



DEPARTMENT OF  
ENVIRONMENTAL PROGRAMS

## Worcester County

GOVERNMENT CENTER  
ONE WEST MARKET STREET, ROOM 1306  
SNOW HILL, MARYLAND 21863  
TEL: 410.632.1220 / FAX: 410.632.2012

LAND PRESERVATION PROGRAM  
STORMWATER MANAGEMENT  
SEDIMENT AND EROSION CONTROL  
SHORELINE CONSTRUCTION  
AGRICULTURAL PRESERVATION  
ADVISORY BOARD

WELL & SEPTIC  
WATER & SEWER PLANNING  
PLUMBING & GAS  
CRITICAL AREAS/FORESTRY  
COMMUNITY HYGIENE

May 2, 2023

This notification is to advise you that the Department has received and is presently reviewing the following request for a shoreline construction project:

Ron & Mary Boltz – Request No. 2023-041 – Request to replace deteriorating timber bulkhead with new vinyl sheeting with maximum encroachment of 18”, backfill the void between the old and new bulkhead with clean sand and remove existing timber pier and platform and replace with new timber platform and associated piles. Also request to relocate existing boat lift and associated outer channelward piles not to exceed Max channelward ext of 22’. This project is located at 538 Yacht Club Dr, Ocean Pines, also known as Tax Map 16, Parcel 14, Lot 5. Third Tax District of Worcester County, Maryland.

The Department in considering this application will make specific findings of fact with regard to the environmental impact, navigational impact, recreational potential, commercial benefit to Worcester County, impact of the proposed construction upon the surrounding neighborhood and upon property values therein, and any other pertinent issues. Approval from the Department does not guarantee approval from any other applicable regulatory agencies.

**If you have an interest which may be adversely affected by the issuance of this permit, you are requested to notify this Department in writing within fifteen (15) calendar days which will end on May 17, 2023.**

Sincerely,

Brandy Whitlock  
Environmental Inspector

cc: Interested Parties  
David Bradford, Deputy Director



WORCESTER COUNTY
SHORELINE CONSTRUCTION
APPLICATION

Request No.: 2023-041
Submission Date: 5-2-23

X Major Construction (\$300.00)
Minor Construction (\$150.00)

Written Description of Proposed Improvement (include channelward distance):

To replace deteriorating timber bulkhead with new vinyl sheeting with maximum channel-ward encroachment of 18", backfill the void between the old bulkhead and new bulkhead with clean sand and to remove existing timber pier and platform and replace with a new timber platform and associated piles. Also, project proposes to relocate existing boat lift and associated outer channelward piles to not exceed a maximum channelward distance of 22' from the mean high water level.

Property Description:

Map: 16 Parcel: 14 Lot: 5 Section: 18 Block: Tax District:
Street Address: 538 Yacht Club Drive, Ocean Pines, MD 21811
Subdivision: Ocean Pines - Mumford Landing Section 18
 Dwelling on lot: Yes Dwelling under construction: No Vacant: Commercial:

Owner: Ron and Mary Boltz Phone No. (410) 546-2210
Mailing Address: 538 Yacht Club Drive, Ocean Pines, MD 21811
E-Mail Address: ron.boltz@alarmengineering.com

Contractor: To be determined Phone No.:
Mailing Address:
E-Mail Address:

Recorded Adjacent Property Owner: A. Leonard Smith Family Trust
Property Address: 536 Yacht Club Drive, Ocean Pines, MD 21811
Tax Map: 16 Parcel: 14 Lot: 4 Section: 18 Block:

Recorded Adjacent Property Owner: Peter Paul Malecki & Pamela J. Slater
Property Address: 947 Yacht Club Drive, Ocean Pines, MD 21811
Tax Map: 16 Parcel: 103 Lot: 35 Section: 18 Block:

As the applicant, I attest that the information presented on this application, site plan and any written documentation attached hereto is known to be accurate. I understand that the proposed shoreline improvement will be constructed to meet or exceed minimum design standards adopted by the Department. Any deviation from these standards will require construction plans sealed by an engineer registered in the State of Maryland. I acknowledge that any falsification of information presented may result in revocation of this approval and of the subsequent Shoreline Construction Permit.

Owner/Applicant's Signature Date 11-APR-23

\*\*\*\*\*

DEPT. USE ONLY:

Notification Distribution Date: 5-2-23 Public Comment Deadline: 5-17-23 (15 calendar days)
Department Approval Date: Expiration:



UNNAMED CANAL TO ISLE OF WIGHT BAY 38°22'27" N 75°07'42" W

**SHEET INDEX**

- 1 VICINITY MAP, PERMIT REQUEST
- 2 OWNER & QUANTITY TABLE
- 3-7 EXISTING SITE AREA/PROPOSED PLANS
- 8-16 SECTION & ELEVATION DETAILS

**QUANTITY SUMMARY**

TOTAL LENGTH = 105 LF TOTAL AREA = 158 SQ. FT.  
 TOTAL CLEAN SAND FILL = 50 CU. YD.  
 NEW TIMBER PLATFORM AREA = 200 SQ. FT.

**PERMIT REQUEST**

TO REPLACE DETERIORATING TIMBER BULKHEAD WITH NEW VINYL SHEETING WITH MAXIMUM CHANNEL-WARD ENCROACHMENT OF 18", BACKFILL THE VOID BETWEEN THE OLD BULKHEAD AND NEW BULKHEAD WITH CLEAN SAND AND TO REMOVE EXISTING TIMBER PIER AND PLATFORM AND REPLACE WITH A NEW TIMBER PLATFORM AND ASSOCIATED PILES. ALSO, PROJECT PROPOSES TO RELOCATE EXISTING BOAT LIFT AND ASSOCIATED OUTER, CHANNELWARD PILES TO NOT EXCEED A MAXIMUM CHANNELWARD DISTANCE OF 22' FROM THE MEAN HIGH WATER LEVEL.

**NOTES:**

EXISTING BULKHEAD IS THE PROPERTY OF THE OWNER.

**LEGEND**

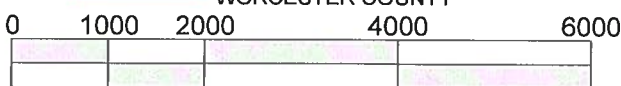
- AFFECTED PROPERTY ADDRESS 84
- ADJACENT PROPERTY ADDRESS 82
- BULKHEAD ELEVATION POINTS X3.9
- SOUNDINGS ELEVATION POINTS X(-4.1)
- EXISTING PROPERTY LINE
- EXISTING BULKHEAD
- PROPOSED NEW BULKHEAD

**BULKHEAD OWNER:**

RON & MARY BOLTZ  
 538 YACHT CLUB DRIVE  
 OCEAN PINES, MARYLAND 21811  
 PHONE 410-546-2210

**LOCATION:**

UNNAMED CANAL ALONG REAR OF  
 PROPERTY LOCATED AT  
 538 YACHT CLUB DRIVE  
 OCEAN PINES, MARYLAND 21811  
 WORCESTER COUNTY



SCALE: 1" = 2000'

**NOTE:**  
 This drawing, specifications, and work produced by Vista Design, Inc. (VDI) for this project are instruments of service for this project only, and remains the copyrighted property of VDI. Reuse or reproduction of any of the instruments of service of VDI by the Client or assignees without the written permission of VDI will be at the Client's risk and be a violation of the copyright laws of the United States of America and the respective state within which the work was completed.

**NOTE:**  
 This Drawing does not include necessary components for construction safety. All construction must be done in compliance with the occupational safety and health act of 1970 and all rules and regulations thereto appurtenant.



**BOLTZ RESIDENCE  
 BULKHEAD  
 REPLACEMENT**

**LOCATION  
 MAP**

**VISTA  
 DESIGN, INC. MDE AI #**  
 Engineers • Architects • Surveyors • Landscape Architects  
 Land Planning Consultants • GIS Services  
 11634 Worcester Hwy, Shovel, MD 21862  
 Ph. 410-352-3874 • www.vistadesigninc.com

**PROJECT DATA**  
 Project: 23-009  
 File: CE032823.dwg  
 Date: 4/6/2023  
 Scale: 1" = 2000'  
 Sheet: I of 16

**BULKHEAD QUANTITIES**

BOLTZ BULKHEAD REPLACEMENT AREA 105 LF x 1.5W = 158 SQ. FT.  
 CLEAN SAND FILL 105 LF x 1.5W x 8'H = 1,260 CU. FT. / 50 CU.YD.  
 TOTAL LENGTH = 105 LF  
 TOTAL AREA OF NEW BULKHEAD = 158 SQ. FT.  
 TOTAL CLEAN SAND FILL REQUIRED 50 CU. YD.  
 TOTAL DISTURBED AREA = 850 SQ. FT.

**PROPOSED WATERACCESS IMPROVEMENT QUANTITIES**

EXISTING TIMBER PIER TO BE REMOVED (5.9' W X 26' L) = 154.6 SQ. FT.  
 EXISTING TIMBER PLATFORM TO BE REMOVED (3.6' W X 9.2' L) = 33.2 SQ. FT.  
 EXISTING BOAT LIFT AND PILES TO BE RELOCATED (15' W X 13' L) = 195 SQ. FT.  
 NEW TIMBER PLATFORM (5.0' W X 40' L) = 200 SQ. FT.

TOTAL PLATFORM AREA = 200 SQ. FT.

**AFFECTED LOT OWNER INFORMATION**

PROPERTY ADDRESS	MAILING ADDRESS	CURRENT OWNER	TAX MAP	GRID	PAR CEL	LOT #	SUB. SECT.	PLAT REF. (BOOK - PAGE)	DEED REF. (LIBER / FOLIO)
538 YACHT CLUB DRIVE OCEAN PINES 21811	SAME	MARY MALLOW & RON JEFFERY BOLTZ	16	23	14	5	18	RHO 144-40	7758 / 151

**ADJACENT LOT OWNER INFORMATION**

PROPERTY ADDRESS	MAILING ADDRESS	CURRENT OWNER	TAX MAP	GRID	PAR CEL	LOT #	SUB. SECT.	PLAT REF. (BOOK - PAGE)	DEED REF. (LIBER / FOLIO)
536 YACHT CLUB DRIVE OCEAN PINES 21811	SAME	A. LEONARD SMITH FAMILY TRUST	16	23	14	4	18	RHO 144-40	4601 / 96
947 YACHT CLUB DRIVE OCEAN PINES 21811	SAME	PETER PAUL MALECKI & PAMELA J. SLATER	16	23	103	35	18	FWH 144-52	6771 / 159

**PERMIT REQUEST**

TO REPLACE DETERIORATING TIMBER BULKHEAD WITH NEW VINYL SHEETING WITH MAXIMUM CHANNEL-WARD ENCROACHMENT OF 18", BACKFILL THE VOID BETWEEN THE OLD BULKHEAD AND NEW BULKHEAD WITH CLEAN SAND AND TO REMOVE EXISTING TIMBER PIER AND PLATFORM AND REPLACE WITH A NEW TIMBER PLATFORM AND ASSOCIATED PILES. ALSO, PROJECT PROPOSES TO RELOCATE EXISTING BOAT LIFT AND ASSOCIATED OUTER, CHANNELWARD PILES TO NOT EXCEED A MAXIMUM CHANNELWARD DISTANCE OF 20' FROM THE NEWLY REPLACED BULKHEAD.

