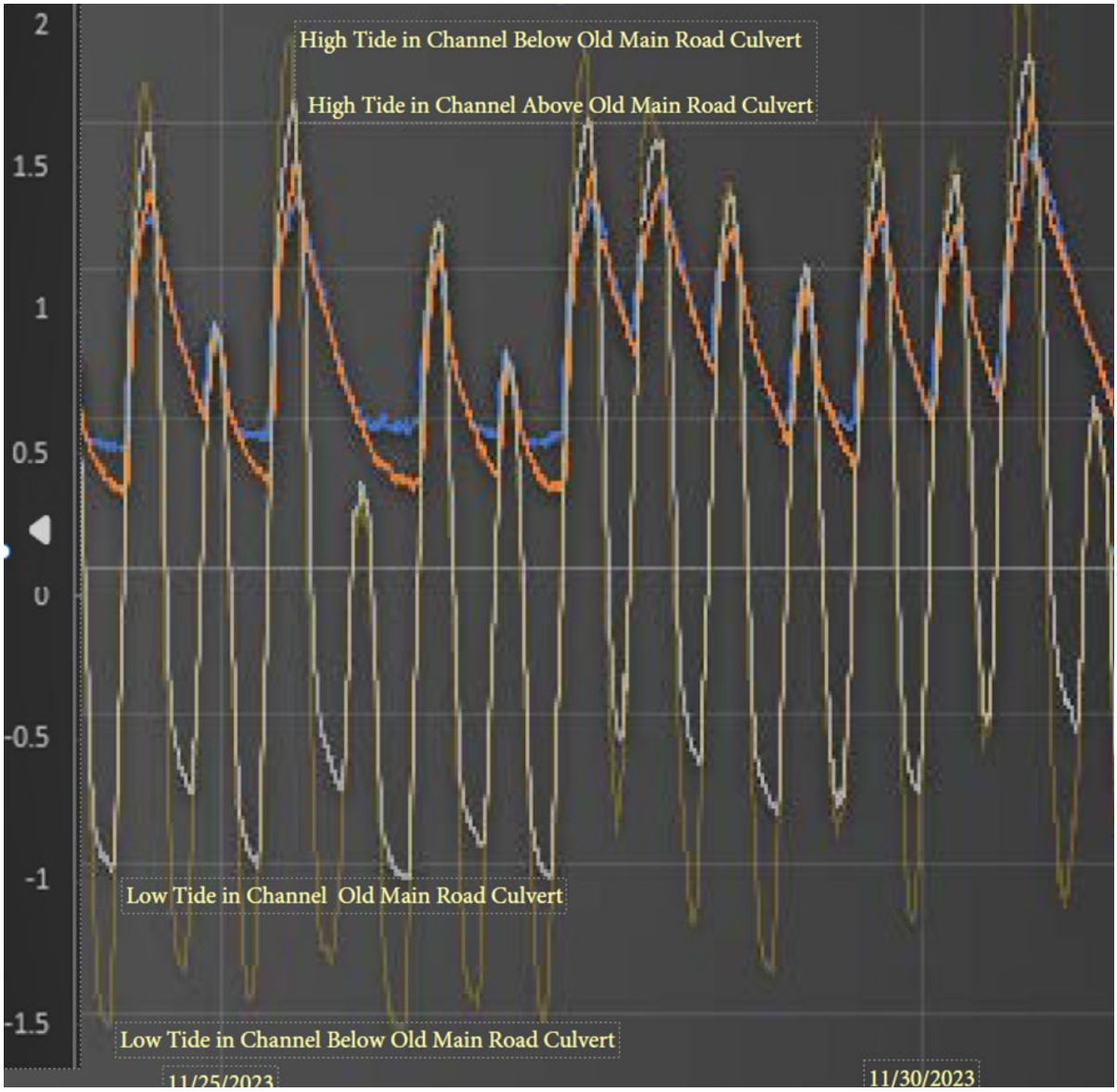
The top of sensor elevations to relate water pressure data to NAVD88 were as follows:

- Sensor S1: 0.73 ft NAVD88
- Sensor S2: 0.61 ft NAVD88
- Sensor S3: -0.83 ft NAVD88
- Sensor S4: -1.05 ft NAVD88

NOAA tidal data from the Southold subordinate tidal station (Station ID: 8512114) was obtained and incorporated into the monitoring data sets for comparison. This station does not have a benchmark and is referenced to its own mean lower low water. A comparison of the average water level data from the tidal creek sensor (S4) and the NOAA tide data identified an average discrepancy of -2.36 feet. Therefore, the NOAA tidal data was offset by -2.36 feet to align the data more closely. Note that this adjustment does not reflect the true MLLW which average all lower lows over the 19-year National Tidal Datum Epoch but instead provides an approximation sufficient for our analyses.

A YSI EC300A conductivity meter was also used to collect salinity data from select locations in the wetland, the creek, and the open bay. he YSI meter was calibrated prior to conducting field measurements.

Data Analysis



Tidal Amplitude. As illustrated in the graphed data provide above, the water levels at each station reflect tidal influence from the adjacent estuary, with location S4 (brown line) showing the full tidal amplitude of 2.0 – 3.0 feet. Tidal amplitude at S2 (tan line) located on the north side of the Old Main Road culvert is reduced (2.0 – 2.5 feet), with high tides lower than those in the estuary and low tides never reaching the elevation of those of the estuary. The data from sensors above the Route 25 culvert (S1 and S2) both reflect a reduced tidal amplitude (1.0- 1.5 feet), with low tides being even more truncated than those at location S3.

Tidal Elevations. The plots of water elevations at the four stations show that during high tide the water elevation north of (above) the Old Main Road culvert (S2 - tan line) rises to an elevation that is up to 0.5 feet below that representing Mill Creek (S2 – brown line). The graphed data also show that the tide above Old Main Road does not fall to reach the low tide

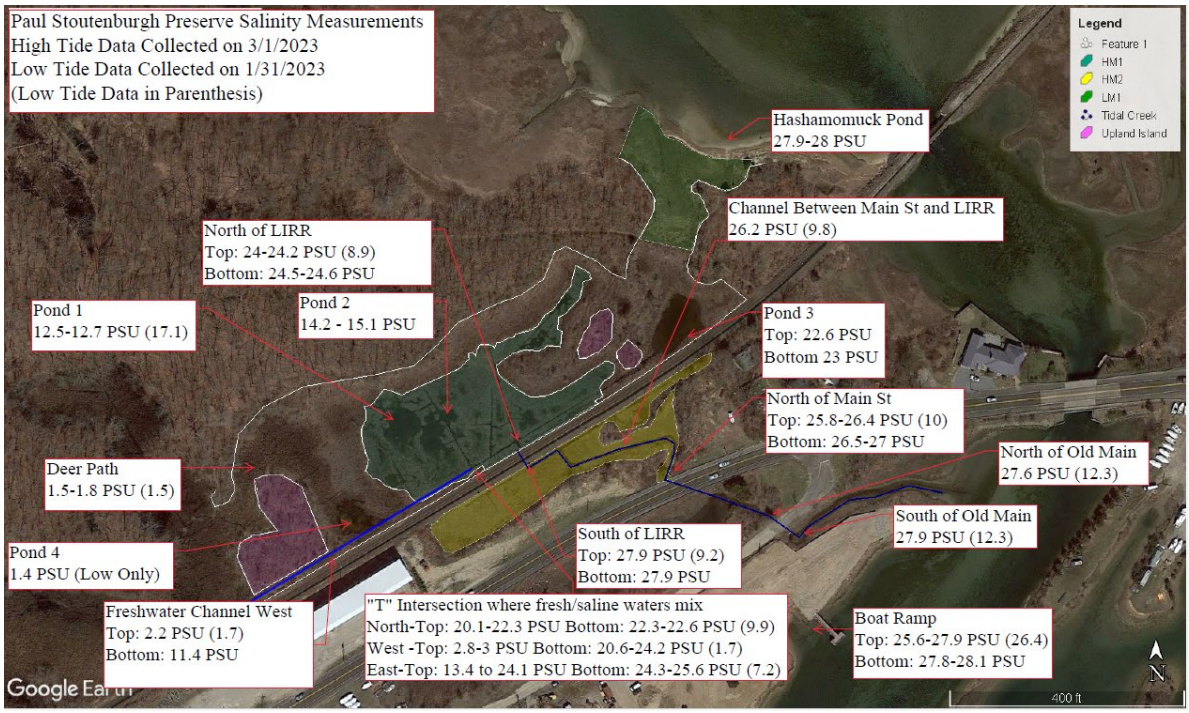
elevations that occur below Old Main Road. As shown in the graphed data, the rate of elevation change above the Old Main Road culvert reduces as a result of a reduction of flow through the culvert as low tide approaches and then reverses as the incoming tide begins to flood back through the culvert on the incoming tide. This reduction is not due to the invert elevation since the rate of elevation change is reduced regardless of water elevation above the invert elevation on the north side of the culvert. This truncated tidal cycle likely contributes to the flooded marsh conditions that persist within the PSP tidal wetland and the resultant low vigor growth of Smooth Cordgrass that occurs in this marsh.

The failed condition of the Route 25 north culvert headwall is likely to be another factor that is impeding drainage of the PSP tidal wetland. The water elevation plots within the tidal wetland north of Route 25 (red) and the PSP tidal wetland (blue) show that the tidal cycle within these wetlands is truncated, water surface elevations remaining above the mid-tide elevations recorded below Route 25 on most occasions. Thus, the PSP tidal wetland does not drain during low tide as it might otherwise do if the Route 25 culvert were functioning properly.

Summary. In summary, the wetlands that occur north of the LIRR within the PSP have undergone significant changes as a result in the fluctuations in water levels and salinities associated with changes in the flows through the culverts that connect these wetlands to the adjacent estuary. Most recently, Smooth Cordgrass coverage increased within the PSP north of the LIRR area following the reopening of the Old Main Road culvert in 2013. However, invasive Common Reed has also become more prevalent with this increase in vegetative cover and the Smooth Cordgrass that occurs in this wetland is of the low vigor form, likely as a result of the prolonged periods of inundation/saturation that occur. Representative photographs of the culverts and tidal wetlands discussed above are provided in Appendix C.

4.0 SALINITY ASSESSMENT

Practical Salinity Unit (PSU) data were collected within channels and tidal wetlands to assess variability with location and tide stage. Locations where salinity measurement were taken and results are shown in the data map below:



Water from the channel below the Old Main Road culvert was found to vary between 26 to 28 PSU. During an outgoing tide, near low tide, salinity at the bottom of the channel below the culvert was measured to be as low as 13.1 PSU, while the near surface waters were 21.5 PSU. During incoming tides, near high tide, the salinity readings were higher (approximately 26 PSU) and there was no difference in salinity with depth.

Water in the channel immediately north of the LIRR culvert showed a similar pattern in measured salinity. However, salinity during outgoing tide, near low, was found to be markedly lower with salinity readings of approximately 2 PSU. Further investigation within the northern wetland area, determined there is a mosquito ditch/channel that runs adjacent and parallel to the LIRR that is conveying freshwater (approximately 1 to 3 PSU) into the tidal wetland north of the LIRR. The source of this low salinity flow is the freshwater marsh/wetland system to the west of the tidal wetland. This input is significant enough to maintain water levels higher in the northern wetland area compared to the area south of the LIRR. In addition, the freshwater channel appears to mix at a mosquito ditch/channel intersection west of the LIRR culvert which results in a lower salinity tidal influx to the western area of the northern wetland system and associated ponds. Interestingly, some of the ponds were observed to have above average salinities compared to the salinities of the creek and open bay. It is hypothesized that these above average salinities are a result of water being impounded within these ponds and evaporation or evapotranspiration is concentrating the salt content.

In summary, the wetlands that occur north of the LIRR within the PSP have undergone significant changes as a result in the fluctuations in water levels and salinities associated with changes in the flows through the culverts that connect these wetlands to the adjacent estuary. Most recently, Smooth Cordgrass coverage increased within the PSP north of the LIRR area following the reopening of the Old Main Road culvert in 2013. However, invasive Common Reed has also become more prevalent with this increase in vegetative cover and the Smooth Cordgrass that occurs in this wetland is of the low vigor form, likely as a result of the prolonged periods of

inundation/saturation that occur. Representative photographs of the culverts and tidal wetlands discussed above are provided in Appendix C.

