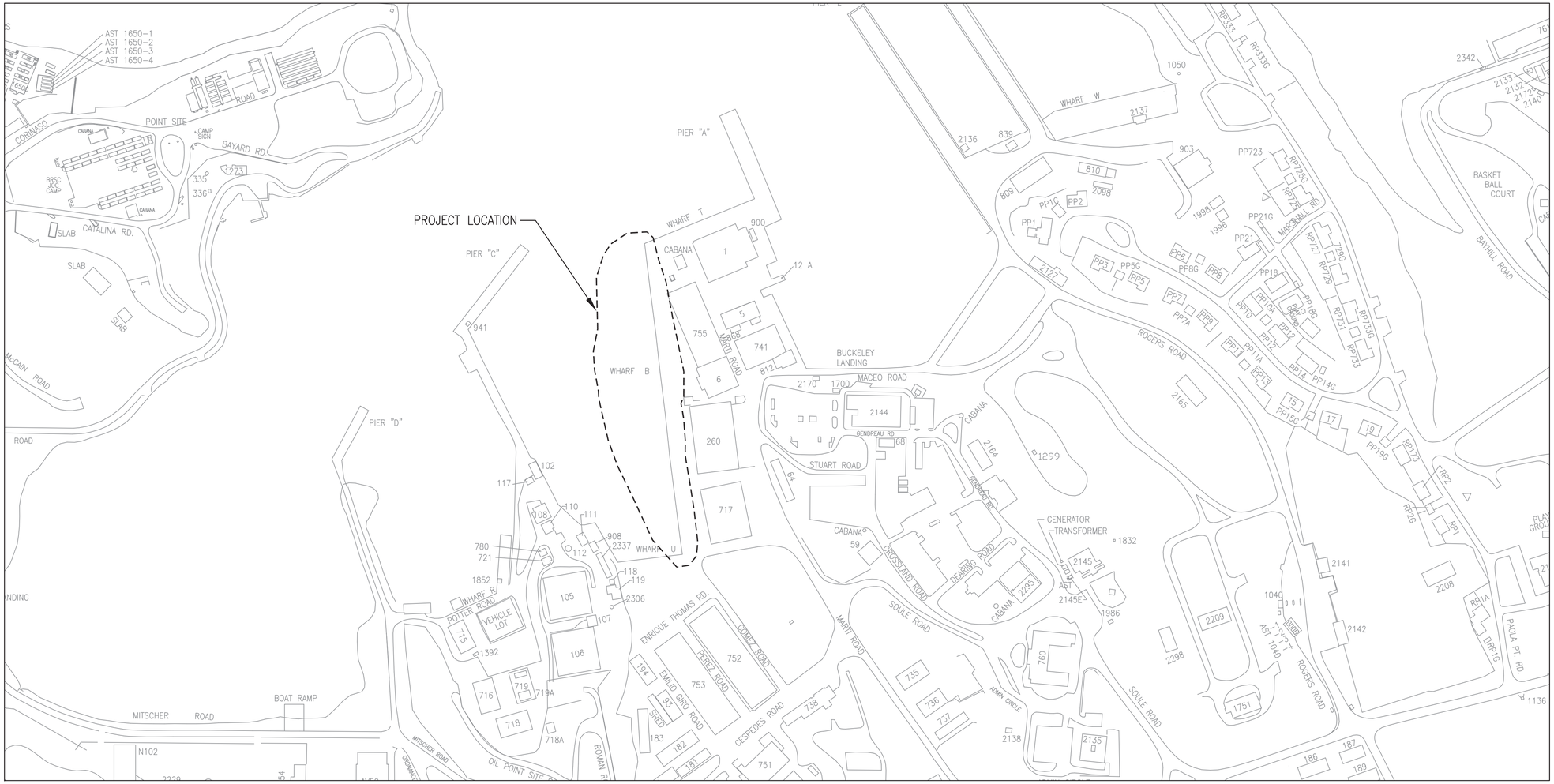
WHARF BRAVO STRUCTURAL REPAIRS

U.S. NAVAL STATION GUANTANAMO BAY
GUANTANAMO BAY, CUBA

SUBMITTAL DATE 06/10/2016



LOCATION MAP
N.T.S.

COMMANDER NAVFAC/BLTL–MICHELE JACKSON, P.E.

IPT PROJECT MANAGER – ELAINE GALLANT, P.E.

IPT TECH. BRANCH HEAD – MICHAEL JOHNSON R.A.

DESIGN WATERFRONT – JOHN McCOY, P.E.

DESIGN STRUCTURAL – VITALY FEYGIN, P.E.

DESIGN CIVIL – RICARDO PALMO

DESIGN ELECTRICAL – CHRISTOPHER DUGUID, P.E.

CHIEF STRUCTURAL – KURT W. WITTMAN, P.E.

CHIEF CIVIL – JEFFREY FRANK, P.E.

FLORES.RAMON.H.1383332679 Digitally signed by FLORES.RAMON.H.1383332679 DN: c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USN, cn=FLORES.RAMON.H.1383332679 Date: 2016.06.08 15:22:14 -04'00'

CHIEF ELECTRICAL – RAMON FLORES, P.E.

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
IPT SOUTH ATLANTIC

NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST
NAVAL AIR STATION JACKSONVILLE

NAVSTA GUANTANAMO BAY

GUANTANAMO BAY, CUBA

WHARF BRAVO STRUCTURAL REPAIRS

COVER & SIGNATURE SHEET

SYM	DESCRIPTION	DATE	APPR

A/E INFO

APPROVED

FOR COMMANDER NAVFAC / B.L.T.L.

ACTIVITY ----

SATISFACTORY TO DATE ----

DES -- DRW -- CHK --

PROJECT MANAGER E. GALLANT

IPT TECH. BRANCH HEAD M. JOHNSON

CHIEF ENG/ARCH (CORE) --

SCALE: SCALE

EPROJECT NO.: 1295318

CONSTR. CONTR. NO.: N69450–XX–C–XXXX

NAVFAC DRAWING NO.: 15081047

SHEET 1 OF 65

G001

DRAWFORM REVISION: 7 AUGUST 2009

FILE NAME: P:\CIB\project_files\z_CUBA\navsta guantanamo bay\hf60514\wharf bravo structural repairs-1295318\working technical files\Drawing\G001 COVER & SIGNATURE SHEET.dwg LAYOUT NAME: G001 COVER & SIGNATURE SHEET PLOTTED: Thursday, June 09, 2016 - 3:26pm USER: john.d.mccoy

ABBREVIATIONS

AB	ABANDONED	FW	FRESH WATER	REF	REFERENCE
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	GOV'T	GOVERNMENT	REINF	REINFORCED, REINFORCING
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	ID	INSIDE DIAMETER	REQ'D	REQUIRED
AP	AFT PERPENDICULAR	HDG	HOT DIPPED GALVANIZED	S	SOUTH
ASTM	ASTM INTERNATIONAL	HORIZ	HORIZONTAL	SCH	SCHEDULE
AWS	AMERICAN WELDING SOCIETY	IN	INCH	SECT	SECTION
@	AT	INFO	INFORMATION	SHT	SHEET
&	AND	LB	POUND	SIM	SIMILAR
APPROX	APPROXIMATE	MACH	MACHINE	SPECS	SPECIFICATIONS
BOT, BOTT	BOTTOM	MAX	MAXIMUM	SQ	SQUARE
℄	CENTER LINE	MAT'L	MATERIAL	SR	SEWER
CA	COMPRESSED AIR	MB	MACHINE BOLT	SS	STAINLESS STEEL
CG	CONTINUOUS GROUND	MCON	MILITARY CONSTRUCTION	SSP	STEEL SHEET PILE
CIP	CAST IN PLACE	MECH	MECHANICAL	ST	STREET
CLR	CLEAR, CLEARANCE	MIL	MILITARY	STA	STATION
CONC	CONCRETE	MIN	MINIMUM	STD	STANDARD
CONT	CONTINUED, CONTINUOUS	MISC	MISCELLANEOUS	STL	STEEL
CP	COMPLETE PENETRATION	ML	MUDLINE	STM	STEAM
CU	COPPER	MLW	MEAN LOW WATER	STR	STAGGER
DB	DOUBLE BITT	MLLW	MEAN LOWER LOW WATER	SUBSTA	SUBSTATION
DBL	DOUBLE	MPH	MILES PER HOUR	SW	SALT WATER
DEMO	DEMOLITION	MSL	MEAN SEA LEVEL	SYMM	SYMMETRICAL
DET	DETAIL	N	NORTH	T	TON
DIA OR Ø	DIAMETER	NAVFAC	NAVAL FACILITIES ENGINEERING COMMAND	T & B	TOP & BOTTOM (TOP & BOT)
DIM	DIMENSION	NIC	NOT IN CONTRACT	TEL	TELEPHONE
DWG	DRAWING	No	NUMBER	THRD	THREADED
EA	EACH	NTS, NS	NOT TO SCALE, NO SCALE	TYP	TYPICAL
EF	EACH FACE	OC	ON CENTER	UFC	UNIFIED FACILITIES CRITERIA
EJ	EXPANSION JOINT	OD	OUTSIDE DIAMETER	UFGS	UNIFIED FACILITIES GUIDE SPECIFICATION
EL	ELEVATION	OPP	OPPOSITE	UHMWP	ULTRA HIGH MOLECULAR WEIGHT PLASTIC
ELEC OR ELEC'L	ELECTRICAL	OH	OPPOSITE HAND	UNO	UNLESS NOTED OTHERWISE
EMBED	EMBEDMENT	OW	OILY WASTE	V	VOLT
EQUIP	EQUIPMENT	℞	PLATE	VAR	VARIES
EW	EACH WAY	P/N	PART NUMBER	VERT	VERTICAL
EXIST	EXISTING	PMPCM	POLYMER MODIFIED PORTLAND CEMENT MORTAR	W/	WITH
EXP	EXPANSION	PI	POST INSTALLED	W/O	WITHOUT
EJ OR EXP JT	EXPANSION JOINT	PSF	POUNDS PER SQUARE FOOT	WP	WORK POINT
FFF	FOAM FILLED FENDER	PSI	POUNDS PER SQUARE INCH	WW	WASTE WATER
FoS	FACTOR OF SAFETY	PTI	POST TENSIONING INSTITUTE	Y & D	BUREAU OF YARDS & DOCKS
FO	FUEL OIL	PVC	POLYVINYL CHLORIDE		
FP	FORWARD PERPENDICULAR	PW	POTABLE WATER		
FT	FOOT, FEET	PWC	PUBLIC WORKS COMMAND		
		RD	ROAD		

SHEET LIST

SHEET NUMBER	SHEET TITLE	NAVFAC DWG NO
	0 – GENERAL	
G001	COVER & SIGNATURE SHEET	15081047
G002	DRAWING SHEET INDEX	15081048
	1 – CIVIL	
C001	GENERAL NOTES AND LEGENDS	15081049
C002	GEOTECHNICAL DATA	15081050
C003	GEOTECHNICAL DATA	15081051
C004	OVERALL EXISTING CONDITIONS PLAN	15081052
C005	EXISTING CONDITIONS – NORTH	15081053
C006	EXISTING CONDITIONS – NORTH	15081054
C007	EXISTING CONDITIONS – SOUTH	15081055
C008	EXISTING CONDITIONS – SOUTH	15081056
C009	PHASING PLAN	15081057
C010	SITE PHOTOGRAPHS	15081058
C011	2014 BATHEYMETRIC DATA (WHARF'S BRAVO–TANGO)	15081059
C100	DEMOLITION SITE PLAN – NORTH	15081060
C101	DEMOLITION SITE PLAN – NORTH	15081061
C102	DEMOLITION SITE PLAN – SOUTH	15081062
C103	DEMOLITION SITE PLAN – SOUTH	15081063
C200	OVERALL SITE PLAN	15081064
C201	SITE PLAN – NORTH	15081065
C202	SITE PLAN – NORTH	15081066
C203	SITE PLAN – SOUTH	15081067
C204	SITE PLAN – SOUTH	15081068
C205	GRADING AND DRAINAGE PLAN – NORTH	15081069
C206	GRADING AND DRAINAGE PLAN – NORTH	15081070
C207	GRADING AND DRAINAGE PLAN – SOUTH	15081071
C208	GRADING AND DRAINAGE PLAN – SOUTH	15081072
C209	SEDIMENT CONTROL PLAN – NORTH	15081073
C210	SEDIMENT CONTROL PLAN – NORTH	15081074
C211	SEDIMENT CONTROL PLAN – SOUTH	15081075
C212	SEDIMENT CONTROL PLAN – SOUTH	15081076
C300	UTILITY SITE PLAN – NORTH	15081077
C301	UTILITY SITE PLAN – NORTH	15081078
C400	CONCRETE JOINT PLAN – NORTH	15081079
C401	CONCRETE JOINT PLAN – NORTH	15081080
C402	CONCRETE JOINT PLAN – SOUTH	15081081
C403	CONCRETE JOINT PLAN – SOUTH	15081082
C501	SITE CONSTRUCTION DETAILS	15081083
C502	SITE CONSTRUCTION DETAILS	15081084
C503	UTILITY DETAILS	15081085
	2 – STRUCTURAL	
S001	STRUCTURAL NOTES 1 OF 2	15081086
S002	STRUCTURAL NOTES 2 OF 2	15081087
S003	SOIL STABILIZATION AREAS	15081088
S011	INSPECTION RESULTS 1 OF 2	15081089
S012	INSPECTION RESULTS 2 OF 2	15081090
S013	SITE PHOTOS	15081091
SD101	DEMOLITION PLAN & DETAILS 1 OF 2	15081092
SD102	DEMOLITION PLAN & DETAILS 2 OF 2	15081093
S111	STRUCTURAL PLANS 1 OF 5	15081094
S112	STRUCTURAL PLANS 2 OF 5	15081095
S113	STRUCTURAL PLANS 3 OF 5	15081096
S114	STRUCTURAL PLANS 4 OF 5	15102421
S115	STRUCTURAL PLANS 5 OF 5	15102422
S301	TYPICAL WHARF SECTIONS	15102423
S401	ENLARGED PLANS AND SECTIONS 1 OF 2	15102424
S402	ENLARGED PLANS AND SECTIONS 2 OF 2	15102425
S501	DETAILS AND PLANS – BULKHEAD	15102426
S502	DETAILS AND SECTIONS – BULKHEAD	15102427
S503	DETAILS – REINFORCEMENT AT MOORING FITTINGS	15102428
S504	DETAILS – WALE, DEADMAN, BULLNOSE, PIN PILE	15102429
S505	DETAILS – FENDERS AND MISC.	15102430
	3 – ELECTRICAL	
E001	GENERAL NOTES SYMBOLS AND LEGENDS	15102431
ES101	SITE PLAN	15102432
ES102	SITE PLAN	15102433
E501	ELECTRICAL DETAILS	15102434
E600	ELECTRICAL DIAGRAMS & RISERS	15102435

SYM	DESCRIPTION	DATE	APPR
–	–	– – –	– – –
–	–	– – –	– – –
–	–	– – –	– – –
–	–	– – –	– – –
–	–	– – –	– – –
–	–	– – –	– – –
–	–	– – –	– – –
–	–	– – –	– – –

NAVFAC

SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC / B.L.T.L.

ACTIVITY

– – –

SATISFACTORY TO DATE – – –

DES – – | DRW – – | CHK – –

PROJECT MANAGER E. GALLANT

IPT TECH. BRANCH HEAD M. JOHNSON

CHIEF ENG/ARCH (CORE) – –

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
IPT SOUTH ATLANTIC

NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST
NAVAL AIR STATION JACKSONVILLE

NAVSTA GUANTANAMO BAY
GUANTANAMO BAY, CUBA

WHARF BRAVO STRUCTURAL REPAIRS

DRAWING SHEET INDEX

SCALE: SCALE

EPROJECT NO.: 1295318

CONSTR. CONTR. NO. N69450–XX–C–XXXX

NAVFAC DRAWING NO. 15081048

SHEET 2 OF 65

G002

DRAWFORM REVISION: 7 AUGUST 2009

SHEET FORMAT IS 22" X 34". IF PRINTED SHEET IS NOT 22" X 34", THEN IT IS NOT TO SCALE

FILE NAME: P:\CIB1\project_files\z_CUBA\navsta guantanamo bay\h\#60514\wharf bravo structural repairs-1295318\working technical files\Drawings\G002 DRAWING SHEET INDEX.dwg LAYOUT NAME: G002 DRAWING SHEET INDEX PLOTTED: Friday, June 10, 2016 – 3:31pm USER: david.c.wolter

GENERAL NOTES:

1. HORIZONTAL COORDINATES BASED ON ASSUMED DATUM, US FEET. ELEVATIONS BASED ON MEAN SEA LEVEL = 0.00 US FEET. SURVEY PERFORMED BY NAVFAC ON FEBRUARY, 2013 AND MARCH, 2016.
2. THE LOCATIONS OF SOME UTILITIES SHOWN ON THE DRAWING ARE BASED ON INFORMATION OBTAINED FROM UTILITY PLANS PROVIDED BY THE GTMO PUBLIC WORKS DEPARTMENT. THE ACCURACY AND COMPLETENESS OF THESE RECORDS IS NOT KNOWN.
3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONFIRM IN THE FIELD, THE LOCATIONS AND ELEVATIONS FOR ALL UTILITIES THAT MAY EFFECT THE WORK.
4. THE CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION AND STRUCTURE PLACEMENT WITH ALL UTILITY CONSTRUCTION.
5. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ADEQUATE EROSION AND SOIL CONTROL DURING AND FOLLOWING CONSTRUCTION UNTIL ALL DISTURBED AREAS HAVE BEEN STABILIZED TO AVOID ADVERSE ENVIRONMENTAL IMPACTS TO OFF-SITE PROPERTY AND DRAINAGE SYSTEMS.
6. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE CONSTRUCTION POLLUTION PREVENTION PLAN.
7. ALL UNDERGROUND UTILITIES TO BE INSTALLED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.
8. THE CONTRACTOR(S) SHALL NOTIFY PUBLIC WORKS, AND THE CONTRACTING OFFICER 48 HOURS PRIOR TO INITIATING ANY EXCAVATION ACTIVITIES, OR AS SPECIFIED BY THE UTILITY COMPANIES AND THE PERMITS OBTAINED FOR THE WORK.
9. CONSTRUCTION WARNING SIGNS ARE TO BE MOUNTED AND ERECTED BEFORE CONSTRUCTION CAN COMMENCE. THESE AND ALL TRAFFIC CONTROL DEVICES SHALL FOLLOW THE STANDARDS SET FORTH BY THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
10. THE CONTRACTOR IS RESPONSIBLE FOR CLEARLY IDENTIFYING THE AREA OF CONSTRUCTION AND SAFELY ROUTING ALL VEHICULAR AND PEDESTRIAN TRAFFIC AROUND THE CONSTRUCTION AREA.
11. THE CONTRACTOR(S) SHALL LOCATE, VERIFY AND IDENTIFY ALL EXISTING UNDERGROUND UTILITIES (SHOWN OR NOT SHOWN) ON THE PLANS PRIOR TO ANY EXCAVATION ACTIVITIES.
12. THE CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS PRIOR TO EXCAVATION AND TAKE ALL MEASURES NECESSARY TO PROTECT UTILITIES DURING CONSTRUCTION. SHOULD ANY UTILITY LINE OR COMPONENT BECOME DAMAGED OR REQUIRE RELOCATION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE CONTRACTING OFFICER.
13. THE CONTRACTOR SHALL PROTECT EXISTING UTILITIES, SURVEY MARKERS, MONUMENTS, ETC. DURING CONSTRUCTION.
14. THERE SHALL BE ADEQUATE NOTICE GIVEN FOR SCHEDULING THE FINAL INSPECTION TO ALLOW FOR TRAVEL TO THE SITE.
15. THERE ARE LOCATIONS WITHIN THE PROJECT LIMITS WITH KNOWN SOIL CONTAMINATION. REFER TO FROEHLING & ROBERTSON, 2013 REPORT
16. FOR SITE ELECTRICAL NOTES SEE ELECTRICAL DRAWINGS SHEETS.

DEMOLITION NOTES:

1. CODES: ALL CODES REGULATING DEMOLITION WORK LISTED IN THE SPECIFICATIONS SHALL BE COMPLIED WITH. THE CONTRACTOR SHALL PUT UP AND MAINTAIN SUCH BARRIERS AND WARNING LIGHTS AS MAY BE NECESSARY OR REQUIRED BY CODE TO PROTECT AND PREVENT UNAUTHORIZED PERSONNEL FROM ENTERING THE DEMOLITION WORK AREA. ALL DEMOLITION OPERATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE FEDERAL OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) INSOFAR AS THEY APPLY TO DEMOLITION WORK TO BE PERFORMED UNDER THIS CONTRACT.

2. PROTECTION OF BUILDINGS & EQUIPMENT: TEMPORARY PROTECTIVE DEVICES SHALL BE INSTALLED AS REQUIRED AROUND THE DEMOLITION WORK FOR PROTECTION OF PERSONNEL, EXISTING ADJACENT BUILDINGS, AND EQUIPMENT AGAINST DUST AND FALLING OR FLYING DEBRIS.

3. ADDITIONAL STORM PIPING WITHIN THE LIMITS OF WORK IS ANTICIPATED FOR THIS PROJECT. FOR BIDDING PURPOSES, THE CONTRACTOR SHALL ASSUME THE ADDITIONAL PIPE QUANTITIES BELOW TO BE DEMO/NEW BEYOND THE ONE SHOWN ON SHEETS C100 TO C403.

   DEMOLITION:
   1) 12" C.I. PIPE 100 LF
   2) 18" C.I. PIPE 75 LF

   NEW:
   1) 15" RCP PIPE 100 LF

4. ALL UTILITY PIPE UNDER EXISTING ROADWAYS THAT IS TO BE REMOVED SHALL BE CAPPED AT THE EDGE OF PAVEMENT AND ABANDONED IN PLACE.

PAVING AND DRAINAGE NOTES:

1. ALL GRADING, PLACEMENT OF FILL AND COMPACTION SHALL BE IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.
2. PIPE LENGTHS MAY REQUIRE SLIGHT FIELD ADJUSTMENTS TO FIT CONDITIONS. ALL PIPE CROSSINGS SHALL BE COMPACTED TO 95% MAX DENSITY AT 6 INCH LIFTS. DENSITIES SHALL BE TAKEN AT EVERY 50 FT. INTERVAL.
3. THE CONTRACTOR SHALL COORDINATE THE CONSTRUCTION OF THE PAVING AND DRAINAGE FACILITIES WITH ALL OTHER CONSTRUCTION
4. ALL PIPE JOINTS SHALL BE PROPERLY FILLED AND SEALED PER THE PRODUCT MANUFACTURER'S SPECIFICATIONS.
5. THE CONTRACTOR SHALL COORDINATE ALL NOTIFICATIONS AND UTILITY LOCATION EFFORTS WITH PUBLIC WORKS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
6. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS. ANY DEVIATION FROM THE CONSTRUCTION DOCUMENTS SHALL BE THE SOLE RESPONSIBILITY OF THE ORGANIZATION AND/OR ENTITY RESPONSIBLE FOR THE INSTALLATION TO UPDATE/REPLACE ANY DEFICIENT MATERIAL/EQUIPMENT NECESSARY TO BRING THE FINAL PRODUCT TO THE STANDARD OF THE CONSTRUCTION DOCUMENTS.
7. WHERE TRENCH EXCAVATION EXCEEDS FIVE (5) FEET IN DEPTH, THE CONTRACTOR SHALL SUBMIT A TRENCH SAFETY SYSTEM FOR APPROVAL, THE TRENCH SAFETY SYSTEM SHALL BE COMPLIANT WITH OSHA STANDARD 29 CFR SECTION 1926.650 SUBPART P.
8. THE CONTRACTOR IS COMPLETELY RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF SEDIMENT AND EROSION CONTROL MEASURES DURING CONSTRUCTION. REFER TO THE CONSTRUCTION STORMWATER POLLUTION PREVENTION PLAN.
9. THERE SHALL BE NO UNPROTECTED OPEN TRENCHES AT THE DAY'S END.
10. ALL CONSTRUCTION LINES AND GRADES SHALL BE ESTABLISHED AND MAINTAINED BY THE CONTRACTOR.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PREVENTION OF DOWNSTREAM TURBIDITY/SILTATION THROUGH THE USE OF HAY BALES, SCREENS, SILTATION BASINS, CHEMICAL FLOCCULATION AND/OR ANY OTHER SUITABLE MEANS REQUIRED.

WHARF UTILITY MARKING NOTES:

1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO RECORD ALL THE EXISTING UTILITY MARKING PRIOR TO PAVEMENT DEMOLITION. ALL THE UTILITY MARKING SHALL BE RE-PAINT TO ITS ORIGINAL LOCATION AFTER THE NEW CONCRETE PAVEMENT IS COMPLETED.

EROSION AND SEDIMENT CONTROL NOTES:

1. STORMWATER POLLUTION PREVENTION PLAN AND EROSION AND SEDIMENT CONTROL MEASURES WILL BE DEVELOPED IN ACCORDANCE WITH APPLICABLE LOCAL, STATE, AND FEDERAL REGULATIONS. THE EROSION CONTROL MEASURES PRESENTED ON THE PLANS ARE INTENDED TO SHOW IN GENERAL TERMS THE MINIMUM ACCEPTABLE LEVEL OF PROTECTION ADJACENT TO THE PROPOSED STRUCTURE.

2. EROSION CONTROL MEASURES AND DETAILS DIFFERING FROM THOSE SHOWN IN THESE PLANS IN CONJUNCTION WITH THE REQUIRED STORMWATER POLLUTION PREVENTION PLAN MAY BE USED, HOWEVER THEY WILL DEMONSTRATE THEIR ADEQUACY AND THAT PERFORMANCE WILL SATISFY LOCAL, STATE, AND FEDERAL REQUIREMENTS.

3. FOLLOWING COMPLETION OF WORK, REMOVE ALL BARRIERS AND RESTORE SITE.

4. THE STORMWATER POLLUTION PREVENTION PLAN MUST BE APPROVED BY THE ENVIRONMENTAL DIVISION PRIOR TO START OF DEMOLITION OR CONSTRUCTION ACTIVITES

5. TURBIDITY BARRIERS SHALL BE USED TO MAINTAIN ACCEPTABLE TURBIDITY LEVELS.

6. NUMBER AND SPACING OF ANCHORS SHALL BE SUFFICIENT TO PREVENT DISPLACEMENT BY CURRENT VELOCITIES, VEGETATION OR DEBRIS.

7. TURBIDITY BARRIERS FOR FLOWING STREAMS AND TIDAL CREEKS MAY BE EITHER FLOATING, OR STAKED TYPES OR ANY COMBINATIONS OF TYPES THAT WILL SUIT SITE CONDITIONS AND MEET EROSION CONTROL AND WATER QUALITY REQUIREMENTS. POSTS IN STAKED TURBIDITY BARRIERS SHALL BE INSTALLED IN VERTICAL POSITION UNLESS OTHERWISE ALLOWED BY THE CONTRACTING OFFICER.

UTILITY NOTES:

1. ALL WATER LINE TO BE PVC PIPE SCHEDULED 80 WITH METAL TRACING WIRE. PIPES SHALL BE MANUFACTURED IN CONFORMANCE WITH THE MOST RECENT AWWA STANDARDS, UFC 3-201-01 AND UFC 3-600-01. FIRE HYDRANT LEADS TO BE 6" DUCTILE IRON AND RESTRAINED.

2. ALL FITTINGS OF THE WATER MAIN MUST BE BLOCKED OR RESTRAINED INCLUDING FIRE HYDRANTS.

3. WATER LINES SHALL BE FLUSHED AND DISINFECTED. DISINFECTION OF THE WATER MAINS SHALL BE IN ACCORDANCE WITH AWWA C-601 STANDARDS.

4. ALL FIRE HYDRANT BARRELS MUST BE COLORED YELLOW PER REGULATION UFC 3-600-01 SEC 3-7.3.1. BONNET AND CAP TO BE PAINTED IN ACCORDANCE WITH NFPA 291.

5. NO VALVES ARE TO BE CLOSED BY THE CONTRACTOR PRIOR TO NOTIFICATION OF DEPARTMENT OF PUBLIC WORKS.

6. CONTRACTOR SHALL REQUEST INSPECTION BY DPW 3 DAYS PRIOR TO COMMENCING CONSTRUCTION OF ANY WATER MAINS.

7. CONTRACTOR SHALL SUBMIT SHOP DRAWING TO GUANTANAMO BAY DPW FOR FINAL APPROVAL OF WATER METER AND VAULT.

8. ANY WATER PIPING DEEPER THAN 10' AND/OR GREATER THAN 12" DIAMETER ARE TO BE DUCTILE IRON PIPE.

9. ANY SEWER PIPING DEEPER THAN 10' AND/OR UNDER ROADWAYS ARE TO BE DUCTILE IRON PIPE.

L E G E N D

	EXISTING	PROPOSED
UTILITY TRENCH		
CONCRETE CURBING		
ASPHALT PAVEMENT		
WOODEN POST		
WATER VALVE		WATER VALVE
WATER VAULT	W	FIRE HYDRANT
ELECTRICAL MANHOLE	E	STORM LINE
ELECTRICAL VAULT	E	— W — WATER LINE
UNKNOWN TYPE MANHOLE	U	—10.00 — MAJOR CONTOURS
DOUBLE BITT (MOORING)		
CLEAT (MOORING)		—10.25 — MINOR CONTOURS
STORMWATER INLET		STORMWATER INLET
SANITARY VAULT	S	
SANITARY MANHOLE	S	
SURVEY SETUP STATION POINT		
LIGHT W/PROTECTIVE RAIL		
BOLLARD		BOLLARD

A B B R E V I A T I O N S

WM	=	WATERMAIN
SS	=	STAINLESS STEEL
PVC	=	POLYVINYL CHLORIDE
RCP	=	REINFORCED CONCRETE PIPE
DIP	=	DUCTILE IRON PIPE
EX	=	EXISTING
HYD.	=	HYDRANT
ASSBLY.	=	ASSEMBLY

SYM	DESCRIPTION	DATE	APPR
---	---	---	---

NAVFAC

SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC / B.L.T.L.

ACTIVITY

SATISFACTORY TO DATE ---

DES RP | DRW RP | CHK JF

PROJECT MANAGER E. GALLANT

IPT TECH. BRANCH HEAD M. JOHNSON

CHIEF ENG/ARCH (CORE) J. FRANK

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
IPT SOUTH ATLANTIC

NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST
NAVAL AIR STATION JACKSONVILLE

NAVSTA GUANTANAMO BAY

GUANTANAMO BAY, CUBA

WHARF BRAVO STRUCTURAL REPAIRS

GENERAL NOTES AND LEGENDS

SCALE: NONE

EPROJECT NO.: 1295318

CONSTR. CONTR. NO. N69450-XX-C-XXXX

NAVFAC DRAWING NO. 15081049

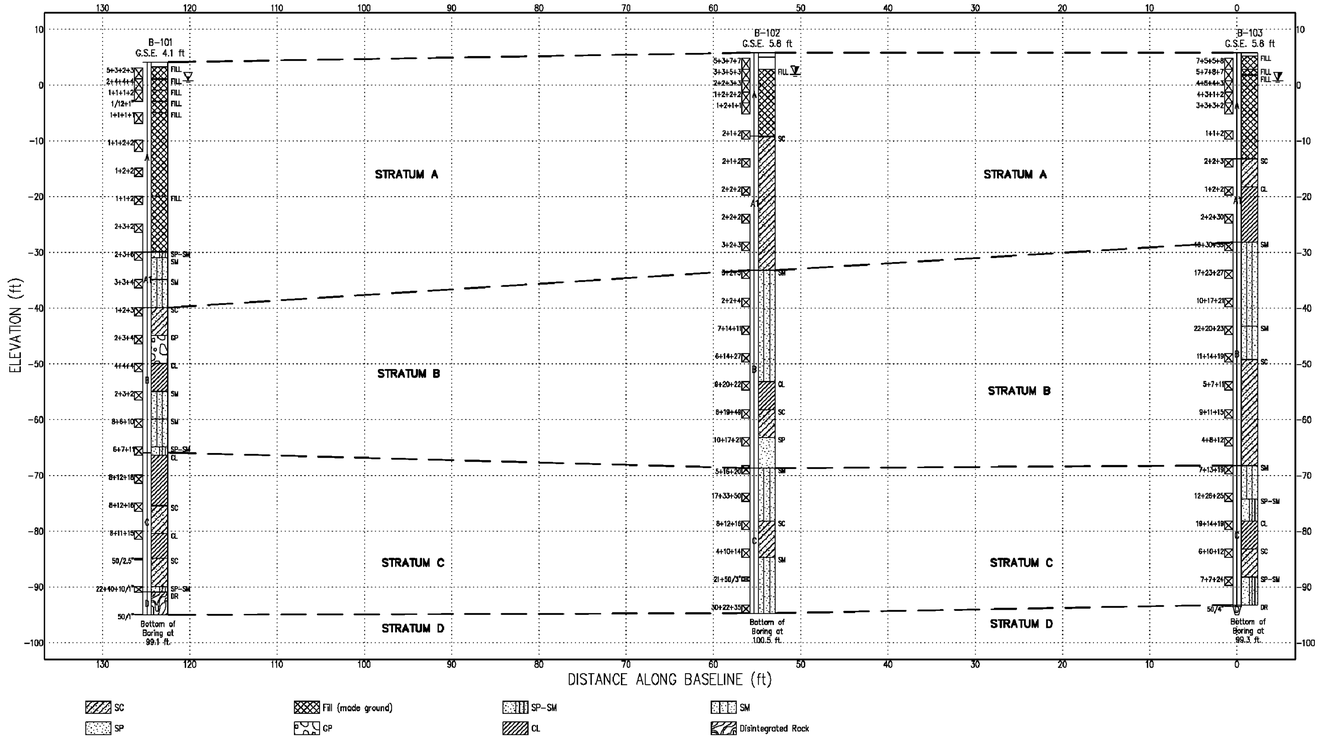
SHEET 3 OF 65

C001

IF SHEET IS LESS THAN (22" x 34") IT IS A REDUCED PRINT, SCALE REDUCED ACCORDINGLY

DRAWFORM REVISION: 7 AUGUST 2009

FILE NAME: P:\CIB\project_files\z_CUBA\navsta guantanamo bay\h\r605141\wharf bravo structural repairs-1295318\working technical files\Drawing\C001 GENERAL NOTES, LEGENDS AND ABBREVIATIONS.dwg LAYOUT NAME: C001 GENERAL NOTES LEGENDS AND ABBREVIATIONS PLOTTED: Friday, June 10, 2016 - 12:31pm USER: ricardo.palma

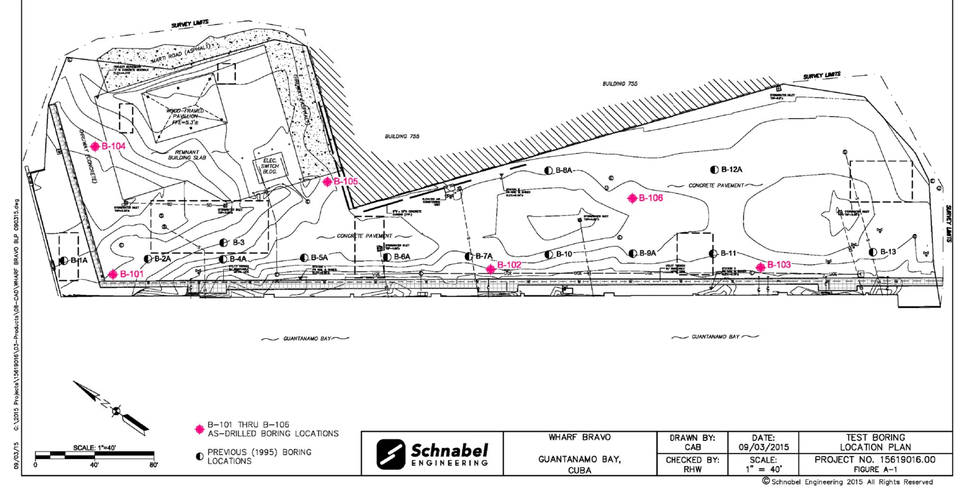


Schnabel ENGINEERING	WHARF BRAVO GUANTANAMO BAY, CUBA	DRAWN BY: CAB CHECKED BY: RHW	DATE: 09/03/2015 SCALE: AS SHOWN	SUBSURFACE CROSS SECTION PROJECT NO. 15619016.00 FIGURE A-2

© Schnabel Engineering 2015 All Rights Reserved

09/03/15 G:\2015 Projects\15619016\03-Products\08-CAD\WHARF BRAVO XS 090315.dwg

1 SOIL BORING
Scale: NONE



B-101 THRU B-106 AS-DRILLED BORING LOCATIONS

PREVIOUS (1995) BORING LOCATIONS

Schnabel ENGINEERING	WHARF BRAVO GUANTANAMO BAY, CUBA	DRAWN BY: CAB CHECKED BY: RHW	DATE: 09/03/2015 SCALE: 1" = 40'	TEST BORING LOCATION PLAN PROJECT NO. 15619016.00 FIGURE A-1

© Schnabel Engineering 2015 All Rights Reserved

09/02/15 G:\2015 Projects\15619016\03-Products\08-CAD\WHARF BRAVO SUP 090315.dwg

IF SHEET IS LESS THAN (22" x 34") IT IS A REDUCED PRINT, SCALE REDUCED ACCORDINGLY

DES	DATE	APPR	DESCRIPTION	SYM

NAVFAC

SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC / B.L.T.L.

ACTIVITY ---

SATISFACTORY TO DATE ---

DES RP DRW RP CHK JF

PROJECT MANAGER E. GALLANT

IPT TECH. BRANCH HEAD M. JOHNSON

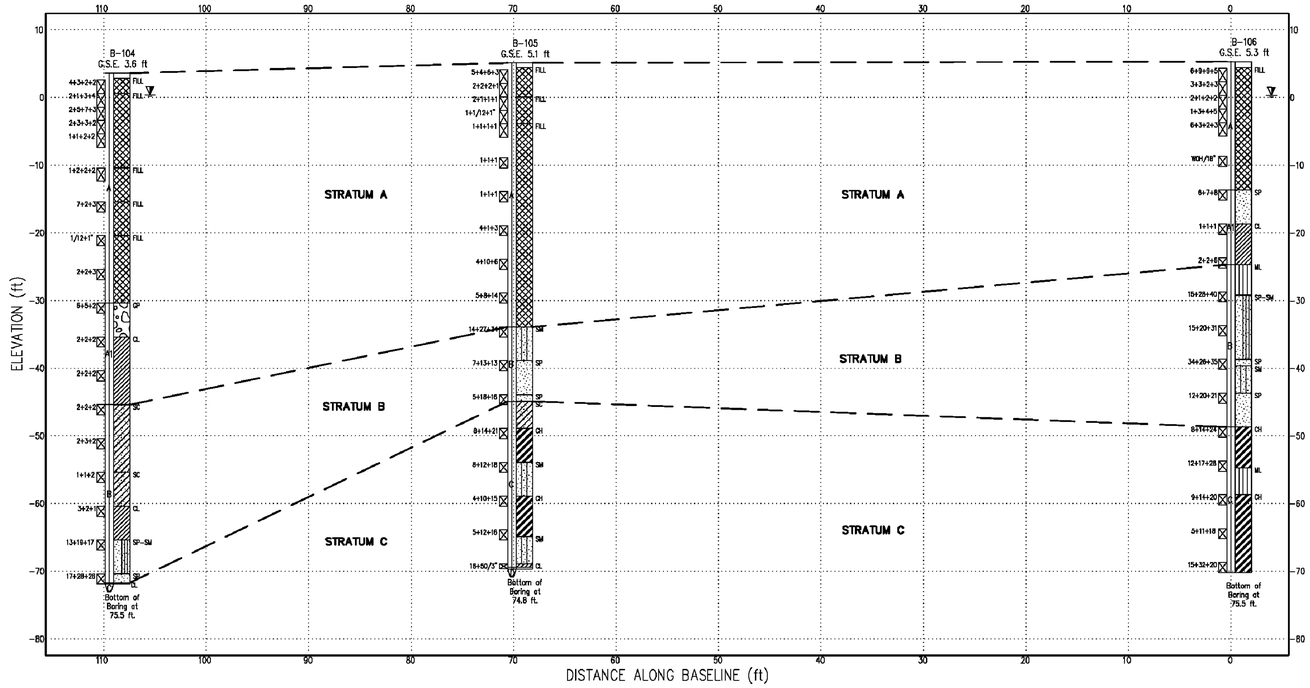
CHIEF ENG/ARCH (CORE) J. FRANK

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST
IPT SOUTH ATLANTIC
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL AIR STATION JACKSONVILLE
NAVSTA GUANTANAMO BAY
GUANTANAMO BAY, CUBA
WHARF BRAVO STRUCTURAL REPAIRS
GEOTECHNICAL DATA

SCALE: NONE
EPROJECT NO.: 1295318
CONSTR. CONTR. NO. N69450-XX-C-XXXX
NAVFAC DRAWING NO. 15081050
SHEET 4 OF 67
C002

DRAWFORM REVISION: 7 AUGUST 2009

FILE NAME: P:\CIB\project_files\z_CUBA\navsta guantanamo bay(hjr60514)\wharf bravo structural repairs-1295318\working technical files\Drawings\C002 OVERALL PROJECT MAP.dwg LAYOUT NAME: C002 OVERALL PROJECT MAP PLOTTED: Thursday, June 09, 2016 - 2:56pm USER: ricardo.palma



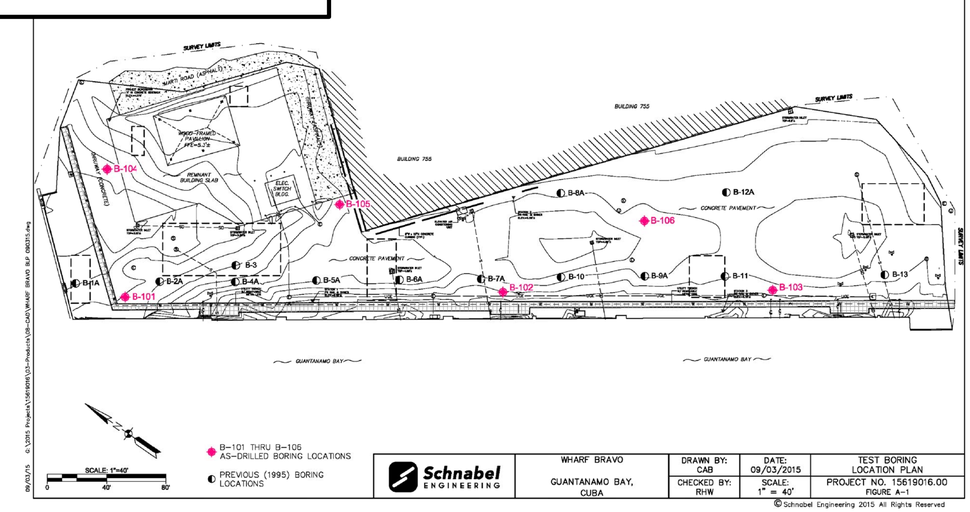
Schnabel ENGINEERING	WHARF BRAVO GUANTANAMO BAY, CUBA	DRAWN BY: CAB	DATE: 09/03/2015	SUBSURFACE CROSS SECTION
		CHECKED BY: RHW	SCALE: AS SHOWN	PROJECT NO. 15619016.00 FIGURE A-3

© Schnabel Engineering 2015 All Rights Reserved

09/03/15 G:\2015 Projects\15619016\03-Products\08-CAD\WHARF BRAVO XS 090315.dwg

2 SOIL BORING

Scale: NONE



Schnabel ENGINEERING	WHARF BRAVO GUANTANAMO BAY, CUBA	DRAWN BY: CAB	DATE: 09/03/2015	TEST BORING LOCATION PLAN
		CHECKED BY: RHW	SCALE: 1" = 40'	PROJECT NO. 15619016.00 FIGURE A-1

© Schnabel Engineering 2015 All Rights Reserved

09/03/15 G:\2015 Projects\15619016\03-Products\08-CAD\WHARF BRAVO BLP 090315.dwg

SYM	DESCRIPTION	DATE	APPR
---	---	---	---

NAVFAC

SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC / B.L.T.L.

ACTIVITY

SATISFACTORY TO DATE ---

DES RP DRW RP CHK JF

PROJECT MANAGER E. GALLANT

IPT TECH. BRANCH HEAD M. JOHNSON

CHIEF ENG/ARCH (CORE) J. FRANK

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
IPT SOUTH ATLANTIC
NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST
NAVAL AIR STATION JACKSONVILLE
NAVSTA GUANTANAMO BAY
GUANTANAMO BAY, CUBA

WHARF BRAVO STRUCTURAL REPAIRS

GEOTECHNICAL DATA

SCALE: NONE

EPROJECT NO.: 1295318

CONSTR. CONTR. NO. N69450-XX-C-XXXX

NAVFAC DRAWING NO. 15081051

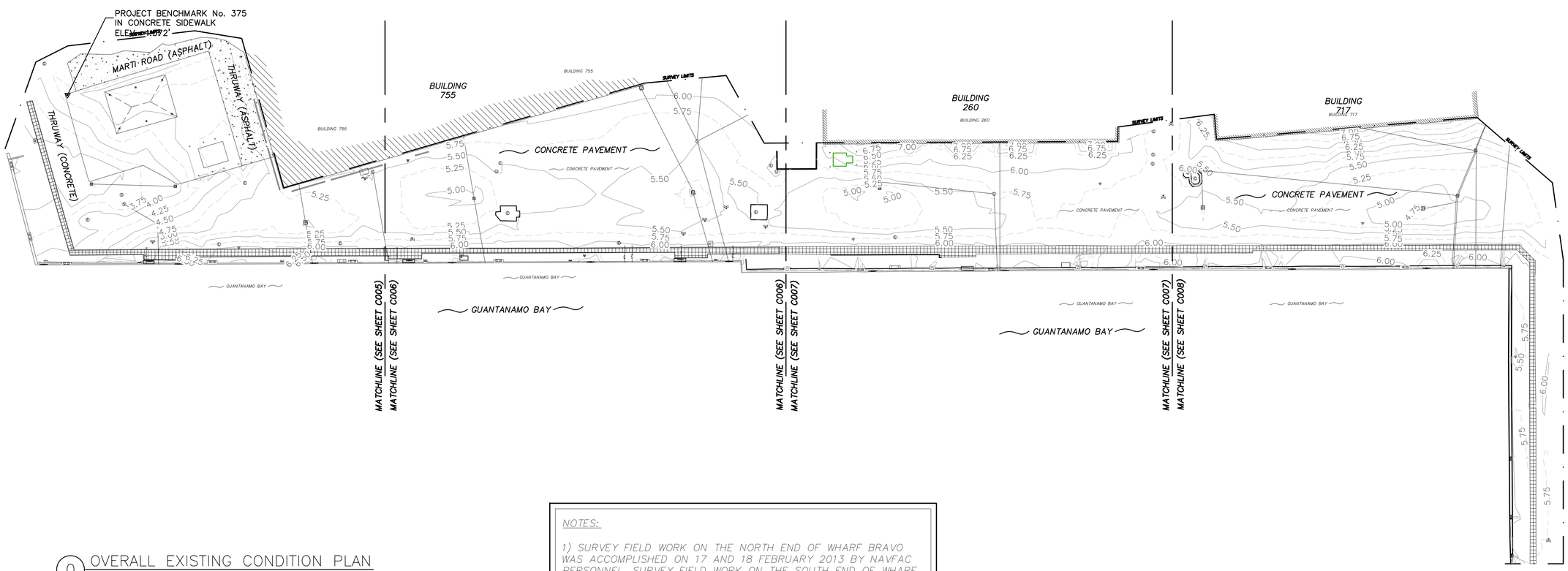
SHEET 5 OF 67

C003

FILE NAME: P:\CBL\project_files\z_CUBA\navsta guantanamo bay\hh60514\wharf bravo structural repairs-1295318\working technical files\Drawings\C003 GEOTECHNICAL DATA.dwg LAYOUT NAME: C003 GEOTECHNICAL DATA PLOTTED: Thursday, June 09, 2016 - 2:57pm USER: ricardo.palmo

SHEET FORMAT IS 22" X 34". IF PRINTED SHEET IS NOT 22" X 34", THEN IT IS NOT TO SCALE

DRAWFORM REVISION: 7 AUGUST 2009



0 OVERALL EXISTING CONDITION PLAN

Scale: 1" = 40'-0"

NOTES:

1) SURVEY FIELD WORK ON THE NORTH END OF WHARF BRAVO WAS ACCOMPLISHED ON 17 AND 18 FEBRUARY 2013 BY NAVFAC PERSONNEL. SURVEY FIELD WORK ON THE SOUTH END OF WHARF BRAVO WAS ACCOMPLISHED ON 20 AND 21 MARCH 2016 BY NAVFAC PERSONNEL.

2) PROJECT BENCHMARK DATA SHOWN WAS OBTAINED FROM PROJECT 'GUANTANAMO BAY BENCH MARKS' DATED 14 DECEMBER 1988. DESIGNATED AS POINT NUMBER '375' WITH AN ELEVATION OF 4.372 FEET AS REFERENCED TO THE BENCHMARK DATUM, MEAN SEA LEVEL OF 0.000 FEET.

3) THE PURPOSE OF THIS SURVEY WAS TO COLLECT SURFACE FEATURES FOR THE USE IN A WHARF EXTENSION PROJECT. NO SUBSURFACE DATA WAS COLLECTED AT THE TIME OF THIS SURVEY. THE ELEVATION OF THE PROJECT BENCHMARK WAS NOT VERIFIED.

GRAPHIC SCALE

1"=40' 0' 40' 80' 120' 160' 200'

IF SHEET IS LESS THAN (22" x 34") IT IS A REDUCED PRINT, SCALE REDUCED ACCORDINGLY

SYM	DESCRIPTION	DATE	APPR
---	---	---	---

NAVFAC

SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY ----

SATISFACTORY TO DATE ----

DES JWF DRW JWF CHK JWF

PROJECT MANAGER E. GALLANT

IPT TECH. BRANCH HEAD M. JOHNSON

CHIEF ENG/ARCH (CORE) J. FRANK

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
IPT SOUTH ATLANTIC

NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST
NAVAL AIR STATION JACKSONVILLE

NAVSTA GUANTANAMO BAY

GUANTANAMO BAY, CUBA

WHARF BRAVO STRUCTURAL REPAIRS

OVERALL EXISTING CONDITIONS PLAN

SCALE: AS SHOWN

EPROJECT NO.: 1295318

CONTR. CONTR. NO. N69450-XX-C-XXXX

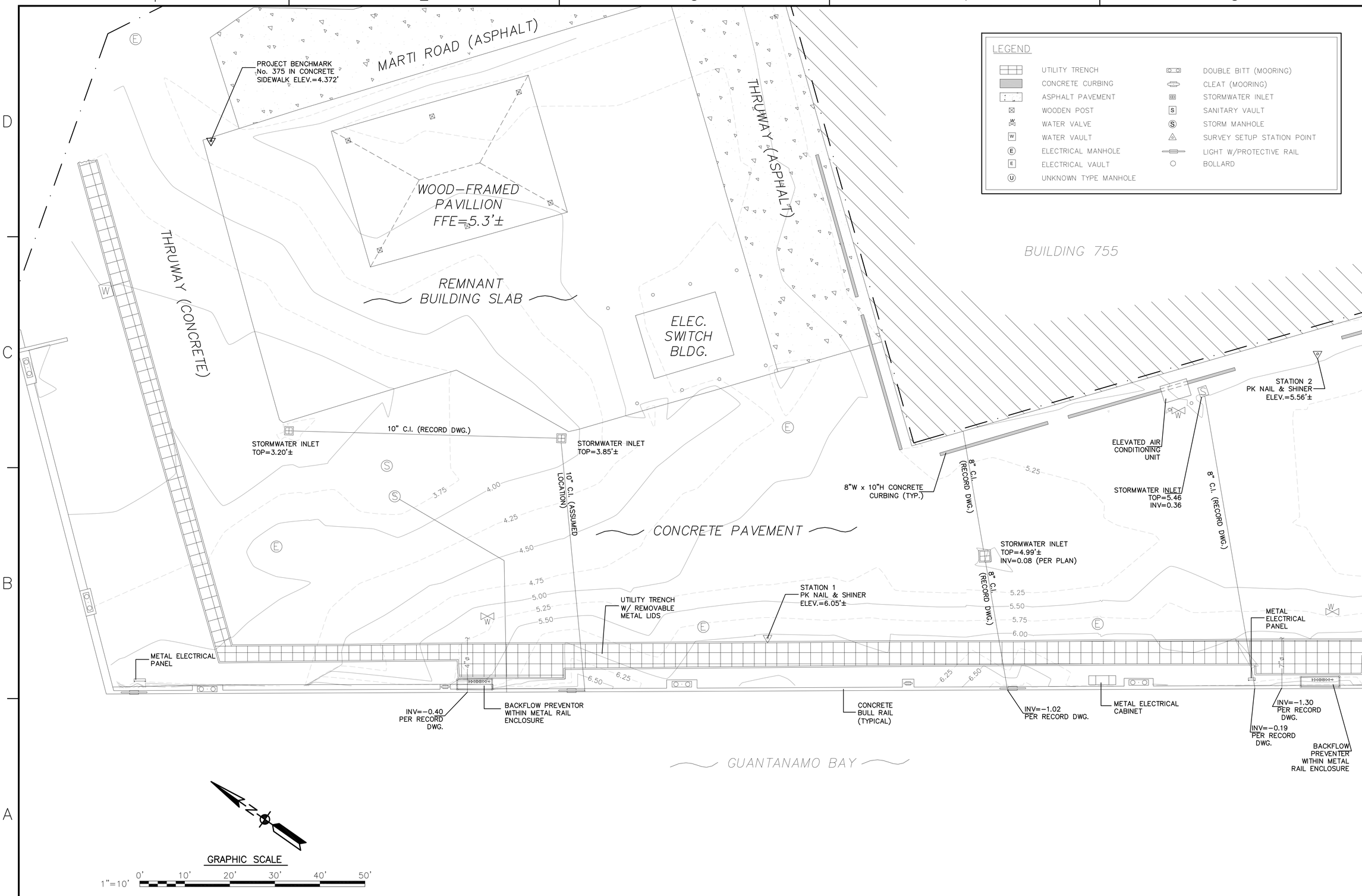
NAVFAC DRAWING NO. 15081052

SHEET 6 OF 67

C004

DRAWFORM REVISION: 5 APRIL 2012

FILE NAME: P:\CIRL\project_files\z_CUBA\navsta guantanamo bay\h16514\wharf bravo structural repairs-1295318\working technical files\Drawings\C004 OVERALL EXISTING CONDITIONS PLAN.dwg LAYOUT NAME: C004 OVERALL EXISTING CONDITIONS PLAN PLOTTED: Thursday, June 09, 2016 - 2:58pm USER: ricardo.palmo



IF SHEET IS LESS THAN (22" x 34") IT IS A REDUCED PRINT, SCALE REDUCED ACCORDINGLY

NO.	DESCRIPTION	DATE	APPR.
---	---	---	---

SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY ----

SATISFACTORY TO DATE ----

DES JWF DRW JWF CHK JWF

PROJECT MANAGER E. GALLANT

IPT TECH. BRANCH HEAD M. JOHNSON

CHIEF ENG/ARCH (CORE) J. FRANK

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
IPT SOUTH ATLANTIC

NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST
NAVAL AIR STATION JACKSONVILLE

NAVSTA GUANTANAMO BAY

GUANTANAMO BAY, CUBA

WHARF BRAVO STRUCTURAL REPAIRS

EXISTING CONDITIONS – NORTH

SCALE: AS SHOWN

EPROJECT NO.: 1295318

CONSTR. CONTR. NO. N69450-XX-C-XXXX

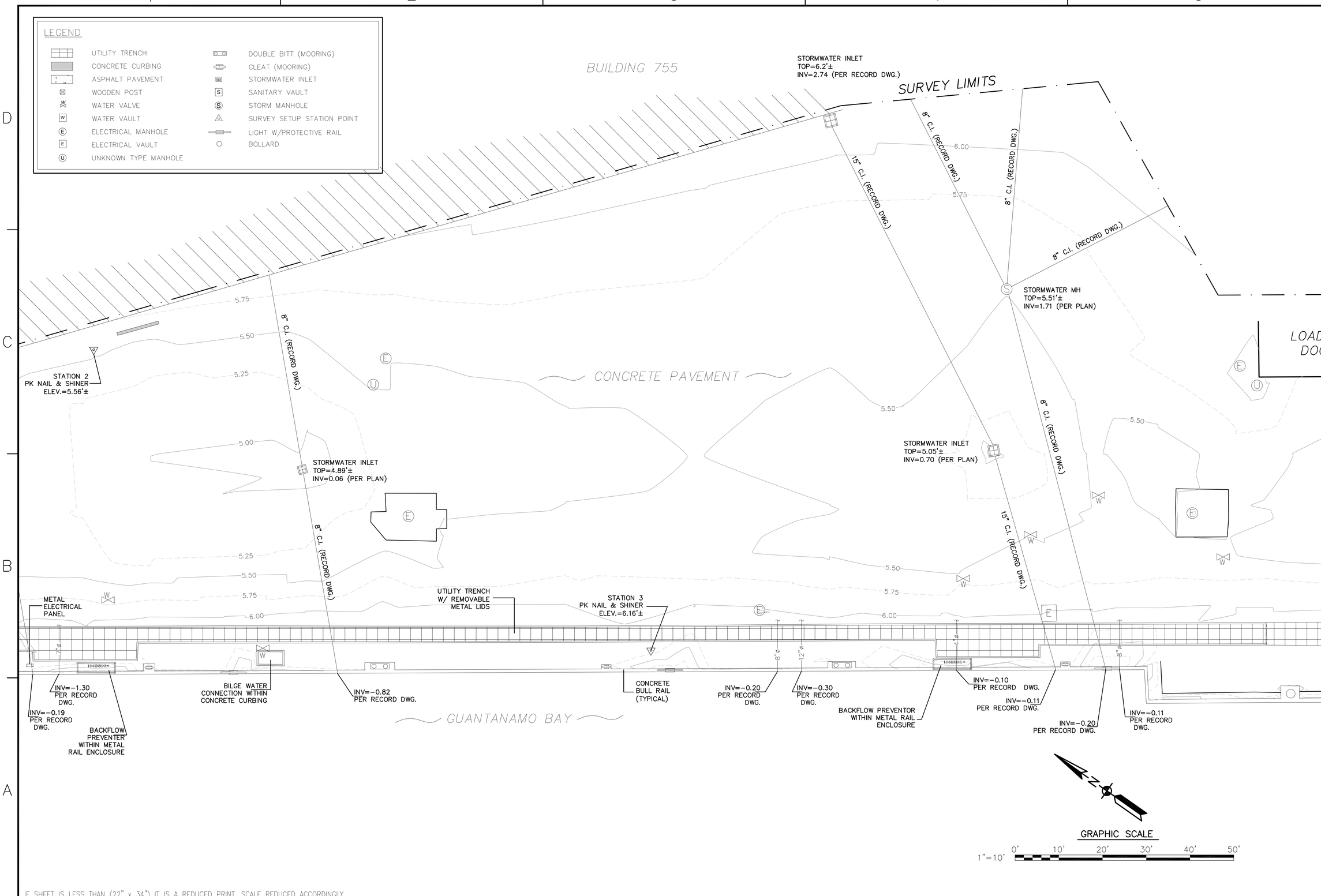
NAVFAC DRAWING NO. 15081053

SHEET 7 OF 65

C005

DRAWFORM REVISION: 5 APRIL 2012

FILE NAME: P:\CUBA\project_files\z_CUBA\navsta guantanamo bay\h\r60514\wharf bravo structural repairs-1295318\working technical files\Drawings\C005 EXISTING CONDITIONS - NORTH.dwg LAYOUT NAME: C005 EXISTING CONDITIONS - NORTH PLOTTED: Friday, June 10, 2016 - 12:32pm USER: ricardo.palmo



IF SHEET IS LESS THAN (22" x 34") IT IS A REDUCED PRINT, SCALE REDUCED ACCORDINGLY

SYM	DESCRIPTION	DATE	APPR
---	---	---	---

NAVFAC

SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE ----

DES JWF DRW JWF CHK JWF

PROJECT MANAGER E. GALLANT

IPT TECH. BRANCH HEAD M. JOHNSON

CHIEF ENG/ARCH (CORE) J. FRANK

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
IPT SOUTH ATLANTIC

NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST
NAVAL AIR STATION JACKSONVILLE

NAVSTA GUANTANAMO BAY

GUANTANAMO BAY, CUBA

WHARF BRAVO STRUCTURAL REPAIRS

EXISTING CONDITIONS – NORTH

SCALE: AS SHOWN

EPROJECT NO.: 1295318

CONSTR. CONTR. NO.
N69450-XX-C-XXXX

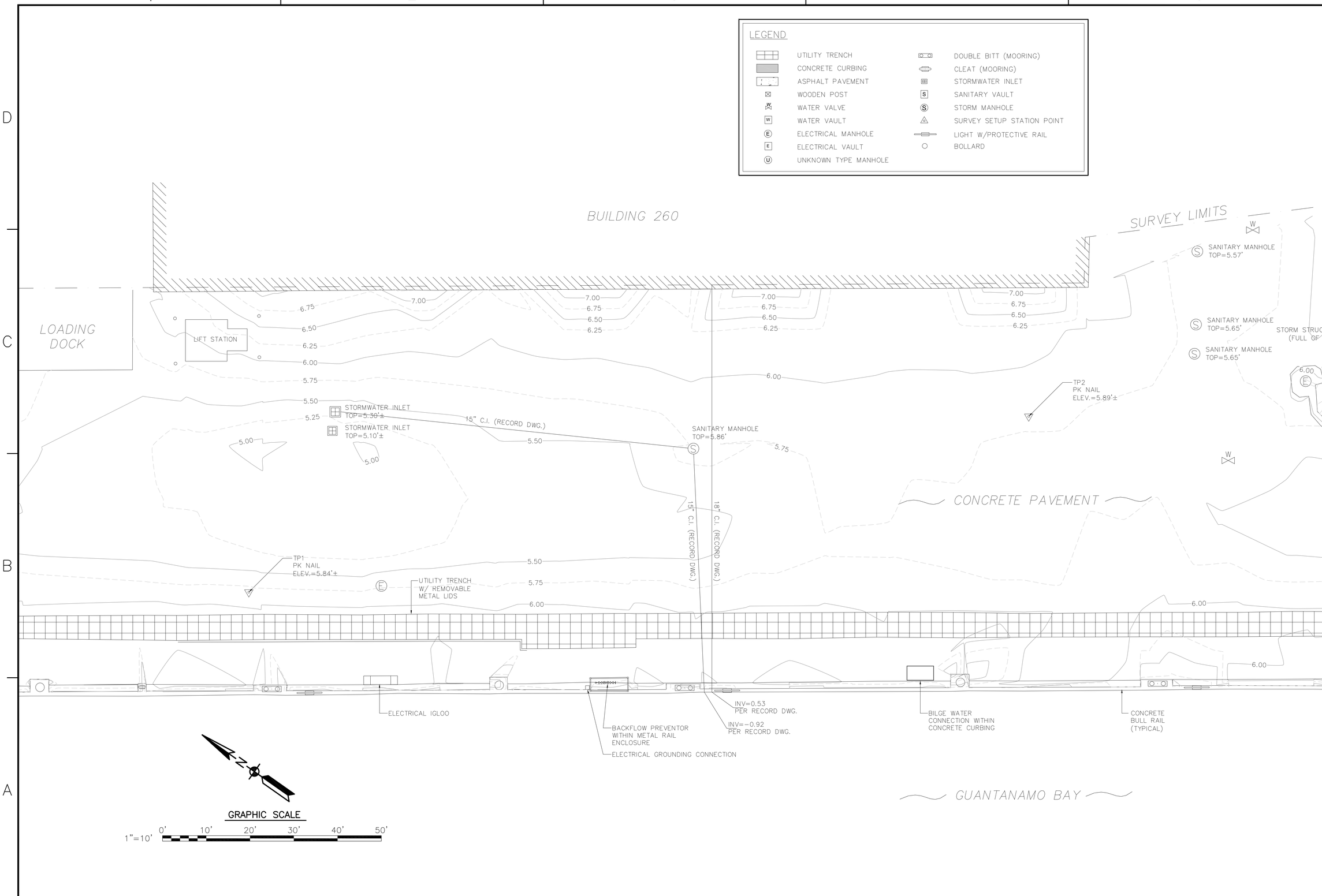
NAVFAC DRAWING NO.
15081054

SHEET 8 OF 65

C006

DRAWFORM REVISION: 5 APRIL 2012

FILE NAME: P:\CUBA\project_files\z_CUBA\navsta guantanamo bay\h\rf60514\wharf bravo structural repairs-1295318\working technical files\Drawings\C006 EXISTING CONDITIONS - NORTH.dwg LAYOUT NAME: C006 EXISTING CONDITIONS - NORTH PLOTTED: Friday, June 10, 2016 - 12:33pm USER: ricardo.palmo



SYM	DESCRIPTION	DATE	APPR
---	---	---	---

NAVFAC

SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC / B.L.T.L.