**NOTES:**

- EXISTING BULKHEAD IS THE PROPERTY OF THE PROPERTY OWNER.
- NO SUB-AQUATIC VEGETATIVE (SAV) BEDS WERE OBSERVED WITHIN THE PERMIT AREA.
- MEAN HIGH WATER ELEVATION = +/- 1.0'

**NOTE:**

This drawing, specifications, and work produced by Vista Design, Inc. (VDI) for this project are instruments of service for this project only, and remains the copyrighted property of VDI. Reuse or reproduction of any of the instruments of service of VDI by the Client or assignees without the written permission of VDI will be at the Clients risk and be a violation of the copyright laws of the United States of America and the respective state within which the work was completed.

**NOTE:**

This Drawing does not include necessary components for construction safety. All construction must be done in compliance with the occupational safety and health act of 1970 and all rules and regulations thereto appurtenant.



BOLTZ RESIDENCE  
BULKHEAD  
REPLACEMENT

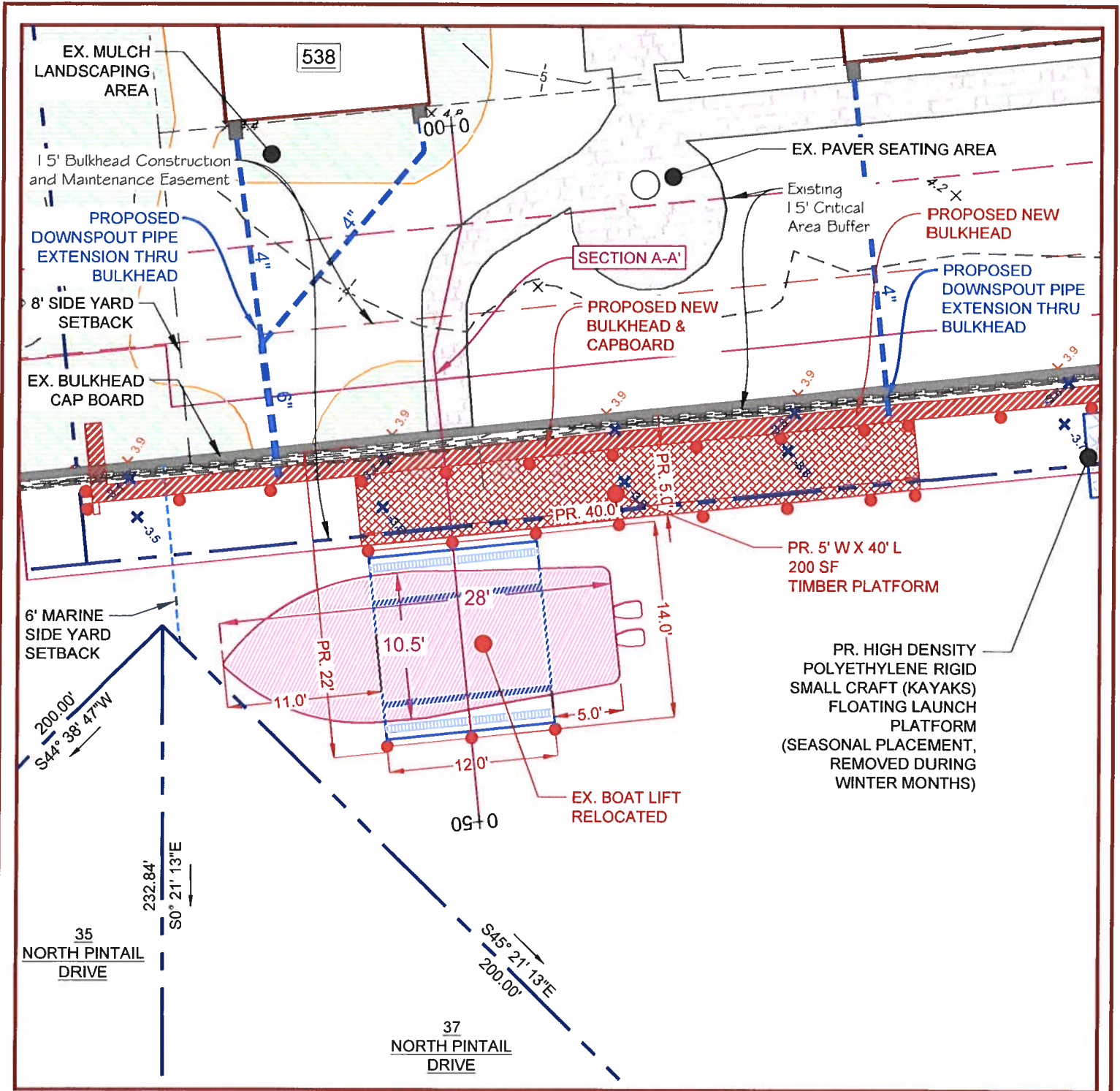
OWNER &  
QUANTITY  
TABLE

**VISTA**  
DESIGN, INC. MDE AI #  
Engineers • Architects • Surveyors • Landscape Architects  
Land Planning Consultants • GIS Services  
11634 Worcester Hwy, Showell, MD 21862  
Ph. 410-352-3874 • www.vistadesigninc.com

PROJECT DATA	
Project:	23-009
File:	CE032823.dwg
Date:	5/2/2023
Scale:	1" = 2000'
Sheet:	2 of 16







**LEGEND**

- AFFECTED PROPERTY ADDRESS 84
- ADJACENT PROPERTY ADDRESS 82
- BULKHEAD ELEVATION POINTS X3.9
- SOUNDINGS ELEVATION POINTS X(-4.1)
- EXISTING PROPERTY LINE
- EXISTING BULKHEAD
- PROPOSED NEW BULKHEAD



SCALE: 1" = 10'

**NOTE:**

This drawing, specifications, and work produced by Vista Design, Inc. (VDI) for this project are instruments of service for this project only, and remains the copyrighted property of VDI. Reuse or reproduction of any of the instruments of service of VDI by the Client or assignees without the written permission of VDI will be at the Client's risk and be a violation of the copyright laws of the United States of America and the respective state within which the work was completed.

**NOTE:**

This Drawing does not include necessary components for construction safety. All construction must be done in compliance with the occupational safety and health act of 1970 and all rules and regulations thereto appurtenant.



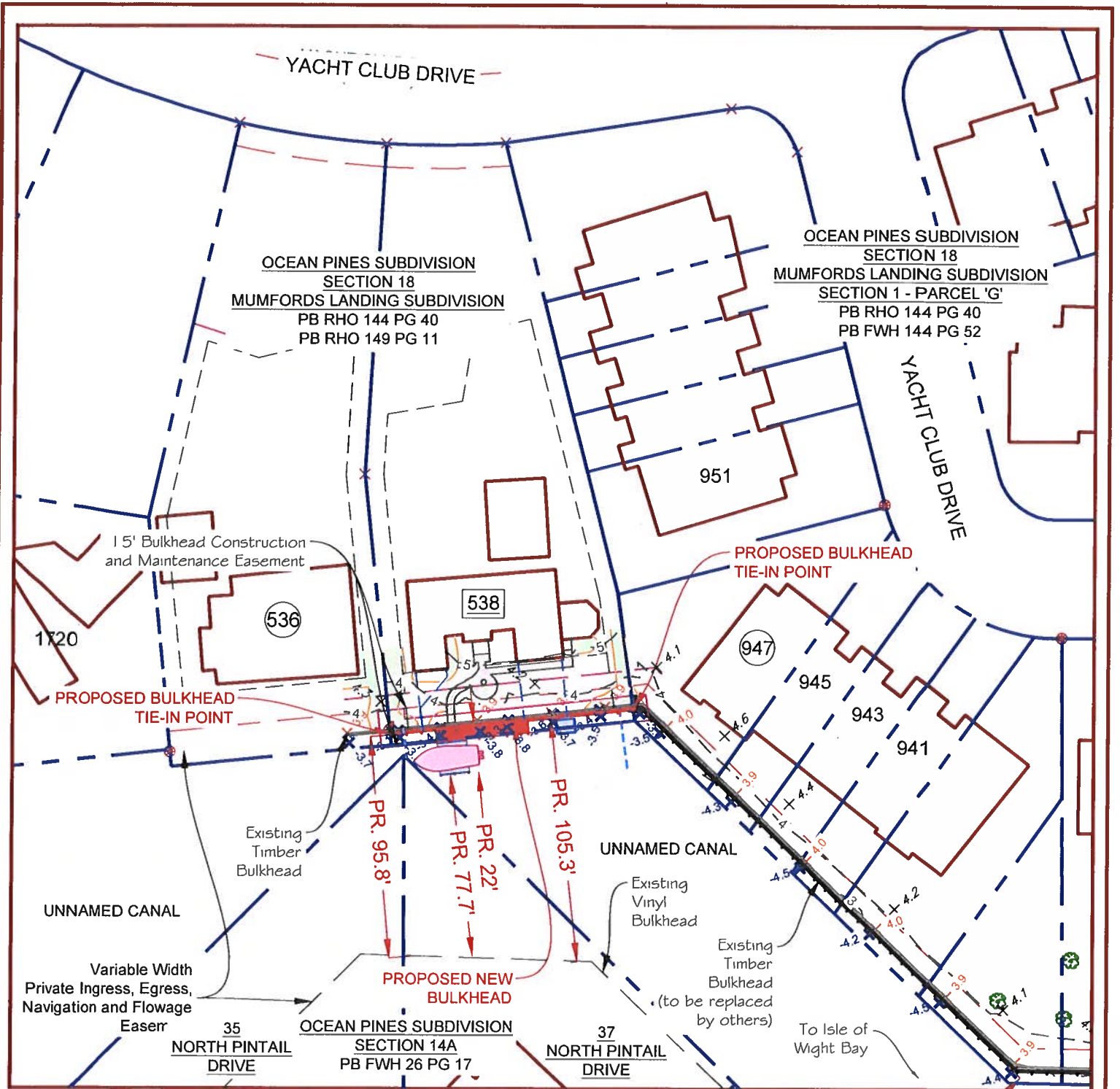
**BOLTZ RESIDENCE  
BULKHEAD  
REPLACEMENT**

**PROPOSED  
SITE  
PLAN**

**VISTA  
DESIGN, INC.** MDE AI #  
Engineers • Architects • Surveyors • Landscape Architects  
Land Planning Consultants • GIS Services  
11634 Worcester Hwy, Showell, MD 21862  
Ph. 410-352-3874 • www.vistadesigninc.com

**PROJECT DATA**

Project:	23-009
File:	CE032823.dwg
Date:	3/30/2023
Scale:	1" = 10'
Sheet:	5 of 16



**LEGEND**

- AFFECTED PROPERTY ADDRESS 84
- ADJACENT PROPERTY ADDRESS 82
- BULKHEAD ELEVATION POINTS X3.9
- SOUNDINGS ELEVATION POINTS X (-4.1)
- EXISTING PROPERTY LINE
- EXISTING BULKHEAD
- PROPOSED NEW BULKHEAD



SCALE: 1" = 60'

**NOTE:**  
 This drawing, specifications, and work produced by Vista Design, Inc. (VDI) for this project are instruments of service for this project only, and remains the copyrighted property of VDI. Reuse or reproduction of any of the instruments of service of VDI by the Client or assignees without the written permission of VDI will be at the Client's risk and be a violation of the copyright laws of the United States of America and the respective state within which the work was completed.

