

U.S. Army Corps
of Engineers
Baltimore

Public Notice

In Reply to Application Number:
**NAB-2018-61994 CAPE SAINT CLAIRE IMPROVEMENT
ASSOCIATION /SHORELINE RESTORATION**

PN 20-54

Comment Period: August 18, 2020 to September 01, 2020

THE PURPOSE OF THIS PUBLIC NOTICE IS TO INFORM INTERESTED PARTIES OF THE PROPOSED ACTIVITY AND TO SOLICIT COMMENTS. NO DECISION HAS BEEN MADE AS TO WHETHER OR NOT A PERMIT WILL BE ISSUED AT THIS TIME.)

This District has received an application for a Department of the Army permit pursuant to Section 10 of the Rivers and Harbors Act (33 USC 403) and Section 404 of the Clean Water Act (33 USC 1344), as described below:

APPLICANT: Mr. Beau Breeden
Cape St. Claire Improvement Association
1223 River Bay Road
Annapolis, Maryland 21409

WATERWAY AND LOCATION OF THE PROPOSED WORK: The proposed project is located in Deep Creek, channelward of Lake Claire and Lake Claire Drive, Cape Saint Claire, Anne Arundel County, Maryland. Latitude: 39.047111N; Longitude: -76.431751 W

OVERALL PROJECT PURPOSE: The purpose of the project is to abate shoreline erosion and facilitate aggradation of natural sand material on the adjacent beach, at property in Annapolis, Anne Arundel County, Maryland.

PROJECT DESCRIPTION: The Cape St. Claire Improvement Association has applied to install an 80-foot long vinyl sheet groin adjacent to an existing pier extending a maximum of 80 feet channelward of the approximate mean high water shoreline; to place 3 oyster reef clusters consisting of 25, 24-inch structures and 20, 36-inch structures at a maximum of 225 feet channelward of the approximate mean high water shoreline; to install 2 clusters of 38 inverted root wads securely into the substrate at a maximum of 150 feet channelward of the approximate mean high water shoreline; to place nine cubic yards of clean sand along 100 linear feet of shoreline a maximum of 20 feet channelward of the approximate mean high water shoreline and plant .05 acres of low marsh, .05 acres of high marsh, and .02 acres of dune habitat; and to install one pile to post warning signage at a maximum of 225 feet channelward of the approximate mean high water shoreline. The proposed work will be completed as shown on the enclosed project plans dated January 23, 2020.

EFFECTS ON AQUATIC RESOURCES:

Activity	WoUS Impact (sf)	Authority
Oyster Reef Structures	1,951 sf	Section 10/404
Root Wads	461 sf	Section 10/404
Vinyl Sheet Groin	160 sf	Section 10
Sand Fill Below MHW	800 sf	Section 404

LEAD FEDERAL AGENCY: The U.S. Army Corps of Engineers, as the lead federal agency, is responsible for all coordination pursuant to applicable federal authorities.

APPLICANT'S PROPOSED AVOIDANCE, MINIMIZATION, AND COMPENSATORY

MITIGATION: The proposed project is shoreline erosion protection. The applicant designed the project to the minimal footprint necessary to achieve the project purpose successfully. No compensatory mitigation is proposed by the applicant.

CORPS EVALUATION REQUIREMENTS: This project will be evaluated pursuant to Corps Regulatory Program Regulations (33 CFR Parts 320-332). The decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit, which reasonable may be expected to accrue from the proposal, must be balanced against its reasonably foreseeable detriments. All factors, which may be relevant to the proposal will be considered, including the cumulative effects thereof; among those are conservation, economic, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, flood plain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, and consideration of property ownership and in general, the needs and welfare of the people. The evaluation of the impact of this project will also include application of the Clean Water Act Section 404(b)(1) Guidelines promulgated by the Administrator, U.S. Environmental Protection Agency.

ENDANGERED SPECIES: The lead federal agency is responsible for Endangered Species Act coordination. A preliminary review of this application indicates that the proposed work will have no effect Federally-listed threatened or endangered species or their critical habitat, pursuant to Section 7 of the Endangered Species Act, as amended. As the evaluation of this application continues, additional information may become available which could modify this preliminary determination.

ESSENTIAL FISH HABITAT: The lead federal agency is responsible for Essential Fish Habitat coordination. The Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA), as amended by the Sustainable Fisheries Act of 1996 (Public Law 04-267), requires all Federal agencies to consult with the National Marine Fisheries Service (NMFS) on all actions, or proposed actions, permitted, funded, or undertaken by the agency that may adversely affect Essential Fish Habitat (EFH), including species of concern, life cycle habitat, or Habitat Areas of Particular Concern. The project site lies in or adjacent to EFH as described under MSFCMA for managed species under the MSFCMA. The Baltimore District has made a preliminary determination that the project will not have a substantial adverse effect on EFH. The Baltimore District has made a preliminary determination that mitigative measures are not required to minimize adverse effects on EFH at this time. This determination may be modified if additional

information indicates otherwise.

HISTORIC RESOURCES: The lead federal agency is responsible for historic resources coordination. Pursuant to Section 106 of the National Historic Preservation Act (NHPA) of 1966 and applicable guidance, the Corps has reviewed the latest published version of the National Register of Historic Places and initially determined that no registered properties listed as eligible for inclusion, therein, are located at the site of the proposed work. The Corps has made the preliminary determination that the proposed project would have no effect on historic properties. The Corps final eligibility and effect determination will be based on coordination with the State Historic Preservation Office as appropriate and required, and with full consideration given to the proposed undertaking's potential direct and indirect effects on historic properties within the Corps' identified permit area.

TRIBAL RESOURCES: Section 106 of the NHPA also requires federal agencies to consult with federally-recognized American Indian tribes that attach religious and cultural significance to historic properties that may be affected by the agency's undertaking. The lead federal agency is responsible for tribal coordination. Corps Tribal Consultation Policy mandates an open, timely, meaningful, collaborative, and effective deliberative communication process that emphasizes trust, respect, and shared responsibility. The policy further emphasizes that, to the extent practicable and permitted by law, consultation works toward mutual consensus and begins at the earliest planning stages, before decisions are made and actions taken. The Corps final eligibility and effect determination will be based on coordination with interested tribes, in accordance with the Corps current tribal standard operating procedures as appropriate and required, and with full consideration given to the proposed undertaking's potential direct and indirect effects on tribal resources.

MODIFICATION OF CIVIL WORKS PROJECTS: 33 USC 408 (SECTION 408): All Section 408 proposals will be coordinated internally at USACE. The Section 408 decision will be issued along with the Section 404 and/or Section 10 decision. Please see the following link for more information regarding Section 408: <https://www.nab.usace.army.mil/section408/>.

WATER QUALITY CERTIFICATION: The applicant is required to obtain a water quality certification in accordance with Section 401 of the Clean Water Act.

COASTAL ZONE MANAGEMENT PROGRAMS: Where applicable, the applicant has certified in this application that the proposed activity complies with and will be conducted in a manner consistent with the approved Coastal Zone Management (CZM) Program. By this public notice, we are requesting the State concurrence or objection to the applicant's consistency statement.

The applicant must obtain any State or local government permits which may be required.

SUBMISSION OF COMMENTS: The Corps of Engineers is soliciting comments from the public; Federal, State, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments provided will become part of the public record for this action and are subject to release to the public through the Freedom of Information Act.

Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

Written comments concerning the work described above related to the factors listed above or other pertinent factors must be received by the U.S. Army Corps of Engineers, Baltimore District within the comment period specified above through postal mail at the address below or electronic submission to the project manager email address below. Written comments should reference the Application Number: NAB-2018-61994

PUBLIC HEARING REQUESTS: Any person who has an interest which may be adversely affected by the issuance of this permit may request a public hearing. The request, which must be in writing, must be received within the comment period as specified above to receive consideration. Also it must clearly set forth the interest which may be adversely affected by this activity and the manner in which the interest may be adversely affected. The public hearing request may be submitted by electronic mail or mailed to the following address:

Mr. Richard Kibby
richard.kibby@usace.army.mil
U.S. Army Corps of Engineers, Baltimore District
Attn: Regulatory Branch
2 Hopkins Plaza
Baltimore, Maryland 21201

It is requested that you communicate this information concerning the proposed work to any persons known by you to be interested, who did not receive a copy of this notice.

General information regarding the Corps' permitting process can be found on our website at <https://www.nab.usace.army.mil/Missions/Regulatory.aspx>. This public notice has been prepared in accordance with Corps implementing regulations at 33 CFR 325.3. If you have any questions concerning this specific project, or would like to request a paper copy of this public notice, please contact Mr. Richard Kibby at 410-962-0694 or *richard.kibby@usace.army.mil*. This public notice is issued by the Chief, Regulatory Branch.