ACTIVITY

SATISFACTORY TO DATE

DES JW | DRW JW | CHK JF

PM/DM E. GALLANT

BRANCH MANAGER M. JOHNSON

CHIEF ENG/ARCH J. FRANK

FIRE PROTECTION ----

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
IPT SOUTH ATLANTIC
NAVSTA GUANTANAMO BAY

NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST
NAVAL AIR STATION JACKSONVILLE
GUANTANAMO BAY, CUBA

WHARF BRAVO STRUCTURAL REPAIRS

EXISTING CONDITIONS – SOUTH

SCALE: AS SHOWN

EPROJECT NO.: 1295318

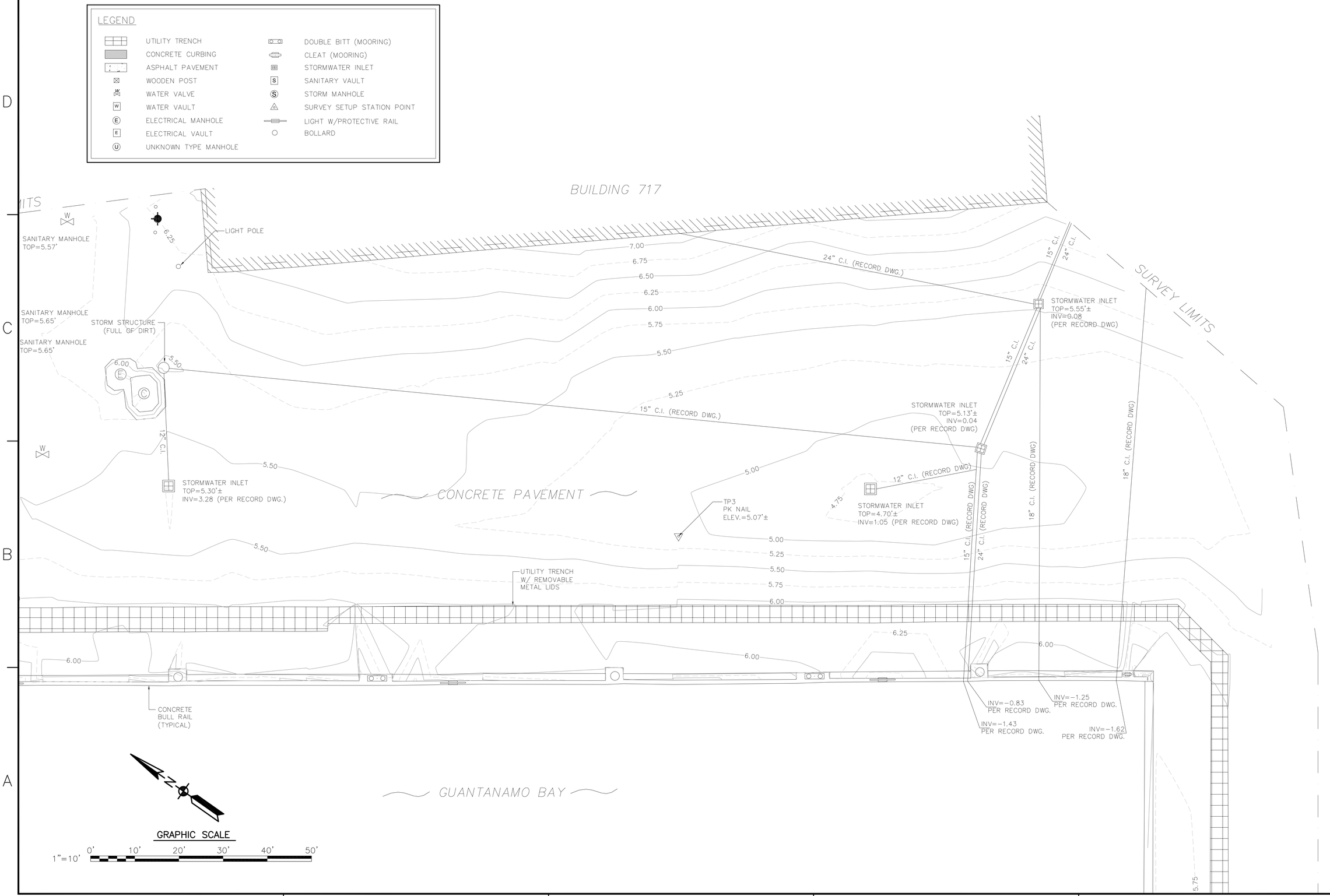
CONSTR. CONTR. NO.: N69450-XX-C-XXXX

NAVFAC DRAWING NO.: 15081055

SHEET 9 OF 65

C007

DRAWFORM REVISION: 7 AUGUST 2009



SYM	DESCRIPTION	DATE	APPR
---	---	---	---
---	---	---	---
---	---	---	---
---	---	---	---
---	---	---	---
---	---	---	---
---	---	---	---

NAVFAC

SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC / B.L.T.L.

ACTIVITY

SATISFACTORY TO DATE

DES	JW	DRW	JW	CHK	JF
PM/DM	E. GALLANT				
BRANCH MANAGER	M. JOHNSON				
CHIEF ENG/ARCH	J. FRANK				
FIRE PROTECTION	-------				

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
PT. SOUTH ATLANTIC

NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST
NAVAL AIR STATION JACKSONVILLE

NAVSTA GUANTANAMO BAY

GUANTANAMO BAY, CUBA

WHARF BRAVO STRUCTURAL REPAIRS

EXISTING CONDITIONS – SOUTH

SCALE: AS SHOWN

EPROJECT NO.: 1295318

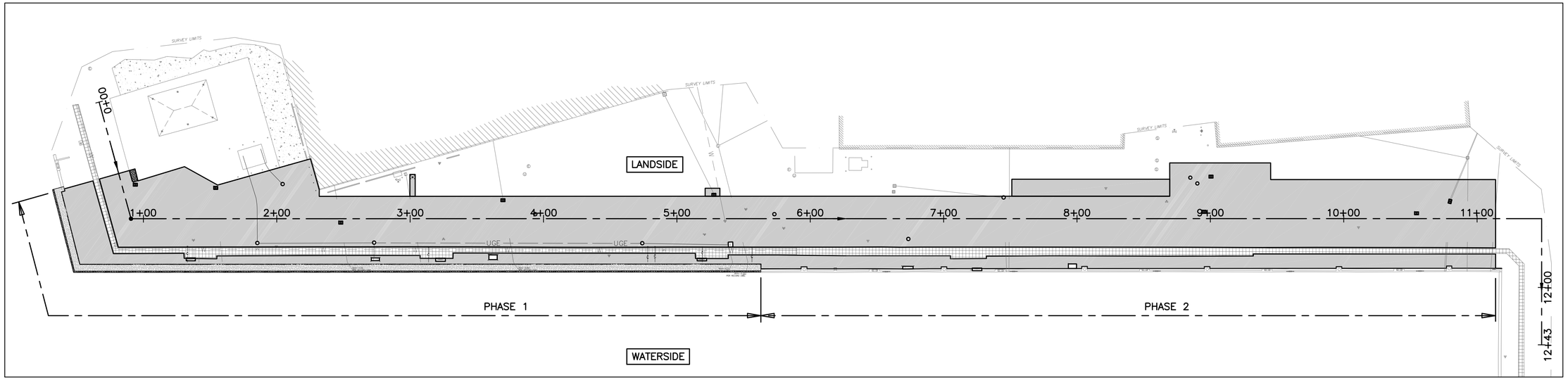
CONTR. CONTR. NO.: N69450-XX-C-XXXX

NAVFAC DRAWING NO.: 15081056

SHEET 10 OF 65

C008

DRAWFORM REVISION: 7 AUGUST 2009



0 PHASING PLAN
Scale: 1" = 40'-0"

NOTES:

1. CONSTRUCTION ACTIVITIES ON WHARF BRAVO SHALL NOT IMPACT BERTHING AT WHARF TANGO AND CHARLIE.
2. LOCATION FOR THE CONTRACTOR LAYDOWN ARE WILL BE PROVIDED DURING THE SITE VISIT.
3. ALL WORK IN ONE PHASE MUST BE COMPLETED AND ACCEPTED BY THE GOVERNMENT PRIOR TO BEGINNING WORK IN THE NEXT PHASE.
4. INACTIVE PHASE OF PROJECT SHALL BE AVAILABLE FOR BERTHING AND DECK OPERATION.

PHASE	DESCRIPTION	COMMENTS
1	FROM STA 0+56 TO STA 5+63	SEE NOTES
2	FROM STA 5+63 TO STA 11+36	SEE NOTES

GRAPHIC SCALE
1"=40' 0' 40' 80' 120' 160' 200'

SYM	DESCRIPTION	DATE	APPR
---	---	---	---

NAVFAC

SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC / B.L.T.L.

ACTIVITY

SATISFACTORY TO DATE

DES RP DRW RP CHK JF
PM/OM E. GALLANT
BRANCH MANAGER M. JOHNSON
CHIEF ENG/ARCH J. FRANK
FIRE PROTECTION

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST
PT. SOUTH ATLANTIC
NAVAL AIR STATION JACKSONVILLE
NAVSTA GUANTANAMO BAY
GUANTANAMO BAY, CUBA

WHARF BRAVO STRUCTURAL REPAIRS

PHASING PLAN

SCALE: AS SHOWN
EPROJECT NO.: 1295318
CONSTR. CONTR. NO. N69450-XX-C-XXXX
NAVFAC DRAWING NO. 15081057
SHEET 11 OF 65

C009

DRAWFORM REVISION: 7 AUGUST 2009

EXISTING UTILITY TRENCH (SOUTH END)

DETERIORATED CONCRETE PAVEMENT

DETERIORATED CONCRETE PAVEMENT

EXISTING STORM INLET (SOUTH END)

EXIST. CONCRETE BULLRAIL (BROKEN)

EXISTING STORM INLET (SOUTH END)

DETERIORATED CONCRETE PAVEMENT

EXISTING UTILITY TRENCH (NORTH VIEW)

DETERIORATED CONCRETE PAVEMENT

EXIST. MH AND STORM INLET (CLOG)

EXISTING STORM INLET

EXISTING UTILITY TRENCH

ELECTRICAL MANHOLE

ELECTRICAL MANHOLE (NORTH VIEW)

STORM INLET

ELECTRICAL MANHOLE

STORM INLET

STORM INLET

UTILITY TRENCH

STORM INLET (NORTH END)

EXISTING SEPTIC TANK

ELECTRICAL MANHOLE (NORTH END)

CONCRETE CAP (NORTH END)

STORM INLET

WATER VAULT

SYM	DESCRIPTION	DATE	APPR
---	---	---	---

NAVFAC

SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC / B.L.T.L.

ACTIVITY

SATISFACTORY TO DATE

DES	RP	DRW	RP	CHK	JF

PM/DM: E. GALLANT

BRANCH MANAGER: M. JOHNSON

CHIEF ENG/ARCH: J. FRANK

FIRE PROTECTION

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
IPT SOUTH ATLANTIC

NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST
NAVAL AIR STATION JACKSONVILLE

NAVSTA GUANTANAMO BAY
GUANTANAMO BAY, CUBA

WHARF BRAVO STRUCTURAL REPAIRS

SITE PHOTOGRAPHS

SCALE: NONE

EPROJECT NO.: 1295318

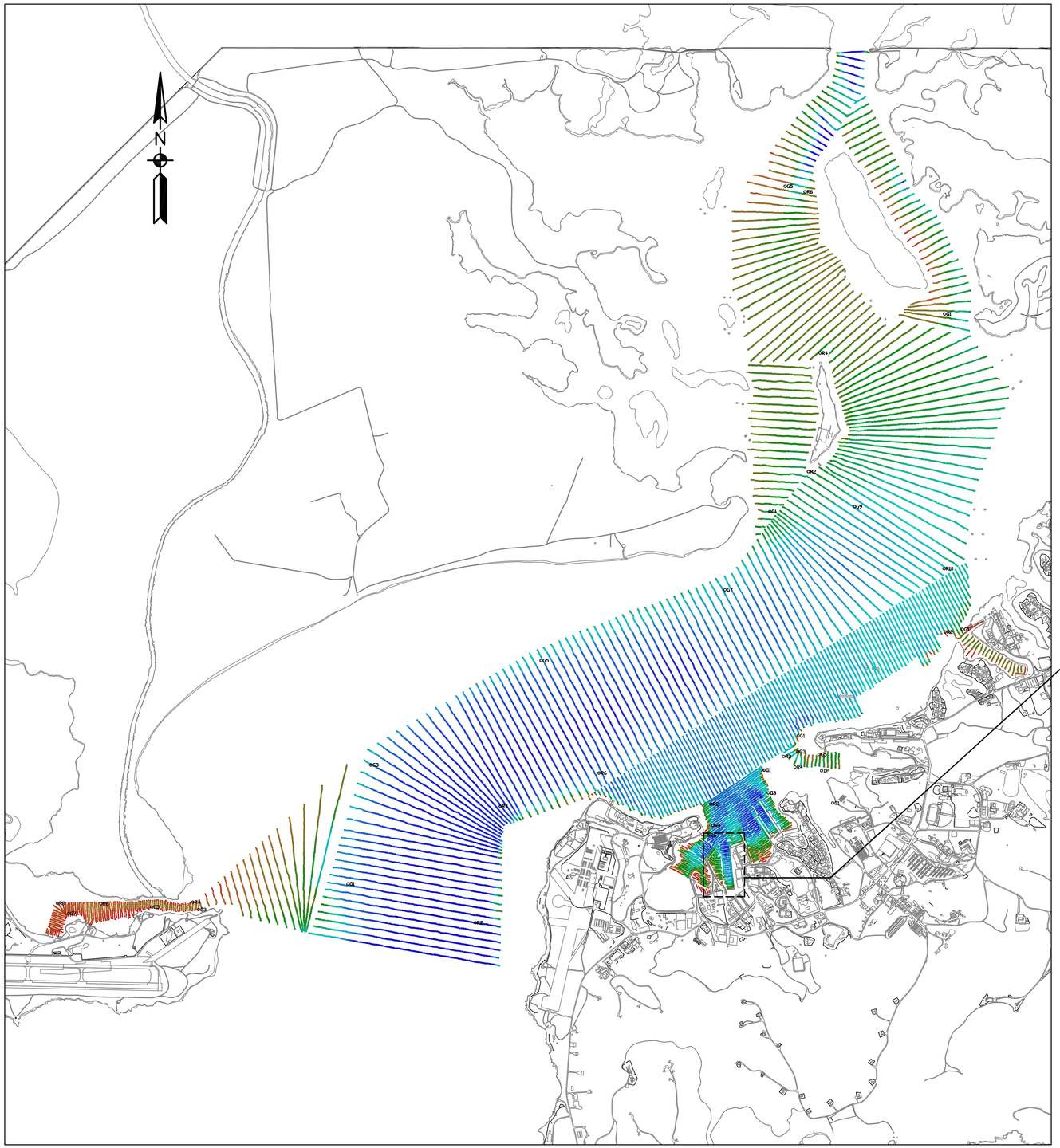
CONSTR. CONTR. NO. N69450-XX-C-XXXX

NAVFAC DRAWING NO. 15081058

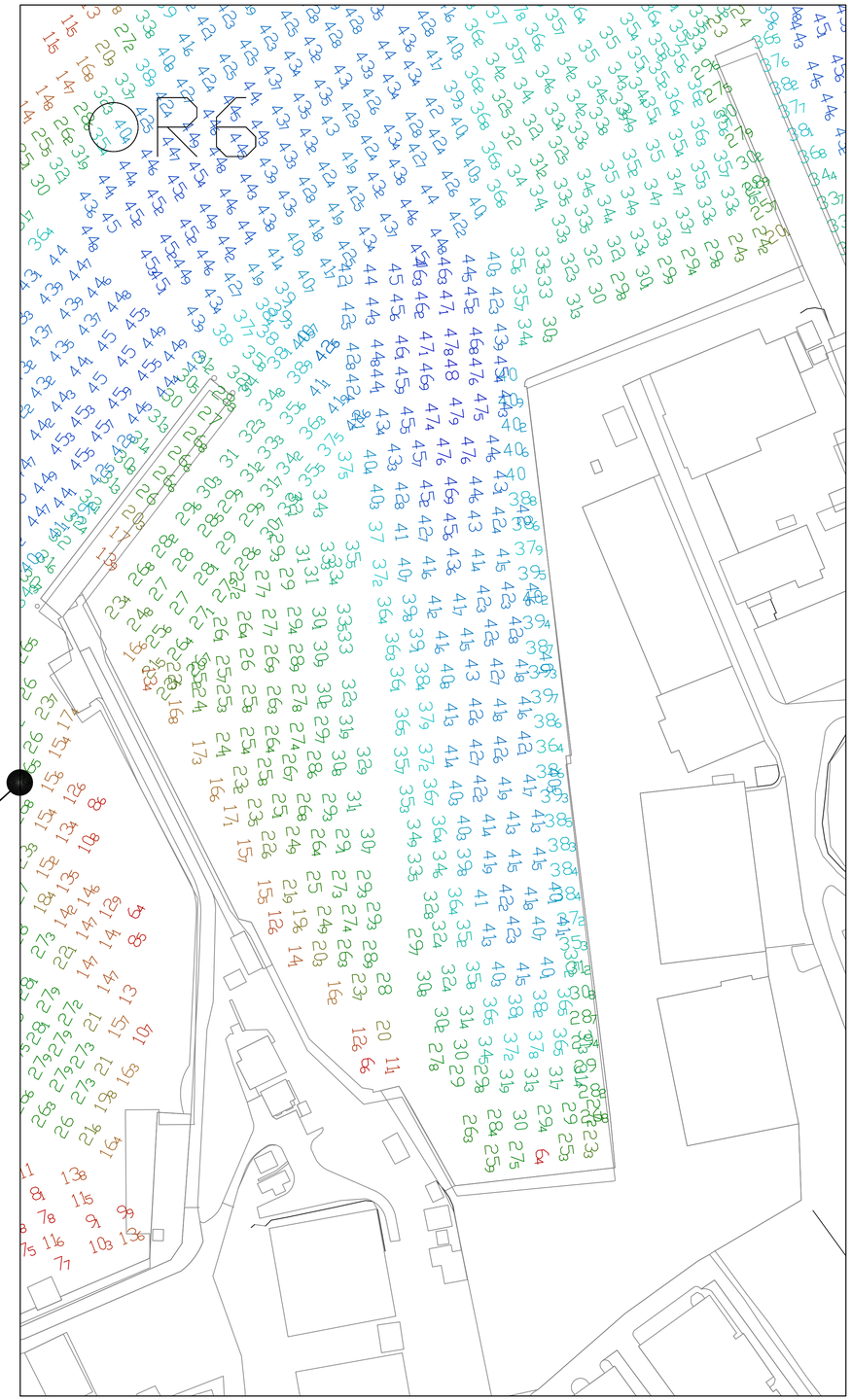
SHEET 12 OF 65

C010

DRAWFORM REVISION: 7 AUGUST 2009



1 BATHEYMETRIC DATA
Scale: N.T.S



SYM	DESCRIPTION	DATE	APPR

NAVFAC

SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC / B.L.T.L.

ACTIVITY

SATISFACTORY TO DATE

DES	JM	DRW	RP	CHK	JF

PM/DM	E. GALLANT
BRANCH MANAGER	M. JOHNSON
CHIEF ENG/ARCH	J. FRANK
FIRE PROTECTION	

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
IPT SOUTH ATLANTIC
NAVSTA GUANTANAMO BAY

NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST
NAVAL AIR STATION JACKSONVILLE
GUANTANAMO BAY, CUBA

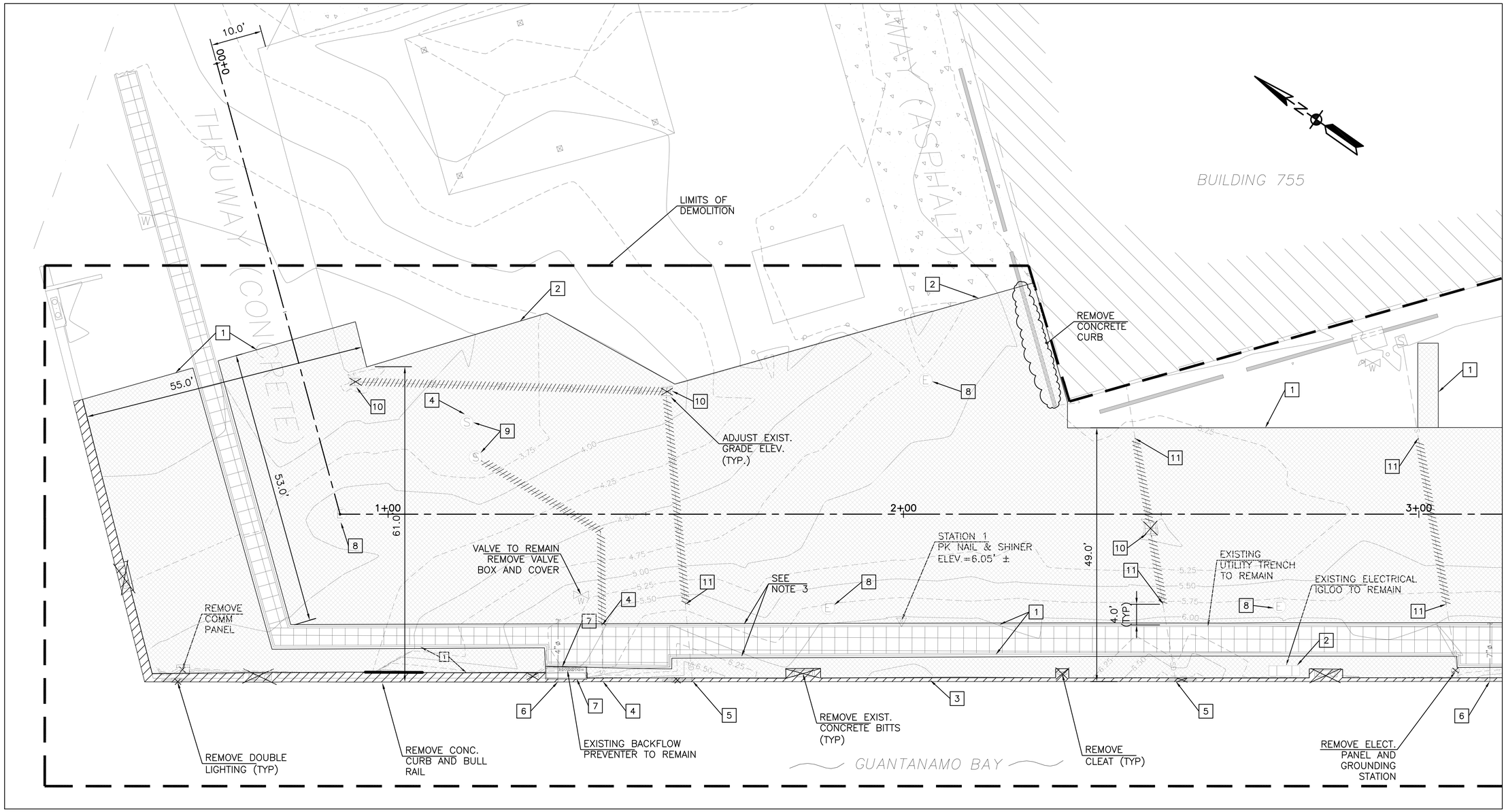
WHARF BRAVO STRUCTURAL REPAIRS

2014 BATHEYMETRIC DATA (WHARFS BRAVO–TANGO)

SCALE: AS SHOWN
EPROJECT NO.: 1295318
CONSTR. CONTR. NO. N69450–XX–C–XXXX
NAVFAC DRAWING NO. 15081059
SHEET 13 OF 65

C011

DRAWFORM REVISION: 7 AUGUST 2009



1 DEMOLITION PLAN
Scale: 1" = 10'-0"

NOTES:

1. ALL LIMITS OF DEMOLITION ARE APPROXIMATE.
2. CONTRACTOR TO COORDINATE WITH BASE UTILITIES TO ESTABLISH SCHEDULE OF UTILITY DISCONNECTIONS.
3. PROTECT CONCRETE TRENCH WALL (4½" WIDTH) ON BOTH SIDES.
4. PROTECT ALL MANHOLE AND STRUCTURES DURING CONSTRUCTION UNLESS MARKED FOR DEMOLITION.
5. THE LOCATION, SIZE AND TYPE OF UTILITIES SHOWN ON THE DRAWINGS ARE FROM RECORD DRAWINGS. THE CONTRACTOR IS RESPONSIBLE VERIFY THE LOCATION AND INFORMATION OF EXISTING UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.
6. CONTRACTOR IS RESPONSIBLE TO ESTABLISH NEW SURVEY CONTROL POINTS OUTSIDE OF THE PAVEMENT REMOVAL AREA.

DEMOLITION NOTES:

1. REMOVE REINFORCED CONCRETE PAVEMENT (9–12 INCHES THICK) TO EXISTING PAVEMENT JOINT LINES WITHIN THE LIMITS SHOWN.
2. SAWCUT PAVEMENT 3" OFF ALONG THE LINES INDICATED AND REMOVE TO THE LIMITS SHOWN.
3. REMOVE REINFORCED CONCRETE CURB FLUSH WITH TOP OF CONCRETE CAP BEAM.
4. REMOVE EXISTING ABANDONED UTILITY TO THE NEAREST JOINT AND FILL WITH FLOWABLE FILL TO PERMANENTLY CAP UTILITY LINE.
5. REMOVE EXISTING BULKHEAD CONCRETE TO EXPOSE PIPE.
6. UNKNOWN PIPE. REMOVE EXISTING BULKHEAD CONCRETE TO EXPOSE PIPE. IF PIPE IS ABANDONED, KEY NOTE 4 SHALL APPLY.
7. REMOVE METAL RAILING ENCLOSURE
8. PROTECT ELECTRICAL/ SANITARY STRUCTURES TO REMAIN
9. REMOVE SANITARY MANHOLES AND SEPTIC TANK.
10. REMOVE AND REPLACE STORM INLET STRUCTURE.
11. TEMPORARY PLUG PIPE DURING SOIL STABILIZATION AND CONVEYING UPSTREAM FLOW.

DEMOLISH EXISTING PIPE.

DEMOLISH EXISTING BULL RAIL & CAP. SEE STRUCTURAL DWGS.

DEMOLISH EXISTING CONCRETE PAVEMENT

GRAPHIC SCALE
1"=10' 0' 10' 20' 30' 40' 50'

IF SHEET IS LESS THAN (22" x 34") IT IS A REDUCED PRINT, SCALE REDUCED ACCORDINGLY

MATCHLINE SEE SHEET C101

SYM	DESCRIPTION	DATE	APPR
---	---	---	---

NAVFAC

SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC / B.L.T.L.

ACTIVITY

SATISFACTORY TO DATE ----

DES RP DRW RP CHK JF

PROJECT MANAGER E. GALLANT

IPT TECH. BRANCH HEAD M. JOHNSON

CHIEF ENG/ARCH (CORE) J. FRANK

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST
NAVAL AIR STATION JACKSONVILLE
IPT SOUTH ATLANTIC
NAVSTA GUANTANAMO BAY
GUANTANAMO BAY, CUBA

WHARF BRAVO STRUCTURAL REPAIRS

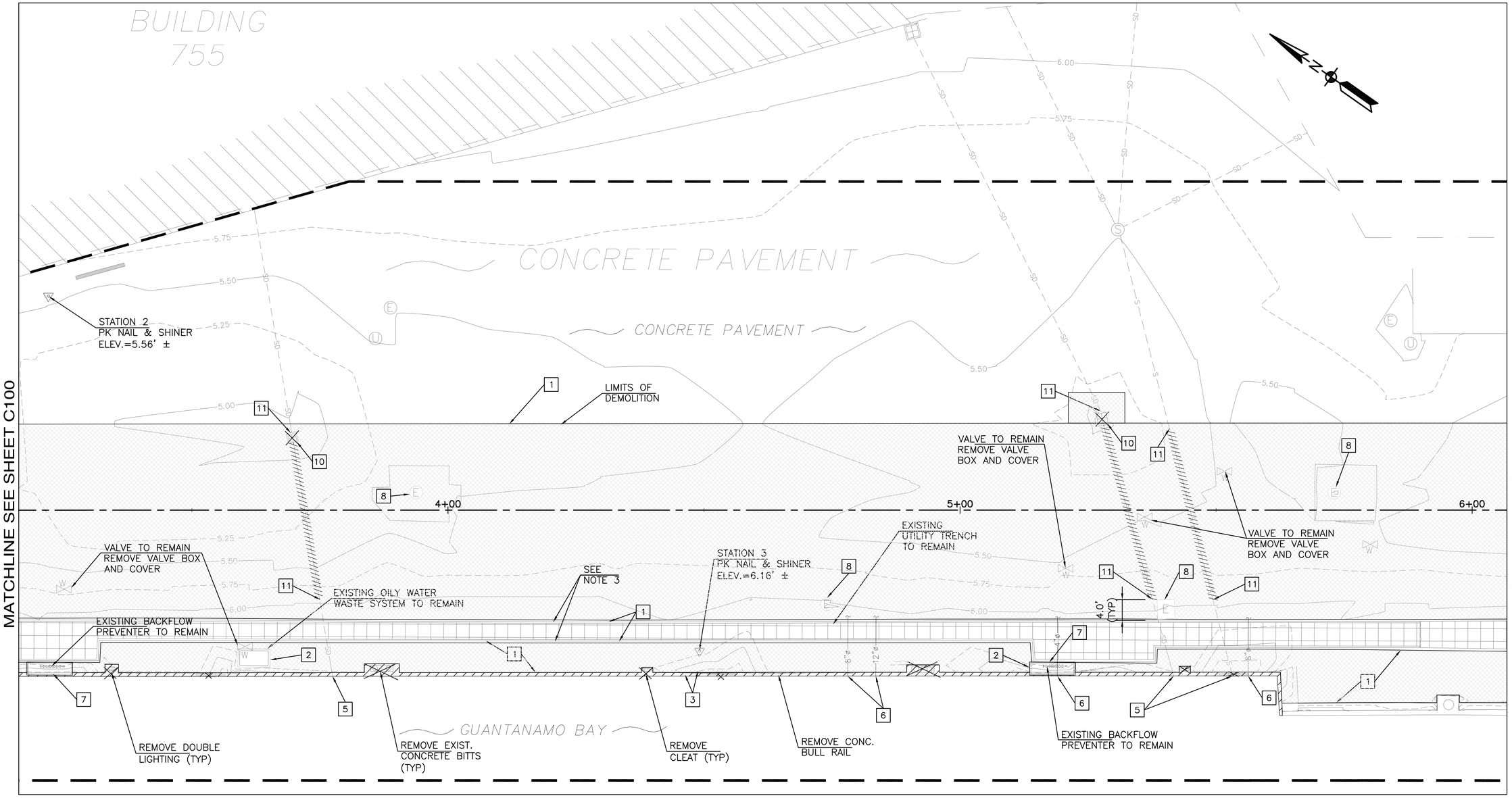
DEMOLITION SITE PLAN – NORTH

SCALE: AS SHOWN
EPROJECT NO.: 1295318
CONSTR. CONTR. NO. N69450–XX–C–XXXX
NAVFAC DRAWING NO. 15081060
SHEET 14 OF 65

C100

DRAWFORM REVISION: 7 AUGUST 2009

FILE NAME: P:\QBL\project_files\z_CUBA\navsta guantanamo bay\h\h60514\wharf bravo structural repairs-1295318\working technical files\Drawings\C100 DEMOLITION SITE PLAN - NORTH.dwg LAYOUT NAME: C100 DEMOLITION SITE PLAN - NORTH PLOTTED: Friday, June 10, 2016 - 12:35pm USER: ricardo.palmo



2 DEMOLITION PLAN

Scale: 1" = 10'-0"

NOTES:

1. ALL LIMITS OF DEMOLITION ARE APPROXIMATE.
2. CONTRACTOR TO COORDINATE WITH BASE UTILITIES TO ESTABLISH SCHEDULE OF UTILITY DISCONNECTIONS.
3. PROTECT CONCRETE TRENCH WALL ($4\frac{1}{2}$" WIDTH) ON BOTH SIDES.
4. PROTECT ALL MANHOLE AND STRUCTURES DURING CONSTRUCTION UNLESS MARKED FOR DEMOLITION.
5. THE LOCATION, SIZE AND TYPE OF UTILITIES SHOWN ON THE DRAWINGS ARE FROM RECORD DRAWINGS. THE CONTRACTOR IS RESPONSIBLE VERIFY THE LOCATION AND INFORMATION OF EXISTING UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.
6. CONTRACTOR IS RESPONSIBLE TO ESTABLISH NEW SURVEY CONTROL POINTS OUTSIDE OF THE PAVEMENT REMOVAL AREA.

DEMOLITION NOTES:

1. REMOVE REINFORCED CONCRETE PAVEMENT (9–12 INCHES THICK) TO EXISTING PAVEMENT JOINT LINES WITHIN THE LIMITS SHOWN.
2. SAWCUT PAVEMENT 3" OFF ALONG THE LINES INDICATED AND REMOVE TO THE LIMITS SHOWN.
3. REMOVE REINFORCED CONCRETE CURB FLUSH WITH TOP OF CONCRETE CAP BEAM.
4. REMOVE EXISTING ABANDONED UTILITY TO THE NEAREST JOINT AND FILL WITH FLOWABLE FILL TO PERMANENTLY CAP UTILITY LINE.
5. REMOVE EXISTING BULKHEAD CONCRETE TO EXPOSE PIPE.
6. UNKNOWN PIPE. REMOVE EXISTING BULKHEAD CONCRETE TO EXPOSE PIPE. IF PIPE IS ABANDONED, KEY NOTE 4 SHALL APPLY.
7. REMOVE METAL RAILING ENCLOSURE
8. PROTECT ELECTRICAL/ SANITARY STRUCTURES TO REMAIN
9. REMOVE SANITARY MANHOLES AND SEPTIC TANK.
10. REMOVE AND REPLACE STORM INLET STRUCTURE.
11. TEMPORARY PLUG PIPE DURING SOIL STABILIZATION AND CONVEYING UPSTREAM FLOW.

DEMOLISH EXISTING PIPE.

DEMOLISH EXISTING BULL RAIL & CAP. SEE STRUCTURAL DWGS.

DEMOLISH EXISTING CONCRETE PAVEMENT

GRAPHIC SCALE

1"=10' 0' 10' 20' 30' 40' 50'

IF SHEET IS LESS THAN (22" x 34") IT IS A REDUCED PRINT, SCALE REDUCED ACCORDINGLY

SYM	DESCRIPTION	DATE	APPR
---	---	---	---

NAVFAC

SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY ----

SATISFACTORY TO DATE ----

DES RP DRW RP CHK JF

PROJECT MANAGER E. GALLANT

IPT TECH. BRANCH HEAD M. JOHNSON

CHIEF ENG/ARCH (CORE) J. FRANK

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
IPT SOUTH ATLANTIC

NAVAL FACILITIES ENGINEERING COMMAND
NAVFAC SOUTHEAST
NAVAL AIR STATION JACKSONVILLE

NAVSTA GUANTANAMO BAY

GUANTANAMO BAY, CUBA

WHARF BRAVO STRUCTURAL REPAIRS

DEMOLITION SITE PLAN – NORTH

SCALE: AS SHOWN

EPROJECT NO. 1295318

CONSTR. CONTR. NO. N69450-XX-C-XXXX

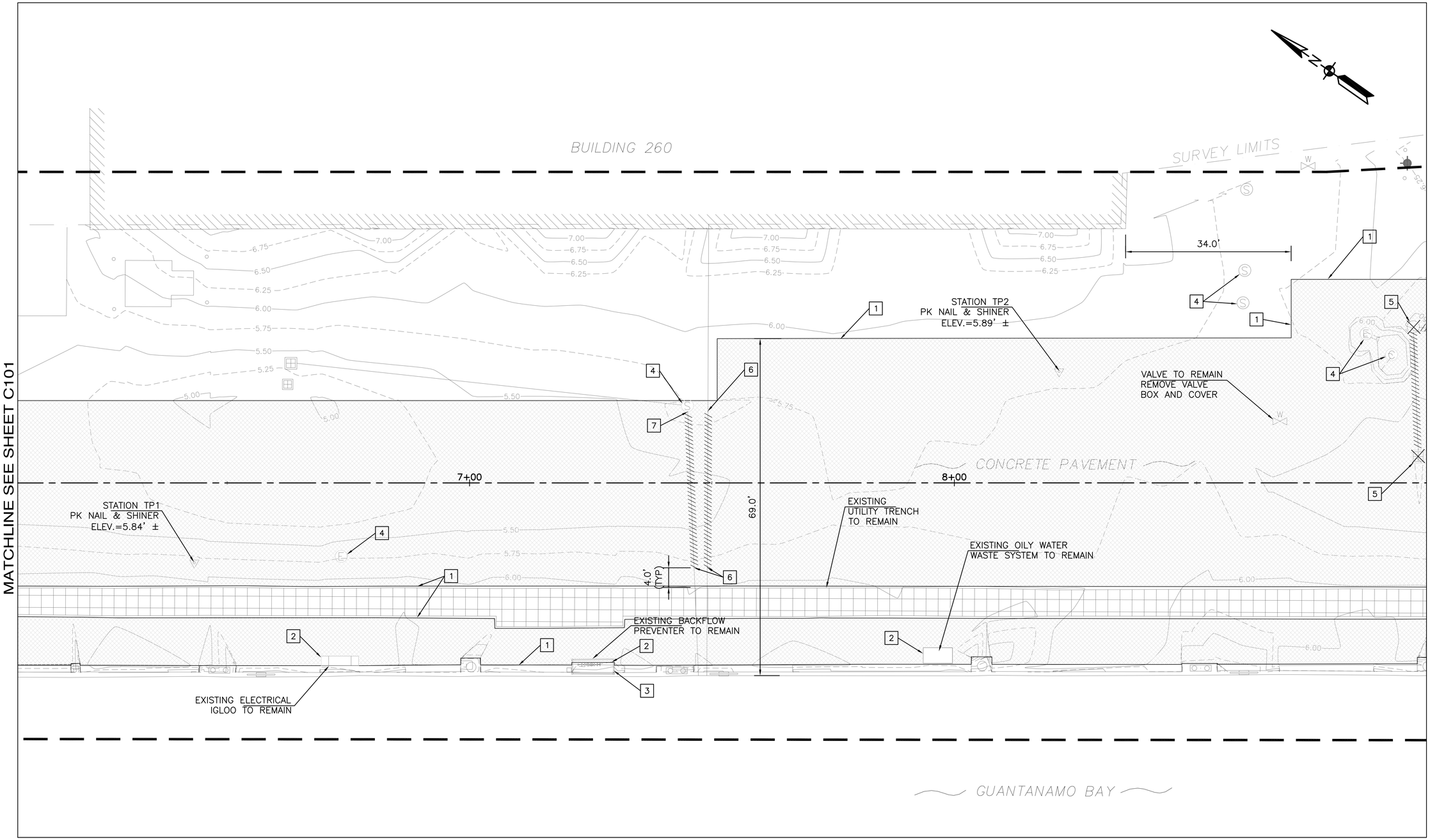
NAVFAC DRAWING NO. 15081061

SHEET 15 OF 65

C101

DRAWFORM REVISION: 5 APRIL 2012

FILE NAME: P:\CIB\project_files\z_CUBA\navsta guantanamo bay\h(n60514\wharf bravo structural repairs-1295318\working technical files\Drawings\C101 DEMOLITION SITE PLAN – NORTH.dwg LAYOUT NAME: C101 DEMOLITION SITE PLAN – NORTH PLOTTED: Friday, June 10, 2016 – 12:36pm USER: ricardo.palmo



3 DEMOLITION PLAN

Scale: 1" = 10'-0"

NOTES:

1. ALL LIMITS OF DEMOLITION ARE APPROXIMATE.
2. CONTRACTOR TO COORDINATE WITH BASE UTILITIES TO ESTABLISH SCHEDULE OF UTILITY DISCONNECTIONS.
3. PROTECT CONCRETE TRENCH WALL ($4\frac{1}{2}$" WIDTH) ON BOTH SIDES.
4. EXISTING BITT AND CLEAT SYSTEMS TO REMAIN

DEMOLITION NOTES:

1. REMOVE REINFORCED CONCRETE PAVEMENT (9–12 INCHES THICK) TO EXISTING PAVEMENT JOINT LINES WITHIN THE LIMITS SHOWN.
2. SAWCUT PAVEMENT 3" OFF ALONG THE LINES INDICATED AND REMOVE TO THE LIMITS SHOWN.
3. REMOVE METAL RAILING ENCLOSURE
4. PROTECT ELECTRICAL/ SANITARY STRUCTURES TO REMAIN
5. REMOVE AND REPLACE STORM INLET STRUCTURE.
6. TEMPORARY PLUG PIPE DURING SOIL STABILIZATION AND CONVEYING UPSTREAM FLOW.
7. REMOVE ALL PIPE FROM CONNECTION TO MANHOLE SO THAT THE NEW PIPE CAN BE INSTALLED CLEAR OF ANY IMPEDIMENTS TO CONNECTION TO MANHOLE

DEMOLISH EXISTING PIPE.

DEMOLISH EXISTING CONCRETE PAVEMENT

GRAPHIC SCALE

1"=10' 0' 10' 20' 30' 40' 50'

SYM	DESCRIPTION	DATE	APPR

NAVFAC

A/E INFO

APPROVED

FOR COMMANDER NAVFAC / B.L.T.L.

ACTIVITY

SATISFACTORY TO DATE

DES RP DRW RP CHK JF

PM/DM E. GALLANT

BRANCH MANAGER M. JOHNSON

CHIEF ENG/ARCH J. FRANK

FIRE PROTECTION

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST
IPT SOUTH ATLANTIC NAVAL AIR STATION JACKSONVILLE
NAVSTA GUANTANAMO BAY GUANTANAMO BAY, CUBA

WHARF BRAVO STRUCTURAL REPAIRS

DEMOLITION SITE PLAN – SOUTH

SCALE: AS SHOWN

EPROJECT NO.: 1295318

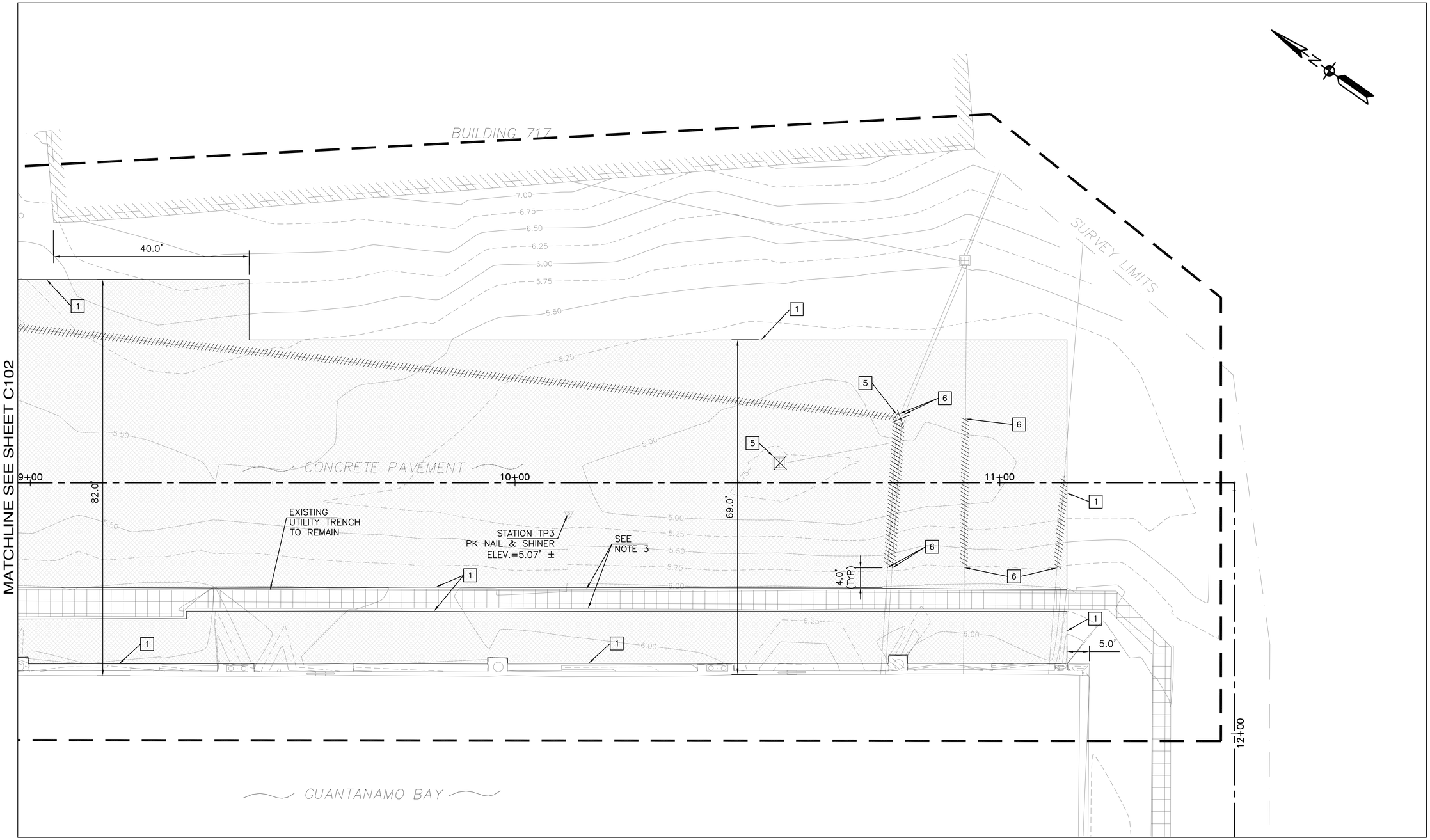
CONSTR. CONTR. NO. N69450–XX–C–XXXX

NAVFAC DRAWING NO. 15081062

SHEET 16 OF 65

C102

DRAWFORM REVISION: 7 AUGUST 2009



4 DEMOLITION PLAN
Scale: 1" = 10'-0"

NOTES:

1. ALL LIMITS OF DEMOLITION ARE APPROXIMATE.
2. CONTRACTOR TO COORDINATE WITH BASE UTILITIES TO ESTABLISH SCHEDULE OF UTILITY DISCONNECTIONS.
3. PROTECT CONCRETE TRENCH WALL (4½" WIDTH) ON BOTH SIDES.
4. EXISTING BITT AND CLEAT SYSTEMS TO REMAIN

DEMOLITION NOTES:

1. REMOVE REINFORCED CONCRETE PAVEMENT (9-12 INCHES THICK) TO EXISTING PAVEMENT JOINT LINES WITHIN THE LIMITS SHOWN.
2. SAWCUT PAVEMENT 3" OFF ALONG THE LINES INDICATED AND REMOVE TO THE LIMITS SHOWN.
3. REMOVE METAL RAILING ENCLOSURE
4. PROTECT ELECTRICAL/ SANITARY STRUCTURES TO REMAIN
5. REMOVE AND REPLACE STORM INLET STRUCTURE.
6. TEMPORARY PLUG PIPE DURING SOIL STABILIZATION AND CONVEYING UPSTREAM FLOW.

DEMOLISH EXISTING PIPE.

DEMOLISH EXISTING CONCRETE PAVEMENT

GRAPHIC SCALE
1"=10' 0' 10' 20' 30' 40' 50'

SYM	DESCRIPTION	DATE	APPR
---	---	---	---

NAVFAC

SEAL

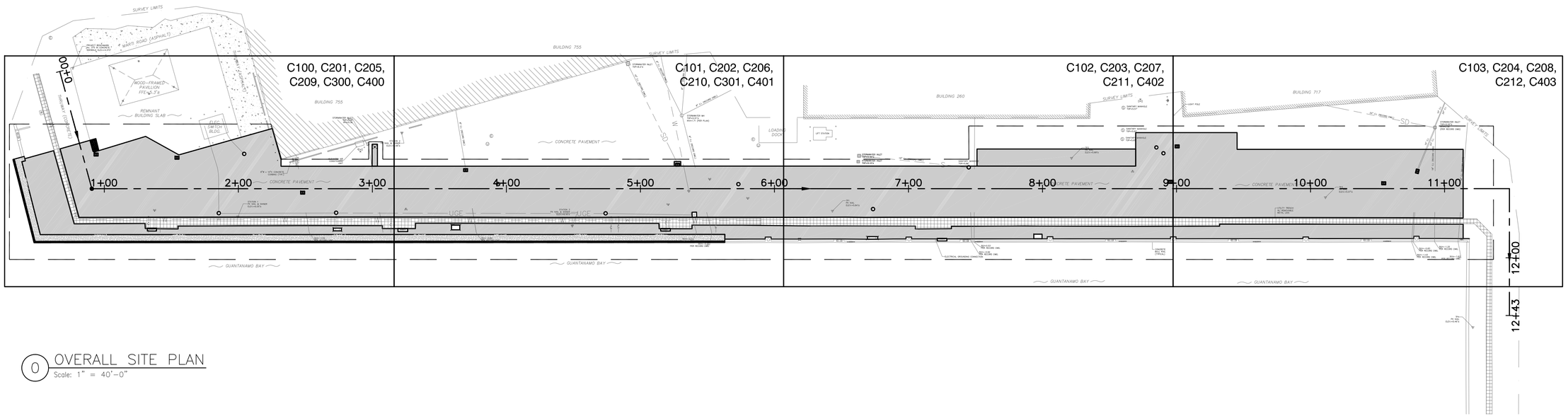
A/E INFO

APPROVED
FOR COMMANDER NAVFAC / B.L.T.L.
ACTIVITY
SATISFACTORY TO DATE
DES -- DRW -- CHK --
PM/DM E. GALLANT
BRANCH MANAGER M. JOHNSON
CHIEF ENG/ARCH J. FRANK
FIRE PROTECTION

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST
PT. SOUTH ATLANTIC
NAVAL AIR STATION JACKSONVILLE
NAVSTA GUANTANAMO BAY
GUANTANAMO BAY, CUBA
WHARF BRAVO STRUCTURAL REPAIRS
DEMOLITION SITE PLAN – SOUTH

SCALE: AS SHOWN
EPROJECT NO. 1295318
CONTR. CONTR. NO. N69450-XX-C-XXXX
NAVFAC DRAWING NO. 15081063
SHEET 17 OF 67
C103

DRAWFORM REVISION: 7 AUGUST 2009



0 OVERALL SITE PLAN

Scale: 1" = 40'-0"

GRAPHIC SCALE

1"=40' 0' 40' 80' 120' 160' 200'

IF SHEET IS LESS THAN (22" x 34") IT IS A REDUCED PRINT, SCALE REDUCED ACCORDINGLY

SYM	DESCRIPTION	DATE	APPR
---	---	---	---

SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC / B.L.T.L.

ACTIVITY

SATISFACTORY TO DATE ----

DES RP DRW RP CHK JF

PROJECT MANAGER E. GALLANT

IPT TECH. BRANCH HEAD M. JOHNSON

CHIEF ENG/ARCH (CORE) J. FRANK

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
IPT SOUTH ATLANTIC

NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST
NAVAL AIR STATION JACKSONVILLE

NAYSTA GUANTANAMO BAY

GUANTANAMO BAY, CUBA

WHARF BRAVO STRUCTURAL REPAIRS

OVERALL SITE PLAN

SCALE: AS SHOWN

EPROJECT NO.: 1295318

CONSTR. CONTR. NO. N69450-XX-C-XXXX

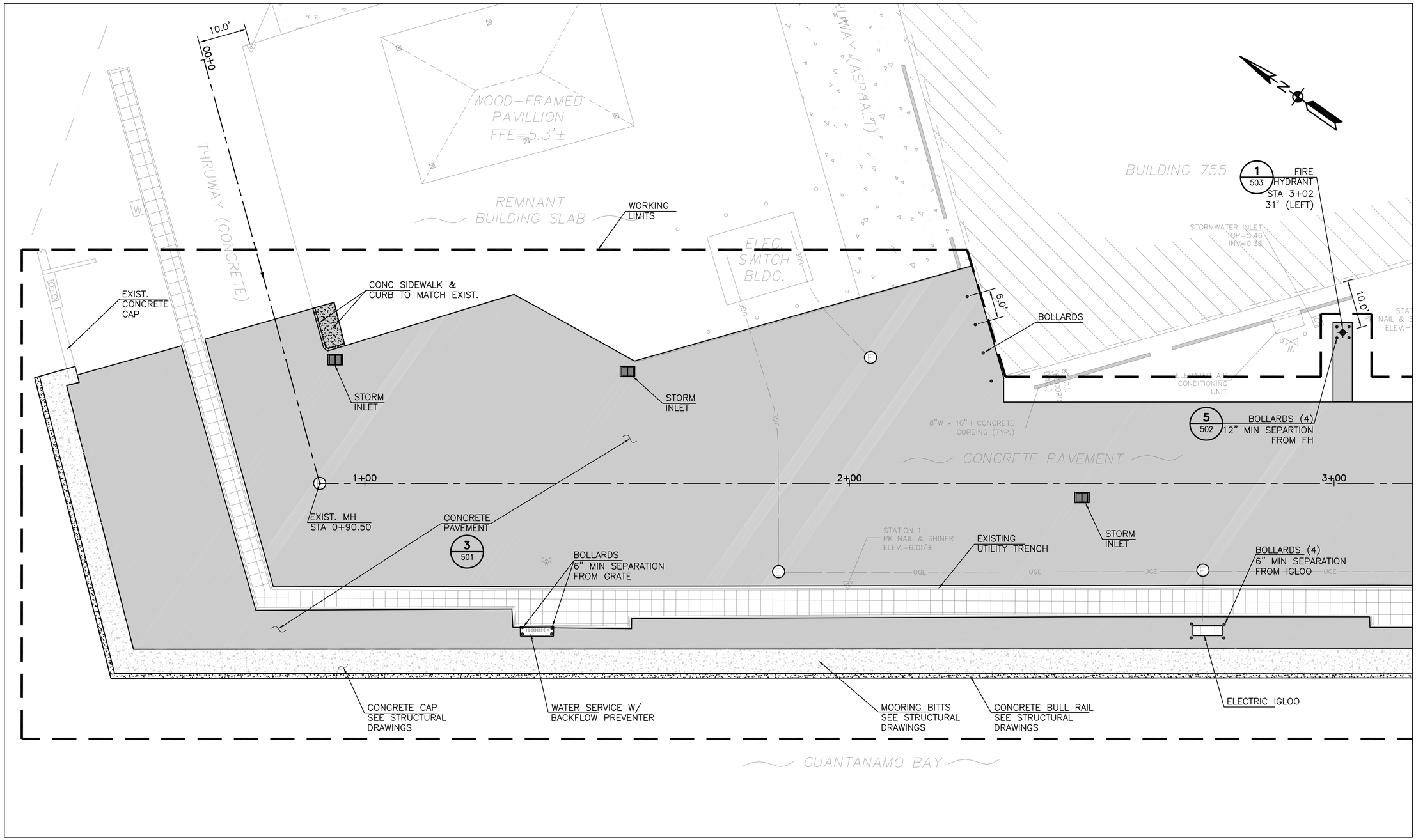
NAVFAC DRAWING NO. 15081064

SHEET 18 OF 65

C200

DRAWFORM REVISION: 7 AUGUST 2009

FILE NAME: P:\CIB\project_files\z_CUBA\naysta guantanamo bay(hi)\60514\wharf bravo structural repairs-1295318\working technical files\Drawings\C200 OVERALL SITE PLAN.dwg LAYOUT NAME: C200 OVERALL SITE PLAN PLOTTED: Thursday, June 09, 2016 - 3:34pm USER: ricardo.palmo



1 SITE PLAN
Scale: 1" = 10'-0"

NOTES:

1. ALL LIMITS OF WORK ARE APPROXIMATE.
2. REFER TO STRUCTURAL DRAWINGS FOR BULL RAIL DIMENSIONS, BITT AND CLEAT LOCATIONS

NEW BULL RAIL

NEW CONCRETE PAVEMENT

NEW CONCRETE CAP

GRAPHIC SCALE

1"=10' 0' 10' 20' 30' 40' 50'

IF SHEET IS LESS THAN (22" x 34") IT IS A REDUCED PRINT, SCALE REDUCED ACCORDINGLY

MATCHLINE SEE SHEET C202

SYM	DESCRIPTION	DATE	APPR

NAVFAC

SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC / B.L.T.L.

ACTIVITY ----

SATISFACTORY TO DATE ----

DES RP DRW RP CHK JF

PROJECT MANAGER E. GALLANT

IPT TECH. BRANCH HEAD M. JOHNSON

CHIEF ENG/ARCH (CORE) J. FRANK

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
IPT SOUTH ATLANTIC
NAVFAC FACILITIES ENGINEERING COMMAND SOUTHEAST
NAVAL AIR STATION JACKSONVILLE
NAVSTA GUANTANAMO BAY
GUANTANAMO BAY, CUBA

WHARF BRAVO STRUCTURAL REPAIRS

SITE PLAN – NORTH

SCALE: AS SHOWN

EPROJECT NO.: 1295318

CONSTR. CONTR. NO. N69450-XX-C-XXXX

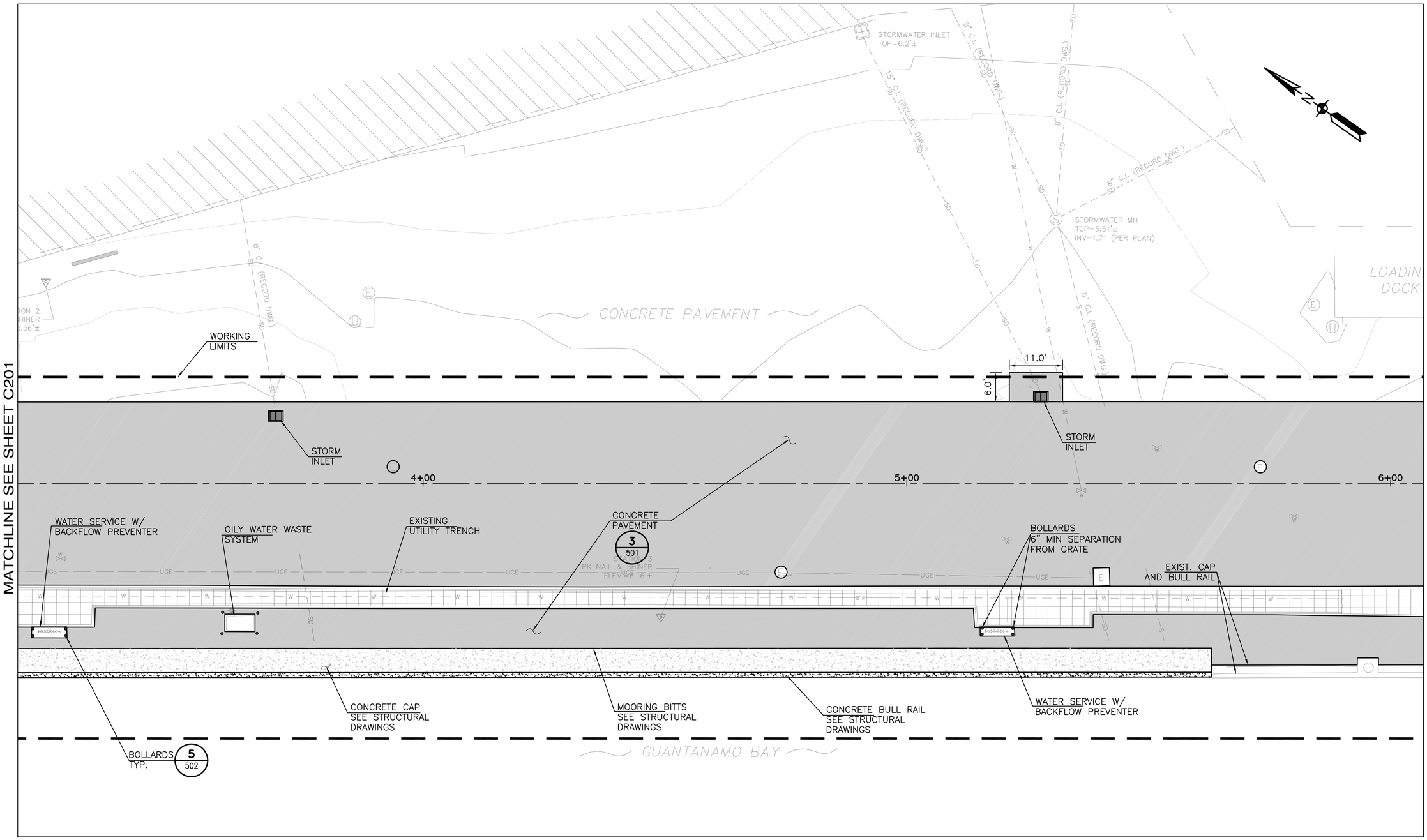
NAVFAC DRAWING NO. 15081065

SHEET 19 OF 65

C201

DRAWFORM REVISION: 7 AUGUST 2009

FILE NAME: P:\CIBL\project_files\z_CUBA\navsta guantanamo bay\h\n60514\wharf bravo structural repairs-1295318\working technical files\Drawings\C201 SITE PLAN - NORTH.dwg LAYOUT NAME: C201 SITE PLAN - NORTH PLOTTED: Friday, June 10, 2016 - 12:38pm USER: ricardo.palmo



2 SITE PLAN
Scale: 1" = 10'-0"

NOTES:
1. ALL LIMITS OF WORK ARE APPROXIMATE.
2. REFER TO STRUCTURAL DRAWINGS FOR BULL RAIL DIMENSIONS, BITT AND CLEAT LOCATIONS

NEW BULL RAIL
NEW CONCRETE PAVEMENT
NEW CONCRETE CAP

GRAPHIC SCALE
1"=10' 0' 10' 20' 30' 40' 50'

IF SHEET IS LESS THAN (22" x 34") IT IS A REDUCED PRINT, SCALE REDUCED ACCORDINGLY

SYM	DESCRIPTION	DATE	APPR
---	---	---	---

NAVFAC

SEAL

A/E INFO
APPROVED
FOR COMMANDER NAVFAC
ACTIVITY

SATISFACTORY TO DATE ---
DES RP DRW RP CHK JF
PROJECT MANAGER E. GALLANT
IPT TECH. BRANCH HEAD M. JOHNSON
CHIEF ENG/ARCH (CORE) J. FRANK

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
IPT SOUTH ATLANTIC
NAVSTA GUANTANAMO BAY

NAVAL FACILITIES ENGINEERING COMMAND
NAVAL AIR STATION JACKSONVILLE
NAVFAC SOUTHEAST
GUANTANAMO BAY, CUBA

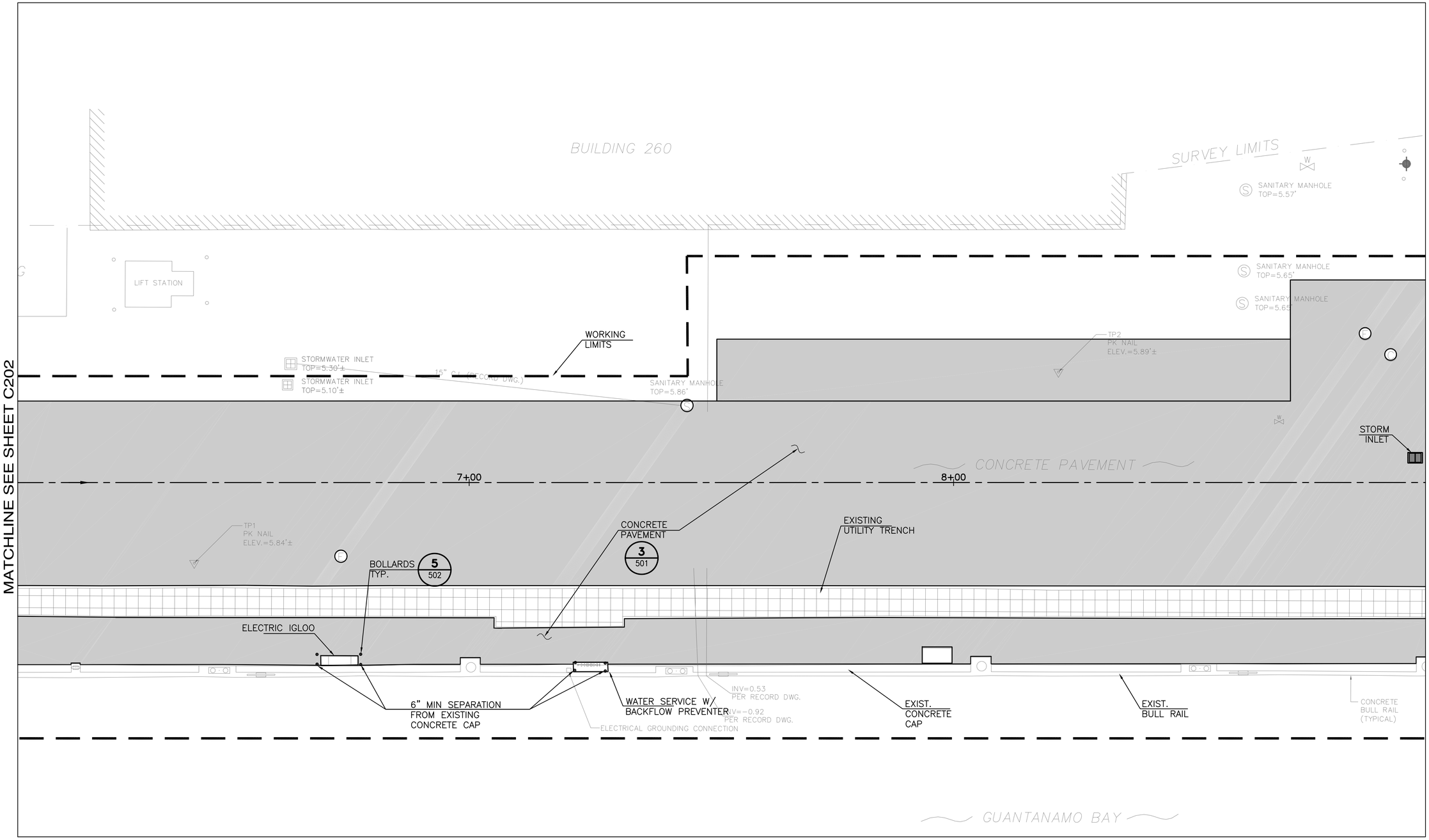
WHARF BRAVO STRUCTURAL REPAIRS

SITE PLAN – NORTH

SCALE: AS SHOWN
EPROJECT NO.: 1295318
CONSTR. CONTR. NO. N69450-XX-C-XXXX
NAVFAC DRAWING NO. 15081066
SHEET 20 OF 65
C202

DRAWFORM REVISION: 5 APRIL 2012

FILE NAME: P:\CIB\project_files\z_CUBA\navsta guantanamo bay\hb60514\wharf bravo structural repairs-1295318\working technical files\Drawings\C202 SITE PLAN - NORTH.dwg LAYOUT NAME: C202 SITE PLAN - NORTH PLOTTED: Friday, June 10, 2016 - 12:39pm USER: ricardo.palmo



3 SITE PLAN
Scale: 1" = 10'-0"

NOTES:

1. ALL LIMITS OF WORK ARE APPROXIMATE.
2. REFER TO STRUCTURAL DRAWINGS FOR BULL RAIL DIMENSIONS, BITT AND CLEAT LOCATIONS

NEW CONCRETE PAVEMENT

SYM	DESCRIPTION	DATE	APPR
---	---	---	---

NAVFAC

SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC / B.L.T.L.

