

# Bluff Restoration

East Beach and Port Jefferson Country Club



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# **East beach capital project timelines**

**Engineers GEI- engaged on many different east beach projects  
since 2010**

**DEC permits :**

**East Beach Sea Wall 2010-2015**

**West end wall extension, ramp installation  
2016-18**

**East end wall extension, ramp and restoration  
2018-2019**

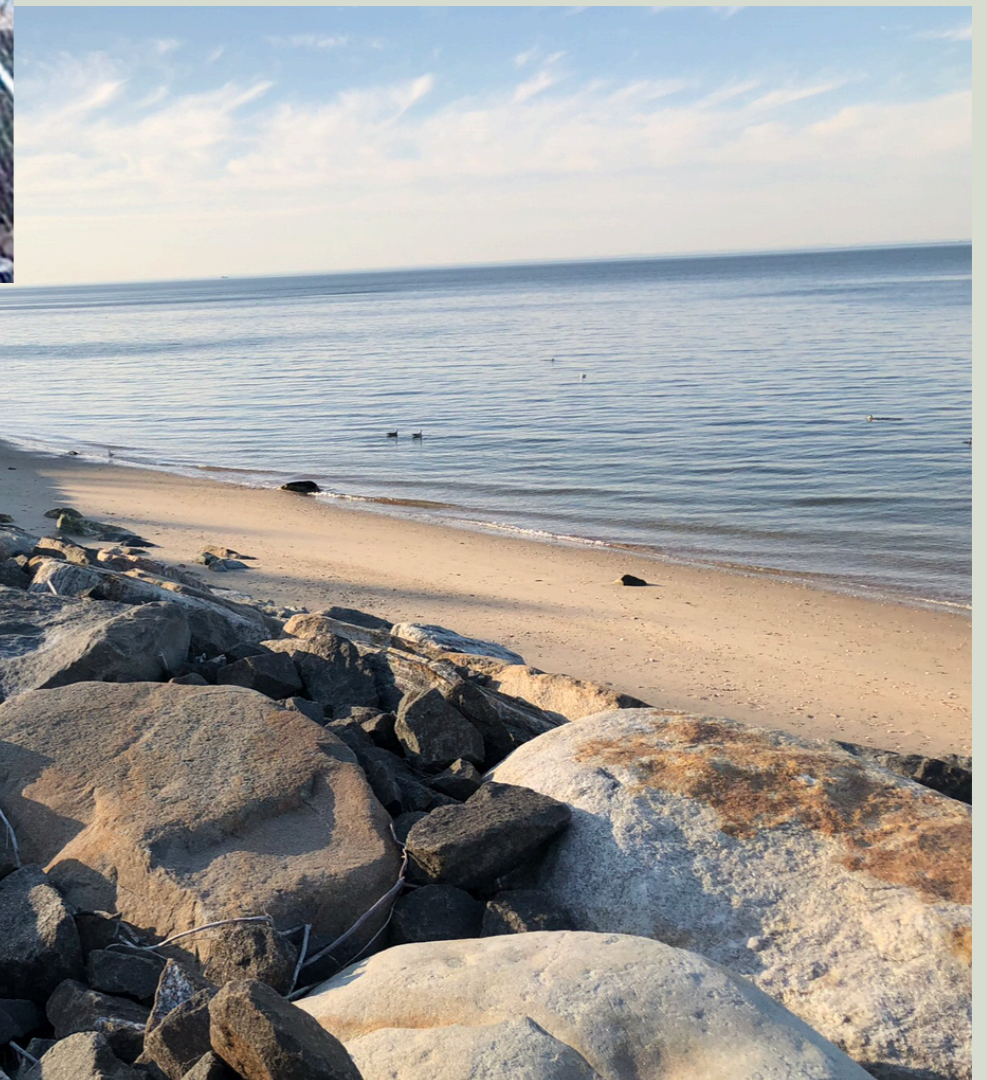
**Jetty 2009-2020**

**Sand dredging 2009-2021**



**Devastating storms  
of 2009 and 2010**

**Irene and Sandy**



**Rebuild our sea wall  
took 4 years with  
FEMA funding costing  
\$2.7 million from  
2010-2015**





**Extended the west steel wall and built the concrete ramps for access to the beach 2017-2019**

**East end gets battered and needs to be completely redone extending the steel wall and rock revetment eastwards and redoing the ramp salvaging the gazebo 2018 -2019**