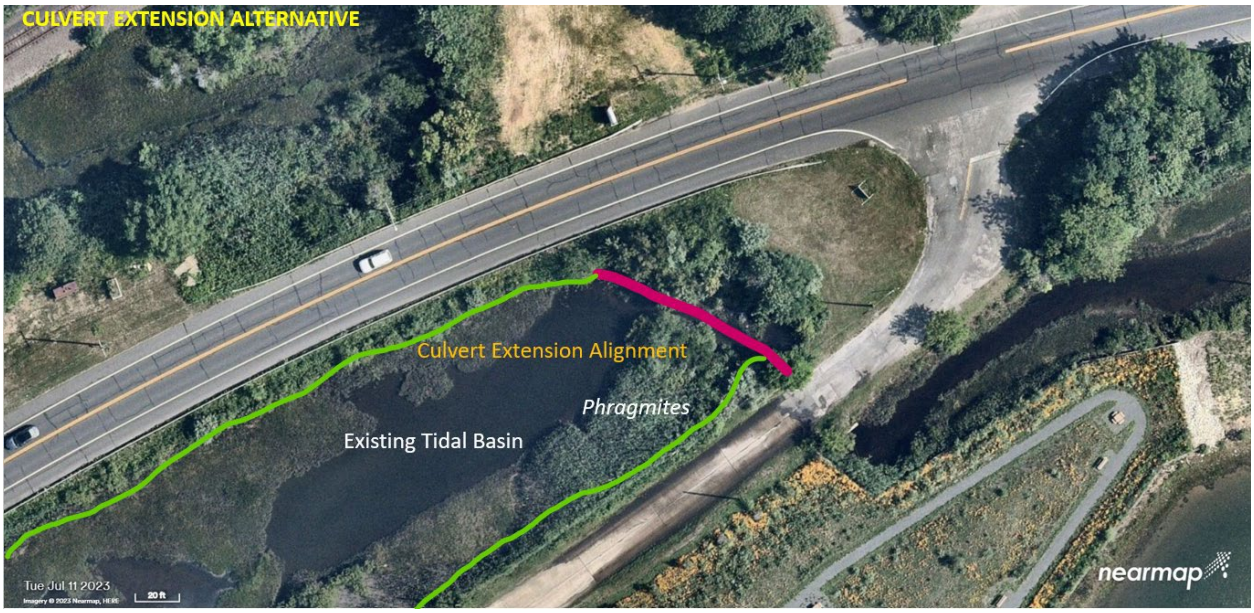
5.0 ALTERNATIVES ASESSMENT

An alternatives evaluation was performed by AKRF that considered approaches to increasing tidal exchange altering salinity toward conditions that will be less favorable to the establishment and growth of Common Reed within the tidal wetlands above Old Main Road. Key among the approaches considered is the desire to increase the wetland area that experiences the recurrence of salinity within the PSP wetland by increasing the inflow of saline waters to these wetlands through LIRR Culvert 21-C-917. Altering freshwater flows to more directly discharge through Culvert 21-C-915 was also considered but not carried forth into the alternatives analysis due to alterations that have been made to this drainage system. The alternatives evaluated were as follows:

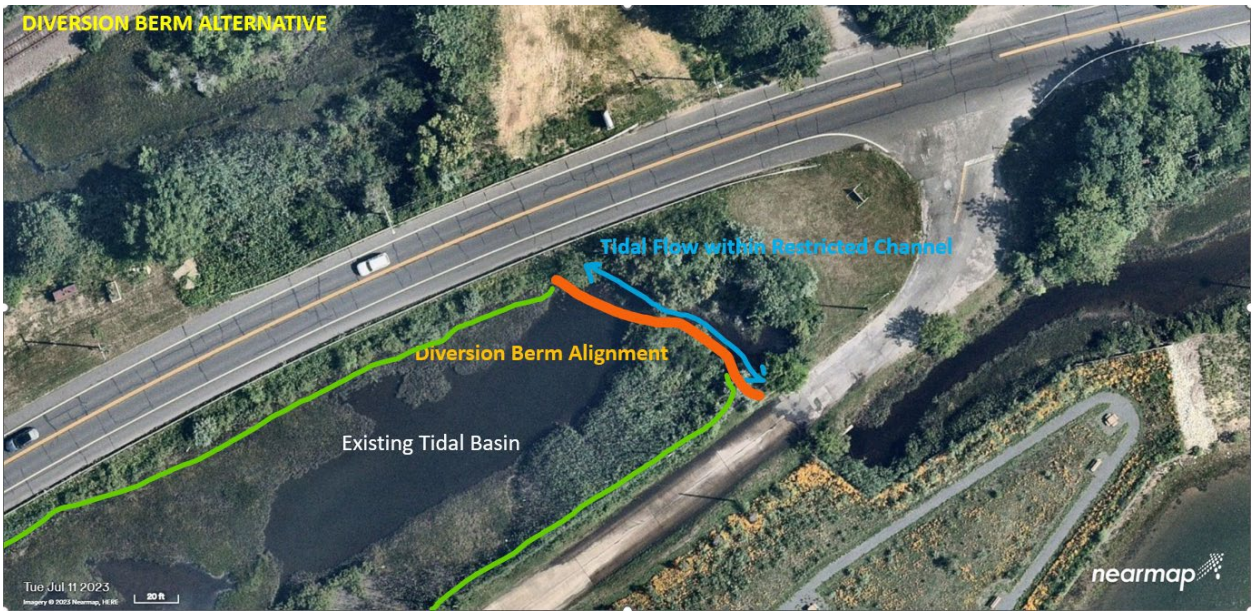
- Installation of a new Culvert Segment Connecting the Existing Old Main Road and Main Road (Rt 25) Culverts (bypassing the tidal basin/wetland between Old Main Road and Route 25)
- Creation of a Berm along the Existing Channel between the Existing Old Main Road and Main Road (Rt 25) Culverts (bypassing the tidal basin/wetland between Old Main Road and Route 25)
- Repair of the failed Main Road (Rt 25) Culvert
- Resizing/Replacement of the Existing Old Main Road Culvert

A discussion of these alternatives was provided in the AKRF Technical Memorandum of October 27, 2023. A summary of these alternatives is provided in the following paragraphs.

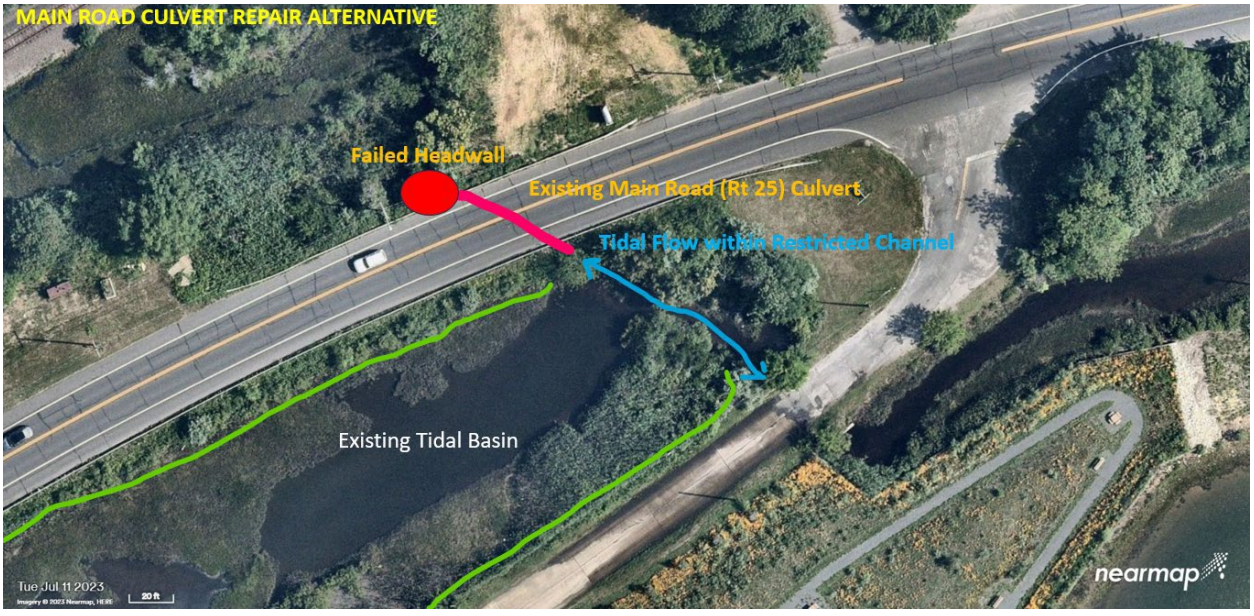
Culvert Extension Alternative: Under existing conditions flow from Mill Creek channel during the period of rising tide first passes through an existing 18-inch diameter smooth wall interior HDPE pipe culvert under Old Main Road into a 1.25-acre tidal basin/wetland between Old Main Road and Route 25. Water level monitoring data show that the water elevation within this basin/wetland varies with the Mill Creek tide but does not reach the full high tide elevation on some occasions (being 0.25 ft below the Mill Creek elevation at high tide). Related to this observation is that a significant volume of water flowing into the basin/wetland through the Old Main Road culvert during an incoming tide occupies the tidal basin/wetland south of Route 25. By extension of a pipe between the existing Old Main Road and Route 25 culverts, tidal flows would be diverted directly to wetlands north of Route 25 (rather than distributing within the tidal basin) and thence to the Culvert 21-C-917 that passes flow north of the LIRR into the PEP tidal wetland. This alternative would therefore increase the flow of saline water to the wetland and thereby result in higher salinities for controlling the growth of Common Reed.



Diversion Berm Alternative: Under existing conditions flow from Mill Creek channel during the period of rising tide first passes through an existing 18 in diameter smooth wall interior HDPE pipe culvert under Old Main Road into a 1.25-acre tidal basin/wetland between Old Main Road and Route 25. Water level monitoring data show that the water elevation within this basin/wetland varies with the Mill Creek tide but does not reach the full high tide elevation on some occasions (being 0.25 ft below the Mill Creek elevation at high tide). Related to this observation is that a significant volume of water flowing into the basin/wetland through the Old Main Road culvert during an incoming tide occupies the tidal basin/wetland south of Route 25. By placement of an earthen berm along the channel leading to the Route 25 culvert, tidal flows would be diverted away from the basin/wetland and provide a more direct transfer of tidal water to the Route 25 culvert opening. This in turn would act to increase the hydraulic head available within the channel to move water north of Route 25 and the LIRR and thereby increase tidal flow to wetlands north of Route 25 (rather than distributing within the tidal basin) and thence to the Culvert 21-C-917 that passes flow north of the LIRR into the PEP tidal wetland. This alternative would therefore increase the flow of saline water to the wetland and thereby result in higher salinities for controlling the growth of Common Reed.



Main Road (Rt 25) Culvert Repair. The failed headwall condition of the north side of the NYSDOT culvert under Main Road restricts both inflow and outflow to/from the tidal wetland that exists south of the LIRR and thereby affects the hydrology of the PSP tidal wetland on the north side of the LIRR. Removing the failed headwall and culvert segment from the channel and installing a new culvert extension will improve tidal flows under Main Road and will likely provide for a better hydrological connection between the PSP tidal wetland and the estuary. As a result, the PSP tidal wetland may experience increased inflow through the LIRR culvert and may also drain to lower elevations than under existing conditions. The latter outcome could reduce the area of ponded water that currently exists and has the potential to create conditions that might favor the establishment and spread of Common Reed by allowing the inflow of freshwater to the tidal wetland during periods of low tide.

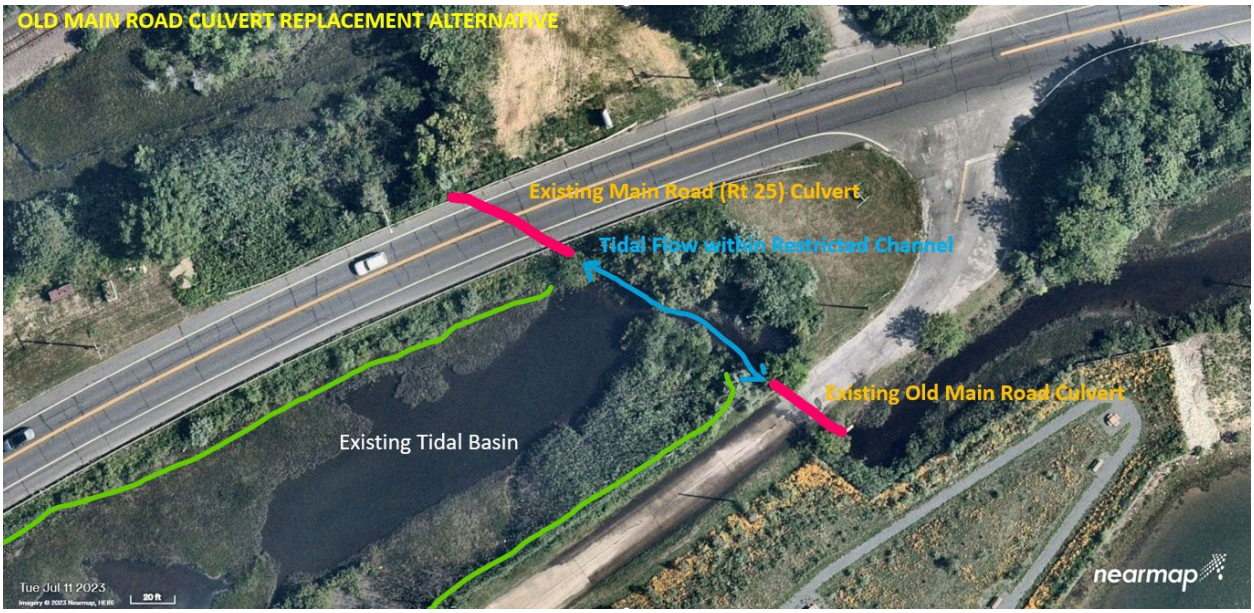


Old Main Road Culvert Alternative: Under existing conditions flow from Mill Creek channel during the period of rising tide first passes through an existing 18-inch diameter smooth wall interior corrugated.

exterior HDPE pipe culvert under Old Main Road into a 1.25-acre tidal basin/wetland between Old Main Road and Route 25. Water level monitoring data show that the water elevation within this basin/wetland varies with the Mill Creek tide but does not reach the full high tide elevation on some occasions (being 0.25 ft below the Mill Creek elevation at high tide).

