

**The following plan concept was submitted by Chuck Dowding.**

# Why is Elder Now w/simple ADA access is a good solution

Costs under \$6,000,000 using WPD cost estimates

Repositions and extends the storm water outfall pipe, which must be done under any plan

Includes enhanced ADA access, which should be included in any plan

Employs existing ramp for non motorized access

Follows the 2030 Waterfront plan recommendations of

- 1) minimal erosion protection and
- 2) heightened attention to aesthetics

Eliminates interaction with any other 3<sup>rd</sup> parties and thus simplifies permit application

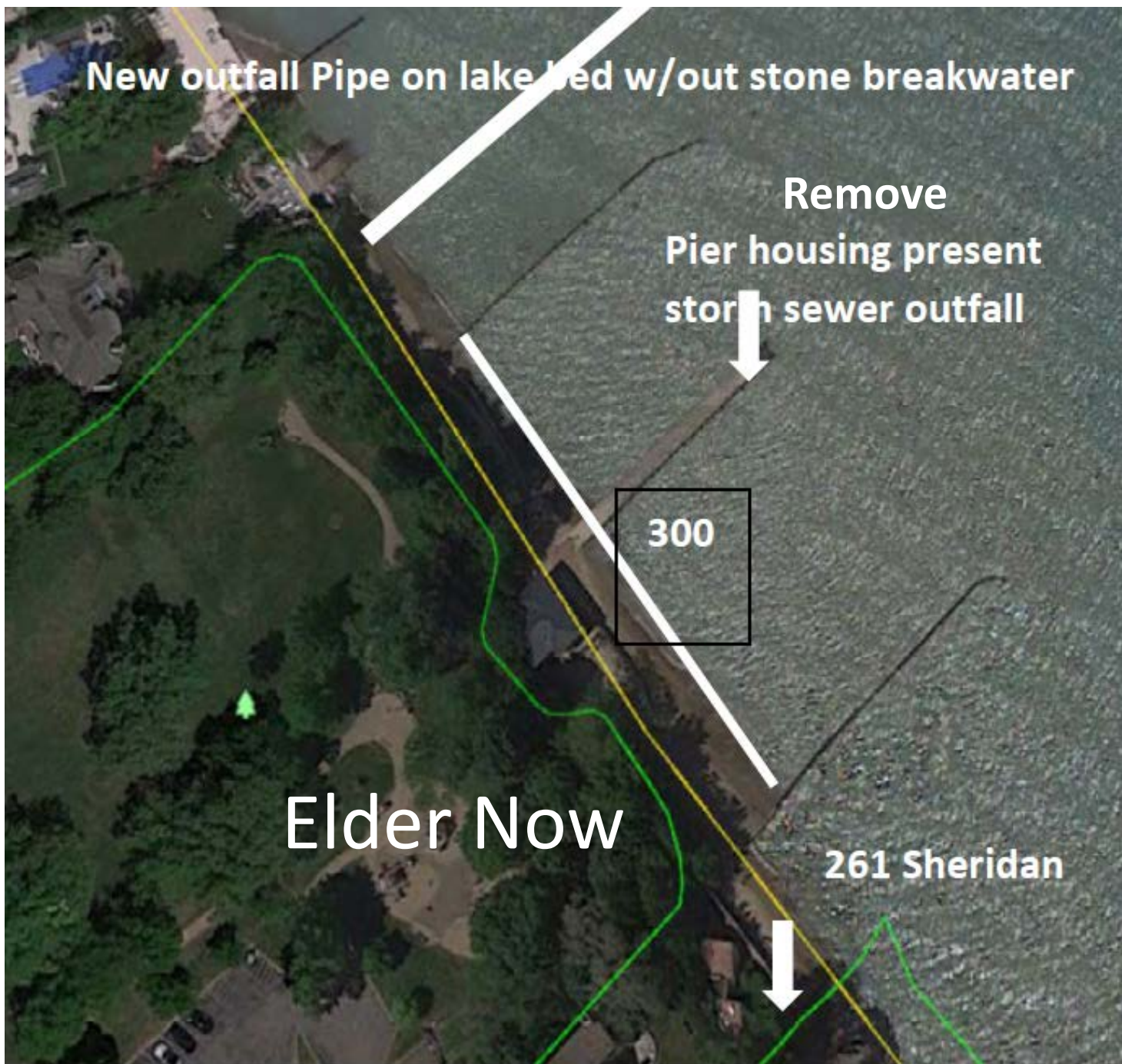
Leverages existing and successful bluff erosion protection at both Elder and Centennial parks

Eliminates walls produced by the rubble stone breakwaters at normal lake water elevations

Provides 2 usable beaches with immediate water access at normal lake water elevations

Cost comparisons of  
***Elder Now*** with  
Elder and Centennial Option 2s  
using WPD supplied cost estimates

<b><i>Elder Now</i></b> without rubble stone breakwater or ramp	3,028,000
Centennial without rubble stone breakwater with ADA access	1,660,000
<b>Total</b>	<b>4,688,000</b>
Elder option 2 with rubble stone break water	6,972,000
Centennial option 2 with rubble stone break water	5,219,000
<b>Total</b>	<b>12,191,000</b>



Elder Now Plan to produce swimmable beach without foreclosing options

#### Observations

I As a first step avoid use of stone breakwater by relying on the bluff stabilization devices now in place which withstood the last high lake level. With lake at its average level (580) there is less urgency than at Lloyd.

II Some/many feel that Lloyd has too much sand and the elevation 591 or even the proposed Elder 589, 300 foot long breakwater produce a 11 or 9 ft wall at the water's edge when at the average (and present) lake level of 580

III Is access ramp necessary to make Elder swimmable or use for non motorized water craft (Elder Now light)



# Back to the Future – the 2030 Plan Considerations

## Did not consider ramifications of a property swap

### Reconstructed Lloyd allows assessment of rubble stone beach capture concept

### Breakwater tapers at shore to minimize loss of beach



- A Rubble-mound breakwater structure
- B Stormwater management improvements
- C Secure non-motorized water craft storage
- D Existing boat house improvements
- E Boardwalk improvements
- F Dune landscape restoration
- G Bluff restoration
- H Expand surface parking
- I Nature based play area
- J Construct a new upper-level restroom building
- K Vehicular circulation improvements and retaining walls
- L Lifeguard stations
- M New sheet-pile groin
- N Renovate single-family home into new beachfront event space
- O New beach house



- A Rubble-mound breakwater structure
- B Stormwater management improvements
- C Secure non-motorized water craft storage
- D Existing boat house improvements
- E Boardwalk improvements
- F Vehicular circulation improvements and retaining walls
- G New sheet-pile groin
- H Bluff restoration
- I Nature based play area
- J Construct a new upper-level restroom building





Overfill Beach at Lloyd



Future Bowl Effect at Elder – Centennial  
With Rubble Stone Breakwaters

Photo taken at Lloyd on 7 July  
Lake at ~580

## Elder Lane Park & Beach: Program & Site Improvements Matrix

0 - \$250,000 \$\$\$\$\$  
\$250,000 - \$500,000 \$\$\$\$\$  
\$500,000 - \$1,000,000 \$\$\$\$\$  
\$1,000,000 - \$3,000,000 \$\$\$\$\$  
\$3,000,000 - \$5,000,000 \$\$\$\$\$