CAPE ST CLAIRE SHORELINE ENHANCEMENT - LAKE CLAIRE

ANNE ARUNDEL COUNTY, MD

VICINITY MAP

SITE MAP



SCALE: 1" = 2000'



SCALE: 1" = 500'

SHEET LIST TABLE

Sheet Number	Sheet Title
1	VICINITY MAP AND AERIAL PHOTO
2	SITE INDEX
3	EXISTING CONDITIONS
4	EXISTING CONDITIONS
5	PROPOSED CONDITIONS
6	PROPOSED CONDITIONS
7	IMPACT PLATES
8	IMPACT PLATES
9	DETAILS
10	DETAILS
11	DETAILS
12	CROSS SECTION

PERMANENT IMPACTS:	
TIDAL OPEN WATER (LIVING SHORELINE)	= 1,990 SF
TIDAL OPEN WATER (GROIN)	= 12 SF
TIDAL OPEN WATER (INVERTED ROOT WAD)	= 461 SF
TIDAL OPEN WATER (FORMED OYSTER REEF STRUCTURES)	= 1,951 SF
TOTAL OPEN WATER (PERMANENT)	= 4,414 SF

CAPE ST CLAIRE COMMUNITY IMPROVEMENT ASSOCIATION
1223 RIVER BAY ROAD
ANNAPOLIS, MD 21409

DATE	ISSUES / REVISIONS
12/21/2018	INITIAL SUBMITTAL
04/01/2019	PRE-FINAL SUBMITTAL
01/23/2020	FINAL SUBMITTAL

 **Biohabitats**
The Stables Building 2081 Clipper Park Road
Baltimore, MD 21211 / ph: 410.554.0156
fx: 410.554.0168 / www.biohabitats.com
Restore the Earth & Inspire Ecological Stewardship

 **SUSTAINABLE SCIENCE LLC**
410 South Second St. Denton, MD 21629
ph: 410.924.4316
http://www.sustainablescience.com

CAPE ST CLAIRE SHORELINE ENHANCEMENT - LAKE CLAIRE

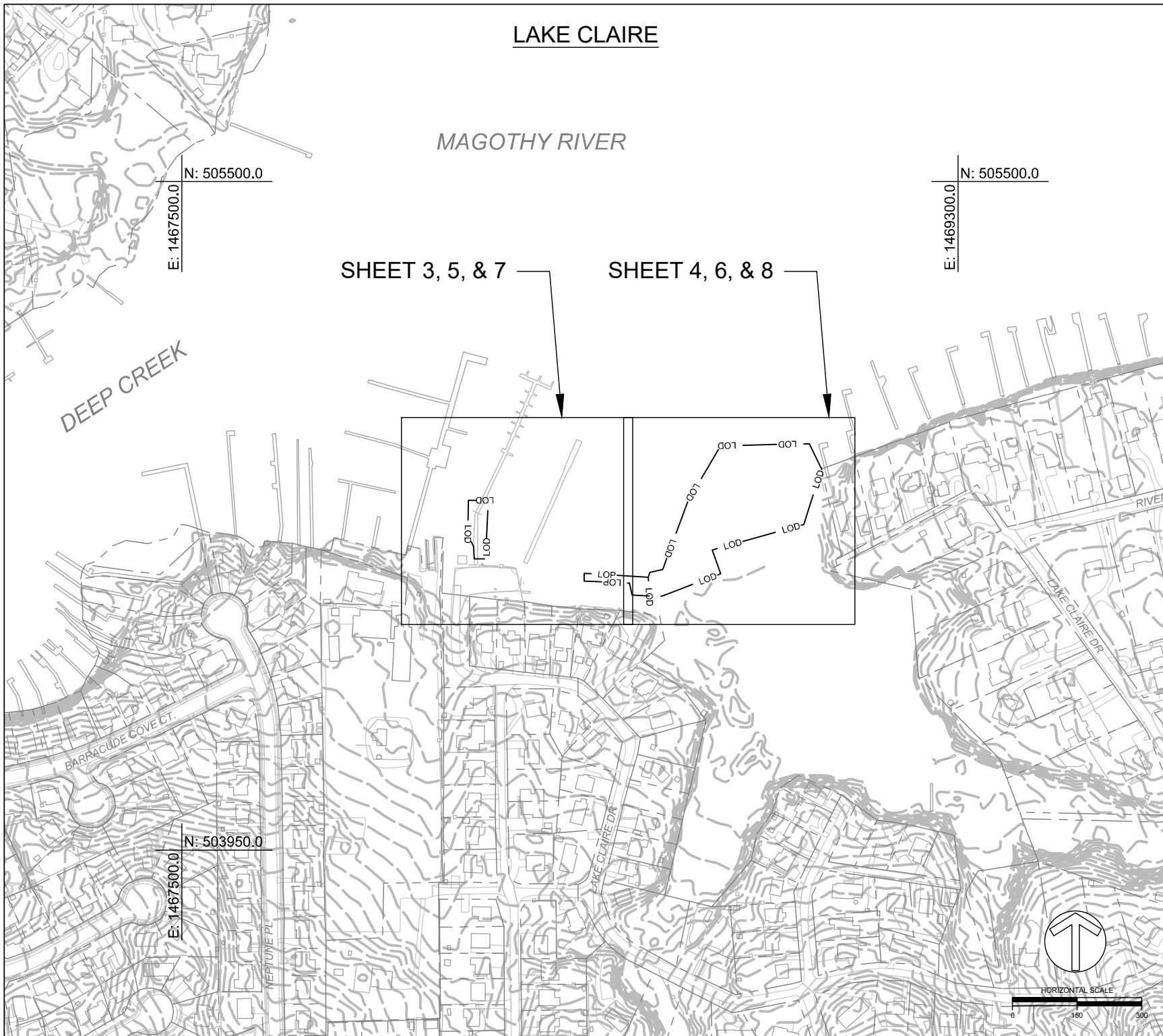
TITLE: VICINITY MAP AND AERIAL PHOTO

PROJECT NO.: 17023.01

SCALE: AS SHOWN

BY: AM, TB CHECK: EM

DWG. NO.: 1 OF 12



LAKE CLAIRE

MAGOTHY RIVER

SHEET 3, 5, & 7

SHEET 4, 6, & 8

DEEP CREEK

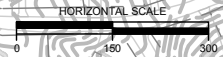
BARRACUDE COVE CT.

LAKE CLAIRE DR.

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E: 1467500.0

N: 505500.0
E: 1469300.0

N: 503950.0
E: 1467500.0



CAPE ST CLAIRE COMMUNITY
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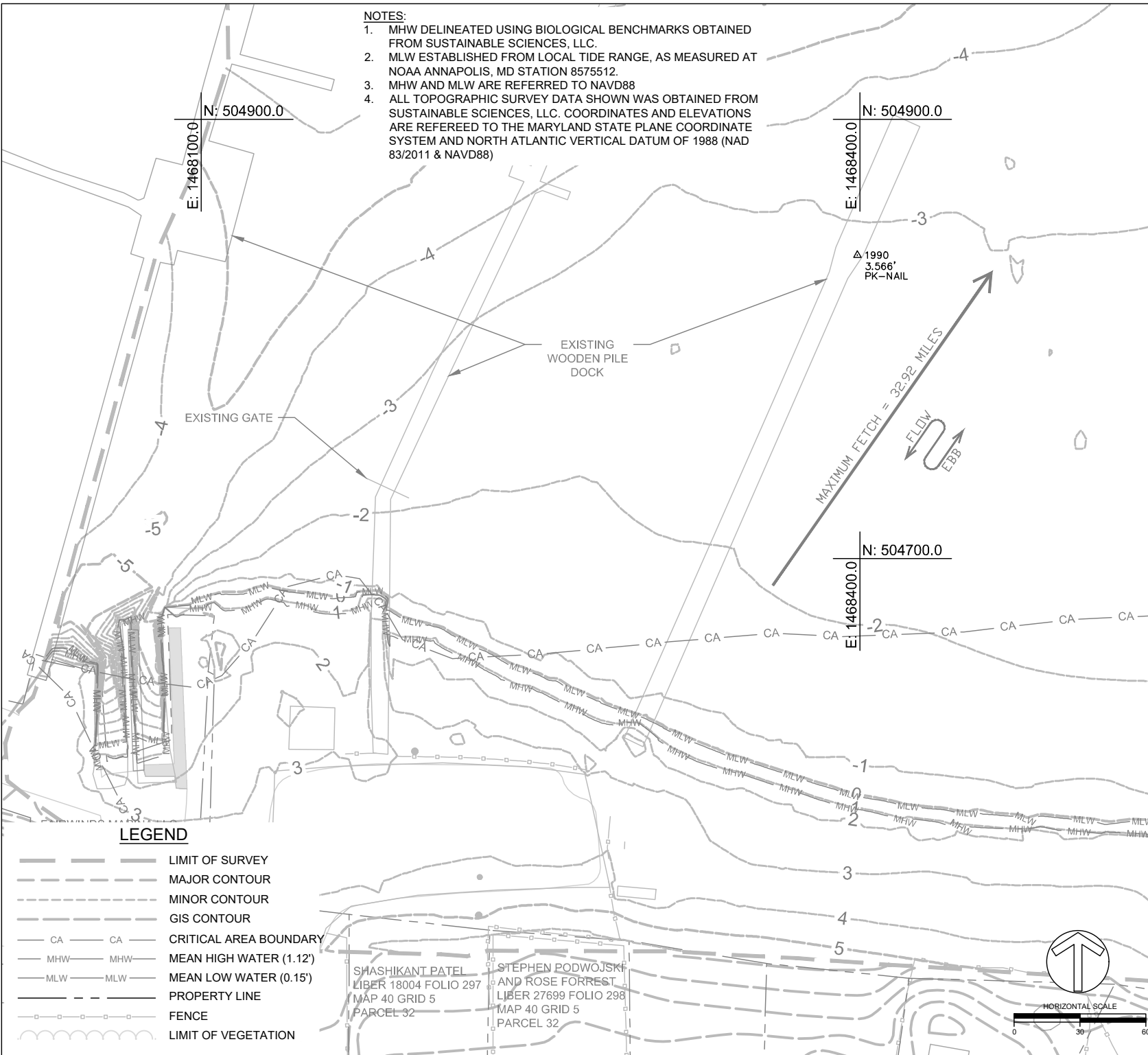
410 South Second St. Denton, MD 21629
ph:4109244316
http://www.sustainablescience.com

