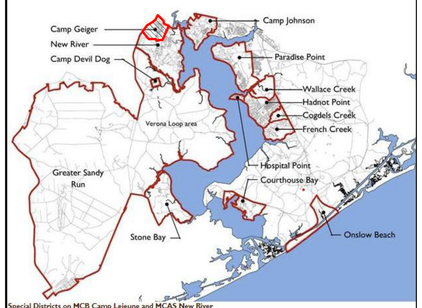
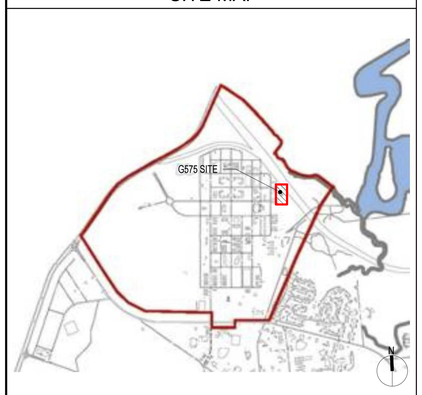
PROJECT LOCATION

REGIONAL MAP

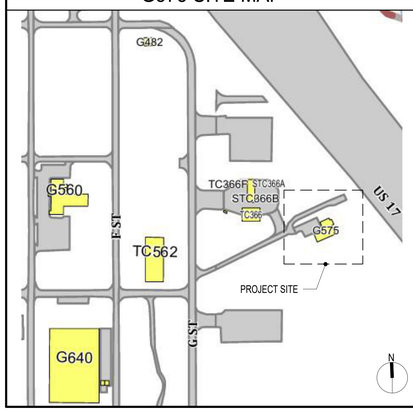
VICINITY MAP



SITE MAP



G575 SITE MAP



G575 LIFT STATION REPAIRS

CAMP GEIGER
MARINE CORPS BASE CAMP LEJEUNE

PROJECT NO.: 26-0044

INDEX OF DRAWINGS

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GENERAL PROJECT NOTES

1. REPLACE INSUFFICIENTLY PROTECTED WORK DAMAGED BY CONSTRUCTION ACTIVITIES TO MATCH ADJOINING MATERIALS, TEXTURES, PATTERNS AND COLORS
2. FIELD VERIFY EXISTING DIMENSIONS PRIOR TO EXECUTING DECONSTRUCTION OR PROCURING MATERIALS
3. PROVIDE AND INSTALL ITEMS INDICATED IN THE INSTRUMENTS OF SERVICE
4. COORDINATE WITH THE CONTRACTING OFFICER TECHNICAL REPRESTENTATIVE (CM - ETM) PRIOR TO THE PRECONSTRUCTION MEETING TO ESTABLISH THE LOCATION AND SIZE OF THE LAY DOWN AREA
5. CITED PRODUCTS OF MANUFACTURERS ONLY DENOTE QUANTITIES, STANDARDS AND FINISHES OF PRODUCTS DESIRED AND DO NOT RESTRICT PROCUREMENT TO SPECIFIC BRANDS, SERIES, OR MANUFACTURERS AS LONG AS THE REQUIREMENTS OF THE TECHNICAL SPECIFICATIONS ARE MET
6. COORDINATE WITH THE CONTRACTING OFFICER TECHNICAL REPRESTENTATIVE (CM - ETM) TO ESTABLISH AND MAINTAIN PROTOCOLS FOR SECURING THE BUILDING AND PROJECT SITE
7. ADJACENT FACILITIES, ROADS, AND INFRASTRUCTURE REMAIN OPERATIONAL DURING CONSTRUCTION. EXECUTE WORK WITHOUT OBSTRUCTING OR INTERFERING WITH ADJACENT ACTIVITIES
8. SUBMITTALS MUST BE APPROVED BY THE CONTRACTING OFFICER PRIOR TO EXECUTING THE WORK DESCRIBED THEREIN

DESIGN TEAM

ARCHITECT
MBF ARCHITECTS, P.A.
317-C POLLOCK STREET
NEW BERN, NC 28560

CIVIL UTILITIES
STANTEC CONSULTING SERVICE INC.
801 FRANKLIN ROAD SUITE 300
RALEIGH, NC 27606

REVISIONS

SYM.	DESCRIPTION	DATE	APP.

DARDEN J. EURE, III — REGISTERED ARCHITECT — 8640 — NORTH CAROLINA — NEW BERN NC
23 JULY 2026

MBF ARCHITECTS, P.A. — CERT. NO. 50679 — NORTH CAROLINA — NEW BERN N.C.

G-001

MBFA NO.: 2505

mbf architects pa

DEPARTMENT OF THE NAVY — NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND

MARINE CORPS BASE
CAMP GEIGER, NORTH CAROLINA

DES.	JAS
DR.	JAS
CHK.	DJE,III
SUBMITTED BY:	
DESIGN DIR.	CHRIS MAAS
APPROVED: PWO OR OICC	DATE
SATISFACTORY TO:	DATE

G575 LIFT STATION REPAIRS

TITLE SHEET AND INDEX OF DRAWINGS

SIZE	CODE IDENT. NO.	NAVFAC DRAWING NO.
E1	80091	60044573

CONSTR. CONTR. NO. N40085-26-B-0044

SCALE AS NOTED | SPEC. 05-26-0044 | SHEET

File Print C:\Users\schmied\Documents\Schmied Local Files\2505A ARCH 2023-G702-CENTRAL_ SchmiedMBFA.rvt 7/22/2026 11:00:10 AM

PROJECT GENERAL NOTES

OWNER:
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
ADDRESS:
PHONE:

DESIGN ENGINEER:
STANTEC CONSULTING SERVICES, INC.
ADDRESS: 521 EAST MOREHEAD, SUITE 425 CHARLOTTE, NC 28202
PHONE: (704) 329-0900

SURVEYOR:
STANTEC CONSULTING SERVICES, INC.
ADDRESS: 521 EAST MOREHEAD, SUITE 425 CHARLOTTE, NC 28202
PHONE: (704) 329-0900

ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM (N.A.V.D.) 1988.

SITE DATA:

PROPERTY ADDRESS: G STREET
CAMP LEJEUNE, NC, 28547
PROJECT LATITUDE: 34°44'10.4"N
PROJECT LONGITUDE: 77°26'57.6"W

PROJECT AREA: <1 ACRE
LIMITS OF GRADING AREA: <1 ACRE
TOTAL LIMITS OF DISTURBANCE AREA: <1 ACRE

PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE REHABILITATION OF WASTEWATER LIFT STATION INFRASTRUCTURE. THE PROJECT INCLUDES WORK AT LIFT STATION G-575 LOCATED IN CAMP GEIGER, MARINE CORPS BASE CAMP LEJEUNE.

WORK AT G-575 CONSISTS OF THE FOLLOWING:

1. REMOVE FOUR (4) EXISTING ELECTRIC SUBMERSIBLE SEWAGE PUMPS; TWO (2) LARGE PUMPS AND TWO (2) SMALL PUMPS; AND REPLACE WITH TWO (2) NEW LARGE AND TWO (2) NEW SMALL PUMPS. NEW PUMPS WILL BE FLYGT PUMPS.
2. REMOVAL OF ALL EXISTING GUIDE RAILS, MOUNTING HARDWARE, AND BASE BENDS AND INSTALL NEW EQUIPMENT (GUIDE RAILS, MOUNTING HARDWARE AND BASE BENDS), FOR THE NEW PUMPS.
3. REPLACE EXISTING 6" DIAMETER DISCHARGE PIPING AND VALVES ON THE SMALL PUMP PIPING WITH NEW 10" DIAMETER PIPING AND VALVES.
4. REMOVE EXISTING LEVEL SENSORS AND FLOATS AND PROVIDE NEW LEVEL SENSORS AND FLOATS.
5. PROVIDE NEW COATINGS ON ALL PUMP DISCHARGE PIPING, FITTINGS, AND VALVES.
6. REPLACEMENT OF FIVE (5) MANHOLES AND ASSOCIATED BYPASS PUIMPING.
7. INSTALL NEW CRANE/HOIST SYSTEM.
8. ELECTRICAL IMPROVEMENTS: LIGHTNING PROTECTION SYSTEM, NEW MOTOR CONTROL CENTERS FOR ALL NEW PUMPS, NEW VARIABLE FREQUENCY DRIVES (VFDs).

GENERAL CONSTRUCTION NOTES

1. CONSTRUCTION AND MATERIAL SPECIFICATIONS WILL CONFORM WITH THE PROJECT SPECIFICATIONS AND NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND STANDARD SPECIFICATIONS.
2. VERIFY THE LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.
3. ALL SHORING WILL BE IN ACCORDANCE WITH OSHA TRENCHING STANDARDS PART 1926, SUBPART P, AS AMENDED TO DATE.
4. PROVIDE ALL NECESSARY EROSION AND SEDIMENTATION CONTROL MEASURES AS REQUIRED BY NCDEQ FOR THIS TYPE OF WORK.
5. IF ADDITIONAL WORK SPACE IS NEEDED, AN ENCROACHMENT IS TO BE AGREED UPON BETWEEN THE CONTRACTOR AND THE CONTRACTING OFFICER AND/OR OWNER IN WRITING.
6. LOCATE AND PROTECT ALL PROPERTY MONUMENTS. IF CORNERS ARE DISTURBED THEY MUST BE REPLACED BY A NC PLS AT NO COST TO THE OWNER OR ENGINEER.
7. PERFORM AND CONDUCT ALL LAYOUT WORK AND SURVEYS REQUIRED TO PROPERLY CONSTRUCT THE PROPOSED FEATURES.
8. RECONNECT DISTURBED UTILITY SERVICES ENCOUNTERED. NOTIFY USERS 24 HOURS PRIOR TO POSSIBLE INTERRUPTIONS OF SERVICE.
9. AT LOCATIONS WHERE TELEPHONE CABLES, FIBER OPTIC CABLES, AND JUNCTION BOXES ARE IN CONFLICT WITH PROPOSED FEATURES, TAKE ALL ACTION NECESSARY TO LOCATE, REMOVE, AND REPLACE THESE UTILITIES TO THE SATISFACTION OF THE CONTRACTING OFFICER AND UTILITY OWNER.
10. ALL EXCESS EXCAVATED MATERIAL WILL BE REMOVED FROM THE CONSTRUCTION SITE AND DISPOSED OF LEGALLY.
11. PROTECT EXISTING AND NEWLY INSTALLED UTILITIES, AT ALL TIMES THROUGH THE DURATION OF CONSTRUCTION, FROM DAMAGE OR DISRUPTION OF SERVICE. TAKE MEASURES TO PROTECT THE HEALTH, SAFETY AND WELFARE OF THOSE PERSONS HAVING ACCESS TO THE WORK SITE.

SAFETY

1. DURING THE CONSTRUCTION AND MAINTENANCE OF THIS PROJECT, ALL SAFETY REGULATIONS MUST BE ENFORCED. THE CONTRACTOR OR HIS REPRESENTATIVE MUST BE RESPONSIBLE FOR THE CONTROL AND SAFETY OF THE TRAVELING PUBLIC AND THE SAFETY OF HIS PERSONNEL.
2. THE MAINTENANCE OF TRAFFIC CONTROL PLAN MUST BE SUBMITTED AND APPROVED BY BASE STAFF AND APPLICABLE LOCAL AGENCIES PRIOR TO COMMENCEMENT OF CONSTRUCTION WITHIN RIGHT OF WAYS.
3. LABOR SAFETY REGULATIONS MUST CONFORM TO THE PROVISIONS SET FORTH BY OSHA IN THE FEDERAL REGISTER OF THE DEPARTMENT OF TRANSPORTATION.
4. PROVIDE AND MAINTAIN PERSONAL SAFETY EQUIPMENT IN ACCORDANCE WITH THE HEALTH AND SAFETY PROGRAM AND ALL OTHER APPLICABLE LEGAL AND HEALTH AND SAFETY REQUIREMENTS. PROVIDE EMPLOYEES AND SUB CONTRACTORS WITH ADEQUATE INFORMATION AND TRAINING TO ENSURE THAT ALL EMPLOYEES AND SUB CONTRACTORS AND SUB CONTRACTOR'S EMPLOYEES COMPLY WITH ALL APPLICABLE REQUIREMENTS. CONTRACTOR MUST REMAIN IN COMPLIANCE WITH ALL OCCUPATION SAFETY AND HEALTH REGULATIONS AS WELL AS THE ENVIRONMENTAL PROTECTION LAWS. THE FOLLOWING IS NOT TO BE PERCEIVED AS THE ENTIRE SAFETY PROGRAM BUT JUST BASIC REQUIREMENTS.
5. ALL EXCAVATIONS MUST CONFORM TO THE REQUIREMENTS OF THE DEPARTMENT OF LABOR'S OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION RULES AND REGULATIONS. PARTICULAR ATTENTION MUST BE PAID TO THE CONSTRUCTION STANDARDS FOR EXCAVATIONS, 29 CFR PART 1926 SUBPART P.
6. THE MINIMUM STANDARDS SET FORTH IN THE CURRENT EDITION OF "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) BE FOLLOWED IN THE DESIGN APPLICATION, INSTALLATION, MAINTENANCE AND REMOVAL OF ALL TRAFFIC CONTROL DEVICES, WARNING DEVICES AND BARRIERS NECESSARY TO PROTECT THE PUBLIC AND WORKMEN FROM HAZARDS WITHIN THE PROJECT LIMITS.
7. ALL TRAFFIC CONTROL MARKINGS AND DEVICES MUST CONFORM TO THE PROVISIONS SET FORTH IN THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES PREPARED BY THE US DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION. ALL NORTH CAROLINA AMENDMENTS WILL APPLY.
8. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO COMPLY AND ENFORCE ALL APPLICABLE SAFETY REGULATIONS.
9. EXERCISE EXTREME CAUTION IN AREAS OF BURIED UTILITIES AND MUST PROVIDE AT LEAST 72 HOURS NOTICE TO NC811 PRIOR TO CONSTRUCTION TO OBTAIN FIELD LOCATIONS OF EXISTING UNDERGROUND UTILITIES.
10. REPAIR ANY DAMAGE TO EXISTING FACILITIES, ABOVE OR BELOW GROUND, THAT MAY OCCUR AS A RESULT OF THE WORK PERFORMED AT NO ADDITIONAL COST TO THE OWNER.

ABBREVIATIONS

ABAND	ABANDONED
ABBRV	ABBREVIATION
ABC	AGGREGATE BASE COURSE
ADDL	ADDITIONAL
ADJ	ADJUSTABLE
AGGR	AGGREGATE
ALT	ALTERNATE
ALUM	ALUMINUM
AMT	AMOUNT
APPD	APPROVED
APPROX	APPROXIMATE
ASPH	ASPHALT
BDRY	BOUNDARY
BKGD	BACKGROUD
BL	BASE LINE
BM	BENCHMARK
BOC	BACK OF CURB
BOT	BOTTOM
BRG	BEARING
BTWN	BETWEEN
CB	CATCH BASIN
C/C	CENTER TO CENTER
CI	CAST IRON, CURB INLET
CL	CENTER LINE
CMU	CONCRETE MASONRY UNIT
CO	CLEANOUT
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS
CTR	CENTER
D	DEPTH
DAT	DATUM
D.B.	DEED BOOK
DBL	DOUBLE
DEMO	DEMOLITION
DET	DETAIL
DI	DUCTILE IRON, DROP INLET
DIA	DIAMETER
DIM	DIMENSION
DIST	DISTANCE
DN	DOWN
DR	DRAIN
DWG	DRAWING
EA	EACH
ELEC	ELECTRIC (AL)
EL, ELEV	ELEVATION
ENGR	ENGINEER
EP	EDGE OF PAVEMENT
EQ	EQUAL
ESMT	EASEMENT
EX, EXIST	EXISTING
FF	FINISHED FLOOR
FFE	FINISHED FLOOR ELEVATION
FLEX	FLEXIBLE
FT	FOOT, FEET

GND	GROUND
GR	GRADE
HDPE	HIGH DENSITY POLYETHYLENE
HDWL	HEADWALL
HORIZ	HORIZONTAL
HT	HEIGHT
ID	INSIDE DIAMETER
IN	INCH
INV	INVERT
INV EL	INVERT ELEVATION
IP	IRON PIPE
LB	POUND
LF	LINEAR FOOT
LFT	LEFT
LG	LONG, LENGTH
LIN	LINEAR
LP	LIGHT POLE
MATL	MATERIAL
MAX	MAXIMUM
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM, MINUTE
MISC	MISCELLANEOUS
N	NORTH
NA	NOT APPLICABLE
#, NO	NUMBER
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OPNG	OPENING
ORIG	ORIGINAL
P.B.	PLAT BOOK
PERM	PERMANENT
PERP	PERPENDICULAR
PG	PAGE
PI	POINT OF INTERSECTION
PK	PK NAIL
PL	PROPERTY LINE
PREFAB	PREFABRICATED
PRELIM	PRELIMINARY
PROJ	PROJECT
PROP	PROPERTY
PT	PRESSURE TREATED
PVC	POLYVINYL CHLORIDE
QTY	QUANTITY
QUAL	QUALITY
R	RADIUS
RC	REINFORCED CONCRETE
RCP	REINFORCED CONCRETE PIPE
REBAR	REINFORCING STEEL BARS
REF	REFERENCE

REINF	REINFORCE (D) (ING) (MENT)
REPL	REPLACE
REQ	REQUIRE
REQD	REQUIRED
REV	REVISION
RT	RIGHT
R/W	RIGHT OF WAY
S	SOUTH
SAN	SANITARY
SECT	SECTION
SF	SQUARE FOOT
SHT	SHEET
SIM	SIMILAR
SPEC	SPECIFICATION
SQ	SQUARE
SQ FT	SQUARE FOOT
SQ IN	SQUARE INCH
SQ YD	SQUARE YARD
SSMH	SANITARY SEWER MANHOLE
SST, SSTL	STAINLESS STEEL
STA	STATION
STD	STANDARD
STL	STEEL
STM	STORM
STN	STONE
STRUCT	STRUCTURAL
SWR	SEWER
SYM	SYMBOL
SYMM	SYMMETRICAL
TBA	TO BE ABANDONED
TBM	TEMPORARY BENCHMARK
TBR	TO BE REMOVED
TCE EASEMENT	TEMPORARY CONSTRUCTION
TEMP	TEMPORARY, TEMPERATURE
THK	THICKNESS
THRU	THROUGH
TOC, TC	TOP OF CONCRETE, TOP OF CURB
TOW	TOP OF WALL
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
UTIL	UTILITY
VAR	VARIES
VC	VITRIFIED CLAY PIPE
VERT	VERTICAL
W	WEST
W/	WITH
W/O	WITHOUT

SYMBOLS LEGEND

EXISTING FEATURES

EIP — EXISTING IRON PIN
FENCE (CHAINLINK)
FIRE HYDRANT
GAS LINE
750 — INDEX CONTOUR
INTERMEDIATE CONTOUR
LIGHT POLE
OE — OVERHEAD ELECTRIC
POWER POLE
PROPERTY/BOUNDARY PARK OUTER
PROPERTY/BOUNDARY PARK INNER
SS — SANITARY SEWER LINE
SANITARY SEWER MANHOLE
SIGN
TREE
TREELINE
W — WATER LINE
WM — WATER METER
WATER VALVE
MINIMUM SETBACK

PROPOSED FEATURES

1+00 2+00 — BASE LINE AND STATION
750 — INDEX CONTOUR
INTERMEDIATE CONTOUR
LIMITS OF DISTURBANCE
PERMANENT SEWER EASEMENT
SANITARY SEWER FORCE MAIN
SILT FENCE
SILT FENCE OUTLET
ROCK CHECK DAM
TCE — TEMPORARY CONSTRUCTION EASEMENT
TEMPORARY CONSTRUCTION ENTRANCE

NOT ALL SYMBOLS AND ABBREVIATIONS ARE USED

DRAFTING SYMBOLS

SYMBOL	DESCRIPTION
N	NORTH ARROW
DETAIL DESIGNATION; X or #; A-101; SHEET ON WHICH DETAIL IS DRAWN	DETAIL CALLOUT
SECTION DESIGNATION; A; A-101; SHEET ON WHICH SECTION IS DRAWN	SECTION CALLOUT

REVISIONS			
SYM.	DESCRIPTION	DATE	APP.