"LAC Priority? (1 = highest priority)	Supports plan goals?		Cost (construction, soft costs)	Grant opportunity?	Partnership opportunity?	Revenue generator?	"Level of effort"	Dependent on shoreline improvements?	Notes
<b>Elder Program and Operational Improvements</b>									
1	✓	Dedicate north half of beach as non-motorized boating beach	\$\$\$\$\$	✓	✓		low		Interim plan
1	✓	Establish partnerships for environmental educational programming	\$\$\$\$\$	✓	✓		low		
2	✓	Dedicate full beach as non-motorized boating beach	\$\$\$\$\$	✓	✓		low	✓	
2	✓	Expand program offerings and partnerships with local rowing / sailing clubs	\$\$\$\$\$		✓	✓	low		
2	✓	Provide a rental program for non-motorized boats and paddle boards	\$\$\$\$\$		✓	✓	medium		Partnership with private operator, local preference
<b>Elder General Site Improvements</b>									
1	✓	Sign program implementation (allowance)	\$\$\$\$\$	✓			low		May be eligible for ICMPSustainable Coastal Planning Grant, Illinois Transportation Enhancement Program (ITEP) funding*
1	✓	Site furnishing and lighting program implementation (allowance)	\$\$\$\$\$				low		[WPD Operational budget item]
1	✓	Stormwater management improvements Constructed wetland Storm sewer improvements	\$\$\$\$\$	✓			medium		Requires partnership with Village.

\*Grant source funded by State of Illinois

## Elder Lane Park & Beach: Shoreline Improvements Matrix

0 - \$250,000 \$\$\$\$\$  
\$250,000 - \$500,000 \$\$\$\$\$  
\$500,000 - \$1,000,000 \$\$\$\$\$  
\$1,000,000 - \$3,000,000 \$\$\$\$\$  
\$3,000,000 - \$5,000,000 \$\$\$\$\$

"LAC Priority? (1 = highest priority)	Supports plan goals?		Cost (construction, soft costs)	Grant opportunity?	Partnership opportunity?	Revenue generator?	"Level of effort"	Dependent on shoreline improvements?	Notes
<b>Elder Shoreline Improvements</b>									
1	✓	Rubble-mound breakwater structure Remove existing stormwater outfall and pier Remove sheet pile groins Back-shore rubble-mound revetment Beach sand backfill	\$\$\$\$\$	✓			high		PH 1 (north property line); includes minimum amount of shoreline structure required to replace existing structures, maintain beach and protect constructed improvements; requires sensitivity to aesthetics of structure; may be eligible for Great Lakes Fishery and Ecosystem Restoration (GLFER) Program funding (US Army Corps of Engineers); requires federal, state, and local permitting

\*Grant source funded by State of Illinois

Breakwater notes indicate  
Minimization of shoreline protection  
Heightened consideration of aesthetics

## Centennial Park & Beach: Program & Site Improvements Matrix

0 - \$250,000 \$\$\$\$\$  
 \$250,000 - \$500,000 \$\$\$\$\$\$  
 \$500,000 - \$1,000,000 \$\$\$\$\$\$  
 \$1,000,000 - \$3,000,000 \$\$\$\$\$\$  
 \$3,000,000 - \$5,000,000 \$\$\$\$\$\$

"LAC Priority? (1 = highest priority)	Supports plan goals?		Cost (construction, soft costs)	Grant opportunity?	Partnership opportunity?	Revenue generator?	"Level of effort"	Dependent on shoreline improvements?	Notes
Centennial Program and Operations Improvements									
1	✓	Property acquisition	\$\$\$\$\$\$	✓	✓		high		
1	✓	Dedicate beach as swimming beach	\$\$\$\$\$	✓	✓		medium		Requires relocation of dog run to alternate open space within the Village
Centennial General Site Improvements									
1	✓	Sign program implementation (allowance)	\$\$\$\$\$	✓			low		May be eligible for ICMPSustainable Coastal Planning Grant, Illinois Transportation Enhancement Program (ITEP) funding*
1	✓	Site furnishing and lighting program implementation (allowance)	\$\$\$\$\$				low		[WPD Operational budget item]

## Centennial Park & Beach: Shoreline Improvements Matrix

0 - \$250,000 \$\$\$\$\$  
 \$250,000 - \$500,000 \$\$\$\$\$\$  
 \$500,000 - \$1,000,000 \$\$\$\$\$\$  
 \$1,000,000 - \$3,000,000 \$\$\$\$\$\$  
 \$3,000,000 - \$5,000,000 \$\$\$\$\$\$

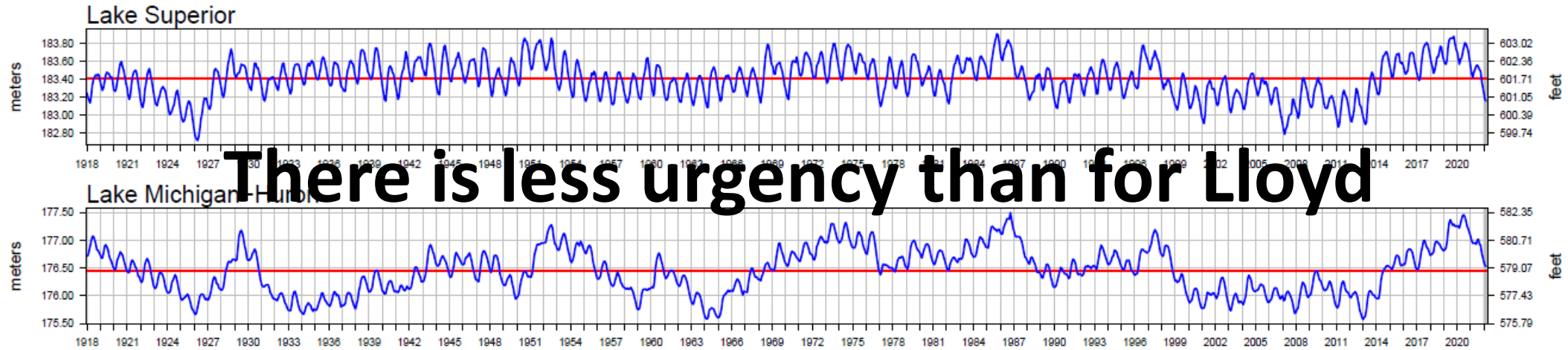
"LAC Priority? (1 = highest priority)	Supports plan goals?		Cost (construction, soft costs)	Grant opportunity?	Partnership opportunity?	Revenue generator?	"Level of effort"	Dependent on shoreline improvements?	Notes
Centennial Shoreline Improvements									
1	✓	Rubble-mound breakwater structure - PH 1 improvement Remove sheet pile groins Back-shore rubble-mound revetment Beach sand backfill	\$\$\$\$\$	✓			high		PH 1 (south property line); includes minimum amount of shoreline structure required to replace existing structures, improve beach and protect constructed improvements; requires sensitivity to aesthetics of structure; may be eligible for Great Lakes Fishery and Ecosystem Restoration (GLFER) Program funding (US Army Corps of Engineers); requires federal, state, and local permitting
1	✓	New sheet-pile groin	\$\$\$\$\$	✓			high		PH 1 (north property line); includes minimum amount of shoreline structure required to replace existing structures, improve beach and protect constructed improvements; requires sensitivity to aesthetics of structure; may be eligible for Great Lakes Fishery and Ecosystem Restoration (GLFER) Program funding (US Army Corps of Engineers); requires federal, state, and local permitting
2	✓	Rubble-mound breakwater structure Remove sheet pile groins Back-shore rubble-mound revetment Beach sand backfill	\$\$\$\$\$	✓			high		PH 2 (north property line); dependent on property acquisition; includes minimum amount of shoreline structure required to improve beach and protect constructed improvements; requires sensitivity to aesthetics of structure; may be eligible for Great Lakes Fishery and Ecosystem Restoration (GLFER) Program funding (US Army Corps of Engineers); requires federal, state, and local permitting





