MAMARONECK BEACH AND YACHT CLUB
555 SOUTH BARRY AVENUE
VILLAGE OF MAMARONECK, NEW YORK

FINAL SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT
PROPOSED SANITARY SEWER SYSTEM UPGRADE

Photograph obtained from Mamaroneck Beach and Yacht Club website.

VOLUME 1

July 2017

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DRAFT SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT
PROPOSED SANITARY SEWER SYSTEM UPGRADE

Project Location:
555 South Barry Avenue
Village of Mamaroneck, Westchester County, NY
Tax Map Parcel: Village of Mamaroneck, Section 4, Block 77, and Lot 31

Lead Agency:
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Mamaroneck Village Planning Board
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Date Submitted:	February 25, 2015
Date Resubmitted:	September 4, 2015
Date of Acceptance:	April 13, 2016
Date of Public Hearing:	May 25, 2016
End of Public Comment Period:	June 8, 2016
Date Resubmitted:	July 12, 2017

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2) Mamaroneck Beach and Yacht Club Environmental Narrative April 2013 prepared by Syrette Dym, AICP; 2013 Amended Site Plan
3) Mamaroneck Village Code
4) Recommended Standards for Wastewater Facilities 2004 Edition
5) New York State Department of Environmental Conservation (NYSDEC)
   a) Design Standards for Intermediate-Sized Wastewater Treatment Systems dated March 5, 2014
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I. INTRODUCTION

A. Introductory Statement

The instant environmental review arises out of an underlying redevelopment plan proposed by the Mamaroneck Beach and Yacht Club (the "Applicant", "MBYC" or "Club") to construct seasonal residence units, refurbish the existing clubhouse and update other amenities associated with the Applicant's beach and yacht club use at 555 South Barry Avenue, Mamaroneck, New York (the "Property"). As discussed in detail below, the proposed redevelopment plan has been subject to intense scrutiny from both an environmental and planning perspective dating back to 2004. The Village of Mamaroneck Planning Board (the "Planning Board") is currently in the process of reviewing an amended site plan submitted on January 17, 2013, with respect to the redevelopment of the Club's property (the "2013 Amended Site Plan"). The 2013 Amended Site Plan modified several previous site redevelopment plans that have been the subject of Planning Board review for almost a decade.

During the review of the 2013 Amended Site Plan, a break in the sewer force main servicing the Property occurred, which subsequently was repaired and returned to service after appropriate testing. The force main was inspected by Village of Mamaroneck professionals and the Westchester County Department of Health ("WCDOH"), is currently functioning properly and no further repairs or upgrades are required. Nonetheless, due to new information regarding the condition of the force main and its ability to serve the Club's redevelopment plan, the Applicant's engineers, in consultation with the Village Officials, recommends an upgrade of the sewer system in conjunction with the redevelopment of the Property.

In order to properly evaluate the environmental impacts from the upgrade that would be required in conjunction with the redevelopment of the Property, the Applicant was advised that it should prepare, a Draft Supplemental Environmental Impact Statement (DSEIS). The SDEIS was required by the Planning Board because (1) TRC Engineers, Inc, the Applicant's engineers, in consultation with the Village Officials recommended a new force main and pump station based upon their investigation of the existing system as part of the remediation of the sewage leak detected in the system in the summer of 2013; (2) new information that a portion of the existing sanitary sewer line on the site had been incorrectly depicted in the survey and plans included in SEQR documentation that had been relied upon for prior environmental approvals; (3) that unbeknownst to the Planning Board the sewer line in its current location runs underneath proposed construction previously approved in 2010; and (4) there was no recorded easement in place to run the existing system over the Mann property (519 Alda Road).

The Planning Board adopted the Final Scope for the DSEIS on February, 12, 2014. As requested, this DSEIS analyzes the impacts of the proposed pump station, force main and sanitary sewer system improvements, and in the Applicant's opinion and demonstrates that the associated impacts are not significantly greater than those already considered during the prior SEQRA review as a result of any changes in the proposed sewer system.

B. Background and History

The Applicant's proposed redevelopment plans have been the subject of intense environmental review under the New York State Environmental Quality Act ("SEQRA") for nearly a decade. A full environmental review under SEQRA, including preparation of a Draft Environmental Impact Statement ("DEIS") and Final Environmental Impact Statement ("FEIS"), was concluded by the Planning Board as lead agency with issuance of an Environmental Findings Statement on October 26, 2007. This Environmental Findings Statement was the subject of a Court challenge by the Club and was annulled on June 16, 2010 by an Order and Judgment from the Supreme Court of the State of New York, County of Westchester.

Thereafter, pursuant to a Court ordered Consent Judgment dated September 8, 2010 by and between the Club and the Village, an Amended Site Plan was formulated by the Club for consideration by the Planning Board, the Lead Agency under SEQRA, for an application regarding clubhouse alternations, new seasonal residences, and other site modifications associated with the beach and yacht club use at the Property (the "2010 Amended Site Plan") (Exhibit 1). The 2010 Amended Site Plan and its environmental impacts were described and analyzed in an Environmental Narrative dated October 2010. The 2010 Amended Site Plan and October 2010 Environmental Narrative were the basis for formulation and issuance of a new Environmental Findings Statement by the Planning Board approved and dated November 29, 2010. The October 2010 Environmental Narrative, which incorporated the DEIS and FEIS previously submitted to and reviewed by the Planning Board, confirmed that the 2010 Amended Site Plan was less intense and resulted in fewer significant environmental impacts than the Applicant's Proposed Action from the FEIS that was the subject of the Environmental Findings Statement issued by the Planning Board on October 26, 2007. A Supplemental EIS was, therefore, not required to be prepared for the 2010 Amended Site Plan because there were no significant adverse environmental impacts not addressed or inadequately addressed in the DEIS and FEIS.

On December 2, 2010, shortly after issuance of the Environmental Finding Statement on November 29, 2010, the Village's Harbor and Coastal Zone Management Commission ("HCZMC") made a finding of consistency with the Village's Local Waterfront Revitalization Program ("LWRP"). Additionally, on December 9, 2010, the Planning Board approved an application for a Wetland Permit pursuant to Chapter 192 of the Village Code for the 2010 Amended Site Plan Due to regulated activities with the 100-foot adjacent areas of the Village's tidal wetland. With these approvals in place, the Planning Board issued a Final Amended Site Plan Approval Resolution under the requirements of Section 240-30(E) on December 9, 2010 for the 2010 Amended Site Plan. Building permits were issued for the Great Lawn Seasonal Residence building, the Yacht Club/Dockmaster's Building, and the Beach Seasonal Residence building on January 14, 2011. These approvals included certain modifications to the existing sewer system, but did not require replacement of the existing pump station or force main. Thereafter, the Club proceeded to commence construction. However, construction was delayed due to a dispute with certain neighboring property owners involving the ownership of a portion of the Club's property.

Due to the delays caused by litigation involving the Club and the opposition from certain neighboring property owners, the Club did not proceed with construction and a number of Resolutions of Extension of Site Plan Approval were issued by the Planning Board which extended the date for commencing and completing construction under the 2010 Amended Site Plan. At present, based upon the last Resolution dated December 18, 2014, the Club must commence construction on or before December 9, 2015 and complete construction on or before June 8, 2020.

To resolve certain issues raised by neighboring property owners, the Club later filed a further amended site plan that eliminates consideration of any portion of the Club's property that was the subject of then pending litigation as part of the lot area, resulting in a site size of 12.27 acres (previously defined as the "2013 Amended Site Plan") (Exhibit 2a). The 2013 Amended Site Plan responded to continued concerns expressed by certain neighboring property owners. Furthermore, as discussed in two separate Stipulations and Orders of Partial Settlement, "So Ordered" by the Honorable Joan B. Lefkowitz, J.S.C. and filed with the Westchester County Clerk on May 7, 2013, the 2013 Amended Site Plan addressed and resolved, in part, certain claims asserted in the various litigations that had arisen out of the approval of the 2010 Amended Site Plan. The 2013 Amended Site Plan, which was submitted to the Village of Mamaroneck as an amended site plan application on January 29, 2013, is the subject of Environmental Narratives dated February 2013 and April 2013.

Although the 2013 Amended Site Plan was submitted, the Applicant continues to maintain that the prior approvals relating to the 2010 Amended Site Plan are valid. However, the 2013 Amended Site Plan was submitted to address certain claims and issues raised in response to the approval of the 2010 Amended Site Plan. Furthermore, each of the prior litigations arising out of the approval of the 2010 Amended Site Plan have now been dismissed pursuant to a Stipulation and Order of Discontinuance executed by the Club, the Village and neighboring property owners in December 2013. As part of the Stipulation of Discontinuance, the Applicant has agreed not to undertake any construction pursuant to the approved 2010 Amended Site Plan unless and until certain conditions are satisfied.

As mentioned in Section A above, during the review of the 2013 Amended Site Plan, the Applicant experienced a sewer force main break, which subsequently was repaired, returned to service after appropriate testing and is functioning properly. Nonetheless, it was determined by the Applicant's engineers in consultation with the Village Officials, that as part of the review of the 2013 Amended Site Plan that the Applicant should evaluate upgrading its sewer infrastructure to include a new pump station system and new force main.

To evaluate the environmental impacts from these changes, including the possible relocation of the force main, and for other reasons discussed in Section A above, it was determined that the Applicant should prepare a Draft Supplemental Environmental Impact Statement (DSEIS) with respect to this issue. The Planning Board adopted the Final Scope for the DSEIS on February, 12, 2014.

II. **EXECUTIVE SUMMARY**

A. The Proposed Action and the Preferred Alternative Action

The Applicant proposes to upgrade the existing sanitary pump station and force main during Phase III of the renovation of the property. The Proposed Action includes modifying the proposed onsite gravity sewer main as needed to convey onsite sewage from new buildings as well as from existing buildings to the new pump station. The location of the new pump station is proposed between the Great Lawn Residence Building and the existing Manager's House. From the new pump station, the force main was proposed generally along the same alignment as the existing force main, which crosses under Otter Creek, traverses residential property at 519 Alda Road and connects to existing Village sanitary manhole #66449 in Alda Road (Exhibit 2b). The construction method proposed to cross under Alder Creek involved trenchless excavation, more particularly by horizontal directional drilling beneath the Creek.

Placement of the proposed force main across the property at 519 Alda Road is reliant upon either confirming the existence of an easement or obtaining an easement from the property owner. The Applicant's legal counsel, however, advises that an easement is not readily available without engaging in protracted litigation, expending significant sums of money or receiving a determination that there are no other alternative locations for the force main, thereby creating an easement by necessity. Therefore the sewer route propounded in the Final Scope as the "Proposed Action" is not plausible at this time. As a result, **the Proposed Action** force main alignment **will not be pursued** unless and until it is determined that no alternative locations, including the Preferred Alternative, are viable.

The Applicant's Engineer (TRC) performed an initial evaluation of several alternative alignments and methods to cross Otter Creek. A summary of the evaluations was presented in TRC's September 23, 2013 Memorandum to the Village Engineer in which the alignment under Otter Creek and through the property at 519 Alda Road was recommended. Within the referenced letter several reasons were cited as to why the South Barry Bridge alternative alignment was not the preferred recommended route. When it became evident that the easement would not be readily available , as described in the previous paragraph, further study was conducted leading to selection of the preferred alternative which resolved the issues cited in the referenced letter.

The Applicant investigated alternative alignments for the force main as described in Chapter VI, Alternatives of this DSEIS. Based on the studies of the alternate routes, a preferred alternative is proposed. The Applicant's engineer believes that the alternate force main alignment along South Barry Avenue is the most practical alignment and the least environmentally intrusive; and, therefore, this alternate alignment of the force main has been selected by the Applicant as the "Preferred Alternative". The preferred alternative will extend the force main from the proposed pumping station through the Site, across Otter Creek (using a pipeline bridge) to and along public lands within the South Barry Avenue right-of-way (ROW) and will connect to municipal sanitary sewer system at manhole #66476.

Through this in depth investigation, the concerns cited in TRC's above referenced September 23, 2013 Memorandum, regarding an alternative of hanging the force main from the South Barry Avenue Bridge, were resolved as follows:

- Concern of exposure to potential freezing will be resolved insulating the proposed force main and encasing the insulated force main within a larger pipe.
- Concern of exposure to flooding will be resolved by crossing Otter Creek with a separate aerial pipeline bridge elevated above the 50-year flood elevation as required by Chapter 10-37 of the "Recommended Standards for Wastewater Facilities" (10-State Standards).
- Concern of exposure to vandalism will be reduced by constructing the force main with a separation from the South Barry Avenue (vehicular and pedestrian) Bridge (see Exhibit 8a), from which it would have been easily accessed by pedestrians.
- Concern of compromising the structural integrity of the existing South Barry Avenue Bridge will be avoided by constructing a separate pipeline bridge for the force main crossing.
- Concern of potential leaks into Otter Creek will be diminished by installing the proposed force main within a second larger pipe. The pipe-within-a-pipe will increase structural strength as well as additional leak protection.

In light of the extensive delays that seeking the referenced easement at 519 Alda Road would cause, the remainder of this DSEIS will focus on the Preferred Alternative, which the Applicant contends is a viable location for the force main, and other alternatives delineated in this DSEIS. The crossing of Otter Creek under the Preferred Alternative is proposed using a pipeline bridge to minimize disturbance of Otter Creek. (See DSEIS VI.B.3, Pipeline Bridge Option.)

This DSEIS also analyzes the impacts of the proposed pump station system improvements and demonstrates that the associated impacts are not significantly greater than the 2013 Amended Site Plan. The proposed pump station is located outside of the wetland buffer as it is either outside of the 100' wetland property buffer and it is located above elevation ten(10')

B. Anticipated Impacts and Proposed Mitigation Measures From The Preferred Alternative

The 2015 Amended Site Plan includes the construction of a new sanitary pump station; and the construction of a new sanitary force main alignment,as described in the Preferred Alternative section (Exhibit 3).

1. Potential Impacts

The pump station will be located between the proposed Great Lawn Residence and the existing Manager's House. The area impacted by the pump station will be approximately 16 feet wide and 29 feet long. The pump station top slab will extend approximately 2 feet above adjacent finished grade. Construction of the pump station

will require displacement of approximately 500 square feet of permeable soil and vegetation and will replace it with impervious surface. An emergency generator will be located adjacent to the pump station and will undergo periodic test operation at regular intervals. The pump station will have dual submersible pumps that will pump approximately 115 gpm (gallons per minute) through a 4-inch force main that will follow an alignment north from the pump station along the edge of the gravel parking area and along the Club's entry road to a new pipeline bridge where the force main will cross over Otter Creek and continue in a northwesterly direction along the South Barry Avenue right-of-way to connect to the Mamaroneck Sanitary Sewer District system at an existing manhole at Soundview Drive.

In the event the Applicant proceeds with the improvements as part of the proposed redevelopment, it will construct a new pipeline bridge along the west side of the existing vehicular bridge crossing at Otter Creek. The pipeline bridge will be approximately 70 feet long, 1 foot wide and consistent with the elevation of the existing vehicular bridge. The pipeline bridge will be supported by two pairs of piers/columns, one pair on each side of the creek. The piers/columns on the east side will be constructed within uplands and the pair on the west side will be constructed within tidal waters beyond the edge of the waterway. Construction of the piers/columns will disturb approximately 100 square feet of soil/vegetation.

2. Proposed Mitigation

The visual impact of the pump station when viewed next to its adjacent buildings, will appear small in scale. The pump station will be enclosed by a six-foot high fence to screen it from view of nearby residents adjacent to Otter Creek. The visual screening will be augmented by proposed plantings that will further shield the view.

The pump station is proposed beyond the limit of the existing tidal wetlands. The top of the pump station will be two feet above the 100-year flood elevation, thereby mitigating potential impact from floods. Land disturbed to construct the pump station will be backfilled and stabilized. Infiltration trenches will be constructed adjacent to the pump station to mitigate potential water quality impacts resulting from the new impervious surfaces. Noise resulting from the pump station will be *de minimus* since the pumps will be submerged below grade and the test operation of the emergency generator will be periodic. The nearest residence to the generator is located approximately 350 feet to the northwest on Alda Road. At this distance, emergency generator noise levels during operation would be at or below the existing nighttime ambient levels. Disturbance from construction would be mitigated by adherence to the Village's noise ordinance and land disturbance would be mitigated by the implementation of temporary and permanent soil erosion and sediment control measures.

C. Description of the Project Alternatives

1. No Action Alternative

Under the No Action Alternative, (1) the existing sanitary sewer pump station and associated force main would remain operational. and ongoing maintenance of the existing pump station would be continued; and (2) the development proposed in the 2013 Site Plan would not be undertaken The Applicant asserts that after recent testing of the existing force main (described in TRC September 23, 2013 letter to the Village, Appendix D), as described more fully in Section IV.A, Purpose and Need for the Proposed Action (Preferred Action)", "… *the existing force main was determined to be in a serviceable and operating condition and as of the date of the tests conducted does not have any apparent leaks."* Although the sewerage infrastructure would remain in place under the no action alternative, the pump station would be upgraded and/or repaired as necessary to meet Club needs on an ongoing basis. A pump station operation, maintenance and emergency response plan would be developed and implemented by the Applicant under the no action alternative described in DSEIS VI.A.3.

To the extent concerns exist with respect to the lack of any proof of a written easement allowing the force main to cross the property at 519 Alda Road, in the event the no action alternative is followed in conjunction with the proposed redevelopment of the Property, the Applicant would seek to obtain either an easement by prescription through litigation with the owners of the property at 519 Alda Road or pursue alternative methods of obtaining an easement. Furthermore, if it is determined that neither the Preferred Alternative, nor any of the other alternatives are feasible due to environmental impacts or other issues, the Applicant could obtain an easement by necessity allowing the existing force main to remain in its current location.

2. South Barry Avenue Force Main Alignment

The South Barry Avenue force main alignment is the preferred alignment under the Preferred Alternative as discussed previously in DSEIS II.A. The alignment of the force main will extend approximately 1300 feet from the pump station to its connection to municipal manhole #66476, located at the intersection of South Barry Avenue at Soundview Drive. The alignment of the force main from the pump station will travel along the easterly edge of the gravel parking area, along the Club's entrance road to the existing vehicular bridge on South Barry Avenue at Otter Creek. Three alternative options of crossing Otter Creek were investigated. The Applicant's preferred option to cross Otter Creek is construction of a pipeline bridge on which the force main will be attached. Once past the Otter Creek crossing, the force main will continue northwest within the South Barry Avenue right-of-way where it will connect to the existing municipal manhole.

a. Pipe Hanger Option

This option would involve hanging the new force main from the existing South Barry Avenue vehicular bridge. Attaching a pipeline to a bridge structure generally should not be considered unless the bridge structure was designed to support the additional load and thrust forces of the proposed pipeline. This pipe hanger option is not recommended for several reasons. Most importantly, Chapter 10-37 of the "Recommended Standards for Wastewater Facilities" (10-State Standards) requires that for aerial stream crossings, sewers must not be below the 50-year flood elevation. The pavement surface of the South Barry Avenue Bridge is at elevation 9.4± and the 50-year flood elevation is 10.7±. Since the bridge is below the 50-year flood elevation, the force main cannot be hung from the bridge. Additional reasons for not recommending the Pipe Hanger option are discussed in Section VI.B.2.

b. Pipeline Bridge Option

This option would involve constructing a pipeline bridge over Otter Creek and is the Preferred Alternative. The pipeline bridge would be located parallel to and along the westerly side of the existing South Barry Avenue vehicular Bridge. The pipeline bridge would be constructed of a 12-inch diameter pipe supported by four concrete pier/columns (two on each side of Otter Creek). The 4-inch force main would be placed within the 12-inch insulated pipe, which would protect the force main from the elements. Beyond the bridge the force main would extend beneath grade where it would be installed by means of conventional trench excavation and backfilling.

c. Horizontal Auger Boring (HAB) or Jack and Bore Option and Horizontal Directional Drilling (HDD)

Horizontal Auger Boring and Horizontal Directional Drilling (HDD) would require excavated pits on both sides of the creek to send and receive the pipe. The drill or bore methods are not recommended construction methods for crossing Otter Creek due to anticipated encounter with subsurface rock causing deflection of the drill or bore resulting in the inability to ensure crossing as well as the desired alignment.

3. Taylors Lane Force Main Alignment

Under the Taylors Lane alternative, the proposed force main would extend from the Club to the intersection of Taylors Lane and Shadow Lane where it would connect to existing sewer manhole MH #66544. The point of connection under this alternative would be located approximately 4,610 feet from the proposed pump station location.

Since the Club does not have direct frontage on Taylors Lane it would require acquisition of an easement through land adjacent to the Club within the Otter Creek Preserve. The proposed force main would traverse the Preserve, which is owned by the Westchester Land Trust after it was transferred to them in April of 2015 by the Nature Conservancy, Inc. The Applicant believes that acquisition of an easement is unlikely due to the Westchester Land Trust's stated mission *"Westchester Land Trust works together with public and private partners to preserve land in perpetuity, and to protect and enhance the natural resources in our communities"*.

The Taylors Lane force main alignment is not considered a feasible alternative for several reasons including:

- This alternative relies on obtaining an easement across environmentally sensitive land and waters.
- Clearcutting would result in removal of existing vegetative cover within the Otter Creek Preserve. Removal or disturbance of approximately 25,000 square feet of environmentally sensitive vegetation. The associated disturbance of soil would cause a long term reduction of sensitive habitats within the preserve as well.
- The Applicant's engineer asserts that the Taylors Lane alternative alignment for a proposed force main would be impractical for several technical reasons including:
    - The length of approximately 4,610 feet (nearly a mile) would result in a significant increase in pump size horsepower, possible higher levels of noise, and energy requirements;
    - The length of the force main, would result in a prolonged detention time of sewage resulting in septic conditions within the force main which could create a public health and safety concern;
    - The prolonged detention time would result in settlement of solids within the force main potentially causing clogging and requiring maintenance which may involve trips within the environmentally sensitive preserve along the force main route to clear obstructions;
    - Due to the length of the force main, there would be a significant burden of cost to the Applicant. When compared to the preferred South Barry Avenue alignment, the length of the Taylors Lane force main would be nearly four times greater, which would result in a proportional increase in comparative cost. Increased cost would be anticipated for initial construction, operation and continued cost for maintenance. It is the Applicant's opinion that this increased cost would not provide any tangible positive benefits over the South Barry Avenue or Alda Road options.

4. Alternative Pump Station Location

A field evaluation of the site was performed to determine an alternative location for the proposed sanitary pump station. Two alternate sites at which the new pump station could be located were evaluated. These sites met some but not all of the siting criteria and therefore were rejected by the Applicant as further discussed below.

a. Adjacent to the Tennis Court

This alternative location is an area adjacent to the western most tennis court between the southerly fence and the site's main access driveway. This site was considered since it was centrally located on the Property and had the potential to be shielded from offsite and onsite views. However, extensive existing vegetation would need to be removed in order to accommodate the pump station and the existing landscape screen would be negated. The top slab of the pump station would be elevated above the 100-year flood elevation leaving it projecting approximately 8.5 feet above the adjacent grade. This would leave the pump station substantially exposed to club members and would make access difficult for routine maintenance. In addition, the pump station would be incompatible with the adjacent tennis court and would present a visual and auditory distraction. Therefore this alternate location is not recommended by the Applicant.

b. Adjacent to the Staff Residence Building

The second alternative location that was evaluated was an area between the northernmost onsite building (staff residence building) and the gravel parking area immediately to the east. Although, this location is above the 100-year flood elevation, it is located in an area with shallow bedrock. In addition, this location is adjacent to the northerly property line and could create noise impacts to the adjacent offsite residence. Therefore, this location does not meet the siting requirements and is not recommended.

5. Private Onsite Wastewater Treatment Facility

Under this Alternative, a private onsite wastewater treatment facility would consist of a wastewater treatment plant (WTP) as an alternate means of providing sewage disposal in lieu of the disposal of sewage to the existing municipal sewage collection system which conveys sewage to the existing Mamaroneck Wastewater Treatment Plant (WWTP).

Section 873.728 "Sewer Connection in Sewered Areas" of the Westchester County Sanitary Code requires that all new habitable buildings within the corporate limits of any city or village or within a town sewer district must connect to the public sanitary sewer system. Since the MBYC is located within the Village of Mamaroneck and Westchester County Mamaroneck Sewer Districts, then its proposed buildings must be connected to municipal sewer and therefore a private onsite wastewater treatment facility would not be a viable option.

D. List of Involved Agencies

1. Involved Agencies

Village of Mamaroneck Planning Board
Village of Mamaroneck Board of Architectural Review
Village of Mamaroneck Harbor & Coastal Zone Management Commission
Town of Rye Town Board
Westchester County Department of Health (WCDOH)
New York State Department of Environmental Conservation (NYSDEC)
New York State Department of State (DOS)
New York State Office of General Services (OGS)
United States Army Corps of Engineers (USACE)
United States Coast Guard (USCG)

E. Permits and Approvals

Table II-1 summarizes the permits and approvals that are required for the Amended Site Plan. Some permits have already been issued and remain applicable to the Amended Site Plan.

Table II-1
Summary of Possible Required Permits and Approvals

Agency	Permit and/or Approval Required
Village of Mamaroneck Planning Board	➢ SEQRA Determination. ➢ Site Plan Approval. ➢ Permit to Locate Structure within 50 Feet of Mean High Water Line pursuant to Chapter 240 §240.30. ➢ Permit for Potential Disturbance to Wetlands Adjacent Area. ➢ Chapter 294 - Stormwater Control Permit.
Village of Mamaroneck Building Department	➢ Building Permit(s) • Great Lawn Residence (Permit Issued 1/14/2011); • Yacht Club/Dock Masters Building (Permit Issues 1/14/11); • Beach Seasonal Residence (Permit Issued 11/14/11).
Village of Mamaroneck Village Engineer	➢ Sanitary Sewer and Pump Station Review.
Village of Mamaroneck Board of Architectural Review	➢ Architectural Review.

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Agency	Permit and/or Approval Required
Village of Mamaroneck Harbor & Coastal Zone Management Commission	➢ Consistency Determination.
Village of Mamaroneck Board of Trustees	➢ Possible Easement to traverse Village property for force main, if required and agreements re ownership and maintenance responsibilities for the force main
Town Board Town of Rye 10 Pearl Street Port Chester, NY 10573 Tel: (914) 939-3558	➢ Owner of the South Barry Avenue/Otter Creek Bridge • Review of placement of pipeline bridge adjacent to the existing vehicular bridge.
Westchester County Department to Health Department 25 Moore Avenue Mt. Kisco, New York 10549	➢ Approval of Plans for a Wastewater Disposal System for Sanitary Sewer Extension and Pump Station with a flow rate greater than 2,500 gallons per day.
New York State Department of Environmental Conservation, Environmental Permits – Region 3 21 South Putt Corners Road New Paltz, New York 12561 Tel: (845) 256-3000	➢ Protection of Waters Permit - Tidal Wetlands Permit (ECL Article 25).
New York State Department of Environmental Conservation, Division of Water 21 South Putt Corners Road New Paltz, New York 12561 Tel: (845) 256-3000	➢ SPDES Permit No. NYR10T581 • SWPPP Amendment per State Pollution Discharge Elimination System (SPDES) General Permit for Discharges from Construction Activity
New York State Department of State Office of Coastal, Local Government and Community Sustainability Attn: Consistency Review Unit 1 Commerce Plaza 99 Washington Avenue - Suite 1010 Albany, New York 12231	➢ Coastal Zone Consistency Certificate.
New York State Office of General Services Bureau of Land Management 26th Floor, Corning Tower Empire State Plaza Albany, NY 12242 518-474-2195 LandUnderWater@ogs.ny.gov	➢ Application for use of land underwater, pursuant to Article 2 Section 3, Subdivision 2 of the Public Lands Law (Easement for pipeline bridge).

Table II-1
Summary of Possible Required Permits and Approvals

Agency	Permit and/or Approval Required
United States Army Corps of Engineers NY District 26 Federal Plaza New York, NY 10278-0090	Nationwide Permit 12 - Utility Line Activities - A Pre-Construction Notification (PCN) is not required for utility line crossings of less than 500 feet. ➢ Nationwide Permit 15 - U.S. Coast Guard Approved Bridges.
United States Coast Guard First Coast Guard District (dpb) Battery Bldg, Room 301 1 South Street New York, NY 10004 Phone: 212-668-7165 Fax: 212-668-7967 Mr. Chris Bisignano Supervisory Bridge Management Specialist	➢ Pipes or pipelines used to transport gaseous, liquid, liquescent, or slurry substances over navigable waters of the United States are considered to be bridges, not utility lines, and require a permit and/or approval from the U.S. Coast Guard pursuant to Section 9 of the Rivers and Harbors Act of 1899. ➢ Section 10 (Structures) Permit ➢ Possibly a Section 404 (Fill) permit
NYS State Historic Preservation Office (SHPO) Division of Historic Preservation PO box 189 Waterford, NY 12188	Archeological Determination

III. **DESCRIPTION OF THE PROPOSED ACTION (PREFERRED ALTERNATIVE)**

A. Project Overview

The Proposed Action is a revision to the 2013 Amended Site Plan (Exhibit 2a) that had previously been submitted to the Village of Mamaroneck Planning Board on January 29, 2013 for Site Plan review and approval. Due to the existence of certain new information regarding the force main and concerns regarding whether it can service the Club's redevelopment plan, the Applicant proposes to include upgrading the existing sanitary pump station and force main into its proposed upgrade and renovation plans for the Property (Exhibit 2b). At the time of the Scoping for this document, the Proposed Action was based on the Applicant's anticipated replacement of the existing force main in a location generally along its current path across the property located at 519 Alda Road. Placement of the proposed force main across the referenced property is reliant upon obtaining an easement from the property owner. Since the time of Scoping, the Applicant's legal counsel, however, has advised that obtaining such an easement would require extensive litigation that would take several years to complete, and therefore the sewer route set forth in the Proposed Action is not viable at the present time. However, in the event it is determined that none of the alternatives presented in this SDEIS are viable, the Applicant asserts that it would be entitled to an easement by necessity over and through the property at 519 Alda Road since that is the current location of the force main.

The Applicant contends that the Preferred Alternate alignment (Exhibit 3) of the force main along the South Barry Avenue right-of-way to connect to the existing public sewer is preferable and that it could obtain any required easements needed for this alignment. The Applicant will work with the Village to secure an easement within South Barry Avenue, if needed.

B. Regional, Village and Site Location

The MBYC is located at 555 South Barry Avenue in the Village of Mamaroneck (previously defined as the "Property"), which is situated in the southernmost portion of Westchester County, New York. The Village of Mamaroneck is adjacent to the Town of Mamaroneck and the Town of Rye. The site is more specifically located in the southeastern portion of the Village of Mamaroneck, south of Boston Post Road and has direct access from South Barry Avenue (Exhibit 4). The MBYC property is comprised of the section, block and lot designated on the Tax Map of the Village of Mamaroneck as SBL: 4-77-31. The property has approximately 800 feet of frontage facing south on Long Island Sound, ±720-foot frontage facing southwest on Mamaroneck Harbor, and ±880-foot frontage facing northwest on Otter Creek. The ±780-foot northeast site boundary is adjacent to two single-family homes.

C. Description of the Proposed Site Development

The MBYC's 2013 Amended Site Plan (Exhibit 2a) is fully described in the "Mamaroneck Beach and Yacht Club Environmental Narrative, dated February 2013", and the "Mamaroneck Beach and Yacht Club Executive Summary", dated April 2013. Architectural Plans, Site and Civil Engineering Plans and Landscaping Plans described in the Narrative and Executive Summary were included as part of the application and the referenced documents are part of the record. Subsequent to the April 2013 Executive Summary, drawings were amended to address a possible upgrade to the existing sanitary sewer pump station and force main. For purposes of comparison to previous Site Plans, the current proposed Amended Site Plan, which is the subject of this DSEIS and modifies only the upgrade to the sanitary pump station and the alternative force main alignment, is identified as the 2015 Amended Site Plan (Exhibit 3).

In all other respects, the main components of the site plan and development program of the 2015 Amended Site Plan remain unchanged from the 2013 Amended Site Plan. For example, both plans include the Beach Seasonal Residence Building, Great Lawn Seasonal Residence Building, Recreation Building, the Yacht Club/Dockmaster Building and improvements to the Clubhouse. Site supporting amenities such as cabanas, parking, utilities, etc. remain unchanged with the exception of the sanitary sewer system, for which the changes to the sanitary system design are described herein.

The only change the Applicant is proposing is upgrading the existing sanitary pump station and force main which is included in the 2015 Amended Site Plan. The location of the new pump station is proposed between the Great Lawn Residence Building and the existing Manager's House.

The Proposed Action included revising the proposed onsite gravity sewer main as needed to convey onsite sewage from new buildings as well as existing buildings to the new pump station. Under the Proposed Action (Exhibit 2b) beginning at the new pump station, the force main was proposed along an alignment generally the same as the existing force main, which crosses under Otter Creek, traverses residential property at 519 Alda Road and connects to existing Village sanitary manhole #66449 in Alda Road. The construction method proposed to cross under Otter Creek involved trenchless excavation, more particularly by horizontal directional drilling beneath the Creek.

Placement of the proposed force main across the property at 519 Alda Road is contingent upon obtaining an easement from the property owner or confirming the existence of an easement through Court proceedings. The Applicant's legal counsel, however, advises that obtaining such an easement, absent a determination that no alternative location for the force main exists, will require protracted litigation and be extremely costly. Therefore this sewer route in the Proposed Action is not plausible at this time and the Proposed Action should not be pursued.

Since the Proposed Action's alignment through 519 Alda Road is not readily available at this time, the Applicant investigated alternative alignments for the force main as described in Chapter VI, Alternatives of this DSEIS. Based on the studies of the

alternate routes, **the Preferred Alternative is now proposed**. The Applicant's engineer believes that the alternate force main alignment along South Barry Avenue is the most practical alignment and the least environmentally intrusive; and, therefore, has been selected by the Applicant as the Preferred Alternative. The Preferred Alternative (Exhibit 3) will extend the force main from the pump station to and along public lands within the South Barry Avenue right-of-way and will connect to municipal sanitary sewer system at manhole #66476. The installation of the sanitary sewer force main within the right-of-way will be subject to Village approval and shall be installed as required by the Village Engineer. The Village of Mamaroneck will maintain ownership of the infrastructure installed within the public right-of-way in South Barry Avenue. The crossing of Otter Creek is proposed using a pipeline bridge to minimize disturbance of Otter Creek. (Also see DSEIS VI.B.3, Pipeline Bridge Option.) See Chapter V.C, Sanitary Sewer System for an expanded discussion of the sanitary system.

As a result, **the remainder of this DSEIS will focus on the Preferred Alternative** alignment for the force main along South Barry Avenue.

Under the Preferred Alternative, the proposed pump station, force main and gravity sewers will be designed and constructed to current industry standards in accordance with permitting and approval requirements of all regulatory agencies having jurisdiction over the Proposed Action including but not limited to the WCDOH and in coordination with the Village Engineer. Sewers will be designed with slopes equal to or exceeding the minimum design required to provide sufficient scouring velocities, which will enable self-cleansing of the pipes. Gravity sewers having average daily flows of 2500 gpd or greater will be under the jurisdiction of the WCDOH, while all other gravity sewers will be considered service connections and will be under the jurisdiction of the Village of Mamaroneck. The pipes exceeding the 2500 gpd threshold will be determined during the detailed design phase as part of the process to secure final permits.

All onsite gravity sewers serving the existing buildings and those buildings proposed in the 2013 Amended Site Plan would drain to the onsite pump station. For the 2015 Preferred Alternative Action, the existing pump station will be replaced by a new pump station and its new location will be situated adjacent to the parking lot between the existing Managers' House and the proposed Great Lawn Residence building.

The pump station will be designed with redundant safety features including but not limited to the following: dual explosion proof, non-clog submersible wastewater pumps, liquid level measurement and control transducers and low level and high level alarms. In the event of an alarm activation, a telemetry system with auto-dialer will be provided to telephone appropriate emergency personnel. In the event of loss of power, a standby generator will automatically turn on, thereby, maintaining power to the pump station resulting in uninterrupted performance of the pump station. Maintenance and operation protocol of the new system will be established.

All onsite sewers including the existing sanitary pump station and force main are owned by the MBYC. The existing force main that crosses under Otter Creek and traverses the property at 519 Alda Road is believed to be owned by the Club. However a written

easement with respect to the location of the force main on 519 Alda Road is not readily available and it is unknown whether the Applicant would be able to confirm such an easement absent a determination that there is no alternative location for the force main.

Thus, the Applicant believes it is appropriate to relocate the force main. Nevertheless, the new onsite sewers including the pump station and force main on the Property will remain under the ownership of the Club which will also be responsible for its continued maintenance and operation.

The proposed force main will follow an alignment north from the proposed pump station where it will skirt the easterly edge of the existing onsite gravel parking area adjacent to the Manager's House. Once reaching the Club's entrance drive, the alignment will continue through the drive where it will depart from Club property heading northerly along the South Barry Avenue right-of-way (owned by the Village of Mamaroneck). After leaving the Club, the force main is proposed to cross over Otter Creek on a separate pipeline bridge parallel to the South Barry Avenue vehicular bridge. (The Applicant notes that the existing bridge is located within the Village of Mamaroneck right-of-way. The land within the right-of-way, including land underwater, is owned by the Village; however, the bridge is owned and maintained by the Town of Rye.

The proposed pipeline bridge over Otter Creek will be located on the westerly side of the vehicular bridge since more right-of-way is available and the span over Otter Creek on the west side would be narrower than on the east side, thereby reducing construction effort, minimizing pipeline exposure and reducing shoreline disturbance. By traversing over Otter Creek, rather than crossing beneath, disturbance to underwater lands will be minimized or avoided. Disturbance of underwater lands will only take place within tidal waters on the north bank of Otter Creek within the Village right-of-way. The Applicant will apply for and obtain all necessary permits to construct the pipeline bridge and foundations with and over Otter Creek and its tidal wetlands.

Once crossing over Otter Creek, the force main will cross to the east side of South Barry Avenue and continue north within South Barry Avenue right-of-way for approximately 600 feet, where it will connect to the existing municipal sewer system at Manhole #66476. Within that 600' stretch, the force main will be aligned approximately five feet behind existing utility poles in unpaved areas for some 400 feet before reaching the residence at the intersection of Soundview Drive at which point the alignment will cross back into South Barry Avenue to avoid impact to existing vegetation, driveway and water main. The final 200± feet of force main will continue in the approximate center of North Barry Avenue to its connection to municipal Manhole #66476. Connection to the municipal system will be performed in accordance with municipal requirements and in coordination with the Village Engineer. The Applicant will apply for and obtain all necessary permits to construct the pipeline bridge and foundations with and over Otter Creek and its tidal wetlands

The location of the new force main within the right-of-way will be situated to minimize impacts to existing infrastructure. Such considerations include potential impacts to public roadway and private driveway pavement; existing utilities, which include water, gas, storm drainage; overhead electric and telecommunications as well as existing vegetation. The preliminary force main alignment along South Barry Avenue is based on field observation and best available existing mapping. Such mapping includes Google aerial maps, GIS maps from the Westchester County Website which identifies lot lines and rights-of-ways, water system maps from the Westchester Joint Water Works and sanitary sewer system maps provided by Westchester County Department of Environmental Facilities. The location of existing gas can only be approximated based on visual inspection of gas valves. Con Edison indicated that gas system maps are no longer provided to customers/contactors. During the detailed design phase, precise locations of underground utilities will be determined and the proposed location of the force main will be adjusted to account for actual field locations during detailed design. The Applicant notes that once departing from the Club property, the force main will be located in the Village of Mamaroneck public right-of-way. The Applicant will work with the Village to develop an agreement regarding ownership and maintenance responsibility for this force main.

IV. **PURPOSE AND NEED FOR THE PROPOSED ACTION (PREFERRED ALTERNATIVE)**

A. Need for the Proposed Action / Preferred Alternative

The Mamaroneck Beach and Yacht Club (MBYC) was notified on Monday August 12, 2013 that Officials of the Village of Mamaroneck had discovered a sewage leak emanating from the existing force main located in Otter Creek adjacent to the Club. The sewage leak was subsequently confirmed by a dye test performed by Village personnel. The Village of Mamaroneck issued an "Order to Remedy Violation" and a "Failed Inspection" dated August 12, 2013 by the Village of Mamaroneck Fire Inspector. The subject of the Violation/Failed Inspection was related to the sanitary sewer force main failure that was discovered on August 12, 2013.

Immediately upon notification by the Village of Mamaroneck, the Club retained professional staff to investigate and remediate the sewage leak. The leak was located and plugged on Tuesday, August 13, 2013. The repair of the broken and damaged section of the existing force main pipe was performed and completed by Club personnel and professionals on Wednesday August 14, 2013.

The New York State Department of Environmental Conservation (NYSDEC) and the Westchester County Department of Health were also notified of the sewage leak. On August 14, 2014, the NYSDEC issued an Emergency Authorization under Article 25 of the ECL and Section 402 of the Clean Water Act to disturb the tidal wetland and adjacent area for the repair and replacement of the sewer line. A Westchester County Department of Health letter dated August 14, 2013 confirmed that the "…repairs to the sewer line have been completed".

On August 30, 2013, the Village of Mamaroneck Fire Inspector issued a Failed Inspection Notice to the MBYC. Subsequently, the Club authorized further field investigations of the existing sanitary force main including a dye test, TV inspection, pressure test, pump vault visual inspection and evaluation of the existing waste systems from existing buildings. The results of these tests were submitted to the Village of Mamaroneck and are summarized below:

- Dye Test - Monday, September 9, 2013 - A dye test was performed on the sanitary force main. No evidence of dye, air bubbles or any form of sewage discharge was observed in Otter Creek or along the alignment of the existing force main.

- TV Inspection - Tuesday, September 10, 2013 - A TV inspection was performed on the force main. The length of the force main that could be televised was limited due to the ability to push the cable through the pipe due to friction and alignment curvature. A section of existing force main located beneath Otter Creek could not be televised due to the inability to extend the TV cable through the existing horizontal and vertical bends of the force main. Findings within the portion of the force main observed revealed no breaks, intrusions or obstructions.

- Pressure Test - Tuesday, September 10, 2013 - A pressure test was performed on the sanitary force main between the onsite pump station and offsite manhole in Alda Road. The test was performed and the pressure remained constant for the duration of the test indicating no perceptible leaks in the existing force main.

- Pump Station Infiltration - During the pressure test, sources of infiltration at the existing pump station were observed by the Building Inspector and directed to be eliminated/repaired. The existing sources of infiltration were subsequently repaired and eliminated.

- Evaluation of Existing Waste Systems from Existing Buildings - In compliance with the direction of the Village Fire Inspector, the existing waste system was reviewed and/or observed by a Licensed Plumber and a report was submitted to the Village.