1 LOCATION PLAN
NOT TO SCALE

NORTH CAROLINA SEAL 028619 ROBERT L. BERNARD 07/23/2026
23 JULY 2026

C-001

MBFA NO.: 2505
Stantec

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
MARINE CORPS BASE
MCAS NEW RIVER, NORTH CAROLINA

DES. JR
DR. JR, MC
CHK. RLB
SUBMITTED BY:
DESIGN DIR. CHRIS MAAS
APPROVED: PWO OR OICC DATE
SATISFACTORY TO: DATE
Christopher Maas 29-Jul-2026

G575 LIFT STATION REPAIRS

GENERAL NOTES - G575

SIZE E1 | CODE IDENT. NO. 80091 | NAVFAC DRAWING NO. 60044574
CONSTR. CONTR. NO. N40085-26-B-0044
SCALE AS NOTED | SPEC. 05-26-0044 | SHEET 2 OF 40

File Path: c:\users\maichowdhury\dc\accdocs\stantec consulting\175578902_camplejeune_lsg575\project files\01_wip\04_civil\sheet_files\sheet_sets\78902_c-001-general notes
Plot Date: 10:13:30 AM

LEGEND

△ 900	SURVEY CONTROL	PVC	POLYVINYL CHLORIDE PIPE
Ⓢ	SEWER MANHOLE	DIP	DUCTILE IRON PIPE
⋈	SEWER VALVE	OEU	OTHER END UNKNOWN
CO	CLEAN OUT	FFE	FINISHED FLOOR ELEVATION
○	POWER POLE	CHL	CHAINLINK
M	UNKNOWN MANHOLE	UNK	UNKNOWN
	LIGHT POLE	SD	STORM PIPE
D	STORM MANHOLE	SAN	SANITARY SEWER PIPE
	BOLLARD	T	UNDERGROUND TELEPHONE
	TREE	G	UNDERGROUND GAS
	SIGN	OE	OVERHEAD ELECTRIC
INV	INVERT		UNDERGROUND ELECTRIC
FES	FLARED END SECTION		FENCE
RCP	REINFORCED CONCRETE PIPE		WOOD LINE
CMP	CORRUGATED METAL PIPE		

REVISIONS			
SYM.	DESCRIPTION	DATE	APP.

N

0 10' 20'

EL=13
60d NA

15465
N=362
E=2,46
EL=14
60d NA

5" CYPRESS
6" CYPRESS
INV=4.54'
TOP=14.04'
INV=4.63'
4"PVC - OEU
18"PVC
INV=4.62'
TOP=14.72'
INV=4.70'
INV=3.45'
TOP=13.24'
INV=3.66'
INV=3.13'
12" CYPRESS CLUSTER
5" CYPRESS
3" CYPRESS
6" CYPRESS
15" CYPRESS
7" CYPRESS
9" CYPRESS
10" CYPRESS
8" CYPRESS
12" CYPRESS
12" CYPRESS
24"PVC
INV=9.42'
TOP=14.53'
INV=5.02'
4"PVC - OEU
INV=5.12'
8"PVC
RECESSED PIPE
BOT CL INV=3.16'
INV=3.16'
INV=3.16'
TOP=14.29'
30"RCP
6'CHL
15148
CHEMICAL TANK
CONTROL PANEL
RELEASE VALVE
CONC
FH
SPIGOT
906
STEPS
PUMP
SAFETY SWITCH
PUMP CONTROL PANEL
SPIGOT
ASPHALT
INV=2.37'
TOP=13.70'
30"RCP
CO
INV=2.93
INV=2.93
905
FFE=14.22'
FFE=14.33'
FFE=14.19'
BUILDING
FFE=14.23'
FFE=14.21'
AC
FFE=14.17'
CONC
FUEL TANK
PLATFORM W/ HANDRAIL
FH
TOP=15.40'
INSIDE DROP
TOP INV=12.92'
BOT INV=11.18'
FLOW ARROWS ARE CONFIRMED FROM FIELD GUYS
POST
GATE
ASPHALT
GRAVEL
8"UNK
PIPES RECESSED
BOT INV=9.23'
TOP=14.18'
INV=9.70'
8"UNK - OEU
15465
8"DIP
WOODS
24"PVC
13'
10'
9'
14'
15'

I, BRUCE D. BEAVERS, CERTIFY THAT THIS SURVEY WAS COMPLETED UNDER MY DIRECT AND RESPONSIBLE CHARGE FROM AN ACTUAL FIELD SURVEY MADE UNDER MY SUPERVISION; THAT THIS GROUND SURVEY WAS PERFORMED AT THE 95% PERCENT CONFIDENCE LEVEL TO MEET FEDERAL GEOGRAPHIC DATA COMMITTEE STANDARDS; THAT THIS SURVEY WAS PERFORMED TO MEET THE REQUIREMENTS FOR A TOPOGRAPHIC/PLANIMETRIC SURVEY TO THE ACCURACY OF CLASS AA, AND THAT THE FIELD DATA WAS COMPLETED ON DECEMBER 3, 2025; THAT THE SURVEY MAPPING WAS COMPLETED ON DECEMBER 31, 2025; AND ALL COORDINATES ARE BASED ON NC 'NAD 83'/2011 AND ALL ELEVATIONS ARE BASED ON NAVD 88.

BRUCE D. BEAVERS PLS L-3451

PRELIMINARY

NOTES:

1. THE PURPOSE OF THIS MAP IS TO SHOW TOPOGRAPHIC FEATURES AND INFORMATION ONLY AND IS NOT TO BE USED FOR BOUNDARY OR PROPERTY OWNERSHIP INFORMATION.
2. THIS DRAWING REPRESENTS THE EXISTING CONDITIONS AS OF DECEMBER 3, 2025.
3. SURVEYED BY: STANTEC CONSULTING SERVICES INC.
4. SURVEY DATE: DECEMBER 31, 2025
5. HORIZONTAL DATUM: NAD83/2011 NC STATE PLANE US SURVEY FEET.
6. VERTICAL DATUM: NAVD 88, GEOID 12A.
7. THIS MAP DOES NOT VERIFY THE EXISTENCE OF, NOR CERTIFY THE LOCATION OF ANY JURISDICTIONAL WETLANDS THAT MAY EXIST ON OR NEAR THE PROPERTY.
8. ALL UNDERGROUND UTILITIES ARE SHOWN PER LEVEL "B".

File Path: c:\users\mchowdhury\dc\accdocs\stantec consulting\175378902_camplejeune_bg375\project files\01_wip\04_civil\sheet_files\sheet_set\378902_c-002_existing
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NORTH CAROLINA SEAL 028619 REGISTERED 07/23/2026 ROBERT L. BERNARD

23 JULY 2026

C-002

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DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND

MARINE CORPS BASE

MCAS NEW RIVER, NORTH CAROLINA

MBFA NO.: 2005

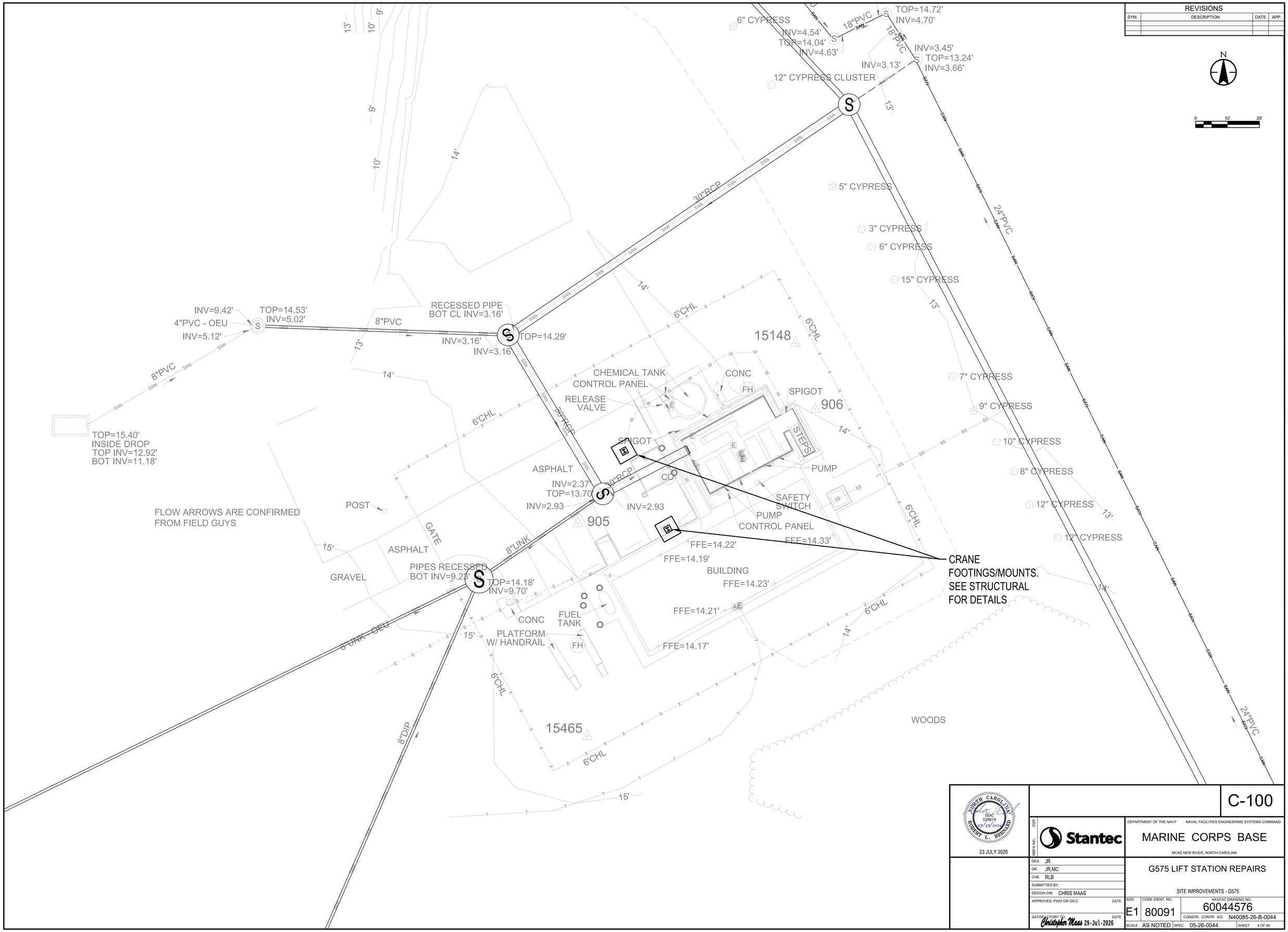
DES.	JR
DR.	JR, MC
CHK.	RLB
SUBMITTED BY:	
DESIGN DIR.	CHRIS MAAS
APPROVED: PWO OR OICC	DATE
SATISFACTORY TO:	DATE

Christopher Maas 29-Jul-2026

G575 LIFT STATION REPAIRS

EXISTING CONDITIONS SURVEY - G575

SIZE	CODE IDENT. NO.	NAVFAC DRAWING NO.
E1	80091	60044575
		CONSTR. CONTR. NO. N40085-26-B-0044
SCALE AS NOTED	SPEC. 05-26-0044	SHEET 3 OF 40



REVISIONS			
SYM.	DESCRIPTION	DATE	APP.

NORTH CAROLINA SEAL 028619 07/23/2026 ROBERT L. BERNARD

23 JULY 2026

C-100

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DEPARTMENT OF THE NAVY — NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND

MARINE CORPS BASE

MCAS NEW RIVER, NORTH CAROLINA

MBFA NO.: 2505

DES. JR
DR. JR,MC
CHK. RLB
SUBMITTED BY:
DESIGN DIR. CHRIS MAAS
APPROVED: PWO OR OICC — DATE
SATISFACTORY TO: Christopher Maas 29-Jul-2026 — DATE

G575 LIFT STATION REPAIRS

SITE IMPROVEMENTS - G575

SIZE	CODE IDENT. NO.	NAVFAC DRAWING NO.
E1	80091	60044576
		CONSTR. CONTR. NO. N40085-26-B-0044
SCALE AS NOTED	SPEC. 05-26-0044	SHEET 4 OF 40

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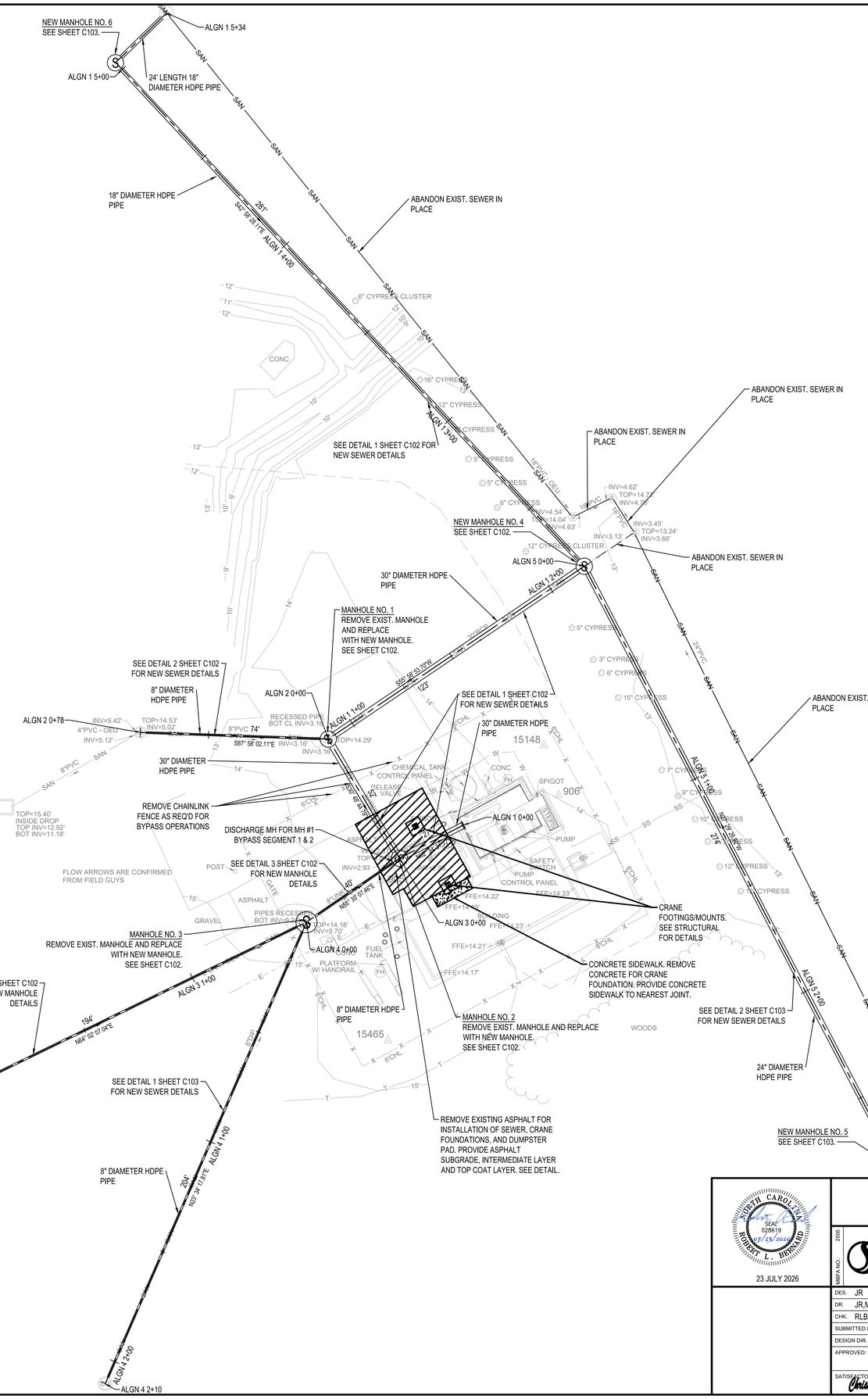
Plot Date: 4:11:25 PM

EXISTING LIFT STATION G-575 DEMOLITION NOTES:

IT IS AT THE DISCRETION OF THE UTILITIES DEPARTMENT OF CAMP LEJEUNE IF ANY OF THE MATERIALS WILL BE RETAINED FOR STORAGE / SALVAGED. ALL MATERIALS REMOVED AND NOT SALVAGED TO THE UTILITIES DEPARTMENT WILL BECOME THE PROPERTY OF THE CONTRACTOR AND WILL BE REMOVED FROM THE SITE AND DISPOSED OF PER STATE/LOCAL REGULATIONS.

