PORTSMOUTH NAVAL SHIPYARD
KITTERY, ME

STRUCTURAL STABILIZATION AND REPAIRS TO BERTHS 1, 2A AND 2B

CONTRACT NO. N40085-12-C-1736

ADDED TEXT

CONTRACTOR: REED & REED INC.

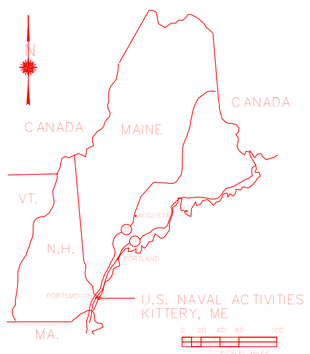
ADDED TEXT

RECORD DRAWINGS

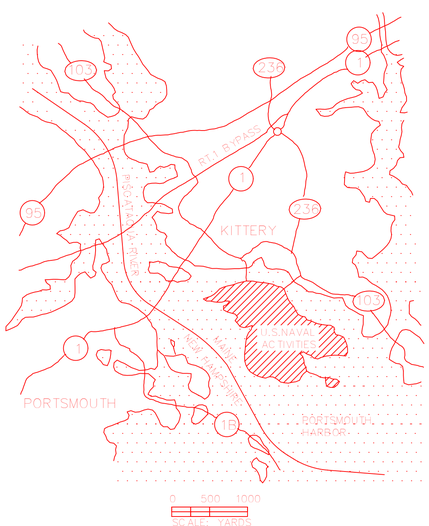
CONFORMED SET

ALL REVISIONS CONTAINED WITH THIS DRAWING SET ARE A REFLECTION OF THE CHANGES MADE AS PART OF THE BID AMENDMENTS. THEY ARE NOT MEANT TO REPLACE THE BID AMENDMENTS RATHER SUMMARIZE THE CHANGES MADE IN ONE SET. THE CONTRACTOR SHALL STILL ADHERE TO ALL CHANGES AND ADDITIONS MADE IN THE BID AMENDMENTS. ANY CONFLICTS WITH THE CONTRACT DRAWINGS AND AMENDMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE CONTRACTING OFFICER FOR DIRECTION.

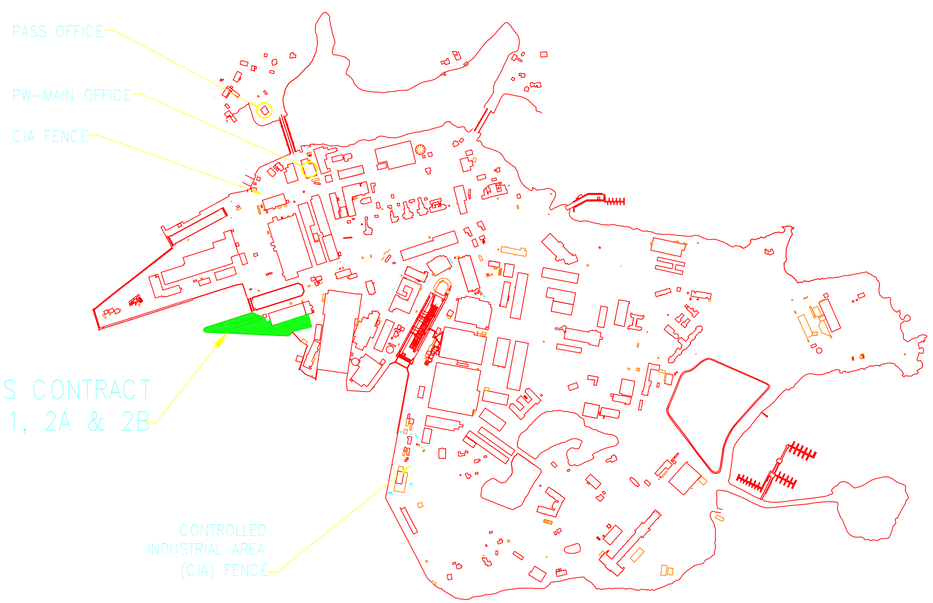
SEE SHEET G-002 FOR LIST OF DRAWINGS



AREA MAP



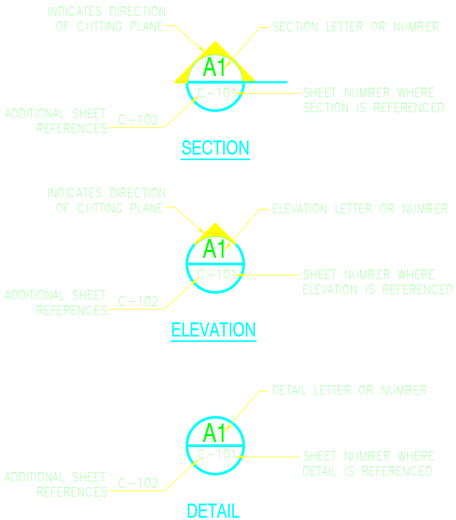
VICINITY MAP



SITE PLAN

SCALE: 1" = 600'

ELEVATION, SECTION OR DETAIL SYMBOLS



GRAPHIC SCALE

AS-BUILT COMMENTS 8/19/14 -
CONFORMED SET 12/7/12 REB

NAVFAC

PROTECTION OF THE ENVIRONMENT
NAVAL FACILITIES ENGINEERING COMMAND ~ MID-ATLANTIC
NAVY PIER, PORTSMOUTH NAVAL SHIPYARD, PORTSMOUTH, NH
PORTSMOUTH NAVAL SHIPYARD
KITTERY, MAINE
STRUCTURAL STABILIZATION AND REPAIRS TO BERTHS 1, 2A AND 2B
TITLE SHEET

NAVFAC NO.	WNRC9
PROJECT NO.	1121079
CONSTR. CONTR. NO.	N40085-12-C-1736
NAVFAC DRAWING NO.	12621669
SHEET 1 OF 34	
G-001	FP1-12-001

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SHEET ADDED

GRAPHIC SCALE

REVISIONS	
AS-BUILT COMMENTS	8/11/14
CONFORMED SET	12/7/12

NAVFAC

PREPARED IN COOPERATION WITH THE PUBLIC WORKS DEPARTMENT, NAVAL SUPPORT ACTIVITY, PORTSMOUTH NAVAL SHIPYARD

NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC

PORTSMOUTH NAVAL SHIPYARD KITTERY, MAINE

STRUCTURAL STABILIZATION AND REPAIRS TO BERTHS 1, 2A AND 2B

DRAWING LIST

MAXIMO NO.: WNRC09

EPROJECT NO.: 1121075

CONSTR. CONTR. NO.: N40085-12-C-1736

NAVFAC DRAWING NO.: 12621670

SHEET 2 OF 94

G-002 | FP1-12-002

GENERAL NOTES:

1. THE CONTRACTOR IS ADVISED THAT THE DRAWINGS AND SPECIFICATIONS FORM A PART OF THE CONTRACT DOCUMENTS. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL KEEP A COPY OF THE DRAWINGS AND SPECIFICATIONS ONSITE AT ALL TIMES DURING THE PROJECT.

2. EXISTING CONDITIONS ARE INTENDED TO PROVIDE GENERAL OVERVIEW OF STRUCTURES BUT DO NOT INCLUDE ALL APPURTENANCES AND CONDITIONS.

3. ALL DIMENSIONS, ELEVATIONS & CONDITIONS SHALL BE VERIFIED IN THE FIELD. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE CONTRACTING OFFICER BEFORE ORDERING MATERIALS AND PROCEEDING WITH THE AFFECTED PART OF THE WORK.

4. CONTRACTOR SHALL PROVIDE AND MAINTAIN HORIZONTAL AND VERTICAL CONTROLS IN THE MAINE STATE PLANE COORDINATE SYSTEM. VERTICAL DATUM IS THE P.N.S.Y. VERTICAL DATUM.

5. THE EXACT SIZE & LOCATION OF ALL EXISTING UTILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO START OF CONSTRUCTION. CONTRACTOR SHALL TAKE CARE TO PROTECT CRANE RAILS AND UTILITIES IN THE WORK AREA AND ALL CONSTRUCTION SHALL BE COORDINATED WITH THE CONTRACTING OFFICER.

6. THE CONTRACTOR SHALL VERIFY THE LOCATION OF UNDERGROUND UTILITIES WITHIN THE LIMITS OF THE WORK PRIOR TO COMMENCING ANY EXCAVATION OR GROUND PENETRATING WORK. THE CONTRACTOR SHALL NOTIFY "DIG SAFE" (1-888-344-7233) AT LEAST 14 CALENDAR DAYS PRIOR TO COMMENCEMENT OF THE EXCAVATION OR GROUND PENETRATING ACTIVITY. THE CONTRACTOR / EXCAVATOR SHALL FULLY COMPLY WITH THE STATE OF MAINE "DIG SAFE" LAW (TITLE 23, MRSA 33 60-A).

7. TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE CONTRACTING OFFICER AT THE CONTRACTORS EXPENSE. NOTIFY THE CONTRACTING OFFICER A MINIMUM OF 15 DAYS IN ADVANCE OF ANY OUTAGES.

8. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURES AND SEQUENCE TO ENSURE THE SAFETY OF THE FACILITIES AND THEIR COMPONENTS DURING DEMOLITION AND ERECTION UNLESS OTHERWISE DIRECTED. THIS INCLUDES THE ADDITION OF NECESSARY SHORING, SHEETING, TEMPORARY BRACING, GUYS OR TIEDOWNS. SUCH MATERIAL SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AFTER COMPLETION OF THE PROJECT.

9. METHODS OF DEMOLITION, CONSTRUCTION, AND ERECTION ARE THE CONTRACTOR'S RESPONSIBILITY UNLESS OTHERWISE SPECIFIED.

10. DIMENSIONS AND DETAILS OF THE EXISTING CONSTRUCTION ARE FROM CONSTRUCTION DRAWINGS AND UTILITY LOCATION MAPS FURNISHED BY THE GOVERNMENT AND FROM FIELD SURVEYS. ALL DIMENSIONS AND DETAILS OF THE EXISTING CONSTRUCTION SHALL BE CHECKED AND VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO COMMENCING CONSTRUCTION.

11. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE AND MAINTAIN ENVIRONMENTAL CONTROLS AS REQUIRED BY FEDERAL AND STATE REGULATIONS AND PERMITS. ENVIRONMENTAL CONTROLS SHALL INCLUDE BUT NOT BE LIMITED TO EROSION AND SEDIMENT CONTROL & DUST CONTROL.

12. THE GOVERNMENT MAY CHARGE TO THE CONTRACTOR ANY ADDITIONAL COST OF REINSPECTION OR RETEST WHEN PRIOR REJECTION MAKES REINSPECTION OR RETEST NECESSARY.

ENVIRONMENTAL CONTROL NOTES:

1. ENVIRONMENTAL CONTROLS SHALL CONFORM TO THE ALL STATE, LOCAL, AND FEDERAL REGULATIONS AND PERMITS; AS WELL AS SPECIFICATION SECTION 01 57 19.00 22 TEMPORARY ENVIRONMENTAL CONTROLS.

2. MEASURES SHALL BE TAKEN TO PREVENT DEBRIS, WELD SLAG, AND WASTE WATERS FROM CONCRETE WORK AND DEMOLITION WORK FROM ENTERING THE STORM WATER DRAINS AND RIVER.

3. THE CONTRACTOR SHALL PROVIDE CATCH BASIN SILT SACK INLET PROTECTION AS NOTED IN THE SPECIFICATIONS. THE CONTRACTOR SHALL CLEAN ON A PERIODIC BASIS AND AFTER EACH SIGNIFICANT RAIN EVENT. ALL DRAINAGE STRUCTURES SHALL BE CLEANED AND DEBRIS REMOVED PRIOR TO FINAL COMPLETION.

4. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE STATE OF MAINE SITE LOCATION OF DEVELOPMENT ACT APPLICATION, KITTERY, DEP NO L-21179-26-AU-B/H-21179-4E-A-J-N. A COPY OF THE PERMIT APPLICATION DOCUMENT INCLUDING A SIGNED COPY OF THE DEP LAND USE PERMIT FOR THIS PROJECT AND INCLUDES THE CONDITIONS OF APPROVAL CAN BE FOUND IN APPENDIX A OF THE SPECIFICATIONS.

5. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH US ARMY CORPS OF ENGINEERS PERMIT NO NAE-2012-00430. A COPY OF THE PERMIT AND THE CONDITIONS OF APPROVAL CAN BE FOUND IN APPENDIX A OF THE SPECIFICATIONS.

6. THE CONTRACTOR SHALL ENSURE A COPY OF THE PERMITS (MEDEP & ACOE) ARE MAINTAINED AT THE PROJECT SITE & THAT ALL PERSONNEL, INCLUDING SUBCONTRACTORS, ARE FULLY AWARE OF THE TERM OF CONDITIONS OF THE PERMITS. THE PERMITS SHALL BE MADE PART OF ANY SUB-CONTRACTS ISSUED BY THE CONTRACTOR WHICH AFFECTS AREAS OF CORP OF ENGINEERS JURISDICTION AT THE SITE OF THE WORK AUTHORIZED BY THE PERMITS.

7. FOR ITEMS OF WORK THAT REQUIRE DEWATERING, THE CONTRACTOR SHALL DESIGN & INSTALL A DEWATERING SYSTEM IN ACCORDANCE WITH THE REQUIREMENTS SPECIFIED IN SECTION 312200.0022. THE CONTRACTOR SHALL INCLUDE ALL COSTS ASSOCIATED WITH ALL DEWATERING EFFORTS REQUIRED TO COMPLETE THE WORK. FAILURE OF THE CONTRACTOR TO PLAN FOR GROUND WATER CONDITIONS SHALL NOT BE THE BASIS FOR ANY CLAIM NOR EQUITABLE PRICE OR CONTRACT TIME ADJUSTMENTS. ALL DEWATERING SYSTEM COMPONENTS (INCLUDING INFILTRATION PITS, TANK, ETC) STORAGE SHALL BE LOCATED WITHIN THE LIMITS OF WORK.

DEMOLITION NOTES:

1. THE CONTRACTOR SHALL PROVIDE CONTROL MEASURES AS REQUIRED BY ENVIRONMENTAL REGULATIONS AND AS REQUIRED TO PREVENT DEBRIS CONTAMINANTS (SOLID, LIQUID OR DISSOLVED) FROM ENTERING THE RIVER. UNDERWATER INSPECTIONS MAY BE CONDUCTED BY THE CONTRACTING OFFICER TO ENSURE THE CONTRACTOR HAS REMOVED ALL DEMOLITION AND CONSTRUCTION DEBRIS FROM THE MUDLINE.

2. ALL MATERIAL DEMOLISHED AND NOT REUSED OR SALVAGED TO THE GOVERNMENT SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED DAILY FROM THE GOVERNMENT'S PROPERTY. REMOVED MATERIAL SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL LAWS.

3. CONTRACTOR SHALL PROVIDE CONNEX BOXES TO PROTECT ALL SALVAGED APPURTENANCES PRIOR TO REINSTALLATION.

CONCRETE:

1. MINIMUM 28-DAY COMPRESSIVE STRENGTH FOR CAST-IN-PLACE CONCRETE, F'C = 5000 PSI AT TUNNEL ROOF, F'C = 4000 PSI AT ALL OTHER LOCATIONS.

2. CHAMFER EXPOSED CORNERS 3/4" UNLESS OTHERWISE NOTED.

3. FOR CAST-IN-PLACE CONCRETE, CLEAR CONCRETE COVER SHALL BE 3", UNLESS OTHERWISE NOTED.

4. ALL CONSTRUCTION JOINTS SHALL HAVE 5" PLASTIC WATERSTOPS UNLESS OTHERWISE NOTED.

5. CONCRETE PLACED IN THE TIDAL ZONE SHALL BE PLACED IN THE DRY AT MID-TIDE OR LOWER ON A FALLING TIDE. WORK OUTSIDE NORMAL WORK HOURS WILL BE ALLOWED TO ACCOMMODATE THIS REQUIREMENT UPON APPROVAL BY THE CONTRACTING OFFICER.

6. CRACKS LARGER THAN 0.006 INCHES IN THE CONCRETE SURFACE SHALL BE CONSIDERED TO BE DEFECTS AND SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST.

REINFORCEMENT:

1. REINFORCING STEEL: ASTM A615 GRADE 60, DEFORMED, EPOXY COATED, UNLESS OTHERWISE NOTED

2. MICRO-PILES: ASTM A272, GRADE 150 DEFORMED BAR.

3. SPLICING OF REINFORCING STEEL OVER 20 FEET IN LENGTH IS PERMITTED. STAGGER SPLICES ONE SPLICE LENGTH MINIMUM WHERE POSSIBLE. PROVIDE MINIMUM SPLICE LENGTHS IN ACCORDANCE WITH THE FOLLOWING TABLE, UNLESS NOTED OTHERWISE. TABULATED VALUES SHALL BE MULTIPLIED BY 1.63 WHEN BAR SPACING IS LESS THAN 6 BAR DIAMETERS OR COVER IS LESS THAT 3 BAR DIAMETERS (1.32 FOR TOP BARS).

BAR SIZE	#4	#5	#6	#7	#8	#9	#10
TOP BAR * (IN.)	26	33	35	48	63	80	101
BOTTOM BAR (IN.)	19	23	25	34	45	57	72

* TOP BAR ARE HORIZONTAL BARS PLACED SO THAT MORE THAN 12 INCHES OF CONCRETE IS CAST BELOW THE REINFORCEMENT.

4. MECHANICAL COUPLERS SHALL BE DESIGNED FOR:
   A. 125 PERCENT OF YIELD STRENGTH OF REINFORCING STEEL FY ≤60 KSI
   B. 100 PERCENT OF YIELD STRENGTH OF MINI-PILES FU ≥150 KSI

5. ALL INSTALLED REINFORCING STEEL AND SUPPORTS TO REMAIN PERMANENTLY EMBEDDED IN THE CONCRETE SHALL BE EPOXY COATED.

6. ALL HOOKS SHALL BE STANDARD HOOKS UNLESS NOTED OTHERWISE.

STRUCTURAL STEEL AND MISCELLANEOUS FABRICATIONS:

1. STEEL SHAPES AND PLATES SHALL BE ASTM A36, GRADE 36

2. PIPES AND SLEEVES SHALL BE ASTM A53, GRADE B

3. ALL BOLTS AND NUTS SHALL CONFORM TO ASTM A325, UNLESS NOTED OTHERWISE. SET ANCHOR BOLTS BY TEMPLATE ONLY.

4. ALL MISCELLANEOUS STEEL, INCLUDING ALL FASTENERS, UNLESS NOTED OTHERWISE, SHALL BE HOT-DIP GALVANIZED. GALVANIZE ITEMS AFTER FABRICATION. GALVANIZING DAMAGED ACCIDENTALLY OR DUE TO FIELD WELDING SHALL BE REPAIRED WITH A FIELD APPLIED GALVANIZING COMPOUND.

5. WELDING ELECTRODES: E70XX, LOW HYDROGEN

STEEL H-PILES:

1. ALL STEEL H-PILES SHALL CONFORM TO ASTM A572, GRADE 50

2. PILE POINTS SHALL CONFORM TO ASTM A27

3. PILE SPLICES SHALL CONFORM TO ASTM A572, GRADE 50

4. H-PILES SHALL NOT BE COATED

△1 H-PILE REMOVED FROM DESIGN

GRAPHIC SCALE

1	AS-BUILT COMMENTS	8/19/14
0	CONFORMED SET	12/7/12

NAVFAC

DESIGNED TO COMPLY WITH UFC 3-190-01 FOR OFFICIAL USE ONLY

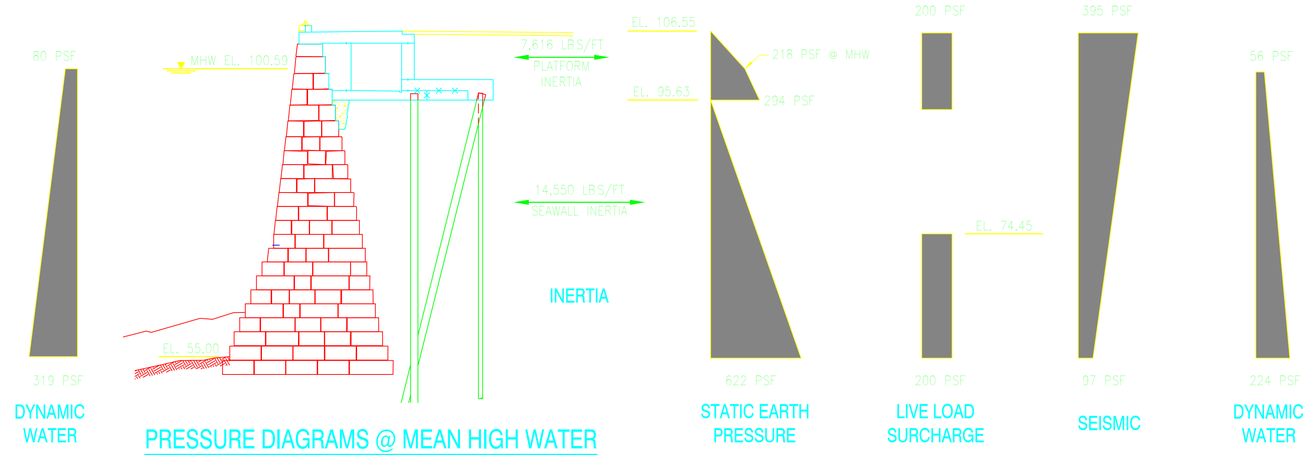
NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
PUBLIC WORKS DEPARTMENT MAINE NAVAL SHIPYARD PORTSMOUTH NAVAL SHIPYARD KITTERY, MAINE

STRUCTURAL STABILIZATION AND REPAIRS TO BERTHS 1, 2A AND 2B

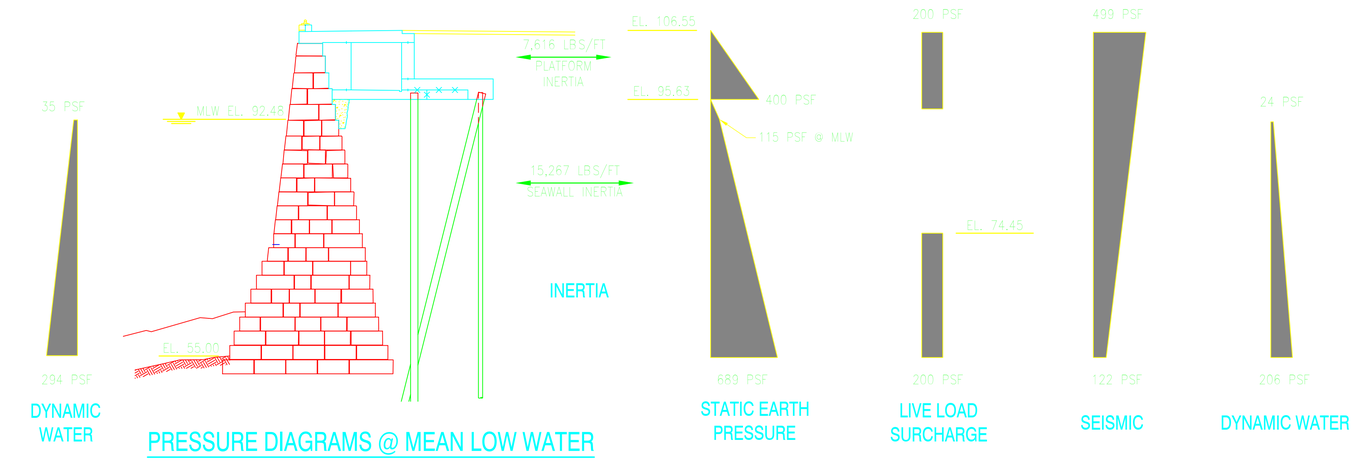
GENERAL NOTES

MAXIMO NO.: WNRC09
EPROJECT NO.: 1121075
CONSTR. CONTR. NO.: N40085-12-C-1736
NAVFAC DRAWING NO.: 12621671
SHEET 2 OF 104

G-003 | FP1-12-003



PRESSURE DIAGRAMS @ MEAN HIGH WATER



PRESSURE DIAGRAMS @ MEAN LOW WATER

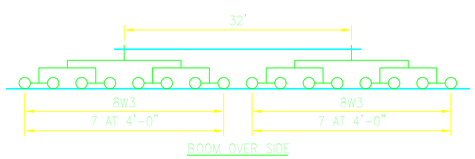
DESIGN LOADS:

1. LIVE LOADS

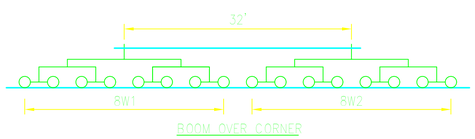
A. UNIFORM LOAD.....600 PSF
B. TRUCK LOAD.....AASHTO HS-25
C. MOBILE CRANE.....150 TON WITH 166,000 LB OUTRIGGER LOAD PLUS 15% IMPACT.
D. PORTAL CRANE.....60 TON CAPACITY, 80,000 LBS PER WHEEL AT 4' ON CENTER, 20' GAGE PLUS 25% IMPACT.
E. PORTAL CRANE AT TESTING AREA....60 TON CAPACITY, 100,000 LBS PER WHEEL AT 4' ON CENTER, 20 GAGE PLUS 25% IMPACT.

2. LATERAL LOADS

A. SEISMIC.....PER IBC 2006
IMPORTANCE FACTOR.....1.0
SITE CLASS..... D



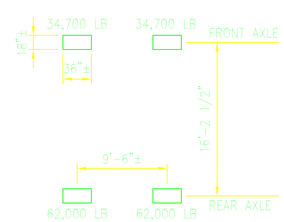
BOOM OVER SIDE



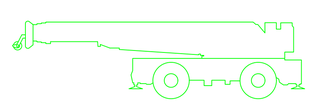
BOOM OVER CORNER

RAIL GAGE (FT)	BOOM OVER CORNER		BOOM OVER SIDE
	W1 (LBS)	W2 (LBS)	W3 (LBS)
20	80,000	48,000	70,000

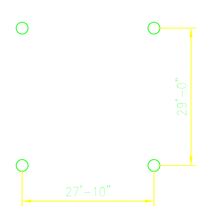
60 TON PORTAL CRANE WHEEL LOADS



MOBILE CRANE WHEEL LOADS



MOBILE CRANE



MOBILE CRANE OUTRIGGER LAYOUT

GRAPHIC SCALE

NAVFAC

NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC

PORTSMOUTH NAVAL SHIPYARD

KITTERY, MAINE

STRUCTURAL STABILIZATION AND REPAIRS TO BERTHS 1, 2A AND 2B

DRAWN BY: WHRGS

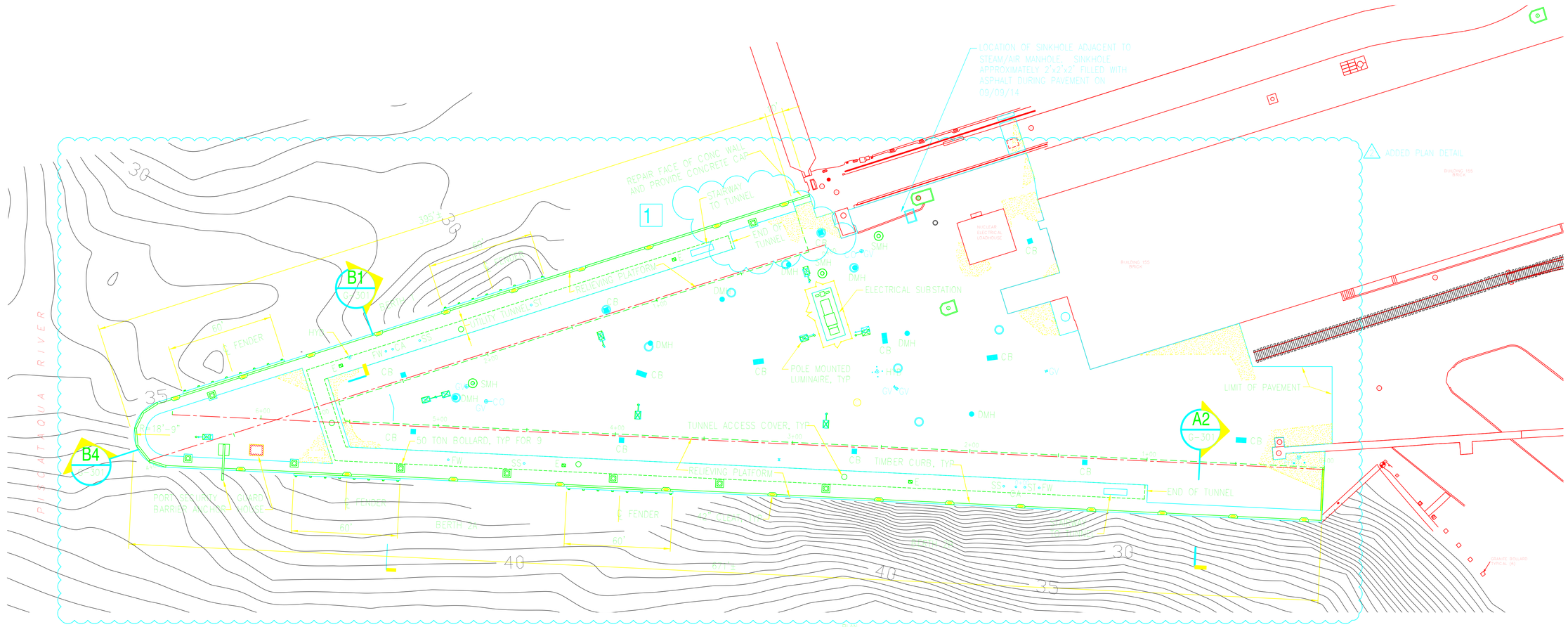
PROJECT NO.: 1121079

CONSTR. CONTR. NO.: N40085-12-C-1736

NAVFAC DRAWING NO.:

SHEET: OF: 34

CONFORMED SET 12/7/12 DWH



GENERAL PLAN

SCALE: 1"=30'

1. Existing cofferdam consisting of sheet pile encountered during excavation. Sheet pile cut off below limits of work in location interfering with Berth 1 rehabilitation. A large void was observed behind the sheet wall (located South side of DD1) beneath the wooden pile supported concrete cap.