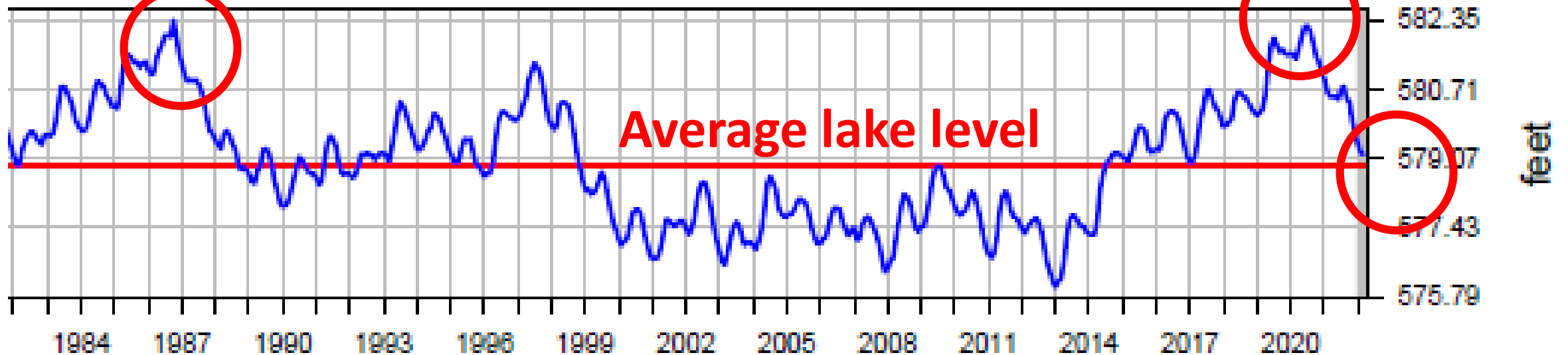
## Great Lakes Water Levels (1918–2022)

— Monthly Mean Level — Long Term Average Annual



**There is less urgency than for Lloyd**

← 33 years →



Elevation 590 sheet pile wall behind stairs installed before the recent high lake level remains stable  
Thus planter boxes are not necessary

*Beach Template Concept*

Standing at ~ elevation 580 on 31 May



## Elder Beach looking North

Photo taken on 22 June 2022



No need for stabilization of bluff  
1980's sheet piles and gabions show no signs of instability





