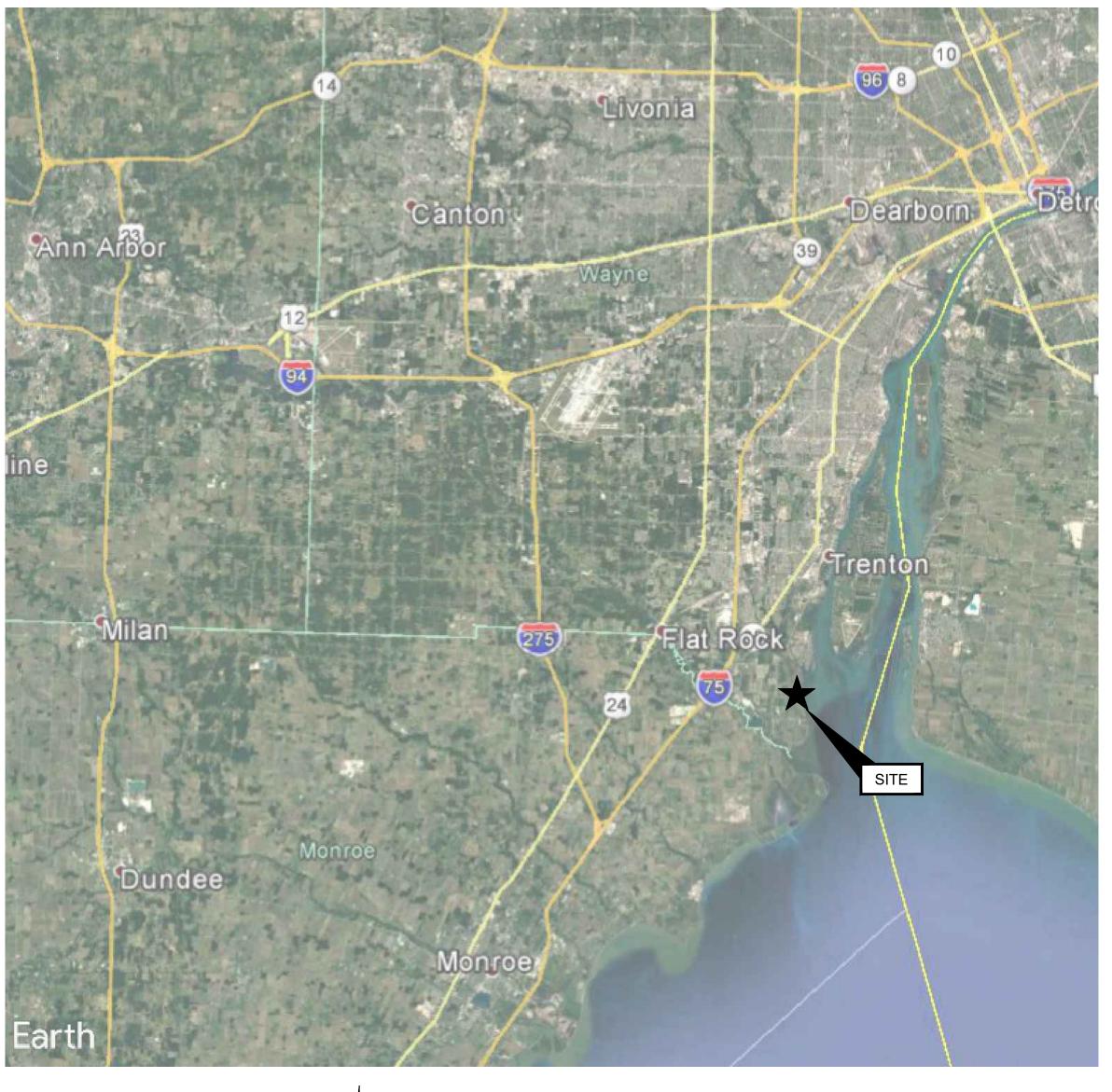
LAKE ERIE METROPARK SHORELINE RESTORATION - PHASE II AS-BUILTS

Project No. 51218.239

NOAA Grant No. NA16NMF4630341

HURON-CLINTON METROPARK AUTHORITY





OWNER CONTACT: TYLER MITCHELL, CHIEF OF NATURAL RESOURCES AND REGULATORY COMPLIANCE

HURON-CLINTON METROPARKS AUTHORITY, ADMINISTRATIVE OFFICE

SHEET INDEX

COVER SHEE SLED HILL AND BEAN FIELD FINAL

SHORELINE SECTIONS

CONSTRUCTED SITE DETAILS

SHORELINE SEED AND TREES

INSTALLED INSTALLED LEDGESTONE STEPS

LANDING DETAILS

13000 HIGH RIDGE DRIVE BRIGHTON, MI 48114-9058 USA (808) 321-2634

ENGINEER CONTACT: SCOTT DIERKS, PE SENIOR WATER RESOURCE ENGINEER GEI CONSULTANTS 9282 GENERAL DRIVE, SUITE 180 PLYMOUTH, MI 48170

C6

C7

VICINITY MAP SCALE: N.T.S.

AS-BUILT

SHORELINE SITE



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3	10/10/2022	ISSUED FOR BIDDING		
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Designed:	MS	
Checked:	SD	
Drawn:	MS, HC	
Submitted By:	SD	
P.E. Number:	44371	



LOCATION MAP

SCALE: N.T.S.