The testing results were submitted to the Village of Mamaroneck in a letter from TRC Engineers, Inc. dated September 23, 2013. In that Letter, TRC Engineers, Inc. advised the following:

> *"In response to the "Order to Remedy Violation" and "Failed Inspection" dated 8/12/2013 issued by the Village of Mamaroneck Building Inspector to the Mamaroneck Beach & Yacht Club (MBYC) relating to the condition of the existing pump station and force main, several tests were performed on the existing force main including a dye test, pressure test and a video inspection (copies attached). Based on the results of the tests conducted, the existing force main was determined to be in a serviceable and operating condition and as of the date of the tests conducted does not have any apparent leaks."*

Due to the age of the existing force main, a request for a more permanent ("long-term") solution to prevent future occurrences was discussed with Village Staff. It was then determined that an upgrade of the sewer system would be incorporated into the proposed redevelopment of the Property as indicated in paragraph three of the TRC September 23, 2013 letter (see Appendix). The Applicant's Engineer coordinated with the Village Engineer to develop a line of action that would reduce the likelihood of experiencing a reoccurrence of the force main leak. The options explored included rehabilitating the existing force main under Otter Creek, constructing a new force main under Otter Creek and constructing a new force main over Otter Creek supported by the South Barry Avenue Bridge. After considering the various options and construction methods, the Applicant's engineer recommended, in their December 31, 2013 letter to the Village, installation of a new force main beneath Otter Creek and constructing a new pump station.

This recommendation would maintain the existing force main within the Club Property and replace the force main beneath Otter Creek. The location of the force main with the

Property would go under portions of the proposed Recreation and Great Lawn Seasonal Residence Buildings. Since the buildings would be elevated, the force main would remain accessible for future maintenance, if needed and therefore the Amended Site Plan (Exhibit 2b) could be constructed essentially as designed. (Also see VI.A, No Action Alternative.)

As described in Section III.C, Proposed Site Development, after it was determined by the Applicant's legal team that an easement across 519 Alda Road allowing connection to the existing sewer in Alda Road was not readily available, an alternative alignment along South Barry Road was considered and selected by the Applicant as the "Preferred Alternative" (Exhibit 3).

B. Objectives of the Project Sponsor

The objective of the Applicant is to have a properly operational onsite sanitary sewer system inclusive of the pump station, force main and onsite sewer collection system in the event it proceeds with the redevelopment of the Property. The Applicant notes that the need to study an alternate pumping station/force main infrastructure initially arose as a result of a distinct, one time break in the existing force main that was immediately repaired. New information regarding the need to confirm an easement over the property at 519 Alda Road also necessitated the need to consider other locations for the force main in conjunction with the proposed redevelopment of the Property.

The adopted Scope of the DSEIS, requires the environmental analysis of the replacement of the existing pump station and force main. The Applicant, since the leak, addressed any alleged deficiencies in the existing force main and sewer system has been deemed in proper working order based on testing observed by the County and Village personnel along with the Applicant's engineer (described in DSEIS Chapter IV.A, Need for the Proposed Action).

Thus, the Applicant maintains that it retains the right to keep the existing pumping station and force main in operation until construction of the new pump station and force main in Phase III of construction is initiated. (Refer to Section V.E, Construction & Table V-10.)

C. Public Benefits of the Preferred Alternative

The Preferred Alternative will have the following public benefits:

1. New infrastructure will increase the life expectancy of the sewer system,
2. The new pump station location will be protected from extreme flood events,
3. The pipeline bridge will be protected from extreme flood events,
4. The pipeline bridge will allow rapid visual inspection of the force main crossing over Otter Creek,
5. The South Barry Avenue alignment will provide accessibility of the force main for future maintenance, if required, and
6. The new pump station will result in a moderate energy savings.

V. **ENVIRONMENTAL ANALYSIS**

A. Visual Character

1. Existing Conditions

a. The pump station will be located immediately north of the Great Lawn Seasonal Residence and south of the existing Manager's House. This location is east of the existing gravel and grass westerly parking area. The existing grade in the area of the pump station varies slightly but remains essentially flat at around elevation 11. The existing landscape in this area is primarily grassy with some low plantings. This area is within a 100-year flood zone (AE14) (see Exhibit 3a).

b. At the location of the proposed force main crossing of Otter Creek, there is an existing vehicular bridge. Otter Creek, at the location of the proposed crossing is approximately 15 to 40 feet wide depending on tidal fluctuation.

2. Potential Impacts

a. The pump station will be located immediately west of the proposed aerial fire truck/apparatus access area adjacent to the Great Lawn Seasonal Residence. The proposed site layout at this area is unchanged from the 2010, 2013 and current 2015 Site Plans. The impact of the pump station at this location would be the same for each of these Site Plans.

b. To comply with flood zone regulations, the pump station top slab will be located at a finished elevation of 16, which is two (2) feet above the 100-year flood elevation (minimum one (1) foot required). The pump station will be located outside of the wetland buffer due to it's location and elevation. , The pump station will be elevated approximately five (5) feet above the existing grade. Existing grade adjacent to the pump station will be adjusted to blend with the pump station elevation.

c. Due to the elevation of the pump station and height of the enclosing fence, minor onsite visual impacts will result. Some views of Otter Creek from the Great Lawn may be limited by installation of the pump station. However, because these views also encompass significant parking areas they are not considered prime views. The station will not block prime view corridors to Otter Creek and Mamaroneck Harbor from the Manager's House and Great Lawn Seasonal Residence.

d. Potential offsite visual impacts from Otter Creek and residential properties on the opposite shore of Otter Creek have been evaluated. At its closest point, the station is set back from Otter Creek approximately 130 feet. At its closest point, the distance from the station to the nearest residence at 519 Alda Road exceeds 300 feet. Visual impacts to observers in either location will be minimal, primarily

due to distance. When seen in context with the existing two-story Manager's House and the approved three-story Great Lawn Seasonal Residence, the addition of a nominal six-foot high screened structure will have a *de minimus* impact on offsite views. (See Exhibit 5, Views of Proposed Pump Station Area).

e. The force main crossing over Otter Creek will be provided by constructing a new "pipeline bridge" adjacent to the existing South Barry Avenue vehicular bridge. The new pipeline bridge structure will be on the Harbor side (west) of the vehicular bridge and will be offset by around eight to ten feet to provide adequate clearance from the vehicular bridge structure. The new bridge will consist of a 12-inch diameter pipe supported by four concrete pier/columns (two on each side of Otter Creek). The 4-inch force main will be placed within the 12-inch insulated pipe, which will protect the force main from the elements. In compliance with the "10-State Standards", the portion of the pipeline over Otter Creek will be elevated above the 50-year storm, which is at approximate elevation 10.7 feet. After crossing Otter Creek, the pipeline will drop in vertical alignment to approximately 4-feet below grade. The length of the exposed pipeline will be approximately 70 feet. (Also, refer to DSEIS VI.B, Pipeline Bridge Option.)

   The Applicant believes that the "Pipeline Bridge Alternative" will have minimal visual impact when compared to the exiting conditions. (See Exhibits 6a, 6b and 7, Views of South Barry Avenue and Pipeline Bridge. Exhibit 8 illustrates the plan and sectional views of the pipeline bridge.) The viewers of the pipeline bridge from adjoining residences and users of Otter Creek will see a 12-inch diameter pipeline against the background of the existing road bridge and its safety railing. The four column/piers will be approximately two feet square (final design dimensions to be determined during final structural design).

3. Proposed Mitigation

   a. To mitigate onsite impacts, the pump station has been designed to be above the lowest elevation required by flood regulations. The station will be enclosed by a six foot high fence that will completely screen the pump station. The proposed fence will be fabricated from solid wood posts, horizontal rails, vertical slats, and top cap to match the character of the existing fence surrounding the rear yard of the Manager's House. Due to the location of the pump station, a portion of the existing fence surrounding the rear yard of the Manager's House will be reconfigured. The new fence will be finished and painted a neutral color to match the existing fence.

   b. To mitigate impacts of views from Otter Creek and adjoining properties, the pump station will be screened by the fence described above as well as by a landscape screen consisting of a mix of evergreen and deciduous plantings. Evergreen plantings include three Eastern Red Cedars and deciduous trees include a Sycamore and five Beach Plums. The proposed fence with the plantings in the foreground will block the view of the pump station as well as soften the view

from Creek side residents. (See Exhibit 5, Views of Proposed Pump Station Area and Exhibit 9, Proposed Landscape Plan.)

c. To mitigate visual impact of the new pipeline bridge and force main, the structure and pipe will be constructed with or painted natural earth tones to blend in with the existing background. The four column/piers will be gray, blending with the existing rubble walls. The pipeline proper can be painted a color (gray) that will blend with the background (perhaps gray or beige). The selected color will be coordinated with and approved by the Village Planning Board. The pipeline will be aligned against the background of the existing bridge railing, thereby blending into the linear background. (See Exhibits 6, 7 and 8 for Views of South Barry Avenue Bridge and Pipeline Bridge).

d. When compared to the 2010 and 2013 Site Plans, the new pump station and Otter Creek pipeline bridge were not proposed. If it were proposed for each of the previous site plans, the mitigation measures would be the same.

B. Natural Features

1. Existing Conditions

a. Soils, Topography and Slopes

Soils

A review of the USDA Natural Resource Conservation Center Web Soil Survey indicates that there are three (3) soil types present along the routing of the preferred force main alignment including CrC: Charlton-Chatfield complex, rolling, very rocky; Ip: Ipswich mucky peat; and UIC: Urban Land Charlton Complex, rolling, very rocky. Descriptions of these soil types are provided in Appendix B and are summarized as follows:

CrC-Charlton-Chatfield Complex, Rolling, Very Rocky, 2 to 15 Percent Slopes, Well Drained: This unit consists of the very deep and moderately deep, well drained and somewhat excessively drained Chatfield soil and the well-drained Charlton soil. It is on hilltops and hillsides that are underlain by highly folded bedrock. Many areas are used for community development. Other areas are wooded or are used for pasture.

Ipswich mucky peat (Ip) Nearly Level Very Deep and Very Poorly Drained: This unit consists of a nearly level, very deep and very poorly drained soil found in tidal marshes along the Long Island Sound. It is subject to daily tidal flooding. Slopes range from 0 to 2 percent but are dominantly less than 1 percent. Typical soil profiles are described as follows: the surface layer is 0 to 8 inches, very dark gray mucky peat. The subsurface layers are 8 to 20 inches, very dark gray muck; 20 to 33 inches, very dark gray mucky peat. The bottom layer is 33 to 60 inches,

very dark grayish brown mucky peat. Soil properties include a water table at the surface to 1 foot above throughout the year; moderate to rapid permeability; very slow or ponded runoff; a depth to bedrock of more than 80 inches; and frequent or very brief periods of flooding throughout the year.

UlC-Urban Land-Charlton-Chatfield Complex, Rolling, Very Rocky, 2 to 15 Percent Slopes, Well Drained to Somewhat Excessively Drained: This unit consists of urban land; the very deep, well drained Charlton soil; and the moderately deep, well drained or somewhat excessively drained Charlton soil. It is on ridges and hilltops that are underlain by folded bedrock. This unit is used mainly for urban development. The open areas are lawns, gardens, or vacant and wooded land between structures.

The following Table V-1 summarizes the characteristics of each of the soil types discussed above.

Table V-1
Table of Soil Characteristics

Map Unit	Soil Names	Water Table (ft)	Restrictive Rock Layer	Typical Profile	Erosion Hazard
CrC	Chatfield-Charlton Complex, rolling, very rocky Charlton soil properties	More than 80”	More than 80”	0 to 8 inches: Loam 8 to 24 inches: Sandy loam 24 to 60 inches: Sandy loam	Moderate
	Chatfield-Charlton Complex, rolling, very rocky Chatfield soil properties	More than 80”	20” to 40”	0 to 7 inches: Loam 7 to 24 inches: Flaggy silt loam 24 to 28 inches: Unweathered bedrock	Moderate
Ip	Ipswich mucky peat	About 0 inches	More than 80”	0 to 8 inches: Mucky peat 8 to 20 inches: Muck 20 to 60 inches: Mucky peat	Moderate
UIC	Urban Land Charlton Complex, rolling, very rocky Charlton soil properties	More than 80”	More than 80”	0 to 8 inches: Loam 8 to 24 inches: Sandy loam 24 to 60 inches: Sandy loam	Severe
	Chatfield-Charlton Complex, rolling, very rocky Chatfield soil properties	More than 80”	20” to 40”	0 to 7 inches: Loam 7 to 24 inches: Flaggy silt loam 24 to 28 inches: Unweathered bedrock	Severe
Source: Natural Resource Conservation Center Web Soil Survey					

Topography

The elevations within the limits of the pump station and force main alignment vary from sea level to approximately elevation 36. The lowest area is the center of the Otter Creek channel with a bottom elevation of approximately plus or minus -6 feet. All elevations are in the North America Vertical Datum (NAVD) 1988.

There are several existing retaining walls along the limits of the force main alignment. These walls are located along the perimeter of the Otter Creek stream corridor and appear to be constructed as dry lay or mortared stone walls. There are no apparent visual deficiencies in the retaining walls and they appear to be in relatively good condition. The retaining wall at 519 Alda Road (Lot 154.75-1-9) was not accessible and was not examined during the preparation of the DSEIS; and therefore, no condition assessment was made. These assessments are visual only and should not be construed as an assessment of their structural condition or stability.

The preferred force main alignment is within the South Barry Avenue right-of-way and topographic features include the road bed, adjacent vegetated shoulder area and existing bridge as well as the adjacent Otter Creek.

Slopes

A review of the existing topography was performed along the proposed force main alignment for the slope categories of 0 to 10%, 10 to 15% and 15% and up. In general, the existing slopes along the alignment of the proposed force main will be in the 0 to 10% range.

b. Vegetation and Wildlife

Vegetative communities in the vicinity of the proposed work area are limited by the presence of South Barry Avenue, its shoulder area, the landscaped areas adjacent to South Barry Avenue, and the South Barry Avenue Bridge over Otter Creek. Vegetation along the proposed pipe route in the South Barry Avenue right-of-way consists of a mix of native and non-native invasive vegetation.

Tidal wetlands as defined by the New York State Department of Environmental Conservation (DEC) exist solely in the area between the banks of Otter Creek. Vegetated tidal wetlands in the project area are limited to a small area (approximately four square feet) adjacent to the northwest corner of the bridge. All other areas in proximity to the Otter Creek Bridge do not support tidal wetland vegetation. The sole vegetated tidal wetland area supports a small stand of intertidal Saltmarsh cordgrass (Spartina alterniuflora). However, erosion is causing the decline in its presence. Immediately landward of the intertidal vegetation is a thicket of climbing rose that appears to be a hybrid species. Rock riprap on both embankments of the eastern side of the bridge and a functional seawall along the southwest shoreline of the bridge preclude establishment or survival of tidal vegetation.

Wildlife likely to inhabit the uplands and tidal area adjacent to the proposed work area include species such as eastern gray (or grey) squirrel (Sciurus carolinensis), eastern cottontail (Sylvilagus floridanus), muskrat (Ondatra zibethicus), white-tail

deer (Odocoileus virginianus), mallard ducks (Anas platyrhynchos) and Canada goose (Branta canadensis). Coordination with NY State Department of Environmental Conservation (DEC) and review of the New York State and U.S. Government listed rare, endangered, threatened or species of special concern that occur in the State failed to reveal the occurrence of any of those species in the vicinity of the project area. This was verified by reviewing the potentially present species that might utilize the waters of Otter Creek and the presence of their habitat within that system. The Protected Species Division of the National Marine Fisheries Service, which is charged with managing listed aquatic species reports that although four sea turtle species (loggerhead, green, Kemp's ridley and leatherback. Along with Shortnose Sturgeon (Acipenser brevirostrum) and Atlantic Sturgeon and Acipenser (Oxyrinchus oxyrinchus) can be found in western Long Island Sound they are unlikely to frequent Otter Creek due to the lack of habitat. Additionally, they report that sea turtles avoid areas with human activity. This avoidance behavior suggests that their use of Mamaroneck Harbor, Otter Creek, and the Preserve would not be anticipated. Individuals seeking to access the mid-reach of Otter Creek or the preserve beyond would have to pass through the harbor and enter Otter Creek (passing under the South Barry Avenue Bridge to reach the Preserve). Studies of sea turtle use of western Long Island Sound have revealed their avoidance behavior. There has been no observed presence in the waters of Mamaroneck Harbor. Similarly the two sturgeon species tend to be found father east or west in the larger tidal rivers of Connecticut or the Hudson River in New York. Fortunately, the proposed work area for a sewer line crossing is in close proximity to the Otter Creek Bridge and would not alter the prevailing exclusionary nature of the bridge for listed species. Although there is no verified record of a siting, diamondback terrapin (Malaclemys terrapin) might seek the tidal wetland and adjacent habitat of the inner Otter Creek Preserve. Diamondback terrapin is relatively rare in Long Island Sound,

The 1974 NYS DEC Tidal Wetland map of the lower Otter Creek area (http://twi.ligis.org/index2/606_532.jpg, map sheet 606-532) (Exhibit 10) is reflective of the seawall on the southwest side of the Otter Creek Bridge, however it does not depict the changes to the east side of the area created when the bridge was replaced. The shoreline changes include riprap along both eastern shorelines. The Village does not appear to have a definitive wetland vegetation map of the site. The Federal Government Tidal Waters are defined by the type of regulatory activity being contemplated. As the proposed sanitary force main alternatives are covered under Section 10 of the U.S. Rivers and Harbors Act of 1899 the limits of regulatory control are the current mean high tide line (see Exhibit 8a) which, as a result of sea level rise, is subject to correction according to the current NOAA tidal epoch data. The US Army Corps of Engineers does not produce or maintain tidal wetlands maps. They rely on site inspection and, when needed, a wetland delineation. Since the proposed sewer line options are so limited in their encroachment to Waters of the United States, they are generally authorized under Nationwide Permit No. 12. No wetland delineation was undertaken. Site

inspections by members of the project team were performed during visits and assessments coordinated during the planning and SEIS development.

There are no vegetated tidal wetlands that will be adversely impacted by the proposed force main options currently under consideration.

c. Wetlands & Streams

Otter Creek is a tidal waterway carrying Long Island Sound saline water into the Otter Creek preserve on flooding tides and draining the preserve of both fresh and saltwater during the ebbing process. Much of the preserve's open water area is dewatered during the ebbing phase. In the vicinity of the force main installation, a residual (thalweg) channel will remain functional even at the lowest tidal stands as freshwater drains from the preserve area.

As reported above, the regulated wetlands in proximity to South Barry Avenue include the rock riprapped shoreline east of the Otter Creek Bridge and the pocket of vegetated wetlands measuring approximately four square feet situated adjacent to the stormwater outfall in the northwest corner of the bridge abutment. Beyond those areas, uplands dominate the site as the result of the seawall or land elevation. The existing functions and values of the area within the proposed project area are primarily related to the tidal exchange waters and the unstable creek bed.

The Creek bed instability is caused by the flow restriction created by the South Barry Avenue Bridge. The flow restriction can be observed during a tidal exchange. Water flow is constricted during inflow as the result of the tidal prism and discharge from the extensive area where tidal flooding occurs upstream from the bridge. The bridge's restriction alters the water velocity causing erosion and deposition depending on the stage of each tidal cycle. As a result of those flow characteristics along with the associated variations in the salt content of the flow, the project area does not provide significant ecological functions and values for aquatic species moving through the area. There is virtually no benthic fauna within Otter Creek at the project site. Residence by motile as well as non-motile species is severely limited.

The current SEIS contains a NYS DEC Tidal Wetlands designation map which utilizes an aerial photograph. The designation lines were field verified by a wetland biologist during siting evaluations used to describe the potential crossing alignments and impacts of structures currently influencing water flows at the site. The Federal Government relies on wetland mappings produced by the US Fish & Wildlife Service under its National Wetland Inventory. As of their 2014 postings, they had classified the crossing area as a freshwater pond. That classification remains in place today.

d. Otter Creek Critical Environmental Area

South Barry Avenue forms a portion of the western boundary of the Otter Creek Preserve. It is designated a Long Island Sound Critical Environmental Area (CEA) and Geologic Area of Particular Concern (GAPC) by the NY State Department of Environmental Conservation. The CEA delineation mapping by NYS DEC is attached (Exhibit 11). The delineated area extends from the mouth of Otter Creek to a line approximately three quarters of the distance across the upper Otter Creek water retention area. The Village of Mamaroneck has assigned the creek a similar CEA designation under Chapter 168 of the Village Code.

2. Potential Impacts

a. Soils, Topography and Slopes

Soils, Topography and Slopes

The proposed force main will have limited impact on soils, topography and slopes. Installation of the pump station will require excavation of approximately 500 square feet to install the station, mainly below grade. After installation, the station will be backfilled. Finished topography and slope will blend into the adjacent existing and proposed finished grade.

Installation of the force main within the site as well as within the South Barry Avenue right-of-way will require trench excavation, placement of the force main and backfilling to existing grade. Where pavement or landscaping will be disturbed, the surface will be restored back to existing conditions.

Depth of rock (restrictive soil layer) along the alignment of the proposed force main, according to the Westchester County Soils Survey and the Natural Resources Conservation Service (Table V-1), is generally anticipated to be between 20 and 80 inches. However, based on field observation, surface bedrock along South Barry Avenue was observed. The alignment of the force main was adjusted to avoid areas where the presence of bedrock was likely. Where rock may be encountered within pipe trenches, however, it will be excavated to provide the minimum depth of cover over the pipe. Detailed subsurface investigation will be performed during detailed design phase of the Project to assist the Applicant's Engineer with adjusting the final alignment of the force main, if necessary to avoid rock.

Construction of the pipe bridge that will cross over Otter Creek will consist of excavation for bridge piers on each side of the creek (Exhibits 8a and 8b). The two piers/columns on the west (residence) side of the Creek will be placed at the edge of the waterway, while the two eastern (MBYC side) piers/columns will be placed in upland areas adjacent to the creek. Should bedrock be encountered in the locations of the bridge piers/columns, the foundations will be anchored to the

bedrock. After excavation and installation of the piers/columns, the excavated area will be backfilled and restored to existing condition. A pipeline bridge will be constructed to carry the proposed force main over the creek, thereby avoiding excavation within Otter Creek. Thus this impact will be temporary in nature and only during construction. Excavated material be used for backfill or will be removed from the site and disposed of at an approved landfill or delivered to another construction site to be used as fill.

b. Wetlands & Streams

Selecting a crossing site in close proximity to the South Barry Avenue Bridge utilizes the existing environmental conditions created by the presence of the bridge and the shoreline erosion control measures installed to protect that structure. By using a pipeline bridge, it is possible to limit impacts to excavation of the piers/columns and therefore avoid significant adverse environmental impacts to the tidal wetlands of the State of New York.

Because of the limited width of Otter Creek at the proposed crossing site (approximately twenty-seven feet) and the ability of the construction methodology to limit work to a small area, environmental impact will be minor in nature and extent and of limited duration. For instance, the pipe bridge alternative requires the installation of two bridge support units (piers/columns) at the edge of the waterway. Two other supports will be in uplands on the opposite side of the creek. The need for these supports is driven by the need to provide sufficient support for the actual pipe bridge, its sewer line, and contents. The preliminary design calls for the placement to be near the sides of Otter Creek with an air gap larger than currently provided by the existing bridge and associated waterway. This design avoids any restriction on small watercraft passage through the area. Because the supports will be freestanding, flow patterns are not anticipated to change thereby no alteration of the circulation patterns currently functioning around the existing bridge are expected. Finally, because the pipe bridge structure will be carried well above the small tidal wetland vegetation patch on the northwest side of the bridge it will not be further degraded.

It is anticipated that both State and Federal authorization will be needed to advance the sewer line replacement project. The State of New York will require a tidal wetlands and possibly a water quality authorization along with a Coastal Zone Consistency Certificate from the NY State Department of State. The USACE will require a section 10 (Structures) permit and possibly a Section 404 (Fill) permit. The USACE regulatory requirements could be waived should the US Coast Guard determine that the proposed structure is a bridge as defined under their regulatory authority. However, because the project is the replacement of an existing sewer line, both regulatory groups have procedures that facilitate the regulatory process. Those procedures will be pursued.

In no case will wetland functions be altered by the proposed action in the Preferred Alternative and regardless of which alternative is ultimately approved.

c. Vegetation and Wildlife

Two trees within the right-of-way along the South Barry Avenue force main route may be impacted by construction, an existing Catalpa tree (approximately 18" in diameter) and a Silver maple (approximately 20" in diameter). There are no other anticipated significant adverse environmental impacts to vegetation and **wildlife associated with the construction of the Mamaroneck Beach and Yacht Club pump station or sewer force main. Similarly, there are no anticipated significant adverse impacts to vegetation and wildlife associated with the preferred pipeline bridge crossing of Otter Creek. Any potential impacts to Otter Creek would be minor and short term as they would be construction related. Once the proposed sewer system has been installed, the system becomes a passive presence.**

d. Comparison to the 2010 and 2013 Amended Site Plans

The Preferred Alternative (2015 Amended Site Plan) proposes to construct additional components, namely gravity sewer, pump station, force main and pipeline bridge; when compared to the 2010 and 2013 Site Plans and, additional impacts will result; however the impacts to natural features will be mainly construction related, minor in extent and temporary.

The Preferred Alternative, will require more soil disturbance than that disturbed for the 2010 and 2013 Amended Site Plans. No permanent changes to topography or slopes will result. Total additional soil disturbance associated with construction includes the following:

- New force main (1300 linear feet, 3900 square feet) (temporary)
- New pump station (500 square feet) (permanent)
- Pipeline Bridge piers (100 square feet) (permanent)
- Additional gravity sewer (700 linear feet, 2100 square feet) (temporary)
- Total disturbed area approximately 6,000 square feet (temporary)
- Total disturbed area approximately 600 square feet (permanent)

Approximately 50 square feet of wetlands/wetland vegetation,will be disturbed by the two piers/columns that will be constructed on the north side of Otter Creek.Within the 50 square feet of disturbance, approximately 10 square feet within the Otter Creek waterway will be permanently displaced for construction (See Exhibits 8a and 8b)Additional construction related disturbance adjacent to Otter Creek will result from construction equipment, however, once again the impacts will be temporary.

3. Mitigation Measures

a. Stormwater General Permit Coverage

General Permit Coverage (SPDES PERMIT NO. NYR10T581)

Since the submission and acceptance of the SWPPP, the NYSDEC has issued three (3) renewals to the SPDES General Permit, as further described below.

General Permit GP-0-08-001
Effective May 1, 2008, the New York State Department of Environmental Conservation (NYSDEC) State Pollution Discharge Elimination System (SPDES) for Discharges from Construction Activity, General Permit No. GP-02-01 (General Permit) was replaced by the New York State Department of Environmental Conservation (NYSDEC) State Pollution Discharge Elimination System (SPDES) for Discharges from Construction Activity, General Permit No. GP-0-08-001 (General Permit).

In accordance with Part II.D.1 of the General Permit No. GP-0-08-001, "Upon renewal of SPDES General Permit for Stormwater Discharges from Construction Activity (Permit No. GP-02-01), an owner or operator of a construction activity with coverage under GP-02-01, as of the effective date of GP-0-08-001, shall be permitted to discharge in accordance with GP-0-08-001 unless otherwise notified by the Department."

General Permit GP-0-10-001

Effective January 29, 2010, the New York State Department of Environmental Conservation (NYSDEC) State Pollution Discharge Elimination System (SPDES) for Discharges from Construction Activity, General Permit No. GP-0-08-001 (General Permit) was replaced by the New York State Department of Environmental Conservation (NYSDEC) State Pollution Discharge Elimination System (SPDES) for Discharges from Construction Activity, General Permit No. GP-0-10-001 (General Permit). The General Permit expired on January 28, 2015.

In accordance with Part II.D.1 of the General Permit No. GP-0-10-001 "Upon renewal of SPDES General Permit for Stormwater Discharges from Construction Activity (Permit No. GP-0-08-001), an owner or operator of construction activity with coverage under GP-0-08-001, as of the effective date of GP-0-10-001, shall be authorized to discharge in accordance with GP-0-10-001 unless otherwise notified by the Department."

General Permit GP-0-15-002

Effective January 29, 2015, the New York State Department of Environmental Conservation (NYSDEC) State Pollution Discharge Elimination System (SPDES) for Discharges from Construction Activity, General Permit No. GP-0-10-001 (General Permit) was replaced by the New York State Department of Environmental Conservation (NYSDEC) State Pollution Discharge Elimination System (SPDES) for Discharges from Construction Activity, General Permit No. GP-0-15-002 (General Permit). The General Permit will expire on January 28, 2020.

In accordance with Part II.D.1 of the General Permit No. GP-0-15-002 "Upon renewal of SPDES General Permit for Stormwater Discharges from Construction Activity (Permit No. GP-0-10-001), an owner or operator of a construction activity with coverage under GP-0-10-001, as of the effective date of GP-0-15-002, shall be authorized to discharge in accordance with GP-0-15-002, unless otherwise notified by the Department." and "An owner or operator may continue to implement the technical/design components of the post-construction stormwater management controls provided that such design was done in conformance with the technical standards in place at the time of initial project authorization. However, they must comply with the other, non-design provisions of GP-0-15-002."

SWPPP Amendment

In accordance with the provisions of the General Permit, a SWPPP Amendment will be provided to address the changes in permit coverage and the construction of the pump station, force main and sanitary sewers. A draft SWPPP Amendment has been prepared and is included in EIS Appendix B2. The SWPPP will be finalized during the detailed design phase of the Project and will be submitted to the Village Engineer for review and acceptance prior to the start of construction. The SWPPP will address the net increase in impervious surface area needed to construct the proposed pump station; the method by which stormwater will be managed; and the required soil erosion and sediment control measures that will be utilized during the construction of the proposed force main.

Construction of the proposed pump station will result in a net increase in impervious surface coverage of approximately 500 square feet (0.011 acres). Storm water quality from the pump station pad will be managed through the use of an infiltration trench. The infiltration trench will be sized to accommodate the required water quality volume as described in Chapter 4 of the DEC Design Manual. The required water quality volume was determined by the following equation.

$WQ_v = (P)\ (Rv)\ (A) /\ 12$

Where:

WQ_v = water quality volume (in acre-feet)

P = 90% Rainfall Event Number (see Figure 4.1, DEC Design Manual)

Rv = 0.05 + 0.009 (I), where I is the percent of impervious cover
A = site area in acres (onsite)

The value of the 90% Rainfall Event (P) for the portion of Westchester County where the Project is located is 1.5 inches. Based on the net increase in impervious surface coverage, the required water quality volume for the pump station pad will be 57 cubic feet. One (1) infiltration trench will be constructed parallel to each of the long sides of the pump station pad. Each infiltration trench will have a length of 30 feet, a width of 1'-3", and a depth of 2'-0". The volume provided in each infiltration trench will be 30 cubic feet with a total volume provide of 60 cubic feet. Therefore, the water quality volume provided is greater than the volume required.

The SWPPP Amendment also includes the methods required to manage the potential for soil erosion and sedimentation as described following.

b. Soils, Topography and Slopes

Since impacts to soil will be minimal based on limited excavation and backfill, mitigation measures will be temporary in nature as related to construction. Temporary erosion control measures will be implemented in accordance with the Village of Mamaroneck and New York Standards and Specifications for Erosion and Sediment Control, dated August 2005 as well as the SWPPP Amendment These temporary soil erosion and sediment control measures include but are not limited to silt fence; soil stockpiling; dust control; inlet protection; excavation dewatering; street sweeping; and turbidity curtains. Following is a description of such mitigation measures.

Silt Fencing: Silt fence will be installed at the pump station excavation site and will consist of standard strength filter fabric with wire mesh reinforcement (or extra strength synthetic filter fabric) secured to supporting posts and entrenched at the base. The fence will be three feet high; with the wire fence reinforcement constructed of a minimum 14.5-gauge galvanized steel wire and a minimum mesh spacing of six inches. Fences will be secured in place by galvanized steel or wood posts set at six feet on-center. The filter fabric will be stapled to the upgradient face of each fence. The purpose of silt fences is to intercept and detain sediment contained in sheet overland runoff from disturbed areas of limited extent. In addition, the silt fencing will physically delineate the limit of work on the down slope side of work areas.

Soil Stockpiling: The stockpile will be located away from sensitive vegetation or specimen trees and on a dry level area and shall comply with the following:

- All stockpiles shall be protected using a perimeter dike of silt fence sediment barriers to prevent sediment runoff. This applies to all stockpiles remaining in place for more than two weeks.

- Stockpile side slopes shall not exceed 2 horizontal to 1 vertical (2:1).
- Temporary seeding or covering of stockpiles shall be completed within two weeks of formation.

Dust Control: Dust control would be accomplished through the use of vegetative cover, mulch, spray adhesive, sprinkling or barriers. Water would be applied by sprinkler or water truck as necessary during grading operations to minimize sediment transport and maintain acceptable air quality conditions. Repetitive treatments will be done as needed until grades are paved or stabilized with vegetation.

Inlet Protection (Catch Basin Filters): Temporary catch basin filters will be utilized to prevent the deposition of sediment into the storm sewer system prior to the stabilization of exposed areas with vegetation or pavement.

- Filters will be placed around each catch basin inlet prior to paving or stabilization with vegetation.
- Sediment shall be removed from the filters when sediment has accumulated to 50 percent of the filter's original height.

Excavation Dewatering: Sump pit(s) would be constructed where water will collect in utility trenches during the excavation phase of construction. The sump pit(s) shall be constructed of a perforated vertical standpipe placed in the center of the pit to collect filtered water. The vertical standpipe shall be wrapped in a filter cloth (Mirafi 100X, Poly Filter GB, or a filter cloth with an equivalent sieve size between 40 and 80). It is recommended that ¼ to ½ inch hardware cloth be wrapped around and secured to the standpipe prior to attaching the filter cloth.

The vertical standpipe assembly shall be placed on a 12 inch layer of 2 inch aggregate. After installing the standpipe, the pit shall be backfilled with 2 inch aggregate. The standpipe shall project 12 to 18 inches above grade. The number of sump pits and locations shall be determined by the contractor.

Water is then pumped from the center of the standpipe to a suitable designed sediment trap, sediment basin, or stabilized area, such as a filter strip. If a sediment trap or portable sediment tank is used, the tank or trap shall have a minimum volume of the 16 times the pump discharge rate.

Street Sweeping: Street Sweeping is considered a good housekeeping technique. Dry street sweeping would be required during all trench excavations within paved roads and parking areas to remove sediments and other contaminants directly from the paved surfaces. Street sweeping will occur daily and before forecasted storm events. All materials collected during street sweeping will be disposed of at an approved off-site location.

Turbidity Curtains: A turbidity curtain should be used when construction activity might cause re-suspension of sediment within a waterbody or along its shoreline. Curtains are used in calm or slow moving water areas. Turbidity curtains can not to be used across flowing watercourses. A turbidity curtain will therefore be used around the pier excavation site.

The area of proposed installation of the curtain shall be inspected for obstacles and impediments that could damage the curtain or impair its effectiveness to retain sediment. All materials shall be removed so they cannot enter the waterbody. Shallow installations can be made by securing the curtain by staking rather than using a flotation system. Supplemental anchors of the turbidity curtain toe shall be used, as needed, depending on water surface disturbances such as boats and wave action by winds.
The turbidity curtain shall be inspected daily and repaired or replaced immediately. It is not normally necessary to remove sediment deposited behind the curtain; but, when necessary, removal is usually done by hand prior to removal of the barrier. All removed silt will be removed from the site. The barrier shall be removed by carefully pulling it toward the construction site to minimize the release of attached sediment. Any floating construction or natural debris shall be immediately removed to prevent damage to the curtain. If the curtain is oriented in a manner that faces the prevailing winds, frequent checks of the anchorage shall be made.

Trench excavation and backfilling will be performed such that trenches will be backfilled daily. No open trenches will be allowed overnight. Excavated soil will be removed daily to prevent sedimentation to nearby wetlands.

c. Vegetation and Wildlife
Construction of the pump station and force main will require minimal vegetated land disturbance associated only with excavation of the pump station pit, trench excavation for the force main and excavation for pipe bridge piers/columns. Since disturbance of existing vegetation and wildlife habitat will be minor and not significant, a mitigation plan would not be warranted. The proposed alignment of the force main along South Barry Avenue is designed to avoid significant impacts to existing trees and landscape features to the greatest extent practicable. The root systems of two trees (18-inch catalpa and 20-inch silver maple) located within or adjacent to the South Barry Avenue right-of-way may be impacted. Mitigation is proposed in the form of four Beach Plum trees (2" caliper) to be planted in the vicinity of the existing trees. Precise locations will be determined in the field to the satisfaction of the Planning Board. Where grassed areas along the right-of-way area impacted by trench excavation, they will be replanted. Prior to construction, the alignment of the force main will be staked and reviewed in the field with the Village Engineer to determine potential impact to vegetation. Alignment, where practical, will be adjusted to avoid impact to significant vegetation.
Using the pipe bridge alternative will permanently displace approximately ten

(10) square feet of tidal wetland habitat in an area immediately adjacent to the South Barry Avenue to construct two piers. It is noted that the existing embankment is rip rap with little vegetation that would be disturbed during construction.. Horizontal Directional Drilling will have no impact on tidal wetlands. Because of the limited habitat value of the area (subject to alternating deposition and erosive flow patterns) habitat replacement will not be necessary. Construction adjacent to Otter Creek, consisting of the pipeline bridge piers/columns, will be sited, to the greatest extent practicable, in locations that will minimize disturbance to Otter Creek vegetation and wildlife. Protection of significant vegetation and/or individual trees during construction will be provided. Any potential impacts associated with crossing Otter Creek are expected to be minimal in extent and duration. Best Management Practices (BMPs) applicable to the specific situation will be employed in line with the authorized SWPPP. No significant adverse impact to vegetation or wildlife is anticipated.

d. Wetlands and Streams

Under the Preferred Action, construction of the force main will utilize a pipe bridge extending over Otter Creek, thereby minimizing direct disturbance to Otter Creek and adjacent tidal wetlands. Impacts to adjacent tidal wetlands will be temporary and limited to the construction period. Because of the minimal amount of tidal wetlands and associated tidal wetland vegetation in the project area, wetlands mitigation will be limited to soil erosion management and vegetation replacement in kind within disturbed areas. Installation and maintenance of sediment and erosion control practices will prevent impact to Otter Creek to the greatest extent practicable. The Applicant's natural science consultant believes that due to the minimal direct and indirect impacts, further mitigation is not warranted.

e. Comparison to the 2010 and 2013 Amended Site Plans

Since the Preferred Alternative involves additional construction components (listed in DSEIS V.B.2.d), namely the pump station, force main, pipeline bridge and gravity sewer; when compared to the 2010 and 2013 Amended Site Plans, additional mitigation measures under the Preferred Action will be required. Additional mitigation measures proposed under the Preferred Alternative that were not necessary under the 2010 and 2013 Amended Site Plans include the following:

- Infiltration Trench (60 linear feet) adjacent to the proposed pump station,
- Replacement of vegetation in-kind that will be disturbed from trench excavation for the force main, pump station, pipeline bridge pier/columns, and gravity sewer,
- Minor revision to the implementation of temporary sediment and erosion control measures.

C. Sanitary Sewer System

1. Existing Conditions

Existing Sanitary Sewers

The existing onsite sewer system includes 4-inch and 6-inch building laterals that connect to existing 8-inch gravity sewers that drain to the pumping station located at the center of the Applicant's site (Exhibit 12). Existing locations of sewers and sizes are shown on the survey base plans. The same utility survey that was used for the 2010 Site Plan was used for the 2013 Site Plan. The current utility survey used for the 2015 Amended Site Plan differs in that the existing force main is shown in its correct location based on underground TV investigation (ACS September 2013). The current map of underground utilities survey is included as part of the referenced 2015 Plans.

Existing Pump Station

Sewage from the Property is collected in an onsite sewer system that drains to an existing onsite submersible sewage pump station. The existing pump station is located in the lawn area south of the tennis courts and contains two (2) submersible pumps. Based on the available literature, provided by the owner, the two (2) pumps working together have an estimated pumping capacity of approximately 100 gallons per minute (gpm).

Based on an historic record site plan dated in 1954 indicates the existence of a sanitary pump station and force main. Assuming the pump station and force main are the same, it has been in continuous operation since that time. Over a period of time, the pumps had been replaced by the Applicant as needed to maintain operation of the system. Recent (September 2013) repairs to the pump station were made to eliminate sources of stormwater inflow. The alignment of the existing 6 inch force main that exits the existing pump station is aligned generally in a southwesterly direction around the great lawn area; it crosses beneath Otter Creek, traverses land adjacent to Otter Creek located at 519 Alda Road where the force main parallels the northerly property line, and then discharges to the existing Village manhole #66449 located in Alda Road.

The existing alignment described is based on the current location as determined by the referenced recent underground survey. The location of the existing force main differs from the location shown on the 2010 (Exhibit 1) and 2013 (Exhibits 2a and 2b) Amended Site Plans in that the force main was shown on previous plans as traversing the great lawn rather than in its actual location which is aligned along the perimeter of the great lawn, adjacent to the existing cabanas.

2. Potential Impacts

Proposed Gravity Sewer System

Proposed improvements to the sanitary sewer system are shown on Exhibit 3. Sewer pipe design data is provided on the Amended Site Plans. The sewerage improvements for the 2015 Amended Site Plan remain similar to those on the 2010 and 2013 Amended Site Plans in that they provide: (i) an 8-inch gravity collector sewer that collects sewage from the service laterals serving existing and new buildings and conveys the sewage to the pump station; and (ii) new 6-inch sewer laterals to serve all new buildings (Beach Seasonal Residence Building, Great Lawn Seasonal Residence Building, Recreation Building and Yacht Club/Dockmaster Building). The 2015 Amended Site Plan differs from the 2010 and 2013 Amended Site Plans in that it proposes further improvements by replacing portions of existing building sewer laterals with new service connections; and the 8-inch sewage collector pipe for the 2015 Amended Site Plan has been designed to direct sewage flow to the new pump station location.

The sewer improvements, more specifically, include new service connections to five (5) existing buildings; new service connections to four (4) new buildings; 700 linear feet of new gravity sewer; a new sanitary pump station; 1300 linear feet of new force main; a connection to the municipal sewer and a pipeline bridge over Otter Creek.

It is noted that a proposed gravity sewer and water service are routed under the elevated proposed Recreation Building (see Exhibit 3). The ground surface elevation beneath the proposed Recreation Building will be 8 feet and the first floor will be elevated to 17 feet. Allowing approximately 2 feet for building structure, there will be approximately 7 feet of clearance between the ground surface and the first floor structure, thereby allowing sufficient vertical clearance to perform future maintenance if required. The locations of the proposed building footings could be adjusted as needed to allow sufficient horizontal clearance. Although the Applicant's Engineer believes this is a viable and approvable design, at the request of the Village Consultant, an alternative design is provided in Exhibit _3b,_ which demonstrates that the sewer and water pipes can be routed around the building. The disadvantage of the rerouting alternative is that in order to avoid conflicts with other utilities, the sewer would have to be constructed at a greater depth, would require an additional 150 feet of sewer pipe and four manholes. The rerouted water would require an additional 170 feet. Thus, it is the Applicant's Engineer's opinion that the Site Plan submittal should continue with the original design, where the water and sewer are routed under the Recreation Building.