**New outfall Pipe on lake bed w/out stone breakwater**

**Remove  
Pier housing present  
storm sewer outfall**

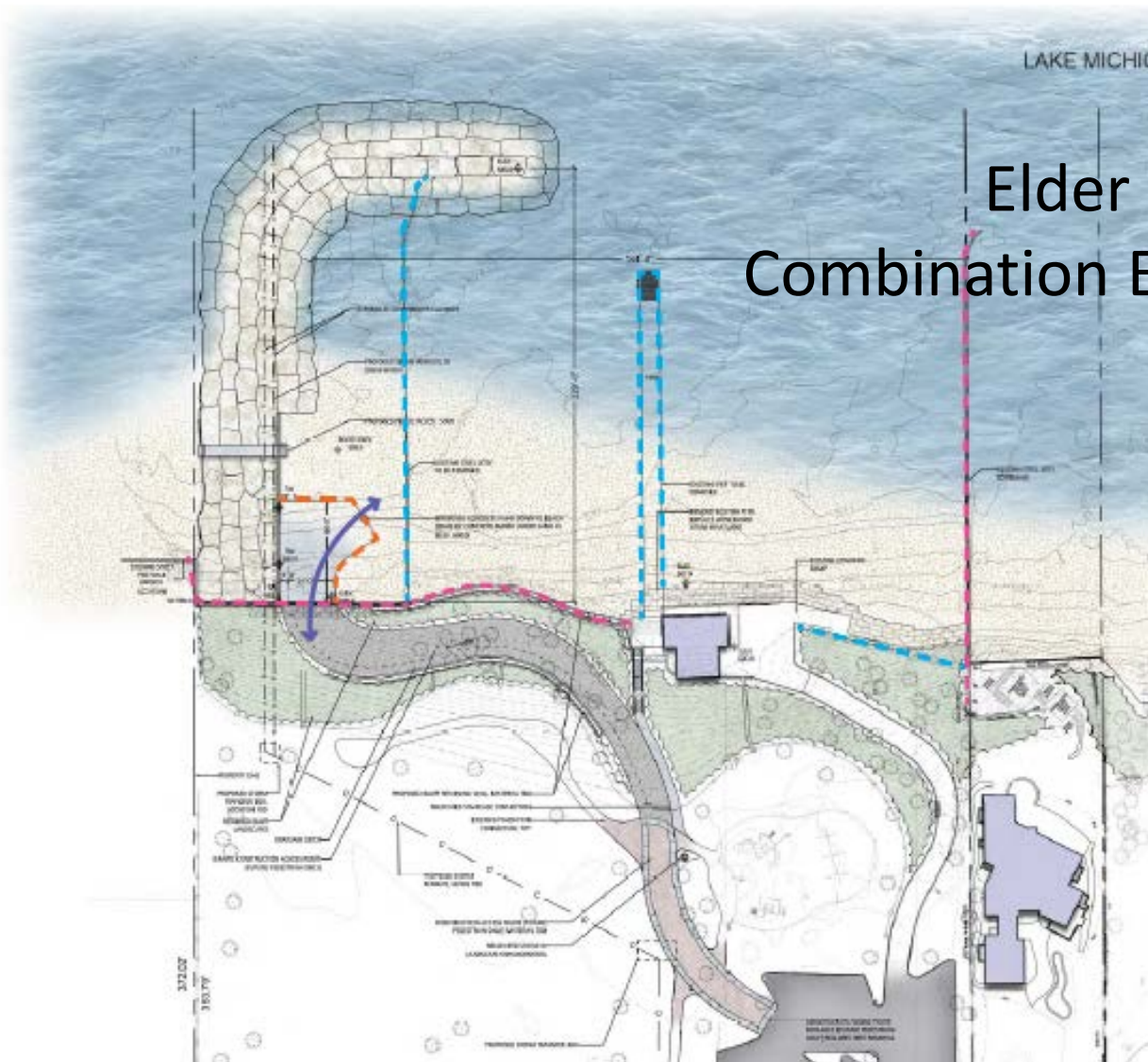
**300**

**261 Sheridan**

- Leave in place sheet pile groin at boundary between Elder/261 (elevation ~ 583) at southern end of 300 feet on drawing to left
- Build pollution reduction devices for Village storm sewer outfall already designed by Burke
- In surf zone, encase outfall pipe in sheet pile protection with maximum height of sheet piles equal to present groin height of 583.
- Beyond surf zone bury pipe in clay trench  
200 ft out as presently planned or  
350 ft to extend to deeper water
- Remove existing north sheet pile groin
- Demolish pier housing present outfall pipe in middle of beach
- Now have some 400 ft beach to repurpose according to new post Lloyd use patterns
- Add beach sand if necessary
- Go swimming
- Add stone breakwater if necessary
- Add ramp later if necessary

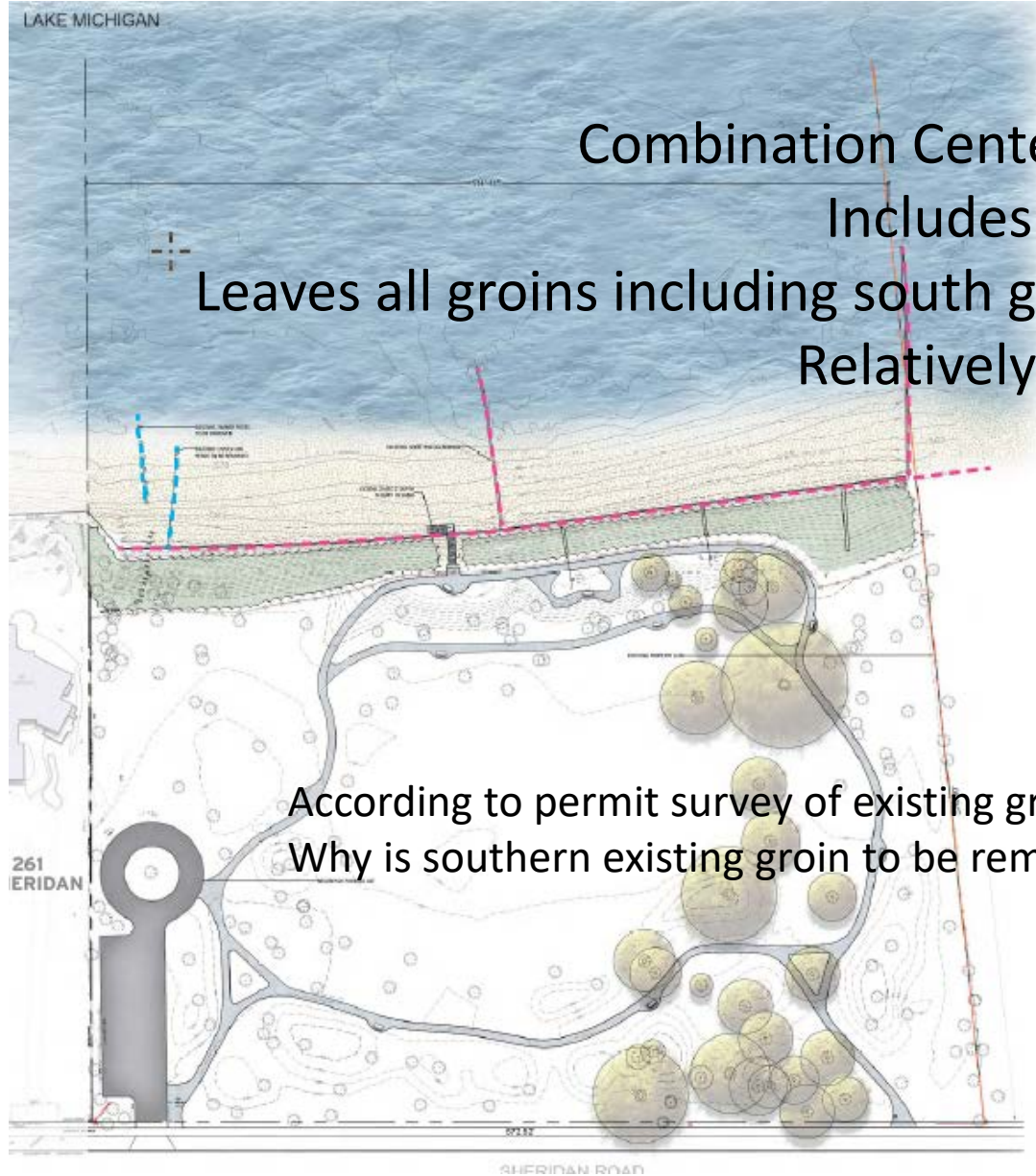


Elder Now is a  
Combination Elder Options 1<sup>st</sup> and 2



Element Description	Price	Qty	Units	Total	no new ramp use existing	with ramp
Mobilization	\$ 600,000.00	1		\$600,000.00	\$600,000.00	\$600,000.00
Buried Stone Revetment 12 ton per ft.	\$2,500.00	175	ft	\$437,500.00	\$437,500.00	\$437,500.00
Concrete demo/removal	\$100.00	600		\$60,000.00	\$60,000.00	\$60,000.00
Bluff Restoration	\$ 150,000.00	1		\$150,000.00	\$150,000.00	\$150,000.00
Sand Placement Mason Sand	\$45.00	9600		\$432,000.00		
Paving of Parking Lot	\$6.00	26254		\$157,524.00	\$157,524.00	\$157,524.00
35 ton per foot breakwater	\$ 5,820.00 0	300		\$1,746,000.00		
15 ton per foot 1/2 breakwater	\$3,000.00	100		\$300,000.00		
Stone Steps 35 Ton Breakwater	\$55,000.00	1		\$55,000.00		
Steel Sheet Piling 30' deep	\$3,200.00	200		\$640,000.00	\$320,000.00	\$640,000.00
Concrete for ramp	\$100.00	1700		\$170,000.00		\$170,000.00
Access Roadway Stone w/Drainage	\$250,000.00	1		\$250,000.00		\$250,000.00
Retaining Walls	\$100,000.00	1		\$100,000.00		\$100,000.00
Relocated Stormwater Outfall	\$600.00	500	L ft	\$300,000.00	\$300,000.00	\$300,000.00
Relocated Stormwater Outfall 36"	\$450.00	325	L ft	\$292,500.00	\$292,500.00	\$292,500.00
Demo (steel, pier, misc.)	\$220,000.00	1		\$157,524.00	\$157,524.00	\$157,524.00
Total				\$5,910,524.00	\$2,475,048.00	\$3,315,048.00
Soft Costs				\$175,000.00	\$175,000.00	\$175,000.00
Thotal hard and soft costs				\$6,085,524.00	\$2,650,048.00	\$3,490,048.00
Contingency (15%)				\$886,578.60	\$377,555.00	\$545,250.00
Total				\$6,972,102.60	\$3,027,603.00	\$4,035,298.00
Missing Considerations						
Pollution reduction devices not priced						
Differentiating costs of pipes material and installtion						
Village requirement for enhanced outfall capacity -- what plans does Village have to increase upstream capacity and when?						