REVISIONS			
SYM.	DESCRIPTION	DATE	APP.



LEGEND

△ 905	SURVEY CONTROL
	SEWER VALVE
CO	CLEANOUT
S	SEWER MANHOLE
FH	FIRE HYDRANT
	WATER VALVE
	BACK FLOW PREVENTER
	ELECTRIC BOX
	TRANSFORMER
AC	AIR CONDITIONER
	LIGHT POLE
	TREE
	BOLLARD
CONC	CONCRETE
INV	INVERT
PVC	POLYVINYL CHLORIDE PIPE
RCP	REINFORCED CONCRETE PIPE
UNK	UNKNOWN
OEU	OTHER END UNKNOWN
DIP	DUCTILE IRON PIPE
CHL	CHAINLINK
FFE	FINISHED FLOOR ELEVATION
BOT	BOTTOM
	WOODS
SAN	SANITARY SEWER
SS	SANITARY SEWER FORCED MAIN
X	FENCE
E	UNDERGROUND ELECTRIC
W	UNDERGROUND WATER
T	UNDERGROUND TELEPHONE
	UNKNOWN UNDERGROUND UTILITY

NORTH CAROLINA SEAL 028619 07/23/2026 ROBERT L. BERNARD

23 JULY 2026

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C-101

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND

MARINE CORPS BASE

MCAS NEW RIVER, NORTH CAROLINA

MBFA NO.: 2005

DES. JR
DR. JR,MC
CHK. RLB
SUBMITTED BY:
DESIGN DIR. CHRIS MAAS
APPROVED: PWO OR OICC DATE
SATISFACTORY TO: Christopher Maas 29-Jul-2026 DATE

G575 LIFT STATION REPAIRS

GRAVITY SEWER - G575

SIZE E1 | CODE IDENT. NO. 80091 | NAVFAC DRAWING NO. 60044577
CONSTR. CONTR. NO. N40085-26-B-0044
SCALE AS NOTED | SPEC. 05-26-0044 | SHEET 5 OF 40

File Path: c:\users\rnachowdhury\dc\accdocs\stantec consulting\175378902_camplejeune_lgs575\project files\01_wip\04_civil\sheet_files\sheet_sets\78902_c-101, 102...
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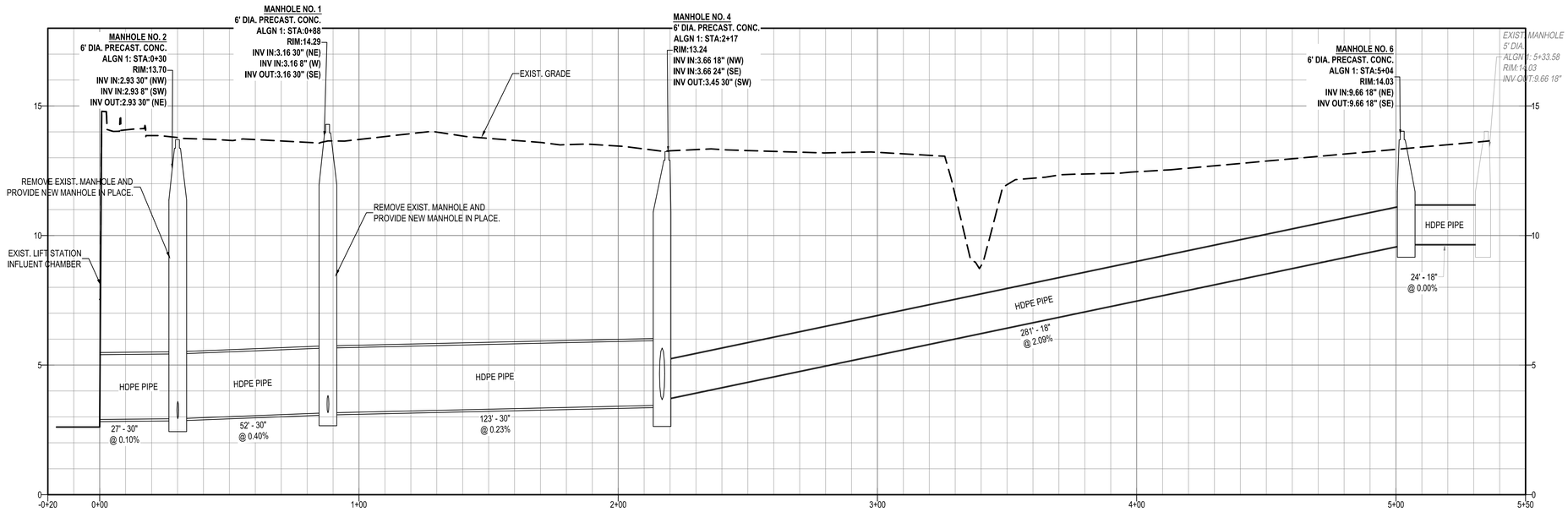
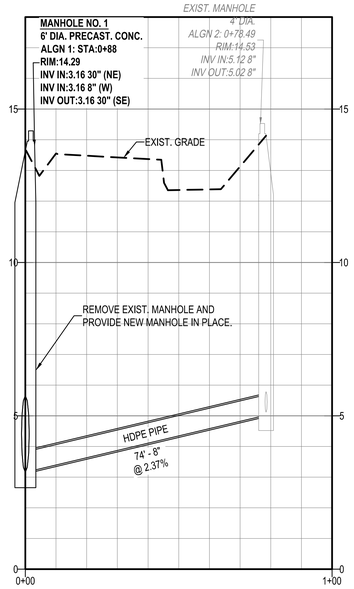
REVISIONS			
SYM.	DESCRIPTION	DATE	APP.



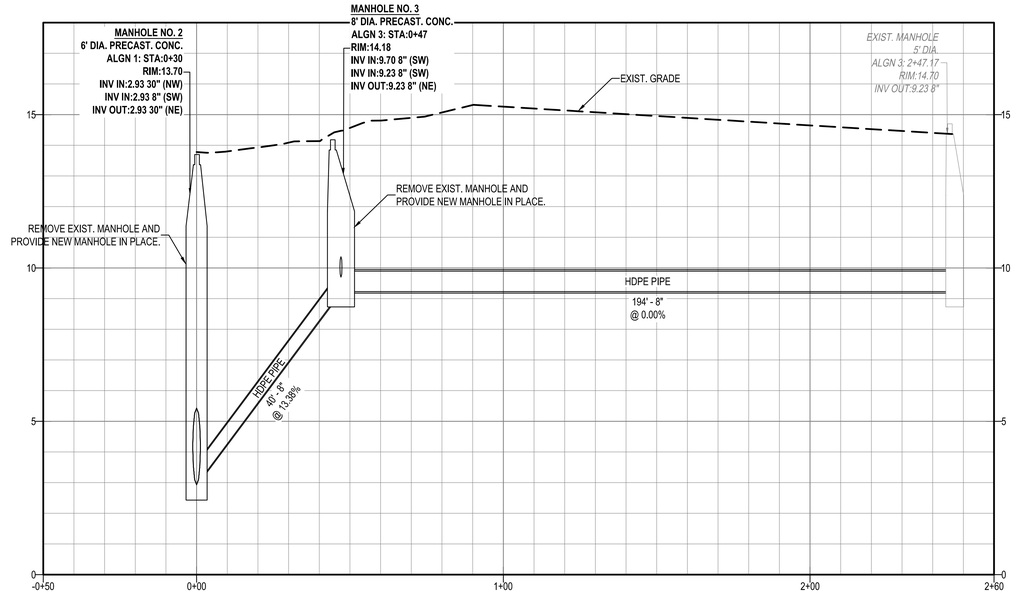
EXIST. LIFT STATION INFLUENT TO EXIST. MANHOLE NW OF NEW MANHOLE NO 4 (1 / C-102)

PROFILE
HORZ: 1" = 20'
VERT: 1" = 2'



NEW MANHOLE NO. 1 TO NW UPSTREAM EXIST. MANHOLE (2 / C-102)

PROFILE
HORZ: 1" = 20'
VERT: 1" = 2'



NEW MANHOLE NO. 2 THRU TO EXIST. MANHOLE SW OF NEW MANHOLE NO. 3 (3 / C-102)

PROFILE
HORZ: 1" = 20'
VERT: 1" = 2'

NORTH CAROLINA
SEAL
028619
07/23/2026
ROBERT L. BERNARD

23 JULY 2026

C-102

MBFA NO.: 2505

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DEPARTMENT OF THE NAVY — NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND

MARINE CORPS BASE

MCAS NEW RIVER, NORTH CAROLINA

DES.	JR
DR.	JR, MC
CHK.	RLB
SUBMITTED BY:	
DESIGN DIR.	CHRIS MAAS
APPROVED: PWO OR OICC	DATE
SATISFACTORY TO: Christopher Maas 29-Jul-2026	DATE

G575 LIFT STATION REPAIRS

PROFILE - MANHOLE REPAIRS - G575

SIZE	CODE IDENT. NO.	NAVFAC DRAWING NO.
E1	80091	60044578
		CONSTR. CONTR. NO. N40085-26-B-0044
SCALE AS NOTED	SPEC. 05-26-0044	SHEET 6 OF 40

File Path: c:\users\mdichowdhury\dc\accdocs\stantec consulting\175578902_complejeune_bg575\project files\01_wip\04_civil\sheet_files\sheet_sets\78902_c-101, 102...
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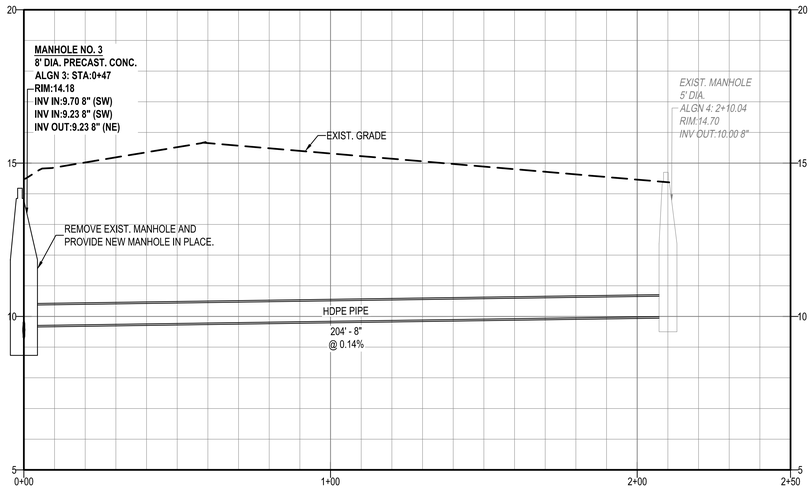
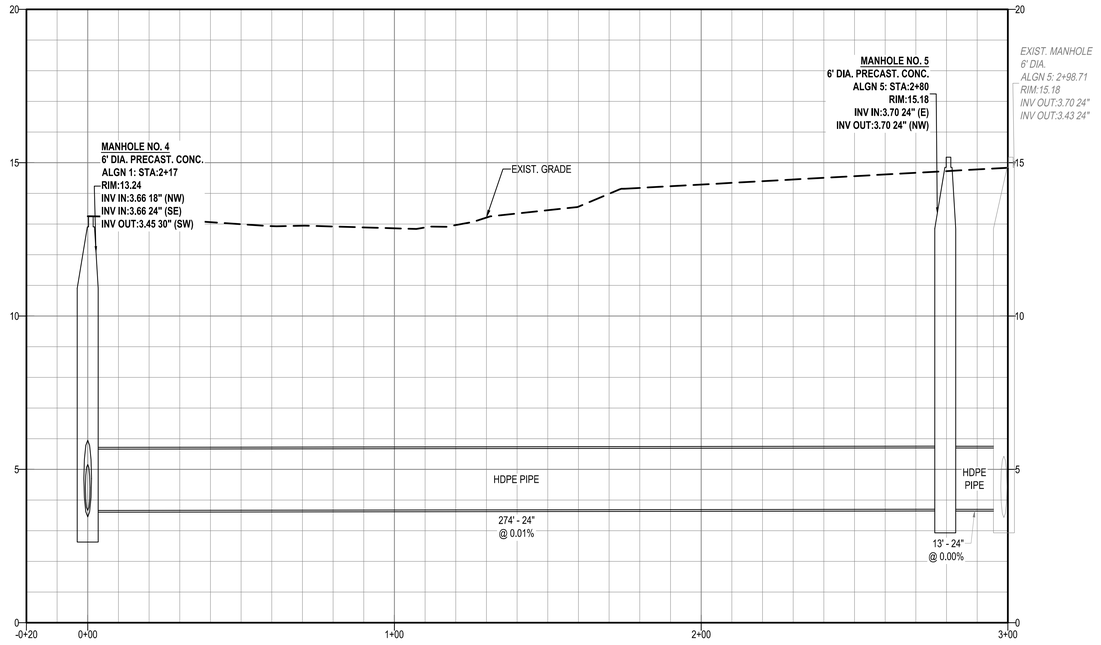
REVISIONS			
SYM.	DESCRIPTION	DATE	APP.



NEW MANHOLE NO. 3 TO SOUTH UPSTREAM EXIST. MANHOLE 1 C-103

PROFILE
HORZ: 1" = 20'
VERT: 1" = 2'



NEW MANHOLE NO. 4 TO SOUTH UPSTREAM EXIST. MANHOLE 2 C-103

PROFILE
HORZ: 1" = 20'
VERT: 1" = 2'

NORTH CAROLINA
SEAL
028619
ROBERT L. BERNARD
07/23/2026

23 JULY 2026

C-103

MBFA NO.: 2505

Stantec

DEPARTMENT OF THE NAVY — NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND

MARINE CORPS BASE

MCAS NEW RIVER, NORTH CAROLINA

DES. JR
DR. JR, MC
CHK. RLB
SUBMITTED BY:
DESIGN DIR. CHRIS MAAS
APPROVED: PWO OR OICC — DATE
SATISFACTORY TO: — DATE
Christopher Maas 29-Jul-2026

G575 LIFT STATION REPAIRS

PROFILE - MANHOLE REPAIRS - G575

SIZE	CODE IDENT. NO.	NAVFAC DRAWING NO.
E1	80091	60044579
		CONSTR. CONTR. NO. N40085-26-B-0044
SCALE AS NOTED	SPEC. 05-26-0044	SHEET 7 OF 40

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Plot Date: 4:15:25 PM

EXISTING LIFT STATION G-575 DEMOLITION NOTES:

IT IS AT THE DISCRETION OF THE UTILITIES DEPARTMENT OF CAMP LEJEUNE IF ANY OF THE MATERIALS WILL BE RETAINED FOR STORAGE / SALVAGED. ALL MATERIALS REMOVED AND NOT SALVAGED TO THE UTILITIES DEPARTMENT WILL BECOME THE PROPERTY OF THE CONTRACTOR AND WILL BE REMOVED FROM THE SITE AND DISPOSED OF PER STATE/LOCAL REGULATIONS.

TEMPORARY BYPASS PUMPING SYSTEM REQUIREMENTS:

- TEMPORARY BYPASS PUMPING MUST BE PROTECTED FROM DEMOLITION AND CONSTRUCTION ACTIVITIES OF THE PUMP STATION AND SEWER NETWORK REHAB AND MUST REMAIN ACTIVE DURING THE ENTIRE CONSTRUCTION DURATION UNTIL THE OWNER APPROVES AND ACCEPTS THE WORK.
- TEMPORARY BYPASS PUMPING OPERATIONS MUST BE PROVIDED IN ACCORDANCE WITH THE TEMPORARY BYPASS PUMPING SYSTEMS SPECIFICATION, THESE NOTES, THE DRAWINGS, AND ALL OTHER REQUIREMENTS OF THE CONTRACT DOCUMENTS.
- THE BYPASS PUMPS MUST BE PROTECTED FROM FLOODING (100-YEAR FLOOD ELEVATION / BASE FLOOD ELEVATION (BFE).
- ALL BYPASS PUMPING COMPONENTS, LISTED AND SHOWN ON THE PLANS, ARE SCHEMATIC AND REPRESENT APPROXIMATE QUANTITIES AND SIZES.
- PROVIDE A FINAL DESIGN INDICATING ALL COMPONENTS OF THE BYPASS PUMPING SYSTEM, INCLUDING NUMBER AND SIZE OF PUMPS, BYPASS PIPING DIAMETERS, PROPOSED PIPE MATERIAL, AND ALL OTHER APPURTENANCES AND ACCESSORIES REQUIRED FOR A COMPLETE AND OPERABLE BYPASS SYSTEM.
- FIELD VERIFY AND CONFIRM LOCATIONS AND DEPTHS OF ALL MANHOLES AND/OR STRUCTURES PROPOSED TO BE USED DURING BYPASS OPERATIONS.