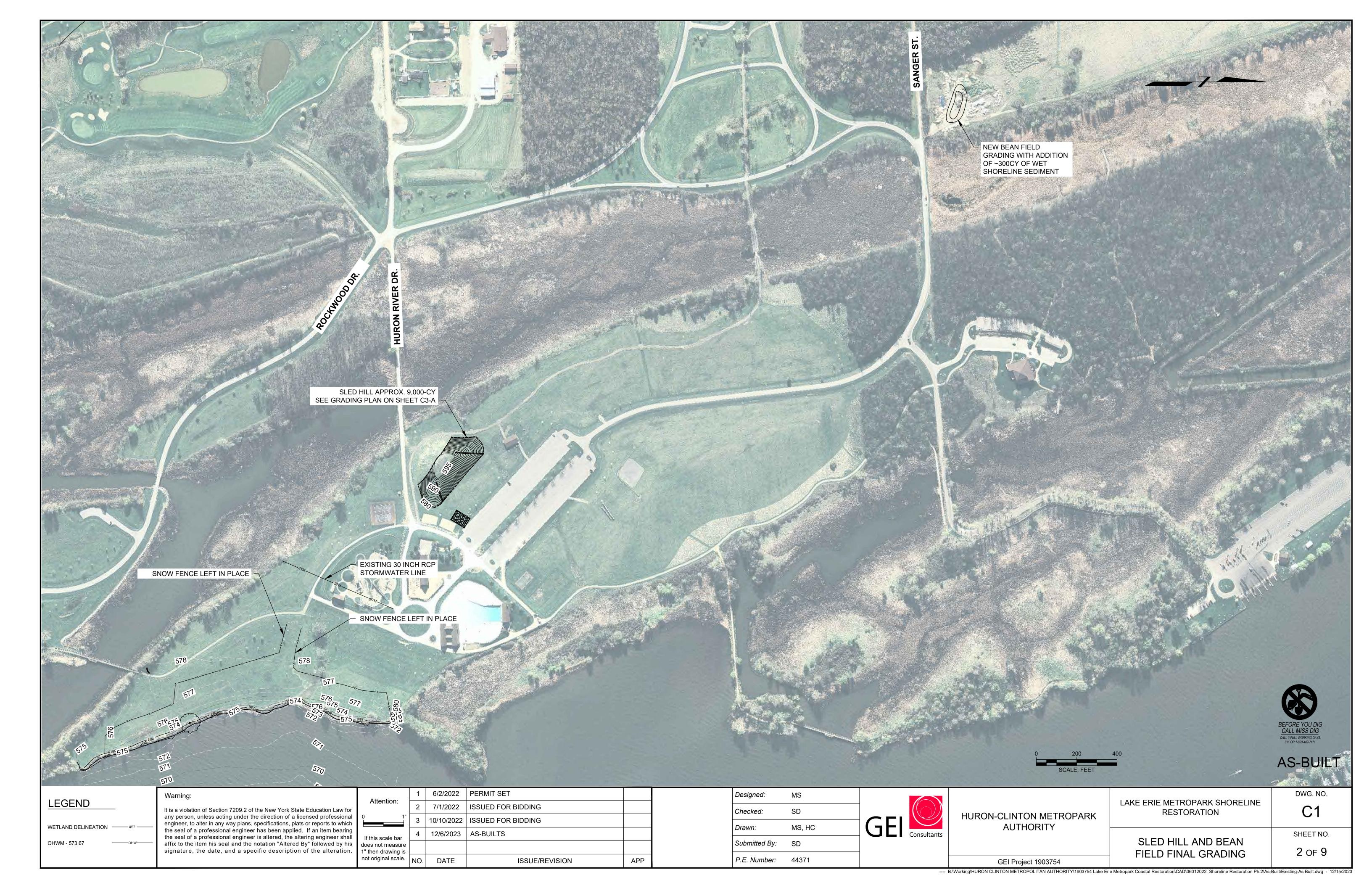
HURON-CLINTON METROPARK AUTHORITY

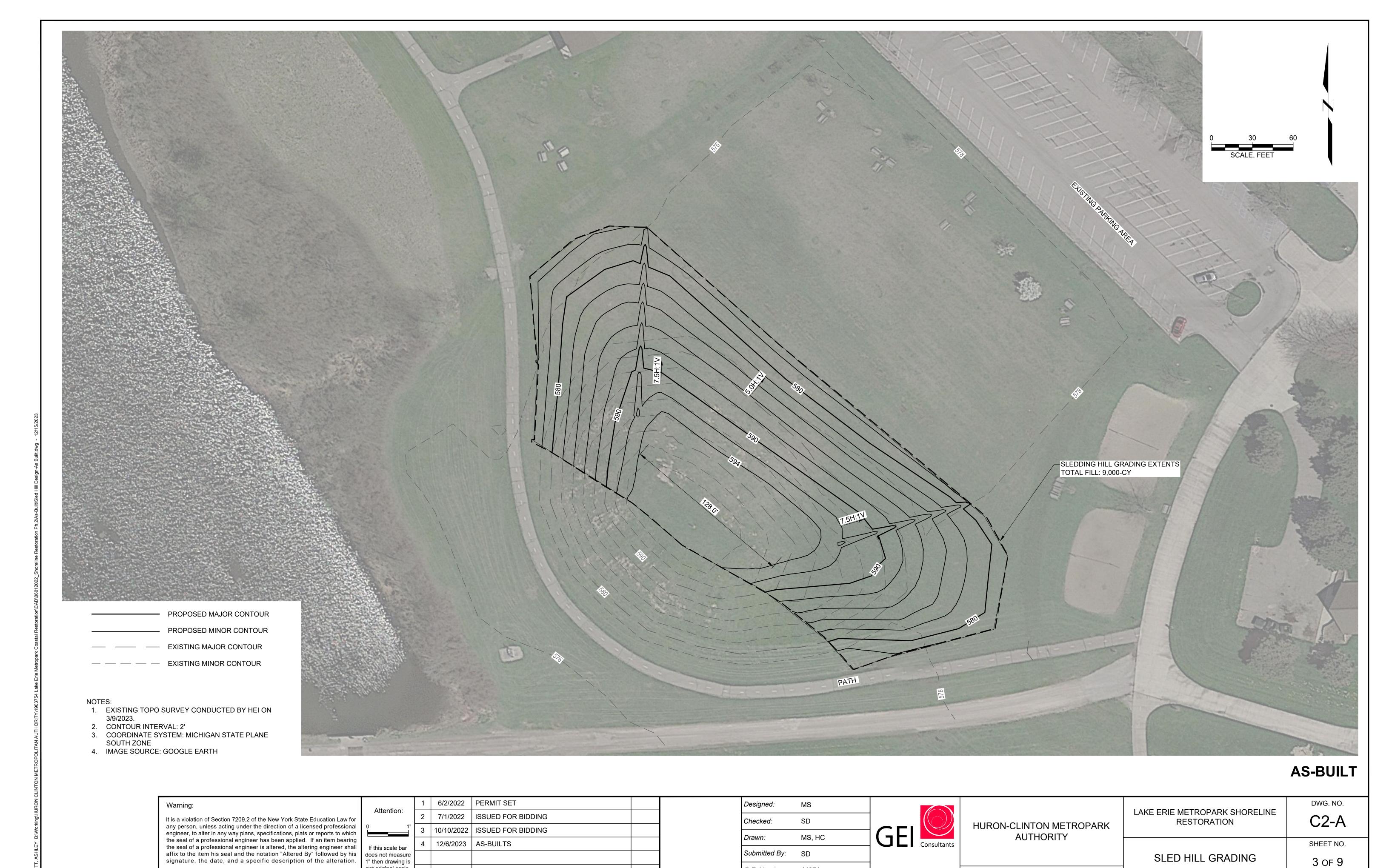
GEI Project 1903754

RESTORATION

DWG. NO. LAKE ERIE METROPARK SHORELINE G1 SHEET NO. **COVER SHEET** 1 of 9

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Submitted By: SD

P.E. Number: 44371

SLED HILL GRADING

GEI Project 1903754

3 of 9

If this scale bar

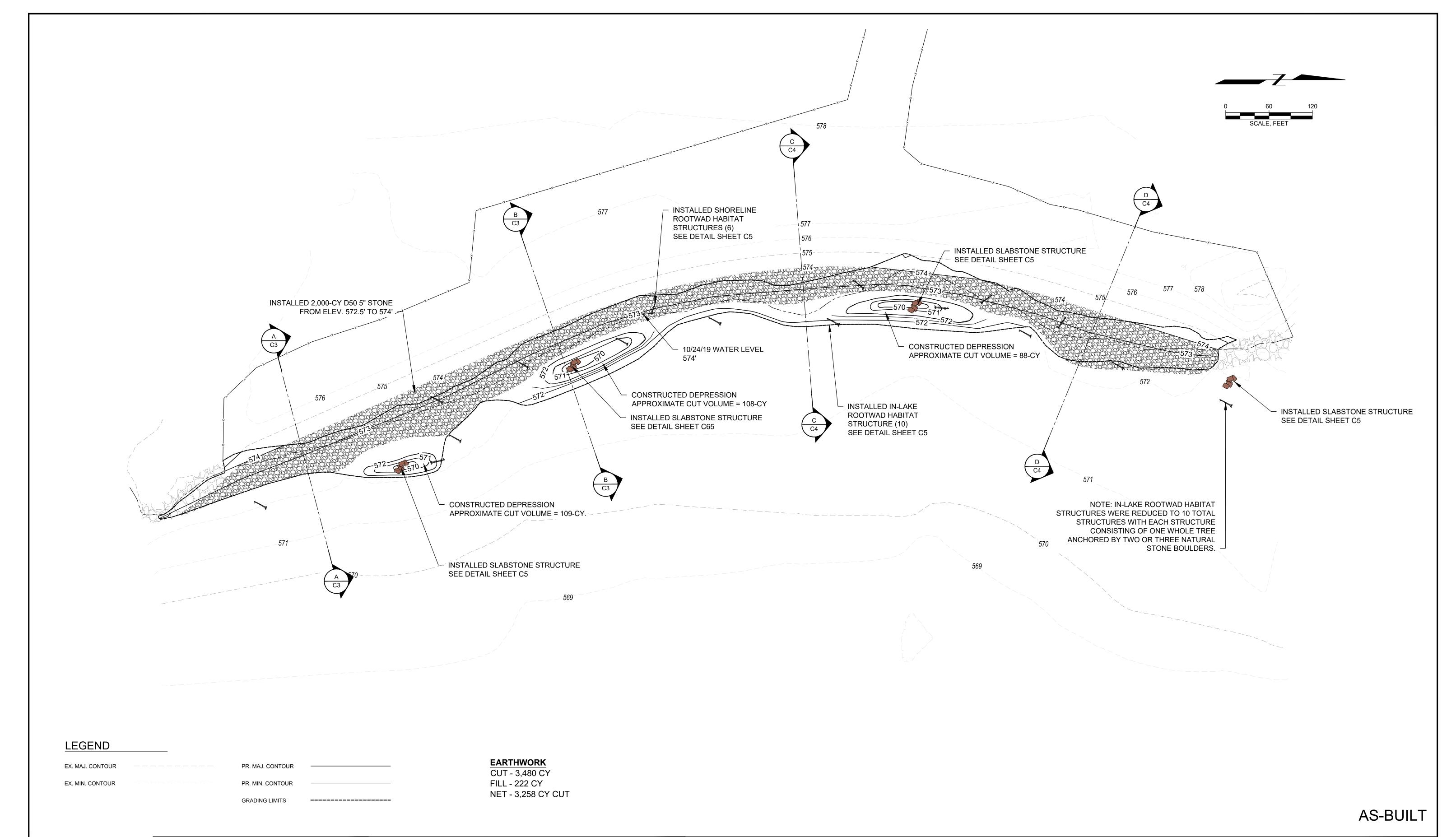
does not measure

1" then drawing is