**NOTE:**  
 This Drawing does not include necessary components for construction safety. All construction must be done in compliance with the occupational safety and health act of 1970 and all rules and regulations thereto appurtenant.



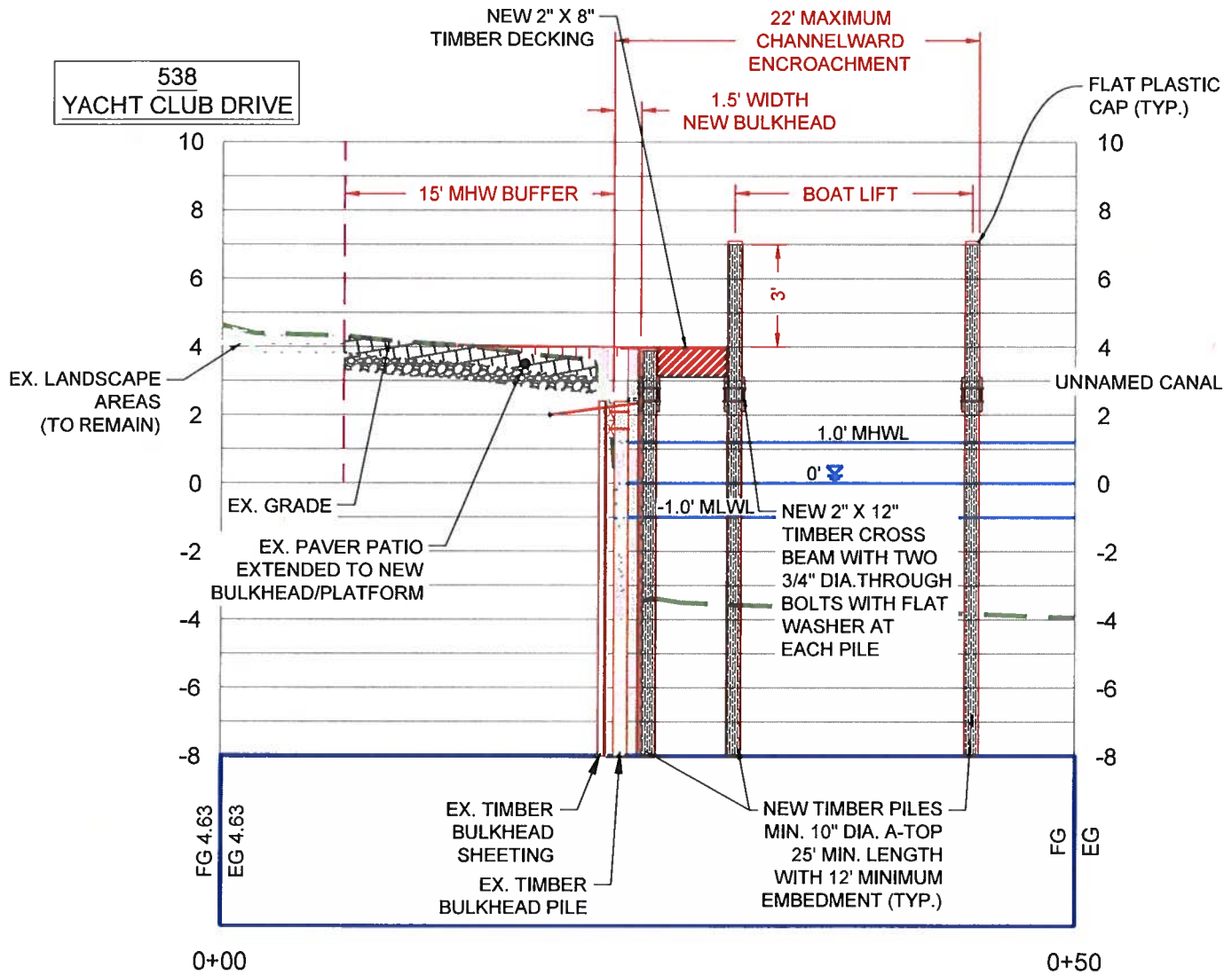
**BOLTZ RESIDENCE  
 BULKHEAD  
 REPLACEMENT**

**PROPOSED  
 CHANNEL  
 DIMENSIONS**

**VISTA  
 DESIGN, INC. MDE AI #**  
 Engineers • Architects • Surveyors • Landscape Architects  
 Land Planning Consultants • GIS Services  
 11634 Worcester Hwy, Showell, MD 21862  
 Ph. 410-352-3874 • www.vistadesigninc.com

PROJECT DATA	
Project:	23-009
File:	CE032823.dwg
Date:	4/6/2023
Scale:	1" = 60'
Sheet:	6 of 16





**SECTION A-A' ELEVATION**  
**HORIZ: 1" = 10'**  
**VERT: 1" = 5'**

**LEGEND**

- AFFECTED PROPERTY ADDRESS 84
- ADJACENT PROPERTY ADDRESS 82
- BULKHEAD ELEVATION POINTS X3.9
- SOUNDINGS ELEVATION POINTS X(-4.1)
- EXISTING PROPERTY LINE
- EXISTING BULKHEAD
- PROPOSED NEW BULKHEAD



SCALE: 1" = 10'

**NOTE:**

This drawing, specifications, and work produced by Vista Design, Inc. (VDI) for this project are instruments of service for this project only, and remains the copyrighted property of VDI. Reuse or reproduction of any of the instruments of service of VDI by the Client or assignees without the written permission of VDI will be at the Client's risk and be a violation of the copyright laws of the United States of America and the respective state within which the work was completed.

**NOTE:**

This Drawing does not include necessary components for construction safety. All construction must be done in compliance with the occupational safety and health act of 1970 and all rules and regulations thereto appurtenant.

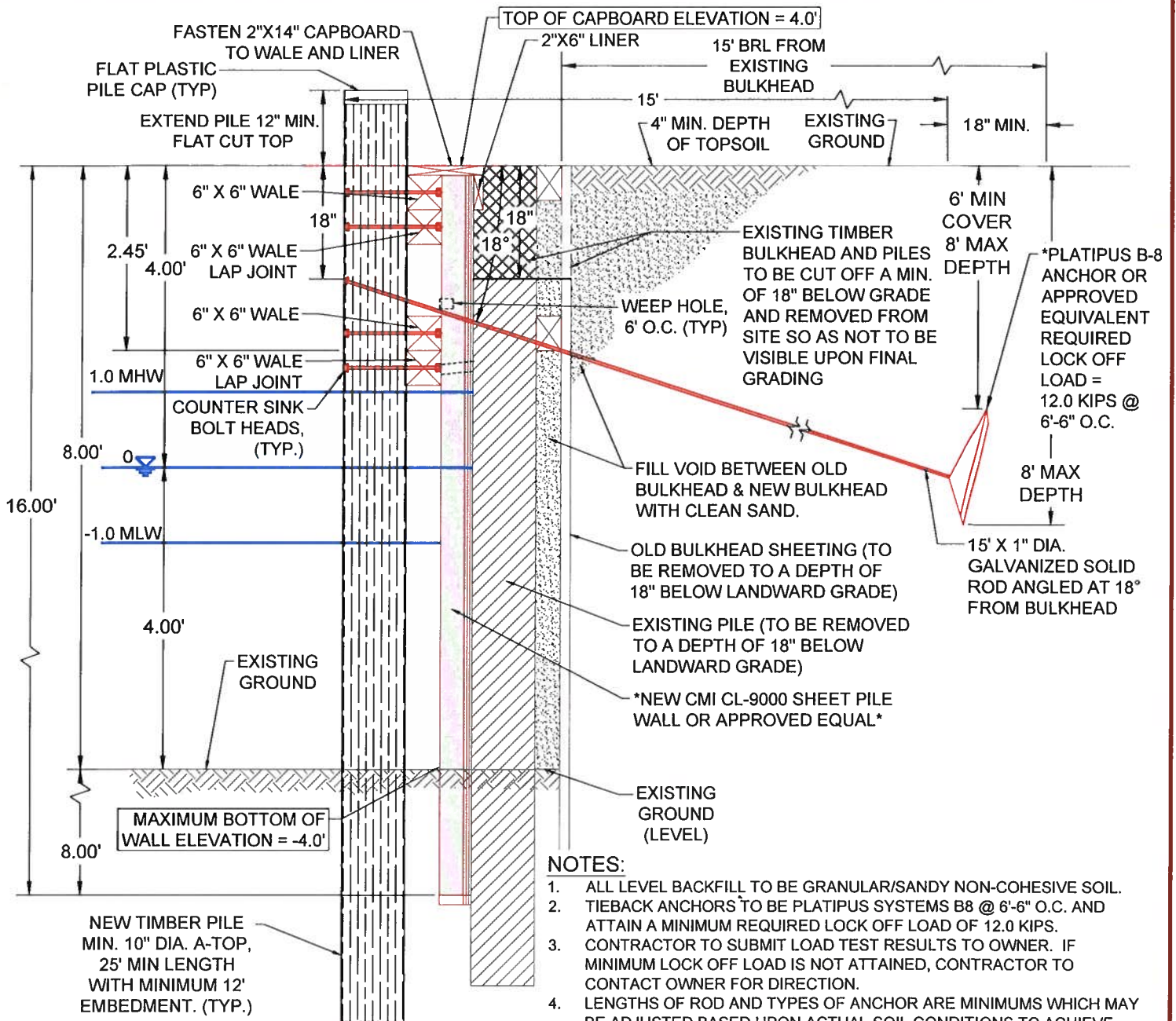


**BOLTZ RESIDENCE  
 BULKHEAD  
 REPLACEMENT**

**PROPOSED  
 PIER  
 ELEVATION**

**VISTA**  
 DESIGN, INC. MDE AI #  
 Engineers • Architects • Surveyors • Landscape Architects  
 Land Planning Consultants • GIS Services  
 11634 Worcester Hwy, Showell, MD 21862  
 Ph. 410-352-3874 • www.vistadesigninc.com

PROJECT DATA	
Project:	23-009
File:	CE032823.dwg
Date:	4/6/2023
Scale:	1" = 10'
Sheet:	7 of 16



\*SHEETING TO BE CMI CL-9000 SHEET PILE AND ANCHORS TO BE PLATIPUS B-8 ANCHOR OR APPROVED EQUIVALENTS. ANY SUBSTITUTIONS TO BE APPROVED IN WRITING BY OWNER AND PROJECT ENGINEER PRIOR TO PURCHASE AND INSTALLATION.