**CAPE ST CLAIRE
SHORELINE
ENHANCEMENT -
LAKE CLAIRE**

TITLE: SITE INDEX	
PROJECT NO. :	17023.01
SCALE:	1" = 300'
BY: AM, TB	CHECK: EM
DWG. NO. : 2 OF 12	

NOTES:

1. MHW DELINEATED USING BIOLOGICAL BENCHMARKS OBTAINED FROM SUSTAINABLE SCIENCES, LLC.
2. MLW ESTABLISHED FROM LOCAL TIDE RANGE, AS MEASURED AT NOAA ANNAPOLIS, MD STATION 8575512.
3. MHW AND MLW ARE REFERRED TO NAVD88
4. ALL TOPOGRAPHIC SURVEY DATA SHOWN WAS OBTAINED FROM SUSTAINABLE SCIENCES, LLC. COORDINATES AND ELEVATIONS ARE REFERRED TO THE MARYLAND STATE PLANE COORDINATE SYSTEM AND NORTH ATLANTIC VERTICAL DATUM OF 1988 (NAD 83/2011 & NAVD88)



CAPE ST CLAIRE COMMUNITY IMPROVEMENT ASSOCIATION
1223 RIVER BAY ROAD
ANNAPOLIS, MD 21409

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410 South Second St. Denton, MD 21629
ph: 4109244316
http://www.sustainablescience.com

MATCHLINE - SHEET 4

CAPE ST CLAIRE SHORELINE ENHANCEMENT - LAKE CLAIRE

TITLE: **EXISTING CONDITIONS**

PROJECT NO.: 17023.01

SCALE: 1" = 60'

BY: AM, TB CHECK: EM

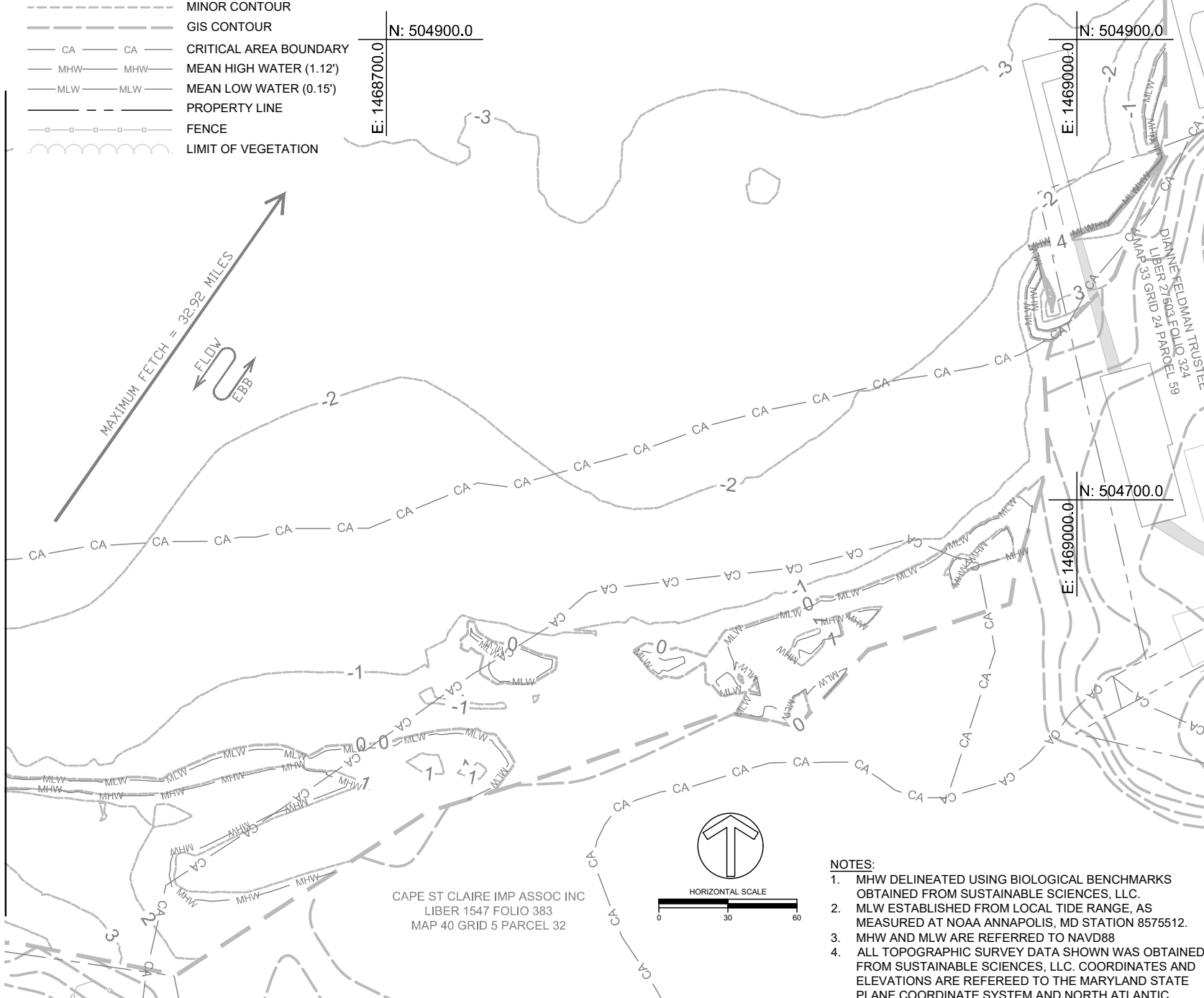
DWG. NO.: 3 OF 12

LEGEND

- LIMIT OF SURVEY
- - - MAJOR CONTOUR
- - - MINOR CONTOUR
- - - GIS CONTOUR
- CA — CA — CRITICAL AREA BOUNDARY
- MHW — MHW — MEAN HIGH WATER (1.12')
- MLW — MLW — MEAN LOW WATER (0.15')
- — — — — PROPERTY LINE
- — □ — □ — □ — FENCE
- ~ ~ ~ ~ ~ LIMIT OF VEGETATION

DEEP CREEK

MATCHLINE - SHEET 3



NOTES:

1. MHW DELINEATED USING BIOLOGICAL BENCHMARKS OBTAINED FROM SUSTAINABLE SCIENCES, LLC.
2. MLW ESTABLISHED FROM LOCAL TIDE RANGE, AS MEASURED AT NOAA ANNAPOLIS, MD STATION 8575512.
3. MHW AND MLW ARE REFERRED TO NAVD88
4. ALL TOPOGRAPHIC SURVEY DATA SHOWN WAS OBTAINED FROM SUSTAINABLE SCIENCES, LLC. COORDINATES AND ELEVATIONS ARE REFERRED TO THE MARYLAND STATE PLANE COORDINATE SYSTEM AND NORTH ATLANTIC VERTICAL DATUM OF 1988 (NAD 83/2011 & NAVD88)