not original scale. NO. DATE

ISSUE/REVISION

APP



BEFORE YOU DIG CALL MISS DIG CALL 3 FULL WORKING DAYS 811 OR 1-800-482-7171

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not original scale.	NO.	DATE	ISSUE/REVISION	APP		

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HURON-CLINTON METROPARK AUTHORITY

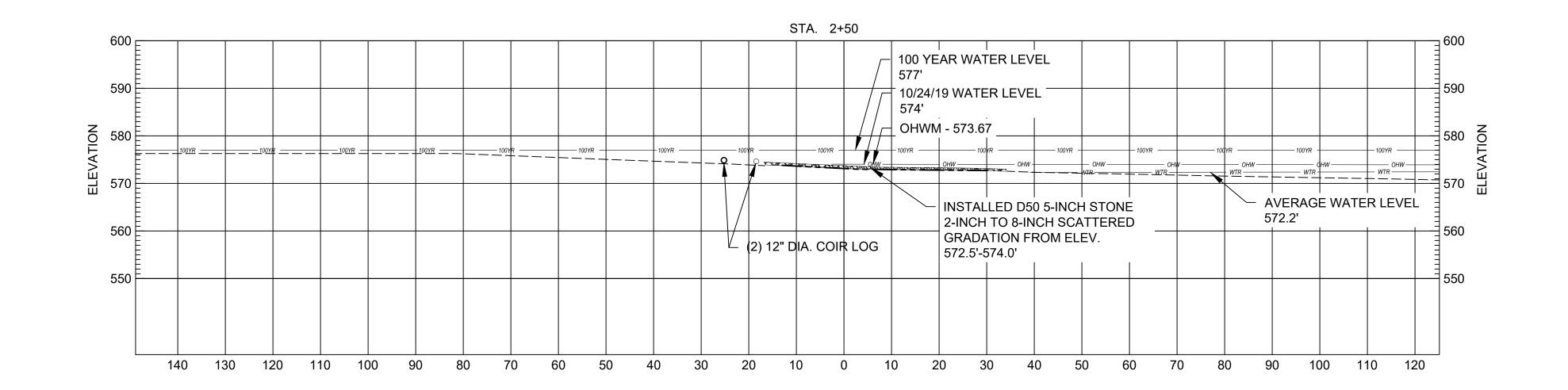
LAKE ERIE METROPARK SHORELINE RESTORATION

SHEET NO. SHORELINE GRADING AND LWD 4 of 9 AND SLABSTONE LOCATIONS