**NOTES:**

1. ALL LEVEL BACKFILL TO BE GRANULAR/SANDY NON-COHESIVE SOIL.
2. TIEBACK ANCHORS TO BE PLATIPUS SYSTEMS B8 @ 6'-6" O.C. AND ATTAIN A MINIMUM REQUIRED LOCK OFF LOAD OF 12.0 KIPS.
3. CONTRACTOR TO SUBMIT LOAD TEST RESULTS TO OWNER. IF MINIMUM LOCK OFF LOAD IS NOT ATTAINED, CONTRACTOR TO CONTACT OWNER FOR DIRECTION.
4. LENGTHS OF ROD AND TYPES OF ANCHOR ARE MINIMUMS WHICH MAY BE ADJUSTED BASED UPON ACTUAL SOIL CONDITIONS TO ACHIEVE MINIMUM LOCK OFF LOAD.
5. ANCHORS ARE TO BE INSTALLED PER THE MANUFACTURER'S APPROVED SPECIFICATIONS AND INSTALLATION METHODS.
6. ALL FASTENERS AND BOLTS SHALL CONFORM TO ASTM A304, GRADE A.
7. ALL HARDWARE TO BE HOT DIPPED GALVANIZED ALLOY STEEL CONFORMING TO ASTM A193 GRADE B7.
8. 10" DIAMETER 'A' TOP TIMBER PILES TO BE DRIVEN MIN. 12 FEET BELOW FINISHED GRADE. 2.5 CCA MARINE GRADE TREATED.

**ROD AND ANCHOR CROSS-SECTION**



SCALE: 1" = 2'

**NOTE:**

This drawing, specifications, and work produced by Vista Design, Inc. (VDI) for this project are instruments of service for this project only, and remains the copyrighted property of VDI. Reuse or reproduction of any of the instruments of service of VDI by the Client or assignees without the written permission of VDI will be at the Client's risk and be a violation of the copyright laws of the United States of America and the respective state within which the work was completed.

**NOTE:**

This Drawing does not include necessary components for construction safety. All construction must be done in compliance with the occupational safety and health act of 1970 and all rules and regulations thereto appurtenant.



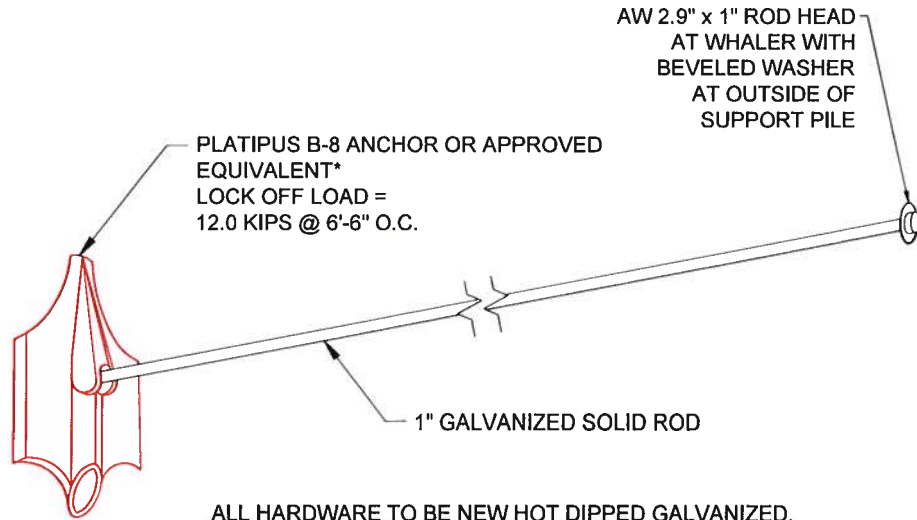
**BOLTZ RESIDENCE  
BULKHEAD  
REPLACEMENT**

**TYPICAL SECTION  
THRU NEW/  
OLD BULKHEAD  
(PLATIPUS ANCHOR)**

**VISTA**  
DESIGN, INC. MDE AI #  
Engineers • Architects • Surveyors • Landscape Architects  
Land Planning Consultants • GIS Services  
11634 Worcester Hwy, Showell, MD 21862  
Ph. 410-352-3874 • www.vistadesigninc.com

**PROJECT DATA**

Project:	23-009
File:	CE032823.dwg
Date:	4/6/2023
Scale:	1" = 2'
Sheet:	8 of 16



ANCHOR TYPE	T-LOC VERSION	DIMENSIONS L x W x H (mm)	PROJECTED SURFACE AREA SQUARE MM (SQUARE INCH)	MATERIALS	TYPICAL LOAD RANGE	MINIMUM DRIVEN DEPTH	Wire	Rod	Chain
B4		310 x 110 x 93 (12.2 x 4.3 x 3.6)	28,736 (44.54)	SG Cast Iron; Aluminum Bronze	10 - 30+ kN (2000 - 6000lbs)	2m	✓	✓	✓
B6		336 x 206 x 91 (13.22 x 8.11 x 3.58)	45,500 (70.52)	SG Cast Iron; Aluminum Bronze	15 - 50+ kN (3500 - 11000lbs)	2m	✓	✓	✓
B8		423 x 259 x 105 (16.65 x 10.19 x 4.13)	71,500 (110.82)	SG Cast Iron; Aluminum Bronze	25 - 75+ kN (5500 - 16500lbs)	3m	✓	✓	✓
B10		541 x 335 x 110 (21.29 x 13.18 x 4.33)	115,800 (179.49)	SG Cast Iron; Aluminum Bronze	40 - 100+ kN (9000 - 22000lbs)	4m	✓	✓	✓



SCALE: 1" = 1'

**NOTE:**

This drawing, specifications, and work produced by Vista Design, Inc. (VDI) for this project are instruments of service for this project only, and remains the copyrighted property of VDI. Reuse or reproduction of any of the instruments of service of VDI by the Client or assignees without the written permission of VDI will be at the Client's risk and be a violation of the copyright laws of the United States of America and the respective state within which the work was completed.

**NOTE:**

This Drawing does not include necessary components for construction safety. All construction must be done in compliance with the occupational safety and health act of 1970 and all rules and regulations thereto appurtenant.

\*PLATIPUS B-8 ANCHOR OR APPROVED EQUIVALENT.  
ANY SUBSTITUTIONS TO BE APPROVED IN WRITING BY OWNER AND PROJECT ENGINEER PRIOR TO PURCHASE AND INSTALLATION.