**Restoration of the breached jetty 2020 after 11 years of planning and funding**



**Replenishment of 80,000 cubic yards of sand dredged  
from Mt. Sinai Harbor 2021**





# Rebuilding the failing retaining wall 2021





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# PHASE I

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# Stabilize the bluff



# Rapid Erosion and rising tides 2017-2020



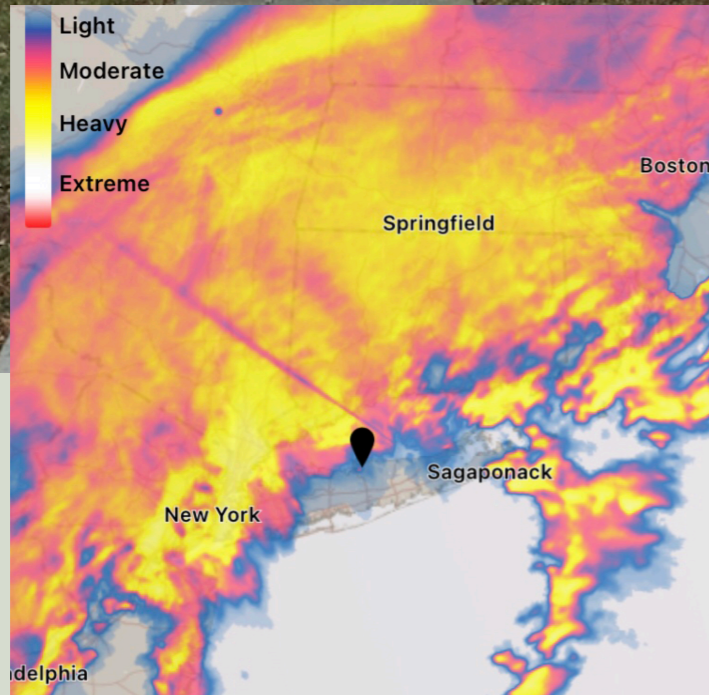
**Severe**

**Deforestation  
and scouring**





# Impacts from last rain storm summer 2021





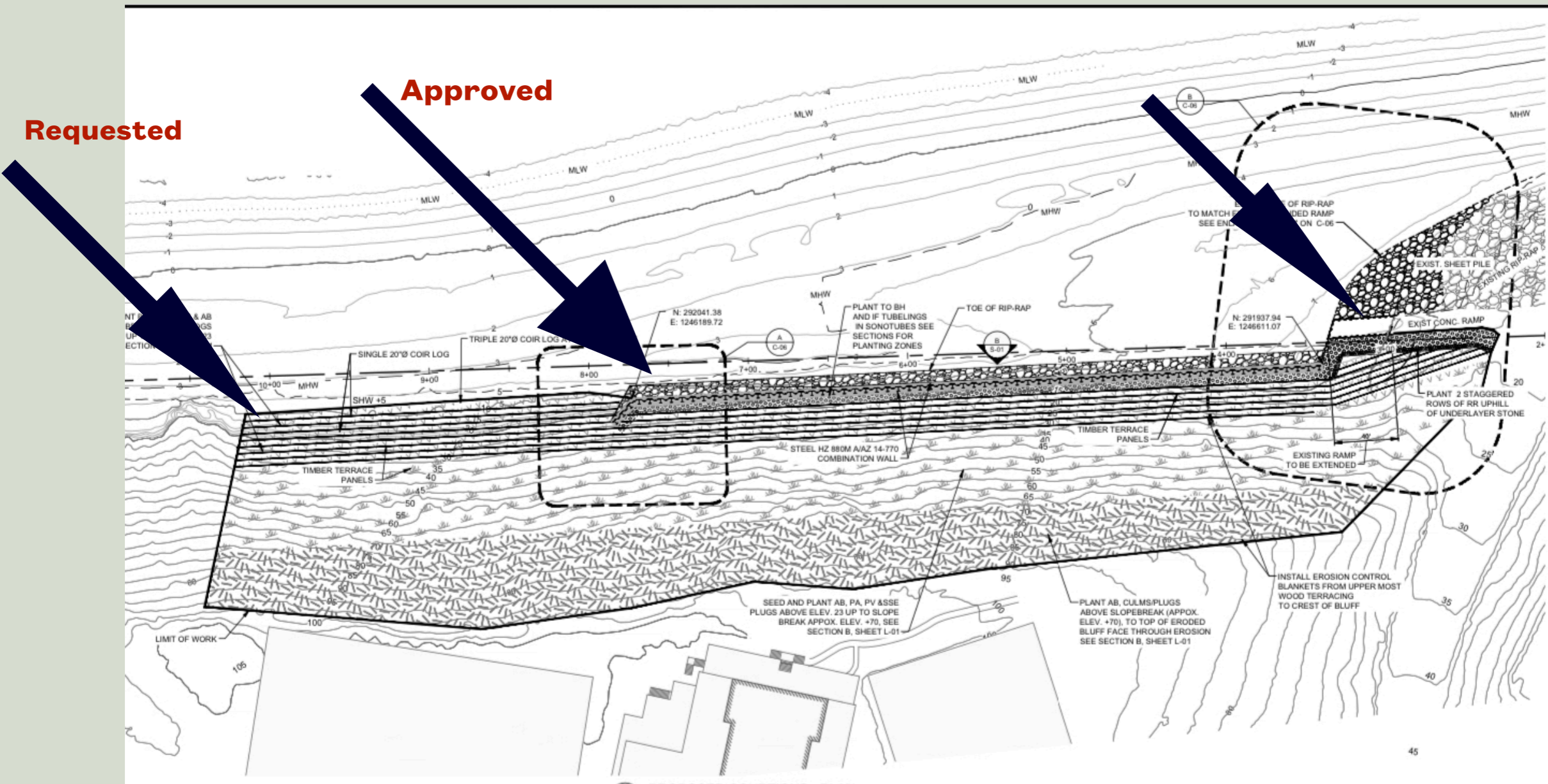
**Severe  
scouring**

**Impacts to upland assets is  
imperative and mitigation is urgent  
to preservation of roadway;  
clubhouse, and all amenities**