PHASE 1 - CONSTRUCTION

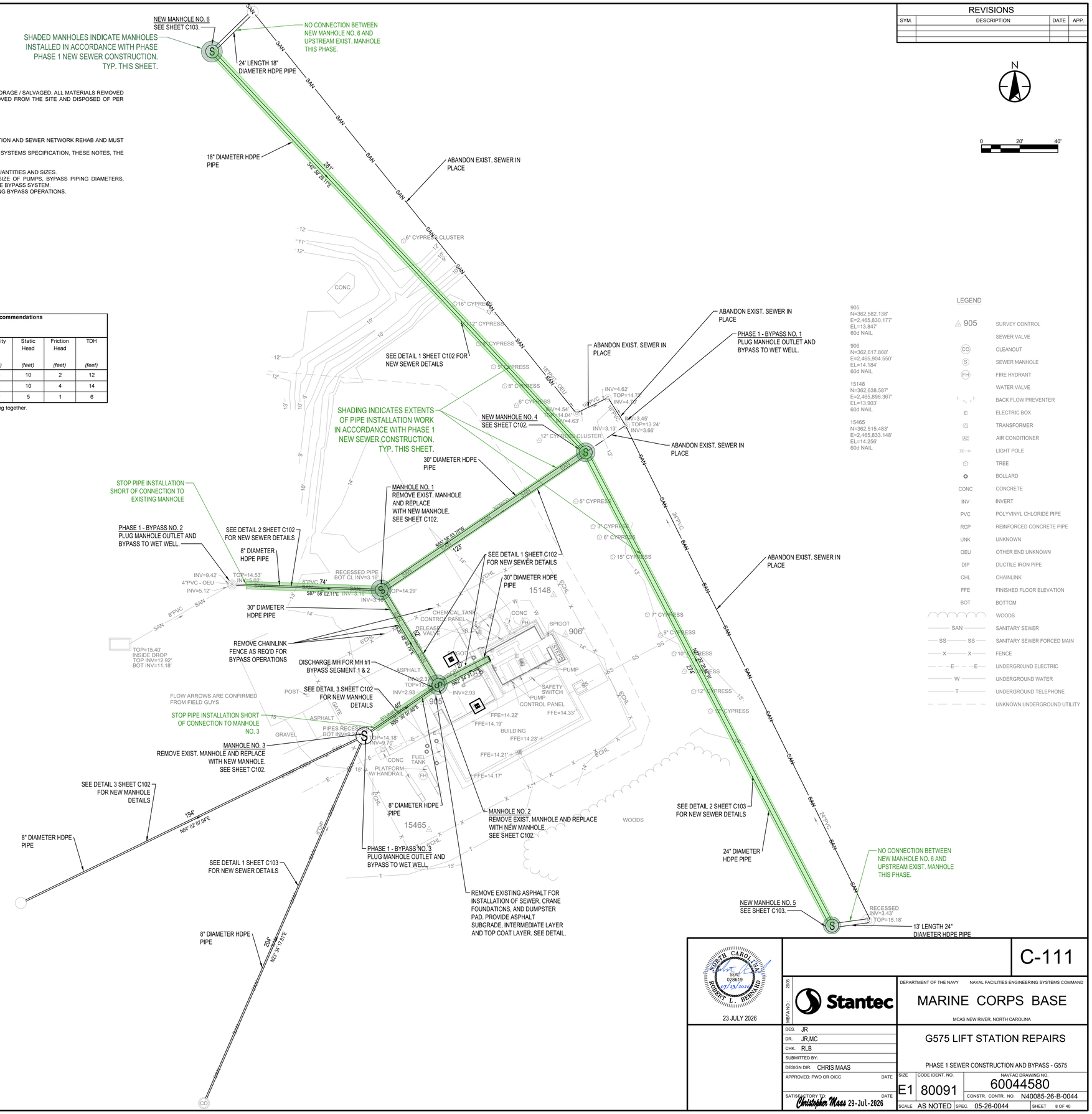
- PROVIDE NEW MANHOLE NO. 1
- PROVIDE NEW MANHOLE NO. 2
- PROVIDE NEW MANHOLE NO. 4
- PROVIDE NEW MANHOLE NO. 5
- PROVIDE NEW MANHOLE NO. 6
- PROVIDE NEW 30", 8", 18" AND 24" PIPE.

Description (See Plans this Sheet)	Bypass Manhole (Suction)			Bypass Manhole Incoming Pipe Diameters		Bypass Discharge Location	Bypass System Recommendations						
	Rim	Inv In	Inv Out	Pipe 1	Pipe 2		Bypass Design Flow[1]	Estimated Bypass Pipe Length	Pipe Diameter	Velocity	Static Head	Friction Head	TDH
	(feet)	*(feet)*	*(feet)*	*(inches)*	*(inches)*		*(gpm)*	*(feet)*	*(inches)*	*(fps)*	*(feet)*	*(feet)*	*(feet)*
Phase 1 - Bypass No. 1	13.24	3.66	3.45	18	24	Wetwell	4,000	200	16	6.4	10	2	12
Phase 1 - Bypass No. 2	14.53	5.12	5.02	8	4	Wetwell	1,000	200	8	6.4	10	4	14
Phase 1 - Bypass No. 3	14.18	9.7	9.23	8	8	Wetwell	2,000	100	12	5.7	5	1	6

Footnote No. 1: The bypass design flow shall be split between to equally sized pumps capabable of pumping the total listed flow when opearting together.
Example: Design Flow = 4,000 GPM. Provide two pumps rated at 2,000 GPM each.

INDICATES EXTENTS OF WORK TO BE DONE THIS PHASE. REFER TO "PHASE 1 - CONSTRUCTION" ABOVE FOR DETAILS.

INDICATES MANHOLES INSTALLED THIS PHASE. REFER TO "PHASE 1 - CONSTRUCTION" ABOVE FOR DETAILS.



REVISIONS			
SYM.	DESCRIPTION	DATE	APP.

NORTH CAROLINA SEAL 028619 07/23/2026 ROBERT L. BERNARD
23 JULY 2026

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C-111

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
MARINE CORPS BASE
MCAS NEW RIVER, NORTH CAROLINA
MBFA NO.: 2505

G575 LIFT STATION REPAIRS
PHASE 1 SEWER CONSTRUCTION AND BYPASS - G575

DES.	JR
DR.	JR,MC
CHK.	RLB
SUBMITTED BY:	
DESIGN DIR.	CHRIS MAAS
APPROVED: PWO OR OICC	DATE
SATISFACTORY TO: Christopher Maas	DATE 29-Jul-2026

SIZE	CODE IDENT. NO.	NAVFAC DRAWING NO.
E1	80091	60044580
		CONSTR. CONTR. NO. N40085-26-B-0044
SCALE AS NOTED	SPEC. 05-26-0044	SHEET 8 OF 40

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Plot Date: 4:16:38 PM

EXISTING LIFT STATION G-575 DEMOLITION NOTES:

IT IS AT THE DISCRETION OF THE UTILITIES DEPARTMENT OF CAMP LEJEUNE IF ANY OF THE MATERIALS WILL BE RETAINED FOR STORAGE / SALVAGED. ALL MATERIALS REMOVED AND NOT SALVAGED TO THE UTILITIES DEPARTMENT WILL BECOME THE PROPERTY OF THE CONTRACTOR AND WILL BE REMOVED FROM THE SITE AND DISPOSED OF PER STATE/LOCAL REGULATIONS.

TEMPORARY BYPASS PUMPING SYSTEM REQUIREMENTS:

- TEMPORARY BYPASS PUMPING MUST BE PROTECTED FROM DEMOLITION AND CONSTRUCTION ACTIVITIES OF THE PUMP STATION AND SEWER NETWORK REHAB AND MUST REMAIN ACTIVE DURING THE ENTIRE CONSTRUCTION DURATION UNTIL THE OWNER APPROVES AND ACCEPTS THE WORK.
- TEMPORARY BYPASS PUMPING OPERATIONS MUST BE PROVIDED IN ACCORDANCE WITH THE TEMPORARY BYPASS PUMPING SYSTEMS SPECIFICATION, THESE NOTES, THE DRAWINGS, AND ALL OTHER REQUIREMENTS OF THE CONTRACT DOCUMENTS.
- THE BYPASS PUMPS MUST BE PROTECTED FROM FLOODING (100-YEAR FLOOD ELEVATION / BASE FLOOD ELEVATION (BFE).
- ALL BYPASS PUMPING COMPONENTS, LISTED AND SHOWN ON THE PLANS, ARE SCHEMATIC AND REPRESENT APPROXIMATE QUANTITIES AND SIZES.
- PROVIDE A FINAL DESIGN INDICATING ALL COMPONENTS OF THE BYPASS PUMPING SYSTEM, INCLUDING NUMBER AND SIZE OF PUMPS, BYPASS PIPING DIAMETERS, PROPOSED PIPE MATERIAL, AND ALL OTHER APPURTENANCES AND ACCESSORIES REQUIRED FOR A COMPLETE AND OPERABLE BYPASS SYSTEM.
- FIELD VERIFY AND CONFIRM LOCATIONS AND DEPTHS OF ALL MANHOLES AND/OR STRUCTURES PROPOSED TO BE USED DURING BYPASS OPERATIONS.

PHASE 2 - CONSTRUCTION

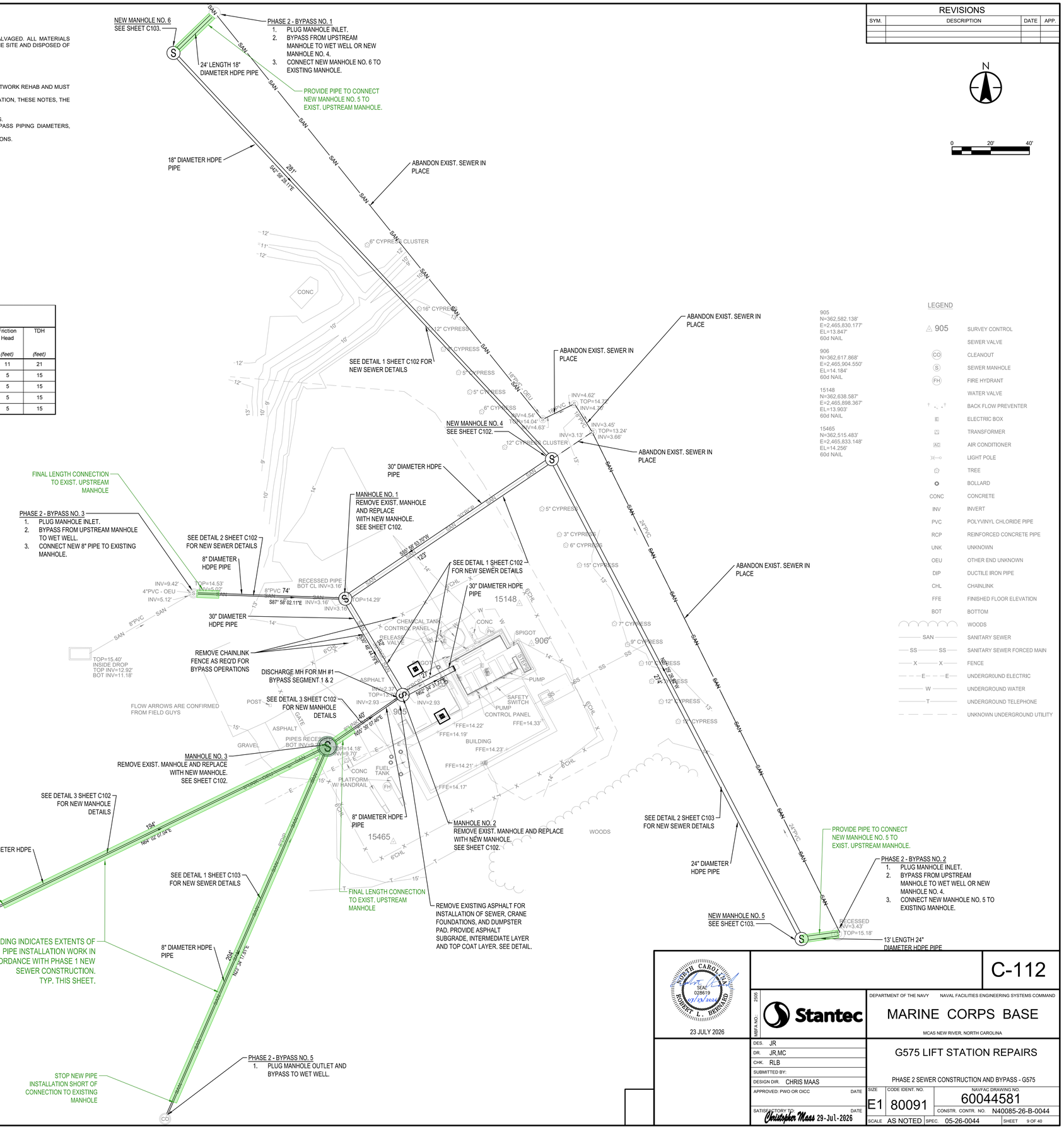
1. CONSTRUCT NEW PIPE FROM MANHOLE NO. 6 TO EXISTING MANHOLE.
2. CONSTRUCT NEW PIPE FROM MANHOLE NO. 5 TO EXISTING MANHOLE.
3. CONNECT NEW 8" PIPE FROM NEW MANHOLE NO. 1 TO EXISTING MANHOLE UPSTREAM WEST OF NEW MANHOLE NO. 1.
4. PROVIDE NEW MANHOLE NO. 3
5. CONNECT NEW 8" PIPE FROM NEW MANHOLE NO. 2 TO NEW MANHOLE NO. 3.
6. PROVIDE NEW 8" LINES UPSTREAM OF NEW MANHOLE NO. 3.

Description (See Plans this Sheet)	Bypass Manhole (Suction)			Bypass Manhole Incoming Pipe Diameters		Bypass Discharge Location	Bypass System Recommendations						
	Rim	Inv In	Inv Out	Pipe 1	Pipe 2		Bypass Design Flow[1]	Estimated Bypass Pipe Length	Pipe Diameter	Velocity	Static Head	Friction Head	TDH
	(feet)	(feet)	(feet)	(inches)	(inches)		(gpm)	(feet)	(inches)	(fps)	(feet)	(feet)	(feet)
Phase 2 - Bypass No. 1	Field Verify			18		New MH No 4	3,000	500	12	8.5	10	11	21
Phase 2 - Bypass No. 2	Field Verify			24		New MH No 4	2,000	500	12	5.7	10	5	15
Phase 2 - Bypass No. 3	Field Verify			Field Verify		Wetwell	1,000	250	8	6.4	10	5	15
Phase 2 - Bypass No. 4	Field Verify			Field Verify		Wetwell	1,000	250	8	6.4	10	5	15
Phase 2 - Bypass No. 5	Field Verify			Field Verify		Wetwell	1,000	250	8	6.4	10	5	15

Footnote No. 1: The bypass design flow shall be split between to equally sized pumps capabable of pumping the total listed flow when opearting together.
Example: Design Flow = 4,000 GPM. Provide two pumps rated at 2,000 GPM each.

INDICATES EXTENTS OF WORK TO BE DONE THIS PHASE. REFER TO "PHASE 2 - CONSTRUCTION" ABOVE FOR DETAILS.

INDICATES MANHOLES INSTALLED THIS PHASE. REFER TO "PHASE 2 - CONSTRUCTION" ABOVE FOR DETAILS.



REVISIONS			
SYM.	DESCRIPTION	DATE	APP.

LEGEND

△ 905	SURVEY CONTROL
	SEWER VALVE
CO	CLEANOUT
S	SEWER MANHOLE
FH	FIRE HYDRANT
	WATER VALVE
	BACK FLOW PREVENTER
E	ELECTRIC BOX
T	TRANSFORMER
AC	AIR CONDITIONER
	LIGHT POLE
	TREE
	BOLLARD
CONC	CONCRETE
INV	INVERT
PVC	POLYVINYL CHLORIDE PIPE
RCP	REINFORCED CONCRETE PIPE
UNK	UNKNOWN
OEU	OTHER END UNKNOWN
DIP	DUCTILE IRON PIPE
CHL	CHAINLINK
FFE	FINISHED FLOOR ELEVATION
BOT	BOTTOM
	WOODS
SAN	SANITARY SEWER
SS	SANITARY SEWER FORCED MAIN
X	FENCE
E	UNDERGR0UND ELECTRIC
W	UNDERGROUND WATER
T	UNDERGROUND TELEPHONE
	UNKNOWN UNDERGROUND UTILITY

NORTH CAROLINA SEAL 028619 ROBERT L. BERNARD 07/23/2026
23 JULY 2026

C-112

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DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND

MARINE CORPS BASE
MCAS NEW RIVER, NORTH CAROLINA

G575 LIFT STATION REPAIRS

PHASE 2 SEWER CONSTRUCTION AND BYPASS - G575

DES.	JR
DR.	JR,MC
CHK.	RLB
SUBMITTED BY:	
DESIGN DIR.	CHRIS MAAS
APPROVED: PWO OR OICC	DATE
SATISFACTORY TO:	DATE

Christopher Maas 29-Jul-2026

SIZE	CODE IDENT. NO.	NAVFAC DRAWING NO.	
E1	80091	60044581	
		CONSTR. CONTR. NO.	N40085-26-B-0044
SCALE	AS NOTED	SPEC. 05-26-0044	SHEET 9 OF 40

UIBFA NO.: 2505

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Plot Date: 4:16:54 PM

EXISTING LIFT STATION G-575 DEMOLITION NOTES:

IT IS AT THE DISCRETION OF THE UTILITIES DEPARTMENT OF CAMP LEJEUNE IF ANY OF THE MATERIALS WILL BE RETAINED FOR STORAGE / SALVAGED. ALL MATERIALS REMOVED AND NOT SALVAGED TO THE UTILITIES DEPARTMENT WILL BECOME THE PROPERTY OF THE CONTRACTOR AND WILL BE REMOVED FROM THE SITE AND DISPOSED OF PER STATE/LOCAL REGULATIONS.