LEGEND:

CA	COMPRESSED AIR SERVICE STATION
E	ELECTRICAL SERVICE STATION
FW	FRESH WATER SERVICE STATION
SS	SANITARY SEWER SERVICE STATION
ST	STEAM SERVICE STATION
HYD	FIRE HYDRANT
C	COMMUNICATIONS MANHOLE
E	ELECTRICAL MANHOLE
DMH	DRAIN MANHOLE
SMH	SEWER MANHOLE
CB	CATCH BASIN
	POLE MOUNTED LUMINAIRE
	TUNNEL ACCESS COVER
GV	GATE VALVE
CO	CLEAN OUT

GRAPHIC SCALE

1" = 30' 0 15' 30' 60'

AS-BUILT COMMENTS 9/11/14
CONFORMED SET 12/7/12 DWH

NAVFAC

DES. DWM DRW RWT CHK. DWH

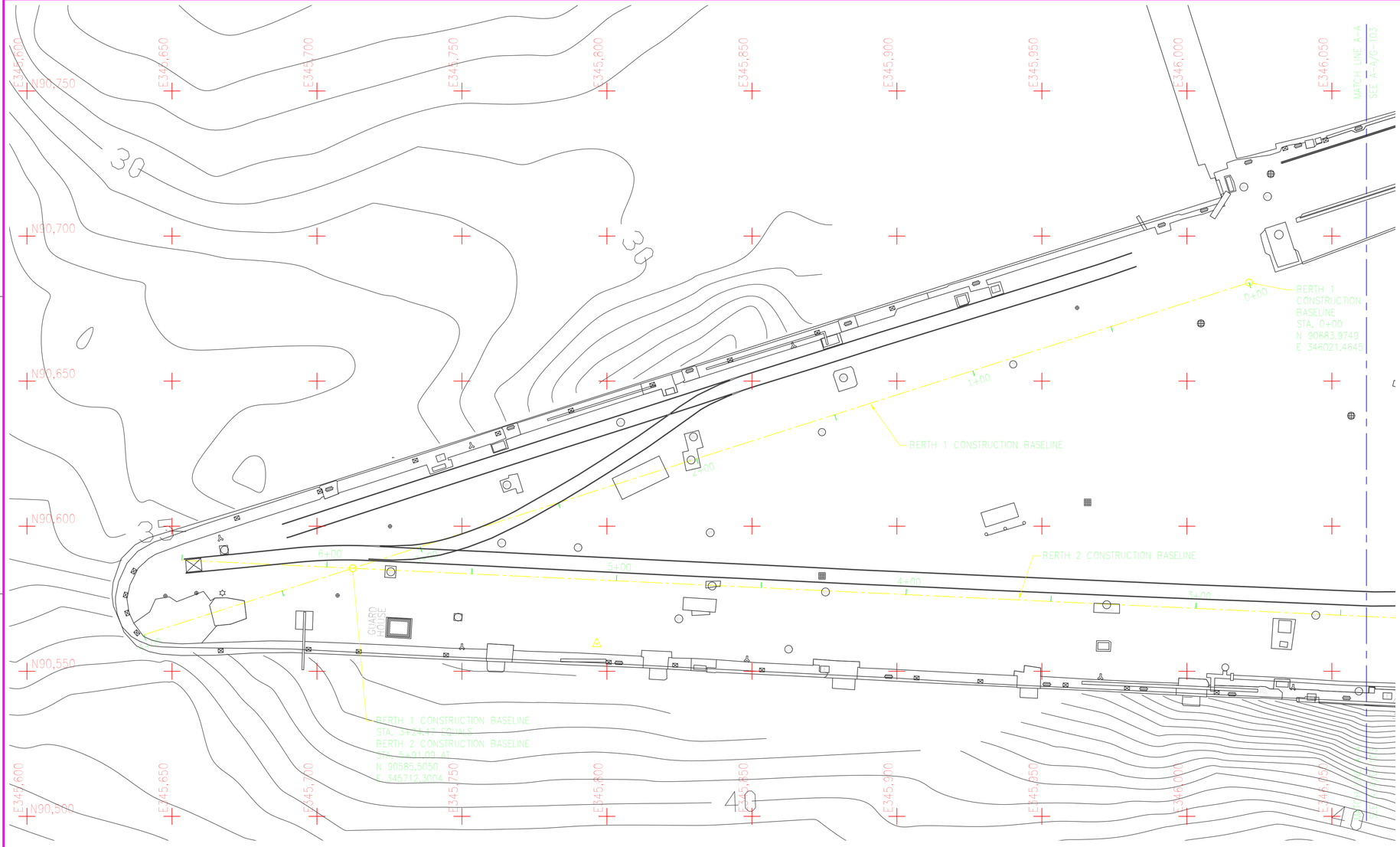
NAVAL FACILITIES ENGINEERING COMMAND ~ MID-ATLANTIC
PORTSMOUTH NAVAL SHIPYARD KITTERY, MAINE

STRUCTURAL STABILIZATION AND REPAIRS TO BERTHS 1, 2A AND 2B

GENERAL PLAN

PROJECT NO. 1121079
CONTR. CONTR. NO. N40085-12-C-1736
NAVFAC DRAWING NO. 12621673
SHEET 5 OF 34

G-101 FP1-12-005



PLAN

SCALE: 1" = 20'

NOTES:

1. SEE EXISTING SITE SURFACE SHOWN ON V-101 AND V-102 FOR PROJECT SURVEY CONTROL POINTS AND BENCH MARK.
2. PROVIDE A REGISTERED PROFESSIONAL LAND SURVEYOR TO ESTABLISH AND MAINTAIN CONSTRUCTION BASELINES AND MAINTAIN HORIZONTAL AND VERTICAL SURVEY CONTROL FOR THE DURATION OF THE WORK.

GRAPHIC SCALE

1" = 20' 0 10' 20' 40'

CONFORMED SET 12/7/12 DPA

NAVFAC

.\Images\Anderson.jpg

NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC

PORTSMOUTH NAVAL SHIPYARD KITTERY, MAINE

STRUCTURAL STABILIZATION AND REPAIRS TO BERTHS 1, 2A AND 2B

LAYOUT PLAN SHEET 1 OF 2

DRAWN BY: WRR23

PROJECT NO. 11121079

CONSTR. CONTR. NO. N40085-12-C-1736

NAVFAC DRAWING NO. 12621674

SHEET 2 OF 34

G-102 | FP1-12-006

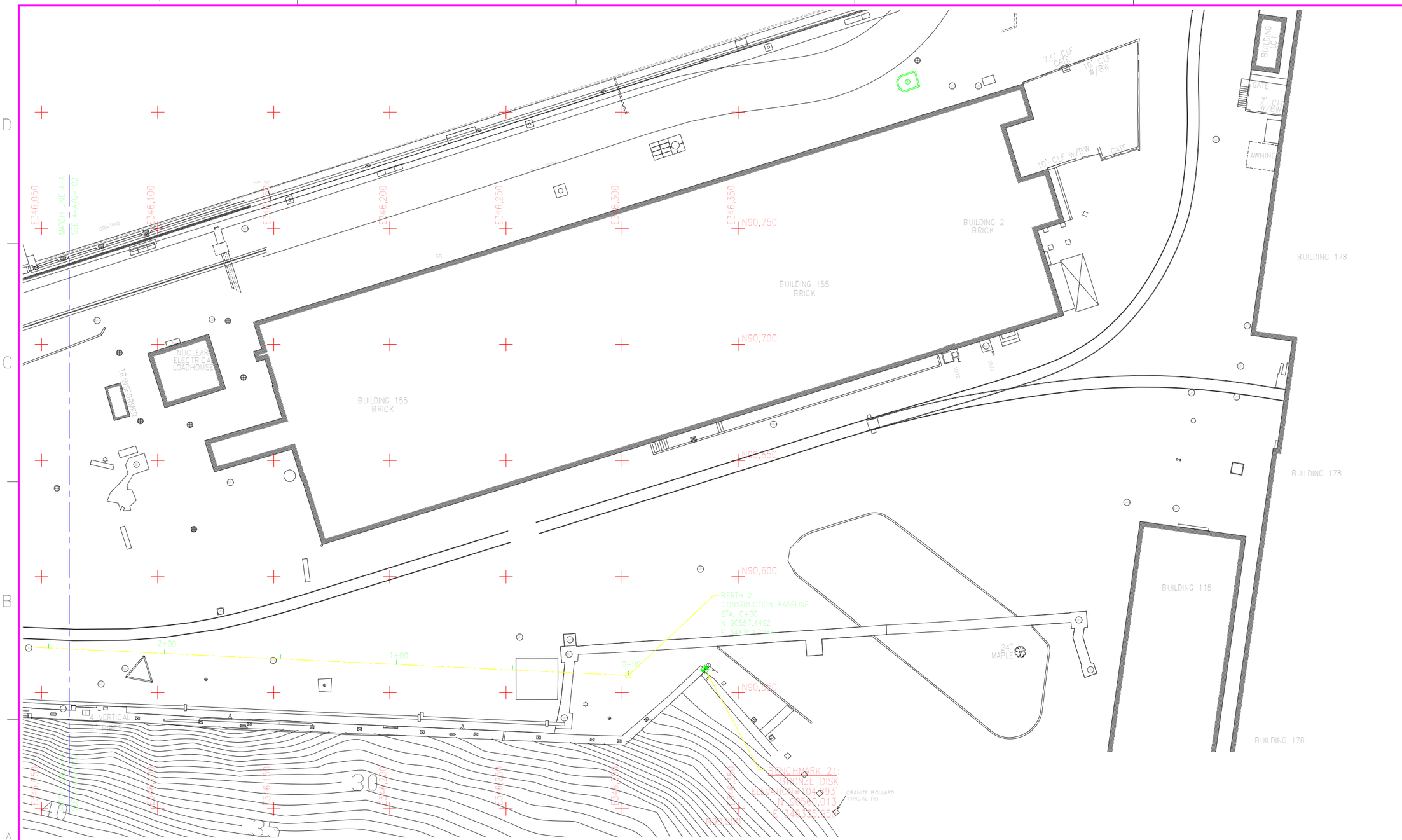
DES: DPA | DRW CHG | CHK: DPA

BRANCH MANAGER

CHIEF ENGIARCH

PROJECT ENGINEER

FILE NAME: $(++)



NOTE:
1. SEE G-102 FOR NOTES.

PLAN
SCALE: 1" = 20'

PLAN NORTH

GRAPHIC SCALE
1" = 20'
0 10' 20' 40'

CONFORMED SET 12/7/12 DPA

NAVFAC

.\images\Anderson.jpg

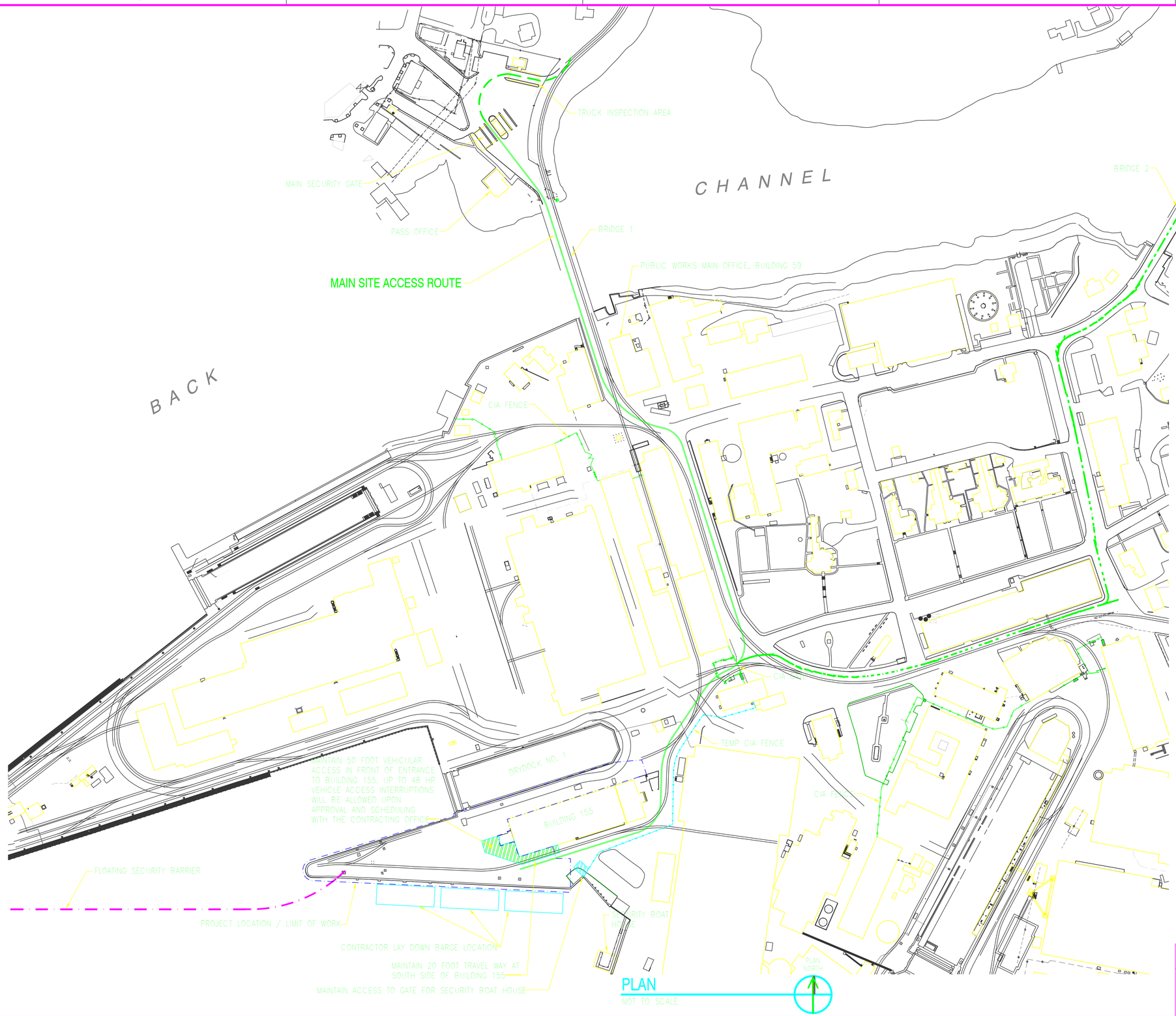
NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
PORTSMOUTH NAVAL SHIPYARD
KITTERY, MAINE

STRUCTURAL STABILIZATION AND REPAIRS TO BERTHS 1, 2A AND 2B

LAYOUT PLAN SHEET 2 OF 2

DRAWN BY: WMRCS
CH'PROJECT NO.: 1121079
CONTR. CONTR. NO.: N40085-12-C-1736
NAVFAC DRAWING NO.: 12621675
SHEET 2 OF 24

G-103 | FP1-12-007



PLAN
NOT TO SCALE

NOTES:

1. CONTRACTOR SHALL COORDINATE ALL BARGE ACCESS AND MOORING LOCATIONS WITH THE CONTRACTING OFFICER.
2. CONTRACTOR SHALL COORDINATE USE OF GATE 2 FOR WIDE LOAD DELIVERIES WITH CONTRACTING OFFICER.
3. WORK AND LAYDOWN AREAS ARE APPROXIMATE LIMITS TO BE DETERMINED AT THE TIME OF CONSTRUCTION.

GRAPHIC SCALE

CONFORMED SET 12/7/12 DWH

NAVFAC

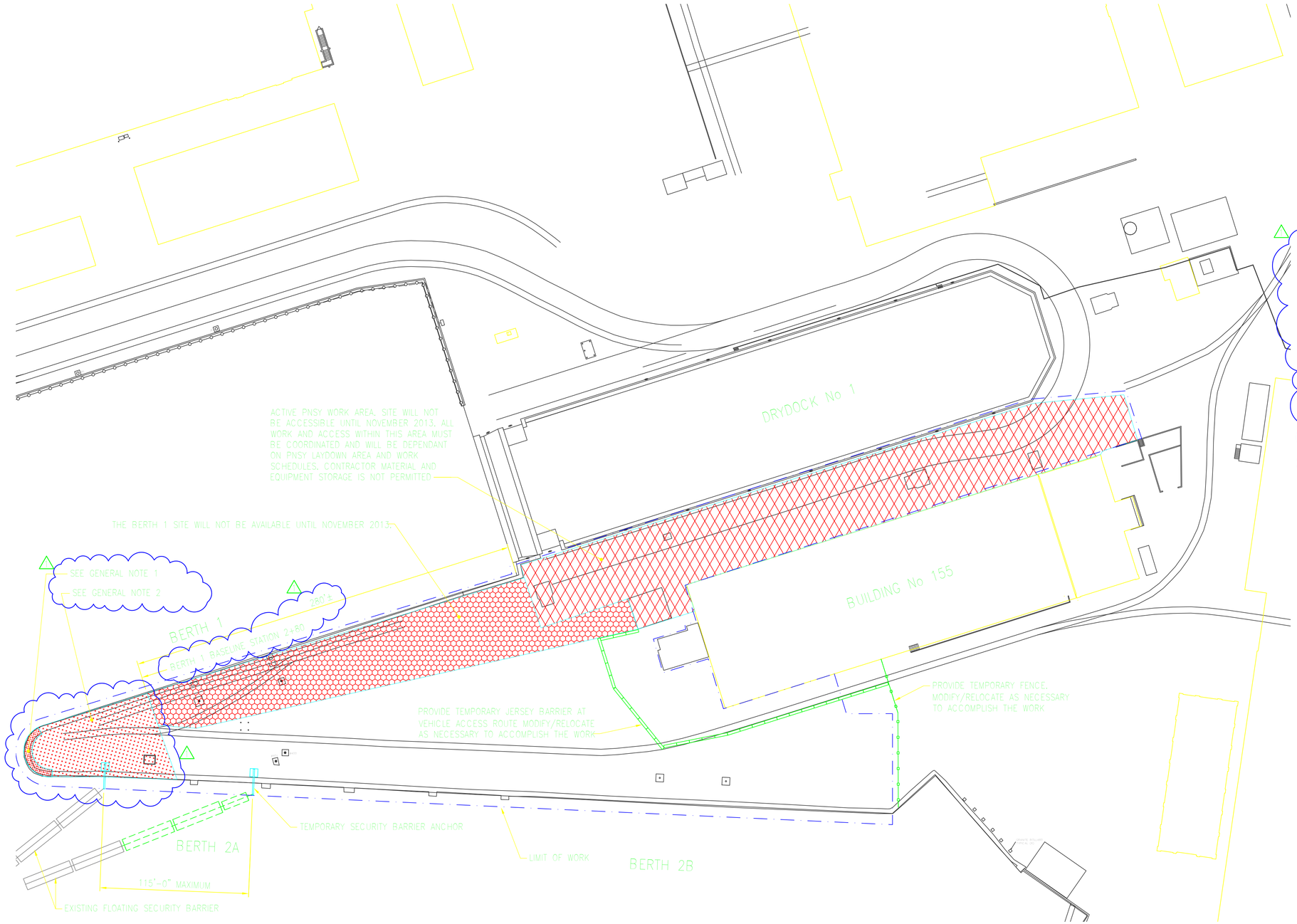
FEATURED IN THE NAVAL FACILITIES ENGINEERING COMMAND ~ MID-ATLANTIC
DIRECTORATE, PORTSMOUTH NAVAL SHIPYARD, KITTERY, MAINE

STRUCTURAL STABILIZATION AND REPAIRS TO BERTHS 1, 2A AND 2B

SITE ACCESS PLAN

MAXIMO No.: WNRC9
PROJECT No.: 1121075
PRINCIPAL CONTR. NO.: N40085-12-C-1736
NAVFAC DRAWING NO.: 12621676

G-104 | FP1-12-008



PHASING PLAN

SCALE: 1"=40'

GENERAL NOTES:

1. QUAYWALL REPAIR AND STABILIZATION AT WEST END SHALL BE COMPLETED PRIOR TO ANY PILE DRIVING ON THE SITE, OR OTHER WORK WITHIN 100 FEET OF THE WEST END.
2. BERTH 1, INCLUDING THE AREA BETWEEN STATION 2+80 TO 3+85 MUST BE AVAILABLE FOR GOVERNMENT USE TO MEET SHIPYARD MISSION REQUIREMENTS BETWEEN SEPTEMBER 1, 2013 AND OCTOBER 30, 2013, ACCORDING TO ONE OF THE OPTIONS AS FOLLOWS:

   A. EXISTING QUAYWALL AND CLEATS SHALL REMAIN IN THE PRESENT CONDITION, WITH BACKFILL TO ELEVATION 104.4 WITHIN 25 FEET BEHIND THE TOP OF WALL.

   B. THE NEW RELIEVING PLATFORM AND WALL SHALL BE COMPLETED WITH CLEATS AND BOLLARDS INSTALLED. THE PLATFORM SHALL BE BACKFILLED TO ELEVATION 104.4 WITHIN 25 FEET BEHIND THE TOP OF WALL. COMPLETION OF THE NEW FENDERING WORK AT BERTH 1 PRIOR TO THIS DATE IS NOT REQUIRED.

SECURITY BARRIER NOTES:

1. THE FLOATING SECURITY BARRIER SHALL REMAIN IN PLACE DURING CONSTRUCTION, BUT MAY BE TEMPORARILY RELOCATED TO SUIT THE WORK.
2. CONTRACTOR SHALL CONSTRUCT A TEMPORARY ANCHOR TO SUPPORT THE RELOCATED BARRIER.
3. LOCATION OF THE TEMPORARY ANCHOR SHALL BE TO SUIT UP TO TWO ADDITIONAL 40 FOOT LONG SECTIONS OF THE BARRIER PLUS A 20 FOOT FLOATING FENDER UNIT, WHICH WILL BE PROVIDED BY THE GOVERNMENT.
4. ADDITIONAL BARRIER SECTIONS AND FLOATING FENDER ARE LOCATED AT PNSY. CONTRACTOR IS RESPONSIBLE FOR TRANSPORTATION, ASSEMBLY AND INSTALLATION OF ALL COMPONENTS NECESSARY TO RELOCATE THE SECURITY BARRIER.
5. CONTRACTOR MAY MAKE MULTIPLE RELOCATIONS OF THE BARRIER UPON APPROVAL AND SCHEDULING WITH THE CONTRACTOR OFFICER.

LOAD RESTRICTIONS:

PRIOR TO REHABILITATION, THE LOAD ON THE EXISTING PIER SHALL BE LIMITED AS FOLLOWS:

1. WITHIN 25' OF QUAYWALL: MAXIMUM LOAD = 250 PSF
2. BEYOND 25' FROM QUAYWALL: MAXIMUM LOAD = 500 PSF
3. THE CONTRACTOR SHALL PROVIDE CALCULATIONS, SKETCHES, PROCEDURES AND OTHER DOCUMENTS AS NECESSARY, STAMPED BY A PROFESSIONAL ENGINEER, DEMONSTRATING LAY-DOWN, EQIPMENT AND CONSTRUCTION TECHNIQUES INCLUDING WHEELS AND OUTRIGGERS WILL NOT EXCEED THESE ROAD LIMITS.

GRAPHIC SCALE

1" = 40' 0 20' 40' 80'

CONFORMED SET	12/7/12	DWH
REVISED WEST END PHASING	8/14/12	DWH

NAVFAC

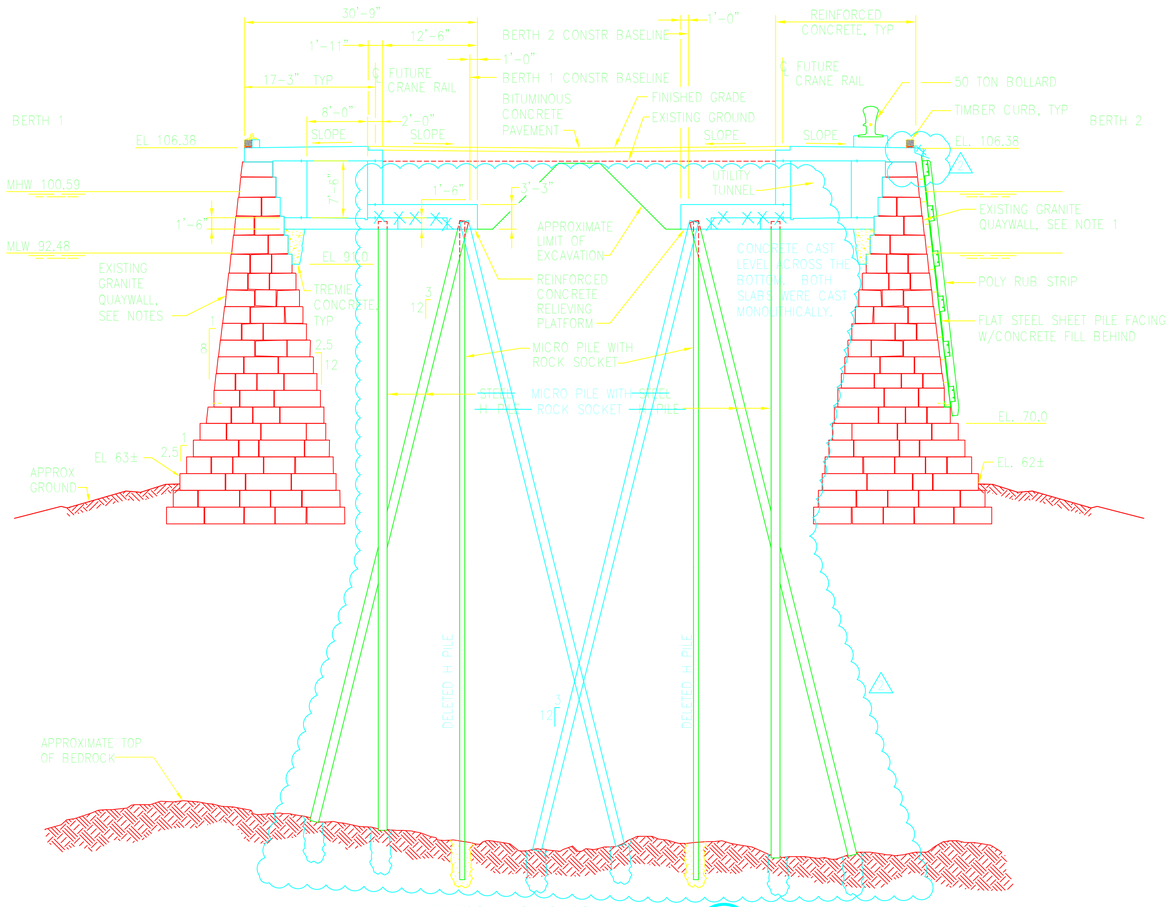
PREPARED AT THE DIRECTION OF THE NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
PUBLIC WORKS DEPARTMENT PORTSMOUTH NAVAL SHIPYARD KITTERY, MAINE

STRUCTURAL STABILIZATION AND REPAIRS TO BERTHS 1, 2A AND 2B

PHASING PLAN

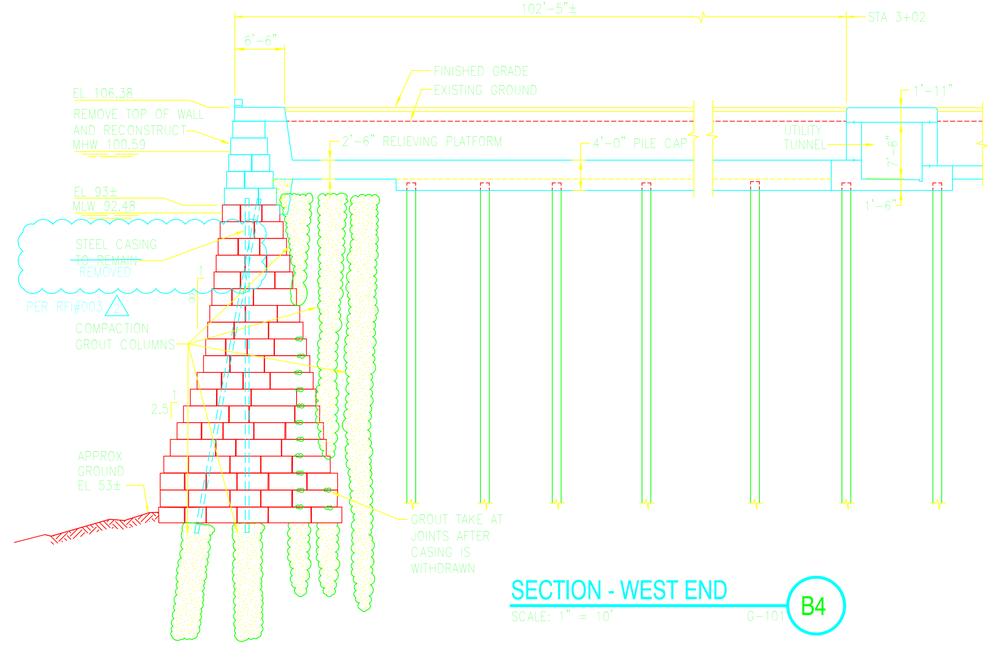
MAXIMO No.:	WNRC9
EPROJECT NO.:	1121079
CONSTR. CONTR. NO.	N40085-12-C-1736
NAVFAC DRAWING NO.	12621677
SHEET 9 OF 34	

G-105 | FP1-12-009



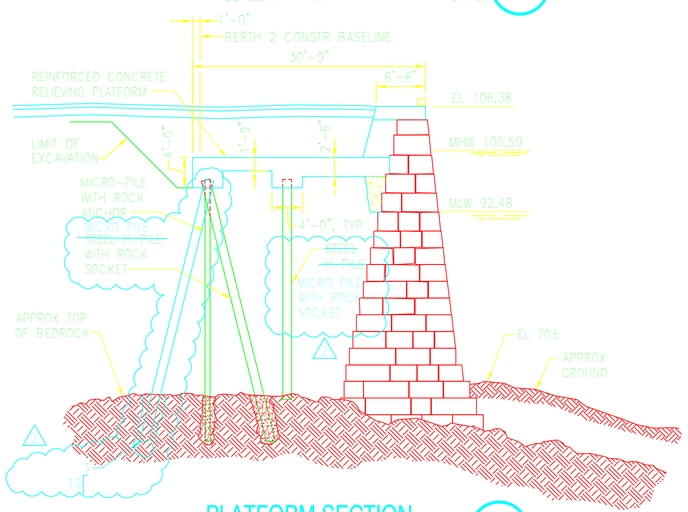
TYPICAL SECTION

SCALE: 1" = 10' G-101 B1



SECTION - WEST END

SCALE: 1" = 10' G-101 B4



PLATFORM SECTION

SCALE: 1" = 10' G-101 A2

NOTES:

1. NO CONSTRUCTION DRAWINGS COULD BE FOUND FOR THE QUAYWALL.
2. THE GENERAL CONFIGURATION AND BATTER OF THE WATERSIDE FACE AS SHOWN ARE FROM PWD-ME DRAWING QW-23-75, TITLED "SECTION OF QUAYWALLS AT BERTHS 1-2-4-5-6" DATED JULY 16, 1923, AND ARE APPROXIMATE AND MAY VARY.
3. BATTER OF THE LANDSIDE FACE AS SHOWN IS FROM PWD-ME DRAWING QW-07-37 TITLED "PLAN SHOWING FILLING TO COMPLETE QUAYWALL", DATED MAY 28, 1907, AND IS APPROXIMATE AND MAY VARY.
4. BOTTOM OF WALL BASED ON GROUND ELEVATIONS PRIOR TO CONSTRUCTION, TAKEN FROM PWD-ME DRAWING TITLED "QUAYWALLS AND PIER AT THE U.S. NAVY YARD, PORTSMOUTH, NH - LOCATION PLAN AND BORINGS", DATED JULY 1904.

GRAPHIC SCALE

1" = 10' 0 5' 10' 20'

8/19/14	AS-BUILT COMMENTS
12/7/12	CONFORMED SET

NAVFAC

DESIGNED: DWH
DRAWN: RWI
CHK: MK
DIV/DIR:
BRANCH MANAGER:
CHIEF ENGINEER:
CO. PERSONNEL:

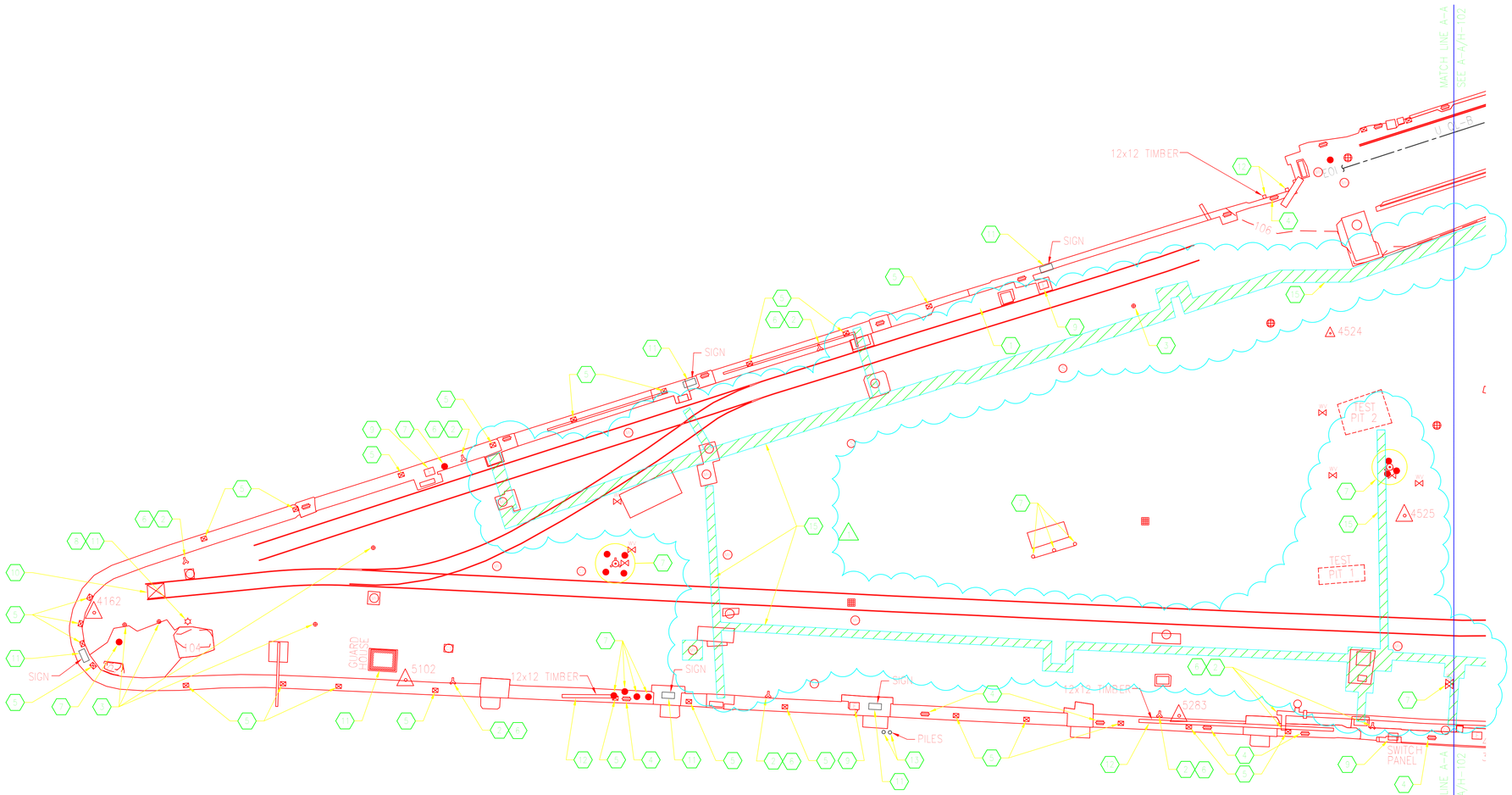
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
PUBLIC WORKS DEPARTMENT NAVAL SHIPYARD PORTSMOUTH
KITTERY, MAINE

STRUCTURAL STABILIZATION AND REPAIRS TO BERTHS 1, 2A AND 2B

GENERAL SECTIONS

DRAWING NO. WH603
PROJECT NO. 1121079
CONSTR. CONTR. NO. N40085-12-C-1736
NAVFAC DRAWING NO. 12621676
SHEET 10 OF 34

G-301 FP1-12-010



PLAN

SCALE: 1" = 20'

PLAN NORTH

GENERAL NOTES:

1. THE FOLLOWING HAZARDOUS MATERIAL ABATEMENT PLAN HAS BEEN PREPARED TO INFORM THE CONTRACTOR OF THE PRESENCE OF HAZARDOUS MATERIALS ON THE BERTHS, AND ARE BASED ON THE FINDINGS OF A "HAZARDOUS MATERIALS SURVEY" REPORT PRODUCED BY WILCOX & BARTON, INC. DATED FEBRUARY 1, 2012.
2. ASBESTOS AND HAZARDOUS MATERIALS REQUIRING ABATEMENT TO SUPPORT BERTH RENOVATIONS ARE DEPICTED ON THE FIGURES AND LISTED IN THE SCHEDULES OF ASBESTOS AND HAZARDOUS MATERIALS TO BE ABATED. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE QUANTITY AND LOCATIONS OF ALL ASBESTOS AND HAZARDOUS MATERIALS ON THE BERTHS. ALL ASBESTOS AND HAZARDOUS MATERIALS WITHIN THE SCOPE OF THE RENOVATION MUST BE ABATED.
3. HAZARDOUS MATERIALS ARE TO BE HANDLED AND DISPOSED IN ACCORDANCE WITH SPECIFICATIONS 02 81 00 TRANSPORTATION AND DISPOSAL OF HAZARDOUS MATERIALS; AND 01 57 19.00 22 TEMPORARY ENVIRONMENTAL CONTROLS – PORTSMOUTH NAVAL SHIPYARD PWD ME.