Where new sewers will be installed, existing sewers will be removed or abandoned in place. Existing sewers that are encountered by new construction will be removed. Existing sewers that are not encountered but will no longer be used will be plugged

and abandoned in place; for example the existing force main that crosses Otter Creek and the property at 519 Alda Road will be abandoned in place. The outlet where the pipe enters existing municipal manhole #66449 (Alda Road) will be plugged/removed to the satisfaction of the Village Engineer. The existing onsite pump station will be removed.

Other miscellaneous but necessary improvements associated with construction of the sanitary sewer system under the Preferred Alternative will include: pavement and turf restoration along the construction route; coordination with other existing utilities and relocation as necessary; landscape planting; as well as physical site amenities such as decorative fencing to reduce potential visual impact.

Proposed Pump Station Location

The new pump station will be located immediately north of the Great Lawn Seasonal Residence Building and south of the existing Manager's House. Existing grade at this location is relatively high (elevation 11±), thereby minimizing the exposure of the pump station to potential flood waters and maximizing the amount of the structure below existing grade. Additionally, the pump station will be outside of the wetland buffer. The elevation of the pump station (16') will have a finished elevation two (2) feet above the 100-year flood elevation of 14. (The 100-year flood zone AE 14 is based on the currently enacted FEMA Letter of Map Revision (LOMR) effective February 20, 2013. When compared to the FEMA Preliminary FIRM Map #36119C0353G, dated December 8, 2014, the elevation at the proposed pump station is near the border of AE13 and AE14, but most likely at elevation 13. The pump station has conservatively been set at elevation 16, two feet above the LOMR 100-year flood elevation and two to three feet above the Preliminary FEMA Map.) The pump station (Exhibits 13a and 13b) will, therefore, be protected from the 100-year flood and will be equipped with the requisite safety and monitoring features that will meet the regulatory design requirements. (Refer to DSEIS V.C.2, paragraph Pump Station Design for safety design features.)

Proposed Sanitary Force Main

From the pump station, the alignment of the force main is proposed northerly along the edge of the gravel parking area and along the Club's entry road to a new pipeline bridge, where the force main will cross over Otter Creek and continue in a northerly direction along the South Barry Avenue right-of-way to connect to the Mamaroneck Sanitary Sewer District at manhole #66476. Refer to Section III.C, Description of Proposed Site Development, for additional description of the force main route.

The added impact of the Preferred Alternative is the need to construct some 1300 linear feet of force main including approximately 700 linear feet along South Barry Avenue where as the 2013 Proposed Action included replacement of some 600 linear

feet of force main and a minor adjustment to the existing force main connection to manhole #66469 in Alda Road.

Sewage Flow Rate

Section B.6.b of the New York State Department of Environmental Conservation (NYSDEC) Design Standards for Intermediate-Sized Wastewater Treatment Systems (Design Standards) dated March 5, 2014 indicates that the design sewage flow rate is typically based on the flow rates determined using one (1) of the following three (3) methods:

i. Using the typical per unit hydraulic loading rates provided in Table B-3 of the NYSDEC Design Standards multiplied by the number of units;

ii. Obtaining metered wastewater flow rates from existing or similar facilities; or

iii. Obtaining metered daily water usage records from existing or similar facilities.

The Adopted Final Scope states that the "*proposed average daily sewage flow (gpd) calculations shall be provided based on proposed land use*" which would be consistent with Method 1 of the Design Standards. However, Table B-3 of the Design Standards does not contain unit hydraulic loading rates for all of the uses that are present on the project such as the cabanas and club members. The calculation of the sewage flow rate based on Method 1 would also be inconsistent with the methodology which was presented in the previously submitted and accepted environmental review documents including the Draft Environmental Impact Statement (DEIS) dated November 2006, the Environmental Narrative Revised October 2010 and the Environmental Narrative dated February 2013 and therefore would not provide a comparable comparison.

The calculation of the proposed average daily sewage flow rate in those preceding SEQRA documents was based on existing water usage records for a period of one (1) year from which an existing unit flow rate of 27 gallons per person per day was established. The unit flow rate was determined by calculating the average annual water usage rate and divided by the total number of club members, resident staff members and non-resident staff members. The determination of the unit flow rate based on metered water usage records is consistent with Method 3 of the Design Standards.

The established unit flow rate for resident staff and non-resident members as described in the prior environmental review documents is the average annual water usage rate or the average unit flow rate based on the entire year. The design of the proposed pump station must consider both the on- and off-season conditions since it will operate on a year round basis. Based on the data utilized to determine the average annual unit flow rate, the unit flow rates for both the on-season and off-season conditions were determined. The calculated values, in gallons per day (gpd) per person for all conditions are presented in Table V-2 below.

Table V-2
Unit Flow Rates

Flow Condition	Unit Flow Rate Per Person (gpd)
Average Annual Unit Flow Rate	27
On-Season Unit Flow Rate	42
Off-Season Unit Flow Rate	77

Further, the typical unit hydraulic flow rate of 110 gallons per bedroom per day for apartments from Table B-3 of the Design Standards will be utilized for the proposed seasonal residences. These unit flow rates will be applied to the total number of resident staff members, nonresident members and number of seasonal residences to determine the flow rates to the proposed pump station for both the on and off season conditions.

The total number of members to be utilized in the analysis is as described in Table 18 of the Environmental Narrative dated February 2013 which indicates a new total population for the 2013 Amended Site Plan of 900 persons. The total on-season population includes 31 resident staff members, 828 nonresident members and 41 persons in the seasonal residences. The total off-season population includes 30 resident staff members and between 27 and 37 nonresident staff members for a total of 57 to 67 persons. For the off season analysis, the higher unit flow rates were utilized.

Table V-3 and V-4 set forth the calculations for the average daily flow and peak hourly flow rate for the On-Season Sewage Flow Rate and Off-Season Sewage Flow Rate to the proposed pump station. The Design Peak Hour Factor is based on the Harmon Peaking Factor as defined in the Recommended Standards for Wastewater Facilities, 2004 Edition and is based on the population associated with each flow rate condition.

Table V-3
On-Season Sewage Flow Rate

Type of Use	No. of Units	No. of Bedrooms per Unit	Population	Unit Flow Rate (gpd)	Flow Rate (gpd)	Flow Rate (gpm)
Non Resident Members	-	-	828	42	34,379	23.9
Resident Staff Members	-	-	31	42	1,724	1.2
New Seasonal Residences	18	1	41	110	1,980	1.4
Total	18	-	900	-	-	-
Average Daily Flow					38,083	26.4
Peaking Factor					3.8	
Peak Hourly Flow Rate					145,820	101.3

Table V-4
Off-Season Sewage Flow Rate

Type of Use	Population	Unit Flow Rate (gpd)	Flow Rate (gpd)	Flow Rate (gpm)
Non Resident Members	37	77	2,865	2.0
Resident Staff Members	30	77	2,323	1.6
Total	67	-	-	-
Average Daily Flow	-	-	5,188	3.6
Peaking Factor			4.3	-
Peak Hourly Flow Rate			22,244	15.4

As discussed earlier in this Section, the established unit flow rate for resident staff and non-resident members as described in the prior environmental review documents is the average annual water usage rate or the average unit flow rate based on the entire year. The variation in unit flow rates that would occur between on-season and off-season conditions was not considered in the prior environmental reports. Table V-5 presents the average annual sewage flow rate for the 2015 Amended Site Plan:

Table V-5
Average Annual Sewage Flow Rate
2015 Amended Site Plan

Type of Use	No. of Units	No. of Bedrooms per Unit	Population	Unit Flow Rate (gpd)	Flow Rate (gpd)	Flow Rate (gpm)
Non Resident Members	-	-	828	27	22,356	15.5
Resident Staff Members	-	-	31	27	729	0.5
New Seasonal Residences	18	1	41	110	1,980	1.4
Totals	18	-	900	-	-	-
Average Daily Flow					25,065	17.4
Peaking Factor					3.8	-
Peak Hourly Flow Rate					95,975	66.6

A comparison of the average annual sewage flow rate as compared to the existing, 2010, 2013 and 2015 Plans is presented in table V-6 below. The Average Annual Sewage Flow Rate for the 2015 Amended Site Plan is less than the 2013 Amended Site Plan, however. This is a result of applying the typical unit hydraulic flow rate of 110 gallons per bedroom per day for apartments for the 2015 Amended Site Plan, which is consistent with the methodology set forth in the latest New York State Department of Environmental Conservation (NYSDEC) Design Standards. For the 2010 and 2013 Amended Site Plans, each residence was assumed to have four persons and a flow rate of 75 gpd per person was applied, which resulted in a conservatively higher flow.

Table V-6
Average Annual Flow Rate Comparison

Site Plan	Average Annual Sewage Flow Rate (gpd)
Existing Conditions	18,936
2010 Amended Site Plan	31,392
2013 Amended Site Plan	30,081
2015 Amended Site Plan	25,065

Sewage flow rates reflected above, were calculated based on attendance of the entire Club population. Occasional special dining events, assuming 200 seats at a rate of 10 gpd per seat, would add approximately 2,000 gpd (average daily flow). However, special events would not necessarily be synchronized with the timing of attendance of all club members. Even if the 2,000 gpd were added to the design flow, the pump

station and force main design would have ample capacity to accommodate the additional flow.

Proposed Pump Station Design

The pump station will be designed in compliance with the New York State Department of Environmental Conservation (NYSDEC), Westchester County Department of Health (DOH) and the Village of Mamaroneck Engineer. The proposed pump station will also be designed in accordance with the following standard publications.

- New York State Design Standards for Intermediate-Sized Wastewater Treatment Systems dated March 5, 2014
- Recommended Standards for Wastewater Facilities 2004 Edition

The pump station will be equipped with a smart controller that will be programmed to provide for both the on season and off peak season flow conditions as well as providing for shut down mode for forecasted flood conditions. The Pump Controller will be set up with two (2) operational modes, one for the peak season and one for the off season which would allow for a change the level set points with a push of a button without going into the basin. The level transducer will provide wide range of available set points and (2) floats for back up would also be provided.

The pump station will be designed with redundant safety features including but not limited to the following: dual explosion proof, non-clog submersible wastewater pumps, liquid level measurement and control transducers, low level and high level alarms. In the event of an alarm activation, a telemetry system with auto-dialer will be provided to telephone appropriate emergency personnel. In the event of loss of power, a standby generator will automatically turn on, thereby, maintaining power to the pump station resulting in uninterrupted performance of the pump station.

For detailed discussion and calculations, refer to Draft Engineer's Report Onsite Sanitary Sewer and Pump Station, the Appendix. Also see detailed pump station drawings listed in the Table of Contents.

When compared to the 2010 and 2013 Site Plans, the 2015 Preferred Alternate Action will replace the existing force main and pump station with new facilities, thereby, providing increased reliability.

3. Proposed Mitigation

Sanitary Sewers

The proposed sanitary collection system will be designed and constructed in accordance with the requirements of the Recommended Standards for Wastewater Facilities 2004 Edition, Chapter 30. In accordance with WCDOH rules and

regulations, an application will be filed for Approval of Plans for a Wastewater Disposal System for Sanitary Sewer Extension(s) for sewers with a flow rate of greater than 2,500 gallons per day. Filing to WCDOH for their approval will be consistent with their policy. WCDOH policy dictates that review for approval will be made after completion of SEQRA and Site Plan Approval from the Village has been obtained. However, as an Involved Agency, the WCDOH will be provided this document and associated site plans for their review.

Sanitary Pump Station and Force Main

The proposed pump station and force main will be designed and constructed in accordance with the requirements of the following publications.

- New York State Department of Environmental Conservation (NYSDEC) Design Standards for Intermediate-Sized Wastewater Treatment Systems (Design Standards) dated March 5, 2014.
- Recommended Standards for Wastewater Facilities 2004 Edition.

The proposed pump station will be equipped with a standby generator set to provide for continued operation during power outages. In the event of a failure of both primary power and the generator set, the pump station will be equipped with an emergency bypass pump out connection. The bypass connection will allow for the use of a portable gasoline or diesel powered suction type pump to connect to the force main and pump out the sewage wet well.

The proposed pump station is a private sewerage facilities. Ownership, operation and maintenance will be the responsibility of the MBYC.

The top elevation of the top slab of the proposed pump station has been designed to an elevation of 16.0 which is at least two feet above the 100 year floodplain elevation.

The Preferred Alternative Action proposes minimization of impacts to Otter Creek by constructing a pipeline bridge crossing to support the sanitary force main, thereby, avoiding more intrusive methods of construction. (Refer to SDEIS VI.B.3, Pipeline Bridge Option for further discussion.)

D. Noise (Qualitative Analysis)

1. Existing Conditions

a. General Information on Noise

The range of pressures that cause the vibrations that create noise is large. Noise is therefore measured on a logarithmic scale, expressed in decibels (dB). The frequency of a sound is the "pitch" (high or low). The unit for frequency is hertz (Hz). Most sounds are composed of a composite of frequencies. The normal

human ear can usually distinguish frequencies from 20 Hz (low frequency) to about 20,000 Hz (high frequency), although people are most sensitive to frequencies between 500 Hz and 4000 Hz. The individual frequency bands can be combined into one overall dB level.

Noise is typically measured on the A-weighted scale (dBA). The A-weighting scale was developed and has been shown to provide a good correlation with the human response to sound and is the most widely used descriptor for community noise assessments (Harris, 1991). The faintest sound that can be heard by a healthy ear is about 0 dBA, while an uncomfortably loud sound is about 120 dBA. In order to provide a frame of reference, some common sound levels are listed below.

Table V-7
Common Sound Levels

Description	Decibel Level
Chainsaw at 30 feet	90 dBA
Truck at 100 feet	85 dBA
Noisy Urban Environment	75 dBA
Lawn Mower at 100 feet	65 dBA
Average Speech	60 dBA
Typical Suburban Daytime	50 dBA
Quiet Office	40 dBA
Quiet Suburban nighttime	35 dBA
Soft Whisper at 15 feet	30 dBA

The L_{eq} sound level is the sound level utilized by the New York State Department of Environmental Conservation (NYSDEC) in assessing potential noise impacts and was therefore used in this analysis. The L_{eq} is a single value of noise that includes all of the varying noise energy in a given duration.

The ability of the average person to perceive increases in noise has been documented. In general, a change of 3 dBA or less is considered to be barely perceptible, while an increase of 10 dBA is perceived as a doubling of the sound, and is a significant increase. Provided below is a set of criteria which have been used to estimate an individual's reaction to changes in noise.

Table V-8
Criteria for Reaction to Changes in Noise

Increase (dBA)	Human Perception of Sound
2-3	Barely perceptible
5	Readily noticeable
10	Doubling of the sound
20	Dramatic change
Source: Bolt, Beranek, and Newman, Inc. 1973	

b. Mamaroneck Village Code

Chapter 254 Noise of the Mamaroneck Village Code "makes it unlawful for a person to continue or cause to be made or continued any excessive, unnecessary or unusually loud noise or any noise which either annoys, disturbs, injures or endangers the comfort, repose, health, peace or safety of others within the limits of the Village".

The Village Code sets forth specific prohibitions on noise under §254-3 which prohibits loud and unreasonable sounds such as radios and television sets which disturb the peace and quiet of neighboring residents, unnecessary horns and signaling devices on automobiles, yelling and shouting, and un-muffled exhausts of internal combustion engines. Other unreasonable sounds are also enumerated.

Construction activity and related noise is regulated by Chapter §254-3.J of the Village Code. Construction generated noise is limited to the hours of 8:00 a.m. to 6:00 p.m. on Monday through Saturday except in the case of urgent necessity. No such activity shall be permitted on Sundays or on any of the following holidays: New Year's Day, Martin Luther King's Birthday, Presidents' Day, Memorial Day, Independence Day, Labor Day, Columbus Day, Yom Kippur, Thanksgiving and Christmas. There are no numerical noise limitations on construction noise.

Under § 254-5 Maximum decibel levels permitted, except for noise emanating from the operation of motor vehicles, the permissible intensity of noise from the foregoing acts between the hours from 8:00 a.m. to 10:00 p.m. and from 10:00 p.m. to 8:00 a.m., respectively, whether such noise is intermittent, impulsive, sporadic or continuous, is as follows:

Table V-9
Maximum Sound Pressure Level in Decibels
("A" Scale Reading of Standard Calibrated Sound Meter)

8:00 a.m. to 10:00 p.m.	10:00 p.m. to 8:00 a.m.
70	62

The intensity of sound shall be measured at a point no closer than sixty (60) feet to the noise source, as best that point can be estimated by the operator of the sound-measuring device without the use of any distance-measuring equipment.

c. New York State Department of Environmental Conservation Criteria

The NYSDEC has a program guidance document entitled Assessing and Mitigating Noise Impacts (NYSDEC 2000). This guidance has been utilized as a standard for evaluating potential noise impacts from numerous projects throughout New York. The NYSDEC guidance recommends that for non-industrial settings the sound from a new source should probably not exceed the existing ambient noise levels by more than 6 dBA at a given residence in order to

avoid noise impacts. The addition of any noise source should not raise the total future ambient noise level above a maximum of 65 dBA.

The NYSDEC guidance explicitly states that the 6 dBA increase is to be used as a general guideline. There are other factors which should also be considered. For example, in settings with very low ambient sound levels, an increase greater than 6 dBA may be acceptable since sound levels are so low.

2. Potential Impacts

Potential noise impacts associated with the proposed sanitary pump station will include noise from the submersible pumps and the standby emergency generator. The proposed pump station has been designed as a wet well submersible pump station. The submersible pump station will contain submersible solids handling or cutter style sewage pumps located in a wet well that operates under water. There will be a minimum of above-ground equipment, the control cabinet and an at-grade mount for use in setting a portable hoist for removal of the pumps during maintenance and repair. There will be no unsightly pump housing or a pump house. The above ground equipment does not generate noise, except during very infrequent use of the hoist for equipment maintenance or repair. The noise generated by the submersible pump station will be no more than a gentle hum adjacent to the station and will be barely perceptible at grade level. No perceptible noise is anticipated at offsite residential locations. Therefore, when compared to the 2010 and 2013 Site Plans, any increase in noise from normal operation of the pump station would imperceptible.

The proposed sanitary sewer pump station will be equipped with an emergency standby generator (generator set) to supply power to the pump station during power outages. The generator set will be located within the fenced enclosure adjacent to the proposed pump station. Noise from a generator set is produced by multiple sources including engine noise, cooling fan noise, alternator noise, induction noise, engine exhaust and structural/mechanical noise. Other than scheduled generator set testing, operation is subject to power outages which cannot be predicted.

When compared to the 2010 and 2013 Site Plans, a standby generator would have functioned under each scenario to power either the existing or new pump station; however the generator under the Preferred Alternative Action, would be nearer the Otter Creek residents. This potential noise during emergency conditions would, however, be compatible with of other neighborhood residents using power generators during the same emergency event.

3. Mitigation

Submersible pump stations have inherent noise reduction benefits since the working installation of the pump station (submersible pumps) will be located in a wet well approximately 15 feet below ground level and will be almost totally submerged. There will be a minimum of noise at ground level when the pumps are operating and no additional noise reduction measure will be required. The proposed sanitary sewer pump station will be equipped with an emergency generator set. The emergency generator will be located within the fenced enclosure. The generator set enclosure will be rated for both weather and sound. The enclosure will contain acoustic insulation that meets UL 94 HF1 flammability classification and repels moisture absorption. A sound attenuated enclosure that uses up to 51 mm (2 in.) of acoustic insulation, acoustic-lined air inlet hoods, and acoustic-lined air discharge hood will be included. The sound rating for the enclosure is estimated at 68 dBA at 23 feet when operating at full load and 65 dBA when operating at no load.

The no load situation is typical of the generator set testing period. Generator set testing will occur once every week and will operate the engine under no load for 5-10 minutes and once every month will operate under load (at least 50% of total system load) for 30 minutes.

The nearest residence to the proposed emergency generator is located approximately 350 feet to the northwest on Alda Road (Exhibit 15). At this distance, emergency generator noise levels during testing under load would be approximately 44 dBA, which would be at or below even the existing nighttime ambient levels (44 dBA to 47 dBA) as provided in the 2006 DEIS.

To further mitigate the impact of the noise from the generator set during testing, testing will be scheduled during non-sensitive times of the day (typically weekdays between 10 AM and 5 PM) when ambient sound levels are higher so as not to disturb guests and area residents. Actual testing times will be scheduled to comply with the Chapter 254 Noise of the Mamaroneck Village Code.

E. Construction

1. Construction Phasing

As described in the 2013 Environmental Narrative, the construction of the 2013Amended Site Plan is anticipated to occur in five (5) phases. Phases I through IV are anticipated to take six (6) years. The phasing of the 2015 Amended Site Plan, as with the 2013 Amended Site Plan, is still necessary to allow for the continuation of Club operations during construction, particularly during the summer months. These phases are anticipated as:

Table V-10 Projected Construction Phasing	
Phase	**Description**
Phase I	• Yacht club/dock masters building – Construct sanitary service and connect to existing sewer.
Phase II	• Construction of the recreation building and associated pool improvements – Construct sanitary service and connect to existing sewer.
Phase III	• Great Lawn Seasonal Residence Building. • Sanitary pump station and force main construction. • Gravity sanitary sewer construction.
Phase IV	• Clubhouse
Phase V	• Construction of the Beach Seasonal Residence Building

Construction of the sanitary infrastructure will be performed in accordance with all applicable construction standards and regulations including the Village of Mamaroneck.

The buildings to be constructed in association with Phases I and II will be in close proximity to the existing sewage pump station and can easily be connected. .. Phase I construction will include the proposed Yacht Club/Dockmaster Building. A sewer service lateral will be installed to convey sewage flows to an existing nearby sewer pipe. Phase II construction will include the proposed Recreation Building, which will be adjacent to the existing pump station. Sewer service laterals will be installed to convey sewage flows from the new building and adjacent existing cabanas.

The proposed sanitary pump station, force main and most of the gravity sewers will be constructed concurrently with Phase III. This is due to the fact that the required electrical service (208 volt, 3 phase) to operate the proposed pump station will be derived from the new service connection that will be installed as necessary to serve the Phase III development. The existing pump station will remain in service until such time as the proposed pump station has been constructed and a Completed Works Approval (CWA) has been issued by the Department of Health allowing for the new pump station and force main to be placed into service.

Constructing the sewage infrastructure in Phase III will serve the majority of the Project's development, which will occur in Phases III, IV and V. Phase III construction will include construction of the Great Lawn Seasonal Residence Building and construction of the remaining sewerage infrastructure including the new pump station, force main and gravity sewers. Phases IV and V will include renovation of the Clubhouse and construction of the Beach Seasonal Residence Building.

As was stated in the 2013 Environmental Narrative, several building permits have already been issued for the project including: Great Lawn Residence (Permit Issued 1/14/2011); Yacht Club/Dock Masters Building (Permit Issues 1/14/11); and the

Beach Seasonal Residence (permit Issued 11/14/11). These permits remain valid and in effect based on the Court Order dated March 12, 2012 in which the permits were deemed stayed pending the resolution of litigation and could not be invalidated, revoked or deemed null and void. Upon the issuance of an "Approval of Plans" by the Westchester County Department of Health, an "Application for Revision to Approved Plans" will be filed with the Building Department prior to the start of construction, if and as required.

2. Short term increases in noise due to construction

   Construction will be performed to comply with all applicable Federal, State, and local laws regarding safety, health, water quality, and sanitation. The Village Code (Chapter 254 §254-3.J - Noise of the Mamaroneck Village Code) is designed to minimize potential noise impacts due to construction by limiting construction hours to between the hours of 8:00 AM and 6:00 PM on weekdays and Saturday. It is therefore considered to be an effective administrative mitigation measure and project construction hours will be in compliance with the Code. The Mamaroneck Code does not permit construction activity on Sundays or a number of holidays. Also, to further minimize potential noise impacts during construction, diesel powered construction equipment will be equipped with functional mufflers. Construction related traffic will be sporadic and will be dispersed throughout the day.

3. Force Main Construction Methods

   The proposed force main will be constructed using two different construction methods including Open Cut or trench excavation, and installation of a Pipeline Bridge. Trench excavation, will be performed for approximately 1,230 linear feet of the proposed force main and the pipeline bridge will support approximately 70 linear feet of the remaining force main. The two methods of proposed construction are described below:

   Open Cut, or trench excavation and backfill, is a traditional construction method and will be the preferred method of construction within upland areas of the force main alignment. This method of construction involves the excavation of a trench to the required depth and width for the installation of the force main. The typical trench width would be between 2 and 3 feet and trench depth will be approximately 4-5 feet. The trench depth is based on providing a minimum cover depth of 4 feet on the proposed force main. Open cut trench excavation is the recommended construction method for installation of the force main within the site and along the South Barry Avenue right-of-way. It is not recommended for the Otter Creek crossing due to anticipated significant adverse impacts.

   Otter Creek Crossing
   The preferred force main alignment along South Barry Avenue will require crossing Otter Creek. After consideration of alternate means or construction methods of crossing Otter Creek including horizontal auger boring (jack and bore) and horizontal

directional drilling, the Applicant proposes constructing a pipeline bridge to cross Otter Creek. The bridge is proposed parallel to and west of the existing vehicular bridge. The west side of the vehicular bridge was selected for the crossing as the span of Otter Creek is narrower than the east side, there would be less impact to existing vegetation and sufficient right-of-way is available to construct the structure.

Construction of the pipeline bridge will require construction of two concrete columns/piers on each side of the Otter Creek embankment. Each column/pier will be approximately 24-inches square and will impose limited disturbance to the creek banks. Based on preliminary design, the columns/piers will support the "bridge", which would be comprised of a 12-inch diameter insulated ductile iron pipe within which the 4-inch force main would be inserted. The oversized pipe as a method of "bridging" Otter Creek would provide several advantages such as: insulation from the elements; protection from vandalism; frost protection; containment in the event of leaks; no additional loads imposed on the existing vehicular bridge structure; limited/minimal land disturbance; ease of visual inspection and maintenance.

For further discussion regarding methods of crossing Otter Creek with the sanitary force main see DSEIS VI.B, South Barry Avenue Force Main Alignment.

4. Operation and Maintenance

An Operation and Maintenance Manual (O&M Manual) will be provided to the Owner/Operator (MBYC) for the proposed pump station and force main upon the completion of construction. The Applicant will work with the Village to develop an agreement regarding ownership and maintenance responsibility for this force main within the public right-of-way. The O&M Manual will contain ownership information, contractor and sub-contractor names and addresses, consultant names and addresses, approving agency names and addresses, applicable permits and approvals, copies of applicable easements and/or legal agreements, approved drawings, engineers design report, technical specifications, submittals log, approved submittals, as-built drawing(s), WC DOH completed works approval (CWA), and manufacturer operation and maintenance manuals. In addition, the O&M Manual will outline the following routine force main test procedures to be performed by the Owner/Operator. Testing will be scheduled during the off-season to avoid impact to club operations.

- A pressure and leakage test of the proposed force main will be conducted once every five (5) years.
- A dye test will be conducted once every five (5) years to determine visual evidence of leaks in conjunction with the pressure and leakage test.
- The test procedures will be performed under the supervision of a Consultant Engineer retained by the Club and/or the Village Engineer and Building Inspector.
- Any deficiencies which may be noted or observed during the test procedure will be repaired to the satisfaction of the Village Engineer.

Prior to the implementation of the new pumping system, and as part of Phases I and II, which are proposed to go forward with the existing pumping system in operation, the Applicant will agree to an enhanced testing program conducted on a yearly basis.

F. Comparison of the Preferred Alternative Action to Prior Plans

In accordance with the adopted Scope, Table V-11 provides a comparative environmental analysis of the Preferred Alternative and prior plans.

Table V-11

Comparison of the Preferred Alternative Action (2015 Amended Site Sanitary Sewer Plan)

Plan	Visual Character	Natural Features	Sanitary System	Noise	Construction
Existing Condition	• No impact	• No impact	• Retain existing pump station • Retain existing force main • Retain existing gravity sewer • 18,936 gpd total average daily high season sewage flow	• No impact	• No impact
2010 **Amended Site Utilities Plan**	• No change in visual impact since existing pump station and force main are retained	• No change in impact to natural features since existing pump station and force main are retained	• Retain existing pump station • Retain existing force main • New gravity sanitary sewer main to pump station with new service connections to new buildings • 31,392 gpd total average daily high season sewage flow	• No change in noise impact since existing pump station and force main are retained	• No change in construction impact since existing pump station and force main are retained
2013 **Amended Site Utilities Plan** **(1/29/2013)**	• No change in visual impact since existing pump station will be retained	• No change in impact to natural features since existing pump station and force main under Otter Creek will be retained	• Retain existing pump station • Retain existing force main under Otter Creek • Remove a portion of existing force main in Great Lawn and reroute 450± L.F. to reconnect with exist force main. • New gravity sanitary sewer main to pump station with new service connections to new buildings • 30,081 gpd total average daily high season sewage flow	• No change in noise impact since existing pump station and force main are retained	• No change in noise impact since existing pump station and force main are retained
Proposed Action **2013 Amended Site Utilities Plan** **(11/25/2013)**	• Visual screening of pump station by fence & plantings	• Temporary soil disturbance from construction of pump station, force main under Otter Creek and gravity sanitary sewer service connections (±4,600 s.f.) • New impervious area (±500 s.f. pump station) mitigated by installation of infiltration trenches • Apply sediment and erosion control	• New pump station • New force main under Otter Creek through 519 Alda Road (±600') • New sanitary service connections to existing buildings (±700') • 30,081 gpd total average daily high season sewage flow	• Temporary noise from construction of pump station, force main and gravity sewer • Temporary construction noise at 519 Alda Road • Operating noise from pump station will be imperceptible • Periodic noise from testing emergency generator	• Construction of pump station and force main performed simultaneously with site construction • Construction of force main under Otter Creek and at 519 Alda Road
Preferred Alternative Action **2015 Amended Site Utilities Plan**	• Visual screening of pump station by fence & plantings • Visual impact of pipeline bridge reduced by painting color compatible with background	• Temporary soil disturbance from construction of pump station, pipeline bridge over Otter Creek and gravity sanitary sewer service connections (±6,000 s.f.) • New impervious area (±500 s.f. pump station) mitigated by installation of infiltration trenches • Apply sediment and erosion control	• New pump station • New force main and pipeline bridge over Otter Creek and along South Barry (±1300') • New sanitary service connections to existing buildings (±700') • 25,065 gpd total average daily high season sewage flow	• Temporary noise from construction of pump station, force main and gravity sewer • Temporary construction noise along South Barry Avenue to construct force main and pipeline bridge • Operating noise from pump station will be imperceptible • Periodic noise from testing emergency generator	• Construction of pump station and force main performed simultaneously with site construction • Construction of pipeline bridge over Otter Creek • Construction of force main in South Barry Avenue R.O.W. • Temporary maintenance and protection of traffic along South Barry Road

Note:
Prior Environmental reviews compared the various Site Plans to each other. The subjects of comparison addressed the full range of site development categories related to the entire Site Plan. The subject of this DSEIS is the sanitary sewer system upgrade (pump station and force main) and, therefore, the comparison includes impacts caused only by this sanitary system upgrade only.

VI. **ALTERNATIVES**

A. No Action Alternative

1. Description

Under the No Action Alternative, (1)_the existing sanitary sewer pump station and force main would remain operational and ongoing maintenance of the existing pump station would be continued; and (2) the development proposed in the 2013 Site Plan would not be undertaken..

2. Potential Impacts

As described in Section IV.A, Need for the Proposed Action/Preferred Alternative, a leak from the existing force main into Otter Creek was discovered on August 12, 2013, immediately reported to the authorities, temporarily plugged by August 13, 2013 and remediated by the Club by August 14, 2013. Subsequent testing was authorized by the Club and performed by the Applicant's team and observed by Village Officials on September 9 & 12, 2013. Results of the testing were submitted to the Village on September 23, 2013 and the Applicant's Engineer concluded that *"[b]ased on the results of the tests conducted, the existing force main was determined to be in a serviceable and operating condition and as of the date of the tests conducted does not have any apparent leaks."*

An historic record site plan dated in 1954 indicates the existence of a sanitary pump station and force main. Assuming the pump station and force main are the same, it has been functioning ever since. The Club has maintained the system as needed, which includes replacement and upgrade of pumps. Although there is no evidence of the force main and pump station having any leaks, the potential for future leaks is not precluded.

3. Mitigation

In order to provide a more permanent solution, the Applicant's Engineer consulted with Village staff to review options of pipe remediation. After reviewing such remedial measures as pipe lining, pipe bursting and cured-in-place pipe restoration, the Applicant's Engineer determined that those measures could not be performed across Otter Creek due to the multiple bends in the existing pipe. In light of that determination, the Applicant's Engineer recommended replacement of the pump station and installation of a new force main in its same general location under Otter Creek and across the property at 519 Alda Road to its termination at an existing municipal manhole. Placement of the proposed force main across the referenced

property would be reliant upon confirming the existence of an easement or obtaining an easement from the property owner. The Applicant's legal counsel, however, advises that an easement is not readily available without engaging in protracted litigation and expenditure of significant sums of money.

Since the existing pump station and force main are presently operating without any apparent leaks, the Applicant maintains that it retains the right to keep the existing pumping station and force main in operation. The Applicant believes that the "No Action Alternative" could achieve similar results through implementation of a rigorous maintenance and emergency response program similar to that proposed for the new system in Section V.E.4, Operation and Maintenance, but with increased (annual) frequency of testing. Through annual testing and repair of any deficiencies noted during test procedures, the Applicant believes that sufficient safeguards would be in place to continue safe operation of the existing system.

As part of the supplemental field investigation following repair of the force main leak, the Applicant determined by TV investigation on September 10, 2013 (Section IV Purpose And Need For The Proposed Action (Preferred Alternative)), that the actual location of the existing force main was not where previously shown on the topographic and utility survey upon which the design of the 2013 Amended Site Plan was prepared. The actual location is adjacent to the existing cabanas which border the great lawn and the existing force main crosses beneath the location of the proposed Recreation Building and Great Lawn Seasonal Residence Building.

The ground surface elevation beneath the proposed Recreation Building will be 8 feet and the first floor will be elevated to 17 feet. Allowing approximately 2 feet for building structure, there will be approximately 7 feet of clearance between the ground surface and the first floor structure, thereby allowing sufficient vertical clearance to perform future maintenance if required. The locations of the proposed building footings could be adjusted as needed to allow sufficient horizontal clearance.

The ground surface elevation beneath the proposed Great Lawn Seasonal Residence Building will be 10 feet and the first floor will be elevated to 20 feet. Allowing approximately 2.5 feet for building structure, there will be approximately 7.5 feet of clearance between the ground surface and the first floor structure, thereby allowing sufficient vertical clearance to perform future maintenance if required. The locations of the proposed building footings could be adjusted as needed to allow sufficient horizontal clearance.

Should the reviewing agencies, including the County Department of Health, not approve the location beneath the proposed buildings, the affected portions of the force main could be rerouted around the building. The Applicant, therefore believes that the "No Action" alternative is viable.

B. South Barry Avenue Force Main Alignment

1. General Description

The alignment of the proposed force main will extend approximately 1300 feet from the pump station to its connection to municipal manhole #66476, which is located at the intersection of South Barry Avenue at Soundview Drive. The alignment from the pump station will travel along the easterly edge of the gravel parking area, along the Club's entrance road to the existing vehicular bridge on South Barry Avenue at Otter Creek. Three (3) alternate options for the crossing of Otter Creek at the South Barry Avenue Bridge were investigated. Those options include installation of pipe hangers on the existing bridge structure, construction of a separate pipeline bridge running parallel to the existing bridge structure and jack and bore under Otter Creek. The Applicant's preferred option to cross Otter Creek is construction of a pipeline bridge on which the force main will be attached. Once past the Otter Creek crossing, the force main will continue northwest along the South Barry Avenue right-of-way (600 feet) where it will connect to existing municipal manhole #66476 (Exhibit 14a).

Existing Bridge Description

The existing South Barry Avenue Bridge is approximately 24 feet in width, which consists of 18 feet wide travel way, 5 foot wide pedestrian walkway on the easterly side and approximately 1 foot that accommodates safety rails. The existing bridge has an overall length of approximately 32 feet, which includes a clear span over Otter Creek of approximately 27 feet wide. The existing bridge deck is supported on steel beams and has a poured concrete deck with an asphalt top course. Safety railings are located on both sides of the bridge and are constructed from galvanized box beams. The existing bridge structure is depicted in Exhibit VI-1 below.

Exhibit VI-1
South Barry Avenue Bridge

Source: Photograph taken by TRC Engineers, Inc. March 27, 2014

The support beams are secured by concrete wing walls embedded into the Creek's embankments.

Otter Creek experiences a shift in inflow direction as the flow approaches the bridge. Shoreline erosion and the presence of the riprap on the upstream (east) side of the bridge indicates that the channel bend tends to encourage shoreline erosion on that side of the bridge. As noted above, the riprapped area lacks vegetation. On the west side of the bridge the channel tends to hug the south side of the creek and passes along the base of the seawall. With the seawall acting to restrict upland erosion but not reduce the flow velocity, the sediment at the base of the seawall is primarily large pebbles and sand. Northward on this side of the bridge and beyond the thalweg channel, Otter Creek has a tidal flat that terminates in the existing shoreline adjacent to the northwest corner of the bridge. The tidal flat is comprised of unconsolidated sand and fine grained and organic materials. Because of the variable flow velocities and patterns, the tidal flat is subject to changes in size and configuration. It appears that the apparent flow restrictions created by the South Barry Avenue Bridge are influencing the tidal flat changes along with a noticeable amount of erosion in the area of the bridge abutments. This is likely the result of no erosion control measures being used to stabilize the area. Compounding the area's instability and subsequent erosion is the presence of a one foot diameter RCP that drains a South Barry Avenue storm drain located in close proximity. Although the discharge has a splash pad beneath it there is some associated erosion of the upland.

Because of the presence of the water main on the east side along with the bridge alignment and Otter Creek flow characteristics it appears environmentally preferable to create an independently supported sewer line bridge. Placing two freestanding structures (pipeline bridge) abutments in the Otter Creek waterway takes advantage of the local site conditions to minimize the environmental impact associated with the project. The location limits the required size of the aerial crossing to approximately 30 feet allowing for a limited amount of habitat displacement, shading from the structure and avoiding any impact on the air gap of the South Barry Bridge. Because the areas are experiencing constant erosion or a fluctuation of sediment accumulation and erosion of the creek bed sediment, the area suffers as suitable habitat for most benthic creatures. Conversely by creating some resistance to the flow, finfish can find some shelter in the area around the support structures. The generally north-south alignment of the actual bridge limits any additional shading from the pipe bridge and sewer line and being able to set the sewer line bridge and pipe above the invert elevation of the bridge and water line means that there will be no additional restriction of the air gap space to hamper access to the sanctuary by canoeists or kayakers.

During the field inspection and site assessment it was observed that a "Call Before You Dig" utilities location effort had been undertaken on South Barry Avenue and it included the actual bridge. The markings indicated the presence of a gas pipeline. Based on the markings, the gas line appears to cross Otter Creek under the bridge toward the west side then cuts eastward across the vehicular bridge on the Club side before turning southward to parallel the water main on the east side of the roadway. The presence and configuration of the gas pipeline and its path along the east side of South Barry Avenue south of the bridge near the water line would make an additional installation for the sewer line difficult. Accordingly, the Applicant has chosen the west side crossing.

Based on Flood Insurance Rate Map (FIRM) Number 39119C0353F, Panel 353 of 426 Suffix F dated September 28, 2007, the existing bridge appears to be located in an area that has been defined as Flood Zone AE13 with a Base Flood Elevation (BFE) of 13 (NAVD). Table No. VI-1 below indicates the flood and tide elevation data in the vicinity of the existing bridge and the approximate bridge deck and low chord elevations. The bridge deck and low chord elevations were scaled from the Elevation View of Drawing P-1 "Bridge Renovation Plans and Details" prepared by Ahneman Kirby, LLC dated July 27, 2012, which was obtained from the Town of Rye through a FOIL request.

Table VI-1 Flood, Tide and Bridge Elevation Data	
Description	**Elevation (NAVD 88)**
Advisory 1% Base Flood Elevation: Zone A	14
FIRM Zone AE	13
Bridge Deck Elevation (Approximate)	9.4
Low Chord Elevation (Approximate)	6.8
High Tide Level	5.3
Mean High Water	3.5
Mean Low Water	-3.8
Mean Lower Low Water	-4.0

Ownership and maintenance of the existing bridge is the responsibility of the Town of Rye. The Town of Rye Superintendent of Highways Report dated March 18, 2014 indicates that the Town has prepared maintenance and repair documents for the Otter Creek (South Barry Avenue) Bridge. On February 16, 2016, the Town Board authorized a renovation project to repaint the bridge. The Town's project is not anticipated to have any impact on the sewer improvements that are being analyzed in this SDEIS.

The Town of Rye has been made aware of the Proposed Action and will be provided a copy of the DSEIS and appendices as part of the public review process.

2. Pipe Hanger Option

Under this alternative, the proposed force main would be attached to the existing bridge structure with the use of pipeline hangers. The design of a pipeline crossing on a bridge structure is considered a special design due to the varied nature of bridge designs. The design of a pipe hanger crossing would consist of a straight alignment, thereby minimize pipe joint deflections and thrust forces, on a roller system with a pipe expansion joint which would allow the pipeline to act independently of the bridge superstructure. .

Attaching pipelines (water, sewer, force main, etc.) to a bridge structure can materially affect the structure, the safe operation of traffic and the efficiency of the maintenance of the pipeline and the bridge. Attaching a pipeline to a bridge structure generally should not be considered unless the bridge structure is of a design that is adequate to support the additional load and thrust forces of the proposed pipeline. This alternative, Pipe Hanger Option, would be considered neither practical nor feasible and is not recommended for the following reasons.

- Chapter 10-37 of the "Recommended Standards for Wastewater Facilities" (10-State Standards) requires that for aerial stream crossings, sewers must not be below the 50-year flood elevation. The pavement surface of the South Barry Avenue Bridge is at elevation 9.4± and the 50-year flood elevation is 10.7±. Since the bridge is below the 50-year flood elevation, the force main cannot be hung from the bridge.