TEMPORARY BYPASS PUMPING SYSTEM REQUIREMENTS:

- TEMPORARY BYPASS PUMPING MUST BE PROTECTED FROM DEMOLITION AND CONSTRUCTION ACTIVITIES OF THE PUMP STATION AND SEWER NETWORK REHAB AND MUST REMAIN ACTIVE DURING THE ENTIRE CONSTRUCTION DURATION UNTIL THE OWNER APPROVES AND ACCEPTS THE WORK.
- TEMPORARY BYPASS PUMPING OPERATIONS MUST BE PROVIDED IN ACCORDANCE WITH THE TEMPORARY BYPASS PUMPING SYSTEMS SPECIFICATION, THESE NOTES, THE DRAWINGS, AND ALL OTHER REQUIREMENTS OF THE CONTRACT DOCUMENTS.
- THE BYPASS PUMPS MUST BE PROTECTED FROM FLOODING (100-YEAR FLOOD ELEVATION / BASE FLOOD ELEVATION (BFE).
- ALL BYPASS PUMPING COMPONENTS, LISTED AND SHOWN ON THE PLANS, ARE SCHEMATIC AND REPRESENT APPROXIMATE QUANTITIES AND SIZES.
- PROVIDE A FINAL DESIGN INDICATING ALL COMPONENTS OF THE BYPASS PUMPING SYSTEM, INCLUDING NUMBER AND SIZE OF PUMPS, BYPASS PIPING DIAMETERS, PROPOSED PIPE MATERIAL, AND ALL OTHER APPURTENANCES AND ACCESSORIES REQUIRED FOR A COMPLETE AND OPERABLE BYPASS SYSTEM.
- FIELD VERIFY AND CONFIRM LOCATIONS AND DEPTHS OF ALL MANHOLES AND/OR STRUCTURES PROPOSED TO BE USED DURING BYPASS OPERATIONS.

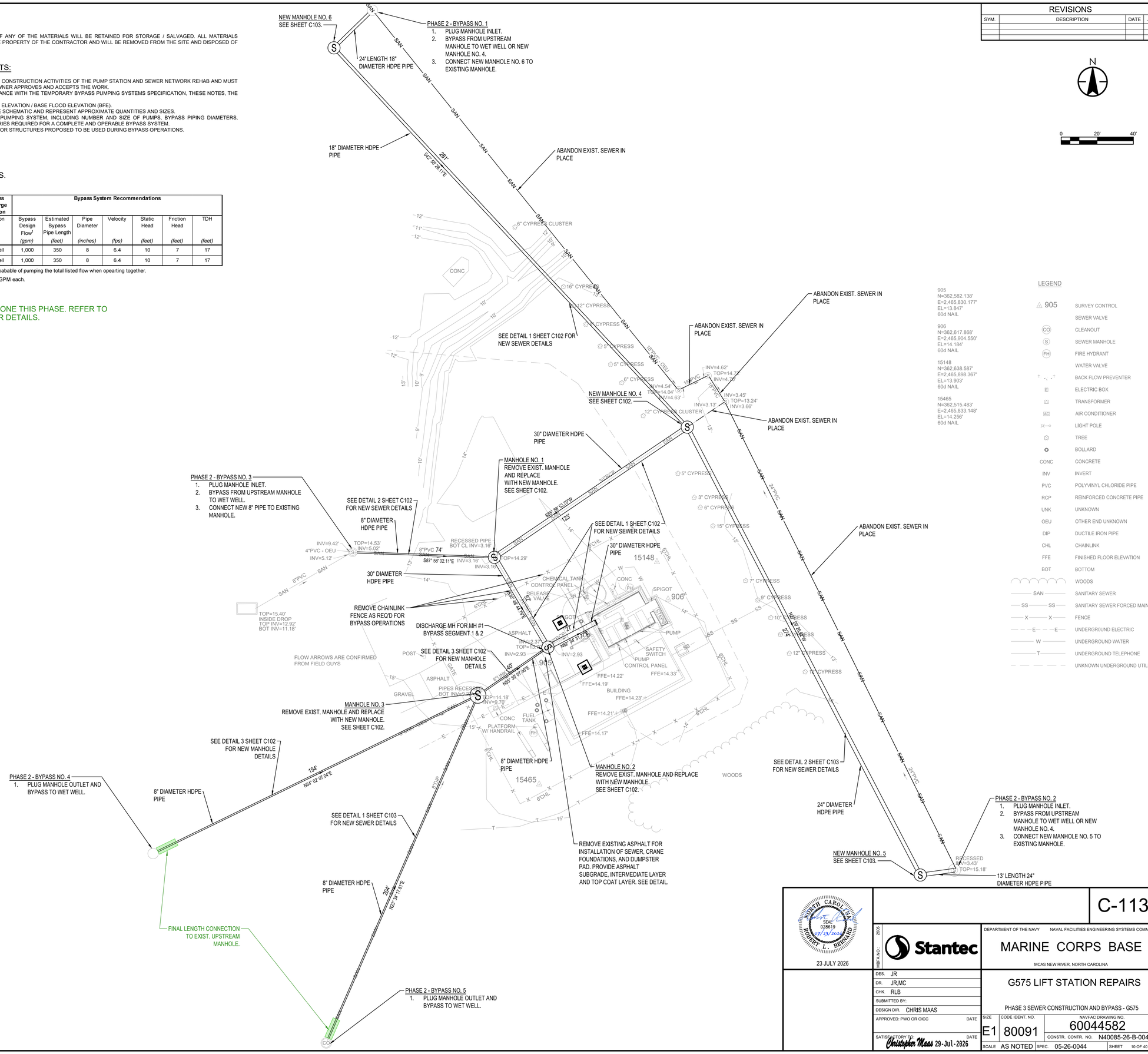
PHASE 3 - CONSTRUCTION

1. CONSTRUCT NEW 8" LINES TO EXISTING MANHOLES.

Description (See Plans this Sheet)	Bypass Manhole (Suction)			Bypass Manhole Incoming Pipe Diameters		Bypass Discharge Location	Bypass System Recommendations						
	Rim (feet)	Inv In (feet)	Inv Out (feet)	Pipe 1 (inches)	Pipe 2 (inches)	Location	Bypass Design Flow[1] (gpm)	Estimated Bypass Pipe Length (feet)	Pipe Diameter (inches)	Velocity (fps)	Static Head (feet)	Friction Head (feet)	TDH (feet)
Phase 3 - Bypass No. 1	Field Verify			Field Verify		Wetwell	1,000	350	8	6.4	10	7	17
Phase 3 - Bypass No. 2	Field Verify			Field Verify		Wetwell	1,000	350	8	6.4	10	7	17

Footnote No. 1: The bypass design flow shall be split between to equally sized pumps capabable of pumping the total listed flow when opearting together.
Example: Design Flow = 4,000 GPM. Provde two pumps rated at 2,000 GPM each.

INDICATES EXTENTS OF WORK TO BE DONE THIS PHASE. REFER TO "PHASE 3 - CONSTRUCTION" ABOVE FOR DETAILS.



REVISIONS

SYM.	DESCRIPTION	DATE	APP.

N

0 20' 40'

NORTH CAROLINA SEAL 028619 07/23/2026 ROBERT L. BERNARD

23 JULY 2026

C-113

Stantec

MBFA NO.: 2505

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND

MARINE CORPS BASE

MCAS NEW RIVER, NORTH CAROLINA

DES.	JR
DR.	JR,MC
CHK.	RLB
SUBMITTED BY:	
DESIGN DIR.	CHRIS MAAS
APPROVED: PWO OR OICC	DATE
SATISFACTORY TO: Christopher Maas 29-Jul-2026	DATE

G575 LIFT STATION REPAIRS

PHASE 3 SEWER CONSTRUCTION AND BYPASS - G575

SIZE	CODE IDENT. NO.	NAVFAC DRAWING NO.
E1	80091	60044582
		CONSTR. CONTR. NO. N40085-26-B-0044
SCALE AS NOTED	SPEC. 05-26-0044	SHEET 10 OF 40

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REVISIONS			
SYM.	DESCRIPTION	DATE	APP.

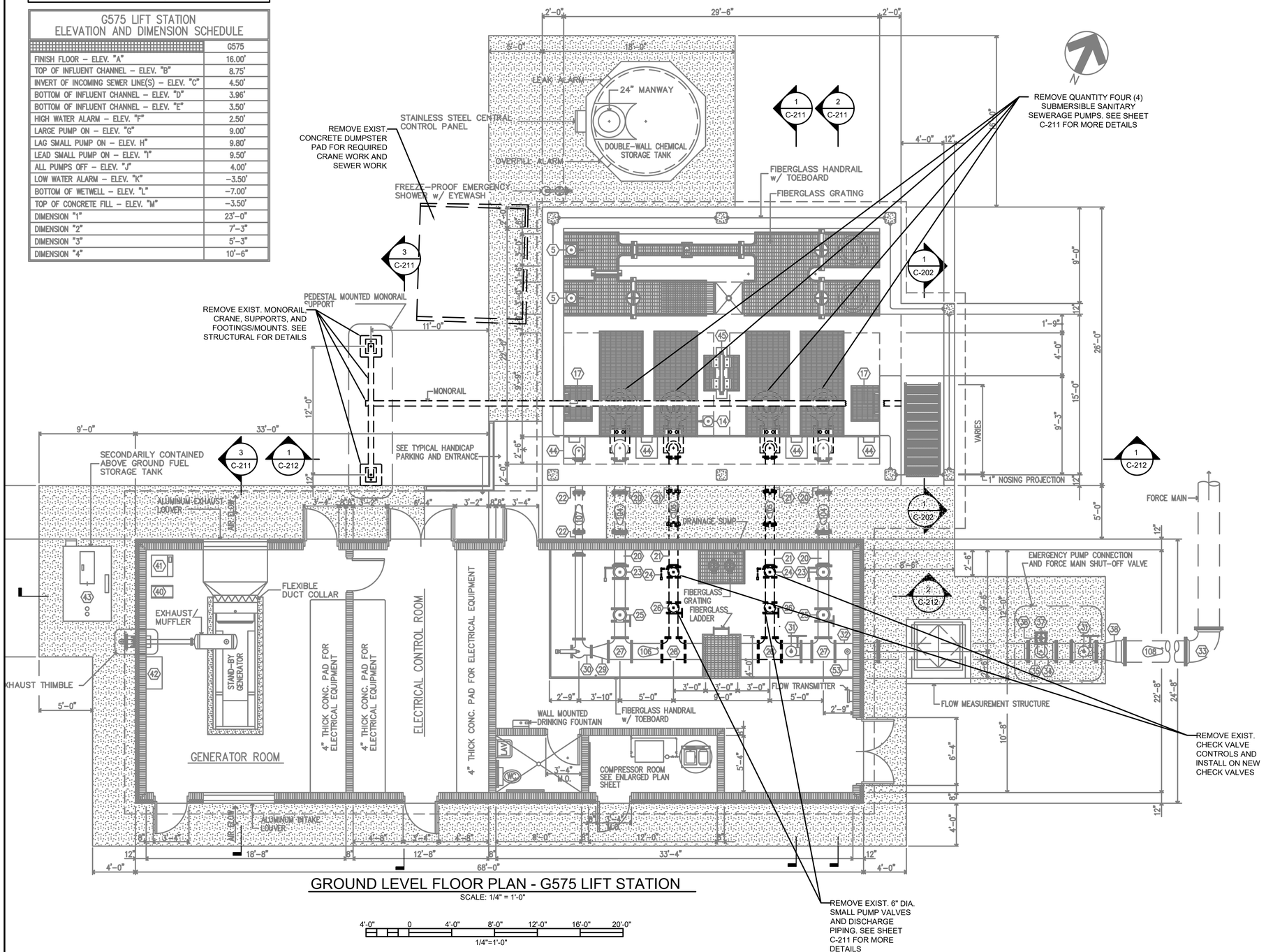
NOTES:

1. THE PURPOSE OF THIS SHEET IS TO SHOW THE EXISTING LIFT STATION (G575) IN ACCORDANCE WITH RECORD DRAWINGS PROVIDED BY THE OWNER.
2. THE INFORMATION SHOWN ON THIS SHEET IS PROVIDED AS A REPRESENTATION OF THE EXISTING FACILITY FOR INFORMATION ONLY. THE ENGINEER NOR OWNER DO NOT WARRANTY THAT SOME DETAILS MAY DIFFER FROM SHOWN.

EQUIPMENT ITEMS, QUANTITIES AND SIZES SHOWN IN THE EQUIPMENT SCHEDULE ARE FROM EXISTING RECORD DRAWINGS AND ARE PROVIDED FOR INFORMATION ONLY. THE SCHEDULE IS NOT INTENDED TO BE A COMPLETE LISTING OF EQUIPMENT. VERIFY EXISTING EQUIPMENT.

G575 LIFT STATION ELEVATION AND DIMENSION SCHEDULE

	G575
FINISH FLOOR – ELEV. "A"	16.00'
TOP OF INFLUENT CHANNEL – ELEV. "B"	8.75'
INVERT OF INCOMING SEWER LINE(S) – ELEV. "C"	4.50'
BOTTOM OF INFLUENT CHANNEL – ELEV. "D"	3.96'
BOTTOM OF INFLUENT CHANNEL – ELEV. "E"	3.50'
HIGH WATER ALARM – ELEV. "F"	2.50'
LARGE PUMP ON – ELEV. "G"	9.00'
LAG SMALL PUMP ON – ELEV. "H"	9.80'
LEAD SMALL PUMP ON – ELEV. "I"	9.50'
ALL PUMPS OFF – ELEV. "J"	4.00'
LOW WATER ALARM – ELEV. "K"	–3.50'
BOTTOM OF WETWELL – ELEV. "L"	–7.00'
TOP OF CONCRETE FILL – ELEV. "M"	–3.50'
DIMENSION "1"	23'–0"
DIMENSION "2"	7'–3"
DIMENSION "3"	5'–3"
DIMENSION "4"	10'–6"



GROUND LEVEL FLOOR PLAN - G575 LIFT STATION

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

4'-0" 0 4'-0" 8'-0" 12'-0" 16'-0" 20'-0"

1/4"=1'-0"

EQUIPMENT ITEMS, QUANTITIES AND SIZES SHOWN IN THE EQUIPMENT SCHEDULE ARE FROM EXISTING RECORD DRAWINGS AND ARE PROVIDED FOR INFORMATION ONLY. THE SCHEDULE IS NOT INTENDED TO BE A COMPLETE LISTING OF EQUIPMENT. VERIFY EXISTING EQUIPMENT.

G575 LIFT STATION EQUIPMENT SCHEDULE

ITEM NO.	QUANTITY REQUIRED	DESCRIPTION	SIZE GEIGER
1	1	D.I. (M.J. x P.E.) WALL PIPE	30" DIA.
2	1	D.I. (M.J. x P.E.) WALL PIPE	14" DIA.
3	1	FABRICATED STAINLESS STEEL SLIDE GATE	30" x 30"
4	1	FABRICATED STAINLESS STEEL SLIDE GATE	14" x 14"
5	--	CRANK OPERATOR FOR SLIDE GATE WITH CLEAR PLASTIC STEM COVER	2 REQ'D.
6	1	STAINLESS STEEL EMBEDDED CHANNEL SLIDE GATE	3'–0"W x 4'–6"H
7	1	STAINLESS STEEL EMBEDDED CHANNEL HAND GATE	9"W x 4'–6"H
7A	1	STAINLESS STEEL EMBEDDED CHANNEL HAND GATE	9"W x 5'–0"H
8	1	STAINLESS STEEL EMBEDDED CHANNEL HAND GATE	2'–0"W x 4'–6"H
9	1	ELECTRIC MOTOR DRIVEN, CHANNEL MOUNTED MACERATOR	
10	1	STAINLESS STEEL BAR SCREEN	
11	2	STAINLESS STEEL EMBEDDED CHANNEL SLIDE GATE	3'–0"W x 5'–0"H
12	3	FLANGED D.I. BASE 90 DEGREE BEND	18" DIA.
13	1	FABRICATED STAINLESS STEEL SLIDE GATE	24" x 24"
14	1	CRANK OPERATOR FOR SLIDE GATE WITH CLEAR PLASTIC STEM COVER	
15	2	PRESSURE TRANSDUCER MOUNTED ON SLIDE REMOVAL SYSTEM	
16	2	REDUNDANT FLOAT SWITCH FOR HIGH LEVEL AND LOW LEVEL ALARM	
17	2	FIBERGLASS LADDER WITH FALL PREVENTION SYSTEM	
18	2	SUBMERSIBLE PUMPS NO. 1 AND NO. 4	
19	2	SUBMERSIBLE PUMPS NO. 2 AND NO. 3	
20	4	D.I. (P.E x M.J.) WALL PIPE WITH M.J. RESTRAINT	12" DIA.
21	4	D.I. (P.E x M.J.) WALL PIPE WITH M.J. RESTRAINT	6" DIA.
22	2	D.I. (P.E x M.J.) WALL PIPE WITH M.J. RESTRAINT	6" DIA.
23	2	CHECK VALVE – LEVER AND WEIGHT	12"
24	2	CHECK VALVE – LEVER AND WEIGHT	6"
25	2	HANDWHEEL ACTUATED ECCENTRIC PLUG VALVE	12"
26	2	HANDWHEEL ACTUATED ECCENTRIC PLUG VALVE	6"
27	2	D.I. (FLANGED x FLANGED x FLANGED) TEE	16"x16"x12"
28	2	D.I. (FLANGED x FLANGED x FLANGED) TEE	16"x16"x6"
29	1	D.I. FLANGED CONCENTRIC REDUCER	16"x6"
30	1	ELBOW BODY SEWAGE SURGE RELIEF VALVE	6"
31	1	HANDWHEEL ACTUATED ECCENTRIC PLUG VALVE	16"
32	1	D.I. (FLANGED x M.J.) WALL PIPE WITH 2" TAP FOR AIR RELEASE VALVE	16" DIA.
33	1	D.I. (M.J. x M.J.) 90 DEGREE ELBOW w/ M.J. RETAINER GLANDS	16"
34	1	ECCENTRIC PLUG VALVE w/ EXTENDED BONNET ACTUATOR	16"
35	1	D.I. (M.J. x M.J. x M.J.) TEE w/ M.J. RETAINER GLANDS	16"x16"x8"
36	1	FLANGED RESILIENT SEAT GATE VALVE	8"
37	1	D.I. BLIND FLANGE	8"
38	1	D.I. (P.E. x M.J.) CONCENTRIC REDUCER w/ M.J. RETAINER GLANDS	------
39	1	GEARED TROLLEY ELECTRIC WIRE ROPE HOIST	2 TON
40	1	RETURN FUEL PUMP	
41	1	DAY TANK SYSTEM	100 GALLON
42	1	BATTERY CHARGER	
43	1	SECONDARILY CONTAINED ABOVE GROUND FUEL STORAGE TANK	500 GALLON
44	4	WASTEWATER PUMP ELECTRICAL JUNCTION BOX	
45	1	FIBERGLASS SUPPORT FOR LEVEL CONTROL EQUIPMENT	
46			
47	4	D.I. FLANGE ADAPTER	12"
48	4	D.I. FLANGE ADAPTER	6"
49	2	D.I. FLANGE ADAPTER	6"
50	4	WALL PENETRATION SEAL WITH THERMOPLASTIC WALL SLEEVE	12"
51	4	WALL PENETRATION SEAL WITH THERMOPLASTIC WALL SLEEVE	6"
52	2	WALL PENETRATION SEAL WITH THERMOPLASTIC WALL SLEEVE	6"
53	1	SEWAGE AIR RELEASE VALVE	2"