Combination Centennial Option 1 and 2

Includes ADA access

Leaves all groins including south groin to maintain 583 beach template

Relatively inexpensive

According to permit survey of existing groins --- both the 2 red and 1 blue exist

Why is southern existing groin to be removed in option 2?





Element Description	Price	Qty	Units	Total	no breakwater		
Mobilization	\$ 600,000.00	1		\$600,000.00	\$600,000.00		
Demo (steel, fencing, wood piles)	\$100,000.00	1		\$100,000.00	\$100,000.00		
Bluff Restoration	\$ 150,000.00	1		\$120,000.00	\$120,000.00		
Sand Placement Mason Sand	\$45.00	120000		\$540,000.00			
Paving of Parking Lot	\$6.00	6800		\$40,800.00	\$40,800.00		
35 ton per foot breakwater	\$ 5,820.00 0	250		\$1,455,000.00			
15 ton per foot 1/2 breakwater	\$3,000.00	100					
Steel Staircase Lump Sum	\$50,000.00	1		\$50,000.00	\$50,000.00		
Steel Sheet Piling 30' deep	\$3,200.00	228		\$729,600.00		leave existing	
Concrete for ramp	\$100.00	812		\$81,200.00	\$81,200.00		
Access Roadway Stone w/Drainage TBD	\$250,000.00	1		\$250,000.00			
Retaining Walls	\$120,000.00	1		\$120,000.00			
ADA walkway and connection Lump Sum	\$300,000.00	1		\$300,000.00	\$300,000.00		
Total				\$4,386,600.00	\$1,292,000.00		
Soft Costs				\$175,000.00	\$175,000.00		
Thotal hard and soft costs				\$4,561,600.00	\$1,467,000.00		
Contingency (15%)				\$657,900.00	\$193,800.00		
Total				\$5,219,500.00	\$1,660,800.00		
Missing Considerations							
Access roadway not on these plans							

PROPOSED PIPES TO PENETRATE EXISTING SHEET PILING WALL. REFER TO PLANS BY MICHEL'S FOR ADDITIONAL DETAILS OF ALL BEACH, BREAKWATER, AND SHEET PILING IMPROVEMENTS.

RIP RAP BUTTRESS TO BE INSTALLED AT BASE OF BLUFF BEHIND EXISTING SHEET PILING. REFER TO DETAIL ON SHEET C6 FOR INFORMATION ON BLUFF STABILIZATION.

PARK DISTRICT TO DETERMINE WHICH BLUFF TREES SHALL BE REMOVED/ PROTECTED DURING CONSTRUCTION (TYP.).

M-4  
10' DIA. MANHOLE WITH CLOSED LID. R=+/-591.00 (MEET EXISTING SURFACE ELEVATION)

BLUFF STABILIZATION REQUIRED AFTER OPEN CUT FOR PIPE INSTALLATION. REFER TO DETAIL ON SHEET C6.

OPEN CUT BLUFF TO INSTALL 60 LF DOUBLE 36" CERAMAWRAP EPOXY COATED DUCTILE IRON PIPE @ 3.33%. SEE PIPE MATERIAL SPECIFICATIONS ON SHEET C7.

M-3  
10' DIA. DROP MANHOLE WITH CLOSED LID. SEE DETAILS ON SHEET C8. R=611.00

174 LF DOUBLE 36" CERAMAWRAP EPOXY COATED DUCTILE IRON PIPE @ 1.15%. SEE DETAILS AND SPECS ON SHEET C7. REFER TO PLANS BY SHABICA FOR DETAILS OF PIPES SET IN BREAKWATER.

PROPOSED ACCESS ROAD AND VEHICLE MANEUVER SHOWN FOR REFERENCE ONLY. DESIGN NOT INCLUDED IN THIS PROJECT SCOPE.

ABANDON EXISTING STORM SEWER

REMOVE 10 LF SEWER PIPES. PROPOSED 60'

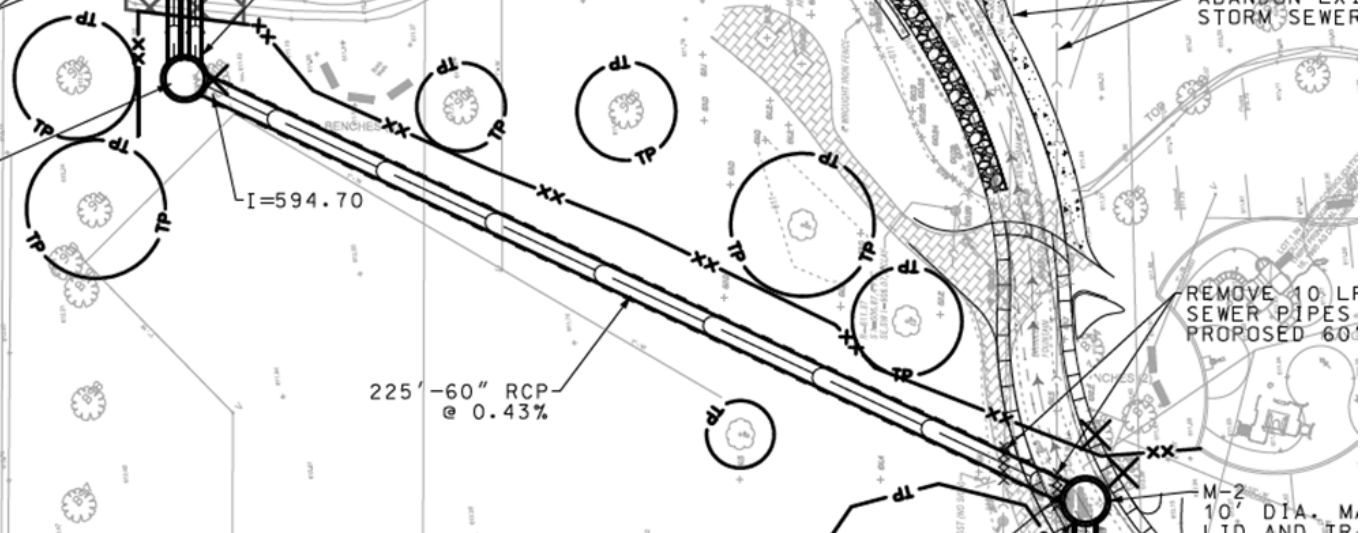
M-2  
10' DIA. M.I. TO AND TO.