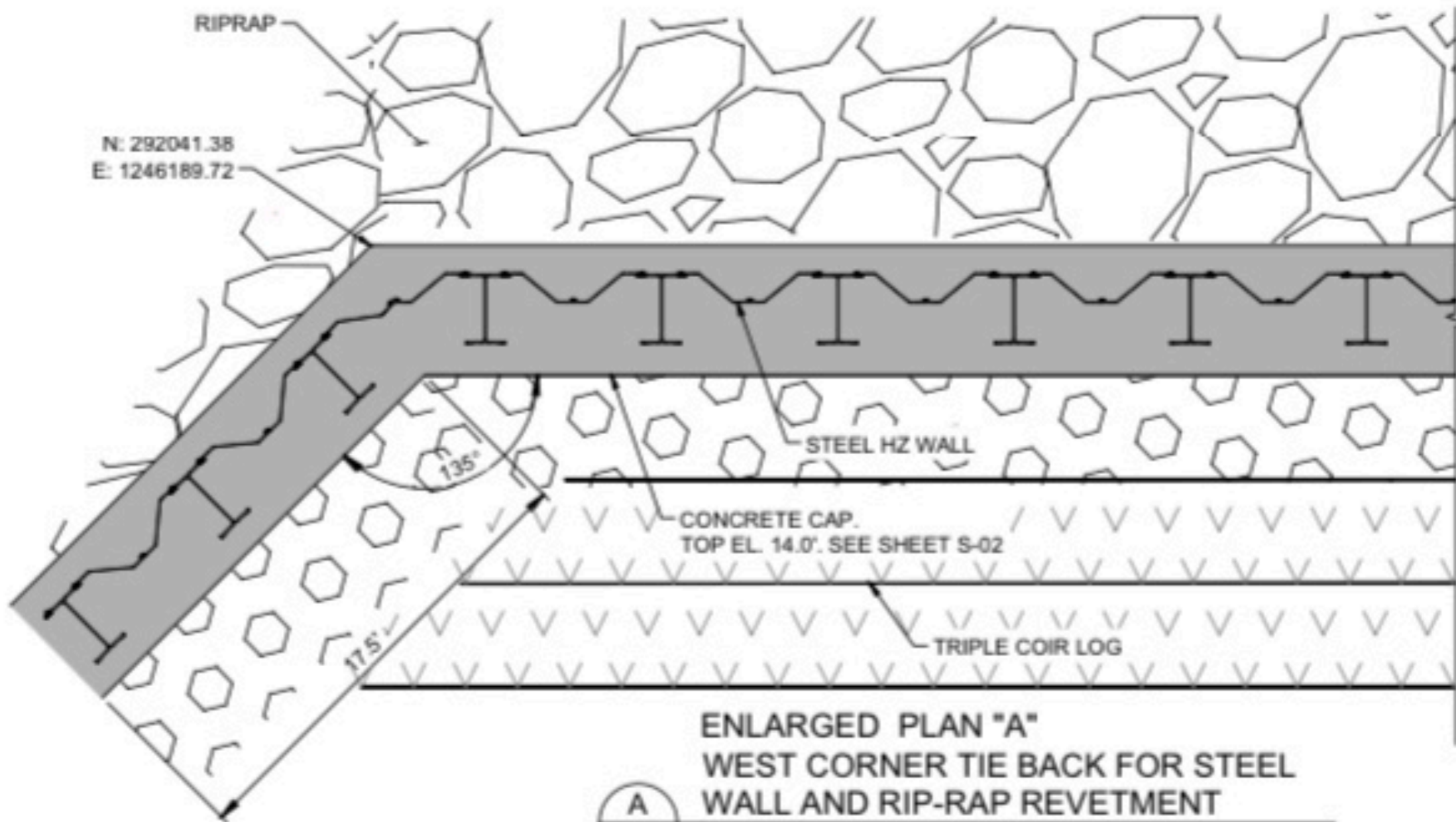
# PHASE 1: DEC permit filed in 2016 finally awarded in June of 2021 with Army Corps in late September



**The DEC approved plan calls for 454 linear feet of steel wall and rock revetment with tiebacks to stabilize the lower Bluff and bolstering the “groin” to prevent further erosion into the roadway. The DEC did not allow for the further extension of the tow wall to the end of the tennis court are as originally requested**