NORTH CAROLINA SEAL 028619 ROBERT L. BERNARD 07/23/2026

23 JULY 2026

C-201

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DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND

MARINE CORPS BASE

MCAS NEW RIVER, NORTH CAROLINA

MBFA NO.: 2505

DES. JR
DR. JR, MC
CHK. RLB
SUBMITTED BY:
DESIGN DIR. CHRIS MAAS
APPROVED: PWO OR OICC DATE
SATISFACTORY TO: DATE
Christopher Maas 29-Jul-2026

G575 LIFT STATION REPAIRS

DEMOLITION PLAN - G575

SIZE E1 | CODE IDENT. NO. 80091 | NAVFAC DRAWING NO. 60044583

CONSTR. CONTR. NO. N40085-26-B-0044

SCALE AS NOTED | SPEC. 05-26-0044 | SHEET 11 OF 40

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REVISIONS			
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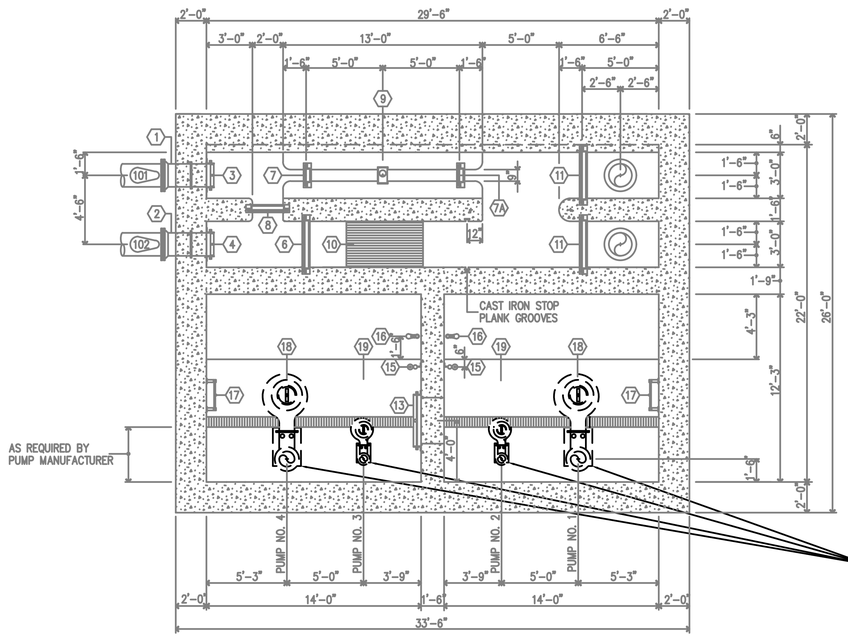
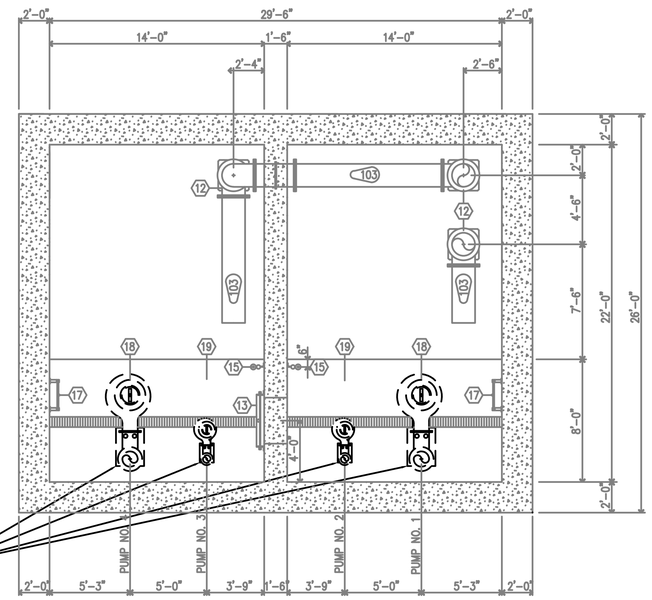


G575 INFLUENT CHANNEL - WETWELL PLAN

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

REMOVE QUANTITY FOUR (4) SUBMERSIBLE SANITARY SEWERAGE PUMPS



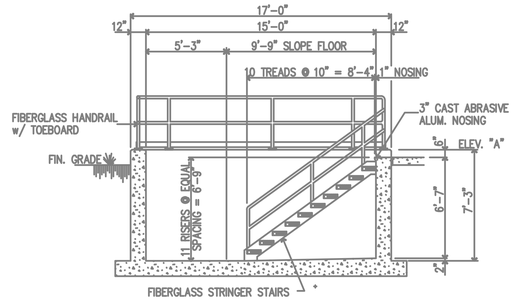
G575 LOWER WETWELL PLAN

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

EQUIPMENT ITEMS, QUANTITIES AND SIZES SHOWN IN THE EQUIPMENT SCHEDULE ARE FROM EXISTING RECORD DRAWINGS AND ARE PROVIDED FOR INFORMATION ONLY. THE SCHEDULE IS NOT INTENDED TO BE A COMPLETE LISTING OF EQUIPMENT. VERIFY EXISTING EQUIPMENT.

LIFT STATION G575
PIPE SCHEDULE

PIPE NO.	DESCRIPTION	G575
101	PUMP STATION INFLUENT PIPE	30" DIA.
102	PUMP STATION INFLUENT PIPE	14" DIA.
103	WETWELL DROP PIPES	18" DIA.
104	PUMP 18 DISCHARGE PIPE	12" DIA.
105	PUMP 19 DISCHARGE PIPE	6" DIA.
106	PUMP STATION HEADER PIPE	16" DIA.
107	SURGE RELIEF PIPE	6" DIA.
108	FORCE MAIN	16" DIA.



SECTION 1 G575 (C-202)

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

4'-0" 0 4'-0" 8'-0" 12'-0" 16'-0" 20'-0"

1/4"=1'-0"

NORTH CAROLINA SEAL 028619 07/23/2026 ROBERT L. BERNARD

23 JULY 2026

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DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND

MARINE CORPS BASE

MCAS NEW RIVER, NORTH CAROLINA

C-202

DES. JR
DR. JR, MC
CHK. RLB
SUBMITTED BY:
DESIGN DIR. CHRIS MAAS
APPROVED: PWO OR OICC DATE
SATISFACTORY TO: Christopher Maas 29-Jul-2026 DATE

G575 LIFT STATION REPAIRS

ENLARGED DEMOLITION PLAN - G575

SIZE E1 | CODE IDENT. NO. 80091 | NAVFAC DRAWING NO. 60044584

CONSTR. CONTR. NO. N40085-26-B-0044

SCALE AS NOTED | SPEC. 05-26-0044 | SHEET 12 OF 40

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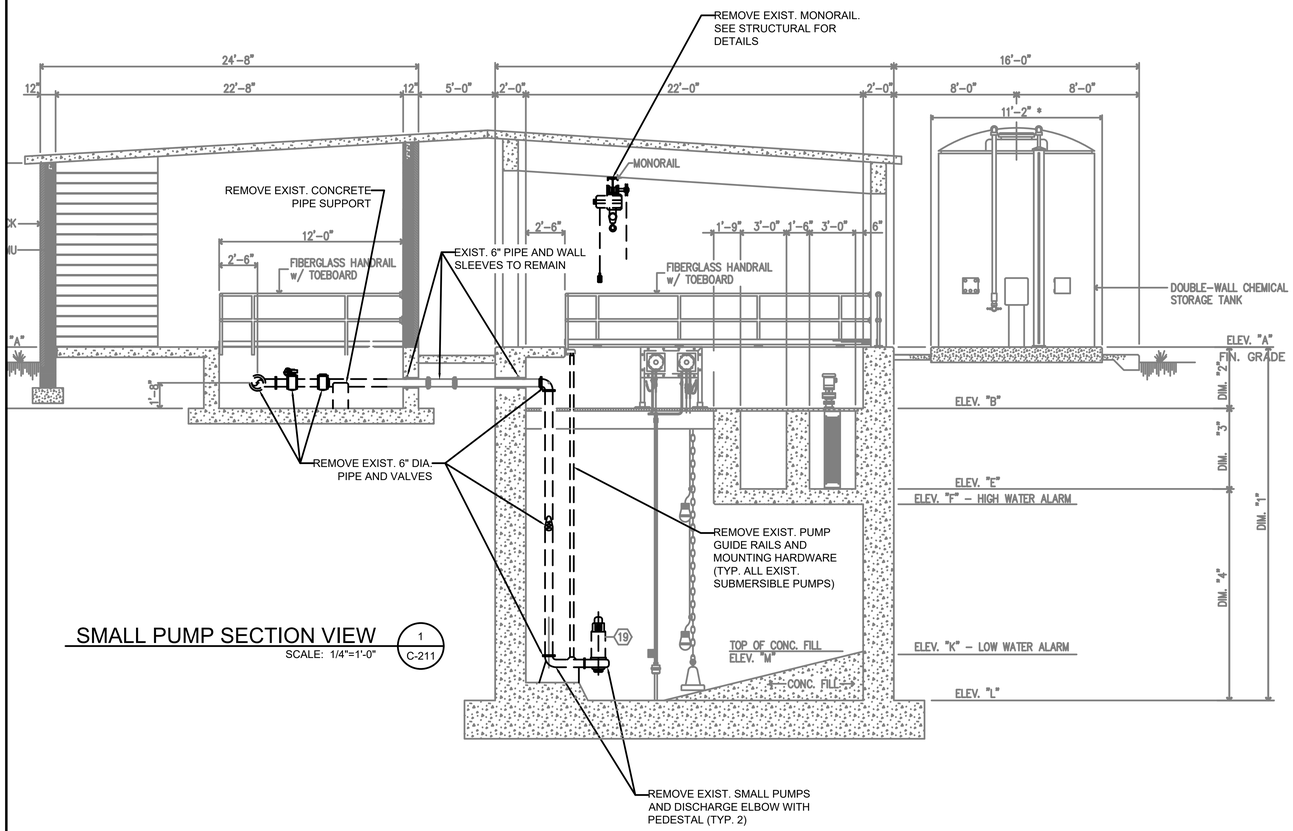
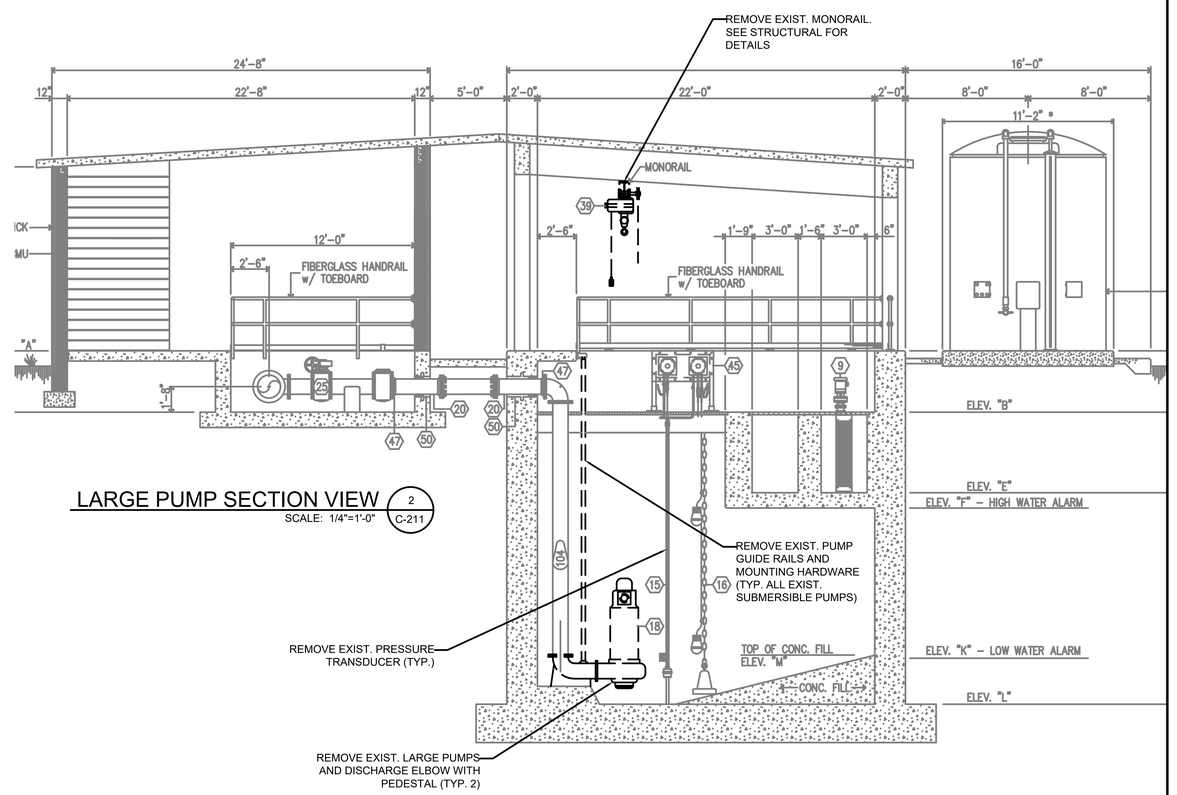
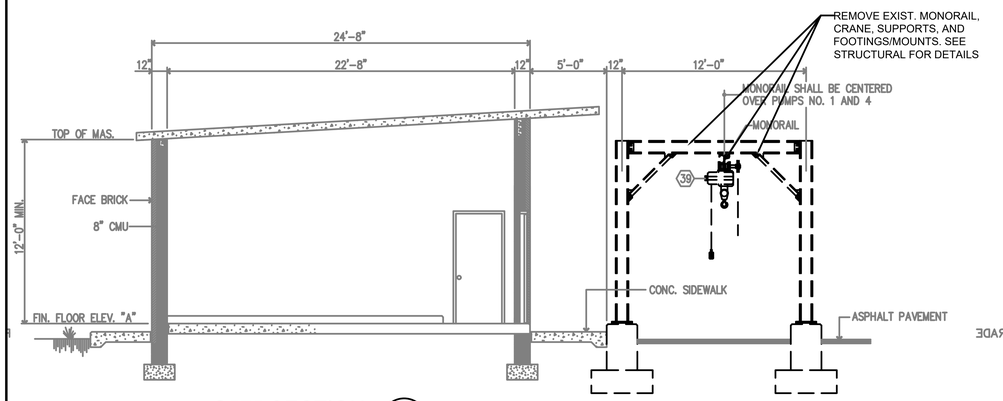
REVISIONS			
SYM.	DESCRIPTION	DATE	APP.