ASBESTOS NOTES:

1. ASBESTOS CONTAINING MATERIALS ARE TO BE ABATED IN ACCORDANCE WITH SPECIFICATION 02 82 16.00 22 ENGINEERING CONTROL OF ASBESTOS CONTAINING MATERIALS AND THESE ABATEMENT PLANS.

PCB/MERCURY NOTES:

1. PCB AND MERCURY CONTAINING MATERIALS ARE TO BE MANAGED IN ACCORDANCE WITH SPECIFICATION 02 84 16 HANDLING OF LIGHTING BALLASTS AND LAMPS AND OTHER DEVICES CONTAINING PCB'S AND MERCURY.
2. MERCURY CONTAINING DEVICES INCLUDING LAMPS AND SWITCHES ARE TO BE MANAGED AS UNIVERSAL HAZARDOUS WASTE IN ACCORDANCE WITH REQUIREMENTS OF 40 CFR 273.

LEAD NOTES:

1. PAINT WITH LEAD (PWL) AND LEAD CONTAINING MATERIALS (LCM) ARE TO BE MANAGED IN ACCORDANCE WITH SPECIFICATION 02 83 13.00 22 LEAD IN CONSTRUCTION AND THESE ABATEMENT PLANS.
2. IF THERE ARE ANY MODIFICATIONS TO THE RENOVATION SCOPE OF WORK, THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE PRESENCE OR ABSENCE OF PWL OR LCM TO BE IMPACTED BY THE MODIFICATIONS AND FOLLOWING THE APPROPRIATE LEAD SAFE WORK PRACTICES.
3. LEAD IS CONTAINED IN PAINTED SURFACES ON THE BERTHS. ANY DETECTION OF LEAD REQUIRES OSHA WORK PRACTICES. RESULTS OF THE PWL SURVEY ARE SUMMARIZED IN THE FOLLOWING SCHEDULE:

CREOSOTE PILE NOTES:

1. VARYING CONCENTRATIONS OF POLYNUCLEAR AROMATIC HYDROCARBONS (PAHS) AND/OR ARSENIC WERE IDENTIFIED IN VARIOUS WOODEN CREOSOTE TIMBER RAILROAD TIES AND PILES. DURING PIER RENOVATION, THESE MATERIALS SHOULD BE DISPOSED OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS.

NOTE:

1. SEE V-101 FOR LEGEND.
2. SEE CD101, CD104, MD101, MD102, ED101 AND ED102 FOR ADDITIONAL INFORMATION.

KEYNOTES HAZARDOUS MATERIALS IDENTIFICATION	SCHEDULE OF QUANTITIES	
1	ASBESTOS INSULATION ON PIPE IN BELOW GRADE TRENCH	25 LINEAR FEET
2	ASBESTOS GASKETS, STEAM AND SEWER LINES	84 EACH
3	CANNON BOLLARDS WITH LEAD BASED PAINT	8 EACH
4	CLEATS WITH LEAD BASED PAINT	9 EACH
5	MOORING RINGS WITH LEAD BASED PAINT	35 EACH
6	SEWER CONNECTIONS WITH LEAD BASED PAINT	9 EACH
7	HYDRANTS AND POSTS WITH LEAD BASED PAINT	24 EACH
8	LIGHT AND FLAG POLES WITH LEAD BASED PAINT	4 EACH
9	ELECTRICAL BOXES WITH LEAD BASED PAINT	6 EACH
10	RAILROAD BUMPER WITH LEAD BASED PAINT	1 EACH
11	MERCURY CONTAINING LAMPS	18 EACH
12	CREOSOTE TREATED TIMBER	2000 BOARD FEET
13	CREOSOTE TREATED PILES	2 PILES
14	NAVIGATION AID WITH LEAD BASED PAINT	1 EACH
15	TRENCH/MANHOLE DEBRIS CONTAINING TRACE LEVELS OF ASBESTOS (<1%)	10 CY

GRAPHIC SCALE

1" = 20' 0 10' 20' 40'

CONFORMED SET	12/7/12	RWH	
ADD DEBRIS REMOVAL FROM TRENCH	7/6/12	DWH	

NAVFAC

Harvie.jpg

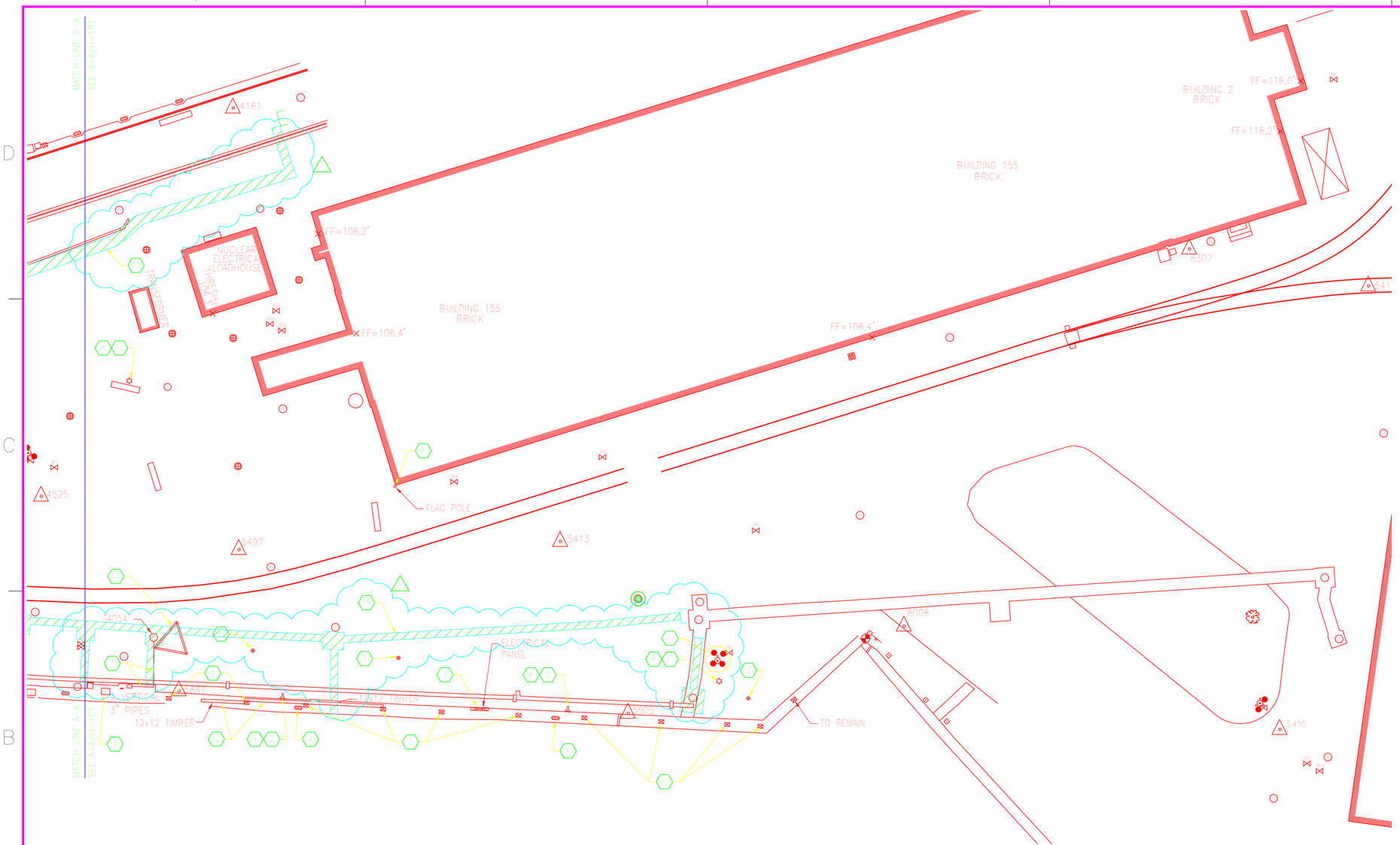
PREPARED BY NAVAL FACILITIES ENGINEERING COMMAND ~ MID-ATLANTIC
PUBLIC WORKS DEPARTMENT, NAVAL SHIPYARD, PORTSMOUTH, KITTERY, MAINE

STRUCTURAL STABILIZATION AND REPAIRS TO BERTHS 1, 2A AND 2B

HAZARDOUS MATERIAL REMOVAL PLAN SHEET 1 OF 2

DRAWN BY: WHR/CS
CONTRACT NO. 1121079
CONSTR. COMPL. NO. N40085-12-C-1736
NAVFAC DRAWING NO. 1262-1679
SHEET H-101 OF FP1-12-011

H-101 | FP1-12-011



PLAN

SCALE: 1" = 20'

PLAN NORTH

NOTE:

SEE H-101 FOR NOTES AND LEGEND.

GRAPHIC SCALE

1" = 20'

0 10' 20' 40'

NAVFAC

NAVAL FACILITIES ENGINEERING COMMAND ~ MID-ATLANTIC

PORTSMOUTH NAVAL SHIPYARD

KITTERY, MAINE

STRUCTURAL STABILIZATION AND REPAIRS TO BERTHS 1, 2A AND 2B

HAZARDOUS MATERIAL REMOVAL PLAN SHEET 2 OF 2

DRAWING NO. WHR03

PROJECT NO. 11121079

CONTR. COMB. NO. N40085-12-C-1736

NAVFAC DRAWING NO. 1262168O

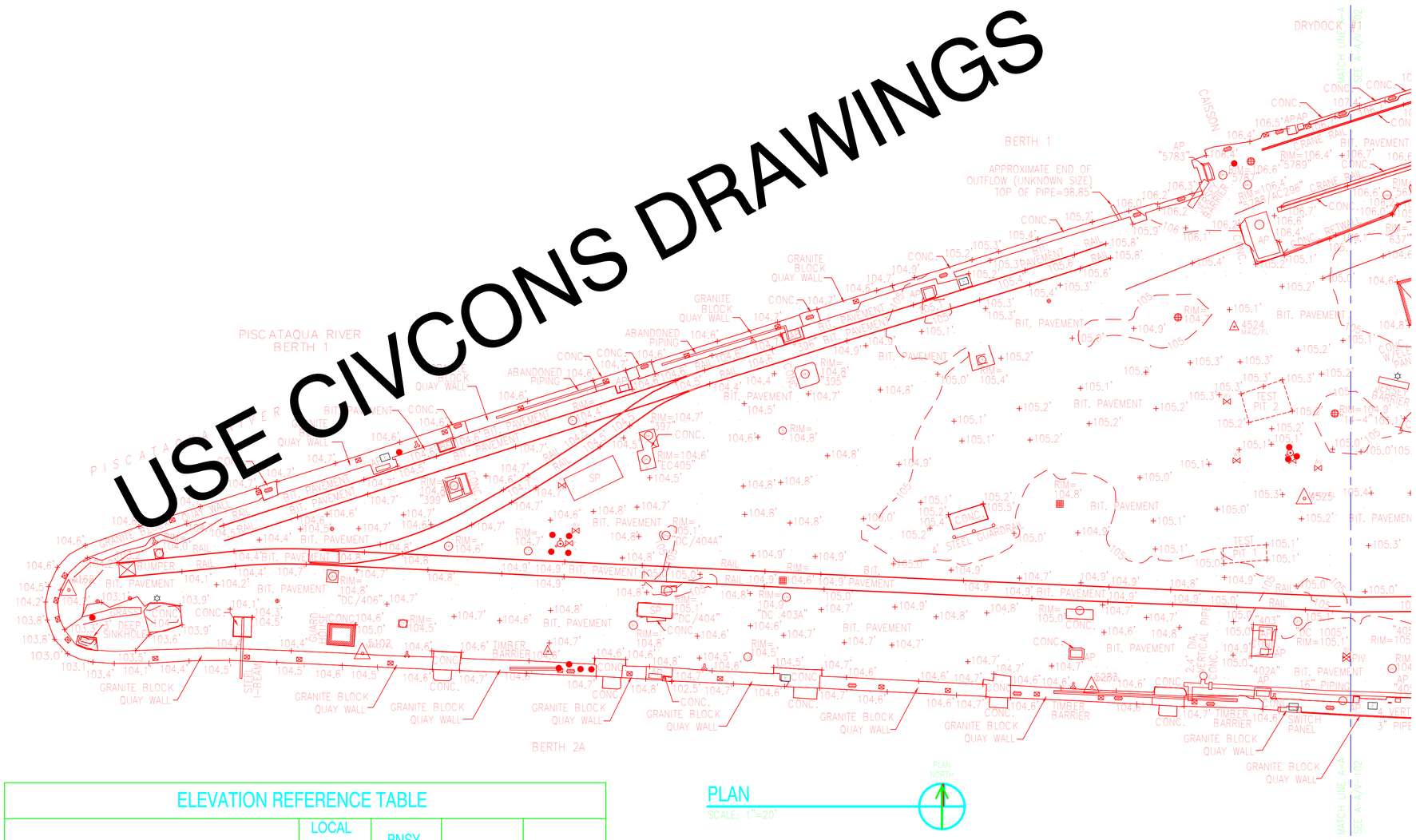
SHEET NO. H-102 FP1-12-012

CONFORMED SET
ADD DEBRIS REMOVAL FROM TRENCH 12/7/12 RWH
7/6/12 DWH

DES. MN DRW CHG CHK. DWH

FILE NAME: $(++)

USE CIVCONS DRAWINGS



NOTES:

1. PLANIMETRIC AND TOPOGRAPHIC DETAIL DEPICTED HEREON IS THE RESULT OF AN ON-THE-GROUND FIELD SURVEY BY CIVIL CONSULTANTS AUGUST 17 – AUGUST 19, 2011 AND NOVEMBER 28 – NOVEMBER 29, 2011 AND FEBRUARY 15, 2012.
2. COORDINATE VALUES AND ORIENTATION ARE BASED ON THE MAINE STATE PLANE COORDINATE SYSTEM, WEST ZONE, NAD27, PORTSMOUTH NAVAL SHIPYARD CONTROL SYSTEM. HORIZONTAL TIES WERE MADE TO PORTSMOUTH NAVAL SHIPYARD (P.N.S.Y.) CONTROL POINTS H-33, H-40, H-42, H-45 (LOCATED OUTSIDE OF THE PROJECT AREA) AND BM-21 (LOCATED ON THE GRANITE BLOCK QUAY WALL IN THE SOUTHEASTERLY CORNER OF THE PROJECT AREA AS DEPICTED HEREON).
3. ELEVATIONS DEPICTED HEREON ARE BASED ON THE P.N.S.Y. VERTICAL DATUM. VERTICAL TIES WERE MADE TO P.N.S.Y. CONTROL POINTS H-33, H-40, H-42, H-45 (LOCATED OUTSIDE OF THE PROJECT AREA) AND BM-21 (LOCATED ON THE GRANITE BLOCK QUAY WALL IN THE SOUTHEASTERLY CORNER OF THE PROJECT AREA AS DEPICTED HEREON). TO COMPUTE ELEVATIONS ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD29), SUBTRACT 96.012 FEET. TO COMPUTE ELEVATIONS IN THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88), SUBTRACT 96.779 FEET.
4. ALL MEASUREMENTS AND COORDINATES ARE IN U.S. SURVEY FEET.
5. UTILITY INFORMATION DEPICTED HEREON IS COMPILED USING PHYSICAL EVIDENCE LOCATED IN THE FIELD. UTILITIES DEPICTED HEREON MAY NOT NECESSARILY REPRESENT ALL EXISTING UTILITIES.
6. MANY AREAS WITHIN THE SOUTHERLY AND EASTERLY PORTIONS OF THE SUBJECT AREA WERE INACCESSIBLE AT THE TIME OF THE SURVEY. DETAILS WITHIN THESE AREAS ARE NOT DEPICTED HEREON.

SURVEY CONTROL POINT COORDINATES

POINT	NORTHING	EASTING	ELEVATION
4161	90746.121	346113.889	106.65
4162	90579.736	345838.246	104.01
4524	90666.739	346023.464	105.20
4525	90609.369	346046.638	105.30
5102	90558.776	345735.316	104.53
5283	90547.623	345976.359	104.66
5410	90528.128	346481.008	107.83
5411	90683.679	346512.101	113.83
5413	90594.092	346228.694	106.27
5497	90591.244	346115.971	105.27
5887	90541.674	346094.953	104.63
5905	90533.798	346252.468	104.61
6008	90564.383	346349.239	107.14
6307	90696.660	346449.300	113.24
6523	90649.873	346574.168	114.13
6622	90756.810	346537.804	114.36
6623	90878.840	346577.801	110.31

ALL SURVEY CONTROL POINTS ARE MAGNETIC MASONRY NAILS WITH BRASS WASHERS MARKED "CIVIL CONSULTANTS"

ELEVATION REFERENCE TABLE

REFERENCE	LOCAL TIDAL DATUM	PNSY DATUM	NGVD29	NAVD88
FEMA FLOOD ZONE A2 (EL9)	12.856	105.012	9.000	8.233
HIGHEST OBSERVED WATER LEVEL (2/19/1972)	12.339	104.495	8.483	7.716
MEAN HIGHER HIGH WATER (MHHW)	8.839	100.995	4.983	4.216
MEAN HIGH WATER (MHW)	8.428	100.584	4.572	3.805
NORTH AMERICA VERTICAL DATUM (NAVD88)	4.623	96.779	0.767	0.000
MEAN SEA LEVEL (MSL)	4.432	96.588	0.576	-0.191
MEAN TIDE LEVEL (MTL)	4.373	96.529	0.517	-0.250
NATIONAL GEODETIC VERTICAL DATUM (NGVD29)	3.856	96.012	0.000	-0.767
MEAN LOW WATER (MLW)	0.322	92.478	-3.534	-4.301
MEAN LOWER LOW WATER (MLLW)	0.000	92.156	-3.856	-4.623
LOWEST OBSERVED WATER LEVEL (2/10/1977)	-3.261	88.895	-7.117	-7.884

THE LOCAL TIDAL DATUM INFORMATION AND THE RELATIONSHIP BETWEEN LOCAL TIDE AND NAVD88 IS BASED ON DATA PUBLISHED BY THE U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL OCEAN SERVICE FOR STATION "SEAVEY ISLAND, PORTSMOUTH HARBOR", STATION ID: 8419870, TIDAL EPOCH 1983-2001. THE RELATIONSHIP BETWEEN THE PORTSMOUTH NAVAL SHIPYARD DATUM AND NGVD29/NAVD88 IS BASED ON A REPORT ENTITLED "SURVEY CONTROL REPORT, PORTSMOUTH NAVAL SHIPYARD, U.S. NAVAL ACTIVITIES, SEAVEY ISLAND; KITTERY, MAINE", PREPARED BY CIVIL CONSULTANTS, DATED FEBRUARY 22, 2002.

FLOOD ZONE A2 (EL 9) IS BASED ON NATIONAL FLOOD INSURANCE PROGRAM, FLOOD INSURANCE RATE MAP (FIRM) FOR THE TOWN OF KITTERY, MAINE, YORK COUNTY, COMMUNITY PANEL NUMBER 230171 0008 D, EFFECTIVE DATE JULY 3, 1986. ZONE A2 (EL 9) IS DEFINED AS "AREAS OF 100-YEAR FLOOD; BASE FLOOD ELEVATIONS AND FLOOD HAZARDS DETERMINED".

PLAN

SCALE: 1"=20'

PLAN NORTH

LEGEND AND ABBREVIATIONS:

AP	ACCESS PANEL – STEEL PLATE		MANHOLE
BIT.	BITUMINOUS		EYELET TIE DOWN
BW	BARBED WIRE		SANITARY SEWER CLEANOUT
CLF	CHAIN LINK FENCE		LIGHT POLE
CONC.	CONCRETE		ELECTRIC MANHOLE
GR	GRANITE		ELECTRICAL HOOKUP
PIV	POSITIONAL INDICATOR VALVE		SIAMESE SANITARY SEWER CONNECTION
RETWALL	RETAINING WALL		GUARD POST
FF=106.4'	FINISH FLOOR		CLEAT TIE DOWN
105.3'	SPOT ELEVATION		SANITARY SEWER MANHOLE
WV	WATER VALVE		SIGN
	FIRE HYDRANT		SURVEY BENCHMARK
	CATCH BASIN	5887	SURVEY CONTROL POINT (SEE COORDINATE TABLE)

GRAPHIC SCALE

1" = 20' 0 10' 20' 40'

CONFORMED SET 12/7/12 DWH

NAVFAC

NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC

PORTSMOUTH NAVAL SHIPYARD KITTERY, MAINE

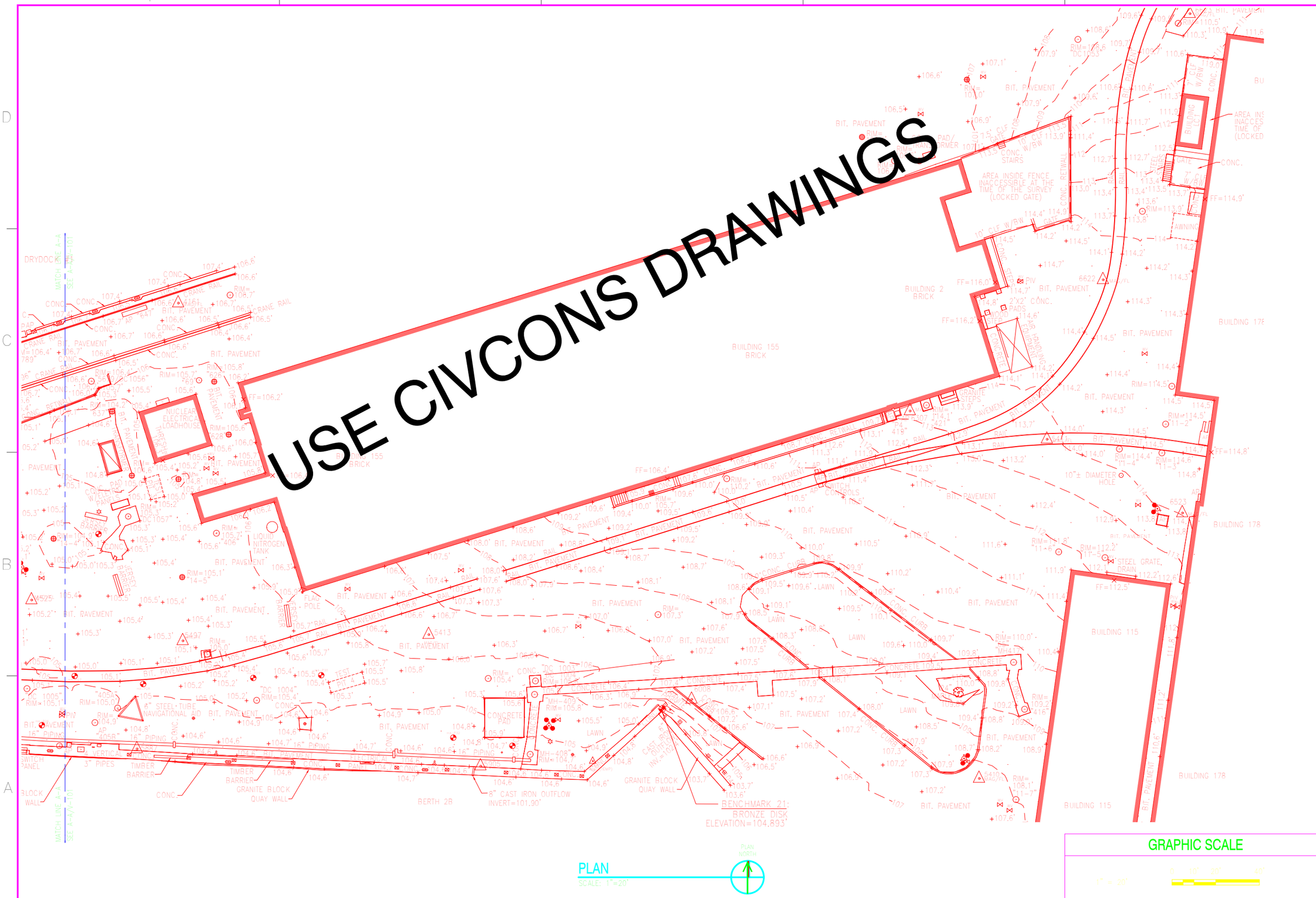
STRUCTURAL STABILIZATION AND REPAIRS TO BERTHS 1, 2A AND 2B

EXISTING SITE SURFACE PLAN SHEET 1 OF 2

DRAWN BY: WRR23
PROJECT NO.: 1121079
CONSTR. CONTR. NO.: N40085-12-C-1736
NAVFAC DRAWING NO.: 12621681
SHEET 12 OF 24

V-101 FP1-12-013

USE CIVCONS DRAWINGS



PLAN

SCALE: 1"=20'

PLAN NORTH

GRAPHIC SCALE

1" = 20'

0 10' 20' 40'

NAVFAC

NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC

PORTSMOUTH NAVAL SHIPYARD

KITTERY, MAINE

STRUCTURAL STABILIZATION AND REPAIRS TO BERTHS 1, 2A AND 2B

EXISTING SITE SURFACE PLAN SHEET 2 OF 2

CONFORMED SET

12/7/12 DWH

W9128F

PROJECT NO. 1121079

CONTR. NO. N40085-12-C-1736

NAVFAC DRAWING NO. 1262168Z

SHEET 14 OF 24

V-102 | FP1-12-014

SYMBOLS LEGEND (QL-C) INFORMATION

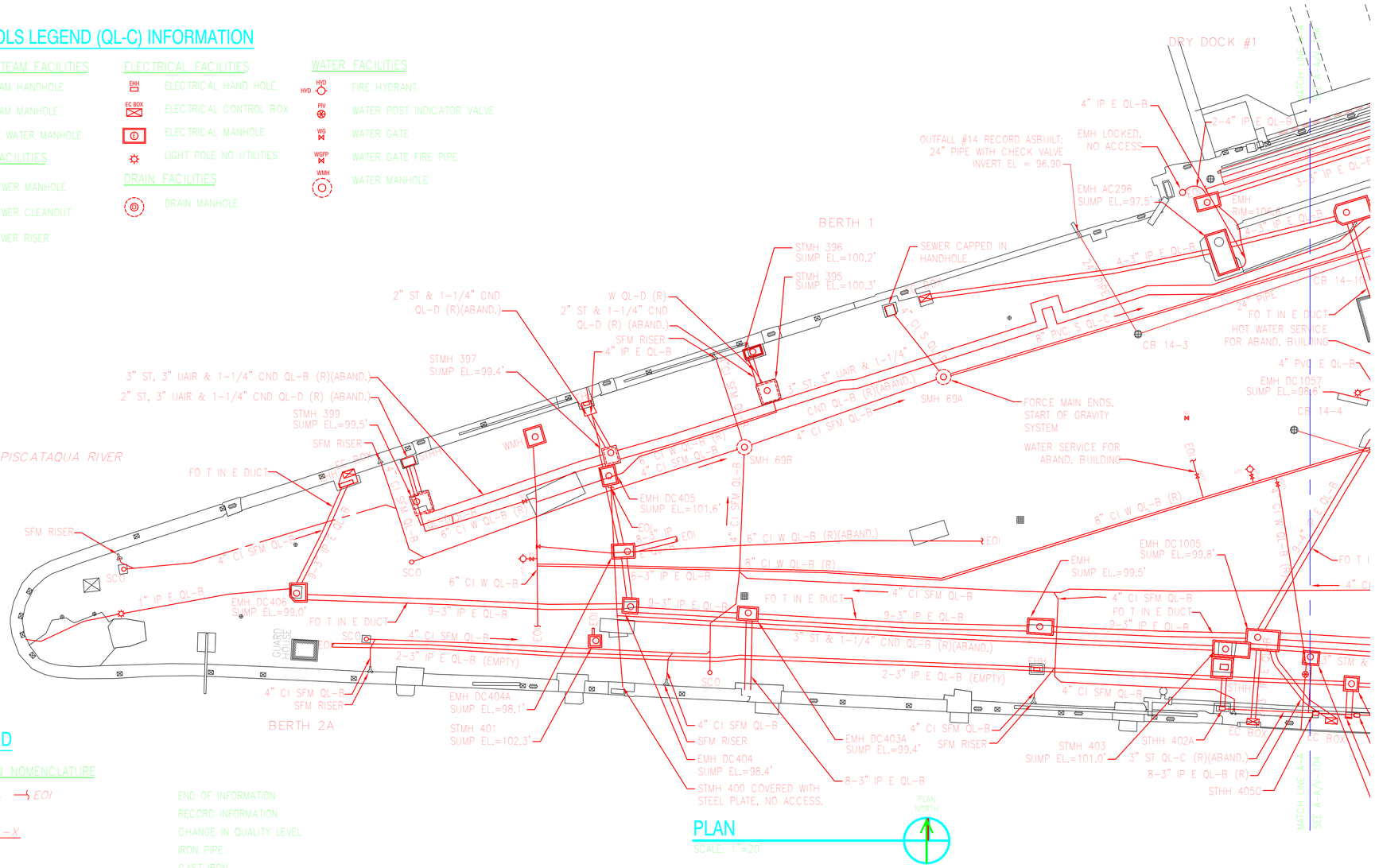
GAS & STEAM FACILITIES
- STEAM HANDHOLE
- STEAM MANHOLE
- HOT WATER MANHOLE

SEWER FACILITIES
- SEWER MANHOLE
- SEWER CLEANOUT
- SEWER RISER

ELECTRICAL FACILITIES
- ELECTRICAL HAND HOLE
- ELECTRICAL CONTROL BOX
- ELECTRICAL MANHOLE
- LIGHT POLE NO UTILITIES

DRAIN FACILITIES
- DRAIN MANHOLE

WATER FACILITIES
- FIRE HYDRANT
- WATER POST INDICATOR VALVE
- WATER GATE
- WATER GATE FIRE PIPE
- WATER MANHOLE



PLAN
SCALE: 1"=20'

NOTES:

1. SEE DRAWINGS V-101 AND V-102 FOR EXISTING SITE SURFACE CONDITIONS, NOTES AND LEGEND. SEE REFERENCE DRAWINGSR-001 AND R-002.
2. SITE UTILITIES SHOWN HEREON ARE BASED UPON SUBSURFACE UTILITY ENGINEERING INVESTIGATIONS PERFORMED BY BSI ENGINEERING, INC. AND SHOWN ON A PLAN DATED MARCH 1, 2012.
3. PNSY YARD PLAN USED TO SHOW UTILITIES NORTH, EAST AND SOUTH OF BUILDING 155.
4. SUPPLEMENT UTILITY INFORMATION DETERMINED BY FST BASED ON FIELD INVESTIGATIONS.