ACTIVITY

SATISFACTORY TO DATE

DES RP DRW RP CHK JF

PM/DM E. GALLANT

BRANCH MANAGER M. JOHNSON

CHIEF ENG/ARCH J. FRANK

FIRE PROTECTION

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
IPT SOUTH ATLANTIC

NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST
NAVAL AIR STATION JACKSONVILLE

NAVSTA GUANTANAMO BAY

GUANTANAMO BAY, CUBA

WHARF BRAVO STRUCTURAL REPAIRS

SITE PLAN – SOUTH

SCALE: AS SHOWN

EPROJECT NO.: 1295318

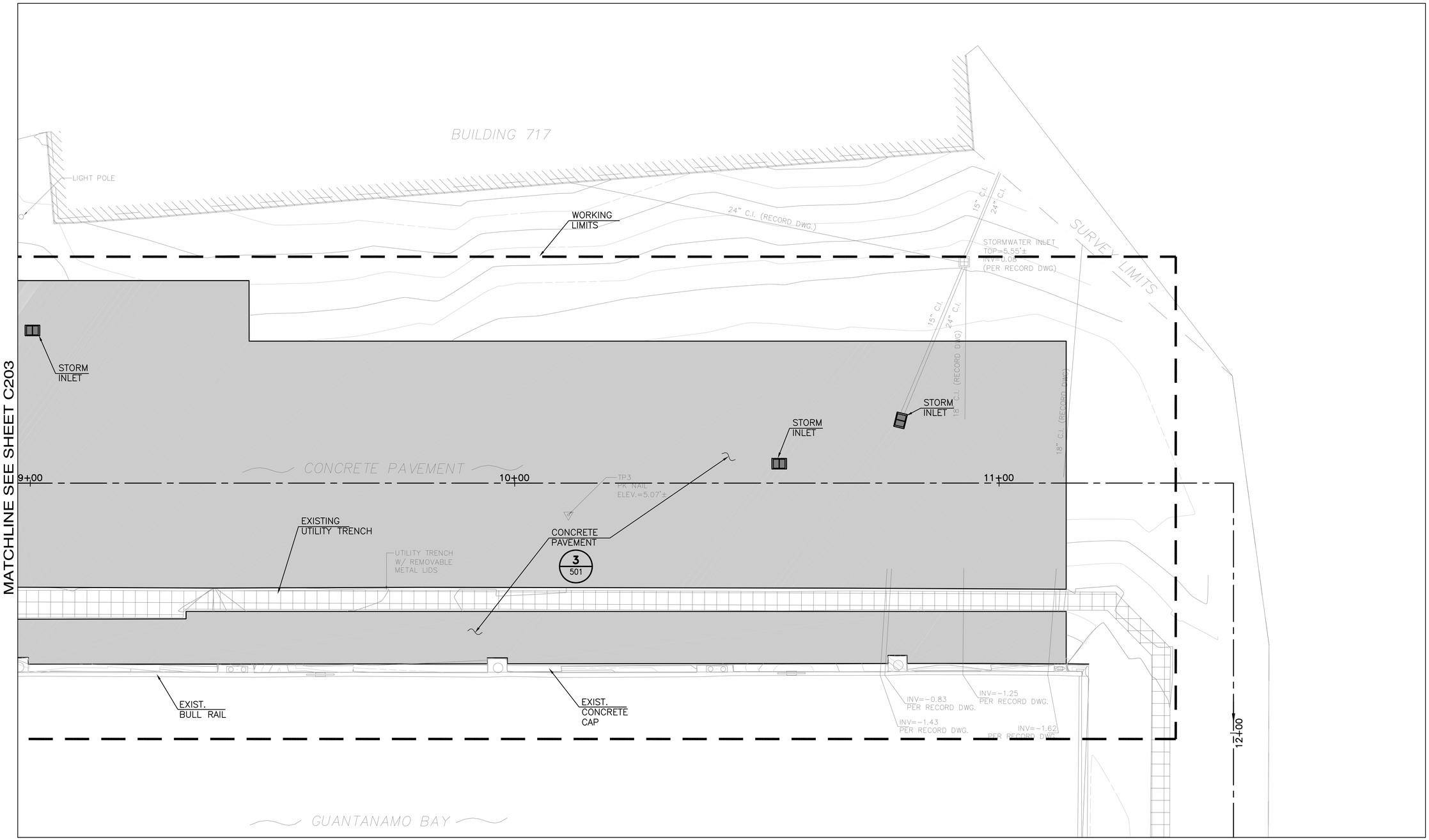
CONSTR. CONTR. NO.
N69450-XX-C-XXXX

NAVFAC DRAWING NO.
15081067

SHEET 21 OF 65

C203

DRAWFORM REVISION: 7 AUGUST 2009



4 SITE PLAN
Scale: 1" = 10'-0"

NOTES:

1. ALL LIMITS OF WORK ARE APPROXIMATE.
2. REFER TO STRUCTURAL DRAWINGS FOR BULL RAIL DIMENSIONS, BITT AND CLEAT LOCATIONS

NEW CONCRETE PAVEMENT

SYM	DESCRIPTION	DATE	APPR
---	---	---	---

NAVFAC

SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC / B.L.T.L.

ACTIVITY

SATISFACTORY TO DATE

DES RP | DRW RP | CHK JF

PM/DM E. GALLANT

BRANCH MANAGER M. JOHNSON

CHIEF ENG/ARCH J. FRANK

FIRE PROTECTION

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
IPT SOUTH ATLANTIC

NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST
NAVAL AIR STATION JACKSONVILLE

NAVSTA GUANTANAMO BAY

GUANTANAMO BAY, CUBA

WHARF BRAVO STRUCTURAL REPAIRS

SITE PLAN – SOUTH

SCALE: AS SHOWN

EPROJECT NO.: 1295318

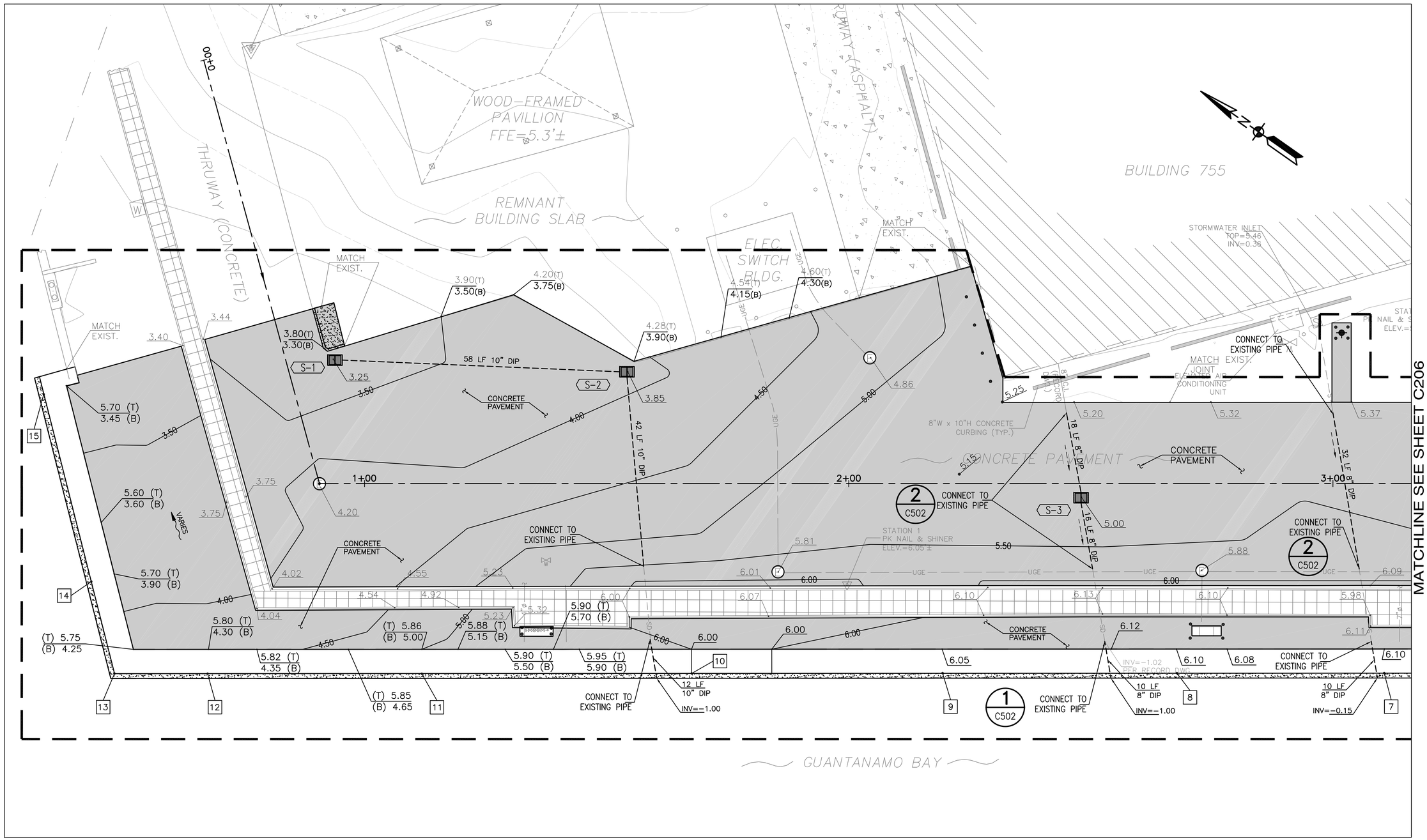
CONSTR. CONTR. NO.: N69450-XX-C-XXXX

NAVFAC DRAWING NO.: 15081068

SHEET 22 OF 65

C204

DRAWFORM REVISION: 7 AUGUST 2009



1 GRADING PLAN

Scale: 1" = 10'-0"

NOTES:

1. FOR WALL PENETRATION COORDINATE WITH STRUCTURAL DESIGN DRAWINGS
2. PROVIDE A CURED IN PLACE LINING TO THE EXISTING PIPE.

LEGEND:

NEW ELEV. 6.84 (T) — TOP OF CONC. CAP; 6.01 (B) — TOP OF PAVEMENT

EXIST ELEV. 5.41

STRUCTURE ELEV. TABLE					
KEY NO.	CONC. CAP ELEV (TOP) (FT)	BULLRAIL ELEV (TOP) (FT)	KEY NOTE	CONC. CAP ELEV (FT)	BULLRAIL ELEV (FT)
7	6.10	6.93	12	5.80	6.63
8	6.10	6.93	13	5.75	6.58
9	6.05	6.88	14	5.70	6.53
10	6.00	6.83	15	5.68	6.51
11	5.86	6.69			

STRUCTURE TABLE						
STRUC.	TOP ELEV (FT)	INVERT IN (FT)	INVERT OUT (FT)	STATION	OFFSET (FT)	TYPE
S-1	3.25	1.10	1.10	0+66.91	9.80L	TYPE 'C'
S-2	3.85	0.80	0.62	1+55.60	23.10L	TYPE 'C'
S-3	5.00	0.10	0.10	2+47.97	4.00R	TYPE 'C'

GRAPHIC SCALE

1"=10' 0' 10' 20' 30' 40' 50'

SYM	DESCRIPTION	DATE	APPR

NAVFAC

A/E INFO

APPROVED

FOR COMMANDER NAVFAC / B.L.T.L.

ACTIVITY ----

SATISFACTORY TO DATE ----

DES RP DRW RP CHK JF

PROJECT MANAGER E. GALLANT

IPT TECH. BRANCH HEAD M. JOHNSON

CHIEF ENG/ARCH (CORE) J. FRANK

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST
IPT SOUTH ATLANTIC
NAVAL AIR STATION JACKSONVILLE
NAVSTA GUANTANAMO BAY
GUANTANAMO BAY, CUBA

WHARF BRAVO STRUCTURAL REPAIRS

GRADING AND DRAINAGE PLAN – NORTH

SCALE: AS SHOWN

EPROJECT NO.: 1295318

CONSTR. CONTR. NO. N69450-XX-C-XXXX

NAVFAC DRAWING NO. 15081069

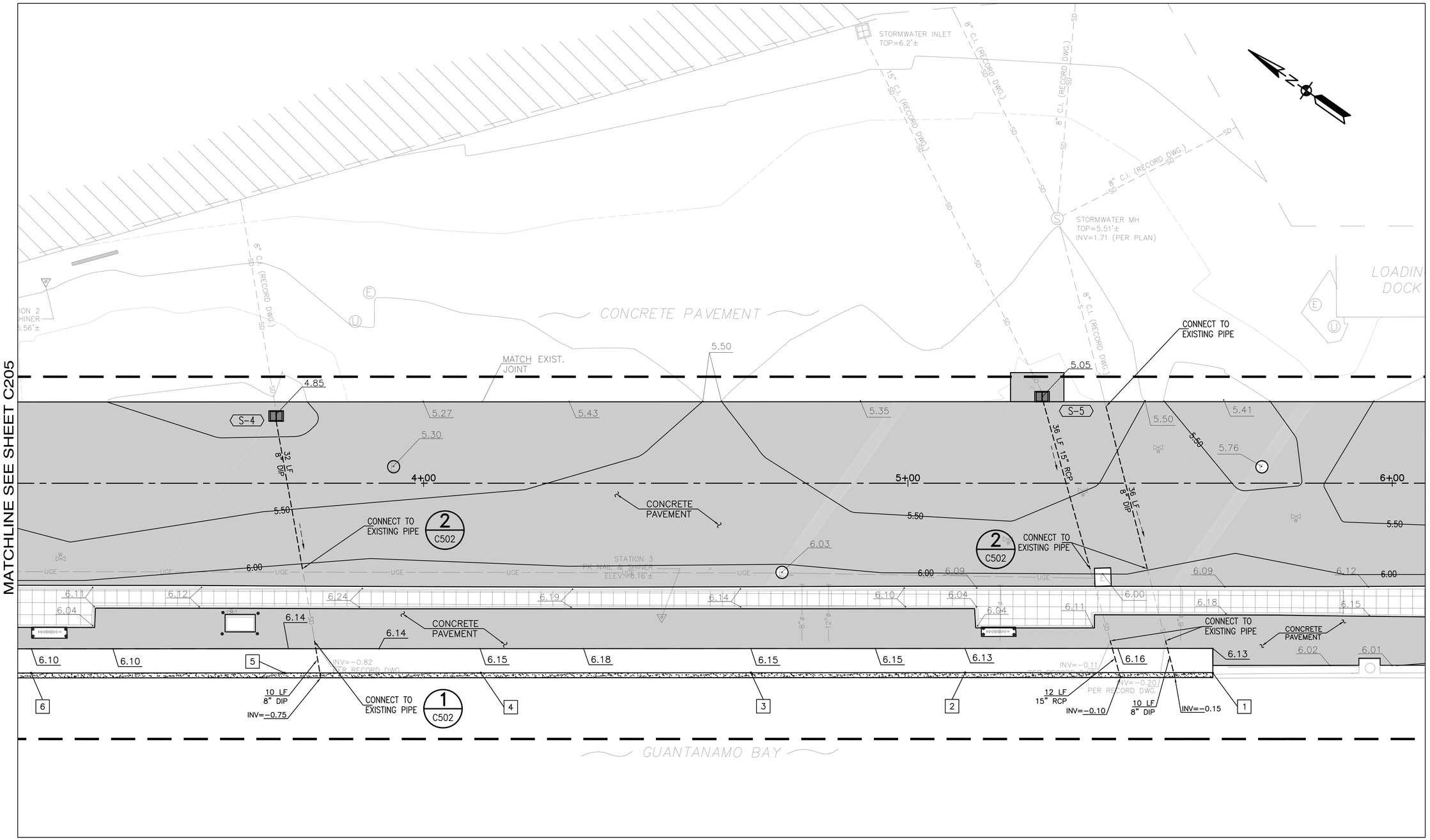
SHEET 23 OF 65

C205

DRAWFORM REVISION: 7 AUGUST 2009

SHEET FORMAT IS 22" X 34". IF PRINTED SHEET IS NOT 22" X 34", THEN IT IS NOT TO SCALE

FILE NAME: P:\CIBA\project_files\z_CUBA\navsta guantanamo bay\hjx60914\wharf bravo structural repairs-1295318\working technical files\Drawings\C205 GRADING AND DRAINGE PLAN - NORTH.dwg LAYOUT NAME: GRADING AND DRAINAGE PLAN - NORTH PLOTTED: Monday, June 13, 2016 - 9:41am USER: ricardo.palma



2 GRADING PLAN

Scale: 1" = 10'-0"

NOTES:

1. FOR WALL PENETRATION COORDINATE WITH STRUCTURAL DESIGN DRAWINGS
2. PROVIDE A CURED IN PLACE LINING TO THE EXISTING PIPE.

LEGEND:

NEW ELEV. 6.84

EXIST ELEV. 5.41

STRUCTURE ELEV. TABLE

KEY NO.	CONC. CAP ELEV (TOP) (FT)	BULLRAIL ELEV (TOP) (FT)	KEY NOTE	CONC. CAP ELEV (FT)	BULLRAIL ELEV (FT)
1	6.13	6.96	6	6.10	6.93
2	6.13	6.96			
3	6.15	6.98			
4	6.15	6.98			
5	6.14	6.97			

STRUCTURE TABLE

STRUC. ID	TOP ELEV (FT)	INVERT IN (FT)	INVERT OUT (FT)	STATION	OFFSET (FT)	TYPE
S-4	4.85	0.06	0.06	3+70.69	13.90L	TYPE 'C'
S-5	5.05	0.70	0.70	5+30.33	17.85L	TYPE 'C'

GRAPHIC SCALE

1"=10' 0' 10' 20' 30' 40' 50'

					APPR
					DATE
					DESCRIPTION
					CTM

NAVFAC

SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC / B.L.T.L.

ACTIVITY

SATISFACTORY TO DATE ----

DES RP DRW RP CHK JF

PROJECT MANAGER E. GALLANT

IPT TECH. BRANCH HEAD M. JOHNSON

CHIEF ENG/ARCH (CORE) J. FRANK

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
IPT SOUTH ATLANTIC

NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST
NAVAL AIR STATION JACKSONVILLE

NAVSTA GUANTANAMO BAY

GUANTANAMO BAY, CUBA

WHARF BRAVO STRUCTURAL REPAIRS

GRADING AND DRAINAGE PLAN – NORTH

SCALE: AS SHOWN

EPROJECT NO.: 1295318

CONSTR. CONTR. NO. N69450-XX-C-XXXX

NAVFAC DRAWING NO. 15081070

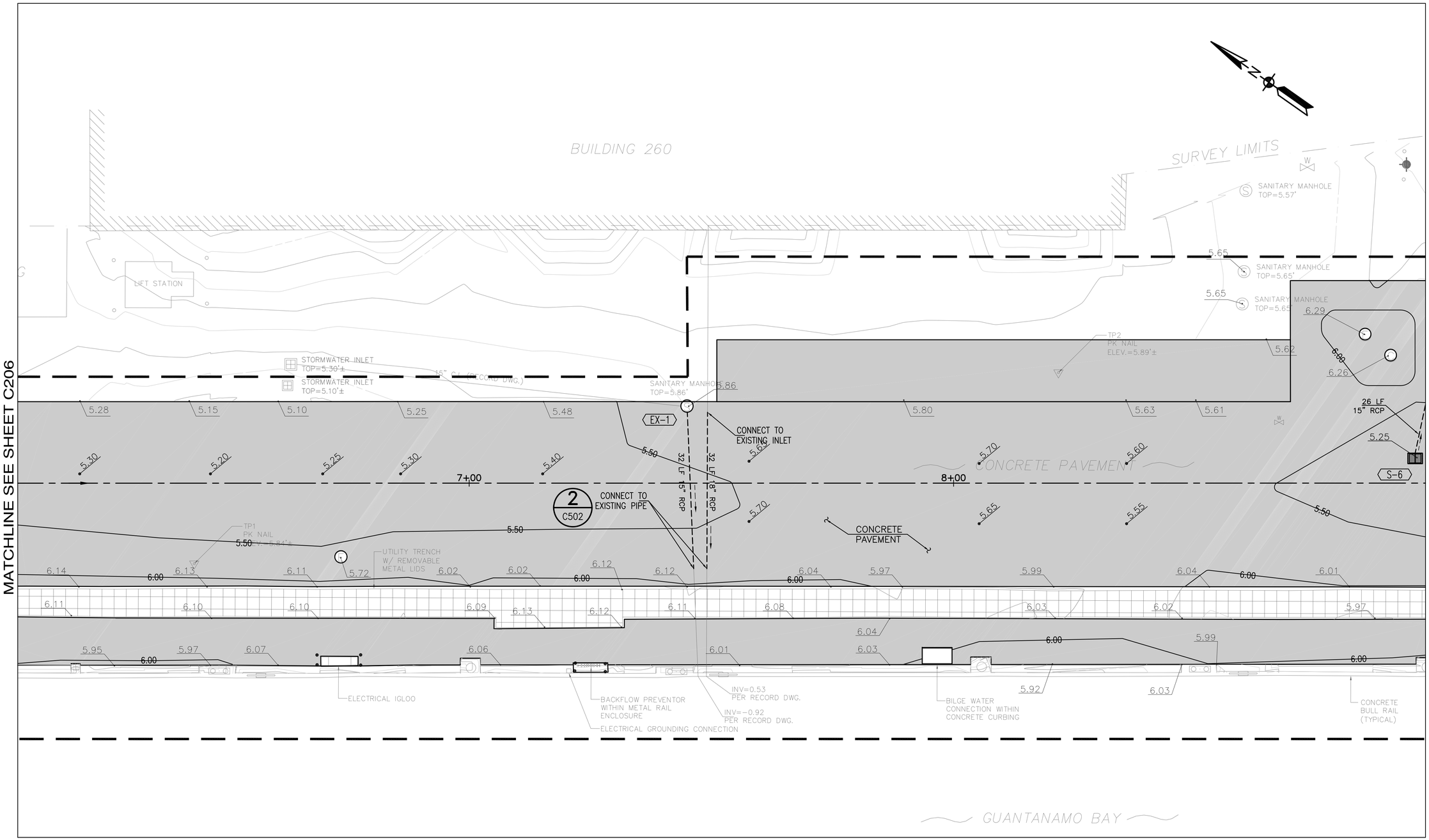
SHEET 24 OF 65

C206

DRAWFORM REVISION: 7 AUGUST 2009

SHEET FORMAT IS 22" X 34". IF PRINTED SHEET IS NOT 22" X 34", THEN IT IS NOT TO SCALE

FILE NAME: P:\CBL\project_files\z_CUBA\navsta guantanamo bay\fr\n60514\wharf bravo structural repairs-1295318\working technical files\Drawings\C206 GRADING AND DRAINAGE PLAN - NORTH.dwg LAYOUT NAME: C206 GRADING AND DRAINAGE PLAN - NORTH PLOTTED: Monday, June 13, 2016 - 8:54am USER: ricardo.palma



3 GRADING PLAN

Scale: 1" = 10'-0"

NOTES:

1. FOR WALL PENETRATION COORDINATE WITH STRUCTURAL DESIGN DRAWINGS.
2. PROVIDE A CURED IN PLACE LINING TO THE EXISTING PIPE.

LEGEND:

NEW ELEV. 6.84

EXIST ELEV. 5.41

STRUCTURE TABLE

STRUC. ID	TOP ELEV (FT)	INVERT IN (FT)	INVERT OUT (FT)	STATION	OFFSET (FT)	TYPE
EX-1	5.86	0.82	0.82	---	---	MANHOLE
S-6	5.25	---	2.25	8+96.06	5.10L	TYPE 'C'

GRAPHIC SCALE

1"=10' 0' 10' 20' 30' 40' 50'

SYM	DESCRIPTION	DATE	APPR

SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC / B.L.T.L.

ACTIVITY

SATISFACTORY TO DATE

DES RP DRW RP CHK JF

PM/DM E. GALLANT

BRANCH MANAGER M. JOHNSON

CHIEF ENG/ARCH J. FRANK

FIRE PROTECTION

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
IPT SOUTH ATLANTIC

NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST
NAVAL AIR STATION JACKSONVILLE

NAVSTA GUANTANAMO BAY

GUANTANAMO BAY, CUBA

WHARF BRAVO STRUCTURAL REPAIRS

GRADING AND DRAINAGE PLAN – SOUTH

SCALE: AS SHOWN

EPROJECT NO.: 1295318

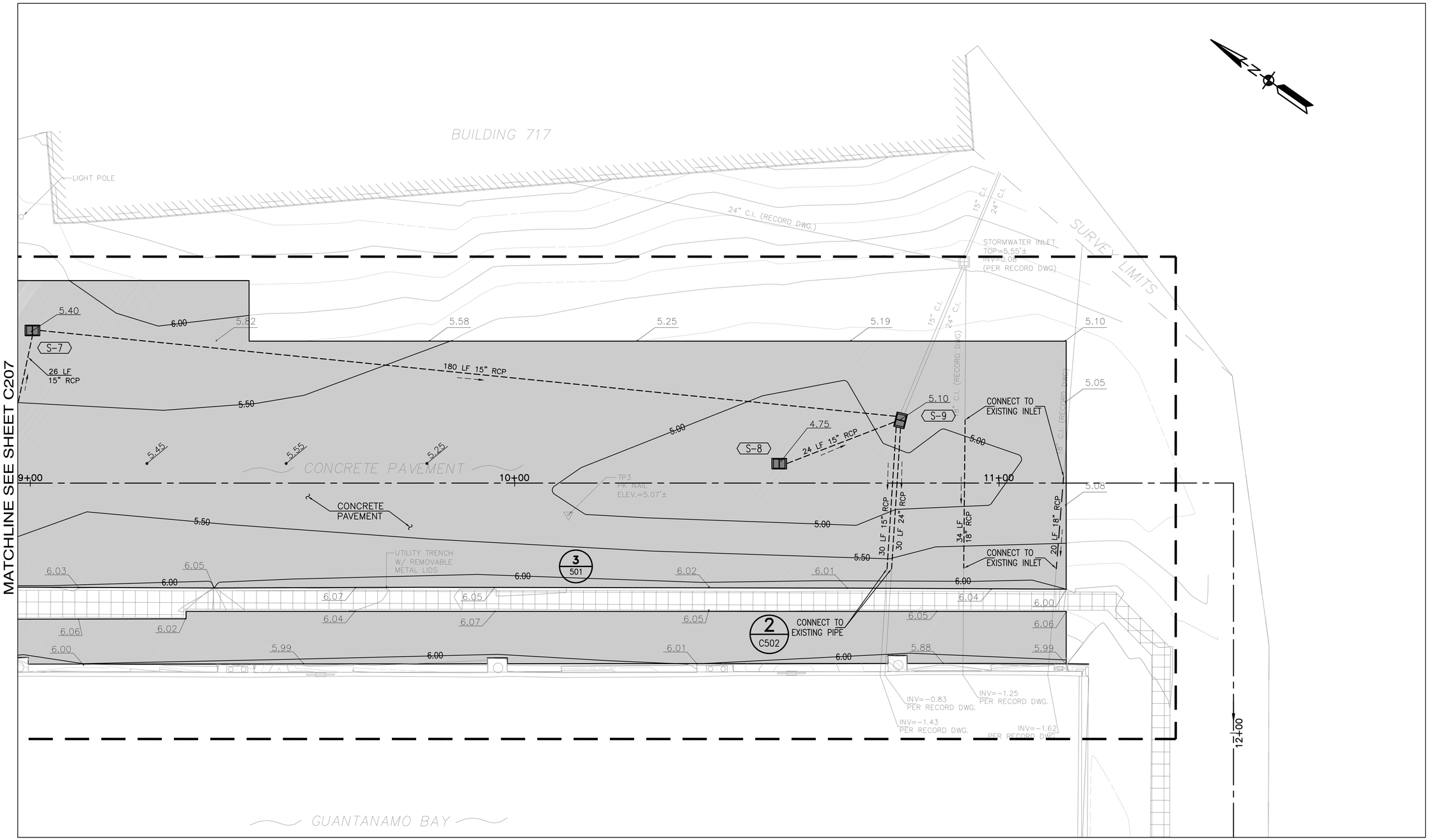
CONSTR. CONTR. NO. N69450-XX-C-XXXX

NAVFAC DRAWING NO. 15081071

SHEET 25 OF 65

C207

DRAWFORM REVISION: 7 AUGUST 2009



4 GRADING PLAN

Scale: 1" = 10'-0"

NOTES:

1. FOR WALL PENETRATION COORDINATE WITH STRUCTURAL DESIGN DRAWINGS.
2. PROVIDE A CURED IN PLACE LINING TO THE EXISTING PIPE.

LEGEND:

NEW ELEV. 6.84

EXIST ELEV. 5.41

STRUCTURE TABLE

STRUC. ID	TOP ELEV (FT)	INVERT IN (FT)	INVERT OUT (FT)	STATION	OFFSET (FT)	TYPE
S-7	5.40	1.50	1.50	9+00.19	31.55L	TYPE 'C'
S-8	4.75	---	1.10	10+54.67	4.50L	TYPE 'C'
S-9	5.10	0.05 0.50	0.05	10+79.64	12.95L	TYPE 'E'

GRAPHIC SCALE

1"=10' 0' 10' 20' 30' 40' 50'

SYM	DESCRIPTION	DATE	APPR
---	---	---	---

NAVFAC

SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC / B.L.T.L.

ACTIVITY

SATISFACTORY TO DATE

DES RP DRW RP CHK JF

PM/DM E. GALLANT

BRANCH MANAGER M. JOHNSON

CHIEF ENG/ARCH J. FRANK

FIRE PROTECTION

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
IPT SOUTH ATLANTIC
NAVSTA GUANTANAMO BAY

NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST
NAVAL AIR STATION JACKSONVILLE
GUANTANAMO BAY, CUBA

WHARF BRAVO STRUCTURAL REPAIRS

GRADING AND DRAINAGE PLAN – SOUTH

SCALE: AS SHOWN

EPROJECT NO.: 1295318

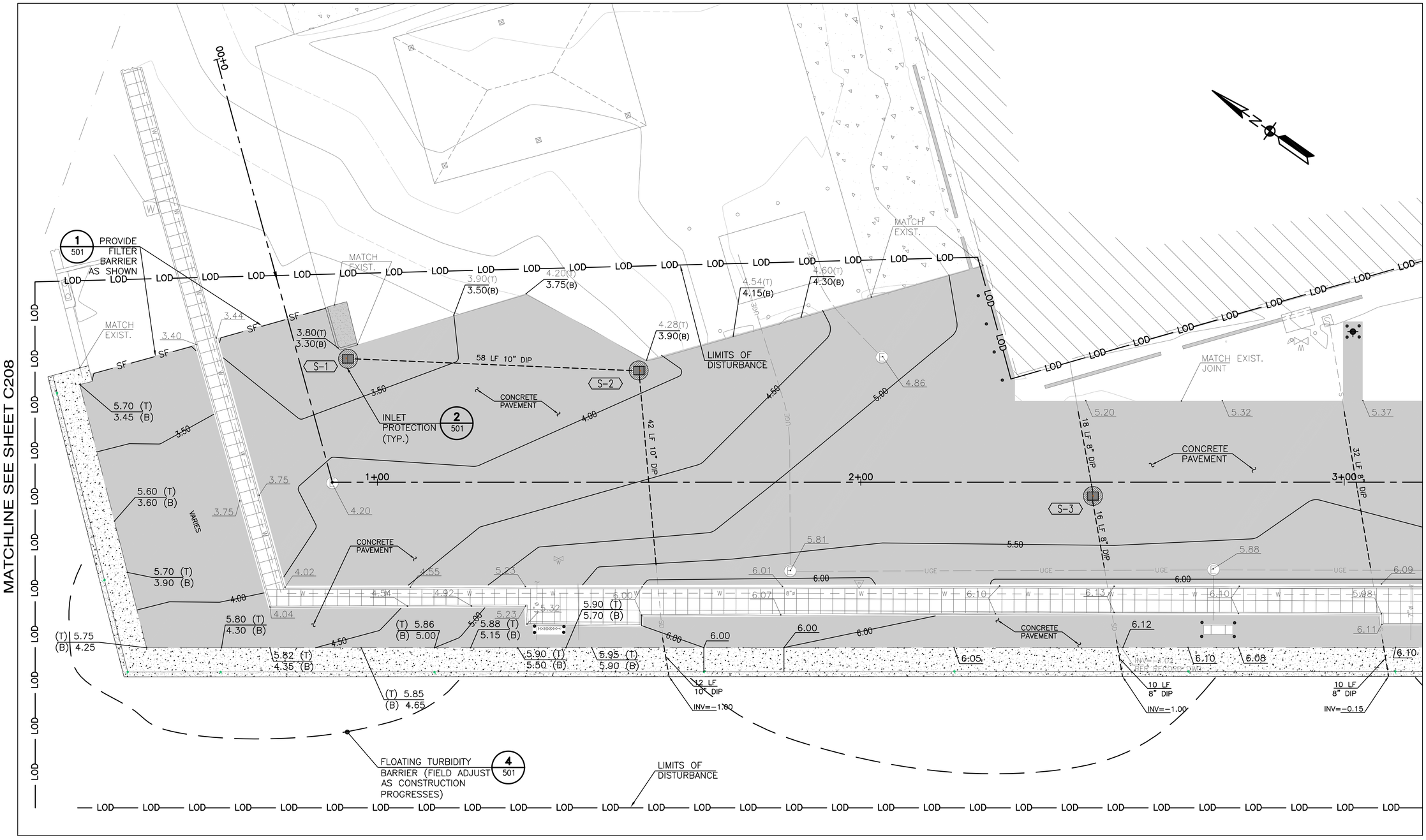
CONSTR. CONTR. NO. N69450-XX-C-XXXX

NAVFAC DRAWING NO. 15081072

SHEET 26 OF 65

C208

DRAWFORM REVISION: 7 AUGUST 2009



1 SEDIMENT CONTROL
Scale: 1" = 10'-0"

NOTES:

1. FOR STORMWATER POLLUTION PREVENTION CONSTRUCTION DETAILS SEE SHEET NUMBER C501

LEGEND:

TURBIDITY BARRIER

LIMITS OF DISTURBANCE — LOD —

INLET PROTECTION

GRAPHIC SCALE
1"=10' 0' 10' 20' 30' 40' 50'

SYM	DESCRIPTION	DATE	APPR

NAVFAC

SEAL

A/E INFO

APPROVED
FOR COMMANDER NAVFAC / B.L.T.L.
ACTIVITY
SATISFACTORY TO DATE

DES	RP	DRW	RP	CHK	JF

PROJECT MANAGER E. GALLANT
IPT TECH. BRANCH HEAD M. JOHNSON
CHIEF ENG/ ARCH (CORE) J. FRANK

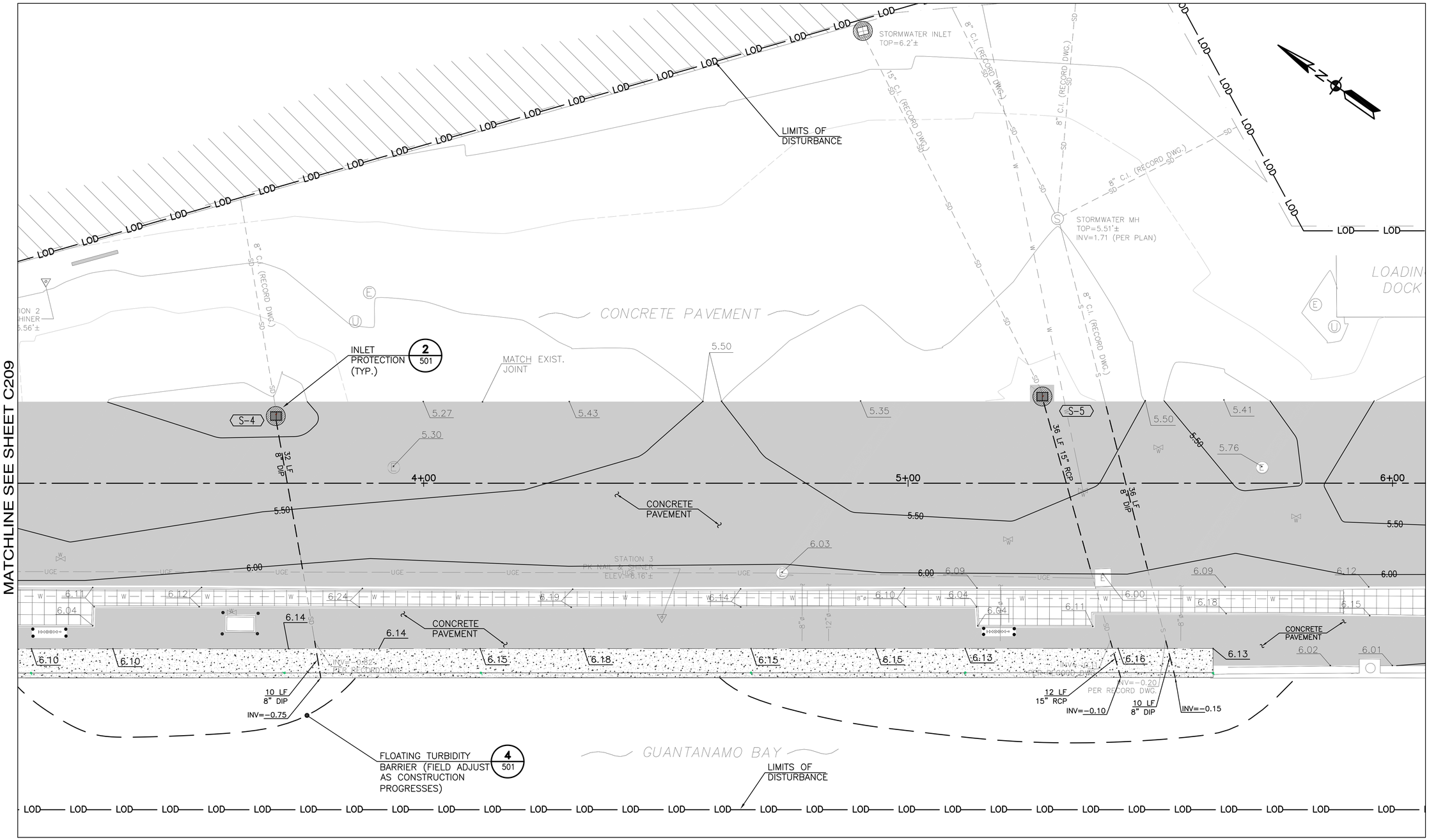
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
IPT SOUTH ATLANTIC
NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST
NAVAL AIR STATION JACKSONVILLE
NAVSTA GUANTANAMO BAY
GUANTANAMO BAY, CUBA
WHARF BRAVO STRUCTURAL REPAIRS
SEDIMENT CONTROL PLAN – NORTH

SCALE: AS SHOWN
EPROJECT NO.: 1295318
CONSTR. CONTR. NO. N69450-XX-C-XXXX
NAVFAC DRAWING NO. 15081073
SHEET 27 OF 65
C209

DRAWFORM REVISION: 7 AUGUST 2009

SHEET FORMAT IS 22" X 34". IF PRINTED SHEET IS NOT 22" X 34", THEN IT IS NOT TO SCALE

FILE NAME: P:\CUBL\project_Files\z_CUBA\navsta guantanamo bay\hi60514\wharf bravo structural repairs-1295318\working technical files\Drawings\C209 SEDIMENT CONTROL PLAN – NORTH.dwg LAYOUT NAME: C209 SEDIMENT CONTROL PLAN – NORTH PLOTTED: Monday, June 13, 2016 – 9:49am USER: ricardo.palmo



2 SEDIMENT CONTROL

Scale: 1" = 10'-0"

NOTES:

1. FOR STORMWATER POLLUTION PREVENTION CONSTRUCTION DETAILS SEE SHEET NUMBER C501

LEGEND:

TURBIDITY BARRIER

LIMITS OF DISTURBANCE — LOD —

INLET PROTECTION

GRAPHIC SCALE

1"=10' 0' 10' 20' 30' 40' 50'

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
IPT SOUTH ATLANTIC

NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST
NAVAL AIR STATION JACKSONVILLE

NAVSTA GUANTANAMO BAY

GUANTANAMO BAY, CUBA

WHARF BRAVO STRUCTURAL REPAIRS

SEDIMENT CONTROL PLAN – NORTH

SCALE: AS SHOWN
EPROJECT NO.: 1295318
CONSTR. CONTR. NO. N69450-XX-C-XXXX
NAVFAC DRAWING NO. 15081074
SHEET 28 OF 65
C210

APPROVED
FOR COMMANDER NAVFAC / B.L.T.L.
ACTIVITY
SATISFACTORY TO DATE
DES RP DRW RP CHK JF
PROJECT MANAGER E. GALLANT
IPT TECH. BRANCH HEAD M. JOHNSON
CHIEF ENG/ARCH (CORE) J. FRANK

SYM DESCRIPTION DATE APPR

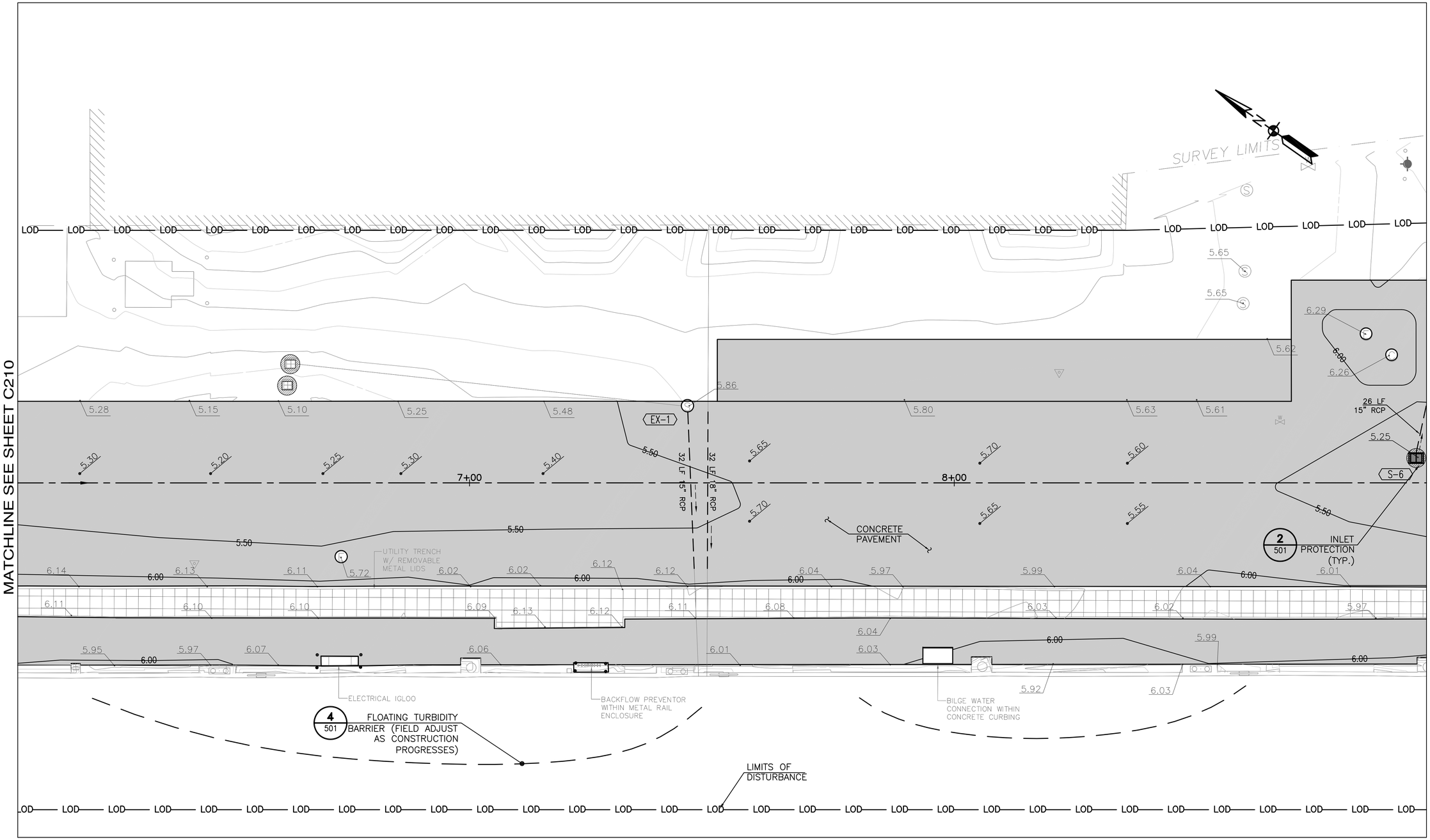
A/E INFO

SEAL

DRAWFORM REVISION: 7 AUGUST 2009

SHEET FORMAT IS 22" X 34". IF PRINTED SHEET IS NOT 22" X 34", THEN IT IS NOT TO SCALE

FILE NAME: P:\CBL\project_files\z_CUBA\naysta guantanamo bay\fin0514\wharf bravo structural repairs-1295318\working technical files\Drawings\C210 SEDIMENT CONTROL PLAN – NORTH.dwg LAYOUT NAME: C210 SEDIMENT CONTROL PLAN – NORTH PLOTTED: Thursday, June 09, 2016 – 3:42pm USER: ricardo.palma



3 SEDIMENT CONTROL
Scale: 1" = 10'-0"

NOTES:

1. FOR STORMWATER POLLUTION PREVENTION CONSTRUCTION DETAILS SEE SHEET NUMBER C501

LEGEND:

TURBIDITY BARRIER

LIMITS OF DISTURBANCE — LOD —

INLET PROTECTION

GRAPHIC SCALE
1"=10' 0' 10' 20' 30' 40' 50'

SYM	DESCRIPTION	DATE	APPR

NAVFAC

SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC / B.L.T.L.

ACTIVITY

SATISFACTORY TO DATE

DES RP DRW RP CHK JF
PM/DM E. GALLANT
BRANCH MANAGER M. JOHNSON
CHIEF ENG/ARCH J. FRANK
FIRE PROTECTION

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
IPT SOUTH ATLANTIC

NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST
NAVAL AIR STATION JACKSONVILLE

NAVSTA GUANTANAMO BAY

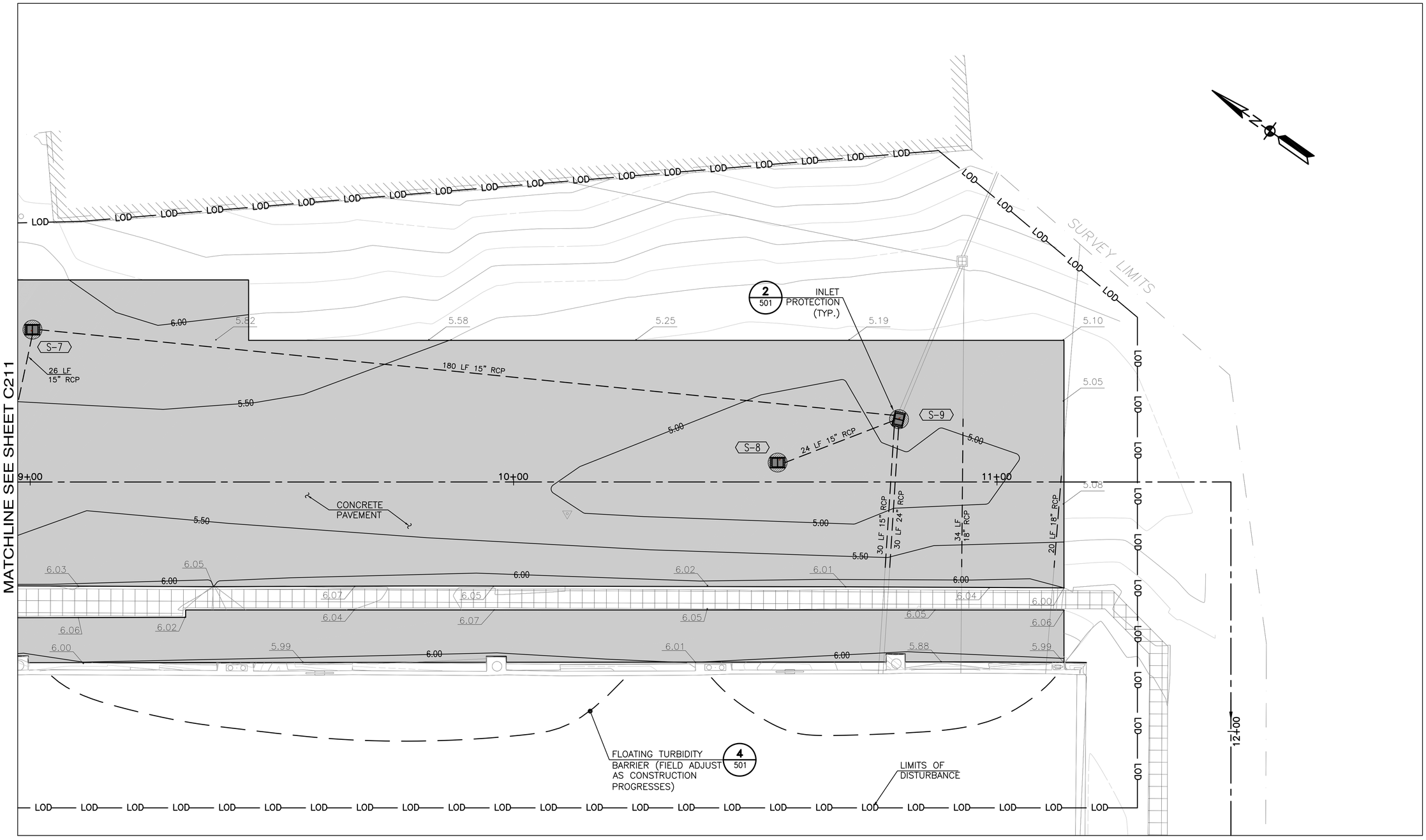
GUANTANAMO BAY, CUBA

WHARF BRAVO STRUCTURAL REPAIRS

SEDIMENT CONTROL PLAN – SOUTH

SCALE: AS SHOWN
EPROJECT NO.: 1295318
CONSTR. CONTR. NO.: N69450-XX-C-XXXX
NAVFAC DRAWING NO.: 15081075
SHEET 29 OF 65
C211

DRAWFORM REVISION: 7 AUGUST 2009



1 SEDIMENT CONTROL
Scale: 1" = 10'-0"

NOTES:

1. FOR STORMWATER POLLUTION PREVENTION CONSTRUCTION DETAILS SEE SHEET NUMBER C501

LEGEND:

TURBIDITY BARRIER

LIMITS OF DISTURBANCE — LOD —

INLET PROTECTION

GRAPHIC SCALE
1"=10' 0' 10' 20' 30' 40' 50'

SYM	DESCRIPTION	DATE	APPR

NAVFAC

SEAL

A/E INFO.

APPROVED

FOR COMMANDER NAVFAC / B.L.T.L.

ACTIVITY

SATISFACTORY TO DATE

DES RP DRW RP CHK JF

PM/DM E. GALLANT

BRANCH MANAGER M. JOHNSON

CHIEF ENG/ARCH J. FRANK

FIRE PROTECTION

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
IPT SOUTH ATLANTIC

NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST
NAVAL AIR STATION JACKSONVILLE

NAVSTA GUANTANAMO BAY

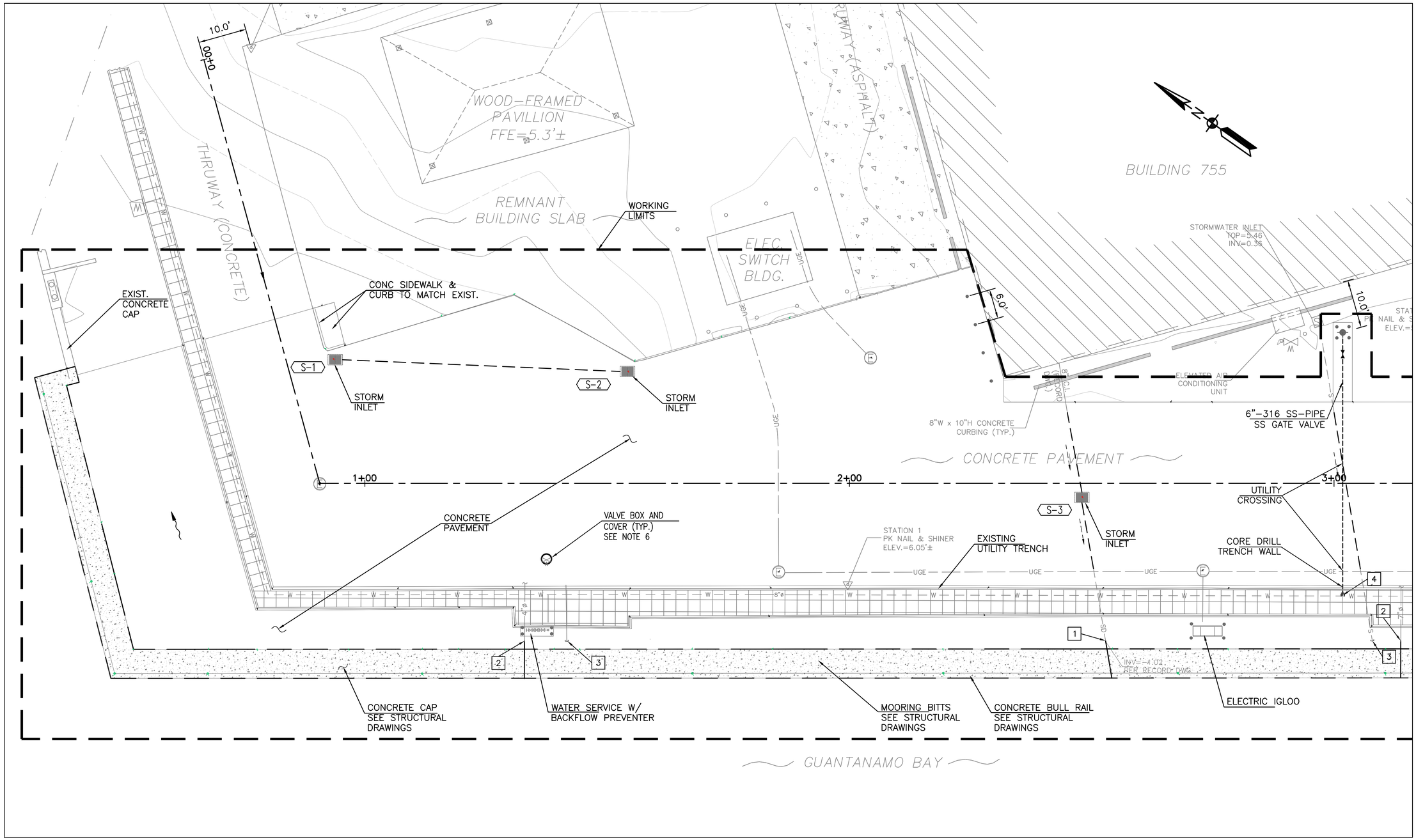
GUANTANAMO BAY, CUBA

WHARF BRAVO STRUCTURAL REPAIRS

SEDIMENT CONTROL PLAN – SOUTH

SCALE: AS SHOWN
EPROJECT NO.: 1295318
CONSTR. CONTR. NO. N69450-XX-C-XXXX
NAVFAC DRAWING NO. 15081076
SHEET 30 OF 65
C212

DRAWFORM REVISION: 7 AUGUST 2009



1 UTILITY PLAN
Scale: 1" = 10'-0"

UTILITY NOTES:

1. SEE GRADING PLANS SHEETS FOR STORMWATER PIPING ADDITIONS.
2. BEFORE EXTENDING THE EXISTING PIPE, VERIFY THE PIPE TYPE AND CONDITION. NOTIFY CONTRACTING OFFICER IF DETERIORATED CONDITIONS ARE FOUND.
3. CAP EXISTING PIPE PERMANENTLY AND ABANDONED IN PLACE WITH FLOWABLE FILL MATERIAL.
4. NEW 6"ø SS WATER CONNECTION (TAPPING SLEEVE) FOR NEW FIRE HYDRANT ASSEMBLY. FOR WATER MAIN CONNECTION, SEE DETAIL 2 ON SHEET C503.

NOTES:

1. ALL LIMITS OF WORK ARE APPROXIMATE.
2. CONTRACTOR TO COORDINATE WITH BASE UTILITIES TO ESTABLISH SCHEDULE OF UTILITY DISCONNECTIONS.
3. EXISTING UTILITIES FROM GTMO PUBLIC WORKS DEPARTMENT UTILITY MAPS AND HAVE NOT BEEN VERIFIED FOR ACCURACY OR COMPLETENESS. LOCATIONS TO BE VERIFIED BY THE CONTRACTOR AND SUB-CONTRACTORS TO THEIR SATISFACTION.
4. REFER TO ELECTRICAL DRAWINGS FOR ALL PROPOSED ELECTRICAL UTILITIES.
5. ALL UNDERGROUND METALLIC FITTINGS FOR WATER AND SANITARY PIPING ARE TO BE WRAPPED PER SPECIFICATION SECTION 33 11 00. SEE SPECIFICATIONS FOR ADDITIONAL CRITERIA FOR WATER AND SANITARY SYSTEMS.
6. ALL NEW VALVE BOX AND COVER SHALL BE CAST IRON TRAFFIC RATED

GRAPHIC SCALE
1"=10' 0' 10' 20' 30' 40' 50'

IF SHEET IS LESS THAN (22" x 34") IT IS A REDUCED PRINT, SCALE REDUCED ACCORDINGLY

SYM	DESCRIPTION	DATE	APPR
---	---	---	---

NAVFAC

SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC / B.L.T.L.

