PROPOSED NORTH BLUFF SEAWALL REPAIR AND HARBOR ACCESS PLAN

OAK BLUFFS, MARTHA'S VINEYARD, MA

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PROJECT FUNDED BY:

MASS DOT SEAPORT ADVISORY COUNCIL

MASSACHUSETTS EMERGENCY MANAGEMENT AGENCY

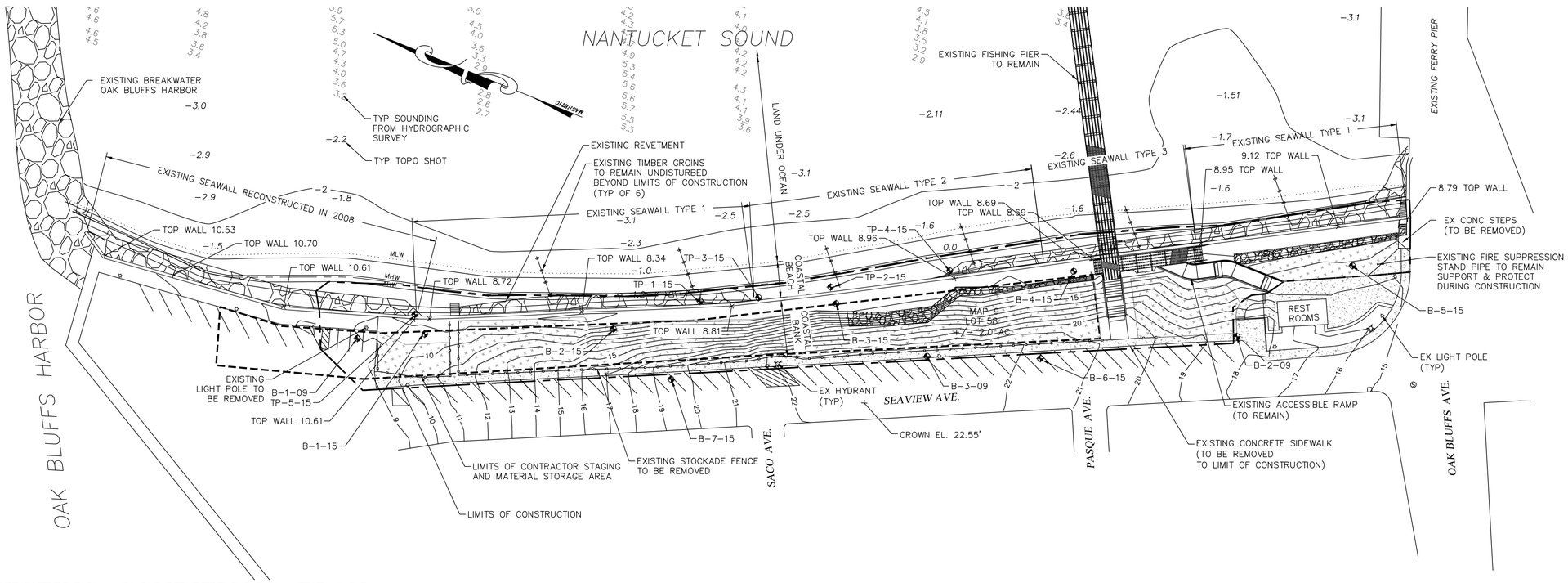
EXECUTIVE OFFICE of ENERGY & ENVIRONMENTAL AFFAIRS

TOWN OF OAK BLUFFS

DEPARTMENT OF CONSERVATION & RECREATION – DIVISION OF WATERWAYS

COMMONWEALTH OF MASSACHUSETTS
JOHN A. DeRUGERIS
CIVIL
No. 32842
REGISTERED PROFESSIONAL ENGINEER

PROPOSED NORTH BLUFF SEAWALL REPAIR AND HARBOR ACCESS PLAN OAK BLUFFS, MARTHA'S VINEYARD, MA		
COVER SHEET		
TOWN OF OAK BLUFFS		
CLE ENGINEERING, INC. 15 CREEK ROAD, MARION, MA 02738 (508) 748-0937		DWG. NAME: CONST. SET JOB NO. 08067.400
AUGUST 12, 2015	DESIGNED BY JAD DRAWN BY JAD APPROVED BY CGP	
W/W. REVIEW BY _____ DATE _____		TOWN ADMINISTRATOR
PROJECT NO. OB1-2015		



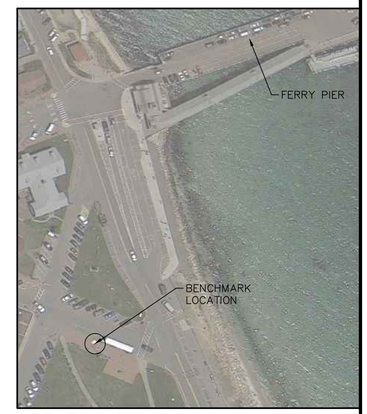
EXISTING CONDITIONS PLAN

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

LOCUS MAP
LOCUS: OAK BLUFFS, MA QUAD



BENCHMARK
LOCUS: OAK BLUFFS, MA QUAD

LEGEND

- LIMIT OF CONTRACTOR STAGING AREA
- LIMIT OF CONSTRUCTION
- MEAN LOW WATER (MLW)
- MEAN HIGH WATER (MHW)
- ANNUAL HIGH WATER (AHW)
- VEGETATED BEACH GRASS
- REVETMENT STONE
- CONCRETE PAVEMENT
- CRUSHED STONE
- 10 CONTOUR LINE
- FENCE/ GUARD RAIL
- BORING/ TEST PIT LOCATION

ABBREVIATIONS:

"#(X)":	CRSI BAR NUMBER FOR STEEL REINFORCEMENT
APPROX:	APPROXIMATE
AHT:	ANNUAL HIGH TIDE
CONC:	CONCRETE
CONN:	CONNECTION
CONTR:	CONTRACTION
CONTIN:	CONTINUOUS
CONST:	CONSTRUCTION
EA:	EACH
EL.:	ELEVATION
EX CONST:	EXISTING CONSTRUCTION
EX GD:	EXISTING GRADE
EX STR:	EXISTING STRUCTURE
GA:	GUAGE
HORIZ:	HORIZONTAL
"L":	ANGLE (BENT BAR OR STRUCTURAL SHAPE)
MAAB:	MASSACHUSETTS ARCHITECTURAL ACCESS BOARD
MLW:	MEAN LOW WATER
MHW:	MEAN HIGH WATER
NAVD:	NORTH AMERICAN VERTICAL DATA (1988)
NGVD:	NATIONAL GEODETIC VERTICAL DATUM (1929)
O.C.:	ON CENTERS
P.D.:	PROJECT DATUM (LOCAL OR REFERENCED)
REF:	REFERENCE or REFERENCED
REINF:	REINFORCING
REBAR:	REINFORCING BAR (SEE SPECIFICATIONS)
SECT:	SECTION
SPECS:	SPECIFICATIONS
STA:	STATION
SST:	STAINLESS STEEL (SEE SPECIFICATIONS)
UNIV:	UNIVERSAL
VERT:	VERTICAL
W/ :	WITH

SURVEY NOTES:

1. RESULTS OF TOPOGRAPHY FROM CLE SURVEY DATED 8/18/08, 8/19/08, 8/20/08, & 4/22/14. SURVEY DATA SHOWN ON THESE PLANS REPRESENTS THE CONDITIONS PRESENT ON THE DATES OF SURVEY ONLY, SEVERAL SIGNIFICANT STORMS HAVE OCCURRED SINCE THOSE DATES WHICH MAY HAVE ALTERED EXISTING TOPOGRAPHY.
2. SOUNDING ELEVATIONS ARE IN FEET AND TENTHS BELOW TO APPROXIMATE NGVD29 DATUM. SURVEYED TOPO NOTES REFER TO ELEVATIONS RELATIVE TO APPROXIMATE NGVD 1929 (REFERRED TO HEREIN AS "PROJECT DATUM" OR "P.D.". REFERENCE DATUMS OF MEAN LOW WATER (MLW), MEAN HIGH WATER (MHW) AND ANNUAL HIGH TIDE (AHT), REFER TO INTERPOLATED DATA RELATIVE TO NGVD 1929, AND FIELD OBSERVATIONS. PRIMARY CONTROL FOR THIS PROJECT WAS TAKEN FROM EXISTING BENCHMARKS AND WAS NOT INDEPENDENTLY VERIFIED. DUE TO THE REMOTE LOCATION OF THE SITE SOME VARIATIONS ARE EXPECTED TO EXIST. PROJECT DATUM ELEVATION FOR THESE DRAWINGS WAS TAKEN FROM THE PROJECT BENCHMARK REFERENCED IN THESE DOCUMENTS.
3. SUBJECT PARCEL IS ACCESSORIES MAP #9 LOT #58, +/-2.0 AC.
4. BENCHMARK IS IS FEMA BENCHMARK ELEVATION 14.85' PROJECT DATUM (APPROXIMATE NGVD 1929), STANDARD DISK, STAMPED NO 1 1928, SET ON TOP OF OUTCROPPING ROCK IN OCEAN VIEW PARK.
5. THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES SHOWN, AND CAN ONLY BE CONSIDERED AS INDICATING THE CONDITIONS AT THAT TIME. INTERPOLATED INFORMATION FROM BETWEEN SURVEY SHOTS OR SOUNDING RUNS IS NOT GUARANTEED. SHOALS, OBSTRUCTIONS OR OTHER DIFFERING CONDITIONS MAY EXIST BETWEEN THESE SURVEY SHOTS OR SOUNDING RUNS. CONSULT WITH CLE ENGINEERING FOR MORE DETAILED INFORMATION.
6. REFER TO SPECIFICATIONS FOR BORING TEST PIT LOGS FROM THE BORING LOCATIONS SHOWN ON PLAN.
7. THE CONTRACTOR IS TO ESTABLISH THE PROJECT BASELINE AND COORDINATE THE WORK WITH THE EXISTING CONDITIONS PRIOR TO START OF THE WORK. THE CONTRACTOR IS TO SUBMIT THE ESTABLISHED PROJECT BASELINE FOR REVIEW AND APPROVAL BY THE PROJECT ENGINEER.

COMMONWEALTH OF MASSACHUSETTS
JOHN A. DeFUGERIS
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8/12/15

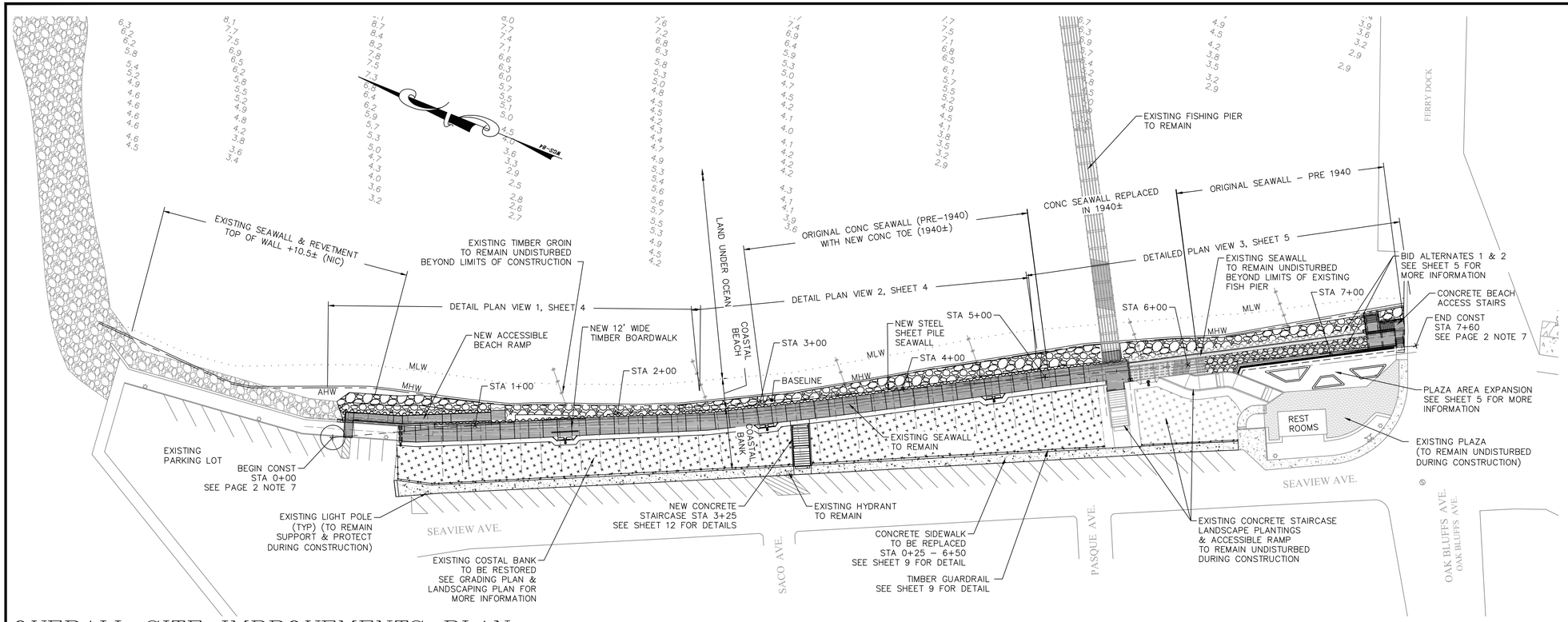
PROPOSED NORTH BLUFF SEAWALL REPAIR AND HARBOR ACCESS PLAN

OAK BLUFFS, MARTHA'S VINEYARD, MA

EXISTING CONDITIONS PLAN

AUGUST 12, 2015 | SHEET 2 OF 18

PROJECT NO. OB1-2015

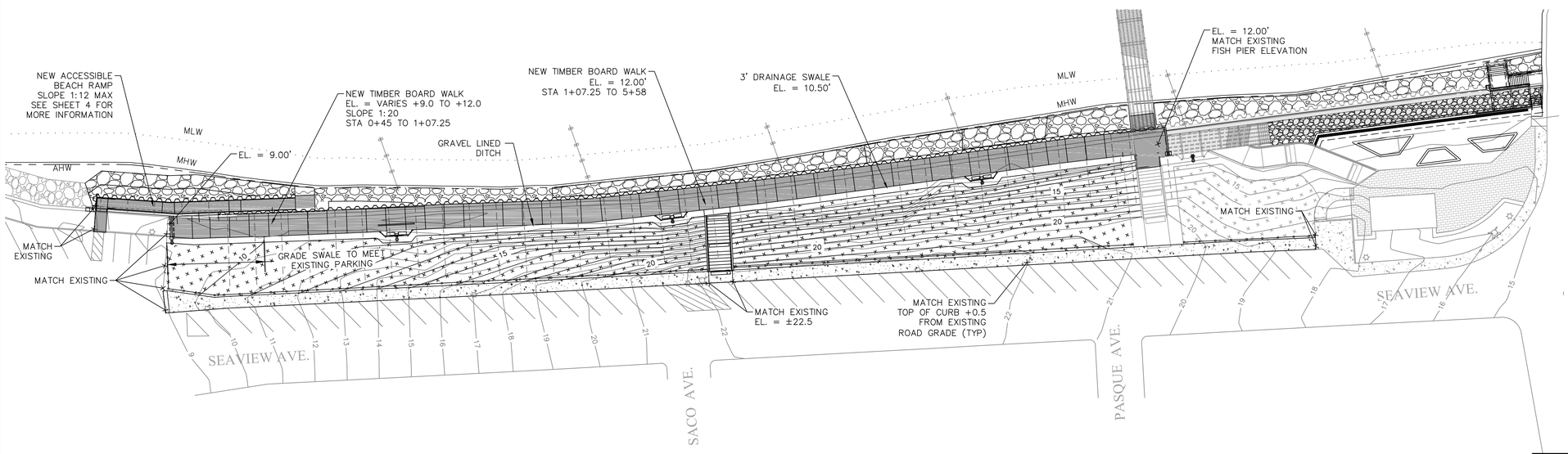


OVERALL SITE IMPROVEMENTS PLAN

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.



GRADING PLAN

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

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PROPOSED NORTH BLUFF SEAWALL REPAIR AND HARBOR ACCESS PLAN	
OAK BLUFFS, MARTHA'S VINEYARD, MA	
OVERALL SITE IMPROVEMENTS PLAN & GRADING PLAN	
AUGUST 12, 2015	SHEET 3 OF 18
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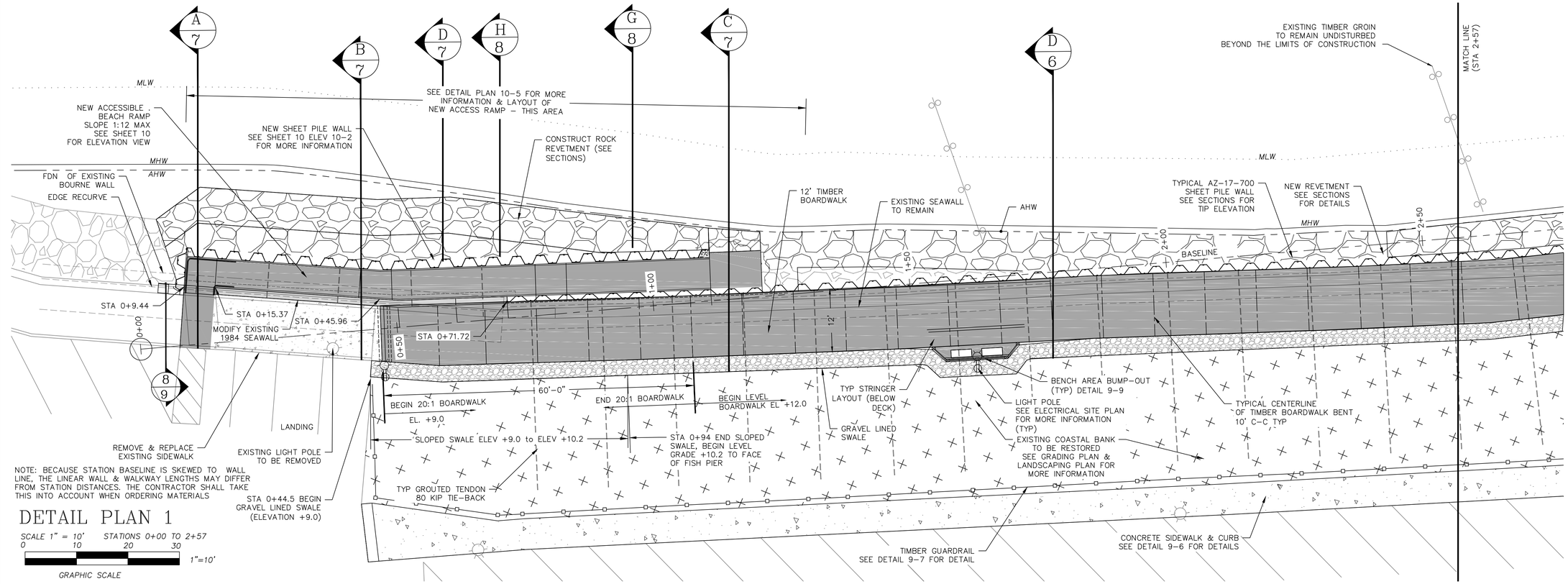
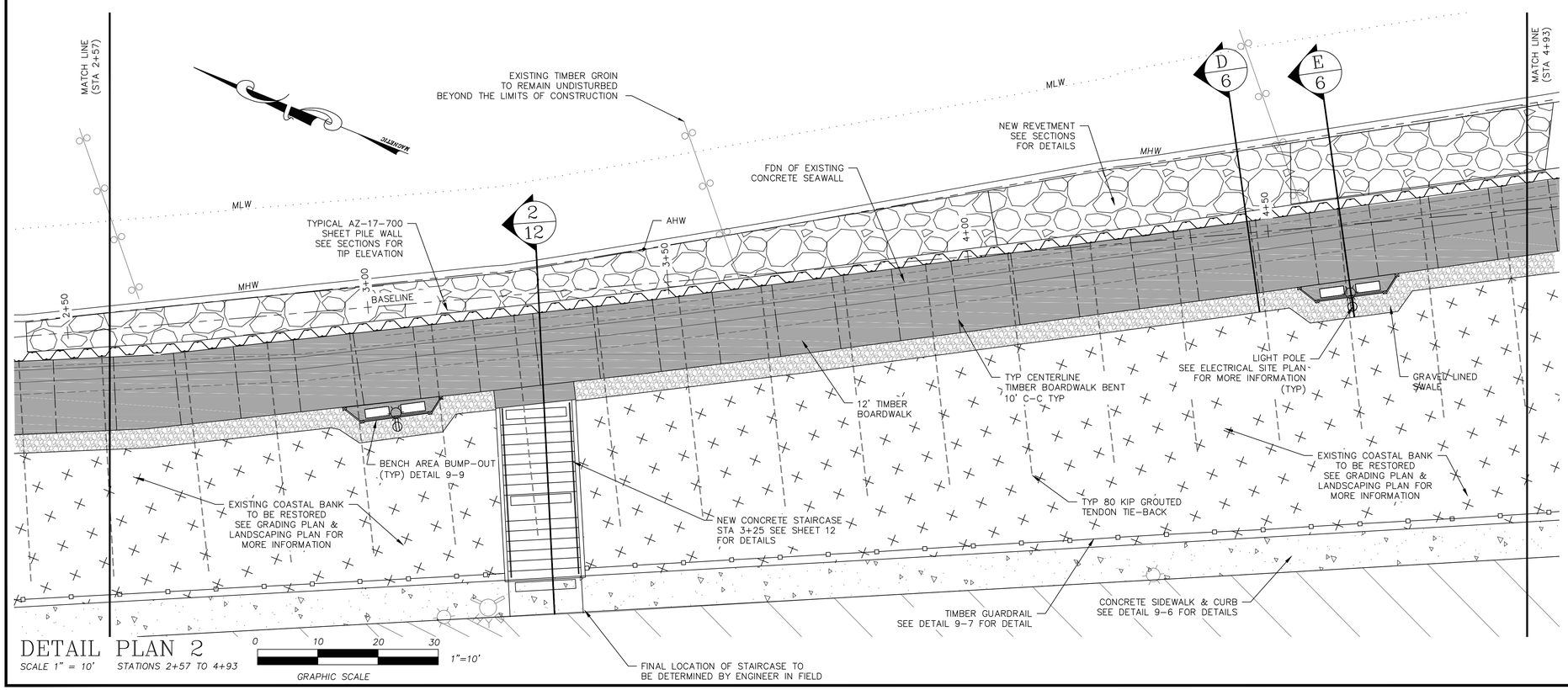