DWG. NO.

C2-B

GEI Project 1903754 ---- B:\Working\HURON CLINTON METROPOLITAN AUTHORITY\1903754 Lake Erie Metropark Coastal Restoration\CAD\06012022_Shoreline Restoration Ph.2\As-Built\Proposed-As Built.dwg - 12/15/2023



LEGEND

---- EXISTING PRE-CONSTRUCTION GRADE

—--— PROPOSED PHASE 2 GRADING

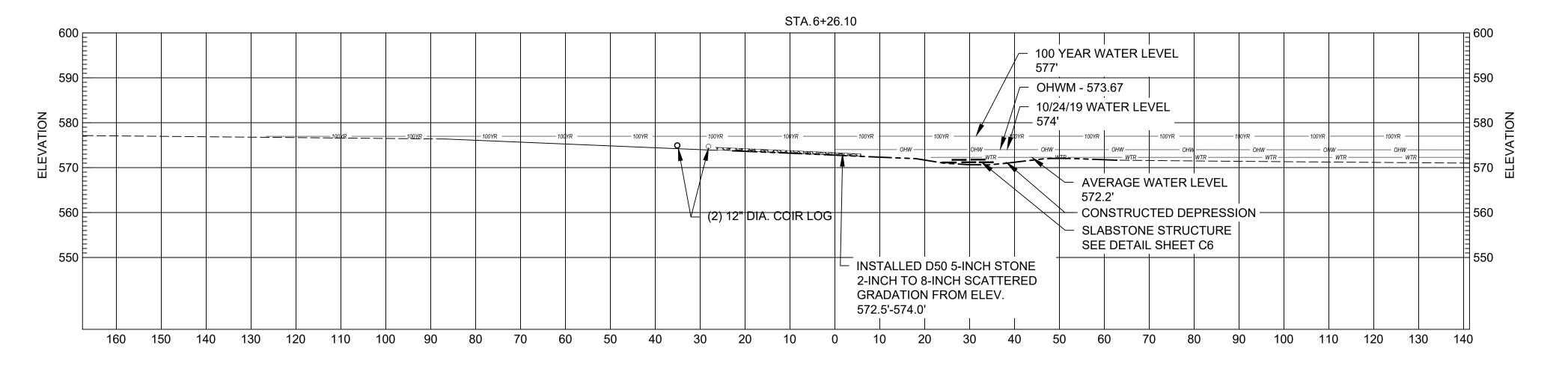
D50 5-INCH STONE

100 YEAR FLOOD ELEVATION

OHWM

SURVEYED WATER ELEVATION

SECTION VIEW





AS-BUILT

DWG. NO.