- The top of the safety rail is at approximate elevation 13.5± (4.1± feet above the road/deck elevation). Placement of the pipeline attached to the safety railing would not be recommended as the pipeline would likely be damaged in the event the rail was struck by an automobile. In addition, it is unlikely that the design of the rail included the additional strength required to support the pipeline. Therefore, structural analysis of the safety rail is not warranted.

- The Town of Rye has recognized the need for repair and maintenance of the existing bridge structure and the attachment of pipeline would potentially impact the efficiency of the maintenance of the bridge.

- The ability of the bridge and safety rail to support the force main is unknown without an in-depth structural analysis. Attachment of a pipeline to the existing structure could be detrimental, particularly when considering the unknown structural capacity. Since the pipeline must be constructed above the bridge deck (discussed above), in order to meet the required design criteria, structural analysis of the existing bridge is unwarranted.

- The Applicant has received bridge plans from the Town of Rye. Based on discussions with the Town Engineer on July 13, 2015 and as shown on Exhibit VI-2, it is understood that the existing water and gas supply lines are not hung from the existing bridge but are independently supported under (gas) and next to (water) the bridge on the Otter Creek Preserve side.

Exhibit VI-2
South Barry Avenue Bridge View from Otter Creek Preserve

Source: Photograph taken June 11, 2015 by Ahneman Kirby, LLC (Town of Rye Consulting Engineer)

- Attachment of the pipeline to the existing bridge would impact the existing bridge abutments.

The "Pipe Hanger" alternate would have a limited visual impact as compared to the exiting conditions because the new small diameter force main would be attached to the existing bridge structure. The primary visual impact to adjoining property owners and users of Otter Creek would be the requirement to elevate the new force main above the bridge. To mitigate this impact, the new force main would be painted a dark color.

3. Pipeline Bridge Option

Under this alternative, a pipeline bridge would be constructed parallel to and along the westerly side of the existing South Barry Avenue Bridge. The pipeline bridge would be constructed of a 12-inch diameter pipe supported by four concrete pier/columns (two on each side of Otter Creek). The 4-inch force main would be placed within the 12-inch insulated pipe, which would protect the force main from the elements. Piers and/or columns would be constructed adjacent to and/or abutting the existing stone retaining wall on either side of the creek. The piers and/or columns would be designed in accordance with the applicable rules and regulations.

The Applicant's Engineer discussed the Pipeline Bridge Option with the Town of Rye's Consulting Engineer. Based on these discussion, it was expressed that the Town of Rye had no objection to the schematic design of the pipeline crossing nor will the proposed pipeline bridge interfere with the maintenance of the vehicular bridge. The Applicant's Engineer understands that the detailed design must consider

protection of the existing retaining walls and their foundations. Locations of the piers/columns will be designed with consideration of the existing retaining walls' zones of influence, and all work will be performed in accordance with the required environmental permits.

It is anticipated that two (2) piers and/or columns on the southerly side of Otter Creek would be located within the upland area west of the vehicular bridge as depicted in Exhibit VI-3 below. Construction of the piers and/or columns in this area would be performed using standard methods such as a shallow concrete foundation, concrete pier and a pile cap on which the ductile iron pipe section would rest.

Exhibit VI-3
Southeasterly Approach to the South Barry Avenue Bridge (from Club)

Source: Photograph taken by TRC Engineers, Inc. March 27, 2014

It is anticipated that two (2) piers and/or columns on the northerly side of Otter Creek would be constructed as pier and pile foundations. Pier and pile foundations would be designed and installed on the basis of a foundation investigation report as defined in Chapter 18 Soils and Foundations, Section 1802 of the Building Code of New York. Each pier/column would result in minimal disturbance within the existing tidal wetlands and adjacent area. Each of the four piers/columns (two per side of Otter Creek) would disturb approximately 25 square feet each for a total disturbance of approximately 100 square feet. It is the Applicant's opinion that the pipeline bridge option is best suited for this application.

The Applicant believes that the "Pipeline Bridge" alternate will have a minimal visual impact as compared to the exiting condition. A new steel bridge structure to carry the

4-inch diameter force main will be constructed on the harbor side of the existing vehicular bridge. The pipeline bridge will be in general alignment with and parallel to the existing bridge. The view of the pipeline bridge from adjoining residents and users of Otter Creek will view pipeline against the background of the existing road bridge and railing, thereby minimizing new visual impacts. To mitigate this impact, the new bridge and force main will be painted an earth tone color, to blend with the background, in coordination with the Village. (See Exhibit 6a, Existing View of South Barry Avenue Bridge, and Exhibit 6b, Proposed View of Pipeline Bridge Alternate)

4. Horizontal Auger Boring (HAB) or Jack and Bore Option and Horizontal Directional Drilling (HDD)

   Horizontal Auger Boring and Horizontal Directional Drilling (HDD) are not the recommended construction methods for crossing Otter Creek due to anticipated encounter with subsurface rock.

   A. *Horizontal Auger Boring (HAB)* or jack and bore is an established method used for the placement of a steel casing pipe under geographic features such as freeways, canals and railroad tracks to carry water lines, sewer lines, irrigation lines, etc. Auger cased boring is a technique where a bore or tunnel is formed from a bore pit to a receiving pit by means of a rotating, cutting head. Spoils are removed back to the bore pit by helically wound auger flighting rotating inside a steel casing. Once the receiving pit is reached and the auger is removed, the casing remains in the ground. The force main or carrier pipe is then installed within the casing pipe. Horizontal Auger Boring is not the recommended construction method for crossing Otter Creek due to its anticipated encounter with subsurface rock potentially causing deflection of the bore resulting in the inability to ensure the desired alignment; and potentially impact the existing foundations of the bridge abutments.

   B. *Horizontal Directional Drilling (HDD)* is defined by The International Society for Trenchless Technology (ISTT) as the method for the installation of pipes, conduits and cables using a surface-launched drilling rig. A pilot bore is drilled using a rotating drill string and is then enlarged by a back reamer to the size required for the product pipe. During the pilot bore the direction of the drill string is controlled by the orientation of a slanted face to the drill head, eccentric fluid jets or a combination of these, usually in conjunction with a locator. Horizontal Directional Drilling is not the recommended construction method for crossing Otter Creek due to the anticipated encounter with subsurface rock causing deflection of the drill bore resulting in the inability to ensure the desired alignment; and potentially impact the existing foundations of the bridge abutments.

5. Preferred Method of Crossing Otter Creek

The pipeline Bridge Option is therefore the Preferred Alternative option to cross Otter Creek for the following reasons:

- Subsurface methods for the crossing of Otter Creek such as Horizontal augering or Horizontal Drilling are not recommended since an encounter with subsurface rock is anticipated which could result in deflection of the auger/drill thereby preventing a successful subsurface creek crossing.
- The bridge hanger is not recommended since the existing bridge's structural capacity to support another utility (force main) is unknown.
- The pipeline bridge will have minimal surface and subsurface impact consisting of four piers/columns with foundations disturbing approximately 25 square feet each. If rock is encountered, the foundation would be anchored to the existing rock layer. Disturbance from sending and receiving pits would not be needed for the pipeline bridge crossing.

C. Taylors Lane Force Main Alignment

Under the Taylors Lane alternative, the proposed force main would extend from the Club's proposed onsite pump station nearly a mile to where it would connect to existing sewer manhole MH 66544, as identified on the Sanitary Sewer Evaluation Survey Map G-5 dated April 1985. This record drawing indicates that MH 66544 is located at the intersection of Taylors Lane and Shadow Lane. The point of connection under this alternative would be located approximately 4,610 feet from the proposed pump station location (Exhibit 14b).

Since the Club does not have direct frontage on Taylors Lane, the proposed force main alignment would require traversing environmentally sensitive land within the Otter Creek Preserve. The Preserve is owned by the Westchester Land Trust. The proposed force main would traverse in a northerly direction through the Preserve. The likely route would follow an alignment (approximately 1,665 linear feet) mainly along the Preserve's easterly border adjacent to residential lots that front on Taylors Lane. Once reaching Taylors Lane, the route would continue north approximately 2,300 feet within the public right-of-way to its proposed point of connection at municipal manhole 66544. The proposed easement through the Preserve would require a width of fifteen (15) feet and a length of approximately 1,665 feet, which would encumber a total land area of approximately 25,000 square feet. The Applicant believes this alternative to be neither practical nor feasible for the following reasons.

- This alternative would rely on obtaining an easement across the environmentally sensitive Otter Creek Preserve. The Applicant's environmental consultant indicates that the tidal wetlands within the Preserve play a significant role in the ecology of the greater Mamaroneck area. The preserve supports more than one hundred species of plants and an equal number of birds. The Preserve lies within a

three-mile stretch of Long Island Sound tributary waterway which contains approximately 90 percent of the remaining productive salt marshes in Westchester County. NY State Department of Environmental Conservation designated it the Preserve a Geologic Area of Particular Concern in 1978. Shortly thereafter the Village of Mamaroneck declared it a Critical Environmental Site.

- The Westchester Land Trust's stated mission is *"to work together with public and private partners to preserve land in perpetuity, and to protect and enhance the natural resources in our communities* In New York, they work to fulfill this mission by protecting key habitats and addressing critical impacts. The acquisition of an easement and installation of a force main on lands owned by the Westchester Land Trust would be contrary to their mission statement. The Applicant, therefore, believes that the acquisition of an easement across these lands would be highly unlikely and improbable. The Applicant has not inquired of the Westchester Land Trust regarding their willingness to cooperate in granting an easement since the Applicant believes this alternative to be impractical for other reasons as described following.

- Installing a forced sewer main across this area would entail extensive disturbance of the Preserve. Clearcutting and removal of existing vegetative cover within a 15 foot wide by 1,665 foot long corridor would destroy approximately 25,000 square feet of the Otter Creek Preserve. Removal of approximately 25,000 square feet of environmentally sensitive vegetation and the associated disturbance of the soils would result in a reduction in habitat as well. The need for maintenance access to the force main would preclude restoration or recovery to the natural ecological conditions within the area.

- The necessary length of the Taylors Lane alternative (1,665 feet) across environmentally sensitive land is significantly longer than the Preferred Alternative (Pipeline Bridge Option), which crosses over Otter Creek and approximately 40 linear feet of environmentally sensitive land.

- The proposed force main would result in a total offsite disturbed area of approximately 40,000 square feet within lands belonging to the Westchester Land Trust and along Taylors Lane right-of-way.

- The Applicant's engineer asserts that the Taylors Lane alternative alignment for a proposed force main would be impractical for the following technical reasons:
  - A proposed length of approximately 4,610 feet (nearly a mile) would result in a significant increase in pump size horsepower, possible higher levels of noise, and energy requirements;
  - During the Club's off-season when sewage flow is low and due to the extreme length of the force main, it would take approximately three hours (detention time) to pass sewage through the entire length of the force main;
  - The prolonged detention time could result in septic conditions (production of dangerous methane gas) within the force main;

- The potential production of septic conditions within the force main could create a public health and safety concern;
- The prolonged detention time would result in settlement of solids within the force main resulting in potential clogs;
- With the potential increase of settlement and clogging, a greater need for maintenance of the force main would result;
- Due to the length of the force main, there would be a significant burden of cost to the Applicant. When compared to the preferred South Barry Avenue alignment, the length of the Taylors Lane force main would be approximately three to four times greater, which would result in a significant differential in comparative cost. Increased cost would be expected for initial construction and future operation as well as maintenance. Increase in initial cost would be due to greater quantity of materials, size of pumps, length of construction and acquisition of an easement (if provided). Increased operating costs would be expected due to larger pumps and energy use. Maintenance costs would be greater for the reasons described above, due to the increased frequency of maintenance and length of force main.

D. Alternative Pump Station Location

A field evaluation of the site was performed to determine an alternative location for the proposed sanitary pump station. The siting criteria considered during the field evaluation were primarily the available area, absence of exposed bedrock, location consistent with routing of the sanitary conveyance system, the elevation of the site, its relationship to the floodplain and compatibility with the Club function. Taking into consideration both the field evaluation and the siting criteria, the possible alternative pump station locations did not provide a definitive alternative location that would meet the siting criteria. There were two (2) locations on site that met some but not all of the siting criteria (Exhibit 16).

Adjacent to the Tennis Court

The first alternative location that was evaluated was an area adjacent to the western most tennis court between the southerly fence and the main access driveway. This site was considered since it was centrally located on the site and had the potential to be shielded from offsite and onsite views. However, existing vegetation would need to be removed in order to accommodate the pump station and the existing landscape screen would be negated.

This area has an existing elevation of approximately 8.5 which is 6.5 feet below the 100-year flood elevation (AE 15 per FEMA LOMR). The structure would have a finished grade of 17 which would place it safely above flood elevation. However, the pump station top slab would extend some 8.5 feet above finished grade leaving it substantially exposed to club members and making access difficult for regular maintenance. In addition, the pump station would not be compatible with operation of the adjacent tennis court and would present a visual and auditory distraction. It was, therefore, determined

by the Applicant that this location does not meet the siting requirements and, therefore, is not recommended.

Adjacent to the Staff Residence Building

The second alternative location that was evaluated was an area between the northernmost onsite building (staff residence building) and the gravel parking area immediately to the east. This area was originally considered as its elevation of 17± was above the 100-year flood elevation (FEMA LOMR Zone X). Although, this location is protected from flooding it has several other characteristics that disqualify it from selection. This site is located on a rise that is likely underlain with bedrock as evidenced by exposed rock outcropping in the vicinity. In addition, this location is adjacent to the northerly property line and could create noise impacts to the adjacent offsite residence. It was, therefore, this location does not meet the siting requirements and is not recommended.

E. Private Onsite Wastewater Treatment Facility

Under this Alternative, a private onsite wastewater treatment facility would consist of an onsite wastewater treatment plant (WTP) as an alternate means of providing sewage disposal to the existing municipal sewage collection system, which contributes to the existing Mamaroneck Wastewater Treatment Plant (WWTP). Section 873.728 "Sewer Connection in Sewered Areas" of the Westchester County Sanitary Code states the following:

> "*Within the corporate limits of any city or village or within a town sewer district, no new habitable building shall be occupied unless served by a connection to the public sanitary sewer system, provided that a temporary system for the separate disposal of sewage or other wastes may be installed to serve an individual and isolated premises in accordance with the requirements of this code when the prior written consent of the municipal council or board or its duly authorized representative having jurisdiction over such sewer district is filed with the application*."

Since the MBYC is located within the Village of Mamaroneck and Westchester County Mamaroneck Sewer Districts, in accordance with the Code all new habitable buildings must be connected to the public sanitary sewer system. Therefore, the construction of a private onsite wastewater treatment facility would not be a viable option.

VII. ADVERSE ENVIRONMENTAL EFFECTS THAT CANNOT BE AVOIDED IF THE PROJECT IS IMPLEMENTED

All potential significant adverse impacts will be mitigated to the extent practical consistent with the requirements of SEQRA. Land development will result in certain unavoidable short term impacts as further described below.

A. Short Term Impacts

Short term impacts related to the Preferred Alternative would be construction related. The short term impacts associated with the construction of the sanitary pump station and sewer collection system will mainly be a result of construction and would include temporary land disturbance and construction noise. Short term impacts would be mitigated as described in Chapter V; for example land disturbance impacts would be mitigated by installation of sediment and erosion controls.

B. Long Term Impacts

The Applicant believes that no significant adverse long term impacts are associated with the construction of a sanitary pump station, force main, and sewer collection system.

VIII. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

The degree to which the proposed Project will use or alter natural and/or human resources is a component of any new construction project. These alterations can be considered as an irreversible and irretrievable commitment of resources. The proposed Project under the 2015 Amended Site Plan will result in an increase in demand on the sewage treatment plant capacity when compared to the existing condition; but a decrease in sewage flow when compared to the 2010 and 2013 Amended Site Plans. The Project will result in similar electrical usage for the new pump station and a minor increase in usage of natural gas to operate the emergency generator.

Construction of the Preferred Alternative would involve a commitment of resources and the use of expendable materials used in the construction of the pump station, force main and additional gravity sewer. Such resources would include steel, concrete, asphalt, plastic, timber, paint, and the operation of construction equipment involving the consumption of fossil fuels. Approximately 500 square feet of pervious area would be replaced by impervious.

IX. USE AND CONSERVATION OF ENERGY

The Preferred Alternative involves replacement of an existing pump station and force main. The force main involves no energy consumption. The old pumps will be replaced with new pumps that will likely be more energy efficient.

X. GROWTH INDUCING, CUMULATIVE AND SECONDARY IMPACTS

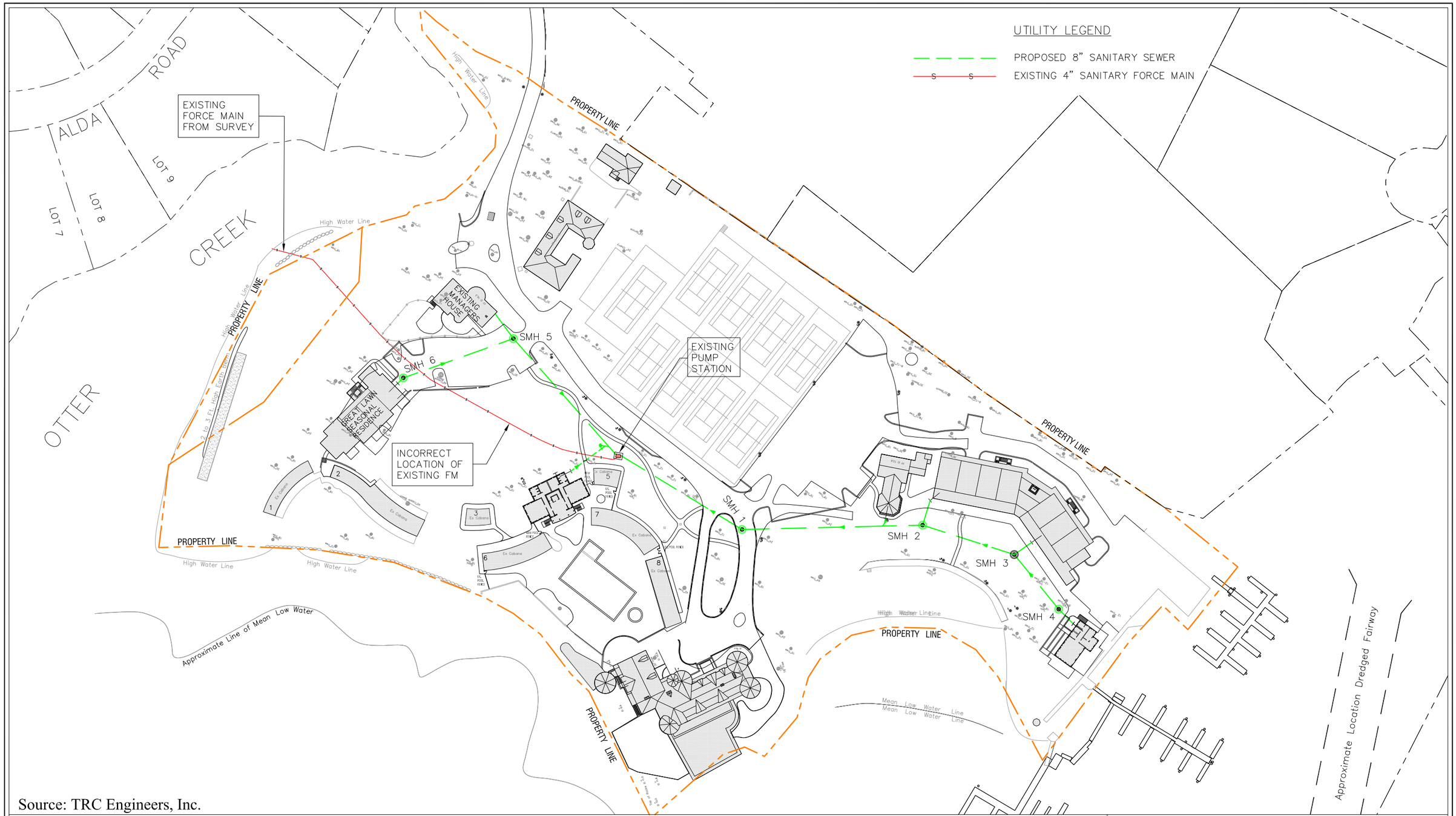
A. Construction Jobs

The development of the Preferred Alternative is not anticipated to have any significant growth inducing impacts on local long term employment opportunities, although it will generate a number of construction jobs for construction of the pump station and force main. A five-person crew would likely perform the construction. No permanent positions would be created after its completion of the sanitary system.

B. Replacement Project

The Preferred Alternative replaces an existing sewage infrastructure system. Since the sewer extension to the public sewer system would be provide by a pressure force main, no other offsite users would be able to connect and thus, it does not have growth inducing impacts.

EXHIBITS



Source: TRC Engineers, Inc.

2010 AMENDED SITE PLAN

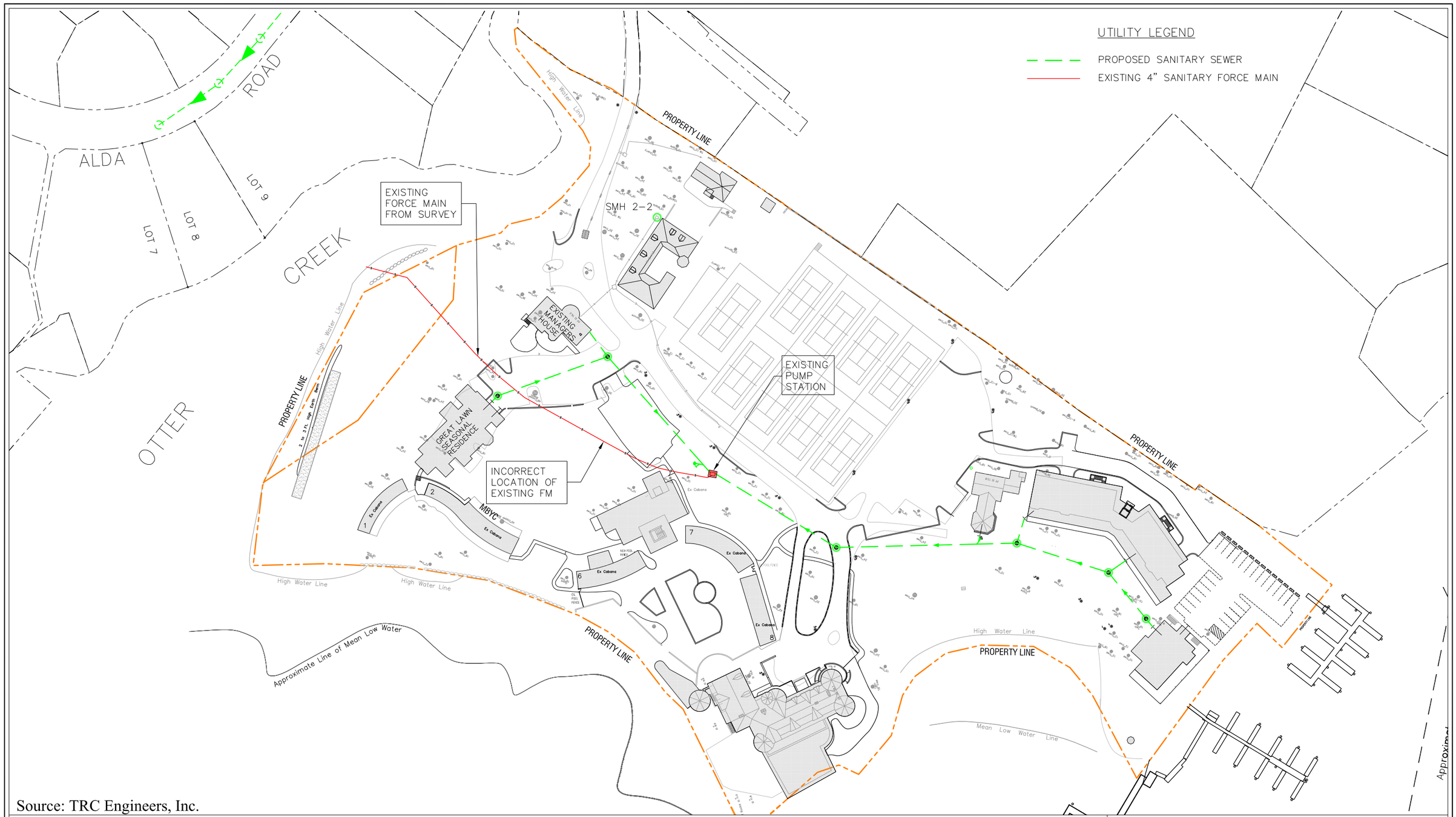
Scale: 1"=400'

Exhibit #1

MAMARONECK BEACH & YACHT CLUB

Proposed Sanitary Sewer System Upgrade
Village of Mamaroneck, New York

TRC Engineers, Inc.



Source: TRC Engineers, Inc.

2013 AMENDED SITE PLAN
(January 29, 2013)

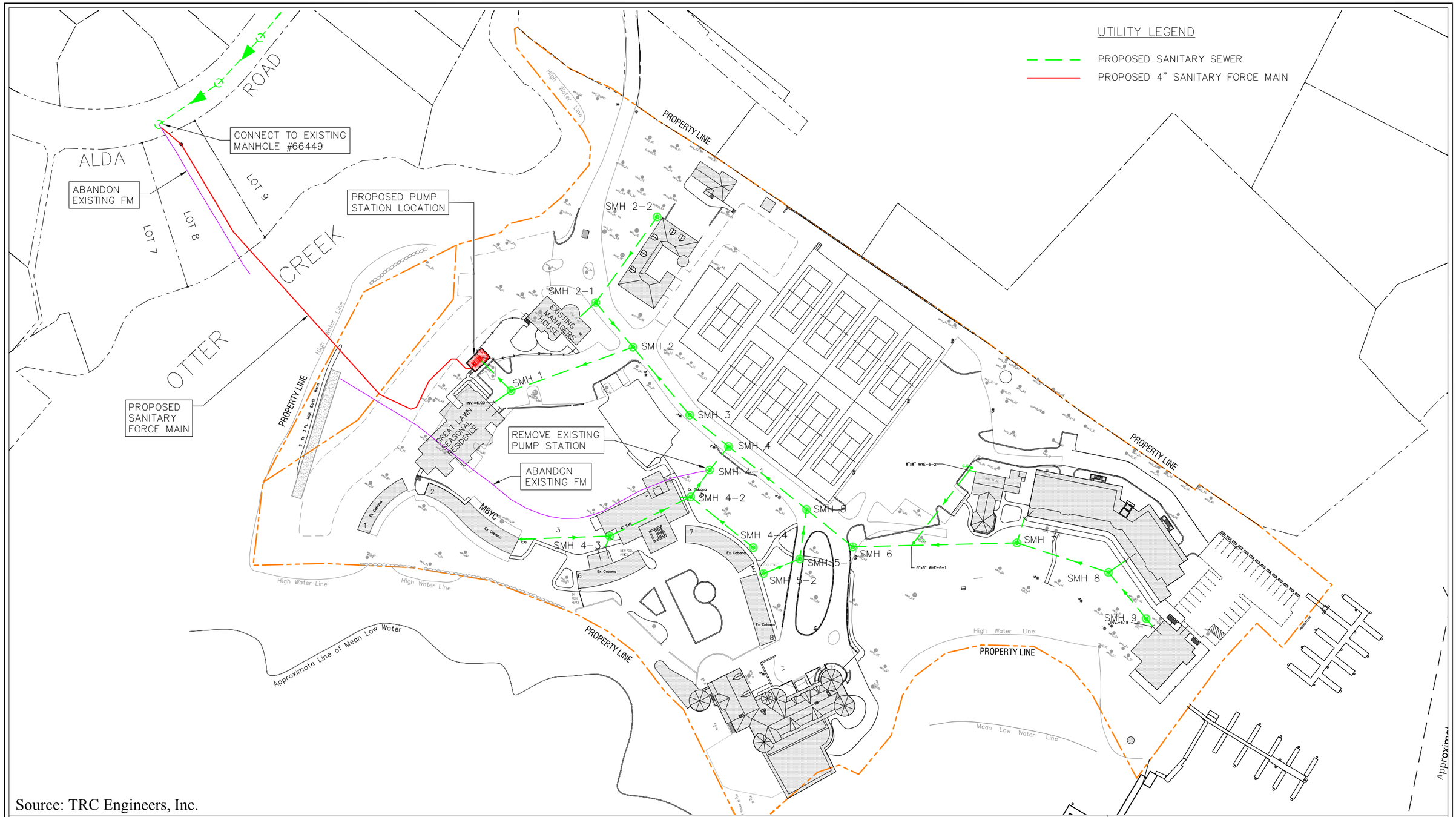
Scale: 1"=400'

Exhibit #2a

MAMARONECK BEACH & YACHT CLUB

Proposed Sanitary Sewer System Upgrade
Village of Mamaroneck, New York

TRC Engineers, Inc.



Source: TRC Engineers, Inc.

2013 AMENDED SITE PLAN (PROPOSED ACTION)
(November 25, 2013)

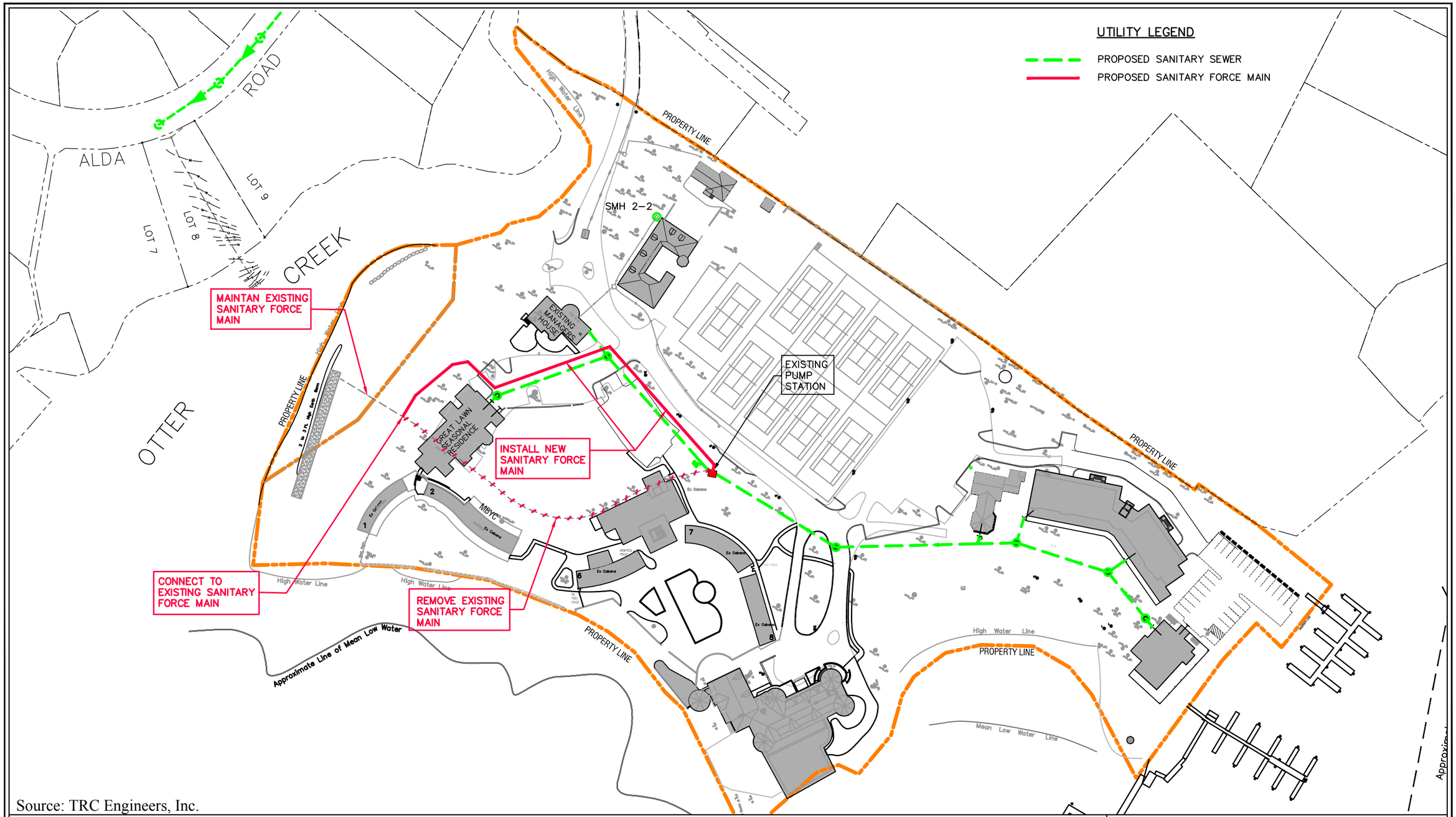
Scale: 1"=400'

Exhibit #2b

MAMARONECK BEACH & YACHT CLUB

Proposed Sanitary Sewer System Upgrade
Village of Mamaroneck, New York

TRC Engineers, Inc.



Source: TRC Engineers, Inc.

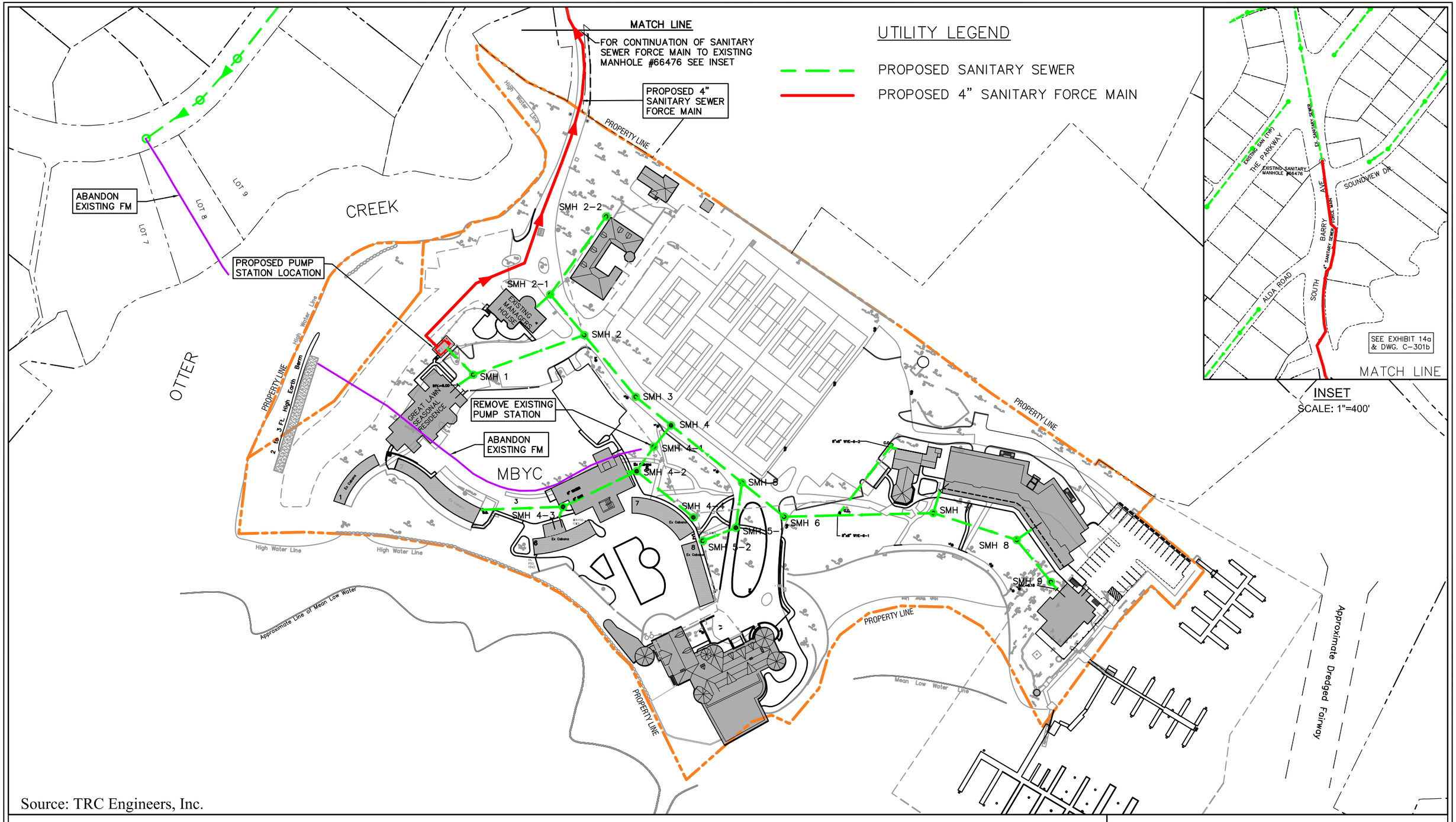
2013 AMENDED SITE PLAN WITH
MODIFIED SANITARY FORCE MAIN
(January 2016)

Scale: 1"=100'

Exhibit #2c

MAMARONECK BEACH & YACHT CLUB
Proposed Sanitary Sewer System Upgrade
Village of Mamaroneck, New York

TRC Engineers, Inc.



Source: TRC Engineers, Inc.

2015 AMENDED SITE PLAN - SOUTH BARRY AVENUE (PREFERRED ALTERNATIVE)

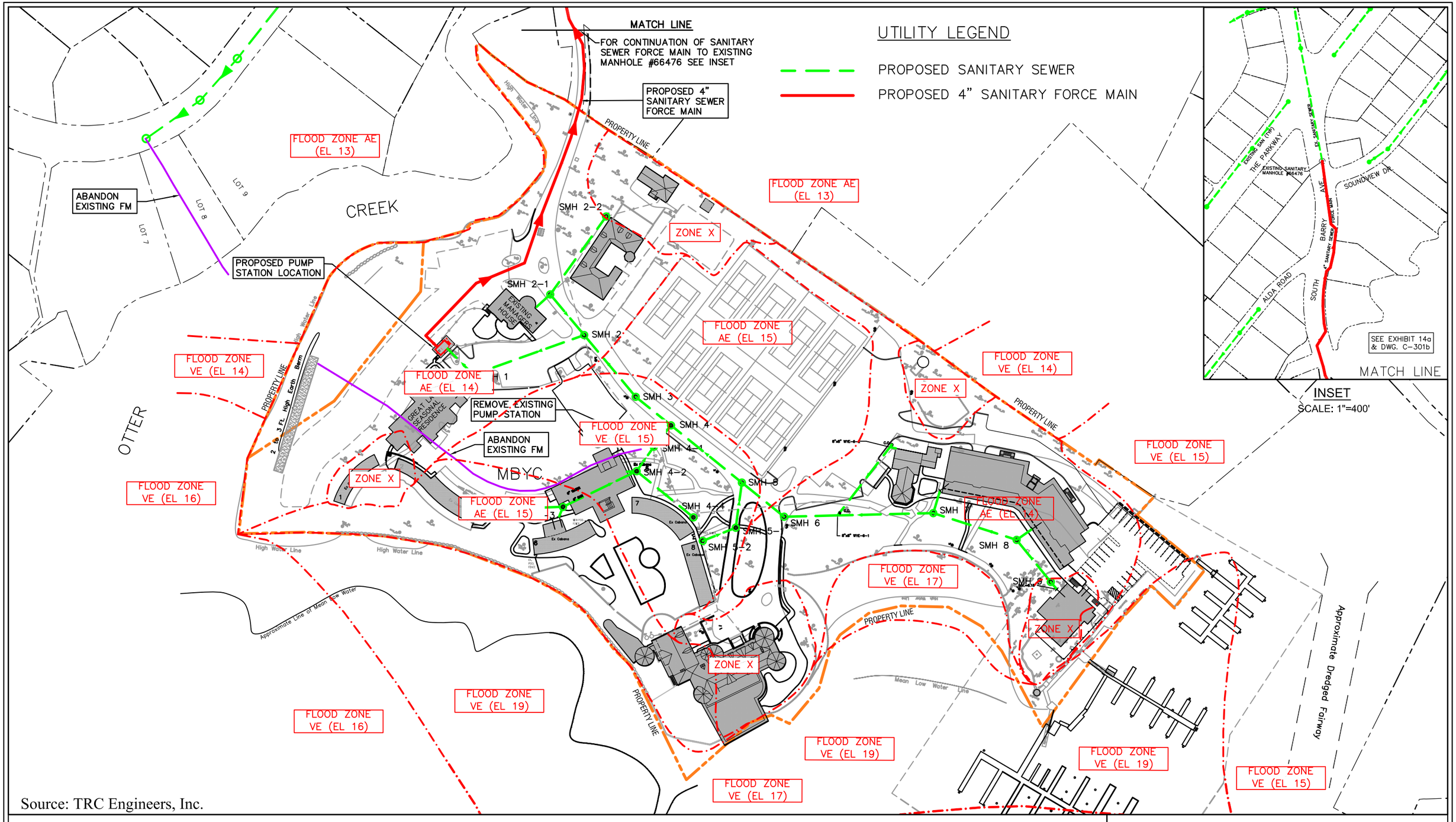
Scale: 1"=300'

Exhibit #3

MAMARONECK BEACH & YACHT CLUB

Proposed Sanitary Sewer System Upgrade
Village of Mamaroneck, New York

TRC Engineers, Inc.



Source: TRC Engineers, Inc.