NOTE: BECAUSE STATION BASELINE IS SKEWED TO WALL LINE, THE LINEAR WALL & WALKWAY LENGTHS MAY DIFFER FROM STATION DISTANCES. THE CONTRACTOR SHALL TAKE THIS INTO ACCOUNT WHEN ORDERING MATERIALS

DETAIL PLAN 1

SCALE 1" = 10' STATIONS 0+00 TO 2+57



DETAIL PLAN 2

SCALE 1" = 10' STATIONS 2+57 TO 4+93

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PROPOSED NORTH BLUFF SEAWALL REPAIR AND HARBOR ACCESS PLAN OAK BLUFFS, MARTHA'S VINEYARD, MA	
DETAIL PLAN STA 0+00 TO 4+93	
AUGUST 12, 2015	SHEET 4 OF 18
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MATCH LINE (STA 4+93)

SOUTHERLY LIMIT SHEET PILE WALL BASE BID

SEE DETAILED PLAN 5-1 BELOW & 8-F FOR MORE INFORMATION ON FISH EXISTING FISH PIER TIE-IN

NEW REVETMENT SEE SECTIONS FOR DETAILS

EXISTING TIMBER GROIN TO REMAIN UNDISTURBED BEYOND THE LIMITS OF CONSTRUCTION

ALTERNATE 2 EXTEND TIMBER BOARD WALK FROM FROM END OF BASE BID STA 5+58 TO STA 7+26± SEE SHEETS 13 & 14 168± LF

ALTERNATE 1 EXTEND SHEET PILE SEAWALL FROM FISH PIER STA 5+58± TO STAIRCASE STA 7+26± 168± LF AND REPLACE TIMBER BOARD WALK FULL WIDTH STA 5+58 – 6+10 53± LF

BASE BID STA 5+58± TO STA 7+26±

NEW CONC. STAIRCASE SEE SHEETS 13 & 14

FACE OF EXISTING CONC. WALL AT STEAMSHIP PIER

REMOVE EXISTING WALKWAY & SECTION OF PIER SHOWN. SALVAGE AS POSSIBLE

STA 5+80± TO STA 6+00± ALT 1 ONLY

EXISTING FISH PIER BOARDWALK TO REMAIN IN BASE BID, REMOVED & REBUILT TO FULL WIDTH IN BID ALT #1 SEE SHEET 11 SECTION 4

NEW REVETMENT STONES PLACED FLAT & CHINKED IN BASE BID SEE SECTION 11-1

ALT 1 STA 6+36± TO STA 7+26±

EXISTING SEAWALL TO REMAIN

AHW

MLW

MHW

STA 5+40± END DETAIL 6-D SEAWALL BEGIN DETAIL 8-F SEAWALL IN VICINITY OF EXISTING FISH PIER

ALT 1 ONLY STA 5+58± TO STA 5+80± WIDTH VARIES

ALT 1 ONLY STA 6+00± TO STA 6+36± WIDTH VARIES

14'-7" (ALT 1 ONLY) WALKWAY WIDTH

12'-6" (ALT 1 ONLY) WALKWAY WIDTH

TIMBER BOARDWALK SEE SHEETS 13 & 14

WOODEN STAIRS TO PLAZA AREA & FERRY PIER

TYPICAL AZ-17-700 SHEET PILE WALL SEE SECTIONS FOR TIP ELEVATION

END BASE BID SHEET PILE SEAWALL STA 5+58± BEGIN REVETED SEAWALL

5+00 5+50 6+00 6+50 7+00 7+50 7+60

2.332'

4'-6"±

CONTINUOUS TRENCH DRAIN

PLAZA BASELINE

NEW CONCRETE RETAINING WALL SEE SHEETS 11 TO 14 FOR DETAILS

WALKWAY WIDTH TRANSITION 14'-7" to 12'-6"

LIMITS OF EXISTING PLAZA

LIGHT POLE SEE ELECTRICAL SITE PLAN FOR MORE INFORMATION (TYP)

EXISTING FIRE SUPPRESSION STAND PIPE TO REMAIN SUPPORT & PROTECT DURING CONSTRUCTION

12' WIDE TIMBER BOARDWALK

EXISTING BUMP-OUT BENCH AREA

PLAZA AREA EXPANSION SEE SHEET 18 LANDSCAPE PLAN FOR MORE INFORMATION

EXISTING PLAZA TO REMAIN UNDISTURBED DURING CONSTRUCTION

BENCH AREA BUMP-OUT TYP (DETAIL 9-9)

TYPICAL CENTERLINE OF TIMBER BOARDWALK BENT 10' C-C TYP

GRAVEL LINED SWALE

TYP GROUTED TENDON 80 KIP TIE-BACK

EXISTING CONCRETE STAIRCASE LANDSCAPE PLANTINGS APPROACH SLAB & ACCESSIBLE RAMP TO REMAIN UNDISTURBED DURING CONSTRUCTION

EXISTING REST ROOM

EXISTING COASTAL BANK TO BE RESTORED SEE GRADING PLAN & LANDSCAPING PLAN FOR MORE INFORMATION

TIMBER GUARDRAIL SEE DETAIL 9-7 FOR DETAIL

CONCRETE SIDEWALK & CURB SEE DETAIL 9-6 FOR DETAILS

DETAIL PLAN 3

SCALE 1" = 10' STA 4+93 TO 7+60

0 10 20 30

GRAPHIC SCALE 1"=10'

10" GRADE BEAM WALL & 10x10 ON TOP (BOTH SIDES OF STAIR)

1'-10" FOOTING (BELOW)

REMOVE & REPLACE RAILING TO NEW LAYOUT

REMOVE EXISTING STAIRS & RAILS THIS AREA

TIE-IN NEW & EXISTING RAIL SYSTEMS

REMOVE & RESET EXISTING PILES (2) IF NECESSARY

5 ea 6x8 STRINGERS (EQ SPACED 16" MAX)

10x10 CAP

9 ea NEW 6x8 STRINGERS (EQUALLY SPACED – 16" MAX)

10x10 CAP

8" GRADE WALL FLUSH WITH END OF STEPS

1'-2" WIDE WALL FOOTING (BELOW)

OUTSIDE FACE OF NEW SHEET PILE CAP

END OF NEW PIER STRINGERS

INSHORE FACE OF NEW SHEET PILE CAP

EXISTING CONC STEPS

12x12 CONC PIER w/ 2'x 3' FOOTING BELOW 10x10 CAP

CUT EXISTING PIER STRINGERS & REPLACE

GROUTED TENDON TIE-BACK ANCHOR (BELOW)

4'-3"± END NEW WALKWAY

12x12 CONC PIER w/ 2'x 3' FOOTING BELOW 10x10 CAP

REMOVE & REPLACE EXISTING PIER AS CALLED FOR

EXISTING PIER TO REMAIN & TO BE PROTECTED

END NEW AZ-14-700 SHEETS EXTEND WALE TO CARRY 10x10

END STEEL PILE CAP PLATE

CUT EXISTING DECK & STRINGERS & INSTALL NEW 10x10 CAP

REMOVE, MODIFY & REPLACE RAILS TO FIT NEW LAYOUT

OPTIONAL SHEET PILE WALL EXTENSION

DETAIL PLAN 5-1

SCALE 1" = 5' DETAILS OF TIE-IN & DEMO AND NEW WALKWAY & SEAWALL AT JUNCTION OF FISH PIER

COMMONWEALTH OF MASSACHUSETTS JOHN A. DeRUGERIS CIVIL No. 32842 REGISTERED PROFESSIONAL ENGINEER

8/12/15

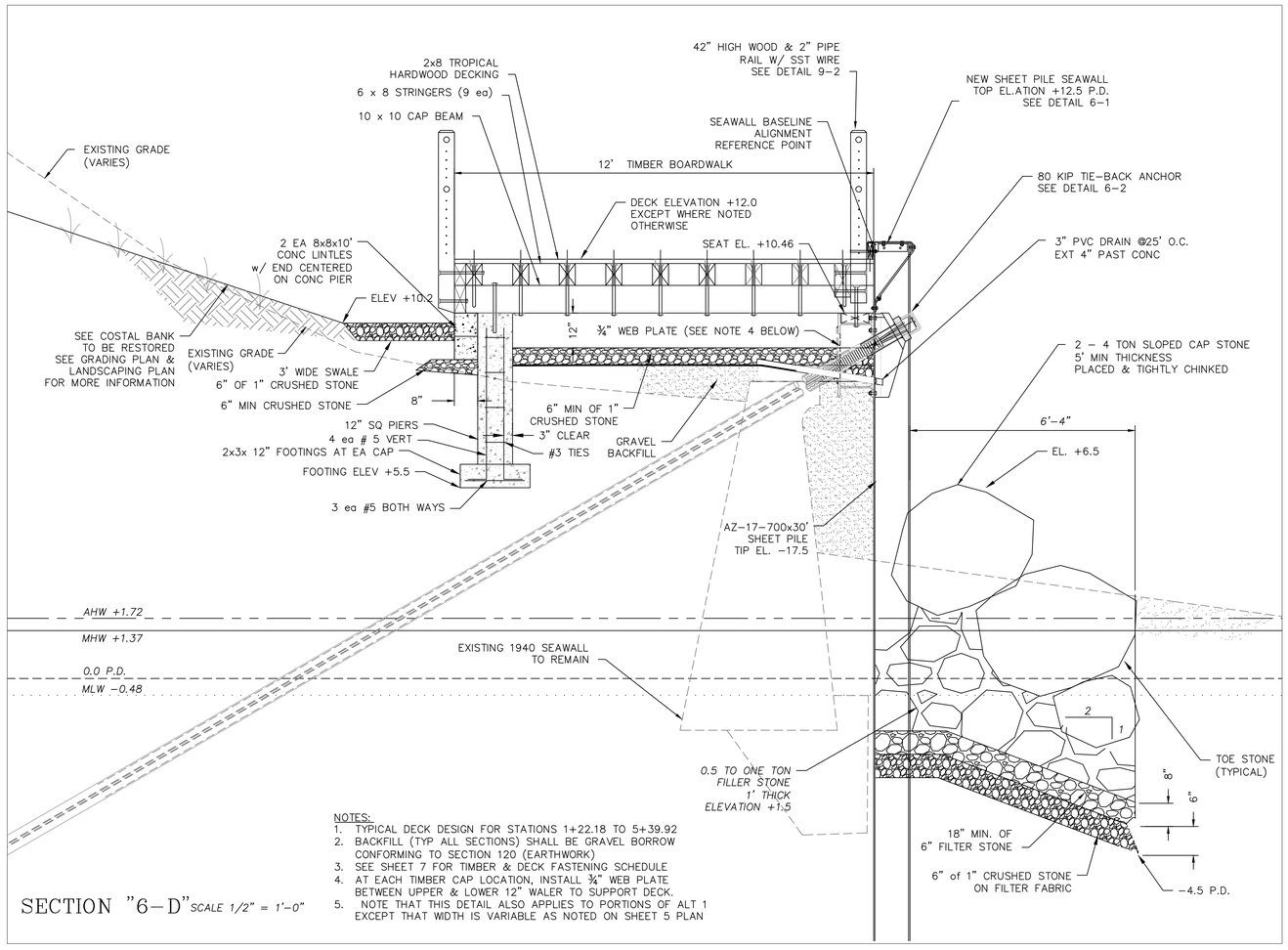
PROPOSED NORTH BLUFF SEAWALL REPAIR AND HARBOR ACCESS PLAN

OAK BLUFFS, MARTHA'S VINEYARD, MA

DETAIL PLAN STA 4+93 TO 7+60

AUGUST 12, 2015 | SHEET 5 OF 18

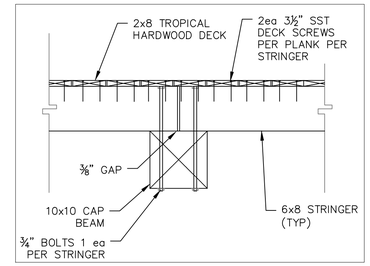
PROJECT NO. OB1-2015



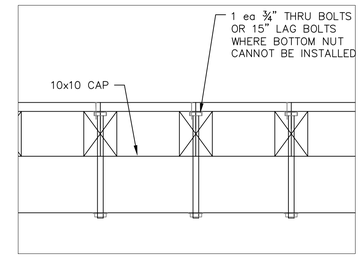
NOTES:
1. TYPICAL DECK DESIGN FOR STATIONS 1+22.18 TO 5+39.92
2. BACKFILL (TYP ALL SECTIONS) SHALL BE GRAVEL BORROW CONFORMING TO SECTION 120 (EARTHWORK)
3. SEE SHEET 7 FOR TIMBER & DECK FASTENING SCHEDULE
4. AT EACH TIMBER CAP LOCATION, INSTALL ¾" WEB PLATE BETWEEN UPPER & LOWER 12" WALER TO SUPPORT DECK.
5. NOTE THAT THIS DETAIL ALSO APPLIES TO PORTIONS OF ALT 1 EXCEPT THAT WIDTH IS VARIABLE AS NOTED ON SHEET 5 PLAN

SECTION "6-D" *SCALE 1/2" = 1'-0"*

0 2 4 6 *1/2"=1'-0"*



DETAIL 6-5 *SCALE 1" = 1'-0"*



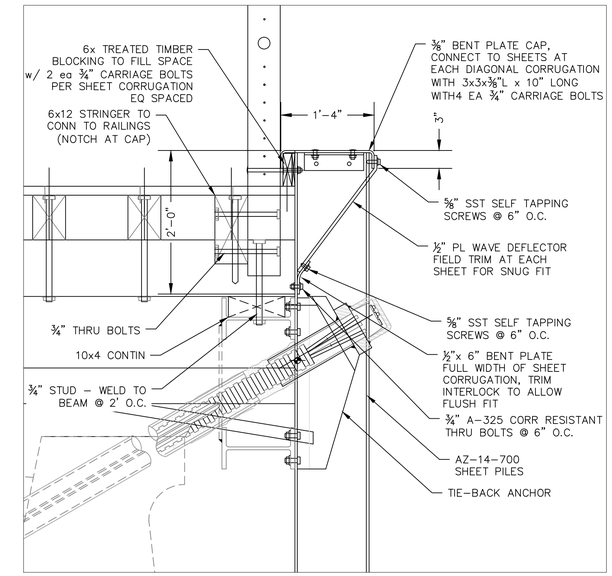
DETAIL 6-4 *SCALE 1" = 1'-0"*

0 1 2 3 *1"=1'-0"*

BOARDWALK MATERIALS & FASTENING SCHEDULE:
1. 2x8 DECKING IS TROPICAL HARDWOOD (SEE SPECIFICATION SECTION 955); FASTEN WITH 2 EA 3 1/2" SST DECK SCREWS PER STRINGER (SEE DETAIL 6-4 & 6-5).
2. 6x8 STRINGER TO CAP 1 EA 3/4" THRU BOLT PER END CONN (DETAIL 6-4 & 6-5)
3. 10 x 10 CAP TO CONCRETE SEAT - 1 ea 1" ANCHOR BOLT, SEAT ON 18 GA SST FLASHING 12" WIDE (TYP DETAILS 6-D & 6-E)

BEACH ACCESS RAMP:
1. ALL HANDRAILS TO COMPLY WITH MASSACHUSETTS ARCHITECTURAL ACCESS BOARD & MASSACHUSETTS BUILDING CODES.

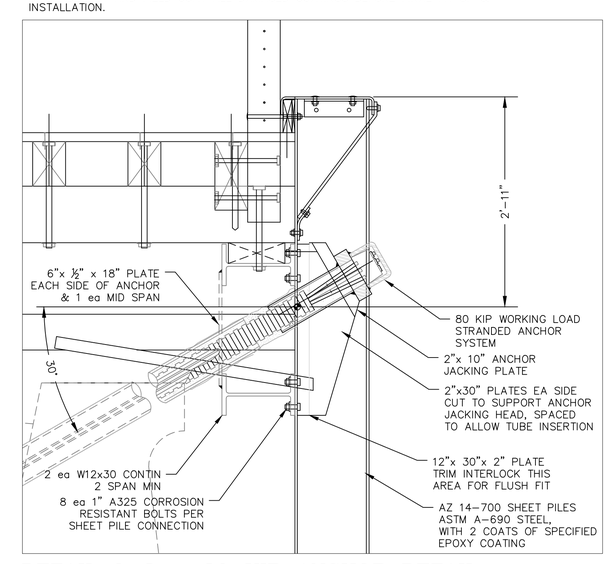
RAILINGS:
THERE ARE FOUR BASIC TYPES OF RAILING TO BE USED THROUGHOUT THIS PROJECT:
1. SAFETY RAILING DESIGNATED AS "2 INCH OD PIPE RAILING" IS DETAILED ON SHEET 9 IN DETAILS 9-2 TO 9-4 FOR WOOD POST RAILS & 13-1 FOR STEEL PIPE POSTED RAILS.
2. MAAB SPECIFICATION HANDRAIL SHALL BE 1 ½" TYPE 316 WELDED SST, AND ARE DETAILED ON SHEET 10 IN DETAIL 10-1 AND DETAIL 9-1.
3. MAAB SPECIFICATION HANDRAIL FOR STAIRS SHALL BE 1 ½" TYPE 316 SST, AND ARE DETAILED ON SHEET 10, DETAILS 10-3, & 10-4; SHEET 12, DETAIL 12-2 AND SHEET 13, DETAILS 13-A TO 13-C.