SUBSURFACE UTILITY ENGINEERING NOTES:

1. BSIE'S PLAN WAS PREPARED IN CONFORMANCE WITH AMERICAN SOCIETY OF CIVIL ENGINEER STANDARD CI/ASCE 38-02 "STANDARD GUIDELINE FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA".
2. CERTAIN UTILITIES SHOWN HAVE BEEN TRACED ON THE GROUND USING ELECTRONIC DESIGNATION TECHNIQUES. DESIGNATION, OR ELECTRONIC UTILITY LOCATION, IS DEFINED AS THE SURFACE LOCATION OF A UTILITY LINE BASED ON ELECTRONIC GEOPHYSICAL PROSPECTING TECHNIQUES AND IS APPROXIMATE IN RELATION TO THE ACTUAL LOCATION OF THE POSSIBLE UTILITY.
3. CERTAIN UTILITIES SHOWN HAVE BEEN TAKEN FROM AVAILABLE RECORD INFORMATION. THESE UTILITIES HAVE NOT BEEN VERIFIED BY AIR-VACUUM EXCAVATION.
4. BELOW GROUND STRUCTURES WERE MEASURED IN THE FIELD AND SHOWN TO REPRESENT THEIR TRUE DIMENSIONS WITH AN ASSUMED WALL THICKNESS OF 0.5 FT UNLESS STATED OTHERWISE.

UTILITY QUALITY LEVEL INFORMATION INDEX (SEE ASCE/CI 38-02):

1. QUALITY LEVEL D: "QL D". UTILITY INFORMATION PLOTTED ON THE DRAWING BASED SOLELY ON RECORD INFORMATION, INDIVIDUAL RECOLLECTIONS OR THE EXISTENCE OF UTILITY SERVICE. IT SHALL BE NOTED THAT ALL INFORMATION SHOWN (OTHER THAN AT TEST HOLE LOCATIONS, SEE QL A BELOW), INCLUDING BUT NOT LIMITED TO A UTILITIES SIZE, CAPACITY, MATERIAL COMPOSITION, CONDITION OR SERVICE STATUS SHALL BE CONSIDERED QL D EVEN THOUGH THE UTILITIES HORIZONTAL LOCATION MAY BE PLOTTED AND LABELED AS QL C OR QL B.
2. QUALITY LEVEL C: "QL C". UTILITY INFORMATION OBTAINED AS ABOVE FOR QUALITY LEVEL D, PLOTTED TO CORRELATE WITH SURFACE UTILITY FEATURES WHICH HAVE BEEN FIELD VERIFIED, SURVEY LOCATED AND ACCURATELY REDUCED ONTO THE DESIGN/CONSTRUCTION DOCUMENTS. INCLUDED IN THIS CATEGORY AERIAL UTILITY INFORMATION AND UTILITY DEPICTION'S, WHICH IN THE PROFESSIONAL OPINION OF THE SUBSURFACE UTILITY ENGINEER, REPRESENT THE MOST PROBABLE APPROXIMATE HORIZONTAL LOCATION, TYPE AND/OR EXISTENCE OF A UTILITY.
3. QUALITY LEVEL B: "QL B". UTILITY INFORMATION DERIVED BY ESTABLISHING THE APPROXIMATE SURFACE HORIZONTAL LOCATION OF A UTILITY USING ELECTRONIC METHODS. SAID INFORMATION IS SUBSEQUENTLY FIELD SURVEY LOCATED AND ACCURATELY REDUCED ONTO THE DESIGN/CONSTRUCTION DOCUMENTS.
4. QUALITY LEVEL A: "QL A". UTILITY INFORMATION WHICH HAS BEEN VISUALLY VERIFIED, SURVEY LOCATED (BOTH HORIZONTALLY AND VERTICALLY) AND ACCURATELY REDUCED ONTO THE DESIGN/CONSTRUCTION DOCUMENTS. THIS IS TYPICALLY SHOWN AS TEST HOLE OR OTHER DIMENSIONED INFORMATION.

LEGEND

SUE PLAN NOMENCLATURE

EOI	END OF INFORMATION
(R)	RECORD INFORMATION
QL-X | QL-X	CHANGE IN QUALITY LEVEL
IP	IRON PIPE
CI	CAST IRON
S	SEWER
FM	FORCE MAIN
FO	FIBER OPTIC
PVC	POLYVINYL CHLORIDE
SW	SALT WATER
HW	HOT WATER
CND	CONDENSATE
MH	MANHOLE
T	TELEPHONE
E	ELECTRIC
W	WATER
S	SEWER
ST	STEAM
U	UNKNOWN
UAIR	UNDERGROUND AIR
(ABAND.)	ABANDONED
CH	CHIMNEY
SUMP	BOTTOM OF MH STRUCTURE
△	NOTE CALLOUT

QUALITY LEVEL "B" INFORMATION

E QL-B	ELECTRICAL QL-B	UAIR QL-B	UNDERGROUND AIR PRODUCTS QL-B: CO2, NO2, ETC.
G QL-B	GAS QL-B	U QL-B	UNKNOWN TRACE SIGNAL QL-B
S QL-B	SEWER QL-B	W QL-B	WATER QL-B
ST QL-B	STEAM QL-B		

QUALITY LEVEL "C" INFORMATION

E QL-C	ELECTRICAL QL-C	ST QL-C	STEAM QL-C
G QL-C	GAS QL-C	UAIR QL-C	UNDERGROUND AIR PRODUCTS QL-C: CO2, NO2, ETC.
S QL-C	SEWER QL-C	W QL-C	WATER QL-C

QUALITY LEVEL "D" INFORMATION

E QL-D	ELECTRICAL QL-D	ST QL-D	STEAM QL-D
G QL-D	GAS QL-D	UAIR QL-D	UNDERGROUND AIR PRODUCTS QL-D: CO2, NO2, ETC.
S QL-D	SEWER QL-D	W QL-D	WATER QL-D

GRAPHIC SCALE
1" = 20' 0 10' 20' 40'

CONFORMED SET 12/7/12 DWH

NAVFAC

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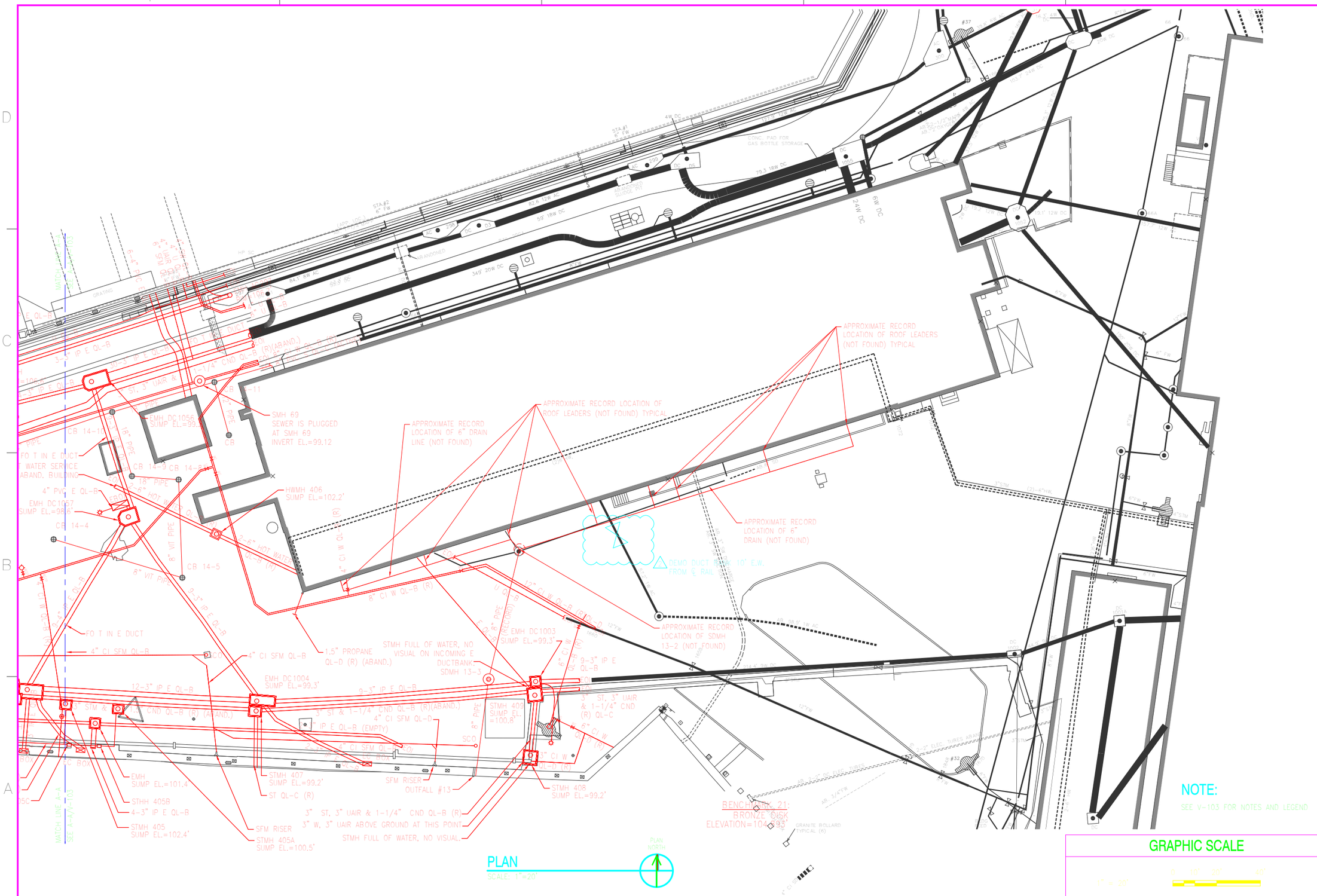
NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
PORTSMOUTH NAVAL SHIPYARD KITTERY, MAINE
STRUCTURAL STABILIZATION AND REPAIRS TO BERTHS 1, 2A AND 2B
EXISTING SITE UTILITIES PLAN SHEET 1 OF 2

PROJECT NO. 1121079
CONTR. CONTR. NO. N40085-12-C-1736
NAVFAC DRAWING NO. 12621683
SHEET 15 OF 34
V-103 FP1-12-015



NOTE:

SEE V-103 FOR NOTES AND LEGEND

AS-BUILT COMMENTS 8/19/14 -
CONFORMED SET 12/7/12 DWH

NAVFAC

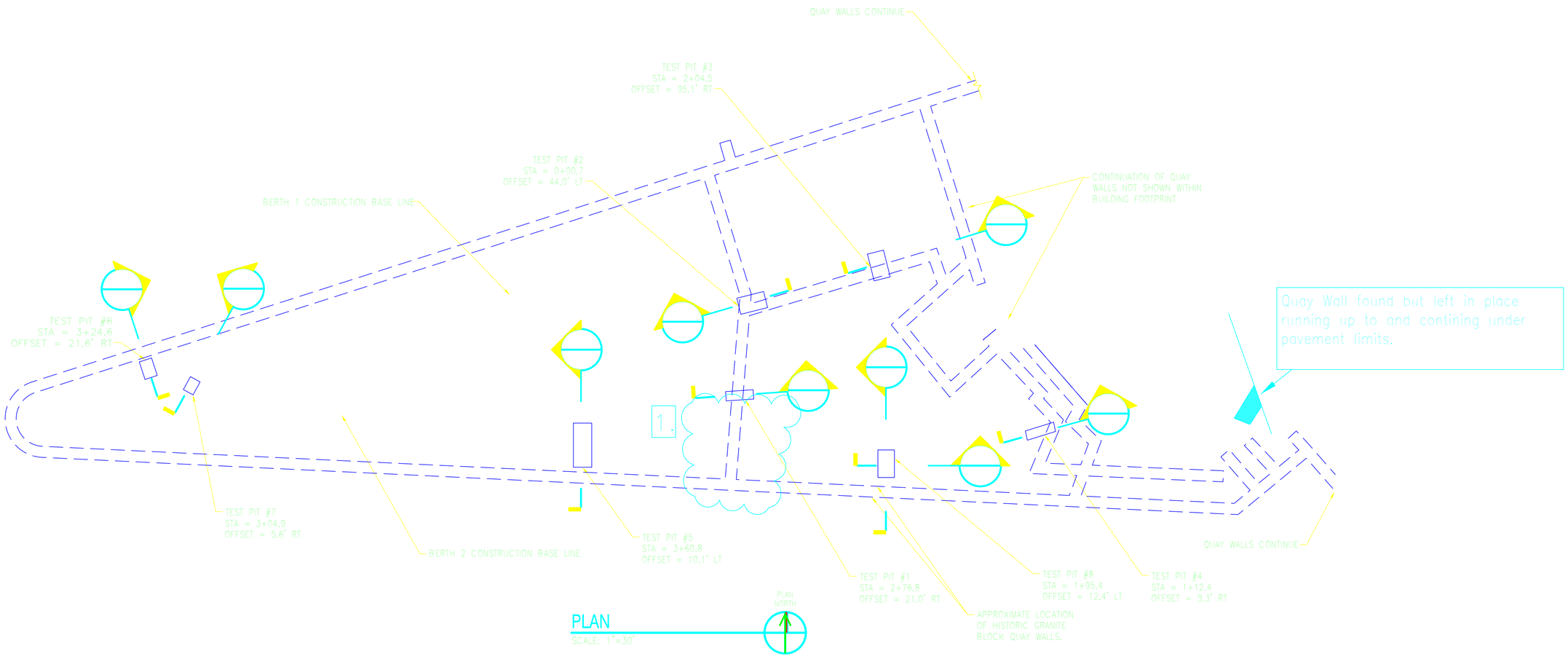
NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
PORTSMOUTH NAVAL SHIPYARD KITTERY, MAINE

STRUCTURAL STABILIZATION AND REPAIRS TO BERTHS 1, 2A AND 2B

EXISTING SITE UTILITIES PLAN SHEET 2 OF 2

SIZE: ANSI D
PROJECT NO.: 1121079
CONSTR. CONTR. NO.: N40085-12-C-1736
NAVFAC DRAWING NO.: 12621684
SHEET 18 OF 34

V-104 FP1-12-016



PLAN

SCALE: 1"=30'

1. Removed quay wall to below relieving slab limits.

NOTE:

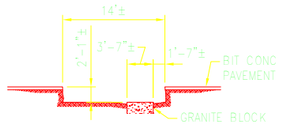
1. APPROXIMATE LOCATION OF HISTORIC GRANITE BLOCK QUAY WALLS PROVIDED BY PNSY AND SHOWN AS A DOUBLE DASHED LINE.
2. SEE DRAWINGS V-101, V-102, V-103, V-104, FOR EXISTING SITE SURFACE AND SITE UTILITIES PLANS.
3. TEST PITS ARE SHOWN WITH STATION AND OFFSET TO THE APPROXIMATE CENTER OF THE TEST PIT AREA.

1"=30' 0 30 60 FT.

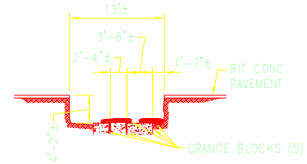
12/7/12 DPA

CONFORMED SET

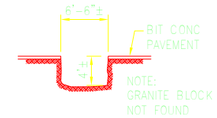
Xref: P:\TR_103A_PNSY_Berth_1_and_2\01_CAD_Drawings\00_Support_Base_Tools\Xref__TitleBlocks_Project_Wide\BRTUCENE_WNBCO_C_TL_CVR.dwg



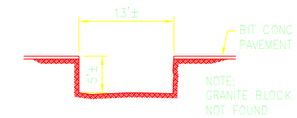
TEST PIT 1 SECTION D1
SCALE: 1" = 10' V-105



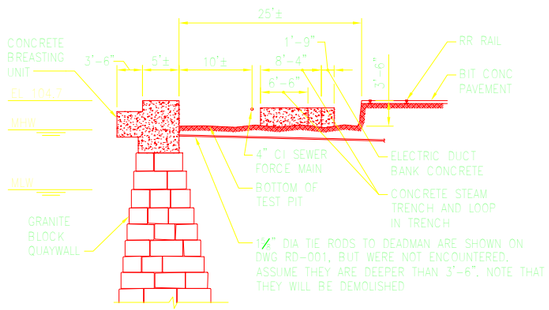
TEST PIT 2 SECTION D2
SCALE: 1" = 10' V-105



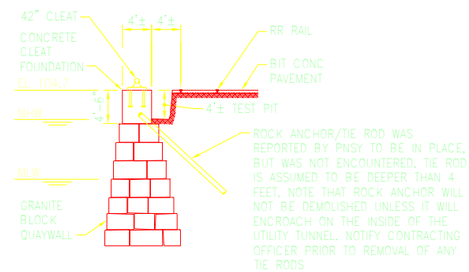
TEST PIT 3 SECTION D4
SCALE: 1" = 10' V-105



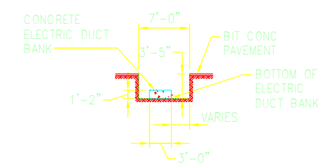
TEST PIT 4 SECTION D5
SCALE: 1" = 10' V-105



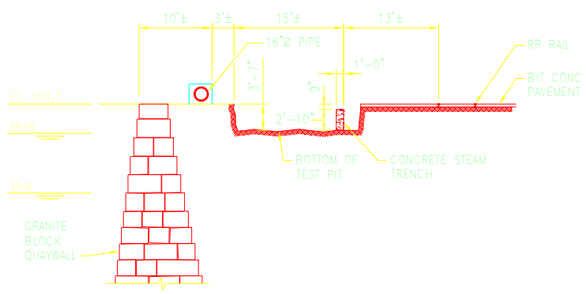
TEST PIT 5 SECTION C1
SCALE: 1" = 10' V-105



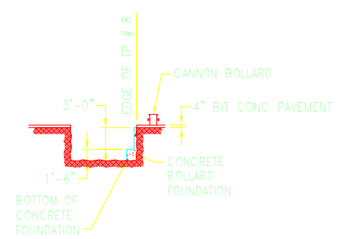
TEST PIT 6 SECTION C3
SCALE: 1" = 10' V-105



TEST PIT 7 SECTION C4
SCALE: 1" = 10' V-105



TEST PIT 8 SECTION LOOKING WEST B1
SCALE: 1" = 10' V-105



TEST PIT 8 SECTION LOOKING NORTH B3
SCALE: 1" = 10' V-105

GRAPHIC SCALE

12/7/12 DPA
CONFORMED SET

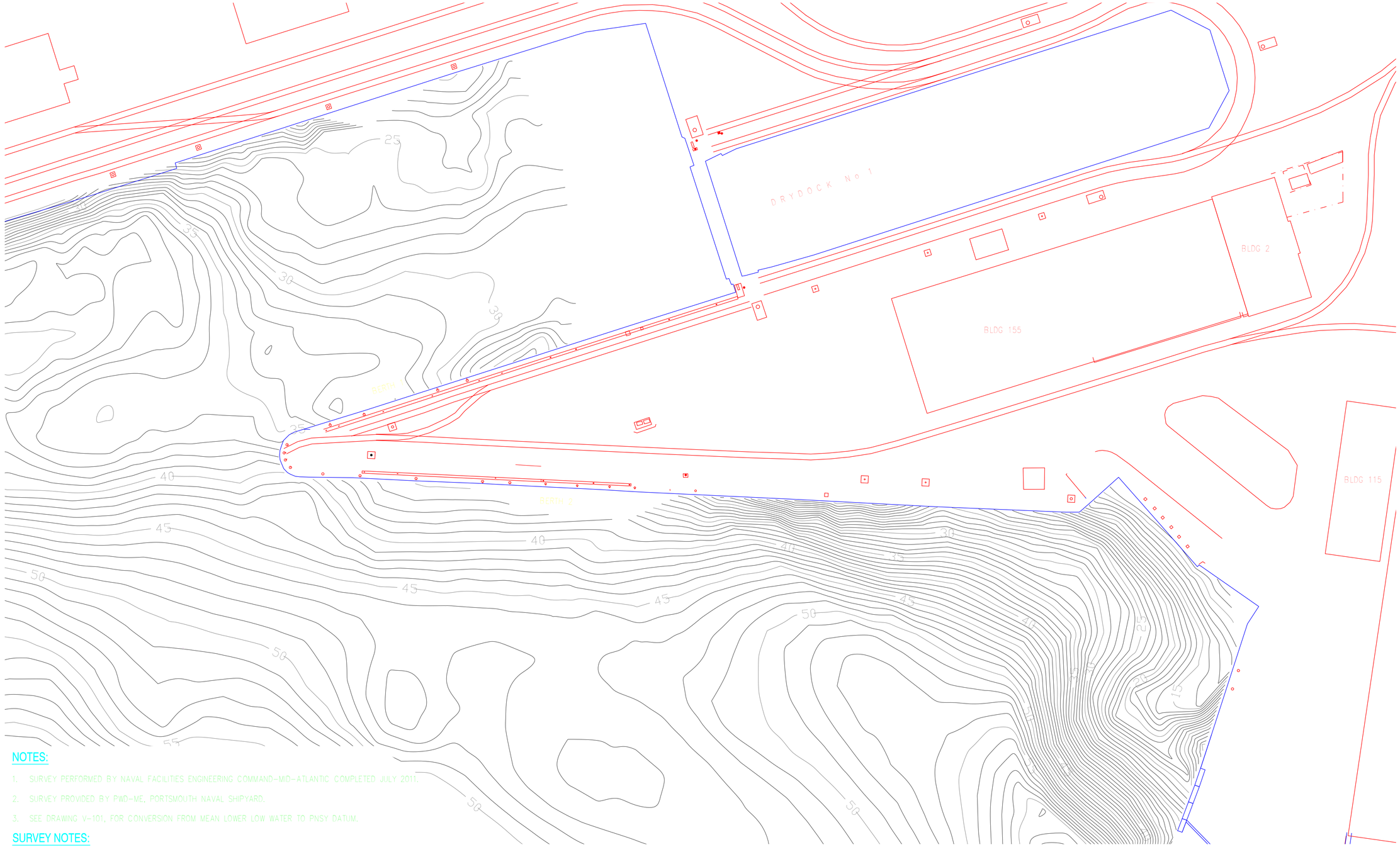
NAVFAC

NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
PORTSMOUTH NAVAL SHIPYARD
KITTERY, MAINE

STRUCTURAL STABILIZATION AND REPAIRS TO BERTHS 1, 2A AND 2B

TEST PIT SECTIONS

NAVFAC MID WNRC9
PROJECT NO. 1121079
CONSTR. CONTR. NO. N40085-12-C-1736
NAVFAC DRAWING NO. 1262 1686
SHEET V-106 FP1-12-018



NOTES:

1. SURVEY PERFORMED BY NAVAL FACILITIES ENGINEERING COMMAND–MID–ATLANTIC COMPLETED JULY 2011.
2. SURVEY PROVIDED BY PWD–ME, PORTSMOUTH NAVAL SHIPYARD.
3. SEE DRAWING V–101, FOR CONVERSION FROM MEAN LOWER LOW WATER TO PNSY DATUM.

SURVEY NOTES:

1. DEPTH SOUNDINGS AND/OR CONTOURS SHOWN HEREIN ARE IN FEET AND REFER TO MEAN LOWER LOW WATER DATUM.
2. THE HYDROGRAPHIC SURVEY WAS CONDUCTED USING CLASS 1 HYDROGRAPHIC SURVEY METHODS & ACCURACIES OUTLINED IN THE CORPS OF ENGINEERS' HYDROGRAPHIC SURVEYING MANUAL (EM 1110–2–1003).
3. ALL SOUNDINGS WERE RECORDED USING A RESON 7101 MULTI–BEAM SONAR SYSTEM WITH HORIZONTAL POSITIONS OBTAINED VIA APPLANIX POS/MV GPS W/MRU.
4. HORIZONTAL DATUM IS BASED ON THE MAINE WEST (LAMBERT) STATE PLANE COORDINATE SYSTEM, ZONE 1802, U.S. SURVEY FEET (NAD83).

PLAN

SCALE: 1"=40'

PLAN NORTH

GRAPHIC SCALE

1" = 40'

0 20' 40' 80'

CONFORMED SET 12/7/12 DPA

NAVFAC

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DESIGNED

CHARGE NAVAL

DRAWN

DATE

PKS. MN. BRK RWI. CHK. DPA.

DIVISION

BRANCH MANAGER

CHIEF ENGINEER

CAPT. PWD/PNSY

FOR REVIEW & COMMENT

NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC

PUBLIC WORKS DEPARTMENT – NAVAL SHIPYARD PORTSMOUTH, KITTERY, MAINE

STRUCTURAL STABILIZATION AND REPAIRS TO BERTHS 1, 2A AND 2B

HYDROGRAPHIC SURVEY

DRAWING NO. WHR02

PROJECT NO. 1121079

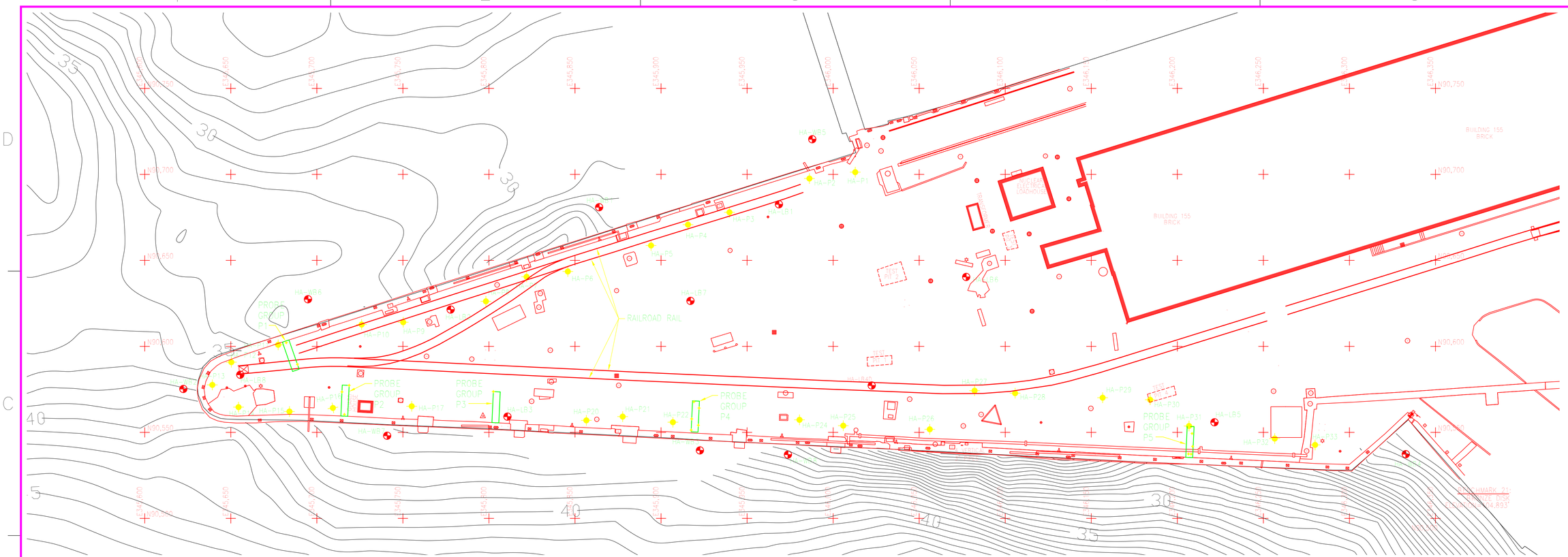
CONTR. CONTR. NO. N40085–12–C–1736

NAVFAC DRAWING NO. 12621687

SHEET 19 OF 34

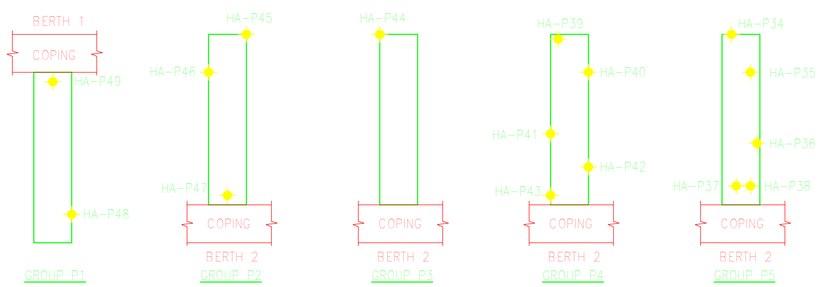
V-107 FP1-12-019

FILE NAME: $(++)



BORING PLAN

SCALE: 1" = 30'



PROBE LOCATION PLANS

SCALE: 1/8"=1'-0"

BORING AND PROBE LOCATIONS

BORING	NORTHING	EASTING	PROBE	NORTHING	EASTING	PROBE	NORTHING	EASTING
HA-LB1	90683	345969	HA-P1	90701	346013	HA-P27	90574	346082
HA-LB2	90624	345778	HA-P2	90698	345968	HA-P28	90573	346106
HA-LB3	90559	345811	HA-P3	90678	345940	HA-P29	90570	346157
HA-LB4D	90577	346022	HA-P4	90671	345916	HA-P30	90569	346184
HA-LB5	90556	346222	HA-P5	90659	345894	HA-P31	90554	346207
HA-LB6	90640	346077	HA-P6	90644	345846	HA-P32	90546	346257
HA-LB7	90626	345917	HA-P7	90640	345822	HA-P33	90543	346280
HA-LB8	90583	345655	HA-P8	90626	345798	HA-P34	90553	346207
HA-WB1	90681	345864	HA-P9	90614	345750	HA-P35	90549	346208
HA-WB2	90575	345622	HA-P10	90612	345726	HA-P36	90542	346209
HA-WB3	90540	345923	HA-P11	90601	345678	HA-P37	90537	346206
HA-WB4	90537	346333	HA-P12	90591	345650	HA-P38	90537	346208
HA-WB5	90720	345988	HA-P13	90578	345639	HA-P39	90568	345919
HA-WB6	90627	345695	HA-P14	90565	345654	HA-P40	90564	345922
HA-WB7	90548	345741	HA-P15	90562	345684	HA-P41	90558	345918
HA-WB8	90537	345974	HA-P16	90564	345709	HA-P42	90554	345922
			HA-P17	90565	345755	HA-P43	90551	345917
			HA-P20	90557	345857	HA-P44	90574	345803
			HA-P21	90559	345878	HA-P45	90577	345719
			HA-P22	90556	345907	HA-P46	90573	345714
			HA-P24	90557	345980	HA-P47	90560	345716
			HA-P25	90554	346006	HA-P48	90589	345689
			HA-P26	90552	346056	HA-P49	90602	345682

NOTES:

1. UNDERWATER CONTOURS SHOWN ARE IN FEET BELOW MEAN LOWER LOW WATER. SEE V-101 FOR CONVERSION TO PNSY DATUM.

LEGEND:

HA-LA3 — BORING LOCATION AND DESIGNATION

HA-LA3 — PROBE LOCATION AND DESIGNATION

GRAPHIC SCALE

1" = 30' — 0 15' 30' 60'

1/8"=1' — 0 8' 16 FT

CONFORMED SET 12/7/12 DWH

NAVFAC

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AS COMMANDER NAVFAC

DATE

DIRECTOR, CIV. DIV.

CHIEF, MPA | CHIEF, CHG | CHIEF, MD

CHIEF, ENGINEERING

BRANCH MANAGER

CHIEF, ENG/ARCH

CHIEF, PROTECTION

PREPARED IN ACCORDANCE WITH THE FACILITIES ENGINEERING MANUAL

NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC

PUBLIC WORKS DEPARTMENT – MAINE NAVAL SUPPORT ACTIVITY

PORTSMOUTH NAVAL SHIPYARD

KITTERY, MAINE

STRUCTURAL STABILIZATION AND REPAIRS TO BERTHS 1, 2A AND 2B

BORING LOCATION PLAN

MAXIMO NO.: WNRC9

EPROJECT NO.: 1121075

CONSTR. CONTR. NO.: N40085-12-C-1736

NAVFAC DRAWING NO.: 12621688

SHEET 70 OF 134

B-101 | FP1-12-020

FILE NAME: $(++)

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GRAPHIC SCALE

CONFORMED SET 12/7/12 DWH

NAVFAC

NAVAL FACILITIES ENGINEERING COMMAND ~ MID-ATLANTIC

PORTSMOUTH NAVAL SHIPYARD KITTERY, MAINE

STRUCTURAL STABILIZATION AND REPAIRS TO BERTHS 1, 2A AND 2B

BORING LOGS PART 1

MAXIMO NO.: WNRC09

EPROJECT NO.: 1121075

CONSTR. CONTR. NO.: N40085-12-C-1736

NAVFAC DRAWING NO.: 12621689

SHEET 2 OF 34

B-601 FP1-12-021

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GRAPHIC SCALE

CONFORMED SET 12/7/12 DWH

NAVFAC

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MAP

APE, PE, PLS

APPROVED

CO, COMMANDER NAVFAC

DATE

OPERATIONS DIV. DIR.