ACTIVITY

SATISFACTORY TO DATE ----

DES RP | DRW RP | CHK JF

PROJECT MANAGER E. GALLANT

IPT TECH. BRANCH HEAD M. JOHNSON

CHIEF ENG/ARCH (CORE) J. FRANK

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
IPT SOUTH ATLANTIC

NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST
NAVAL AIR STATION JACKSONVILLE

NAVSTA GUANTANAMO BAY

GUANTANAMO BAY, CUBA

WHARF BRAVO STRUCTURAL REPAIRS

UTILITY SITE PLAN – NORTH

SCALE: AS SHOWN

EPROJECT NO.: 1295318

CONSTR. CONTR. NO. N69450-XX-C-XXXX

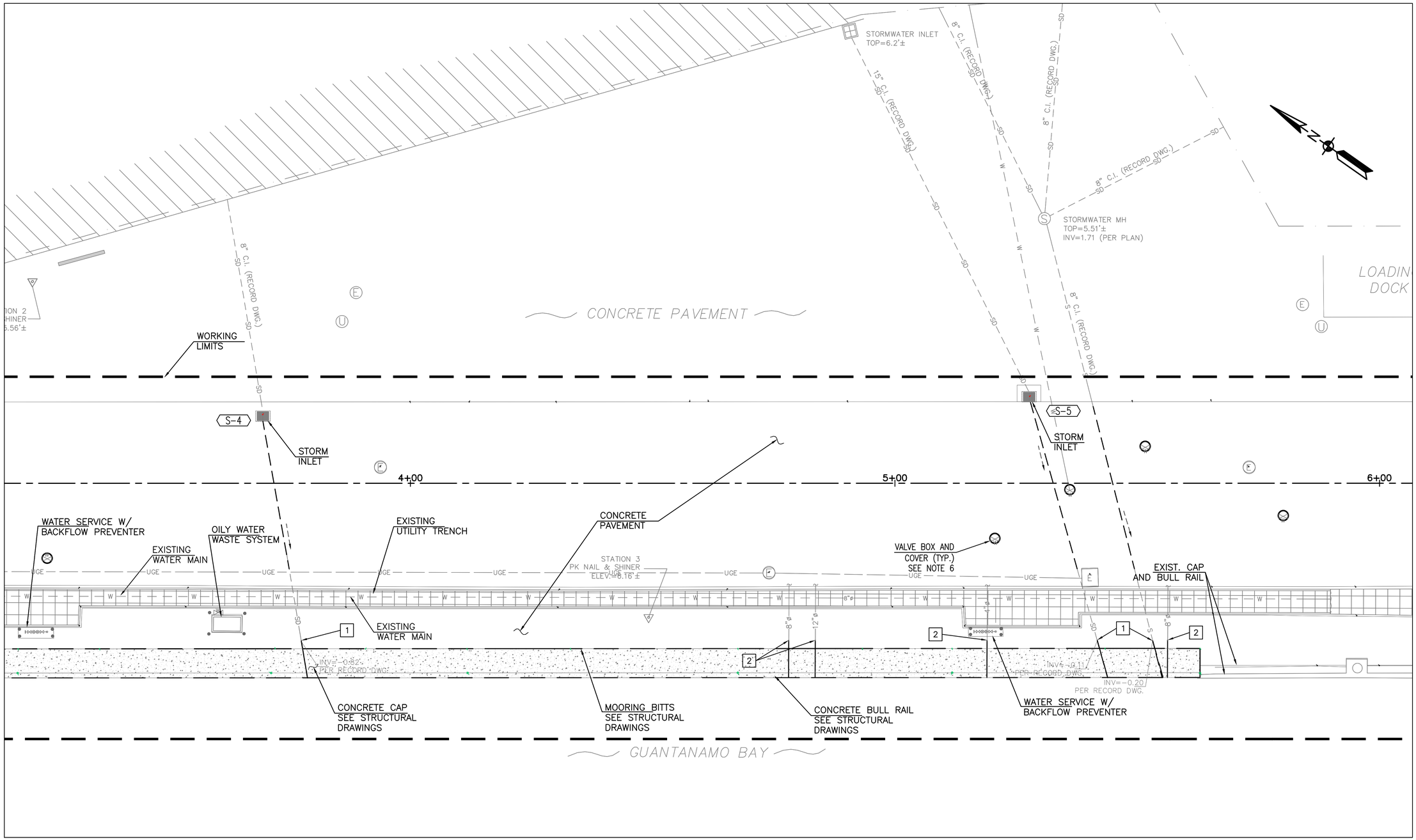
NAVFAC DRAWING NO. 15081077

SHEET 31 OF 65

C300

DRAWFORM REVISION: 7 AUGUST 2009

FILE NAME: P:\CIB\project_files\z_CIBA\navsta guantanamo bay\hi\e60514\wharf bravo structural repairs-1295318\working technical files\Drawing\C300 UTILITY SITE PLAN - NORTH.dwg LAYOUT NAME: C300 UTILITY SITE PLAN - NORTH PLOTTED: Thursday, June 09, 2016 - 3:47pm USER: rcardo.palmo



2 UTILITY PLAN
Scale: 1" = 10'-0"

UTILITY NOTES:

1. SEE GRADING PLANS SHEETS FOR STORMWATER PIPING ADDITIONS.
2. BEFORE EXTENDING THE EXISTING PIPE, VERIFY THE PIPE TYPE AND CONDITION. NOTIFY CONTRACTING OFFICER IF DETERIORATED CONDITIONS ARE FOUND.
3. CAP EXISTING PIPE PERMANENTLY AND ABANDONED IN PLACE WITH FLOWABLE FILL MATERIAL.

NOTES:

1. ALL LIMITS OF WORK ARE APPROXIMATE.
2. CONTRACTOR TO COORDINATE WITH BASE UTILITIES TO ESTABLISH SCHEDULE OF UTILITY DISCONNECTIONS.
3. EXISTING UTILITIES FROM GTMO PUBLIC WORKS DEPARTMENT UTILITY MAPS AND HAVE NOT BEEN VERIFIED FOR ACCURACY OR COMPLETENESS. LOCATIONS TO BE VERIFIED BY THE CONTRACTOR AND SUB-CONTRACTORS TO THEIR SATISFACTION.
4. REFER TO ELECTRICAL DRAWINGS FOR ALL PROPOSED ELECTRICAL UTILITIES.
5. ALL UNDERGROUND METALLIC FITTINGS FOR WATER AND SANITARY PIPING ARE TO BE WRAPPED PER SPECIFICATION SECTION 33 11 00. SEE SPECIFICATIONS FOR ADDITIONAL CRITERIA FOR WATER AND SANITARY SYSTEMS.
6. ALL NEW VALVE BOX AND COVER SHALL BE CAST IRON TRAFFIC RATED.

GRAPHIC SCALE
1"=10' 0' 10' 20' 30' 40' 50'

IF SHEET IS LESS THAN (22" x 34") IT IS A REDUCED PRINT, SCALE REDUCED ACCORDINGLY

SYM	DESCRIPTION	DATE	APPR
---	---	---	---

NAVFAC

SEAL

A/E INFO

APPROVED
FOR COMMANDER NAVFAC / B.L.T.L.
ACTIVITY

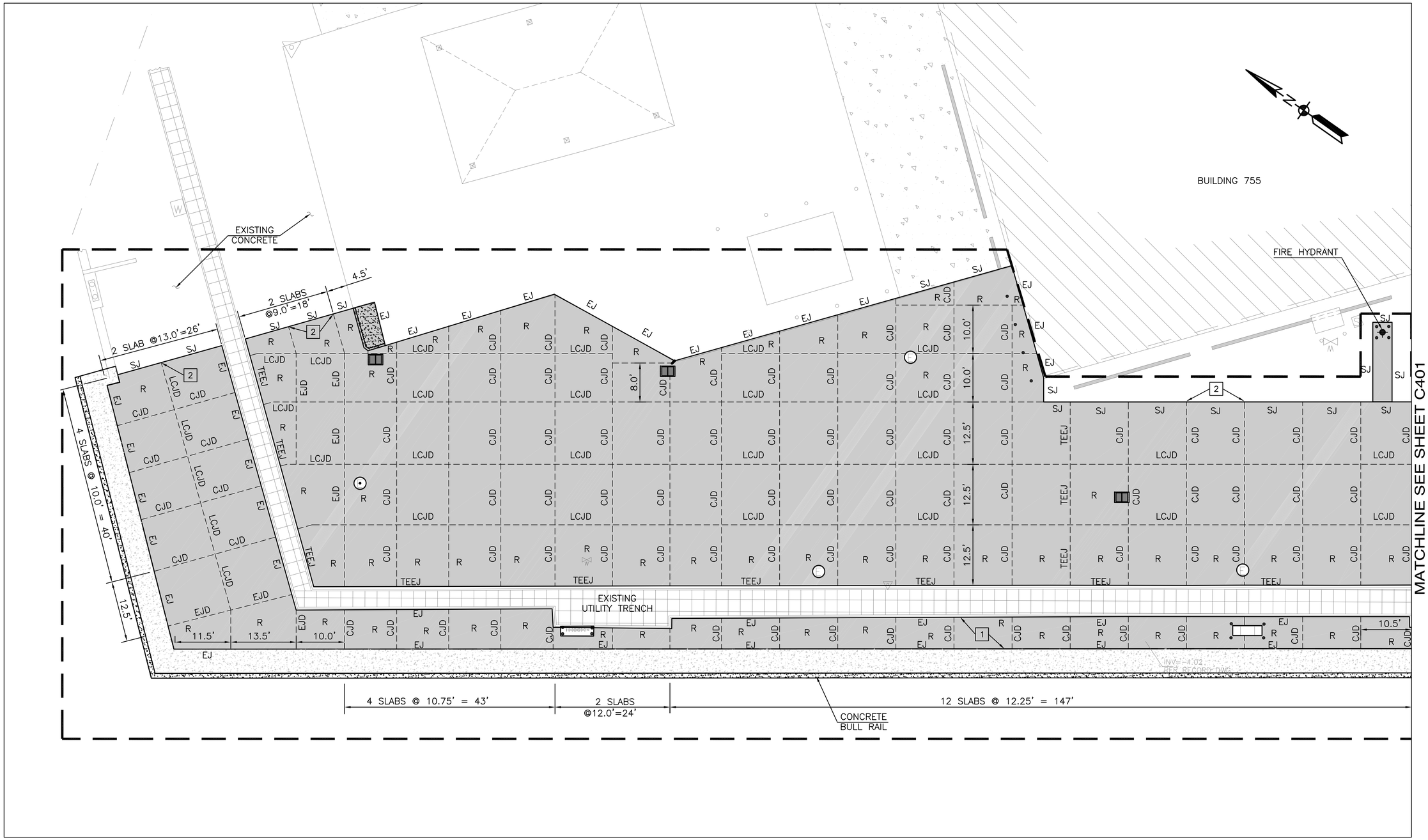
SATISFACTORY TO DATE ---
DES RP DRW RP CHK JF
PROJECT MANAGER E. GALLANT
IPT TECH. BRANCH HEAD M. JOHNSON
CHIEF ENG/ARCH (CORE) J. FRANK

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
IPT SOUTH ATLANTIC
NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST
NAVAL AIR STATION JACKSONVILLE
NAVSTA GUANTANAMO BAY
GUANTANAMO BAY, CUBA
WHARF BRAVO STRUCTURAL REPAIRS
UTILITY SITE PLAN – NORTH

SCALE: AS SHOWN
EPROJECT NO.: 1295318
CONSTR. CONTR. NO. N69450-XX-C-XXXX
NAVFAC DRAWING NO. 15081078
SHEET 32 OF 65
C301

DRAWFORM REVISION: 7 AUGUST 2009

FILE NAME: P:\CIB\project_files\z_CUBA\navsta guantanamo bay\h#60514\wharf bravo structural repairs-1295318\working technical files\Drawings\C301 UTILITY SITE PLAN - NORTH.dwg LAYOUT NAME: C301 UTILITY SITE PLAN - NORTH PLOTTED: Thursday, June 09, 2016 - 3:48pm USER: rlcardo.palmo



1 CONCRETE JOINT PLAN
Scale: 1" = 10'-0"

NOTES:

1. ALL CONCRETE SURFACES AND JOINTS SHALL BE FLUSHED CLEAN WITH WATER AFTER BOTH INITIAL AND FINAL SAWCUTS AND PRIOR TO THE DRYING OF SAWCUT SPAWNED SLURRY.
2. BOTH JOINT FACES SHALL BE SAND-BLASTED AND AIR-BLOWN PRIOR TO FINAL BACKER ROD AND SEALANT INSTALLATION.
3. SEAL RESERVOIR FOR CONTRACTION JOINTS SHALL BE FORMED USING A SECOND SAWCUT. SHOULDERED BLADE SHALL NOT BE USED WITH INITIAL SAWCUT.
4. CONTRACTOR SHALL SEAL ALL NEW JOINTS.

LEGEND:

TEEJ – THICKENED EDGE EXPANSION JOINT
CJD – CONTRACTION JOINT DOWELED
LCJD – LONGITUDINAL CONSTRUCTION JOINT DOWELED
EJD – EXPANSION JOINT DOWELED
EJ – EXPANSION JOINT
SJ – SPECIAL JOINT (THICKENED)
R – REINFORCED SLAB
NEW BULL RAIL
NEW CONCRETE CAP

KEY NOTES:

1. FOR JOINT DETAILS SEE SHEET C501. SEE STRUCTURAL DRAWINGS FOR NEW CONCRETE CAP CROSS SECTION.
2. CONTRACTOR SHALL RE-SEAL EXISTING JOINTS TWO FEET BEYOND THE EXISTING SLAB

GRAPHIC SCALE
1"=10' 0' 10' 20' 30' 40' 50'

SYM	DESCRIPTION	DATE	APPR

NAVFAC

SEAL

A/E INFO

APPROVED
FOR COMMANDER NAVFAC / B.L.T.L.
ACTIVITY

SATISFACTORY TO DATE ----
DES RP DRW RP CHK JF
PROJECT MANAGER E. GALLANT
IPT TECH. BRANCH HEAD M. JOHNSON
CHIEF ENG/ARCH (CORE) J. FRANK

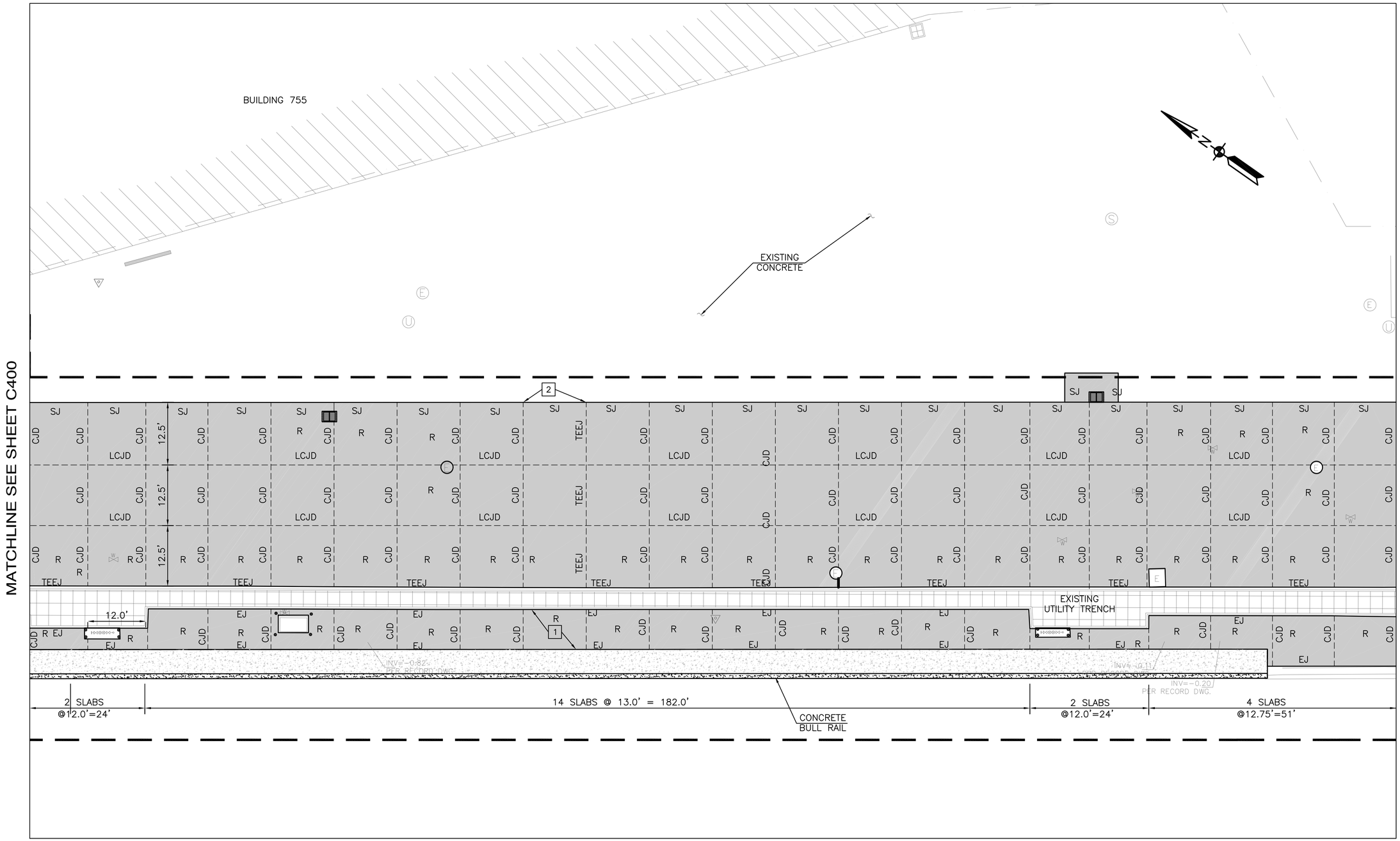
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
IPT SOUTH ATLANTIC
NAVSTA GUANTANAMO BAY
NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST
NAVAL AIR STATION JACKSONVILLE
GUANTANAMO BAY, CUBA
WHARF BRAVO STRUCTURAL REPAIRS
CONCRETE JOINT PLAN – NORTH

SCALE: AS SHOWN
EPROJECT NO.: 1295318
CONSTR. CONTR. NO. N69450-XX-C-XXXX
NAVFAC DRAWING NO. 15081079
SHEET 33 OF 65
C400

DRAWFORM REVISION: 7 AUGUST 2009

FILE NAME: P:\CBL\project_files\z_CUBA\navsta guantanamo bay(h)\h60514\wharf bravo structural repairs-1295318\working technical files\Drawings\C400 CONCRETE JOINT PLAN - NORTH.dwg LAYOUT NAME: C400 CONCRETE JOINT PLAN - NORTH PLOTTED: Friday, June 10, 2016 - 12:43pm USER: ricardo.palmo

SHEET FORMAT IS 22" X 34". IF PRINTED SHEET IS NOT 22" X 34", THEN IT IS NOT TO SCALE



2 CONCRETE JOINT PLAN

Scale: 1" = 10'-0"

NOTES:

1. ALL CONCRETE SURFACES AND JOINTS SHALL BE FLUSHED CLEAN WITH WATER AFTER BOTH INITIAL AND FINAL SAWCUTS AND PRIOR TO THE DRYING OF SAWCUT SPAWNED SLURRY.
2. BOTH JOINT FACES SHALL BE SAND-BLASTED AND AIR-BLOWN PRIOR TO FINAL BACKER ROD AND SEALANT INSTALLATION.
3. SEAL RESERVOIR FOR CONTRACTION JOINTS SHALL BE FORMED USING A SECOND SAWCUT. SHOULDERED BLADE SHALL NOT BE USED WITH INITIAL SAWCUT.
4. CONTRACTOR SHALL SEAL ALL NEW JOINTS.

LEGEND:

- TEEJ – THICKENED EDGE EXPANSION JOINT
- CJD – CONTRACTION JOINT DOWELED
- LCJD – LONGITUDINAL CONSTRUCTION JOINT DOWELED
- EJD – EXPANSION JOINT DOWELED
- EJ – EXPANSION JOINT
- SJ – SPECIAL JOINT (THICKENED)
- R – REINFORCED SLAB
- NEW BULL RAIL
- NEW CONCRETE CAP

KEY NOTES:

1. FOR JOINT DETAILS SEE SHEET C501. SEE STRUCTURAL DRAWINGS FOR NEW CONCRETE CAP CROSS SECTION.
2. CONTRACTOR SHALL RE-SEAL EXISTING JOINTS TWO FEET BEYOND THE EXISTING SLAB

GRAPHIC SCALE

1"=10' 0' 10' 20' 30' 40' 50'

SYM	DESCRIPTION	DATE	APPR
---	---	---	---

NAVFAC

A/E INFO

APPROVED

FOR COMMANDER NAVFAC / B.L.T.L.

ACTIVITY ----

SATISFACTORY TO DATE ----

DES RP | DRW RP | CHK JF

PROJECT MANAGER E. GALLANT

IPT TECH. BRANCH HEAD M. JOHNSON

CHIEF ENG/ARCH (CORE) J. FRANK

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST
IPT SOUTH ATLANTIC NAVAL AIR STATION JACKSONVILLE
NAVSTA GUANTANAMO BAY GUANTANAMO BAY, CUBA

WHARF BRAVO STRUCTURAL REPAIRS

CONCRETE JOINT PLAN – NORTH

SCALE: AS SHOWN

EPROJECT NO.: 1295318

CONSTR. CONTR. NO. N69450-XX-C-XXXX

NAVFAC DRAWING NO. 15081080

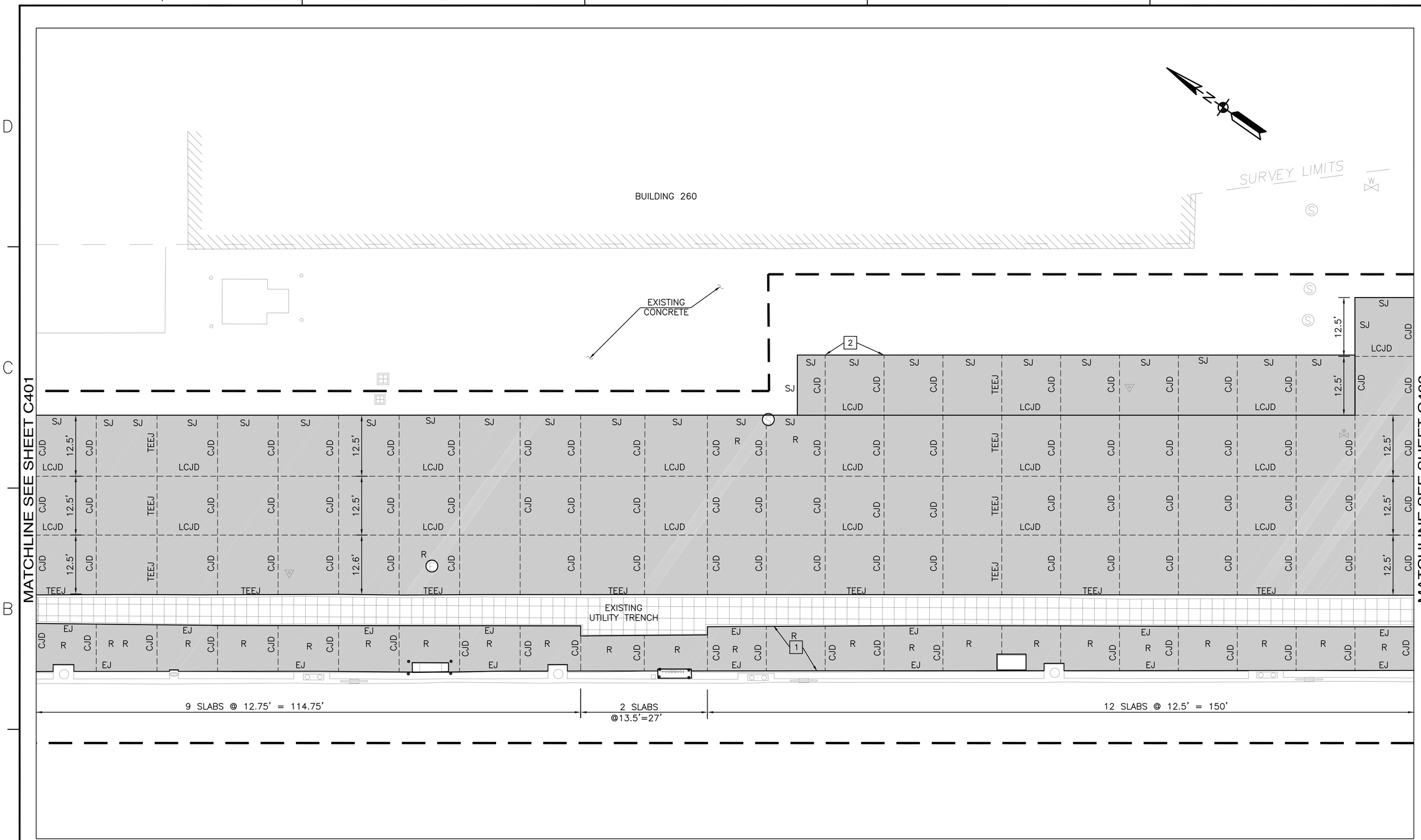
SHEET 34 OF 65

C401

DRAWFORM REVISION: 7 AUGUST 2009

SHEET FORMAT IS 22" X 34". IF PRINTED SHEET IS NOT 22" X 34", THEN IT IS NOT TO SCALE

FILE NAME: P:\CBL\project_files\z-CUBA\navsta guantanamo bay\h\h60514\wharf bravo structural repairs-1295318\working technical files\Drawings\C401 CONCRETE JOINT PLAN - NORTH.dwg LAYOUT NAME: C401 CONCRETE JOINT PLAN - NORTH PLOTTED: Friday, June 10, 2016 - 12:44pm USER: ricardo.palmo



3 CONCRETE JOINT PLAN
Scale: 1" = 10'-0"

NOTES:

1. ALL CONCRETE SURFACES AND JOINTS SHALL BE FLUSHED CLEAN WITH WATER AFTER BOTH INITIAL AND FINAL SAWCUTS AND PRIOR TO THE DRYING OF SAWCUT SPAWNED SLURRY.
2. BOTH JOINT FACES SHALL BE SAND-BLASTED AND AIR-BLOWN PRIOR TO FINAL BACKER ROD AND SEALANT INSTALLATION.
3. SEAL RESERVOIR FOR CONTRACTION JOINTS SHALL BE FORMED USING A SECOND SAWCUT. SHOULDERED BLADE SHALL NOT BE USED WITH INITIAL SAWCUT.
4. CONTRACTOR SHALL SEAL ALL NEW JOINTS.

LEGEND:

TEEJ – THICKENED EDGE EXPANSION JOINT
CJD – CONTRACTION JOINT DOWELED
LCJD – LONGITUDINAL CONSTRUCTION JOINT DOWELED
EJD – EXPANSION JOINT DOWELED
EJ – EXPANSION JOINT
SJ – SPECIAL JOINT (THICKENED)
R – REINFORCED SLAB

KEY NOTES:

1 FOR JOINT DETAILS SEE SHEET C501.

2 CONTRACTOR SHALL RE-SEAL EXISTING JOINTS TWO FEET BEYOND THE EXISTING SLAB

GRAPHIC SCALE
1"=10' 0' 10' 20' 30' 40' 50'

SYM	DESCRIPTION	DATE	APPR
---	---	---	---

NAVFAC

SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC / B.L.T.L.

ACTIVITY

SATISFACTORY TO DATE

DES RP | DRW RP | CHK JF

PM/DM E. GALLANT

BRANCH MANAGER M. JOHNSON

CHIEF ENG/ARCH J. FRANK

FIRE PROTECTION

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
IPT SOUTH ATLANTIC
NAVSTA GUANTANAMO BAY

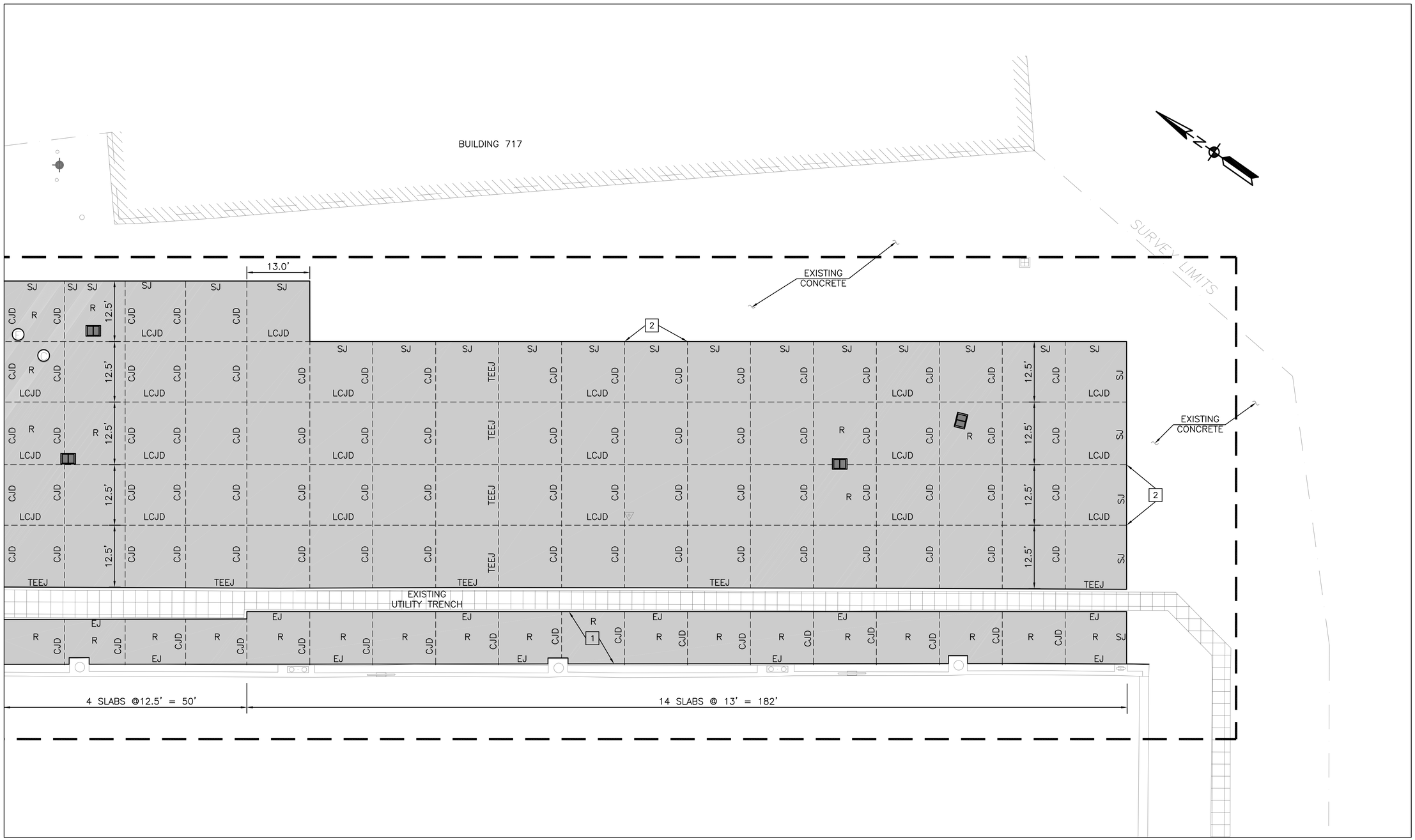
NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST
NAVAL AIR STATION JACKSONVILLE
GUANTANAMO BAY, CUBA

WHARF BRAVO STRUCTURAL REPAIRS

CONCRETE JOINT PLAN – SOUTH

SCALE: AS SHOWN
EPROJECT NO.: 1295318
CONSTR. CONTR. NO. N69450-XX-C-XXXX
NAVFAC DRAWING NO. 15081081
SHEET 35 OF 65
C402

DRAWFORM REVISION: 7 AUGUST 2009



4 CONCRETE JOINT PLAN
Scale: 1" = 10'-0"

NOTES:

1. ALL CONCRETE SURFACES AND JOINTS SHALL BE FLUSHED CLEAN WITH WATER AFTER BOTH INITIAL AND FINAL SAWCUTS AND PRIOR TO THE DRYING OF SAWCUT SPAWNED SLURRY.
2. BOTH JOINT FACES SHALL BE SAND-BLASTED AND AIR-BLOWN PRIOR TO FINAL BACKER ROD AND SEALANT INSTALLATION.
3. SEAL RESERVOIR FOR CONTRACTION JOINTS SHALL BE FORMED USING A SECOND SAWCUT. SHOULDERED BLADE SHALL NOT BE USED WITH INITIAL SAWCUT.
4. CONTRACTOR SHALL SEAL ALL NEW JOINTS.

LEGEND:

TEEJ – THICKENED EDGE EXPANSION JOINT
CJD – CONTRACTION JOINT DOWELED
LCJD – LONGITUDINAL CONSTRUCTION JOINT DOWELED
EJD – EXPANSION JOINT DOWELED
EJ – EXPANSION JOINT
SJ – SPECIAL JOINT (THICKENED)
R – REINFORCED SLAB

KEY NOTES:

1 FOR JOINT DETAILS SEE SHEET C501.

2 CONTRACTOR SHALL RE-SEAL EXISTING JOINTS TWO FEET BEYOND THE EXISTING SLAB

GRAPHIC SCALE
1"=10' 0' 10' 20' 30' 40' 50'

SYM	DESCRIPTION	DATE	APPR
---	---	---	---

NAVFAC

SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC / B.L.T.L.

ACTIVITY

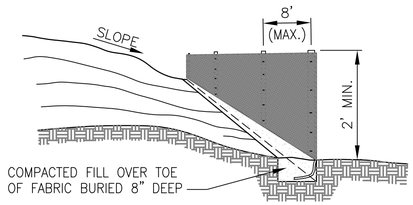
SATISFACTORY TO DATE

DES RP DRW RP CHK JF
PM/DM E. GALLANT
BRANCH MANAGER M. JOHNSON
CHIEF ENG/ARCH J. FRANK
FIRE PROTECTION

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
PT. SOUTH ATLANTIC
NAVFAC FACILITIES ENGINEERING COMMAND SOUTHEAST
NAVAL AIR STATION JACKSONVILLE
NAVSTA GUANTANAMO BAY
GUANTANAMO BAY, CUBA
WHARF BRAVO STRUCTURAL REPAIRS
CONCRETE JOINT PLAN – SOUTH

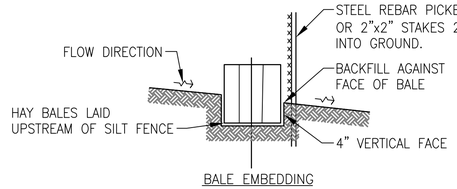
SCALE: AS SHOWN
EPROJECT NO.: 1295318
CONSTR. CONTR. NO. N69450-XX-C-XXXX
NAVFAC DRAWING NO. 15081082
SHEET 36 OF 65
C403

DRAWFORM REVISION: 7 AUGUST 2009

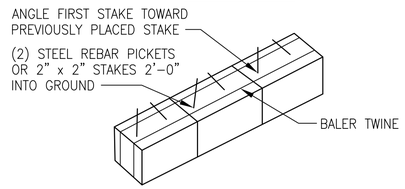


NOTES:

1. STEEL REBAR PICKETS OR 2" X 2" STAKES 2'–0" INTO GROUND @ 8'o/c. LOCATE POSTS ON DOWNSLOPE SIDE OF FILTER FABRIC.
2. BURY TOE OF FENCE APPROXIMATELY 8" DEEP TO PREVENT UNDERCUTTING.
3. WHEN JOINTS ARE NECESSARY, SECURELY FASTEN THE FABRIC AT A SUPPORT POST WITH OVERLAP TO THE NEXT POST.
4. FILTER FABRIC TO BE NYLON, POLYESTER, PROPYLENE OR ETHYLENE YARN WITH EXTRA STRENGTH – 50LB/LIN. IN. (MINIMUM) – AND WITH A FLOW RATE OF AT LEAST 0.3 GAL./SQ. FT./MINUTE. FABRIC SHOULD CONTAIN ULTRAVIOLET RAY INHIBITORS AND STABILIZERS.



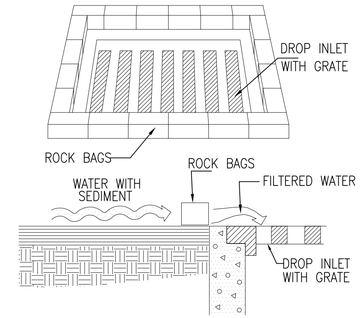
BALE EMBEDDING



BALE ANCHORING

1 C501 FILTER BARRIER (FB)

NOT TO SCALE

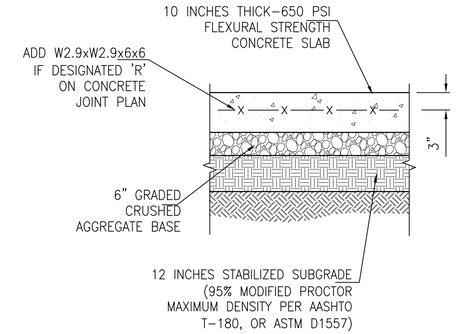


2 C501 ROCK BAG DROP INLET SEDIMENT FILTER

NOT TO SCALE

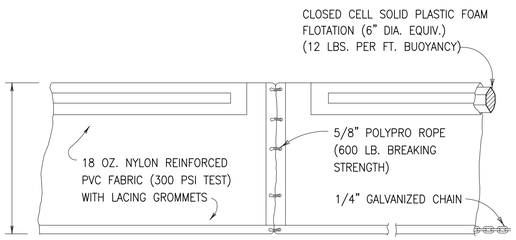
SPECIFIC APPLICATION

THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE HEAVY FLOWS ARE EXPECTED AND WHERE AN OVERFLOW CAPACITY IS NECESSARY TO PREVENT EXCESSIVE PONDING AROUND THE STRUCTURE.



3 C501 TYPICAL CONCRETE DETAIL

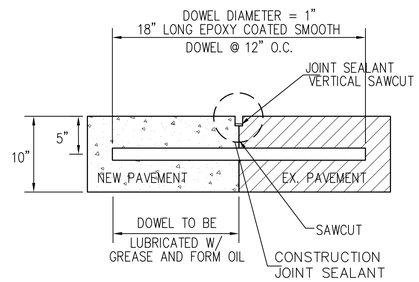
NOT TO SCALE



TYPE I

4 C501 FLOATING TURBIDITY BARRIERS

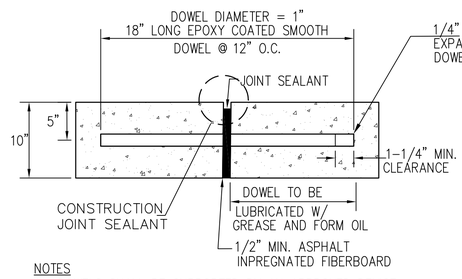
NOT TO SCALE



NOTES

1. DRILL HOLES 9" DEEP, 12" LATERAL SPACING INTO SURROUNDING PCC PAVEMENT THOROUGHLY.
2. INSERT EPOXY, TO FILL HOLE AND INSERT BARS WITH RETENTION COLLARS.
3. DOWELS SHALL BE AUGNED PERPENDICULAR TO THE SQUARE FACE OF CONCRETE.
4. FOR EPOXY GROUT, THE DIAMETER SHALL BE NOT MORE THAN 1/8–INCH LARGER THAN THE DOWEL DIAMETER.
5. FOR CEMENT–BASED GROUT, THE HOLE DIAMETER SHALL BE AT LEAST 1/4–INCH LARGER AND NOT MORE THAN 3/8–INCH LARGER THAN THE DOWEL.
6. DRILLING, CLEANING, AND GROUTING SHALL BE PERFORMED PER THE EPOXY MANUFACTURER'S RECOMMENDATIONS FOR THIS SPECIFIC APPLICATION.
7. INSTALL END CAPS ON THE FREE END OF DOWELS.
8. JOINT SEALANT TO BE AS NOTED IN PCC JOINT DETAIL.

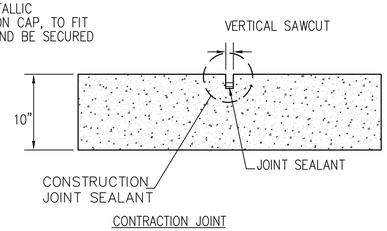
BUTT JOINT



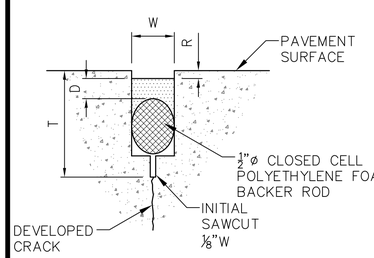
NOTES

1. DOWELS SHALL BE SUPPORTED BY AN APPROVED DEVICE

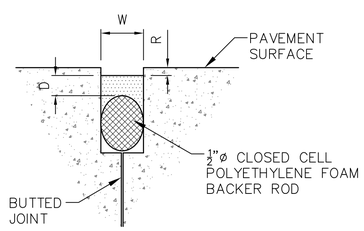
TRANSVERSE EXPANSION JOINT



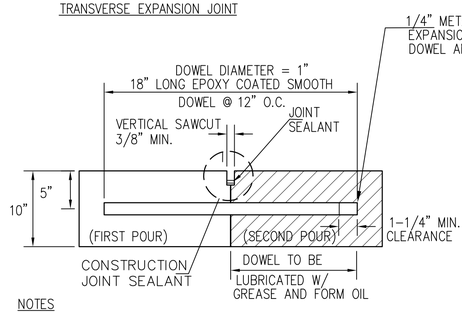
CONTRACTION JOINT



CONTRACTION JOINT



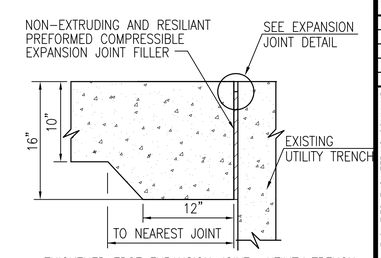
CONSTRUCTION JOINT



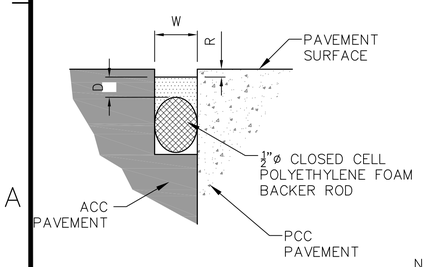
NOTES

1. DOWELS SHALL BE SUPPORTED BY AN APPROVED DEVICE

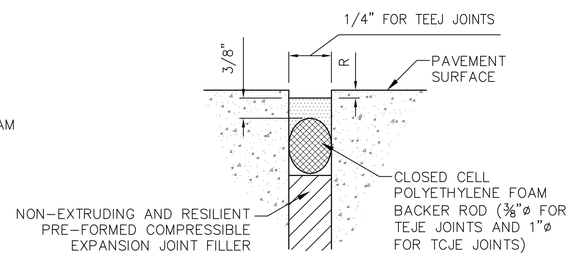
CONSTRUCTION JOINT



THICKENED EDGE EXPANSION JOINT– UTILITY TRENCH



PCC TO ACC JOINT

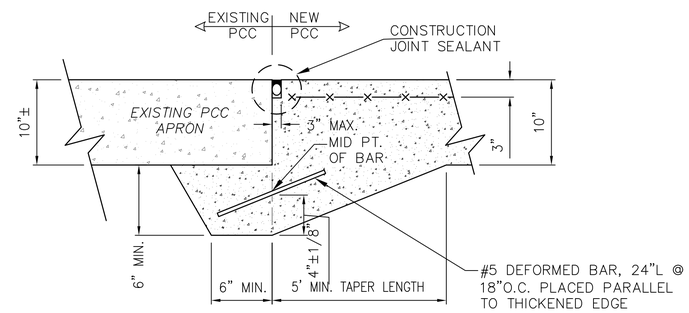


EXPANSION JOINT

SAWCUT/CLEAN BOTH SIDES OF JOINT TO REMOVE FOREIGN MATERIALS &ASSURE ADHESION OF SEALANT TO PCC SUBSTRATE

DEFINITIONS

W ≡ WIDTH OF SEALANT RESERVOIR = 3/8"
D ≡ DEPTH OF SEALANT = 3/8" (OR PER MANUFACTURER'S RECOMMENDATION)
T ≡ DEPTH OF INITIAL SAWCUT = 2.50"
R ≡ DEPTH OF RECESS = 1/4" ± 1/16"



SPECIAL JOINT – EXISTING APRON

5 C501 CONCRETE JOINT DETAILS

NOT TO SCALE

SYM	DESCRIPTION	DATE	APPR

NAVFAC

SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC / B.L.T.L.

ACTIVITY

SATISFACTORY TO DATE ----

DES	RP	DRW	RP	CHK	JF

PROJECT MANAGER E. GALLANT
IPT TECH. BRANCH HEAD M. JOHNSON
CHIEF ENG/ARCH (CORE) J. FRANK

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
IPT SOUTH ATLANTIC
NAVSTA GUANTANAMO BAY

NAVAL FACILITIES ENGINEERING COMMAND
NAVAL AIR STATION JACKSONVILLE
GUANTANAMO BAY, CUBA

WHARF BRAVO STRUCTURAL REPAIRS

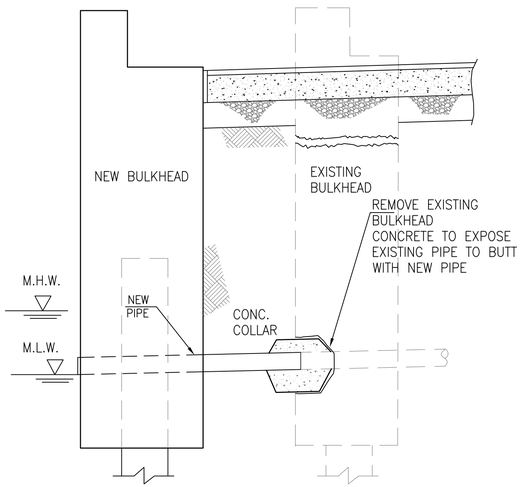
SITE CONSTRUCTION DETAILS

SCALE: AS SHOWN
EPROJECT NO.: 1295318
CONSTR. CONTR. NO. N69450–XX–C–XXXX
NAVFAC DRAWING NO. 15081083
SHEET 37 OF 65

C501

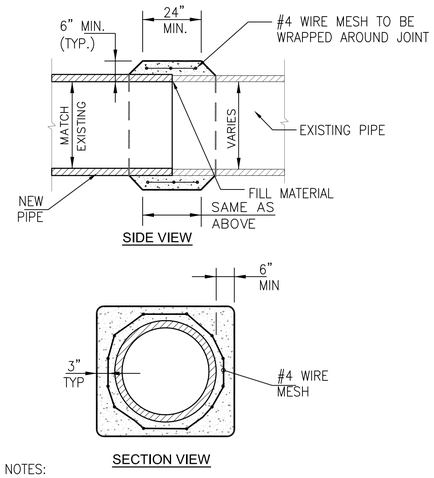
DRAWFORM REVISION: 7 AUGUST 2009

FILE NAME: P:\CUB\project_files\z_CUBA\navsta guantanamo bay\hr\60514\wharf bravo structural repairs-1295318\working technical files\Drawings\C501 SITE CONSTRUCTION DETAILS.dwg LAYOUT NAME: C501 SITE CONSTRUCTION DETAILS PLOTTED: Thursday, June 09, 2016 – 3:51pm USER: ricardo.palma



1 C502 PIPE EXTENSION DETAIL (TYP.)

NOT TO SCALE

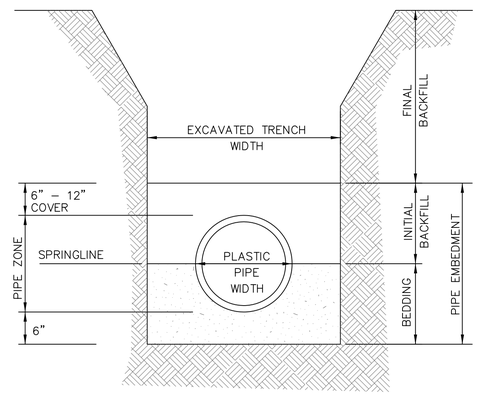


NOTES:

1 – PREVENT ANY EXCESS CONCRETE FLOW THRU GAPS BY FILLING WITH MASTIC FILLING MATERIAL.
2 – REMOVE EXISTING PIPE BEYOND BULKHEAD IF EXISTING PIPE IS DAMAGED.
3 – WRAP THE JOINT (NEW/ EXIST. PIPE) WITH GEOTEXTILE.

2 C502 PIPE COLLAR DETAIL

NOT TO SCALE

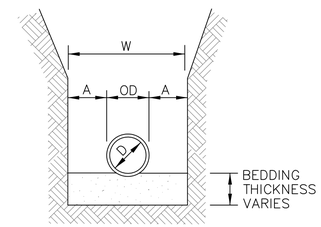


NOTE: PROVIDE BEDDING IN ACCORDANCE WITH THE SPECIFICATIONS.

3 C502 TRENCH FOR PLASTIC PIPE

NOT TO SCALE

PIPE DIA "D"	MAXIMUM "A"
6" TO 15"	8"
18" TO 21"	10"
24" TO 30"	12"
33" TO 42"	15"
48" & LARGER	18"

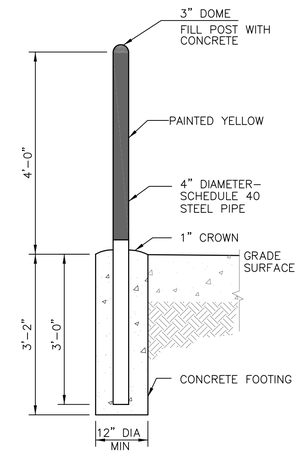


MAXIMUM TRENCH WIDTH "W" TAKEN AT TOP OF PIPE

NOTE: PROVIDE BEDDING IN ACCORDANCE WITH THE SPECIFICATIONS.

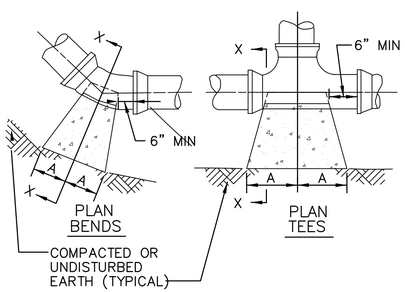
4 C502 TRENCH FOR NON-PLASTIC PIPE

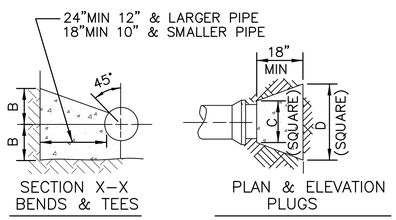
NOT TO SCALE



5 C502 PERMANENT BOLLARD

NOT TO SCALE

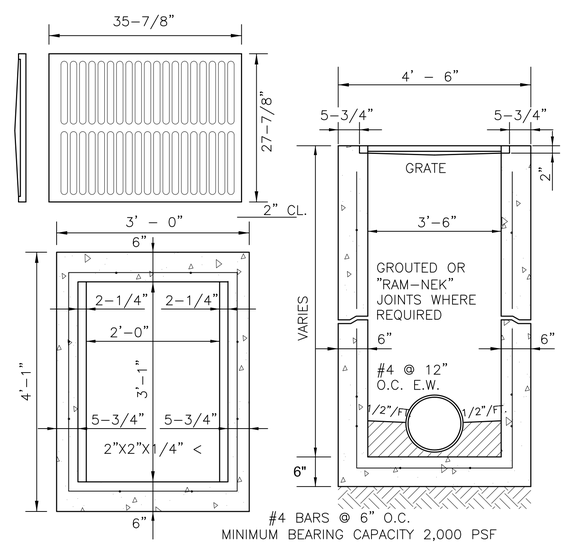




SIZE	1/4 BENDS		1/8 BENDS		1/16 BENDS		TEES		PLUGS	
	A	B	A	B	A	B	A	B	C	D
6"	16"	10"	9"	10"	6"	8"	10"	12"	10"	21"
8"	22"	13"	12"	13"	8"	10"	13"	16"	12"	29"
10"	26"	17"	14"	17"	10"	13"	16"	20"	14"	36"
12"	29"	21"	16"	21"	11"	16"	18"	24"	16"	41"
14"	35"	24"	19"	24"	12"	20"	22"	27"	18"	48"
16"	38"	27"	21"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

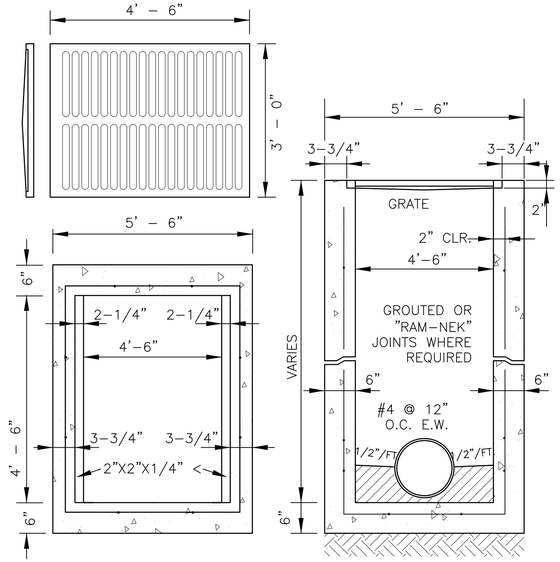
6 C502 THRUST BLOCKS

NOT TO SCALE



7 C502 STORM SEWER TYPE "C" INLET

NOT TO SCALE



8 C502 STORM SEWER TYPE "E" INLET (MODIFY)

NOT TO SCALE

NOTES:

1. CONCRETE DESIGN COMPRESSIVE STRENGTH SHALL EQUAL OR EXCEED 4,000 PSI @ 28–DAYS.
2. ALL GRATES TO BE TRAFFIC BEARING RATED HS–20.
3. CONTRACTOR SHALL PLACE 10' WIDE SOD COLLAR AROUND INLETS (NOT IN PAVEMENT)..

SYM	DESCRIPTION	DATE	APPR

NAVFAC

SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC / B.L.T.L.

ACTIVITY

SATISFACTORY TO DATE

DES	RP	DRW	RP	CHK	JF
PM/DM	E. GALLANT				
BRANCH MANAGER	M. JOHNSON				
CHIEF ENG/ARCH	J. FRANK				
FIRE PROTECTION	--				

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST
NAVAL AIR STATION JACKSONVILLE
IPT, SOUTH ATLANTIC
NAVSTA GUANTANAMO BAY
GUANTANAMO BAY, CUBA

WHARF BRAVO STRUCTURAL REPAIRS

SITE CONSTRUCTION DETAILS

SCALE: AS SHOWN

EPROJECT NO.: 1295318

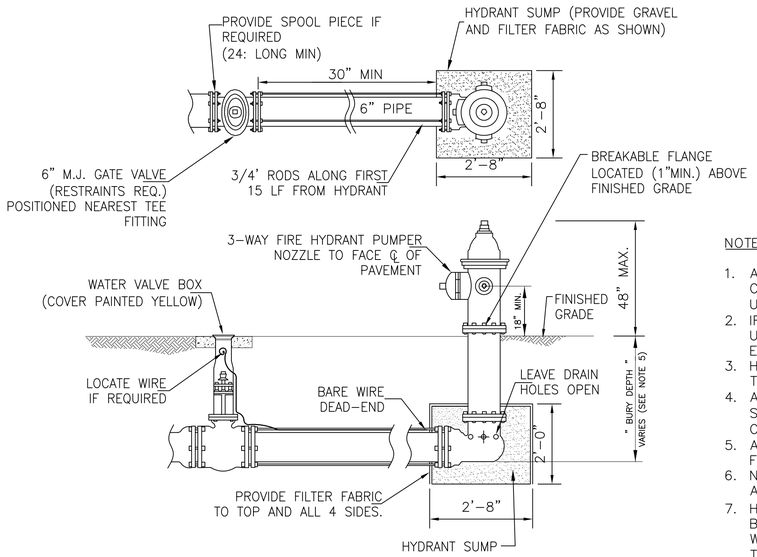
CONSTR. CONTR. NO. N69450–XX–C–XXXX

NAVFAC DRAWING NO. 15081084

SHEET 38 OF 65

C502

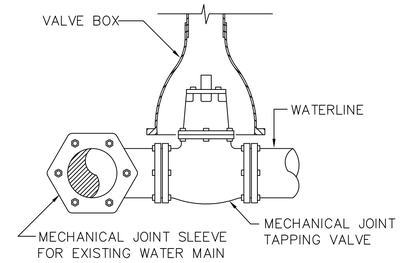
DRAWFORM REVISION: 7 AUGUST 2009



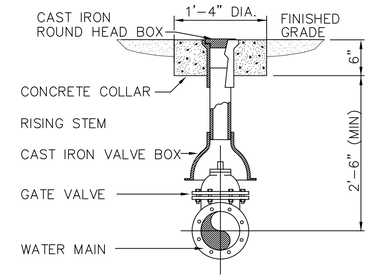
NOTE

1. ALL BOLTS SHALL BE STAINLESS STEEL TYPE 316 COATED WITH ANTI-SIEZE COMPOUND UNLESS OTHERWISE SPECIFIED. ALL BOLTS SHALL BE TIGHTENED USING A TORQUE WRENCH TO MANUFACTURER'S SPECIFICATIONS.
2. IF THRUST BLOCK ARE CALLED FOR, THEY SHALL BE PLACED AGAINST UNDISTURBED OR COMPACTED SOIL. ALL BOLTS AND JOINTS SHALL BE LEFT EXPOSED AND FREE FROM POURED CONCRETE
3. HORIZONTAL PIPE MATERIAL UNDER THE PIER SHALL BE STAINLESS STEEL TYPE 316.
4. ALL FITTINGS SHALL MEET AWWA STANDARD C153/A21 53-00. ALL GASKETS SHALL BE CHLORAMINE RESISTANT AS WELL AS MEET AWWA STANDARD C111/A21 11-00 AND NSF STANDARD 61.
5. ALL JOINTS SHALL BE PUSH ON WITH FIELD-LOC GASKETS OR MEGALUG OR FLANGED.
6. NYLON HYDRANT CAPS SHALL BE COLOR-CODED TO INDICATE AVAILABLE FLOW AND ATTACHED AS SHOWN WITH STAINLESS STEEL CHAIN OR WIRE.
7. HYDRANT BOLTS & NUTS SHALL BE $\frac{5}{8}$"X2$\frac{3}{4}$" STAINLESS STEEL TYPE 316 FOR BOTH ABOVE GROUND AND BURIED LOCATIONS. THREADS SHALL BE COATED WITH ANTI-SEIZE COMPOUND. ALL BOLTS SHALL BE TIGHTENED USING A TORQUE WRENCH TO MANUFACTURER'S SPECIFICATIONS.

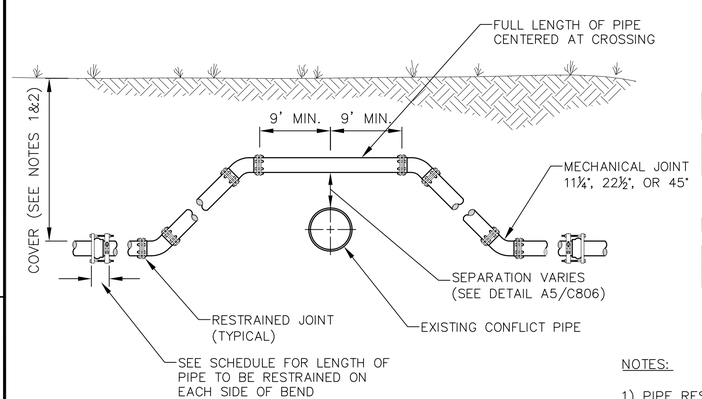
1 C503 FIRE HYDRANT DETAIL
NOT TO SCALE



2 C503 TAPPING SLEEVE DETAIL
NOT TO SCALE



3 C503 VALVE DETAIL
NOT TO SCALE



TYPE 'A' CROSSING
NOT TO SCALE

PVC PIPE RESTRAINT JOINT SCHEDULE

LENGTH TO BE RESTRAINED (FEET)

NOMINAL PIPE SIZE (INCHES)	HORIZONTAL BENDS 90	45	22.5	11.25	VERTICAL OFFSETS Lu	Li	L
4	20	8	4	2	20	3	50
6	28	10	5	2	28	4	70
8	36	14	6	3	36	5	90

REDUCERS

SIZE	LENGTH (FEET)
6x4	35
8x6	35
8x4	65

TEES

RUN SIZE	BRANCH SIZE	LENGTH (FEET)
4	4	FITTING ONLY
6	6	10
6	4<LESS	FITTING ONLY
8	8	30
8	6<LESS	FITTING ONLY

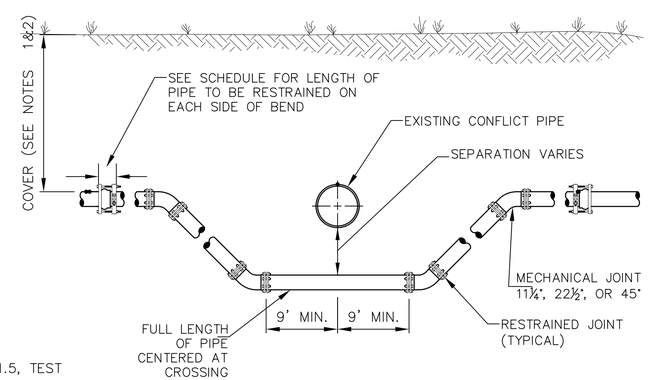
NOTES:

1) PIPE RESTRAINT ASSUMPTIONS: PVC PIPE, SAFETY FACTOR = 1.5, TEST PRESSURE=150PSI, DEPTH OF COVER=30 INCHES.

2) VERTICAL OFFSETS ARE APPROXIMATELY 3 FEET OF COVER ON TOP AND APPROXIMATELY 8 FEET COVER ON BOTTOM. Lu IS THE RESTRAINED LENGTH FOR THE TOP LEVEL. Li IS THE RESTRAINED LENGTH FOR THE BOTTOM LEVEL.

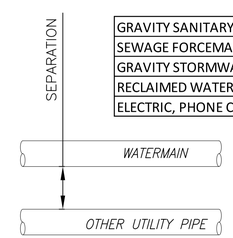
3) TEES: TOTAL LENGTH BETWEEN FIRST JOINTS OR RESTRAINED LENGTH ON EITHER SIDE OF THE TEE (RUN) SHALL BE A TOTAL DISTANCE OF 30 FEET (MIN.)

4) THE INSTALLATION OF BELL HARNESS RESTRAINTS AT PVC JOINTS SHALL BE COMPLETED PER THE MANUFACTURER'S RECOMMENDATIONS.



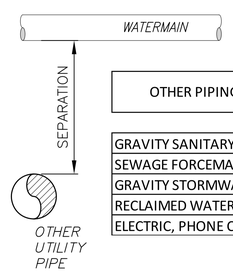
TYPE 'B' CROSSING
NOT TO SCALE

4 C503 PPE CROSSING CONFLICTS DETAIL
NOT TO SCALE



MINIMUM HORIZONTAL SEPARATION REQUIREMENTS

OTHER PIPING TYPE	MINIMUM HORIZONTAL SEPARATION (FEET)
GRAVITY SANITARY SEWER	10
SEWAGE FORCEMAIN	10
GRAVITY STORMWATER	3
RECLAIMED WATER	3
ELECTRIC, PHONE CABLE, GAS	2



MINIMUM VERTICAL SEPARATION REQUIREMENTS

OTHER PIPING TYPE	MINIMUM VERTICAL SEPARATION (INCHES)
GRAVITY SANITARY SEWER	18
SEWAGE FORCEMAIN	18
GRAVITY STORMWATER	12
RECLAIMED WATER	12
ELECTRIC, PHONE CABLE, GAS	6

5 C503 MINIMUM SEPARTION FOR WATERMAINS
NOT TO SCALE

SYM	DESCRIPTION	DATE	APPR

NAVFAC

SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC / B.L.T.L.

ACTIVITY

SATISFACTORY TO DATE

DES RP DRW RP CHK JF

PM/DM E. GALLANT

BRANCH MANAGER M. JOHNSON

CHIEF ENG/ARCH J. FRANK

FIRE PROTECTION --

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
IPT SOUTH ATLANTIC

NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST
NAVAL AIR STATION JACKSONVILLE

NAVSTA GUANTANAMO BAY

GUANTANAMO BAY, CUBA

WHARF BRAVO STRUCTURAL REPAIRS

UTILITY DETAILS

SCALE: AS SHOWN

EPROJECT NO.: 1295318

CONSTR. CONTR. NO. N69450-XX-C-XXXX

NAVFAC DRAWING NO. 15081085

SHEET 39 OF 65

C503

DRAWFORM REVISION: 7 AUGUST 2009

STRUCTURAL DESIGN SCOPE

1) PROVIDE A UNIFORM BERTHING FACE TO MATCH EXISTING FACILITY. PROVIDE BACKLAND SOIL STABILIZATION. PROVIDE REPAIR AND MAINTENANCE OF EXISTING FACILITIES NOT IMPACTED BY THE NEW BERTHING FACE.