DETAIL 6-1 - WAVE DEFLECTOR AZ-14-700 PILES

SCALE 1" = 1'-0" 0 1 2 3 *1"=1'-0"*

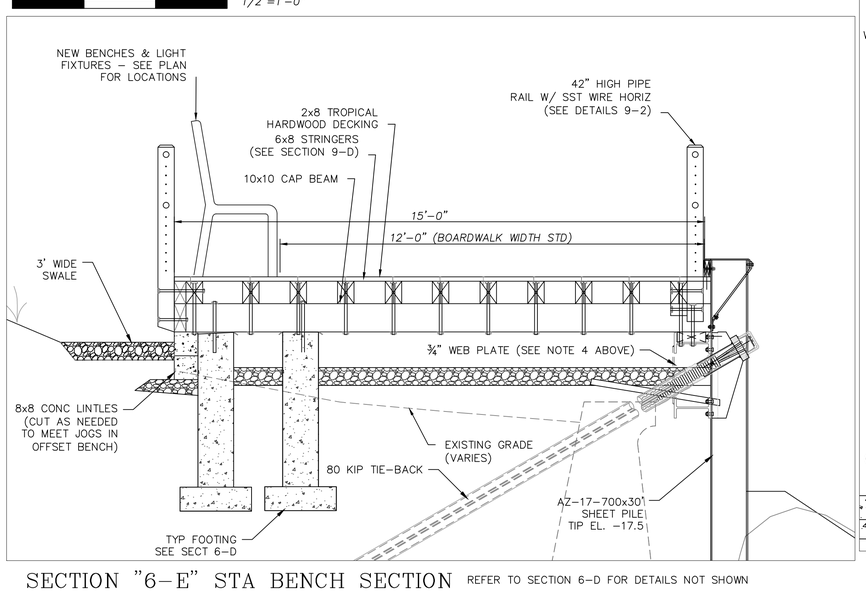
SPECIAL NOTES ON WAVE DEFLECTOR:
1. SHOP SUPPLIED PLATES ARE TO BE OVERSIZED TO ALLOW FOR FIELD TRIMMING TO ACCOUNT FOR IRREGULARITIES IN PILE DRIVING AND ALIGNMENT.
2. GRIND OFF INTERLOCK PROJECTIONS IN AREAS WHERE PLATE MEETS SHEETS
3. TRIM PLATE FOR SNUG FIT BETWEEN SHEET AND WAVE DEFLECTOR PLATE.
4. DRILL HOLES FOR BOLT ATTACHMENTS
5. SANDBLAST AND FIELD COAT ALL DAMAGED COATINGS BEFORE FINAL FIT UP & INSTALLATION.



DETAIL 6-2 - 80 KIP ANCHOR DETAIL *SCALE 1" = 1'-0"*

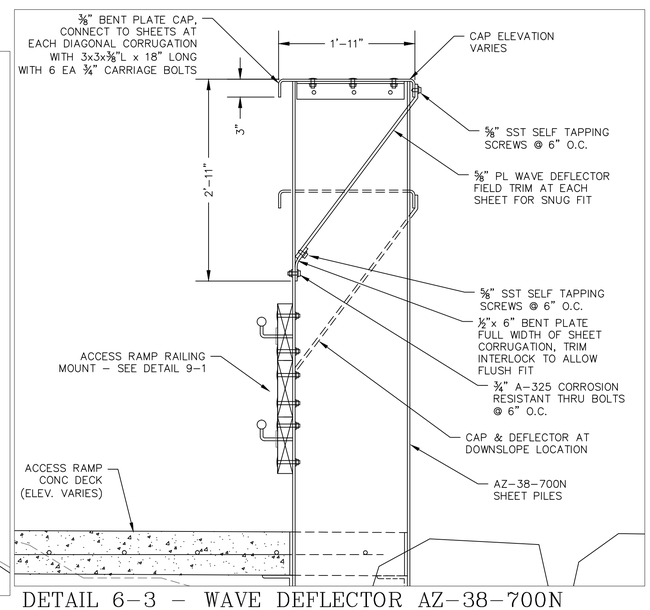
NOTE: ANCHOR ELEVATION AT FISH PIER IS DIFFERENT - REFER TO THAT DETAIL

0 1 2 3 *1"=1'-0"*



SECTION "6-E" STA BENCH SECTION REFER TO SECTION 6-D FOR DETAILS NOT SHOWN

SCALE 1/2" = 1'-0"



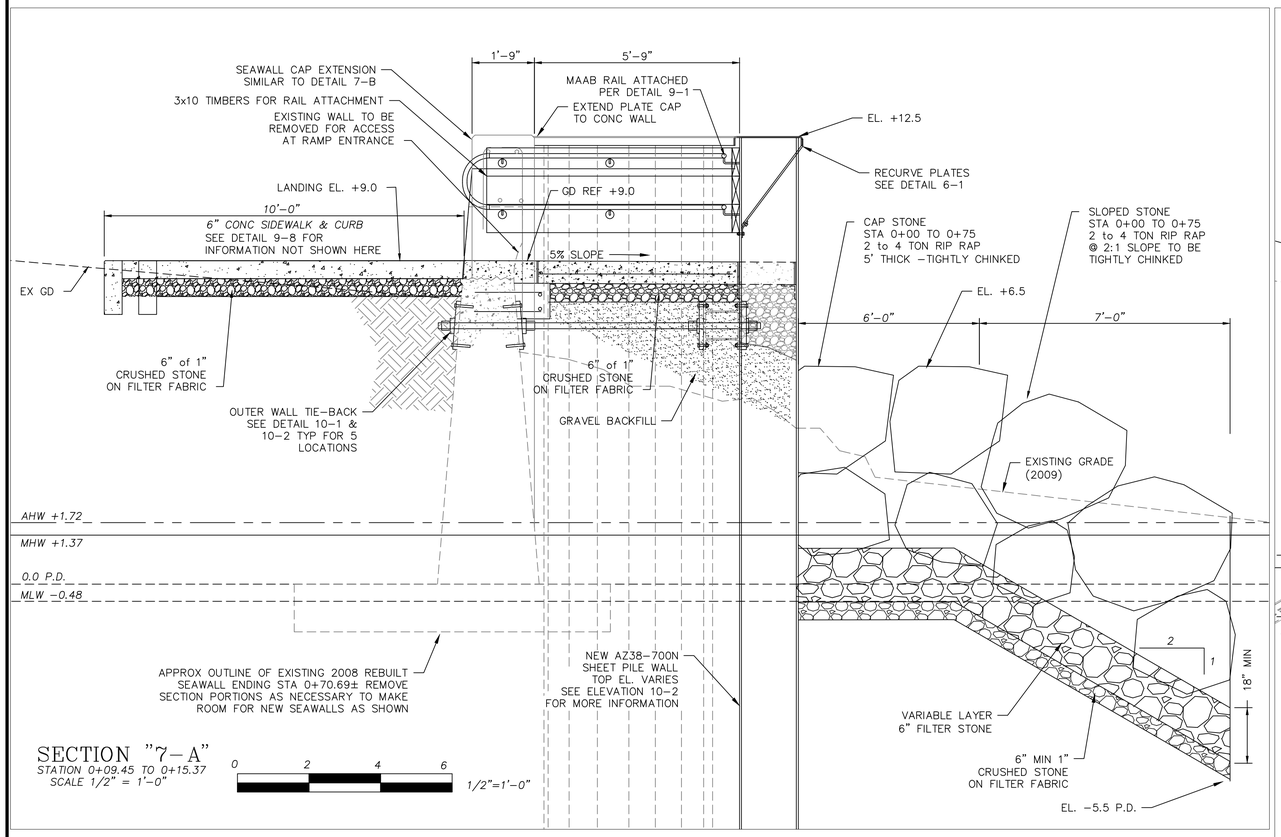
DETAIL 6-3 - WAVE DEFLECTOR AZ-38-700N PILES *SCALE 1" = 1'-0"*

SEE DETAIL 6-1 FOR NOTES

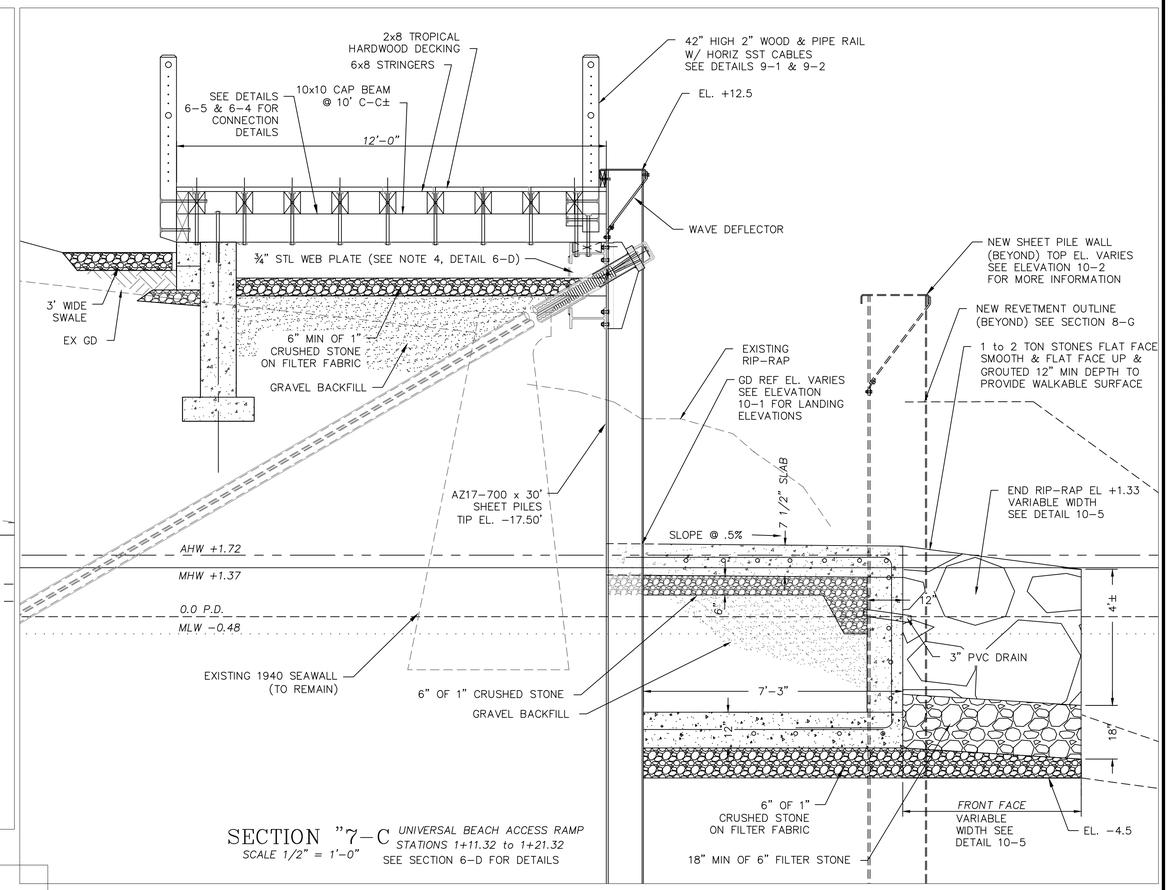
0 1 2 3 *1"=1'-0"*

COMMONWEALTH OF MASSACHUSETTS JOHN A. DeRUGERIS CIVIL No. 32842 REGISTERED PROFESSIONAL ENGINEER 8/12/15

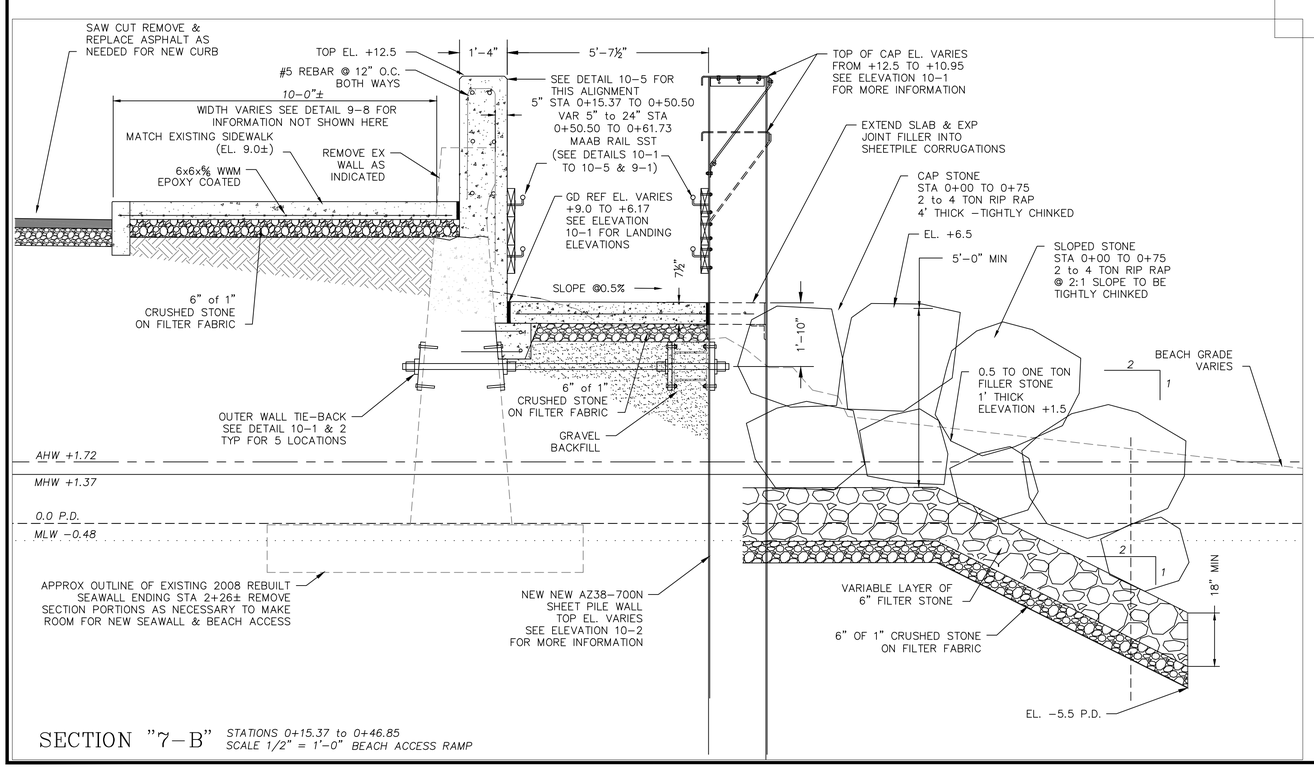
PROPOSED NORTH BLUFF SEAWALL REPAIR AND HARBOR ACCESS PLAN	
OAK BLUFFS, MARTHA'S VINEYARD, MA	
SEAWALL SECTIONS & DETAILS 1 OF 4	
AUGUST 12, 2015	SHEET 6 OF 18
PROJECT NO. OB1-2015	



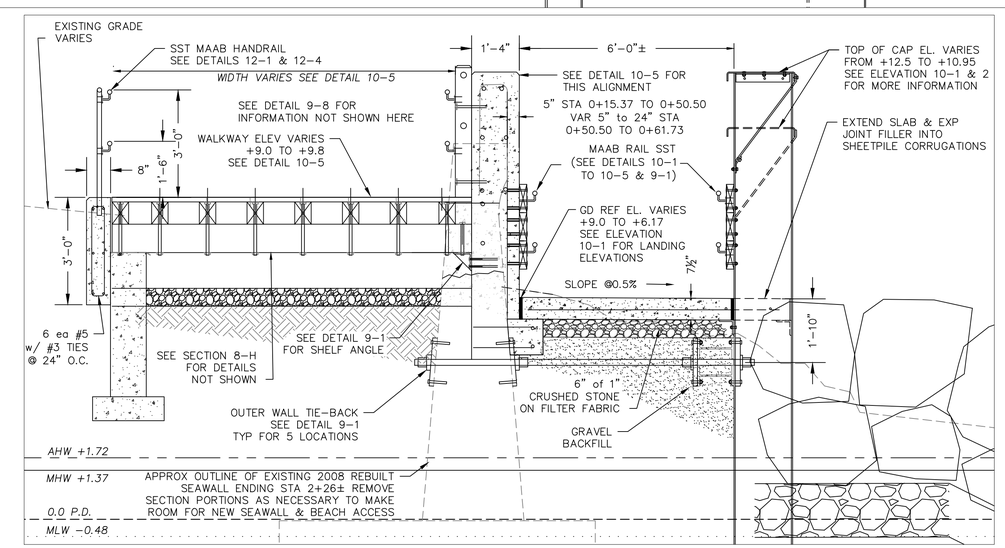
SECTION "7-A"
STATION 0+09.45 TO 0+15.37
SCALE 1/2" = 1'-0"