DES. MAN. DRW. CHG. CHK. MIS.

DIV/DIM

BRANCH MANAGER

CHIEF ENG/ARCH

FIRE PROTECTION

PREPARED IN COOPERATION WITH THE OFFICE OF THE CHIEF OF NAVAL OPERATIONS

NAVAL FACILITIES ENGINEERING COMMAND ~ MID-ATLANTIC

PUBLIC WORKS DEPARTMENT MAINE NAVAL SHIPYARD PORTSMOUTH NAVAL SHIPYARD KITTERY, MAINE

STRUCTURAL STABILIZATION AND REPAIRS TO BERTHS 1, 2A AND 2B

BORING LOGS PART 2

NAVFAC MO No.: WNRC09

EFPROJECT No.: 1121075

CONSTR. CONTR. NO.: N40085-12-C-1736

NAVFAC DRAWING NO.: 12621690

SHEET 2 OF 34

B-602 | FP1-12-022

FILE NAME: $(++)

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GRAPHIC SCALE

12/7/12 DWH

CONFORMED SET

NAVFAC

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APPROVED

CO, COMMANDER NAVFAC

DATE

OPERATIONS DIR. DATE

DES. MAN. DRW. CHK. INR. MIS.

DIV/DIR

BRANCH MANAGER

CHIEF ENGINEER

FIRE PROTECTION

FOR OFFICIAL USE ONLY

NAVAL FACILITIES ENGINEERING COMMAND ~ MID-ATLANTIC

PUBLIC WORKS DEPARTMENT MAINTENANCE SUPPORT DESIGN

PORTSMOUTH NAVAL SHIPYARD

KITTERY, MAINE

STRUCTURAL STABILIZATION AND REPAIRS TO BERTHS 1, 2A AND 2B

BORING LOGS PART 3

MAXIMO NO.: WNRC09

EPROJECT NO.: 1121075

CONSTR. CONTR. NO.: N40085-12-C-1736

NAVFAC DRAWING NO.: 12621691

SHEET 2 OF 34

B-603 | FP1-12-023

FILE NAME: $(++)

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GRAPHIC SCALE

CONFORMED SET 12/7/12 DWH

NAVFAC

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NAVAL FACILITIES ENGINEERING COMMAND ~ MID-ATLANTIC

PORTSMOUTH NAVAL SHIPYARD

KITTERY, MAINE

STRUCTURAL STABILIZATION AND REPAIRS TO BERTHS 1, 2A AND 2B

BORING LOGS PART 4

MAXIMO NO.: WNRC09

EPROJECT NO.: 1121075

CONSTR. CONTR. NO.: N40085-12-C-1736

NAVFAC DRAWING NO.: 12621692

SHEET 2 OF 24

B-604 | FP1-12-024

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GRAPHIC SCALE

CONFORMED SET 12/7/12 DWH

NAVFAC

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NAVAL FACILITIES ENGINEERING COMMAND ~ MID-ATLANTIC

PORTSMOUTH NAVAL SHIPYARD

KITTERY, MAINE

STRUCTURAL STABILIZATION AND REPAIRS TO BERTHS 1, 2A AND 2B

BORING LOGS PART 5

MAXIMO NO.: WNRC09

EPROJECT NO.: 1121075

CONSTR. CONTR. NO.: N40085-12-C-1736

NAVFAC DRAWING NO.: 12621693

SHEET 25 OF 34

B-605 FP1-12-025

FILE NAME: $(++)

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GRAPHIC SCALE

CONFORMED SET 12/7/12 DWH

NAVFAC

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NAVAL FACILITIES ENGINEERING COMMAND ~ MID-ATLANTIC

PORTSMOUTH NAVAL SHIPYARD KITTERY, MAINE

STRUCTURAL STABILIZATION AND REPAIRS TO BERTHS 1, 2A AND 2B

BORING LOGS PART 6

MAXIMO NO.: WNRC09

EPROJECT NO.: 1121075

CONSTR. CONTR. NO.: N40085-12-C-1736

NAVFAC DRAWING NO.: 12621694

B-606 FP1-12-026

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GRAPHIC SCALE

CONFORMED SET 12/7/12 DWH

NAVFAC

NAVAL FACILITIES ENGINEERING COMMAND ~ MID-ATLANTIC

PORTSMOUTH NAVAL SHIPYARD

KITTERY, MAINE

STRUCTURAL STABILIZATION AND REPAIRS TO BERTHS 1, 2A AND 2B

BORING LOGS PART 7

MAXIMO NO.: WNRC09

EPROJECT NO.: 1121075

CONSTR. CONTR. NO.: N40085-12-C-1736

NAVFAC DRAWING NO.: 12621695

SHEET 7 OF 34

B-607 | FP1-12-027

PROBE TABLE 1.tif

PROBE TABLE 4.tif

PROBE TABLE 2.tif

PROBE TABLE 5.tif

PROBE TABLE 3.tif

PROBE TABLE 6.tif

GRAPHIC SCALE

CONFORMED SET
12/7/12 DWH

NAVFAC

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APPROVED
CO, COMMANDER NAVFAC
DATE
OPERATIONS DIV. DIR.
DES. MAN. DRW. CHK. INR. MIS.
DIV/DIV
BRANCH MANAGER
CHIEF ENG/ARCH
FIRE PROTECTION

PREPARED IN COOPERATION WITH THE NAVAL FACILITIES ENGINEERING COMMAND ~ MID-ATLANTIC
PUBLIC WORKS DEPARTMENT - MAINTENANCE DIVISION, SUPPORT DIVISION
PORTSMOUTH NAVAL SHIPYARD
KITTERY, MAINE

STRUCTURAL STABILIZATION AND REPAIRS
TO BERTHS 1, 2A AND 2B

BORING LOGS PART 8

MAXIMO NO.: WNRC9
EPROJECT NO.: 1121075
CONSTR. CONTR. NO.: N40085-12-C-1736
NAVFAC DRAWING NO.: 12621696
SHEET 25 OF 34

B-608 | FP1-12-028

FILE NAME: $(++)

PROBE TABLE 7.tif

PROBE TABLE 10.tif

PROBE TABLE 8.tif

PROBE TABLE 11.tif

PROBE TABLE 9.tif

GRAPHIC SCALE

CONFORMED SET
12/7/12 DWH

NAVFAC

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APPROVED

CO, COMMANDER NAVFAC

DATE

OPERATIONS DIV. DIR.

DES. MAN. | DRW. CHG. | SUP. MN

CH/ZM

BRANCH MANAGER

CHIEF ENG/ARCH

FIRE PROTECTION

PREPARED IN COOPERATION WITH THE DEPARTMENT OF THE NAVY
DIRECTOR, FACILITIES DEVELOPMENT, MARINE CORPS SUPPORT DETACHMENT, QUANTICO, VA

NAVAL FACILITIES ENGINEERING COMMAND ~ MID-ATLANTIC

PORTSMOUTH NAVAL SHIPYARD | KITTERY, MAINE

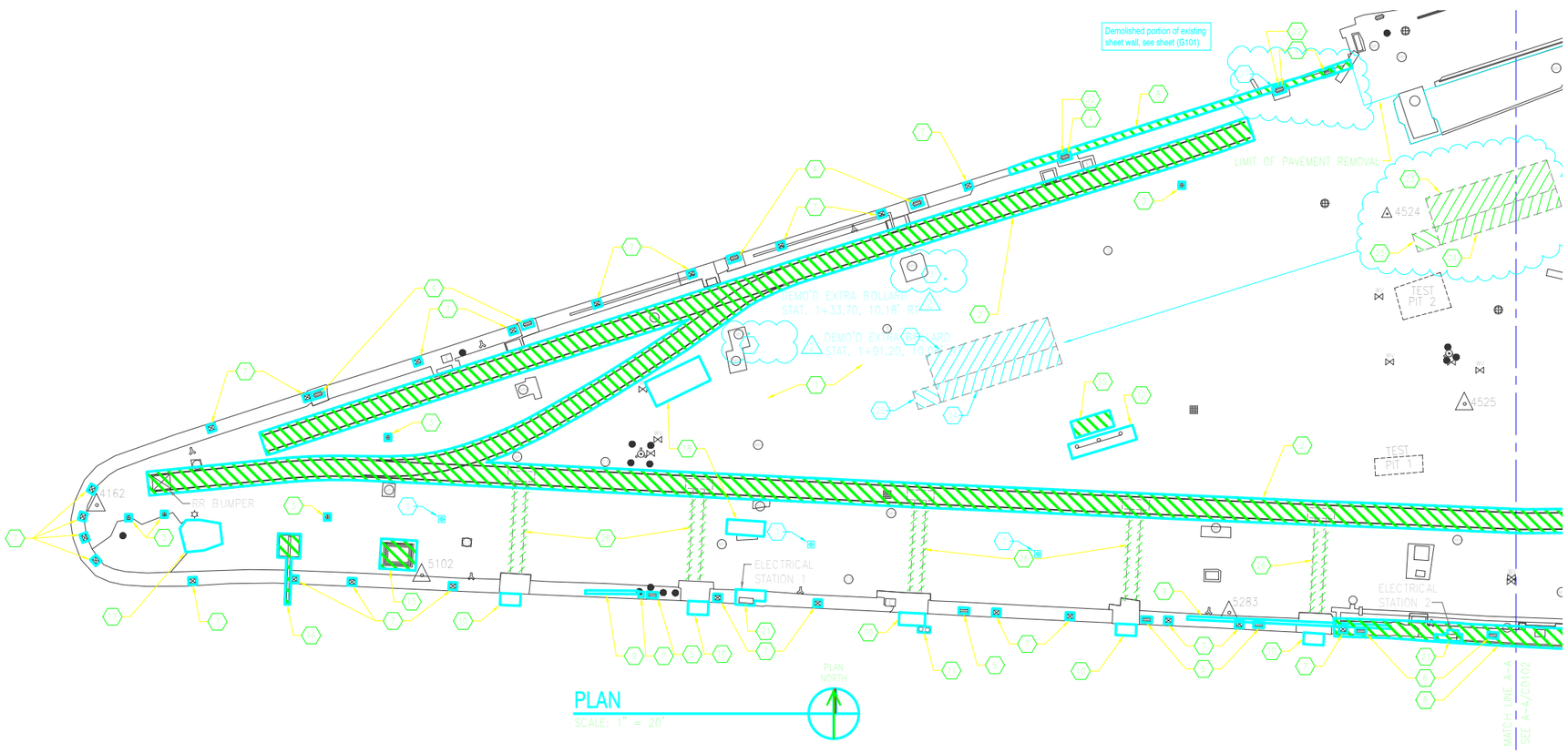
STRUCTURAL STABILIZATION AND REPAIRS
TO BERTHS 1, 2A AND 2B

BORING LOGS PART 9

MAXIMO NO.: WNRC09
EPROJECT NO.: 1121075
CONSTR. CONTR. NO.: N40085-12-C-1736
NAVFAC DRAWING NO.: 12621697
SHEET 23 OF 24

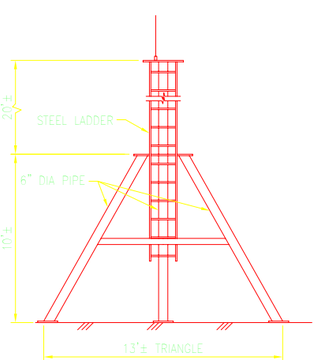
B-609 | FP1-12-029

FILE NAME: $(++)



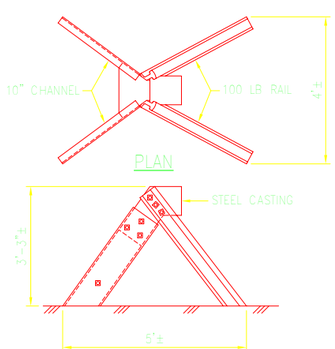
PLAN

SCALE: 1" = 20'



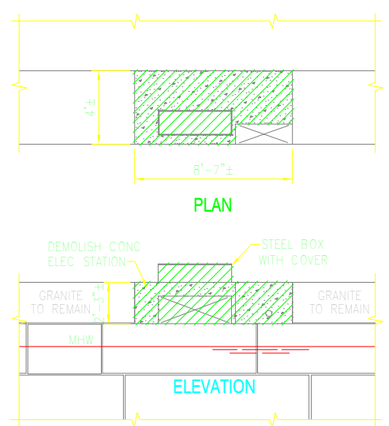
DETAIL - NAVIGATION AID

SCALE: 1/4"=1'-0"



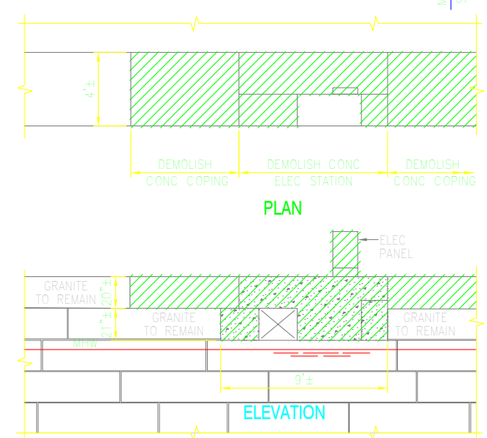
DETAIL - RAILROAD BUMPER

SCALE: 1/2"=1'-0"



DEMOLITION ELECTRICAL STATION 1

SCALE: 1/4"=1'-0"



DEMOLITION ELECTRICAL STATION 2

SCALE: 1/4"=1'-0"

DEMOLITION NOTES:

1. REMOVE AND DISPOSE OF 3 1/2"± THICK BITUMINOUS CONCRETE PAVEMENT THICKNESS VARIES, SEE C-103 FOR LIMITS
2. REMOVE AND DISPOSE OF RR TRACK, RR BUMPER & CREOSOTE TREATED WOOD TIES (7"x9"x8'-6"), 19" ON CENTER
3. REMOVE AND DISPOSE OF BOLLARDS (15"± DIA x 30"± HIGH CANNON BOLLARDS) INCLUDING BURIED CONCRETE BASES (APPROX 10'x10'x7') SIX ADDITIONAL BOLLARDS SHOWN
4. REMOVE AND DISPOSE OF 42" CLEATS INCLUDING 26"x14"x2" GROUT PAD
5. REMOVE AND DISPOSE OF 30" CLEATS INCLUDING 20"x12"x1" GROUT PAD
6. REMOVE AND DISPOSE OF 24" CLEATS
7. REMOVE AND DISPOSE OF 12" MOORING RINGS
8. REMOVE AND DISPOSE OF 4'± WIDE CONCRETE CAP. AT BERTH 1, REMOVE TO EL 104.6, BERTH 1 THICKNESS VARIES 8" TO 20"±, BERTH 2 THICKNESS VARIES 15" TO 18"±.
9. REMOVE AND DISPOSE OF 12x12 TIMBER CURB
10. REMOVE AND DISPOSE OF CONCRETE BREASTING UNITS (APPROX 6'x4'x3.5') SEE CD501 FOR DETAIL
11. REMOVE AND DISPOSE OF TWO UNFASTENED TIMBER FENDER PILES
12. REMOVE AND DISPOSE OF STEEL 10" CHANNEL GUARDRAIL & POSTS (6.5" OD, CONC FILL) WITH 2'x2'x5' CONCRETE BASES
13. SALVAGE AND REINSTALL GUARD HOUSE. REMOVE AND DISPOSE OF 9'x7.5' CONCRETE SLAB, CRUMBLE CONCRETE AND REMOVE REBAR. SEE S-505
14. SALVAGE AND REINSTALL PORT SECURITY BOOM ANCHORAGE, 6'x6'-4"x3'± CONCRETE BASE, 20" W12x40 BEAM, 10 TON CONCRETE SINKER AND ACCESSORIES. SEE NOTE 5
15. REMOVE AND DISPOSE OF 12'x6'x2'± THICK CONCRETE SLAB
16. REMOVE AND DISPOSE OF 18'x18'x2'± THICK CONCRETE SLAB
17. REMOVE AND DISPOSE OF 15'x18'x1'± THICK DUMPED CONCRETE
18. REMOVE AND DISPOSE OF STEEL PLATES
19. REMOVE AND DISPOSE OF NAVIGATIONAL AID CONSTRUCTED OF 6" STEEL PIPE. SEE DETAIL, THIS SHEET
20. REMOVE AND DISPOSE OF STEEL FLAG POLE
21. REMOVE AND DISPOSE OF CONCRETE ELECTRICAL STATIONS. SEE DETAIL, THIS SHEET, SEE SHEET S-505 FOR REPAIR DETAILS
22. REMOVE AND DISPOSE CONCRETE CLEAT BASE TO ELEVATION 104.6
23. REMOVE AND DISPOSE BURIED REINFORCED CONCRETE EQUIPMENT FOUNDATION, 38'x9'x7'
24. REMOVE AND DISPOSE BURIED REINFORCED CONCRETE SLAB, 38'x5.5'x0.5', AND WALL, 44'x4'x0.5'
25. REMOVE AND DISPOSE BURIED REINFORCED CONCRETE VAULT, FLOOR, 7'x5'x0.5', WALLS, 27'x3.5'x0.5'. REMOVE AND DISPOSE 950 GALLON STEEL LINED CONCRETE LUBRICATING OIL VALUT. SEE REFERENCE DRAWING
26. REMOVE AND DISPOSE 1/2" DIA TIE RODS AND CONCRETE DEADMEN. ASSUME DEADMAN TO BE 3'x8'x10' DEEP

NOTES:

1. THE DEMOLITION BASE PLAN WAS PREPARED USING THE EXISTING SITE SURFACE PLAN, AS PREPARED BY CIVIL CONSULTANTS, AND ADDING SUBSURFACE UTILITIES AS DETERMINED BY BSI ENGINEERING.
2. SEE H-101 AND H-102 FOR HAZARDOUS MATERIAL REMOVAL.
3. SEE V-101 AND V-102 FOR LEGEND AND ABBREVIATIONS.
4. SEE CD103, CD104, MD101, MD102, ED101 AND ED102 FOR UTILITY REMOVALS.
5. SECURITY BOOM ANCHORAGE REMOVAL TO BE COORDINATED WITH SHIPYARD. PROVIDE TEMPORARY ANCHORAGE DURING CONSTRUCTION. REINSTALL AS SHOWN ON S-503.
6. MOORING RINGS SHALL BE CUT FLUSH WITH THE TOP OF COPING.
7. ANCHOR BOLTS FOR CLEATS TO REMAIN.

LEGEND:

EXISTING FEATURES SHOWN THUS

FEATURES TO BE PROVIDED UNDER THIS CONTRACT SHOWN THIS

AREA OF DEMOLITION

GRAPHIC SCALE

REVISION	DATE	BY
AS-BUILT COMMENTS	8/19/14	DWH
CONFORMED SET	12/7/12	DWH
AMENDMENT 0002	8/1/12	DWH

NAVFAC

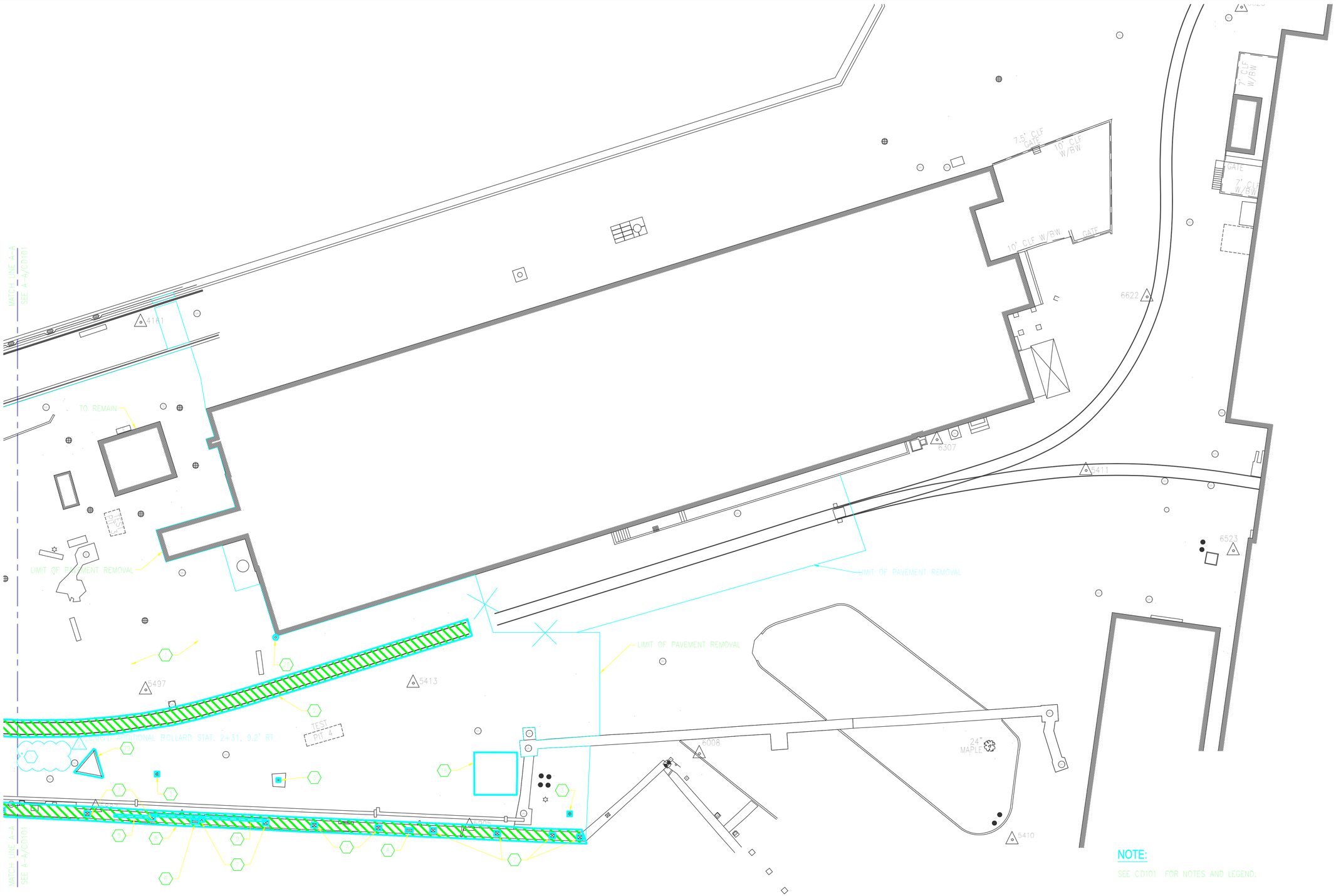
NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
PORTSMOUTH NAVAL SHIPYARD KITTERY, MAINE

STRUCTURAL STABILIZATION AND REPAIRS TO BERTHS 1, 2A AND 2B

DEMOLITION PLAN – SURFACE FEATURES SHEET 1 OF 2

DRAWN BY: WWRG
PROJECT NO.: 1121079
CONTR. CONTR. NO.: N40085-12-C-1736
NAVFAC DRAWING NO.: 12621698
SHEET 10 OF 24

CD101 | FP1-12-030



NOTE:

SEE CD101 FOR NOTES AND LEGEND.

PLAN

SCALE: 1" = 20'

PLAN NORTH

GRAPHIC SCALE

1"=20' 0 20 40 FT.

AS-BUILT COMMENTS 8/19/14 –
CONFORMED SET 12/7/12 DWH

NAVFAC

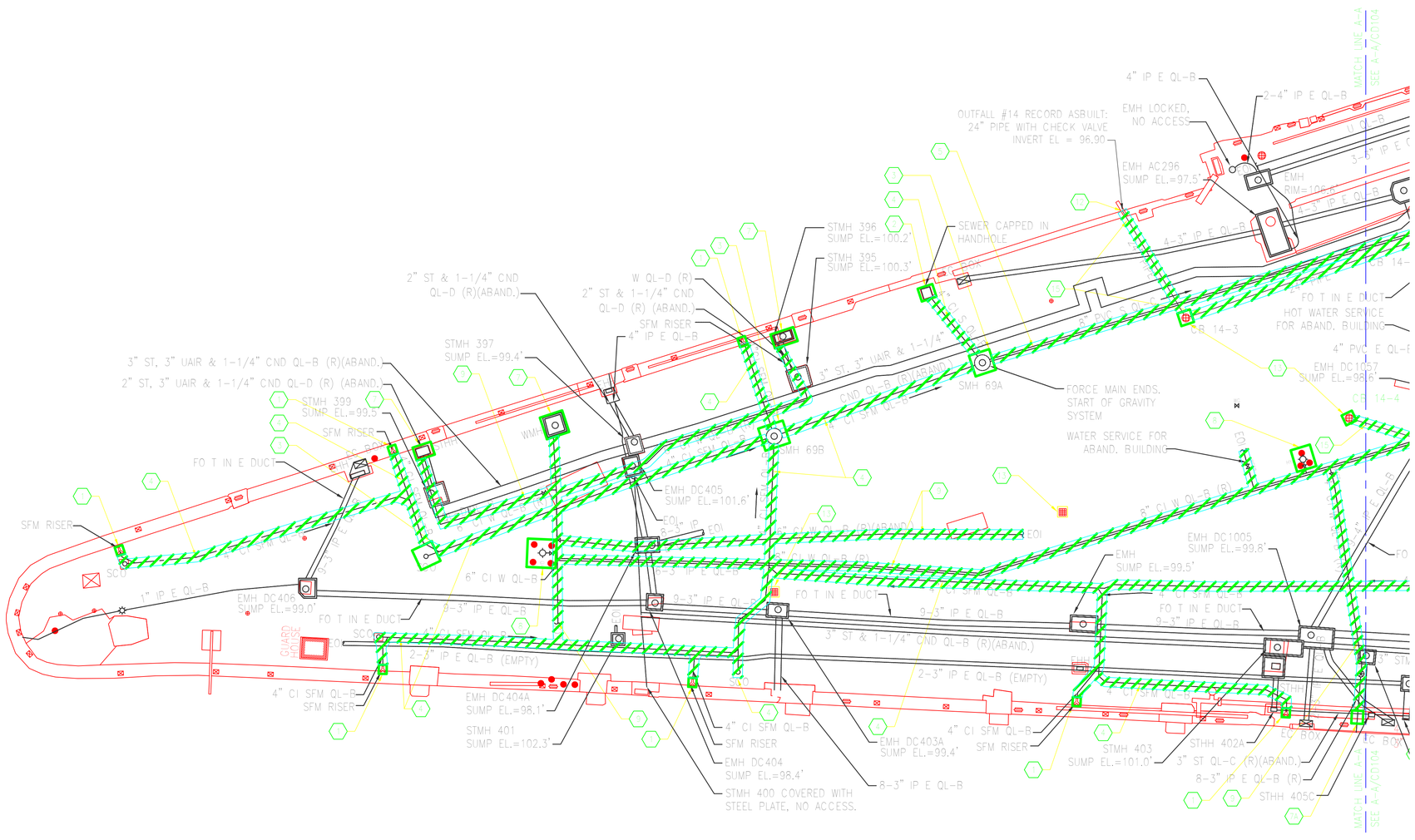
PREPARED BY THE NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
PUBLIC WORKS DEPARTMENT NAVAL SHIPYARD KITTERY, MAINE

STRUCTURAL STABILIZATION AND REPAIRS TO BERTHS 1, 2A AND 2B

DEMOLITION PLAN – SURFACE FEATURES SHEET 2 OF 2

MAXIMS No.: WNRC9
PROJECT NO.: 1121079
CONSTR. CONTR. NO.: N40085-12-C-1736
NAVFAC DRAWING NO.: 12621699
SHEET 2 OF 2

CD102 | FP1-12-031



PLAN

SCALE: 1" = 20'

PLAN NORTH

LEGEND:

EXISTING FEATURES SHOWN THUS

FEATURES TO BE PROVIDED UNDER THIS CONTRACT SHOWN THIS

EXISTING FEATURES TO BE DEMOLISHED

SANITARY SEWER SYSTEM DEMOLITION NOTES:

1. REMOVE AND DISPOSE OF SANITARY SEWER SHORE CONNECTION IN A SIAMESE CONFIGURATION APPROXIMATELY 30" ABOVE GRADE OF 4" DUCTILE IRON PIPE WITH FLANGED CONNECTIONS WITH 2 PLUG VALVES AND 2 KAMLOK FITTINGS.
2. REMOVE AND DISPOSE SANITARY SEWER HAND HOLE OF REINFORCED CONCRETE WITH INTERIOR DIMENSIONS OF APPROXIMATELY 3 FT x 3 FT x 3 FT.
3. REMOVE AND DISPOSE OF SANITARY SEWER MANHOLE OF REINFORCED CONCRETE 4 FT TO 5 FT DIAMETER, AND APPROXIMATELY 5.5 FT TO 7 FT TO INVERT OF FLOW.
4. REMOVE AND DISPOSE OF SANITARY SEWER FORCE MAIN & CLEAN OUTS
5. REMOVE AND DISPOSE OF SANITARY SEWER GRAVITY MAIN
6. SEE C-104 FOR NEW SANITARY SEWER SYSTEM CONNECTION

WATER SYSTEM DEMOLITION NOTES:

1. REMOVE AND DISPOSE OF WATER SHORE CONNECTION OF 2 1/2" COPPER PIPE AND VALVE IN A 4 SIDED STEEL ENCLOSURE APPROXIMATELY 50"x20"x14" HIGH, t=3/16" WITH STEEL HINGED COVER OR IN A MANHOLE OF REINFORCED CONCRETE WITH INTERIOR DIMENSIONS OF APPROXIMATELY 5 FT x 5 FT x 5 FT DEEP WITH FRAME AND COVER.
2. REMOVE AND DISPOSE OF WATER SHORE CONNECTION APPROXIMATELY 30" ABOVE GRADE OF 4" CAST IRON PIPE WITH 4" THREADED CONNECTION AND CAP.
3. REMOVE AND DISPOSE OF FIRE HYDRANT AND STEEL GUARD POSTS 6"Ø x 48" HIGH WITH CONCRETE FILL SET IN CONCRETE FOUNDATION APPROXIMATELY 4 FT x 4 FT x 4 FT.
4. REMOVE AND DISPOSE OF WATER MAIN APPROXIMATE DEPTH OF COVER IS 5 FT TO 6.5 FT.
5. SEE C-105 FOR NEW WATER SYSTEM CONNECTIONS
6. CUT AND CAP WATER LINE

DRAINAGE SYSTEM DEMOLITION NOTES:

1. REMOVE AND DISPOSE OF 30"Ø x 45"± LONG DUCKBILL ELASTOMERIC CHECK VALVE.
2. REMOVE AND DISPOSE OF REINFORCED CONCRETE DRAIN MANHOLE WITH FRAME AND COVER OR REINFORCED CONCRETE CATCH BASIN WITH FRAME AND GRATE.
3. EXISTING REINFORCED CONCRETE DRAIN MANHOLE WITH FRAME AND COVER TO REMAIN. RESTORE MANHOLE WALLS AND MAKE WATERTIGHT AT FORMER PIPE OPENING SEE C-103 FOR DRAINAGE SYSTEM CONNECTIONS.
4. REMOVE AND DISPOSE OF DRAIN LINES
5. EXISTING REINFORCED CONCRETE CATCH BASIN WITH FRAME AND GRATE TO REMAIN. RESTORE WALLS AND MAKE WATERTIGHT AT FORMER PIPE OPENING SEE C-103 FOR DRAINAGE SYSTEM CONNECTIONS.

NOTES:

1. SEE V-101 AND V-102 FOR EXISTING SITE SURFACE PLANS, LEGEND, ABBREVIATION AND NOTES.
2. SEE V-103 AND V-104 FOR EXISTING SITE UTILITIES PLANS LEGEND AND NOTES AND R-001 AND R-002.
3. PROVIDE COMPLETE REMOVAL OF; SANITARY SEWER, WATER AND DRAINAGE SYSTEMS AND INCIDENTAL WORK. COORDINATE PROVISION OF NEW WORK.
4. OUTFALLS 13 & 14 CONVEY STORMWATER FROM CONTRIBUTORY AREAS WITHIN AND OUTSIDE OF THE LIMIT OF WORK. MAINTAIN AND MANAGE ALL OUTFALL FLOWS THROUGHOUT ALL PHASES OF THE WORK.