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CAPE ST CLAIRE SHORELINE ENHANCEMENT - LAKE CLAIRE

TITLE: **EXISTING CONDITIONS**

PROJECT NO.: 17023.01

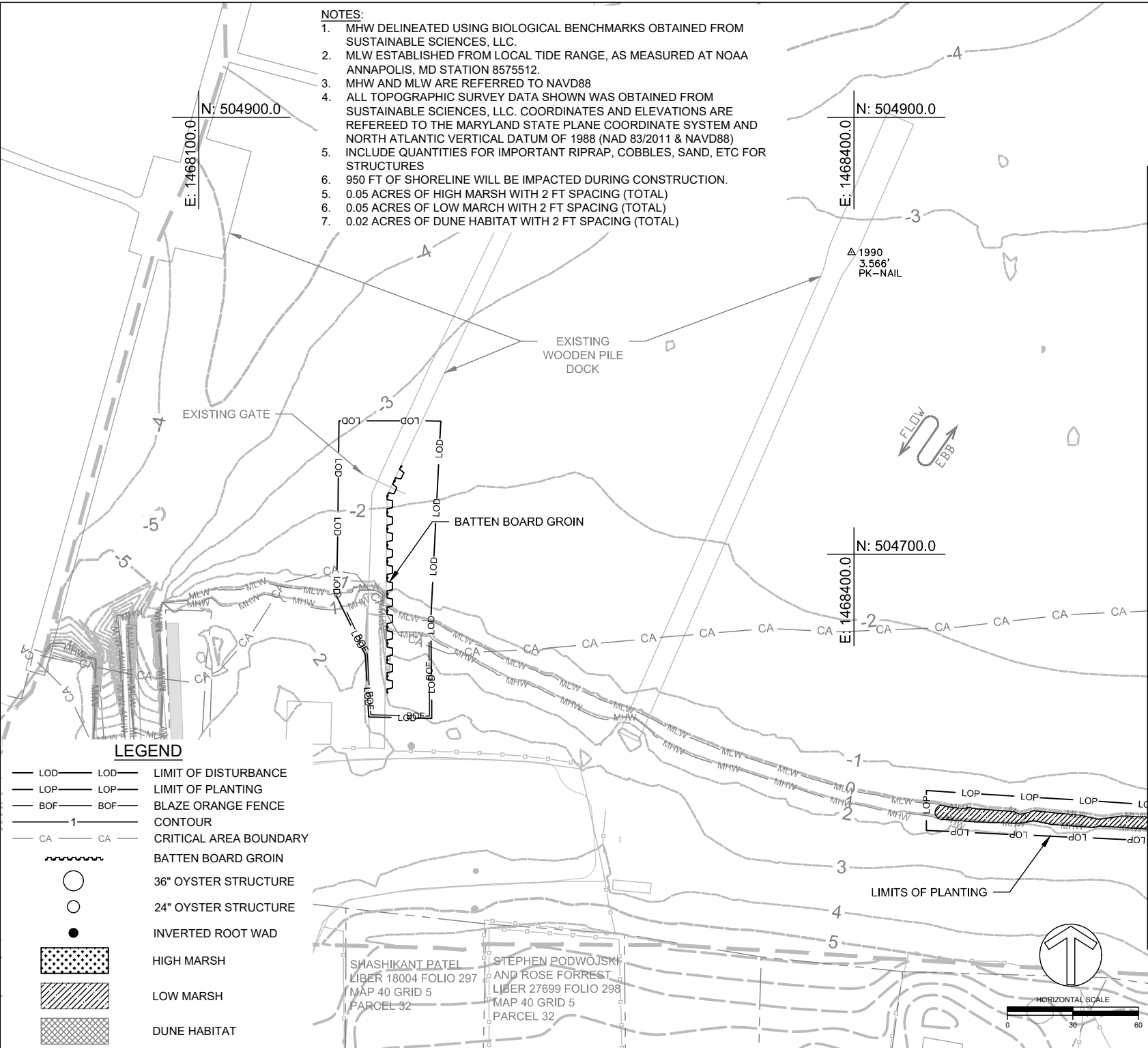
SCALE: 1" = 60'

BY:	CHECK:
AM, TB	EM

DWG. NO.: 4 OF 12

NOTES:

1. MHW DELINEATED USING BIOLOGICAL BENCHMARKS OBTAINED FROM SUSTAINABLE SCIENCES, LLC.
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5. INCLUDE QUANTITIES FOR IMPORTANT RIPRAP, COBBLES, SAND, ETC FOR STRUCTURES
6. 950 FT OF SHORELINE WILL BE IMPACTED DURING CONSTRUCTION.
5. 0.05 ACRES OF HIGH MARSH WITH 2 FT SPACING (TOTAL)
6. 0.05 ACRES OF LOW MARCH WITH 2 FT SPACING (TOTAL)
7. 0.02 ACRES OF DUNE HABITAT WITH 2 FT SPACING (TOTAL)