SECTION "7-C UNIVERSAL BEACH ACCESS RAMP
SCALE 1/2" = 1'-0"
STATIONS 1+11.32 to 1+21.32
SEE SECTION 6-D FOR DETAILS



SECTION "7-B" STATIONS 0+15.37 to 0+46.85
SCALE 1/2" = 1'-0" BEACH ACCESS RAMP



SECTION "7-D" STATIONS 0+46.85 to 0+61.73
SCALE 1/2" = 1'-0" BEACH ACCESS RAMP

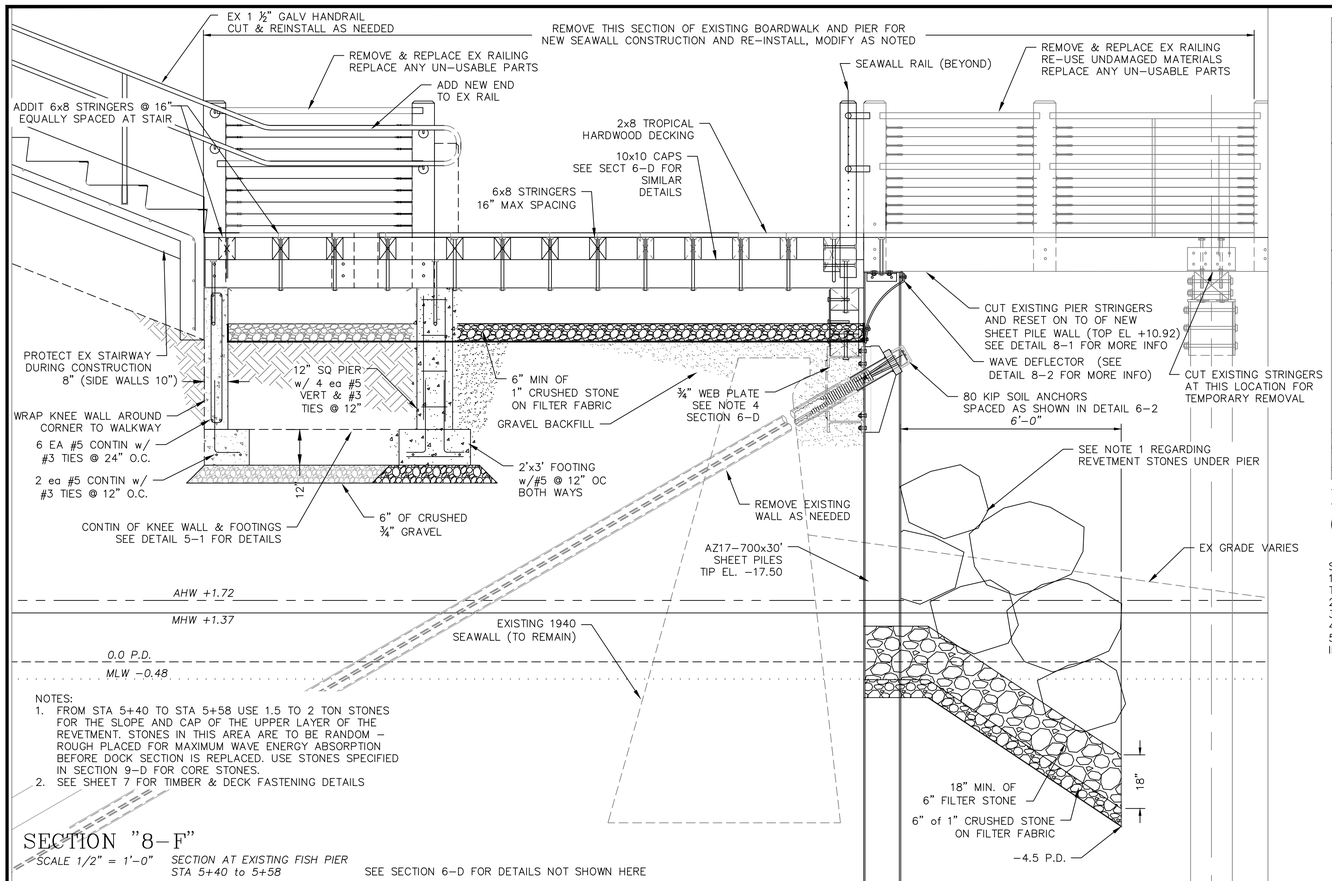
PROPOSED NORTH BLUFF SEAWALL REPAIR AND HARBOR ACCESS PLAN

OAK BLUFFS, MARTHA'S VINEYARD, MA

SEAWALL SECTIONS & DETAILS 2 OF 4

AUGUST 12, 2015 | SHEET 7 OF 18

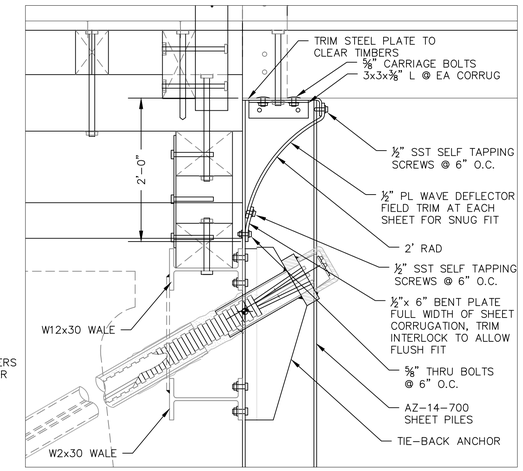
PROJECT NO. OB1-2015



NOTES:
1. FROM STA 5+40 TO STA 5+58 USE 1.5 TO 2 TON STONES FOR THE SLOPE AND CAP OF THE UPPER LAYER OF THE REVETMENT. STONES IN THIS AREA ARE TO BE RANDOM – ROUGH PLACED FOR MAXIMUM WAVE ENERGY ABSORPTION BEFORE DOCK SECTION IS REPLACED. USE STONES SPECIFIED IN SECTION 9-D FOR CORE STONES.
2. SEE SHEET 7 FOR TIMBER & DECK FASTENING DETAILS

SECTION "8-F"

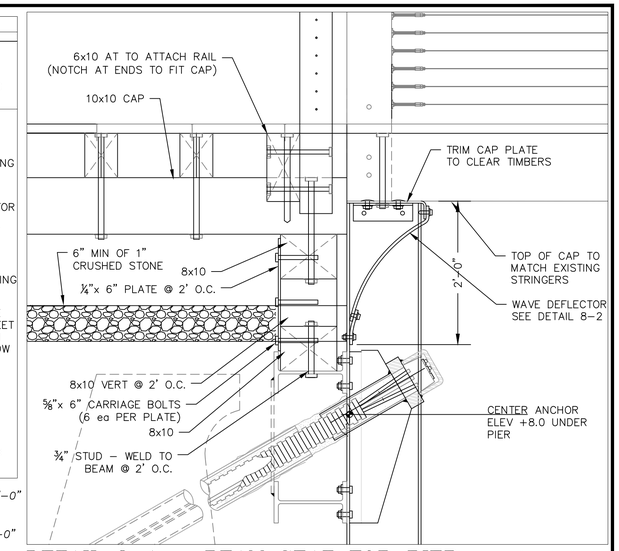
SCALE 1/2" = 1'-0" *SECTION AT EXISTING FISH PIER STA 5+40 to 5+58* SEE SECTION 6-D FOR DETAILS NOT SHOWN HERE



DETAIL 8-2 – WAVE DEFLECTOR (UNDER PIER)

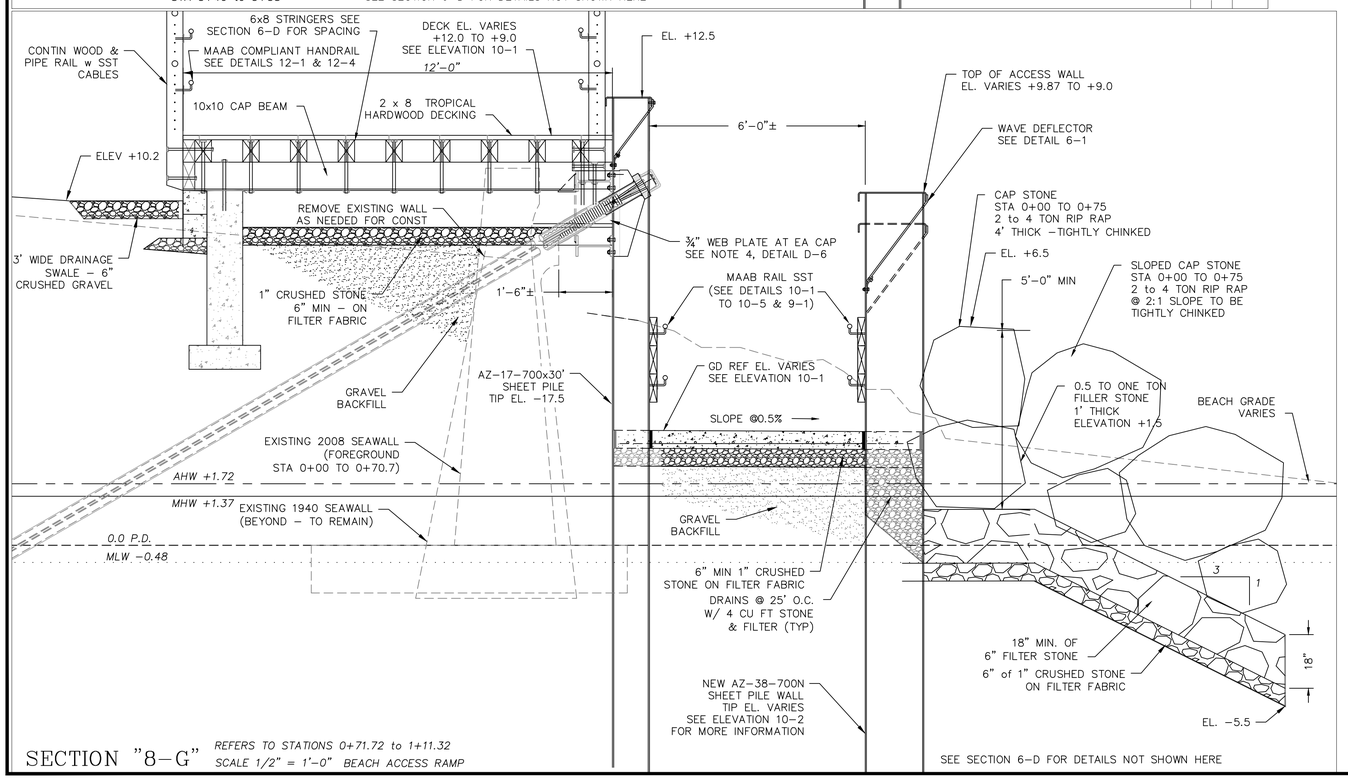
SCALE 1" = 1'-0" 0 1 2 3 1"=1'-0"

SPECIAL NOTES ON WAVE DEFLECTOR:
1. SHOP SUPPLIED PLATES ARE TO BE OVERSIZED TO ALLOW FOR FIELD TRIMMING TO ACCOUNT FOR IRREGULARITIES IN PILE DRIVING AND ALIGNMENT.
2. GRIND OFF INTERLOCK PROJECTIONS IN AREAS WHERE PLATE MEETS SHEETS
3. TRIM PLATE FOR SNUG FIT BETWEEN SHEET AND WAVE DEFLECTOR PLATE.
4. DRILL HOLES FOR BOLT ATTACHMENTS
5. SANDBLAST AND FIELD COAT ALL DAMAGED COATINGS BEFORE FINAL FIT UP & INSTALLATION.



DETAIL 8-1 – BEAM SEAT FOR PIER

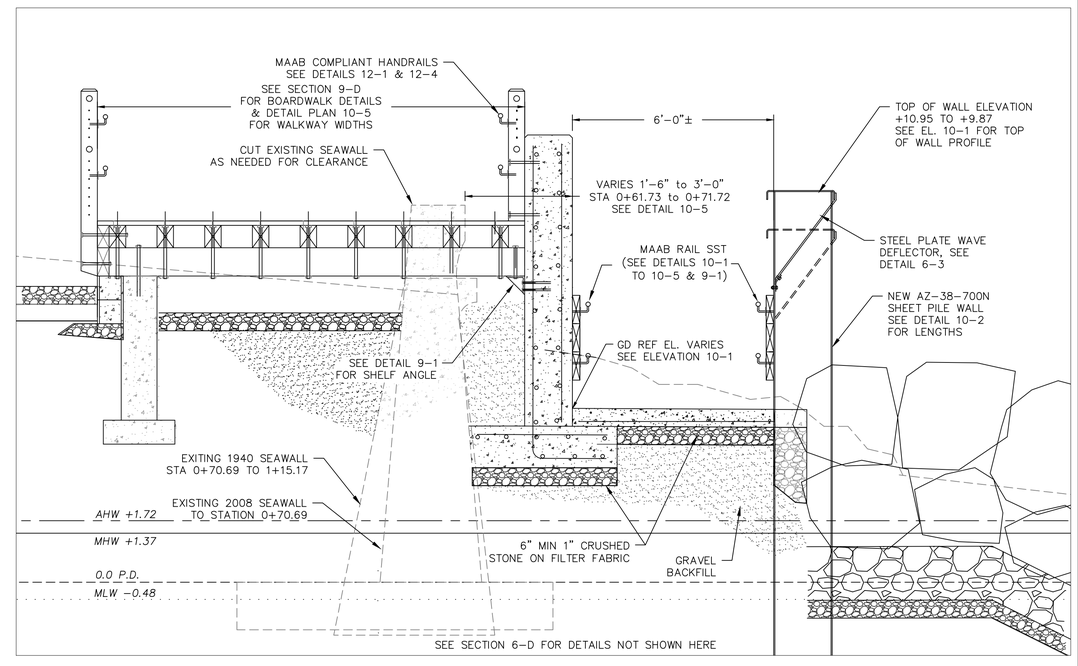
SCALE 1" = 1'-0" 0 1 2 3 1"=1'-0"



SECTION "8-G"

REFERS TO STATIONS 0+71.72 to 1+11.32 *SCALE 1/2" = 1'-0"* *BEACH ACCESS RAMP*

SEE SECTION 6-D FOR DETAILS NOT SHOWN HERE



SEE SECTION 6-D FOR DETAILS NOT SHOWN HERE

SECTION "8-H"

SCALE 1/2" = 1'-0"
BEACH ACCESS RAMP
REFERS TO STATIONS 0+61.73 to 0+71.72

0 2 4 6 1/2"=1'-0"

COMMONWEALTH OF MASSACHUSETTS JOHN A. DeFUGERIS CIVIL No. 32942 REGISTERED PROFESSIONAL ENGINEER

PROPOSED NORTH BLUFF SEAWALL REPAIR AND HARBOR ACCESS PLAN	
OAK BLUFFS, MARTHA'S VINEYARD, MA	
SEAWALL DETAILS AND SECTIONS 3 OF 4	
AUGUST 12, 2015	SHEET 8 OF 18
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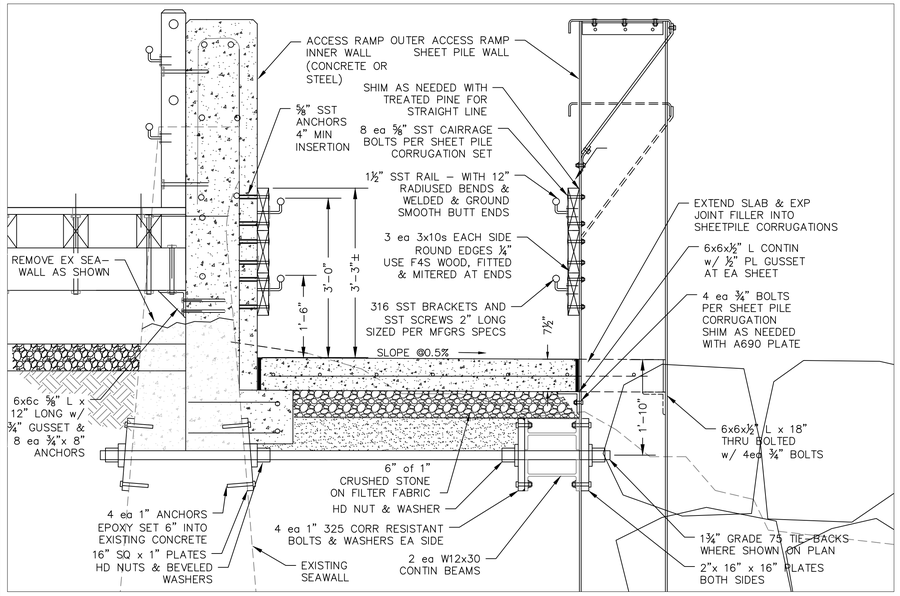
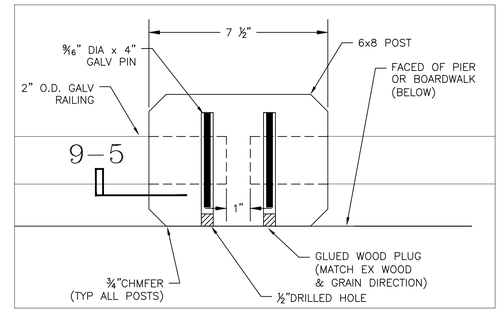
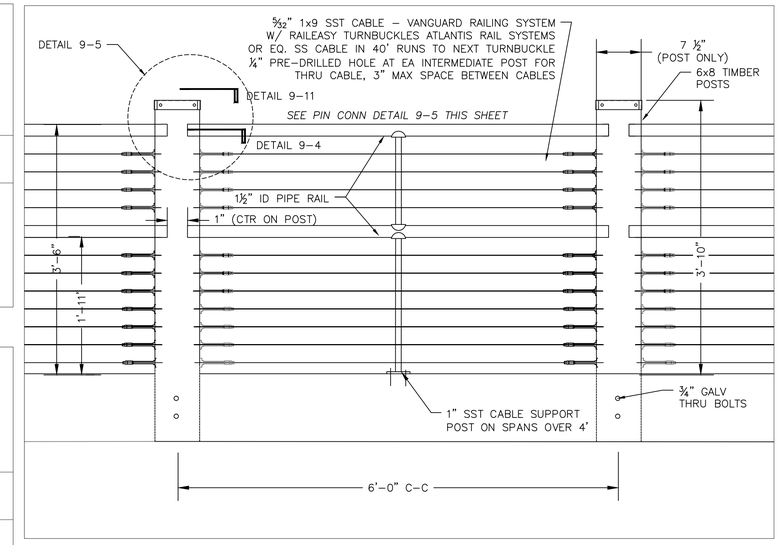


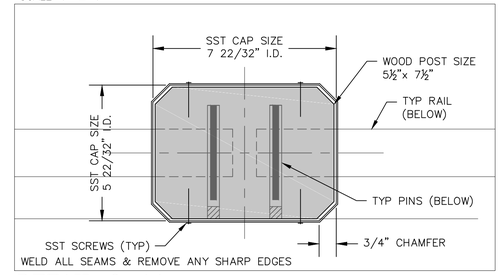
DETAIL 9–1 *SCALE 3/4" = 1'-0" ACCESS RAMP DETAILS*



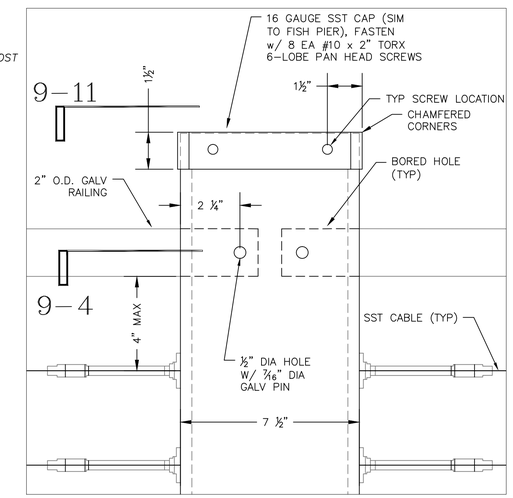
DETAIL 9–4 6 x 8 POST/ RAIL DETAILS
SCALE 4" = 1'



DETAIL 9–2
2" PIPE RAILING DETAILS WITH WOOD POST
SCALE 1" = 1'-0"

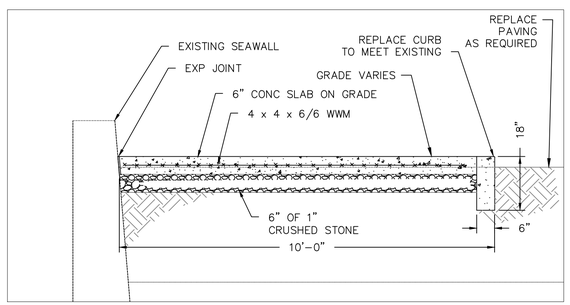


DETAIL 9–11 STAINLESS STEEL CAP DETAILS
SCALE 4" = 1'