DESIGN CRITERIA

1) UFC 3-301-01, STRUCTURAL ENGINEERING, MAY 2014
2) UFC 4-151-10, GENERAL CRITERIA FOR WATERFRONT CONSTRUCTION, SEPTEMBER 2001
3) UFC 4-152-01, DESIGN OF PIERS AND WHARVES, SEPTEMBER 2005
4) ASCE 7-10, MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES
5) ASCE 61-14, SEISMIC DESIGN OF PIERS AND WHARVES – CHAPTER 2

DESIGN LOADS

1) DEAD LOADS:
   STRUCTURE SELF WEIGHT
2) LIVE LOADS:
   DECK AREA = 300 PSF UNIFORM SURCHARGE
3) WHEEL LOADS:
   DECK AREA = AASHTO HS-20-44, 20TON LIFT TRUCK
   = 24K FORKLIFT (CRITERIA 3)
   TRENCH COVERS = AASHTO HS-20-44, 20TON LIFT TRUCK
4) CRANE LOADS = 50 TON MOBILE CRANE PER UFC 4-152-01
5) BERTHING LOADS

VESSEL NAME	LOA(FT)	BEAM(FT)	DRAFT(FT)	DISPLACEMENT (LT)	BERTHING SPEED(FT/SEC)
BOB HOPE(TAKR300)A	949	106	26	44,229	0.36
LHD-1	844	106	28	40,650	0.37
AOT	615	90	33	39,620	0.37
DDG-51	505	66	30	8,274	0.62
USCG WHEC	378	43	15	3299	0.81
MT OCEAN ENERGY	171	34	9	1,016	0.96
YTB	108	30.5	14	344	1.0

6) WIND LOADS:
   OPERATIONAL MOORING = 35 KNOT 30-SEC GUST
   EXTREME MOORING = 60 KNOT 30-SEC GUST
7) SEISMIC(UFC 3-301-01, UFC 4-152-01, ASCE 61-14):
   SITE CLASS = E
   RISK CATEGORY = II
   DESIGN CLASSIFICATION = MODERATE
   PERFORMANCE = CONTROLLED AND REPAIRABLE DAMAGE
   PGA(2475 YR) = 0.50g(UFC 3-301-01, REFERENCE ONLY)
   PGA(775 YR) = 0.33g
   PGA(475 YR) = 0.29g

EXISTING CONDITION

1) REFER TO RECORD DRAWINGS, NAVFAC DRAWINGS 4221150 TO 4221181 AND 4249498 TO 4249519. THE GOVERNMENT MAKES NO CLAIM REGARDING THE ACCURACY OF THESE DRAWINGS. THE CONTRACTOR IS RESPONSIBLE TO FIELD VERIFY ALL INFORMATION REPRESENTED IN ALL CONTRACT DRAWINGS. RECORD DRAWINGS ARE INCORPORATED INTO THIS CONTRACT BY REFERENCE.

GENERAL INFORMATION

1) THESE NOTES ARE NOT INTENDED TO REPLACE THE SPECIFICATIONS. SEE SPECIFICATION FOR REQUIREMENTS IN ADDITION TO GENERAL NOTES.
2) THE STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE AND DO NOT INDICATE THE MEANS OR METHODS OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND IS SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, PROCEDURES, TECHNIQUES AND SEQUENCE.
3) DO NOT SCALE DIMENSIONS FROM DRAWINGS. THE CONTRACTOR SHALL REQUEST, IN WRITING, FROM THE GOVERNMENT ANY NECESSARY DIMENSIONS NOT SHOWN ON THE DRAWINGS.
4) REPRODUCTION OF CONTRACT DRAWINGS SHALL NOT BE USED AS SHOP DRAWINGS UNDER ANY CIRCUMSTANCE.
5) CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND CONDITIONS OF EXISTING STRUCTURE(S) AND SITE THAT ARE AFFECTED BY NEW WORK BEFORE PRECEDING. NOTIFY CONTRACTING OFFICER OF ANY DISCREPANCIES THAT IMPACT NEW WORK PRIOR TO MOBILIZATION TO THE SITE.
6) REFERENCE ELEVATION OF 0.00 FEET REFERENCED TO MEAN SEA LEVEL. FOLLOWING IS THE TIDAL INFORMATION AVAILABLE AT TIME OF DESIGN(REF. PWO BENCH MARK DRAWING 5T-1120-1288):
   MEAN HIGH WATER(MHW) +0.50FT
   MSL 0.00FT
   MEAN LOW WATER(MLW) -0.50FT
7) WATER DEPTHS FOUND IN THE INSPECTION SHEETS ARE REFERENCED TO MEAN SEA LEVEL. WATER DEPTHS TAKEN FROM "HYDROGRAPHIC CONDITION SURVEY – 2014" BY NAVFAC MIDATLANTIC HYDROGRAPHIC SURVEY BRANCH.
8) ALL DIVING OPERATIONS MUST BE PLANNED AND CONDUCTED IN ACCORDANCE WITH CONTRACT REQUIREMENTS AND CONTRACTOR'S SAFETY PRACTICES. NO DIVING SHALL OCCUR UNDER THIS CONTRACT WITHOUT WRITTEN ACCEPTANCE OF THE CONTRACTOR'S DIVE PLAN.
9) REFER TO CIVIL SHEETS FOR PROJECT PHASING REQUIREMENTS.

CONSTRUCTION NOTES

1) ALL CRANE OPERATIONS SHALL BE CONDUCTED IN ACCORDANCE WITH CONTRACT, FEDERAL, AND LOCAL REQUIREMENTS. CONTRACTOR IS RESPONSIBLE TO DETERMINE IF EQUIPMENT CAN OPERATE SAFELY ON THE WHARF.
2) BOTTOM DEBRIS GENERATED BY THE CONTRACTOR SHALL BE REMOVED AT NO ADDITIONAL COST TO THE GOVERNMENT. DIVERS SHALL BE USED TO LOCATE AND RECOVER CONTRACTOR GENERATED BOTTOM DEBRIS. THE USE OF CLAM SHELL BUCKETS OR SIMILAR METHODS IS PROHIBITED.
3) PROVIDE TURBIDITY CURTAIN AROUND ALL ACTIVE CONSTRUCTION AREAS. TURBIDITY CURTAIN SHALL EXTEND FROM WATER SURFACE TO MUDLINE. ANCHOR PER MANUFACTURER'S REQUIREMENTS.
4) COORDINATE LAYDOWN AREA FOR MATERIALS AND EQUIPMENT WITH THE CONTRACTING OFFICER.
5) TAKE PRECAUTIONS TO PROTECT EXISTING WHARF STRUCTURE FROM DAMAGE DUE TO CONSTRUCTION OPERATIONS.

STRUCTURAL DEMOLITION NOTES

1) REMOVE ALL ITEMS AS DETAILED IN THE STRUCTURAL DEMOLITION SHEETS & AS NECESSARY TO EXECUTE THE PROJECT. REFER TO CIVIL SHEETS FOR ANY ADDITIONAL REQUIREMENTS.
2) REMOVE AND STORE EXISTING FOAM FENDERS IN A LOCATION AS INDICATED BY THE CONTRACTING OFFICER. RE-INSTALL AS PART OF THIS CONTRACT.

EXISTING UTILITIES

1) PRIOR TO STARTING CONSTRUCTION, UTILITIES FOR FUEL, POTABLE WATER, WASTE OIL AND SANITARY SEWER WILL BE CHECKED BY THE CONTRACTOR FOR OBVIOUS LEAKS, PRESSURE TESTED AND FLOW TESTED (WHERE APPLICABLE) TO ESTABLISH BASELINE DATA. ANY LEAK OR ABNORMAL DATA WILL BE REPORTED TO THE CONTRACTING OFFICER. AFTER COMPLETION OF PROJECT, UTILITIES AGAIN SHALL BE TESTED TO ENSURE THAT THEY MEET THE BASELINE ESTABLISHED DATA. ANY VARIANCES WILL BE REPORTED TO THE CONTRACTING OFFICER AND REPAIRED AT NO ADDITIONAL COST TO THE GOVERNMENT.

CONCRETE(MARINE)

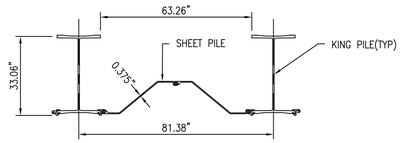
1) ALL CONCRETE CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE PROVISIONS OF THE AMERICAN CONCRETE INSTITUTE (ACI) BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE (ACI 318), JANUARY 2011. CONCRETE SHALL MEET THE FOLLOWING MINIMUM REQUIREMENTS:
   A. THE 28-DAY CONCRETE COMPRESSIVE STRENGTH SHALL BE 5,000 PSI WITH A MAXIMUM W/C RATIO OF 0.35.
   B. UNO, CONCRETE COVER OVER STEEL REINFORCEMENT SHALL BE 3 INCHES.
   C. PROVIDE PORE BLOCKER ADMIXTURE. REFER TO SPECIFICATION FOR ADDITIONAL INFORMATION.
   D. REFER TO SPECIFICATIONS FOR ADDITIONAL CONCRETE REQUIREMENTS.
2) EPOXY CHEMICAL EMBED MATERIAL SHALL MEET THE REQUIREMENTS OF ASTM C881 TYPE IV, GR 3.
3) STEEL REINFORCEMENT SHALL MEET THE REQUIREMENTS OF ASTM A615-12 GRADE 60. ALL REINFORCEMENT MUST BE HOT DIPPED GALVANIZED AFTER ALL BENDING AND MANUFACTURE IS COMPLETE. PROVIDE EVEN SPACING OF REINFORCING.
4) PROVIDE NON-SHRINK NON-METALLIC GROUT MEETING THE REQUIREMENTS OF ASTM C1107 WITH A WATER-SOLUBLE CHLORIDE CONTENT LESS THAN 0.10% BY MASS TO TOTAL MASS OF THE TOTAL CEMENTITIOUS MATERIALS. PROVIDE A MINIMUM 5,000 PSI 28-DAY COMPRESSIVE STRENGTH GROUT.
5) FOR CIP CONCRETE AGAINST EXISTING OR NEW CONCRETE:
   A. PREPARE EXISTING CONCRETE SURFACE TO THE SATURATED SURFACE DRY CONDITION (SSD). APPLY APPROXIMATELY $\frac{1}{8}$" THICK CEMENT SLURRY TO EXISTING SURFACE IMMEDIATELY PRIOR TO PLACING NEW CONCRETE.
6) MAXIMUM ALLOWABLE LENGTH OF CONCRETE PILE CAP PLACEMENT MUST NOT EXCEED 40 FEET CENTER TO CENTER. PROVIDE 4'-0" WIDE CLOSURE POURS IN PILE CAP BETWEEN ADJACENT CONCRETE PLACEMENTS AND AS INDICATED ON THE DRAWINGS. LOCATE ALL REINFORCEMENT SPLICES AT CLOSURE POURS. ALLOW ADJACENT CONCRETE PLACEMENTS A MINIMUM OF 7 DAYS OF CURING BEFORE PLACEMENT OF CONCRETE IN CLOSURE POUR. PROVIDE MINIMUM OF $\frac{1}{4}$" SURFACE AMPLITUDE ON ADJACENT POUR FACES.

STEEL

1) THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS AND STRUCTURES SHALL BE IN ACCORDANCE WITH THE SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS, ANSI/AISC 360-05, MARCH 9, 2005.
2) THE REQUIRED MATERIAL SPECIFICATION FOR STRUCTURAL STEEL MEMBERS ARE AS FOLLOWS:
   RECTANGULAR AND ROUND HSS---------- ASTM A500, GRADE B
   ROUND STEEL PIPE---------- ASTM A53, GRADE B
   PIPE PILE---------- ASTM A252, GRADE 3 50KSI
   PLATES ---------- ASTM A572 GR50
   CHANNELS AND ANGLES---------- ASTM A36
   STRUCTURAL BOLTS---------- ASTM A490, TYPE 1
   NUTS FOR STRUCTURAL BOLTS---------- ASTM A563
   WASHERS---------- ASTM F436
   MOORING FITTINGS---------- ASTM A27
   MOORING ANCHOR RODS & HARDWARE---------- ASTM A449 OR F1554, GR105
   THREADED ROD---------- ASTM A36
   THREADED ROD FOR P.I. ANCHORS---------- ASTM A240, TYPE 304 OR 304L
   TIE BACK ANCHOR ROD---------- ASTM A615, GRADE 75
   HEADED STUD---------- ASTM A29 TYPE B
   WELDING ELECTRODE---------- AWS D1.1, E70XX
   HOT DIPPED GALVANIZED HARDWARE---------- ASTM A153
   HOT DIPPED GALVANIZED PRODUCTS---------- ASTM A123, GRADE 100
   HOT DIPPED GALVANIZED REINFORCEMENT & TIE RODS--- ASTM A767 CLASS 1
   CLEANING PRIOR TO HDG---------- SSPC SP10, NEAR WHITE
3) ALL WELDED AND MANUFACTURED STEEL PRODUCTS SHALL BE HOT DIPPED GALVANIZED TO THE REQUIREMENTS OF ASTM A123-08 AFTER ALL WELDING AND MANUFACTURING PROCESSES ARE COMPLETED. REMOVE ALL WELDING SLAG AND FLUX FROM STEEL SURFACE PRIOR TO CLEANING. ALL STEEL SHAPES MUST BE HOT DIPPED GALVANIZED.
4) ALL WELDING SHALL BE IN ACCORDANCE WITH THE STRUCTURAL WELDING CODE, AWS D1.1; LATEST ADDITION. UNLESS OTHERWISE INDICATED, TIE BACK ANCHOR RODS MUST NOT BE WELDED.
5) PROVIDE HOT DIPPED GALVANIZED TIE BACK ANCHOR RODS, NUTS, WASHERS AND CONNECTIONS. PROVIDE DOUBLE CORROSION PROTECTION IN THE FORM OF WRAPPING (COAT TAR IMPREGNATED TAPE OR OTHER EQUIVALENT MEANS) AND PVC SLEEVE FULL LENGTH OF THE TIE ROD INCLUDING ALL ACCESSORIES.
6) WELDING OF HOT DIPPED GALVANIZED ITEMS SHALL BE IN ACCORDANCE WITH AWS WZC/D19.0, "WELDING ZINC-COATED STEEL". REMOVE GALVANIZED COATING BY GRINDING OR OTHER ACCEPTABLE METHOD A MINIMUM OF 2 INCHES IN ALL DIRECTIONS FROM THE WELD CENTERLINE. AFTER WELDING, CLEAN & REPAIR WELD EFFECTED ZONE(S) AS REQUIRED BY MIL-P-21035B AND ASTM A780. PROVIDE COATING REPAIR IN ACCORDANCE WITH MIL-P-21035B WITH A MINIMUM DRY FILM THICKNESS OF 10MILS.
7) DO NOT MIX ITEMS OF DIFFERENT GRADE OF HARDWARE ON THE SAME CONNECTION. ALL HARDWARE SHALL BE HOT DIPPED GALVANIZED.
8) MOORING FITTINGS MUST BE COATED PER SPECIFICATION 09 97 13.26. PROVIDE ELASTOMERIC SEALER AT ALL POCKETS MEETING THE REQUIREMENTS OF ASTM C920 GRADE P CLASS 50 USE NT.

COMBINATION SHEET PILE WALL SYSTEM

1) BASIS OF DESIGN FOR THE COMBINATION WALL SYSTEM MUST CONFORM TO ASTM A572 GR 50 AND MEET THE FOLLOWING MINIMUM SECTION PROPERTIES:
   NOMINAL WEB/FLANGE THICKNESS SSP ---------- 0.375 INCHES
   ELASTIC SECTION MODULUS (PER LINEAR FOOT OF WALL)---------- 97.6 INCHES^3
   MOMENT OF INERTIA (PER LINEAR FOOT OF WALL)----------1708.0 INCHES^4
   KING PILE MOMENT OF INERTIA----------10738 INCHES^4
   KING PILE SECTIONAL AREA---------- 56.71 INCHES^2
   SINGLE SHEET PILE DIMENSIONAL(NOMINAL) BASIS (REFER TO FIGURE BELOW) :



IF CONTRACTOR PROPOSES STEEL COMBINATION PILE SECTION THAT DIFFERS FROM THE ABOVE NOMINAL DIMENSIONS BUT MEETS OR EXCEEDS THE DESIGN CROSS SECTIONAL REQUIREMENTS, CONTRACTOR IS RESPONSIBLE FOR ALL IMPACTS TO THIS DESIGN, INCLUDING RE-DESIGN, AS WELL AS ALL IMPACTS TO CONSTRUCTION.

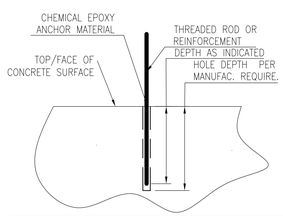
2) COMBINATION SHEET PILE WALL SHALL BE COATED ON THE SEAWARD FACE WITH A COAL-TAR EPOXY – POLYAMIDE COATING SYSTEM. LIMITS OF COATING IS FROM ELEVATION -45.0' MSL TO -2.0' MSL (+/-3").
3) PROVIDE GRAVEL FILL AS REQUIRED BY THIS CONTRACT BETWEEN THE NEW COMBINATION SHEET PILE WALL AND THE EXISTING SSP AND PILE CAP.
4) TIE RODS AND ANCHORAGE. PROVIDE TIE RODS AT MAXIMUM 10'-0" CENTER TO CENTER SPACING AND AT LOCATIONS INDICATED IN DRAWINGS. CONTRACTOR MAY LOCATE ANCHORS NEAR EXISTING ANCHORS AND TO AVOID EXISTING BURIED STRUCTURES TO REDUCE INTERFERENCE WITH BACKLAND SOIL STABILIZATION EFFORTS. CONTRACTOR MAY CHOOSE INDIVIDUAL DEADMAN ANCHORS(AS SHOWN), CONTINUOUS ANCHOR WALL WITH CONTINUOUS WALE(USING SAME SECTION AS SHOWN) OR COMBINATION TO PROVIDE SUPPORT FOR THE NEW COMBINATION SHEET PILE WALL. PROVIDE SITE DRAWING FOR REVIEW AND APPROVAL BY THE GOVERNMENT INDICATING EXISTING TIE ROD LOCATIONS AND OTHER BURIED OBSTRUCTIONS, ANCHORAGE TYPE(WALL OR DEADMAN) AND LOCATIONS. MAXIMUM ALLOWED TIE ROD ANCHOR VERTICAL OFFSET IS +0 TO -5 DEGREES IN THE VERTICAL PLANE AND +/-5 DEGREES IN THE HORIZONTAL PLANE.

PILE DRIVING

1) PROVIDE ALL KING AND PIPE PILES WITH STEEL PILE POINTS. POINTS MUST BE PROVIDED BY THE SAME MANUFACTURER AS THE PILE. POINTS MUST BE WELDED TO PILE TIPS AS RECOMMENDED BY THE MANUFACTURER. FOR ALL PIPE PILES, PROVIDE INSIDE FIT POINTS.
2) PROVIDE SHEET PILE WITH POINTS.
3) PIPE PILES DRIVEN IN PHASE 2 MUST BE VIBRATED IN PLACE UNTIL THE PILE TIP ELEVATION EXCEEDS THE DEPTH OF THE GRAVEL BACKFILL.

BACKFILL REQUIREMENTS

1) PROVIDE GRAVEL BACKFILL BETWEEN THE NEW COMBINATION WALL/PILE CAP AND EXISTING STRUCTURE AS INDICATED IN THESE DRAWINGS.
2) PROVIDE #57 STONE AS GRAVEL BACKFILL.
3) CEMENTITIOUS FLOWABLE FILL MUST MEET ASTM C150 WITH A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 1,000PSI. MAXIMUM LIFT HEIGHT OF FLOWABLE FILL IS 3 FEET. LOWER LIFT MUST REACH A MINIMUM OF 400PSI COMPRESSIVE STRENGTH BEFORE PLACING OF NEXT LIFT. GRAVEL FILL MUST NOT BE PLACED UNTIL ALL FLOWABLE FILL HAS REACHED MINIMUM 28-DAY COMPRESSIVE STRENGTH.

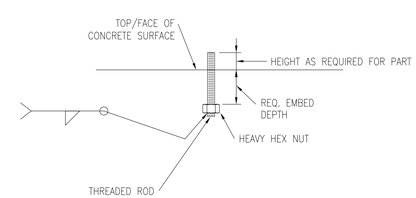


MINIMUM REQUIRED SERVICE LOADS			
ANCHOR SIZE / REBAR SIZE	TENSION (LBS.)	SHEAR (LBS.)	MIN. EMBEDMENT DEPTH (IN)
1-1/4"	3100	9600	8
#5	18600	0	8

POST INSTALLED ANCHOR NOTES:

1. IF VALUES FOR BOTH TENSION AND SHEAR ARE PROVIDED IN TABLE ABOVE THEN THE LOADS ACT CONCURRENTLY.
2. INSTALL ANCHORS IN CONFORMANCE WITH MANUFACTURER'S RECOMMENDATIONS. ANCHORING SYSTEM MUST HAVE CURRENT EVALUATION SERVICE REPORT FROM THE INTERNATIONAL CODE COUNCIL. PROVIDE FOR GOVERNMENT REVIEW AND ACCEPTANCE PRIOR TO CONSTRUCTION.
3. ANCHORS MUST BE CLEAN AND FREE OF OIL, SCALE AND RUST.
4. PRIOR TO DRILLING, LOCATE REINFORCEMENT AND COORDINATE ANCHOR LOCATIONS WITH GOVERNMENT TO PREVENT DAMAGE TO EXISTING REINFORCEMENT.
5. HOLES TO RECEIVE ANCHORS SHALL BE DRILLED WITH ROTARY HAMMER TYPE DRILL.
6. PROPERLY SUPPORT ANCHORS DURING SET TIME. ENSURE THAT ANCHORS ARE PROTECTED FOR A 24 HOUR CURING TIME.
7. REFER TO DRAWINGS AND MATERIALS UNDER "STEEL" NOTES ON S001 FOR MATERIAL REQUIREMENTS.

A3 TYP. P.I. EMBED
Scale: N.S.



A4 TYP. HEADED ANCHOR
Scale: N.S.

ABBREVIATIONS

AB	ABANDONED	FW	FRESH WATER	REF	REFERENCE
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	GOV'T	GOVERNMENT	REINF	REINFORCED, REINFORCING
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	ID	INSIDE DIAMETER	REQ'D	REQUIRED
AP	AFT PERPENDICULAR	HDG	HOT DIPPED GALVANIZED	S	SOUTH
ASTM	ASTM INTERNATIONAL	HORIZ	HORIZONTAL	SCH	SCHEDULE
AWS	AMERICAN WELDING SOCIETY	IN	INCH	SECT	SECTION
@	AT	INFO	INFORMATION	SHT	SHEET
&	AND	LB	POUND	SIM	SIMILAR
APPROX	APPROXIMATE	MACH	MACHINE	SPECS	SPECIFICATIONS
BOT, BOTT	BOTTOM	MAX	MAXIMUM	SQ	SQUARE
℄	CENTER LINE	MAT'L	MATERIAL	SR	SEWER
CA	COMPRESSED AIR	MB	MACHINE BOLT	SS	STAINLESS STEEL
CG	CONTINUOUS GROUND	MCON	MILITARY CONSTRUCTION	SSP	STEEL SHEET PILE
CIP	CAST IN PLACE	MECH	MECHANICAL	ST	STREET
CLR	CLEAR, CLEARANCE	MIL	MILITARY	STA	STATION
CONC	CONCRETE	MIN	MINIMUM	STD	STANDARD
CONT	CONTINUED, CONTINUOUS	MISC	MISCELLANEOUS	STL	STEEL
CP	COMPLETE PENETRATION	ML	MUDLINE	STM	STEAM
CU	COPPER	MLW	MEAN LOW WATER	STR	STAGGER
DB	DOUBLE BITT	MLLW	MEAN LOWER LOW WATER	SUBSTA	SUBSTATION
DBL	DOUBLE	MPH	MILES PER HOUR	SW	SALT WATER
DEMO	DEMOLITION	MSL	MEAN SEA LEVEL	SYMM	SYMMETRICAL
DET	DETAIL	N	NORTH	T	TON
DIA OR Ø	DIAMETER	NAVFAC	NAVAL FACILITIES ENGINEERING COMMAND	T & B	TOP & BOTTOM (TOP & BOT)
DIM	DIMENSION	NIC	NOT IN CONTRACT	TEL	TELEPHONE
DWG	DRAWING	No	NUMBER	THRD	THREADED
EA	EACH	NTS, NS	NOT TO SCALE, NO SCALE	TYP	TYPICAL
EF	EACH FACE	OC	ON CENTER	UFC	UNIFIED FACILITIES CRITERIA
EJ	EXPANSION JOINT	OD	OUTSIDE DIAMETER	UFGS	UNIFIED FACILITIES GUIDE SPECIFICATION
EL	ELEVATION	OPP	OPPOSITE	UHMWP	ULTRA HIGH MOLECULAR WEIGHT PLASTIC
ELEC OR ELEC'L	ELECTRICAL	OH	OPPOSITE HAND	UNO	UNLESS NOTED OTHERWISE
EMBED	EMBEDMENT	OW	OILY WASTE	V	VOLT
EQUIP	EQUIPMENT	℞	PLATE	VAR	VARIES
EW	EACH WAY	P/N	PART NUMBER	VERT	VERTICAL
EXIST	EXISTING	PMPCM	POLYMER MODIFIED PORTLAND CEMENT MORTAR	W/	WITH
EXP	EXPANSION	PI	POST INSTALLED	W/O	WITHOUT
EJ OR EXP JT	EXPANSION JOINT	PSF	POUNDS PER SQUARE FOOT	WP	WORK POINT
FFF	FOAM FILLED FENDER	PSI	POUNDS PER SQUARE INCH	WW	WASTE WATER
FoS	FACTOR OF SAFETY	PTI	POST TENSIONING INSTITUTE	Y & D	BUREAU OF YARDS & DOCKS
FO	FUEL OIL	PVC	POLYVINYL CHLORIDE		
FP	FORWARD PERPENDICULAR	PW	POTABLE WATER		
FT	FOOT, FEET	PWC	PUBLIC WORKS COMMAND		
		RD	ROAD		

NO.	DESCRIPTION	DATE	APPR
---	---	---	---

NAVFAC

SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC / B.L.T.L.

ACTIVITY

SATISFACTORY TO DATE ----

DES	JM	DRW JM	CHK KW
PROJECT MANAGER	E. GALLANT		
IPT TECH. BRANCH HEAD	M. JOHNSON		
CHIEF ENG/ARCH (CORE)	K. WITTMAN		
----	--		

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
IPT SOUTH ATLANTIC

NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST
NAVAL AIR STATION JACKSONVILLE

NAVSTA GUANTANAMO BAY
GUANTANAMO BAY, CUBA

WHARF BRAVO STRUCTURAL REPAIRS

STRUCTURAL NOTES 1 OF 2

SCALE: SCALE
EPROJECT NO.: 1295318
CONSTR. CONTR. NO. N69450-XX-C-XXXX
NAVFAC DRAWING NO. 15081086
SHEET 40 OF 65

S001

DRAWFORM REVISION: 7 AUGUST 2009

FILE NAME: P:\CIB\project_files\z_CUBA\navsta guantanamo bay(hjr60514)\wharf bravo structural repairs-1295318\working technical files\Drawings\S001 STRUCTURAL NOTES 1 OF 2.dwg LAYOUT NAME: S001 STRUCTURAL NOTES 1 OF 2 PLOTTED: Friday, June 10, 2016 - 3:36pm USER: david.c.walter

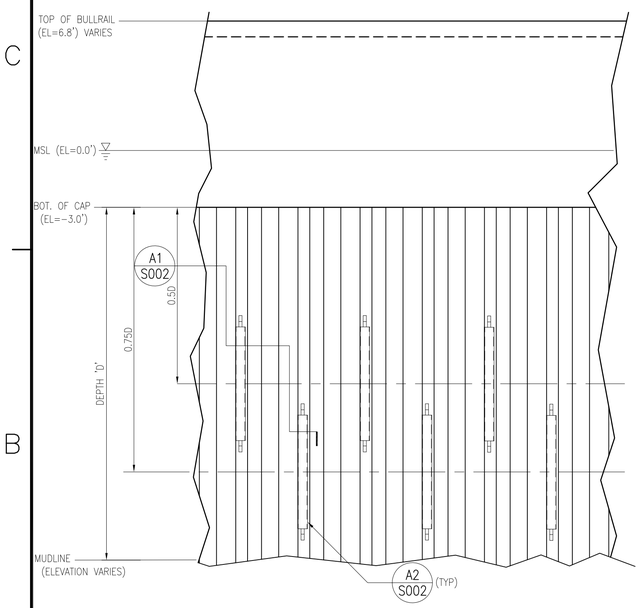
SHEET FORMAT IS 22" X 34". IF PRINTED SHEET IS NOT 22" X 34", THEN IT IS NOT TO SCALE

CONCRETE REPAIRS

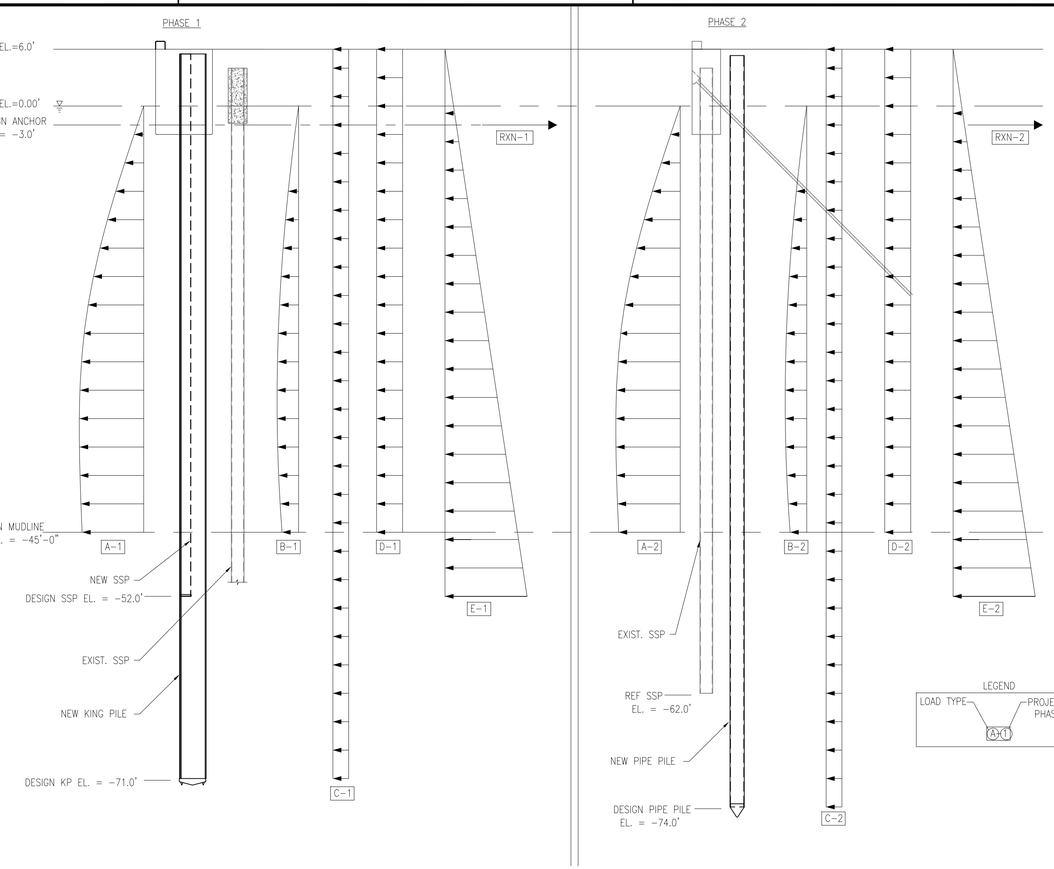
1) PRIOR TO MOBILIZATION AND COMMENCEMENT OF ANY REPAIR WORK, CONTRACTOR MUST PERFORM A SURVEY TO VERIFY ALL REPAIR QUANTITIES AND LOCATIONS INDICATED ON THE DRAWINGS. THE CONTRACTOR MUST NOTIFY THE GOVERNMENT IN WRITING OF ANY DISCREPANCIES EFFECTING THE PRICE AND/OR SCHEDULE OF THE WORK PRIOR TO BEGINNING CONSTRUCTION.
2) THE OPERATIONS EMPLOYED IN CONCRETE REMOVAL AND PREPARATION OF THE CONCRETE AND REINFORCEMENT FOR REPAIR MUST NOT WEAKEN THE SURROUNDING EXISTING CONCRETE AND REINFORCEMENT OR THE BOND BETWEEN THEM. LIMIT THE SIZE OF IMPACT HAMMERS TO 15 POUNDS.
3) REMOVAL OF CONCRETE MUST BE A MINIMUM OF 1" BEHIND REINFORCING STEEL. REPAIR MUST EXTEND AN ADDITIONAL 12 INCHES BEYOND DEFECT DIMENSIONS AND INTO SOUND CONCRETE.
4) AREAS REQUIRING REPAIR SHALL BE MODIFIED TO PROVIDE FOR SIMPLE LAYOUTS TO REDUCE EDGE LENGTH AND ELIMINATE ACUTE ANGLES. THE PERIMETERS OF REPAIRS SHALL PROVIDE RIGHT ANGLE CUTS TO THE CONCRETE SURFACE BY SAW CUTTING. SAW CUTS SHALL BE A MINIMUM OF 1" DEEP AND SHALL BE PERPENDICULAR TO SURROUNDING SURFACE. DO NOT CUT EXISTING REINFORCING STEEL.
5) THE MOISTURE CONDITION OF CONCRETE SUBSTRATE IMMEDIATELY PRIOR TO APPLICATION OF REPAIR MATERIAL SHALL BE SATURATED SURFACE DRY (SSD).
6) ALL EXPOSED REINFORCEMENT STEEL SHALL BE CLEANED OF ALL SCALE, RUST, DIRT, OIL AND ANY OTHER DELETERIOUS MATERIAL. PROVIDE SUPPLEMENTAL REINFORCEMENT OF SAME SIZE AS ORIGINAL IF EXISTING REINFORCING STEEL HAS A 20% OR GREATER LOSS OF CROSS SECTIONAL AREA. MECHANICAL SPLICES IS THE PREFERRED METHOD FOR SPLICE BUT WHERE THE SPLICE WILL REDUCE THE CONCRETE TO LESS THAN EXISTING OR 3", PROVIDE BUTT WELDED SPLICE.
7) PROVIDE EMBEDDED GALVANIC ANODES AROUND THE PARAMETER OF THE REPAIR AND AT WELDED SPLICES.
8) MATCH ADJACENT SOUND CONCRETE SURFACE CROSS SECTION AND TEXTURE.
9) REFER TO CONCRETE (MARINE) ON SHEET S001 FOR SURFACE PREPARATION REQUIREMENTS.

CATHODIC PROTECTION NOTES

1) PROVIDE SACRIFICIAL ANODES FOR EACH NEW AND EXISTING EXPOSED STEEL SHEET PILE PAIR ALONG THE FACE OF WHARF BRAVO.
2) CATHODIC PROTECTION ANODES MUST MEET THE FOLLOWING REQUIREMENTS:
   A. SPECIFICATION : MIL-A-24779 (SH) 06 OCT 2006, 90 POUNDS
   B. ANODE MATERIAL : ALUMINUM ALLOY
   C. CORE MATERIAL : A36 STEEL
   D. ANODE POTENTIAL : 1.10 VOLTS
   E. NOMINAL AMPERE HOURS/POUND : 1150 AMP-HR/LB
3) PROVIDE SURFACE PREPARATION OF NEW AND EXISTING STEEL SHEET PILE BY REMOVING MARINE GROWTH AND COATING IN THE VICINITY OF THE ANODE ATTACHMENT IMMEDIATELY PRIOR TO WELDING OF THE ANODE.



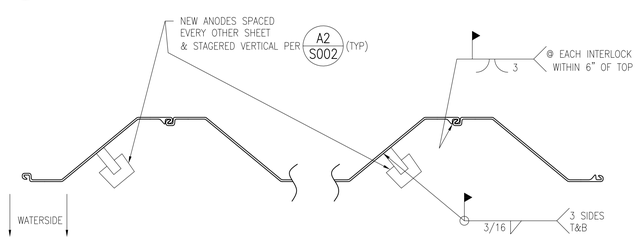
B1 ELEVATION – ANODE ATTACHMENT
Scale: NONE



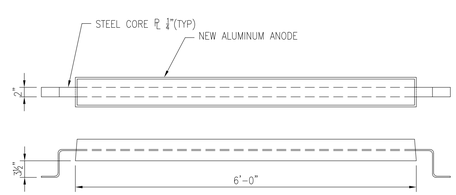
B3 DESIGN BASIS – SEISMIC PRESSURE DIAGRAMS(REFERENCE ONLY)
Scale: NTS

SEISMIC PRESSURE VALUES TABLE(PSF/FT OF WALL)

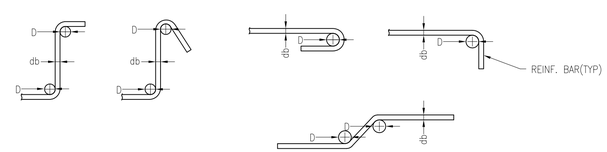
PHASE #	A WESTERGARRD SEASIDE	B WESTERGARRD LANDSIDE	C LIVE LOAD SURCHARGE	D GRAVEL TRUNCATED ACTIVE PRESSURE	E SOIL TRUNCATED ACTIVE PRESSURE	ELASTIC FOUNDATION REACTION (#/CF)	ALLOWABLE PASSIVE PRESSURE COEFFICIENT (Kp)	REACTION(KIP/FT)
1	156	42	0.1	58	678	EL 50 = 0 EL 58 = 2,700 EL 58 = 5,200 EL 75 = 101,900	4.16	13.4
2	156	42	0.1	58	678	EL 50 = 0 EL 58 = 2,700 EL 58 = 5,200 EL 75 = 101,900	4.16	13.4



A1 SECTION – ANODE ATTACHMENT
Scale: NONE



A2 DETAIL – ANODE
Scale: NONE



MINIMUM BEND DIAMETERS(IN), ASTM A767

BAR SIZE(db)	#3	#4	#5	#6	#7	#8	#9	#10
D	2-1/4	3	3-3/4	4-1/2	7	8	9	10

A4 MIN. REINF. BEND DIA.
Scale: NONE

SYM	DESCRIPTION	DATE	APPR
---	---	---	---

SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC / B.L.T.L.

ACTIVITY

SATISFACTORY TO DATE

DES JM | DRW JM | CHK KW

PM/DM E. GALLANT

BRANCH MANAGER M. JOHNSON

CHIEF ENG/ARCH K. WITTMAN

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST
NAVAL AIR STATION JACKSONVILLE
IPT SOUTH ATLANTIC
NAVSTA GUANTANAMO BAY
GUANTANAMO BAY, CUBA

WHARF BRAVO STRUCTURAL REPAIRS

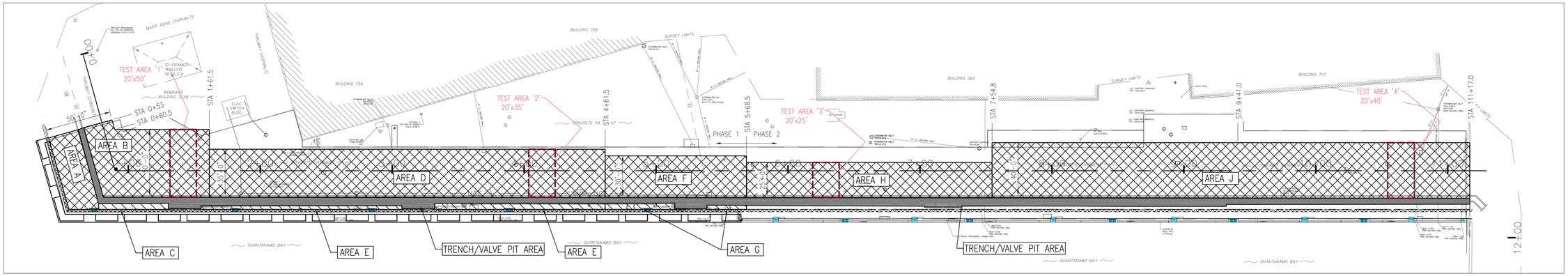
STRUCTURAL NOTES 2 OF 2

SCALE: SCALE
EPROJECT NO.: 1295318
CONSTR. CONTR. NO. N69450-XX-C-XXXX
NAVFAC DRAWING NO. 15081087
SHEET 41 OF 65
S002

DRAWFORM REVISION: 7 AUGUST 2009

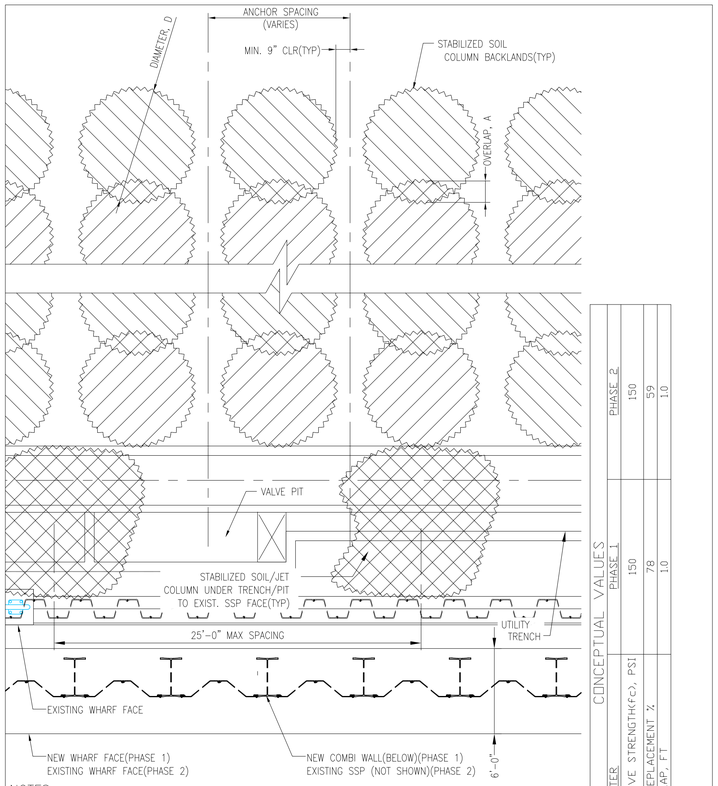
FILE NAME: P:\CUBA\project_files\z_CUBA\navsta guantanamo bay\h\h60514\wharf bravo structural repairs-1295318\working technical files\Drawings\S002 STRUCTURAL NOTES 2 OF 2.dwg LAYOUT NAME: S002 STRUCTURAL NOTES 2 OF 2 PLOTTED: Friday, June 10, 2016 - 3:39pm USER: david.c.walter

SHEET FORMAT IS 22" X 34". IF PRINTED SHEET IS NOT 22" X 34", THEN IT IS NOT TO SCALE



C1 PLAN – SOIL STABILIZATION AREAS

Scale: 1" = 40'–0"



CONCEPTUAL VALUES		
PARAMETER	PHASE 1	PHASE 2
IMPROVED SOIL COMPRESSIVE STRENGTH(f'c), PSI	150	150
ESTIMATED SOIL REPLACEMENT %	78	59
MIN. OVERLAP, FT	10	10

NOTES:

1. THIS SKETCH PROVIDES CONCEPTUAL DESIGN OF SOIL STABLIZATION IN THE BACKLAND AREAS, UNDER TRENCHES/VALVE PITS AND BETWEEN TRENCHES AND EXISTING SHEET PILE WALLS. MINIMUM LOCATIONS FOR SOIL STABILIZATION UNDER THE TRENCHES AND VALVE PITS IS AS SHOWN.
2. PROVIDE SUFFICIENT IMPROVED SOIL COMPRESSIVE STRENGTH AND OVERLAP TO PREVENT COLUMN SEPARATION.IF SUFFICIENT OVERLAP CANNOT BE ACHIEVED DUE TO OBSTRUCTIONS, PROVIDE IMPROVED SOIL CAP AT TOP OF IMPACTED COLUMNS TO DEVELOP REQUIRED RESISTANCE.

A1 CONCEPTUAL SKETCH

Scale: NONE

SOIL STABLIZATION REQUIREMENTS

1. THE DESIGN OF THE SOIL STABILIZATION NECESSARY FOR SEISMIC LOADINGS ANTICIPATED FROM THE DESIGN SEISMIC EVENT IS A DELEGATED DESIGN TO BE PROVIDED BY THE CONTRACTOR'S LICENSED GEOTECHNICAL ENGINEER.
2. THE PERFORMANCE REQUIREMENTS OF THE CONTRACTOR'S SOIL STABILIZATION ARE THAT:
   - 2.1. THE SOIL IS STABILIZED ON THE LAND SIDE OF THE EXISTING TRENCH BOX AND VALVE PITS SUCH THAT IT DOES NOT LIQUEFY NOR DOES IT IMPART ANY SEISMIC LOADING TO THE WHARF BULKHEAD WALL STRUCTURES DURING THE DESIGN SEISMIC EVENT.
   - 2.2. THE SOIL BENEATH THE TRENCH BOX/VALVE PITS AND BETWEEN THESE STRUCTURES AND THE ADJACENT WHARF BULKHEAD STRUCTURES IS STABILIZED AS NECESSARY TO PREVENT LIQUEFACTION DURING THE DESIGN SEISMIC EVENT. IF THE DESIGNER FOR THE SOIL STABILIZATION DETERMINES THAT ADJACENT SOIL STABILIZATION REQUIRED BY 2.1 EFFECTIVELY ELIMINATES LIQUEFACTION IN THE AREAS OF 2.2, THEN THE DESIGNER MUST PROVE THIS ASSERTION BY APPROPRIATE ANALYSIS THAT MUST BE ACCEPTED BY THE GOVERNMENT DURING FINAL DESIGN.
3. COORDINATE ALL SOIL STABILIZATION WITH NEW AND EXISTING STRUCTURES, PAVEMENTS, DRAINAGE STRUCTURES, TIE RODS, SOIL ANCHORS, BURIED UTILITIES AND EXISTING UTILITY TRENCH/PITS. THE CONTRACTOR IS RESPONSIBLE FOR REMOVAL AND REPLACEMENT OF ANY UTILITIES AS NECESSARY TO IMPLEMENT THEIR SOIL STABILIZATION DESIGN. LOCATE AND VERIFY ALL UNDERGROUND UTILITIES. REPLACEMENT OF STORM DRAINS ARE SHOWN IN CIVIL DESIGN DRAWINGS. ITEM 2.2 MAY REQUIRE PARTIAL REMOVAL OF PORTIONS OF THE UTILITIES IN THE TRENCH BOX/VALVE PITS IN ORDER TO ACHIEVE THE REQUIRED SOIL STABILIZATION.
4. THE TABLE AND PLAN SHOWN ON THIS SHEET INDICATE MINIMUM DIMENSIONS (PLAN EXTENTS AND DEPTHS) WHERE SOIL STABILIZATION SHALL BE ACCOMPLISHED. THE CONTRACTOR'S GEOTECHNICAL ENGINEER SHALL BE RESPONSIBLE FOR DETERMINING IF ADDITIONAL MEASURES ARE REQUIRED TO MEET THE PERFORMANCE REQUIREMENTS IN PARAGRAPH 2 AND THESE ADDITIONAL REQUIREMENTS SHALL BE INCLUDED IN CONTRACTOR'S BID. PROVIDE ADDITIONAL SITE EXPLORATION AS REQUIRED FOR A COMPLETE AND USABLE STABILIZATION DESIGN.
5. A CONCEPTUAL SKETCH OF POTENTIAL SOIL STABILIZATION SCHEMES IS INCLUDED ON THIS SHEET. THE CONTRACTOR'S GEOTECHNICAL ENGINEER SHALL PROVIDE ACTUAL SOIL STABILIZATION DESIGN ALONG WITH SUPPORTING CALCULATIONS TO BE SUBMITTED FOR GOVERNMENT REVIEW AND APPROVAL PRIOR TO ANY CONSTRUCTION MOBILIZATION. REFER TO SPECIFICATION 01 33 00 FOR SUBMITTAL REQUIREMENTS.
6. IF THE CONTRACTOR CHOOSES TO USE DEEP SOIL MIXING OR LOW PRESSURE CEMENT GROUT, THEN FOLLOW THE REQUIREMENTS OF SPECIFICATION 31 62 00. FOR JET GROUTING, REFER TO SPECIFICATION 31 32 23.
7. THE DESIGN SEISMIC EVENT FOR WHICH SOIL STABILIZATION SHALL BE DEISGNED IS DEFINED AS THE SEISMIC EVENT WITH A 475 YEAR RETURN PERIOD AT THIS LOCATION AS SHOWN ON SHEET S001.
8. IF PHASE 2 OF THIS CONTRACT IS AWARDED, THEN THE EXISTING TIE–RODS THAT ARE PART OF THE 1942 SHEET PILE WALL MAY BE REMOVED TO FACILITATE SOIL STABILIZATION EFFORTS. THE GOVERNMENT MAKES NO ASSERTION AS TO THE CURRENT CONDITION OF THESE ANCHOR RODS AND THEIR ABILITY TO BE REMOVED.
9. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF EXISTING STRUCTURES, UTILITIES, TRENCHES ETC. FACILITIES THAT ARE FOUND TO HAVE BEEN DAMAGED BY THE CONTRACTOR WILL BE REPAIRED AND/OR REPLACED AT NO ADDITIONAL COST TO THE GOVERNMENT.
10. FOR BIDDING PURPOSES, CONTRACTOR SHALL ASSUME THAT SOIL STABILIZATION UNDER THE TRENCH/VALVE PITS OCCURS AT A MAXIMUM OF EVERY 25'–0" ON CENTER FOR THE LENGTH OF THE TRENCH WITHIN PROJECT BOUNDARIES AND EXTENDS TO THE FULL WIDTH OF THE TRENCH/VALVE PIT. SEE SKETCH FOR CONCEPT.
11. THE MINIMUM CLEARANCE FROM STABILIZED SOIL TO EXISTING TIE RODS, SOIL ANCHORS, UTILITIES AND OTHER STRUCTURES SHALL NOT BE LESS THAT 9 INCHES.

SOIL STABILIZATION DESIGN PARAMETERS

AREA	DESCRIPTION	PHASE	MINIMUM DEPTH FOR SOIL STABILIZATION (FEET)
A	AREA BETWEEN SSP AND TRENCH	1	64
B	BACKLAND AREA BEHIND TRENCH	1	64
C	BETWEEN SSP AND TRENCH	1	64
D	BACKLAND AREA BEHIND TRENCH	1	51
E	BETWEEN SSP AND TRENCH	1	51
F	BACKLAND AREA BEHIND TRENCH	1	31
G	BETWEEN SSP AND TRENCH	1	31
H	BACKLAND AREA BEHIND TRENCH	2	25
J	BACKLAND AREA BEHIND TRENCH	2	45

PLAN NORTH

GRAPHIC SCALE

1"=40' 0' 40' 80' 120' 160' 200'

SYM	DESCRIPTION	DATE	APPR

NAVFAC

SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC / B.L.T.L.

ACTIVITY

SATISFACTORY TO DATE

DES	JM	DRW	JM	CHK	KW
PM/DM	E. GALLANT				
BRANCH MANAGER	M. JOHNSON				
CHIEF ENG/ARCH	K. WITTMAN				

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
IPT SOUTH ATLANTIC

NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST
NAVAL AIR STATION JACKSONVILLE

NAVSTA GUANTANAMO BAY

GUANTANAMO BAY, CUBA

WHARF BRAVO STRUCTURAL REPAIRS

SOIL STABILIZATION AREAS

SCALE: SCALE

EPROJECT NO.: 1295318

CONSTR. CONTR. NO.: N69450–XX–C–XXXX

NAVFAC DRAWING NO.: 15081088

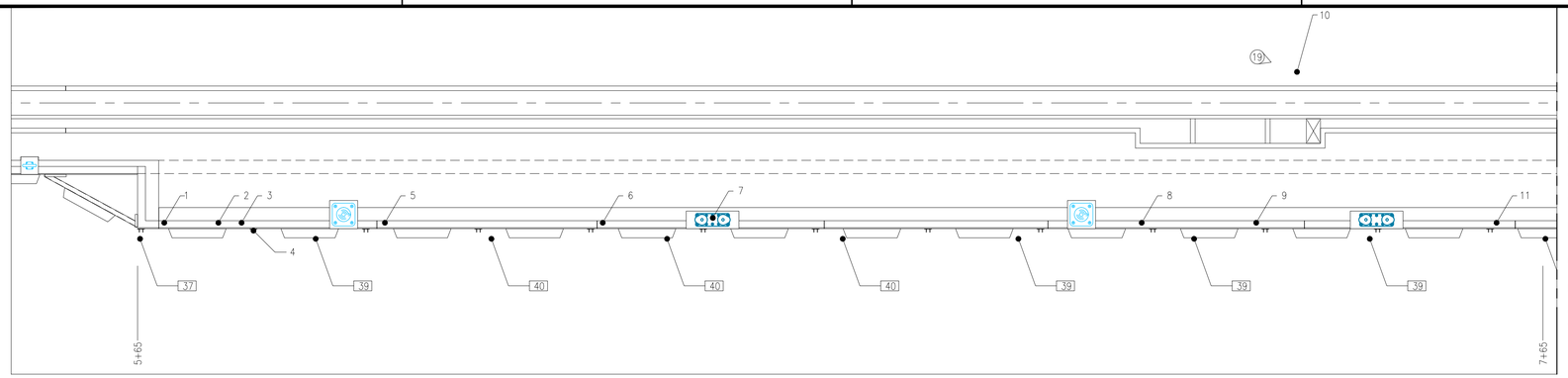
SHEET 42 OF 65

S003

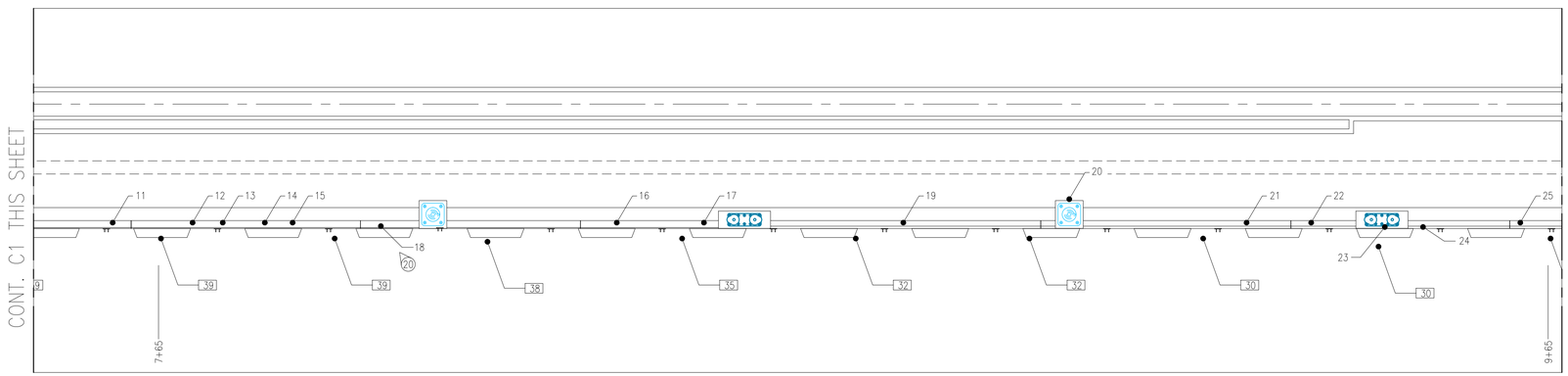
DRAWFORM REVISION: 7 AUGUST 2009

SHEET FORMAT IS 22" X 34". IF PRINTED SHEET IS NOT 22" X 34", THEN IT IS NOT TO SCALE

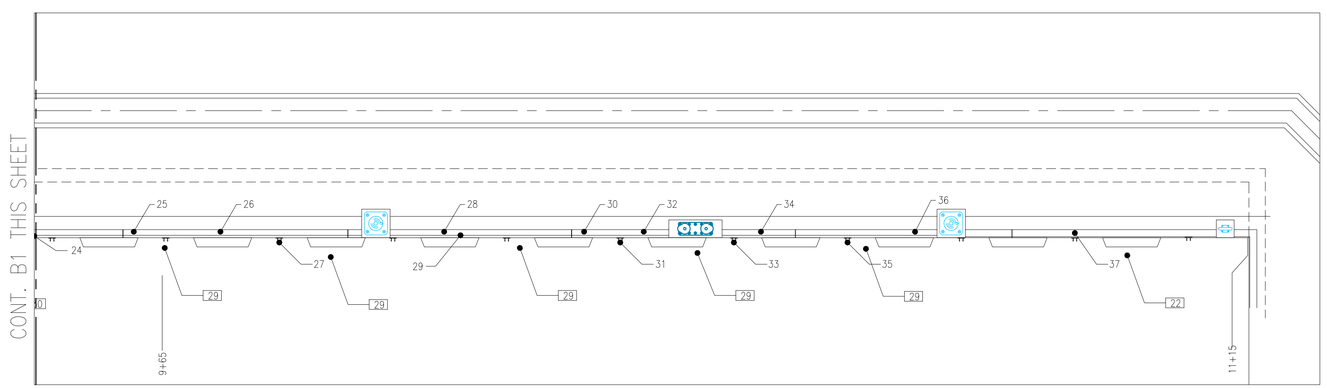
FILE NAME: P:\CIB\project_files\z_CUBA\navsta guantanamo bay\h16514\wharf bravo structural repairs-1295318\working technical files\Drawings\S003 SOIL STABILIZATION AREAS.dwg LAYOUT NAME: S003 SOIL STABILIZATION AREAS PLOTTED: Friday, June 10, 2016 - 2:22pm USER: john.d.mccoy



C1 PLAN INSPECTION – 5+65 TO 7+57
Scale: 3/32" = 1'-0"



B1 PLAN INSPECTION – 7+57 TO 9+57
Scale: 3/32" = 1'-0"



A1 PLAN INSPECTION – 9+57 TO 11+18
Scale: 3/32" = 1'-0"

GENERAL SHEET NOTES

INSPECTION NOTES

1. INSPECTION RESULTS PRESENTED ARE FROM OCTOBER 2012 DESIGN LEVEL INSPECTION CONDUCTED BY NAVFAC-SE. CENTER OF DEFECT LOCATION IDENTIFIED BY STATION LOCATION. UNDERWATER DEFECTS LOCATED BY STATION LOCATION AND DEPTH BELOW MSL. CENTER OF DEFECTS ARE WITHIN ±2 FEET OF IDENTIFIED LOCATION. EXTENTS OF DEFECTS ARE +6/-0 INCHES OF IDENTIFIED DIMENSION.
2. PROVIDE REPAIRS AS INDICATED IN THE TABLE FOUND ON SHEET S012. DEFECTS THAT ARE NOT TO BE REPAIRED AS REQUIRED BY DETAILS ON SHEET S506, SHALL BE MARKED AS DO NOT REPAIR(DNR).

SYMBOL LEGEND

- FOAM FENDER
- EXTRUDED FENDER
- DOUBLE BITT
- CLEAT
- X — DEFECT LOCATION
- X — PHOTO(SEE S013)
- X — WATER DEPTH (FEET REF MSL)

INSPECTION ABBREVIATIONS

ASSESTS

BR	BULLRAIL
CAP	PILE CAP
DECK	CONCRETE/PAVED DECK
EF	EXTRUDED FENDER
MF1	MOORING FITTING TYPE 1 (DOUBLE BITT)
MF2	MOORING FITTING TYPE 2 (CLEAT)
MF3	MOORING FITTING TYPE 3 (BOLLARD)
MFD	MOORING FOUNDATION
OTHER	OTHER
PF	PNUEMATIC/FOAM FENDER
PFP	PNEUMATIC,/FOAM FENDER PADEYE
SSP	STEEL SHEET PILE
TC	TRENCH COVER
TR	TRENCH
VPC	VALVE PIT COVER

DEFECTS

ABS	ABRASION DAMAGE
BRK	BREAKAGE
CCS	CLOSED CORROSION SPALL
CMS	CLOSED MECHANICAL/OVERLOAD SPALL
COR	CORROSION
DNR	DO NOT REPAIR
FDT	FASTENER DETERIORATION
HCR	HORIZONTAL CRACK
HOL	HOLE
LCR	LONGITUDINAL CRACK ABOVE WATERLINE
MSC	MISSING CONNECTION
MSG	MISSING
OCS	OPEN CORROSION SPALL
OMC	OPEN MECHANICAL SPALL
OSC	OVERSTRESSED CRACKS
VCR	VERTICAL CRACK ABOVE WATERLINE

TABLE NOMENCLATURE

P	POSITION FROM TOP OF PILE TO CENTER OF DEFECT
V	VERTICAL HEIGHT
X	DIMENSION PARALLEL TO WALL FACE
Y	DIMENSION PERPENDICULAR TO WALL FACE
W	WIDTH
D	DEPTH OF DEFECT
N	SIZE AND QUANTITY OF REINFORCEMENT

KEYPLAN

GRAPHIC SCALE

3/32"=1'-0" 0' 10' 20' 30' 40'

SUBMITTAL TITLE
SUBMITTAL DATE

SYM	DESCRIPTION	DATE	APPR
---	---	---	---

SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC / B.L.T.L.

ACTIVITY ----

SATISFACTORY TO DATE ----

DES JM DRW JM CHK KW

PROJECT MANAGER E. GALLANT

IPT TECH. BRANCH HEAD M. JOHNSON

CHIEF ENG/ARCH (CORE) K. WITTMAN

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST
IPT SOUTH ATLANTIC
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL AIR STATION JACKSONVILLE
NAVSTA GUANTANAMO BAY
GUANTANAMO BAY, CUBA

WHARF BRAVO STRUCTURAL REPAIRS

INSPECTION RESULTS 1 OF 2

SCALE: SCALE
EPROJECT NO.: 1295318
CONSTR. CONTR. NO.: N69450-XX-C-XXXX
NAVFAC DRAWING NO.: 15081089
SHEET 43 OF 65

S011

DRAWFORM REVISION: 7 AUGUST 2009

SHEET FORMAT IS 22" X 34". IF PRINTED SHEET IS NOT 22" X 34", THEN IT IS NOT TO SCALE

FILE NAME: P:\CBL\project_files\z-CUBA\navsta guantanamo bay\hi#60514\wharf bravo structural repairs~1295318\working technical files\Drawings\S011 INSPECTION RESULTS 1 OF 2.dwg LAYOUT NAME: S011 INSPECTION RESULTS 1 OF 2 PLOTTED: Friday, June 10, 2016 - 3:50pm USER: david.c.walter

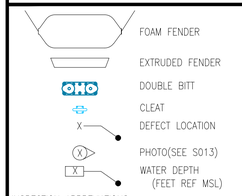
TABLE - INSPECTION RESULTS

DEFECT	ASSET		DEFECT VERTICAL	DEFECT	SHEET PILE/CAP		LENGTH	DECK		AREA	CRACK	DEPTH	EXP. BARS	
ID NO.	TYPE	LOCATION	CENTER(MSL)	TYPE	P	V (in.)	L (ft)	X (ft)	Y (ft)	SF or %	W (in.)	(D) in.	N (#)	REPAIR DETAIL
1	BR	5+68.8		OMC			1.4					2		A1/S505
2	BR	5+76.5		OMC			2.8					2		A1/S505
3	BR	5+79.8		OMC			2.3					3		A1/S505
4	PFP	5+81.5		BRK										C2/S505
5	BR	6+00.2		OMC			1					5		A1/S505
6	BR	6+31.2		OMC			0.9					10		A1/S505
7	MF1	6+47.0		COR										NOTE 3
8	BR	7+07.9		OMC				1.3					5	A1/S505
9	BR	7+24.2		OMC				1.8					3	A1/S505
10	VPC	7+30.0		MSG										REPLACE
11	BR	7+58.4		OMC				1.3					3	A1/S505
12	BR	7+69.9		OMC				2.2					4	A1/S505
13	BR	7+74.3		OMC				1.2					5	A1/S505
14	BR	7+80.3		OMC				2.9					3	A1/S505
15	BR	7+84.3		OMC				0.7					4	A1/S505
16	BR	8+31.0		OMC				15.5					12	A1/S505
17	BR	8+43.6		OMC				5.6					12	A1/S505
18	CAP	7+97.0	-3	OMC			1.4						1#8	B1/S505
19	BR	8+72.2		OMC				0.3					3.6	A1/S505
20	MFD3	8+95.2		OCS				1.7					3	A1/S505(SIM)
21	BR	9+21.6		OMC				2.7					3	A1/S505
22	BR	9+30.9		OMC				1					2	A1/S505
25	BR	9+61.0		OMC				1.7					5	A1/S505
26	BR	9+73.2		OMC				1.2					5	A1/S505
27	PFP	9+81.6		BRK										C2/S505
28	BR	10+04.7		OMC				2					4	A1/S505
29	BR	10+24.4		OMC				3					12	A1/S505
30	BR	10+29.5		OMC				1.3					3	A1/S505
31	PFP	10+32.8		BRK										C2/S505
32	BR	10+45.5		OMC				5.3					6	A1/S505
33	PFP	10+49.3		BRK										C2/S505
34	BR	10+61.5		OMC				10.1					12	A1/S505
35	PFP	10+71.0		BRK										C2/S505
36	BR	10+93.5		OMC				3.2						A1/S505
37	BR	10+90.0		OMC			8						1#6	A1/S505

GENERAL SHEET NOTES

1. INSPECTION RESULTS PRESENTED ARE FROM OCTOBER 2012 DESIGN LEVEL INSPECTION CONDUCTED BY NAVFAC-SE. CENTER OF DEFECT LOCATION IDENTIFIED BY STATION LOCATION. UNDERWATER DEFECTS LOCATED BY STATION LOCATION AND DEPTH BELOW MSL. CENTER OF DEFECTS ARE WITHIN ±2 FEET OF IDENTIFIED LOCATION. EXTENTS OF DEFECTS ARE +6/-0 INCHES OF IDENTIFIED DIMENSION.
2. PROVIDE REPAIRS AS INDICATED IN THE TABLE. DEFECTS THAT ARE NOT TO BE REPAIRED AS REQUIRED BY DETAILS ON SHEET S503, SHALL BE MARKED AS DO NOT REPAIR(DNR).
3. CLEAN AND RE-COAT AS INDICATED. REFER TO SPECIFICATION 09 97 13.26. COLOR TO BE WHITE.