BOLTZ RESIDENCE  
BULKHEAD  
REPLACEMENT

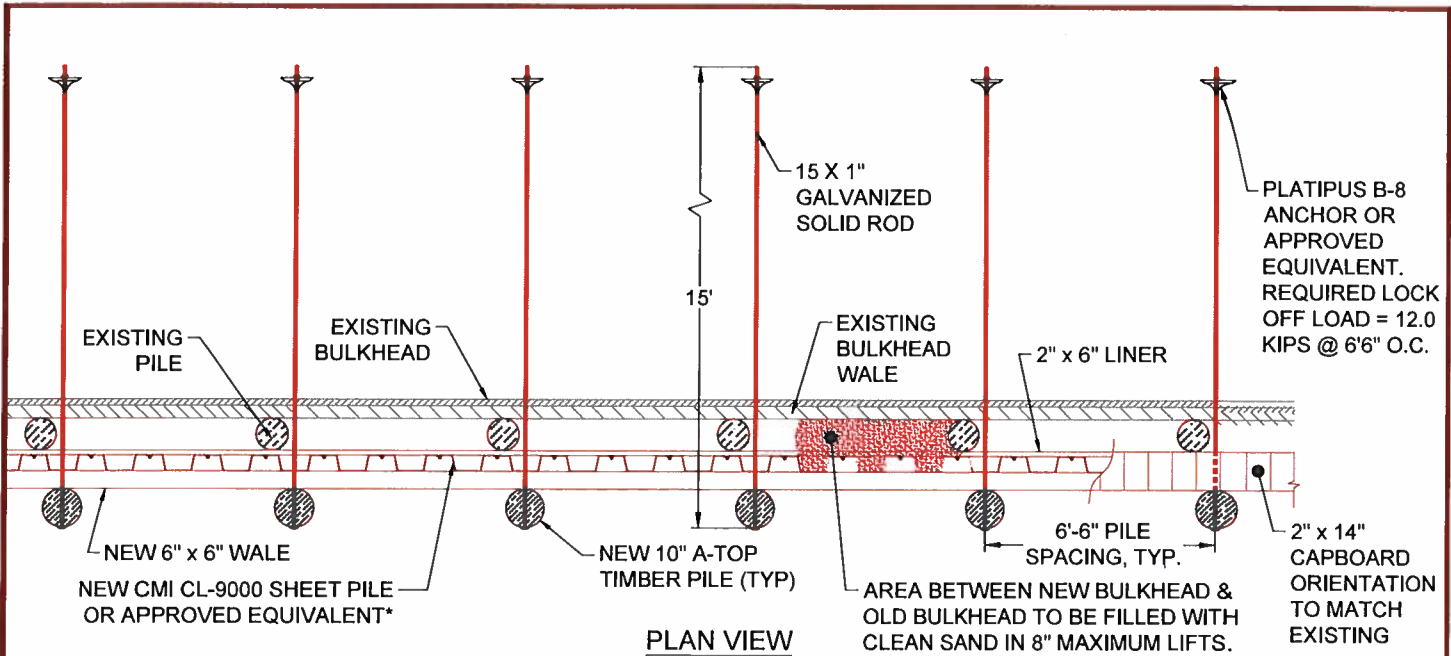
TYPICAL DETAIL  
PLATIPUS B-8  
ANCHOR

**VISTA**  
DESIGN, INC.

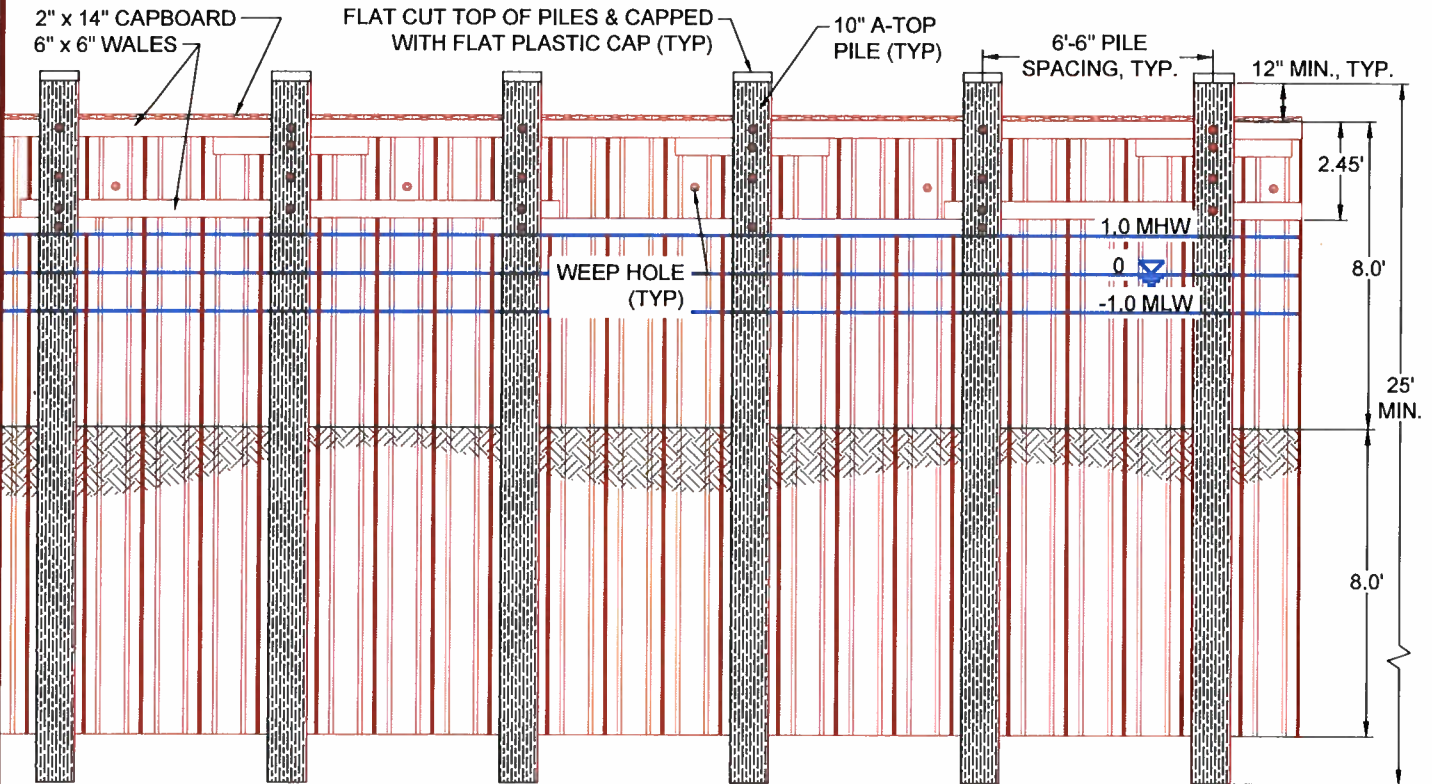
Engineers • Architects • Surveyors • Landscape Architects  
Land Planning Consultants • GIS Services  
11634 Worcester Hwy, Showell, MD 21862  
Ph. 410-352-3874 • www.vistadesigninc.com

**PROJECT DATA**

Project: 17-111  
File: CE032823.dwg  
Date: 4/6/2023  
Scale: 1" = 1'  
Sheet: 9 of 16



PLAN VIEW



ELEVATION VIEW



SCALE: 1" = 5'

\*SHEETING TO BE CMI CL-9000 SHEET PILE OR APPROVED EQUIVALENT.  
 PLATIPUS B-8 ANCHOR OR APPROVED EQUIVALENT. ANY SUBSTITUTIONS  
 TO BE APPROVED IN WRITING BY OWNER AND PROJECT ENGINEER PRIOR  
 TO PURCHASE AND INSTALLATION.

**NOTE:**

This drawing, specifications, and work produced by Vista Design, Inc. (VDI) for this project are instruments of service for this project only, and remains the copyrighted property of VDI. Reuse or reproduction of any of the instruments of service of VDI by the Client or assignees without the written permission of VDI will be at the Client's risk and be a violation of the copyright laws of the United States of America and the respective state within which the work was completed.

**NOTE:**

This Drawing does not include necessary components for construction safety. All construction must be done in compliance with the occupational safety and health act of 1970 and all rules and regulations thereto appurtenant.



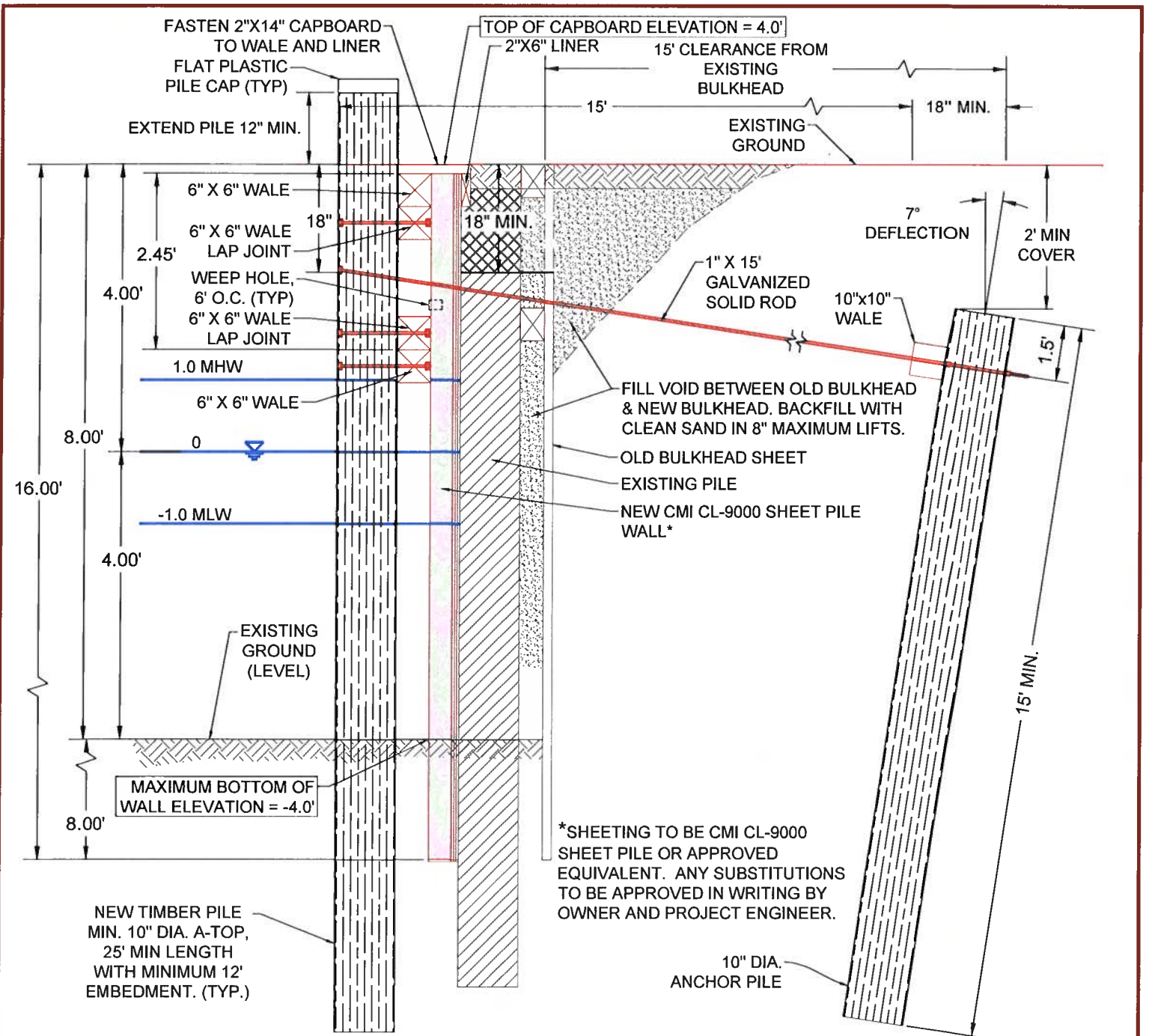
BOLTZ RESIDENCE  
 BULKHEAD  
 REPLACEMENT

TYPICAL SECTION  
 THRU NEW/  
 OLD BULKHEAD  
 (PLATIPUS ANCHOR)

**VISTA**  
 DESIGN, INC. MDE AI #  
 Engineers • Architects • Surveyors • Landscape Architects  
 Land Planning Consultants • GIS Services  
 11634 Worcester Hwy, Showell, MD 21862  
 Ph. 410-352-3874 • www.vistadesigninc.com

**PROJECT DATA**

Project:	23-009
File:	CE032823.dwg
Date:	4/6/2023
Scale:	1" = 5'
Sheet:	10 of 16



**NOTES:**

1. ALL LEVEL BACKFILL TO BE GRANULAR/SANDY NON-COHESIVE SOIL.
2. LENGTHS OF ROD AND TYPES OF ANCHOR ARE MINIMUMS WHICH MAY BE ADJUSTED BASED UPON ACTUAL SOIL CONDITIONS TO ACHIEVE MINIMUM LOCK OFF LOAD.
3. ANCHORS ARE TO BE INSTALLED PER THE MANUFACTURER'S APPROVED SPECIFICATIONS AND INSTALLATION METHODS.
4. ALL FASTENERS AND BOLTS SHALL CONFORM TO ASTM A304, GRADE A.
5. ALL HARDWARE TO BE HOT DIPPED GALVANIZED ALLOY STEEL CONFORMING TO ASTM A193 GRADE B7.
6. 10" DIAMETER 'A' TOP TIMBER PILES TO BE DRIVEN MIN. 12 FEET BELOW FINISHED GRADE. 2.5 CCA MARINE GRADE TREATED.

**TYPICAL CROSS-SECTION**



SCALE: 1" = 2'

**NOTE:**  
This drawing, specifications, and work produced by Vista Design, Inc. (VDI) for this project are instruments of service for this project only, and remains the copyrighted property of VDI. Reuse or reproduction of any of the instruments of service of VDI by the Client or assignees without the written permission of VDI will be at the Client's risk and be a violation of the copyright laws of the United States of America and the respective state within which the work was completed.