2015 AMENDED SITE PLAN - SOUTH BARRY AVENUE (PREFERRED ALTERNATIVE)
With FEMA Approved Flood Zone (LOMR)

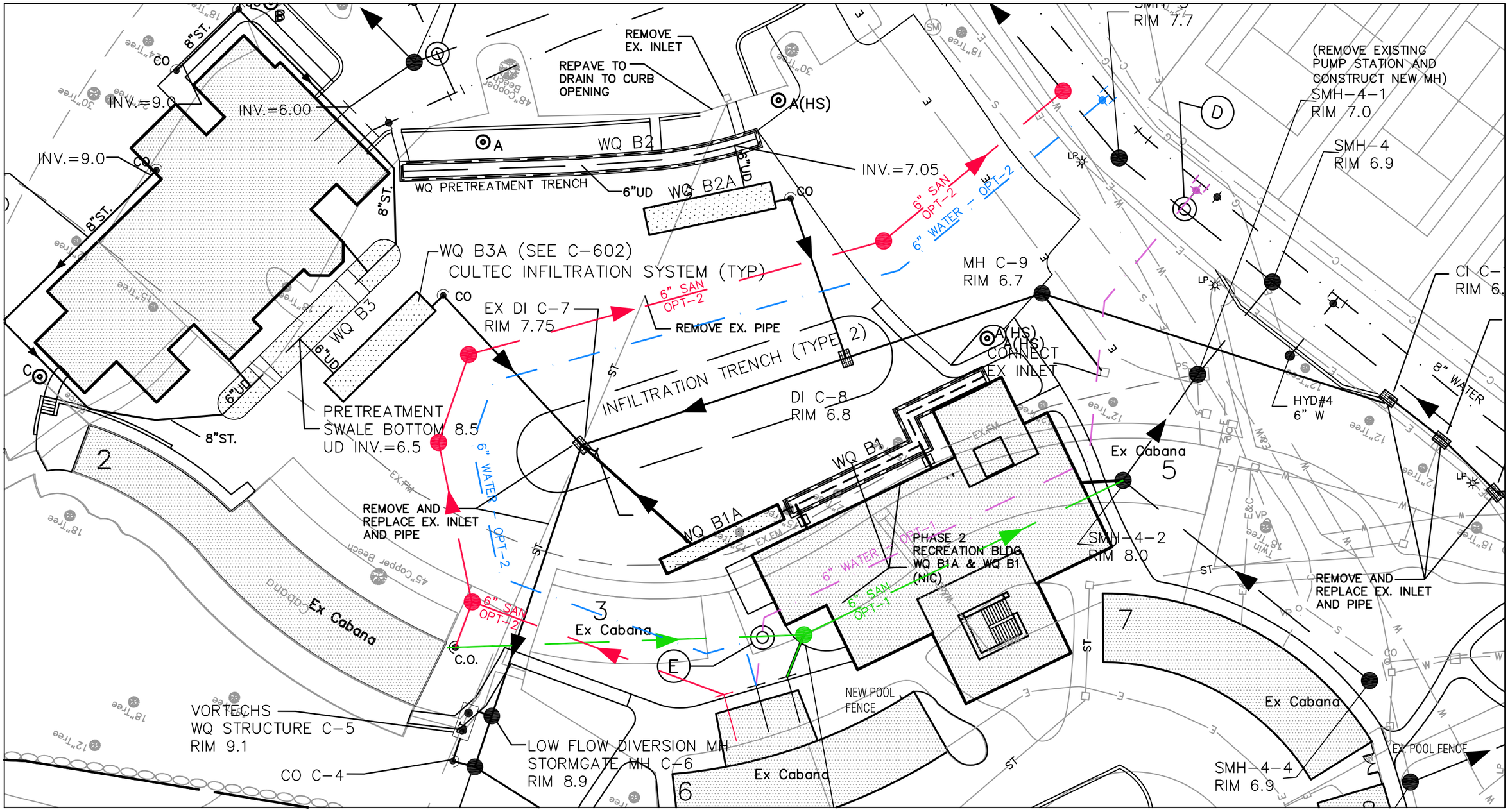
Scale: 1"=300'

Exhibit #3a

MAMARONECK BEACH & YACHT CLUB

Proposed Sanitary Sewer System Upgrade
Village of Mamaroneck, New York

TRC Engineers, Inc.



Source: TRC Engineers, Inc.

OPTION LEGEND

- PROPOSED SANITARY SEWER–OPTION No. 1
- PROPOSED SANITARY SEWER OPTION No. 2
- PROPOSED WATER OPTION No. 1
- PROPOSED WATER OPTION No. 2

UTILITIES SKETCH
SANITARY & WATER ALTERNATIVE
OPTIONS 1 & 2

(January 2016)

Scale: 1"=30'

Exhibit #3b

MAMARONECK BEACH & YACHT CLUB
Proposed Sanitary Sewer System Upgrade
Village of Mamaroneck, New York

TRC Engineers, Inc.

Source: USGS NY_Mamaroneck_20130322_TM_geo.pdf

SITE LOCATION MAP

Scale: 1"=2000'

Exhibit #4

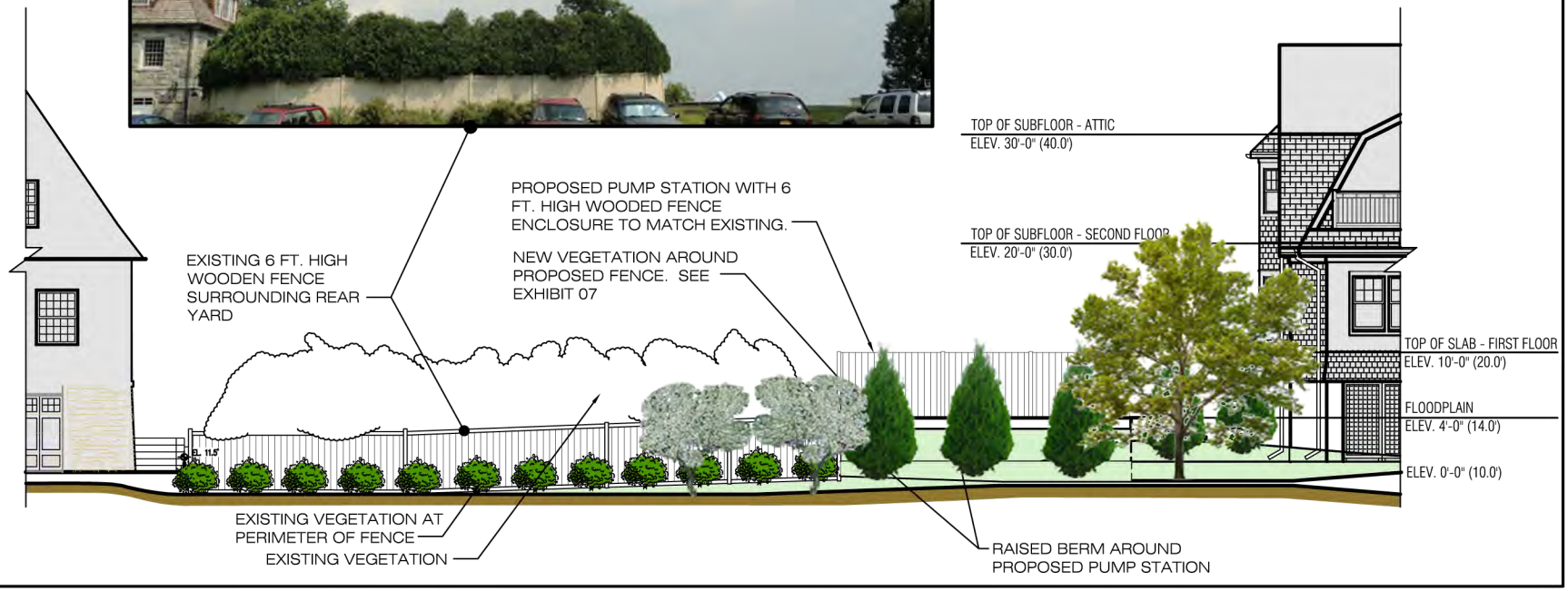
MAMARONECK BEACH & YACHT CLUB

Proposed Sanitary Sewer System Upgrade

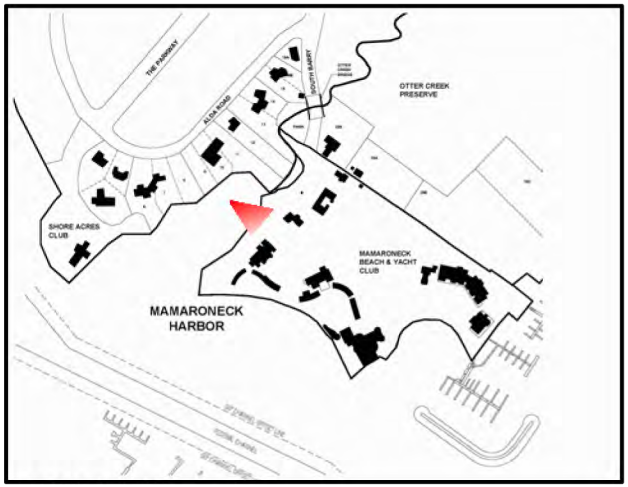
Village of Mamaroneck, New York

TRC Engineers, Inc.

EXISTING VIEW



PROPOSED VIEW



LOCATION PLAN

Exhibit 05

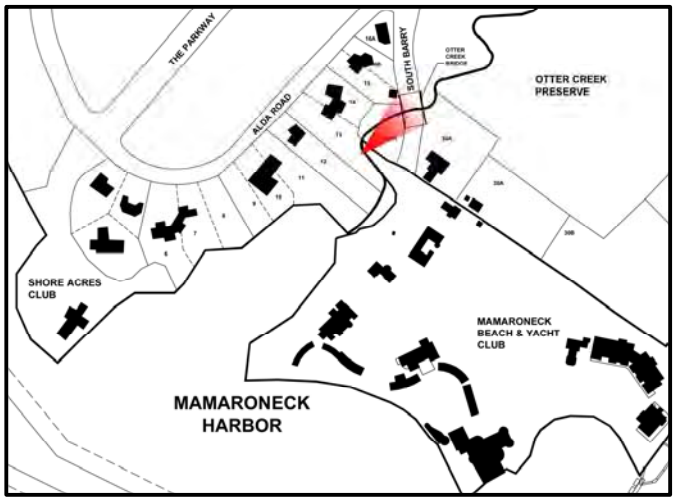
VIEWS OF PROPOSED PUMP STATION AREA

MAMARONECK BEACH & YACHT CLUB

Proposed Sanitary Sewer System Upgrade
Village of Mamaroneck, New York

DEANGELIS ARCHITECTURAL SERVICES, LLC

VIEW LOOKING NORTHEAST



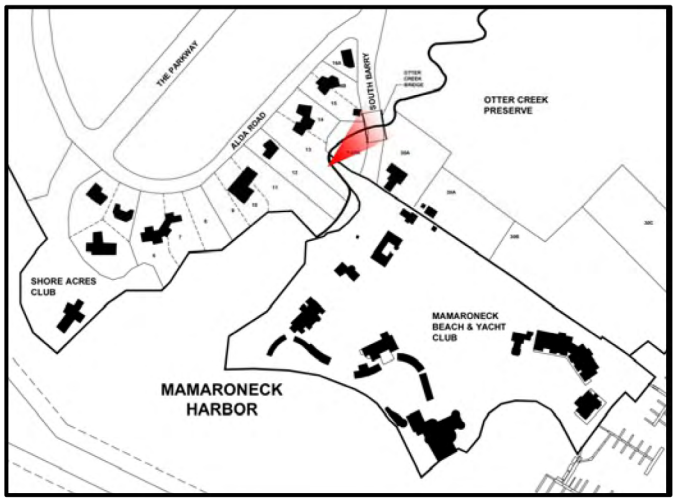
LOCATION PLAN

Exhibit 6a
EXISTING VIEW
SOUTH BARRY BRIDGE (OTTER CREEK)

MAMARONECK BEACH & YACHT CLUB
Proposed Sanitary Sewer System Upgrade
Village of Mamaroneck, New York

DEANGELIS ARCHITECTURAL SERVICES, LLC

VIEW LOOKING NORTHEAST



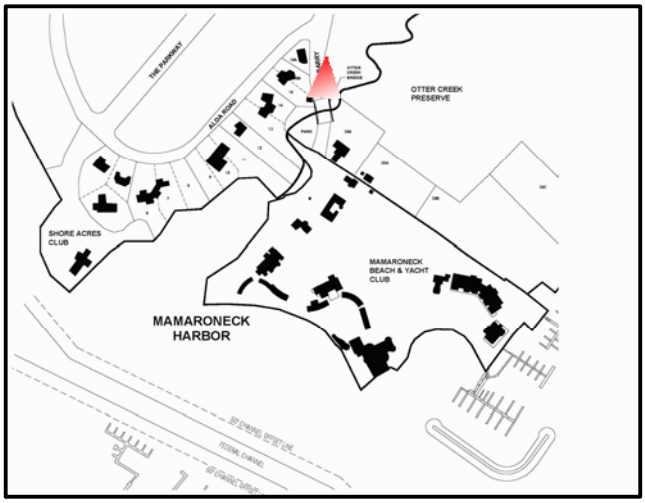
LOCATION PLAN

Exhibit 6b
PROPOSED VIEW OF PIPELINE BRIDGE (OTTER CREEK)

MAMARONECK BEACH & YACHT CLUB
Proposed Sanitary Sewer System Upgrade
Village of Mamaroneck, New York

DEANGELIS ARCHITECTURAL SERVICES, LLC

VIEW LOOKING SOUTH (TO CLUB)



LOCATION PLAN

PROPOSED FORCE
MAIN LOCATION

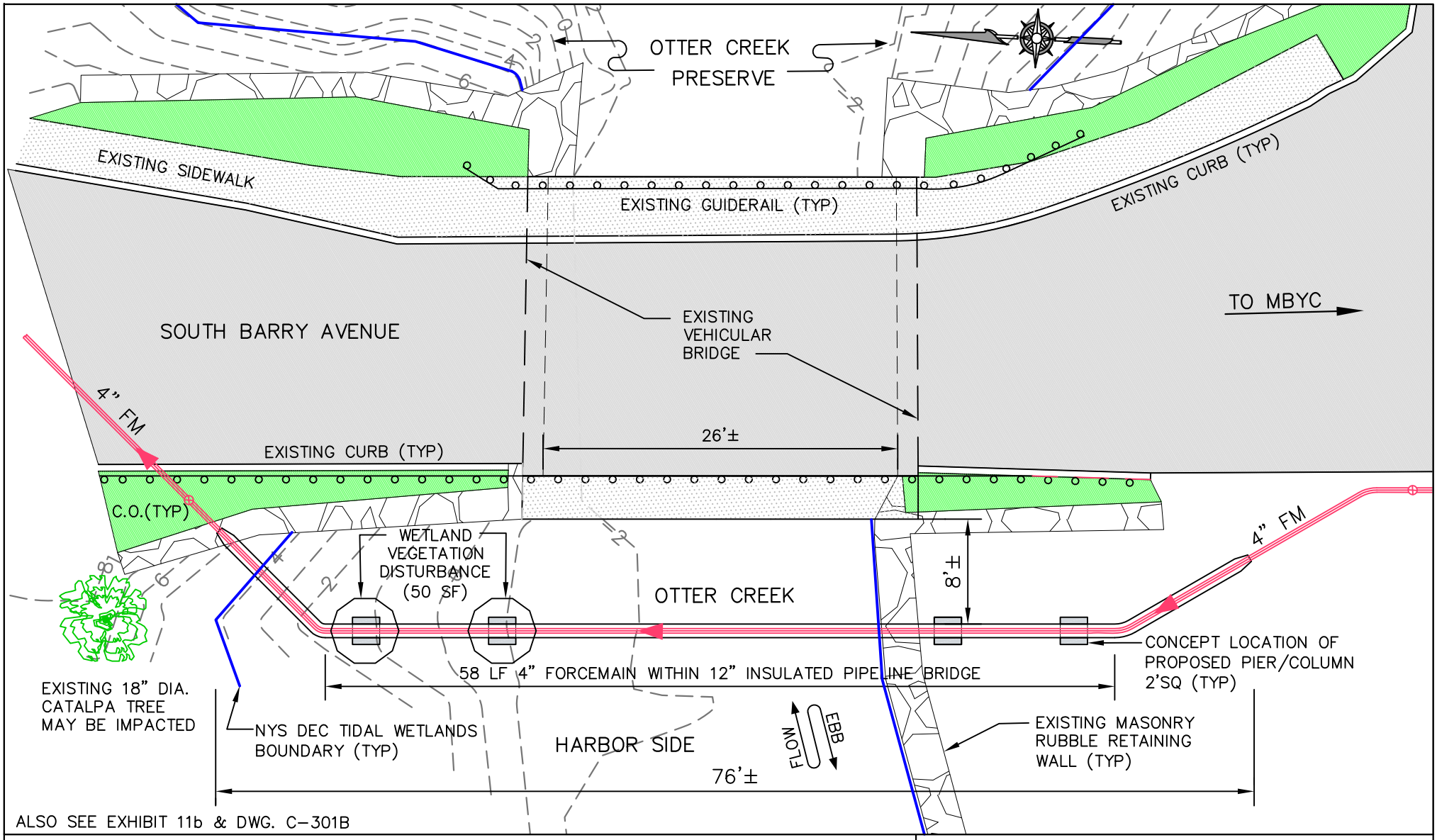
ENLARGED VIEW
LOOKING SOUTH

Exhibit 07
PROPOSED VIEW OF PIPELINE
(SOUTH BARRY AVENUE)

MAMARONECK BEACH & YACHT CLUB
Proposed Sanitary Sewer System Upgrade
Village of Mamaroneck, New York

DEANGELIS ARCHITECTURAL SERVICES, LLC

Q:\Acad200\200001\dwg\EXHIBITS\REVISED-EXHIBITS_July 15\8a-Schematic Pipeline Bridge (Plan).dwg



SCHEMATIC PIPELINE BRIDGE (PLAN)

Source: TRC Engineers, Inc. / Ahneman Kirby, LLC.

Scale: 1"=10'

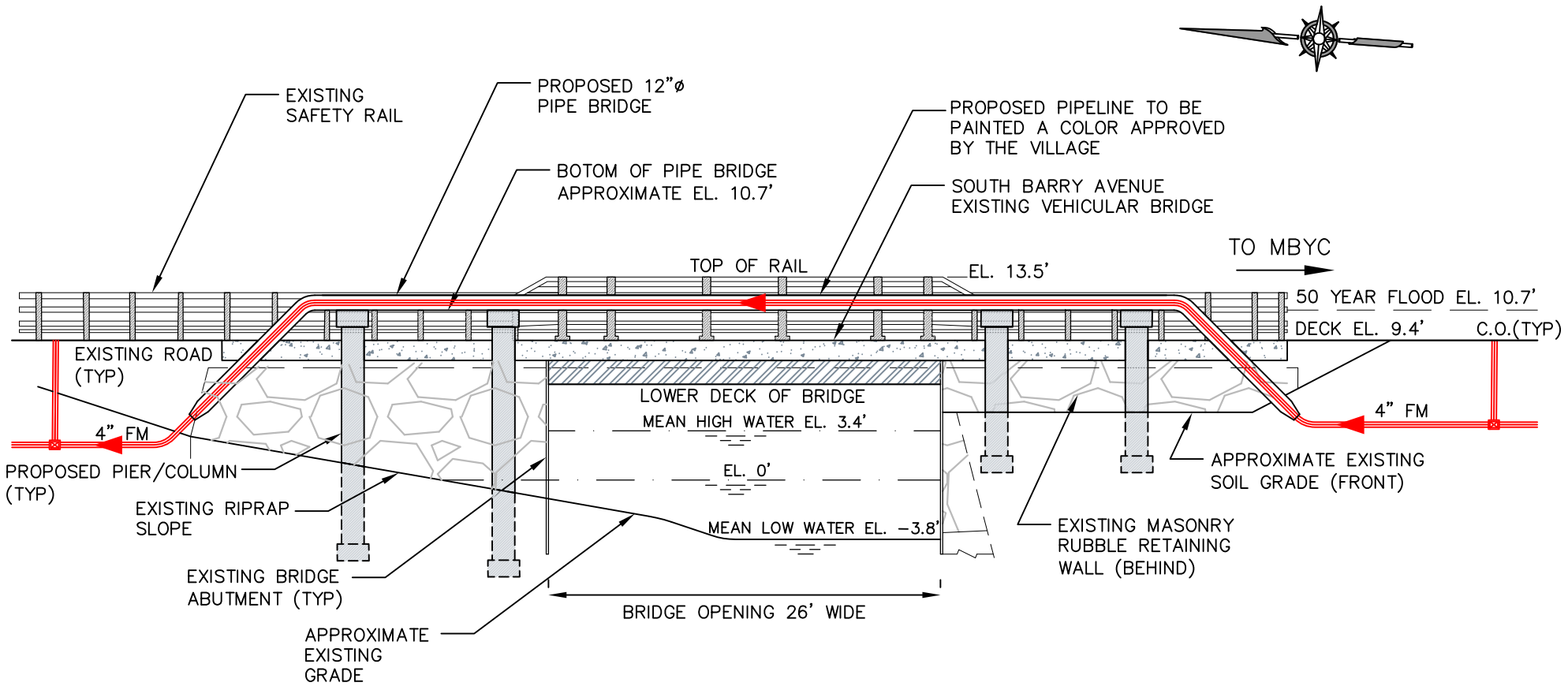
Exhibit 8a

MAMARONECK BEACH & YACHT CLUB

Proposed Sanitary Sewer System Upgrade
Village of Mamaroneck, New York

TRC Engineers, Inc.

Q:\Acad200\200001\dwg\EXHIBITS\REVISED-EXHIBITS_July 15\8b-Schematic Pipeline Bridge (Elevation).dwg



VIEW FROM THE HARBOR SIDE

ALSO SEE EXHIBIT 11a & DWG. C-301b

SCHEMATIC PIPELINE BRIDGE (ELEVATION)

Source: TRC Engineers, Inc. / Ahneman Kirby, LLC.

Scale: 1"=10'

Exhibit 8b

MAMARONECK BEACH & YACHT CLUB

Proposed Sanitary Sewer System Upgrade
Village of Mamaroneck, New York

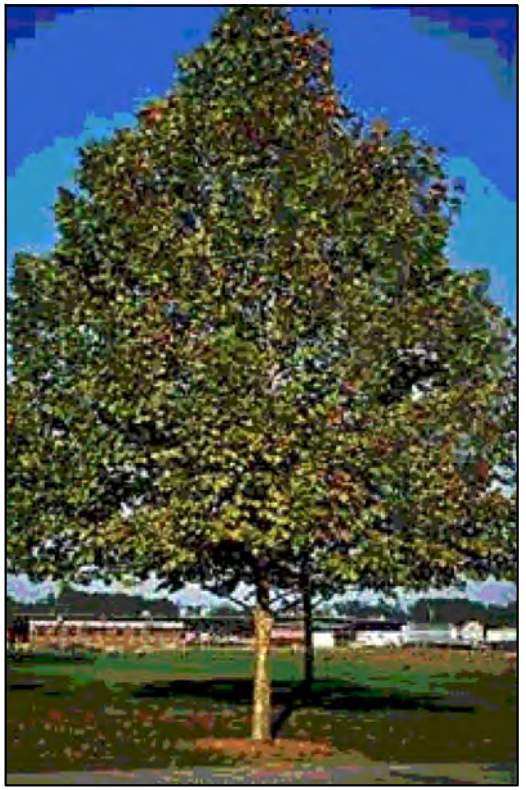
TRC Engineers, Inc.

PLANT LIST

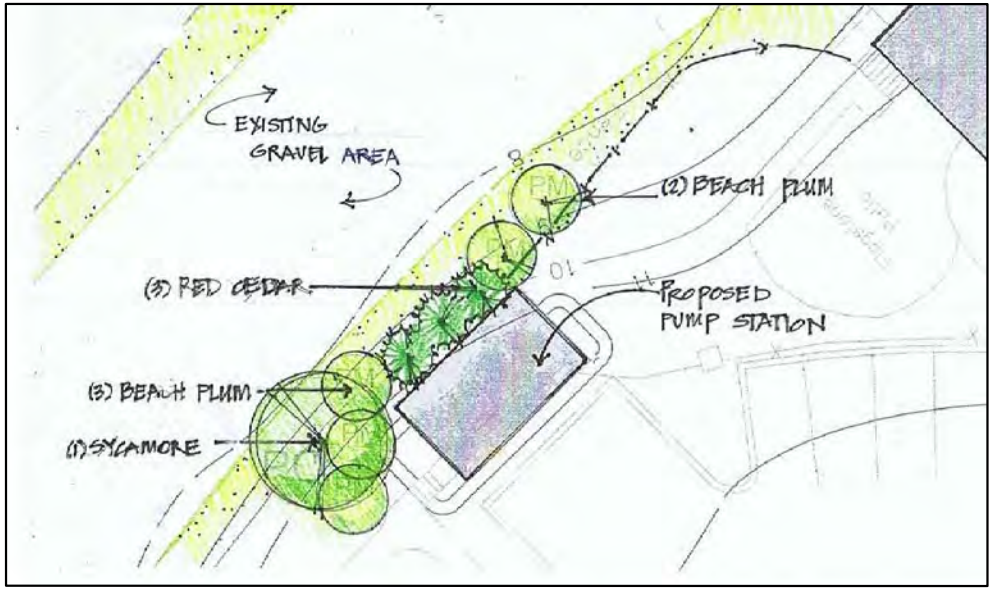
Quantity	Symbol	Latin Name	Common Name	Size
3	JV	Juniperus virginiana	Eastern Red Cedar	10'-12' Ht.
5	PM	Prunus maritima 'Marsh'	Beach Plum	1" – 1 ½" cal.
1	PO	Platanus occidentalis	Sycamore	3" – 3 ½" cal.

EASTERN RED CEDAR

BEACH PLUM,



SYCAMORE

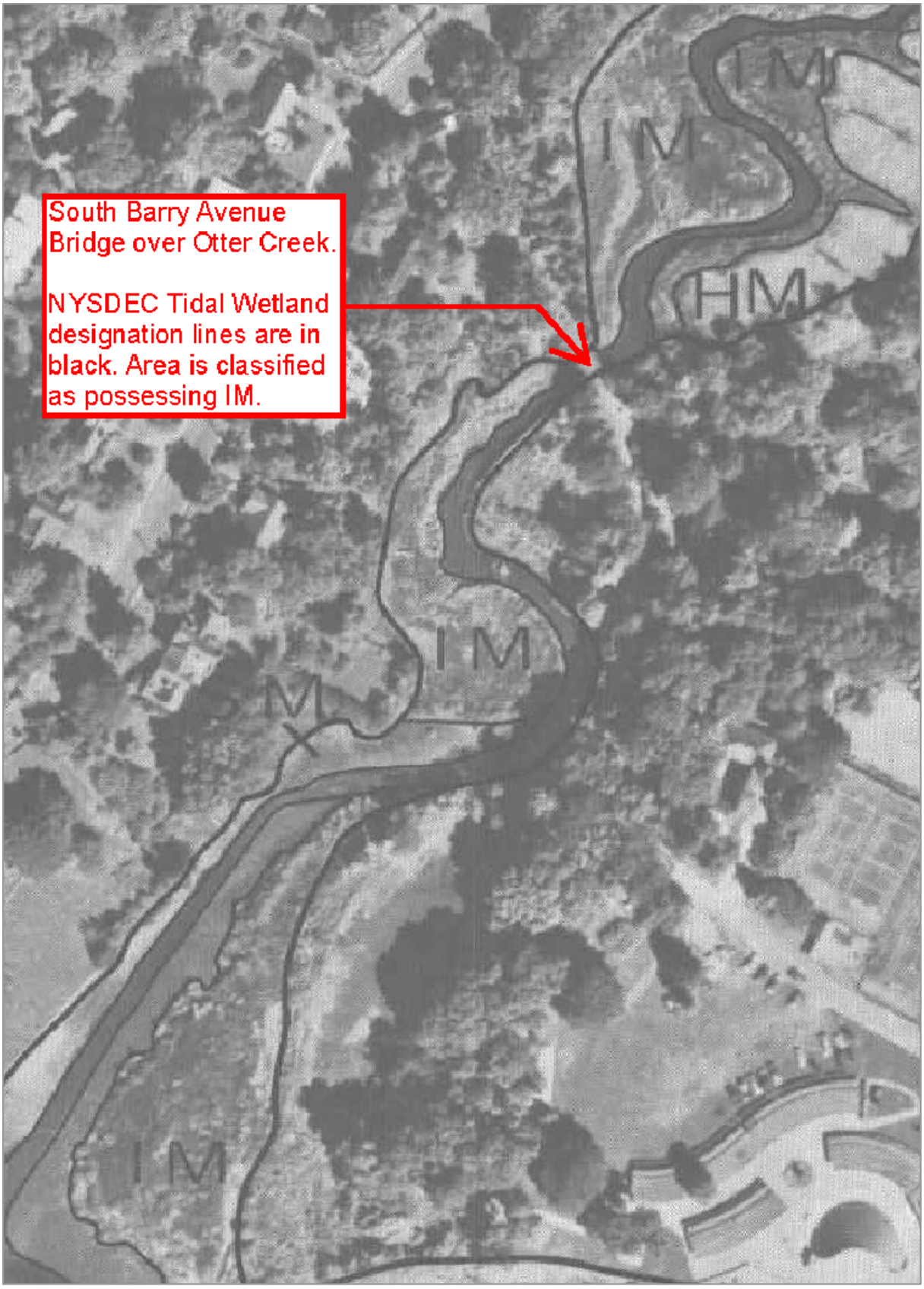


LANDSCAPE PLAN - NTS

Exhibit 9
Proposed Landscape Plan (Pump Station)

MAMARONECK BEACH & YACHT CLUB
South Barry Avenue Survey Sketch
Village of Mamaroneck, New York

Munz Landscape Architecture PLLC



NYS DEC Tidal Wetlands Map

Source: NYS DEC Website

Scale: N.T.S.

Exhibit 10

MAMARONECK BEACH & YACHT CLUB

Proposed Sanitary Sewer System Upgrade

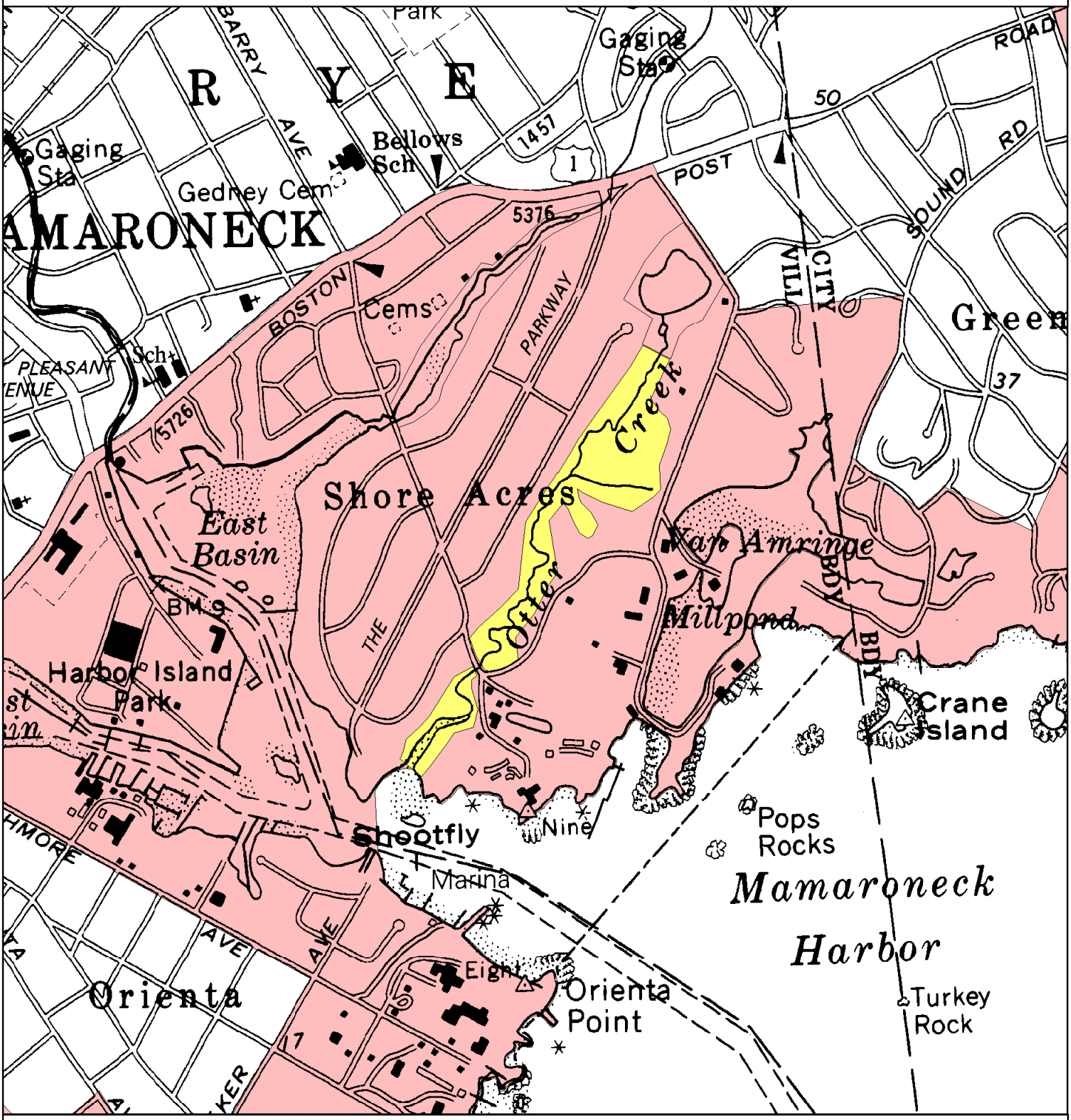
Village of Mamaroneck, New York

TRC Engineers, Inc.

Otter Creek Critical Environmental Area (CEA)

Effective Date of Designation: 12-25-80

Designating Agency: Village of Mamaroneck



Legend

- Otter Creek CEA
- Adjacent CEA

0 500 1,000 2,000 Feet

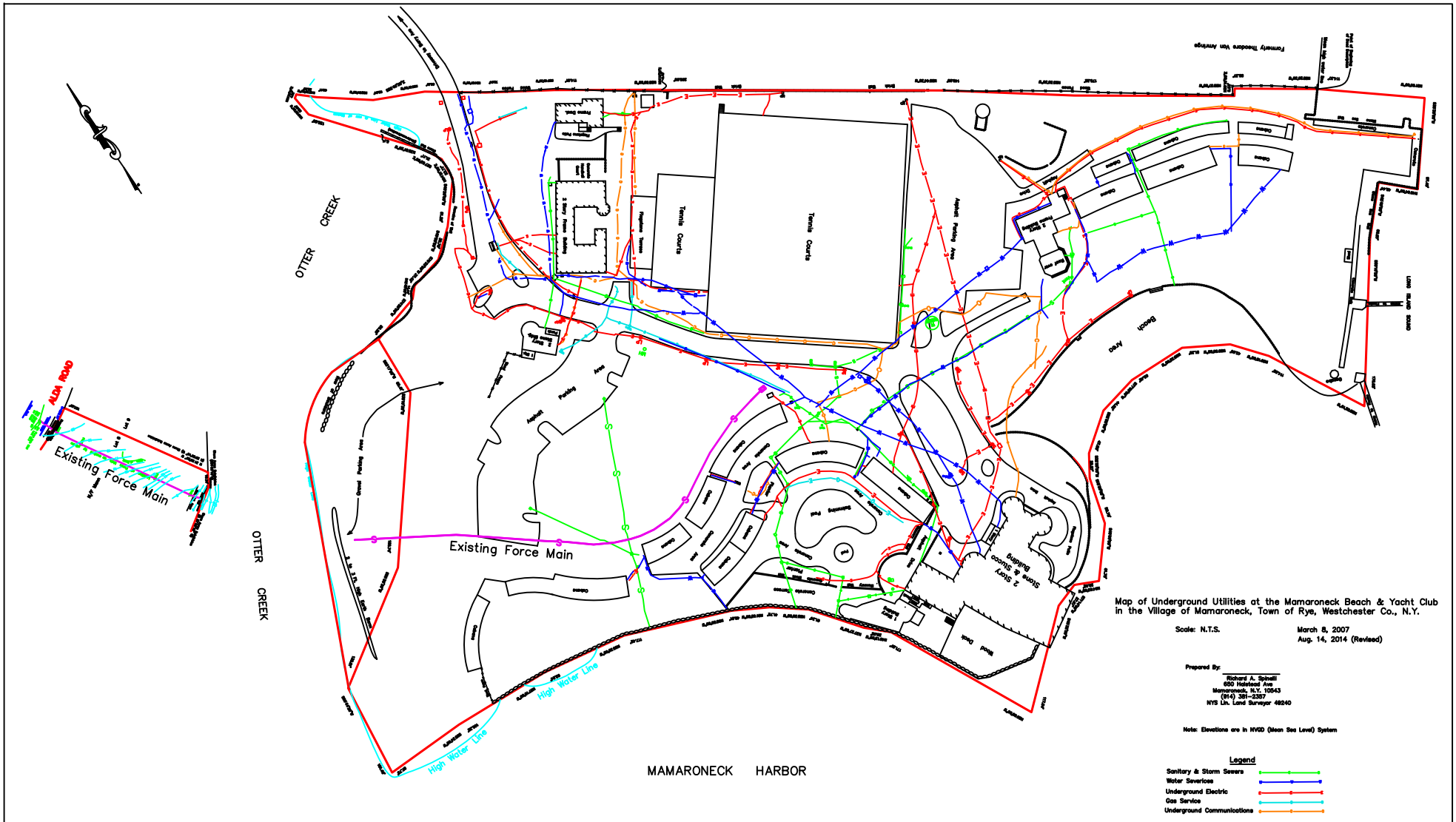
1 inch equals 1,000 feet

For Adjacent CEAs see map: Long Island Sound CEA

EXHIBIT 11

Base Map: DOT 1:24,000 Planimetric Images

Disclaimer: This map was prepared by the New York State Department of Environmental Conservation using the most current data available. It is deemed accurate but is not guaranteed. NYS DEC is not responsible for any inaccuracies in the data. Please contact the designating authority for additional information regarding legal boundary descriptions.



Note: Also See Full Size Drawing

UNDERGROUND UTILITIES MAP

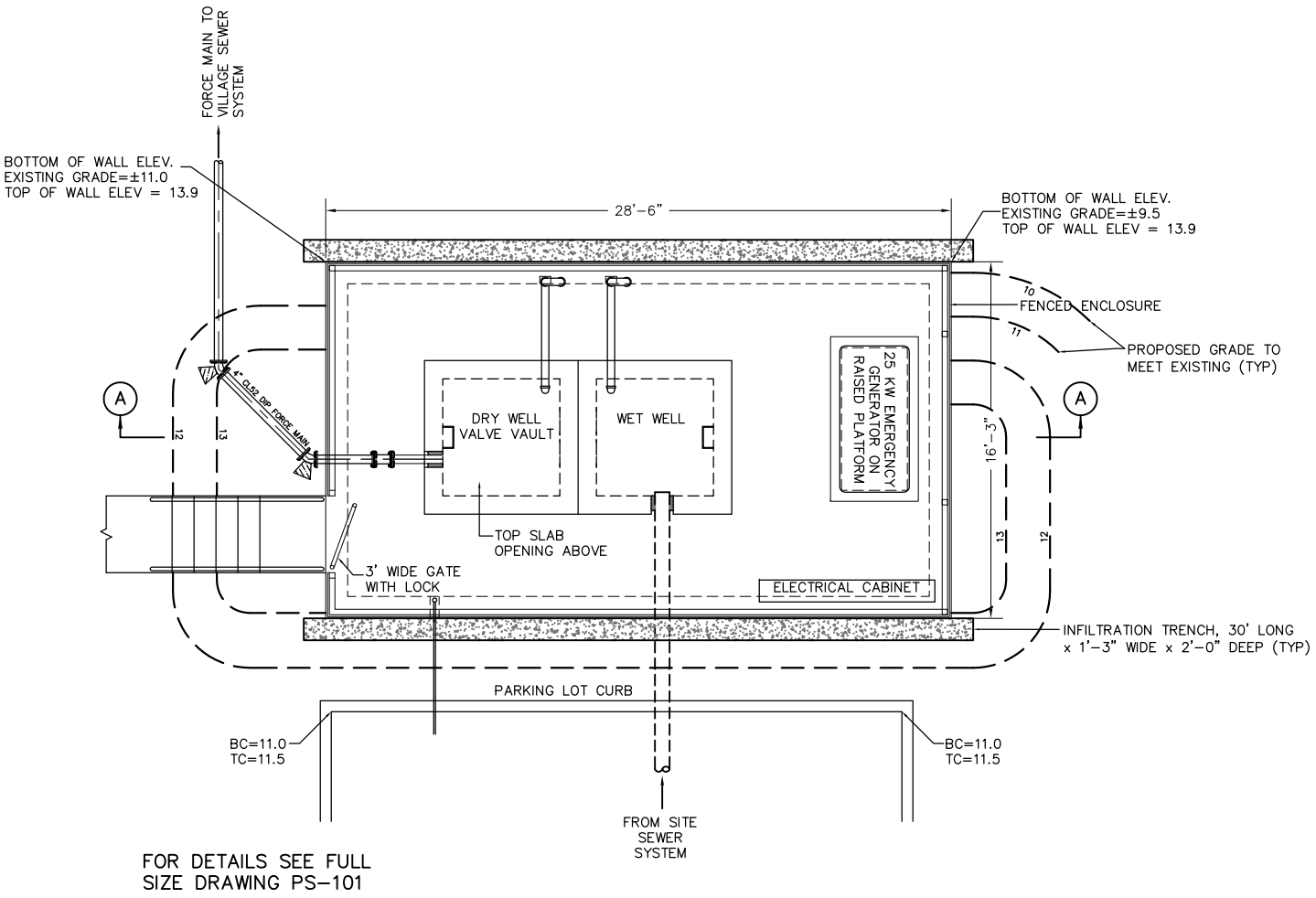
Source: Richard A. Spinelli, NYS Land Surveyor

Exhibit 12

MAMARONECK BEACH & YACHT CLUB

Proposed Sanitary Sewer System Upgrade
Village of Mamaroneck, New York

TRC Engineers, Inc.



PLAN VIEW

Source: TRC Engineers, Inc.

PRELIMINARY PUMP STATION (PLAN)

Scale: N.T.S.

Exhibit 13a

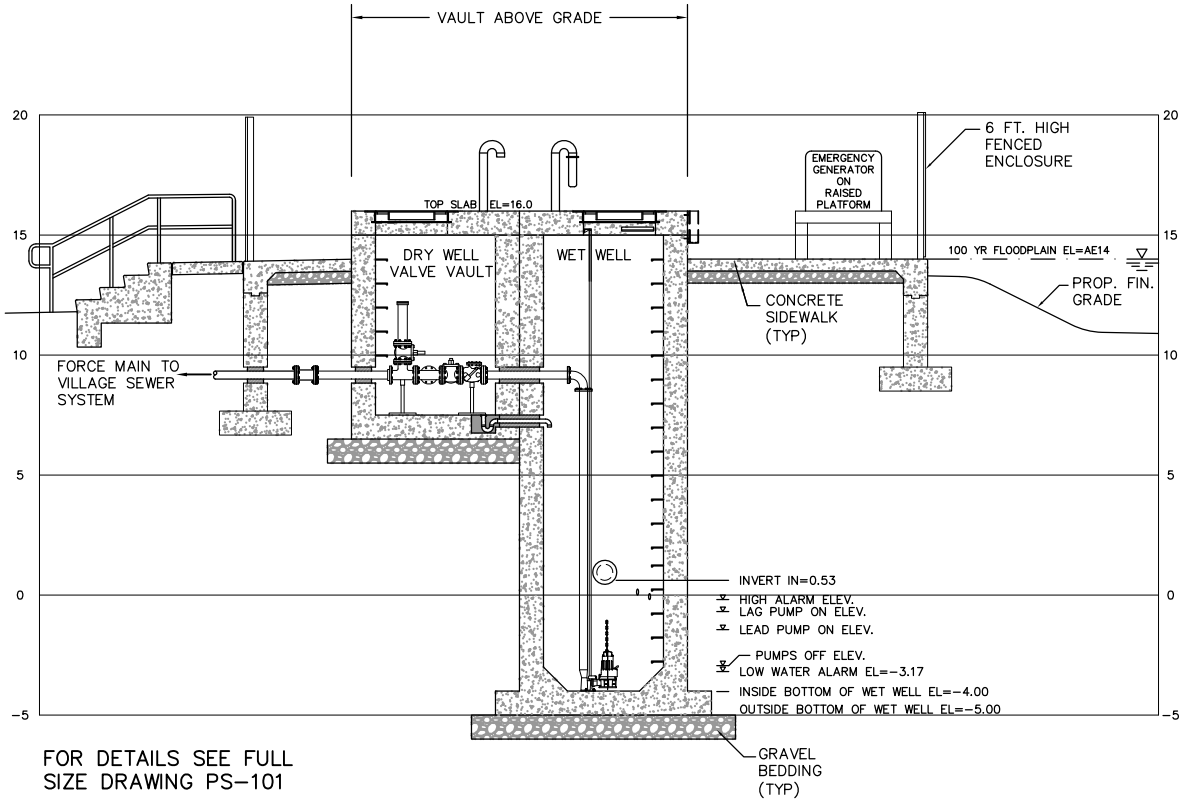
MAMARONECK BEACH & YACHT CLUB

South Barry Avenue Survey Sketch

Village of Mamaroneck, New York

TRC Engineers, Inc.