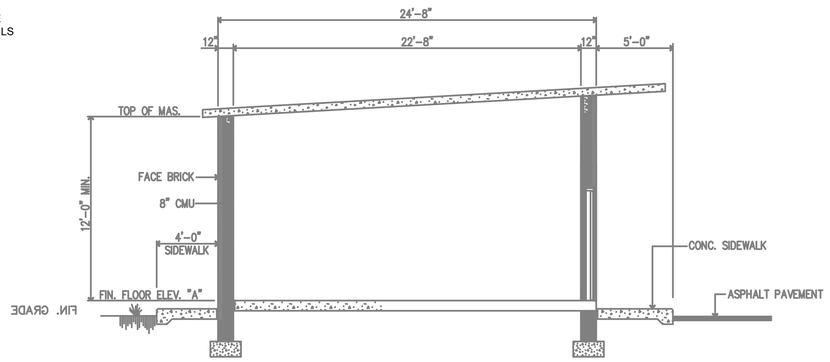
SMALL PUMP SECTION VIEW 1 C-211
SCALE: 1/4"=1'-0"



LARGE PUMP SECTION VIEW 2 C-211
SCALE: 1/4"=1'-0"



G575 SECTION 3 C-211
SCALE: 1/4"=1'-0"



G575 SECTION 3 C-211
SCALE: 1/4"=1'-0"

4'-0" 0 4'-0" 8'-0" 12'-0" 16'-0" 20'-0"
1/4"=1'-0"

NORTH CAROLINA SEAL 028619 07/23/2026 ROBERT L. BERNARD
23 JULY 2026

C-211

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DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND

MARINE CORPS BASE

MCAS NEW RIVER, NORTH CAROLINA

MBFA NO.: 2505

DES. JR
DR. JR, MC
CHK. RLB
SUBMITTED BY:
DESIGN DIR. CHRIS MAAS
APPROVED: PWO OR OICC DATE
SATISFACTORY TO: DATE
Christopher Maas 29-Jul-2026

G575 LIFT STATION REPAIRS

DEMOLITION SECTIONS - G575

SIZE	CODE IDENT. NO.	NAVFAC DRAWING NO.
E1	80091	60044585
		CONSTR. CONTR. NO. N40085-26-B-0044
SCALE AS NOTED	SPEC. 05-26-0044	SHEET 13 OF 40

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REVISIONS			
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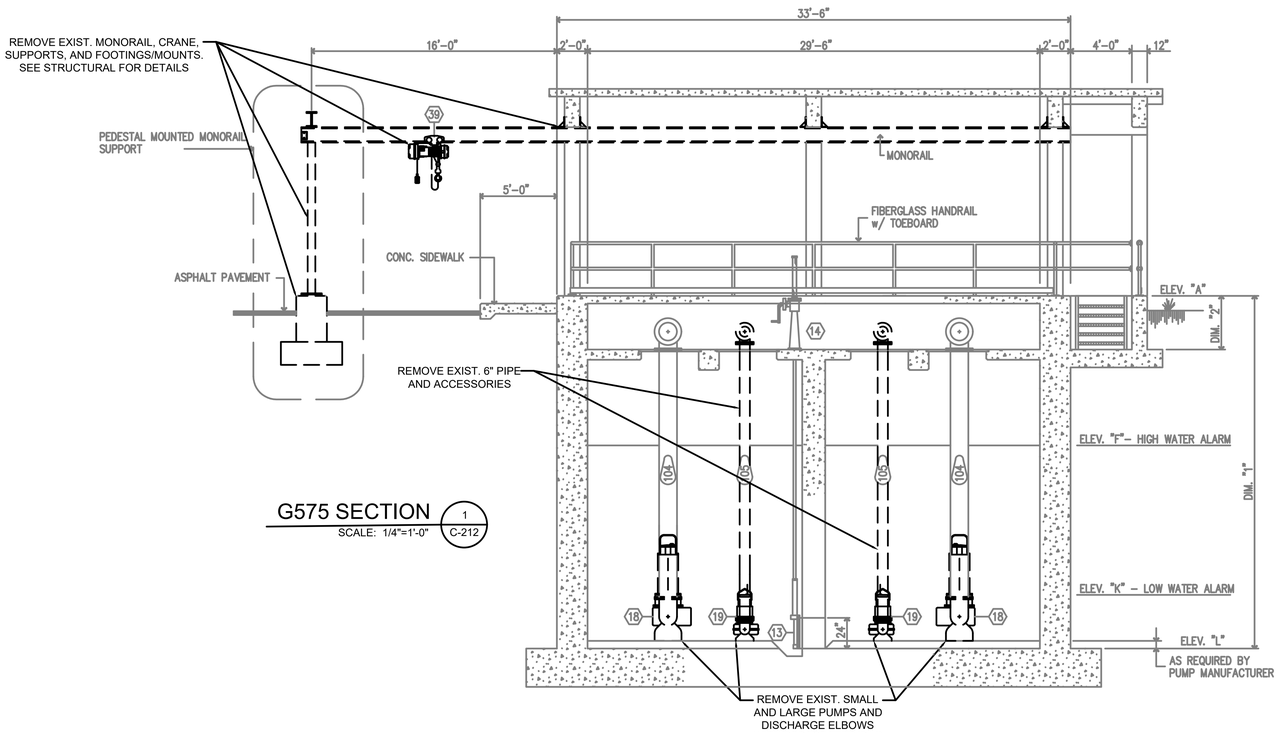
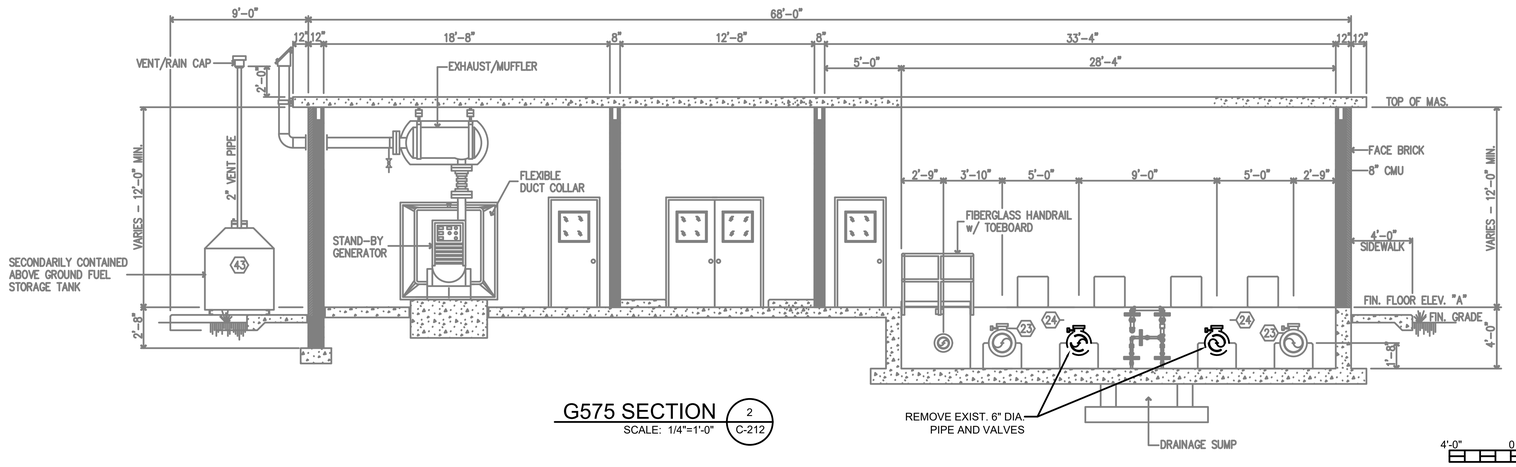
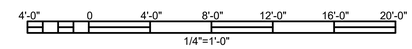


G575 SECTION 1 C-212
SCALE: 1/4"=1'-0"



G575 SECTION 2 C-212
SCALE: 1/4"=1'-0"



NORTH CAROLINA SEAL 028619 07/23/2026 ROBERT L. BERNARD
23 JULY 2026

C-212

MBFA NO.: 2505

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DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND

MARINE CORPS BASE

MCAS NEW RIVER, NORTH CAROLINA

DES. JR
DR. JR, MC
CHK. RLB
SUBMITTED BY:
DESIGN DIR. CHRIS MAAS
APPROVED: PWO OR OICC DATE
SATISFACTORY TO: DATE
Christopher Maas 29-Jul-2026

G575 LIFT STATION REPAIRS

DEMOLITION SECTIONS - G575

SIZE	CODE IDENT. NO.	NAVFAC DRAWING NO.
E1	80091	60044586
		CONSTR. CONTR. NO. N40085-26-B-0044
SCALE AS NOTED	SPEC. 05-26-0044	SHEET 14 OF 40

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NOTES:

1. THE PURPOSE OF THIS SHEET IS TO SHOW THE EXISTING LIFT STATION (G575) IN ACCORDANCE WITH RECORD DRAWINGS PROVIDED BY THE OWNER.
2. THE INFORMATION SHOWN ON THIS SHEET IS PROVIDED AS A REPRESENTATION OF THE EXISTING FACILITY FOR INFORMATION ONLY. THE ENGINEER NOR OWNER DO NOT WARRANTY THAT SOME DETAILS MAY DIFFER FROM SHOWN.
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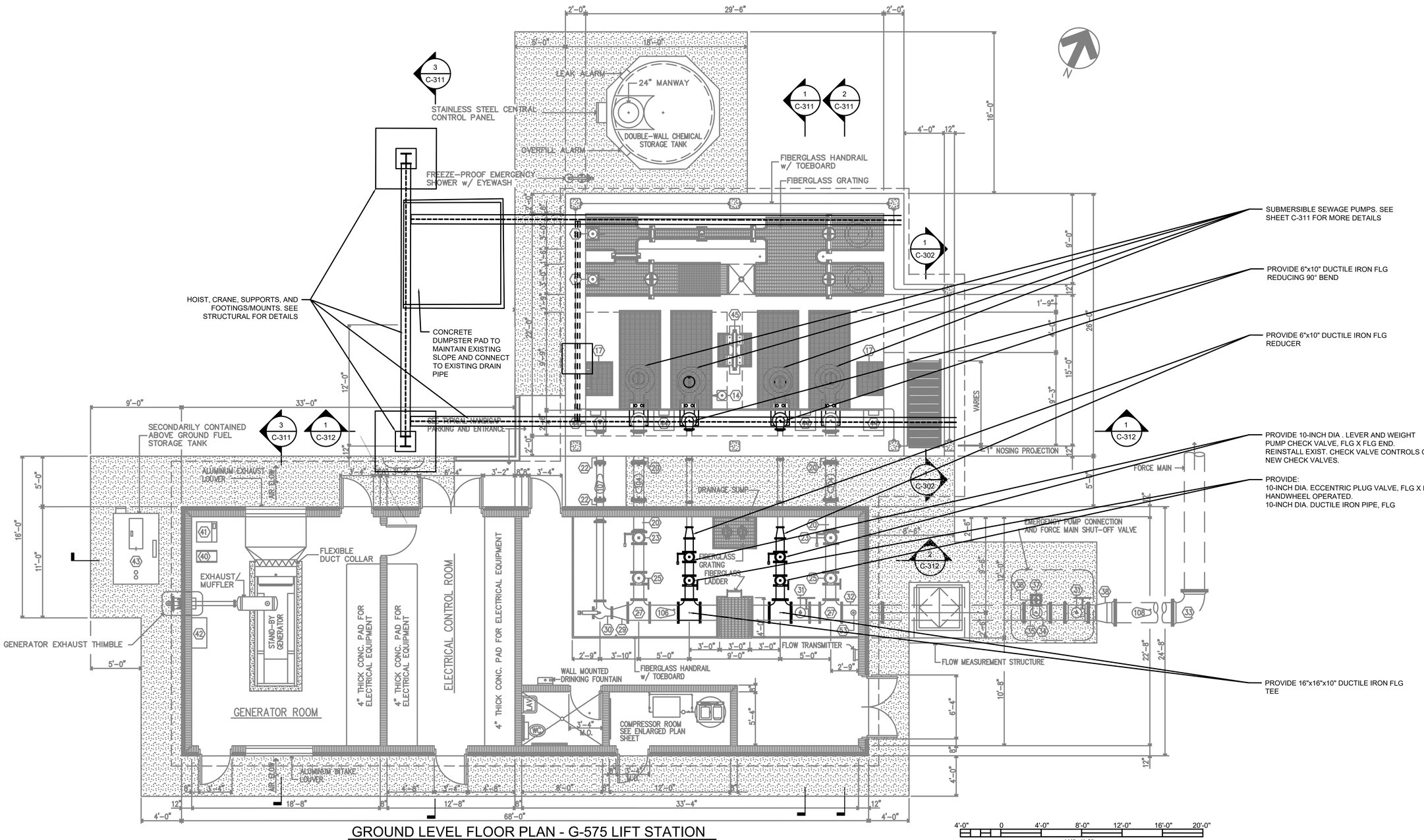
REVISIONS			
SYM.	DESCRIPTION	DATE	APP.



GROUND LEVEL FLOOR PLAN - G-575 LIFT STATION

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

NORTH CAROLINA SEAL 028619 ROBERT L. DEMAND 07/23/2026

23 JULY 2026

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C-301

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND

MARINE CORPS BASE

MCAS NEW RIVER, NORTH CAROLINA

NBIFA NO.: 2005

DES.	JR
DR.	JR, MC
CHK.	RLB
SUBMITTED BY:	
DESIGN DIR.	CHRIS MAAS
APPROVED: PWO OR OICC	DATE
SATISFACTORY TO:	DATE

Christopher Maas 29-Jul-2026

G575 LIFT STATION REPAIRS

PLAN VIEW - G575

SIZE	CODE IDENT. NO.	NAVFAC DRAWING NO.
E1	80091	60044587
SCALE AS NOTED	SPEC. 05-26-0044	CONSTR. CONTR. NO. N40085-26-B-0044
		SHEET 15 OF 40

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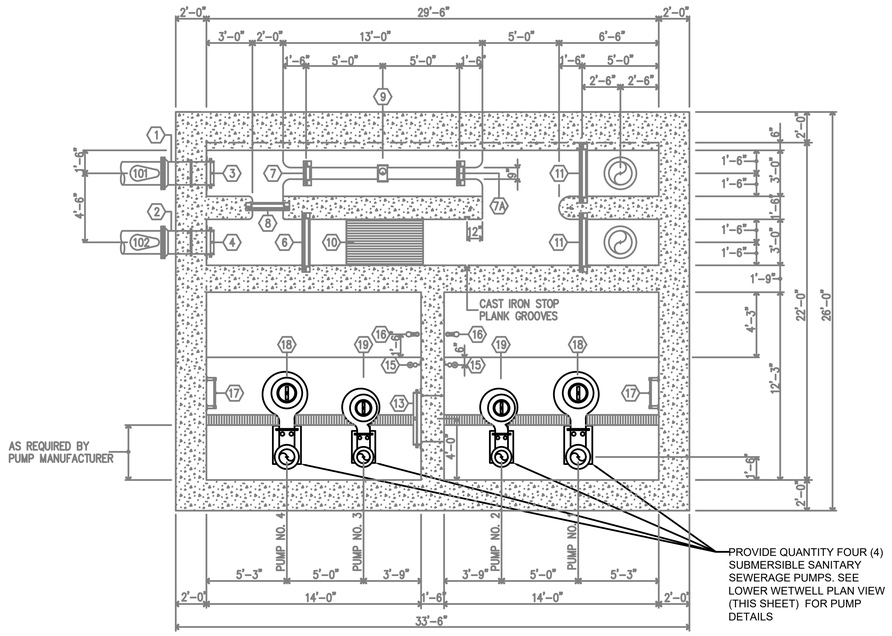
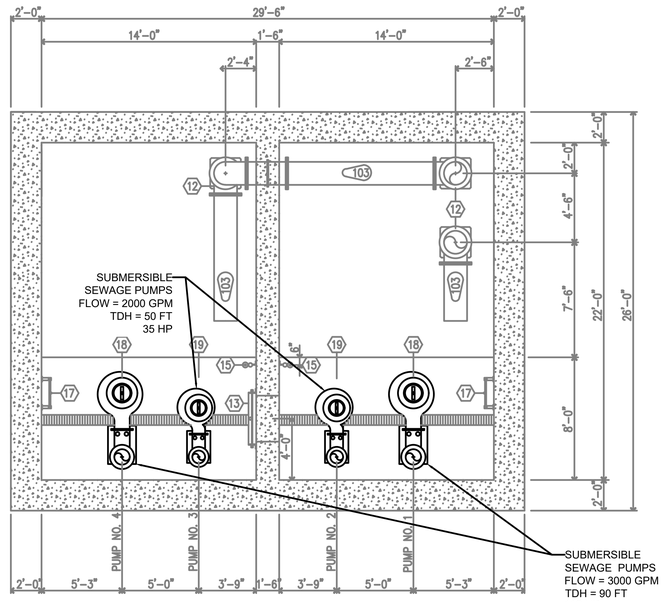
REVISIONS			
SYM.	DESCRIPTION	DATE	APP.