GRAPHIC SCALE

1"=20' 0 20 40 FT.

CONFORMED SET 12/7/12 DPA

NAVFAC

NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC

PORTSMOUTH NAVAL SHIPYARD KITTERY, MAINE

STRUCTURAL STABILIZATION AND REPAIRS TO BERTHS 1, 2A AND 2B

DEMOLITION PLAN – WATER, SEWER AND DRAINS SHEET 1 OF 2

DRAWN BY: DPA CHK: CHG APP: DWT

DESIGN MANAGER

PROJ. ENGINEER

CIVIL PROTECTION

DRAWING NO. WNRC9

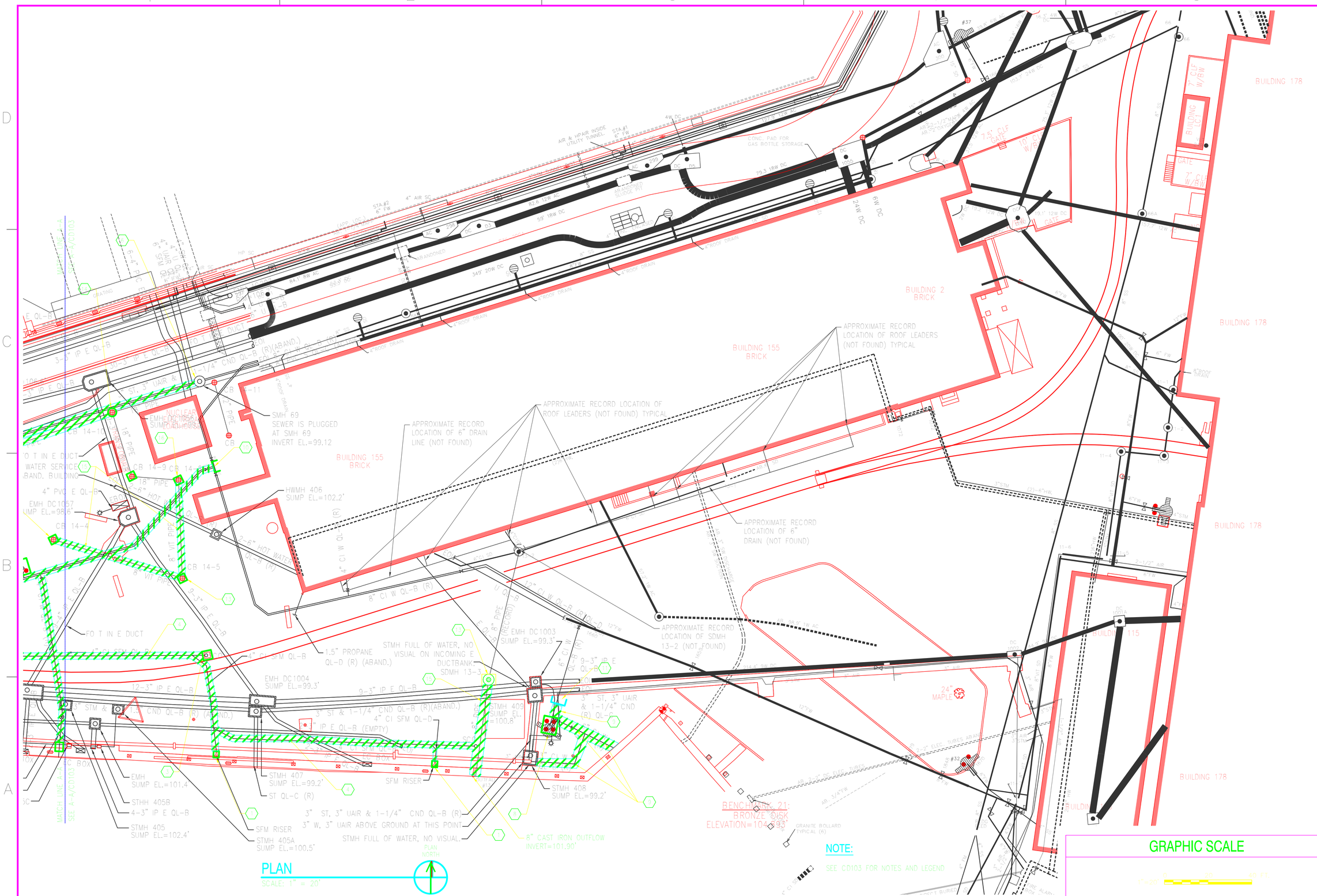
SUBPROJECT NO. 1121075

CONSTR. CONTR. NO. N40085-12-C-1736

NAVFAC DRAWING NO. 12621700

SHEET 12 OF 75

CD103 FP1-12-032



CONFORMED SET 12/7/12 DPA

NAVFAC

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AS COMMITTED WORK

DESIGNED BY: DPA
DWN: DPA
CHK: CRG
SUP: TMV
BRANCH MANAGER
PROJ ENGINEER

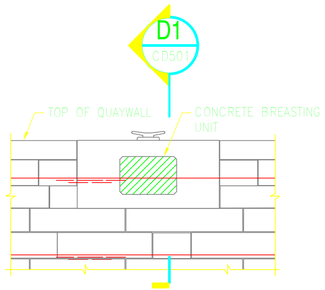
PREPARED FOR: NAVAL FACILITIES ENGINEERING COMMAND ~ MID-ATLANTIC
PREPARED BY: PORTSMOUTH NAVAL SHIPYARD
PUBLIC WORKS DEPARTMENT, PUBLIC WORKS DIVISION, KITTERY, MAINE

STRUCTURAL STABILIZATION AND REPAIRS TO BERTHS 1, 2A AND 2B

DEMOLITION PLAN – WATER, SEWER AND DRAINS, SHEET 2 OF 2

CONTRD NO. WHRS 9
PROJECT NO. 1121079
CONSTR. CONTR. NO. N40085-12-C-1736
NAVFAC DRAWING NO. 12621701
SHEET 33 OF 94

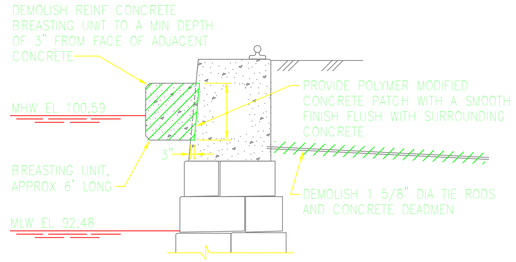
CD104 | FP1-12-033



NOTE: DEMOLISH 5 BREASTING UNITS AS SHOWN. SEE CD101 FOR LOCATIONS

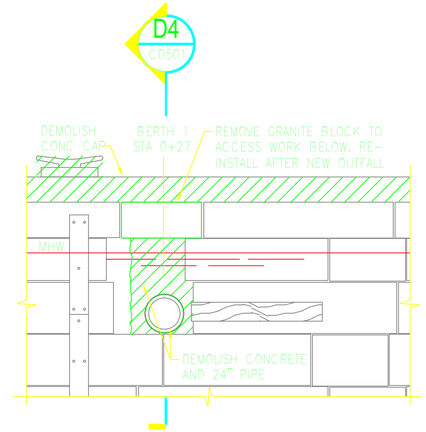
QUAYWALL ELEVATION

SCALE: 1/8"=1'-0"



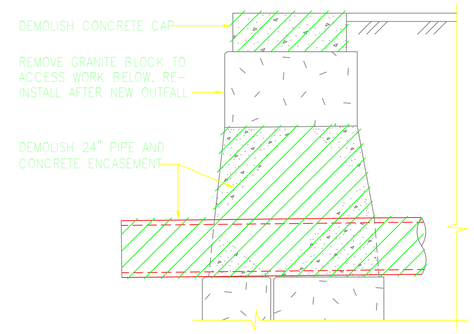
SECTION D1

SCALE: 3/16"=1'-0" CD501



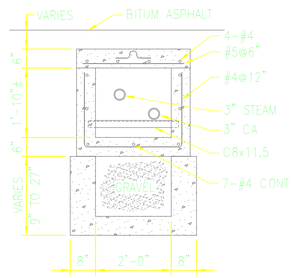
QUAYWALL ELEVATION

SCALE: 1/4"=1'-0"



SECTION D4

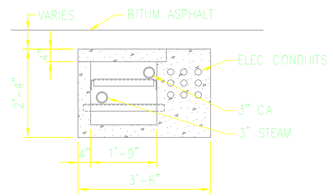
SCALE: 3/8"=1'-0" CD501



MH 387 TO MH 394

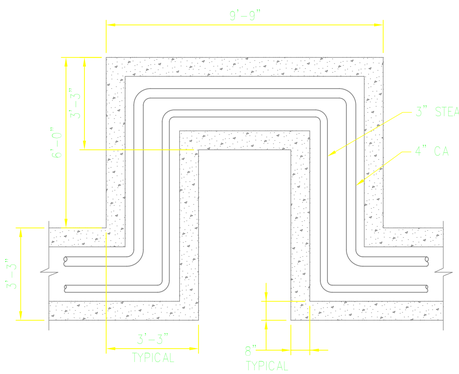
SECTION - BERTH 1 STEAM TRENCH

SCALE: 1/2"=1'-0"



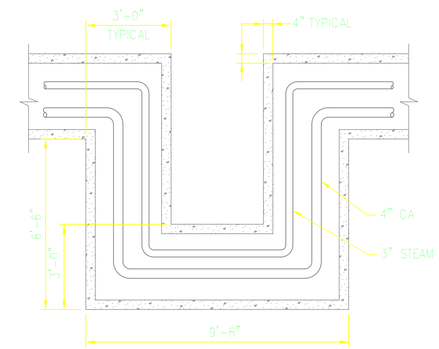
SECTION
BERTH 2 STEAM TRENCH/DUCT BANK

SCALE: 1/2"=1'-0"



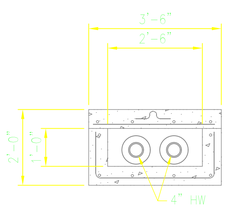
PLAN - BERTH 1 EXPANSION LOOP CHAMBER

SCALE: 3/8"=1'-0"



PLAN - BERTH 2 EXPANSION LOOP CHAMBER

SCALE: 3/8"=1'-0"



SECTION - HOT WATER TRENCH

SCALE: 1/2"=1'-0"

GRAPHIC SCALE

1/8"=1' 0 8 16 FT.
3/16"=1' 0 5 10 FT.
1/2"=1' 0 2 4 FT.
1/4" = 1'-0" 0 2" 4" 8"
3/8" = 1'-0" 0 4" 8" 1' 6"

CONFORMED SET 12/7/12 DWH

NAVFAC

.\Images\Harvis.jpg

AFE NO.

CONTRACT

AS COMMENCE WORK

DATE

OPERATION OF: DATE

DES: MN DRN: RWI CHK: MS

DATE

BRANCH MANAGER

CHIEF ENG/ARCH

DES APPROVED

PREPARED IN THE NAVY NAVAL FACILITIES ENGINEERING COMMAND ~ MID-ATLANTIC PUBLIC WORKS DEPARTMENT NAVAL SHIPYARD, PORTSMOUTH, ME

PORTSMOUTH NAVAL SHIPYARD KITTERY, MAINE

STRUCTURAL STABILIZATION AND REPAIRS TO BERTHS 1, 2A AND 2B

DEMOLITION DETAILS

DRAWING NO. WHBC-9

PROJECT NO. 1121079

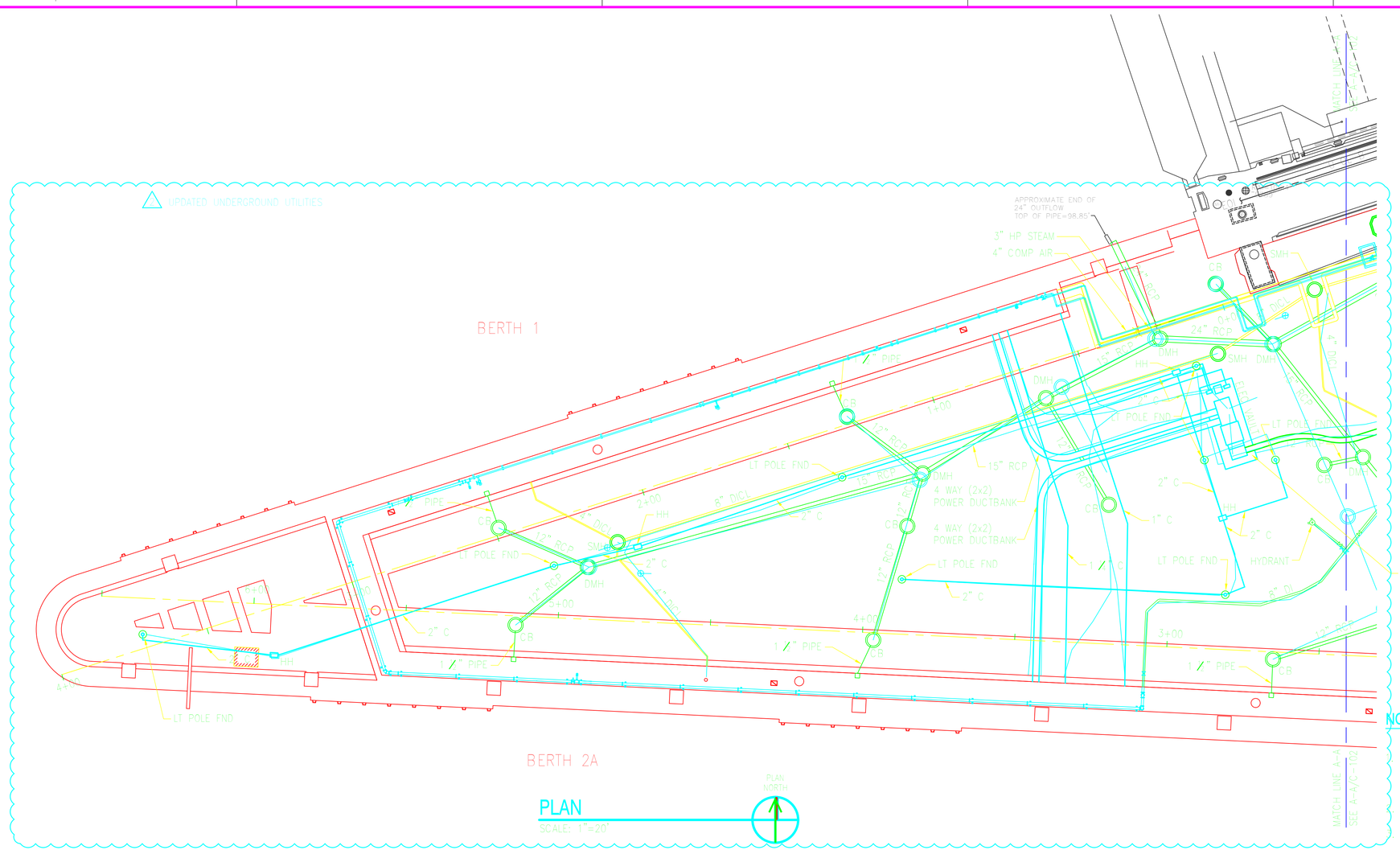
CONSTR. CONTR. NO. N40085-12-C-1736

NAVFAC DRAWING NO. 12621702

SHEET 34 OF 94

CD501 FP1-12-034

FILE NAME: $(++)



PLAN

SCALE: 1"=20'

NOTES

THIS PLAN OF BELOW GRADE UTILITIES WAS DEVELOPED FROM PROJECT UTILITY PLANS. UTILITIES IN TUNNEL NOT SHOWN.

SEE G-102 & G-103 FOR LAYOUT PLANS

SEE C-103 GRADING AND DRAINAGE PLAN

4. SEE C-104 SANITARY SEWER PLAN AND PROFILE
5. SEE C-105 WATER PLAN
6. SEE S-103 RELIEVING PLATFORM AND TUNNEL PLAN
7. SEE M-101 COMPRESSED AIR PLAN SHEET 1 OF 2
8. SEE M-103 HIGH PRESSURE STEAM PLAN SHEET 1 OF 2
9. SEE E-101 ELECTRICAL SITE PLAN SHEET 1 OF 2

LEGEND:

EXISTING FEATURES SHOWN THUS

FEATURES TO BE PROVIDED UNDER THIS CONTRACT SHOWN THIS

GRAPHIC SCALE

1" = 20' 0 10' 20' 40'

AS-BUILT COMMENTS 9/11/14 –
CONFORMED SET 12/7/12 DPA

NAVFAC

APPROVED
CAPT COMMANDER NAVFAC
DATE:
CONTRACTOR'S REP.
DATE: — DRW. JSR CHK. DPA
PE/PM
BRANCH MANAGER
CHIEF ENGINEER
CIV. PROTECTION

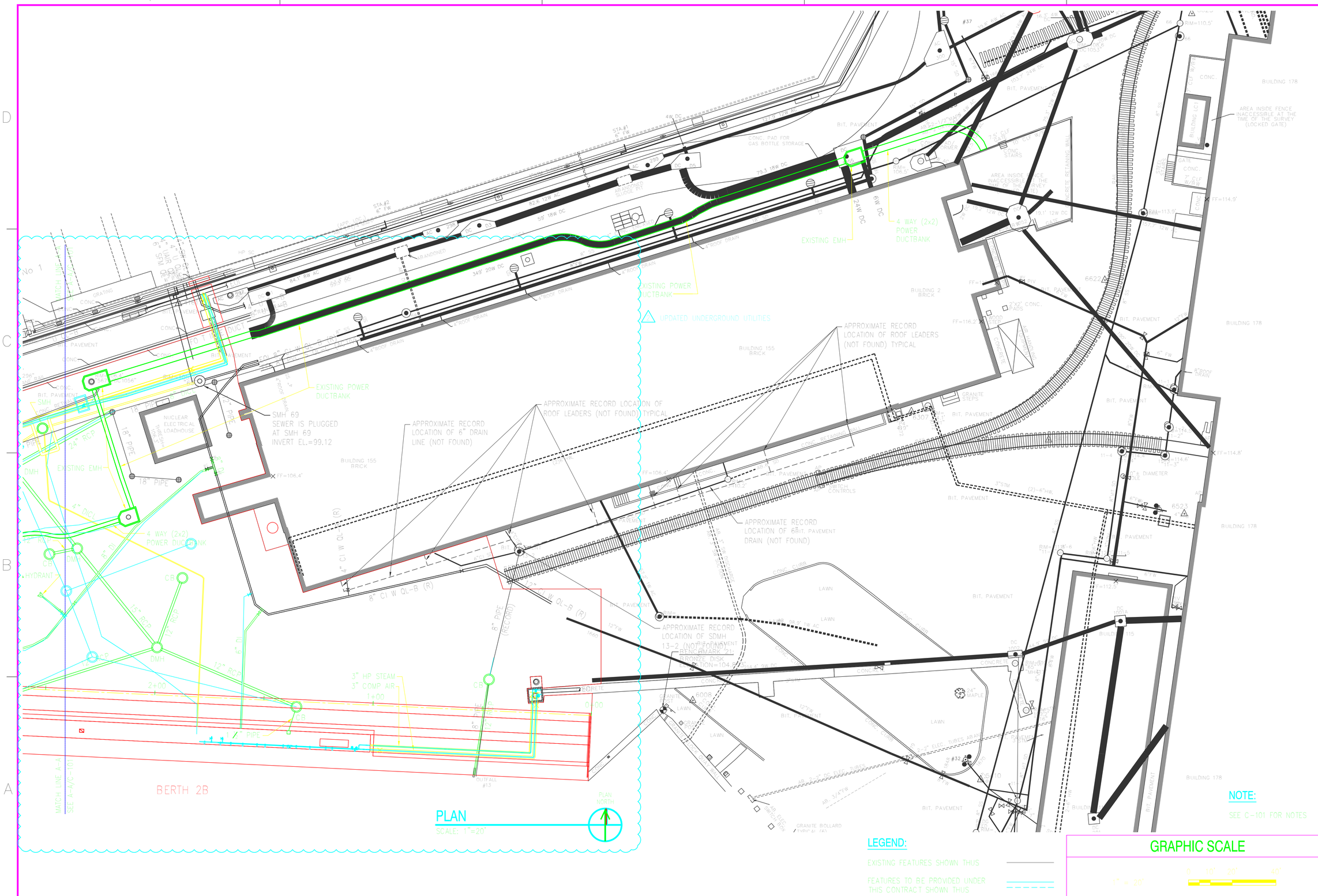
PREPARED BY AND FOR THE USE OF THE NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
PUBLIC WORKS TERRITORY MANAGER SUPPORT PORTSMOUTH NAVAL SHIPYARD KITTERY, MAINE

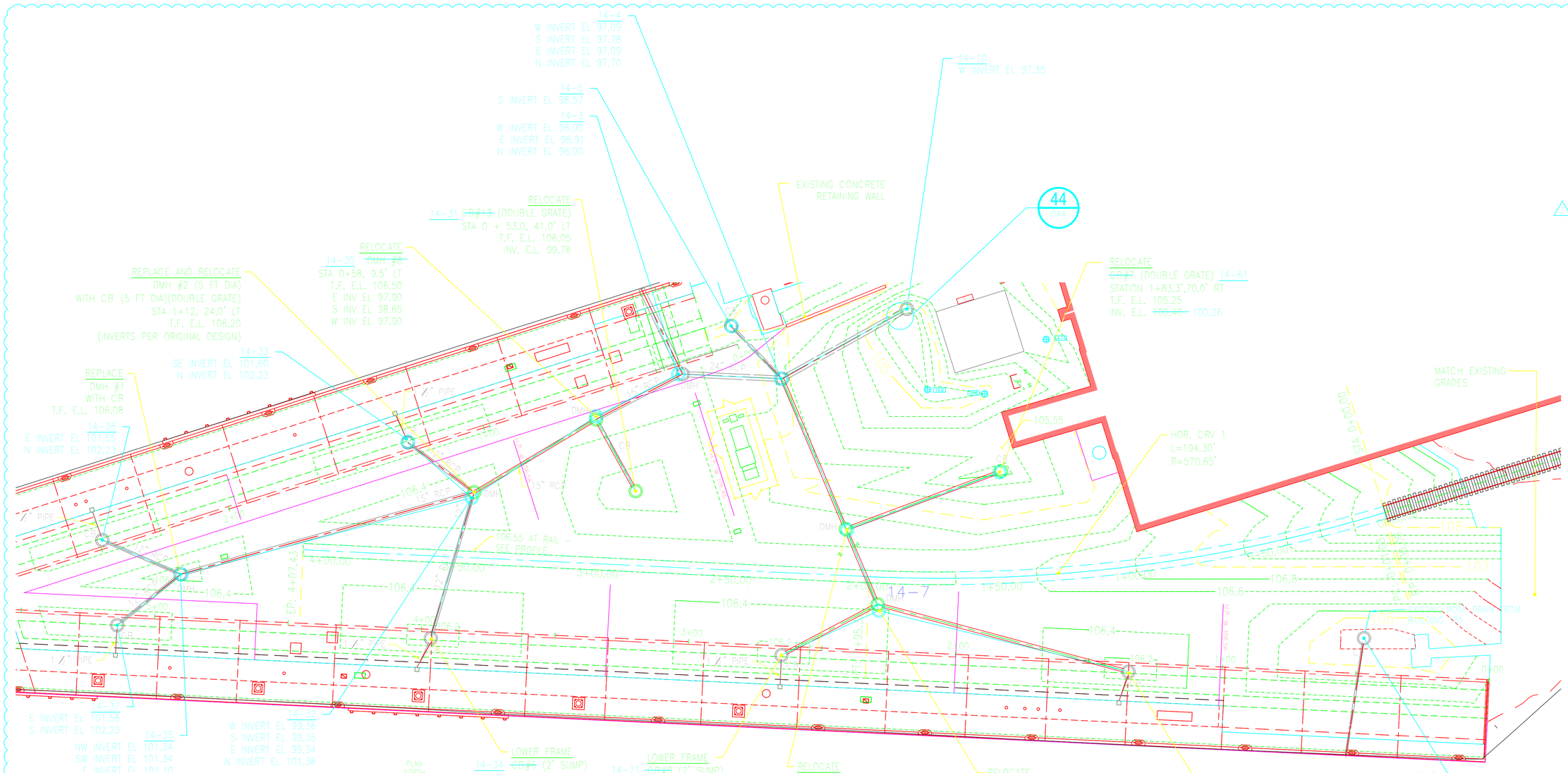
STRUCTURAL STABILIZATION AND REPAIRS TO BERTHS 1, 2A AND 2B

BELOW GRADE PLAN SHEET 1 OF 2

DRAWING NO. W96C09
CONTRACT NO. 1121079
CONSTR. CONTR. NO. N40085-12-C-1736
NAVFAC DRAWING NO. 1262.1703
SHEET 15 OF 34

C-101 FP1-12-035


PLAN
SCALE: 1"=20'
PLAN NORTH
BERTH 2B
MATCH LINE A-A
SEE A-A/C-101
EXISTING POWER DUCTBANK
UPDATED UNDERGROUND UTILITIES
SMH 69
SEWER IS PLUGGED
AT SMH 69
INVERT EL.=99.12
APPROXIMATE RECORD LOCATION OF 6" DRAIN LINE (NOT FOUND)
APPROXIMATE RECORD LOCATION OF ROOF LEADERS (NOT FOUND) TYPICAL
APPROXIMATE RECORD LOCATION OF BIT. PAVEMENT DRAIN (NOT FOUND)
APPROXIMATE RECORD LOCATION OF SDMH 13-2 (NOT FOUND)
BENCHMARK 21:
BRONZE DISK
ELEVATION=104.27
4 WAY (2x2) POWER DUCTBANK
EXISTING EMH
NUCLEAR ELECTRICAL LOADHOUSE
BUILDING 155 BRICK
BUILDING 2 BRICK
BUILDING 178
BIT. PAVEMENT
CONC. PAD FOR GAS BOTTLE STORAGE
AREA INSIDE FENCE INACCESSIBLE AT THE TIME OF THE SURVEY (LOCKED GATE)
3" HP STEAM
3" COMP AIR
8" CI W QL-B (R)
8" PIPE (RECORD)
OUTFALL #13
GRANITE BOLLARD
GRANITE STEPS
LAWN
NOTE:
SEE C-101 FOR NOTES
LEGEND:
EXISTING FEATURES SHOWN THUS
FEATURES TO BE PROVIDED UNDER THIS CONTRACT SHOWN THUS
GRAPHIC SCALE
1" = 20'
0 10' 20' 40'
AS-BUILT COMMENTS
CONFORMED SET
9/11/14
12/7/12
NAVFAC
NAVAL FACILITIES ENGINEERING COMMAND ~ MID-ATLANTIC
PORTSMOUTH NAVAL SHIPYARD
KITTERY, MAINE
STRUCTURAL STABILIZATION AND REPAIRS TO BERTHS 1, 2A AND 2B
BELOW GRADE PLAN SHEET 2 OF 2
DRAWN BY: WRR/DS
CONTRACT NO. 1121D79
OWNER COMB. NO. N40085-12-C-1736
NAVFAC DRAWING NO. 1262-704
SHEET 16 OF 25
C-102 FP1-12-036



ADDITION TRACKAGE LAYOUT - PLAN

SCALE: 1"=20'

GENERAL NOTES:

1. THE HEREIN DEPICTED GRADING AND DRAINAGE CONSTRUCTION REQUIREMENTS INCLUDE ONLY THOSE CHANGES TO DRAWING C-103 OF THE CONFORMED SET DATED 12/7/12 AS A RESULT OF EXTENDING THE RAIL ALONG BERTH 2.
2. DELETE THE FOLLOWING DRAINAGE STRUCTURES AND PIPING:
   A. CB #5
   B. CB #10, TOGETHER WITH ASSOCIATED 34 L.F. OF 12" RCP OUTLET PIPE.

GRAPHIC SCALE

1" = 20' 0 10' 20' 40'

AS-BUILT COMMENTS 9/4/14

NAVFAC

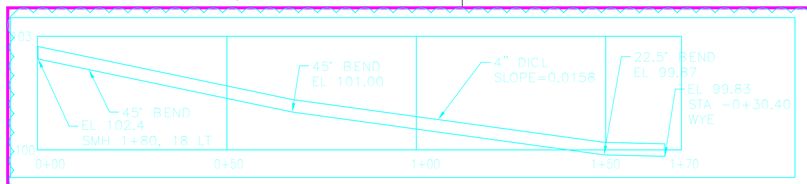
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND ~ MID-ATLANTIC
NAVAL FACILITIES ENGINEERING COMMAND, WASHINGTON
PORTSMOUTH NAVAL SHIPYARD KITTERY, MAINE

STRUCTURAL STABILIZATION AND REPAIRS TO BERTHS 1, 2A AND 2B

GRADING AND DRAINAGE PLAN

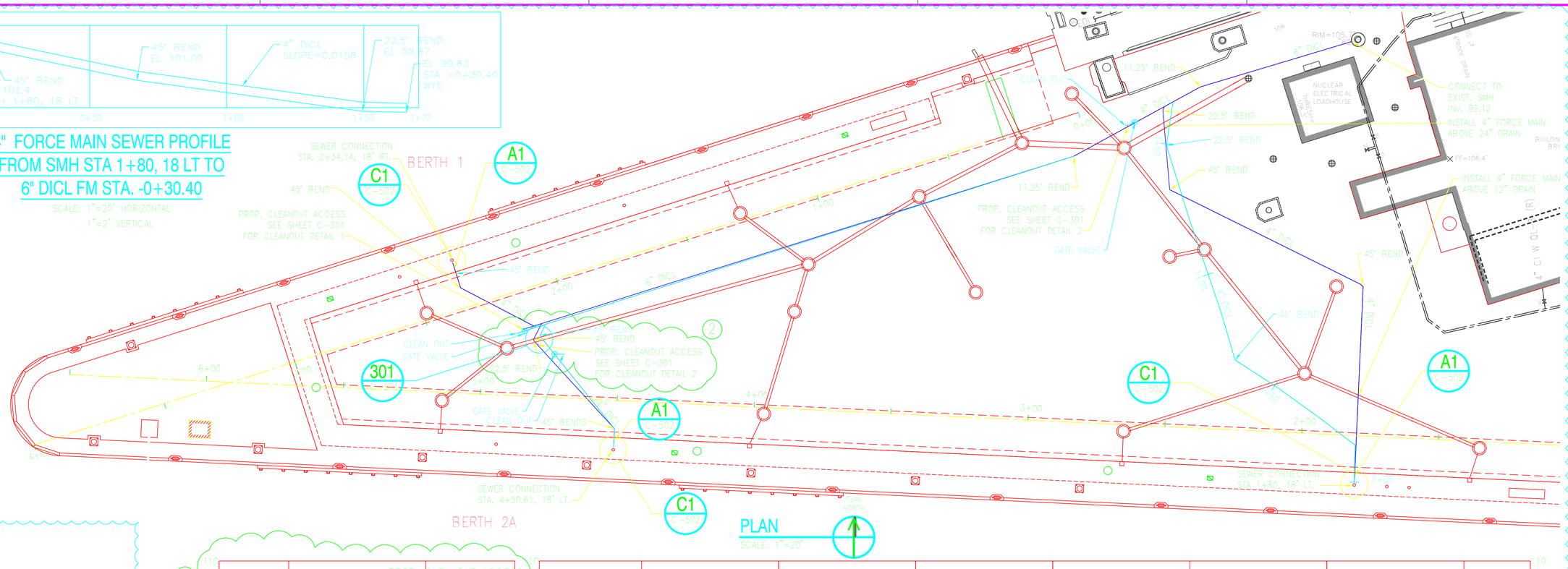
MASTER NO. WNRC 9
PROJECT NO. 1121079
CONTR. COVER NO. N40085-12-C-1736
NAVFAC DRAWING NO. 12621705
SHEET 17 OF 56 - 04

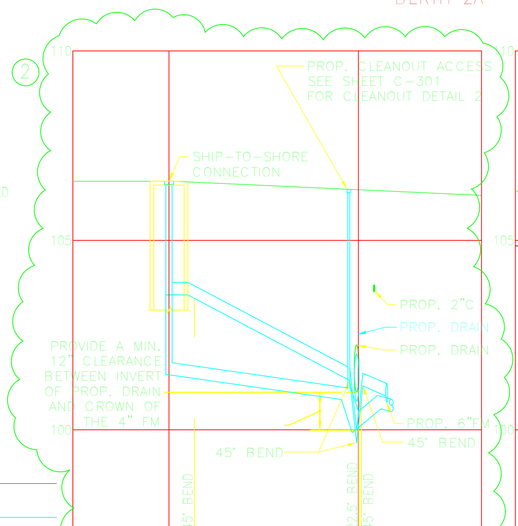
C103 | FP1-12-037



4" FORCE MAIN SEWER PROFILE FROM SMH STA 1+80, 18 LT TO 6" DICL FM STA. -0+30.40

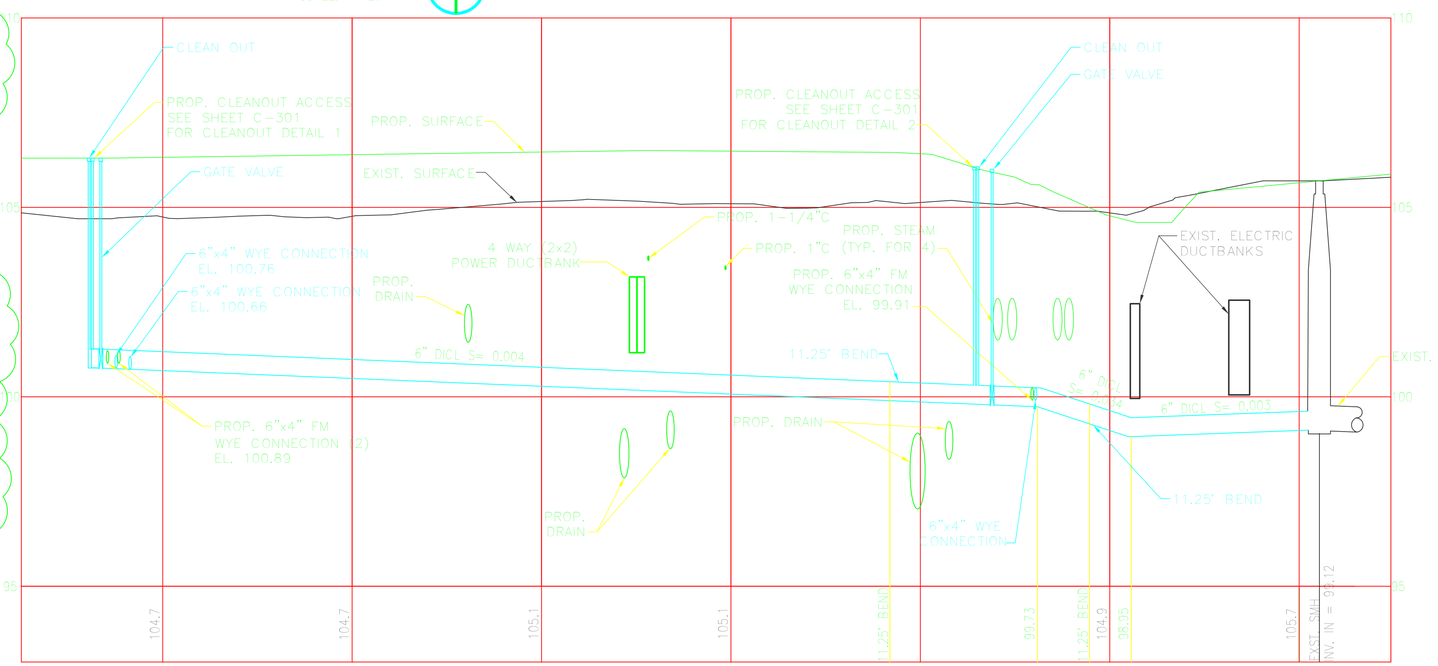
SCALE: 1"=20' HORIZONTAL
1"=2' VERTICAL





4" FM CONNECTION TO 6" FM PROFILE AT STA. 2+12

SCALE: 1"=20' HORIZONTAL
1"=2' VERTICAL



ABBREVIATIONS:

C	CONDUIT
DICL	DUCTILE IRON CEMENT LINED
EL	ELEVATION
EXIST	EXISTING
FM	FORCE MAIN
INV	INVERT
LT	LEFT
PROP	PROPOSED
RT	RIGHT
SMH	SEWER MANHOLE
STA	STATION
TF	TOP OF FRAME
TYP	TYPICAL

LEGEND:

EXISTING FEATURES SHOWN THUS

FEATURES TO BE PROVIDED UNDER THIS CONTRACT SHOWN THUS

NOTES:

1. CONSTRUCT 4" FORCE MAINS TO MAINTAIN DOWNWARD SLOPE FROM CONNECTIONS ABOVE THE UTILITY TRENCH TO POINT OF CONNECTION AT SEWER MANHOLES.
2. PROVIDE MIN 4' TO 6' COVER OVER 4" FORCE MAINS.
3. SEWER MANHOLE LOCATIONS ARE REFERENCED TO BERTH 1 BASELINE STATIONING.
4. FOR PLAN OF BELOW GRADE UTILITIES SEE C-101 & C-102.