LEGEND

- LOD — LOD — LIMIT OF DISTURBANCE
- LOP — LOP — LIMIT OF PLANTING
- BOF — BOF — BLAZE ORANGE FENCE
- 1 — CONTOUR
- CA — CA — CRITICAL AREA BOUNDARY
- ~~~~~ BATTEN BOARD GROIN
- 36" OYSTER STRUCTURE
- 24" OYSTER STRUCTURE
- INVERTED ROOT WAD
- ▨ HIGH MARSH
- ▨ LOW MARSH
- ▨ DUNE HABITAT

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MATCHLINE - SHEET 6

CAPE ST CLAIRE SHORELINE ENHANCEMENT - LAKE CLAIRE

TITLE: PROPOSED CONDITIONS

PROJECT NO. : 17023.01

SCALE: 1" = 60'

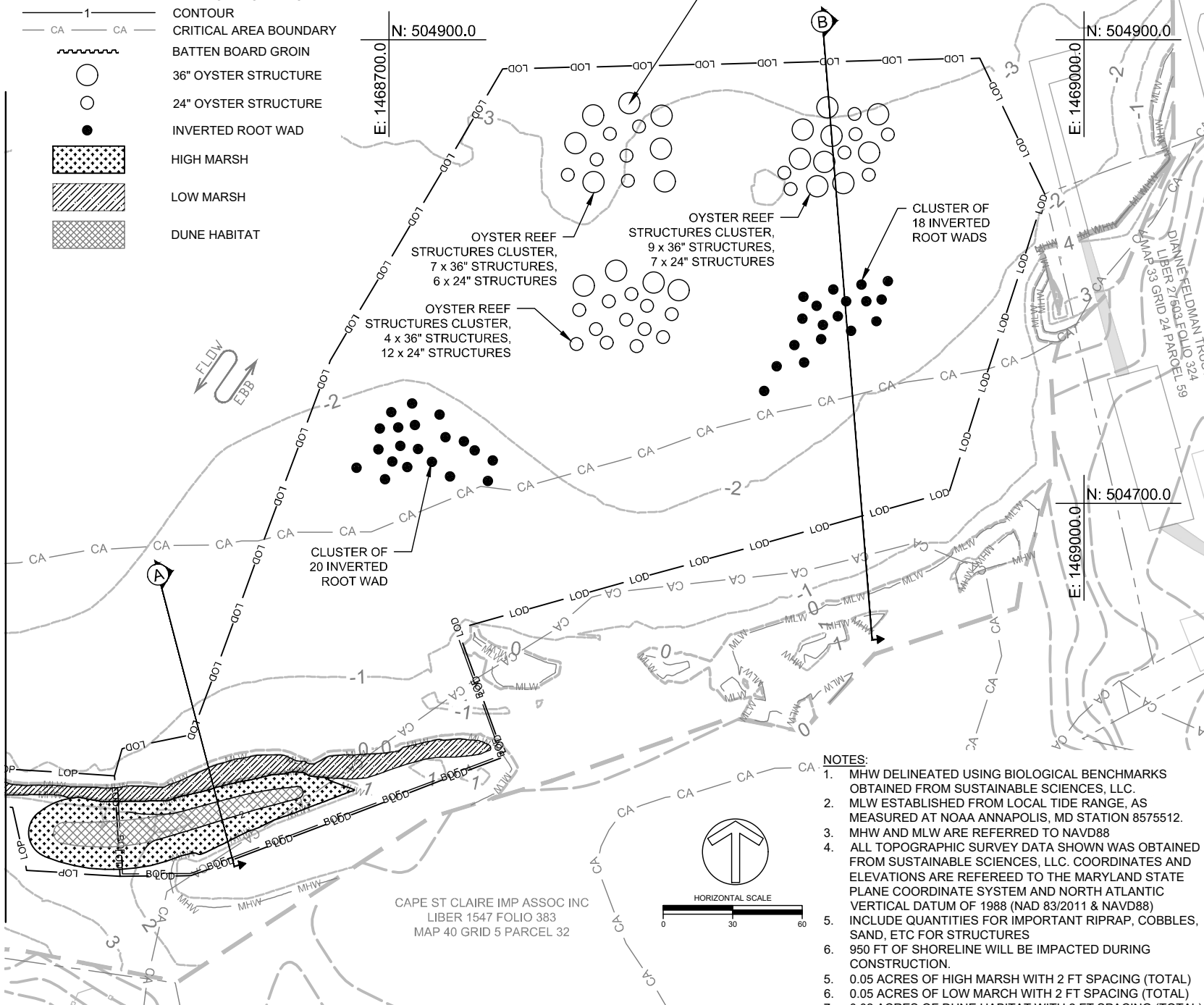
BY: AM, TB CHECK: EM

DWG. NO. : 5 OF 12

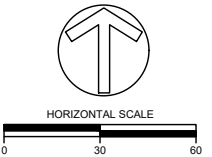
LEGEND

- LOD — LOD — LIMIT OF DISTURBANCE
- LOP — LOP — LIMIT OF PLANTING
- BOF — BOF — BLAZE ORANGE FENCE
- 1 — CONTOUR
- CA — CA — CRITICAL AREA BOUNDARY
- ~ BATTEN BOARD GROIN
- 36" OYSTER STRUCTURE
- 24" OYSTER STRUCTURE
- INVERTED ROOT WAD
- [Pattern] HIGH MARSH
- [Pattern] LOW MARSH
- [Pattern] DUNE HABITAT

DEEP CREEK



CAPE ST CLAIRE IMP ASSOC INC
LIBER 1547 FOLIO 383
MAP 40 GRID 5 PARCEL 32



NOTES:

1. MHW DELINEATED USING BIOLOGICAL BENCHMARKS OBTAINED FROM SUSTAINABLE SCIENCES, LLC.
2. MLW ESTABLISHED FROM LOCAL TIDE RANGE, AS MEASURED AT NOAA ANNAPOLIS, MD STATION 8575512.
3. MHW AND MLW ARE REFERRED TO NAVD88
4. ALL TOPOGRAPHIC SURVEY DATA SHOWN WAS OBTAINED FROM SUSTAINABLE SCIENCES, LLC. COORDINATES AND ELEVATIONS ARE REFERRED TO THE MARYLAND STATE PLANE COORDINATE SYSTEM AND NORTH ATLANTIC VERTICAL DATUM OF 1988 (NAD 83/2011 & NAVD88)
5. INCLUDE QUANTITIES FOR IMPORTANT RIPRAP, COBBLES, SAND, ETC FOR STRUCTURES
6. 950 FT OF SHORELINE WILL BE IMPACTED DURING CONSTRUCTION.
5. 0.05 ACRES OF HIGH MARSH WITH 2 FT SPACING (TOTAL)
6. 0.05 ACRES OF LOW MARCH WITH 2 FT SPACING (TOTAL)
7. 0.02 ACRES OF DUNE HABITAT WITH 2 FT SPACING (TOTAL)

CAPE ST CLAIRE COMMUNITY IMPROVEMENT ASSOCIATION
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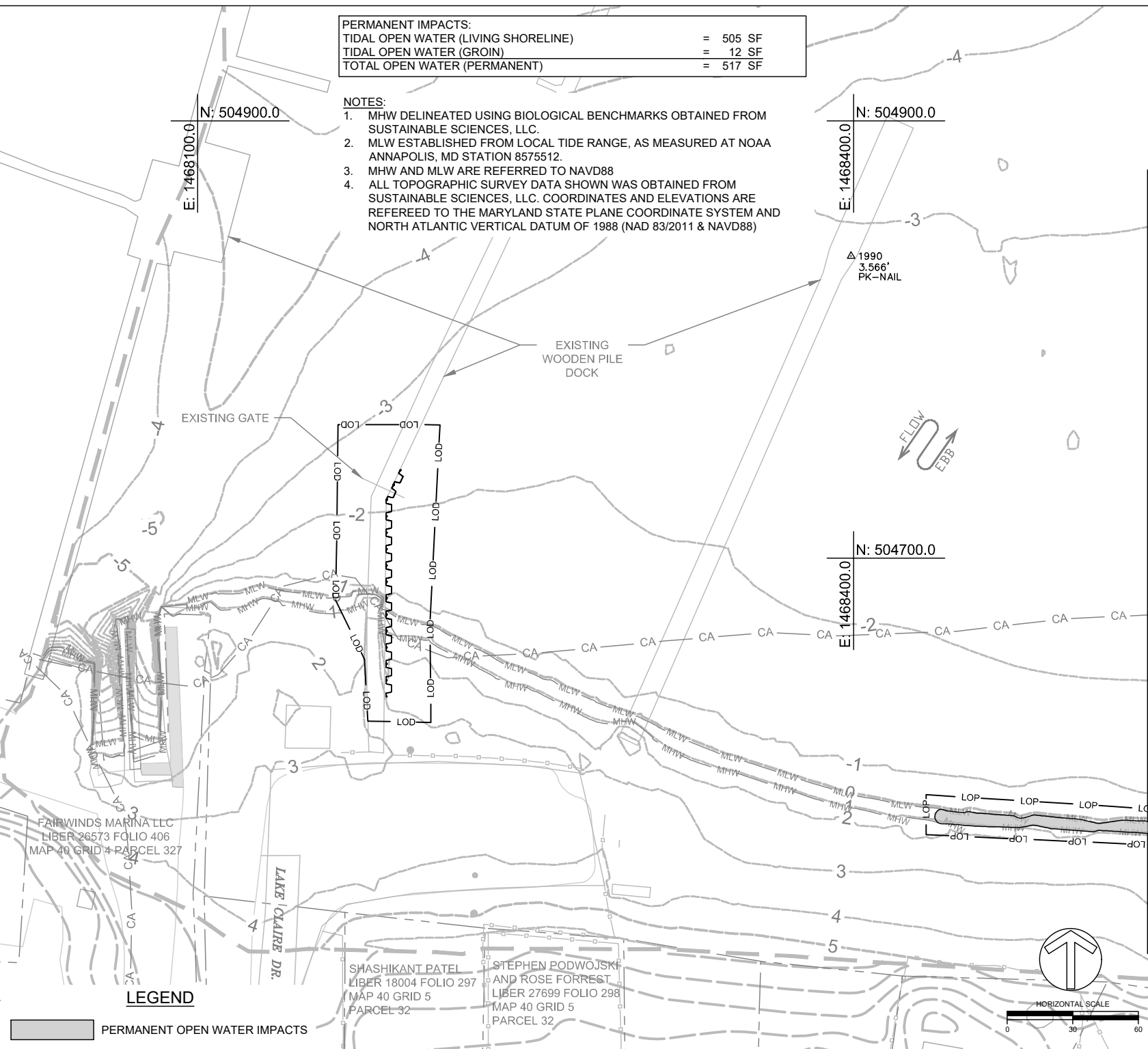
410 South Second St. Denton, MD 21629