SYMBOL LEGEND



INSPECTION ABBREVIATIONS

ASSESTS

BR	BULLRAIL
CAP	PILE CAP
DECK	CONCRETE/PAVED DECK
EF	EXTRUDED FENDER
MF1	MOORING FITTING TYPE 1 (DOUBLE BITT)
MF2	MOORING FITTING TYPE 2 (CLEAT)
MF3	MOORING FITTING TYPE 3 (BOLLARD)
MFD	MOORING FOUNDATION
OTHER	OTHER
PF	PNUEMATIC/FOAM FENDER
PFP	PNEUMATIC./FOAM FENDER PADEYE
SSP	STEEL SHEET PILE
TC	TRENCH COVER
TR	TRENCH
VPC	VALVE PIT COVER

DEFECTS

ABS	ABRASION DAMAGE
BRK	BREAKAGE
CCS	CLOSED CORROSION SPALL
CMS	CLOSED MECHANICAL/OVERLOAD SPALL
COR	CORROSION
DNR	DO NOT REPAIR
FDT	FASTENER DETERIORATION
HCR	HORIZONTAL CRACK
HOL	HOLE
LCR	LONGITUDINAL CRACK ABOVE WATERLINE
MSC	MISSING CONNECTION
MSG	MISSING
OCS	OPEN CORROSION SPALL
OMC	OPEN MECHANICAL SPALL
OSC	OVERSTRESSED CRACKS
VCR	VERTICAL CRACK ABOVE WATERLINE

TABLE NOMENCLATURE

P	POSITION FROM TOP OF PILE TO CENTER OF DEFECT
V	VERTICAL HEIGHT
X	DIMENSION PARALLEL TO WALL FACE
Y	DIMENSION PERPENDICULAR TO WALL FACE
W	WIDTH
D	DEPTH OF DEFECT
N	SIZE AND QUANTITY OF REINFORCEMENT

SUBMITTAL TITLE
SUBMITTAL DATE

SYM	DESCRIPTION	DATE	APPR
---	---	---	---

SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC / B.L.T.L.

ACTIVITY ----

SATISFACTORY TO DATE ----

DES JM DRW JM CHK KW

PROJECT MANAGER E. GALLANT

IPT TECH. BRANCH HEAD M. JOHNSON

CHIEF ENG/ARCH (CORE) K. WITTMAN

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
IPT SOUTH ATLANTIC
NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST
NAVAL AIR STATION JACKSONVILLE
NAVSTA GUANTANAMO BAY
GUANTANAMO BAY, CUBA

WHARF BRAVO STRUCTURAL REPAIRS

INSPECTION RESULTS 2 OF 2

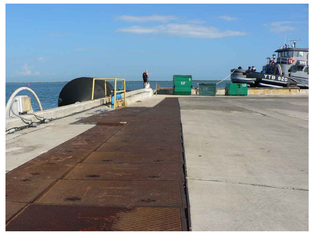
SCALE: SCALE
EPROJECT NO.: 1295318
CONSTR. CONTR. NO.: N69450-XX-C-XXXX
NAVFAC DRAWING NO.: 15081090
SHEET 44 OF 65

S012

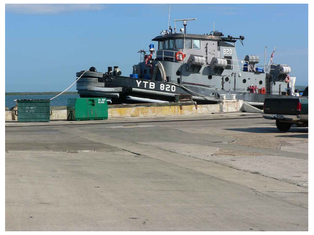
DRAWFORM REVISION: 7 AUGUST 2009

SHEET FORMAT IS 22" X 34". IF PRINTED SHEET IS NOT 22" X 34", THEN IT IS NOT TO SCALE

FILE NAME: P:\CBL\project_files\z_CUBA\navsta guantanamo bay\hj60514\wharf bravo structural repairs~1295318\working technical files\Drawings\S012 INSPECTION RESULTS 2 OF 2.dwg LAYOUT NAME: S012 INSPECTION RESULTS 2 OF 2 PLOTTED: Friday, June 10, 2016 - 3:51pm USER: david.c.walter



1 – BRAVO LOOKING NORTH



2 – WHARF TANGO

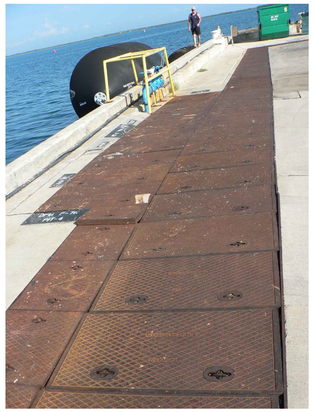
3 – TRENCH COVERS

4 – BRAVO LOOKIING SOUTH

9 – TYP CAP EXPANSION JOINT

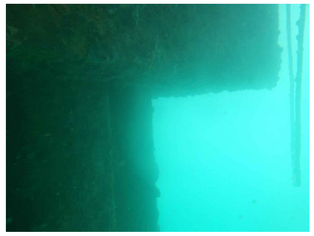
10 – TYP. LOW DECK LIGHTING

11 – TYP. CLEAT



5 – POTABLE WATER

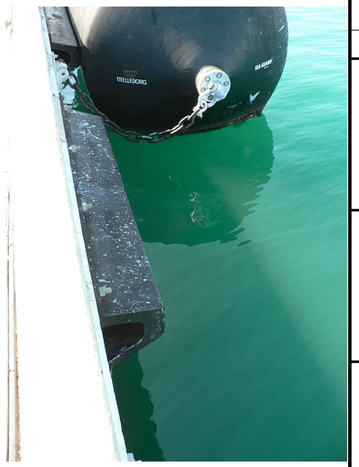
6 – COMMS BOX



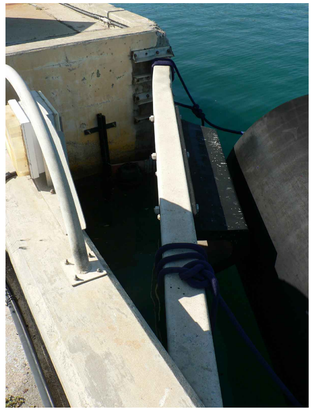
7 – UW BRAVO CORNER

8 – TYP LDB AND FOAM FENDER

12 – TYP. LOW DOUBLE BITT



13 – TYP. ELASTIC FENDER



14 – FENDERING BAR AT STA. 5+05

15 – SHORE POWER CONNECTION

16 – COMMUNICATIONS

17 – TYP. POTABLE WATER CONNECTION

18 – DAMAGED VALVE PIT COVER

20 – UNDERWATER VOID W/EXOSED REINF.

SYM	DESCRIPTION	DATE	APPR
---	---	---	---
---	---	---	---
---	---	---	---
---	---	---	---
---	---	---	---
---	---	---	---
---	---	---	---

SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC / B.L.T.L.

ACTIVITY

SATISFACTORY TO DATE ----

DES JM | DRW JM | CHK KW

PROJECT MANAGER E. GALLANT

IPT TECH. BRANCH HEAD M. JOHNSON

CHIEF ENG/ARCH (CORE) K. WITTMAN

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST
NAVAL AIR STATION JACKSONVILLE
IPT SOUTH ATLANTIC
NAVSTA GUANTANAMO BAY
GUANTANAMO BAY, CUBA

WHARF BRAVO STRUCTURAL REPAIRS

SITE PHOTOS

SCALE: SCALE

EPROJECT NO.: 1295318

CONSTR. CONTR. NO. N69450–XX–C–XXXX

NAVFAC DRAWING NO. 15081091

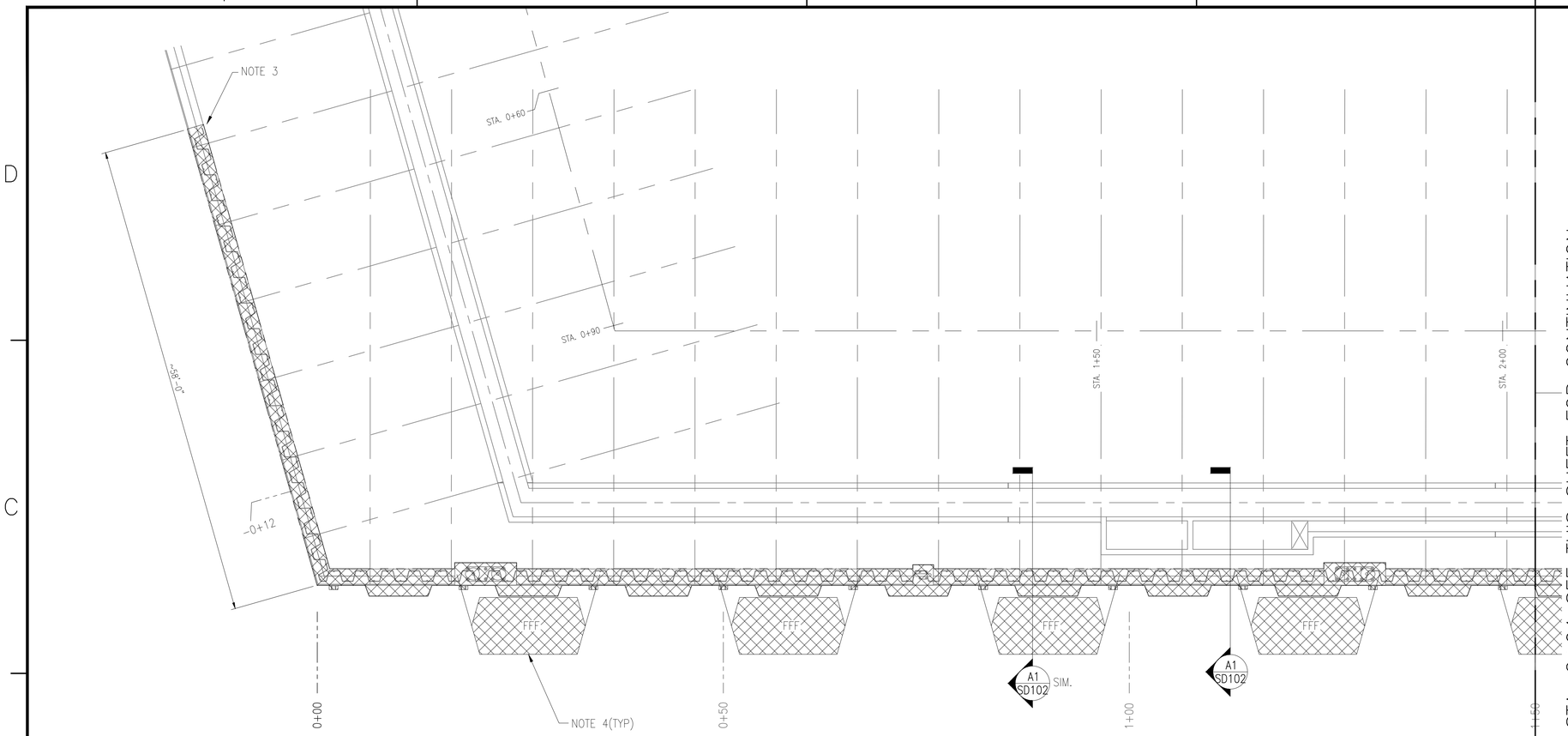
SHEET 45 OF 65

S013

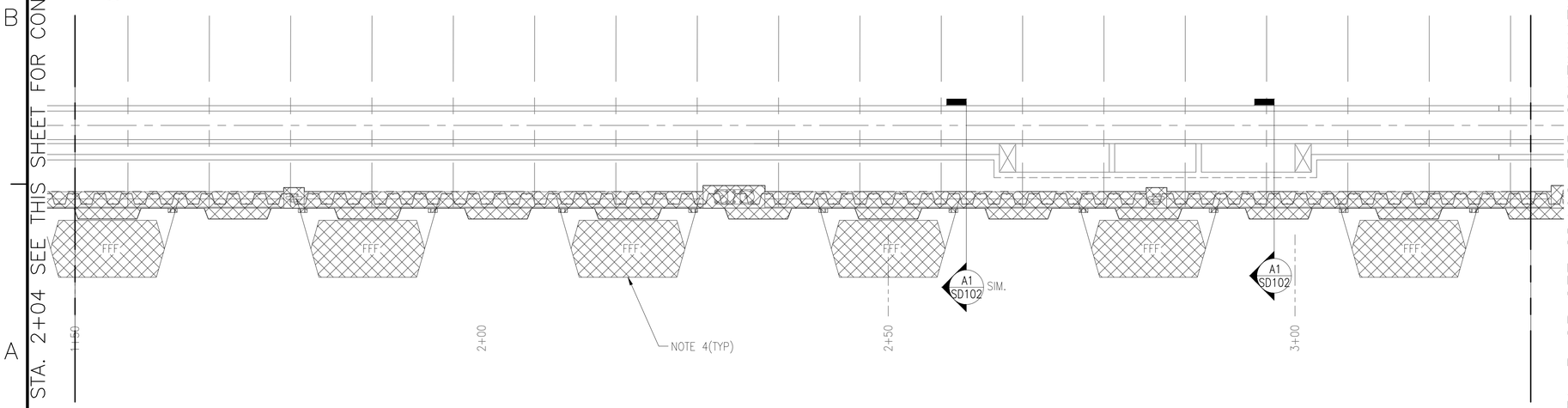
DRAWFORM REVISION: 7 AUGUST 2009

SHEET FORMAT IS 22" X 34". IF PRINTED SHEET IS NOT 22" X 34", THEN IT IS NOT TO SCALE

FILE NAME: P:\CUBA\project_files\y_CUBA\navsta guantanamo bay\hp60514\wharf bravo structural repairs-1295318\working technical files\Drawings\S013 SITE PHOTOS.dwg LAYOUT NAME: S013 SITE PHOTOS PLOTTED: Friday, June 10, 2016 – 3:51pm USER: david.c.waller



B1 DEMOLITION – PHASE 1 PLAN 1
Scale: 1/8" = 1'-0"

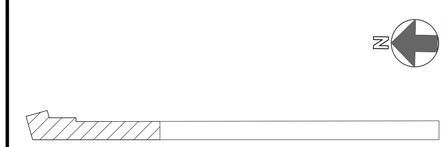


A1 DEMOLITION – PHASE 1 PLAN 2
Scale: 1/8" = 1'-0"

GENERAL SHEET NOTES

1. DEMOLISH BULKHEAD CAP WITHIN LIMITS SHOWN IN THESE DEMOLITION DRAWINGS.
2. REFER TO SHEET S001 FOR ADDITIONAL INFORMATION.
3. PROVIDE CLEAN AND STRAIGHT SAW CUTS AT TIE-IN AT WHARF TANGO.
4. COLLECT AND STORE FOAM FILLED FENDERS AT LOCATION PROVIDED BY GOVERNMENT.

KEYPLAN



GRAPHIC SCALE

1/8"=1'-0" 0' 5' 10' 20' 30'

SUBMITTAL TITLE
SUBMITTAL DATE

SYM	DESCRIPTION	DATE	APPR
---	---	---	---
---	---	---	---
---	---	---	---
---	---	---	---
---	---	---	---
---	---	---	---
---	---	---	---

SEAL

A/E INFO

APPROVED
FOR COMMANDER NAVFAC / B.L.T.L.
ACTIVITY
SATISFACTORY TO DATE

DES	JM	DRW JM	CHK KW
PM/DM	E. GALLANT		
BRANCH MANAGER	M. JOHNSON		
CHIEF ENG/ARCH	K. WITTMAN		

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
IPT SOUTH ATLANTIC
NAVSTA GUANTANAMO BAY
NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST
NAVAL AIR STATION JACKSONVILLE
GUANTANAMO BAY, CUBA

WHARF BRAVO STRUCTURAL REPAIRS

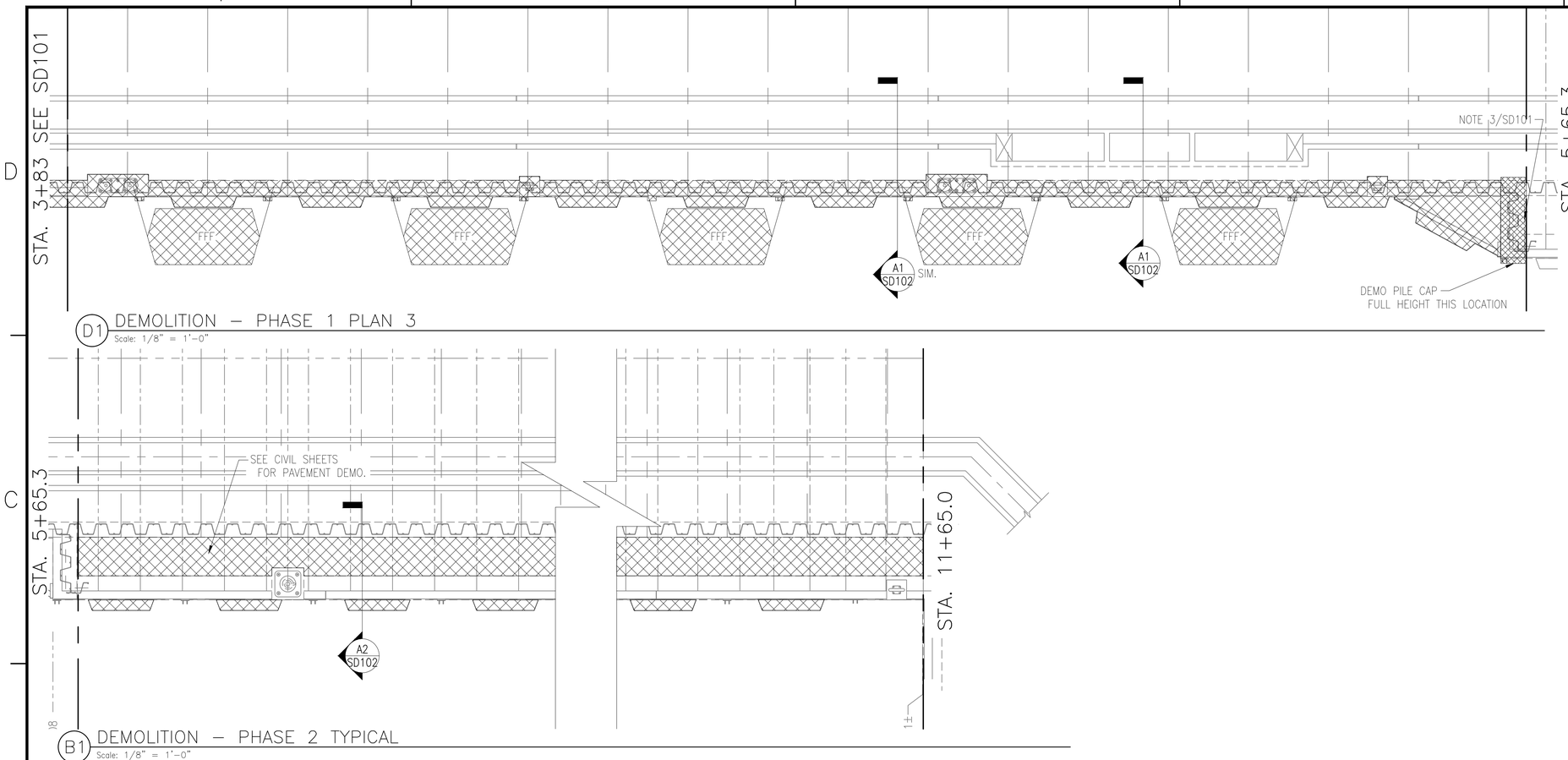
DEMOLITION PLAN & DETAILS 1 OF 2

SCALE: SCALE
EPROJECT NO.: 1295318
CONSTR. CONTR. NO. N69450-XX-C-XXXX
NAVFAC DRAWING NO. 15081092
SHEET 46 OF 65
SD101

DRAWFORM REVISION: 7 AUGUST 2009

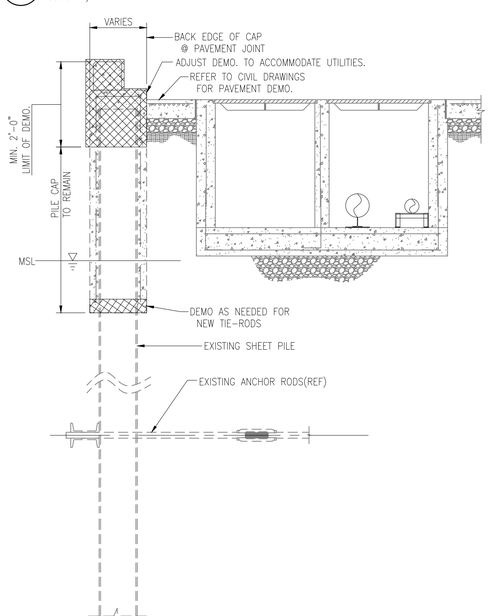
SHEET FORMAT IS 22" X 34". IF PRINTED SHEET IS NOT 22" X 34", THEN IT IS NOT TO SCALE

FILE NAME: P:\CUBA\project_files\y_CUBA\navsta guantanamo bay\h\h80514\wharf bravo structural repairs-1295318\working technical files\Drawings\SD101 DEMOLITION PLAN & DETAILS 1 OF 2.dwg LAYOUT NAME: SD101 DEMOLITION PLAN & DETAILS 1 OF 2 PLOTTED: Friday, June 10, 2016 - 3:52pm USER: david.c.walter

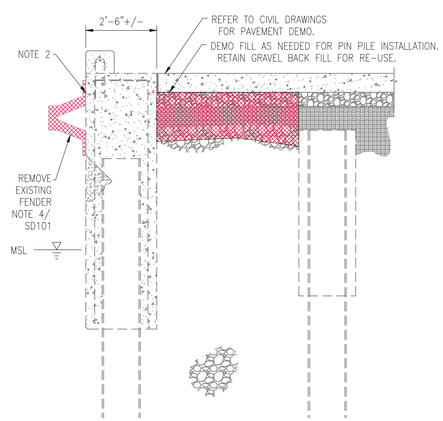


D1 DEMOLITION – PHASE 1 PLAN 3
Scale: 1/8" = 1'-0"

B1 DEMOLITION – PHASE 2 TYPICAL
Scale: 1/8" = 1'-0"



A1 TYP. PHASE 1 DEMO
Scale: 3/8" = 1'-0"



A2 TYP. PHASE 2 DEMO
Scale: 3/8" = 1'-0"

GENERAL SHEET NOTES

1. REFER TO NOTES ON SHEET SD101 FOR ADDITIONAL INFORMATION.
2. CUT AND GRIND ALL UNUSED ANCHORS FLUSH TO SURROUNDING CONCRETE.

KEYPLAN

GRAPHIC SCALE

1/8"=1'-0" 0' 5' 10' 20' 30'

SUBMITTAL TITLE
SUBMITTAL DATE

SYM	DESCRIPTION	DATE	APPR
---	---	---	---

SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC / B.L.T.L.

ACTIVITY

SATISFACTORY TO DATE

DES JM DRW JM CHK KW
PM/DM E. GALLANT
BRANCH MANAGER M. JOHNSON
CHIEF ENG/ARCH K. WITTMAN

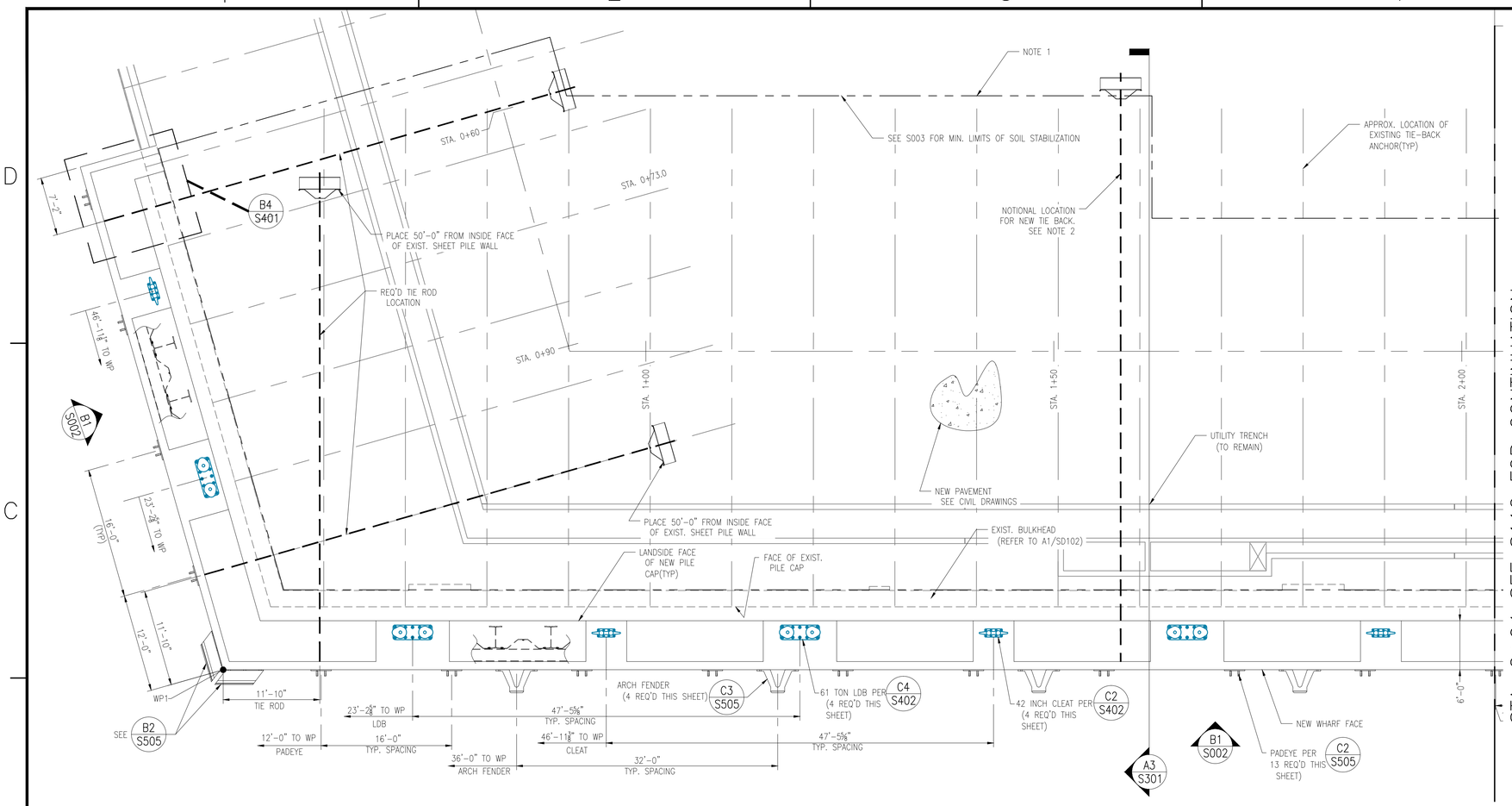
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
IPT SOUTH ATLANTIC
NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST
NAVAL AIR STATION JACKSONVILLE
NAVSTA GUANTANAMO BAY
GUANTANAMO BAY, CUBA
WHARF BRAVO STRUCTURAL REPAIRS
DEMOLITION PLAN & DETAILS 2 OF 2

SCALE: SCALE
EPROJECT NO.: 1295318
CONSTR. CONTR. NO. N69450–XX–C–XXXX
NAVFAC DRAWING NO. 15081093
SHEET 47 OF 65
SD102

DRAWFORM REVISION: 7 AUGUST 2009

SHEET FORMAT IS 22" X 34". IF PRINTED SHEET IS NOT 22" X 34", THEN IT IS NOT TO SCALE

FILE NAME: P:\CBL\project_files\z_CUBA\navsta guantanamo bay\h\n60514\wharf bravo structural repairs-1295318\working technical files\Drawings\SD102 DEMOLITION PLAN & DETAILS 2 OF 2.dwg LAYOUT NAME: SD102 DEMOLITION PLAN & DETAILS 2 OF 2 PLOTTED: Friday, June 10, 2016 - 3:53pm USER: david.c.walter



B1 ENLARGED PLAN 1
Scale: 1/8" = 1'-0"

GENERAL SHEET NOTES

1. REFER TO RECORD DRAWINGS FOR INFORMATION ON EXISTING STRUCTURES.
2. REFER TO "COMBINATION SHEET PILE WALL SYSTEM" NOTE #4 FOUND ON SHEET S001.
3. COORDINATE WORK THIS SHEET WITH CIVIL DRAWINGS.
4. REFER TO SHEETS S401 AND S402 FOR ENLARGED PLANS.

SYMBOL LEGEND

LOW DOUBLE BITT (LDB) PER	C4 S402
42" CLEAT (CL42) PER	C2 S402
ARCH FENDER (FA) PER	C3 S505
PIPE PILE (PP) PER	A2 S504
FENDER PADEYE PER	C1 S505

KEYPLAN

GRAPHIC SCALE

1/8"=1'-0" 0' 5' 10' 20' 30'

SYM	DESCRIPTION	DATE	APPR
---	---	---	---

SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC / B.L.T.L.

ACTIVITY ----

SATISFACTORY TO DATE ----

DES JM DRW JM CHK KW

PROJECT MANAGER E. GALLANT

IPT TECH. BRANCH HEAD M. JOHNSON

CHIEF ENG/ARCH (CORE) K. WITTMAN

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
IPT SOUTH ATLANTIC
NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST
NAVAL AIR STATION JACKSONVILLE
NAVSTA GUANTANAMO BAY
GUANTANAMO BAY, CUBA

WHARF BRAVO STRUCTURAL REPAIRS

STRUCTURAL PLANS 1 OF 5

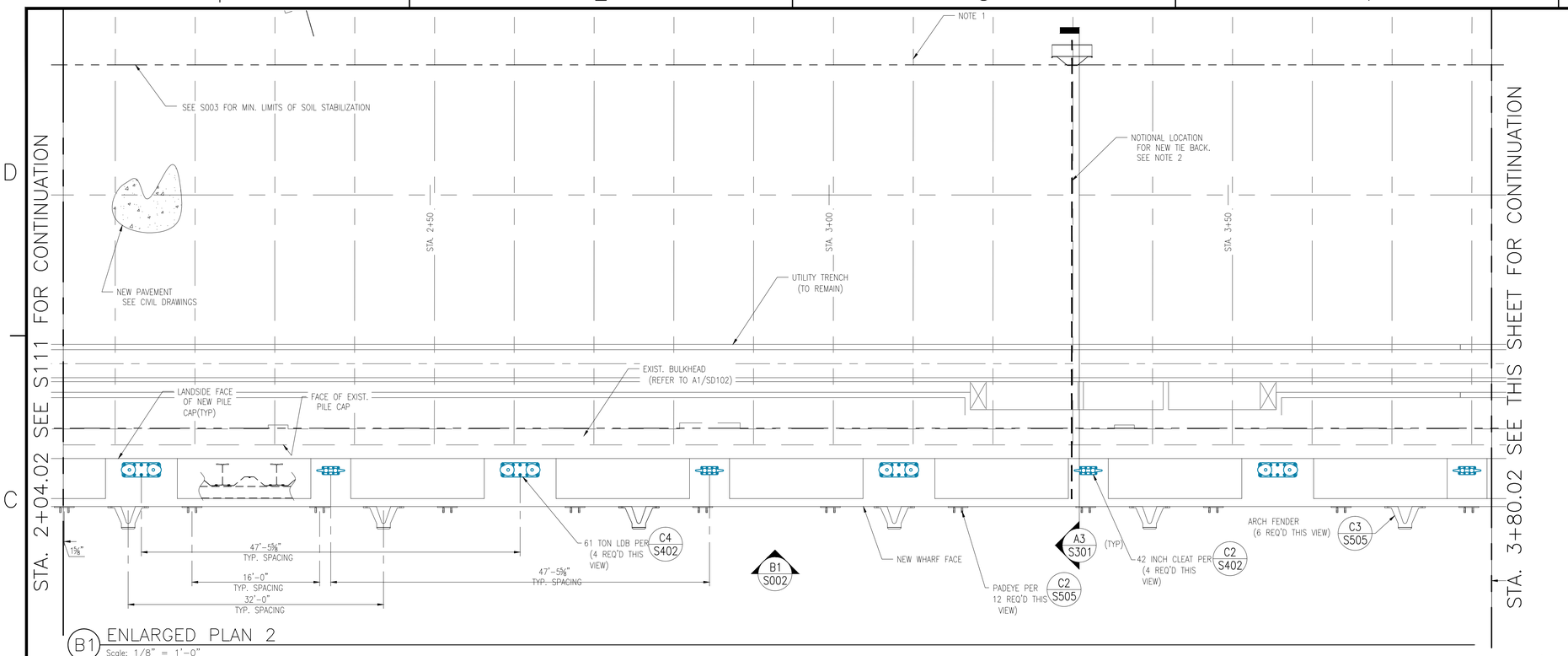
SCALE: SCALE
EPROJECT NO.: 1295318
CONSTR. CONTR. NO. N69450-XX-C-XXXX
NAVFAC DRAWING NO. 15081094
SHEET 48 OF 65

S111

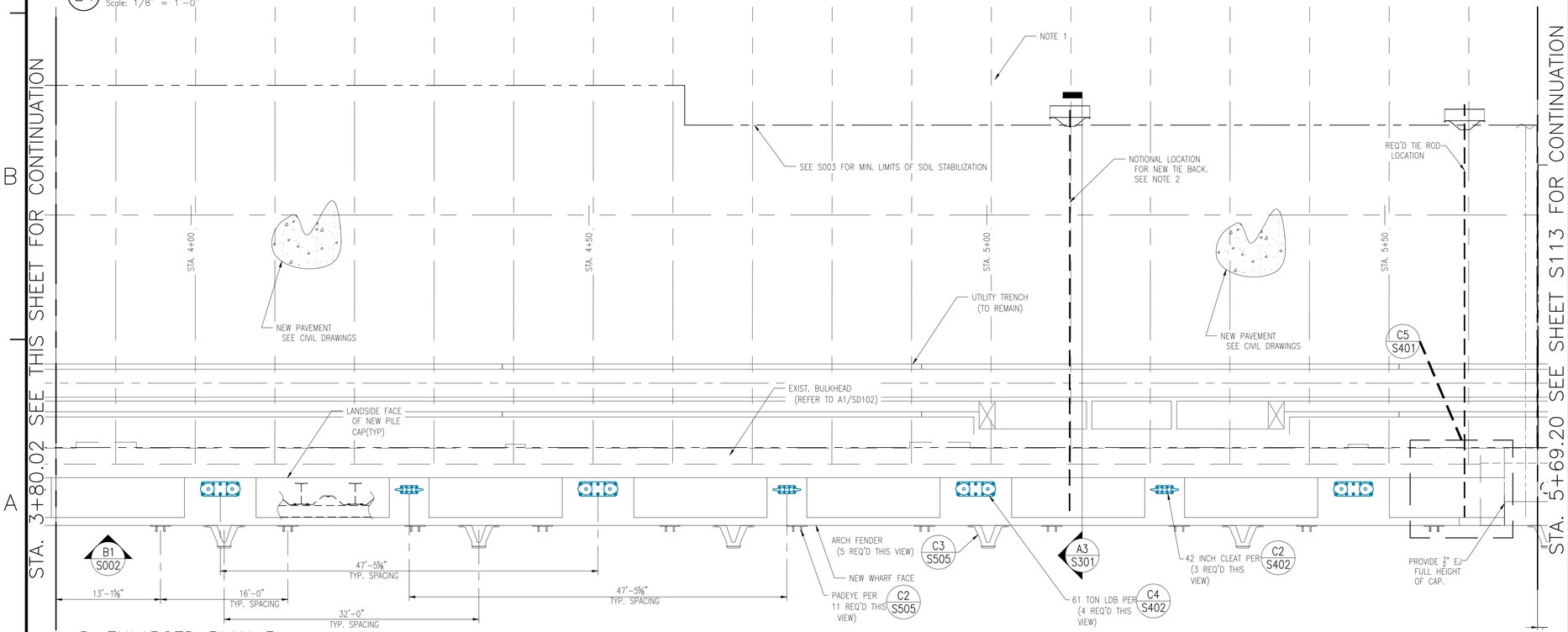
DRAWFORM REVISION: 7 AUGUST 2009

SHEET FORMAT IS 22" X 34". IF PRINTED SHEET IS NOT 22" X 34", THEN IT IS NOT TO SCALE

FILE NAME: P:\CBL\project_files\z_CUBA\navsta guantanamo bay\hi-60514\wharf bravo structural repairs-1295318\working technical files\Drawings\S111 STRUCTURAL PLANS 1 OF 5.dwg LAYOUT NAME: S111 STRUCTURAL PLANS 1 OF 5 PLOTTED: Friday, June 10, 2016 - 3:54pm USER: davidz.walter



B1 ENLARGED PLAN 2
Scale: 1/8" = 1'-0"



A1 ENLARGED PLAN 3
Scale: 1/8" = 1'-0"

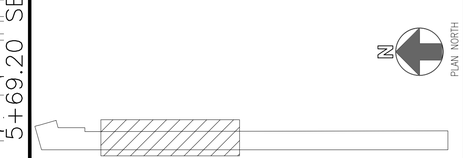
GENERAL SHEET NOTES

1. REFER TO RECORD DRAWINGS FOR INFORMATION ON EXISTING STRUCTURES.
2. REFER TO "COMBINATION SHEET PILE WALL SYSTEM" NOTE #4 FOUND ON SHEET S001.
3. COORDINATE WORK THIS SHEET WITH CIVIL DRAWINGS.
4. REFER TO SHEETS S401 AND S402 FOR ENLARGED PLANS.

SYMBOL LEGEND

LOW DOUBLE BITT (LDB) PER	C4 S402
42" CLEAT (CL42) PER	C2 S402
ARCH FENDER (FA) PER	C3 S505
PIPE PILE (PP) PER	A2 S504
FENDER PADEYE PER	C1 S505

KEYPLAN



GRAPHIC SCALE

1/8"=1'-0" 0' 5' 10' 20' 30'

SYM	DESCRIPTION	DATE	APPR
----	----	----	----

NAVFAC

SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC / B.I.T.L.

ACTIVITY ----

SATISFACTORY TO DATE ----

DES JM DRW JM CHK KW

PROJECT MANAGER E. GALLANT

IPT TECH. BRANCH HEAD M. JOHNSON

CHIEF ENG/ARCH (CORE) K. WITTMAN

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
IPT SOUTH ATLANTIC
NAVFAC FACILITIES ENGINEERING COMMAND SOUTHEAST
NAVAL AIR STATION JACKSONVILLE
NAVSTA GUANTANAMO BAY
GUANTANAMO BAY, CUBA

WHARF BRAVO STRUCTURAL REPAIRS

STRUCTURAL PLANS 2 OF 5

SCALE: SCALE

EPROJECT NO.: 1295318

CONSTR. CONTR. NO. N69450-XX-C-XXXX

NAVFAC DRAWING NO. 15081095

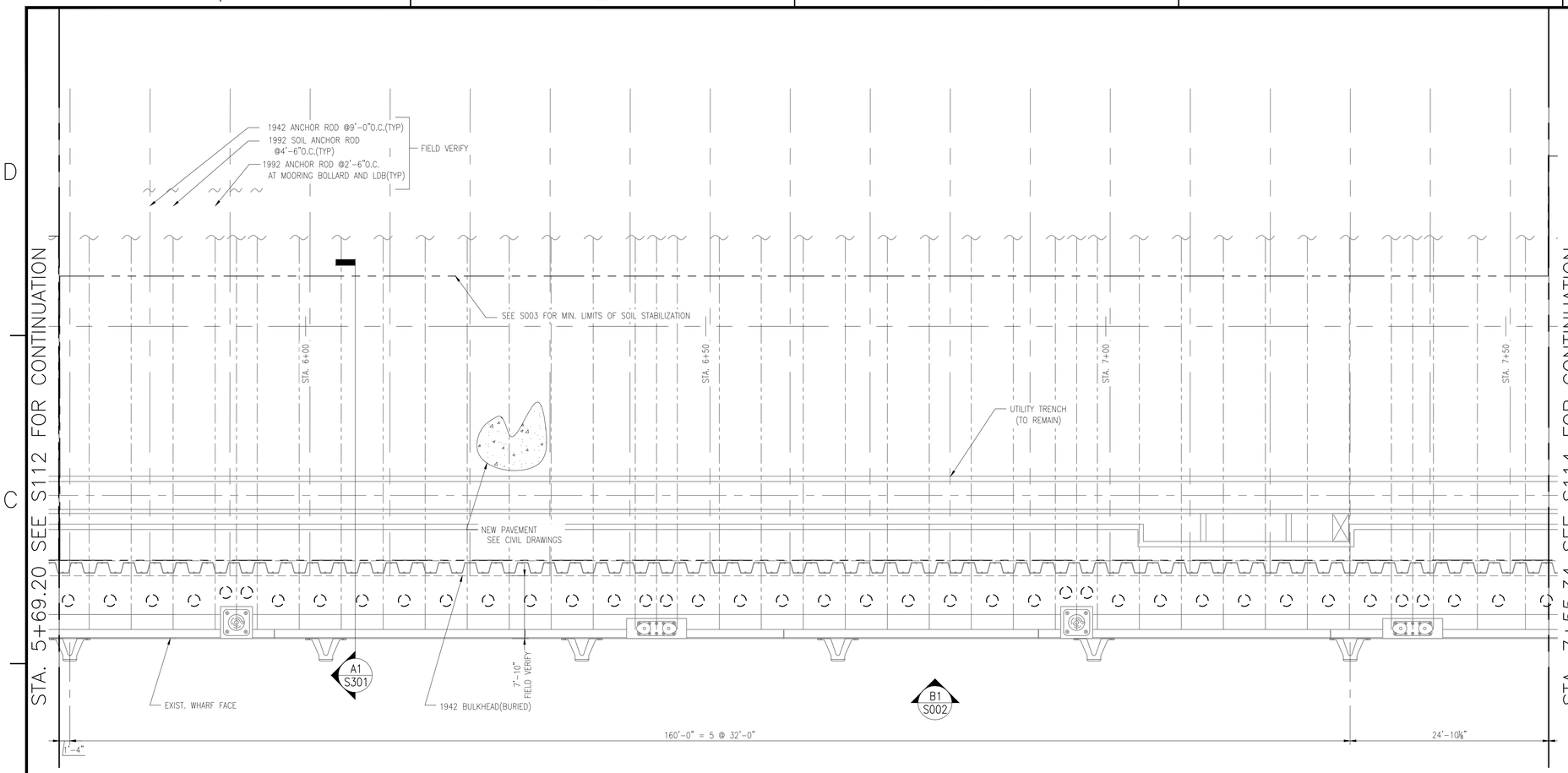
SHEET 49 OF 65

S112

DRAWFORM REVISION: 7 AUGUST 2009

FILE NAME: P:\CBA\project_files\z_CUBA\navsta guantanamo bay\hi60514\wharf bravo structural repairs-1295318\working technical files\Drawings\S112 STRUCTURAL PLANS 2 OF 5.dwg LAYOUT NAME: S112 STRUCTURAL PLANS 2 OF 5 PLOTTED: Friday, June 10, 2016 - 3:54pm USER: davidc_walter

SHEET FORMAT IS 22" X 34". IF PRINTED SHEET IS NOT 22" X 34", THEN IT IS NOT TO SCALE



B1 ENLARGED PLAN 4
Scale: 1/8" = 1'-0"

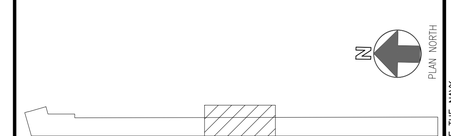
GENERAL SHEET NOTES

1. REFER TO RECORD DRAWINGS FOR INFORMATION ON EXISTING STRUCTURES.
2. EXISTING 1942 ANCHOR RODS MAY BE REMOVED TO FACILITATE SOIL STABILIZATION EFFORTS.
3. COORDINATE WORK THIS SHEET WITH CIVIL DRAWINGS.
4. REFER TO SHEETS S401 AND S402 FOR ENLARGED PLANS.

SYMBOL LEGEND

LOW DOUBLE BITT (LDB) PER	C4 S402
42" CLEAT (CL42) PER	C2 S402
ARCH FENDER (FA) PER	C3 S505
PIPE PILE (PP) PER	A2 S504
FENDER PADEYE PER	C1 S505

KEYPLAN



GRAPHIC SCALE

1/8"=1'-0" 0' 5' 10' 20' 30'

SYM	DESCRIPTION	DATE	APPR
---	---	---	---

SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC / B.I.T.L.

ACTIVITY ----

SATISFACTORY TO DATE ----

DES JM DRW JM CHK KW

PROJECT MANAGER E. GALLANT

IPT TECH. BRANCH HEAD M. JOHNSON

CHIEF ENG/ARCH (CORE) K. WITTMAN

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
IPT SOUTH ATLANTIC
NAVSTA GUANTANAMO BAY

NAVAL FACILITIES ENGINEERING COMMAND
NAVAL AIR STATION JACKSONVILLE
GUANTANAMO BAY, CUBA

WHARF BRAVO STRUCTURAL REPAIRS

STRUCTURAL PLANS 3 OF 5

SCALE: SCALE

EPROJECT NO.: 1295318

CONSTR. CONTR. NO. N69450-XX-C-XXXX

NAVFAC DRAWING NO. 15081096

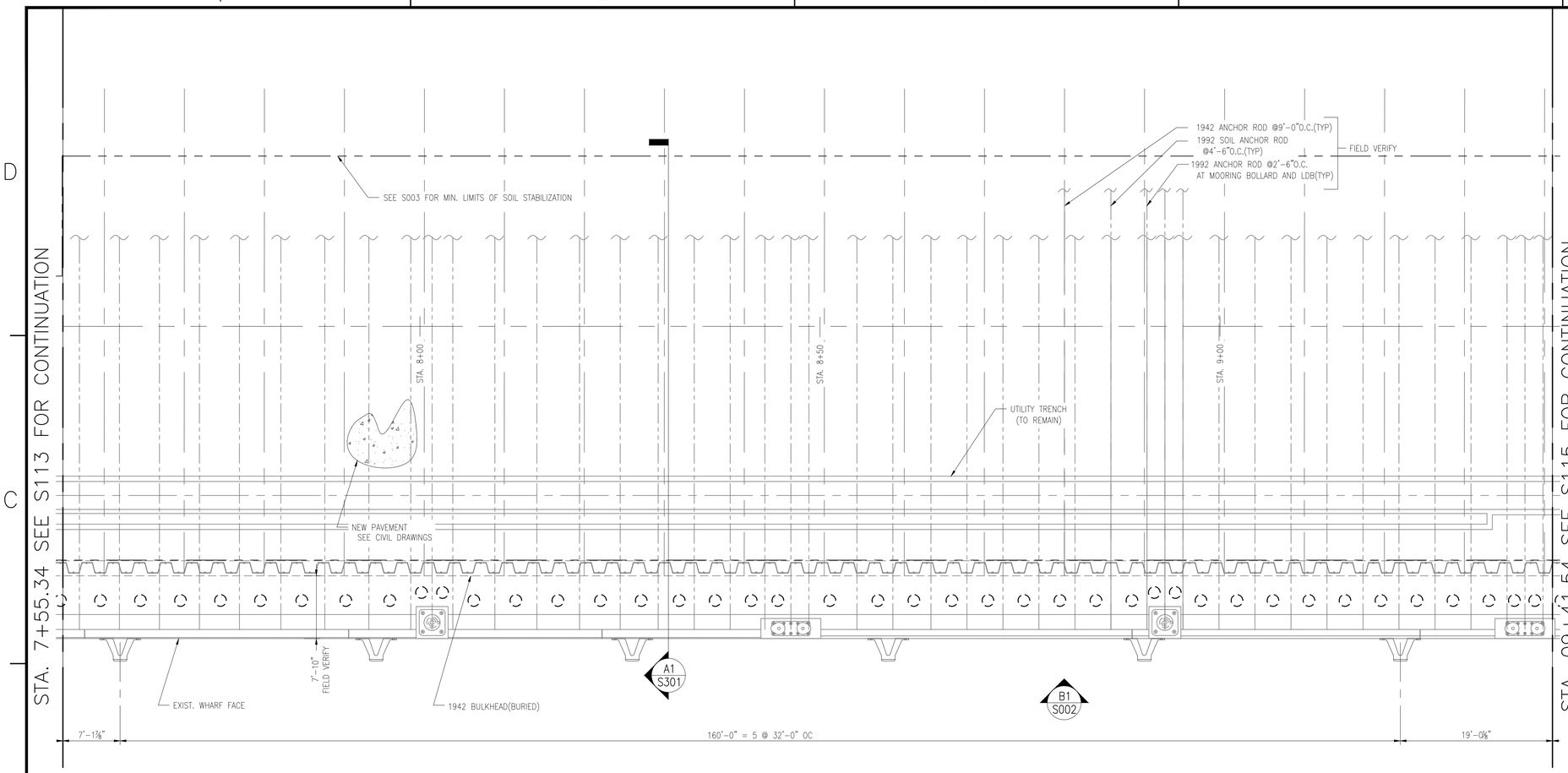
SHEET 50 OF 65

S113

DRAWFORM REVISION: 7 AUGUST 2009

FILE NAME: P:\CBL\project_files\2_CUBA\navsta guantanamo bay\hjr60514\wharf bravo structural repairs-1295318\working technical files\DrawingsS113 STRUCTURAL PLANS 3 OF 5.dwg LAYOUT NAME: S113 STRUCTURAL PLANS 3 OF 5 PLOTTED: Friday, June 10, 2016 - 3:55pm USER: davids_walter

SHEET FORMAT IS 22" X 34". IF PRINTED SHEET IS NOT 22" X 34", THEN IT IS NOT TO SCALE



B1 ENLARGED PLAN 5
Scale: 1/8" = 1'-0"

GENERAL SHEET NOTES

1. REFER TO RECORD DRAWINGS FOR INFORMATION ON EXISTING STRUCTURES.
2. EXISTING 1942 ANCHOR RODS MAY BE REMOVED TO FACILITATE SOIL STABILIZATION EFFORTS.
3. COORDINATE WORK THIS SHEET WITH CIVIL DRAWINGS.
4. REFER TO SHEETS S401 AND S402 FOR ENLARGED PLANS.

SYMBOL LEGEND

LOW DOUBLE BITT (LDB) PER	C4	S402
42" CLEAT (CL42) PER	C2	S402
ARCH FENDER (FA) PER	C3	S505
PIPE PILE (PP) PER	A2	S504
FENDER PADEYE PER	C1	S505

KEYPLAN

GRAPHIC SCALE

1/8"=1'-0" 0' 5' 10' 20' 30'

SYM	DESCRIPTION	DATE	APPR
---	---	---	---

SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC / B.I.T.L.

ACTIVITY ----

SATISFACTORY TO DATE ----

DES JM DRW JM CHK KW

PROJECT MANAGER E. GALLANT

IPT TECH. BRANCH HEAD M. JOHNSON

CHIEF ENG/ARCH (CORE) K. WITTMAN

NAVAL FACILITIES ENGINEERING COMMAND
NAVAL AIR STATION JACKSONVILLE

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST
IPT SOUTH ATLANTIC
NAVSTA GUANTANAMO BAY
GUANTANAMO BAY, CUBA

WHARF BRAVO STRUCTURAL REPAIRS

STRUCTURAL PLANS 4 OF 5

SCALE: SCALE

EPROJECT NO.: 1295318

CONSTR. CONTR. NO. N69450-XX-C-XXXX

NAVFAC DRAWING NO. 15102421

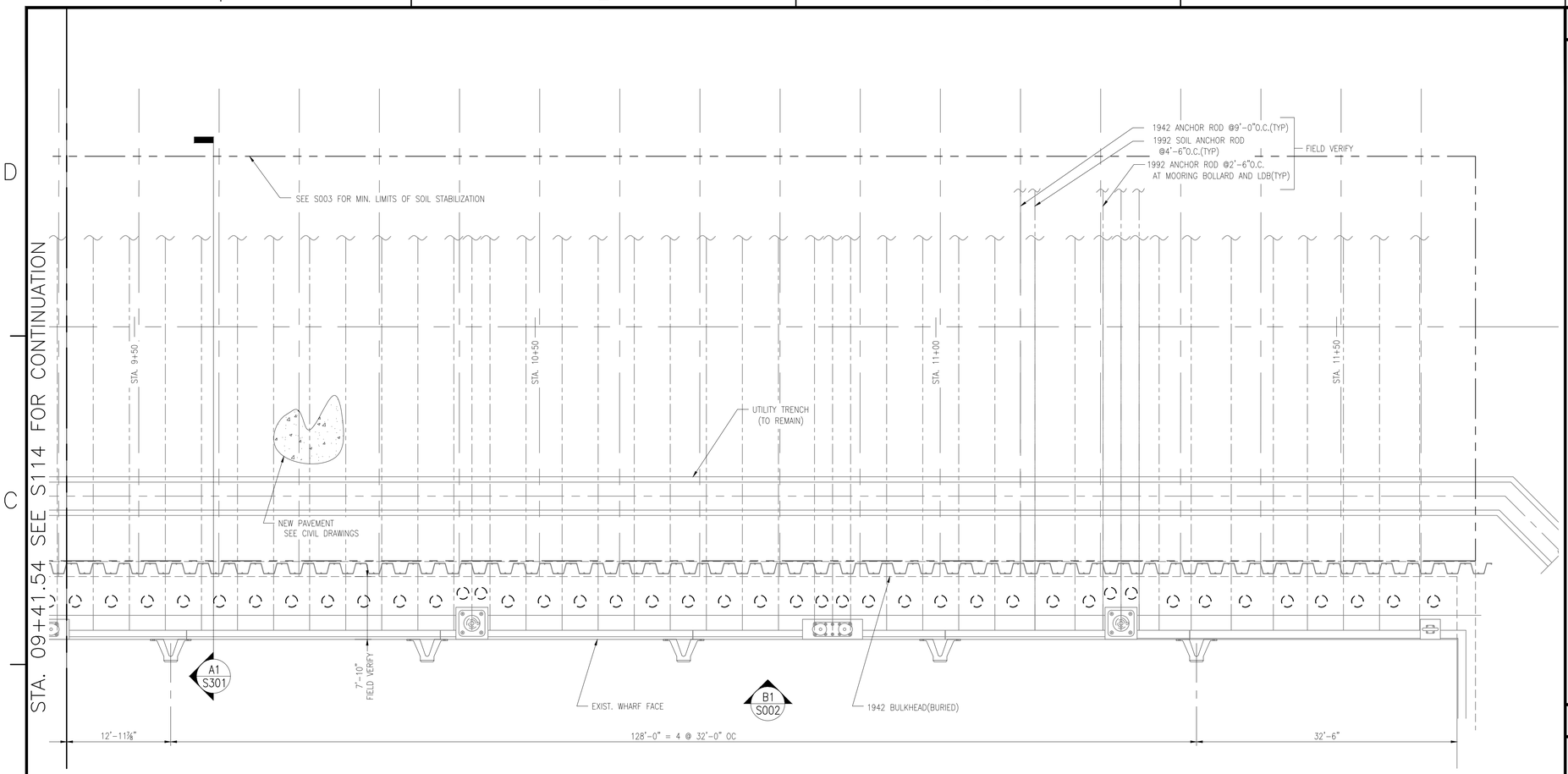
SHEET 51 OF 65

S114

DRAWFORM REVISION: 7 AUGUST 2009

FILE NAME: P:\CBL\project_files\2_CUBA\navsta guantanamo bay\hjr60514\wharf bravo structural repairs-1295318\working technical files\DrawingsS114 STRUCTURAL PLANS 4 OF 5.dwg LAYOUT NAME: S114 STRUCTURAL PLANS 4 OF 5 PLOTTED: Friday, June 10, 2016 - 3:56pm USER: david.c.walter

SHEET FORMAT IS 22" X 34". IF PRINTED SHEET IS NOT 22" X 34", THEN IT IS NOT TO SCALE



B1 ENLARGED PLAN 6
Scale: 1/8" = 1'-0"

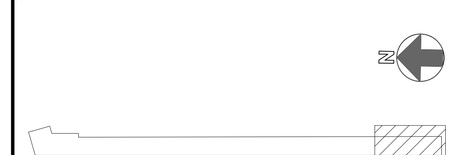
GENERAL SHEET NOTES

1. REFER TO RECORD DRAWINGS FOR INFORMATION ON EXISTING STRUCTURES.
2. EXISTING 1942 ANCHOR RODS MAY BE REMOVED TO FACILITATE SOIL STABILIZATION EFFORTS.
3. COORDINATE WORK THIS SHEET WITH CIVIL DRAWINGS.
4. REFER TO SHEETS S401 AND S402 FOR ENLARGED PLANS.

SYMBOL LEGEND

LOW DOUBLE BITT (LDB) PER	C4 S402
42" CLEAT (CL42) PER	C2 S402
ARCH FENDER (FA) PER	C3 S505
PIPE PILE (PP) PER	A2 S504
FENDER PADEYE PER	C1 S505

KEYPLAN



GRAPHIC SCALE

1/8"=1'-0" 0' 5' 10' 20' 30'

SYM	DESCRIPTION	DATE	APPR
---	---	---	---

SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC / B.I.T.L.

ACTIVITY ----

SATISFACTORY TO DATE ----

DES JM DRW JM CHK KW

PROJECT MANAGER E. GALLANT

IPT TECH. BRANCH HEAD M. JOHNSON

CHIEF ENG/ARCH (CORE) K. WITTMAN

DEPARTMENT OF THE NAVY
IPT SOUTH ATLANTIC
NAVAL FACILITIES ENGINEERING COMMAND
NAVFAC
NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST
NAVSTA GUANTANAMO BAY
NWAL AIR STATION JACKSONVILLE
GUANTANAMO BAY, CUBA

WHARF BRAVO STRUCTURAL REPAIRS

STRUCTURAL PLANS 5 OF 5

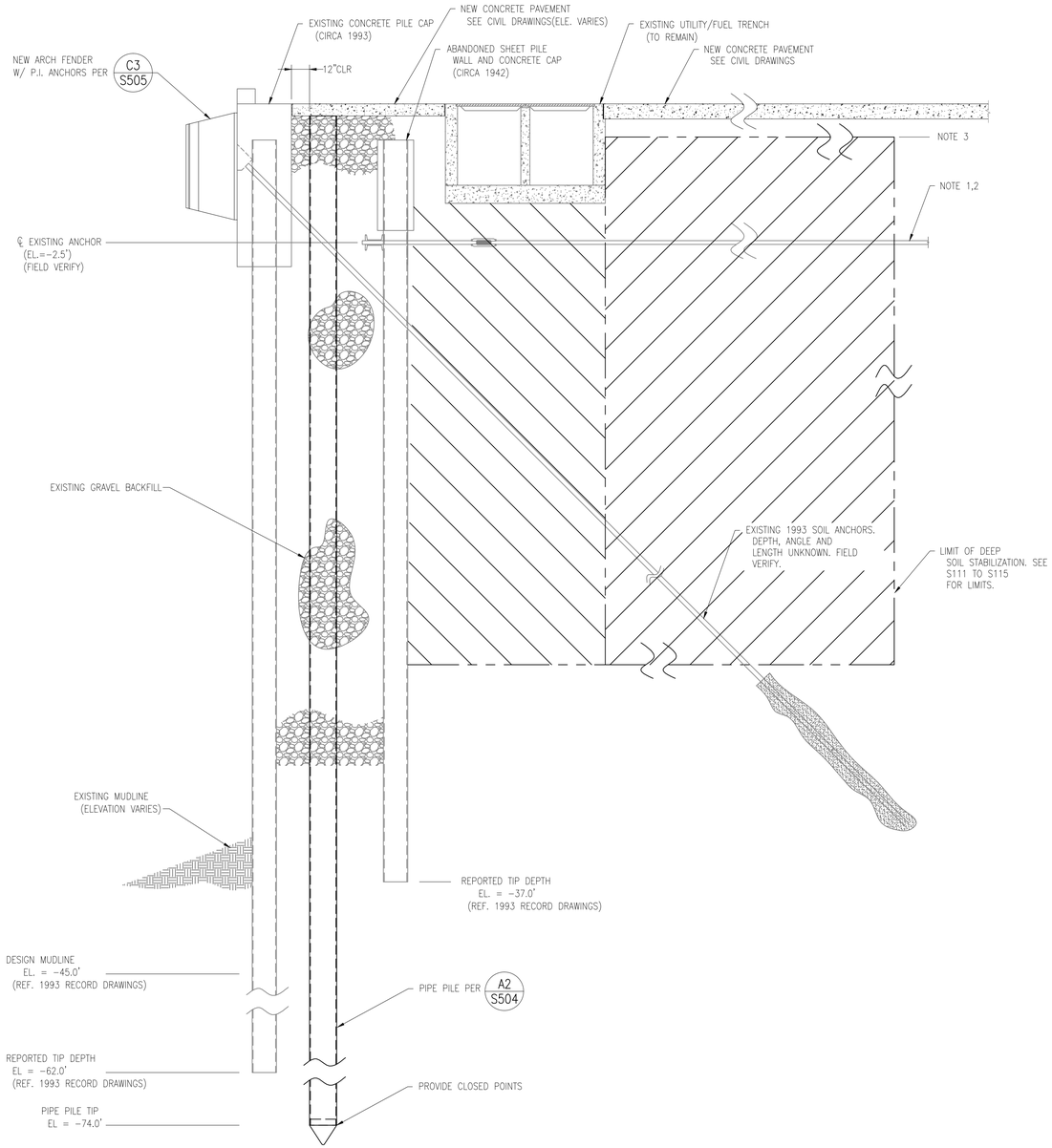
SCALE: SCALE
EPROJECT NO.: 1295318
CONSTR. CONTR. NO. N69450-XX-C-XXXX
NAVFAC DRAWING NO. 15102422
SHEET 52 OF 65

S115

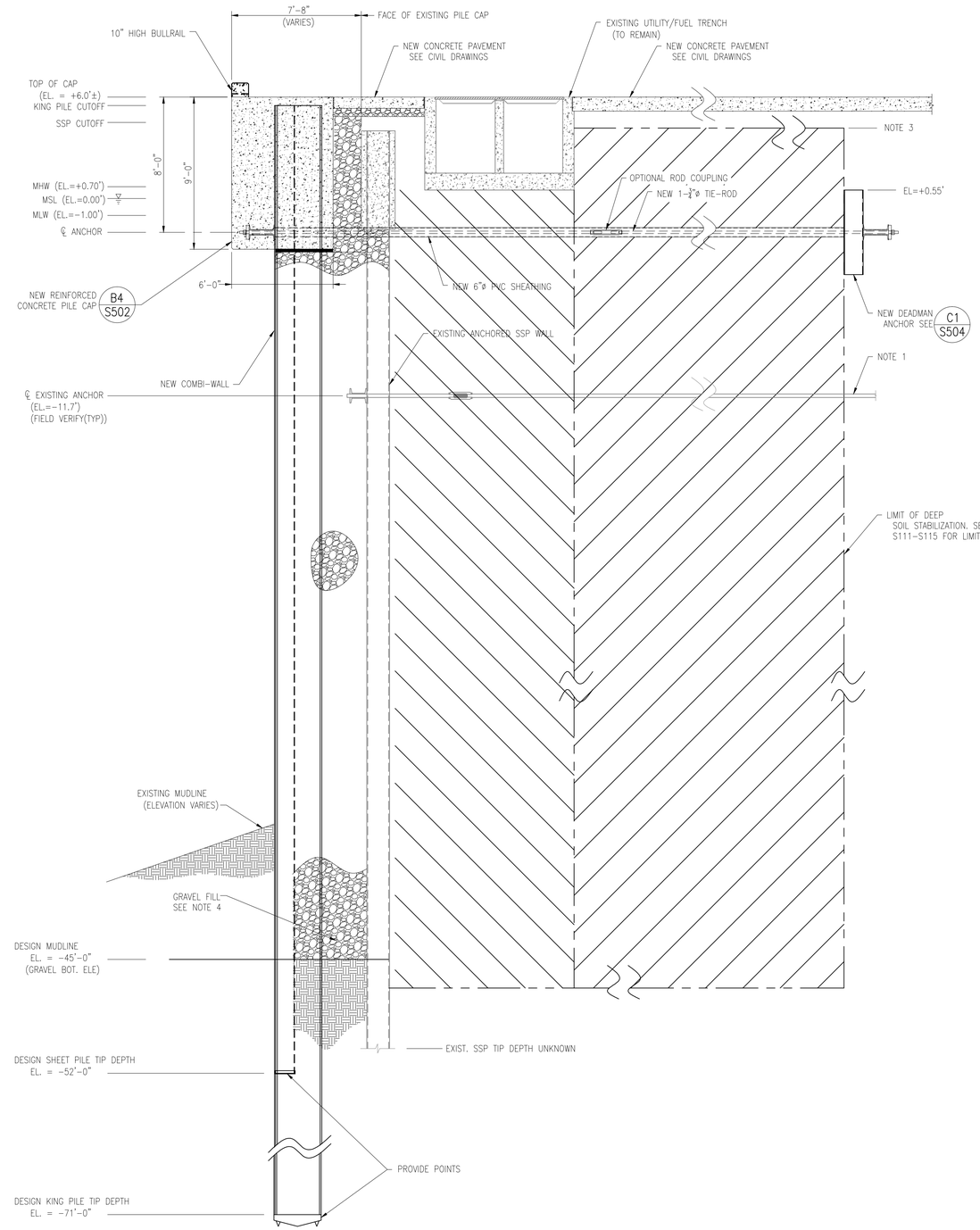
DRAWFORM REVISION: 7 AUGUST 2009

FILE NAME: P:\CBL\project_files\z_CUBA\navsta guantanamo bay\hjr60514\wharf bravo structural repairs-1295318\working technical files\Drawings\S115 STRUCTURAL PLANS 5 OF 5.dwg LAYOUT NAME: S115 STRUCTURAL PLANS 5 OF 5 PLOTTED: Friday, June 10, 2016 - 3:56pm USER: david.c.walter

SHEET FORMAT IS 22" X 34". IF PRINTED SHEET IS NOT 22" X 34", THEN IT IS NOT TO SCALE



A1 PHASE 2 – TYPICAL WHARF SECTION
Scale: 1/4" = 1'-0"



A3 PHASE 1 – TYPICAL WHARF SECTION
Scale: 1/4" = 1'-0"

SHEET NOTES
1. CONTRACTOR MUST VERIFY LOCATION AND DEPTH OF EXISTING SHEET PILE WALL DEADMAN AND ANCHOR RODS.
2. PHASE 2 DEADMAN ANCHORS, NOT SOIL ANCHORS, MAY BE REMOVED AS NEEDED TO FACILITATE SOIL STABILIZATION.
3. TOP ELEVATION OF SOIL STABILIZATION MUST BE 0.5 FEET BELOW BOTTOM OF IMPROVED SUBGRADE THAT SUPPORTS BASE COURSE AND PAVEMENT. REFER TO CIVIL DRAWINGS FOR ADDITIONAL INFORMATION.
4. DUE TO THE PROXIMITY OF THE DESALINATION PLANT INTAKE, PLACE GRAVEL TO ELEVATION -40.0' AND THEN VIBRATE DOWN INTO THE EXISTING SOFT SOIL TO THE DESIGN MUDLINE ELEVATION SHOWN USING STEEL PIPE PROBE.