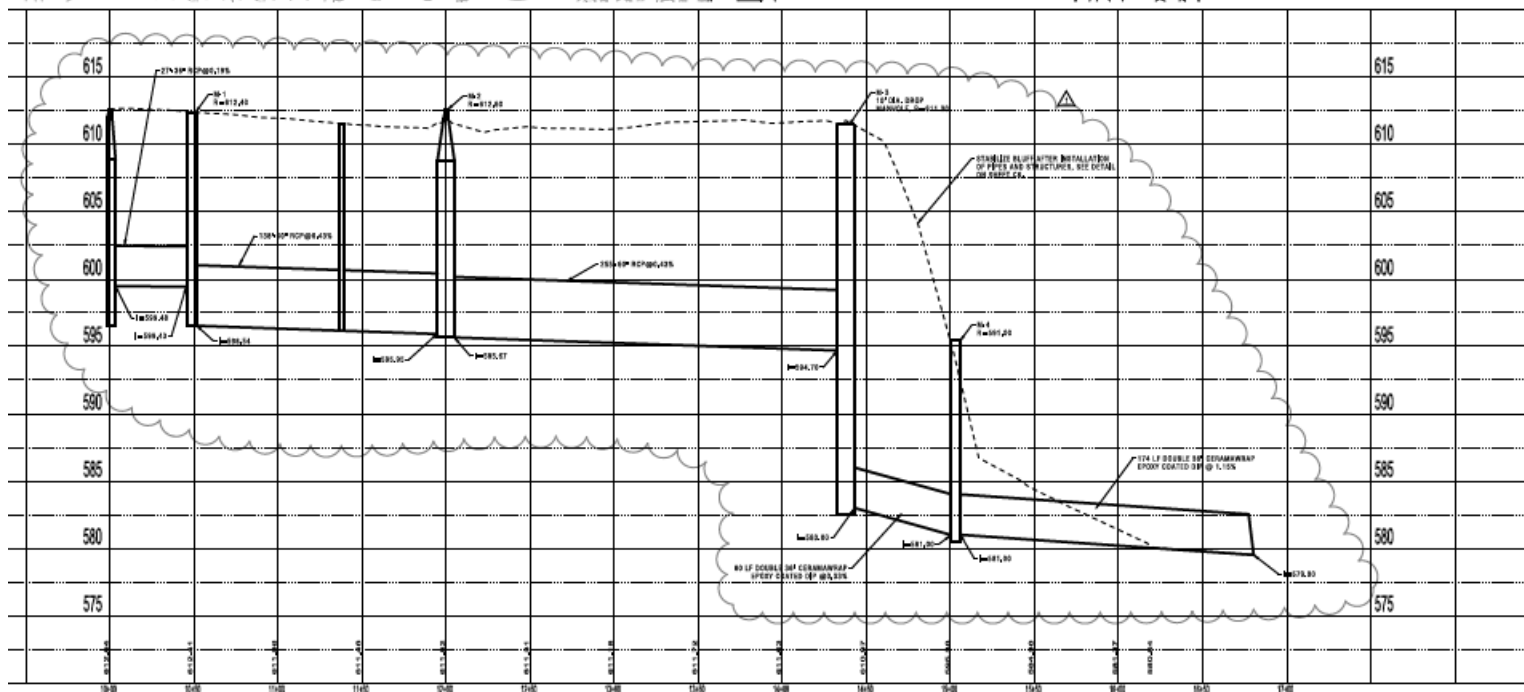
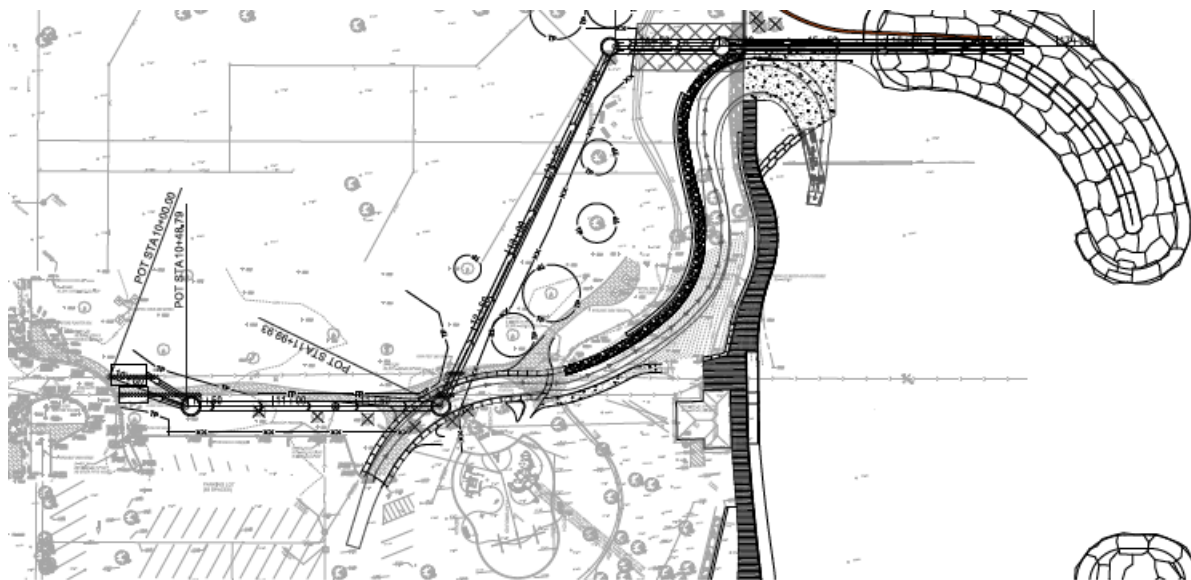
225' -60" RCP @ 0.43%