ph: 4109244316
http://www.sustainablescience.com

CAPE ST CLAIRE SHORELINE ENHANCEMENT - LAKE CLAIRE

TITLE: PROPOSED CONDITIONS	
PROJECT NO.:	17023.01
SCALE:	1" = 60'
BY:	CHECK:
AM, TB	EM
DWG. NO.:	
6 OF 12	

PERMANENT IMPACTS:	
TIDAL OPEN WATER (LIVING SHORELINE)	= 505 SF
TIDAL OPEN WATER (GROIN)	= 12 SF
TOTAL OPEN WATER (PERMANENT)	= 517 SF

- NOTES:
1. MHW DELINEATED USING BIOLOGICAL BENCHMARKS OBTAINED FROM SUSTAINABLE SCIENCES, LLC.
 2. MLW ESTABLISHED FROM LOCAL TIDE RANGE, AS MEASURED AT NOAA ANNAPOLIS, MD STATION 8575512.
 3. MHW AND MLW ARE REFERRED TO NAVD88
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SUSTAINABLE SCIENCE LLC

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MATCHLINE - SHEET 8

CAPE ST CLAIRE SHORELINE ENHANCEMENT - LAKE CLAIRE

TITLE: **IMPACT PLATES**

PROJECT NO.: 17023.01

SCALE: 1" = 60'

BY: AM, TB	CHECK: EM
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DWG. NO.: 7 OF 12

FAIRWINDS MARINA LLC
LIBER 26573 FOLIO 406
MAP 40 GRID 4 PARCEL 327

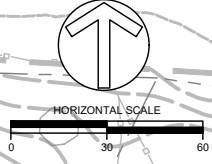
LAKE CLAIRE DR.

SHASHIKANT PATEL
LIBER 18004 FOLIO 297
MAP 40 GRID 5
PARCEL 32

STEPHEN PODWOJSKI
AND ROSE FORREST
LIBER 27699 FOLIO 298
MAP 40 GRID 5
PARCEL 32

LEGEND

PERMANENT OPEN WATER IMPACTS



LEGEND

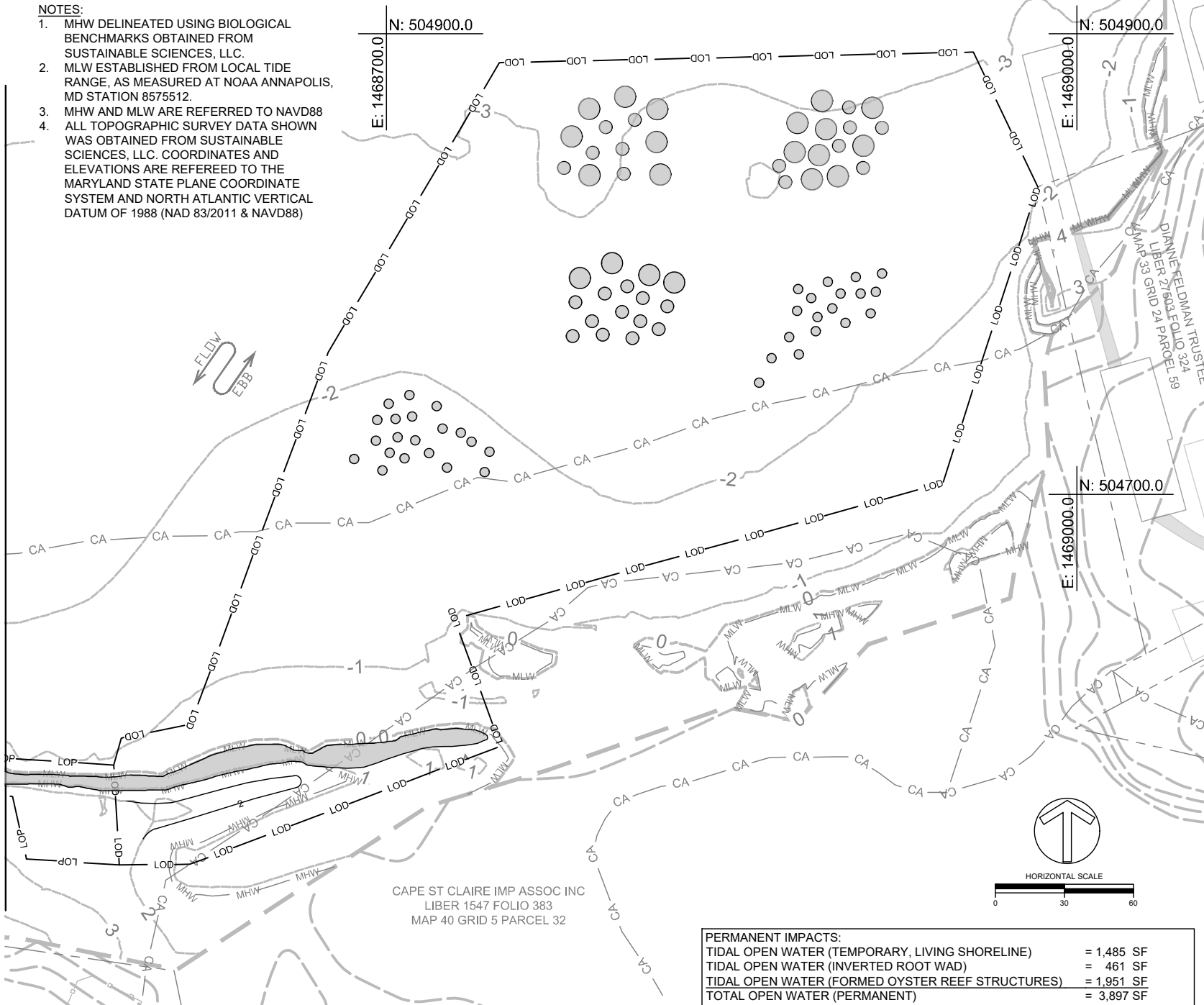
 PERMANENT OPEN WATER IMPACTS

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DEEP CREEK

MATCHLINE - SHEET 7




CAPE ST CLAIRE IMP ASSOC INC
LIBER 1547 FOLIO 383
MAP 40 GRID 5 PARCEL 32

PERMANENT IMPACTS:	
TIDAL OPEN WATER (TEMPORARY, LIVING SHORELINE)	= 1,485 SF
TIDAL OPEN WATER (INVERTED ROOT WAD)	= 461 SF
TIDAL OPEN WATER (FORMED OYSTER REEF STRUCTURES)	= 1,951 SF
TOTAL OPEN WATER (PERMANENT)	= 3,897 SF

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CAPE ST CLAIRE SHORELINE ENHANCEMENT - LAKE CLAIRE

TITLE: IMPACT PLATES

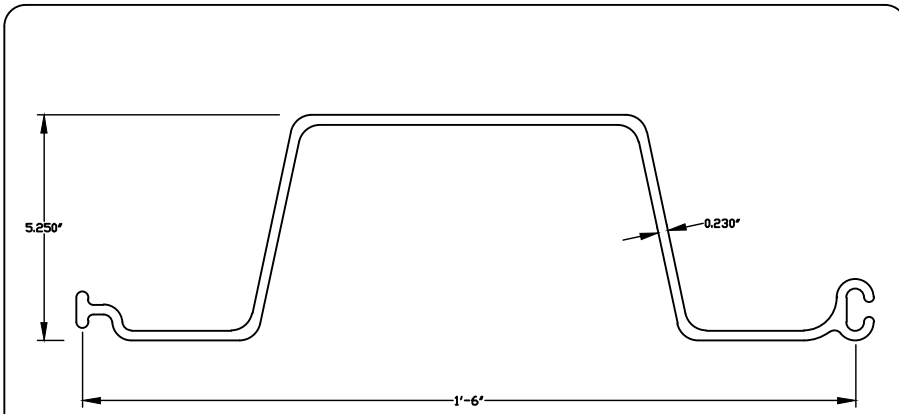
PROJECT NO.: 17023.01


SCALE: 1" = 60'

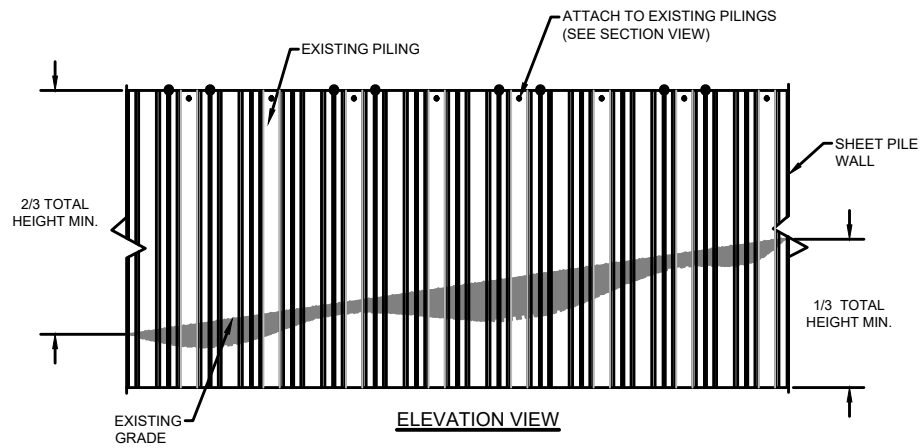