GRAPHIC SCALE
1"=20' 0 20 40 FT.

3	AS BUILT COMMENTS	7/26/14	RES
2	SANITARY SEWER REVISIONS	7/08/14	RES
1	SANITARY SEWER REVISIONS	9/4/13	RES
0	CONFORMED SET	12/7/12	RES

NAVFAC

NAVAL FACILITIES ENGINEERING COMMAND ~ MID-ATLANTIC
PUBLIC WORKS DEPARTMENT NAVAL SHIPYARD PORTSMOUTH

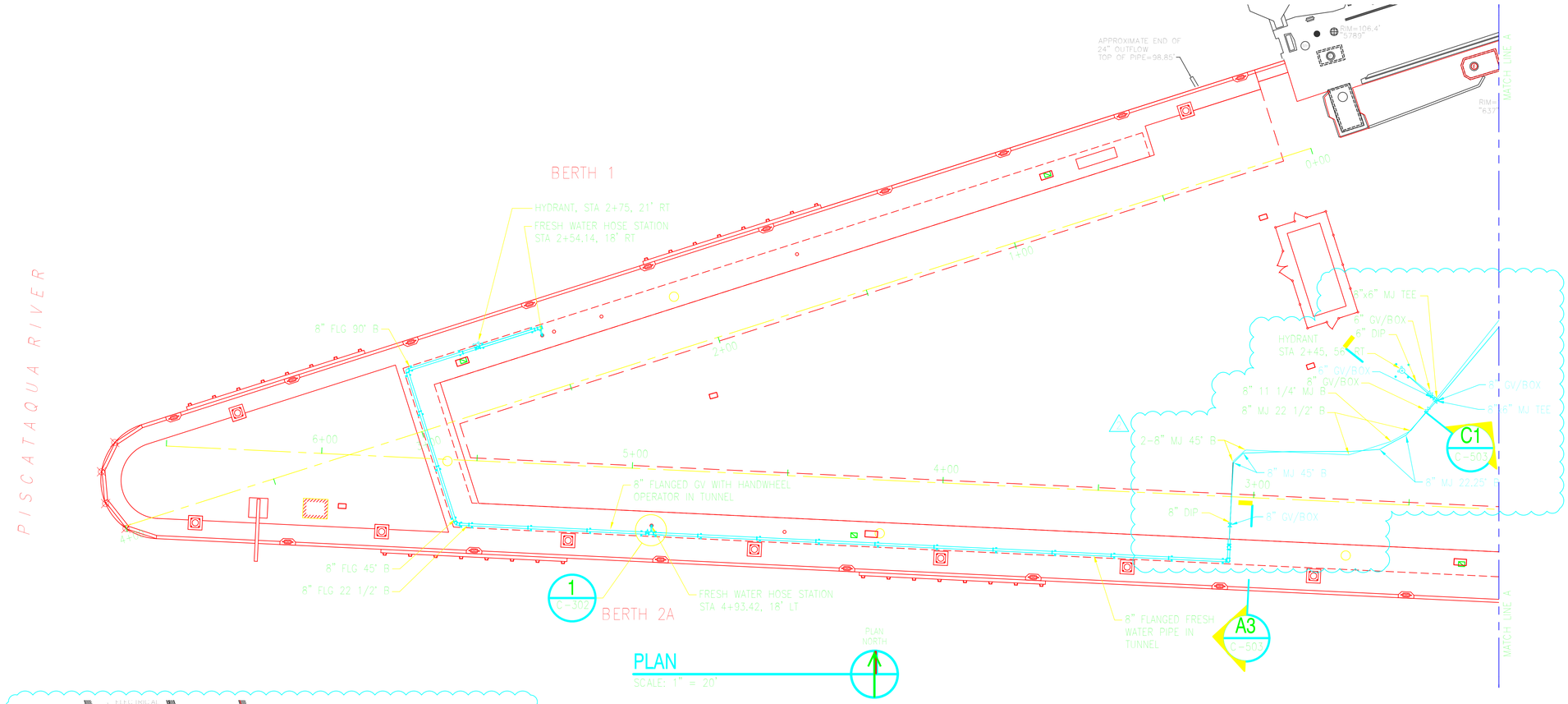
PORTSMOUTH NAVAL SHIPYARD
KITTERY, MAINE

STRUCTURAL STABILIZATION AND REPAIRS TO BERTHS 1, 2A AND 2B

SANITARY SEWER PLAN AND PROFILE

DESIGN BY: WRGD
PROJECT NO. 1121079
CONSTR. CONTR. NO. N40085-12-C-1736
NAVFAC DRAWING NO. 12621706
SHEET 18 OF 34

C-104 FP1-12-038



ABBREVIATIONS:

B	BEND
DI	DUCTILE IRON
DIP	DUCTIL IRON PIPE
FLG	FLANGED
GV	GATE VALVE
LT	LEFT
MJ	MECHANICAL JOINT
RT	RIGHT
STA	STATION

NOTES:

1. THRUST BLOCKS ARE REQUIRED AT ALL TEES, BENDS, VALVES, AND HYDRANTS. SEE SHEET C-503 FOR DETAILS.
2. DI PIPE AND FITTINGS IN TUNNEL SHALL BE FLANGED.

LEGEND:

EXISTING FEATURES SHOWN THUS

FEATURES TO BE PROVIDED UNDER THIS CONTRACT SHOWN THIS

GRAPHIC SCALE

1" = 20' 0 10' 20' 40'

AS-BUILT COMMENTS	8/20/14	JLB
AS BUILT	8/4/14	JLB
CONFORMED SET	12/7/12	JJA

NAVFAC

DESIGN: JJA DRW: RWT CHK: JJA

BRANCH MANAGER

CHIEF ENGINEER

PROTECTION

PROTECTION OF THE ENVIRONMENT

NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC

PUBLIC WORKS TERRITORIAL MANAGER, SHIPYARD PORTSMOUTH, VIRGINIA

PORTSMOUTH NAVAL SHIPYARD KITTERY, MAINE

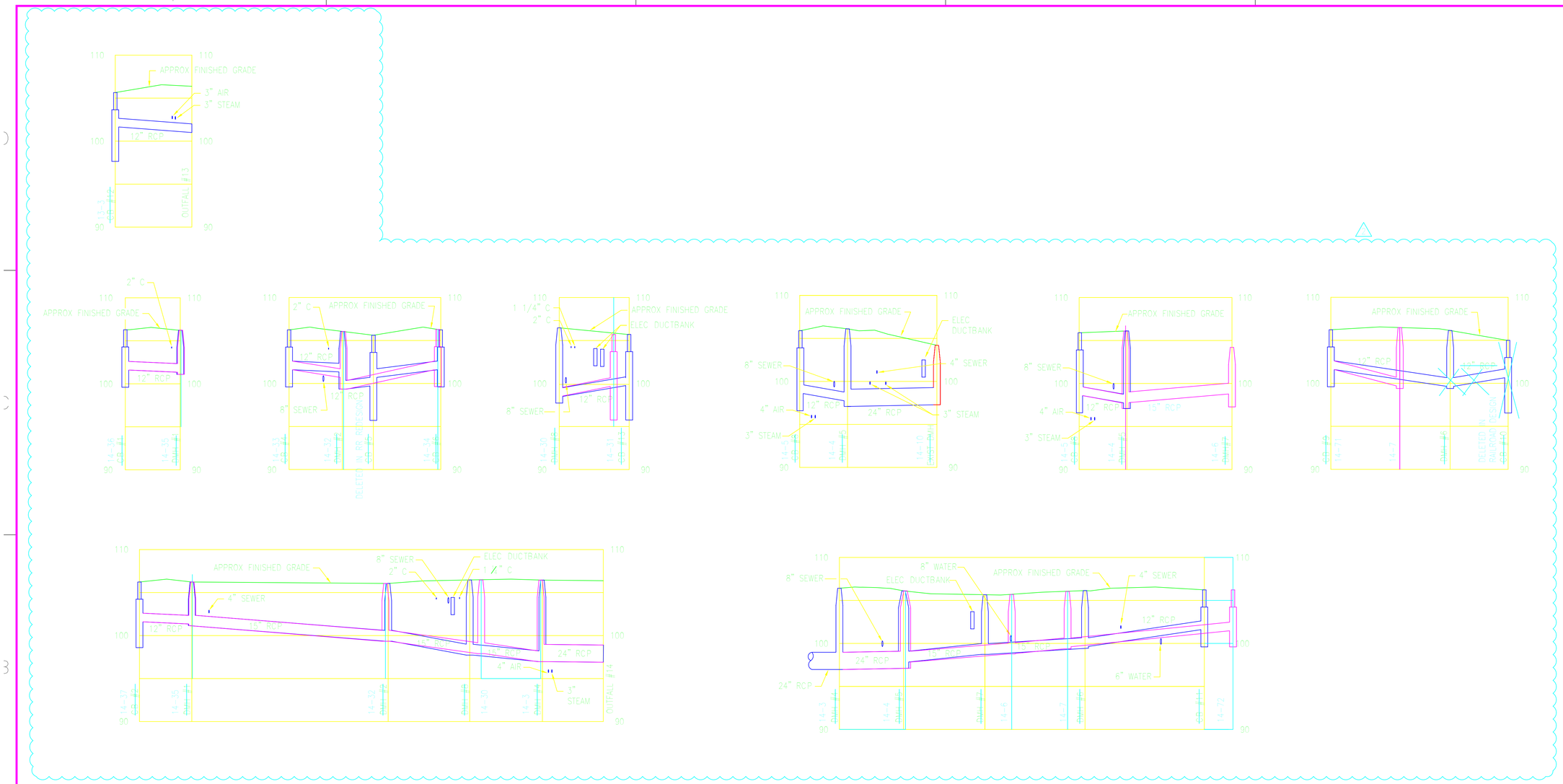
STRUCTURAL STABILIZATION AND REPAIRS TO BERTHS 1, 2A AND 2B

WATER PLAN

CONTRACT NO.	N62583
PROJECT NO.	1121079
CONSTR. CONTR. NO.	N40085-12-C-1736
NAVFAC DRAWING NO.	12621707
SHEET 33 OF 34	

C-105 FP1-12-039

SELECT AND RIGHT CLICK TO LOCK VIEWPORTS



DRAINAGE PROFILES

SCALE: 1"=30' HORIZONTAL
1"=6' VERTICAL

ABBREVIATIONS:

APPROX	APPROXIMATELY
C	CONDUIT
CB	CATCH BASIN
DMH	DRAIN MANHOLE
ELEC	ELECTRIC
RCP	REINFORCED CONCRETE PIPE

NOTE:

1. SEE C-103 FOR GRADING AND DRAINAGE PLAN WITH STRUCTURE LOCATIONS AND PIPE INVERTS. PROFILE DRAWN ALONG CENTERLINE OF PIPE.

GRAPHIC SCALE

HORZ. 1"=30' 0 30 60 FT.
VERT. 1"=6' 0 6 12 FT.

AS-BUILT COMMENTS 2/20/14
CONFORMED SET 12/7/12 DPA

NAVFAC

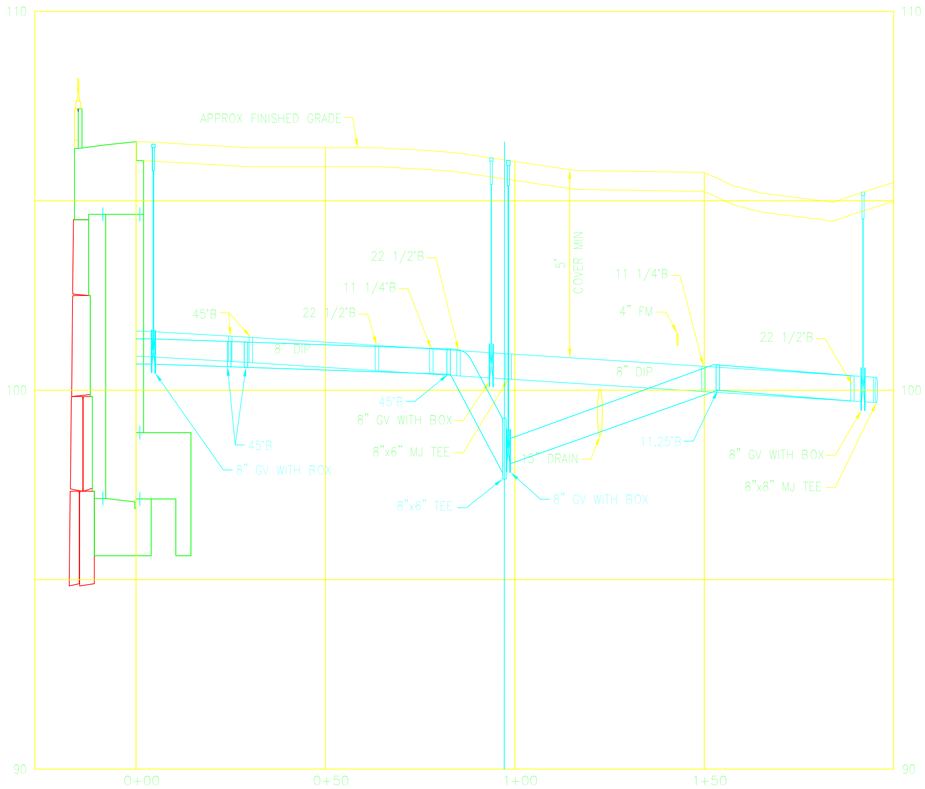
APPROVED
CIVIL ENGINEER NAVY
ACTNG
CONTRACTOR SIGNATURE
DATE JUH DRW WJG CHK DPA
SCALE
PROJ MANAGER
CHIEF DIV DESIGN
CIVIL PROJECT ENG

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
NAVAL ENGINEERING CENTER, LAKEHURST
NAVAL ENGINEERING CENTER, PORTSMOUTH
NAVAL ENGINEERING CENTER, CHESAPEAKE
NAVAL ENGINEERING CENTER, NORFOLK
PORTSMOUTH NAVAL SHIPYARD
KITTERY, MAINE

STRUCTURAL STABILIZATION AND REPAIRS TO BERTHS 1, 2A AND 2B

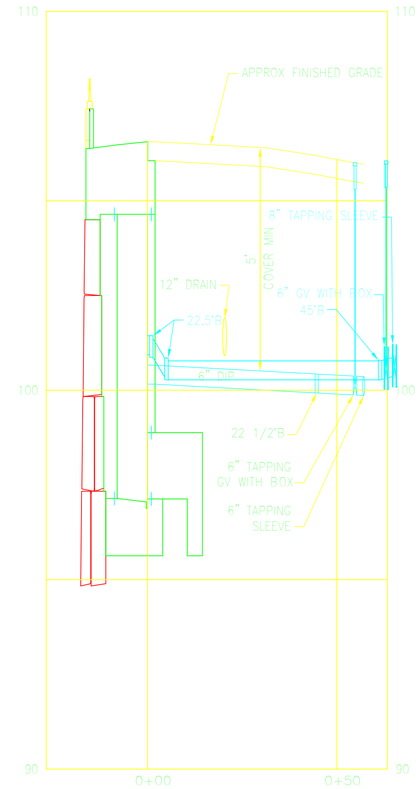
DRAINAGE PROFILES

MAXIMO No: W9B29
EPROJECT NO: 1121079
CONSTR. CONTR. NO: N40085-12-C-1735
NAVFAC DRAWING NO: 12621708
SHEET 22 OF 24



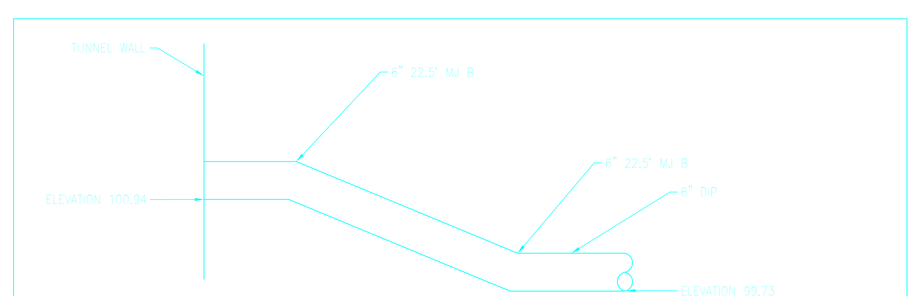
8" WATER PROFILE

SCALE: 1"=20' HORIZONTAL
1"=2' VERTICAL



6" WATER PROFILE

SCALE: 1"=20' HORIZONTAL
1"=2' VERTICAL



202 PIPE ELEVATION DETAIL

202 / C-202

SCALE: 1"=1'

ABBREVIATIONS:

APPROX	APPROXIMATELY
B	BEND
DIP	DUCTILE IRON PIPE
FM	FORCE MAIN
GV	GATE VALVE
MJ	MECHANICAL JOINT

GRAPHIC SCALE

HORZ. 1"=20' 0 10 20 40 FT.
VERT. 1"=2' 0 1 2 4 FT.

4	AS-BUILT COMMENTS CONFORMED SET
3	8/20/14 -
2	12/7/12 - MJA

NAVFAC

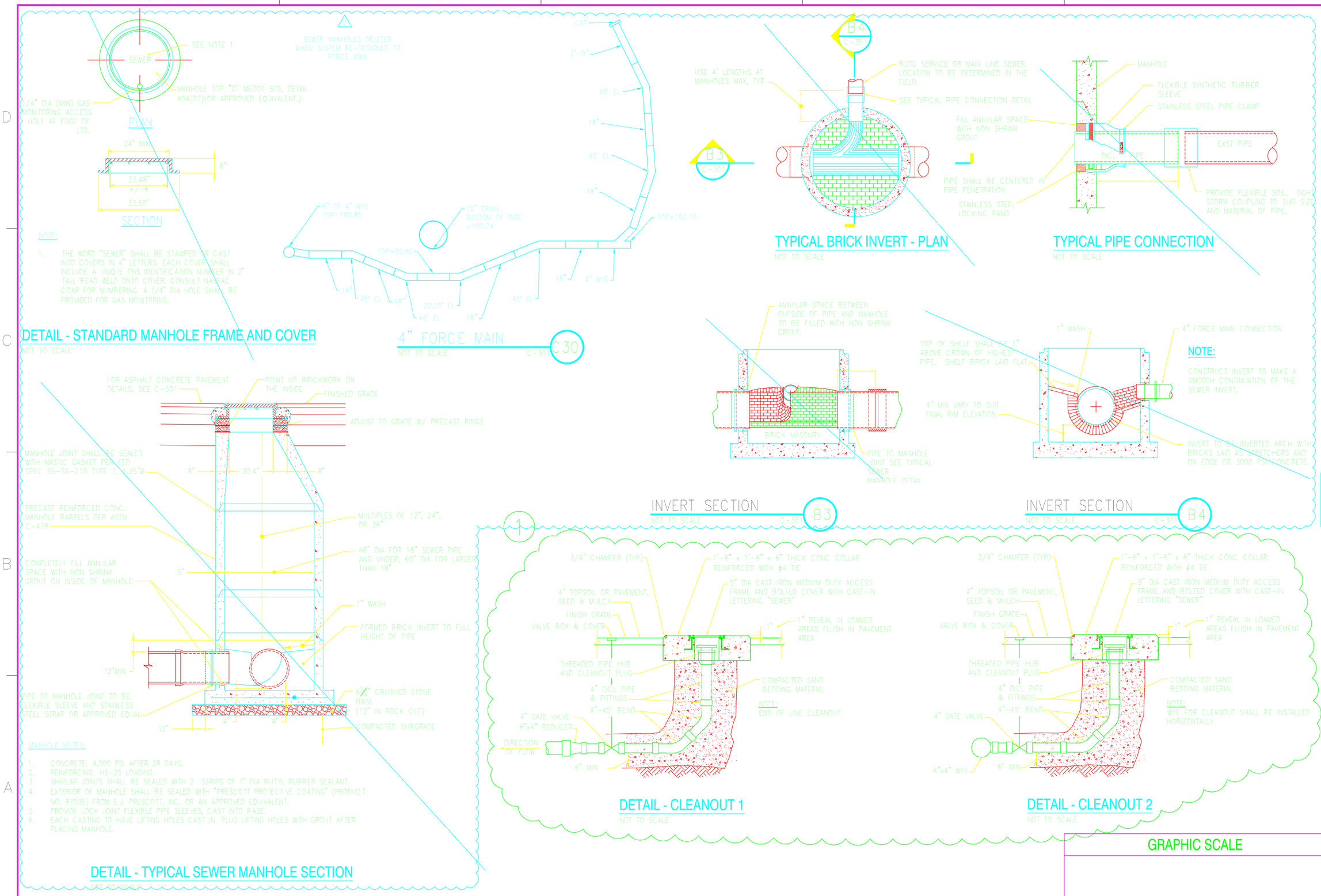
PREPARED IN COOPERATION WITH THE NAVAL FACILITIES ENGINEERING COMMAND ~ MID-ATLANTIC
DIRECTOR, PROG. DEVELOPMENT - MARK WINN, SUPPORT PROGRAMS
KITTERY, MAINE
PORTSMOUTH NAVAL SHIPYARD

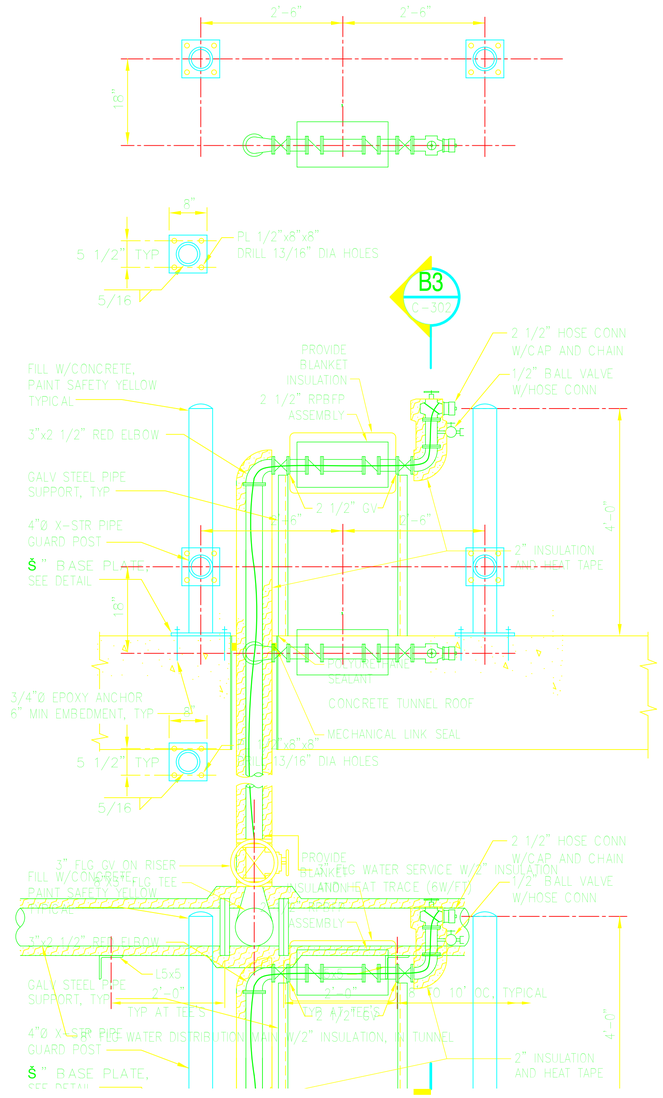
STRUCTURAL STABILIZATION AND REPAIRS TO BERTHS 1, 2A AND 2B

WATER PROFILES

MAXIMO NO.: WNRC9
EPROJECT NO.: 1121075
CONSTR. CONTR. NO.: N40085-12-C-1736
NAVFAC DRAWING NO.: 12621709
SHEET: C-202 OF 34
C-202 | FP1-12-041

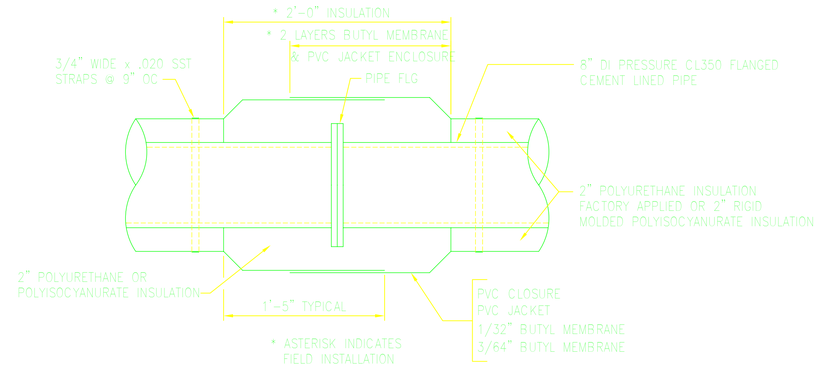
APPROVED
PE COMMANDER NAVFAC
DATE
OPERATIONS DIV.
DATE: JUN | DRW: FLC | CHK: JJA
DIV/DIR
BRANCH MANAGER
CHIEF ENGINEER
FIRE PROTECTION