GRAPHIC SCALE
1/4"=1'-0" 1' 0' 1' 5' 10' 15'

SYM	DESCRIPTION	DATE	APPR
----	----	----	----

NAVFAC

SEAL

A/E INFO
APPROVED
FOR COMMANDER NAVFAC / B.L.T.L.
ACTIVITY

SATISFACTORY TO DATE ----
DES JM DRW JM CHK --
PROJECT MANAGER E. GALLANT
IPT TECH. BRANCH HEAD M. JOHNSON
CHIEF ENG/ARCH (CORE) K. WITTMAN

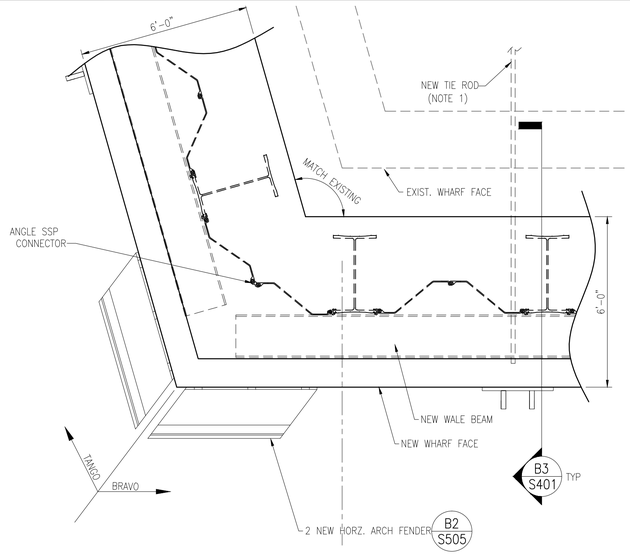
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
IPT SOUTH ATLANTIC
NAVSTA GUANTANAMO BAY
NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST
NAVAL AIR STATION JACKSONVILLE
GUANTANAMO BAY, CUBA
WHARF BRAVO STRUCTURAL REPAIRS
TYPICAL WHARF SECTIONS

SCALE: SCALE
EPROJECT NO.: 1295318
CONSTR. CONTR. NO.: N69450-XX-C-XXXX
NAVFAC DRAWING NO. 15102423
SHEET 53 OF 65
S301

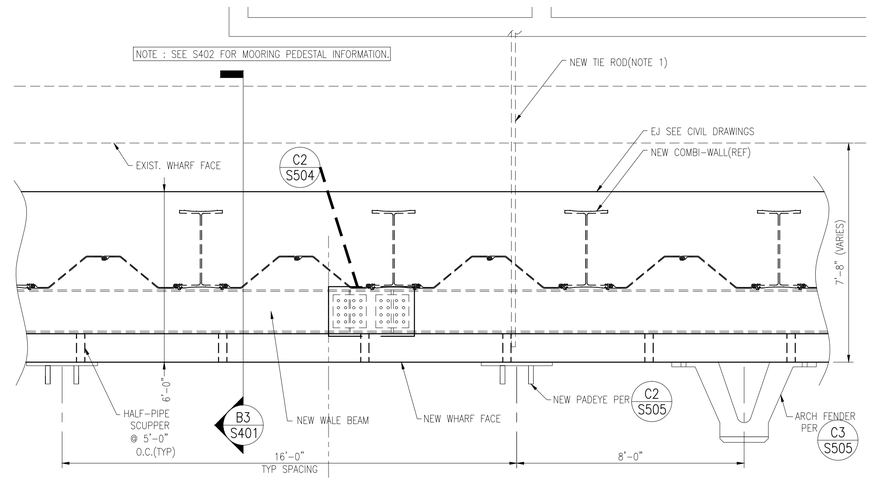
DRAWFORM REVISION: 7 AUGUST 2009

SHEET FORMAT IS 22" X 34". IF PRINTED SHEET IS NOT 22" X 34", THEN IT IS NOT TO SCALE

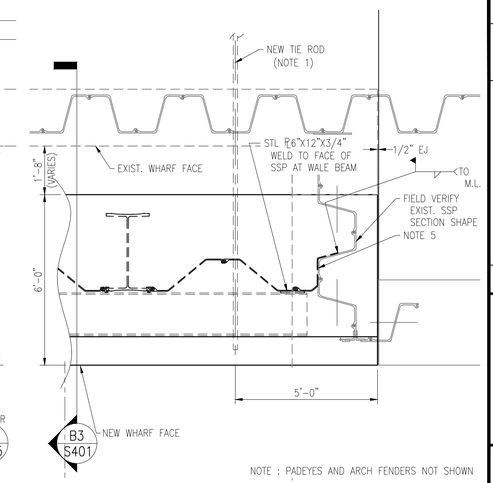
FILE NAME: P:\OBL\project_files\z_CUBA\navsta guantanamo bay\hj460514\wharf bravo structural repairs~1295318\working technical files\Drawings\S301 TYPICAL WHARF SECTIONS.dwg LAYOUT NAME: S301 TYPICAL WHARF SECTIONS PLOTTED: Friday, June 10, 2016 - 3:57pm USER: david.c.walter



C1 PLAN – CORNER
Scale: 3/8" = 1'-0"

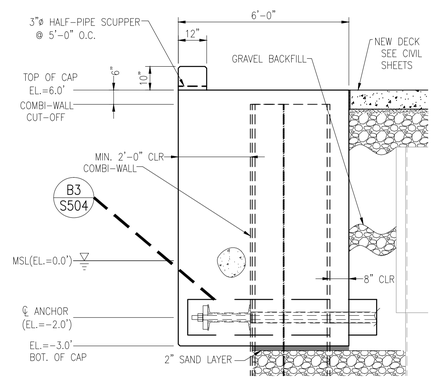


C3 PLAN – TYPICAL BULKHEAD
Scale: 3/8" = 1'-0"

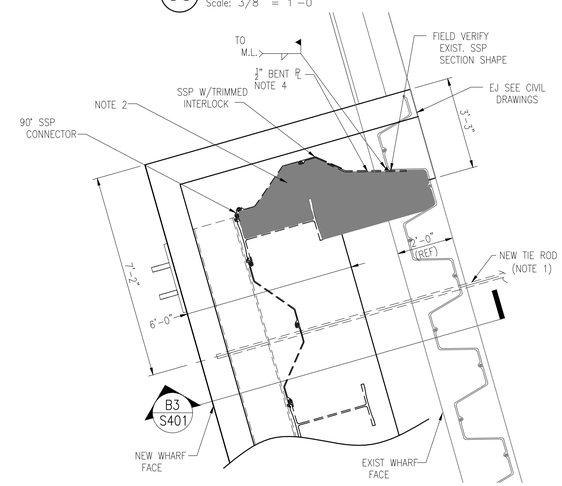


NOTE : PADEYES AND ARCH FENDERS NOT SHOWN

C5 PLAN – TIE IN @ SOUTH END
Scale: 3/8" = 1'-0"



B3 SECTION – TYPICAL BULKHEAD
Scale: 3/8" = 1'-0"



B4 PLAN – TIE IN @ NORTH END
Scale: 3/8" = 1'-0"

PLAN NORTH

SHEET NOTES

1. ANCHOR SPACING MUST NOT EXCEED 10'-0" OC. ADJUST NEW ANCHOR RODS AS NEEDED TO AVOID TRENCH SUMP PITS, UNDERGROUND AND BURIED UTILITIES, STORM PIPING, ETC. ANCHORS MAY ALSO BE ADJUST TO ACCOMMODATE SOIL STABILIZATION. CONTRACTOR IS RESPONSIBLE FOR DETERMINATION OF QUANTITY OF REQUIRED ANCHOR LOCATIONS, DEADMEN AND ASSOCIATED MATERIALS.
2. PROVIDE FLOWABLE FILL FROM ELEVATION –40.0' TO –36.0' WHERE INDICATED. PROVIDE GRAVEL REMAINDER OF WALL AS REQUIRED FOR REMAINDER OF WHARF.
3. REFER TO SHEETS S501 TO S503 FOR REINFORCEMENT AND ADDITIONAL REQUIREMENTS.
4. PROVIDE CLOSURE PLATE FROM IMMEDIATELY UNDER EXISTING PILE CAP TO ELEVATION –40.0'. CONTRACTOR MUST PROVIDE CLOSURE PLATE THAT ACCOUNTS FOR THE SHAPE OF THE SSP AT WHARF TANGO AS WELL AS THE LOCATION OF THE EXPOSED WALE BEAM. EXCAVATE SEDIMENT AS NEEDED TO INSTALL CLOSURE PLATE.
5. PROVIDE BENT STEEL SHEET PILE WITH ONE INTERLOCK REMOVED TO INTERFACE WITH EXISTING SHEET PILE. CONTRACTOR MUST FIELD VERIFY EXISTING SHAPE TO DETERMINE FINAL BENT SHAPE.

GRAPHIC SCALE
3/8"=1'-0" 1' 0 1' 5' 10'

SYM	DESCRIPTION	DATE	APPR
---	---	---	---

NAVFAC

SEAL

A/E INFO

APPROVED
FOR COMMANDER NAVFAC / B.L.T.L.
ACTIVITY
SATISFACTORY TO DATE

DES	JM	DRW JM	CHK KW
PM/DM	E. GALLANT		
BRANCH MANAGER	M. JOHNSON		
CHIEF ENG/ARCH	K. WITTMAN		
----	--		

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
IPT SOUTH ATLANTIC
NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST
NAVAL AIR STATION JACKSONVILLE
NAVSTA GUANTANAMO BAY
GUANTANAMO BAY, CUBA
WHARF BRAVO STRUCTURAL REPAIRS
ENLARGED PLANS AND SECTIONS 1 OF 2

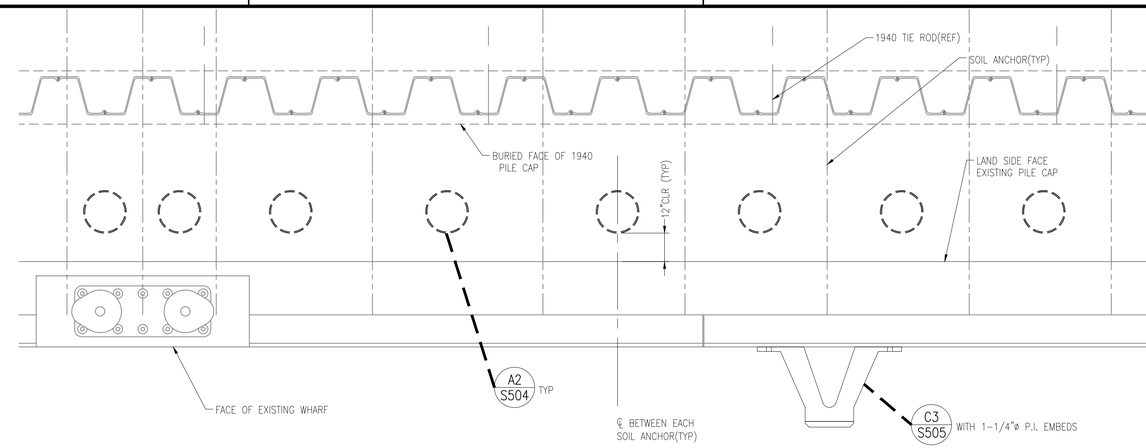
SCALE:
EPROJECT NO.: 1295318
CONSTR. CONTR. NO. N69450–XX–C–XXXX
NAVFAC DRAWING NO. 15102424
SHEET 54 OF 65
S401

DRAWFORM REVISION: 7 AUGUST 2009

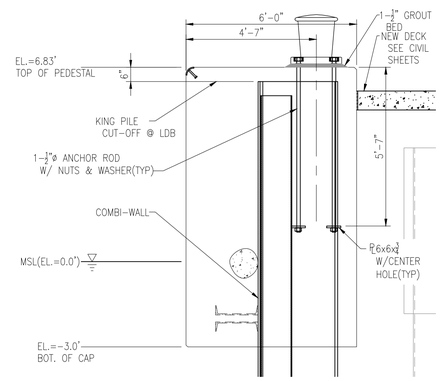
FILE NAME: P:\CBL\project_files\z_CUBA\navsta guantanamo bay\h60514\wharf bravo structural repairs-1295318\working technical files\Drawings\S401 ENLARGED PLANS AND SECTIONS 1 OF 2.dwg LAYOUT NAME: S401 ENLARGED PLANS AND SECTIONS 1 OF 2 PLOTTED: Friday, June 10, 2016 – 1:54pm USER: john.d.mccoy

SHEET FORMAT IS 22" X 34". IF PRINTED SHEET IS NOT 22" X 34", THEN IT IS NOT TO SCALE

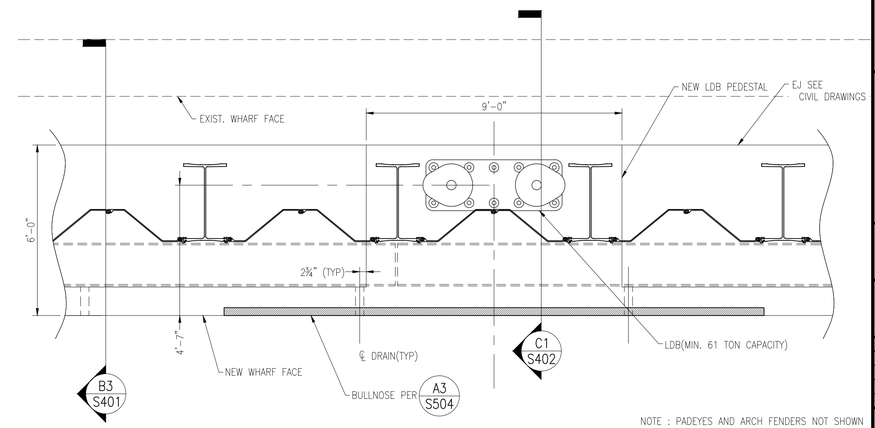
SUBMITTAL TITLE
SUBMITTAL DATE



B3 PLAN – PHASE 2 @ BULKHEAD
Scale: 3/8" = 1'-0"

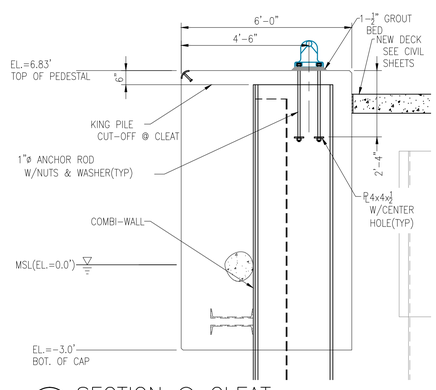


C1 SECTION @ LDB
Scale: 3/8" = 1'-0"

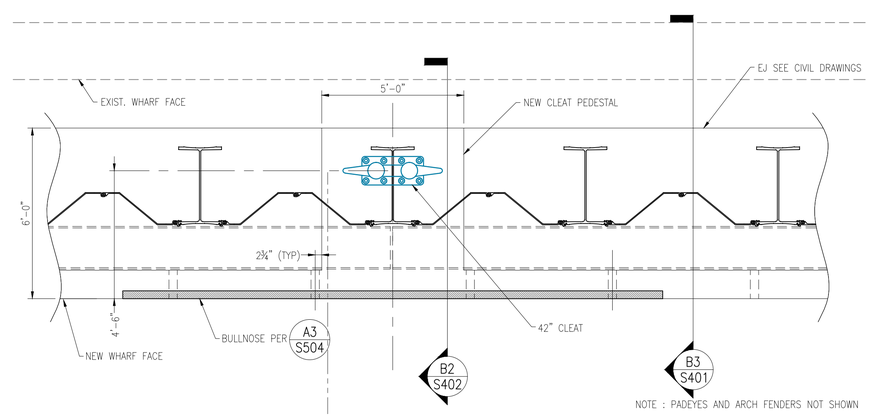


NOTE : PADEYES AND ARCH FENDERS NOT SHOWN

C4 PLAN – BULKHEAD @ LOW DOUBLE BITT
Scale: 3/8" = 1'-0"



B2 SECTION @ CLEAT
Scale: 3/8" = 1'-0"



NOTE : PADEYES AND ARCH FENDERS NOT SHOWN

C2 PLAN – BULKHEAD @ CLEAT
Scale: 3/8" = 1'-0"

SHEET NOTES

1. FILL ALL MOORING ANCHOR POCKETS WITH ELASTOMERIC SEALANT.
2. REFER TO SHEETS S501 TO S503 FOR REINFORCEMENT REQUIREMENTS.

KEYPLAN

PLAN NORTH

GRAPHIC SCALE

3/8"=1'-0" 1' 0 1' 5' 10'

SYM	DESCRIPTION	DATE	APPR
---	---	---	---
---	---	---	---
---	---	---	---
---	---	---	---
---	---	---	---
---	---	---	---
---	---	---	---

SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC / B.L.T.L.

ACTIVITY

SATISFACTORY TO DATE

DES	JM	DRW JM	CHK KW
PM/DM	E. GALLANT		
BRANCH MANAGER	M. JOHNSON		
CHIEF ENG/ARCH	K. WITTMAN		
---	--		

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
IPT SOUTH ATLANTIC

NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST
NAVAL AIR STATION JACKSONVILLE

NAVSTA GUANTANAMO BAY
GUANTANAMO BAY, CUBA

WHARF BRAVO STRUCTURAL REPAIRS

ENLARGED PLANS AND SECTIONS 2 OF 2

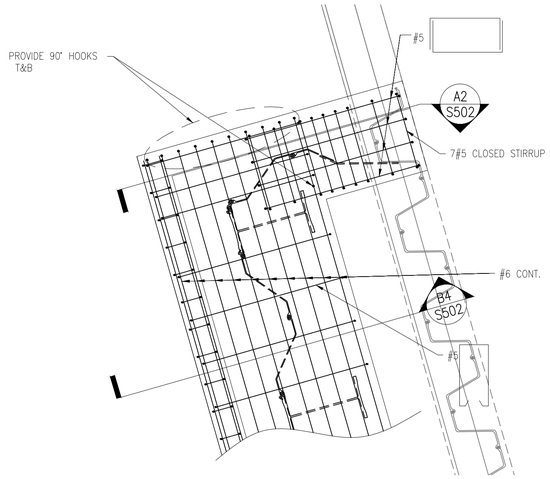
SCALE: SCALE
EPROJECT NO.: 1295318
CONSTR. CONTR. NO. N69450-XX-C-XXXX
NAVFAC DRAWING NO. 15102425
SHEET 55 OF 65

S402

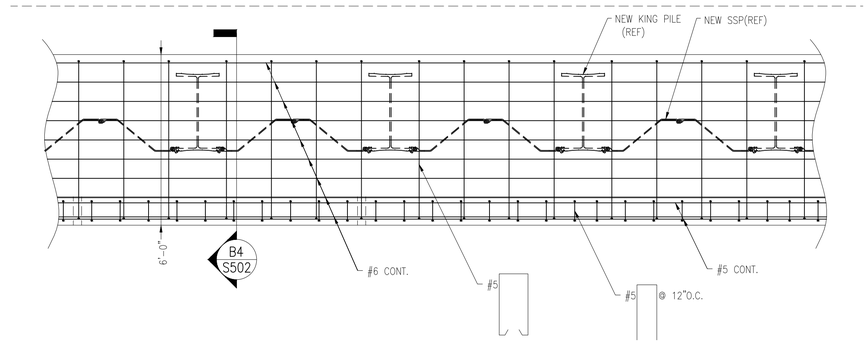
DRAWFORM REVISION: 7 AUGUST 2009

SHEET FORMAT IS 22" X 34". IF PRINTED SHEET IS NOT 22" X 34", THEN IT IS NOT TO SCALE

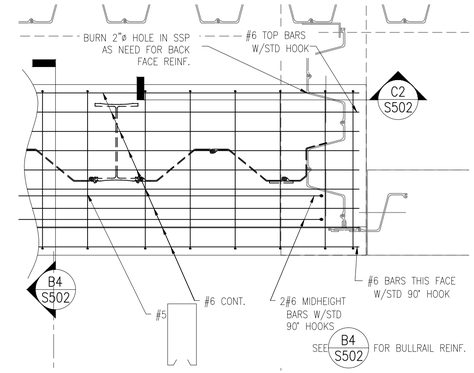
FILE NAME: P:\CBL\project_files\z_CUBA\navsta guantanamo bay\h\r60514\wharf bravo structural repairs-1295318\working technical files\Drawings\S402 ENLARGED PLANS AND SECTIONS 2 OF 2.dwg LAYOUT NAME: S402 ENLARGED PLANS AND SECTIONS 2 OF 2 PLOTTED: Friday, June 10, 2016 – 1:55pm USER: john.d.mccoy



C1 PLAN – PILE CAP REINFORCEMENT @ NORTH TIE IN
Scale: 3/8" = 1'–0"



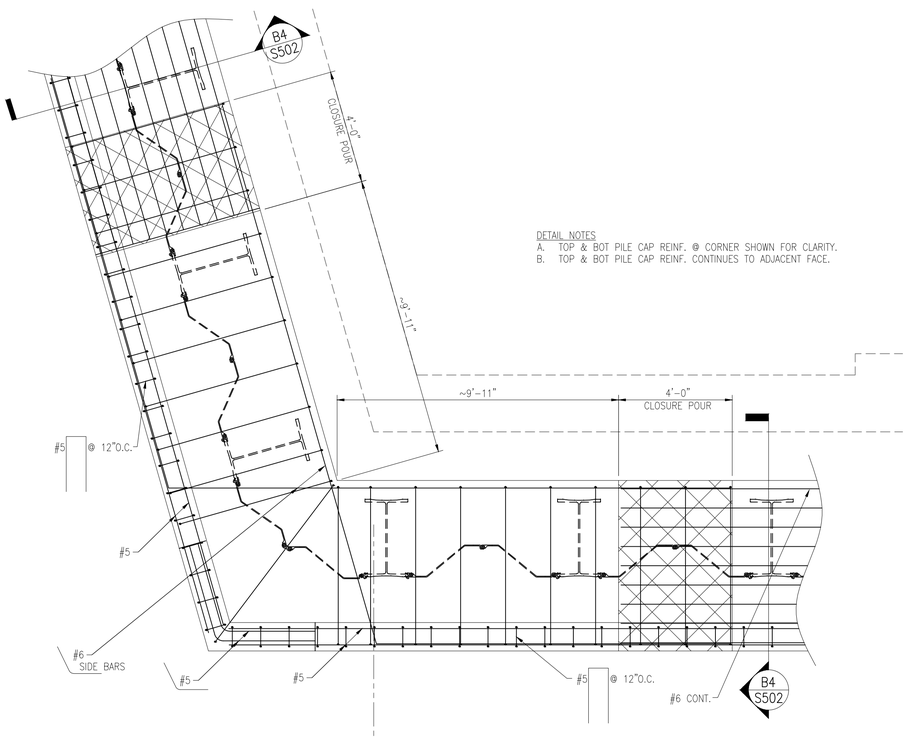
C2 PLAN – TYPICAL BULKHEAD REINFORCEMENT
Scale: 3/8" = 1'–0"



C4 PLAN – PILE CAP REINFORCEMENT @ SOUTH TIE IN
Scale: 3/8" = 1'–0"

NOTE : WALE BEAM, PADEYES, MOORING FITTINGS & TIE RODS NOT SHOWN FOR CLARITY.

DETAIL NOTES
A. TOP & BOT PILE CAP REINF. @ CORNER SHOWN FOR CLARITY.
B. TOP & BOT PILE CAP REINF. CONTINUES TO ADJACENT FACE.



A1 PLAN – PILE CAP REINFORCEMENT @ CORNER
Scale: 3/8" = 1'–0"

GRAPHIC SCALE
3/8"=1'–0" 1' 0 1' 5' 10'

SYM	DESCRIPTION	DATE	APPR
---	---	---	---

SEAL

A/E INFO
APPROVED
FOR COMMANDER NAVFAC / B.L.T.L.
ACTIVITY

SATISFACTORY TO DATE ---
DES JM DRW JM CHK KW
PROJECT MANAGER E. GALLANT
IPT TECH. BRANCH HEAD M. JOHNSON
CHIEF ENG/ARCH (CORE) K. WITTMAN

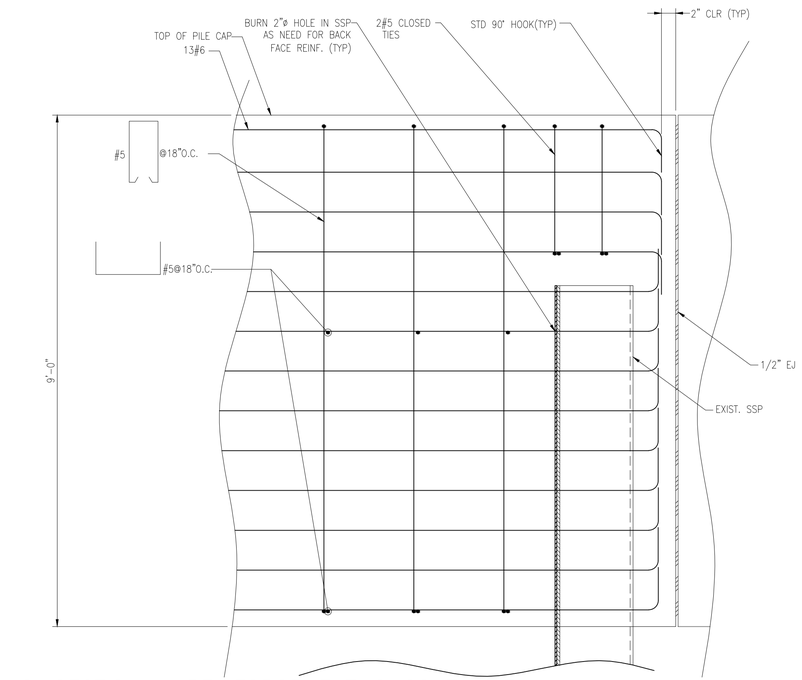
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
IPT SOUTH ATLANTIC
NAVSTA GUANTANAMO BAY
NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST
NAVAL AIR STATION JACKSONVILLE
GUANTANAMO BAY, CUBA
WHARF BRAVO STRUCTURAL REPAIRS
DETAILS AND PLANS – BULKHEAD

SCALE: SCALE
EPROJECT NO.: 1295318
CONSTR. CONTR. NO.: N69450–XX–C–XXXX
NAVFAC DRAWING NO.: 15102426
SHEET 56 OF 65
S501

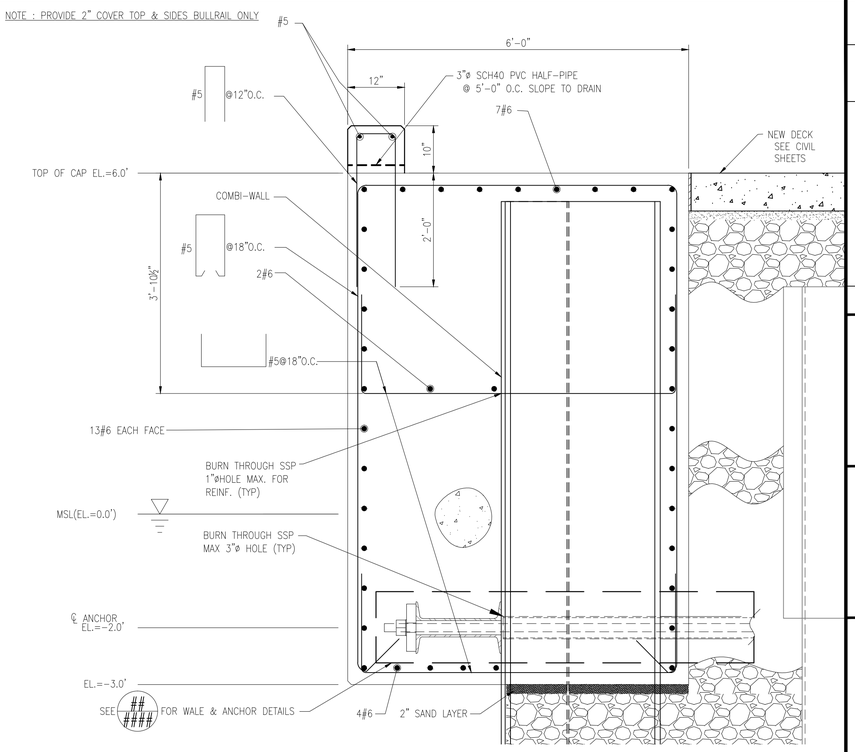
DRAWFORM REVISION: 7 AUGUST 2009

FILE NAME: P:\CUBA\project_Files\y_CUBA\navsta guantanamo bay(h)\n60514\wharf bravo structural repairs-1295318\working technical files\Drawings\S501 DETAILS AND PLANS - BULKHEAD.dwg LAYOUT NAME: S501 DETAILS AND PLANS - BULKHEAD PLOTTED: Friday, June 10, 2016 - 4:19pm USER: david.walter

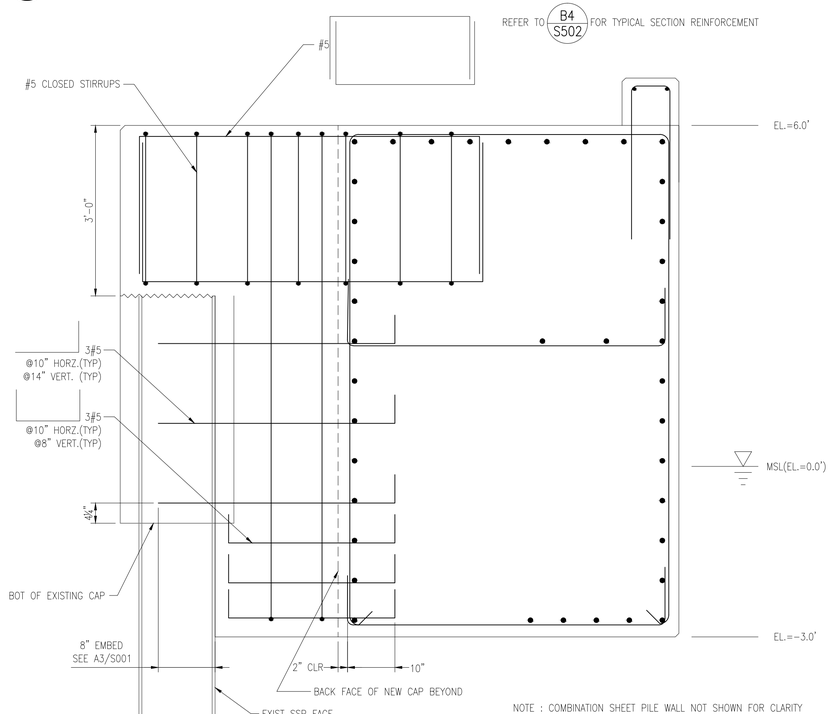
SHEET FORMAT IS 22" X 34". IF PRINTED SHEET IS NOT 22" X 34", THEN IT IS NOT TO SCALE



C2 SECTION – REINFORCEMENT @ SOUTH TIE IN
Scale: 3/4" = 1'-0"



B4 TYPICAL CAP REINFORCEMENT AND DETAILS
Scale: 3/4" = 1'-0"



A2 SECTION – REINFORCEMENT @ NORTH TIE IN
Scale: 3/4" = 1'-0"

GRAPHIC SCALE
3/4"=1'-0" 1' 6" 0' 1' 2' 3' 4'

SYM	DESCRIPTION	DATE	APPR
---	---	---	---

NAVFAC

SEAL

A/E INFO

APPROVED
FOR COMMANDER NAVFAC / B.L.T.L.
ACTIVITY

SATISFACTORY TO DATE ----

DES JM	DRW JM	CHK KW	
PROJECT MANAGER	E. GALLANT		
IPT TECH. BRANCH HEAD	M. JOHNSON		
CHIEF ENG/ARCH (CORE)	K. WITTMAN		

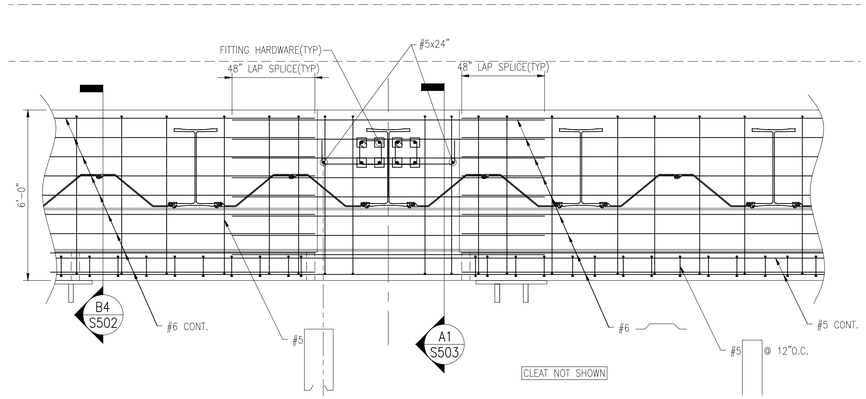
DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
IPT SOUTH ATLANTIC
NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST
NAVAL AIR STATION JACKSONVILLE
NAVSTA GUANTANAMO BAY
GUANTANAMO BAY, CUBA
WHARF BRAVO STRUCTURAL REPAIRS
DETAILS AND SECTIONS – BULKHEAD

SCALE: SCALE
EPROJECT NO.: 1295318
CONSTR. CONTR. NO.: N69450-XX-C-XXXX
NAVFAC DRAWING NO.: 15102427
SHEET 57 OF 65
S502

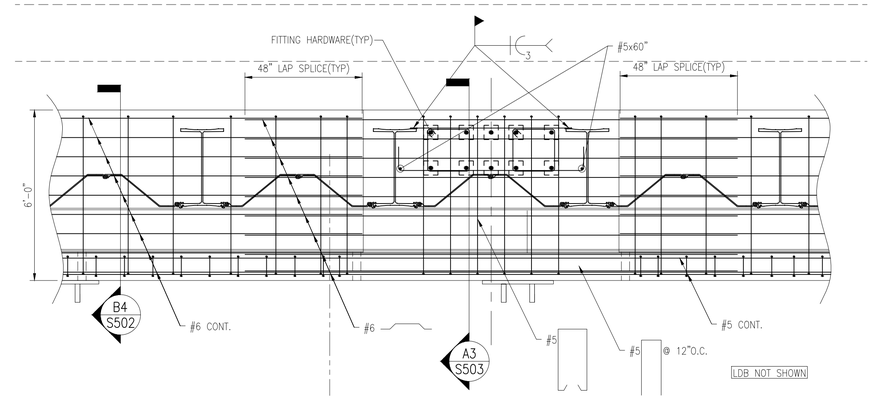
DRAWFORM REVISION: 7 AUGUST 2009

SHEET FORMAT IS 22" X 34". IF PRINTED SHEET IS NOT 22" X 34", THEN IT IS NOT TO SCALE

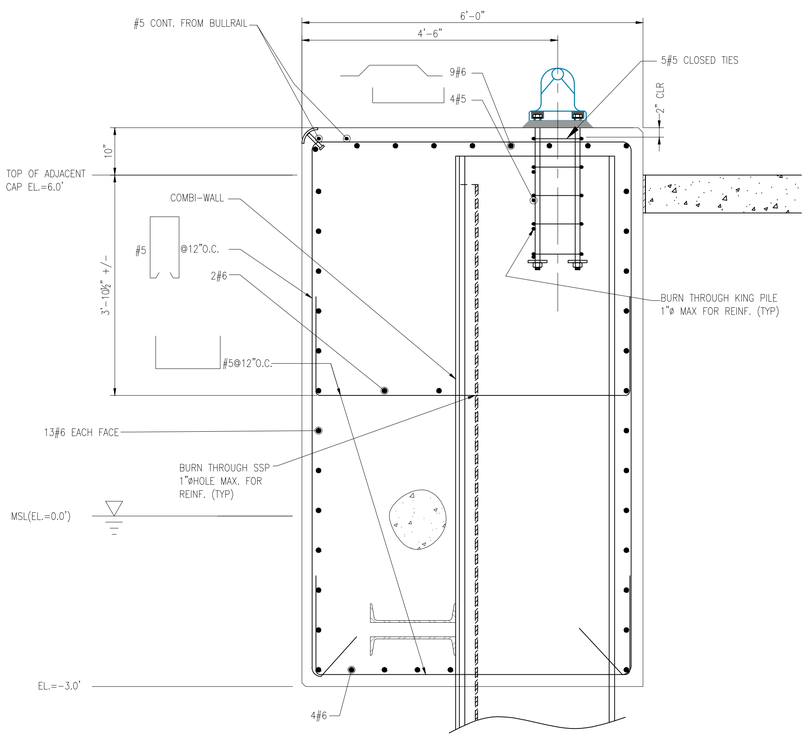
FILE NAME: P:\CBL\project_files\z_CUBA\navsta guantanamo bay\hp60514\wharf bravo structural repairs-1295318\working technical files\Drawings\S502 DETAILS AND SECTIONS - BULKHEAD.dwg LAYOUT NAME: S502 DETAILS AND SECTIONS - BULKHEAD PLOTTED: Friday, June 10, 2016 - 4:20pm USER: david.c.walter



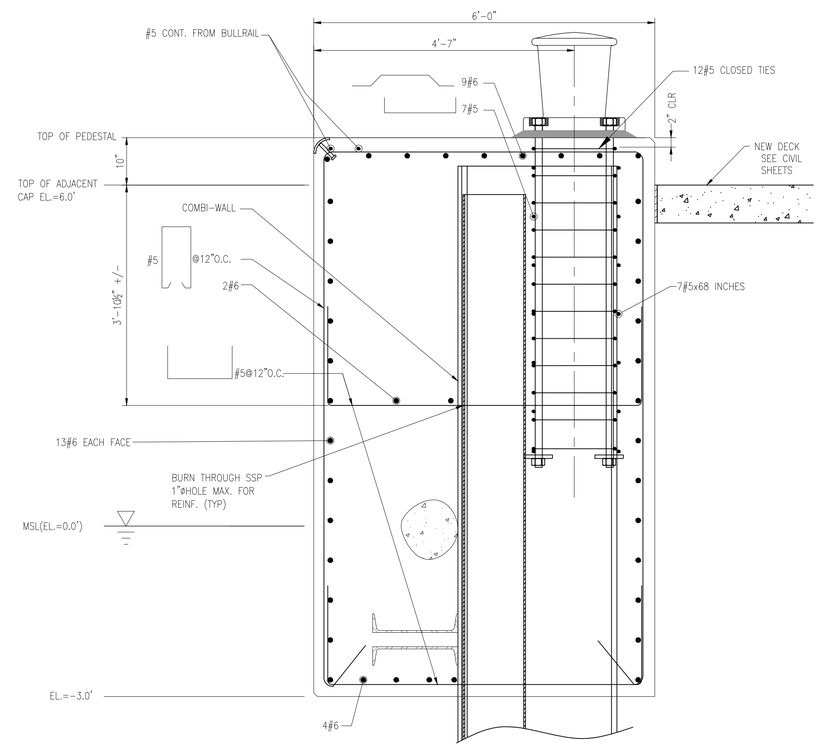
C2 PLAN – PILE CAP REINFORCEMENT @ CLEAT
Scale: 3/8" = 1'-0"



C4 PLAN – PILE CAP REINFORCEMENT @ LDB
Scale: 3/8" = 1'-0"



A1 TYPICAL CAP SECTION REINFORCEMENT & DETAILS AT CLEAT
Scale: 3/4" = 1'-0"



A3 TYPICAL CAP REINFORCEMENT & DETAILS AT LDB
Scale: 3/4" = 1'-0"

GRAPHIC SCALE

3/8"=1'-0" 1' 0 1' 5' 10'

3/4"=1'-0" 1' 6" 0' 1' 2' 3' 4'

SYM	DESCRIPTION	DATE	APPR
---	---	---	---
---	---	---	---
---	---	---	---
---	---	---	---
---	---	---	---
---	---	---	---
---	---	---	---

NAVFAC

SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC / B.L.T.L.

ACTIVITY

SATISFACTORY TO DATE

DES JM DRW JM CHK KW
PM/DM E. GALLANT
BRANCH MANAGER M. JOHNSON
CHIEF ENG/ARCH K. WITTMAN
---- --

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST
NAVAL AIR STATION JACKSONVILLE
IPT SOUTH ATLANTIC
NAVSTA GUANTANAMO BAY
GUANTANAMO BAY, CUBA

WHARF BRAVO STRUCTURAL REPAIRS

DETAILS – REINFORCEMENT AT MOORING FITTINGS

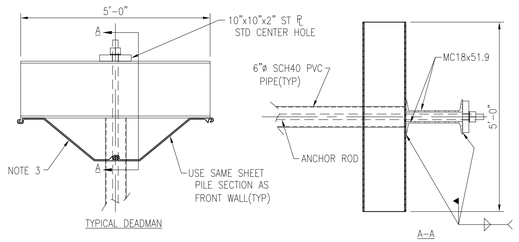
SCALE: SCALE
EPROJECT NO.: 1295318
CONSTR. CONTR. NO. N69450–XX–C–XXXX
NAVFAC DRAWING NO. 15102428
SHEET 58 OF 65

S503

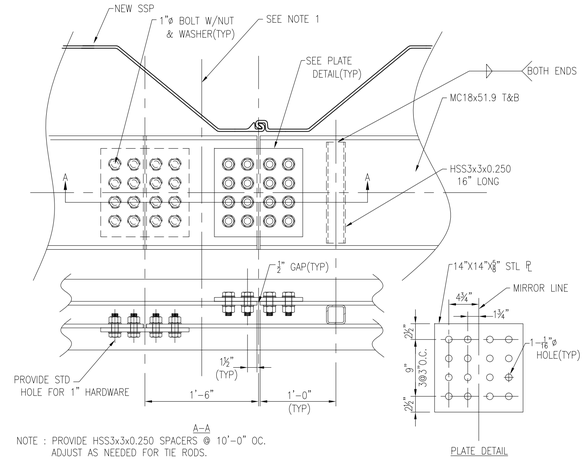
DRAWFORM REVISION: 7 AUGUST 2009

FILE NAME: P:\CUBA\project_files\v_CUBA\navsta guantanamo bay\h60514\wharf bravo structural repairs-1295318\working technical files\Drawings\S503 DETAILS – REINFORCEMENT AT MOORING FITTINGS.dwg LAYOUT NAME: S503 DETAILS – REINFORCEMENT AT MOORING FITTINGS PLOTTED: Friday, June 10, 2016 – 4:20pm USER: david.c.walter

SHEET FORMAT IS 22" X 34". IF PRINTED SHEET IS NOT 22" X 34", THEN IT IS NOT TO SCALE

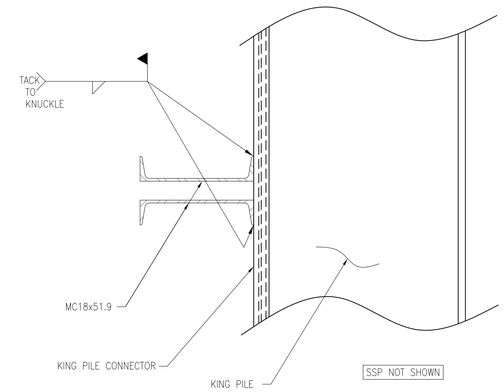


C1 DETAIL – TYP. DEADMAN
Scale: 1/2" = 1'-0"

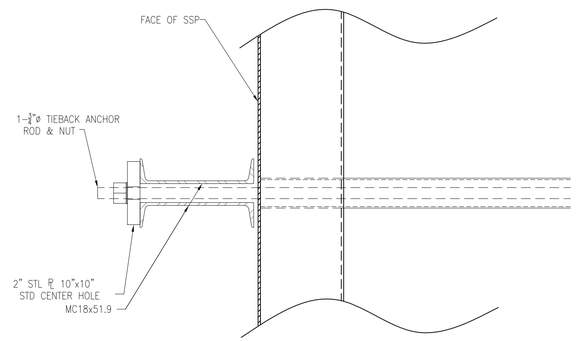


NOTE : PROVIDE HSS3x3x0.250 SPACERS @ 10'-0" OC.
ADJUST AS NEEDED FOR TIE RODS.

C2 DETAIL –WALE SPLICE
Scale: 1" = 1'-0"

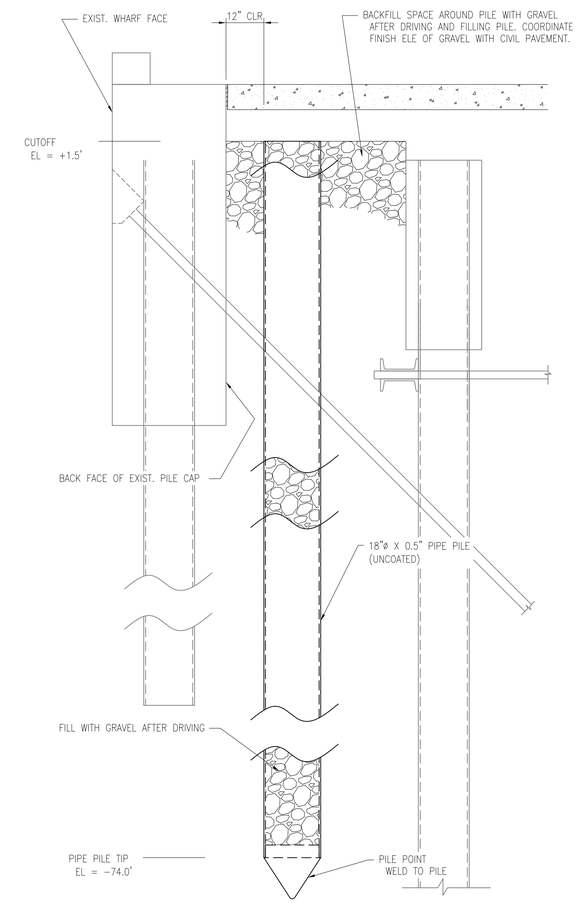


WALE CONNECTION AT KING PILE

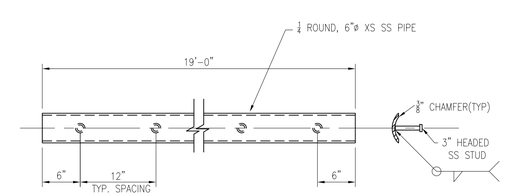


TIE ROD AT STEEL SHEET PILE

B3 DETAIL – WALE CONNECTION
Scale: 1" = 1'-0"



A2 DETAIL – PIPE PILE
Scale: 1/2" = 1'-0"



SEE NOTE 2 FOR ADDITIONAL REQUIREMENTS

A3 DETAIL – BULLNOSE
Scale: 1" = 1'-0"

GENERAL SHEET NOTES

1. WALE SPLICES SHALL NOT OCCUR WITHIN 2'-6" OF CENTERLINE OF NEW ANCHOR RODS.
2. PROVIDE BULLNOSE THAT IS CLEAN AND FREE OF ALL BURRS THAT MAY SNAG MOORING LINES. BULLNOSE MATERIALS MUST MEET THE FOLLOWING MATERIAL SPECIFICATIONS:
   A. STAINLESS STEEL PIPE---- ASTM A312
   B. HEADED STUD---------- ASTM A302
3. SHEET PILE USED FOR ALL DEADMEN MUST BE COATED ON ALL FACES AS REQUIRED BY THIS CONTRACT.

GRAPHIC SCALE

1/2"=1'-0" 1' 0' 1' 2' 3' 4' 5'

1"=1'-0" 1' 6" 0' 1' 2' 3'

SYM	DESCRIPTION	DATE	APPR
---	---	---	---
---	---	---	---
---	---	---	---
---	---	---	---
---	---	---	---
---	---	---	---
---	---	---	---

NAVFAC

SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC / B.L.T.L.

ACTIVITY

SATISFACTORY TO DATE

DES JM | DRW JM | CHK KW

PM/DM E. GALLANT

BRANCH MANAGER M. JOHNSON

CHIEF ENG/ARCH K. WITTMAN

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST
NAVAL AIR STATION JACKSONVILLE
IPT SOUTH ATLANTIC
NAVSTA GUANTANAMO BAY
GUANTANAMO BAY, CUBA

WHARF BRAVO STRUCTURAL REPAIRS

DETAILS – WALE, DEADMAN, BULLNOSE, PIN PILE

SCALE: SCALE

EPROJECT NO.: 1295318

CONSTR. CONTR. NO. N69450-XX-C-XXXX

NAVFAC DRAWING NO. 15102429

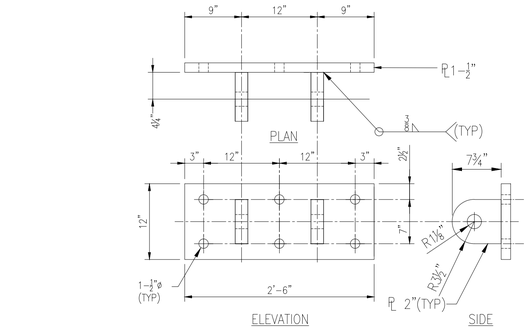
SHEET 59 OF 65

S504

DRAWFORM REVISION: 7 AUGUST 2009

FILE NAME: P:\CUB\project_files\z_CUBA\navsta guantanamo bay\ph1n605014\wharf bravo structural repairs-1295318\working technical files\Drawings\S504 DETAILS – WALE, DEADMAN, BULLNOSE, PIN PILE.dwg LAYOUT NAME: S504 DETAILS – WALE, DEADMAN, BULLNOSE, PIN PILE PIN PILE PLOTTED: Monday, June 13, 2016 – 8:28am USER: david.c.walter

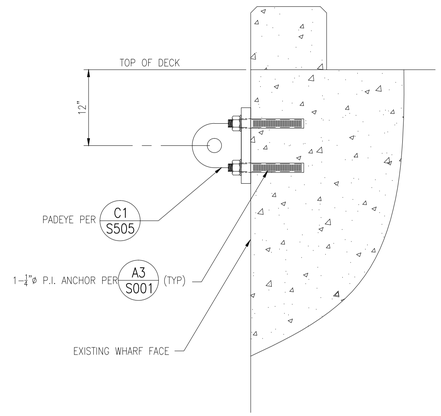
SHEET FORMAT IS 22" X 34". IF PRINTED SHEET IS NOT 22" X 34", THEN IT IS NOT TO SCALE



PADEYE NOTE : HOT DIP GALVANIZE AFTER MANUFACTURE

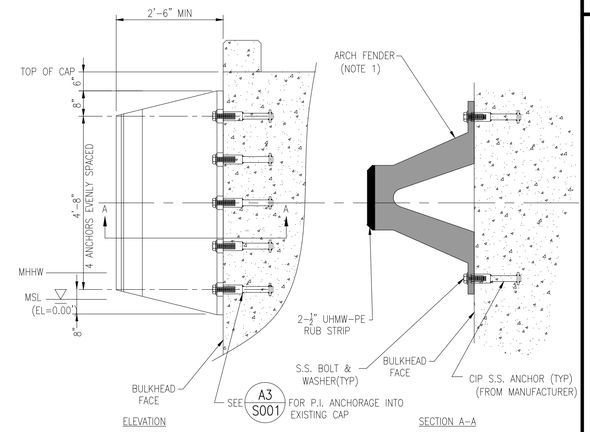
C1 DETAIL – FENDER PADEYE

Scale: 1" = 1'-0"



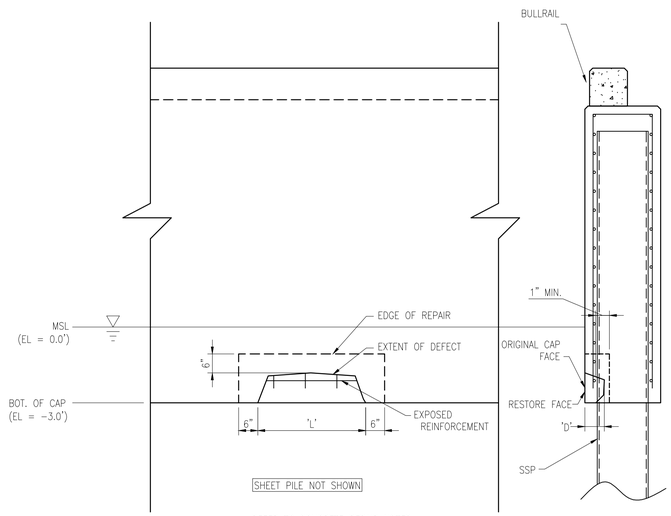
C2 PADEYE

Scale: 1" = 1'-0"



C3 DETAIL – ARCH FENDER

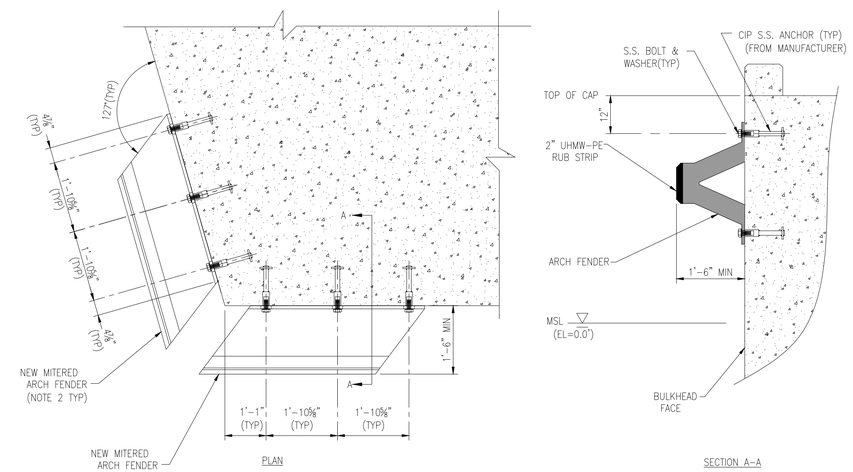
Scale: 1/2" = 1'-0"



REFER TO CONCRETE REPAIR NOTES ON S002.

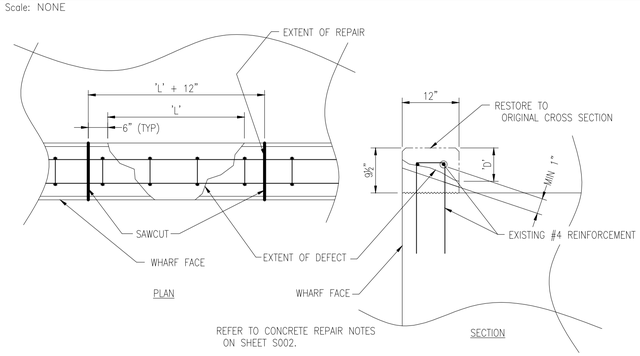
B1 DETAIL – CAP REPAIR

Scale: NONE



B2 DETAIL – CORNER FENDER

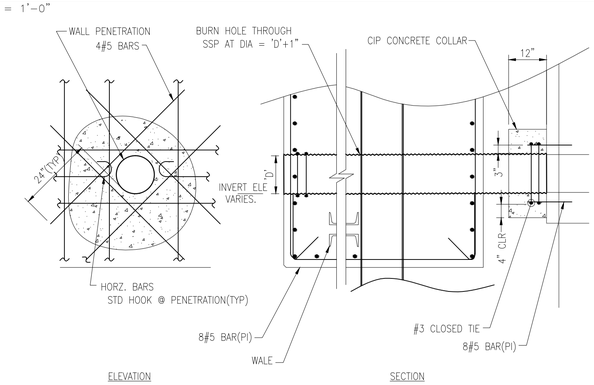
Scale: 1/2" = 1'-0"



REFER TO CONCRETE REPAIR NOTES ON SHEET S002.

A1 DETAIL – BULLRAIL REPAIR

Scale: NONE



NOTE : REFER TO CIVIL DRAWINGS FOR SIZES AND LOCATIONS.

A3 DETAIL – PIPE PENETRATION

Scale: NONE

GENERAL SHEET NOTES

1. REFER TO SPECIFICATION 35 59 13.19 FOR ADDITIONAL REQUIREMENTS.
2. PROVIDE ARCH FENDER PER SPECIFICATION 35 59 13.19 MEETING THE FOLLOWING MINIMUM PERFORMANCE REQUIREMENTS:
   A. ENERGY ABSORPTION---- 13.9 KIP*FT / FT LENGTH
   B. REACTION---------- 20.3 KIP / FT LENGTH
3. RESERVED.

GRAPHIC SCALE

1"=1'-0" 1' 6" 0' 1' 2' 3'

1/2"=1'-0" 1' 0' 1' 2' 3' 4' 5'

SYM	DESCRIPTION	DATE	APPR
---	---	---	---
---	---	---	---
---	---	---	---
---	---	---	---
---	---	---	---
---	---	---	---
---	---	---	---

SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC / B.L.T.L.

ACTIVITY

SATISFACTORY TO DATE

DES JM DRW JM CHK KW

PM/DM E. GALLANT

BRANCH MANAGER M. JOHNSON

CHIEF ENG/ARCH K. WITTMAN

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
IPT SOUTH ATLANTIC
NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST
NAVAL AIR STATION JACKSONVILLE
NAVSTA GUANTANAMO BAY
GUANTANAMO BAY, CUBA
WHARF BRAVO STRUCTURAL REPAIRS
DETAILS – FENDERS AND MISC.