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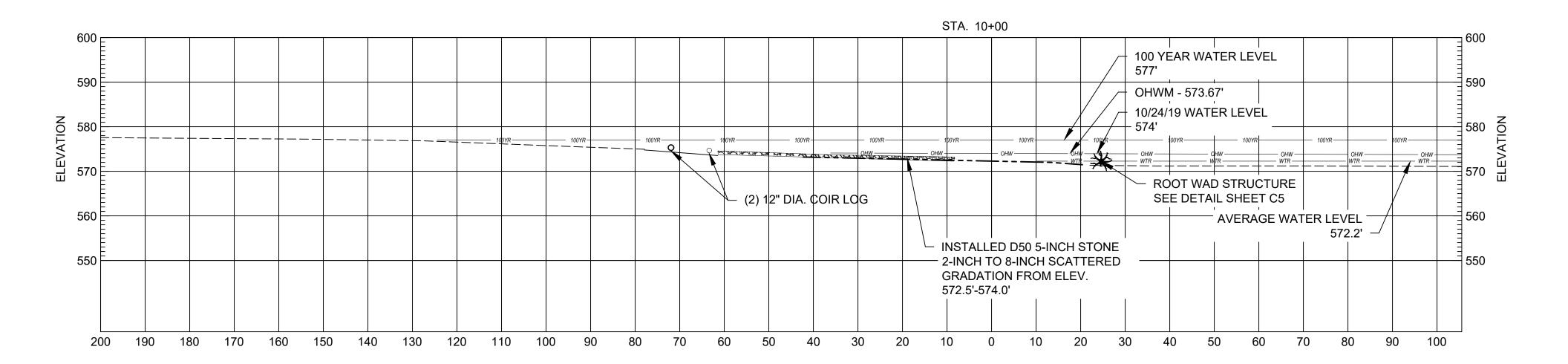
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GEI Project 1903754

ON-CLINTON METROPARK	LAKE ERIE METROPARK SHORELINE
AUTHORITY	RESTORATION
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SHEET NO. SHORELINE 5 of 9 SECTIONS