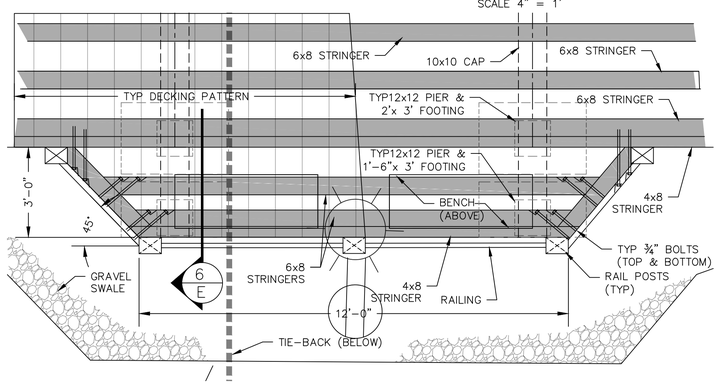
DETAIL 9–5 *ELEVATION – POST CONNECTION*
SCALE 4" = 1'

RAILING NOTES:
1. RAILING PIN CONNECTION TYPICAL ALL RAILING ENDS.
2. CORNERS & ANGLES TO BE PROVIDED WITH SIMILAR CONNECTION.
3. RAILS TO BE PRE-FAB SLIP-ON PIPE & FITTINGS AS MANUFACTURED BY FS INDUSTRIES OR EQUAL.
4. PIPE TO BE 2" EXTRA HEAVY WALL GALVANIZED STEEL SHOP COATED W/ TWO COATS OF COLORED EPOXY PAINT. FIELD TOUCH-UP WILL BE REQUIRED (OWNER TO SELECT COLOR).
5. HORIZ. WIRES TO BE SST CABLE AND FITTINGS AS SHOWN IN DETAILS
6. RAIL HT TO BE 42" UNLESS NOTED OTHERWISE

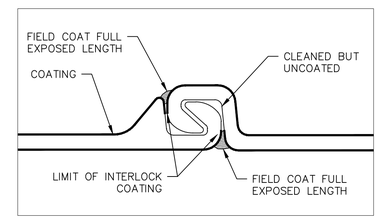


SECTION 9–8 *STATION 0+10 TO 0+50 CONCRETE WALKWAY*
SCALE 1/2" = 1'-0"

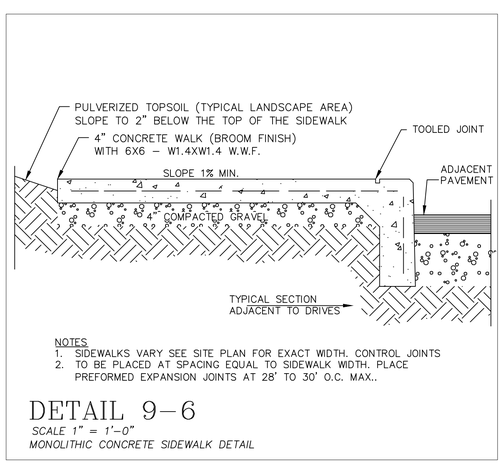
0 2 4 6
1/2"=1'-0"



DETAIL PLAN 9–9 FRAMING DETAILS TYP BENCH "BUMP OUT"
SCALE 1" = 2'

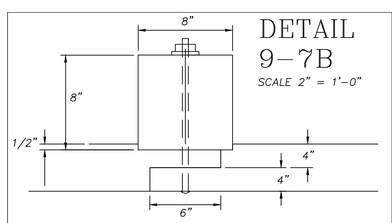


DETAIL PLAN 9–10
LIMITS OF INTERLOCK COATING – TYP AZ SHEET PILE
NOT TO SCALE

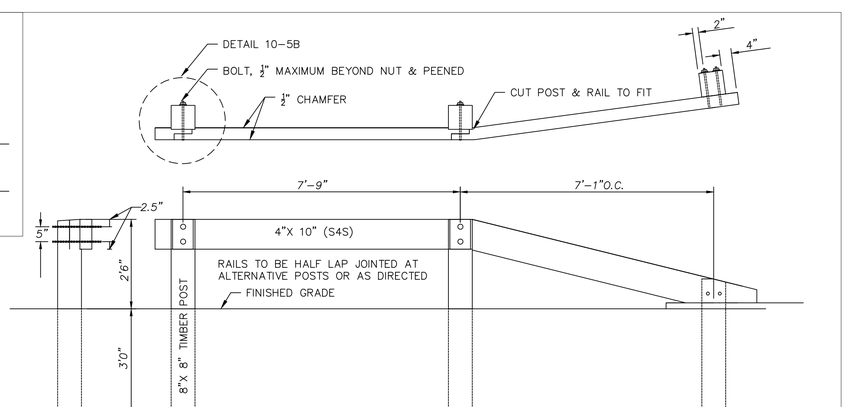


NOTES
1. SIDEWALKS VARY SEE SITE PLAN FOR EXACT WIDTH. CONTROL JOINTS
2. TO BE PLACED AT SPACING EQUAL TO SIDEWALK WIDTH. PLACE PREFORMED EXPANSION JOINTS AT 28' TO 30' O.C. MAX..

DETAIL 9–6
SCALE 1" = 1'-0"
MONOLITHIC CONCRETE SIDEWALK DETAIL



DETAIL 9–7B
SCALE 2" = 1'-0"



DETAIL 9–7
SCALE 1/2" = 1'-0"
TIMBER GUARDRAIL DETAIL

NOTES: WOOD RAILS AND POSTS SHALL BE SOUTHERN YELLOW PINE STRUCTURAL GRADE #2 OR BETTER TIMBER PRESERVATIVES SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M–133. THE METHODS OF TREATMENT SHALL CONFORM TO AMER. WOOD PRESERVERS ASSN. STANDARDS 01, 02, & 03. ANY CUTS MADE IN THE FIELD SHALL BE PAINTED W/ 2 BRUSH COATS OF AFORE – MENTIONED: METHOD OF TREATMENT

PROPOSED NORTH BLUFF SEAWALL REPAIR AND HARBOR ACCESS PLAN
OAK BLUFFS, MARTHA'S VINEYARD, MA

SEAWALL DETAIL AND SECTIONS 4 OF 4

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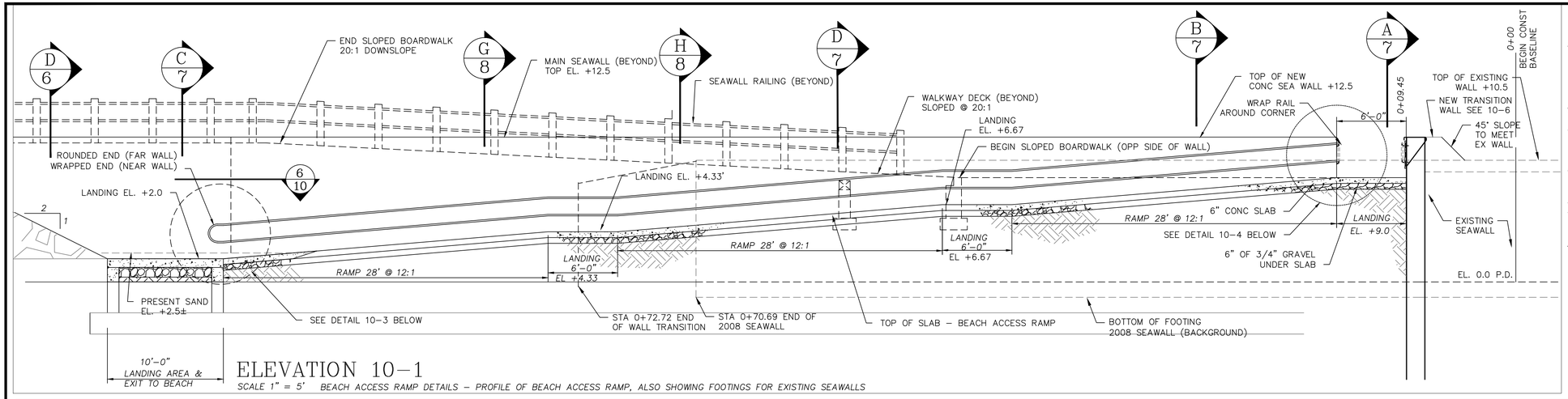
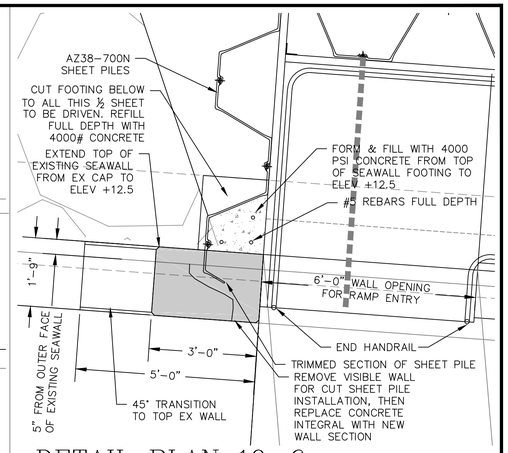


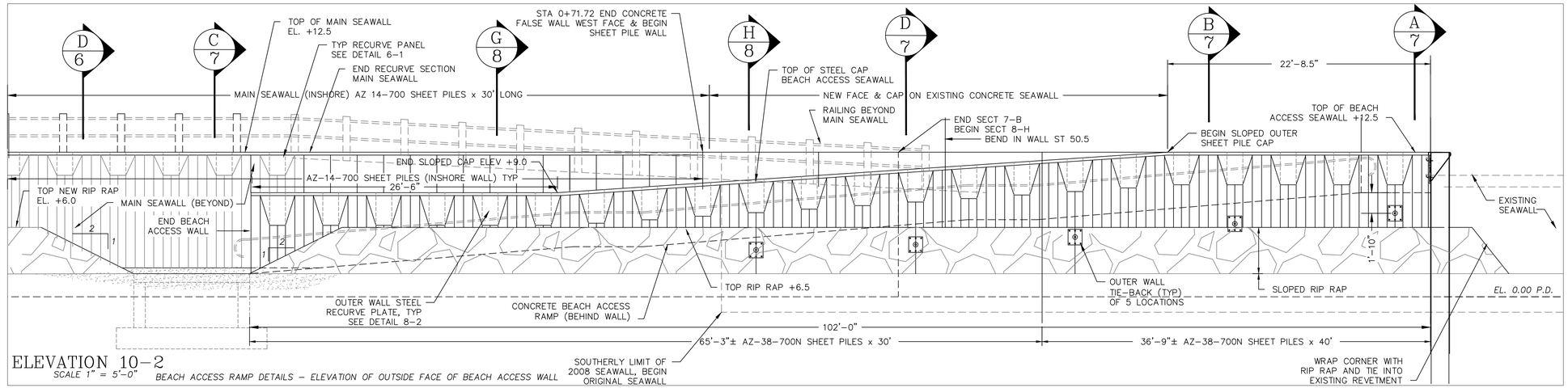
ELEVATION 10-1

SCALE 1" = 5' BEACH ACCESS RAMP DETAILS - PROFILE OF BEACH ACCESS RAMP, ALSO SHOWING FOOTINGS FOR EXISTING SEAWALLS



DETAIL PLAN 10-6

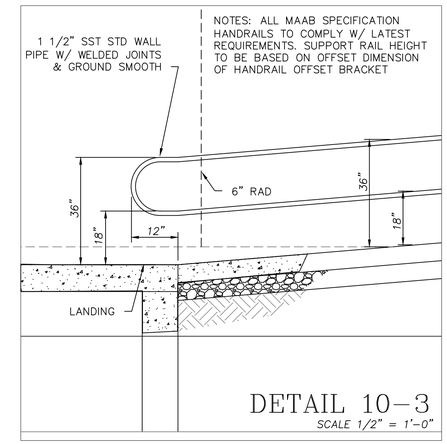
SCALE 1" = 2'-0" CLOSURE DETAIL SHEET PILE TO EXISTING SEAWALL STATION 0+09.44



ELEVATION 10-2

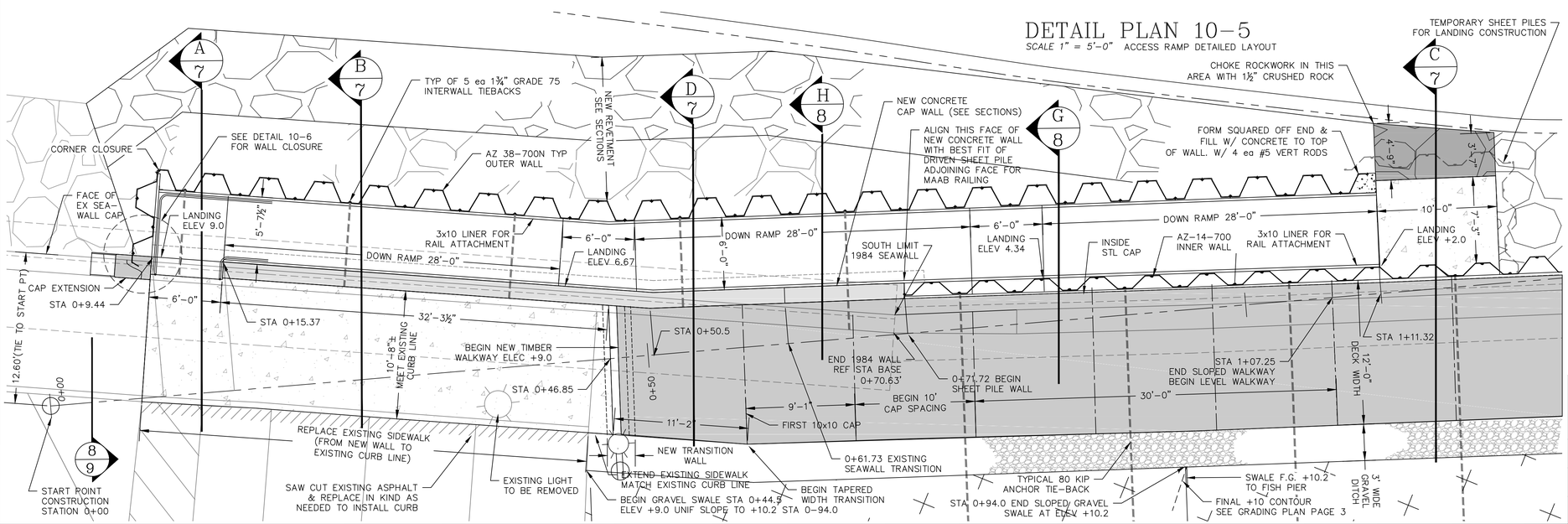
SCALE 1" = 5'-0" BEACH ACCESS RAMP DETAILS - ELEVATION OF OUTSIDE FACE OF BEACH ACCESS WALL

0 5 10 15 1"=5'



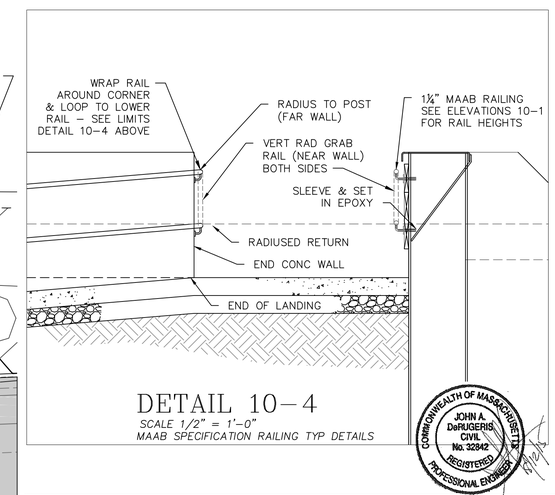
DETAIL 10-3

SCALE 1/2" = 1'-0"



DETAIL PLAN 10-5

SCALE 1" = 5'-0" ACCESS RAMP DETAILED LAYOUT



DETAIL 10-4

SCALE 1/2" = 1'-0"
MAAB SPECIFICATION RAILING TYP DETAILS

COMMONWEALTH OF MASSACHUSETTS JOHN A. DeRUGERIS CIVIL No. 32842 REGISTERED PROFESSIONAL ENGINEER

PROPOSED NORTH BLUFF SEAWALL REPAIR AND HARBOR ACCESS PLAN

OAK BLUFFS, MARTHA'S VINEYARD, MA

BEACH ACCESS RAMP DETAILS

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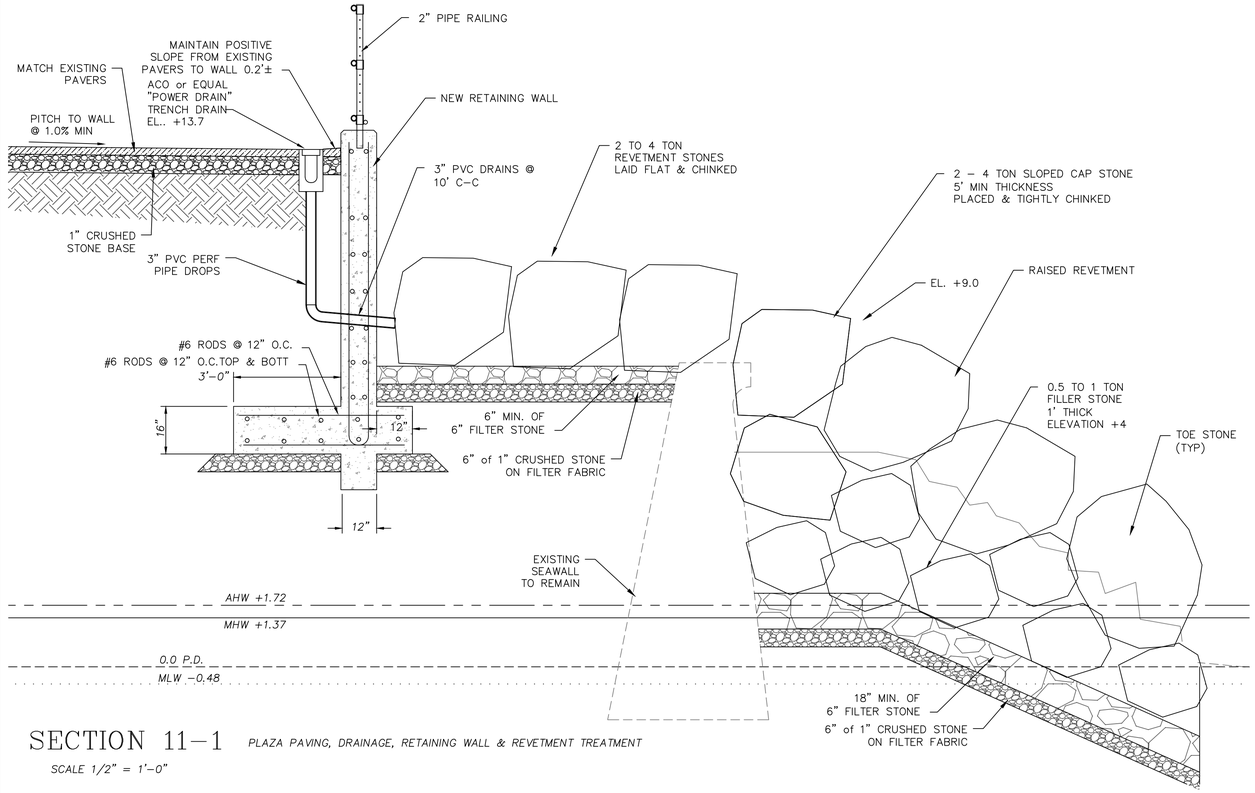
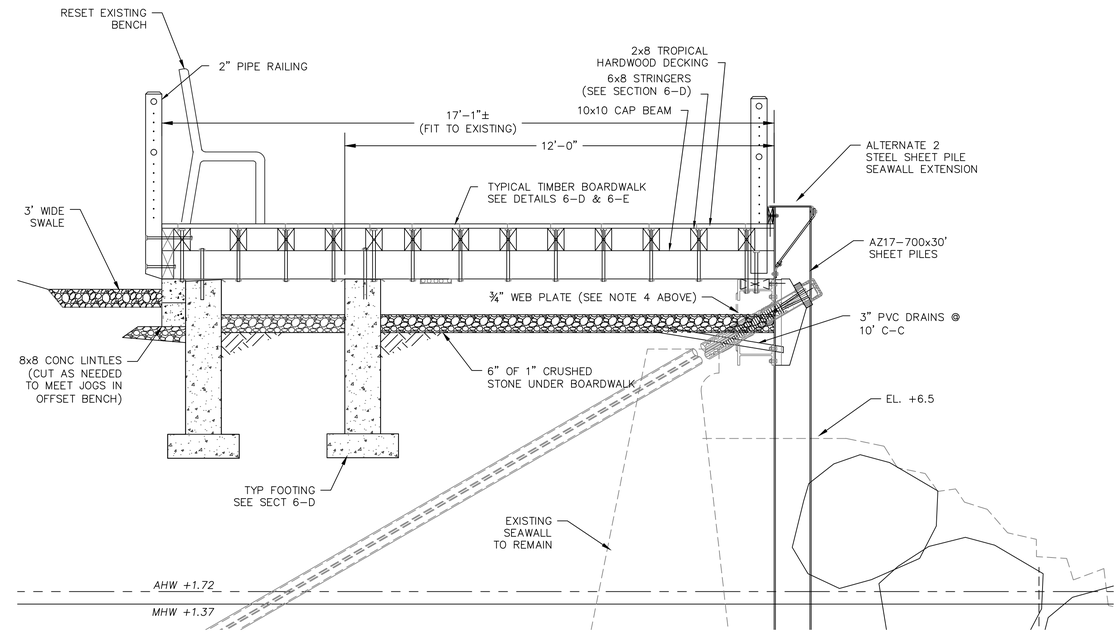