I=581.00

I=583.00

I=594.70





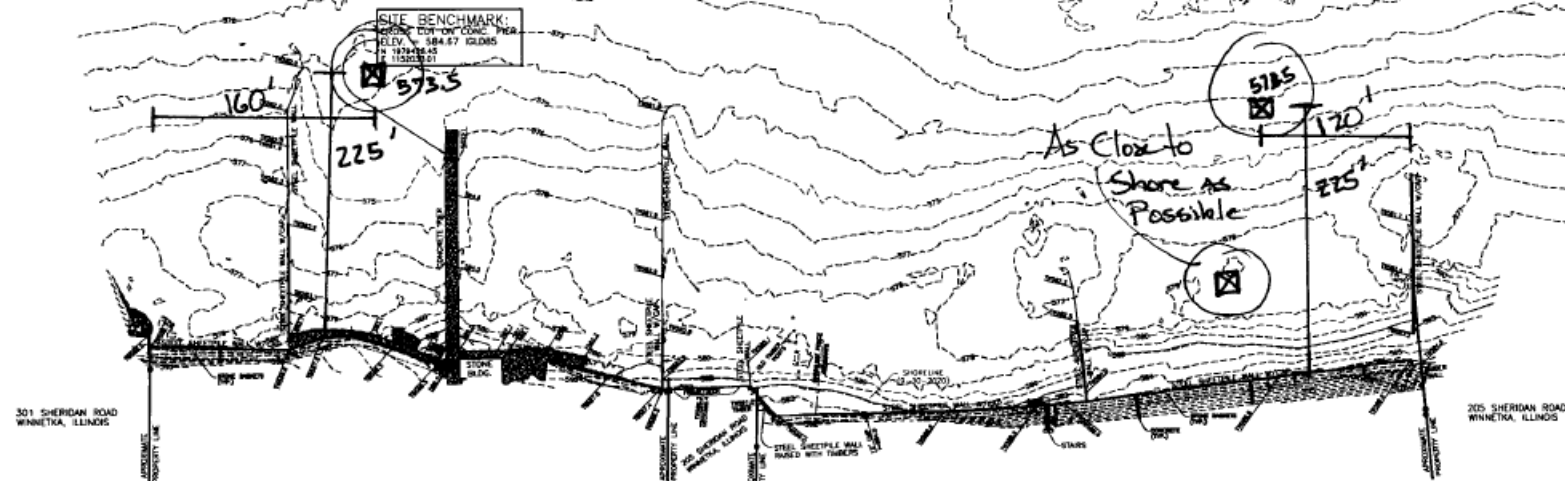


Clay depth/soil sample for testing

# TOPOGRAPHIC / BATHYMETRIC SURVEY

CENTENIAL PARK / ELDER LANE PARK  
WINNETKA, ILLINOIS

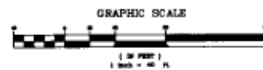
LAKE MICHIGAN  
LAKE LEVEL=581.9 IGLD85  
(9-30-2020)



STATE OF ILLINOIS  
DEPT. OF LAND  
J. Jeffrey J. Robinson, Jr. State Professional Land Surveyor, No. 3015  
Survey No. 1-100-000000  
DATE: THE 30th DAY OF SEPTEMBER, A.D. 2020



SCALE: 1" = 40'