Drainage of this tidal basin/wetland is also restricted, with water elevations at low tide remaining approximately 0.5 ft above the low tide elevation in Mill Creek even though the culvert invert (-1.74 ft) would allow for complete drainage. This may in part be due to the channel elevations immediately above the Old Main Road Culvert restricting flow to the culvert itself as well as the flow capacity of the culvert itself. This is further shown by the fact that standing water remains within the tidal basin through the period of low tide. Restriction in tidal flow through the Old Main Road culvert is evidenced by velocity measurements of 3 feet/second through the culvert during a rising tide, indicating a significant hydraulic head produced by the rise in waters within the channel on the Mill Creek side of Old Main Road where velocities were an order of magnitude lower than those passing through the culvert.

The original culvert under Old Main Road was a 2-foot x 2-foot box culvert that provided approximately twice the cross-sectional area for passage of tidal flows than the current culvert pipe. Restoration of the original capacity would be reestablished by installation of a second 18-inch diameter smooth wall interior culvert pipe at this location. This added capacity would likely increase the water elevation within the tidal basin/wetland at high tide and thereby provide greater hydraulic pressure for the movement of tidal water through the Route 25 culvert to the tidal wetland between the LIRR and the PSP tidal wetland.

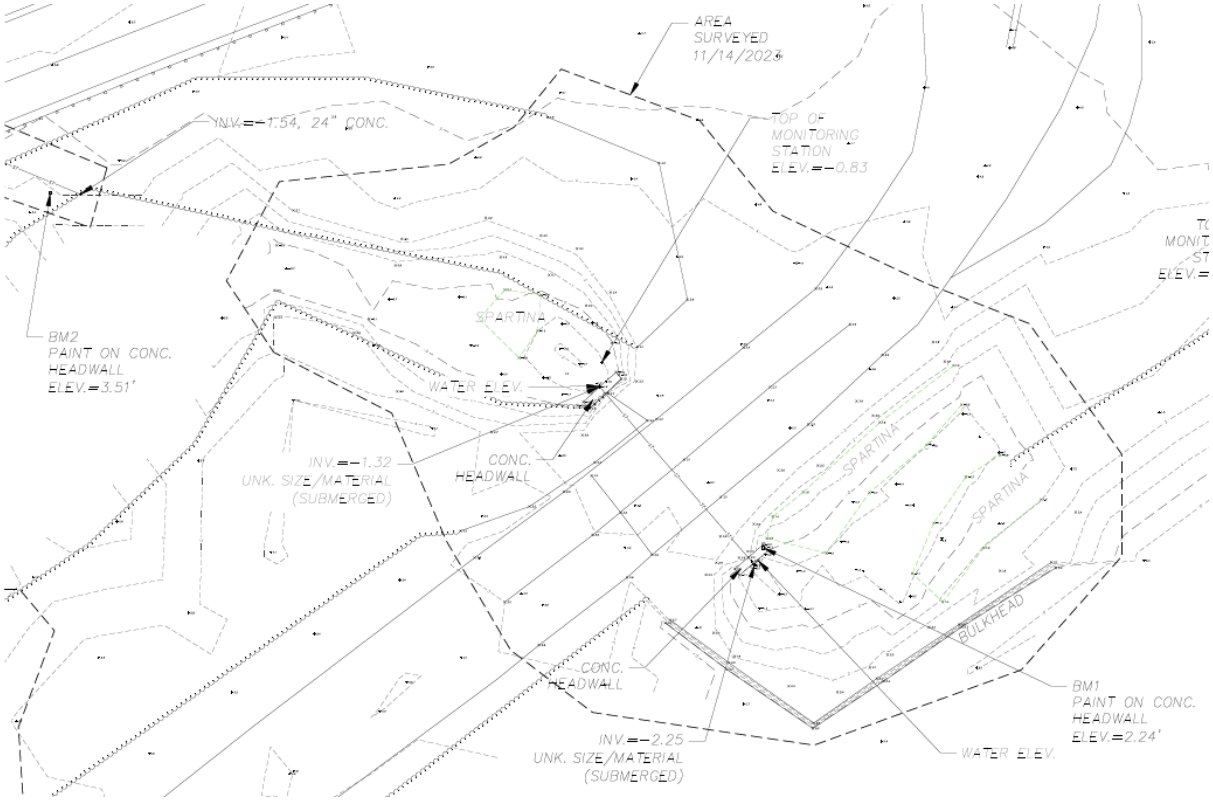


Of the alternatives described above, replacement of the existing Old Main Road Culvert single pipe culvert with an appropriately sized box culvert was selected as the preferred alternative, with the objective of increasing water elevations between Old Main Road and Route 25 and thereby the tidal flow potential to increase tidal flows under Route 25 and the LIRR though the existing

culverts. This potential is currently compromised by the failed condition of the NYSDOT Route 25 culvert north headwall.

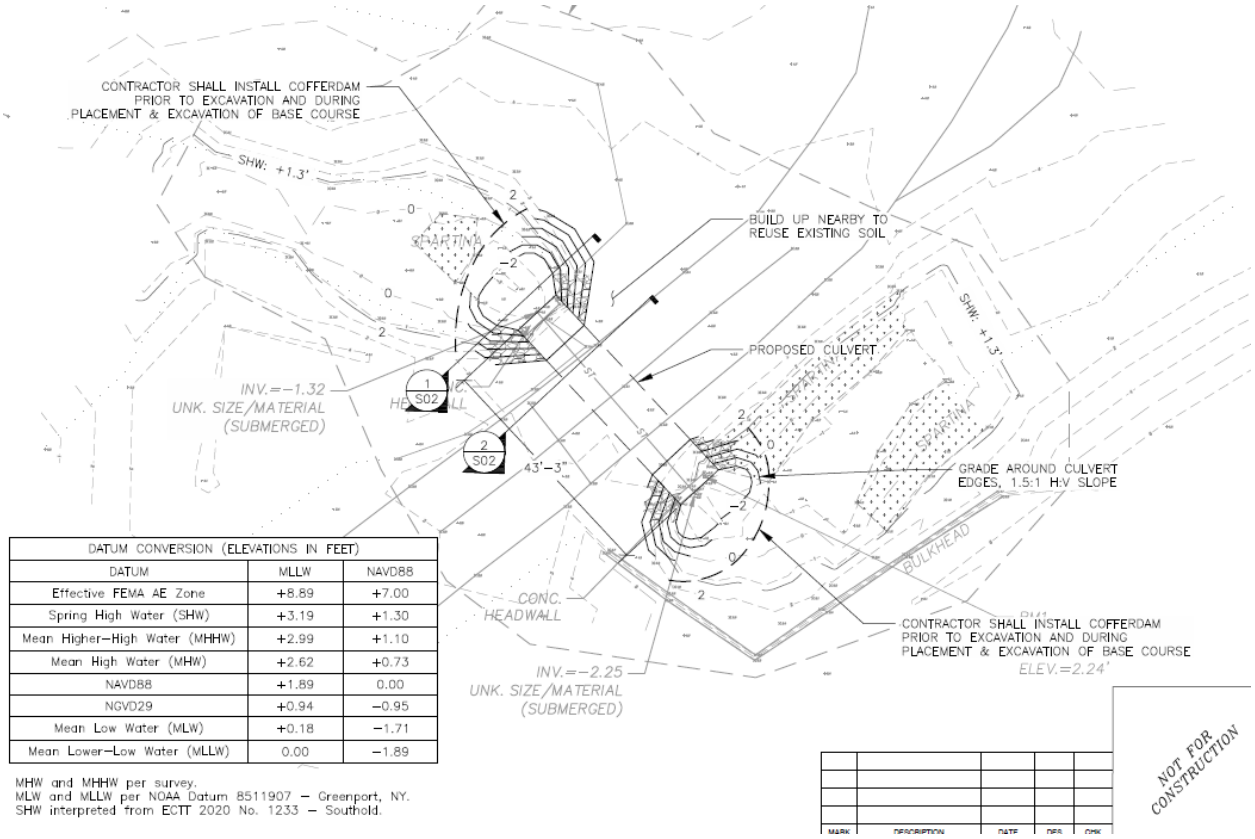
Old Main Road Replacement Culvert Design.

Following a meeting held with the project Steering Committee on October 27, 2023 and a presentation before the Southold Trustees on November 13, 2023 and the recommendations of the Southold Town Engineer, Michael Collins, AKRF initiated design and permitting efforts on the preferred alternative To develop a design for a new box culvert at this location that will convey the Mill Creek tide north of Old Main Road, MJ Engineering and Land Surveying, Inc. of the AKRF Team first collected detail survey data at the Old Main Road culvert location and prepared a topographic base map below:



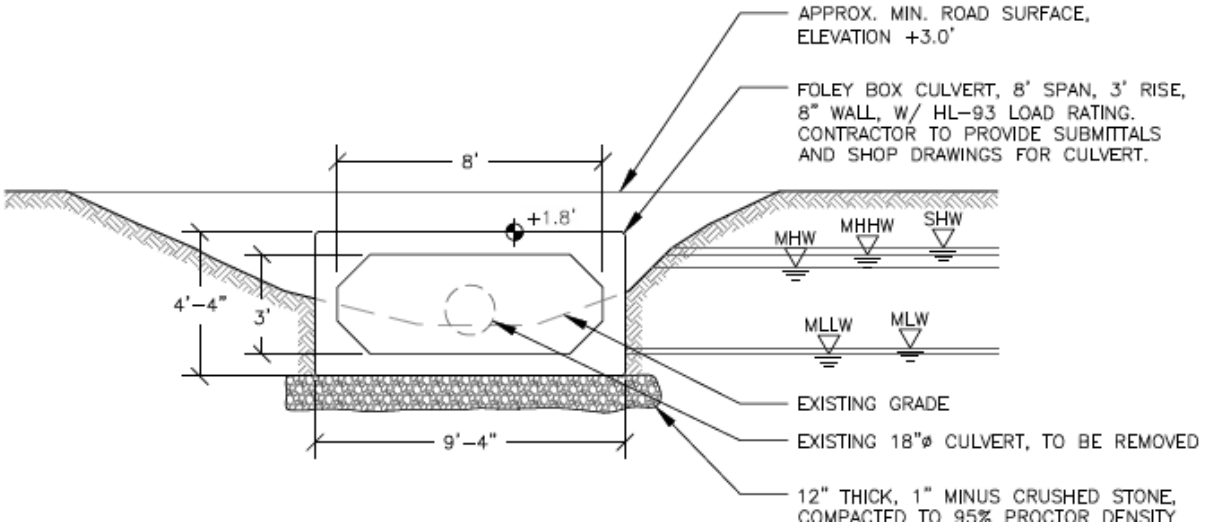
Using this mapping as a base, BlueShore Engineering LLC of the AKRF Team developed a design for the installation of a box culvert that will convey the full Mill Creek tidal signal to the tidal basin/wetland area between Old Main Road and Route 25. The increased size of the Old Main Road culvert will increase the tidal water elevation that within this tidal basin/wetland, thereby providing greater potential for flows to pass through the NYSDOT culvert and then to the LIRR culvert 21-C-917 that conveys tidal flow to the PSP wetland. The detail of the design is shown in

the construction drawing set provided in Appendix D which was provided to the Town of Southold for review on April 8, 2024. This Excerpts from the design set are shown below:



DATUM CONVERSION (ELEVATIONS IN FEET)		
DATUM	MLLW	NAVD88
Effective FEMA AE Zone	+8.89	+7.00
Spring High Water (SHW)	+3.19	+1.30
Mean Higher-High Water (MHHW)	+2.99	+1.10
Mean High Water (MHW)	+2.62	+0.73
NAVD88	+1.89	0.00
NGVD29	+0.94	-0.95
Mean Low Water (MLW)	+0.18	-1.71
Mean Lower-Low Water (MLLW)	0.00	-1.89

MHW and MHHW per survey.
MLW and MLLW per NOAA Datum 8511907 – Greenport, NY.
SHW interpreted from ECTT 2020 No. 1233 – Southold.



This box 8 ft X 3 ft culvert provides approximately 15X the flow through area that the current 18-inch culvert provides, greatly enhancing the tidal flow to and the elevations that high tides reach within the tidal basin and wetlands between Old Main Road and Route 25, which in turn will increase tidal flows through the Route 25 and LIRR culverts.

The new culvert will also allow full drainage of the tidal basin and wetlands between Old Main Road and Route 25, reducing the period of ponding and marsh plain flooding and allowing marsh

sediment to aerate on the low tide cycle. A similar effect is possible within the tidal marsh areas north of Route 25 and within the PSP north of the LIRR. This aeration could enhance the growth of *Spartina alterniflora* in each of these marsh areas. However, the full effects of the increased flow under Old Main Road on marsh areas north of Route 25 will also be dependent on NYSDOT's corrective actions in repairing the failed headwall on the north side of the Route 25 culvert. AKRF informed NYSDOT's Melik Tariq of the condition of this culvert via email on May 28, 2024.

A design memorandum and the plan set for the replacement of the culvert was provided to NYSDOT for review on July 16, 2024. Melik Tariq of NYSDOT responded that Case Number 110427 had been assigned to the submission and that review of the plans had been initiated. On August 20, 2024 AKRF received an email form Melik Tariq transmitting a number of questions regarding both the design of the proposed Old Main Road culvert replacement as well as the existing culvert under Route 25. On September 3, 2024 NYSDOT sent an email to AKRF indicating that they do not maintain culvert under Old Main Road, however NYSDOT would like to review plans to look for potential flow impacts on the ends of the Route 25 culvert, and potential concerns.