# Steel wall and rock revetment detail



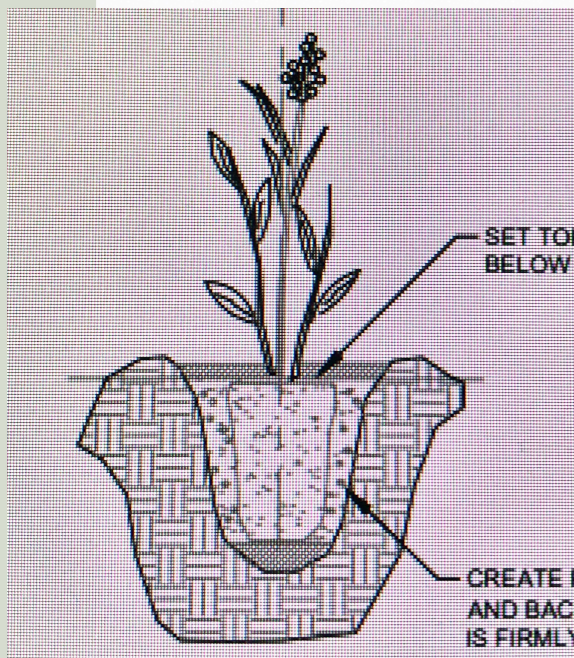