Q:\Acad200\200001\dwg\EXHIBITS\REVISED-EXHIBITS_July 15\13b-PumpStation (Elevation).dwg



ELEVATION VIEW A–A
VIEW LOOKING WEST

Source: TRC Engineers, Inc.

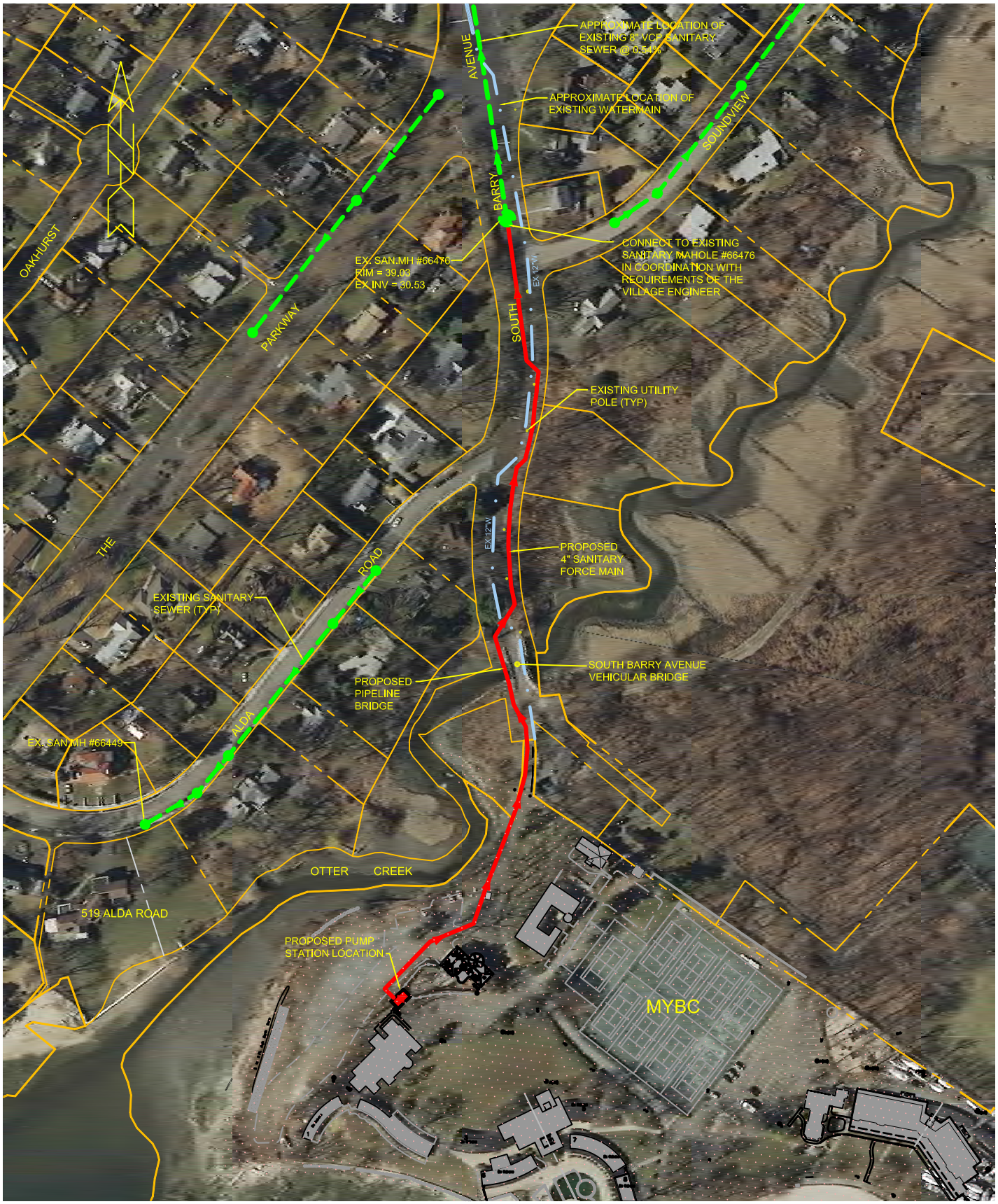
PRELIMINARY PUMP STATION (ELEVATION)

Scale: N.T.S.

Exhibit 13b

MAMARONECK BEACH & YACHT CLUB
South Barry Avenue Survey Sketch
Village of Mamaroneck, New York

TRC Engineers, Inc.



SOUTH BARRY AVENUE
ALTERNATIVE FORCE MAIN ALIGNMENT

Source: TRC Engineers, Inc. Scale: 1"=200'

Exhibit 14a

MAMARONECK BEACH & YACHT CLUB

Proposed Sanitary Sewer System Upgrade
Village of Mamaroneck, New York

TRC Engineers, Inc.

Source: TRC Engineers, Inc.

ALTERNATIVE FORCE MAIN ALIGNMENT (TAYLORS LANE)

Scale: 1"=300'

Exhibit #14b

MAMARONECK BEACH & YACHT CLUB

Proposed Sanitary Sewer System Upgrade
Village of Mamaroneck, New York

TRC Engineers, Inc.

Q:\Acad200\200001\dwg\EXHIBITS\REVISED-EXHIBITS_July 15\14b TaylorsLane_Alt.dwg

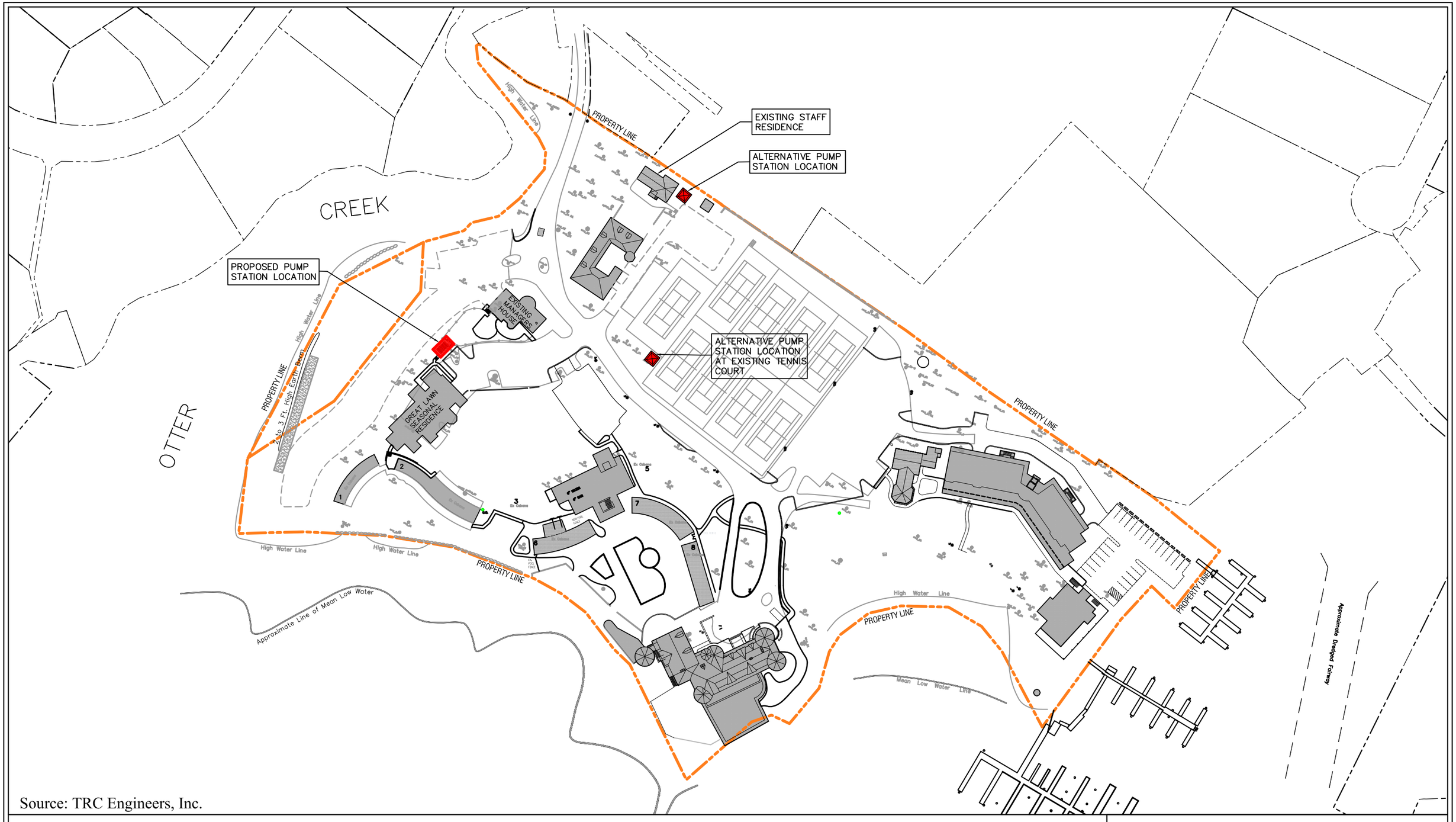
Source: TRC Engineers, Inc.

NOISE IMPACT PLAN

Scale: 1"=200'

Figure #15

MAMARONECK BEACH & YACHT CLUB
Proposed Sanitary Sewer System Upgrade
Village of Mamaroneck, New York



Source: TRC Engineers, Inc.

ALTERNATIVE PUMP STATION LOCATIONS

Scale: 1"=300'

Exhibit #16

MAMARONECK BEACH & YACHT CLUB

Proposed Sanitary Sewer System Upgrade
Village of Mamaroneck, New York

TRC Engineers, Inc.

XII. COMMENTS AND RESPONSES

A. ORGANIZATIONAL CHART OF COMMENTS AND RESPONSES

INDEX OF COMMENTS AND RESPONSES				
Comment source/Key		**Commentator**	**Issue**	**Comment/ Response Number**
Document	**Location**			
Memo 6/13/16	Pg. 1, para. 3	BFJ Planning	Existing Sewer Line	1A
Memo 6/13/16	Pg. 1, para. 4	BFJ Planning	Existing Sewer Line	1B
Memo 6/13/16	Pg. 1, para. 5 - Pg. 2, para. 1	BFJ Planning	Existing Sewer Line	1C
Letter 6/7/16	Pg. 1 para. 2	Debora S. Cohen, Newman Ferrara LLP	Existing Sewer Line	1D
Letter 5/11/16	Pg. 2, para 3 - Pg. 4 para. 2	Daniel Natchez, President Daniel S. Natchez and Associates, Inc; Shore Acres Property Owners Association	Existing Sewer Line	1E
Letter 5/25/16 Tafur	Pg. 2-3, Item 3	Victor M. Tafur, Resident of 490 Bleeker Avenue	Existing Sewer Line	1F
Email 6/6/16 Hillyer	Pg. 1, para. 5 - Pg. 2, para. 1	Christopher D. Hillyer, Resident of 506 South Barry Avenue	Existing Sewer Line	1G
Email 6/6/16 Hillyer	Pg. 3, para. 1, line 1	Christopher D. Hillyer, Resident of 506 South Barry Avenue	Existing Sewer Line	1H
Email 5/28/16L Waitt	Pg. 1, para. 2	Lorna Waitt, Resident of 549 Alda Road	Existing Sewer Line	1I
Email 6/3/16 K Waitt	Pg. 1, para. 5	Keith W. Waitt, Resident of 549 Alda Road	Existing Sewer Line	1J
Email 6/8/16 Stabile	Pg. 2 para. 3	Allison Staible	Existing Sewer Line	1K

Email (via Betty-Ann Sherer, Land Use Coordinator) 06/05/16	Pg. 1, para. 4	Katherine E. Desmond, Resident of 347 Prospect Avenue	Existing Sewer Line	1L
Letter 6/7/16	Pg. 1, para. 2 - 3	Daniel Natchez, President Daniel S. Natchez and Associates, Inc; Shore Acres Property Owners Association	Existing Sewer Line	1M
Public Hearing Transcript 5/25/16	Pg. 53, ln 4 -16	Barbara Mann, Resident of Alda Rd	Existing Sewer Line	1N
Public Hearing Transcript 5/25/16	Pg. 54, ln 4 -16	Sue McCrory, Resident of The Crescent	Existing Sewer Line	1O
Public Hearing Transcript 5/25/16	Pg. 58, ln 9 -24	Stuart Tiekert	Existing Sewer Line	1P
Public Hearing Transcript 5/25/16	Pg. 64, ln 10-12, 18 - 24, Pg. 65, ln 10-13, 17 - 19, 23-24	Debora S. Cohen	Existing Sewer Line	1Q
Memo 6/13/16	Pg. 2, para. 3	BFJ Planning	Natural Features	2A
Memo 6/13/16	Pg. 2, para. 4	BFJ Planning	Natural Features	2B
Letter 06/02/16	Pg. 1, para. 3	Rebecca Crist, Deputy Permit Administrator, NYS Department of Environmental Conservation,	Natural Features	2C
Letter 06/02/16	Pg. 2, para. 1	Rebecca Crist, Deputy Permit Administrator, NYS Department of Environmental Conservation,	Natural Features	2D
Letter 06/02/16	Pg. 2, Item 1	Rebecca Crist, Deputy Permit Administrator, NYS Department of Environmental Conservation,	Natural Features	2E
Letter 06/02/16	Pg. 2, Item 3	Rebecca Crist, Deputy Permit Administrator, NYS Department of Environmental Conservation,	Natural Features	2F

Letter 06/02/16	Pg 2-3, Item 4	Rebecca Crist, Deputy Permit Administrator, NYS Department of Environmental Conservation,	Natural Features	2G
Memo 5/26/16	Pg. 2, para. 8	VOM HCZMC	Natural Features	2H
Memo 5/13/16	Pg. 1, para. 8 - 9	Sven Hoeger, Environmental Consultant to the HCZMC	Natural Features	2I
Letter 5/11/16	Pg. 9, para. 7 - Pg. 10, para. 1	Daniel Natchez, President Daniel S. Natchez and Associates, Inc; Shore Acres Property Owners Association	Natural Features	2J
Letter 5/11/16	Pg. 10, para. 2	Daniel Natchez, President Daniel S. Natchez and Associates, Inc; Shore Acres Property Owners Association	Natural Features	2K
Letter 5/11/16	Pg. 10, para. 3 - 5	Daniel Natchez, President Daniel S. Natchez and Associates, Inc; Shore Acres Property Owners Association	Natural Features	2L
Letter 5/11/16	P.g 11, para. 1	Daniel Natchez, President Daniel S. Natchez and Associates, Inc; Shore Acres Property Owners Association	Natural Features	2M
Email 5/28/16 L Waitt	Pg. 1, para. 6	Lorna Waitt, Resident of 549 Alda Road	Natural Features	2N
Email 6/3/16 K Waitt	Pg. 2, para. 3, item a.	Keith W. Waitt, Resident of 549 Alda Road	Natural Features	2O

Letter 06/02/16	Pg. 3, para. 4	Rebecca Crist, Deputy Permit Administrator, NYS Department of Environmental Conservation,	Natural Features	2P
Memo 6/13/16	Pg. 2, para. 5	BFJ Planning	LWRP	3.A
Memo 5/26/1/6	Pg. 2, para. 3	VOM HCZMC	LWRP	3.B
Memo 5/13/16	Pg. 1, para. 4 - 7	Sven Hoeger, Environmental Consultant to the HCZMC	LWRP	3.C
Memo 6/13/16	Pg. 3, para. 2	BFJ Planning	Landscaping	4.A
Memo 6/13/16	Pg. 3, para. 3	BFJ Planning	Landscaping	4.B
Email 5/29/16	Pg 1, para. 3	Dana L Stetson and Mary M. Stetson, Residents of 565 Alda Road	Landscaping	4C
Email 6/6/16	Pg 3, para. 2, item a.	Christopher D. Hillyer, Resident of 506 South Barry Avenue	Landscaping	4.D
Memo 6/13/16	Pg. 3, para. 4	BFJ Planning	flow rate	5.A
Memo 5/26/16	Pg. 2, para. 4	VOM HCZMC	flow rate	5.B
Letter 5/25/16 Tafur	Pg. 1 - 2, Item 1	Victor M. Tafur, Resident of 490 Bleeker Avenue	flow rate	5.C
Memo 6/13/16	Pg. 3, para. 5	BFJ Planning	Relocate water & sewer lines from under Rec Building	6.A
Letter 5/11/16	Pg. 11, para. 2	Daniel Natchez, President Daniel S. Natchez and Associates, Inc; Shore Acres Property Owners Association	Relocate water & sewer lines from under Rec Building	6.B
Memo 6/13/16	Pg. 3, para. 6	BFJ Planning	No Action Alternative	7.A
Letter 06/02/16	Pg 2, Item 2	Rebecca Crist, Deputy Permit Administrator, NYS Department of Environmental Conservation,	No Action Alternative	7.B

Memo 5/26/16	Pg. 1, para. 2	VOM HCZMC	No Action Alternative	7C
Letter 5/25/16 Tafur	Pg. 3, Item 4	Victor M. Tafur, Resident of 490 Bleeker Avenue	No Action Alternative	7.D
Letter 6/7/16	Pg. 1 para. 2	Debora S. Cohen, Newman Ferrara LLP	No Action Alternative	7.E
Memo 6/13/16	Pg. 4, para. 2	BFJ Planning	Relocation from Proposed Pipe Bridge	8.A
Letter 6/7/16	Pg. 2 para. 4	Debora S. Cohen, Newman Ferrara LLP	Relocation from Proposed Pipe Bridge	8.B
Letter 5/11/16	Pg. 5, para. 3	Daniel Natchez, President Daniel S. Natchez and Associates, Inc; Shore Acres Property Owners Association	Relocation from Proposed Pipe Bridge	8.C
Memo 6/13/16	Pg. 4, para. 3	BFJ Planning	Relocation from Proposed Pipe Bridge	8.D
Memo 5/26/16	Pg. 1, para. 5	VOM HCZMC	Relocation from Proposed Pipe Bridge	8.E
Letter 06/02/16	Pg 3, Item 5	Rebecca Christ, Deputy Permit Administrator, NYS Department of Environmental Conservation,	Relocation from Proposed Pipe Bridge	8.F
Letter 5/11/16	Pg. 9, para. 1 - 8	Daniel Natchez, President Daniel S. Natchez and Associates, Inc; Shore Acres Property Owners Association	Relocation from Proposed Pipe Bridge	8.G
Email 6/6/16 Hillyer	Pg 2, para. 2, item b	Christopher D. Hillyer, Resident of 506 South Barry Avenue	Relocation from Proposed Pipe Bridge	8.H
Email 6/6/16 Hillyer	Pg 2, para. 2, item c.	Christopher D. Hillyer, Resident of 506 South Barry Avenue	Relocation from Proposed Pipe Bridge	8.I

Email 6/6/16	Pg 2, para. 2, item d.	Christopher D. Hillyer, Resident of 506 South Barry Avenue	Relocation from Proposed Pipe Bridge	8.J
Memo 6/13/16	Pg. 3, para. 3	BFJ Planning	Relocation from Proposed Pipe Bridge	8.K
Email 6/3/16 K Waitt	Pg. 2, para. 2	Keith W. Waitt, Resident of 549 Alda Road	Relocation from Proposed Pipe Bridge	8.O
Letter 5/11/16	Pg. 7, para. 5	Daniel Natchez, President Daniel S. Natchez and Associates, Inc; Shore Acres Property Owners Association	Relocation from Proposed Pipe Bridge	8.L
Email 5/28/16	Pg. 1, para. 3	Lorna Waitt, Resident of 549 Alda Road	Relocation from Proposed Pipe Bridge	8.M
Email 5/29/16	Pg 1, para. 3	Dana L Stetson and Mary M. Stetson, Residents of 565 Alda Road	Relocation from Proposed Pipe Bridge	8.N
Email 6/3/16	Pg 2, para.2	Keith W. Waitt, Resident of 549 Alda Road	Relocation from Proposed Pipe Bridge	8.O
Memo 6/13/16	Pg. 5, para. 1	BFJ Planning	Evaluate Horizontal Auger Boring (HAB) and Horizontal Directional Drilling (HDD)	9.A
Email 6/6/16	Pg 2, para. 2, item a.	Christopher D. Hillyer, Resident of 506 South Barry Avenue	Evaluate Horizontal Auger Boring (HAB) and Horizontal Directional Drilling (HDD)	9.B
Public Hearing Transcript 5/25/16	Pg. 23, ln 17 - Pg. 24, ln 4	Mark Radulovic	Evaluate Horizontal Auger Boring (HAB) and Horizontal Directional Drilling (HDD)	9C

Memo 6/13/16	Pg. 5, para. 2	BFJ Planning	Construction Phasing and Impacts	10.A
Memo 5/26/16	Pg. 1, para. 3; Pg. 2, para.2	VOM HCZMC	Construction Phasing and Impacts	10.B
Letter 6/7/16	pg 2, para. 2	Debora S. Cohen, Newman Ferrara LLP	Construction Phasing and Impacts	10.C
Letter 5/25/16	Pg. 4, Item 7	Victor M. Tafur, Resident of 490 Bleeker Avenue	Construction Phasing and Impacts	10.D
Email 5/28/16	Pg. 1, para. 8	Lorna Waitt, Resident of 549 Alda Road	Construction Phasing and Impacts	10.E
Email 6/3/16	Pg. 1, para. 6	Keith W. Waitt, Resident of 549 Alda Road	Construction Phasing and Impacts	10.F
Memo 6/13/16	Pg. 5, para. 3	BFJ Planning	Construction Phasing and Impacts	10.G
Email 5/29/16	Pg 1, para. 3	Dana L Stetson and Mary M. Stetson, Residents of 565 Alda Road	Impacts on Neighbors	10.H
Public Hearing Transcript 5/25/16	Pg. 47, ln 23 - Pg. 48, ln 18	MaryAnn Zurbuch	Impacts on Neighbors	10.I
Memo 6/13/16	Pg. 6, para. 2	BFJ Planning	Impacts on Neighbors	11.A
Letter 5/11/16	Pg. 8 para. 6 - Pg. 9, para. 1	Daniel Natchez, President Daniel S. Natchez and Associates, Inc; Shore Acres Property Owners Association	Impacts on Neighbors	11.B
Letter 5/11/16	Pg. 9, para. 2	Daniel Natchez, President Daniel S. Natchez and Associates, Inc; Shore Acres Property Owners Association	Impacts on Neighbors	11.C
Letter 5/11/16	Pg. 9, para. 5	Daniel Natchez, President Daniel S. Natchez and Associates, Inc; Shore Acres Property Owners Association	Impacts on Neighbors	11.D

Letter 5/11/16	Pg. 9, para. 6	Daniel Natchez, President Daniel S. Natchez and Associates, Inc; Shore Acres Property Owners Association	Impacts on Neighbors	11.E
Email 6/6/16	Page 3, para. 2	Christopher D. Hillyer, Resident of 506 South Barry Avenue	Impacts on Neighbors	11.F
Email 5/29/16	Pg 1, para. 3	Dana L Stetson and Mary M. Stetson, Residents of 565 Alda Road	Impacts on Neighbors	11.G
Memo 6/13/16	Pg. 6, para. 1	BFJ Planning	Easements	12.A
Memo 5/26/16	Pg. 1, para. 4	VOM HCZMC	Easements	12.B
Letter 05/25/16	Pg. 1, para. 1	Susan E. Carpenter, Director of Land Perservation and Counsel, Westchester Land Trust	Easements	12.C
Letter 6/7/16	Pg. 2, para. 5	Debora S. Cohen, Newman Ferrara LLP	Easements	12.D
Letter 6/7/16	Page 3, para. 1	Debora S. Cohen, Newman Ferrara LLP	Easements	12.E
Letter 5/25/16	Pg. 3 Item 6	Victor M. Tafur, Resident of 490 Bleeker Avenue	Easements	12.F
Email 5/28/16	Pg. 1, para. 4	Lorna Waitt, Resident of 549 Alda Road	Easements	12.G
Letter 5/11/16	Pg 8, p1 -3	Daniel Natchez, President Daniel S. Natchez and Associates, Inc; Shore Acres Property Owners Association	Easements	12.H
Email 6/6/16	Pg 2, para. 3, item a.	Christopher D. Hillyer, Resident of 506 South Barry Avenue	Easements	12.I
Letter 6/7/16	Page 3, para. 1	Debora S. Cohen, Newman Ferrara LLP	Permits and Approvals	13.A
Letter 5/25/16 Tafur	Pg. 2 Item 2	Victor M. Tafur, Resident of 490 Bleeker Avenue	Permits and Approvals	13.B

Memo 5/26/16	Pg. 1, para. 6 - 10	VOM HCZMC	Permits and Approvals	13.C
Memo 5/26/16	Pg. 2, para. 1	VOM HCZMC	Request for Onsite Wastewater Treatment Facility	14.A
Letter 5/25/16 Tafur	Pg. 3 Item5	Victor M. Tafur, Resident of 490 Bleeker Avenue	Request for Onsite Wastewater Treatment Facility	14.B
Email 5/28/16	Pg. 1, para. 7	Lorna Waitt, Resident of 549 Alda Road	Request for Onsite Wastewater Treatment Facility	14.C
Email 6/3/16 K Waitt	Pg. 2, para. 3, item d.	Keith W. Waitt, Resident of 549 Alda Road	Request for Onsite Wastewater Treatment Facility	14.D
Email 6/6/16 Hillyer	Pg. 3, para. 1, item c.	Christopher D. Hillyer, Resident of 506 South Barry Avenue	Request for Onsite Wastewater Treatment Facility	14.E
Public Hearing Transcript 5/25/16	Pg. 56, ln 24 - Pg. 57, ln 10	Sue McCrory, Resident of The Crescent	Request for Onsite Wastewater Treatment Facility	14.F
Letter 6/7/16	Pg. 1, para. 4	Daniel Natchez, President Daniel S. Natchez and Associates, Inc; Shore Acres Property Owners Association	Process	15.A
	Pg. 2, para. 5	Allison Stabile, Resident of Alda Rd	Process	15.B
Email (via Betty-Ann Sherer, Land Use Coordinator) 06/08/16	Pg. 1, para. 2	Michelle Goodman, Resident of 622 The Parkway	Process	15.C
Email (via Betty-Ann Sherer, Land Use Coordinator) 06/08/16	Pg. 1	Gretta Heaney, Resident of Alda Rd	Process	15.D
Email 6/6/16 Hillyer	Pg. 1, para. 3	Christopher D. Hillyer, Resident of 506 South Barry Avenue	Process	15.E
Email 6/6/16 Hillyer	Pg. 3, para. 3	Christopher D. Hillyer, Resident of 506 South Barry Avenue	Process	15.F

Email 6/3/16	Pg. 3, para. 1	Keith W. Waitt, Resident of 549 Alda Road	Process	15.G
Memo 5/26/16	Pg. 2, para. 5	VOM HCZMC	Sewer System Improvements Monitoring	16.A
Memo 5/26/16	Pg. 2, para. 14	VOM HCZMC	Miscellaneous	17.A
Memo 5/26/16	Pg. 2, para. 15	VOM HCZMC	Miscellaneous	17.B
Letter 5/11/16	Pg. 11 para. 3 - Pg. 12	Daniel Natchez, President Daniel S. Natchez and Associates, Inc; Shore Acres Property Owners Association	Miscellaneous	17.C
Memo 5/26/16	Pg. 1, para. 6 - 10	VOM HCZMC	Pump Station	18.A
Email 5/28/16	Pg. 1, para. 5	Lorna Waitt, Resident of 549 Alda Road	Pump Station	18.B
Email 6/3/16 K Waitt	Pg. 2, para. 3, item c.	Keith W. Waitt, Resident of 549 Alda Road	Pump Station	18.C
Public Hearing Transcript 5/25/16	Pg. 55, ln 5-6, 20-24, Pg. 56, ln. 17 -19	Sue McCrory, Resident of The Crescent	Existing Sewer Line	18.D

B. COMMENTS AND RESPONES

Topic 1: Existing Sewer Line

COMMENT 1.A:
We believe that the proposed sewer upgrade is required, and should occur as soon as practicable, *…Memorandum submitted by BFJ Planning, June 13, 2016, Pg. 1, para. 3*

RESPONSE 1.A:
The sewer upgrade is planned for the third phase of the project. The sewer is not in disrepair. It will be replaced as part of the overall project.

COMMENT 1.B:
There is apparently no easement allowing the existing force main to cross the property at 519 Alda Road, and there is no expectation that an easement will be readily available. The SDEIS states at various points that the Applicant anticipates that either "protracted litigation" would be required to obtain an easement, or a determination would be needed that there are no other alternative locations for the force main, thereby creating an easement by necessity. *BFJ Planning, Memorandum, June 13, 2016, Pg. 1, para. 4*

RESPONSE 1.B:
No easement is necessary as the project will not entail crossing 519 Alda Road.

COMMENT 1.C:
The various tests conducted on the existing sewer force main in 2013 as a result of the August 12, 2013, leak is not adequate to establish unequivocally that the existing system is functioning properly. Although the dye test performed on September 9, 2013, indicated no evidence of sewage discharge into Otter Creek, both the TV inspection and the pressure test could not be conducted to the fullest extent. The entire length of the force main could not be televised due to the limited ability to push the cable through the pipe because of friction and alignment curvature. Thus, the video inspection was limited to a distance of approximately 150 feet into the force main from both the pump station end of the force main and the receiving manhole end of the force main in Alda Road (see TRC report dated September 19, 2013, in Appendix D). Meanwhile, based on our understanding of the process, the pressure (hydrostatic) test was not performed at the required standard 50 psi, nor tested for the required duration of one (1) hour, because of concerns about the integrity of the existing force main. Therefore, two of the three tests conducted on the existing pipe were not able to be performed adequately. In any case, no testing has been done on the pipe since September 2013, and given the known age of the pipe, it is likely that its condition has continued to deteriorate in the nearly three years since testing. It is questionable whether the pipe is or can be expected to continue functioning adequately without leaks. *BFJ Planning, Memorandum, June 13, 2016, Pg. 1, para. 5 - Pg. 2, para. 1*

RESPONSE 1.C:
No single technology or technique can identify all of the indicators of pipe deterioration. The condition assessment of a force main should be done through non-destructive testing methods to avoid damage to the force main. Multiple diagnostic tests can be utilized to determine the water tightness of an existing pipe system. Not all of these tests need to be performed to provide sufficient data that would allow the engineer to determine, with reasonable assurance, potential leakage from the existing pipe system. The appropriate test methods should be selected based on the existing field conditions such as accessibility; the presence or absence of isolation valves; and pipe materials.

The Applicant has performed several tests including a TV inspection, pressure test and dye test to determine the integrity of the existing sanitary force main. The TV inspection was limited by changes in horizontal and vertical alignments; the pressure test was performed at pressures above the normal operating pressure; and the dye test was performed without limitation. Although the TV inspection was limited, the other two tests provided results that indicated no apparent signs of leakage occurred at or above normal operating conditions.

The referenced standards including the "Recommended Standards for Wastewater Facilities"; the "New York State Design Standards for Intermediate Sized Wastewater Treatment Systems"; and the Plumbing Code of New York (PCNY) apply to new construction and are not applicable to maintenance and operations.

Due to the limitations noted in the Comment, the Applicant's engineer believes that the practical and appropriate diagnostic testing method to assess the existing force main for potential leakage is the dye test.

Results of the referenced testing that was performed in September 2013 were submitted to the Village and are part of the record. Subsequent to the testing performed in September 2013, the Applicant had a dye test performed on July 25, 2016 and again on May 1, 2017. The test was performed at low tide and the Otter Creek bed and banks were fully observable. The results of the dye tests revealed no visible evidence of sewage leakage along the alignment of the existing force main including the portion within the bed and banks of Otter Creek (See Appendix G for Dye test reports).

The Applicant notes that upon the observation of the leak, pumping operations were ceased and the leaking section of force main was repaired. The appropriate government agencies including the Village of Mamaroneck, the Westchester County Department of Health and the NYS DEC were notified. After completion of the repairs, the incident files were closed and no future testing or monitoring requirements were imposed. The Applicant has agreed to continue perform ongoing monitoring in the form of annual dye testing.

COMMENT 1.D:

MBYC presents "No Action" as a possible and viable alternative. The Applicant asserts that, following the August 2013 break in the sewer line, "appropriate testing" was performed *and "the existing force main was deemed to be in a serviceable and operating condition and as of the date of the tests conducted does not have any apparent leaks"* (emphasis included).DSEIS, p. 7. The Applicant should be required to provide the Planning Board with documentation that "appropriate testing" was performed. The Planning Board should obtain from the Building Department documentation of a determination by the then Building Inspector and Village Engineer that "appropriate testing was performed" and the results of those tests, as reported to the Village. The Applicant should be required to provide documentation that the Building Inspector and Village Engineer deemed "the existing force main to be in serviceable and operating condition as of the date of the tests conducted." Additionally, given the time that has elapsed since the sewer line break occurred, any repairs were made and any testing performed, the Applicant should be required to undertake up to date testing and provide the test results to the Village and Planning Board so that the Planning Board can reasonably evaluate the "No Action" alternative. The testing should be confirmed to the Planning Board by the Building Inspector and Village Engineer as code complaint and they should be asked to provide a written opinion as to the current status of the pipe and the viability of a "No Action" alternative.

Debora S. Cohen, Newman Ferrara LLP, Letter, June 6, 2016, Pg. 1 para. 2

RESPONSE 1.D:

The "No Action" alternative is required in environmental impact statements as an alternative to any proposed action. As such it is intended to provide insights as to the consequences of taking no action. As the MBYC is proposing to install a new sewage line connection and not relying on the existing line any longer than necessary, additional testing would only further verify the MBYC's conclusion that they should install a replacement sanitary sewer line. See Response 1.C

COMMENT 1.E:

There are still references and statements within the DSEIS that state that a no action alternative would allow the existing sanitary sewer force main to remain under Otter Creek. While there are now references to suggestions by the MB&YC's engineer/expert that the line could be replaced, there is nothing that says it needs to be replaced.

There are sound reasons that the existing sanitary force main needs to be replaced regardless of whether a new development goes forward, including:

i) The line is 60 to 100 years old (per MB&YC's submissions to this Board), and is believed to be past its useful life;

ii) The line has failed, dumping raw sewage into Otter Creek – a Critical Environmental Area (CEA), and the line is roughly 250 feet upstream of the Shore Acres Point Corporation's beach where toddlers through adult's wade, play and swim. Their health has already been put in jeopardy.

iii) It is unclear whether the line is currently working or has developed another leak. Following the detection of the original leak and its repair the line was pressured tested and all were told that the line is not leaking. Subsequently we have been told that Save the Sound was then permitted to enter MB&YC's property to test the waters for pollution. Shortly

thereafter, we are further told that Save the Sound was told that they could not enter MB&YC's property to undertake testing of the waters.

SAPOA thus arranged to allow testing to be undertaken by Save the Sound along Otter Creek in the vicinity of the prior leak. Those test results are attached and show levels for enterococcus (indicative of human excrement as opposed to other animals) far beyond the limits for human contact. It is not known whether the problem is caused in whole or part by MB&YC, but at the very least another pressure test should be undertaken. Clearly all may not be okay.

iv) The line being beneath the Creek means that a break would go undetected for days to months or even years. It is known that the recent break in the line resulted in the line leaking for over a month prior to action being taken (and it may have been leaking for a far longer time). The no action alternative should require the *replacement of the sewer line* along the South Barry Avenue corridor *or* certification that the existing force main line *meets the current NYS Building Code Requirements*.

v) The DSEIS has numerous references to the statement that the line has been inspected by the Village and County and is "currently functioning properly and no further repairs or upgrades are required." "… the Applicants engineer, in consultation with the Village Officials, recommends an upgrade of the sewer system in conjunction with the redevelopment of the Property." The implication is that the Village professional staff at that time and currently were/are happy with no replacement. In point of fact that is not totally correct. While the position of the current Village staff is not entirely clear, based on the undersigned's direct conversations with William Gerety, the Director of Buildings, Code Enforcement Officer as well as Village Building Inspector at and for some time subsequent to the break in the line, he refused to remove the Notice of Violation and Order to Remedy that had been issued to MB&YC due to the fact that MB&YC's engineer could not or would not certify that the line met the current NYS Building Code for sanitary force mains. In fact, the pressure test undertaken of the sewer line was only at 14 psi and only for 45 minutes (see TRC REPORT OF TEST AND INSPECTION EXISTING SANITARY FORCE MAIN PRESSURE TEST dated September 19, 2013 in Appendix D) as opposed to the required 50 psi for one hour per the NYS Building Code. In addition, the cameraing of the line could not get all the way through the line – in fact it could not go under the Creek with the downward and upward slope. The TRC REPORT OF TEST AND INSPECTION EXISTING SANITARY FORCE MAIN INSPECTION, dated September 19 in Appendix D, states, "The use of the manual camera was limited due to the ability to push the camera cable through the pipe due to friction and pipe curvature/alignment. As a result, the section of the force main under Otter Creek could not be observed."

"NEW YORK STATE DESIGN STANDARDS FOR INTERMEDIATE SIZED WASTEWATER TREATMENT SYSTEMS, MARCH 5, 2014

New York State Department of Environmental Conservation Division of Water 625 Broadway Albany, New York 12233-3505
Design Factors

Pressure Testing of Force Mains

Pressure tests should be made only after completion of backfilling operations and at least 36 hours after the concrete thrust blocks have been cast. All tests should be conducted under the supervision of the design engineer.

The duration of pressure tests should be 1 hour, unless otherwise directed by the engineer. The test pressure should be no less than 50 psi, with a recommended pressure of 2-1/2 times the maximum system operating pressure.

The pipeline should be slowly filled with water. Before applying the specified pressure, all air should be expelled from the pipeline by making taps at the point of highest elevation. The specified pressure, measured at the lowest point of elevation, should be applied by means of a pump connected to the pipe in a manner satisfactory to the design engineer. After completion of the test, the taps should be tightly plugged."

TRC Draft Engineers Report On site Sanitary Sewers and Pump Station (Appendix B1) E. Fore Main Design 3) c, states "The minimum hydrostatic test pressure shall be 50psi".:

vi) In TRC's memo dated September 23, 2013 to the Village entitled SANITARY FORCE MAIN REMEDIATION (found in Appendix D), the third paragraph states, "As discussed with the Building Inspector and the Village Engineer, the Applicant acknowledges their intention to provide a more permanent rehabilitation to or replacement of the existing sanitary force main and pump station." Emphasis added.

Daniel Natchez, President Daniel S. Natchez and Associates, Inc; Shore Acres Property Owners Association, Letter, May 11, 2016, Pg. 2, para 3 - Pg. 4 para. 2

RESPONSE 1.E:

The line is adequate for the existing use. The tests performed have not disclosed any current problem with the line. There are many sewer lines in the Village that are as old or older and are not being replaced. Applicant acknowledges the potential for increased usage would provide a sufficient basis to request a full replacement.

COMMENT 1.F:

As for all site plans under review by this Planning Board, and as required by the scoping document calling for an evaluation of the "existing conditions" of the Sanitary Sewer System and the no action alternative analysis, the Applicant must provide an evaluation of the integrity of the Private Sewer Lateral (private sanitary sewage line between the on-site sewage system under Otter Creek and 519 Alda Road to the public sewage line). Notably, the DSEIS states that "[a] TV inspection was performed on the force main. The length of the main force main that could be televised was limited due to the ability to push the cable through the pipe due to friction and alignment curvature. *A section of existing force main located beneath Otter Creek could not be televised due to the inability to extend the TV cable through the existing horizontal and vertical bends of the force main*." (page 19). Although other tests (the dye test and pressure test) seem to be satisfactory, they are not sufficient to verify the integrity of the current Private Sewer Lateral for the no action

alternative. *Victor M. Tafur, Resident of 490 Bleeker Avenue, Letter, May 25, 2016, Pg. 2-3, Item 3*

RESPONSE 1.F:
See Response 1.C

COMMENT 1.G:
Ensuring that the current MYBC sewer line is not leaking and properly tested after its temporary repair is critical to our environment, wildlife, and human recreational use of the Creek and mouth of the Creek to the Harbor where the swimming beach at Shore Acres Point Corporation (SAPC) is located. The old force main break as is well known; however, it appears not to have been tested properly. The Board wanted it to be tested immediately. This must be accomplished;
This must be done immediately as the new force main (according to the DSEIS) will not be put in place until Phase Ill of the project, and thus, if the project is abandoned, it may never be replaced. *Christopher D. Hillyer, Resident of 506 South Barry Avenue, Letter, June 6, 2016, Pg. 1, para. 5 - Pg. 2, para. 1*

RESPONSE 1.G:
See Response 1.C

COMMENT 1.H:
The current sewer line must be tested to code. *Christopher D. Hillyer, Resident of 506 South Barry Avenue, Letter, June 6, 2016, Pg. 3, para. 1, line 1*

RESPONSE 1.H:
See Response 1.C

COMMENT 1.I:
The testing of the sewer pipe in 2013 was not conducted to NY State standards. The applicant attested to the integrity of the pipe, and yet the inadequate testing appeared to be news to the Board, and no remedial action was taken by the Village, besides the apparent dismissal of the village engineers and the disappearance of the supporting paperwork. *Lorna Waitt, Resident of 549 Alda Road, Email to Betty-Ann Sherer, May 28, 2016, Pg. 1, para. 2*

RESPONSE 1.I:
See Response 1.C

COMMENT 1.J:
MB&YC stated in 2013 that the repaired sewer line had been thoroughly tested. It omitted to state that it had not been tested to NY Standards both in terms of PSI flow (141bs vs SOibs) or length of time. NY Standards also require a telescopic camera to be inserted through the whole length of the line. This was not done as the camera could not be inserted due to "blockages". That in itself is a red flag for future breaks under Otter Creek. *Keith W. Waitt, Resident of 549 Alda Road, Letter, June 3, 2016, Pg. 1, para. 5*

RESPONSE 1.J:
See Response 1.C

COMMENT 1.K:
Prior to August 2013, I expressed my concerns to this board about the status of the aged MBYC sanitary sewer force main in the context of proposed additional impact on infrastructure that might have been in questionable condition. *Allison Stabile, Email to Betty-Ann Sherer, June 8, 2016, Pg. 2 para. 3*

RESPONSE 1.K:
See Response 1.C

COMMENT 1.L:
I expected that Village, County, State or Federal law would require the Club to make immediate and permanent repairs, certainly before the winter set in. I have been shocked to learn that the Club is still relying on a makeshift delivery system after all this time. *Katherine E. Desmond, Resident of 347 Prospect Avenue, Email to Betty-Ann Sherer, June 5, 2016, Page 1, para.4*

RESPONSE 1.L:
See Response 1.C

COMMENT 1.M:
As stated in our letter of May 11, 2016, we want to make it clear for the record, DSN&A, SAPOA and myself are in favor of and believe it is important for the **existing sanitary sewer** (force main) line from Mamaroneck Beach & Yacht Club (MB&YC) to be **replaced as soon as possible**, and we further support the conceptual route going up along South Barry Avenue. However, now that the DSEIS has been presented to the Board and deemed to be available for public comment, it is important that the FSEIS, *which is the Planning Board's Document*, be correct and meaningful in terms of the Project being proposed. It is important that this Project be designed and undertaken in the most environmentally compatible and enhancing manner, and in a way that ensures the health, safety and best long term interests of the Village.