**NOTE:**  
This Drawing does not include necessary components for construction safety. All construction must be done in compliance with the occupational safety and health act of 1970 and all rules and regulations thereto appurtenant.

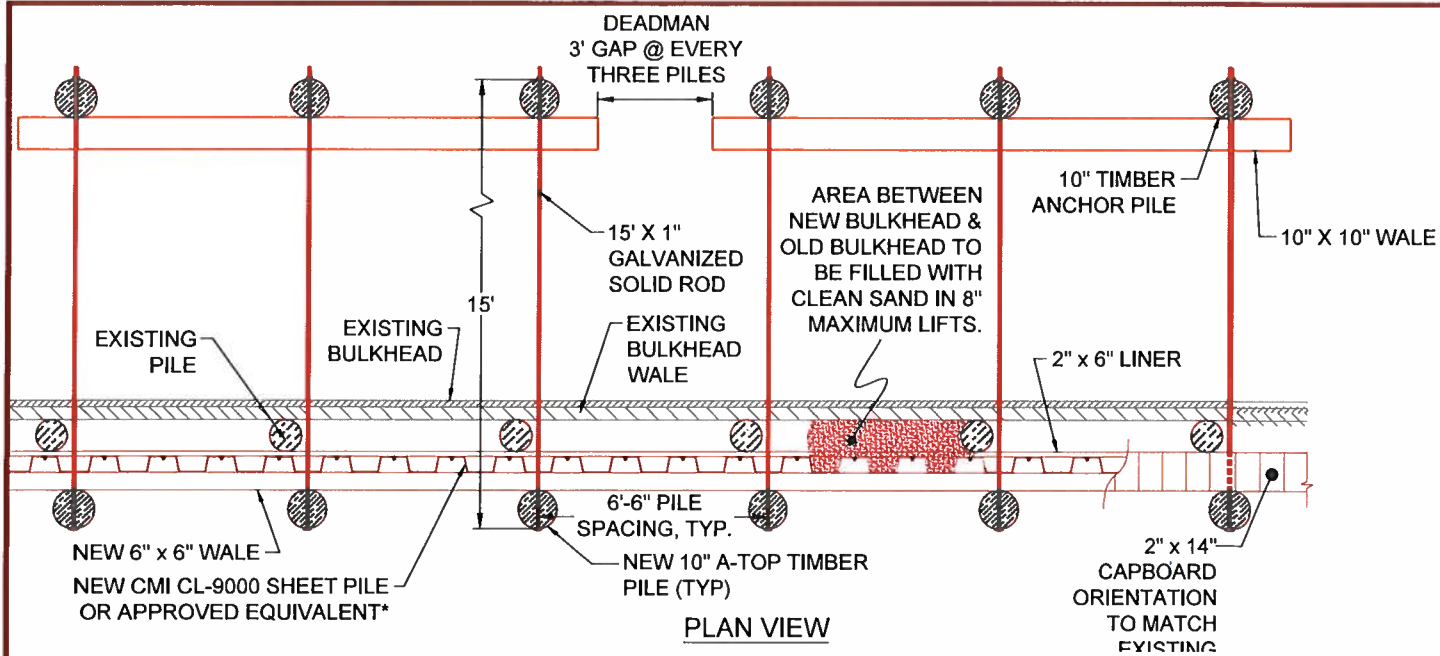


**BOLTZ RESIDENCE  
BULKHEAD  
REPLACEMENT**

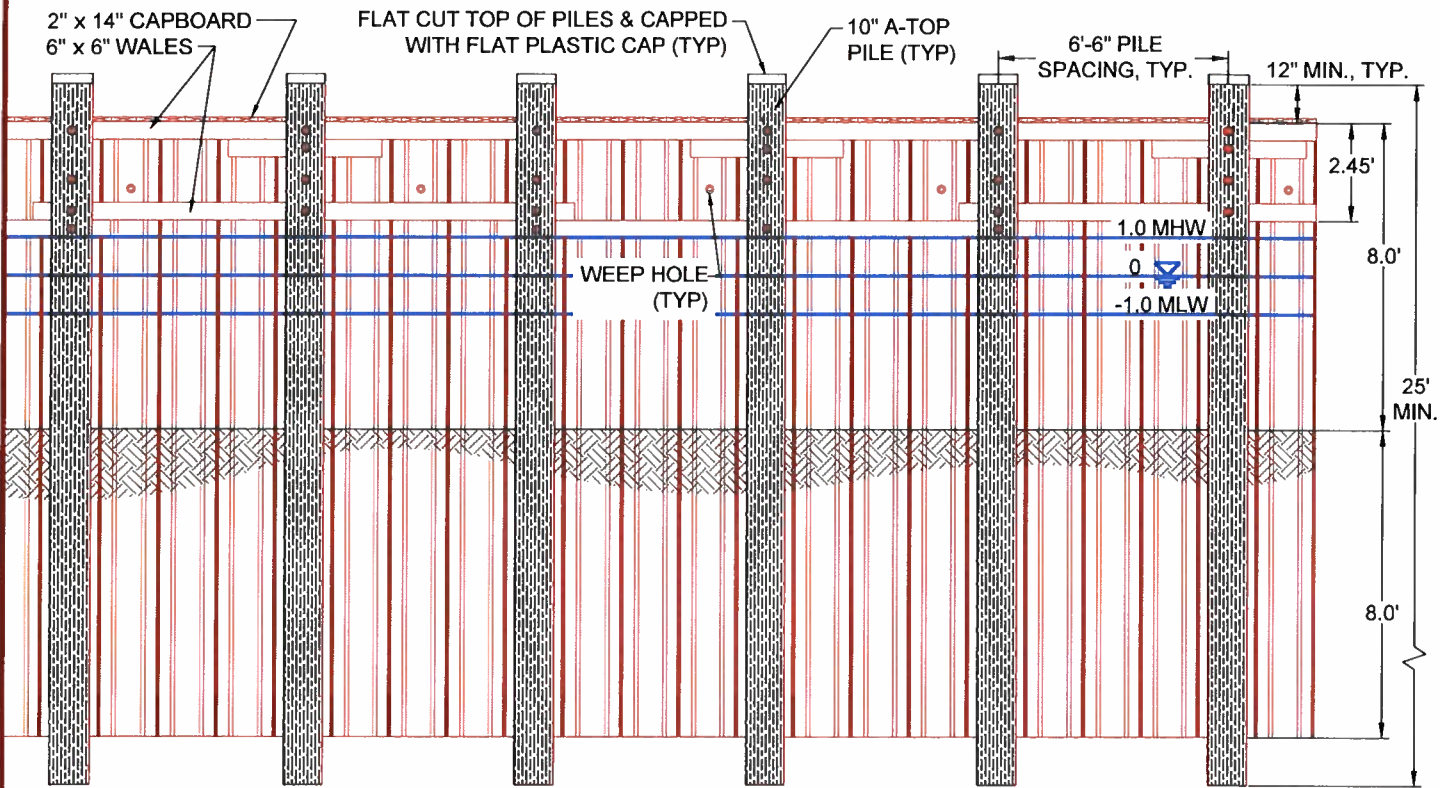
**TYPICAL SECTION  
THRU NEW/  
OLD BULKHEAD  
(PILE DEADMAN)**

**VISTA  
DESIGN, INC.** MDE AI #  
Engineers • Architects • Surveyors • Landscape Architects  
Land Planning Consultants • GIS Services  
11634 Worcester Hwy, Shovel, MD 21862  
Ph. 410-352-3874 • www.vistadesigninc.com

PROJECT DATA	
Project:	23-009
File:	CE032823.dwg
Date:	4/6/2023
Scale:	1" = 2'
Sheet:	II of 16



PLAN VIEW



ELEVATION VIEW



SCALE: 1" = 5'

\*SHEETING TO BE CMI CL-9000 SHEET PILE OR APPROVED EQUIVALENT.  
 ANY SUBSTITUTIONS TO BE APPROVED IN WRITING BY OWNER AND PROJECT ENGINEER PRIOR TO PURCHASE AND INSTALLATION.

NOTE:  
 This drawing, specifications, and work produced by Vista Design, Inc. (VDI) for this project are instruments of service for this project only, and remains the copyrighted property of VDI. Reuse or reproduction of any of the instruments of service of VDI by the Client or assignees without the written permission of VDI will be at the Client's risk and be a violation of the copyright laws of the United States of America and the respective state within which the work was completed.

NOTE:  
 This Drawing does not include necessary components for construction safety. All construction must be done in compliance with the occupational safety and health act of 1970 and all rules and regulations thereto appurtenant.