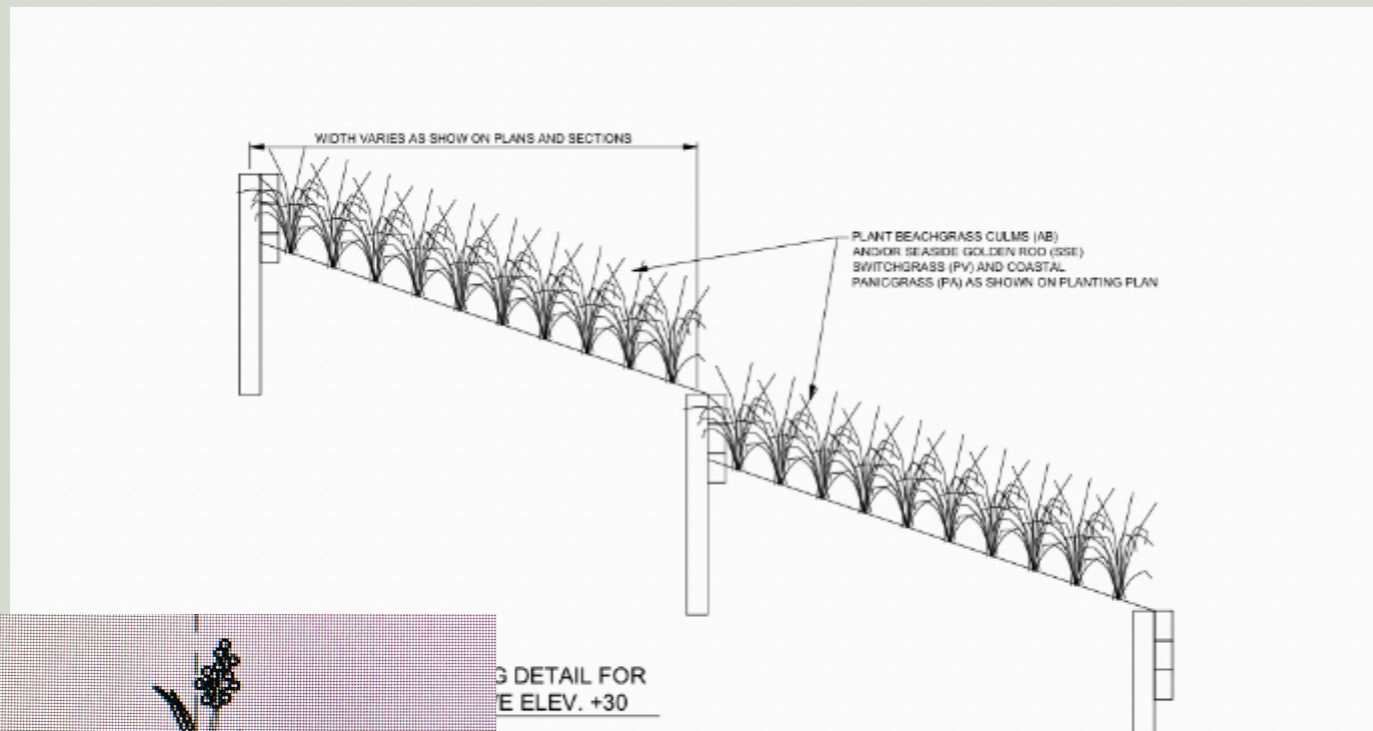
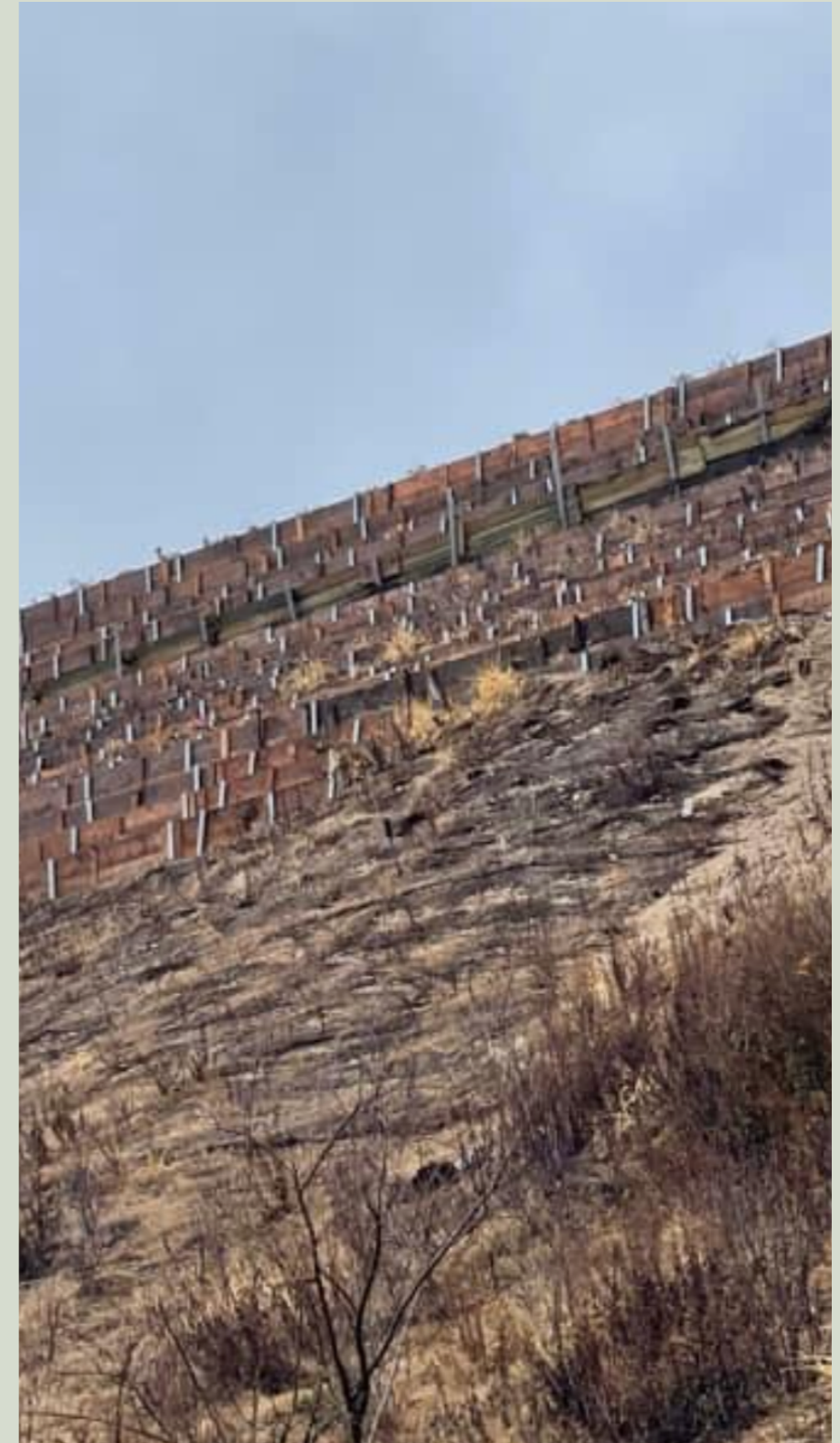
A  
C-06