MISSTATEMENT:
In the Public Hearing of May 25, 2016 the Applicant's attorney, in explaining the 'history,' stated that, "they fixed the line" … "County closed their file" … and "NO ONE HAS ASKED US TO DO ANYTHING" (LMCTV 49.25-49.38)[emphasis added]. In point of fact, William Gerety, the Building Inspector at the time of the subject sewer line break, informed representatives of the Applicant that he would not remove the "Order To Remedy" until the line was tested and passed NYS Building Code requirements – i.e., a minimum of 50 PSI for a minimum of 1 hour or to a higher requirement based upon the design loads.

Daniel Natchez, President Daniel S. Natchez and Associates, Inc; Shore Acres Property Owners Association, Letter, June 6, 2016, Pg. 1, para. 2 - 3

RESPONSE 1.M:
See Response 1.C

COMMENT 1.N:
I am Barbara Mann of 519 Alda Road, the owner of the property that beach club owns under us. We moved into the building about 28 years ago. Nobody seemed to know or tell us that there was a pipe underneath. And until it really exploded and there was a problem, and the problem wasn't our entire yard, but we had little fountains coming up through the grass. And at one point, the village came in and fixed it. And they didn't seem to know whose pipe it was underneath us either. And the village came to the street and was working on it. *Barbara Mann, Resident of 519 Alda Road, Transcript of For The Mamaroneck Beach & Yacht Club Draft Supplemental Environmental Impact Statement, May 25, 2016, Pg. 53, ln 4 -16*

RESPONSE 1.N:
See Response 1.C

COMMENT 1.O:
My name is Sue McCrory. I live in the orient across from the harbor from Mamaroneck Beach & Yacht Club. I just wanted to make a couple of comments and second some comments that other people made.

Number one, I think this -- so in 2010, as I recall, we were told the sewer line was functioning fine when the EIS was done at that point. In 2013, when the plan was revised, the E -- the sewer line was apparently fine. And then in August of 2013, it broke, and then we discovered we didn't even really know where the sewer line was.

We're now in 2016. We should have absolute confidence about the present state of that sewer line. It should be thoroughly tested. It should be -- it should be camera-ed. We should know exactly what's there, because we will be continuing to rely on it for some number of years. *Sue McCrory, Resident of The Crescent, Transcript of For The Mamaroneck Beach & Yacht Club Draft Supplemental Environmental Impact Statement, May 25, 2016, Pg. 54, ln 4 -16*

RESPONSE 1.O:
See Response 1.C

COMMENT 1.P:
Stuart Tiekert, 130 Beach Avenue. I, again, following this issue when the break happened in 2013, and I was surprised to find at that time the -- I believe it's the Shore Acres Club beach was at that time the most frequently closed beach in -- on Long Island Sound. And, apparently, as soon as the pipe was fixed, the counts went down to almost nothing. So I would just voice the same concern that if this project is not going to be done immediately, the existing pipe needs to be tested to whatever the current standard is and then hopefully regularly tested if it's going to be years before the final solution, as they said, is done. *Stuart Tiekert, 130 Beach Avenue 130 Beach Avenue, Transcript of For The Mamaroneck Beach & Yacht Club Draft Supplemental Environmental Impact Statement, May 25, 2016, Pg. 58, ln 9 -24*

RESPONSE 1.P:
See Response 1.C

COMMENT 1.Q:
I don't know why Mr. -- Mr. Gereghty's notice to remedy was removed. From the information we have, from representatives of SAPOA speaking to him, there's some documents that are supposed to exist in regard to why he didn't want to lift the notice of violation, why he didn't want to lift the order to remedy. But, mysteriously, those documents can't -- can't be found.
So, before you accept no alternative as an alternative, I would urge you to find out what concerns your prior building inspector had about the existence of the pipe… [w]e fixed it, and we worked with village officials, and now the pipe is fine. Debora S. Cohen, Newman Ferrara LLP, Transcript of The Mamaroneck Beach & Yacht Club Draft Supplemental Environmental Impact Statement, May 25, 2016, Pg. 64, ln 10-12, 18 - 24

RESPONSE 1.Q:
The Order to Remedy issued by Mr. Gerrity was appropriately closed out by the Village of Mamaroneck.

Topic 2: Natural Features

COMMENT 2.A
No wetland delineation has been conducted by the Applicant, and instead the DSEIS relies on a 1974 NYSDEC Tidal Wetlands Map (Exhibit 10) and "site inspections by members of the project team" (see p. 28). We question whether this data is sufficient to fully understand the boundaries of the tidal wetlands along Otter Creek or to support the DSEIS's assertion that no vegetated tidal wetlands will be "adversely impacted by the proposed force main options currently under consideration" (p. 28). *BFJ Planning, Memorandum, June 13, 2016, Pg. 2, para. 3*

RESPONSE 2.A:
The Applicant's Consultant that has been providing support as a Certified Wetland Scientist. During the multiple site inspections of the potential Otter Creek crossing locations, they observed and concluded that no tidal wetland vegetation would be disturbed by the preferred crossing method as discussed in the DSEIS. The 1974 NYSDEC Tidal wetland delineation was provided to facilitate understanding of the designated tidal wetlands at the Otter Creek Bridge. Sea level rise was factored into the on-site evaluation and the impacts continued to be associated with the pipe supports that would be placed in Otter Creek proper. There is no tidal wetland vegetation present at the two sites.

COMMENT 2.B:
The DSEIS indicates that approximately 10 square feet of tidal wetland habitat will be permanently displaced by the concrete piers required for the pipeline bridge, while approximately 50 square feet will be disturbed during construction (see p. 31 and 37). It should be made clear that the proposed mitigation to replace vegetation in kind within disturbed areas will include both permanent disturbance and construction-related disturbance. As an alternative to this mitigation, the Applicant should consider a re-design of the pipeline bridge that avoids the wetlands altogether. *BFJ Planning, Memorandum, June 13, 2016, Pg. 2, para. 4*

RESPONSE 2.B:
The "Tidal Wetlands" under discussion are "Waters of the State of New York." NYS DEC defines their regulated tidal areas as *"Tidal wetlands are the areas where the land meets the sea. These areas are periodically flooded by seawater during high or spring tides or, are affected by the cyclic changes in water levels caused by the tidal cycle. Salt marshes and mud flats are some typical types of tidal wetlands found along New York's marine shoreline."*

There is no tidal wetland "vegetation" growing within Otter Creek in the proposed pipe support area. Unfortunately, it is necessary to cross Otter Creek to connect the sanitary sewer pipeline. The alignment selected involves the minimum amount of footprint and disturbance. The fifty (50) square feet of disturbance is expected to be approximately twenty (20) square feet once the design is finalized. The current value is a conservative estimate for purposes of denying the "worst case" scenario.

COMMENT 2.C
Except for "No Action", all of the alternatives require disturbance to DEC-regulated Tidal Wetland or adjacent area. As previously stated in the DEC's response to the draft scope for the Supplemental EIS, a determination on tidal wetland and adjacent area jurisdiction and compatibility of regulated activities with the preservation of tidal wetlands cannot be made until a plan with the location of all tidal wetland and adjacent area boundaries is provided. DEC requires that contours be expressed in National Vertical Datum 1988 (NAVD88) for the purposes of establishing the adjacent area. Tidal wetland boundaries must be based on the official maps and confirmed by DEC staff. As this has not yet occurred, a final determination on DEC jurisdiction over the larger project is not yet possible. Please note that until the location of the adjacent area is determined, it is not possible to say whether the project will require any variance from the tidal wetland development restrictions in §661 .6. *New York State Department of Environmental Conservation, Rebecca Crist, Deputy Permit Administrator, Letter, June 2, 2016, Pg. 1, para. 3*

RESPONSE 2.C:
The Applicant agrees with the DEC's statement by Ms. Christ. However, the Club is unable to respond to her request until the Village of Mamaroneck has finalized coordination regarding the alignment of the pipe.

COMMENT 2.D:
Many of the alternatives, including the Preferred Alternative, require disturbance directly to tidal wetlands. To meet permit issuance standards in §661 .9 for disturbance to tidal wetlands, a project sponsor must demonstrate that the proposal:

- is "compatible with the policy of the act to preserve and protect tidal wetlands";
- is "reasonable and necessary";
- will not impact human health or property;
- complies with the development restrictions in §661 .6; and
- complies with the use guidelines in §661 .5.

New York State Department of Environmental Conservation, Rebecca Crist, Deputy Permit

Administrator, Letter, June 2, 2016, Pg. 2, para. 1

RESPONSE 2.D:
The Applicant has determined that replacement of the existing sanitary sewer is identified in and complies with the use guidelines in §661 .5 as a "use #40" situation. The preferred alternative is "compatible with the policy of the Act to preserve and protect tidal wetlands." By using a pipe bridge the impacts to tidal wetlands are minimized in a "reasonable and necessary" manner. The installation provides a replacement for an existing sanitary sewer line and its presence and operation will not adversely impact human health or property. Finally, the proposed replacement of the sanitary sewer meets the requirements of §661 .6 (Development Restrictions).

COMMENT 2.E:
Page 28 of the Draft EIS states that the document contains a "NYS DEC Tidal Wetlands designation map" which was "field verified by a wetland biologist". The map in question is a portion of DEC 1974 Tidal Wetland 606-532. While DEC wetland biologists visited the site several years ago, their visit was focused on the wetlands in vicinity of the facility. DEC staff have not reviewed the wetlands in the vicinity of the proposed pipeline bridge and cannot comment on the applicant's assertions regarding the location or quality of the wetlands. *New York State Department of Environmental Conservation, Rebecca Crist, Deputy Permit Administrator, Letter, June 2, 2016, Pg. 2, Item 1*

RESPONSE 2.E:
See response to comment 2.A (above). Please note that the preferred alternative "bridges" Otter Creek. The impact area is the bottom of the Creek that does not contain tidal wetland vegetation.

COMMENT 2.F:
The proposed pump station may be in the tidal wetland adjacent area. If so, staff recommend relocation outside of the adjacent area. This would be a "commercial and industrial use facilities not requiring water access", §661.5(48) and a Presumably Incompatible action.
*New York State Department of Environmental Conservation, Rebecca Crist, Deputy Permit Administrator, Letter, June 2, 2016, Pg. 2, Item 3*Response:

RESPONSE 2.F:
The NY S DEC's definition of an "Adjacent Area" was utilized in the determination of the pump station location. "Adjacent Area shall mean those land areas that are generally not inundated by tidal waters extending 300 feet landward of the most landward tidal wetlands boundary or to an elevation of ten feet above mean sea level" (Part 661 Tidal Wetlands Land Use Regulation). The proposed pump station takes advantage of the local topography and existing infrastructure. It has been located uphill of elevation 10 and in an area that has been previously disturbed and/or filled. Any adverse impacts to tidal wetlands are avoided by applying Best Management Practices for controlling potential soil erosion during the site work. These practices are described in the Storm Water Pollution Prevention Plan discussed in the EIS. After construction the area around the pump station will be restored to a natural setting which limits erosion to the Waters of NY State.

COMMENT 2.G:

4. The Preferred Alternative requires impact to and permanent fill in the tidal wetland.
   a. The addition of a sewer main to the existing bridge would be a modification of an existing structure within Littoral Zone and a Generally Compatible action pursuant to the Tidal Wetlands regulations §661.5(b)(25). The construction of a new pipeline bridge would be new utility in the Littoral Zone and a Presumably Incompatible action pursuant to §661.5(b)(42).
   b. No mitigation has been offered for this and would likely be required to meet issuance standards for a Presumably Incompatible action.
   c. The pipeline bridge piers are proposed at the edge of the creek bed. However the creek can be expected to shift location and size over time, especially given current predictions for climate change effects. There is no consideration in the Draft EIS of how such shifts will affect the piers nor of how the piers might affect movements of the creek. Staff recommend that the pier be place further from the current bed to allow for future movement.

New York State Department of Environmental Conservation, Rebecca Crist, Deputy Permit Administrator, Letter, June 2, 2016, Pg 2-3, Item 4

RESPONSE 2.G:

a) Connection of the proposed sanitary sewer to the existing bridge structure was one of the early options considered. This option has since been deemed feasible by the design engineers' due to the design and functional characteristics of the Otter Creek Bridge. We believe that the replacement of an existing sanitary sewer is more accurately described as a use §661.5 (b) use type #40 as the proposed replacement will connect from an existing distribution facility to an existing structure replacing a connection currently in operation.

b) Mitigation was not considered as a component of the preferred alternative due to the minimal size of the impact footprint. It can be added during the regulatory review process with the NYS DEC.

c) Otter creek is stabilized in place by the presence of the bridge opening and the abutting seawall on the southwestern side of that structure. Sea level rise and changes in flow patterns within Otter Creek will not alter that situation. The bridge and its supports have been certified by the designing engineer of the bridge to be able to accept the pipe addition.

COMMENT 2.H

Otter Creek: What are the impacts and how will they be mitigated. Also, additional biological inventory should be provided (e.g., birds, mammals, reptiles, fish, etc.) *Village of Mamaroneck HCZM Commission, Memorandum, May 25, 2016, Pg. 2, para. 8*

RESPONSE 2.H:

(See resource discussions provided above) As described in the SEIS, the impacts to Otter Creek

and its resources are limited to the approximately ten (10) square feet of Creek bed that will support the passive, two pipe bridge structures. There are few resident resources that occupy or pass under the existing Otter Creek Bridge due to the current conditions found at the site. Because those resources are unlikely to experience additional adverse impacts beyond those currently being experienced from the proximity of human and vehicular traffic passing through the area, the currently listed species represent all but the least likely to use the area.

COMMENT 2.I

The appended maps Exhibit 3 and 3a of the DSEIS show the proposed route of the force main, but stops short of showing a plan of the Otter Creek Crossing. Page 6 of the document mentioned an anticipated tidal wetland disturbance of 100 square feet. The discussion of possible mitigation measures on pages 36 and 37 anticipates a permanent wetland displacement of 10 square feet. Neither the photo in exhibit 6 b nor the plan of the bridge in exhibit 8a shows where exactly tidal wetlands are located. A delineation line should be shown on all plans of the pipeline bridge to properly document its anticipated impact on the environment.

I do agree with the DSEIS that the wetland disturbance will be small, even negligible, however it does occur in a designated Critical Environmental Area, so that mitigation measures do seem appropriate if not necessary. If the bottom ends of the bridge pilings will be completely in the intertidal zone, they could perhaps be fitted with reef-balls or other substrates suitable for oyster attachment and useable as intermittent habitat for invertebrates and juvenile fish. *Sven Hoeger, Environmental Consultant to the HCZMC, Memorandum, May 13, 2016, Pg. 1, para. 8 - 9*

RESPONSE 2.I:

It appears that the dimensions and location of the two (2) footing for the pipe bridge piers for the proposed alternative has been misunderstood. The bridge piers will occupy less than ten (10) square feet of the Otter Creek bed each. They will occupy an intertidal or subtidal [1] area of the Creek bed where natural and bridge related erosion has made the creek bed area unstable. Because of the proximity of the vehicular Otter Creek Bridge to the work site, it is anticipated that the pipe bridge piers will represent a de minimis disturbance to the designated Critical Environmental Area as Mr. Hoeger states in his comment. Additionally, it has now been determined that it is feasible to hang the force main from the existing bridge and therefor eliminating the need for the two piers.

Mitigation was considered for the structures but because of the nature of the area (hydrodynamics, sediment instability, biological productivity, and reluctance to impede the waterway, as well as mitigation triggering additional regulatory action, it was concluded that mitigation at the site would be counterproductive.

COMMENT 2.J

In V. The Environmental Analysis:
It is stated that, “Coordination with NY State Department of Environmental Conservation (DEC)

[1] Because of the shifting sediment at the bridge pier sites there are occasions when the creek bed has shoaled and the areas became, temporarily intertidal. These events were short lived with the sediment accumulation lasting only days.

and review of the New York State and U.S. Government listed rare, endangered, threatened or species of special concern that occur in the State failed to reveal the occurrence of any of those species in the vicinity of the Project area." Yet it is known that bald eagles (NYS Threatened) have been seen in the area and osprey (NYS Special Concern) frequent the area and have been known to nest nearby. In fact there are two osprey nesting platforms close by to the east within the WLT property that have been home to osprey over the years, with a nest actively being used at this time and with four young having been observed in one of the nests last year, and the large dead tree just southwest of the Barry Avenue Bridge is a very frequent perch, providing an ideal view of the creek waters and wetlands.

Osprey in dead tree on 5/5/16 near entrance to MB&YC adjacent to proposed sewer line route

The area is also used by numerous other species including herons, egrets, ducks, geese, white tail deer, muskrats and others as have been previously described in documents and filings associated with the Otter Creek Preserve. To simply rely on a generic NYS database while ignoring the abundant local information provided and readily observable does not satisfy the level of review that should have been undertaken as part of the DSEIS.*Daniel Natchez, President Daniel S. Natchez and Associates, Inc; Shore Acres Property Owners Association, Letter, May 11, 2016, Pg. 9, para. 7 - Pg. 10, para. 1*

RESPONSE 2.J:

The objective of the DSEIS was to describe the presence or likelihood of occurrence of protected and managed species within the preferred alternative work area. The proposed sewer line replacement is an activity of limited duration and impact. The area is immediately adjacent to the and includes the Otter Creek Bridge that supports South Barry Avenue which passes by several residences within a distance of about thirty feet. Having the vehicular Otter Creek Bridge immediately adjacent to the work site places a regular source of human activity at the site as vehicles and pedestrians regularly pass over the bridge. Add to that the presence of the occasional canoer and kayaker transiting this reach of Otter Creek and one can put in perspective the noise

and current ambient level at the work site.

The resources Mr. Natchez describes are unlikely to actually use the project area due to the presence of the bridge and its associated human and vehicular traffic. Because the current design will be in such proximity to the bridge and roadway, resource use disruptions are unlikely to occur above that currently occurring.

Coordination with the US Army Corps of Engineers, US Fish and Wildlife Service, National Marine Fisheries Service, and NYS Department of Environmental Conservation regarding the Protected Species list contents was performed. We received a positive response from all parties with the proviso that additional coordination would occur during the regulatory review process. We were directed to NYS DEC regulations such as codified at 6 NYCRR Part 182 Endangered and Threatened Species Regulations. Typically, the regulatory agencies invoke a seasonal restriction on construction activities to limit the amount of disturbance created during sensitive lifestages of natural resources using an area. It is understood that such restrictions can be accommodated once they are defined by the regulatory experts managing those matters.

COMMENT 2.K
On page 28 it is stated that "As reported above, the regulated wetlands in proximity to South Barry Avenue include the rock riprapped shoreline east of the Otter Creek Bridge and the pocket of vegetated wetlands measuring approximately four-square feet situated adjacent to the stormwater outfall in the northwest comer of the bridge abutment. Beyond those areas, uplands dominate the site as the result of the seawall or land elevation. The existing functions and values of the area within the proposed Project area are primarily related to the tidal exchange waters and the unstable creek bed." Yet the Project area has a stand of Spartina alterniflora and mud banks that are enjoyed by fiddler crabs and other species. *Daniel Natchez, President Daniel S. Natchez and Associates, Inc; Shore Acres Property Owners Association, Letter, May 11, 2016, Pg. 10, para. 2*

RESPONSE 2.K:
The design engineers concluded that the vegetated tidal wetlands Mr. Natchez notes are located well outside and away from the preferred alternative alignment.

COMMENT 2.L:
The issue of the disturbance of 50 square feet and permanent loss of 10 square feet of intertidal area may to some be minor. However, the question is whether there are any other reasonable alternatives. And, in fact, there are – including but not limited to:

Placing the sewer line on/alongside the bridge outboard of the safety guard rail at i) the same height as the road or bridge beams - thereby not causing a new linear obstruction or ii) the height of the "preferred alternative".

Bringing a bridge line directly adjacent to the existing bridge similar to the approach that was used for the water line on the east side of the bridge. This could also incorporate a longer span to avoid the wetland area. *Daniel Natchez, President Daniel S. Natchez and Associates, Inc; Shore Acres Property Owners Association, Letter, May 11, 2016, Pg. 10, para. 3 - 5*

RESPONSE 2.L:
Applicant has modified the plan to run the line across the bridge adjacent to the gas and water lines.

COMMENT 2.M
It is also curious that with all the subsurface borings and investigation that the applicant did and provided in the appendices of the DSEIS that NO subsurface investigation was made of the approach for the proposed preferred alternative route of the sewer line on either side of the bridge or, for that matter, farther northward to Soundview Drive. *Daniel Natchez, President Daniel S. Natchez and Associates, Inc; Shore Acres Property Owners Association, Letter, May 11, 2016, Pg. 11, para. 1*

RESPONSE 2.M:
Applicant has modified the plan to run the line across the bridge adjacent to the gas and water lines. See Appendix H for letter from engineer certifying the feasibility of attaching sanitary sewer line to existing bridge without disturbing the bridge's underpinnings or the Creek. It was not deemed necessary to undertake soil borings in an area that had been disturbed to add a force main to an existing structure as this would only disturb the natural setting without providing any needed or additional insights During the design phase of the project all geotechnical investigations will be made for the purpose of determining the depth of bedrock along the path of the proposed force main, outside the confines of Otter Creek.

COMMENT 2.N:
The applicant has seemingly completely ignored the variety of wildlife in the preserve, and the report did not include the kestrels, egrets, blue heron, white heron, swans and white owls. This highlights the limited attention they paid to the species present in the preserve and their disregard for the preservation of the wildlife that they will disturb.*Lorna Waitt, Resident of 549 Alda Road, Email to Betty-Ann Sherer, May 28, 2016, Pg. 1, para. 6*

RESPONSE 2.N:
The avian wildlife community was not ignored. The listing provided in the DSEIS represents the range of "semi-domesticated" or accommodating of human activity in proximity to them.
See Response 2.H

COMMENT 2.O:
a. The Otter Creek Preserve that is now owned by the Westchester Land Trust, and the real environmental impact of the proposed sewer line construction on this protected environment.

Keith W. Waitt, Resident of 549 Alda Road, Letter, June 3, 2016, Pg. 2, para. 3, item a.

RESPONSE 2.O:
See Response 2.H

COMMENT 2.P

The Draft EIS notes that an "Archeological Determination" will be required from the State Historic Preservation Office (SHPO). A determination of impact for the whole project, including any new main or pump station, is a requirement of a complete application to DEC.

New York State Department of Environmental Conservation, Rebecca Crist, Deputy Permit Administrator, Letter, June 2, 2016, Pg. 3, para. 4

RESPONSE 2.P:
The Archeological Determination shall be requested as it is a standard component of the NYS DEC permit Application submission.

Topic 3: LWRP

COMMENT 3.A:
Chapter 240-31 of the Village Code requires that draft and final environmental impact statements identify the applicable policies of the Mamaroneck Local Waterfront Revitalization Program and a discussion of the potential impacts of the project on such policies. This information should be provided in the FSEIS. *BFJ Planning, Memorandum, June 13, 2016, Pg. 2, para. 5*

RESPONSE 3.A:
An analysis of the applicable policies was conducted previously (June 5, 2013) as part of the overall process (Please see Appendix I). Any impacts from the force main replacement would be deminimus and fall within the purview of the policies analyzed.

COMMENT 3.B
Refer to Village Code Section 240-31 for Environmental Impact Statement requirements including an identification of all LWRP policies and effects of the proposed action on each. All filings must also be made with the Secretary of State, HCZMC and other involved agencies. *Village of Mamaroneck HCZM Commission, Memorandum, May 25, 2016, Pg. 2, para. 3*

RESPONSE 3.B:
See Response 3.A

COMMENT 3.C:
With regard to the "Preferred" Alternative discussed in the DSEIS, I note that this project may not be fully consistent with LWRP policies:

Significant coastal fish and wildlife habitats, as identified on the N.Y. Coastal Area Map (when finalized), shall be protected, preserved, and where practical, restored ...

Significant coastal fish and wildlife habitats, as identified in this document, shall be protected, preserved, and where practical, restored so as to maintain their viability as habitats. and # 44, Preserve and protect tidal and fresh-water wetlands and preserve the benefits derived from these areas. *Sven Hoeger, Environmental Consultant to the HCZMC, Memorandum, May 13, 2016, Pg. 1, para. 4 - 7*

RESPONSE 3.C:
The preferred alternative makes every effort to meet the objectives of the Village of Mamaroneck LWRP. LWRP #7 and #7a are met by selecting a site with very limited impacts in close proximity to the Otter Creek Bridge and the encroachment into the waterway is limited to two (2) support structures for the sanitary sewer pipe bridge. The site will be restored to facilitate supporting coastal fish and wildlife habitat after construction. See Response 3.A

Topic 4: Landscaping

COMMENT 4.A:
It is noted that the proposed alignment of the force main along South Barry Avenue may impact two fairly large trees: an 18-inch catalpa and a 20-inch silver maple. Mitigation is proposed in the form of four (4) beach plum trees of 2-inch caliper. Both the two existing trees and the proposed replacement vegetation should be included in a revised landscaping plan. It is recommended that Beach Plums, while suitable for coastal environments, are not an appropriate substitute for a mature single trunk tree.*BFJ Planning, Memorandum, June 13, 2016, Pg. 3, para. 2*

RESPONSE 4.A:
All efforts shall be made during construction to protect and preserve these existing trees. If however; during the course of construction the (2) trees (18" catalpa & 20" silver maple) are impacted by construction and excavation, a certified tree arborist will be brought in to evaluate the impact and provide recommended mitigation measures if possible I.e. Root pruning, air spade and fertilization. Should upon evaluation by the arborist the impact to the trees is too severe and compromises their survival new replacement trees will include (4) silver maples in 3" caliper.

COMMENT 4.B:
The revised landscaping plan should be drawn to scale and include a wider area around the proposed pump station and new planting bed, including Otter Creek, the South Barry Avenue Bridge and the South Barry Avenue right-of-way. The plan should also include all existing plant material marked with species name and trunk caliper. Additional notations should include which plants are to remain and which are proposed for removal. The plant material proposed to replace removed items should be indicated on a revised plant schedule. On the current plant schedule, Beach Plum shrubs are sized by caliper, which is not applicable in this case. Since this is a shrub, industry standards for this plant are by container size or height, not caliper. *BFJ Planning, Memorandum, June 13, 2016, Pg. 3, para. 3*

RESPONSE 4.B:
Noted. Plans will be changed to reflect the size calcification change to 5'-6' ht. and all existing trees which require protection will be balled and burlapped.

COMMENT 4.C:
Potential impact to our structure and nearby tree
Dana L Stetson and Mary M. Stetson, Residents of 565 Alda Road, Email to Betty-Ann Sherer, May 29, 2016, Pg 1, para. 3

RESPONSE 4.C:
All efforts shall be made during construction to protect and preserve these existing trees. There will be no impact to your structure. Please see response to 11A for additional comment.

COMMENT 4.D:
The risk to the certified Heritage Oak on S. Barry near the corner of S. Barry and Soundview, maintained by the Village must be considered due to its status as a Heritage Oak. *Christopher D. Hillyer, Resident of 506 South Barry Avenue, Letter, June 6, 2016, Pg 3, para. 2, item a.*

RESPONSE 4.D:
This is recognized as a heritage tree and all tree protection measures Shall be employed during the construction. A certified tree arborist shall be brought in during the construction to evaluate any potential impact to this tree to minimize root disturbance. Mitigation measures such as root pruning, air spading and fertilization may be used to minimize potential impact to the tree (LM).

Topic 5: Flow Rate

COMMENT 5.A:
The calculated sanitary sewer flows are consistent with the expected uses. Calculated on-season flow is typical, or even conservative, for similar uses such as a country club, while off-season flow is consistent with typical per capita flow *Planning, Memorandum, June 13, 2016, Pg. 3, para. 4*

RESPONSE 5.A:
Applicant agrees with BFJ's finding.

COMMENT 5.B:
Sewer use and capacity issues: These must be addressed in detail, specifically the potential for simultaneous multiple functions and events in addition to what is provided in the DSEIS. The DEC Design Standards provide system design criteria and the appropriate flow rates for the actual use of the property (e.g., public functions). *Village of Mamaroneck HCZM Commission, Memorandum, May 25, 2016, Pg. 2, para. 4*

RESPONSE 5.B:
See Response 5.A

COMMENT 5.C:
The Sanitary Sewer Flow Rate Evaluation presented in the DSEIS is flawed and must be corrected in the Final Supplemental Environmental Impact Statement (FSEIS). Although the only pro- posed change in new buildings from the 2013 proposal to the current proposal is the elimination of 5 residential units—from 23 to 18 units—the flow rate calculation has been reduced from 31,392 gallons per day (gpd) in the 2010 Site Plan (30,081 gpd in the 2013 Amended Site Plan), to 25,065 gpd, as illustrated in Table V-6, Average Annual Flow Rate Comparison (page 44).

As way background, the Finding Statement adopted in November 2010 determined, as follows:
The Amended Site Plan will also result in an increase in sewer demand. Demand is anticipated to increase from 18,936 gpd to 31,392 gpd, an increase of 12,456 gpd or approximately 66%, due to the additional population on the site. The Planning Board notes that the Mamaroneck WWTP has sufficient capacity to meet this in- creased demand. The Board further notes that a new eight-inch gravity sewer system with hookups to all existing and proposed buildings is included as part of the Amended Site Plan. In addition, the existing sanitary pump station will be upgraded as necessary. The Planning Board notes that the sewer system upgrades will be co- ordinated with the Village Engineer prior to any final site plan approval. Therefore, the Planning Board finds that the Amended Site Plan will not have any significant adverse impacts on sanitary sewers. The Planning Board also notes that the Amended Site Plan will have a reduced impact on the existing sewage system from the impact that would have resulted from the Applicant's Modified Proposed Action from the FEIS. This reduced impact is due to 1) additional sewer flows anticipated for the Amended Site Plan will be less than the Applicant's Modified Proposed Action, and 2) the existing sanitary pump station and associated force main will not need to be replaced, but rather will be maintained in its current location (due to the modified location of the recreation building) and upgraded as necessary. (page 19, emphasis supplied)

And the Scoping Document required:
A description will be provided of the capacity of the revised sewer system to handle the maximum usage under the 2010 Approved Site Plan and the 2013 Amended Site Plan ... (including the potential operation of all facilities and building occupancy, taking into account possible simultaneous multiple functions and events) ... An appropriate peak factor (typically 4 in New York State) shall be applied to the pro- posed sanitary sewer calculations."
As explained in the DSEIS, the lower flow rate of 25,065 gpd "is a result of applying the typical unit hydraulic flow rate of 110 gallons per bedroom per day for apartments for the 2015 Amended Site Plan, which is consistent with the methodology set forth in the latest New York State Department of Environmental Conservation (NYSDEC) Design Standards." (page 44).

While 110 gpd is the correct current standard for residential apartments, per bedroom, the NYS-DEC is a guidance manual that need to be applied to the specific circumstances. For the pro- posed apartments—which have areas of 950 or 1,250 square feet, 2 bathrooms, some "plus den" (see Finding Statement page 4)—the Applicant in coordination with the Village Engineer estimated 75 gpd assuming four persons per apartment (18 units x 4 persons x 75 gpd) and a "conservative peaking factor of 6." Please see: (1) the Applicant's Sanitary Sewer Analysis, submitted on October 14, 2010, pages 1-6, and (2) the Comparison of the 2013 Amended Site Plan with the 2010 Amended Site Plan, page III-31.

This estimate was incorporated in the 2010 Finding Statement. There is no valid reason to change this flow rate calculation. Also, please note the "maximum usage" flow analysis required by the scoping document has not been provided. *Victor M. Tafur, Resident of 490 Bleeker Avenue, Letter, May 25, 2016, Pg. 1 - 2, Item 1*

RESPONSE 5.C:
See Response 5.A

Topic 6: Relocation of Water & Sewer Lines from Under Recreation

Building

COMMENT 6.A:
The DSEIS states (see p. 39) that a proposed gravity sewer and water service are routed under the proposed Recreation Building, and that the building's elevation will allow approximately 7 feet of clearance between the ground surface and the first-floor structure for any required maintenance. We suggest that the water and sewer lines should be re-routed to avoid placing utilities underneath buildings. *BFJ Planning, Memorandum, June 13, 2016, Pg. 3, para. 5*

RESPONSE 5.C:
The proposed water main and sewer line will be constructed of ductile iron pipe. Ductile iron pipe has been recognized as the industry standard for its strength, durability, and reliability. In addition, these are private systems and maintenance would be the responsibility of the property owner. The Applicant recognizes and accepts the maintenance of these lines as their responsibility.

COMMENT 6.B:
The Applicant is suggesting that the proposed sewer and water pipes that would be under one of the new buildings (Otter Creek Seasonal Residences) should not be rerouted outside the perimeter of the proposed building – a believed requirement of the former Village Engineer – simply because it would add an additional 100 feet of sewer pipe, four manholes and 170 feet of water pipe. Acting Chairman Sjunnemark stated in the Board's October 14, 2015 meeting that the lines going under the proposed new seasonal residence building should not be done. As the Acting Chairman suggested, since the building has not been built one could move either the building or the lines, but prudent building practices favor eliminating where possible and practical placing trunk lines of any utility from running beneath a building. *Daniel Natchez, President Daniel S. Natchez and Associates, Inc; Shore Acres Property Owners Association, Letter, May 11, 2016, Pg. 11, para. 2*

RESPONSE:
See Response 6.A

Topic 7: No Action Alternative

COMMENT 7.A:
Under SEQR regulations, the Applicant was required to include a No Action alternative (see 6 NYCRR Part 617.9(b)(v)). However, for the reasons discussed above in the Purpose and Need of the Proposed Action, we do not believe the No Action is a viable alternative.
BFJ Planning, Memorandum, June 13, 2016, Pg. 3, para. 6

RESPONSE 7.A:
As recognized in comment 7.A, a No Action alternative is required under 6 NYCRR Part 617.9(b)(v). As stated in the SEQR Handbook, "the 'no action' alternative must always be discussed to provide a baseline for evaluation of impacts and comparisons of other impacts. The Applicant recognizes that in the event the underlying site improvements go forward, a "No action" alternative with respect to the moving of the sewer pipe is not the preferred alternative for the lead

agency.

COMMENT 7.B:

The Supplement Draft EIS clearly states that the "No Action" alternative, with respect to the sewer main, is a viable one. While there is the potential for impacts should the existing main fail, there is no current indication that it will do so. Staff recommend that the continued use of the existing main be considered. A clear explanation of the need for the new main will be required to meet the "reasonable and necessary" standard for any proposal include disturbance to tidal wetland.

New York State Department of Environmental Conservation, Rebecca Crist, Deputy Permit Administrator, Letter, June 2, 2016, Pg 2, Item 2

RESPONSE 7.B:

Applicant has provided a chronological history of the recent issues with the main. A leak was repaired in 2013. While we agree the existing main is viable, the proposed redevelopment may result in an increase in usage necessitating a new sewer line. (I did not review the statutory language on the "reasonable and necessary" standard) this places us on the odd position of arguing against ourselves.

COMMENT 7.C:

Fully analyze the environmental impacts of all alternatives. For example, a valid "no build" alternative must be provided. This would require that the current sewer line be tested at the capacity required to meet NYS standards. The option of using the existing bridge structure (over Otter Creek)) for the placement of the sewer line should also be included. Alternative(s) to disturbing the wetlands (by locating supports/pilings outside the wetlands) should be fully explored. A preferred alternative should not receive more attention than other alternatives. *Village of Mamaroneck HCZM Commission, Memorandum, May 25, 2016, Pg. 1, para. 2*

RESPONSE 7.C:

The line has been tested and is adequate for the existing use. The plan has been modified to use the existing bridge structure which will minimize any environmental impacts.

COMMENT 7.D

The No Action Alternative Analysis is incomplete. The DSEIS simply indicates that it "would seek to obtain either an easement by prescription through litigation with the owners of the property at 519 Alda road or pursue alternative methods of obtaining an easement. Furthermore, if it is determined that neither the Preferred Alternative, nor any of the other alternatives are feasible due to the environmental impacts of other issues, the Applicant could obtain and easement by necessity allowing the existing for main to remain in its current location." (Page 7). The FSEIS must clarify whether there is in fact a valid, feasible, no action alternative. *Victor M. Tafur, Resident of 490 Bleeker Avenue, Letter, May 25, 2016, Pg. 3, Item 4*

RESPONSE 7.D:

See Response 7. A

COMMENT 7.E
Because the Application has put forward "No Action" as an alternative and has not, as pointed out by one Planning Board member, stated that "No Action" is not a viable alternative. Therefore, it is not only within the Planning Board's authority and jurisdiction to require this information [code compliance of existing sanitary sewer line] from the Applicant, it is necessary for the Board to conduct, with due diligence, a "reasonable" inquiry into the "No Action" alternative as required by SEQRA. *Debora S. Cohen, Newman Ferrara LLP, Letter, June 6, 2016, Pg. 1 para. 2*

RESPONSE 7.D:
See Response 7.A

Topic 8: Relocation from Proposed Pipe Bridge

COMMENT 8.A:
The DSEIS notes (see p. 61) that "attaching a pipeline to a bridge structure generally should not be considered unless the bridge structure is of a design that is adequate to support the additional load and thrust forces of the proposed pipeline." Yet there is no indication that the Applicant has actually discussed with the Town of Rye the potential to attach the pipeline to the bridge. On p. 63, the DSEIS states that the Applicant's Engineer discussed the pipeline bridge option with the Town of Rye's Consulting Engineer, but it is unclear that any option other than the Applicant's Preferred Option was discussed. *BFJ Planning, Memorandum, June 13, 2016, Pg. 4, para. 2*

RESPONSE 8A:
A structural Engineer was retained to perform an engineering study of the existing bridge. The Engineer concluded that the proposed 4-inch force main within a 12-inch pipe can be supported on the bridge structure. The proposed force main could be supported along either side of the existing bridge structure. Paul Noto, Esq., prior counsel for the applicant, spoke to the Town of Rye and was advised that so long as the structural engineer found the design acceptable, it would be acceptable to the Town.

No other options were discussed with the Town of Rye. Alternative options, which may be deemed viable, such as horizontal directional drilling (HDD), could be presented to the Town of Rye for their review and acceptance if Village of Mamaroneck believes advisable.

COMMENT 8.B:

> The Applicant should be required to provide the Planning Board with documentation to elucidate why it is not feasible, in the Applicant's view, to run the sewer pipe either attached, or directly adjacent, to the existing South Barry Avenue bridge. The documentation should include any correspondence with the Town of Rye memorializing the Applicant's communications with them regarding the viability of this alternative as well as with the DEC to determine whether that agency would deem such an alternative acceptable.

Debora S. Cohen, Newman Ferrara LLP, Letter, June 6, 2016, Pg. 2 para. 4

RESPONSE 8.B:
See Response 8.A

COMMENT 8.C:
It is unclear why the above referenced "Exhibit 8," which was included in previous iterations of the DSEIS, has been removed from the final DSEIS submitted and accepted by the Board last month. That illustration aided greatly in the understanding of the alternative and clearly showed an option of running the pipe alongside the bridge deck at a level similar to the water line that runs adjacent to the east side of the bridge. A copy of the image from that exhibit is included here:

PREVIOUS EXHIBIT 8 now removed from Final DSEIS for public review
Daniel Natchez, President Daniel S. Natchez and Associates, Inc; Shore Acres Property Owners Association, Letter, May 11, 2016, Pg. 5, para. 3

RESPONSE 8.C:

The proposed force main will be located approximately as depicted on Exhibit 8. The location may vary slightly based upon the final design documents, drawings, and field conditions.

COMMENT 8.D:
The DSEIS also notes (see p. 62) that the State's Recommended Standards for Wastewater Facilities "requires" that for aerial stream crossings, sewers must not be below the 50-year flood elevation. Because the South Barry Avenue Bridge pavement surface is approximately 15 inches below the 50-year flood elevation, the DSEIS indicates that the force main cannot be hung from the bridge. Questions have been raised about the extent that this recommended standard must be adhered to. In fact, the actual wording of the standard for aerial crossings indicates that the sewer line "should" be above the 50-year flood elevation, and the Forward to the standards notes that the term "should" indicates "desirable procedures or methods, with deviations subject to individual consideration" (see Recommended Standards for Wastewater Standards, 2014 Edition). The Applicant should consult with NYSDEC to confirm whether the sewer line must be above the 50-

year flood elevation, given the presence of the roadway bridge which is already located below that elevation. Ideally, to lessen visual impacts, the bridge could be placed at the same level as the South Barry Avenue Bridge roadway; however, we defer to NYSDEC on this issue. *BFJ Planning, Memorandum, June 13, 2016, Pg. 4, para. 3*

RESPONSE 8.D:
During the permitting process, the Applicant will consult with the NYS DEC relative to the proposed elevation of the proposed force main with the goal of placing the pipeline crossing at an elevation that would lessen the visuals impact of the crossing by attaching directly to the existing bridge.