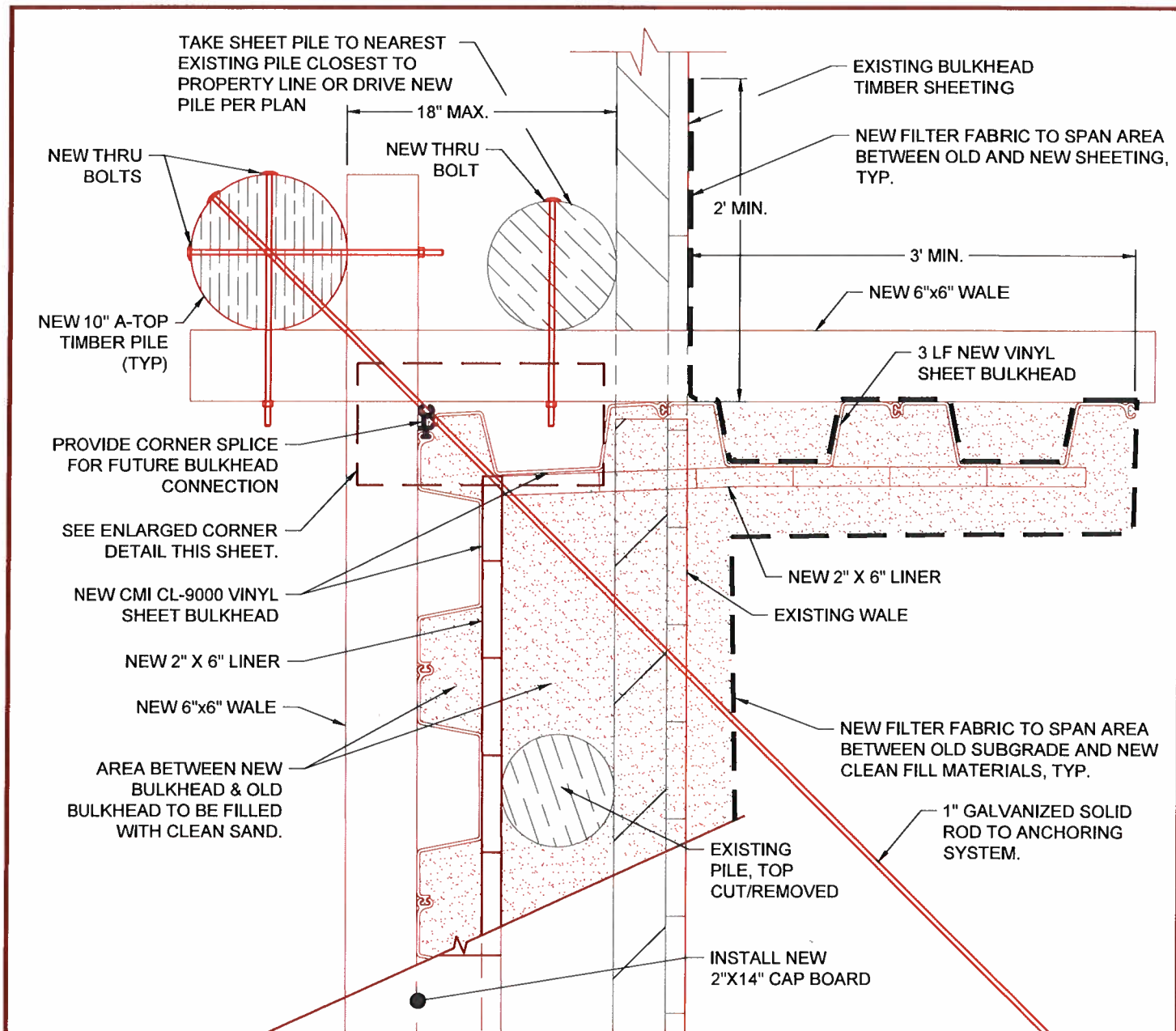


BOLTZ RESIDENCE  
 BULKHEAD  
 REPLACEMENT

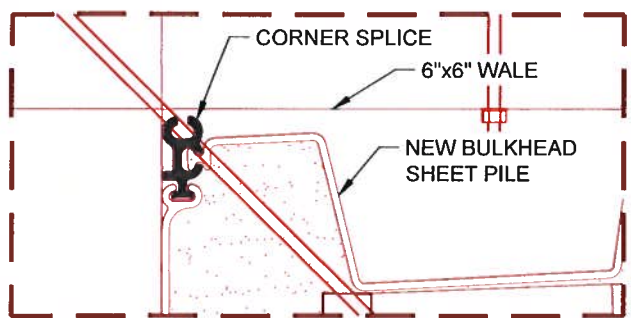
TYPICAL SECTION  
 THRU NEW/  
 OLD BULKHEAD  
 (PILE DEADMAN)

**VISTA**  
 DESIGN, INC. MDE AI #  
 Engineers • Architects • Surveyors • Landscape Architects  
 Land Planning Consultants • GIS Services  
 11634 Worcester Hwy, Showell, MD 21862  
 Ph. 410-352-3874 • www.vistadesigninc.com

PROJECT DATA	
Project:	23-009
File:	CE032823.dwg
Date:	4/6/2023
Scale:	1" = 5'
Sheet:	12 of 16



PLAN VIEW CORNER DETAIL  
SCALE: 1" = 1'



ENLARGED CORNER DETAIL  
SCALE: 1" = 0.5'



SCALE: 1" = 1.0'

**NOTE:**  
This drawing, specifications, and work produced by Vista Design, Inc. (VDI) for this project are instruments of service for this project only, and remains the copyrighted property of VDI. Reuse or reproduction of any of the instruments of service of VDI by the Client or assignees without the written permission of VDI will be at the Client's risk and be a violation of the copyright laws of the United States of America and the respective state within which the work was completed.

**NOTE:**  
This Drawing does not include necessary components for construction safety. All construction must be done in compliance with the occupational safety and health act of 1970 and all rules and regulations thereto appurtenant.

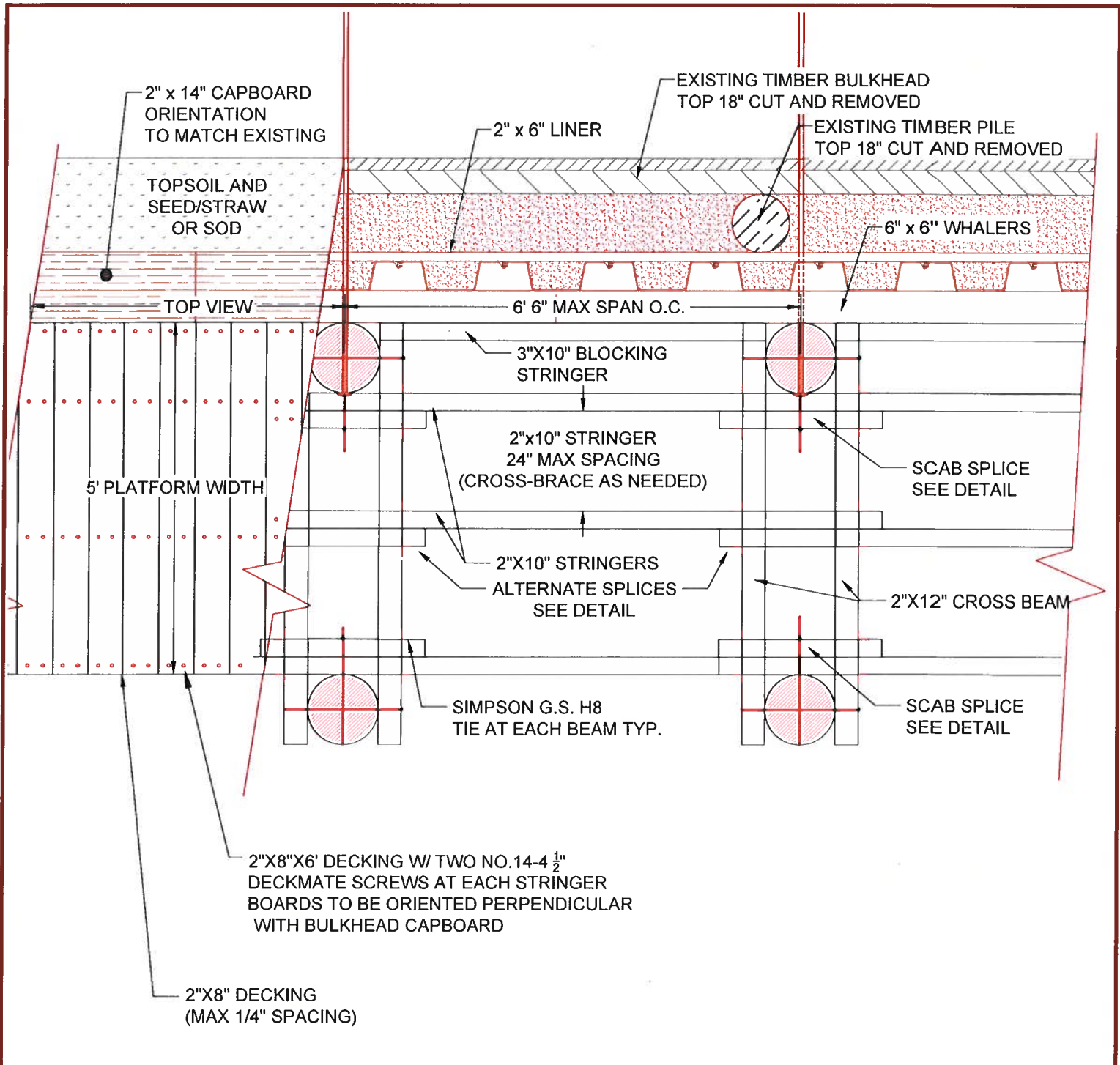


BOLTZ RESIDENCE  
BULKHEAD  
REPLACEMENT

VINYL BULKHEAD  
TO EXISTING  
BULKHEAD DETAIL  
(IN-LINE)

**VISTA**  
DESIGN, INC. MDE AI #  
Engineers • Architects • Surveyors • Landscape Architects  
Land Planning Consultants • GIS Services  
11634 Worcester Hwy, Showell, MD 21862  
Ph. 410-352-3874 • www.vistadesigninc.com

PROJECT DATA	
Project:	23-009
File:	CE032823.dwg
Date:	4/6/2023
Scale:	AS SHOWN
Sheet:	13 of 16



## PLATFORM FRAMING DETAIL



SCALE: 1" = 2'

**NOTE:**

This drawing, specifications, and work produced by Vista Design, Inc. (VDI) for this project are instruments of service for this project only, and remains the copyrighted property of VDI. Reuse or reproduction of any of the instruments of service of VDI by the Client or assignees without the written permission of VDI will be at the Client's risk and be a violation of the copyright laws of the United States of America and the respective state within which the work was completed.

**NOTE:**

This Drawing does not include necessary components for construction safety. All construction must be done in compliance with the occupational safety and health act of 1970 and all rules and regulations thereto appurtenant.