6.0 PERMITTING

Replacement of the existing 18-inch pipe culvert at Old Main Road with a concrete box culvert will require authorizations by both the New York State Department of Conservation (DEC) and the U.S. Army Corps of Engineers (ACOE). Correspondence with DEC was initiated in February 2024 to identify permit requirement and applicable application forms/procedures. These authorizations are secured through the submission of a Joint Application Form to each entity. AKRF prepared this form for submission by the Town of Southold (Appendix E). A Short Environmental Assessment Form (EAF) was also prepared (Appendix F). Permit submittals were planned to be made by the Town of Southold in the fall of 2024, however a response received from NYSDOT indicating that the ownership of the Old Main Road roadway and culvert had not been transferred to the Town of Southold as previously believed. Since this would change the permitting responsibility and requirements from what was envisioned by the Town of Southold, a hold was placed on the permitting process – which has remained through the date of this report.

7.0 COMMUNICATIONS

Copies of emails relating to key aspects of the project are provided in Appendix G.

APPENDIX A

TNC Tidal Crossing Score Summary

Tidal Crossing Score Summary

Project Background

The Long Island Road-Stream and Tidal Crossing Improvement Project, led by The Nature Conservancy with input from state, county, municipal, and other partners, has identified and prioritized road-stream and tidal crossings in Suffolk County, NY for upgrade or replacement. The prioritization is based on social and ecological criteria for road-stream crossings, including culverts and bridges, which are an essential element of our transportation network. These crossings allow roads to pass over rivers, streams, tidal creeks, and wetlands. Undersized, poorly designed, or failing infrastructure at these crossings restricts water flow and can lead to road flooding, property damage, degraded natural systems and impaired water quality. Tidal systems need to experience the full tidal signal both to function today and to respond to sea level rise. This document provides prioritization scoring for the tidal crossing described below. Tidal crossings were assessed using the field and desktop methodology developed by The Nature Conservancy in NH, NH Department of Environmental Services, and the University of NH with modifications to make them suitable for NY. With this information, communities can strategically plan capital investments, secure funding, and implement high priority improvement projects with partners.

Prioritization Scoring

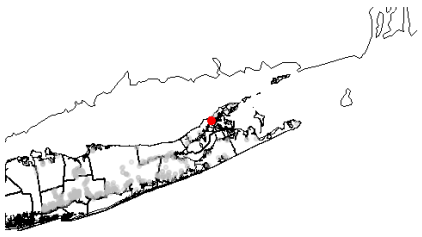
Crossings are prioritized based on four categories of benefits: ecological benefit, resilience benefit, transportation benefit, and infrastructure condition benefit. Within each category, individual metrics are scored on a scale of 1 to 5. Higher scores indicate a greater benefit and therefore higher priority for upgrade or replacement. Within each benefit category, metrics are summed and then re-scaled to 1 to 5. Finally, all four benefit scores are summed to calculate the Total Prioritization Score, with a potential range of 4 to 20. A detailed explanation of all the metrics and scoring methods for this prioritization is provided in the Tidal Prioritization Scoring Summary document found at the project resources site.

General Crossing Information

Assessed on **March 12, 2019**
following the:
TNC Tidal Protocol

Crossing ID	156
Crossing type	Box Culvert
# structures	1
Culvert material	Concrete
Municipality	Southold
Ownership	

Site Location



This crossing is located within the **Peconic Estuary** in the **Town of Southold** at the intersection of **Old Main Road** and **an unidentified stream**.
Coordinates: W -72.4, N 41.078

Final Scoring

Total Prioritization Score (4-20)	**13**
Ecological Benefit (1-5)	**3**
Resilience Benefit (1-5)	**4**
Transportation Benefit (1-5)	**1**
Infrastructure Condition Benefit (1-5)	**5**

Ecological Benefit

		Score
Degree of tidal restriction & AOP	Severe	4
Impact on vegetation community	Slight	2
Marsh complex size	< 15 acres	3
Salt marsh area upstream (acres)	5.72	3

Resilience Benefit

		Score
Present day coastal flood frequency	Inundated by the 10-year storm	**3**
How often is road surface inundated from 39in of sea level rise, projected by 2080's	Inundated at least once every 30 days	**5**
Marsh migration potential (acres)	17.41	**3**
Rainfall flood risk (impervious surface in upstream watershed)	12.19 %	**2**

Transportation Benefit

		Score
Evacuation route	No	**1**
Road functional class	Local	**1**

Infrastructure Condition Benefit

		Score
Crossing condition	Poor	**5**
Erosion classification	–	**5**
High water clearance	–	**5**
Partner priority	Yes	**5**

Site Photos

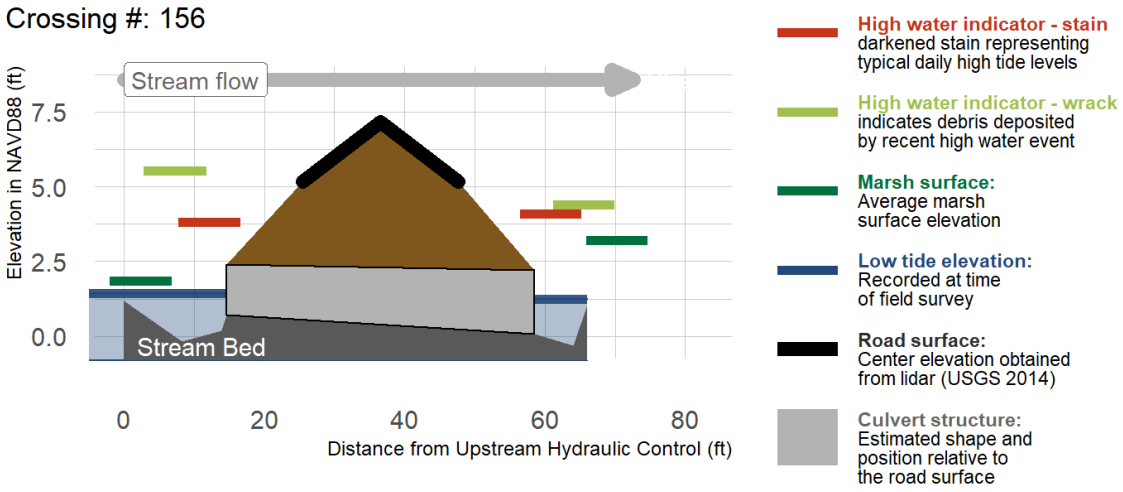
Upstream view from structure

Downstream view from structure

Downstream view toward structure

Upstream view toward structure

Cross Sectional Profile



Crossing Structure Profile Measurements

	upstream	downstream
Road surface	5.17	5.16
Tidal range	2.36	2.87
Marsh surface	1.84	3.2
Ceiling height	2.39	2.2
High water stain	3.8	4.1
Wrack line	5.52	4.38
Low tide elevation	1.44	1.23
Low tide perch	–	–

All profile measures are in feet relative to NAVD88.

Degree of Tidal Restriction and Aquactic Organism Passage Components

	score	upstream	downstream
Tidal range ratio	2	–	–
Crossing ratio	5	6.67	3.93
Erosion classification ratio	5	19.2	1.91

73.2% of the land within the watershed (catchment) is protected from development. Today, there are **0** building structures upstream at risk of flooding in a 100-yr storm. In future conditions, with 39 inches of sea level rise, **5** building structures will be at risk of flooding.

Data Access

- Access to the data associated with this crossing can be found at the project resources site.

Disclaimer

This document is a screening tool for prioritizing planning efforts and is not intended to replace a site visit for making engineering or management decisions. Due diligence is required to ensure that all infrastructure and property owners, permitting agencies and project engineers are consulted in advance of project planning. Please note that different entities may own the roadway, crossing infrastructure, water management structures, and the surrounding land. Information presented here represents the best available at the time of the assessment.

Tidal Crossing Score Summary

Project Background

The Long Island Road-Stream and Tidal Crossing Improvement Project, led by The Nature Conservancy with input from state, county, municipal, and other partners, has identified and prioritized road-stream and tidal crossings in Suffolk County, NY for upgrade or replacement. The prioritization is based on social and ecological criteria for road-stream crossings, including culverts and bridges, which are an essential element of our transportation network. These crossings allow roads to pass over rivers, streams, tidal creeks, and wetlands. Undersized, poorly designed, or failing infrastructure at these crossings restricts water flow and can lead to road flooding, property damage, degraded natural systems and impaired water quality. Tidal systems need to experience the full tidal signal both to function today and to respond to sea level rise. This document provides prioritization scoring for the tidal crossing described below. Tidal crossings were assessed using the field and desktop methodology developed by The Nature Conservancy in NH, NH Department of Environmental Services, and the University of NH with modifications to make them suitable for NY. With this information, communities can strategically plan capital investments, secure funding, and implement high priority improvement projects with partners.

Prioritization Scoring

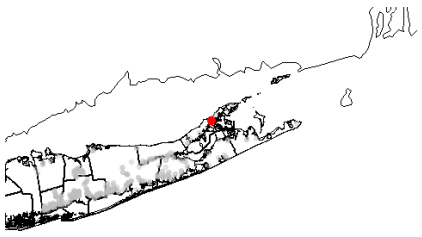
Crossings are prioritized based on four categories of benefits: ecological benefit, resilience benefit, transportation benefit, and infrastructure condition benefit. Within each category, individual metrics are scored on a scale of 1 to 5. Higher scores indicate a greater benefit and therefore higher priority for upgrade or replacement. Within each benefit category, metrics are summed and then re-scaled to 1 to 5. Finally, all four benefit scores are summed to calculate the Total Prioritization Score, with a potential range of 4 to 20. A detailed explanation of all the metrics and scoring methods for this prioritization is provided in the Tidal Prioritization Scoring Summary document found at the project resources site.

General Crossing Information

Assessed on **March 12, 2019**
following the:
TNC Tidal Protocol

Crossing ID	200
Crossing type	Round Culvert
# structures	1
Culvert material	Concrete
Municipality	Greenport
Ownership	NYS DOT

Site Location



This crossing is located within the **Peconic Estuary** in the **Town of Southold** at the intersection of **Route 25** and **an unidentified stream**.
Coordinates: W -72.4, N 41.078

Final Scoring

Total Prioritization Score (4-20)	**17**
Ecological Benefit (1-5)	**4**
Resilience Benefit (1-5)	**3**
Transportation Benefit (1-5)	**5**
Infrastructure Condition Benefit (1-5)	**5**

Ecological Benefit

		Score
Degree of tidal restriction & AOP	Moderate	3
Impact on vegetation community	Formerly connected/Severe	5
Marsh complex size	< 15 acres	3
Salt marsh area upstream (acres)	5.72	3

Resilience Benefit

		Score
Present day coastal flood frequency	Inundated by the 10-year storm	**3**
How often is road surface inundated from 39in of sea level rise, projected by 2080's	Inundated at least once every 30 days	**5**
Marsh migration potential (acres)	15.55	**3**
Rainfall flood risk (impervious surface in upstream watershed)	5.01 %	**1**

Transportation Benefit

		Score
Evacuation route	Yes	**5**
Road functional class	Minor Arterial	**4**

Infrastructure Condition Benefit

		Score
Crossing condition	Poor	**4**
Erosion classification	–	**5**
High water clearance	–	**5**
Partner priority	Yes	**5**

Site Photos

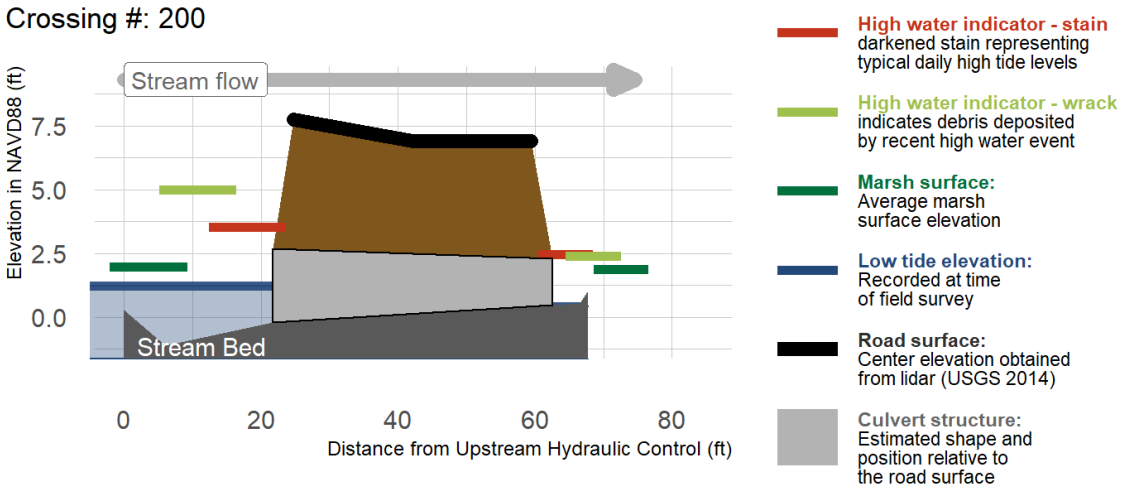
Upstream view from structure

Downstream view from structure

Downstream view toward structure

Upstream view toward structure

Cross Sectional Profile



Crossing Structure Profile Measurements

	upstream	downstream
Road surface	7.77	6.91
Tidal range	2.33	2.02
Marsh surface	1.99	1.87
Ceiling height	2.69	2.3
High water stain	3.55	2.45
Wrack line	4.98	2.39
Low tide elevation	1.22	0.43
Low tide perch	–	–

All profile measures are in feet relative to NAVD88.

Degree of Tidal Restriction and Aquactic Organism Passage Components

	score	upstream	downstream
Tidal range ratio	1	–	–
Crossing ratio	4	2	3.5
Erosion classification ratio	5	5.88	28

82.19% of the land within the watershed (catchment) is protected from development. Today, there are **4** building structures upstream at risk of flooding in a 100-yr storm. In future conditions, with 39 inches of sea level rise, **7** building structures will be at risk of flooding.