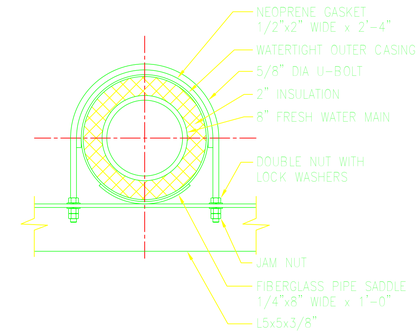

SEE NOTE 1
SEWER
MANHOLE TOP "D" MEDOT STD. DETAIL 604(07)(OR APPROVED EQUIVALENT.)
1/4" DIA (MIN) GAS MONITORING ACCESS HOLE AT EDGE OF LTD.
PLAN
24" MIN
8"
33.48"
+/-6
33.50"
SECTION
NOTE:
1. THE WORD "SEWER" SHALL BE STAMPED OR CAST INTO COVERS IN 4" LETTERS. EACH COVER SHALL INCLUDE A UNIQUE PNS IDENTIFICATION NUMBER IN 2" TALL BEAD WELD ONTO COVER. CONSULT NAVFAC COAR FOR NUMBERING. A 1/4" DIA HOLE SHALL BE PROVIDED FOR GAS MONITORING.
DETAIL - STANDARD MANHOLE FRAME AND COVER
NOT TO SCALE
SEWER MANHOLES DELETED WHEN SYSTEM RE-DESIGNED TO FORCE MAIN
CAP
2'-0"
45° EL
18"
45° EL
18"
TOP=101.10
6" TO 4" WYE TOP=100.85
15" DRAIN BOTTOM OF PIPE =100.74
TOP=99.62
18"
45° EL
18"
22.25° EL
45° EL
18"
45° EL
18"
4" WYE
4" FORCE MAIN
NOT TO SCALE
C-301
C30
B4
C-301
USE 4' LENGTHS AT MANHOLES MAX. TYP
BLDG SERVICE OR MAIN LINE SEWER. LOCATION TO BE DETERMINED IN THE FIELD.
SEE TYPICAL PIPE CONNECTION DETAIL
B3
C-301
TYPICAL BRICK INVERT - PLAN
NOT TO SCALE
MANHOLE
FLEXIBLE SYNTHETIC RUBBER SLEEVE
STAINLESS STEEL PIPE CLAMP
FILL ANNULAR SPACE WITH NON SHRINK GROUT
EXST PIPE
DICL PIPE
PIPE SHALL BE CENTERED IN PIPE PENETRATION
STAINLESS STEEL LOCKING BAND
PROVIDE FLEXIBLE SOIL TIGHT STORM COUPLING TO SUIT SIZE AND MATERIAL OF PIPE.
TYPICAL PIPE CONNECTION
NOT TO SCALE
FOR ASPHALT CONCRETE PAVEMENT DETAILS, SEE C-501
POINT UP BRICKWORK ON THE INSIDE
FINISHED GRADE
ADJUST TO GRADE W/ PRECAST RINGS
MANHOLE JOINT SHALL BE SEALED WITH MASTIC GASKET PER FED SPEC SS-SS-210 TYPE 1, 1.25"Ø
8"
30.4"
8"
PRECAST REINFORCED CONC. MANHOLE BARRELS PER ASTM C-478
MULTIPLES OF 12", 24", OR 36"
48" DIA FOR 18" SEWER PIPE AND UNDER, 60" DIA FOR LARGER THAN 18"
COMPLETELY FILL ANNULAR SPACE WITH NON SHRINK GROUT ON INSIDE OF MANHOLE
5"
1" WASH
FORMED BRICK INVERT TO FULL HEIGHT OF PIPE
12"MIN
PIPE TO MANHOLE JOINT TO BE FLEXIBLE SLEEVE AND STAINLESS STEEL STRAP OR APPROVED EQUAL
6 3/4" CRUSHED STONE BASE (12" IN ROCK CUT)
COMPACTED SUBGRADE
12"
4"
8"
MANHOLE NOTES:
1. CONCRETE: 4,000 PSI AFTER 28 DAYS.
2. REINFORCING: HS-25 LOADING.
3. SHIPLAP JOINTS SHALL BE SEALED WITH 2 STRIPS OF 1" DIA BUTYL RUBBER SEALANT.
4. EXTERIOR OF MANHOLE SHALL BE SEALED WITH "PRESCOTT PROTECTIVE COATING" (PRODUCT NO. 87035) FROM E.J. PRESCOTT, INC. OR AN APPROVED EQUIVALENT.
5. PROVIDE LOCK JOINT FLEXIBLE PIPE SLEEVES, CAST INTO BASE.
6. EACH CASTING TO HAVE LIFTING HOLES CAST IN. PLUG LIFTING HOLES WITH GROUT AFTER PLACING MANHOLE.
DETAIL - TYPICAL SEWER MANHOLE SECTION
NOT TO SCALE
ANNULAR SPACE BETWEEN OUTSIDE OF PIPE AND MANHOLE TO BE FILLED WITH NON SHRINK GROUT.
BRICK MASONRY
PIPE TO MANHOLE JOINT SEE TYPICAL SEWER MANHOLE DETAIL
INVERT SECTION
NOT TO SCALE
C-301
B3
TOP OF SHELF SHALL BE 1" ABOVE CROWN OF HIGHEST PIPE. SHELF BRICK LAID FLAT.
1" WASH
4" FORCE MAIN CONNECTION
4" MIN VARY TO SUIT FINAL RIM ELEVATION
INVERT TO BE INVERTED ARCH WITH BRICKS LAID AS STRETCHERS AND ON EDGE OR 3000 PSI CONCRETE.
NOTE:
CONSTRUCT INVERT TO MAKE A SMOOTH CONTINUATION OF THE SEWER INVERT.
INVERT SECTION
NOT TO SCALE
C-301
B4
1
3/4" CHAMFER (TYP)
1'-6" x 1'-6" x 6" THICK CONC COLLAR REINFORCED WITH #4 TIE
9" DIA CAST IRON MEDIUM DUTY ACCESS FRAME AND BOLTED COVER WITH CAST-IN LETTERING "SEWER"
4" TOPSOIL OR PAVEMENT, SEED & MULCH
FINISH GRADE
VALVE BOX & COVER
1"
1" REVEAL IN LOAMED AREAS FLUSH IN PAVEMENT AREA
THREADED PIPE HUB AND CLEANOUT PLUG
4" DICL PIPE & FITTINGS
4"-45° BEND
COMPACTED SAND BEDDING MATERIAL
NOTE:
END OF LINE CLEANOUT
4" GATE VALVE
6"x4" REDUCER
DIRECTION OF FLOW
6" MIN
DETAIL - CLEANOUT 1
NOT TO SCALE
3/4" CHAMFER (TYP)
1'-6" x 1'-6" x 6" THICK CONC COLLAR REINFORCED WITH #4 TIE
9" DIA CAST IRON MEDIUM DUTY ACCESS FRAME AND BOLTED COVER WITH CAST-IN LETTERING "SEWER"
4" TOPSOIL OR PAVEMENT, SEED & MULCH
FINISH GRADE
VALVE BOX & COVER
1"
1" REVEAL IN LOAMED AREAS FLUSH IN PAVEMENT AREA
THREADED PIPE HUB AND CLEANOUT PLUG
4" DICL PIPE & FITTINGS
4"-45° BEND
COMPACTED SAND BEDDING MATERIAL
NOTE:
WYE FOR CLEANOUT SHALL BE INSTALLED HORIZONTALLY
4" GATE VALVE
6"x4" WYE
6" MIN
DETAIL - CLEANOUT 2
NOT TO SCALE
GRAPHIC SCALE
1 SANITARY SEWER REVISIONS 9/4/13 BES
CONFORMED SET 12/7/12 BES
NAVFAC
NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
KITTERY, MAINE
PORTSMOUTH NAVAL SHIPYARD
STRUCTURAL STABILIZATION AND REPAIRS TO BERTHS 1, 2A AND 2B
SANITARY SEWER SECTIONS AND DETAILS
WNC09
1121079
N40085-12-C-1736
1262171C
C-301
FP1-12-042

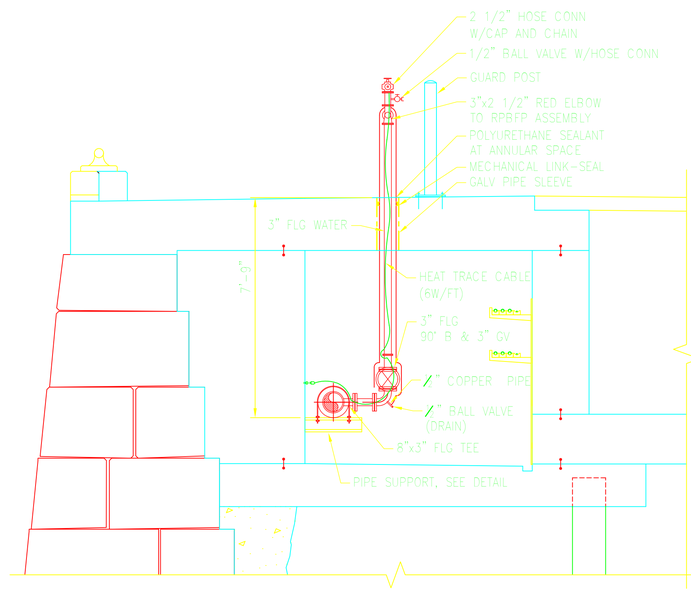


DETAIL - WATER HOSE STATION

SCALE: 3/4"=1'-0" C-302 1

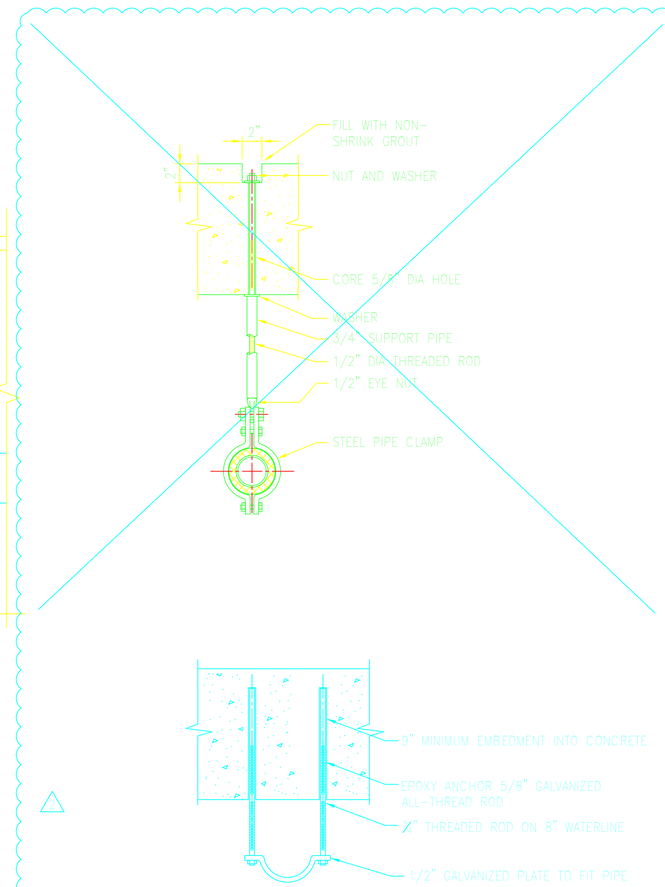






SECTION

SCALE: 3/8" = 1'-0" C-302 B3



TYPICAL INTERMEDIATE PIPE SUPPORT

SCALE: NOT TO SCALE

GRAPHIC SCALE

3/4" = 1'-0" 0 1" 2" 3" 4"

1 1/2" = 1'-0" 0 4" 8" 1'-4"

8/19/14	-
12/7/12	JJA

AS-BUILT COMMENTS
CONFORMED SET

NAVFAC

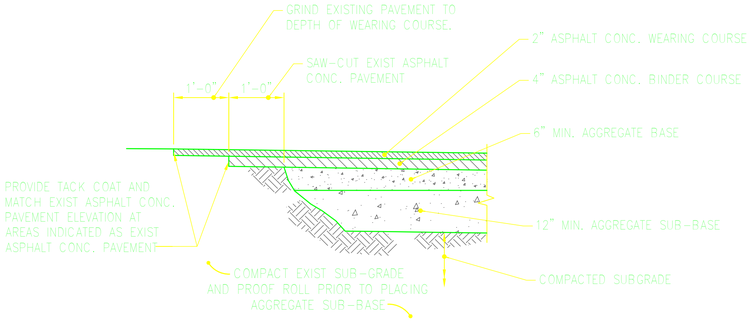
NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC
PORTSMOUTH NAVAL SHIPYARD
KITTERY, MAINE

STRUCTURAL STABILIZATION AND REPAIRS TO BERTHS 1, 2A AND 2B

WATER SECTIONS AND DETAILS

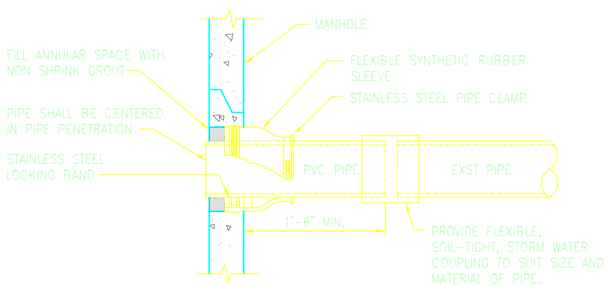
MAXIMO NO. WNRC9
EPROJECT NO. 1121075
CONSTR. CONTR. NO. N40085-12-C-1736
NAVFAC DRAWING NO. 12621711
SHEET 7 OF 10 SHTS

C-302 FP1-12-043



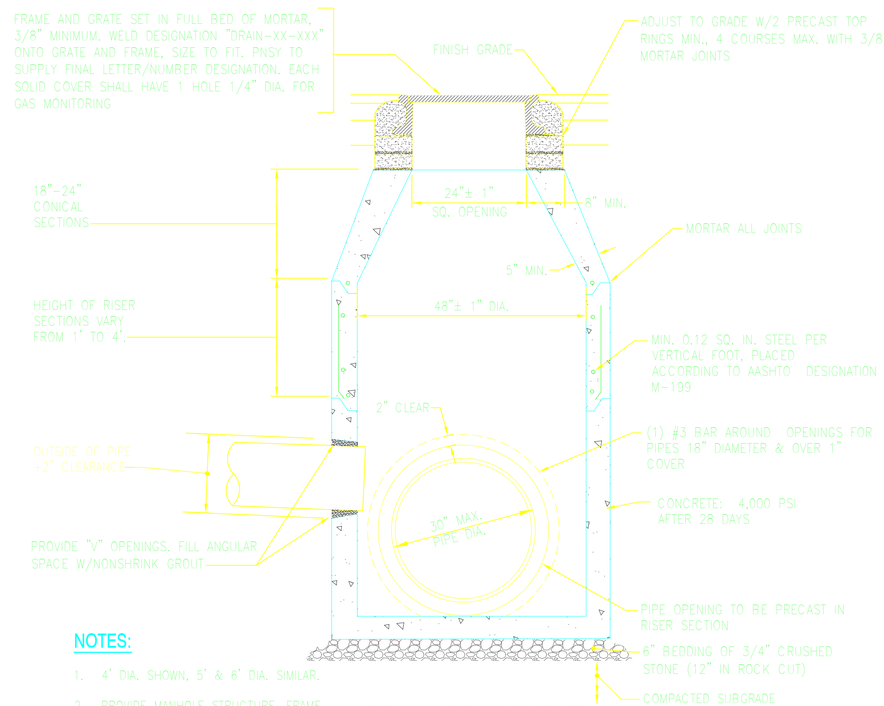
TYPICAL ASPHALT CONCRETE PAVEMENT DETAIL - CIA

NOT TO SCALE



TYPICAL PIPE CONNECTION DETAIL

NOT TO SCALE

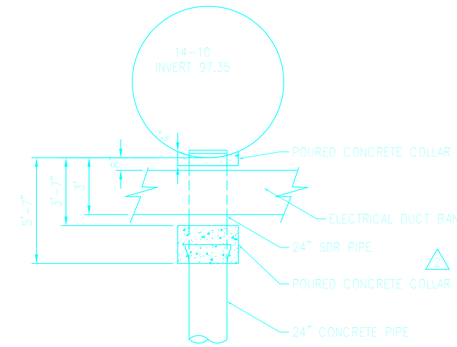


NOTES:

1. 4' DIA. SHOWN, 5' & 6' DIA. SIMILAR.
2. PROVIDE MANHOLE STRUCTURE, FRAME AND COVER SUITABLE FOR AASHTO HS-25 LIVE LOAD.

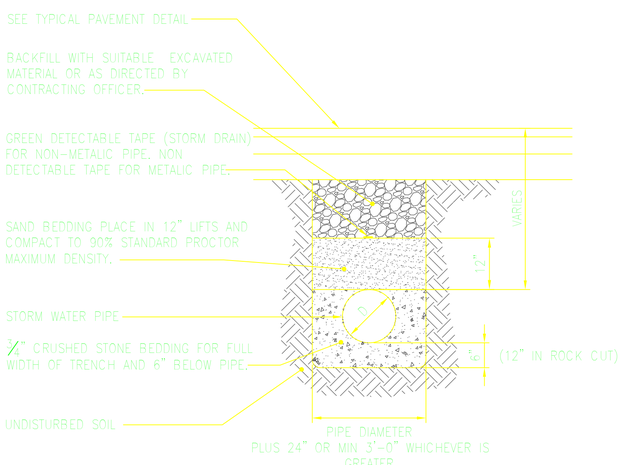
DRAINAGE MANHOLE

NOT TO SCALE



DRAINAGE CONNECTION TO MANHOLE 14-10

NOT TO SCALE



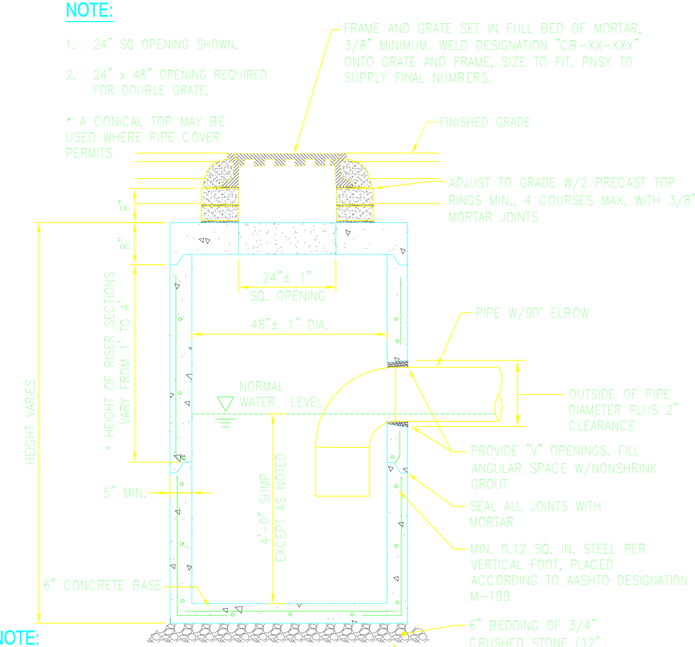
PIPE TRENCH DETAIL

NOT TO SCALE

NOTE:

1. 24" SQ OPENING SHOWN.
2. 24" x 48" OPENING REQUIRED FOR DOUBLE GRATE.

* A CONICAL TOP MAY BE USED WHERE PIPE COVER PERMITS



** OMIT WHEN MANHOLE SITS ON RELIEVING PLATFORM

NOTE:

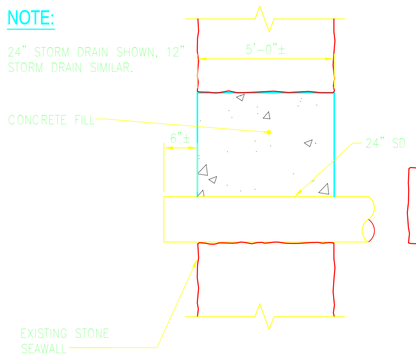
1. PROVIDE CATCH BASIN STRUCTURE, FRAME AND GRATE SUITABLE FOR AASHTO HS-25 LIVE LOAD.

CATCH BASIN

NOT TO SCALE

NOTE:

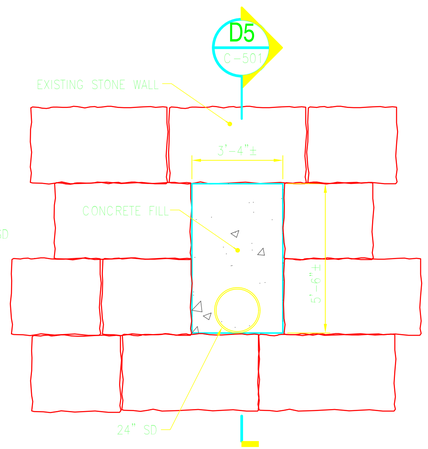
24" STORM DRAIN SHOWN, 12" STORM DRAIN SIMILAR.



OUTFALL SECTION

NOT TO SCALE

D5
C-501



ELEVATION

TYPICAL OUTFALL

NOT TO SCALE

GRAPHIC SCALE

AS-BUILT COMMENTS 9/4/14
CONFORMED SET 12/7/12 DPA

NAVFAC

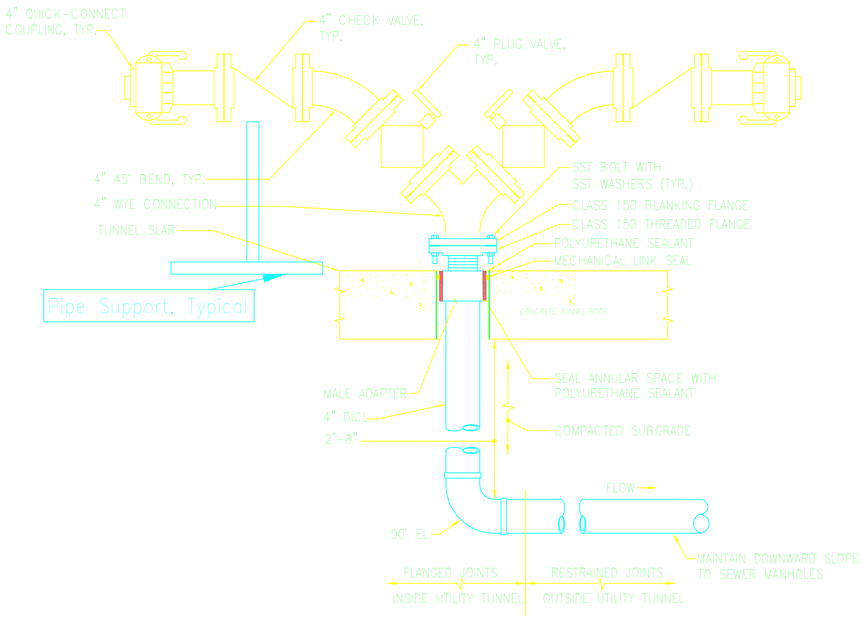
NAVAL FACILITIES ENGINEERING COMMAND ~ MID-ATLANTIC
PUBLIC WORKS DEPARTMENT PORTSMOUTH NAVAL SHIPYARD KITTERY, MAINE

STRUCTURAL STABILIZATION AND REPAIRS TO BERTHS 1, 2A AND 2B

DRAINAGE DETAILS

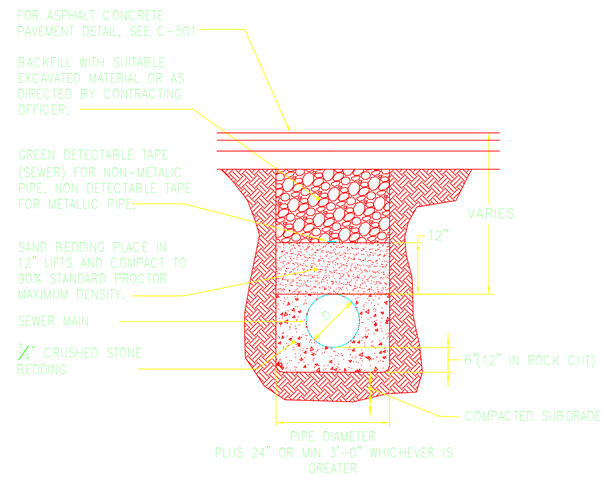
DRAWN BY: WHBC 9
PROJECT NO.: 11121079
CONSTR. CONTR. NO.: N40085-12-C-1736
NAVFAC DRAWING NO.: 12621712
SHEET 44 OF 94

C-501 | FP1-12-044



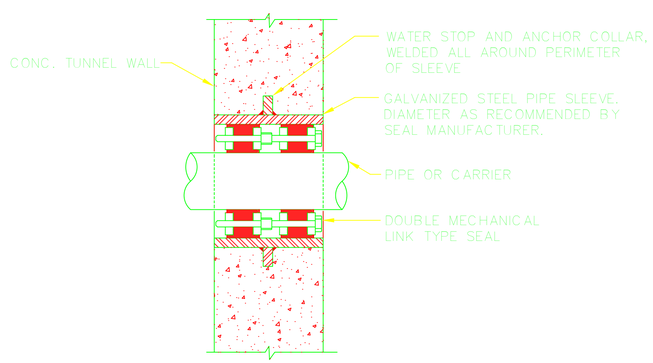
DETAIL - SANITARY INLET

NOT TO SCALE



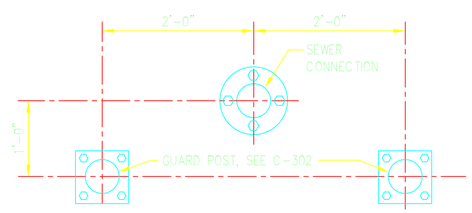
DETAIL - PIPE TRENCH

NOT TO SCALE



DETAIL - SEWER PIPE PENETRATION

NOT TO SCALE



PLAN AT SANITARY INLET

NOT TO SCALE

GRAPHIC SCALE

NAVFAC

NAVAL FACILITIES ENGINEERING COMMAND ~ MID-ATLANTIC

PORTSMOUTH NAVAL SHIPYARD

KITTERY, MAINE

STRUCTURAL STABILIZATION AND REPAIRS TO BERTHS 1, 2A AND 2B

MAXIMO No.: WNRC9

PROJECT NO.: 1121075

CONSTR. CONTR. NO.: N40085-12-C-1736

NAVFAC DRAWING NO.:

SHEET OF 24

12/7/12 RES

CONFORMED SET

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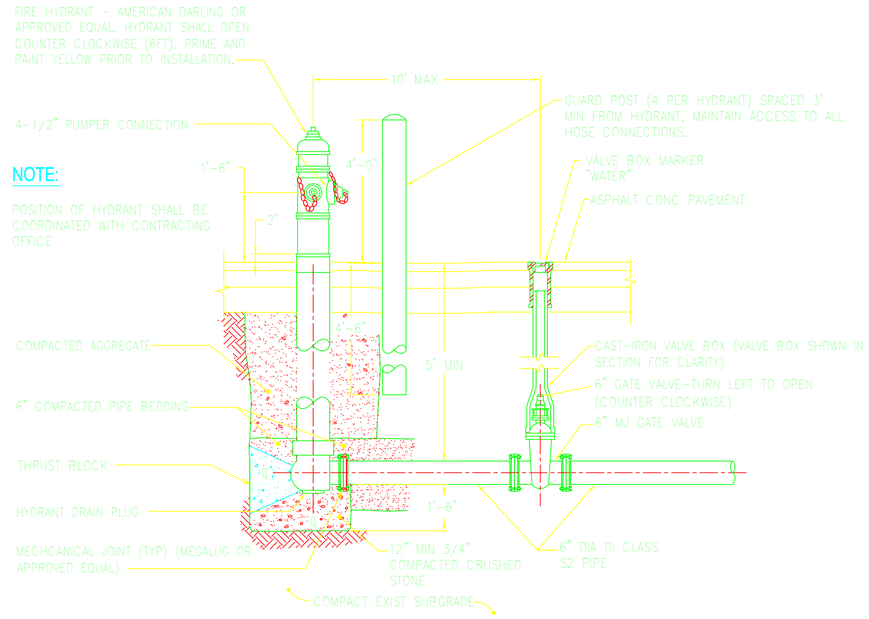
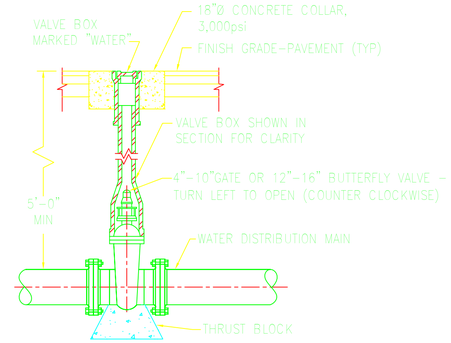


NOTE:

POSITION OF HYDRANT SHALL BE COORDINATED WITH CONTRACTING OFFICE

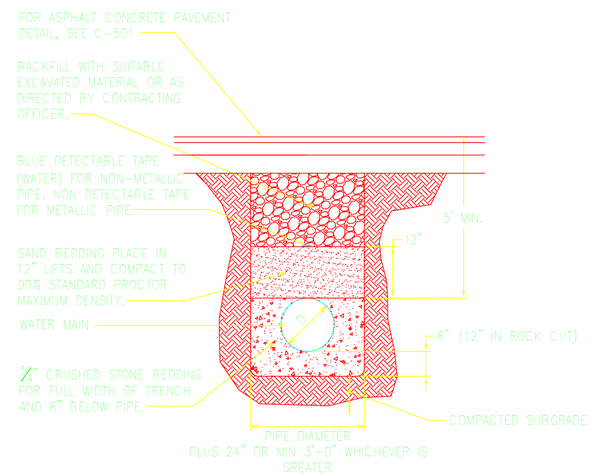
SECTION - FIRE HYDRANT CONNECTION

NOT TO SCALE C-105 C1



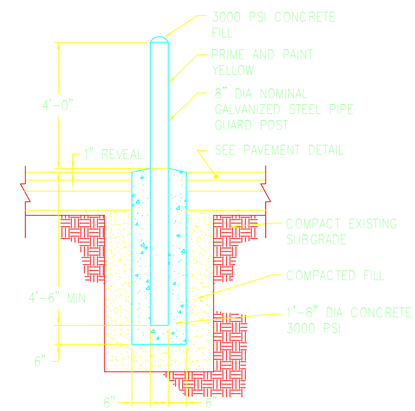
WATER SHUTOFF VALVE DETAIL

NOT TO SCALE



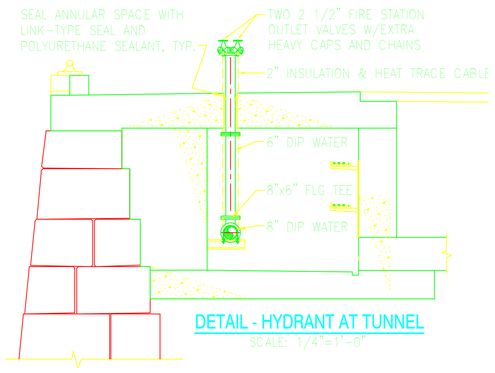
PIPE TRENCH DETAIL

NOT TO SCALE



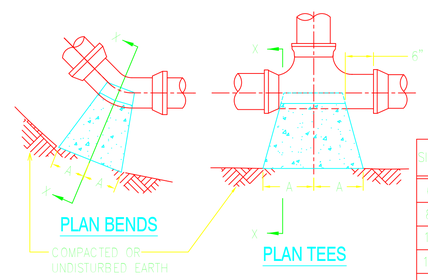
GUARD POST DETAIL

NOT TO SCALE



DETAIL - HYDRANT AT TUNNEL

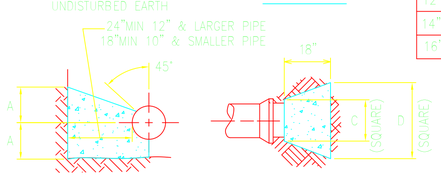
SCALE: 1/4"=1'-0"



PLAN BENDS

PLAN TEES

SIZE	1/4 BENDS		1/8 BENDS		1/16 BENDS		TEES		PLUGS	
	A	B	A	B	A	B	A	B	C	D
6"	16"	10"	9"	10"	6"	8"	10"	12"	10"	21"
8"	22"	13"	12"	13"	8"	10"	13"	16"	12"	29"
10"	26"	17"	14"	17"	10"	13"	16"	20"	14"	36"
12"	29"	21"	16"	21"	11"	16"	18"	24"	16"	41"
14"	35"	24"	19"	24"	12"	20"	22"	27"	18"	48"
16"	38"	27"	21"	27"	12"	24"	24"	30"	20"	54"

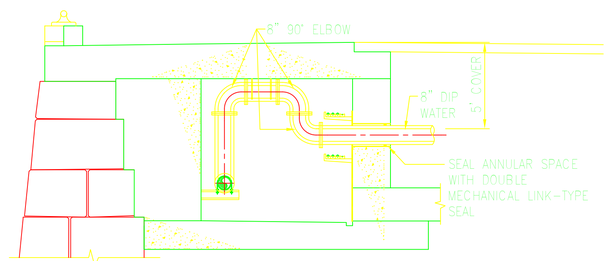


SECTION X-X BENDS & TEES

PLAN & ELEVATION PLUGS

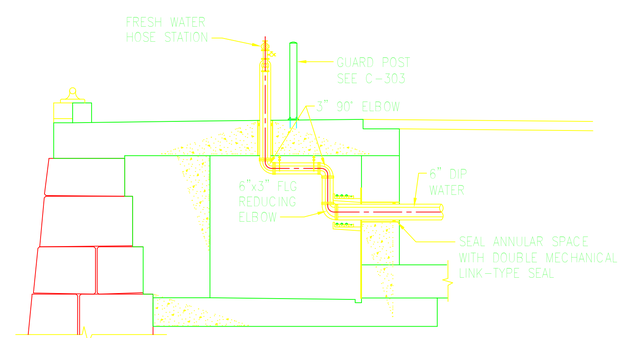
NOTES:

1. CONCRETE BLOCKING THRUST (3000 PSI) IS REQUIRED FOR ALL TEES, BENDS, REDUCERS AND PLUGS.
2. MEGA-LUG RESTRAINT SYSTEMS ARE REQUIRED FOR ALL MECHANICAL JOINTS. THESE SYSTEMS DO NOT REDUCE THE REQUIREMENTS FOR THRUST BLOCKING.
3. ALL FITTINGS SHALL BE WRAPPED IN POLYETHYLENE PRIOR TO INSTALLATION OF CONCRETE THRUST BLOCKING. JOINTS SHALL NOT BE COVERED WITH CONCRETE.
4. POUR THRUST BLOCKS AGAINST UNDISTURBED MATERIAL. WHERE TRENCH WALL HAS BEEN DISTURBED, EXCAVATE LOOSE MATERIAL AND EXTEND CONCRETE THRUST BLOCK TO UNDISTURBED MATERIAL.



SECTION - WATER SERVICE

SCALE: 1/4" = 1'-0" C-105 A3



SECTION - WATER STATION

SCALE: 1/4" = 1'-0" C-105 A4

GRAPHIC SCALE

1/4" = 1'-0" 0 2' 4' 8'

NAVFAC

NAVAL FACILITIES ENGINEERING COMMAND – MID-ATLANTIC

PORTSMOUTH NAVAL SHIPYARD KITTERY, MAINE

STRUCTURAL STABILIZATION AND REPAIRS TO BERTHS 1, 2A AND 2B

WATER DETAILS

DRAWN BY: WRR23

PROJECT NO. 1121079

CONSTR. CONTR. NO. N40085-12-C-1736

NAVFAC DRAWING NO. 1262171.4

SHEET 46 OF 94

C-503 FP1-12-046

DES: JJA DRW: RWT CHK: DWH

12/7/12 JJA

CONFORMED SET

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