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LEGEND

EXISTING PRE-CONSTRUCTION GRADE

— -- PROPOSED PHASE 2 GRADING

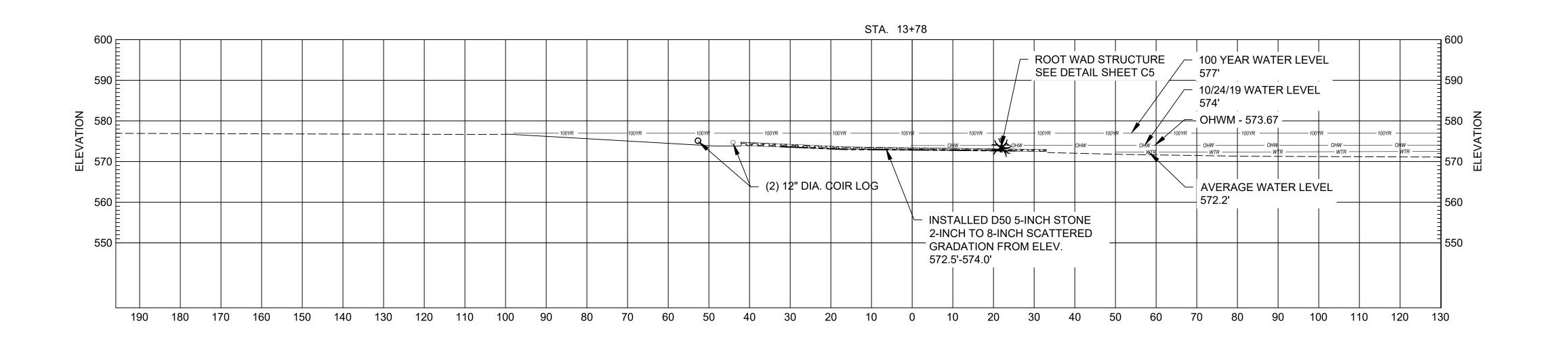
D50 5-INCH STONE

100 YEAR FLOOD ELEVATION

OHWM

SURVEYED WATER ELEVATION







AS-BUILT



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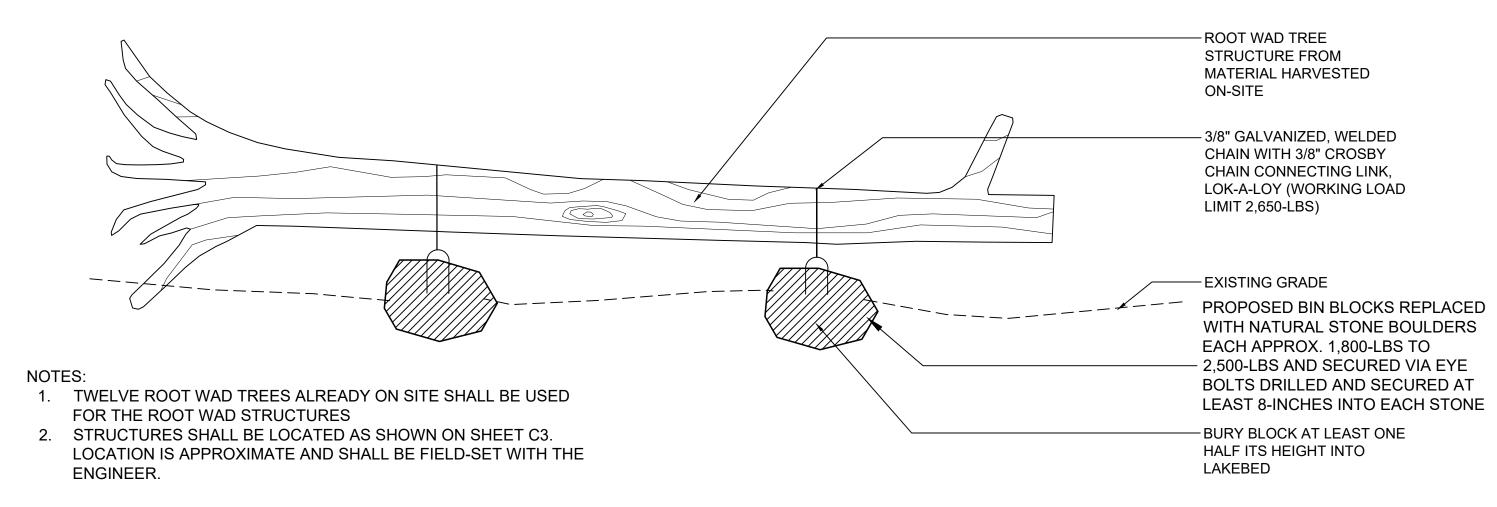
ON-CLINTON METROPARK AUTHORITY	LAKE ERIE METROPARK SHORELINE RESTORATION
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DWG. NO.	
C4	
SHEET NO.	
6 of 9	

GEI Project 1903754

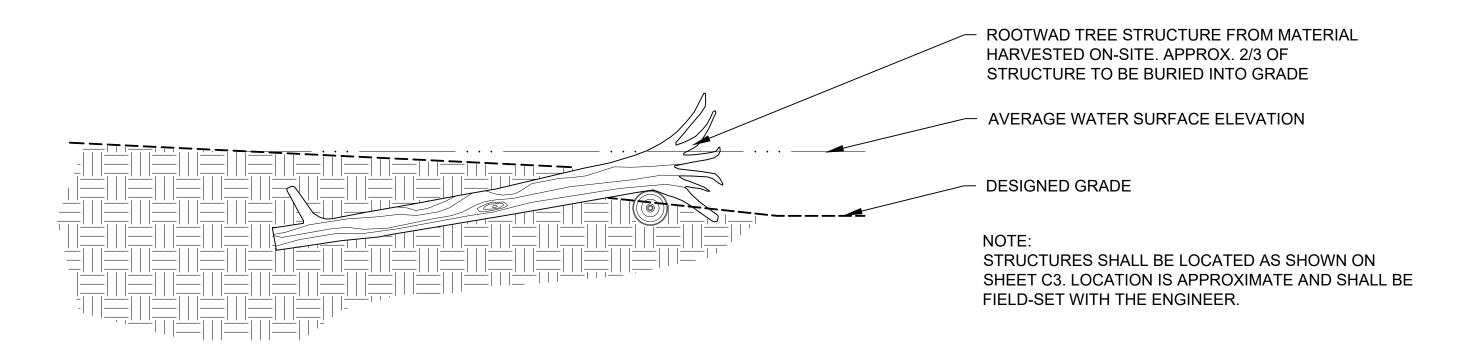
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SECTIONS



IN-LAKE ROOT WAD HABITAT STRUCTURE

NOT TO SCALE



SHORELINE ROOT WAD HABITAT STRUCTURE

NOT TO SCALE

SIZE AND QUANTITY OF SLABS VARY. PLACED RANDOMLY, CREATING VOID SPACES BY LAYERING SLABS ATOP ONE - 6"-18" THICK CONCRETE SLABS MIN 2' IN LEAST DIMENSION

6 TONS OF ROCK PER STRUCTURE.

PROFILE

SLABSTONE STRUCTURE

NOT TO SCALE

AS-BUILT

DWG. NO.

C5

SHEET NO.

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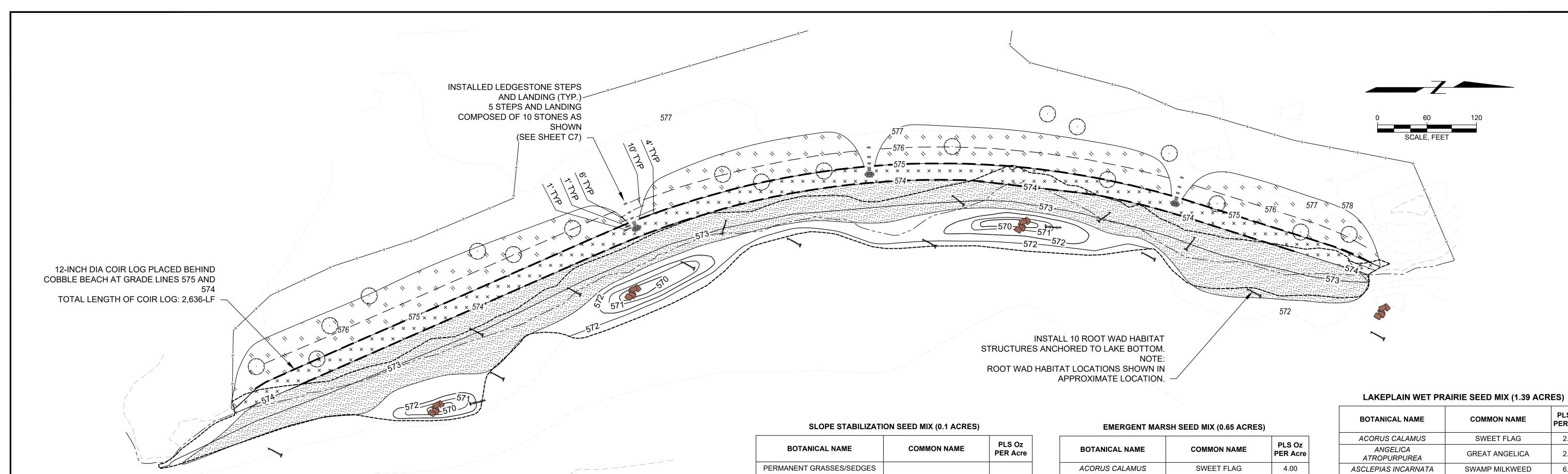
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Consultants	