Data Access

- Access to the data associated with this crossing can be found at the project resources site.

Disclaimer

This document is a screening tool for prioritizing planning efforts and is not intended to replace a site visit for making engineering or management decisions. Due diligence is required to ensure that all infrastructure and property owners, permitting agencies and project engineers are consulted in advance of project planning. Please note that different entities may own the roadway, crossing infrastructure, water management structures, and the surrounding land. Information presented here represents the best available at the time of the assessment.

APPENDIX B

AKRF email to NYSDOT Regarding Condition of Route 25 Culvert

Outlook

Route 25 culvert

From Ray Hinkle <rhinkle@akrf.com>
Date Tue 5/28/2024 1:28 PM
To Melik Tariq <Melik.Tariq@dot.ny.gov>
Cc jade.blennau <jade.blennau@stonybrook.edu>; joyce.novak <joyce.novak@stonybrook.edu>

Malik. Thank you for your confirmation on the Old Main Road situation. As part of our investigation we made observations of all of the culverts between Old Main Road and the Paul Stoutenburgh Preserve tidal wetland including the culvert under current Route 25. FYI we observed that the north headwall of this culvert has been separated from the concrete pipe and erosion has resulted in slope failure that is partially blocking flow. Michael Collins, the Southold Town Engineer, indicates he has brought this to the attention of his NYSDOT contact. A photo of this culvert is provided FYI.

APPENDIX C

Representative Site Photographs

Photo 1 - PSP Tidal Wetland North of LIRR Culvert 21-C-917

Photo 2 - South Side of LIRR Culvert 21-C-917

Photo 3 - Tidal Wetland between LIRR and NYS Route 25

Photo 4 - Failed Headwall on North Side of Route 25 Culvert

Photo 5 - Headwall on South Side of Route 25 Culvert

Photo 6 - Tidal Basin/Wetland between Old Main Road and Route 25

Photo 7 – Headwall on North of Old Main Road Culvert

Photo 8 - Headwall on South Side of Old Main Road Culvert

Photo 9 - Old Main Road Culvert Location

Photo 10 - Tidal Channel Below Old Main Road

APPENDIX D

Construction Drawings

PERMIT REQUIREMENTS & ENVIRONMENTAL CONTROLS

1. The Contractor shall be furnished a copy of environmental permits from the US Army Corps of Engineers and the New York State Department of Environmental Conservation. The Contractor shall review and comply with all permit conditions.
2. The Contractor shall prevent trash or construction debris from entering the watercourse, and shall recover any items that enter the watercourse immediately.

REFERENCE DATUM

Elevations shown on drawings are relative to NAVD88, unless noted otherwise. Datum conversions shall refer to the table on this sheet.

BUILDING CODE

All work shall be performed in accordance with the 2020 New York State Building Code and all local amendments in effect at the time of the contract.

GENERAL REQUIREMENTS

1. The contractor is responsible for providing all labor, materials and equipment necessary to accomplish the completed construction as shown in these documents, based upon their review of existing conditions and record drawings.
2. The contractor shall provide all field surveys necessary to complete construction in accordance with these drawings by a NY licensed surveyor.
3. The contractor shall field verify existing conditions as needed to provide a complete installation in accordance with these plans.
4. The contractor is responsible for means, methods, and safety of the work.
5. The contractor shall observe all safety, operation, and scheduling limitations dictated by the Owner during the performance of this work.
6. The contractor shall coordinate all work with the Owner's representative to prevent or minimize any interruption to residents.
7. The contractor shall be responsible for the disposal of all demolition and construction debris. Debris shall be properly disposed of at a licensed facility.
8. Alternates to specifications contained herein must have prior approval of the Engineer of Record (EOR).

DATUM CONVERSION (ELEVATIONS IN FEET)		
DATUM	MLLW	NAVD88
Effective FEMA AE Zone	+8.89	+7.00
Spring High Water (SHW)	+3.19	+1.30
Mean Higher–High Water (MHHW)	+2.99	+1.10
Mean High Water (MHW)	+2.62	+0.73
NAVD88	+1.89	0.00
NGVD29	+0.94	−0.95
Mean Low Water (MLW)	+0.18	−1.71
Mean Lower–Low Water (MLLW)	0.00	−1.89

MHW and MHHW per survey.
MLW and MLLW per NOAA Datum 8511907 – Greenport, NY.
SHW interpreted from ECTT 2020 No. 1233 – Southold.

MARK	DESCRIPTION	DATE	DES	CHK

NOT FOR CONSTRUCTION

BlueShore ENGINEERING L.L.C.
1029 Teaneck Rd Fl2, Teaneck, NJ 07666
(201) 817-2001 info@blueshorellc.com

CODE: IBC2020 | DATUM: NAVD88
PLOT DATE: 2024-07-11 | PROJECT: 210320
SIZE: ANSI B | SCALE: N/A

Suffolk County
3500 Sunrise Highway
Great River, NY 11379

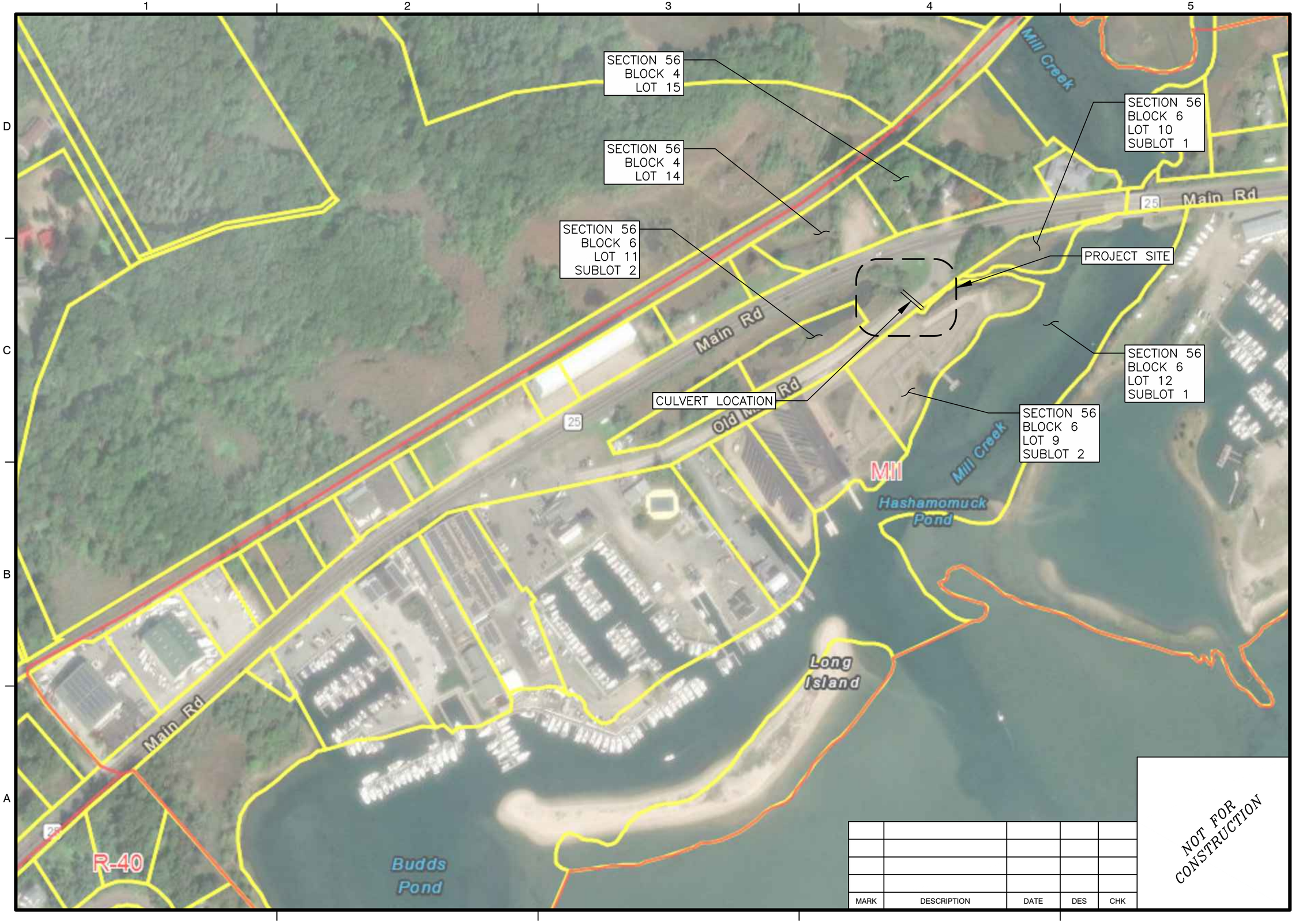
DATE: 07/11/2024

GENERAL NOTES

Paul Stoutenburgh Preserve
63455 Main Rd, Southold, NY

Peconic Culvert Improvements

SHEET ID
G-01



MARK	DESCRIPTION	DATE	DES	CHK

NOT FOR CONSTRUCTION

BlueShore ENGINEERING L.L.C.
1029 Teaneck Rd Fl2, Teaneck, NJ 07666
(201) 817-2001 info@blueshorellc.com

CODE: IBC2020 | DATUM: NAVD88
PLOT DATE: 2024-07-11
SIZE: ANSI B | PROJECT: 210320
SCALE: 1" = 200'

Suffolk County
3500 Sunrise Highway
Great River, NY 11379

DATE: 07/11/2024

VICINITY MAP

Paul Stoutenburgh Preserve
63455 Main Rd, Southold, NY

Peconic Culvert Improvements

SHEET ID
G-02

AREA SURVEYED 11/14/2023

CONTRACTOR SHALL INSTALL COFFERDAM PRIOR TO EXCAVATION AND DURING PLACEMENT & EXCAVATION OF BASE COURSE

SHW: +1.3'

BUILD UP NEARBY TO REUSE EXISTING SOIL

PROPOSED CULVERT

GRADE AROUND CULVERT EDGES, 1.5:1 H:V SLOPE

INV.=−1.32
UNK. SIZE/MATERIAL
(SUBMERGED)

CONC. HEADWALL

1 S02

2 S02

43'−3"

1 S03

SPARTINA

BULKHEAD

CONC. HEADWALL

INV.=−2.25
UNK. SIZE/MATERIAL
(SUBMERGED)

CONTRACTOR SHALL INSTALL COFFERDAM PRIOR TO EXCAVATION AND DURING PLACEMENT & EXCAVATION OF BASE COURSE

ELEV.=2.24'

DATUM CONVERSION (ELEVATIONS IN FEET)		
DATUM	MLLW	NAVD88
Effective FEMA AE Zone	+8.89	+7.00
Spring High Water (SHW)	+3.19	+1.30
Mean Higher−High Water (MHHW)	+2.99	+1.10
Mean High Water (MHW)	+2.62	+0.73
NAVD88	+1.89	0.00
NGVD29	+0.94	−0.95
Mean Low Water (MLW)	+0.18	−1.71
Mean Lower−Low Water (MLLW)	0.00	−1.89

MHW and MHHW per survey.
MLW and MLLW per NOAA Datum 8511907 − Greenport, NY.
SHW interpreted from ECTT 2020 No. 1233 − Southold.

MARK	DESCRIPTION	DATE	DES	CHK

NOT FOR CONSTRUCTION

BlueShore ENGINEERING L.L.C.
1029 Teaneck Rd Fl2, Teaneck, NJ 07666
(201) 817-2001 info@blueshorellc.com

CODE: IBC2020 | DATUM: NAVD88
PLOT DATE: 2024-07-11
SIZE: ANSI B | PROJECT: 210320
SCALE: 1/16" = 1'-0"

Suffolk County
3500 Sunrise Highway
Great River, NY 11379

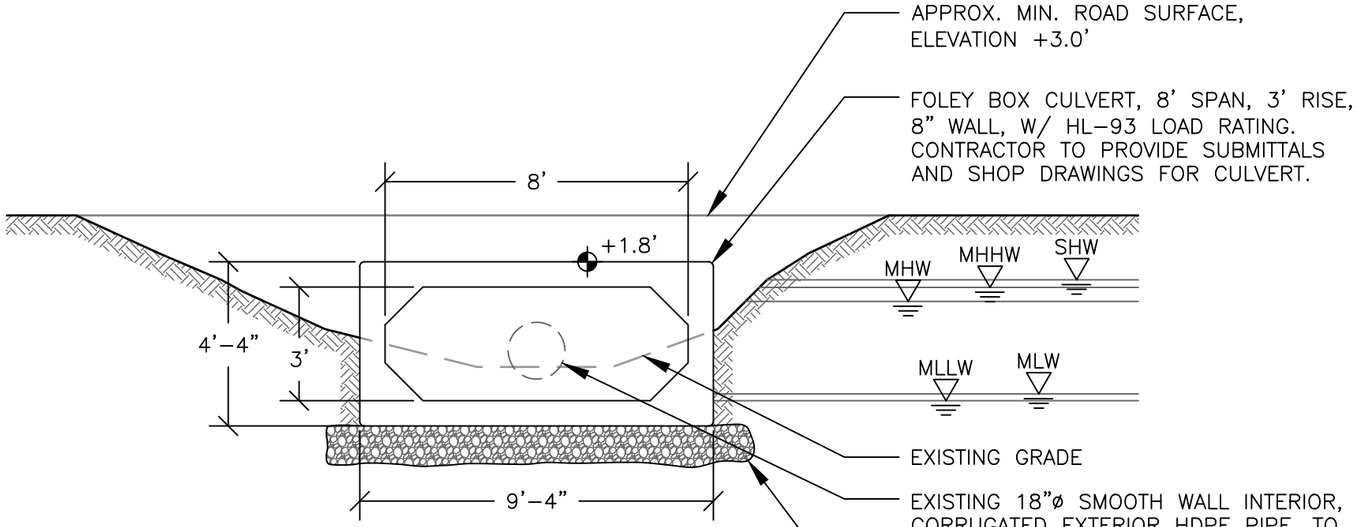
DATE: 07/11/2024

PROPOSED CULVERT SITE PLAN

Peconic Culvert Improvements

Paul Stoutenburgh Preserve
63455 Main Rd, Southold, NY

SHEET ID
S-01



APPROX. MIN. ROAD SURFACE, ELEVATION +3.0'

FOLEY BOX CULVERT, 8' SPAN, 3' RISE, 8" WALL, W/ HL–93 LOAD RATING. CONTRACTOR TO PROVIDE SUBMITTALS AND SHOP DRAWINGS FOR CULVERT.