ENLARGED PLAN "A"  
WEST CORNER TIE BACK FOR STEEL  
WALL AND RIP-RAP REVETMENT

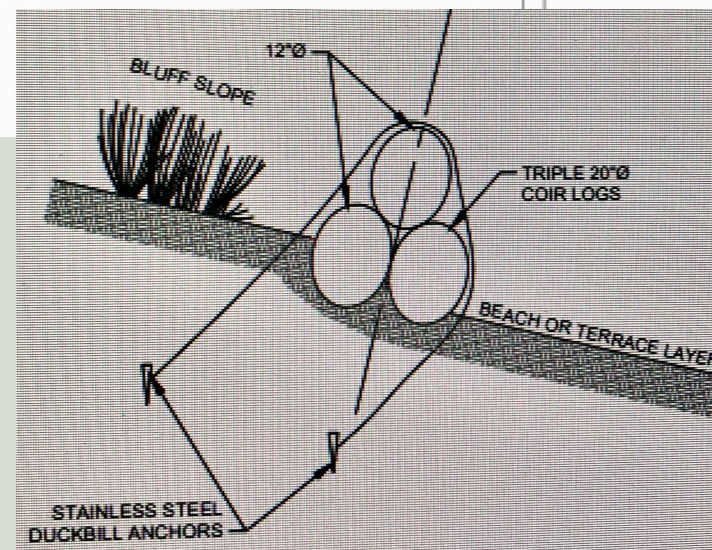
SCALE: 1"=10'



**A significant expense of the entire project is the replanting of the entire flank of the hill which includes core logs, erosion control blankets, wood terracing, soil anchors and tens of thousands of native plants including woody plants, beach and switch grasses**



DETAIL FOR  
ELEV. +30





The comprehensive project and detailed drawings were put out for competitive bidding. Twelve bids came in ranging from \$4.8 million to \$6.2 million dollars.