SECTION 11-1 *PLAZA PAVING, DRAINAGE, RETAINING WALL & REVETMENT TREATMENT*

SCALE 1/2" = 1'-0"

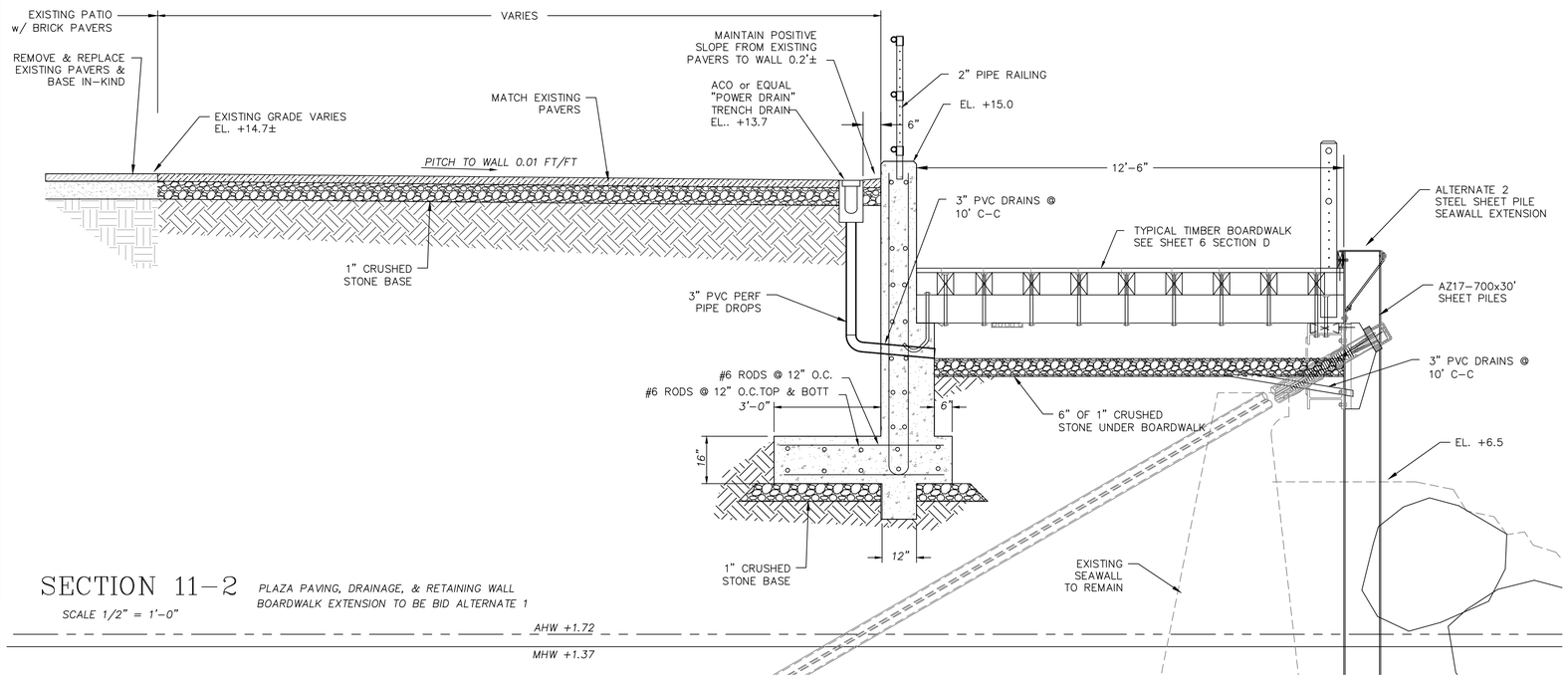


SECTION 11-3 *ALTERNATE 1 DETAILS STA 5+58± TO 5+80± BOARDWALK EXTENSION TO BE BID ALTERNATE 1*

SCALE 1/2" = 1'-0"

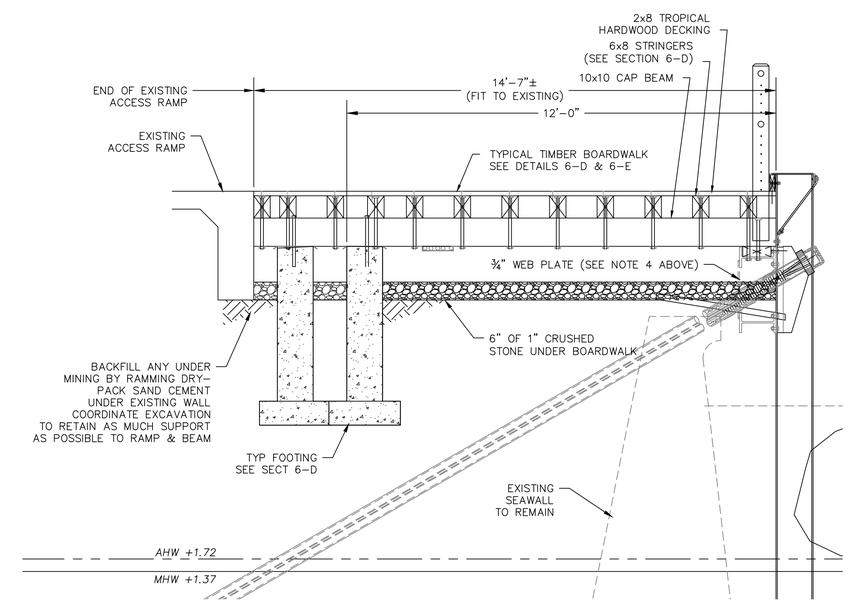
0 2 4 6

SCALE 1/2" = 1'-0"



SECTION 11-2 *PLAZA PAVING, DRAINAGE, & RETAINING WALL BOARDWALK EXTENSION TO BE BID ALTERNATE 1*

SCALE 1/2" = 1'-0"



SECTION 11-4 *ALTERNATE 1 DETAILS STA 5+80± TO 6+00% BOARDWALK EXTENSION TO BE BID ALTERNATE 1*

SCALE 1/2" = 1'-0"

COMMONWEALTH OF MASSACHUSETTS
JOHN A. DeRUGERIS
CIVIL
No. 32842
REGISTERED PROFESSIONAL ENGINEER
8/10/15

PROPOSED NORTH BLUFF SEAWALL REPAIR AND HARBOR ACCESS PLAN

OAK BLUFFS, MARTHA'S VINEYARD, MA

PLAZA AREA DETAILS

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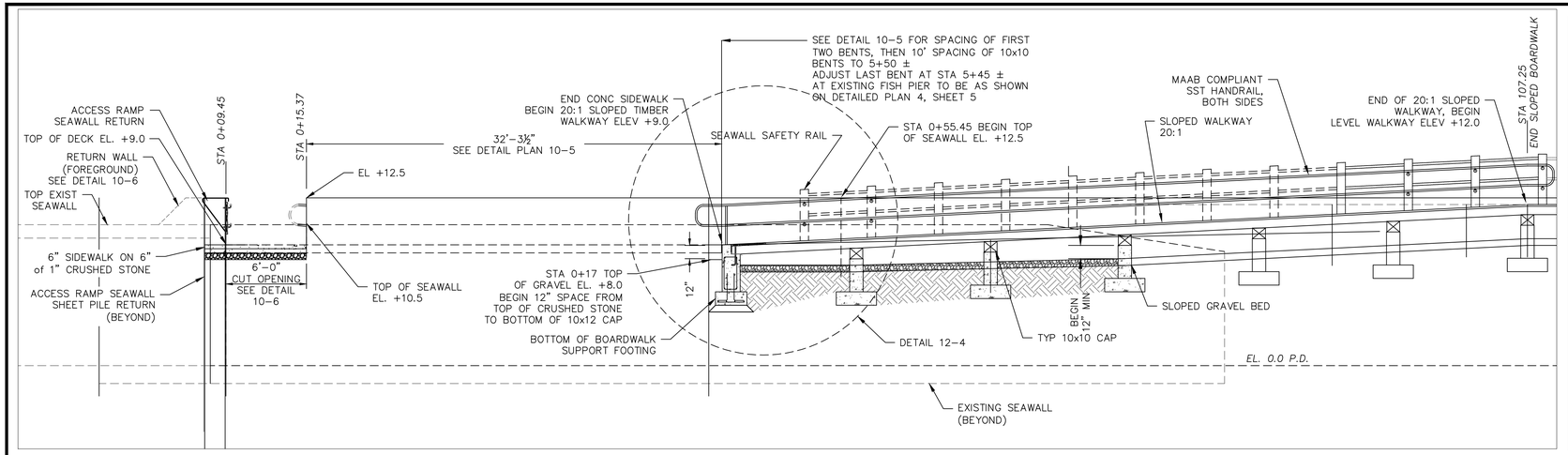


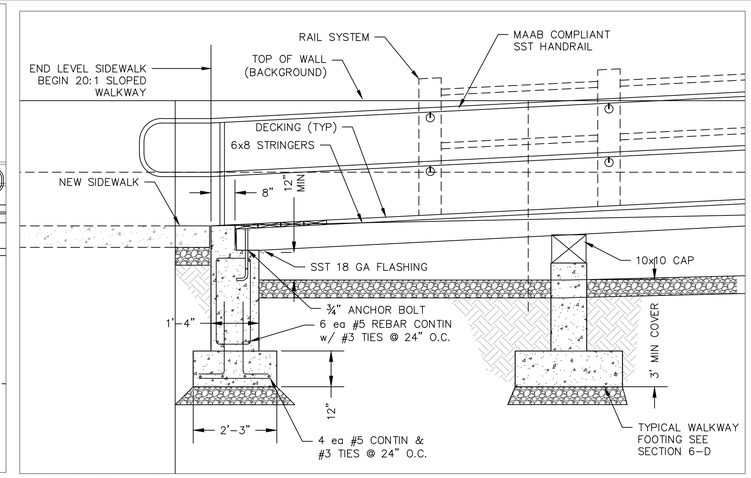
ELEVATION 12–1

DETAILED ELEVATION OF NORTHERLY BOARDWALK TRANSITION FROM EL. +9.0 TO ELEVATION +12.0, WITH BOARDWALK & GRAVEL BED ELEVATIONS SHOWN

SCALE 1" = 5'–0"

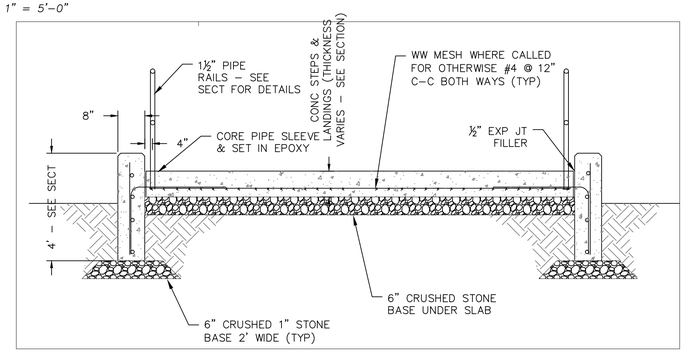
0 5 10 15 1"=5'

GRAPHIC SCALE



DETAIL 12–4

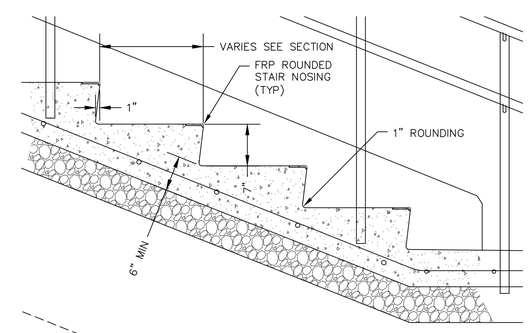
SCALE 1" = 5'–0"



12–3

TYP CONC STAIR DETAILS

SCALE 1/2" = 1'–0"



DETAIL 12–5

SCALE 1" = 1'–0"

0 1 2 3

SCALE 1" = 1'–0"

SECTION 12–2

SCALE 1/2" = 1'–0"

SACO AVE STAIRCASE @ STA 3+25

0 2 4 6 1/2"=1'–0"

GRAPHIC SCALE

COMMONWEALTH OF MASSACHUSETTS
JOHN A. DeRUGERIS
CIVIL
No. 32842
REGISTERED PROFESSIONAL ENGINEER

PROPOSED NORTH BLUFF SEAWALL REPAIR AND HARBOR ACCESS PLAN

OAK BLUFFS, MARTHA'S VINEYARD, MA

CONCRETE STAIR DETAILS

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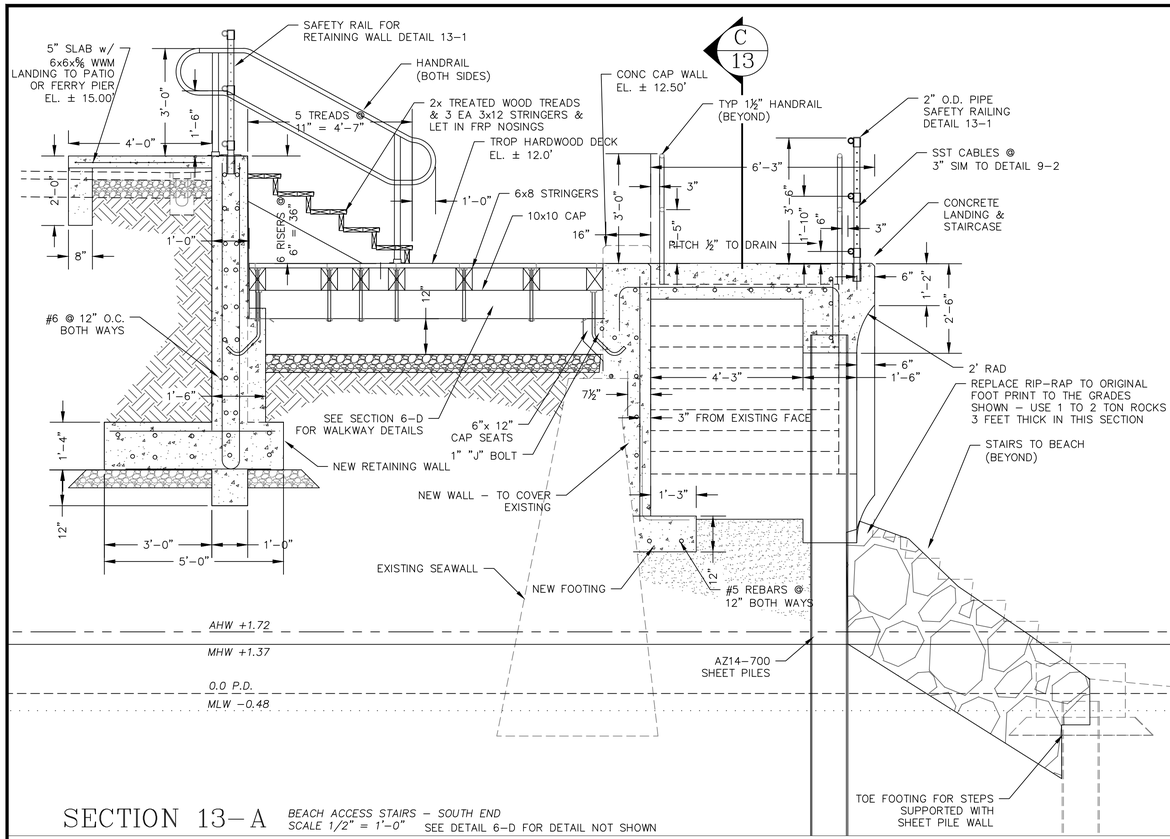
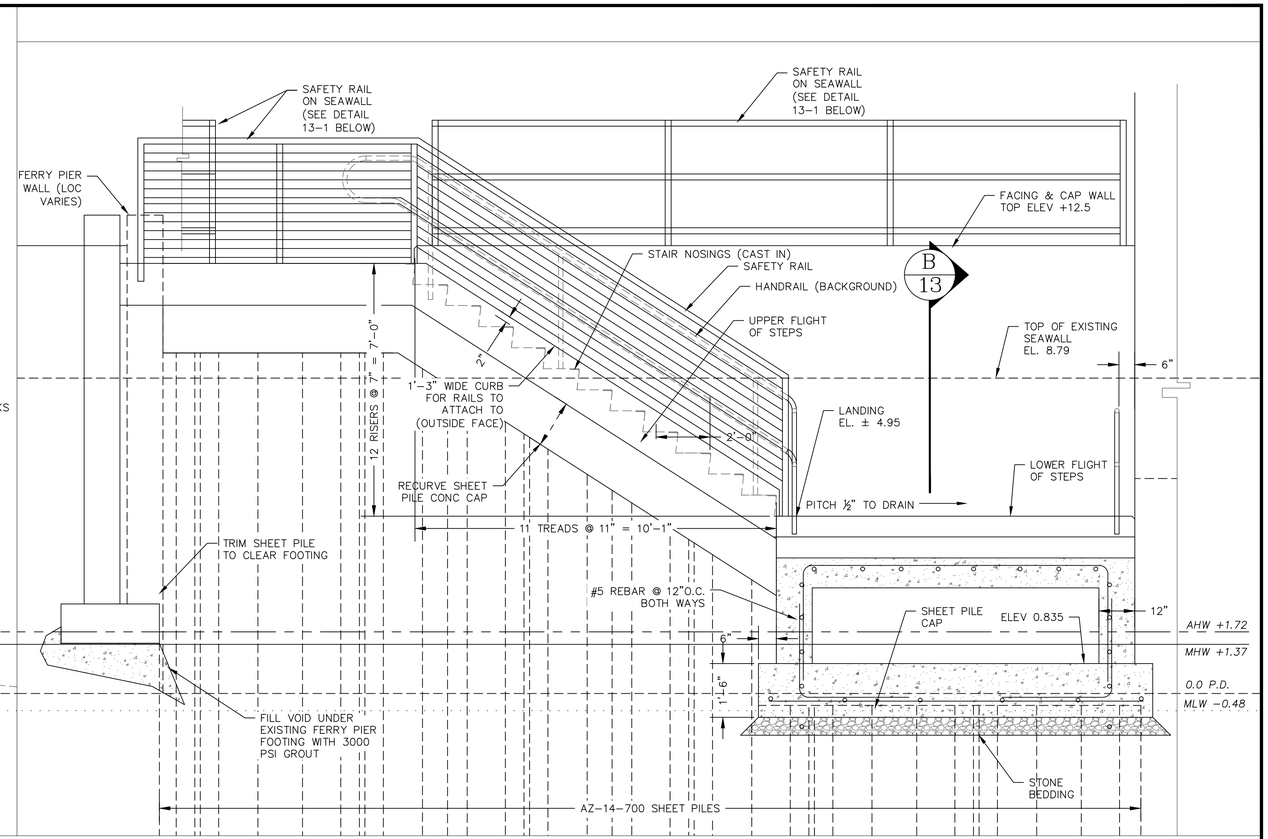