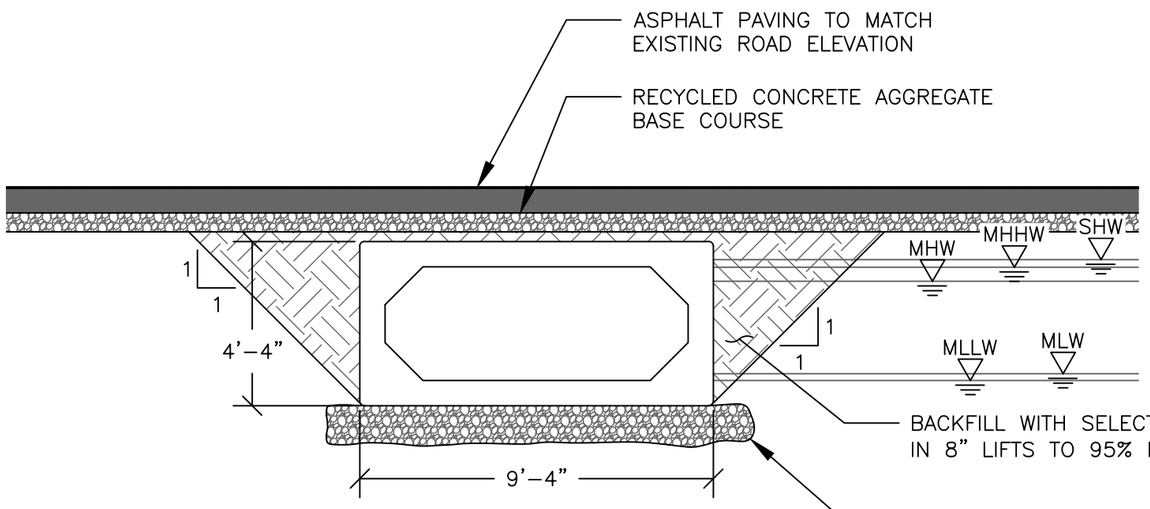
EXISTING GRADE

EXISTING 18"ø SMOOTH WALL INTERIOR, CORRUGATED EXTERIOR HDPE PIPE, TO BE REMOVED

12" THICK, 1" MINUS CRUSHED STONE, COMPACTED TO 95% PROCTOR DENSITY

1 CULVERT SECTION

Scale: 1/4" = 1'–0"



ASPHALT PAVING TO MATCH EXISTING ROAD ELEVATION

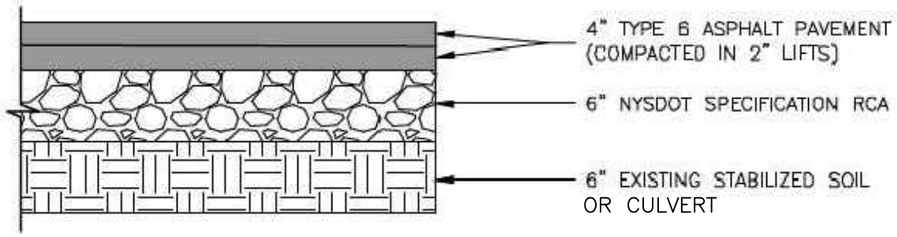
RECYCLED CONCRETE AGGREGATE BASE COURSE

BACKFILL WITH SELECT STRUCTURAL FILL IN 8" LIFTS TO 95% PROCTOR DENSITY

12" THICK, 1" MINUS CRUSHED STONE, COMPACTED TO 95% PROCTOR DENSITY

2 CULVERT SECTION AT ROAD

Scale: 1/4" = 1'–0"



4" TYPE 6 ASPHALT PAVEMENT (COMPACTED IN 2" LIFTS)

6" NYSDOT SPECIFICATION RCA

6" EXISTING STABILIZED SOIL OR CULVERT

3 ASPHALT RESTORATION DETAIL

Scale: 3/4" = 1'–0"

MARK	DESCRIPTION	DATE	DES	CHK

NOT FOR CONSTRUCTION

BlueShore ENGINEERING L.L.C.
1029 Teaneck Rd Fl2, Teaneck, NJ 07666
(201) 817-2001 info@blueshorellc.com

CODE: IBC2020 | DATUM: NAVD88 | SCALE: AS NOTED
PLOT DATE: 2024-07-11 | SIZE: ANSI B | PROJECT: 210320

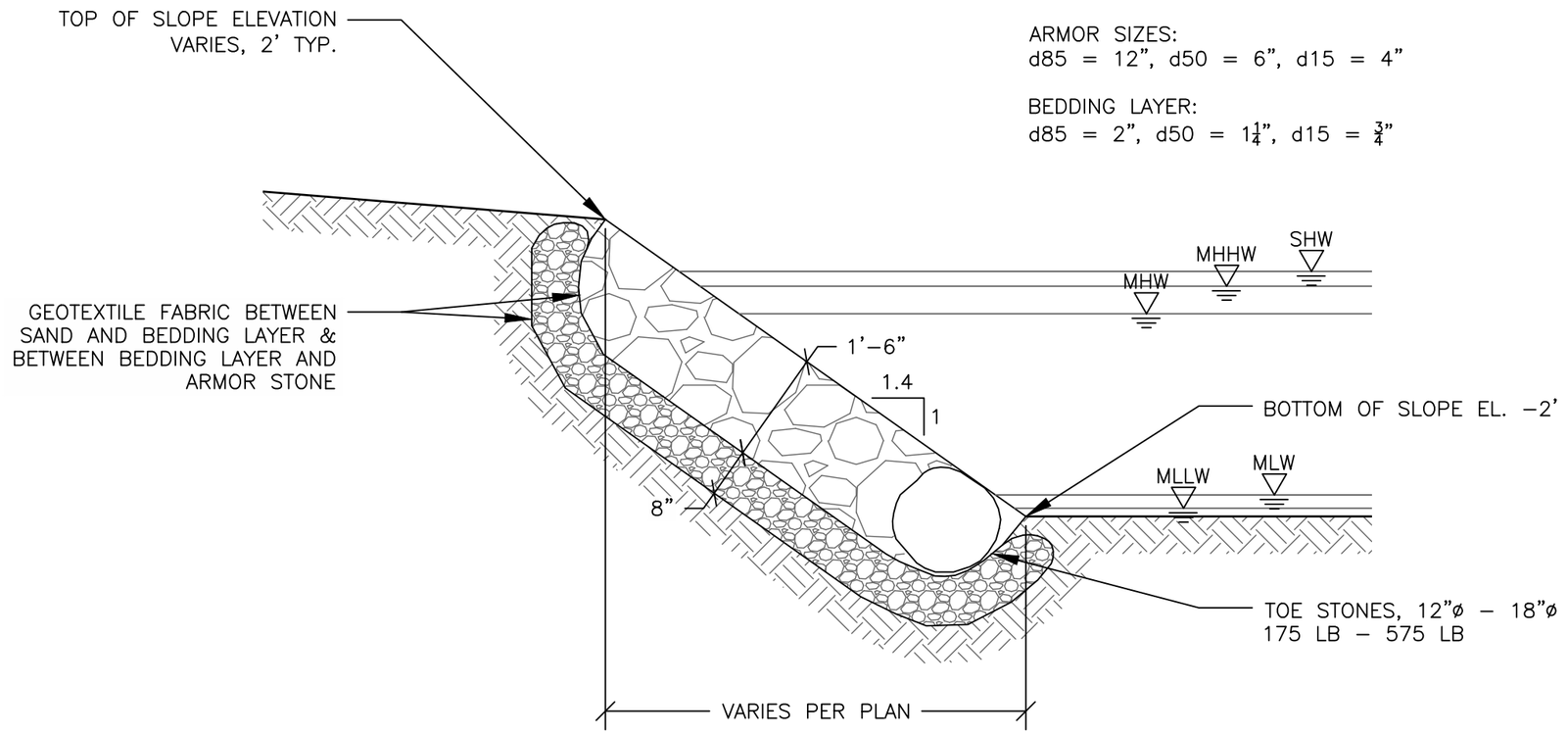
Suffolk County
3500 Sunrise Highway
Great River, NY 11379

DATE: 07/11/2024

CULVERT SECTION DETAILS

Peconic Culvert Improvements
Paul Stoutenburgh Preserve
63455 Main Rd, Southold, NY

SHEET ID
S-02



MARK	DESCRIPTION	DATE	DES	CHK

NOT FOR CONSTRUCTION

BlueShore
ENGINEERING L.L.C.
1029 Teaneck Rd Fl2, Teaneck, NJ 07666
(201) 817-2001 info@blueshorellc.com

CODE: IBC2020 | DATUM: NAVD88
PLOT DATE: 2024-07-11
SIZE: ANSI B | PROJECT: 210320
SCALE: 1/2" = 1'-0"

Suffolk County
3500 Sunrise Highway
Great River, NY 11379

DATE: 07/11/2024

REVETMENT SECTION

Peconic Culvert Improvements
Paul Stoutenburgh Preserve
63455 Main Rd, Southold, NY

SHEET ID
S-03

APPENDIX E

DRAFT of Joint Permit Application

NEW YORK STATE | Department of Environmental Conservation | Office of General Services | Department of State

US Army Corps of Engineers

JOINT APPLICATION FORM

For Permits for activities activities affecting streams, waterways, waterbodies, wetlands, coastal areas, sources of water, and endangered and threatened species.

You must separately apply for and obtain Permits from each involved agency before starting work. Please read all instructions.

1. **Applications To:**

>NYS Department of Environmental Conservation ☑ Check here to confirm you sent this form to NYSDEC.

Check all permits that apply:

- ☐ Stream Disturbance
- ☐ Excavation and Fill in Navigable Waters
- ☐ Docks, Moorings or Platforms
- ☐ Dams and Impoundment Structures
- ☐ 401 Water Quality Certification*
- ☐ Freshwater Wetlands
- ☑ Tidal Wetlands
- ☐ Wild, Scenic and Recreational Rivers
- ☐ Coastal Erosion Management
- ☐ Water Withdrawal
- ☐ Long Island Well
- ☐ Incidental Take of Endangered / Threatened Species

* See Instructions (page 3)

>US Army Corps of Engineers ☐ Check here to confirm you sent this form to USACE.

Check all permits that apply: ☑ Section 404 Clean Water Act ☐ Section 10 Rivers and Harbors Act

Is the project Federally funded? Yes ☑ No

If yes, name of Federal Agency:

General Permit Type(s), if known:

Preconstruction Notification: Yes No

>NYS Office of General Services ☐ Check here to confirm you sent this form to NYSOGS.

Check all permits that apply:

- ☐ State Owned Lands Under Water
- ☐ Utility Easement (pipelines, conduits, cables, etc.)
- ☐ Docks, Moorings or Platforms

>NYS Department of State ☐ Check here to confirm you sent this form to NYSDOS.