Funding the project will require a BOND initiative which will have an impact of increasing the typical household tax bill approx \$147.00 per annum over the 15 year term if no other sources of funding are available or if no other budgetary changes are made.

	Principal	Interest (1.125%)	Payment	Outstanding	Annual Tax Increase on \$1,400 household	
2022	\$340,000.00	\$56,250.00	\$396,250.00	\$4,660,000.00	\$147.00	
2023	\$340,000.00	\$52,425.00	\$392,425.00	\$4,320,000.00		
2024	\$340,000.00	\$48,600.00	\$388,600.00	\$3,980,000.00		
2025	\$340,000.00	\$44,775.00	\$384,775.00	\$3,640,000.00		
2026	\$340,000.00	\$40,950.00	\$380,950.00	\$3,300,000.00	<b>Getting legislative relief to push the bond to a 30 year term would cut the debt service in half reducing the impact to less than \$80 per household if no other source of funding or changes are made to the budget</b>	
2027	\$340,000.00	\$37,125.00	\$377,125.00	\$2,960,000.00		
2028	\$340,000.00	\$33,300.00	\$373,300.00	\$2,620,000.00		
2029	\$340,000.00	\$29,475.00	\$369,475.00	\$2,280,000.00		
2030	\$340,000.00	\$25,650.00	\$365,650.00	\$1,940,000.00		
2031	\$340,000.00	\$21,825.00	\$361,825.00	\$1,600,000.00		
2032	\$340,000.00	\$18,000.00	\$358,000.00	\$1,260,000.00		
2033	\$340,000.00	\$14,175.00	\$354,175.00	\$920,000.00		
2034	\$340,000.00	\$10,350.00	\$350,350.00	\$580,000.00		
2035	\$340,000.00	\$6,525.00	\$346,525.00	\$240,000.00		
2036	\$240,000.00	\$4,250.00	\$244,250.00	\$0.00		
	\$5,000,000.00					