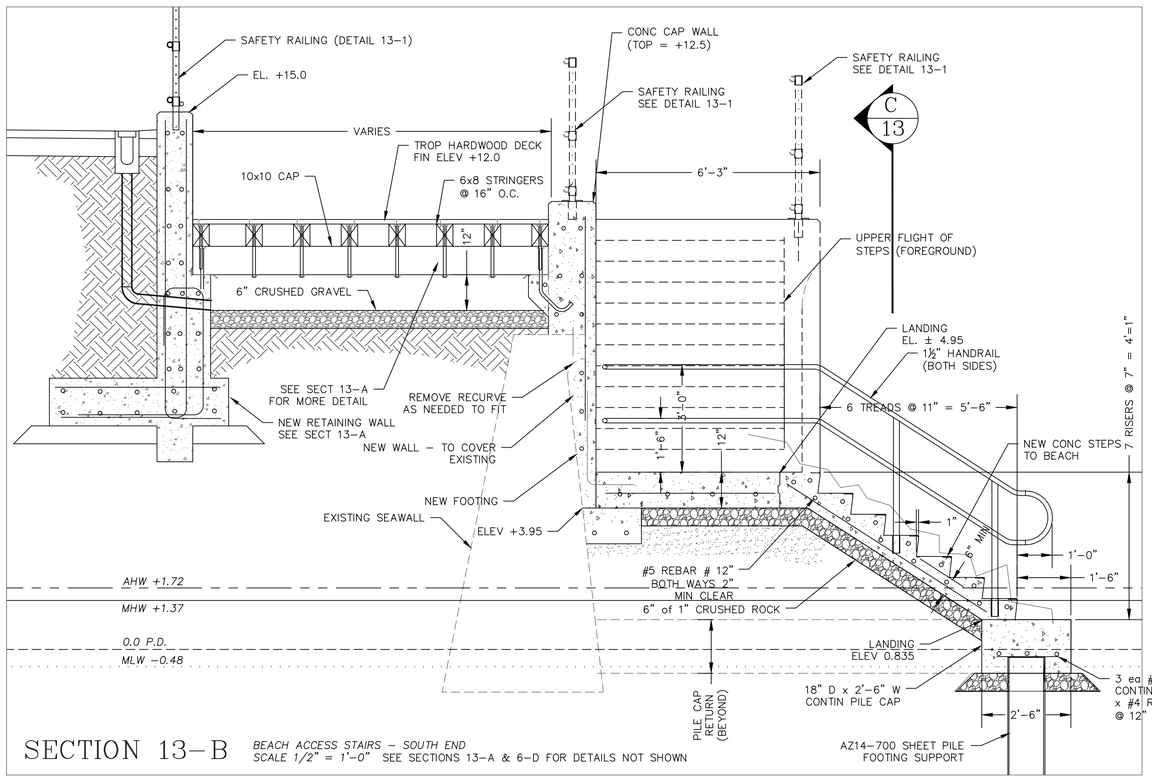
SECTION 13-A *BEACH ACCESS STAIRS - SOUTH END SCALE 1/2" = 1'-0"* SEE DETAIL 6-D FOR DETAIL NOT SHOWN



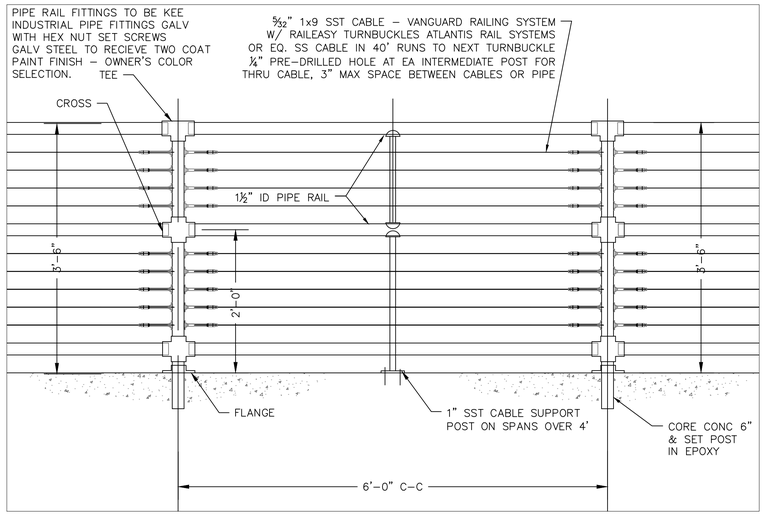
SECTION 13-C *BEACH ACCESS STAIRS - SOUTH END SCALE 1/2" = 1'-0"*

0 2 4 6

SCALE 1/2" = 1'-0"



SECTION 13-B *BEACH ACCESS STAIRS - SOUTH END SCALE 1/2" = 1'-0"* SEE SECTIONS 13-A & 6-D FOR DETAILS NOT SHOWN



0 1 2 3

SCALE 1" = 1'-0"

DETAIL 13-1

2" PIPE RAILING DETAILS WITH STAINLESS STEEL POST
SCALE 1" = 1'-0"

COMMONWEALTH OF MASSACHUSETTS
JOHN A. DePUGERIS
CIVIL
No. 32842
REGISTERED PROFESSIONAL ENGINEER

PROPOSED NORTH BLUFF SEAWALL REPAIR AND HARBOR ACCESS PLAN

OAK BLUFFS, MARTHA'S VINEYARD, MA

BEACH ACCESS STAIR DETAILS 1 OF 2

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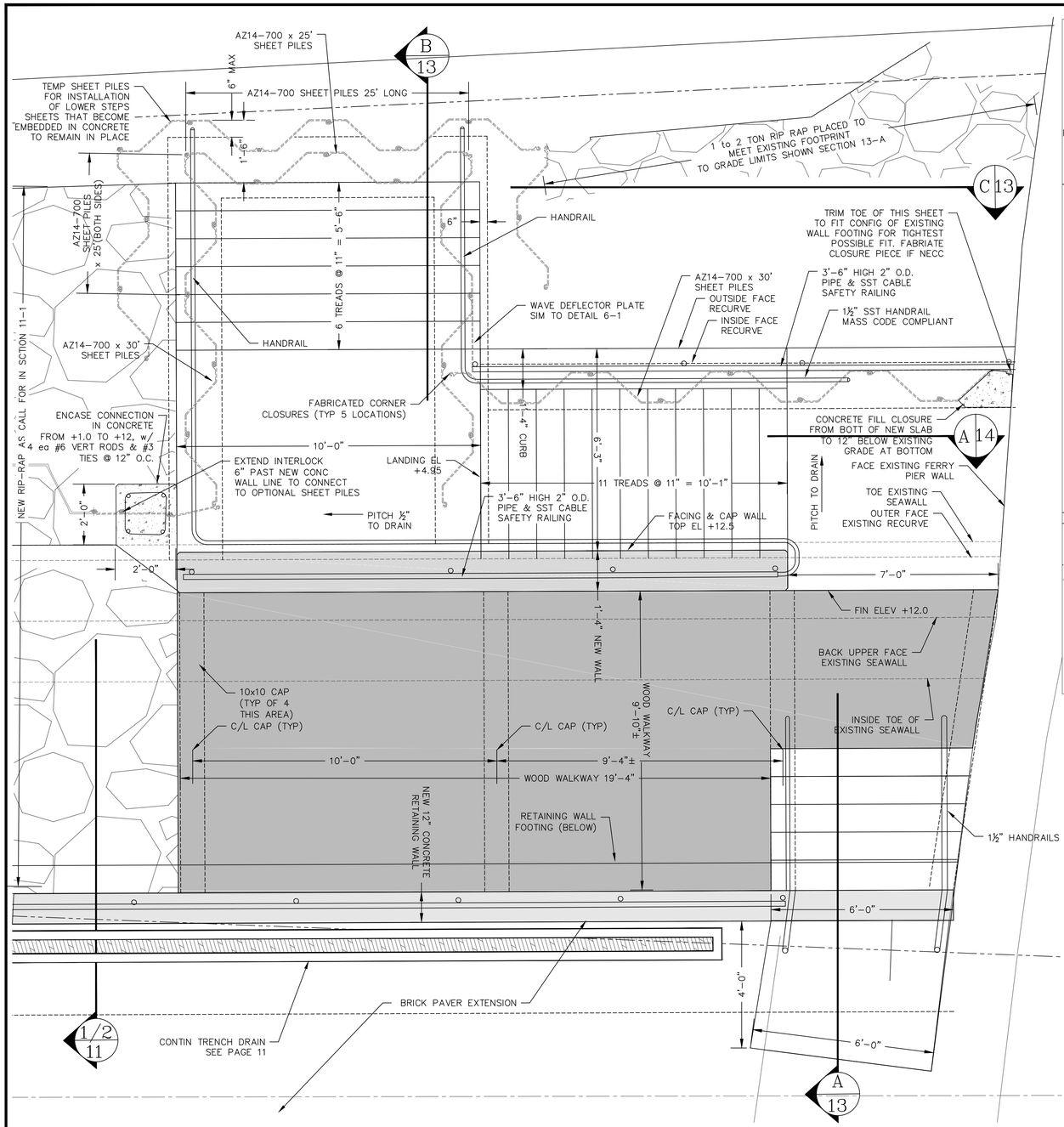
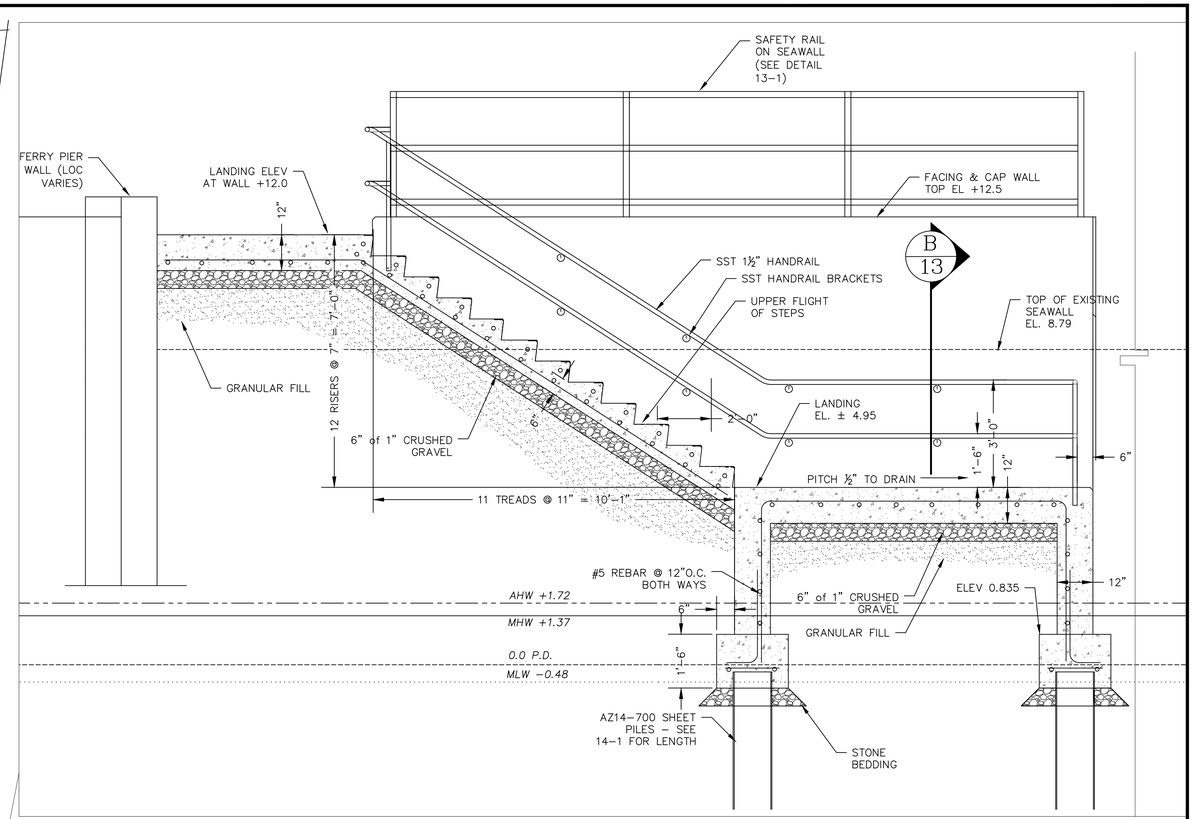


DETAIL PLAN 14-1

SCALE 1" = 5'-0" ACCESS RAMP DETAILED LAYOUT

0 5 10 15 1"=5'



SECTION 14-A

BEACH ACCESS STAIRS - SOUTH END
SCALE 1/2" = 1'-0"

0 2 4 6

SCALE 1/2" = 1'-0"

COMMONWEALTH OF MASSACHUSETTS JOHN A. DeRUGERIS CIVIL No. 32842 REGISTERED PROFESSIONAL ENGINEER

PROPOSED NORTH BLUFF SEAWALL REPAIR AND HARBOR ACCESS PLAN OAK BLUFFS, MARTHA'S VINEYARD, MA	
BEACH ACCESS STAIR DETAILS 2 OF 2	
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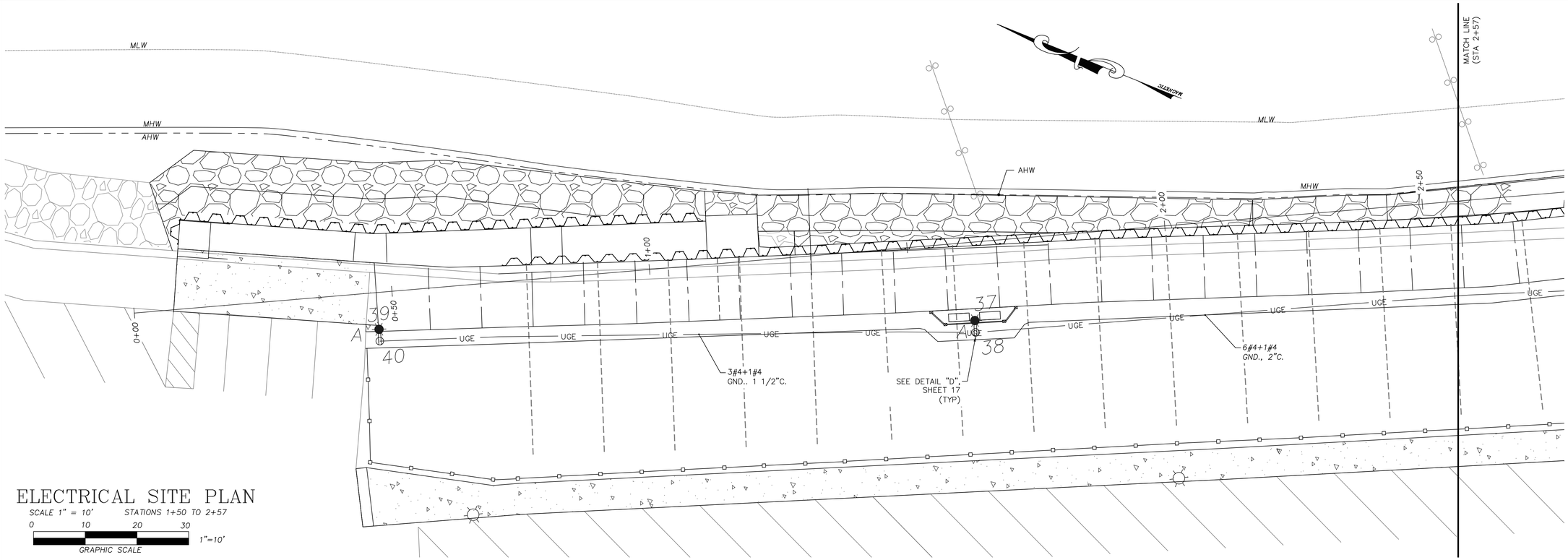
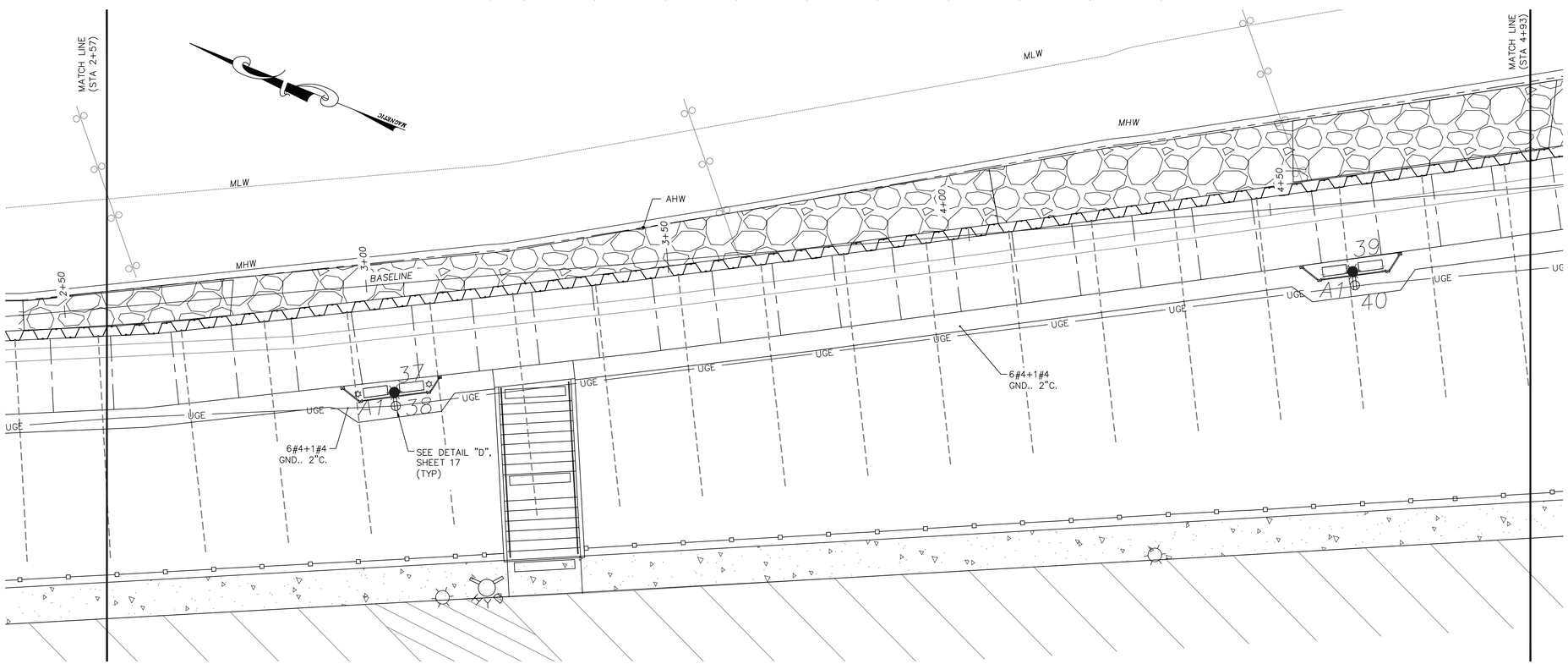