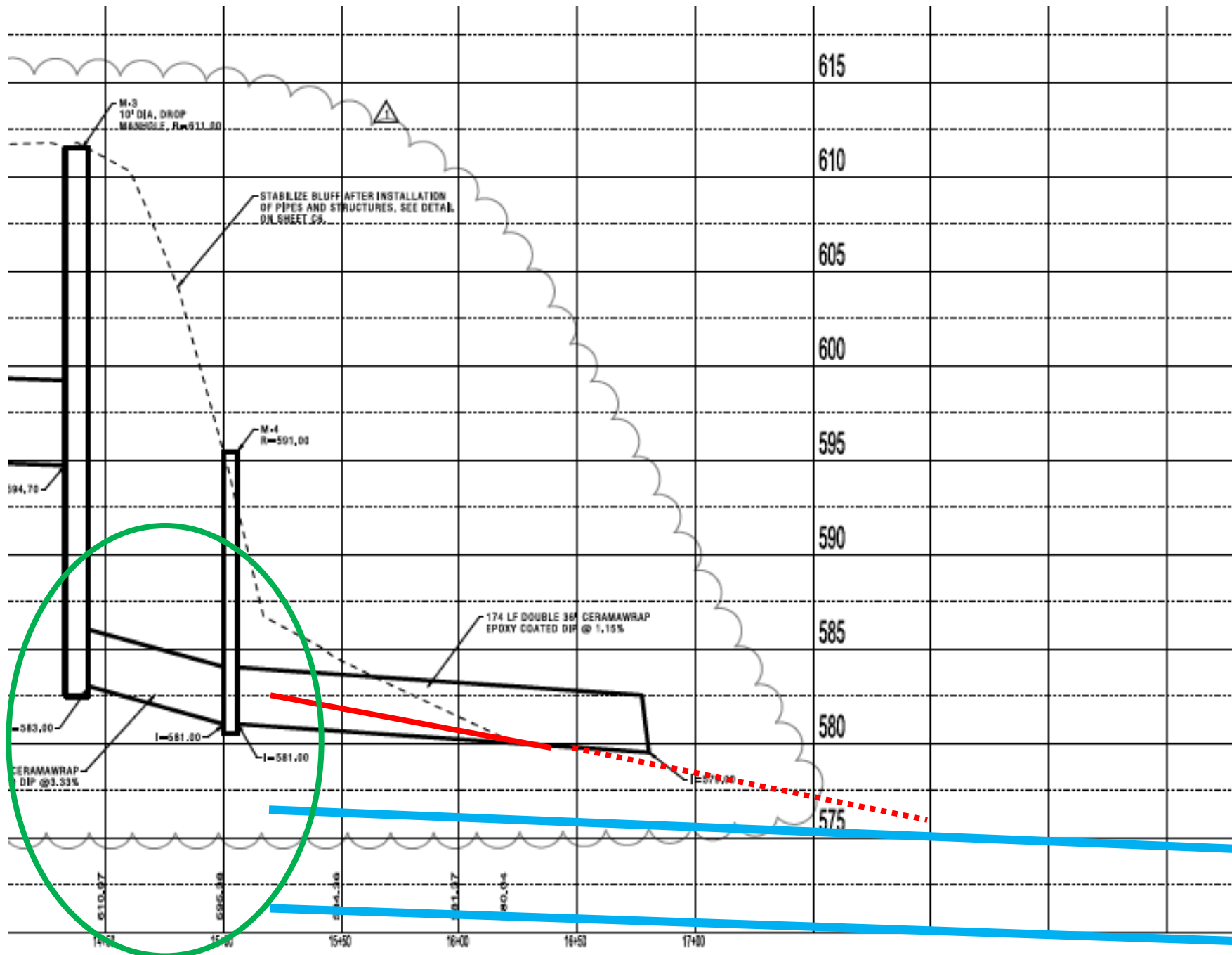


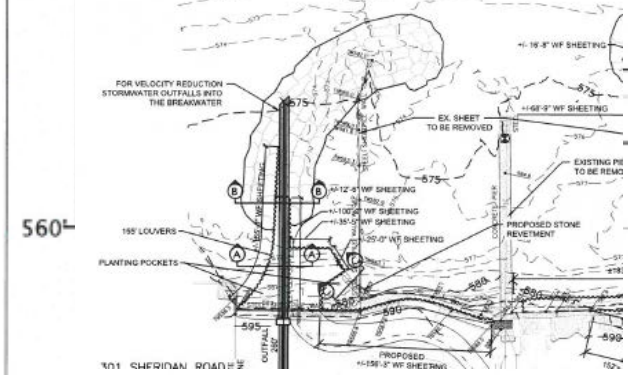
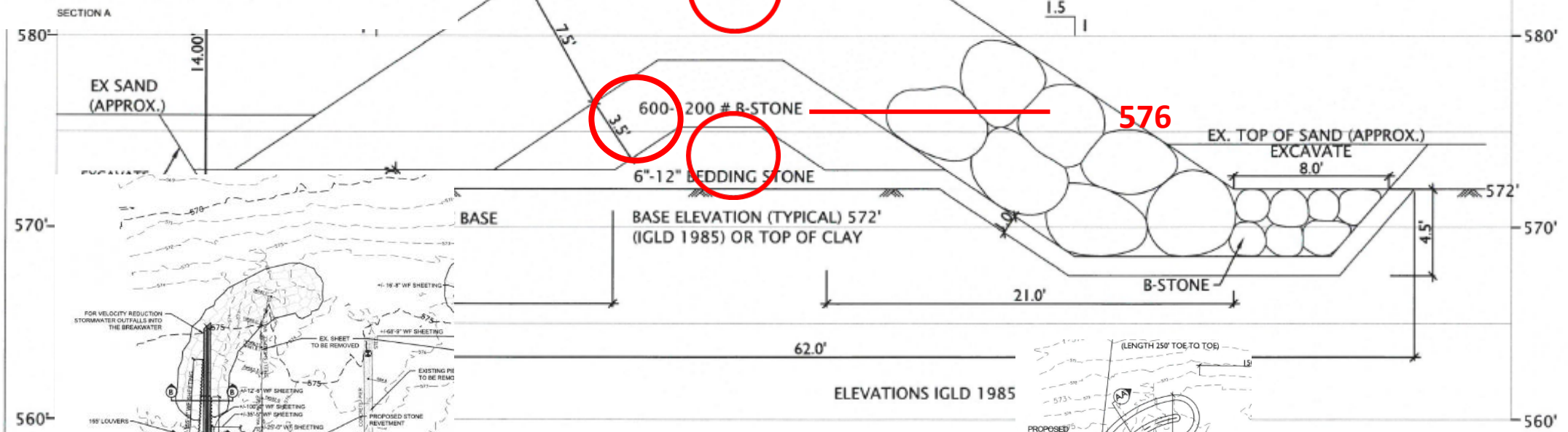
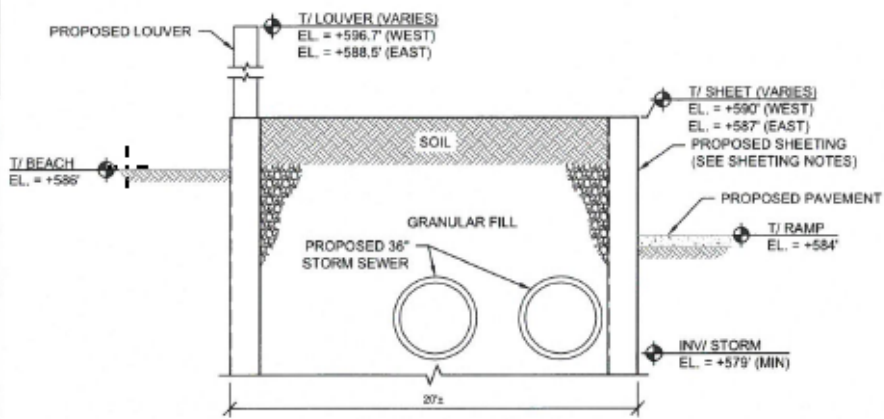
1. These sheets shall be kept on file and used as a reference only.
2. The surveyor shall be responsible for the accuracy of the data and the results of the survey.
3. The surveyor shall be responsible for the accuracy of the data and the results of the survey.
4. The surveyor shall be responsible for the accuracy of the data and the results of the survey.

TERRA TECHNOLOGY  
LAND SURVEYING, INC.

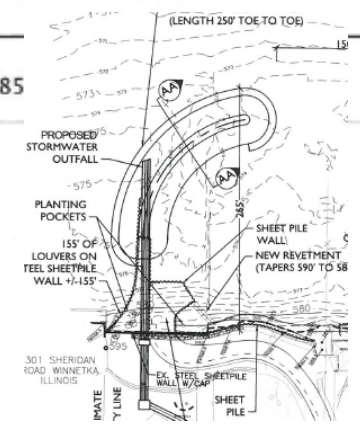
24188 ROSE AVE., LAKE ZURICH, ILLINOIS 60047  
PHONE: (847) 540-8808 FAX: (847) 540-8809

JOB NO.: 20-0018 SURVEY DATE: 09/30/2020  
DRAWING FILE: DATA/20/0018/SITE.DWG





AA & CC SECTION AA & CC  
FIG-3 SCALE: 0' 2.5' 5'



Project Title :	ELDER / CENTENNIAL PARK SHORELINE
Title :	SECTION AA & CC
Figure No. :	4
Date :	11 APRIL 2022
Scale :	0' 2.5' 5'



Element Description	What	Where	Source of Cost	Doc?	Price	Qty	Units	Total	no new ramp use existing	with ramp
Mobilization	General Contractor Cost	Elder			\$ 600,000.00	1		\$600,000.00	\$600,000.00	\$600,000.00
Buried Stone Revetment 12 ton per ft.					\$2,500.00	175	ft	\$437,500.00	\$437,500.00	\$437,500.00
Concrete demo/removal					\$100.00	600		\$60,000.00	\$60,000.00	\$60,000.00
Bluff Restoration	Vegetation restoration of bluff	bluff	Lakota		\$ 150,000.00	1		\$150,000.00	\$150,000.00	\$150,000.00
Sand Placement Mason Sand					\$45.00	9600		\$432,000.00		
Paving of Parking Lot					\$6.00	26254		\$157,524.00	\$157,524.00	\$157,524.00
35 ton per foot breakwater					\$ 5,820.00 0	300		\$1,746,000.00		
15 ton per foot 1/2 breakwater					\$3,000.00	100		\$300,000.00		
Stone Steps 35 Ton Breakwater					\$55,000.00	1		\$55,000.00		
Steel Sheet Piling 30' deep					\$3,200.00	200		\$640,000.00	\$320,000.00	\$640,000.00
Concrete for ramp					\$100.00	1700		\$170,000.00		\$170,000.00
Access Roadway Stone w/Drainage					\$250,000.00	1		\$250,000.00		\$250,000.00
Retaining Walls					\$100,000.00	1		\$100,000.00		\$100,000.00
Relocated Stormwater Outfall	1 60" diameter on bluff	bluff			\$600.00	500	L ft	\$300,000.00	\$300,000.00	\$300,000.00
Relocated Stormwater Outfall 36"	2 36" diameter beach and lake	beach and lake			\$450.00	325	L ft	\$292,500.00	\$292,500.00	\$292,500.00
Demo (steel, pier, misc.)	Existing pier and outfall pipe				\$220,000.00	1		\$157,524.00	\$157,524.00	\$157,524.00
Total								\$5,910,524.00	\$2,475,048.00	\$3,315,048.00
Soft Costs								\$220,000.00	\$220,000.00	\$220,000.00
Engineering, plans/drawings, permit costs	Non construction costs -- in addition to \$600,000 already spent							\$175,000.00	\$100,000.00	\$100,000.00
Thotal hard and soft costs								\$6,305,524.00	\$2,795,048.00	\$3,635,048.00
Contingency (15%)	Reserves for unexpected costs							\$886,578.60	\$377,555.00	\$545,250.00
Total								\$6,972,102.60	\$3,172,603.00	\$4,180,298.00
	Spend the remaining money upgrading Tower and making necessary repairs of Centennial									
	Do nothing at Centennial									
Missing Considerations										
Pollution reduction devices not priced										
Differentiating costs of pipes material and installetion		bluff, bluff/beach slope, surf zone, lake bottom								
Village imposed requirement for enhanced outfall capacity -- what plans does Village have to increase upstream capacity what and when?										

[illegible]