BY: AM, TB CHECK: EM

DWG. NO.: 8 OF 12

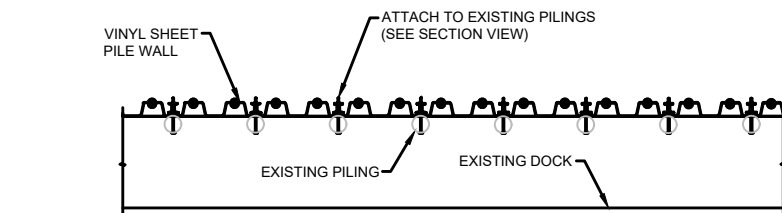
DATE	ISSUES / REVISIONS
12/21/2018	INITIAL SUBMITTAL
04/01/2019	PRE-FINAL SUBMITTAL
01/23/2020	FINAL SUBMITTAL



 Everlast Synthetic Products, LLC 1000 Wyngate Pkwy,S-100 Woodstock, GA 30189 (678)388-7781	Scale: 6' = 1' Date: 12/11/06	THIS DRAWING CONTAINS PROPRIETARY INFORMATION, WHICH IS THE PROPERTY OF EVERLAST SYNTHETIC PRODUCTS, LLC AND SHALL NOT BE COPIED, REPRODUCED, OR MADE AVAILABLE TO THIRD PARTIES WITHOUT PRIOR WRITTEN PERMISSION FROM EVERLAST SYNTHETIC PRODUCTS, LLC.	Certified only with seal, signature, and date
	Product: ESP 2.1 Vinyl Sheet Pile		

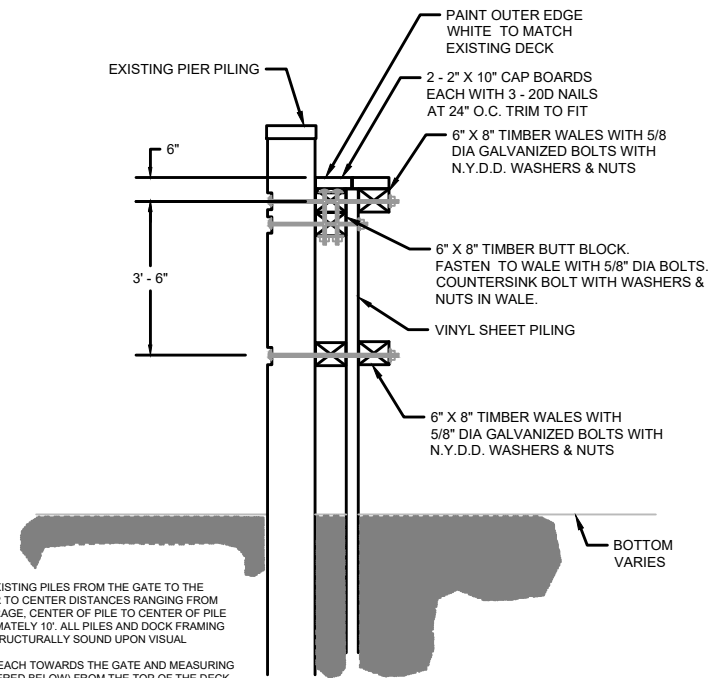


ELEVATION VIEW



PLAN VIEW

- NOTES:
- THERE ARE SEVEN EXISTING PILES FROM THE GATE TO THE BEACH, WITH CENTER TO CENTER DISTANCES RANGING FROM 96" TO 102". ON AVERAGE, CENTER OF PILE TO CENTER OF PILE MEASURES APPROXIMATELY 10'. ALL PILES AND DOCK FRAMING APPEAR NEW AND STRUCTURALLY SOUND UPON VISUAL INSPECTION.
 - MOVING FROM THE BEACH TOWARDS THE GATE AND MEASURING AT EACH PILE (NUMBERED BELOW) FROM THE TOP OF THE DECK DOWN TO THE SAND, THE FOLLOWING MEASUREMENTS WERE RECORDED:
- #1 = 2' 1"
 - #2 = 2' 3"
 - #3 = 3' 11"
 - #4 = 4' 1"
 - #5 = 4' 1"
 - #6 = 4' 4"
 - #7 (CORNER POST @GATE) = 4' 6"



SECTION VIEW

NOT TO SCALE

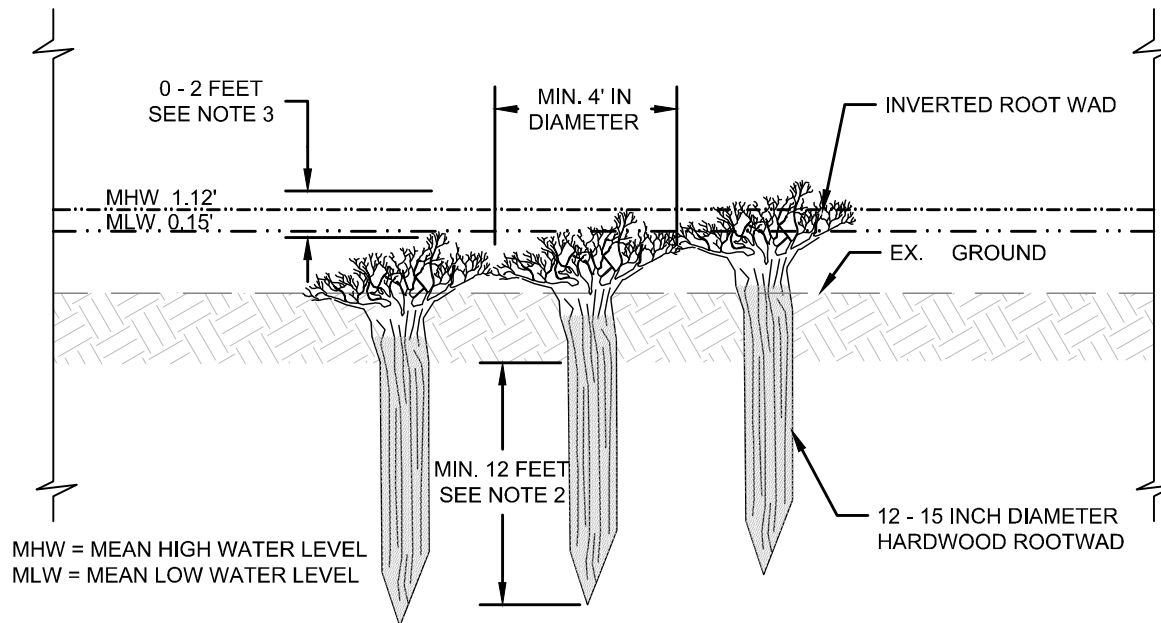
 **Biohabitats**
 The Stables Building, 2081 Clipper Park Road
 Baltimore, MD 21211 / ph: 410.554.0156
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 **SUSTAINABLE SCIENCE LLC**
 410 South Second St. Denton, MD 21629
 ph:4109244316
 http://www.sustainablescience.com

CAPE ST CLAIRE SHORELINE ENHANCEMENT - LAKE CLAIRE

TITLE:		DETAILS	
PROJECT NO.:		17023.01	
SCALE:		NTS	
BY:	AM, TB	CHECK:	EM
DWG. NO.:		9 OF 12	

DATE	ISSUES / REVISIONS
12/21/2018	INITIAL SUBMITTAL
04/01/2019	PRE-FINAL SUBMITTAL
01/23/2020	FINAL SUBMITTAL



MHW = MEAN HIGH WATER LEVEL