COMMENT 8.E:
Information must be provided about the current bridge elevation. *Village of Mamaroneck HCZM Commission, Memorandum, May 25, 2016, Pg. 1, para. 5*

RESPONSE 8.E:
See Response 8.D

COMMENT 8.F:

The Draft EIS states that, if placed on the existing bridge, the main would be below the 50-year flood elevation. The designed pipeline bridge would place it above the 50-year elevation, but still well below the 13-foot base flood elevation. There is no discussion in the Draft EIS of any measures to protect the proposed pipeline from storm damage. Chapter 10-37 of the "Recommended Standards For Wastewater Facilities" (10 States Standards), referenced in the Draft EIS, states that aerial stream crossing should be no lower than the 50-year flood elevation. They further state that "the impact of flood waters and debris" should considered. The Draft EIS provides an extensive discussion of the potential impacts of flooding on the proposed pump station, but none on the potential for impact to the pipeline bridge. Reliance on the minimum recommendation to address potential impacts is insufficient. Consideration of flood impacts will be required to meet the "reasonable and necessary" standard for the DEC permit application.

New York State Department of Environmental Conservation, Rebecca Crist, Deputy Permit Administrator, Letter, June 2, 2016, Pg 3, Item 5

RESPONSE 8.F:
See Response 8D

COMMENT 8.G:
In discussions and emails with William Nechamen, Section Chief, Flood Plain Management Section, Bureau of Flood Protection and Dam Safety, NYSDEC, on May 9, 2016 it was agreed that "…absent an existing crossing in the area the elevation would be preferable above the 100 year storm, but if there is an existing crossing obstruction, such as the existing bridge, keeping the line within the existing obstruction elevations would not be creating a new obstruction and, therefore, would be preferable." *See attached email trail*.

We specifically discussed with Mr. Nechamen the "Recommended Standards for Wastewater

Facilities 2014 Edition" which says in "37. Aerial Crossings" in part that "For aerial stream crossings, the impact of flood waters and debris shall be considered. The bottom of the pipe should be placed no lower than the elevation of the 50 year flood. Ductile pipe with mechanical joins is recommended."

It is our understanding from talking to Mr. Nechamen that the 10 State guidance, while helpful, is essentially envisioning an aerial crossing where there is no other structure crossing, and he further noted that the 100 year flood elevation would more appropriate in today's environment. The object is not to create a *new* obstruction but if a crossing can be made at an elevation where no new obstruction is made, then its consideration would be prudent.

Your attention is directed to the *previous DSEIS Exhibit 8* (shown above) and current DSEIS Exhibits 8b and 8a, which clearly show, probably better than we can describe, why being over the west side of the bridge from a visual, environmental and practical approach makes more sense. *Daniel Natchez, President Daniel S. Natchez and Associates, Inc; Shore Acres Property Owners Association, Letter, May 11, 2016, Pg. 9, para. 1 - 8*

RESPONSE 8.G:
See Response 8D

COMMENT 8.H:
The MYBC presentation of the sewer line being 4" and "along the bridge rail" are misleading. While the pipe itself is 4", it will be inside a 12" pipe and this will be insulated to a diameter approaching 20". Thus, it is a large, unsightly pipe;
Christopher D. Hillyer, Resident of 506 South Barry Avenue, Letter, June 6, 2016, Pg. 2, para. 2, item b

RESPONSE 8.H:
See Response 8D, The pipe insulation will not increase the outside diameter of the pipe. The insulation would be placed in the void between the force main/carrier pipe and the casing pipe.

COMMENT 8.I
It will not be "along the bridge rail". It will be 8' from the bridge; while this might be in the *line of sight* to match the bridge rail, it will be at a distance and unsightly;
Christopher D. Hillyer, Resident of 506 South Barry Avenue, Letter, June 6, 2016, Pg 2, para. 2, item c.

RESPONSE 8.I:
See Response 8D

COMMENT 8.J:

The water levels presented in by MYBC are historic and do not accurately portray the flooding risk.

i. The bridge was flooded in Hurricane Sandy and previously;
ii. Even in without a storm, the water at high hide can reach the supporting girder; see photo, infra, taken 4-20-2015 1:05pm; and
iii. The supporting girder approximates 6'above the "zero" elevation. The "mean high water level is inaccurate"; the "50 yr flood" level is historic and out of date; and the building requirement of "50 yr flood" level is not in the building code as an appropriate level for current building; and

Christopher D. Hillyer, Resident of 506 South Barry Avenue, Letter, June 6, 2016, Pg 2, para. 2, item d.

RESPONSE 8.J:
See Response 8D

COMMENT 8.K:
We suggest that, if a standalone pipeline bridge must be constructed, it be located as close as possible to the South Barry Avenue Bridge (within 2-3 feet), to limit any visual impact from the additional structure. Further, the Applicant should assess the potential to place the pipeline bridge on the east (inland) side of the bridge. It is recognized that an existing water pipe is supported from the bridge on the inland side, but we suggest that this side of the bridge is preferable to the harbor side, given the potential for damage from floating debris during significant storm events. The Applicant should examine an alignment that provides sufficient offset from the water pipe but is as close to the bridge as possible to lessen visual impacts. *BFJ Planning, Memorandum, June 13, 2016, Pg. 3, para. 3*

RESPONSE 8.K:
The existing water main is not supported on the existing bridge structure. The water main is supported on a beam section that bears on the existing abutment on both ends of the Otter Creek crossing (Photograph 8.K-1 The Applicant has had the structural engineer assess the feasibility of hanging the proposed force main along the inland side of the Otter Creek Bridge and will be determined if feasible during the design and permitting phase due to the requirements of the alignment of the pipe before and after the bridge.

Photograph 8.K-1

Photograph 8.K-2

COMMENT 8.L:

It is also worth noting that the current DSEIS's Exhibit 7 Proposed View of Pipeline (South Barry Avenue) has conveniently positioned the camera far from the actual bridge and at a very low height – so as to allow the pipeline bridge to be lost behind the Barry Avenue bridge guardrails. It in no way represents what the bridge crossing would look like to drivers, pedestrians and cyclists crossing the bridge itself. One might have imagined MB&YC would be more concerned with the aesthetics of the view as its members and guests come to and from the Club. *Daniel Natchez,*

President Daniel S. Natchez and Associates, Inc; Shore Acres Property Owners Association, Letter, May 11, 2016, Pg. 7, para. 5

RESPONSE 8.L:
See Response 8.K

COMMENT 8.M:
The pipe will not be contiguous to the bridge but located 8 feet away from it. The DSEIS presented made no mention of that fact, but suggested they would.be painting the pipe grey to mitigate visual impact. *Lorna Waitt, Resident of 549 Alda Road, Email to Betty-Ann Sherer, May 28, 2016, Pg. 1, para. 3*

RESPONSE 8.M:
See Response 8.K

COMMENT 8.N:
Visual impact of a sewer pipe that is proposed to be 8 feet away from the existing bridge (and elevated above the roadway). *Dana L Stetson and Mary M. Stetson, Residents of 565 Alda Road, Email to Betty-Ann Sherer, May 29, 2016, Pg 1, para. 3*

RESPONSE 8.N:
See Response 8.K

COMMENT 8.O:
During the Public Hearing, the Applicant's attorney stated that he would ask his client if she was prepared to undertake a new sewer line test and whether she was willing to pay for it. The Village is not asking for a test, it is demanding it and the Applicant has no choice. Moreover, the test will not just be "thorough" but witnessed and in accordance with NY standards in every way. The Attorney also responded to the Board that he does not know why the DSEIS recommends the pipeline bridge to be 8 feet from the existing road/utility bridge owned by the Town of Rye. The Applicant's attorney is the attorney for the Town of Rye! It is inconceivable that he is not aware of the reasons why the sewer pipe is not being recommended to be attached to the existing road bridge. As I said in my statement at the time, it may be related to the fact that MB&YC does not want to be beholden to the Town of Rye in any way. It may be for other reasons, which by his omission, the attorney could be seen to be misleading the Board. *Keith W. Waitt, Resident of 549 Alda Road, Letter, June 3, 2016, Pg. 2, para. 2*

RESPONSE 8.O:
See Response 8.K

Topic 9: Evaluate Horizontal Auger Boring (HAB) and Horizontal Directional Drilling (HDD)

COMMENT 9.A:
The SDEIS notes that the HAB and HDD options are not the recommended construction methods for crossing Otter Creek due to anticipated encounter with subsurface rock (see p. 65). However, the Planning Board would like the Applicant to examine of these two options more closely, in the event that an on-bridge creek side (eastern) South Barry Avenue Force Main Alignment is not determined to be feasible. Either of these alternatives that place the sewer line underneath the creek could reduce visual impacts and lessen the potential impact of the elements (i.e. freezing weather, vandalism) on the line. *BFJ Planning, Memorandum, June 13, 2016, Pg. 5, para. 1*

RESPONSE 9.A:
Horizontal directional drilling under Otter Creek would require both jacking and receiving pits. These pits would be approximately 8' wide by 12' long by 6' deep. The bore length would be approximately 120 feet and would require a staging area on the jacking pit side approximately 8 feet wide by 50 feet long. The pipe would be staged on the site side of the bridge, receiving pit side, and would require pullback area equal to the length of pipe equal to the bore length, 120 feet. The recommended depth of the bore hole beneath the creek bed would be a minimum of 8 feet.
The use of the HDD option would potentially result in the force main being placed beneath the existing bridge abutments and/or adjacent retaining wall(s). Information on the construction of the existing abutments and retaining walls including footing type (spread footing or pile supported), depth to bottom of footing, width of footing, bearing surface, etc. is not available. This information would be critical to the decision on the use a HDD alternative alignment which would potentially place the force main beneath the existing bridge abutments and/or adjacent retaining wall(s).

COMMENT 9.B
Traversing Otter Creek was planned via horizontal drilling into the Alda Road hookup site. If horizontal drilling was possible in that location, it should be used at the S. Barry Road bridge site. This would obviate the freeze/thaw risk and abrogate the risk future flooding, as well as being more aesthetically pleasing;
Christopher D. Hillyer, Resident of 506 South Barry Avenue, Letter, June 6, 2016, Pg 2, para. 2, item a.

RESPONSE 9.B:
See Response 9.A

COMMENT 9.C
I heard about drilling underneath Otter Creek, horizontal drilling, but I didn't see anything in your plan here about doing horizontal drilling, you know, underneath where you're proposing to do the pipe up and next to the bridge. And I'm sort of curious why that was completely left out in this, sort of, proposal to, you know, move forward. That's it. *Mark Radulovic, Resident of 1015 Shore Acres Drive, Transcript of For The Mamaroneck Beach & Yacht Club Draft Supplemental Environmental Impact Statement, May 25, 2016 Pg. 23, ln 17 - Pg. 24, ln 4*

RESPONSE 9.C:
See Response 9.A

Topic 10: Construction Phasing and Impacts

COMMENT 10.A:
The DSEIS indicates that the proposed sewer system upgrade will occur during Phase III of the overall proposed redevelopment plan, which will serve "the majority" of the development (see p. 51). We disagree with this characterization that deferring the sewer upgrade to Phase III will serve most of the proposed development. Phase I of construction involves construction of the yacht club/dock master building, while Phase II involves construction of the recreation building and associated pool improvements. Each of these phases represents a significant portion of the overall development, with potential to generate substantially greater use of the Club, and commensurate additional sewer impacts. Connecting the new yacht club/dock master and recreation buildings to the existing sewer system is not advisable, given the uncertain condition of the existing pipe and the lack of any easement to convey the existing pipe over the 519 Alda Lane property. The replacement of the existing sewer system should be undertaken during Phase I of construction, prior to or in conjunction with construction of the yacht club/dock master building. *BFJ Planning, Memorandum, June 13, 2016, Pg. 5, para. 2*

RESPONSE 10.A:
In previous filings by the Applicant and the report of the Village Engineer, it states that the upgraded power for the pump station would not be available until Phase III. Additionally, Applicant believe that the additional members from the improvements in Phase I and Phase II are adequately served with the existing system as it is anticipated that the membership of Applicant will not increase over usage and capacity of previous years when Applicant had a larger membership.

COMMENT 10.B:
Sewer reconstruction work should be a priority and should be scheduled as soon as possible, after all appropriate permits are obtained and reviews have been performed. It is critical that this work commence before any further leaks occur and before any other substantive work for the redevelopment begins.
Timetable: Details of construction staging and a timetable must be included *Village of Mamaroneck HCZM Commission, Memorandum, May 25, 2016, Pg. 1, para. 3; Pg. 2, para.2*

RESPONSE 10.B:
See Response 10.A

COMMENT 10.C:

The Applicant proposed to upgrade the existing sanitary pump station and force main during Phase III of the renovation of the property. The Planning Board should require the Applicant to explain why, in the Applicant's view, upgrade of the sewer system is not feasible prior to commencement of or during Phase I, i.e. before commencement of any other redevelopment plans being undertaken. Time is of the essence to replace the existing sewer pipe under Otter Creek and such a requirement by the Planning Board should be imposed as a condition precedent to the granting any approvals for redevelopment. In addition, the Planning Board should express in its Findings the Board's anticipation that Village officials will, and are, taking all appropriate actions required to properly monitor and impose necessary remedial actions upon MBYC to insure the sewer pipe under Otter Creek is not now or in the future leaking sewage into Otter Creek. It is reasonable for the Planning Board to require accurate and up to date information regarding the current status of the sewer pipe under Otter Creek in order to review the feasibility of the various alternatives presented by the Applicant including, but not limited to, the feasibility of delaying upgrades to the sewer system until Phase III or the No Action alternative.

Debora S. Cohen, Newman Ferrara LLP, Letter, June 6, 2016, pg 2, para. 2

RESPONSE 10.C:
See Response 10.A

COMMENT 10.D:
The DSEIS proposes that the Sanitary Sewage update be part of Phase III (page 51). This is simply unacceptable and contrary to Village, County, State and Federal laws. No new approval or construction can be authorized without this necessary upgrade. Moreover, the information before you show an imminent and substantial risk of another sewage failure affecting our Harbor and Otter Creek, thus it is respectfully requested that you refer this matter to the appropriate officials for immediate preventive and corrective actions. *Victor M. Tafur, Resident of 490 Bleeker Avenue, Letter, May 25, 2016, Pg. 4, Item 7*

RESPONSE 10.D:
See Response 10.A

COMMENT 10.E
The Village Land Use lawyer said that the applicant has to have the sewer line in place before development can occur. Previously it has been stated they will not create the new sewer system until phase 3 of the development. Which is it? *Lorna Waitt, Resident of 549 Alda Road, Email to Betty-Ann Sherer, May 28, 2016, Pg. 1, para. 8*

RESPONSE 10.E:
See Response 10.A

COMMENT 10.F:
During the Public Hearing, the VOM Land Use Attorney stated that "the Applicant will not be allowed to begin any new development it proposes until the sewer line had been replaced" (see LMCTV Part2 @ 43.10 mins). However, the DSEIS clearly states, and we have all been advised,

that the Applicant is not intending to begin replacement of the sewer line until Phase Ill of its development. (see page 51 of their DSEIS). By this time, Phase I and II will have been completed which includes a Yacht Club/dock masters building, a recreation building and pool improvements. It also would indicate that if Phase Ill was not pursued, then the sewer line will never need to be replaced. This is not an alternative given what we know about the compromised state of the sewer line today. *Keith W. Waitt, Resident of 549 Alda Road, Letter, June 3, 2016, Pg. 1, para. 6*

RESPONSE 10.F:
See Response 10.A

COMMENT 10.G:
In addition, the DSEIS contains no substantive discussion of the potential construction impacts on adjoining property owners and users of South Barry Avenue. In particular, we note that the DSEIS indicates (see p. 29) that surface bedrock was observed along South Barry Avenue, and that the alignment may need to be adjusted to avoid rock, or rock may be excavated to provide the minimum depth of cover over the pipe. Yet the document does not provide any details about the methods for excavation, including the potential for blasting. *BFJ Planning, Memorandum, June 13, 2016, Pg. 5, para. 3*

RESPONSE 10.G:
Rock excavation in trenches typically consists of boulders exceeding ½ cubic yard in volume and bedrock/ledge rock which cannot be removed without blasting or the use of pneumatic hammers. The nature of the rock encountered in the excavation will dictate the method of excavation. Weathered, decomposed or soft bedrock could be removed with pneumatic hammers whereas hard intact bedrock would most likely require blasting.

If required, blasting operations would be performed in accordance with the applicable provisions of Chapter 120 Blasting of the Village Code. The overall construction time frame for the proposed force main would be approximately 4 weeks. During this period, construction operations would include a maintenance and protection of traffic plan; blasting inspecting and monitoring will be performed in accordance with the applicable provisions of Chapter 120 blasting and more specifically §120-8 “Property inspections and monitoring by contractor; liability”.

COMMENT 10.H:
Disruption to the area during construction (as there was not discussion or representation of the plans we can only assume the worst) *Dana L Stetson and Mary M. Stetson, Residents of 565 Alda Road, Email to Betty-Ann Sherer, May 29, 2016, Pg 1, para. 3*

RESPONSE 10.H:
See Response 10.G

COMMENT 10.I:
My name is MaryAnn Zurbuch, 575 Alda Road. I'm the owner of a home on the corner of Alda Road and South Barry Avenue. My husband and I moved here about a year ago, looking for a quiet community to start a family. We now have a one-month-old newborn son. Our house is a hundred years old, built on the rock ledge. The length of it runs along South Barry Avenue. It's got a lot of

original, unique, architectural elements.

We're very concerned about the impact of the project to the structure of our home with the chipping and the blasting that will be involved, you know, as well as the impact to the other homes along South Barry. We're also concerned about the potential for noise and disturbance to our family, as well as the other families in the community, and we would like both of these matters addressed in the impact statement. *MaryAnn Zurbuch, Resident of 575 Alda Road, Transcript of For The Mamaroneck Beach & Yacht Club Draft Supplemental Environmental Impact Statement, May 25, 2016,* Pg. 47*, ln 23 - Pg. 48, ln 18*

RESPONSE10.I:
See Response 10.G

Topic 11: Impacts on Neighbors

COMMENT 11.A:
In addition, the southwestern terminus of the proposed pipeline bridge appears to be located very close to a detached garage, as well as what appears to be a storm drain. The detached garage is depicted on Exhibit 7 but not on Exhibit 8a. The storm drain appears on Google Street View (August 2013). Potential impacts to these structures should be addressed. *BFJ Planning, Memorandum, June 13, 2016, Pg. 6, para. 2*

RESPONSE 11.A:
The applicant intends to construct the force main within the right of way of South Barry Avenue and therefore the detached garage would not be impacted by the proposed force main.

During final design, an analysis of the existing storm drain will be made based on field survey data. The design will make a concerted attempt to limit impacts to the existing storm drain. If impacts to the existing storm drain cannot be avoided, it will be reconstructed to Village Standards and Specifications.

COMMENT 11.B:
On the northwest side of the Otter Creek Crossing there is an existing residential garage approximately 6 feet from the proposed sewer line route as well as the Village's storm water outfall that is within approximately 2 to 3 feet from the proposed sewer line route. No information is provided regarding potential impacts to or conflicts with these structures.

Exhibit 8a does include a mapping of the existing 18" tree near the northwest corner of the bridge along with the note that it "may be impacted" – but there is no suggestion of the extent of that impact, how it could be minimized and who would be responsible for the future removal of the tree in the event it is killed. *Daniel Natchez, President Daniel S. Natchez and Associates, Inc; Shore Acres Property Owners Association, Letter, May 11, 2016, Pg. 8 para. 6 - Pg. 9, para. 1*

RESPONSE 11.B:
See Responses 11.A and 4.C
It is possible that construction activities may occur within the critical root zone of the existing

street tree. If so, roots within the Critical Root Zone of the existing tree that may interfere with construction activity shall be located and pruned by Certified Arborist as follows: 1) Roots encountered within the Critical Root Zone shall be cut using a sharp saw or hand pruners. Roots shall be severed cleanly perpendicular to the long axis of the root and cut ends immediately covered with wet burlap or loam; 2) Exposed roots of trees to be preserved shall be covered with burlap, mulch or backfill and kept damp; 3) Burlap wrap shall be removed after construction work is completed, prior to final backfill. Exposed roots shall be permanently backfilled as soon as possible.

If, during or after construction, the tree is deemed unsafe by the Certified Arborist, it will be removed and replaced at the Applicants expense.

COMMENT 11.C:
Simple issues, such as the separation of the water mains and a sanitary sewer line, the Westchester Land Trust's property and other private properties along the route of South Barry Avenue, the anticipated rock removal, all fail to be identified or discussed in the DSEIS and should be part of the FSEIS. *Daniel Natchez, President Daniel S. Natchez and Associates, Inc; Shore Acres Property Owners Association, Letter, May 11, 2016, Pg. 9, para. 2*

RESPONSE:
See Responses 11.A and 4.C

COMMENT 11.D:
There is also no discussion of how the line could be installed without impairing the ability of the up to four other property owners south of the bridge to undertake a similar project or join the proposed line at a future date and not be foreclosed due to the approach MB&YC proposes to undertake. *Daniel Natchez, President Daniel S. Natchez and Associates, Inc; Shore Acres Property Owners Association, Letter, May 11, 2016, Pg. 9, para. 5*

RESPONSE 11.D:
It is the Applicant's understanding that other property owners located to the south of the South Barry Avenue Bridge have functioning on site waste water disposal systems. It is also the Applicant's understanding that these other property owners and have not taken steps to connect to the Village Sewer District. SEQR does not require the Lead Agency to consider hypothetical issues arising from other properties. Furthermore, there is no indication that the proposed location of the force main on the South Barry Avenue Bridge would "foreclose" other property owners from locating another force main on the South Barry Avenue Bridge or finding alternative means of connecting to the Village Sewer District in the future.

COMMENT 11.E:
Similarly, there is no discussion as to whether the line outside MB&YC could at some point in time be dedicated to the Village and/or other arrangements made to allow the other homeowners to utilize same. *Daniel Natchez, President Daniel S. Natchez and Associates, Inc; Shore Acres Property Owners Association, Letter, May 11, 2016, Pg. 9, para. 6*

RESPONSE 11.E:
See Response 11.D

COMMENT 11.F:
The DSEIS did not include updated or factually accurate information on increase in traffic, noise from the pump station,… *Christopher D. Hillyer, Resident of 506 South Barry Avenue, Letter, June 6, 2016, Page 3, para. 2*

RESPONSE 11.F:
A noise analysis was provided in Section V.D of the DSEIS. Operations and maintenance is typically limited to one vehicular trip on a weekly, monthly and quarterly basis. The pump station will not result in any measurable increase in average daily traffic volumes.

COMMENT 11.G:
Potential impact to our structure and nearby tree. Visual impact of a sewer pipe that is proposed to be 8 feet away from the existing bridge (and elevated above the roadway).
Disruption to the area during construction (as there was not discussion or representation of the plans we can only assume the worst). *Dana L Stetson and Mary M. Stetson, Residents of 565 Alda Road, Email to Betty-Ann Sherer, May 29, 2016, Pg 1, para. 3*

RESPONSE 11.G:
See Responses 4.C, 8.A and 11.A

Topic 12: Easements

COMMENT 12.A:
The Applicant must clearly indicate any and all property easements required by any of the alternatives discussed in the DSEIS, including the names of all property owners from whom easements will be necessary, and confirmation that the owners have been contacted about the potential to provide easements and are amenable to negotiating an appropriate easement agreement. *Planning, Memorandum, June 13, 2016, Pg. 6, para. 1*

RESPONSE 12.A:
Applicant has reached an agreement with the Westchester Land Trust, the owner of the adjacent property for an easement over their property. Said easement permits applicant to cross the property line for the purposes of installing and maintaining the new sewer line. The easement is recorded with the Westchester County Clerk and is attached as Appendix J.

COMMENT 12.B:
Currently there does not seem to be an easement obtained or even requested from the Westchester Land Trust. If any easement is obtained information must be provided about who would be responsible for any spills, damage, remediation and fines/penalties in the event of a break or leak in the sewer line. .*Village of Mamaroneck HCZM Commission, Memorandum, May 25, 2016, Pg.*

1, para. 4

RESPONSE 12.B:
See Response 12.A

COMMENT 12.C:

the current application has been revised from the original application to show the sewer line running through Lot 30A1 along the paved access to MBYC from South Barry Ave. That lot belongs to Westchester Land Trust. While there is an existing easement for ingress and egress to a barn on MBYC's property, placing a sewer line under the drive overburdens that easement. We have asked MBYC's owner for the basis on which they believe they have a right to utilize this lot in this way, and we have asked the Planning Board for the basis on which you believe you have authority to approve this application utilizing Lot 30A1 in this way. We have received no response from either MBYC or from you.

Westchester Land Trust, Susan E. Carpenter, Director of Land Preservation and Counsel, Letter May 25, 2016, Pg. 1, para. 1

RESPONSE 12.C:
See Response 12.A

COMMENT 12.D:
The Applicant should be required to provide the Planning Board with documentation of any studies or analysis done of the feasibility and environmental impacts of continuing a force main that "will continue northwest within the South Barry Avenue right-of-way where it will connect to the existing municipal manhole." SDEIS, p. 7, 14. The Applicant has described this alternative, in lieu of being granted an easement by the property owners of 519 Aida Road, as the least environmentally intrusive". SDEIS, p. 16. The Applicant should be required to explain the basis for this conclusion, particularly in light of public comments and questions regarding the necessity for rock and tree removal to effectuate this alternative. *Debora S. Cohen, Newman Ferrara LLP, Letter, June 6, 2016, Pg. 2, para. 5.*

RESPONSE 12.D:
The preferred alternative runs along the public road and connects on South Barry Ave. It requires the least disruption of adjacent land and follows the path of the existing gas and water lines.

COMMENT 12.E:
Similarly, the Applicant makes references to easements they would need for various alternatives and makes general statements as to what they will do if said easements are not granted. The Planning Board should require the Applicant to provide a clearer and more detailed summary of easements that would be required for each Alterative and document efforts to date to communicate with and/or obtain them from the respective property owners. Without this information, it does not

appear possible for the Planning Board to make a determination as to the "reasonableness" of the various alternatives presented. *Debora S. Cohen, Newman Ferrara LLP, Letter, June 6, 2016, Page 3, para. 1*

RESPONSE 12.E:
See Response 12.A

COMMENT 12.F:
The environmental impacts, authorizations, ownership and maintenance of the offsite 1,300 feet sewer line thru Otter Creek, Westchester Land Trust property and Village property to Manhole #66476 (See exhibit 14a) need to be fully explored. The discussion of these critical issues is in-sufficient or simply inadequate under SEQRA and for the necessary approvals by the Village and other municipalities or agencies. *Victor M. Tafur, Resident of 490 Bleeker Avenue, Letter, May 25, 2016, Pg. 3 Item 6*

RESPONSE 12.F:
See Response 12.A

COMMENT 12.G:
The Westchester Land Trust representative revealed that no easement or application has been made for the pipe to cross their land, and indeed is not even in place for the utilities that currently cross their land. *Lorna Waitt, Resident of 549 Alda Road, Email to Betty-Ann Sherer, May 28, 2016, Pg. 1, para. 4*

RESPONSE 12.G:
See Response 12.A

COMMENT 12.H:
The DSEIS says that the route of the preferred alternatives "…along the South Barry Avenue …" would be through and leaving MB&YC's property and thereafter through "…public lands within South Barry Avenue right-of-way (ROW)." However, it is believed that there are also private lands as opposed to all "public lands" south of the South Barry Avenue Bridge over Otter Creek. …To date it does not appear to have been addressed. In fact there is not even remotely accurate mapping of the properties involved in the Barry Avenue route – not even of the MB&YC property itself. How can impacts be assessed without even such basic information? *Daniel Natchez, President Daniel S. Natchez and Associates, Inc; Shore Acres Property Owners Association, Letter, May 11, 2016, Pg 8, p1 -3*

RESPONSE 12.H:
See Response 12.A

COMMENT 12.I:
Easements must be obtained from the Westchester Land Trust; *Christopher D. Hillyer, Resident of 506 South Barry Avenue, Letter, June 6, 2016, Pg 2, para. 3, item a.*

RESPONSE 12.I:
See Response 12.A

Topic 13: Permits and Approvals

COMMENT 13.A
Table Il-l of the SDEIS is a chart the Applicant identifies as a "Summary of Possible Required Permits and Approvals". The Applicant should be required to delineate the actual permits and approvals required for each Alternative and document the efforts to date to communicate with the necessary agencies or officials regarding the conditions for, and likelihood of, obtaining them. *Debora S. Cohen, Newman Ferrara LLP, Letter, June 6, 2016, Page 3, para. 1*

RESPONSE 13.A: The permits list is the same for virtually all the alternatives. No additional listing is necessary.

COMMENT 13.B:
As noted in the 2010 Finding Statement, "the Planning Board notes that the Mamaroneck WWTP has sufficient capacity to meet this increased demand." (page 19). Indeed, a letter from the County was attached to the Applicant's 2010 Sanitary Sewer Analysis, submitted on October 14, 2010. An updated letter must be obtained for the FSEIS.

The FSEIS must also include an evaluation that the proposed flows would not result in sewage exceedances under County Law or sanitary sewer overflows, which are violations of the Federal Clean Water Act and NYS Environmental Conservation Law. See also Flow Metering Study, Arcadis (2015), previously submitted to the Planning Board. *Victor M. Tafur, Resident of 490 Bleeker Avenue, Letter, May 25, 2016, Pg. 2 Item 2; Pg. 3 Item 6*

RESPONSE 13.B:
The following was excerpted from Village website at
http://www.village.mamaroneck.ny.us/Pages/MamaroneckNY_Stormwater/idde%20testing
In 2009, the federal Environmental Protection Agency (EPA) conducted wet-weather sampling at storm water outfalls in many Long Island Sound Shore communities. Based on those sampling results the EPA found higher than acceptable levels of certain bacteria at outfalls in most of these communities, including the Village of Mamaroneck. Based on these results, the EPA issued a Notice of Violation and an Order to Remedy to the Village of Mamaroneck which required that the Village identify the sources and design a program which will eliminate these pollutants of concern.

In order to assist with this process, the Village conducted a Request for Proposals process and retained the firm of with Malcolm Pirnie/ARCARDIS ("Arcadis") to assist the Village with the its illicit discharge detection and elimination program which was followed by river sampling operations to confirm the EPA findings as well as locate areas of concern.
The Village retained the firm of Malcolm Pirnie/ARCARDIS ("Arcadis") to assist the Village with its illicit discharge detection and elimination program.

An Illicit Discharge is defined in the Chapter 282, Article V of the Village Code as "Any discharge through an unauthorized connection, including a direct or indirect nonstormwater discharge to the storm sewer system, except as exempted in this chapter." The proposed force main would connect to an existing sanitary sewer and therefore would not constitute an illicit connection.

COMMENT 13.C:
Marine Structures: Is a permit required for any component of sewer system? If so, identify such as part of the complete list of permitting agencies/permits required *Village of Mamaroneck HCZM Commission, Memorandum, May 25, 2016, Pg. 1, para. 6 - 10*

RESPONSE 13.C:
See Response 13.A

Topic 14: Request for Onsite Wastewater Treatment Facility

COMMENT 14.A:
On-site treatment of wastewater: Must be provided as an alternative as the Westchester County Health Code does allow for it. See full text of Section 873.728 (only partial text is included in SDEIS) *Village of Mamaroneck HCZM Commission, Memorandum, May 25, 2016, Pg. 2, para. 1*

RESPONSE 14.A:
The subject property is located in and is serviced by the Village Sewer District and Westchester County Mamaroneck Sewer District. It is the Applicants intent to continue to be served by these entities.

COMMENT 14.B:
The DSEIS fails to analyze the Private Onsite Wastewater Treatment Facility alternative, based on an interpretation of the County Sanitary Code, specifically Section 873.728, which is partially reproduced in page 69. This interpretation seems erroneous. The Applicant fails to state that Section 873.728, "shall not apply to a building of 40,000 square feet or more in area which contains the usable area otherwise required." See DSEIS Appendix E, Volume 2. Moreover, Section 873.728 must be interpreted together with sections Section 873.727 and Section 873.729, also included the DSEIS, Appendix E, Volume 2, which indicate that a building must connect to the public sanitary sewer "provided that such sewer is within 100 feet of any property line of such premises and is otherwise accessible," and the provisions for "where a public sanitary system is not available and accessible." These provisions and how they apply to MBYC must be fully discussed and a Private Onsite Wastewater Treatment Facility alternative fully explored in the FSEIS. *Victor M. Tafur, Resident of 490 Bleeker Avenue, Letter, May 25, 2016, Pg. 3 Item5*

RESPONSE 14.B:
See Response 14.A

COMMENT 14.C:
The alternative options for a sewer system were brushed over, and no consideration made for an on-site facility which would have less impact on the Preserve or neighborhood and which would cost very little more than the current preferred alternative. *Lorna Waitt, Resident of 549 Alda Road, Email to Betty-Ann Sherer, May 28, 2016,Pg. 1, para. 7*

RESPONSE 14.C:
See Response 14.A

COMMENT 14.D:
Why the alternative of a private onsite wastewater treatment facility is not a viable option (page 10 of DSEIS). Our calculations are that the costs would be the same as the Applicant's option, given the length of line, construction of pump station, pipeline bridge and chipping of South Barry Avenue up to the main sewer line. The benefit is that it would be a self-contained construction project on the Applicant's land and not require a pump station, pipeline bridge or chipping/blasting on a public roadway. It also will be far more convenient (and less contentious) for all the neighbors!

Keith W. Waitt, Resident of 549 Alda Road, Letter, June 3, 2016, Pg. 2, para. 3, item d.

RESPONSE 14.D:
See Response 14.A

COMMENT 14.E:
It has been considered problematic by the Village Engineer to force (i.e. under positive pressure) sewage from the 4" line into the sewer mains (under Aida, S. Barry, and Soundview) and that a holding tank with gravity feed to the main is the only acceptable option. This has not been described in the documents and would require additional digging and manholes. *Christopher D. Hillyer, Resident of 506 South Barry Avenue, Letter, June 6, 2016, Pg. 3, para. 1, item c.*

RESPONSE 14.E:
See Response 14.A

COMMENT 14.F:
I'm disappointed that the DEIS has not considered actually doing an on-site self-contained sewer system. I've heard some controversy about that. I've heard that the applicant said it wasn't allowed, and then others have told me that they have not accurately represented the law. I don't know which of those two is correct, but this may be exactly the location where a self-contained sewer system would be the most appropriate alternatives. *Sue McCrory, Resident of The Crescent, Transcript of For The Mamaroneck Beach & Yacht Club Draft Supplemental Environmental Impact Statement, May 25, 2016, Pg. 56, ln 24 - Pg. 57, ln 10*

RESPONSE 14.F:
See Response 14.A

Topic 15: Process

COMMENT 15.A:
We wholeheartedly support the Planning Board holding a Public Hearing on the FSEIS prior to its adoption. *Daniel Natchez, President Daniel S. Natchez and Associates, Inc; Shore Acres Property Owners Association, Letter, June 6, 2016, Pg. 1, para. 4*

RESPONSE 15.A: A public hearing on the FSEIS is not required under SEQRA. Additional public hearings on this will only further delay the ultimate approvals and construction of the new sewer line.

COMMENT 15.B:
I urge you to continue to take advantage of the public's knowledge and input, to insure that your decision making is based on the most complete and accurate information available to you. *Allison Stabile, Email to Betty-Ann Sherer, June 8, 2016, Pg. 2, para. 5*

RESPONSE 15.B:
See Response 15.A

COMMENT 15.C:
The DSEIS process has enabled Mamaroneck residents to be informed about the environmental impacts proposed by Mamaroneck Beach & Yacht Club. These public hearings are so important for our quality of life. I am requesting you hold a public hearing when the FSEIS is submitted to the Planning Board. *Michelle Goodman, Resident of 622 The Parkway, Email to Betty-Ann Sherer, June 8, 2016, Pg. 1, para. 2*

RESPONSE 15.C:
See Response 15.A

COMMENT 15.D:
I am writing to urge you to continue to support transparency in local governance. Specifically, the DSEIS process has raised important, substantive concerns which MB&YC will must address. However, without a public hearing on the FEIS, the public will not be able to vet that information. *Gretta Heaney, Email to Betty-Ann Sherer, June 8, 2016, Pg. 1*

RESPONSE 15.D:
See Response 15.A

COMMENT 15.E:

Second, the issues surrounding the force main are serious. Given these serious concerns, I believe that it is imperative that there be a public hearing opened for when the FSEIS is filed.

Christopher D. Hillyer, Resident of 506 South Barry Avenue, Letter, June 6, 2016, Pg. 1, para. 3

RESPONSE 15.E:
See Response 15.A

COMMENT 15.F:

Accordingly, I strongly urge the Board that the Public Hearing be re-opened to reflect on and gain input as relates to the FSEIS. If Members of the Board are presented with the facts, I have to believe that your experience and conscience will ensure the correct environmental decisions are made in the best interests of the entire Village. Public involvement is one key means of preventing potential misstatements and errors of omission in the FSEIS.

Christopher D. Hillyer, Resident of 506 South Barry Avenue, Letter, June 6, 2016, Pg. 3, para. 3

RESPONSE 15.F:
See Response 15.A

COMMENT 15.G:
Why the Village had to contribute towards the cost of production of this DSEIS, when it clearly is biased towards the Applicant and will require a considerable amount of the Board's time to determine all the facts. *Keith W. Waitt, Resident of 549 Alda Road, Letter, June 3, 2016,Pg. 3, para. 1*

RESPONSE 15.G:
See Response 15.A

Topic 16: Sewer System Improvements Monitoring

COMMENT 16.A:
Sewer System Improvements Monitoring: A full description of monitoring both during and after construction with an emphasis on environmental impacts and remediation if a failure occurs.
Village of Mamaroneck HCZM Commission, Memorandum, May 25, 2016, Pg. 2, para. 5

RESPONSE 16.A:
The sanitary sewer system will be constructed and tested in accordance with the applicable provisions of the relevant codes. The Applicant will develop and implement an emergency response plan.

Topic 17: Miscellaneous

COMMENT 17.A:
FEMA elevation: Include both current and proposed flood maps. *Village of Mamaroneck HCZM Commission, Memorandum, May 25, 2016, Pg. 1, para. 6 - 10*

RESPONSE 17.A:
Based on the search of the FEMA Map Service Center website, the current flood map for the area is number36119C0361F, effective on 09/28/2007.

COMMENT 17.B:
Also, please note what appears to be a typo on page 44 Volume I. Table B 5 has "Peak Hourly Flow Rate" on a chart that seems to show daily flow rates.
Village of Mamaroneck HCZM Commission, Memorandum, May 25, 2016, Pg. 1, para. 6 - 10

RESPONSE 17.B:
The reference is correct, the peak hourly flow rate is equal to the average daily flow times the peaking factor.

COMMENT 17.C
DSEIS Statement:

"During the review of the 2013 Amended Site Plan, … in conjunction with the redevelopment of the Property." [emphasis added]

Not correct – see comments from the former Building Inspector communicated to the Applicant's representatives – the line does NOT meet NYS Building Code, is in a CEA and has leaked raw sewage for an indefinite period into Otter Creek, 250 feet upstream from a beach area.

Within the "Background and History" there are many misleading and self-serving statements that are inappropriate in a FSEIS.

"To resolve certain issues …**had changed'**.

In fact, it is suggested that the first six (6) paragraphs be removed as not relevant as to why the DSEIS was required to be prepared and is not meaningful for a FSEIS.
Within Table II-1 as well as in narratives elsewhere some of the references are misleading including:

Village of Mamaroneck Board of Trustees - Easement for the use of Village Property are required – so the word "possibly" is misleading and a license agreement may also be required.

Army Corps of Engineers – Nationwide Permit #10. In discussions with the ACE a permit may be required but in any event notifications are required to the ACE for a determination:

"Notification: The permittee must submit … impervious materials. (See general condition 31.) "

NYS Department of Environmental Conservation – It is believed that a tidal wetlands permit is required and a water quality determination is required - including for an ACE permit.

There are statements inferring as well as stating that the land beneath the bridge (page 17) is owned by the Village and in fact the Otter Creek bed is owned by the State of NY.
There are statements inferring that the only issue regarding the sewer line is a replacement if other activities are undertaken. As stated earlier, this is not the case as the current line does not meet

the current NYS BUILDING CODE. The lack of mention of this throughout the document and in IV PURPOSE AND NEED FOR THE PROPOSED ACTION (PREFERRED ALTERNATIVE) goes through a long litany and curiously omits the discussion and interaction with the then Building Inspector and the need to have the existing or new force main meet the NYS Building Code requirement of 50psi pressure test – See "B vi" herein.
It appears that there is no mention of the age of the existing force main within the DSEIS. Previously the Applicant made it known that it was their belief that the line was circa 100 years old and later that it could be somewhere between 60 to 100 years old. In either case it is well beyond it useful life and the age of the existing line is a significant reason for its replacement regardless of whether any new development is undertaken and is a likely reason or significant contributor to why the line failed.
Two apparent typos, not significant, but mentioned since they were observed:

Page 17 last full line, it is believed that the word "with" should be "within".

Page 26 ninth line up from the bottom, it is believed that the word "alterniuflora" should be "alterniflora".

Daniel Natchez, President Daniel S. Natchez and Associates, Inc; Shore Acres Property Owners Association, Letter, May 11, 2016, Pg. 11 para. 3 - Pg. 12

RESPONSE 17.C:
This comment is a compilation of other comments and has been addressed throughout the document.

Topic 18: Pump Station

COMMENT 18.A:
Elevation and Location of Proposed Pump Station: More information is needed about elevating the new pump station at the current location and any associated aesthetic impacts. *Village of Mamaroneck HCZM Commission, Memorandum, May 25, 2016, Pg. 1, para. 6 - 10*

RESPONSE 18.A:
The proposed pump station has been designed such that the top slab of the proposed pump station will be at an elevation of 16.0 which is at least two feet above the 100-year mapped floodplain elevation. The pump station will be contained within a fenced enclosure.
See also Response 4A

COMMENT 18.B:
No mention was made in the report regarding the noise that the pump station will make, or from the chipping and blasting of the rock that will need to occur for placement of the pipe along South Barry Avenue. *Lorna Waitt, Resident of 549 Alda Road, Email to Betty-Ann Sherer, May 28, 2016, Pg. 1, para. 5*

RESPONSE 18.B:
See Responses 10G and 11.F

COMMENT 18.C:
The noise levels of the pump station in decibels and confirmation that this will be a constant 24/7 humming.
Keith W. Waitt, Resident of 549 Alda Road, Letter, June 3, 2016, Pg. 2, para. 3, item c.

RESPONSE 18.C:
See Response 18.B and Response 11.F

COMMENT 18.D:
My second comment has to do with base flood elevation.
So, I believe, from what I understood of the presentation, that Mamaroneck Beach & Yacht is designing this to the old flood elevation of 13. That, I think, is environmentally unsound, and I think that should be reconsidered. Is there any water entry point where flood waters can get into that system from this design? *Sue McCrory, Resident of The Crescent, Transcript of For The Mamaroneck Beach & Yacht Club Draft Supplemental Environmental Impact Statement, May 25, 2016, Pg. 55, ln 5-6, 20-24, Pg. 56, ln. 17 -19*

RESPONSE 18.D:
See Response 18.A