SCALE: SCALE

EPROJECT NO.: 1295318

CONSTR. CONTR. NO. N69450-XX-C-XXXX

NAVFAC DRAWING NO. 15102430

SHEET 60 OF 65

S505

DRAWFORM REVISION: 7 AUGUST 2009

FILE NAME: P:\CBL\project_files\z_CUBA\navsta guantanamo bay\h60514\wharf bravo structural repairs-1295318\working technical files\Drawings\S505 DETAILS - FENDERS AND MISC..dwg LAYOUT NAME: S505 DETAILS - FENDERS AND MISC. PLOTTED: Friday, June 10, 2016 - 4:23pm USER: david.c.walter

SHEET FORMAT IS 22" X 34". IF PRINTED SHEET IS NOT 22" X 34", THEN IT IS NOT TO SCALE

ABBREVIATIONS LEGEND

SCALE: NTS

A
- A – AMBERE
- AB – ANCHOR BOLT
- AC – ALTERNATING CURRENT
- ACT – ABOVE COUNTER TOP
- ADA – AMERICANS W/ DISABILITIES ACT
- ADMIN – ADMINISTRATION
- AF – AMP FRAME, AMP FUSE
- AFF – ABOVE FINISH FLOOR
- AGU – AUTOMATIC GAIN CONTROL
- AHU – AIR HANDLING UNIT
- ALT – ALTERNATE
- ALM – ALARM
- ALUM – ALUMINUM
- ANN – ANNUNCIATOR
- ANSI – AMERICAN NATIONAL STANARDS INSTITUTE
- APPROX – APPROXIMATE
- ASTM – AMERICAN SOCIETY FOR TESTING AND MATERIALS
- AT – AMP TRIP OR AMP TAP
- ATC – AUTOMATIC TEMP. CONTROL
- ATS – AUTOMATIC TRANSFER SWITCH
- AUTO – AUTOMATIC
- AUX – AUXILIARY
- AWG – AMERICAN WIRE GAGE

B
- BLDG – BUILDING
- BLW – BELOW
- BM – BEAM
- BMS – BUILDING MANAGEMENT SYSTEM
- BRG – BEARING

C
- C – CONDUIT
- CAB – CABINET
- CAP – CAPACITY
- CATV – COMMUNITY ANTENNA TELEVISION SYSTEM
- CB – CIRCUIT BREAKER
- CCTV – CLOSED CIRCUIT TELEVISION
- CD – CANDELLA
- CEF – CEILING EXHAUST FAN
- CKT – CIRCUIT
- CL – CENTER LINE
- CL – CLASS
- CLF – CURRENT LIMITING FUSE
- CLG – CEILING
- CLR – CLEAR
- CMU – CONCRETE MASONRY UNIT
- COL – COLUMN
- CONSTR – CONSTRUCTION
- CORR – CORRIDOR
- CS – CONTROL SWITCH
- CT – CURRENT TRANSFORMER
- CTR – CENTER
- CU – COPPER
- CUH – CABINET UNIT HEATER

D
- DC – DIRECT CURRENT
- DEMO – DEMOLITION
- DEPT – DEPARTMENT
- DET – DETECTOR
- DIA – DIAMETER
- DIFF – DIFFUSER
- DIM – DIMENSION
- DIST PNL – DISTRIBUTION PANEL
- DIV – DIVISION
- DN – DOWN
- DPDT – DOUBLE POLE DOUBLE THROW
- DPS – DEPARTMENT OF PUBLIC SAFETY
- DR – DOOR

E
- EA – EACH
- EC – ELECTRICAL CONTRACTOR
- EF – EXHAUST FAN
- EL – ELEVATION
- ELEC – ELECTRIC
- ELEV – ELEVATOR
- ELU – EMERGENCY LIGHTING UNIT
- EM – EMERGENCY
- EMT – ELECTRICAL METALIC TUBING
- ENCL – ENCLOSURE
- EOL – END OF LINE
- EPO – EMERGENCY POWER OFF
- EPRF – EXPLOSION PROOF
- EQ – EQUAL
- EQUIP – EQUIPMENT
- EX – EXISTING
- EXT – EXTERIOR

F
- FCU – FAN COIL UNIT
- FDR – FEEDER
- FDTN – FOUNDATION
- FHP – FULL HEIGHT PARTITION
- FLL – FLOW LINE
- FLR – FLOOR
- FLEX – FLEXIBLE
- FLG – FLANGE
- FLUOR – FLUORESCENT
- FO – FIBER OPTIC
- FP – FIREPROOF
- FRMG – FRAMING
- FS – FUSIBLE SWITCH
- FT – FOOT (or) FEET
- FUT – FUTURE

G
- GA – GUAGE
- GALV – GALVANIZED
- GC – GENERAL CONTRACTOR
- GEN – GENERATOR
- GFI – GROUND FAULT INTERRUPTER
- GRD – GROUND
- GWB – GYPSUM WALL BOARD

H
- HC – HEATING CONTRACTOR
- HDCP – HANDICAP
- HDR – HEADER
- HDW – HARDWARE
- HID – HIGH INTENSITY DISCHARGE
- HORIZ – HORIZONTAL
- HP – HORSEPOWER
- HPS – HIGH PRESSURE SODIUM
- HUH – HORIZONTAL UNIT HEATER
- HVAC – HEATING, VENTILATING, AND AIR CONDITIONING
- HW – HOT WATER
- HZ – FREQUENCY IN CYCLES PER SECOND

I
- IC – INTERCOMMUNICATION
- ID – INSIDE DIAMETER
- IDS – INTRUSTION DETECTION SYSTEM
- IMS – INFORMATION MANAGEMENT SYSTEM
- INSUL – INSULATION
- INT – INTERIOR

J
- JB – JUNCTION BOX

K
- KCMIL – THOUSAND CIRCULAR MILS
- KO – KNOCK OUT
- KV – KILOVOLT
- KVA – KILOVOLT AMPERES
- KVAR – KILOVAR
- KW – KILOWATT
- KWH – KILOWATT HOURS

L
- LAV – LAVATORY
- LAN – LOCAL AREA NETWORK
- LCD – LINEAR CEILING DIFFUSER
- LIN – LINEAR
- LOC – LOCATION
- LTG – LIGHTING
- LVR – LOUVER

M
- MAN – MANUAL
- MATL – MATERIAL
- MAX – MAXIMUM
- MC – MECHANICAL CONTRACTOR METAL CLAD CABLE
- MCC – MOTOR CONTROL CENTER
- MCB – MAIN CIRCUIT BREAKER
- MCM – THOUSAND CIRCULAR MILS
- MDP – MAIN DISTRIBUTION PANEL
- MDS – MAIN DISTRIBUTION SWITCHBOARD
- MECH – MECHANICAL
- MFR – MANUFACTURER
- MIN – MINIMUM
- MISC – MISCELLANEOUS
- MLO – MAIN LUGS ONLY
- MOD – MOTOR OPERATED DAMPER
- MSB – MAIN SWITCH BOARD
- MSG – MAIN SWITCH GEAR
- MTD – MOUNTED

N
- NA – NOT APPLICABLE
- NAC – NOTIFICATION APPLIANCE CIRCUIT EXTENDER
- NDU – NETWORK DISPLAY UNIT
- NE – NORMAL EMERGENCY
- NEC – NATIONAL ELECTRICAL CODE
- NEMA – NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
- NEUT – NEUTRAL
- NF – NON FUSED
- NFS – NON FUSED SWITCH
- NIC – NOT IN CONTRACT
- NO – NUMBER
- NPS – NATIONAL PIPE THREAD
- NPU – NETWORK PROCESSING UNIT
- NTS – NOT TO SCALE

O
- OC – ON CENTER
- OD – OUTSIDE DIAMETER
- OH – OVERHEAD DOOR

P
- PAP – PRE ACTION PANEL
- PB – PULL BOX
- PC – PLUMBING CONTRACTOR
- PL – PILOT LIGHT
- PNL – PANELBOARD
- PP – POWER PANEL
- PR – PAIR
- PRV – POWER ROOF VENTILATOR
- PRESS – PRESSURE
- PVC – POLYVINYL CHLORIDE

R
- R – RELAY
- REC – RECESSED
- RECP – RECEPTACLE
- REQD – REQUIRED
- REV – REVISION
- RGS – RIGID GALVANIZED STEEL
- RTU – ROOF TOP UNIT

S
- SAPF – SPECIAL ACCESS PROGRAM FACILITY
- SCHED – SCHEDULE
- SCC – STATUS COMMAND CENTER
- SCIF – SENSITIVE COMPARTMENTED INFORMATION FACILITY
- SDMPR – SMOKE DAMPER
- SEC – SECONDARY
- SECT – SECTION
- SF – SQUARE FOOT
- SIM – SIMILAR
- SLC – SIGNAL LINE CIRCUIT
- SMK – SMOKE
- SMS – SECURITY MANAGEMENT SYSTEM
- SMR – SURFACE MOUNTED RACEWAY
- SP – STANDPIPE
- SPECS – SPECIFICATIONS
- ST – SHUNT STRIP
- STD – STANDARD
- STR – STARTER
- SUPV – SUPERVISORY
- SUSP – SUSPEND
- SW – SWITCH
- SWBD – SWITCHBOARD
- SWGR – SWITCHGEAR

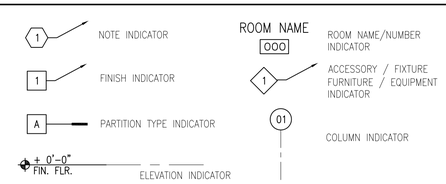
T
- T – TREAD
- TBD – TO BE DETERMINED
- TEL – TELEPHONE
- TEMP – TEMPORARY
- TERM – TERMINAL
- TV – TELEVISION
- TP – TWISTED PAIR
- TSP – TYPICAL SHEILDED PAIR
- TYP – TYPICAL

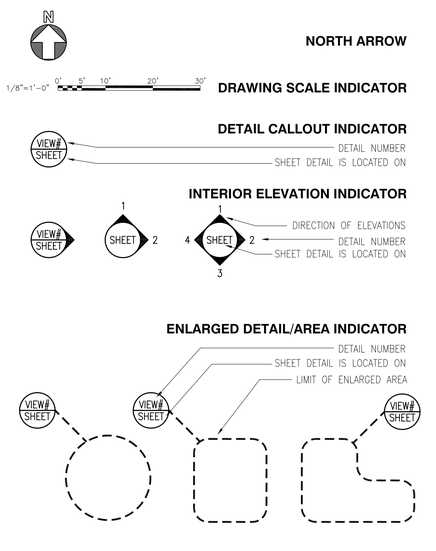
U
- UFC – UNIFORM FACILITIES CRITERIA
- UG – UNDERGROUND
- UHF – ULTRA HIGH FREQUENCY
- UL – UNDERWRITERS LABRATORY
- UNO – UNLESS NOTED OTHERWISE

W
- W – WIRE
- W/ – WITH
- W/O – WITHOUT
- WH – WALL HYDRANT
- WP – WATERPROOF
- XFMR – TRANSFORMER
- XP – EXPLOSION PROOF

SYMBOLS LEGEND

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





LIGHTING FIXTURE SCHEDULE

FIXTURE SYMBOL	STYLE NO. & TYPE	NUMBER AND TYPE OF LAMPS	VOLTAGE	MOUNTING	NOTES
A	NL-48	LED	120/208	WALL MOUNTED	1, 2, 3, 4, 7
B	NL-48	LED	120/208	WALL MOUNTED	1, 2, 3, 5, 7
C	NL-48	LED	120/208	WALL MOUNTED	1, 2, 3, 6, 7

LIGHTING SCHEDULE NOTES

1. FIXTURES SHALL BE WET-LISTED
2. FIXTURES SHALL HAVE MULTI-TAP BALLAST
3. MOUNT FIXTURES USING EXISTING LIGHT FIXTURE BRACKETS
4. FIXTURE SHALL BE YELLOW
5. FIXTURE SHALL BE BLUE
6. FIXTURE SHALL BE WHITE
7. 2 #10, #10 GROUND IN 1" CONDUIT

ELECTRICAL SYMBOLS LEGEND

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

TELEPHONE AND DATA

- DOOR BUZZER
- CAMERA
- CLOCK
- MOTION DETECTOR – WALL MTD
- MOTION DETECTOR – CLG MTD
- MICROPHONE JACK – WALL MTD
- MICROPHONE JACK – FLR MTD
- DOOR HOLD
- DOOR CONTACT
- KEYCARD
- VOICE & DATA – CLG MTD
- VOICE & DATA – FLR MTD
- VOICE & DATA – WALL MTD
- INTERCOM CALL STATION
- SPEAKER – CLG MTD
- SPEAKER – WALL MTD
- CATV – WALL MTD
- CATV – CLG MTD
- CATV – FLR MTD
- TELEPHONE DATA BACKBOARD
- CABLE TRAY

POWER

- DUPLEX RECEPTACLE – CLG MTD
- QUAD RECEPTACLE – CLG MTD
- DUPLEX GFCI RECEPTACLE CLG MTD
- QUAD GFCI RECEPTACLE CLG MTD
- WP DUPLEX GFCI WATERPROOF RECEPTACLE – CLG MTD
- WP QUAD GFCI WATERPROOF RECEPTACLE – CLG MTD
- RECEPTACLE – FLR MTD
- QUAD RECEPTACLE – FLR MTD
- DUPLEX GFCI RECEPTACLE FLR MTD
- QUAD GFCI RECEPTACLE FLR MTD
- WP DUPLEX GFCI WATERPROOF RECEPTACLE – FLR MTD
- WP QUAD GFCI WATERPROOF RECEPTACLE – FLR MTD
- RECEPTACLE – WALL MTD
- QUAD RECEPTACLE – WALL MTD
- DUPLEX GFCI RECEPTACLE WALL MTD
- QUAD GFCI RECEPTACLE WALL MTD
- WP DUPLEX GFCI WATERPROOF RECEPTACLE – WALL MTD
- WP QUAD GFCI WATERPROOF RECEPTACLE – WALL MTD
- C RECEPTACLE – CLOCK
- PUSH BUTTON
- J JUNCTION BOX – FLR MTD
- JUNCTION BOX – WALL MTD
- JUNCTION BOX – CLG MTD
- MOTOR
- DISCONNECT SWITCH
- MOTOR STARTER
- PANELBOARD 208Y/120V
- PANELBOARD 480Y/277V
- BACKBOARD
- WIREMOLD
- T TRANSFORMER
- CROSS HATCHING REPRESENTS GROUND, NEUTRAL AND HOT RESPECTIVELY, ARROW REPRESENTS HOME RUN
- CONDUIT CONCEALED IN WALL OR ABOVE CEILING
- CONDUIT CONCEALED IN SLAB–IN GROUND OR UNDERFLOOR
- CONDUIT EXPOSED
- CONDUIT UP/DOWN
- CONNECTION TO GROUND ROD

LIGHTING

- LIGHT – WALL MTD
- LIGHT – WALL MTD – EMERGENCY
- OCCUPANCY SENSOR – WALL MTD
- OCCUPANCY SENSOR – CLG MTD
- PHOTOCEL
- DOWNLIGHT – SMALL
- DOWNLIGHT – SMALL – EMERGENCY
- DOWNLIGHT – LARGE
- DOWNLIGHT – LARGE – EMERGENCY
- POLE LIGHT
- POLE LIGHT – EMERGENCY
- EXIT SIGN – WALL MTD – DARKENED SECTION(S) OF SYMBOLS INDICATE FACES. ARROWS INDICATE DIRECTIONAL CHEVRONS
- EXIT SIGN – CLG MTD – DARKENED SECTION(S) OF SYMBOLS INDICATE FACES. ARROWS INDICATE DIRECTIONAL CHEVRONS
- EMERGENCY LIGHT – TWIN HEAD
- EXIT SIGN – CLG MTD – DARKENED SECTION(S) OF SYMBOLS INDICATE FACES. ARROWS INDICATE DIRECTIONAL CHEVRONS
- CEILING MTD FAN
- $ LIGHT SWITCH – SINGLE POLE
- $2 LIGHT SWITCH – 2 WAY
- $3 LIGHT SWITCH – 3 WAY
- $4 LIGHT SWITCH – 4 WAY
- $D LIGHT SWITCH – DIMMER
- $D3 LIGHT SWITCH – 3 WAY DIMMER
- $D4 LIGHT SWITCH – 4 WAY DIMMER
- $K LIGHT SWITCH – KEYED
- $P LIGHT SWITCH – PILOT LIGHT
- $OS LIGHT SWITCH – OCCUPANCY SENSOR
- TRACK LIGHT HEAD
- TRACK LIGHT HEAD – EMERGENCY
- TRACK LIGHT
- TRACK LIGHT – EMERGENCY
- LIGHT – 2X4 FLUORESCENT
- LIGHT – 2X4 FLUORESCENT EMERGENCY
- LIGHT – 2X2 FLUORESCENT
- LIGHT – 2X2 FLUORESCENT EMERGENCY
- LIGHT – 1X4 FLUORESCENT
- LIGHT – 1X4 FLUORESCENT EMERGENCY
- LIGHT – 4' STRIP FLUORESCENT
- LIGHT – 4' STRIP FLUORESCENT EMERGENCY
- LIGHT – 8' STRIP FLUORESCENT
- LIGHT – 8' STRIP FLUORESCENT EMERGENCY
- LIGHT – UNDERCABINET FLUORESCENT
- LIGHT – UNDERCABINET FLUORESCENT EMERGENCY

SECURITY ALARM

- VTC SECURITY ACCESS CAMERA SUBSCRIPT VTC = VIDEO TELE-CONFERENCE
- SECURITY VOLUMETRIC SENSOR
- SECURITY ACCESS BELL
- SECURITY ACCESS BUZZER
- SECURITY ACCESS BUZZER COMBINATION BELL
- SECURITY ACCESS BI DIRECTIONAL SPEAKER
- SECURITY ACCESS CARD READER
- CU SECURITY ACCESS CONTROL UNIT
- IC SECURITY ACCESS INTERCOM STATION
- AP SECURITY ACCESS ANNUNCIATOR PANEL
- SECURITY ACCESS DOOR POSITION
- KP KEY PAD
- MD MOTION DETECTOR
- ES ELECTRIC STRIKE

ELECTRICAL GENERAL NOTES

SCALE: NTS

1. ALL ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH THE APPLICABLE EDITION OF THE NATIONAL ELECTRICAL CODE (NFPA 70), UFC 1-200-01 GENERAL BUILDING REQUIREMENTS, AND ALL LOCAL AND STATE CODES.
2. ALL MATERIAL SHALL BE NEW AND SHALL CONFORM TO THE STANDARDS OF THE UNDERWRITER'S LABORATORIES (UL) INC., AND THE NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA).
3. IT IS THE INTENT OF THESE PLANS AND SPECIFICATIONS THAT A COMPLETE AND WORKABLE ELECTRICAL INSTALLATION BE PROVIDED FOR ALL THE EQUIPMENT DESCRIBED OR SHOWN AS BEING IN THIS CONTRACT.
4. FURNISH ALL LABOR AND TOOLS NECESSARY, AND FURNISH AND INSTALL ALL MATERIALS AND EQUIPMENT IN A FASHION COMPLYING WITH ALL APPLICABLE CODES, UFC'S AND AUTHORITY HAVING JURISDICTION REQUIREMENTS, INCLUDING ITEMS REQUIRED BUT NOT NECESSARILY SHOWN SUCH AS COUPLINGS, BRACKETS, CLAMPS, BOXES, CONNECTORS AND HARDWARE.
5. PROVIDE PULL AND JUNCTION BOXES AS REQUIRED AND SIZED PER NEC.
6. CONDUCTORS SHALL BE COPPER, INSULATION RATED AT NOT LESS THAN 600 VOLTS. MINIMUM SIZE SHALL BE #12 AWG UNLESS OTHERWISE NOTED ON THE DRAWINGS. ALL WIRE #8 AWG AND LARGER SHALL BE STRANDED. ALL CONDUCTORS #10 AND SMALLER SHALL BE SOLID, UNLESS OTHERWISE NOTED.
7. BRANCH CIRCUIT CONDUCTORS SHALL BE TYPE AS INDICATED.
8. PROVIDE A TYPED DIRECTORY IN ALL MODIFIED PANELBOARDS CLEARLY DESCRIBING THE LOCATION OF AND TYPE OF LOAD BEING SERVED FOR ALL CIRCUITS.
9. PROVIDE ENGRAVED PHENOLIC NAMEPLATES FOR ALL ELECTRICAL EQUIPMENT; FOR EXAMPLE, PANELBOARDS, DISCONNECT SWITCHES, ETC.
10. ALL TERMINALS, SPLICING CONNECTORS, LUGS, ETC. SHALL BE IDENTIFIED FOR USE WITH THE MATERIAL (CU/AL) OF THE CONDUCTOR AND SHALL BE PROPERLY INSTALLED.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL ELECTRICAL EQUIPMENT FROM FOREIGN MATERIAL DURING CONSTRUCTION.
12. VERIFY EXACT LOCATIONS OF ALL EQUIPMENT BEFORE ROUGHING IN.
13. ALL NEW CONDUITS RUN IN EXISTING BUILDING SHALL BE CONCEALED WHERE POSSIBLE. EXACT ROUTING OF CONDUITS IF EXPOSED SHALL BE APPROVED BY CONTRACTING OFFICER.
14. THIS SCHEDULE IS A STANDARD SCHEDULE. CERTAIN SYMBOLS & ABBREVIATIONS INDICATED ON THIS SCHEDULE MAY NOT APPEAR ON THE DRAWINGS.
15. BEFORE SUBMITTING THE BID PROPOSAL, VISIT THE JOB SITE AND BECOME FULLY ACQUAINTED WITH THE JOB CONDITIONS. VERIFY SERVICE REQUIREMENTS, INCLUDING ALL NECESSARY PULLBOXES, SIZE AND NUMBER OF CONDUITS AND CONDUCTORS, PANELS, SWITCHBOARDS, DISCONNECT SWITCHES, CABLES, ETC., WHETHER SHOWN ON DRAWINGS OR NOT, BUT REQUIRED FOR PROVIDING A COMPLETE AND OPERABLE ELECTRICAL SYSTEM WITHOUT ADDITIONAL COST TO THE OWNER.
16. ALL EXTERIOR ENCLOSED DISCONNECT SWITCHES AND CIRCUIT BREAKERS SHALL BE NEMA 4X, UNLESS OTHERWISE NOTED.
17. ALL INTERIOR ENCLOSED DISCONNECT SWITCHES AND CIRCUIT BREAKERS SHALL BE NEMA 1, UNLESS OTHERWISE NOTED.
18. ALL MEDIUM VOLTAGE CABLES SHALL BE INSTALLED CONTINUOUS FROM TERMINATION POINT TO TERMINATION POINT WITHOUT SPLICES IN MANHOLES OR JUNCTION POINTS.
19. EC TO PERFORM LOCK-OUT & TAG-OUT PROCEDURES PRIOR TO DEMOLITION OF LIGHTING CIRCUITS AND ELECTRICAL IGLOOS. FIELD VERIFY EXACT LOCATIONS IN FIELD OF CIRCUIT BREAKERS AND DISCONNECTS FOR ALL CIRCUITS SHOWN ON DRAWINGS.
20. EC TO REMOVE AND STORE ALL LIGHT FIXTURE BRACKETS, COMMUNICATION CABINETS, GROUNDING STATION WIRING AND CLAMPS, AND ELECTRICAL IGLOOS DURING DEMOLITION. EC TO INSTALL SAME DEVICES AND EQUIPMENT STORED AFTER CONSTRUCTION IS COMPLETE.

PANELBOARD NUMBERING

SCALE: NTS

A 1 H L 1

SPECIAL PURPOSE
- A – SERVICE 'A'
- B – SERVICE 'B'
- E – EMERGENCY
- LS – LIFE SAFETY

BREAKER NUMBER
- 1
- 2
- 3
- 4
- 5

VOLTAGE
- H – 277/480V 3PH 4W
- L – 120/208V 3PH 4W
- OR
- 120/240V 1 PH 3W

PANEL PURPOSE
- P – POWER
- L – LIGHTING
- M – MECHANICAL
- S – SITE
- U – UPS

PANEL NUMBER PER TYPE PER FLOOR
- 1 – FIRST
- 2 – SECOND
- 3 – THIRD
- ETC

NO.	DESCRIPTION	DATE	APPR
---	---	---	---

NAVFAC

SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC / B.L.T.L.

ACTIVITY ----

SATISFACTORY TO DATE ----

DES CRD DRW CRD CHK RF

PROJECT MANAGER E. GALLANT

IPT TECH. BRANCH HEAD M. JOHNSON

CHIEF ENG/ARCH (CORE) R. FLORES

---- XX

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
IPT SOUTH ATLANTIC
NAVSTA GUANTANAMO BAY

NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST
NAVAL AIR STATION JACKSONVILLE
GUANTANAMO BAY, CUBA

WHARF BRAVO STRUCTURAL REPAIRS

GENERAL NOTES SYMBOLS AND LEGENDS

SCALE: SCALE

EPROJECT NO.: 1295318

CONSTR. CONTR. NO. N69450-XX-C-XXXX

NAVFAC DRAWING NO. 15102431

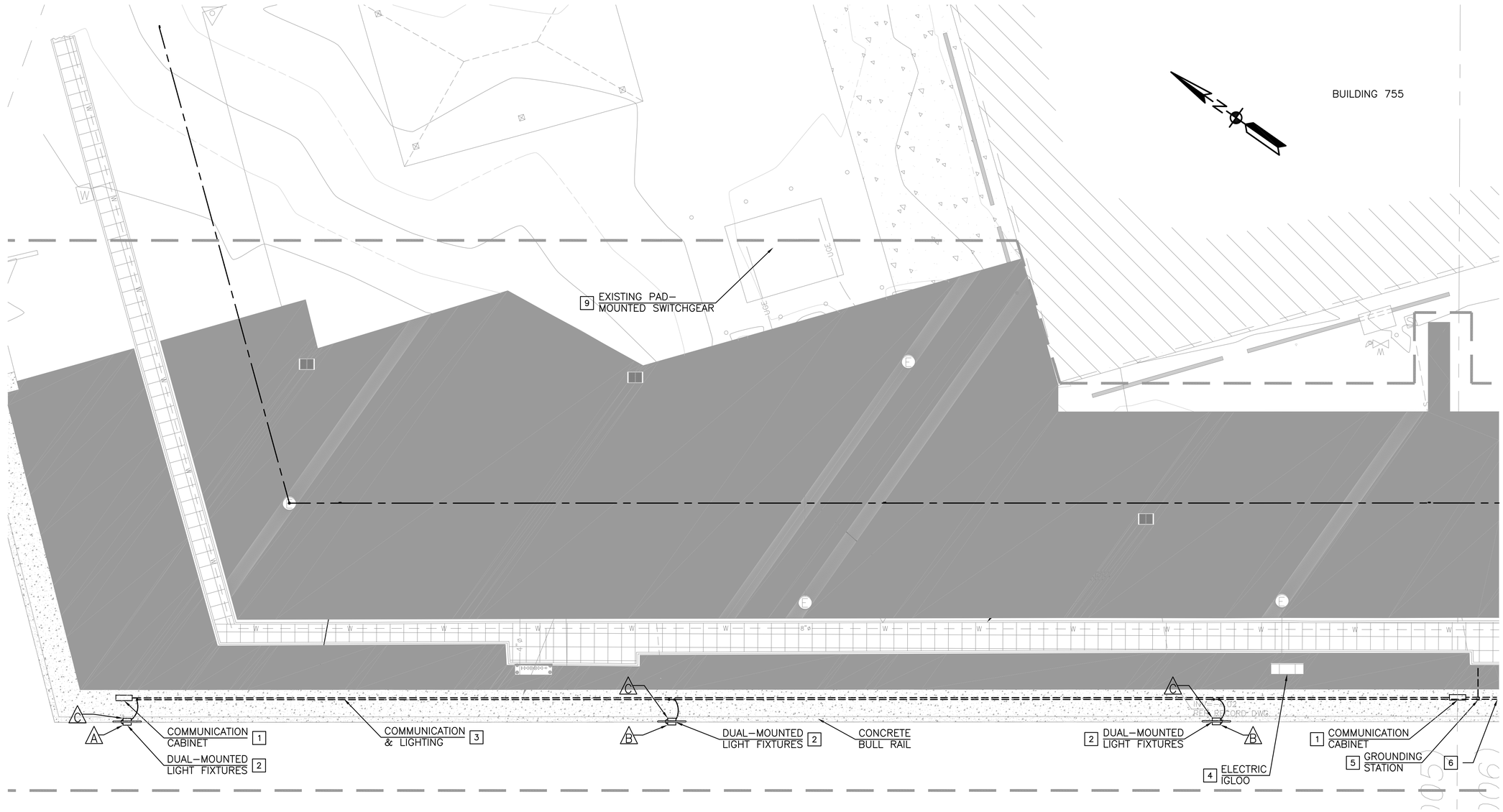
SHEET 61 OF 65

E001

DRAWFORM REVISION: 7 AUGUST 2009

FILE NAME: P:\GBL\project_files\z_CUBA\navsta guantanamo bay\h\n60514\wharf bravo structural repairs-1295318\working technical files\Drawings\E001 GENERAL NOTES SYMBOLS AND LEGENDS.dwg LAYOUT NAME: E001 GENERAL NOTES SYMBOLS AND LEGENDS PLOTTED: Thursday, June 09, 2016 - 4:25pm USER: ricardo.palmo

SHEET FORMAT IS 22" X 34". IF PRINTED SHEET IS NOT 22" X 34", THEN IT IS NOT TO SCALE



1 ELECTRICAL PLAN

Scale: 1" = 10'

CONSTRUCTION NOTES:

1. ELECTRICAL CONTRACTOR (EC) TO INSTALL EXISTING COMMUNICATION CABINET IN NEW LOCATION NEAR CURB. EC SHALL CONNECT 2" CONDUIT STUB–UPS TO CABINET USING PVC–COATED FLEXIBLE METAL CONDUIT. EC SHALL INSTALL NEW COMMUNICATION CABLE IN 2" CONDUIT AND CONNECT TO ALL COMMUNICATION CABINETS INSTALLED ALONG THE WHARF CURB. EC SHALL TEST AND VERIFY COMMUNICATION SYSTEM IS FUNCTIONAL AND WORKING CORRECTLY WHEN INSTALLATION IS COMPLETE.

2. EC SHALL INSTALL DUAL–MOUNTED LED LIGHT FIXTURES AT NEW CURB LOCATIONS ALONG THE WHARF USING EXISTING BRACKET HARDWARE. EC SHALL CONNECT TO NEW NEMA 4X JUNCTION BOXES WITH SCREW–TYPE COVERS, USING PVC–COATED FLEXIBLE METAL CONDUIT. EC SHALL CONNECT TO EXISTING LIGHTING CIRCUITS AND TEST NEW LIGHT FIXTURES TO VERIFY NEW INSTALLATION IS WORKING CORRECTLY WHEN INSTALLATION IS COMPLETE.

3. EC SHALL INSTALL (1) 1" PVC SCHEDULE 40 CONDUIT AND (1) 2" PVC SCHEDULE 40 CONDUIT AT MINIMUM 18 INCHES BELOW NEW CONCRETE SLAB FOR LIGHTING CIRCUITS AND COMMUNICATION CABLE. COORDINATE CONDUIT RUNS WITH STRUCTURAL CURB, BULL–RAIL AND MOORING FITTINGS TO AVOID CONFLICTS WITH INSTALLATION. IN THE EVENT OF CONFLICT, INSTALL CONDUITS BELOW STRUCTURAL COMPONENTS. SEE STRUCTURAL DRAWINGS FOR CAP AND CURB DETAILS.

4. EC SHALL CONNECT EXISTING IGLOO TO EXISTING PAD–MOUNTED LOCATION WHEN CONSTRUCTION IS COMPLETE. EC SHALL CONNECT RECEPTACLES AND COMPONENTS WITHIN IGLOO TO EXISTING CIRCUITS AND CABLING AND TEST TO VERIFY ALL COMPONENTS WITHIN IGLOO ARE WORKING PROPERLY WHEN INSTALLATION IS COMPLETE.

5. EC SHALL INSTALL EXISTING GROUNDING STATION AT NEW LOCATION NEXT TO COMMUNICATION CABINET. EC SHALL CONNECT GROUNDING STATION TO EXISTING 1 INCH RIGID METAL CONDUIT IN CONCRETE SLAB. EC SHALL INSTALL NEW #4/0 COPPER FROM GROUNDING STATION TO VAULT AND CONNECT TO EXISTING GROUNDING CONNECTION USING EXOTHERMIC WELD. EC SHALL BOND ALL PIPING WITHIN VAULT USING #4/0 COPPER CONDUCTOR AND APPROVED PIPE CLAMPS. EC SHALL CONNECT GROUNDING CONDUCTOR TO STRUCTURAL STEEL USING EXOTHERMIC WELD. EC SHALL TEST ALL GROUNDING FOR CONTINUITY AND TO ENSURE GROUNDING RESISTANCE MEETS GROUNDING SPECIFICATIONS.

6. SEE SHEET ES102 FOR CONTINUATION

7. EC SHALL EXTEND 1 " CONDUIT AND CABLES TO EXISTING LIGHTING CIRCUITS BY CONNECTING TO EXISTING JUNCTION BOXES AND CONDUIT ALONG WHARF. EXISTING LIGHTING CIRCUITS ARE FED FROM PANEL LB ON EXTERIOR OF BUILDING 260. ALL CONDUIT SURFACE MOUNTED ON WHARF SHALL BE PVC–COATED RIGID METAL CONDUIT.

8. EC SHALL EXTEND 2" CONDUIT AND COMMUNICATION CABLE ALONG WHARF AND CONNECT TO EXISTING CONDUIT IN SLAB USING NEMA 4X JUNCTION BOX. ALL CONDUIT SURFACE MOUNTED ON WHARF SHALL BE PVC–COATED RIGID METAL CONDUIT.

9. EC SHALL PROVIDE LOCK–OUT AND TAG–OUT PROCEDURES FOR ELECTRICAL IGLOOS DURING CONSTRUCTION. EC SHALL TEST CIRCUIT BREAKERS, CABLING AND IGLOOS AFTER CONSTRUCTION IS COMPLETE TO VERIFY ALL COMPONENTS ARE WORKING PROPERLY WHEN INSTALLATION IS COMPLETE.

10. SEE LIGHTING FIXTURE SCHEDULE ON SHEET E001 FOR FIXTURE TYPES A, B, C. PROVIDE LOW WATTAGE FIXTURES FACING THE WATER. PROVIDE HIGHER WATTAGE FIXTURES FACING THE WHARF FOR VEHICLE AND PEDESTRIAN TRAFFIC. SEE SECTION 26 56 00.00 20 FOR DETAILS.

ELECTRICAL GENERAL NOTES:

1. EXISTING PRIMARY CIRCUITS SHALL REMAIN ENERGIZED AND IN SERVICE DURING CONSTRUCTION WITH EXCEPTION DURING APPROVED POWER OUTAGES WITH THE CONTRACTING OFFICER.

2. THE CONTRACTOR IS RESPONSIBLE FOR ALL ELECTRICAL WORK INCLUDING, BUT NOT LIMITED TO, MODIFICATIONS TO THE UNDERGROUND ELECTRICAL DISTRIBUTION, MODIFICATIONS TO THE TELECOMMUNICATIONS, CONDUIT, TRENCHING AND BACK FILL, CABLING, AND TESTING.

GRAPHIC SCALE

1"=10' 0' 10' 20' 30' 40' 50'

SYM	DESCRIPTION	DATE	APPR
---	---	---	---

NAVFAC

SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC / B.L.T.L.

ACTIVITY

SATISFACTORY TO DATE ----

DES CRD DRW CRD CHK RF

PROJECT MANAGER E. GALLANT

IPT TECH. BRANCH HEAD M. JOHNSON

CHIEF ENG/ARCH (CORE) R. FLORES

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST
NAVAL AIR STATION JACKSONVILLE
IPT SOUTH ATLANTIC
NAVSTA GUANTANAMO BAY
GUANTANAMO BAY, CUBA

WHARF BRAVO STRUCTURAL REPAIRS

SITE PLAN

SCALE: SCALE

EPROJECT NO.: 1295318

CONSTR. CONTR. NO. N69450–XX–C–XXXX

NAVFAC DRAWING NO. 15102432

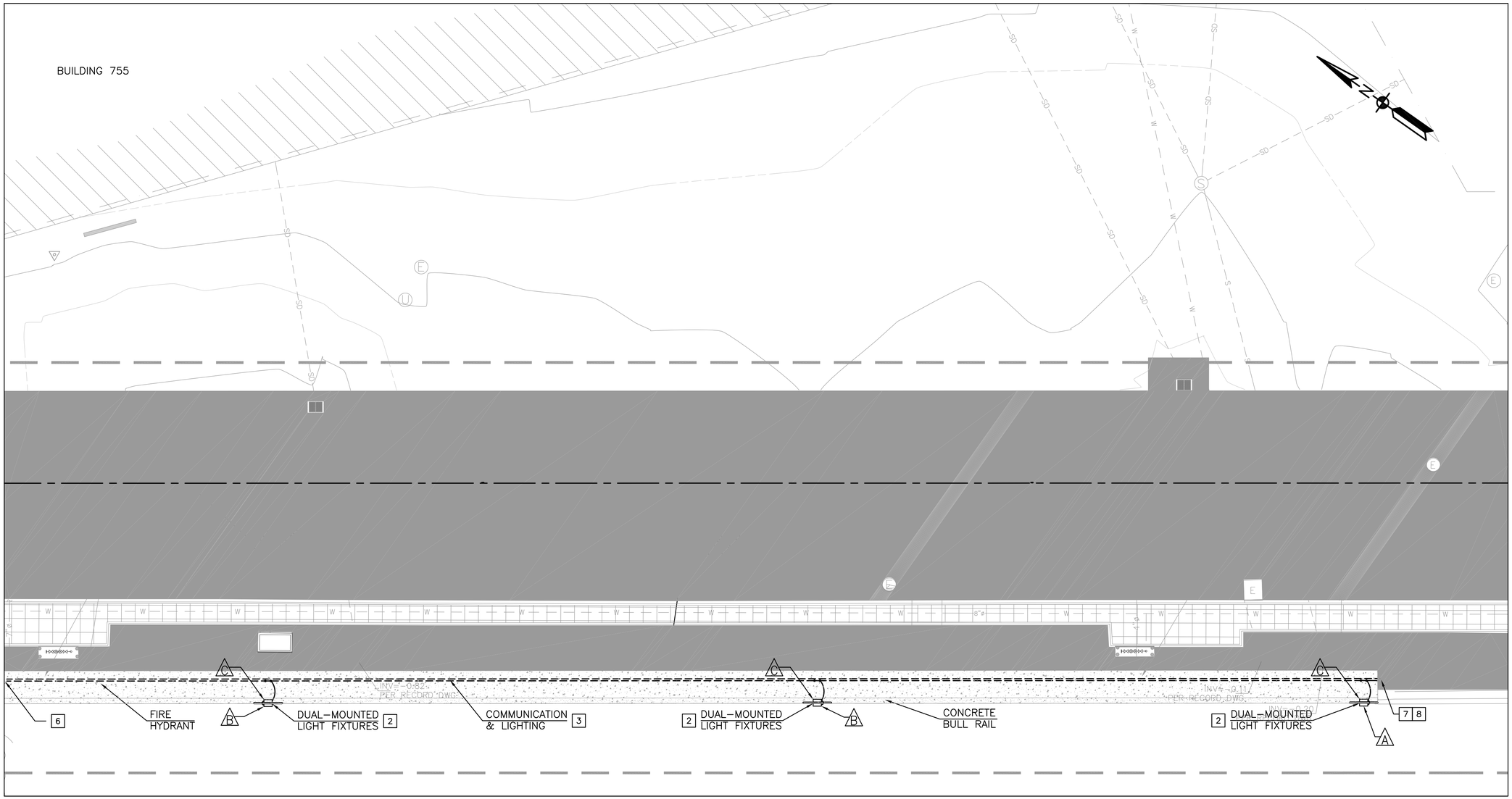
SHEET 62 OF 65

ES101

DRAWFORM REVISION: 7 AUGUST 2009

FILE NAME: P:\CIBL\project_files\z_CUBA\navsta guantanamo bay\jh\n60514\wharf bravo structural repairs-1295318\working technical files\Drawings\ES101 SITE PLAN.dwg LAYOUT NAME: ES101 SITE PLAN PLOTTED: Friday, June 10, 2016 - 12:46pm USER: ricardo.palmo

SHEET FORMAT IS 22" X 34". IF PRINTED SHEET IS NOT 22" X 34", THEN IT IS NOT TO SCALE



2 ELECTRICAL PLAN

Scale: 1" = 10'

CONSTRUCTION NOTES:

1. ELECTRICAL CONTRACTOR (EC) TO INSTALL EXISTING COMMUNICATION CABINET IN NEW LOCATION NEAR CURB. EC SHALL CONNECT 2" CONDUIT STUB-UPS TO CABINET USING PVC-COATED FLEXIBLE METAL CONDUIT. EC SHALL INSTALL NEW COMMUNICATION CABLE IN 2" CONDUIT AND CONNECT TO ALL COMMUNICATION CABINETS INSTALLED ALONG THE WHARF CURB. EC SHALL TEST AND VERIFY COMMUNICATION SYSTEM IS FUNCTIONAL AND WORKING CORRECTLY WHEN INSTALLATION IS COMPLETE.
2. EC SHALL INSTALL DUAL-MOUNTED LED LIGHT FIXTURES AT NEW CURB LOCATIONS ALONG THE WHARF USING EXISTING BRACKET HARDWARE. EC SHALL CONNECT TO NEW NEMA 4X JUNCTION BOXES WITH SCREW-TYPE COVERS, USING PVC-COATED FLEXIBLE METAL CONDUIT. EC SHALL CONNECT TO EXISTING LIGHTING CIRCUITS AND TEST NEW LIGHT FIXTURES TO VERIFY NEW INSTALLATION IS WORKING CORRECTLY WHEN INSTALLATION IS COMPLETE.
3. EC SHALL INSTALL (1) 1" PVC SCHEDULE 40 CONDUIT AND (1) 2" PVC SCHEDULE 40 CONDUIT AT MINIMUM 18 INCHES BELOW NEW CONCRETE SLAB FOR LIGHTING CIRCUITS AND COMMUNICATION CABLE. COORDINATE CONDUIT RUNS WITH STRUCTURAL CURB, BULL-RAIL AND MOORING FITTINGS TO AVOID CONFLICTS WITH INSTALLATION. IN THE EVENT OF CONFLICT, INSTALL CONDUITS BELOW STRUCTURAL COMPONENTS. SEE STRUCTURAL DRAWINGS FOR CAP AND CURB DETAILS.
4. EC SHALL CONNECT EXISTING IGLOO TO EXISTING PAD-MOUNTED LOCATION WHEN CONSTRUCTION IS COMPLETE. EC SHALL CONNECT RECEPTACLES AND COMPONENTS WITHIN IGLOO TO EXISTING CIRCUITS AND CABLING AND TEST TO VERIFY ALL COMPONENTS WITHIN IGLOO ARE WORKING PROPERLY WHEN INSTALLATION IS COMPLETE.
5. EC SHALL INSTALL EXISTING GROUNDING STATION AT NEW LOCATION NEXT TO COMMUNICATION CABINET. EC SHALL CONNECT GROUNDING STATION TO EXISTING 1 INCH RIGID METAL CONDUIT IN CONCRETE SLAB. EC SHALL INSTALL NEW #4/0 COPPER FROM GROUNDING STATION TO VAULT AND CONNECT TO EXISTING GROUNDING CONNECTION USING EXOTHERMIC WELD. EC SHALL BOND ALL PIPING WITHIN VAULT USING #4/0 COPPER CONDUCTOR AND APPROVED PIPE CLAMPS. EC SHALL CONNECT GROUNDING CONDUCTOR TO STRUCTURAL STEEL USING EXOTHERMIC WELD. EC SHALL TEST ALL GROUNDING FOR CONTINUITY AND TO ENSURE GROUNDING RESISTANCE MEETS GROUNDING SPECIFICATIONS.
6. SEE SHEET ES101 FOR CONTINUATION
7. EC SHALL EXTEND 1 " CONDUIT AND CABLES TO EXISTING LIGHTING CIRCUITS BY CONNECTING TO EXISTING JUNCTION BOXES AND CONDUIT (NOT SHOWN ON THIS SHEET) ALONG WHARF. EXISTING LIGHTING CIRCUITS ARE FED FROM PANEL LB ON EXTERIOR OF BUILDING 260. ALL CONDUIT SURFACE MOUNTED ON WHARF SHALL BE PVC-COATED RIGID METAL CONDUIT.
8. EC SHALL EXTEND 2" CONDUIT AND COMMUNICATION CABLE ALONG WHARF AND CONNECT TO EXISTING CONDUIT IN SLAB (NOT SHOWN ON THIS SHEET) USING NEMA 4X JUNCTION BOX. ALL CONDUIT SURFACE MOUNTED ON WHARF SHALL BE PVC-COATED RIGID METAL CONDUIT.
9. EC SHALL PROVIDE LOCK-OUT AND TAG-OUT PROCEDURES FOR ELECTRICAL IGLOOS DURING CONSTRUCTION. EC SHALL TEST CIRCUIT BREAKERS, CABLING AND IGLOOS TO VERIFY ALL COMPONENTS ARE WORKING PROPERLY WHEN INSTALLATION IS COMPLETE.
10. SEE LIGHTING FIXTURE SCHEDULE ON SHEET E001 FOR FIXTURE TYPES A, B, C. PROVIDE LOW WATTAGE FIXTURES FACING THE WATER. PROVIDE HIGHER WATTAGE FIXTURES FACING THE WHARF FOR VEHICLE AND PEDESTRIAN TRAFFIC. SEE SECTION 26 56 00.00 20 FOR DETAILS.

ELECTRICAL GENERAL NOTES:

1. EXISTING PRIMARY CIRCUITS SHALL REMAIN ENERGIZED AND IN SERVICE DURING CONSTRUCTION WITH EXCEPTION DURING APPROVED POWER OUTAGES WITH THE CONTRACTING OFFICER.
2. THE CONTRACTOR IS RESPONSIBLE FOR ALL ELECTRICAL WORK INCLUDING, BUT NOT LIMITED TO, MODIFICATIONS TO THE UNDERGROUND ELECTRICAL DISTRIBUTION, MODIFICATIONS TO THE TELECOMMUNICATIONS, CONDUIT, TRENCHING AND BACK FILL, CABLING, AND TESTING.

GRAPHIC SCALE

1"=10' 0' 10' 20' 30' 40' 50'

SYM	DESCRIPTION	DATE	APPR
---	---	---	---

SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC / B.L.T.L.

ACTIVITY ----

SATISFACTORY TO DATE ----

DES CRD DRW CRD CHK RF

PROJECT MANAGER E. GALLANT

IPT TECH. BRANCH HEAD M. JOHNSON

CHIEF ENG/ARCH (CORE) R. FLORES

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST
IPT SOUTH ATLANTIC NAVAL AIR STATION JACKSONVILLE
NAVSTA GUANTANAMO BAY GUANTANAMO BAY, CUBA

WHARF BRAVO STRUCTURAL REPAIRS

SITE PLAN

SCALE: SCALE

EPROJECT NO.: 1295318

CONSTR. CONTR. NO. N69450-XX-C-XXXX

NAVFAC DRAWING NO. 15102433

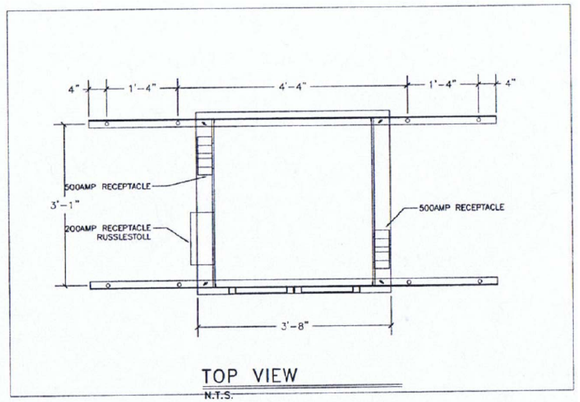
SHEET 63 OF 65

ES102

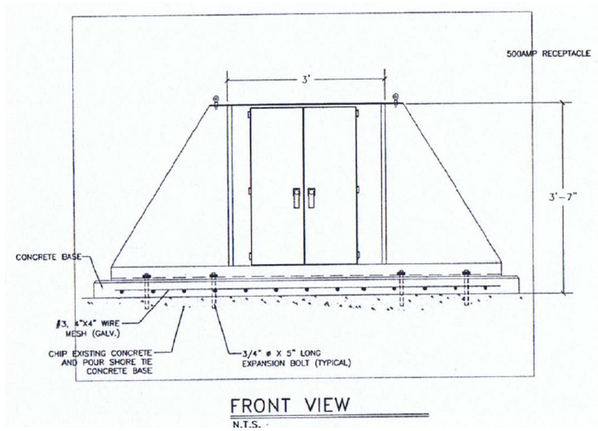
DRAWFORM REVISION: 7 AUGUST 2009

FILE NAME: P:\CIBL\project_files\z_CUBA\navsta guantanamo bay\h\r60514\wharf bravo structural repairs-1295318\working technical files\Drawings\ES102 SITE PLAN.dwg LAYOUT NAME: ES102 SITE PLAN PLOTTED: Friday, June 10, 2016 - 12:46pm USER: ricardo.palmo

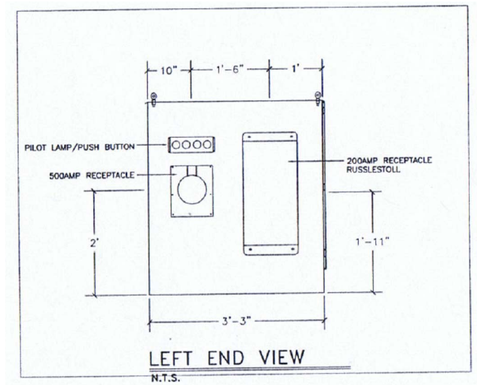
SHEET FORMAT IS 22" X 34". IF PRINTED SHEET IS NOT 22" X 34", THEN IT IS NOT TO SCALE



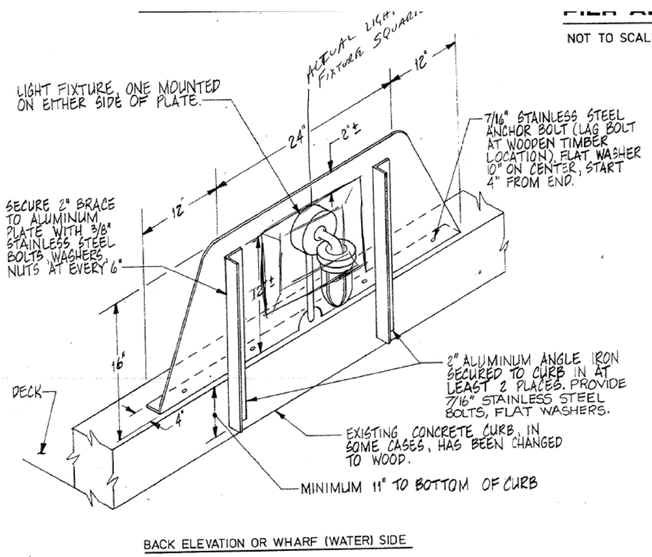
A ELECTRICAL IGLOO – TOP VIEW
Scale: 1/8" = 1'-0"



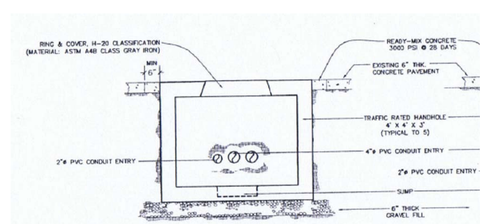
B ELECTRICAL IGLOO – FRONT VIEW
Scale: 1/8" = 1'-0"



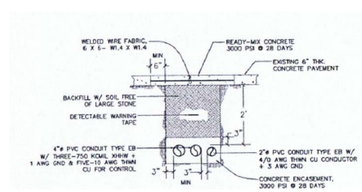
C ELECTRICAL IGLOO – END VIEW
Scale: 1/8" = 1'-0"



D LIGHT FIXTURE SUPPORT DETAIL
Scale: 1/8" = 1'-0"



E MANHOLE AND CONDUIT DETAIL
Scale: 1/8" = 1'-0"



F CONDUIT AND DUCTBANK DETAIL
Scale: 1/8" = 1'-0"

GENERAL SHEET NOTES

1. DETAILS SHOWN ARE FROM EXISTING DRAWINGS AND AS BUILDS.
2. ELECTRICAL IGLOO TO BE REMOVED BY ELECTRICAL CONTRACTOR DURING CONSTRUCTION, STORED AND INSTALLED WHEN CONSTRUCTION IS COMPLETE. EC TO COORDINATE INSTALLATION AFTER CONSTRUCTION IS COMPLETE.
3. PRIOR TO DEMOLITION, EC TO PERFORM LOCK-OUT & TAG-OUT PROCEDURES FOR ALL CIRCUITS TO THE ELECTRICAL IGLOO. EC TO PROTECT AND REUSE EXISTING CABLING DURING CONSTRUCTION. CONNECT TO IGLOO AFTER CONSTRUCTION IS COMPLETE. EC TO TEST BREAKER, CABLES AND IGLOO TO VERIFY CIRCUITS AND EQUIPMENT ARE WORKING CORRECTLY.
4. EC TO KEEP LIGHT FIXTURE BRACKETS, COMMUNICATION CABINETS, COMMUNICATION CABLES, GROUNDING STATION WIRING AND CLAMPS, AND ELECTRICAL IGLOO DURING DEMOLITION. EC TO STORE DURING CONSTRUCTION AND REUSE ITEMS DURING INSTALLATION.
5. LIGHT FIXTURE SHOWN IN DETAIL IS NOT THE CURRENT FIXTURE, ONLY SHOWN TO DETAIL FIXTURE SUPPORT. EXISTING SUPPORT TO BE REMOVED, STORED AND REUSED WITH NEW LED STYLE FIXTURE. NEW FIXTURE TO MATCH STYLE, SIZE, VOLTAGE AND COLOR TYPE.
7. ALL EXTERIOR ENCLOSED DISCONNECT SWITCHES AND CIRCUIT BREAKERS SHALL BE NEMA 4X, UNLESS OTHERWISE NOTED.
8. ALL INTERIOR ENCLOSED DISCONNECT SWITCHES AND CIRCUIT BREAKERS SHALL BE NEMA 1, UNLESS OTHERWISE NOTED.

SYM	DESCRIPTION	DATE	APPR
---	---	---	---
---	---	---	---
---	---	---	---
---	---	---	---
---	---	---	---
---	---	---	---
---	---	---	---

NAVFAC

SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC / B.L.T.L.

ACTIVITY

SATISFACTORY TO DATE ---

DES CRD DRW CRD CHK RF

PROJECT MANAGER E. GALLANT

IPT TECH. BRANCH HEAD M. JOHNSON

CHIEF ENG/ARCH (CORE) R. FLORES

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
IPT SOUTH ATLANTIC

NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST
NAVAL AIR STATION JACKSONVILLE
NAVSTA GUANTANAMO BAY
GUANTANAMO BAY, CUBA

WHARF BRAVO STRUCTURAL REPAIRS

ELECTRICAL DETAILS

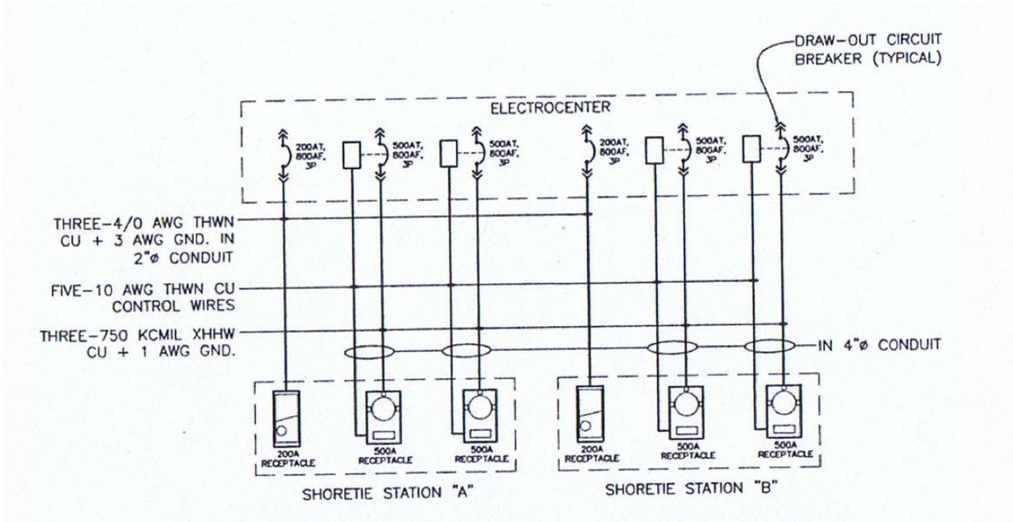
SCALE: SCALE
EPROJECT NO.: 1295318
CONSTR. CONTR. NO. N69450-XX-C-XXXX
NAVFAC DRAWING NO. 15102434
SHEET 64 OF 65

E501

DRAWFORM REVISION: 7 AUGUST 2009

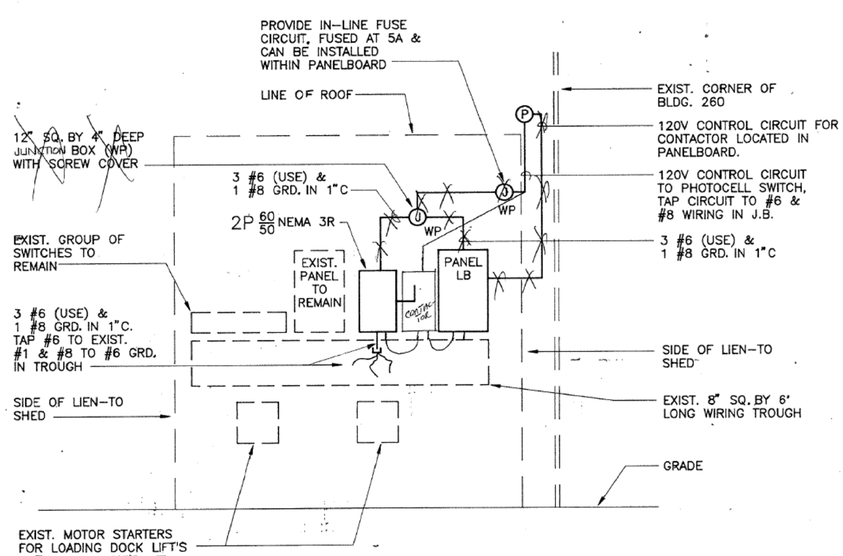
FILE NAME: P:\CIB\project_files\z_CUBA\navsta guantanamo bay(hjr60514)\wharf bravo structural repairs-1295318\working technical files\Drawings\E501 ELECTRICAL DETAILS.dwg LAYOUT NAME: E501 ELECTRICAL DETAILS PLOTTED: Thursday, June 09, 2016 - 4:28pm USER: ricardo.palmo

SHEET FORMAT IS 22" X 34". IF PRINTED SHEET IS NOT 22" X 34", THEN IT IS NOT TO SCALE



(A) UNDERGROUND FEEDER 1-LINE DIAGRAM

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



(C) PANEL SCHEDULES

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

PANEL 'LA' SCHEDULE

50A, M.L.O., 208/120 V, 1 PHASE, 3 WIRE, SURFACE MOUNT, SOLID NEUTRAL & GRD BUS, NEMA 3R ENCLOSURE

LOAD SERVED	LOAD (AMPS) A	LOAD (AMPS) B		CKT BKR KAIC	CKT BKR TRIP	WIRE SIZE	CKT NO.	CKT NO.	WIRE SIZE	CKT BKR TRIP	CKT BKR KAIC	LOAD (AMPS) A	LOAD (AMPS) B		LOAD SERVED
OUTBOARD LIGHTS	3			22	20	12	1	2	---	---	---	0			SPACE ONLY
INBOARD LIGHTS		5		22	20	12	3	4	---	---	---		0		SPACE ONLY
	5							6	---	---	---	0			SPACE ONLY
SPARE		0		22	20	---	7	8	---	---	---		0		SPACE ONLY
SPARE	0			---	20	---	9	10	---	---	---	0			SPACE ONLY
		0						12	---	---	---				SPACE ONLY
TOTAL	8	5										0	0		TOTAL

TOTAL CONNECTED AMPS A: 8 B: 5

PROVIDE PANEL WITH 3P, 50A CONTACTOR & SERVICE ENTRANCE RATED. ALL CIRCUIT BREAKERS SHALL BE GFI.

PANEL 'LB' SCHEDULE

50A, M.L.O., 208/120 V, 1 PHASE, 3 WIRE, SURFACE MOUNT, SOLID NEUTRAL & GRD BUS, NEMA 3R ENCLOSURE

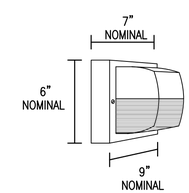
LOAD SERVED	LOAD (AMPS) A	LOAD (AMPS) B	CKT BKR KAIC	CKT BKR TRIP	WIRE SIZE	CKT NO.	CKT NO.	WIRE SIZE	CKT BKR TRIP	CKT BKR KAIC	LOAD (AMPS) A	LOAD (AMPS) B	LOAD SERVED
OUTBOARD LIGHTS – N/E	2		22	20	12	1	2	12	20	22	3.6		INBOARD LIGHTS – N/E
OUTBOARD LIGHTS – S/W		1.5	22	20	12	3						3.6	
SPARE	0		22	20	---	5	6	12	20	22	3		INBOARD LIGHTS – S/W
SPARE		0	22	20	---	7						3	
SPACE ONLY	0		---	---	---	9	10	---	---	---	0		SPACE ONLY
SPACE ONLY		0	---	---	---	10	12	---	---	---		0	SPACE ONLY
TOTAL	2	1.5									6.3	6.3	TOTAL

TOTAL CONNECTED AMPS A: 8.3 B: 8.3

PROVIDE PANEL WITH 3P, 50A CONTACTOR & SERVICE ENTRANCE RATED. ALL CIRCUIT BREAKERS SHALL BE GFI.

(B) POWER RISER DIAGRAM

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



LED LUMINAIRE REQUIREMENTS:

1. HOUSING – ONE-PIECE, DIE-CAST ALUMINUM WITH BAKED-ON POLYESTER POWDER COAT FINISH IN BLACK.
2. DIFFUSER – CLEAR PRISMATIC, UV-STABILIZED, INJECTION-MOLDED POLYCARBONATE WITH MINIMUM 1/8" THICKNESS. DIFFUSER SECURED WITH TAMPER-RESISTANT STAINLESS STEEL SCREWS. BLACK HORIZONTAL FRONT EYELID FOR CUTOFF.
3. GASKET – ONE-PIECE, CLOSED-CELL NEOPRENE TO DISCOURAGE MOISTURE, INSECTS AND DEBRIS.
4. BALLAST – CLASS P, HIGH POWER FACTOR (≥.95), PROGRAMMED RAPID START ELECTRONIC TYPE WITH ≤10% TOTAL HARMONIC DISTORTION FOR COMPACT FLUORESCENT LAMPS.
5. LAMPS – LED, WATTAGES BASED ON LIGHT FIXTURE SELECTED. PROVIDE LOW WATTAGE ON WATER SIDE. PROVIDE HIGHER WATTAGE ON SHORE SIDE.
6. CERTIFICATION – UL LISTED AND LABELED FOR WET LOCATIONS.

WALL-MOUNTED LED LIGHT FIXTURE

REVISED: AUGUST 2004 | LIGHTING PLATE: NL-48

(D) LED LIGHT FIXTURE

Scale: NOT TO SCALE

GENERAL SHEET NOTES

1. ALL WORK SHALL BE IN ACCORDANCE WITH THE NEC AND UFC STANDARDS.
2. UNDERGROUND FEEDER 1-LINE DIAGRAM SHOWN FROM UTILITY AS BUILD DRAWINGS. EXISTING PAD-MOUNTED SWITCHGEAR NORTH OF BUILDING 755 IS LOCATION FOR IGLOO BREAKERS. EC TO VERIFY CIRCUITS, SIZES AND BREAKER LOCATIONS FOR IGLOO.
4. POWER RISER DIAGRAM SHOWS LOCATION OF DISCONNECT AND PANEL LB ON CORNER OF BUILDING 260 AS LOCATION FOR CIRCUIT BREAKERS FOR WHARF LIGHT FIXTURES. EC TO VERIFY AND PERFORM LOCK-OUT & TAG-OUT WHEN WORKING ON CIRCUITS.
3. EC TO PERFORM SITE VISIT AND FIELD VERIFY ALL SITE CONDITIONS INCLUDING ALL SERVICE REQUIREMENTS, PULLBOXES, SIZE AND NUMBER OF CONDUITS AND CONDUCTORS, PANELS, SWITCHBOARDS, DISCONNECT SWITCHES, CABLES, ETC., WHETHER SHOWN ON DRAWINGS OR NOT, BUT REQUIRED FOR PROVIDING A COMPLETE AND OPERABLE ELECTRICAL SYSTEM WITHOUT ADDITIONAL COST TO THE OWNER.
5. EC TO KEEP LIGHT FIXTURE BRACKETS, COMMUNICATION CABINETS, COMMUNICATION CABLES, GROUNDING STATION WIRING AND CLAMPS, AND ELECTRICAL IGLOO DURING DEMOLITION. EC TO STORE DURING CONSTRUCTION AND REUSE ITEMS DURING INSTALLATION.
7. ALL EXTERIOR ENCLOSED DISCONNECT SWITCHES AND CIRCUIT BREAKERS SHALL BE NEMA 4X, UNLESS OTHERWISE NOTED.
8. ALL INTERIOR ENCLOSED DISCONNECT SWITCHES AND CIRCUIT BREAKERS SHALL BE NEMA 1, UNLESS OTHERWISE NOTED.

SYM	DESCRIPTION	DATE	APPR
---	---	---	---

NAVFAC

SEAL

A/E INFO

APPROVED

FOR COMMANDER NAVFAC / B.L.T.L.

ACTIVITY ----

SATISFACTORY TO DATE ----

DES CRD DRW CRD CHK RF

PROJECT MANAGER E. GALLANT

IPT TECH. BRANCH HEAD M. JOHNSON

CHIEF ENG/ARCH (CORE) R. FLORES

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
IPT SOUTH ATLANTIC

NAVAL FACILITIES ENGINEERING COMMAND SOUTHEAST
NAVAL AIR STATION JACKSONVILLE

NAVSTA GUANTANAMO BAY

GUANTANAMO BAY, CUBA

WHARF BRAVO STRUCTURAL REPAIRS

ELECTRICAL DIAGRAMS & RISERS

SCALE: SCALE

EPROJECT NO.: 1295318

CONSTR. CONTR. NO. N69450-XX-C-XXXX

NAVFAC DRAWING NO. --

SHEET 65 OF 65

E600

DRAWFORM REVISION: 7 AUGUST 2009

FILE NAME: P:\CIB\project_files\z_CUBA\navsta guantanamo bay\hr60514\wharf bravo structural repairs-1295318\working technical files\Drawings\E600 ELECTRICAL DIAGRAMS & RISERS.dwg LAYOUT NAME: E600 ELECTRICAL DIAGRAMS & RISERS PLOTTED: Thursday, June 09, 2016 - 4:29pm USER: ricardo.palma

SHEET FORMAT IS 22" X 34". IF PRINTED SHEET IS NOT 22" X 34", THEN IT IS NOT TO SCALE