MLW = MEAN LOW WATER LEVEL

NOTES:

1. INVERTED ROOT WADS TO BE A HARDWOOD SPECIES 12 TO 18 INCHES IN DIAMETER.
2. ROOT WADS SHALL BE JETTED INTO EXISTING SUBSTRATE.
3. AS DIRECTED BY ENGINEER, VARIATIONS AT, ABOVE, AND BELOW MHW.
4. MIN. 8' SPACING O.C.
5. CONTRACTOR SHALL LEAVE LARGE ROOT INTACT, WASHED FREE OF ROCK AND SOIL.

INVERTED ROOTWAD SECTION

NOT TO SCALE



CAPE ST CLAIRE SHORELINE ENHANCEMENT - LAKE CLAIRE

TITLE: DETAILS

PROJECT NO.: 17023.01

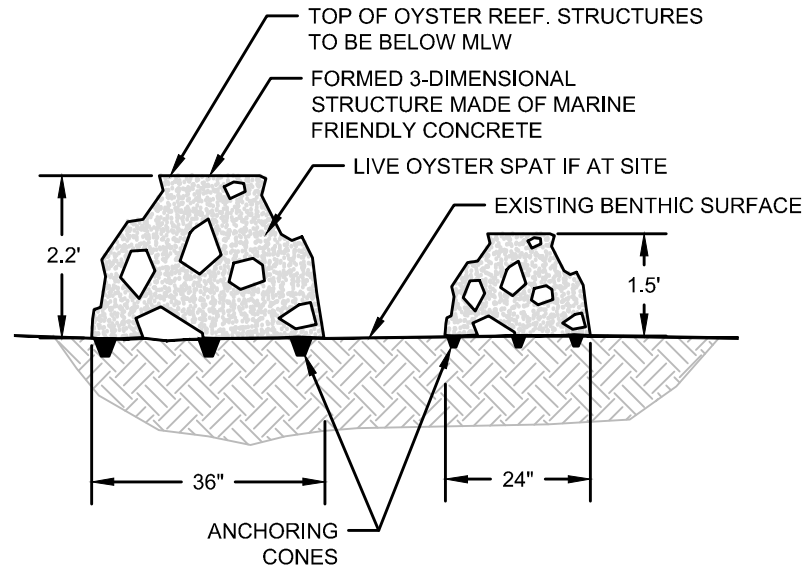
SCALE: NTS

BY: AM, TB	CHECK: EM
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DWG. NO.: 10 OF 12

CAPE ST CLAIRE COMMUNITY
IMPROVEMENT ASSOCIATION
1223 RIVER BAY ROAD
ANNAPOLIS, MD 21409

DATE	ISSUES / REVISIONS
12/21/2018	INITIAL SUBMITTAL
04/01/2019	PRE-FINAL SUBMITTAL
01/23/2020	FINAL SUBMITTAL



NOTES:

1. OYSTER REEF STRUCTURES TO BE PROVIDED BY OWNER.
2. CONTRACTOR SHALL INSTALL OYSTER REEF STRUCTURES AS DIRECTED BY ENGINEER. TOTAL QUANTITY AND APPROXIMATE LOCATIONS SHOWN ON PLANS.
3. OYSTER SPAT SET TO BE COMPLETED BY OWNER PRIOR TO PROVIDING TO CONTRACTOR.

36" & 24" FORMED OYSTER REEF STRUCTURES
SECTION VIEW NOT TO SCALE

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**CAPE ST CLAIRE
SHORELINE
ENHANCEMENT -
LAKE CLAIRE**

TITLE: **DETAILS**

PROJECT NO. : **17023.01**

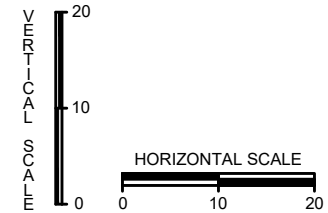
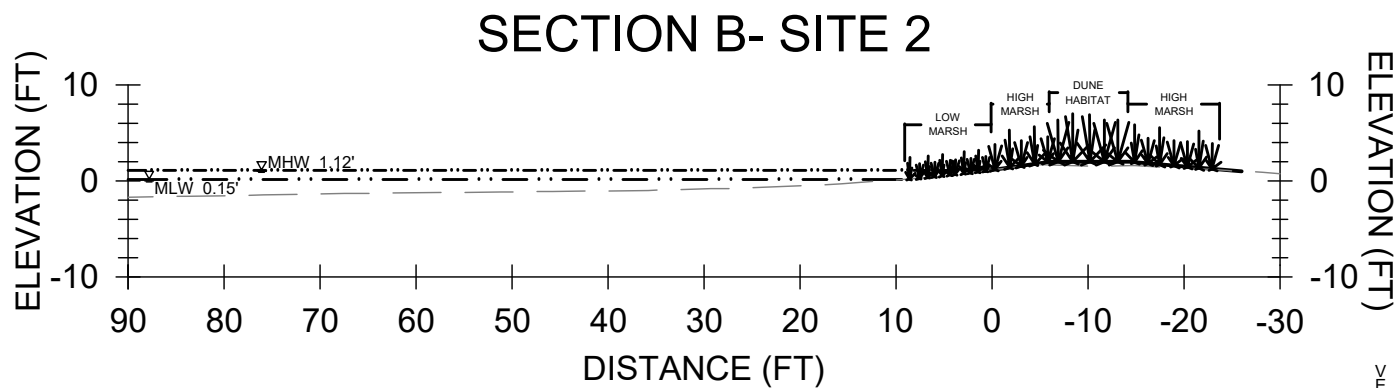
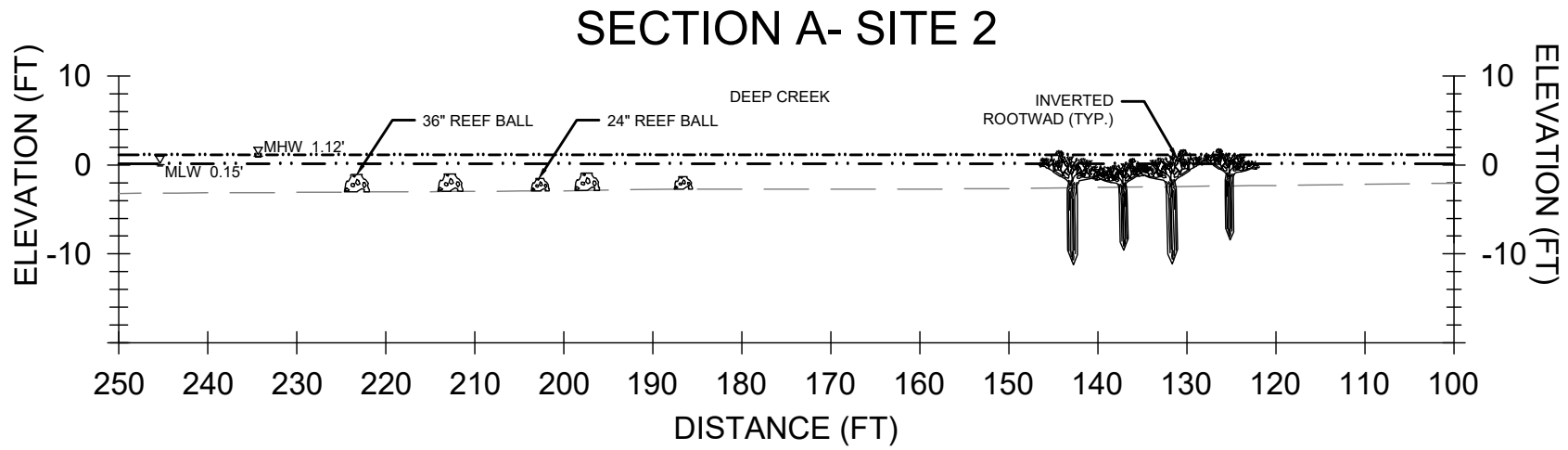
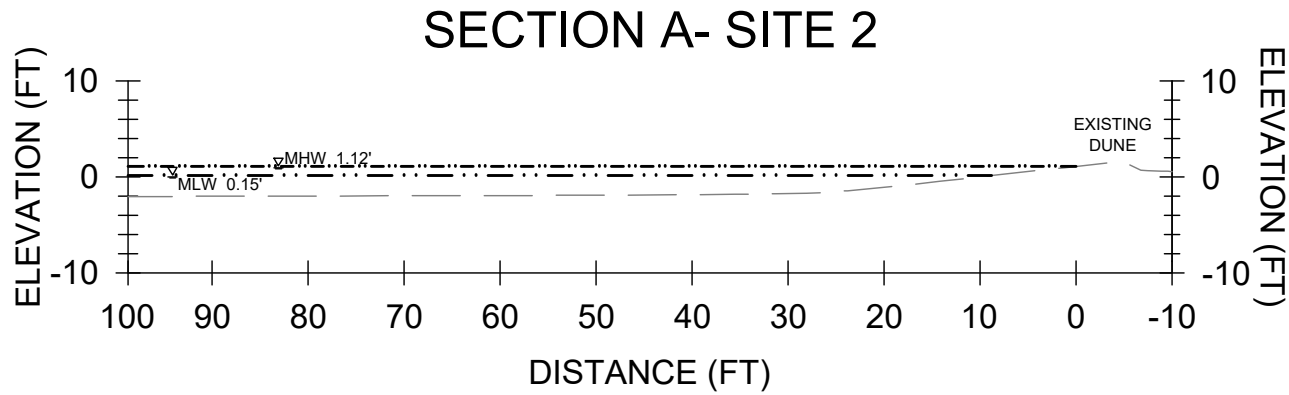
SCALE: **NTS**

BY: AM, TB	CHECK: EM
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DWG. NO. : **11 OF 12**

CAPE ST CLAIRE COMMUNITY IMPROVEMENT ASSOCIATION
1223 RIVER BAY ROAD
ANNAPOLIS, MD 21409

DATE	ISSUES / REVISIONS
12/21/2018	INITIAL SUBMITTAL
04/01/2019	PRE-FINAL SUBMITTAL
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CAPE ST CLAIRE SHORELINE ENHANCEMENT - LAKE CLAIRE	
TITLE: CROSS SECTION	
PROJECT NO.: 17023.01	
SCALE: AS SHOWN	
BY: AM, TB	CHECK: EM
DWG. NO.: 12 OF 12	