Check if this applies: ☐ Coastal Consistency Concurrence

2. **Name of Applicant**

Town of Southold

Taxpayer ID (if applicant is NOT an individual)

Mailing Address: 530905 Main Road

Post Office / City: Southold

State: NY

Zip: 11971

Telephone: 6317651560

Email: michael.collins@town.southold.ny.us

Applicant Must be (check all that apply): ☑ Owner ☐ Operator ☐ Lessee

3. **Name of Property Owner (if different than Applicant)**

Mailing Address

Post Office / City

State

Zip

Telephone

Email

For Agency Use Only	Agency Application Number:

4. **Name of Contact / Agent**

Michael Collins

Mailing Address	Post Office / City	State	Zip
530905 Main Road	Southold	NY	11971

Telephone 6317651560 Email michael.collins@town.southold.ny.us

5. **Project / Facility Name**

Old Main Road Culvert Replacement

Property Tax Map Section / Block / Lot Number:

Project Street Address, if applicable	Post Office / City	State	Zip
Old Main Road	Southold	NY	11971

Provide directions and distances to roads, intersections, bridges and bodies of water

Near intersection of east end of Old Main Road and New York State Route 25 (Main Road)

✔ Town	Village	City	County	Stream/Waterbody Name
Southold			Suffolk	Mill Creek

Project Location Coordinates: Enter Latitude and Longitude in degrees, minutes, seconds:

Latitude: 41 ° 4 ' 41 " Longitude: 72 ° 23 ' 59 "

6. **Project Description:** Provide the following information about your project. Continue each response and provide any additional information on other pages. **Attach plans on separate pages.**

a. Purpose of the proposed project:

The purpose of the project is to remove an existing 18-inch diameter HDPE pipe that conveys tidal flows between the Peconic Estuary (Mill Creek) and tidal wetlands to the north of Old Main Road, New York State Route 25 and the Long Island Railroad. This culvert will be replaced with an 8-foot wide box culvert to provide the free flow of tides to and from these wetlands, thereby increasing salinities in areas where invasive common reed (Phragmites australis) has become established. The result will be an increase in estuarine diversity and productivity.

b. Description of current site conditions:

The small diameter of the existing pipe restricts tidal flows reduces the volume that flows from the Mill Creek area of the Peconic Estuary to/from tidal wetlands to the north of Old Main Road, New York State Route 25 and the Long Island Railroad. This reduction results in muted tidal prism within these wetlands, reducing the salinity that controls wetland vegetation composition. The reduced salinity has allowed salt intolerant species such as invasive common reed to establish and dominate in a wetland area of the Paul Stoutenburgh Preserve.

c. Proposed site changes:

Removal of the 18-inch pipe and Installation of a 8-foot wide box culvert will allow unrestricted flow from Mill Creek to reach the existing 24-inch diameter culvert under Route 25, and thereby provide increased tidal exchange with tidal wetlands north of Route 25.

d. Type of structures and fill materials to be installed, and quantity of materials to be used (e.g., square feet of coverage, cubic yards of fill material, structures below ordinary/mean high water, etc.):

Foley concrete box culvert 8 feet wide opening and 3 foot rise. Concrete walls 8 inches thick. Total width of culvert = 9 ft 4 in. Total Length of culvert = 45 ft.

e. Area of excavation or dredging, volume of material to be removed, location of dredged material placement:

Total area of excavation = 1,000 square feet; within area below mean high water = 600 square feet. Volume of excavation within area below mean high water = 550 cubic feet.

f. Is tree cutting or clearing proposed? Yes If Yes, explain below. ✔ No

Timing of the proposed cutting or clearing (month/year):

Number of trees to be cut: Acreage of trees to be cleared:

g. Work methods and type of equipment to be used:

Excavation and placement of materials will utilize a backhoe excavator positioned above the men high water line

h. Describe the planned sequence of activities:

Install coffer dams above and below work area, remove existing pavement, remove existing 18-inch HDPE Pipe, excavate area of box culvert placement, install bedding materials, install box culvert, place fill round box culvert, place scour protection on slopes adjacent to culvert, restore disturbed tidal wetlands

i. Pollution control methods and other actions proposed to mitigate environmental impacts:

Install coffer dams above and below work area, restore shoreline and replant inter tidal areas with low and high marsh species

j. Erosion and silt control methods that will be used to prevent water quality impacts:

Work area will be contained within coffer dams

k. Alternatives considered to avoid regulated areas. If no feasible alternatives exist, explain how the project will minimize impacts:

No feasible alternatives since culvert is to be replaced is within inter-tidal area.

l. Proposed use: ☐ Private ☑ Public ☐ Commercial

m. Proposed Start Date: _____ Estimated Completion Date: _____

n. Has work begun on project? Yes If Yes, explain below. ☑ No

o. Will project occupy Federal, State, or Municipal Land? ☑ Yes If Yes, explain below. ☐ No

Work area is within property of the Town of Southold, NY

p. List any previous DEC, USACE, OGS or DOS Permit / Application numbers for activities at this location:

NA

q. Will this project require additional Federal, State, or Local authorizations, including zoning changes?

☑ Yes If Yes, list below. ☐ No

Clean Water Act Section 404 Authoization

7. **Signatures.**

Applicant and Owner (If different) must sign the application. If the applicant is the landowner, the **landowner attestation form** can be used as an electronic signature as an alternative to the signature below, if necessary. Append additional pages of this Signature section if there are multiple Applicants, Owners or Contact/Agents.

I hereby affirm that information provided on this form and all attachments submitted herewith is true to the best of my knowledge and belief.

Permission to Inspect - I hereby consent to Agency inspection of the project site and adjacent property areas. Agency staff may enter the property without notice between 7:00 am and 7:00 pm, Monday - Friday. Inspection may occur without the owner, applicant or agent present. If the property is posted with "keep out" signs or fenced with an unlocked gate, Agency staff may still enter the property. Agency staff may take measurements, analyze site physical characteristics, take soil and vegetation samples, sketch and photograph the site. I understand that failure to give this consent may result in denial of the permit(s) sought by this application.

False statements made herein are punishable as a Class A misdemeanor pursuant to Section 210.45 of the NYS Penal Law. Further, the applicant accepts full responsibility for all damage, direct or indirect, of whatever nature, and by whomever suffered, arising out of the project described herein and agrees to indemnify and save harmless the State from suits, actions, damages and costs of every name and description resulting from said project. In addition, Federal Law, 18 U.S.C., Section 1001 provides for a fine of not more than $10,000 or imprisonment for not more than 5 years, or both where an applicant knowingly and willingly falsifies, conceals, or covers up a material fact; or knowingly makes or uses a false, fictitious or fraudulent statement.

Signature of Applicant Date

Applicant Must be (check all that apply): ☐ Owner ☐ Operator ☐ Lessee

Printed Name Title

Signature of Owner (if different than Applicant) Date

Printed Name Title

Signature of Contact / Agent Date

Printed Name Title

For Agency Use Only **DETERMINATION OF NO PERMIT REQUIRED**

Agency Application Number

(Agency Name) has determined that No Permit is required from this Agency for the project described in this application.

Agency Representative:

Printed Name Title

Signature Date

APPENDIX F

DRAFT of Short Environmental Assessment Form

Short Environmental Assessment Form
Part 1 - Project Information

Instructions for Completing

Part 1 – Project Information. The applicant or project sponsor is responsible for the completion of Part 1. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification. Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information.

Complete all items in Part 1. You may also provide any additional information which you believe will be needed by or useful to the lead agency; attach additional pages as necessary to supplement any item.

Part 1 – Project and Sponsor Information

Old Main Road Culvert Replacement, Town of Southold

Name of Action or Project:
Old Main Road Culvert Replacement

Project Location (describe, and attach a location map):
Old Main Road near Hashamomuchk Pond

Brief Description of Proposed Action:
A small diameter culvert restricts tidal flows and reduces the volume of tidal exchange Tthat flows from the Mill Creek area of the Peconic Estuary to/from tidal wetlands to the north of Old Main Road, New York State Route 25 and the Long Island Railroad. This reduction results in muted tidal prism within these wetlands, reducing the salinity that controls wetland vegetation composition. The reduced salinity has allowed salt intolerant species such as invasive common reed to establish and dominate in a wetland area of the Paul Stoutenburgh Preserve.

The purpose of the project is to remove an existing 18-inch diameter HDPE pipe that conveys tidal flows between the Peconic Estuary (Mill Creek) and tidal wetlands to the north of Old Main Road, New York State Route 25 and the Long Island Railroad. This culvert will be replaced with an 8-foot wide box culvert to provide the free flow of tides to and from these wetlands, thereby increasing salinities in areas where invasive common reed (Phragmites australis) has become established. The result will be an increase in estuarine diversity and productivity.

Name of Applicant or Sponsor:	Telephone:
Town of Southold	E-Mail:

Address:
530905 Main Road

City/PO:	State:	Zip Code:
qSouthold	New York	11971

	NO	YES
1. Does the proposed action only involve the legislative adoption of a plan, local law, ordinance, administrative rule, or regulation? If Yes, attach a narrative description of the intent of the proposed action and the environmental resources that may be affected in the municipality and proceed to Part 2. If no, continue to question 2.	☑	☐
2. Does the proposed action require a permit, approval or funding from any other government Agency? If Yes, list agency(s) name and permit or approval: US Army Corps of Engineers	☐	☑

3. a. Total acreage of the site of the proposed action? .08 acres
   b. Total acreage to be physically disturbed? .08 acres
   c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? .08 acres

4. Check all land uses that occur on, are adjoining or near the proposed action:

5. ☐ Urban ☑ Rural (non-agriculture) ☐ Industrial ☐ Commercial ☐ Residential (suburban)
   ☐ Forest ☐ Agriculture ☑ Aquatic ☐ Other(Specify):
   ☐ Parkland

	NO	YES	N/A
5. Is the proposed action,			
a. A permitted use under the zoning regulations?	☐	☑	☐
b. Consistent with the adopted comprehensive plan?	☐	☑	☐

	NO	YES
6. Is the proposed action consistent with the predominant character of the existing built or natural landscape?	☐	☑

	NO	YES
7. Is the site of the proposed action located in, or does it adjoin, a state listed Critical Environmental Area?		
If Yes, identify: Name:Mill Creek, Name:Peconic Bay and Environs, Reason:Significant coastal fish & wildlife habitat, Reason:Protect public health, water, vegetation, & scenic beauty, Agency:Southold, Town of, Agency:Suffolk County, Da...	☐	☑

	NO	YES
8. a. Will the proposed action result in a substantial increase in traffic above present levels?	☑	☐
b. Are public transportation services available at or near the site of the proposed action?	☐	☑
c. Are any pedestrian accommodations or bicycle routes available on or near the site of the proposed action?	☑	☐

	NO	YES
9. Does the proposed action meet or exceed the state energy code requirements?		
If the proposed action will exceed requirements, describe design features and technologies:	☑	☐

	NO	YES
10. Will the proposed action connect to an existing public/private water supply?		
If No, describe method for providing potable water:	☑	☐

	NO	YES
11. Will the proposed action connect to existing wastewater utilities?		
If No, describe method for providing wastewater treatment:	☐	☑

	NO	YES
12. a. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on the National or State Register of Historic Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places?	☑	☐
b. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory?	☐	☑

	NO	YES
13. a. Does any portion of the site of the proposed action, or lands adjoining the proposed action, contain wetlands or other waterbodies regulated by a federal, state or local agency?	☐	☑
b. Would the proposed action physically alter, or encroach into, any existing wetland or waterbody?	☐	☑
If Yes, identify the wetland or waterbody and extent of alterations in square feet or acres: Tempory Disturbance of approximately 1,500 square feet within Tidal Tributary to Mill Creek		

14. Identify the typical habitat types that occur on, or are likely to be found on the project site. Check all that apply:

☑ Shoreline ☐ Forest ☐ Agricultural/grasslands ☑ Early mid-successional

☑ Wetland ☐ Urban ☐ Suburban

	NO	YES
15. Does the site of the proposed action contain any species of animal, or associated habitats, listed by the State or Federal government as threatened or endangered? Northern Long-eared Bat, Pi...	☐	☑
16. Is the project site located in the 100-year flood plan?	☐	☑
17. Will the proposed action create storm water discharge, either from point or non-point sources?	☑	☐
If Yes, a. Will storm water discharges flow to adjacent properties?	☑	☐
b. Will storm water discharges be directed to established conveyance systems (runoff and storm drains)?	☑	☐
If Yes, briefly describe: _____ _____		
18. Does the proposed action include construction or other activities that would result in the impoundment of water or other liquids (e.g., retention pond, waste lagoon, dam)? If Yes, explain the purpose and size of the impoundment:_____ _____	☑	☐
~~1~~9. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste management facility? If Yes, describe: _____ _____	☑	☐
20.Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste? If Yes, describe: _____ _____	☑	☐

I CERTIFY THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE

Applicant/sponsor/name: _____ Date:_____

Signature: _____Title:_____

PRINT FORM

EAF Mapper Summary Report

Thursday, December 12, 2024 6:56 PM

Disclaimer: The EAF Mapper is a screening tool intended to assist project sponsors and reviewing agencies in preparing an environmental assessment form (EAF). Not all questions asked in the EAF are answered by the EAF Mapper. Additional information on any EAF question can be obtained by consulting the EAF Workbooks. Although the EAF Mapper provides the most up-to-date digital data available to DEC, you may also need to contact local or other data sources in order to obtain data not provided by the Mapper. Digital data is not a substitute for agency determinations.

Part 1 / Question 7 [Critical Environmental Area]	Yes
Part 1 / Question 7 [Critical Environmental Area - Identify]	Name:Mill Creek, Name:Peconic Bay and Environs, Reason:Significant coastal fish & wildlife habitat, Reason:Protect public health, water, vegetation, & scenic beauty, Agency:Southold, Town of, Agency:Suffolk County, Date:3-9-90, Date:7-12-88
Part 1 / Question 12a [National or State Register of Historic Places or State Eligible Sites]	No
Part 1 / Question 12b [Archeological Sites]	Yes
Part 1 / Question 13a [Wetlands or Other Regulated Waterbodies]	Yes - Digital mapping information on local and federal wetlands and waterbodies is known to be incomplete. Refer to EAF Workbook.
Part 1 / Question 15 [Threatened or Endangered Animal]	Yes
Part 1 / Question 15 [Threatened or Endangered Animal - Name]	Northern Long-eared Bat, Piping Plover, Common Tern, Least Tern
Part 1 / Question 16 [100 Year Flood Plain]	Yes
Part 1 / Question 20 [Remediation Site]	No

APPENDIX G

Project Email Communications

Delete Archive Report Reply Reply all Forward Zoom

Tidal Wetlands Permit Forms

Applica....2023.pdf Instruc...Form.pdf Joint Ap...Form.pdf SAAF.pdf SEAF PART 1.pdf

SF

Star, Laura F (DEC) <laura.star@

To: Ray Hinkle

Wed 2/7/2024 2:40 PM

You replied on Wed 7/17/2024 12:27 PM

This sender laura.star@dec.ny.gov is from outside your organization. Block sender

Application Checklist rev.202...
94 KB

Show all 5 attachments (3 MB) Save all to OneDrive - AKRF, Inc. Download all

You don't often get email from laura.star@dec.ny.gov. Learn why this is important

Hi Ray,

Attached are the forms you will need to submit to get a permit.