ELECTRICAL SITE PLAN

SCALE 1" = 10' STATIONS 1+50 TO 2+57

0 10 20 30 1"=10'

GRAPHIC SCALE



ELECTRICAL SITE PLAN

SCALE 1" = 10' STATIONS 2+57 TO 4+93

0 10 20 30 1"=10'

GRAPHIC SCALE

COMMONWEALTH OF MASSACHUSETTS
ROBERT WOOLSON ELECTRICAL NO. 34691
REGISTERED PROFESSIONAL ENGINEER

PROPOSED NORTH BLUFF SEAWALL REPAIR AND HARBOR ACCESS PLAN

OAK BLUFFS, MARTHA'S VINEYARD, MA

ELECTRICAL SITE PLAN 1 OF 2

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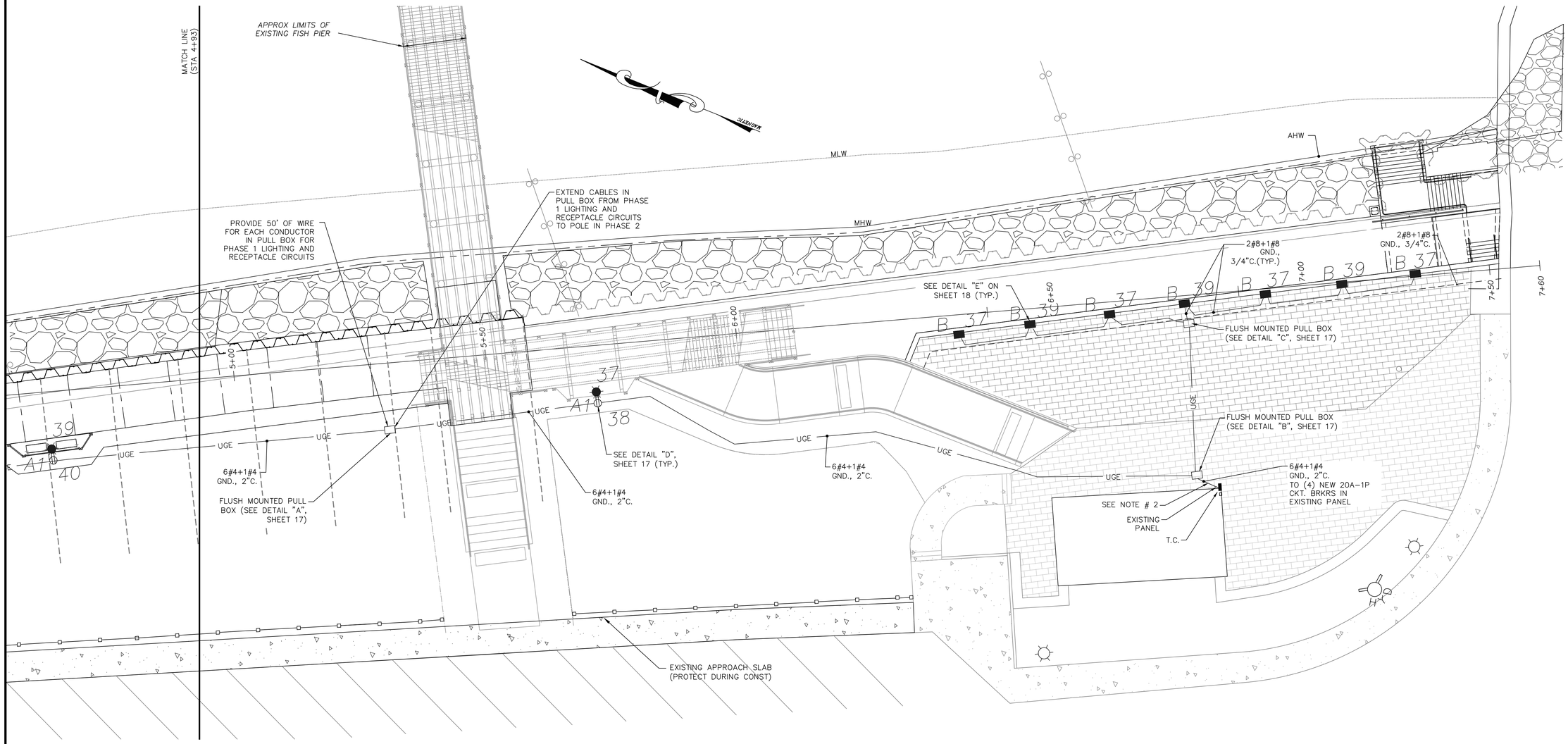

ELECTRICAL SITE PLAN

SCALE 1" = 10' STA 4+93 TO 7+60

0 10 20 30 1"=10'

GRAPHIC SCALE

NOTES:

1. ALL CONDUITS ARE TO BE BURIED 24" BELOW GRADE.
2. CONTRACTOR TO CORE DRILL BRICK WALL IN TO STORAGE ROOM TO ACCESS THE EXISTING ELECTRICAL PANEL.
3. LIGHT POLES, TYPE A & TYPE B FIXTURES, AND ASSOCIATED WIRE, CONDUIT & PULL BOX TO BE INCLUDED IN BID ITEM NUMBER 1. SEE SPECIFICATION SECTION 040 – MEASUREMENT & PAYMENT FOR MORE INFORMATION

COMMONWEALTH OF MASSACHUSETTS
ROBERT WOOLSON
ELECTRICAL
NO. 34691
REGISTERED PROFESSIONAL ENGINEER

PROPOSED NORTH BLUFF SEAWALL REPAIR AND HARBOR ACCESS PLAN OAK BLUFFS, MARTHA'S VINEYARD, MA	
ELECTRICAL SITE PLAN 2 OF 2	
AUGUST 12, 2015	SHEET 16 OF 18
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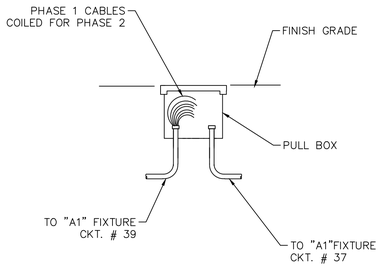
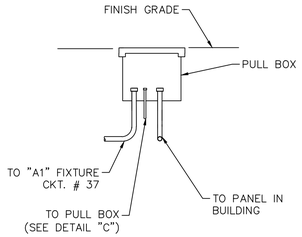


DETAIL "A"
NOT TO SCALE



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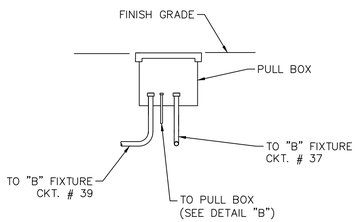


DETAIL "C"
NOT TO SCALE

ELECTRICAL LEGEND

37 — LIGHTING CIRCUIT NUMBER (TYP.)

A — TYPE "A" LIGHT FIXTURE ON 20' POLE

38 — RECEPTACLE CIRCUIT NUMBER (TYP.)

A1 — TYPE "A1" LIGHT FIXTURE ON 16' POLE

B — TYPE "B" LIGHT FIXTURE MOUNTED FLUSH IN WALL

EXISTING LIGHT POLE TO REMAIN

20A,120 VOLT DUPLEX RECEPTACLE

T.C. — ASTRONOMIC 3 POLE TIME CLOCK, EQUAL TO TORK# TZ300L.

LIGHTING FIXTURE SCHEDULE

TYPE	MANUFACTURER	MOUNTING	LAMPS		FINISH	REMARKS
			WATTS	TYPE		
A	SELUX BPC-S-R5-1-S150-SP-120-FS / AT535/ (20')- SP- BC5-REC	POLE	1 150W	HPS	FOREST GREEN	SEE NOTE #1 GREEN
A1	SELUX BPC-S-R5-1-S150-SP-120-FS / AT535/ (16')- SP- BC5-REC	POLE	1 150W	HPS	FOREST GREEN	SEE NOTE #1 GREEN
B	HYDREL 4453-B-13DTT-120-LLV-LPI-GR	FLUSH WALL	1 13W	CFL DTT	GRAY	SEE NOTE #2 GRAY

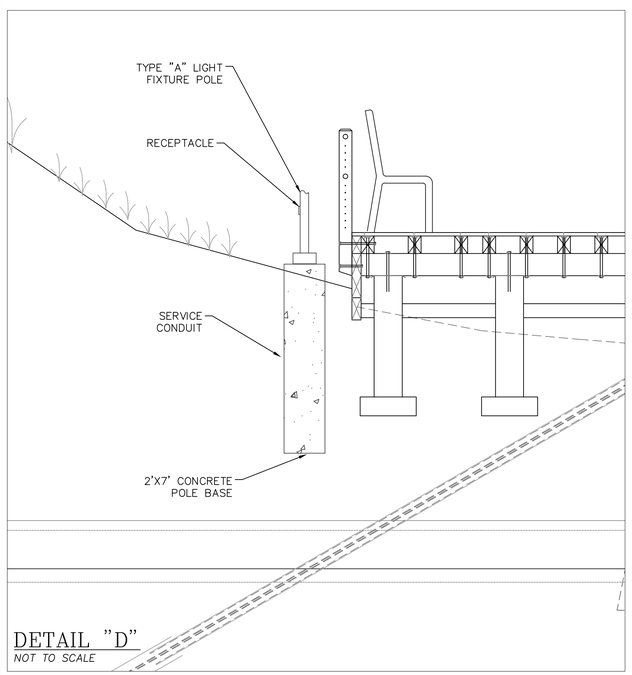
NOTES

1. EQUAL MANUFACTURERS ARE BEGA AND ANP LIGHTING.
2. EQUAL MANUFACTURERS ARE BEGA AND WILLIAMS LIGHTING.

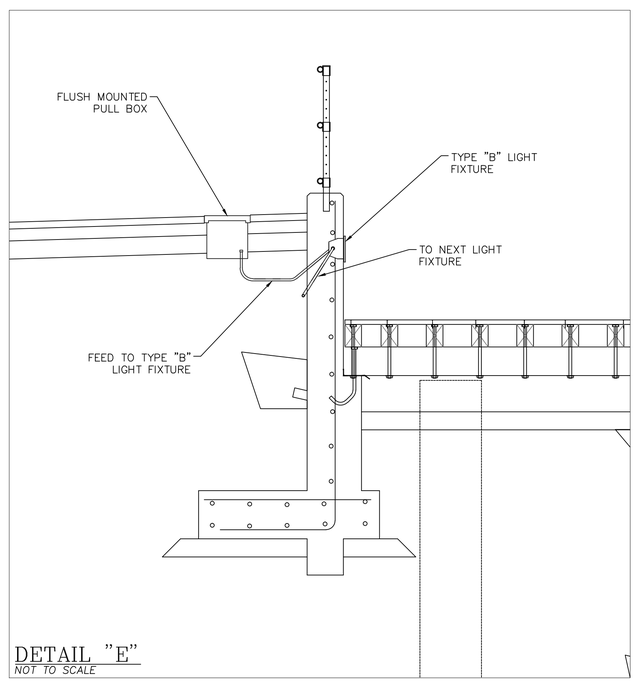
PANEL SCHEDULE

EXISTING PANEL -100A-2P MAIN BRKR. -120/240V- SINGLE PHASE-3 WIRE- 60 Hz. - SURFACE MOUNTED

CKT. NO.	CKT. BRKR.		A.I.C.	ITEM
	AMP	POLE	RATING	
1-20	20	1	10,000	USED
21,23	20	1	10,000	SPARES
24-36	20	1	10,000	USED
37,39	20	1	10,000	LIGHTING (NEW)
38,40	20	1	10,000	RECEPTACLES (NEW)
41,42		1	10,000	SPACES



DETAIL "D"
NOT TO SCALE



DETAIL "E"
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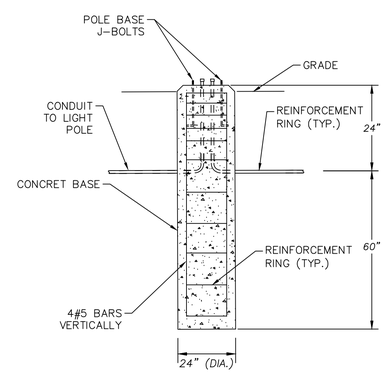


LIGHT POLE PRECAST BASE DETAIL
NOT TO SCALE

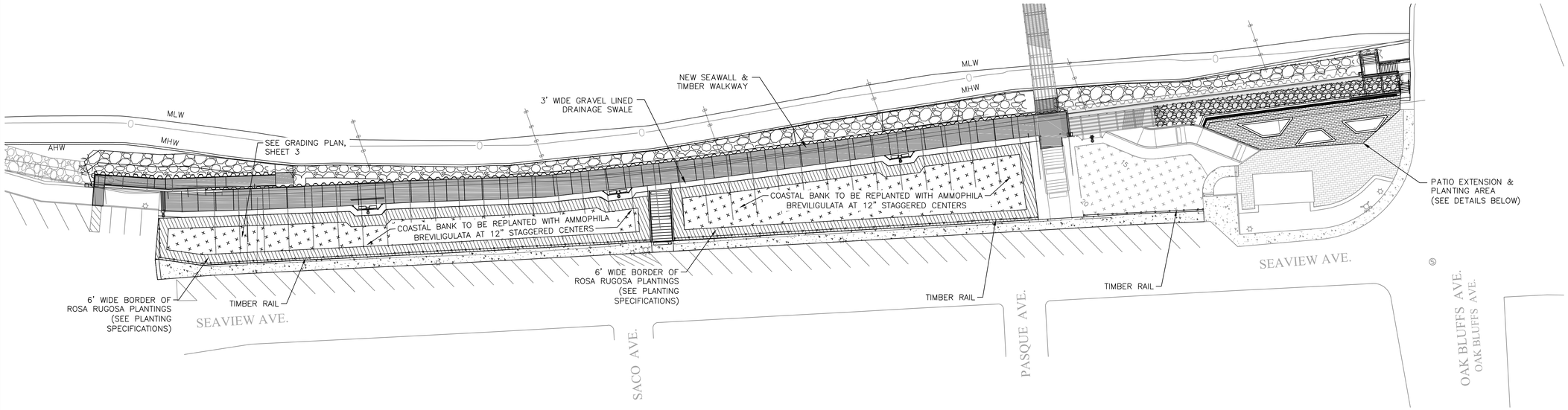
PROPOSED NORTH BLUFF SEAWALL REPAIR AND HARBOR ACCESS PLAN

OAK BLUFFS, MARTHA'S VINEYARD, MA

ELECTRICAL DETAILS

AUGUST 12, 2015 | SHEET 17 OF 18

PROJECT NO. 0B1-2015



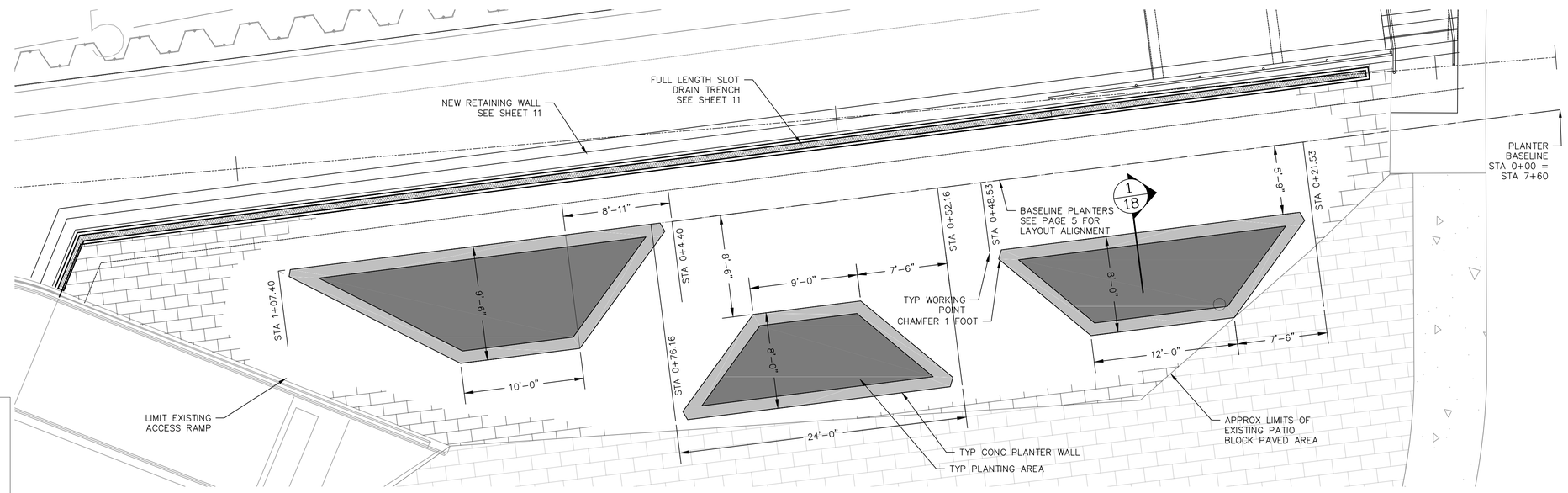
LANDSCAPE PLAN

SCALE 1"= 30'-0"

GRAPHIC SCALE

30 0 15 30 60 120

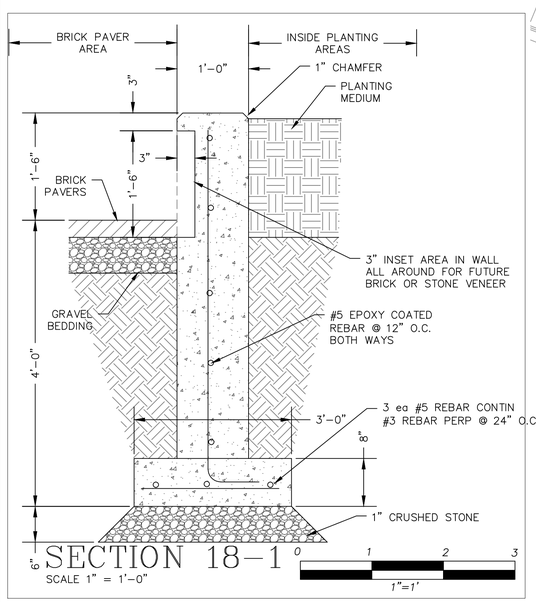
(IN FEET)
1 inch = 30 ft.



PLAZA EXPANSION DETAILS

SCALE 1"= 5'-0"

0 5 10 15
1"=5'



SECTION 18-1

SCALE 1" = 1'-0"

0 1 2 3
1"=1'

COMMONWEALTH OF MASSACHUSETTS
JOHN A. DeRUGERIS
CIVIL
No. 32942
REGISTERED PROFESSIONAL ENGINEER

PROPOSED NORTH BLUFF SEAWALL REPAIR AND HARBOR ACCESS PLAN OAK BLUFFS, MARTHA'S VINEYARD, MA	
LANDSCAPE PLAN	
AUGUST 12, 2015	SHEET 18 OF 18
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