HURON-CLINTON METROPARK **AUTHORITY**

LAKE ERIE METROPARK SHORELINE RESTORATION

CONSTRUCTED SITE DETAILS

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ANDROPOGON GERARDII

BOUTELOUA CURTIPENDULA

CAREX SPP. ELYMUS CANADENSIS

PR. MAJ. CONTOUR

OHWM - 573.67 PR. MIN. CONTOUR EX. MAJ. CONTOUR **GRADING LIMITS** -----

12" DIA COIR LOG _______ EX. MIN. CONTOUR

PLANTING LEGEND

LEGEND

WETLAND DELINEATION

EMERGENT MARSH SEED MIX AREA ELEV. 574'-575' (0.65 AC) LAKEPLAIN WET PRAIRIE SEED MIX AREA

ELEV. >575' (1.39 AC) PLUG PLANTS AND LIVE STAKES ELEV. 572.5'-574'

(1.58 AC) PROPOSED TREE (18)

x x x x x x

CELTIS NYSS QUEF

			1
			ELYMUS VIRGINICUS
			PANICUM VIRGATUM
	TREES		SCHIZACHYRIUM SCOPAF
BOTANICAL NAME	COMMON NAME, SIZE	QTY	SORGHASTRUM NUTAI
BOTANIOAL NAME	JOHNION NAME, OLL		
ELTIS OCCIDENTALIS	HACKBERRY, 2"	4	
NYSSA SYLVATICA	BLACK GUM, 2"	4	TEMPORARY COVER
QUERCUS BICOLOR	SWAMP WHITE OAK, 2"	4	AVENA SATIVA
PLANTANUS X EXCLAMATION	LONDON PLANETREE, 2"	6	LOLIUM MULTIFLORUM

PLUG PLANTS AND LIVE STAKES (1.58 ACRES)

BIG BLUESTEM

SIDE-OATS GRAMA

PRAIRIE SEDGE SPECIES

CANADA WILD RYE

VIRGINIA WILD RYE

SWITCH GRASS

LITTLE BLUESTEM INDIAN GRASS

COMMON OAT

ANNUAL RYE

TOTAL PLS OUNCES

TOTAL PLS POUNDS

TOTAL PLS OUNCES

TOTAL PLS POUNDS

48.00

16.00

4.00

32.00

24.00

12.00 32.00

32.00

640.00

512.00

240.00

2406.40

PLUG PLANTS AND LIVE STAKES (1.58 ACRES)			
BOTANICAL NAME	COMMON NAME	QTY	
CORNUS SERICEA	RED OSIER DOGWOOD	100	
SALIX INTERIOR	SANDBARK WILLOW	100	
	TOTAL	200	

BOTANICAL NAME	COMMON NAME	PLS Oz PER Acre
ACORUS CALAMUS	SWEET FLAG	4.00
ASCLEPIAS INCARNATA	SWAMP MILKWEED	4.00
AVENA SATIVA	SEED OATS	512.00
BIDENS CERNUA	NODDING BUR MARIGOLD	2.00
CALAMAGROSTIS CANADENSIS	BLUE JOINT GRASS	2.00
CAREX VULPINOIDEA	BROWN FOX SEDGE	4.00
DECODON VERTICILLATUS	SWAMP LOOSESTRIFE	0.25
ELEOCHARIS ACICULARIS	NEEDLE SPIKE RUSH	0.50
ELEOCHARIS PALUSTRIS	GREAT SPIKE RUSH	1.00
GLYCERIA STRIATA	FOWL MANNA GRASS	1.00
HIBISCUS MOSCHEUTOS	SWAMP ROSE MALLOW	4.00
IRIS VIRGINICA SHREVEI	BLUE FLAG IRIS	6.00
JUNCUS CANADENSIS	CANADIAN RUSH	1.00
JUNCUS EFFUSUS	COMMON RUSH	3.00
JUNCUS TORREYI	TORREY'S RUSH	0.25
LEERSIA ORYZOIDES	RICE CUT GRASS	2.00
LOLIUM MULTIFLORUM	ANNUAL RYE	160.00
MIMULUS RINGENS	MONKEY FLOWER	1.00
PELTANDRA VIRGINICA	ARROW ARUM	6.00
PONTEDERIA CORDATA	PICKEREL WEED	4.00
RUMEX ORBICULATUS	GREAT WATER DOCK	1.00
SAGITTARIA LATIFOLIA	SAGITTARIA LATIFOLIA	2.00
SAURURUS CERNUUS	LIZARD'S TAIL	0.50
SCIRPUS ACUTUS	HARD-STEMMED BULRUSH	2.00
SCIRPUS ATROVIRENS	DARK GREEN RUSH	2.00
SCIRPUS CYPERINUS	WOOL GRASS	1.00
SCIRPUS FLUVIATILIS	RIVER BULRUSH	2.00
SCIRPUS PUNGENS	CHAIRMAKER'S RUSH	3.00
SCIRPUS VALIDUS	CREBER GREAT BULRUSH	4.00
SPARGANIUM EURYCARPUM	COMMON BUR REED	2.00
ZIZANIA AQUATICA	WILD RICE	32.00
	TOTAL PLS OUNCES	923.40
	TOTAL PLS POUNDS	57.70