There is also an application checklist listing the other items we require, such as plans, photographs, permit fee, survey, etc.

Please submit two hard copies of the entire application package to our office.

Thank you,

Laura

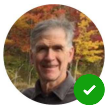
Laura F. Star
Environmental Analyst 2

New York State Department of Environmental Conservation
Environmental Permits

Delete Archive Report Reply Reply all Forward Zoom

DRAFT Old Main Road Culvert Design Sheets

DRAFT Old ...24.pdf



Ray Hinkle

To: Collins, Michael <michael.collins@town.southold.ny. Mon 4/8/2024 8:20 AM

DRAFT Old Main Raod Culve...
1 MB

Michael - BlueShore Engineering has produced the attached plan sheets for the new culvert installation on Old Main Road. I am providing this Draft version for your review and comment.

Ray

Ray Hinkle, CERP, CWB
Senior Technical Director - Ecosystem Restoration

P: 201.970.7424 | rhinkle@akrf.com | www.akrf.com
7250 Parkway Drive, Suite 210, Hanover, MD 21076

Reply Forward

Outlook

RE: Old Main Road Culvert NY25 Southold SCTM '1000056000400014000', mm1631

From Tariq, Melik (DOT) <Melik.Tariq@dot.ny.gov>
Date Thu 7/18/2024 9:55 AM
To Ray Hinkle <rhinkle@akrf.com>
Cc Magioncalda, Jennifer (DOT) <Jennifer.Magioncalda@dot.ny.gov>

Hi Ray,
Received your vm too.
We will review it and will update you in about 6-8 weeks

Thanks
M Tariq

From: Ray Hinkle <rhinkle@akrf.com>
Sent: Tuesday, July 16, 2024 2:35 PM
To: Tariq, Melik (DOT) <Melik.Tariq@dot.ny.gov>
Cc: Fajolu, Olumuyiwa (DOT) <Olumuyiwa.Fajolu@dot.ny.gov>; Magioncalda, Jennifer (DOT) <Jennifer.Magioncalda@dot.ny.gov>; Collins, Michael <michael.collins@town.southold.ny.us>; jade.blennau <jade.blennau@stonybrook.edu>; joyce.novak <joyce.novak@stonybrook.edu>
Subject: Re: Old Main Road Culvert NY25 Southold SCTM '1000056000400014000', mm1631

Melik - please see attached memo and plan sheets.

Ray

Ray Hinkle, CERP, CWB
Senior Technical Director
Ecosystem Restoration

P: 201.970.7424 | rhinkle@akrf.com | www.akrf.com
7250 Parkway Drive, Suite 210, Hanover, MD 21076

From: Tariq, Melik (DOT) <Melik.Tariq@dot.ny.gov>
Sent: Tuesday, May 28, 2024 11:16 AM
To: Ray Hinkle <RHinkle@AKRF.com>
Cc: Fajolu, Olumuyiwa (DOT) <Olumuyiwa.Fajolu@dot.ny.gov>; Magioncalda, Jennifer (DOT)

<Jennifer.Magioncalda@dot.ny.gov>
Subject: Old Main Road Culvert NY25 Southold SCTM '1000056000400014000', mm1631

You don't often get email from melik.tariq@dot.ny.gov. Learn why this is important

Good morning Ray,
Hope you had a good weekend.
As mentioned in the attached email, the NYSDOT does not maintain the this culvert under Old Town Rd, however we will like to review plans to look for potential flow impacts on the ends of the NY25 culvert, and potential concerns. You also have the link to the permit application, Perm33, in case work is proposed within the State DOT Right of Way.

From: Ray Hinkle <rhinkle@akrf.com>
Sent: Monday, May 27, 2024 3:17 PM
To: Magioncalda, Jennifer (DOT) <Jennifer.Magioncalda@dot.ny.gov>
Subject: Old Mian Road Culver - Southold, NY

You don't often get email from rhinkle@akrf.com. Learn why this is important

Hi Jennifer. We spoke last week about the question of the culvert location on what is called Old Main Road in Southold, NY. This is a section of the original Route 25 that was replaced when Route 25 was rebuilt in the 1950s. From Wikipedia the following paragraph describes former portions of Route 25 in Eastern Long Island that have been realigned:

Near Riverhead, Middle Country Road once followed a parallel roadway to the south of the current roadway between River Road and Forge Road.[33] Although some of this section has been dismantled, a portion still exists as modern Forge Road from the Peconic River Bridge to Kroemer Avenue.[34] In Laurel, New York (Southold township), A quarter mile section was rerouted past the town hamlet of Laurel in a more direct and straight manner. The old section became Franklinville Road which connects to NY 25 at both ends of the 1/4 mile bypass. In Mattituck, an old alignment of Main Road (NY 25) exists as Old Main Road from Bray Avenue to west of Sigsbee Road. Southwest of Southold, Main Road originally followed the length of Lower Road and Ackerly Pond Lane between Lower Road and Main Road.[citation needed] To the northeast of the community, another former segment remains intact as Old Main Road between Budd's Pond and Mill Creek to Hashamomuck Pond.[35]

The highlighted section is the one in question. As i said, there is a project that we have been working on with Suffolk County and the Town of Southold that would replace an existing 18 inch plastic pipe under Old Main Road (the former alignment of Route 25) with a 8 ft wide box culvert to allow for tidal flow to freely enter the wetland areas north of the roadway as part of an ecosystem restoration that is being guided by the Peconic Estuary Program. The location of the culvert is shown on the attached aerial photograph. The Southold town engineer thought that ownership of the old roadway had been transferred to Southold, but current mapping does not confirm this. So, I am trying to get further information on that question so w can proceed with NYSDEC permit submittals, in which we will need to identify the Applicant and Owner. FYI, The attached map shows the location of the culvert. Any assistance you can provide would be appreciated. As I mentioned, Jade Blennau of the Peconic Estuary Program had reached out to DOT previously about permit needs from DOT, but we have not confirmed if DOT is still the owner of the roadway at the culver or

if it is owned by the Town of Southold. The answer to this question changes the NYSDEC permitting submittal for the project. I will forward the email chain that was initiated by Jade last week.

Ray

Ray Hinkle, CERP, CWB
Senior Technical Director - Ecosystem Restoration

P: 201.970.7424 | rhinkle@akrf.com | www.akrf.com
7250 Parkway Drive, Suite 210, Hanover, MD 21076

Outlook

Case 110427 New Culvert To Replace Existing 18" Pipe At Old NY25 mm1631 Southold '1000056000600009002'

From Tariq, Melik (DOT) <Melik.Tariq@dot.ny.gov>
Date Thu 7/18/2024 2:10 PM
To Ray Hinkle <rhinkle@akrf.com>
Cc Fajolu, Olumuyiwa (DOT) <Olumuyiwa.Fajolu@dot.ny.gov>; Magioncalda, Jennifer (DOT) <Jennifer.Magioncalda@dot.ny.gov>; Collins, Michael <michael.collins@town.southold.ny.us>; jade.blennau <jade.blennau@stonybrook.edu>; joyce.novak <joyce.novak@stonybrook.edu>

Hi Ray,
Case number '110427' has been assigned to your submission and is sent out to groups for review. We will contact you when our review is complete.

Pls use the case number in all correspondence

Thanks and regards
M Tariq

From: Ray Hinkle <rhinkle@akrf.com>
Sent: Tuesday, July 16, 2024 2:35 PM
To: Tariq, Melik (DOT) <Melik.Tariq@dot.ny.gov>
Cc: Fajolu, Olumuyiwa (DOT) <Olumuyiwa.Fajolu@dot.ny.gov>; Magioncalda, Jennifer (DOT) <Jennifer.Magioncalda@dot.ny.gov>; Collins, Michael <michael.collins@town.southold.ny.us>; jade.blennau <jade.blennau@stonybrook.edu>; joyce.novak <joyce.novak@stonybrook.edu>
Subject: Re: Old Main Road Culvert NY25 Southold SCTM '1000056000400014000', mm1631

Melik - please see attached memo and plan sheets.

Ray

Ray Hinkle, CERP, CWB
Senior Technical Director
Ecosystem Restoration

P: 201.970.7424 | rhinkle@akrf.com | www.akrf.com
7250 Parkway Drive, Suite 210, Hanover, MD 21076

From: Tariq, Melik (DOT) <Melik.Tariq@dot.ny.gov>
Sent: Tuesday, May 28, 2024 11:16 AM
To: Ray Hinkle <RHinkle@AKRF.com>
Cc: Fajolu, Olumuyiwa (DOT) <Olumuyiwa.Fajolu@dot.ny.gov>; Magioncalda, Jennifer (DOT) <Jennifer.Magioncalda@dot.ny.gov>
Subject: Old Main Road Culvert NY25 Southold SCTM '1000056000400014000', mm1631

Good morning Ray,
Hope you had a good weekend.
As mentioned in the attached email, the NYSDOT does not maintain the this culvert under Old Town Rd, however we will like to review plans to look for potential flow impacts on the ends of the NY25 culvert, and potential concerns. You also have the link to the permit application, Perm33, in case work is proposed within the State DOT Right of Way.

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Subject: Old Mian Road Culver - Southold, NY

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Outlook

Case 110427 New Culvert To Replace Existing 18" Pipe At Old NY25 mm1631 Southold '1000056000600009002'

From Tariq, Melik (DOT) <Melik.Tariq@dot.ny.gov>
Date Tue 9/3/2024 1:47 PM
To Ray Hinkle <RHinkle@AKRF.com>
Cc Steiger, Eric (DOT) <Eric.Steiger@dot.ny.gov>; Fajolu, Olumuyiwa (DOT) <Olumuyiwa.Fajolu@dot.ny.gov>; heather.lanza@town.southold.ny.us <heather.lanza@town.southold.ny.us>; michael.orientale@town.southold.ny.us <michael.orientale@town.southold.ny.us>

Hi Ray,
We have searched our old records and we could not find any documentation stating that the ownership of the subject stretch of old NY25 was transferred to the Town, meaning the NYSDOT still owns this road (though maintenance jurisdiction WAS transferred to the Town).
As such, please also submit application form perm33 (perm33.pdf (ny.gov))
and add Work Zone Traffic Control plans (Part II: 619 Standard Sheets | Department of Transportation (ny.gov))
In perm 33, at this time just make entries to page 5 of 7

Any questions, pls let me know.

Regards
M Tariq

From: Tariq, Melik (DOT)
Sent: Friday, August 30, 2024 3:46 PM
To: RHinkle@AKRF.com
Cc: Steiger, Eric (DOT) <Eric.Steiger@dot.ny.gov>; Fajolu, Olumuyiwa (DOT) <Olumuyiwa.Fajolu@dot.ny.gov>
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Hi Ray,
Happy Labor Day.
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1. The north side of the NY25 culvert needs to be repaired. If the work can be added to this project, it would be appreciated.
2. It is suggested that the NY25 pipe and inlet /outlet areas be cleaned to ensure best results for this effort.
3. Culvert design should consider two-way aquatic organism movements and hydraulic passage.
4. Is there any estimate of daily flow volume that floods and drains downstream basins, as a result of tidal changes? Do the two existing 24" pipes under NY25 and LIRR, equalize these flows promptly?

5. Existing 18” dia pipe is being replaced by proposed culvert with almost 22 sqft cross section. Next two existing pipes in the flow line, have slightly more than 3 sqft area each. Will this difference create a bottle neck to free flow at these pipes?
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7. From Dwg S-02, invert of proposed culvert’s slightly lower than the existing 18” pipe. Will this difference result in silting deposits in the new culvert?
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Thanks and regards

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Outlook

RE: Case 110427 New Culvert To Replace Existing 18" Pipe At Old NY25 mm1631 Southold '1000056000600009002'

From Collins, Michael <michael.collins@town.southold.ny.us>
Date Wed 9/4/2024 7:58 AM
To Ray Hinkle <rhinkle@akrf.com>; joyce.novak <joyce.novak@stonybrook.edu>; jade.blennau <jade.blennau@stonybrook.edu>
Cc Goodwin, Dan <dang@southoldtownny.gov>

Dan and I are going to sort this out with NYSDOT. This is absolute nonsense, they cannot transfer maintenance responsibility but not ownership. We are on hold until we sort this out.

I'd like to say I cannot believe they are pulling this after we checked ownership twice in the last decade but it's the State so par for the course.

Michael

From: Ray Hinkle <rhinkle@akrf.com>
Sent: Tuesday, September 3, 2024 6:55 PM
To: Collins, Michael <michael.collins@town.southold.ny.us>
Subject: Fwd: Case 110427 New Culvert To Replace Existing 18" Pipe At Old NY25 mm1631 Southold '1000056000600009002'

Michael.....FYI as you were not copied on this email. I think we need to have a call to discuss the path forward.

Ray

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From: Tariq, Melik (DOT) <Melik.Tariq@dot.ny.gov>
Sent: Tuesday, September 3, 2024 1:47:03 PM
To: Ray Hinkle <RHinkle@AKRF.com>
Cc: Steiger, Eric (DOT) <Eric.Steiger@dot.ny.gov>; Fajolu, Olumuyiwa (DOT) <Olumuyiwa.Fajolu@dot.ny.gov>; heather.lanza@town.southold.ny.us <heather.lanza@town.southold.ny.us>; michael.orientale@town.southold.ny.us <michael.orientale@town.southold.ny.us>
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