**BOLTZ RESIDENCE  
BULKHEAD  
REPLACEMENT**

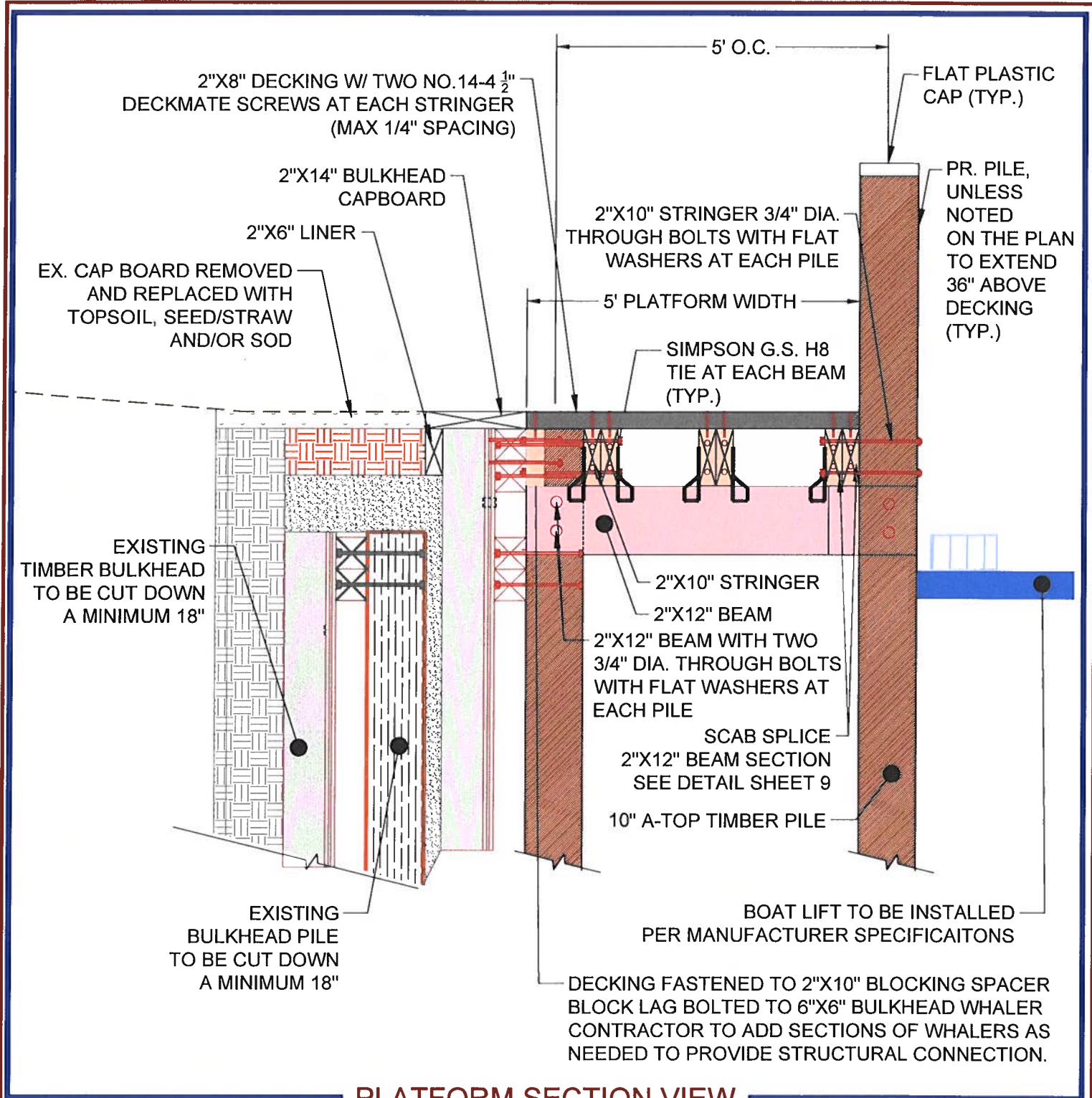
**TYPICAL  
PLATFORM  
FRAMING DETAIL**

**VISTA**  
DESIGN, INC. MDE AI #  
Engineers • Architects • Surveyors • Landscape Architects  
Land Planning Consultants • GIS Services  
11634 Worcester Hwy, Showell, MD 21862  
Ph. 410-352-3874 • www.vistadesigninc.com

**PROJECT DATA**

Project:	23-009
File:	CE032823.dwg
Date:	4/6/2023
Scale:	1" = 2'
Sheet:	14 of 16





**PLATFORM SECTION VIEW**



SCALE: 1" = 2'

**NOTE:**

This drawing, specifications, and work produced by Vista Design, Inc. (VDI) for this project are instruments of service for this project only, and remains the copyrighted property of VDI. Reuse or reproduction of any of the instruments of service of VDI by the Client or assignees without the written permission of VDI will be at the Client's risk and be a violation of the copyright laws of the United States of America and the respective state within which the work was completed.

**NOTE:**

This Drawing does not include necessary components for construction safety. All construction must be done in compliance with the occupational safety and health act of 1970 and all rules and regulations thereto appurtenant.



**BOLTZ RESIDENCE  
BULKHEAD  
REPLACEMENT**

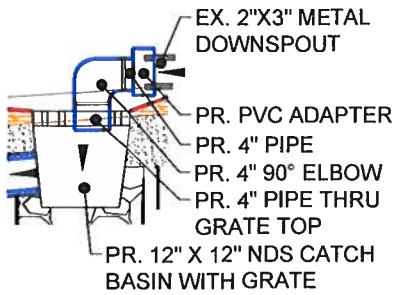
**TYPICAL  
PLATFORM  
SECTION DETAIL**

**VISTA**  
DESIGN, INC. MDE AI #  
Engineers • Architects • Surveyors • Landscape Architects  
Land Planning Consultants • GIS Services  
11634 Worcester Hwy, Showell, MD 21862  
Ph. 410-352-3874 • www.vistadesigninc.com

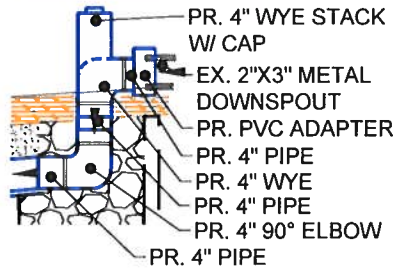
**PROJECT DATA**

Project:	23-009
File:	CE032823.dwg
Date:	4/6/2023
Scale:	1" = 2'
Sheet:	15 of 16

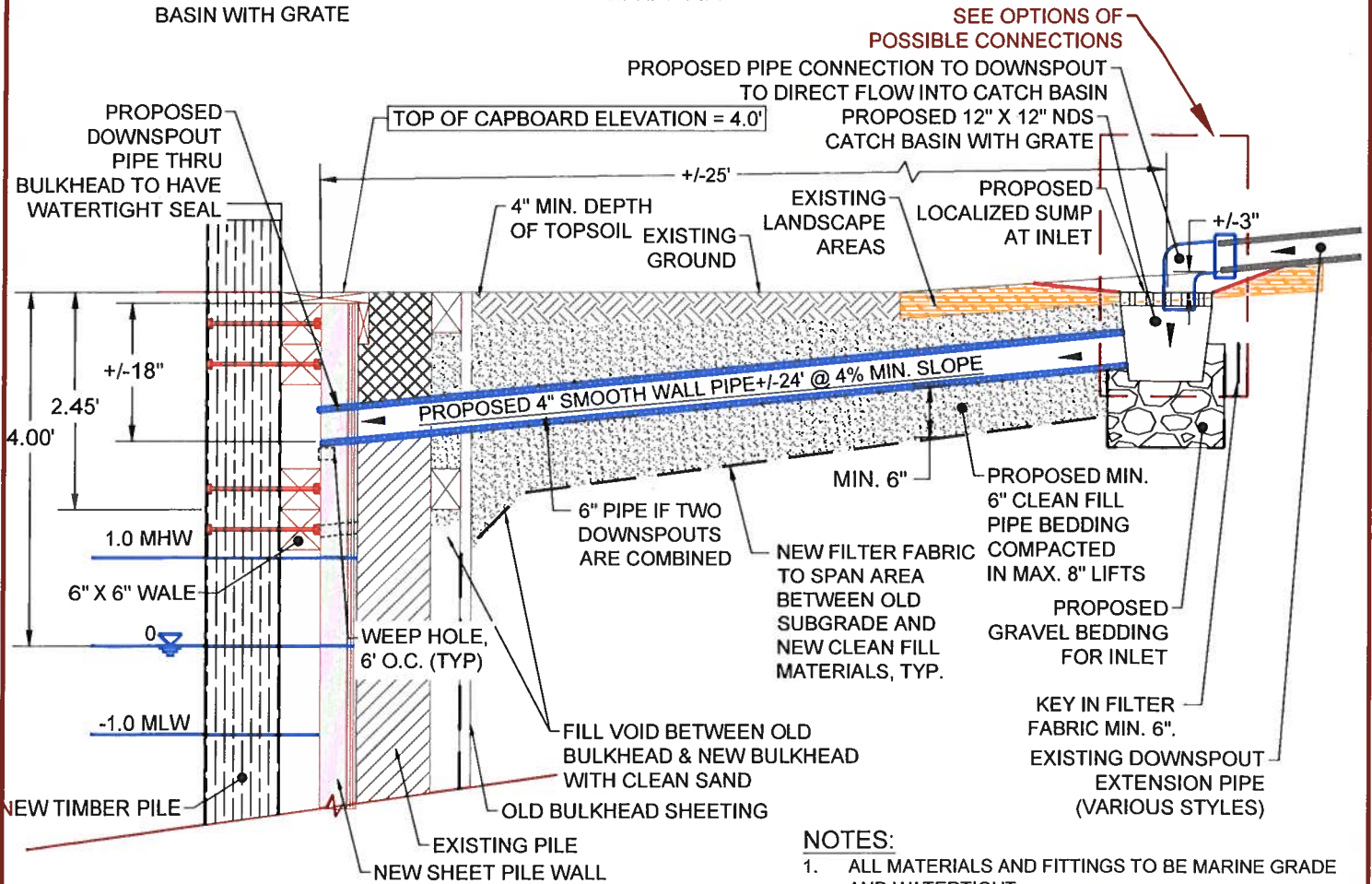
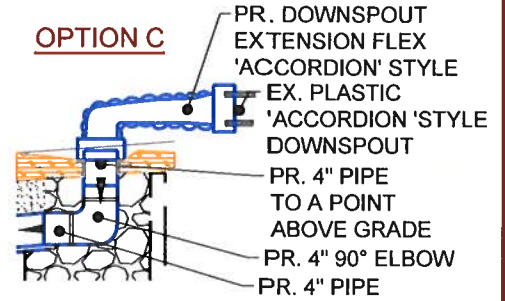
**OPTION A**



**OPTION B**



**OPTION C**



**SECTION VIEW**

**NOTES:**

1. ALL MATERIALS AND FITTINGS TO BE MARINE GRADE AND WATERTIGHT.
2. PIPE THRU BULKHEAD TO BE SMOOTH WALL (NON-CORRUGATED).
3. PIPE AND INLET TO BE INSTALLED PER MANUFACTURERS STANDARDS AND SPECIFICATIONS.



SCALE: 1" = 2'

**NOTE:**

This drawing, specifications, and work produced by Vista Design, Inc. (VDI) for this project are instruments of service for this project only, and remains the copyrighted property of VDI. Reuse or reproduction of any of the instruments of service of VDI by the Client or assignees without the written permission of VDI will be at the Client's risk and be a violation of the copyright laws of the United States of America and the respective state within which the work was completed.

**NOTE:**

This Drawing does not include necessary components for construction safety. All construction must be done in compliance with the occupational safety and health act of 1970 and all rules and regulations thereto appurtenant.



**BOLTZ RESIDENCE  
 BULKHEAD  
 REPLACEMENT**

**DOWNSPOUT  
 PIPE THRU  
 BULKHEAD DETAIL**

**VISTA  
 DESIGN, INC.** MDE AI #  
 Engineers • Architects • Surveyors • Landscape Architects  
 Land Planning Consultants • GIS Services  
 11634 Worcester Hwy, Shovel, MD 21862  
 Ph. 410-352-3874 • www.vistadesigninc.com

**PROJECT DATA**

Project:	23-009
File:	CE032823.dwg
Date:	4/6/2023
Scale:	1" = 2'
Sheet:	16 of 16