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**PHASE II**

**Upland stabilization of the PJCC facility & assets**

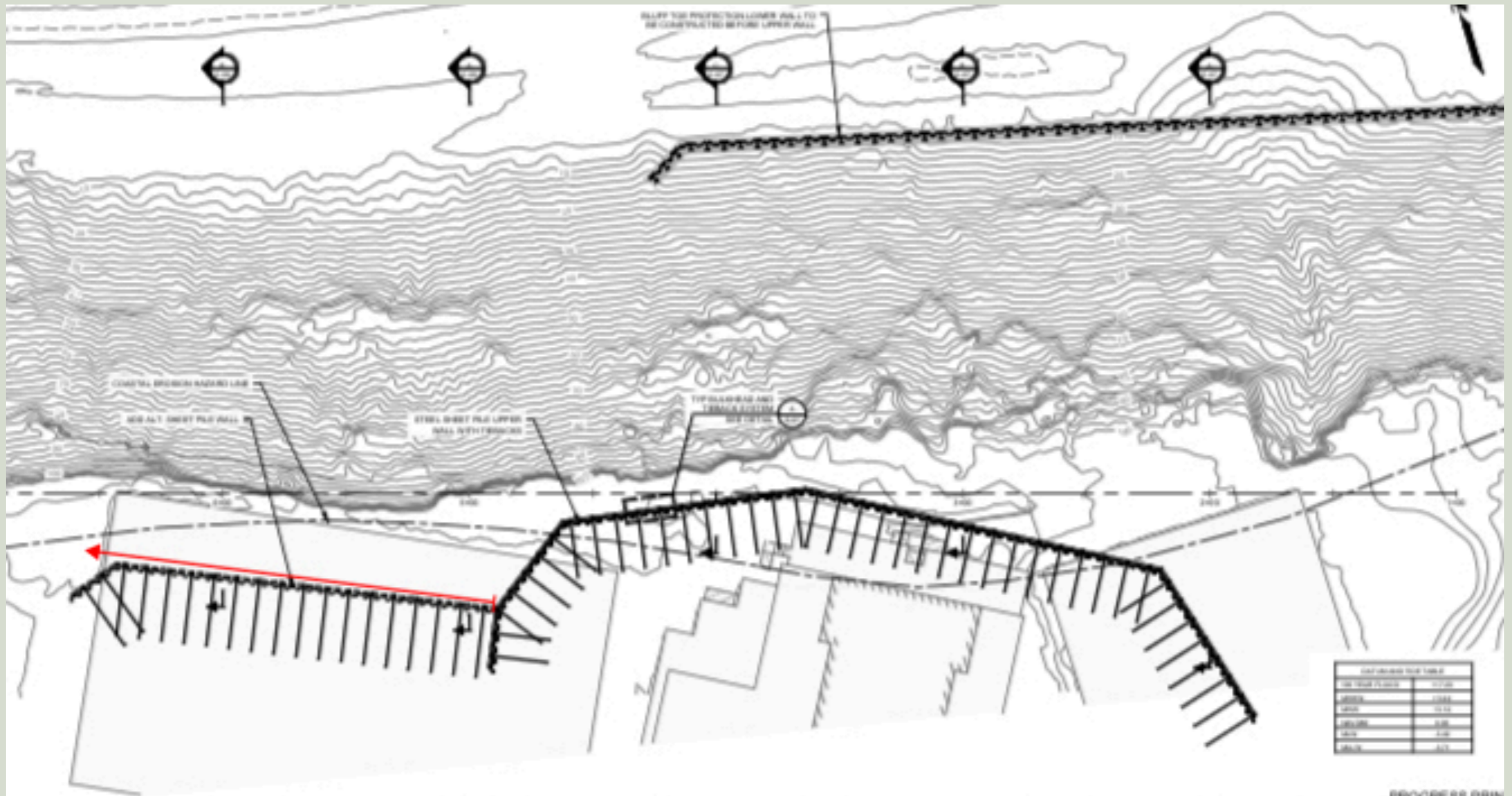




**Focus is on preservation of the facility as we plan on moving recreational assets back and adding drainage and green, vegetative buffering to bolster the plantings on the bluff and prevent rapid rain run off occurrences**



**Preliminary plans are in place for a metal wall to be installed behind the building tho the scope and timing of the final plans is uncertain as we await further surveys of the upland westerly topography to explore drainage**



DATE AND TIME LOG	
DATE	TIME

PROGRESS PRINT

	<p><b>DRAFT</b></p>	Designer: GUY Checker: RPA JEP Drawn: VR Approved: _____ Date: _____ Job Project: 100000	<p>INCORPORATED VILLAGE OF PORT JEFFERSON 321 WEST BROADWAY PORT JEFFERSON, NY 11777</p>	<p><b>EAST BEACH BLUFF STABILIZATION PHASE II BLUFF CREST STABILIZATION</b></p> <p>VILLAGE OF PORT JEFFERSON, NY</p>	SHEET NAME PROPOSED CONDITIONS - PLAN	SHEET NO. C-06
		Title block for description of the drawing and project			SHEET NAME PROPOSED CONDITIONS - PLAN	SHEET NO. C-06



**Concepts are also being considered including the re-arranging of the exiting tennis courts, adding pickle ball courts - all subject to the survey, drainage and cost as all must be scaled back from the bluff**





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# Status and in the works

## **PHASE I**

**Award the BID**

**Vote on the BOND**

**Steel is being held until the end of Feb. - if we postpone the award of bond - we will have to go back out to BID**

## **PHASE II**

**Waiting on the Estimate to DEMO the existing building**

**Waiting on Topographical surveys**

**Waiting on the drainage plans**

**Cost estimates for all aspects of PHASE II**

**Applications to FEMA for hazard mitigation grant**





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**Phase I: Can we really afford to wait?**