BOTANICAL NAME	COMMON NAME	PLS Oz PER Acre
ACORUS CALAMUS	SWEET FLAG	2.00
ANGELICA ATROPURPUREA	GREAT ANGELICA	2.00
ASCLEPIAS INCARNATA	SWAMP MILKWEED	6.00
ASTER NOVAE-ANGLIAE	NEW ENGLAND ASTER	1.00
AVENA SATIVA	SEED OATS	512.00
BIDENS CERNUA	NODDING BUR MARIGOLD	2.00
BROMUS CILIATUS	FRINGED BROME	2.00
CALAMAGROSTIS CANADENSIS	BLUE JOINT	8.00
CAREX CRINITA	FRINGED SEDGE	2.00
CAREX VULPINOIDEA	BROWN FOX SEDGE	2.00
COREOPSIS TRIPTERIS	TALL COREOPSIS	1.00
ELYMUS VIRGINICUS	VIRGINIA WILD RYE	16.00
EUPATORIUM MACULATUM	SPOTTED JOE-PYE WEED	2.00
EUPATORIUM PERFOLIATUM	COMMON BONESET	2.00
GLYCERIA STRIATA	FOWL MANNA GRASS	2.00
HIBISCUS MOSCHEUTOS	SWAMP ROSE MALLOW	2.00
IRIS VIRGINICA SHREVEI	BLUE FLAG IRIS	5.00
JUNCUS EFFUSUS	COMMON RUSH	2.00
LEERSIA ORYZOIDES	RICE CUT GRASS	2.00
LIATRIS SPICATA	MARSH BLAZING STAR	2.00
LOBELIA CARDINALIS	CARDINAL FLOWER	1.00
LOBELIA SIPHILITICA	GREAT BLUE LOBELIA	1.00
LOLIUM MULTIFLORUM	ANNUAL RYE	160.00
MIMULUS RINGENS	MONKEY FLOWER	2.00
MONARDA FISTULOSA	WILD BERGAMOT	2.00
PYCNANTHEMUM VIRGINIANUM	COMMON MOUNTAIN MINT	1.00
ROSA PALUSTRIS	SWAMP ROSE	1.00
SAGITTARIA LATIFOLIA	COMMON ARROWHEAD	1.00
SCIRPUS ATROVIRENS	DARK GREEN RUSH	1.00
SCIRPUS CYPERINUS	WOOL GRASS	1.00
SOLIDAGO OHIOENSIS	OHIO GOLDENROD	1.00
SPARTINA PECTINATA	PRAIRIE CORD GRASS	10.00
THALICTRUM DASYCARPUM	PURPLE MEADOW RUE	0.50
VERBENA HASTATA	BLUE VERVAIN	2.00
ZIZIA AUREA	GOLDEN ALEXANDERS	2.00
	TOTAL PLS OUNCES	1446.85
	TOTAL PLS POUNDS	90.43

AS-BUILT

DWG. NO.



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HURON-CLINTON METROPARK **AUTHORITY**

GEI Project 1903754

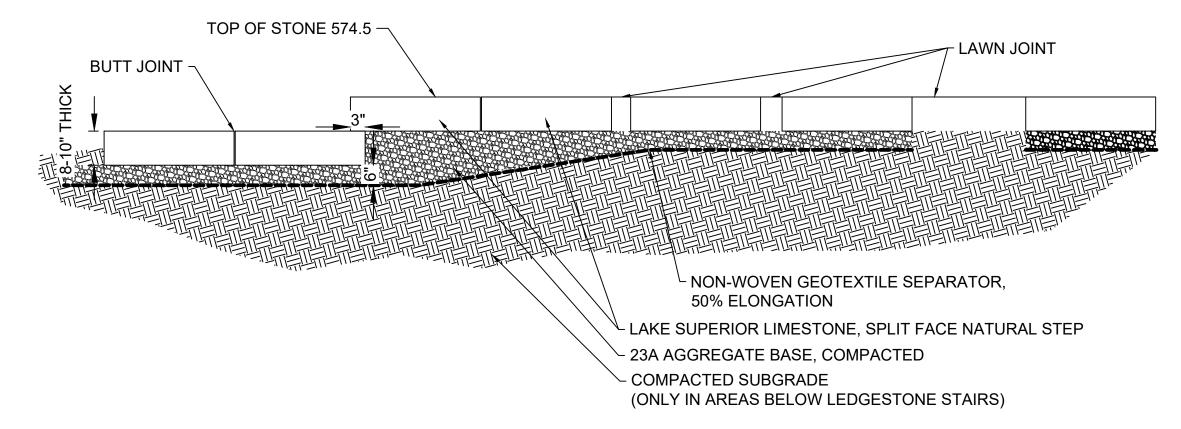
LAKE ERIE METROPARK SHORELINE RESTORATION

SHORELINE SEED AND TREES INSTALLED

C6 SHEET NO.

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LEDGESTONE STEPS AND LANDING

NOT TO SCALE

AS-BUILT

DWG. NO.

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LAKE ERIE METROPARK SHORELINE RESTORATION

INSTALLED LEDGESTONE

STEPS AND LANDING DETAILS

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