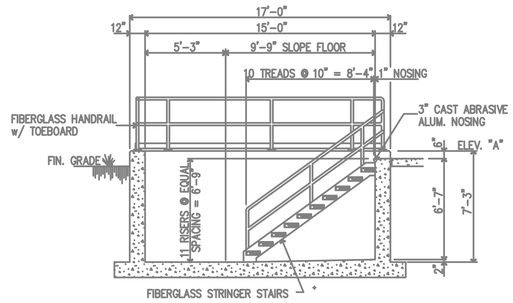
G575 INFLUENT CHANNEL - WETWELL PLAN

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



G575 LOWER WETWELL PLAN

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



SECTION 1/C-302 G575

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

4'-0" 0 4'-0" 8'-0" 12'-0" 16'-0" 20'-0"

1/4"=1'-0"

NORTH CAROLINA SEAL 028619 07/23/2026 ROBERT L. BERNARD

23 JULY 2026

C-302

Stantec

MBFA NO. 2606

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND

MARINE CORPS BASE

MCAS NEW RIVER, NORTH CAROLINA

DES.	JR
DR.	JR, MC
CHK.	RLB
SUBMITTED BY:	
DESIGN DIR.	CHRIS MAAS
APPROVED: PWO OR OICC	DATE
SATISFACTORY TO:	DATE

Christopher Maas 29-Jul-2026

G575 LIFT STATION REPAIRS

ENLARGED PLAN - G575

SIZE	CODE IDENT. NO.	NAVFAC DRAWING NO.
E1	80091	60044588
		CONSTR. CONTR. NO. N40085-26-B-0044
SCALE AS NOTED	SPEC. 05-26-0044	SHEET 16 OF 40

File Path: c:\users\mochowdhury\dc\accdocs\stantec consulting\175378902_camplejeune_bg575\project files\01_wip\04_civil\sheet_files\sheet_sets\378902_c-302_prop. enlarged plan.ps
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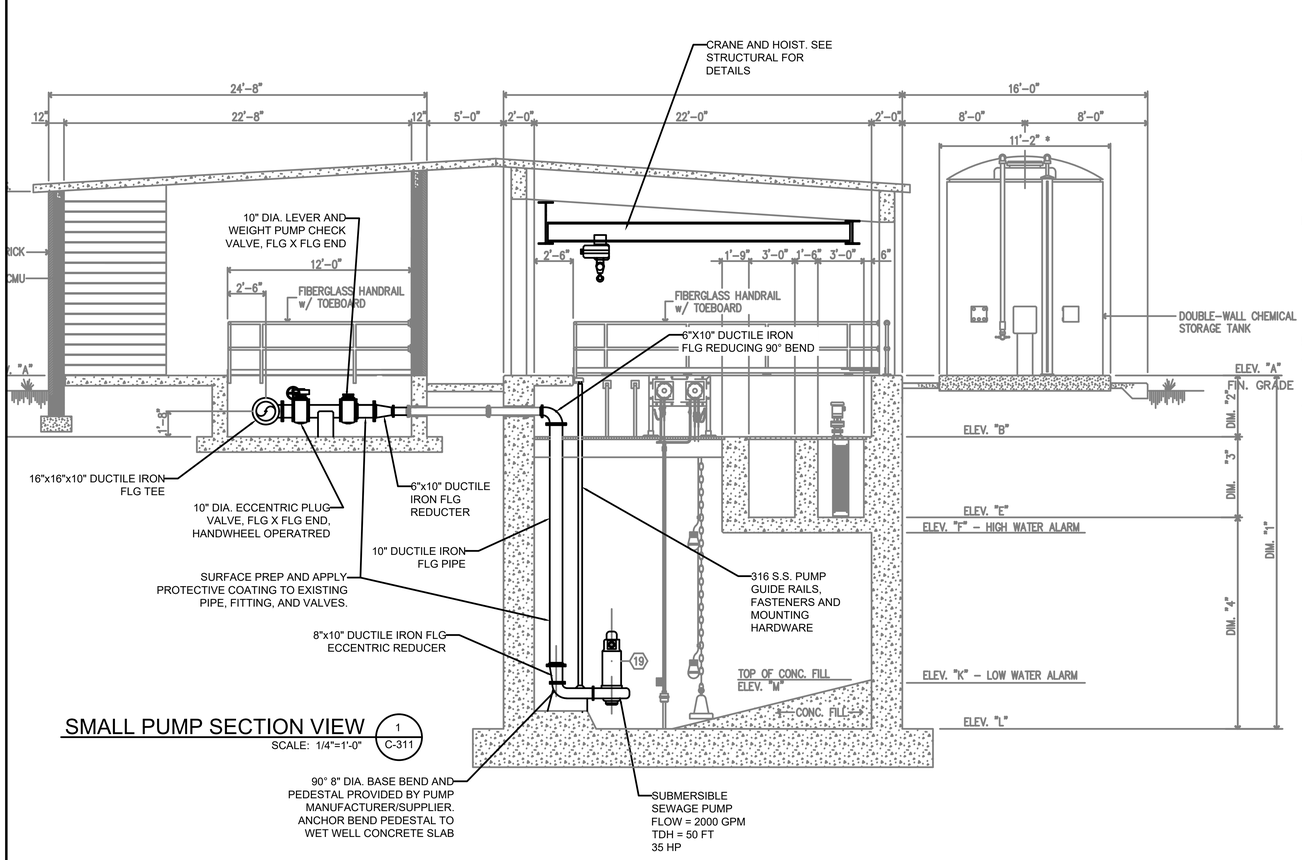
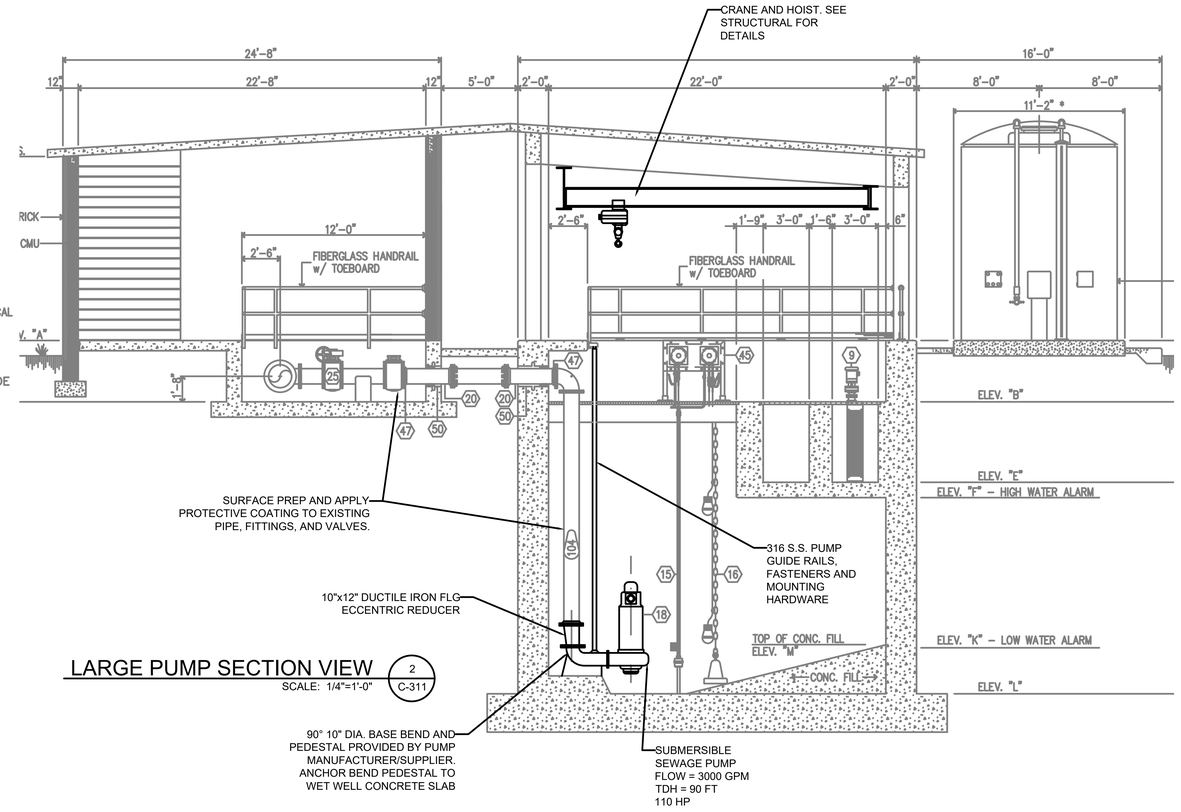
REVISIONS			
SYM.	DESCRIPTION	DATE	APP.



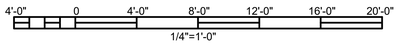
SMALL PUMP SECTION VIEW (1 / C-311)
SCALE: 1/4"=1'-0"



LARGE PUMP SECTION VIEW (2 / C-311)
SCALE: 1/4"=1'-0"

GENERAL LIFT STATION NOTES:

1. ALL INTERNAL WET WELL AND VALVE PIT PIPING MUST BE CLASS 350 D.I. PIPE (WITH LINING AND COATING AS INDICATED IN THE SPECIFICATIONS) AND FLANGES TO BE CLASS 125.
2. PUMP GUIDE RAILS, RAIL GUIDES, AND TOP RAIL GUIDES ARE TO BE 316 STAINLESS STEEL. ALL FASTENERS ARE TO BE 316 STAINLESS STEEL.
3. LIFT STATION MUST MEET ALL CURRENT OWNER SPECIFICATIONS.
4. CHECK VALVES ARE TO BE ARM/LEVER WITH WEIGHT TYPE.
5. ALL EXPOSED PLUG VALVES MUST BE GEAR AND HAND WHEEL OPERATED.
6. PUMP DISCHARGE PIPING AND GUIDE RAILS MUST BE INSTALLED LEVEL AND PLUMB.
7. THE ENGINEER AND OWNER'S MAINTENANCE SUPERVISOR MUST BE NOTIFIED OF CONSTRUCTION START DATE OF THE LIFT STATION.
8. ALL EXISTING PIPE, FITTINGS AND VALVES (RELATED TO THE PUMP DISCHARGE PIPING) MUST BE SURFACE PREPARED FOR NEW COATINGS. APPLY APPROPRIATE COATING PER SERVICE CONDITION (I.E. IMMERSION AND NON-IMMERSION).
9. ALL NEW PIPE, FITTINGS AND VALVES (RELATED TO THE PUMP DISCHARGE PIPING) MUST BE PROVIDED WITH A HIGH PERFORMANCE COATING (FACTORY APPLIED OR FIELD APPLIED). APPLY APPROPRIATE COATING PER SERVICE CONDITION (I.E. IMMERSION AND NON-IMMERSION).



NORTH CAROLINA SEAL 028619 ROBERT L. BERNARD 07/23/2026
23 JULY 2026

C-311

Stantec

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND

MARINE CORPS BASE

MCAS NEW RIVER, NORTH CAROLINA

G575 LIFT STATION REPAIRS

SECTIONS - G575

DES.	JR
DR.	JR, MC
CHK.	RLB
SUBMITTED BY:	
DESIGN DIR.	CHRIS MAAS
APPROVED: PWO OR OICC	DATE
SATISFACTORY TO:	DATE

Christopher Maas 29-Jul-2026

SIZE	CODE IDENT. NO.	NAVFAC DRAWING NO.	
E1	80091	60044589	
		CONSTR. CONTR. NO.	N40085-26-B-0044
SCALE	AS NOTED	SPEC.	05-26-0044
		SHEET	17 OF 40

UIBFA NO.: 2305

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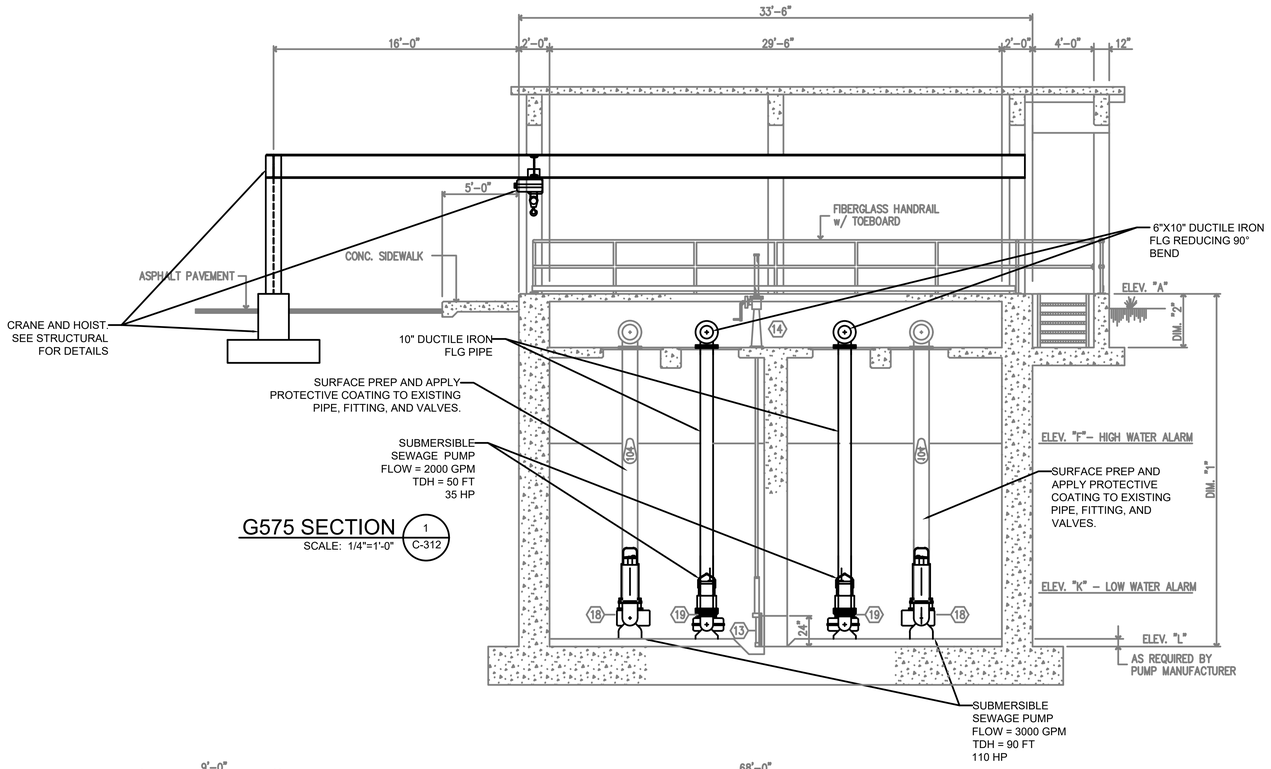
REVISIONS			
SYM.	DESCRIPTION	DATE	APP.



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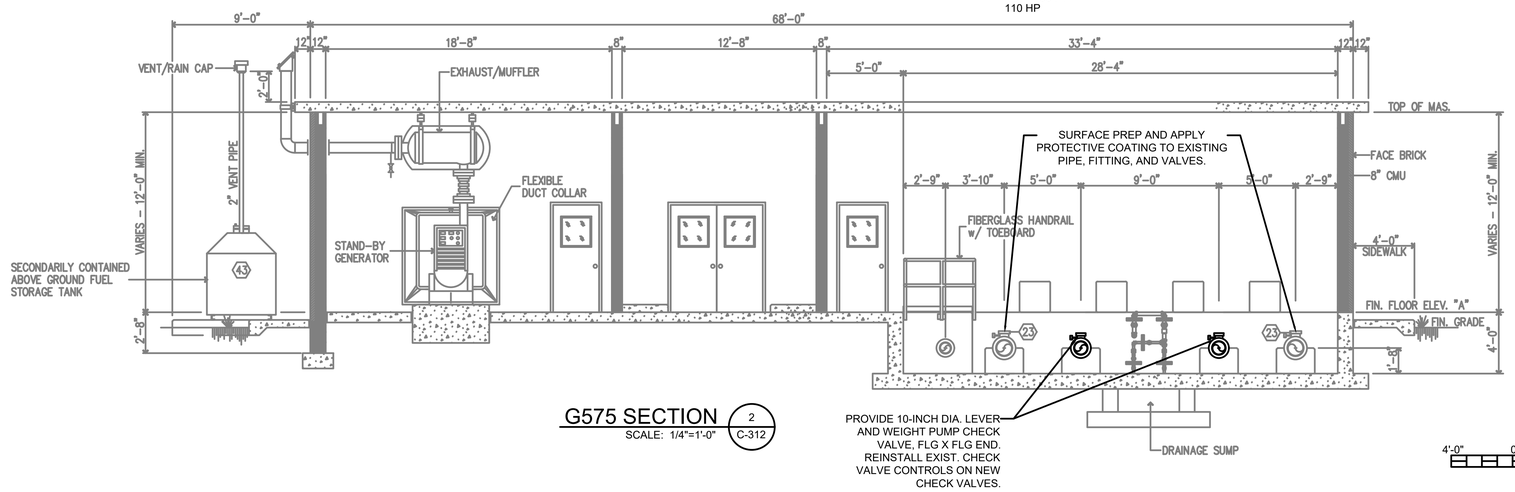

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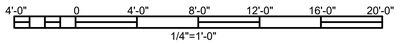

NORTH CAROLINA SEAL 028619 07/23/2026 ROBERT L. BERNARD
23 JULY 2026

C-312

MBFA NO.: 2505

Stantec

DEPARTMENT OF THE NAVY — NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND

MARINE CORPS BASE

MCAS NEW RIVER, NORTH CAROLINA

DES. JR
DR. JR, MC
CHK. RLB
SUBMITTED BY:
DESIGN DIR. CHRIS MAAS
APPROVED: PWO OR OICC — DATE
SATISFACTORY TO: — DATE
Christopher Maas 29-Jul-2026

G575 LIFT STATION REPAIRS

SECTIONS - G575

SIZE	CODE IDENT. NO.	NAVFAC DRAWING NO.
E1	80091	60044590
		CONSTR. CONTR. NO. N40085-26-B-0044
SCALE AS NOTED	SPEC. 05-26-0044	SHEET 18 OF 40

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NEW STABILIZATION TIMEFRAMES

SITE AREA DESCRIPTION	STABILIZATION	TIMEFRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH.
OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERIMETERS AND HQW ZONES

MULCHING MATERIALS AND APPLICATION RATES

MATERIAL	RATE PER ACRE	QUALITY	NOTES
STRAW	2 TONS	DRY, UNCHOPPED, UNWEATHERED; AVOID WEEDS	SHOULD COME FROM WHEAT OR OATS SPREAD BY HAND OR MACHINE, MUST BE TACKED DOWN.

TEMPORARY SEEDING

TIME OF SEEDING	GRASS TYPE	AMOUNT/ ACRE	FERTILIZATION/ ACRE	FERTILIZATION/ACRE MAINTENANCE	
DEC 1 - APR 15	RYE (GRAIN) & LESPEDEZA, KOBE	120 LBS. & 50 LBS.	750 LBS. 10-10-10	NA	NA
APRIL 15-AUG 15	GERMAN MILLET	40 LBS.	750 LBS. 10-10-10	NA	NA
AUG 15-DEC 30	RYE (GRAIN)	120 LBS.	1,000 LBS. 10-10-10	NA	NA

PERMANENT VEGETATION

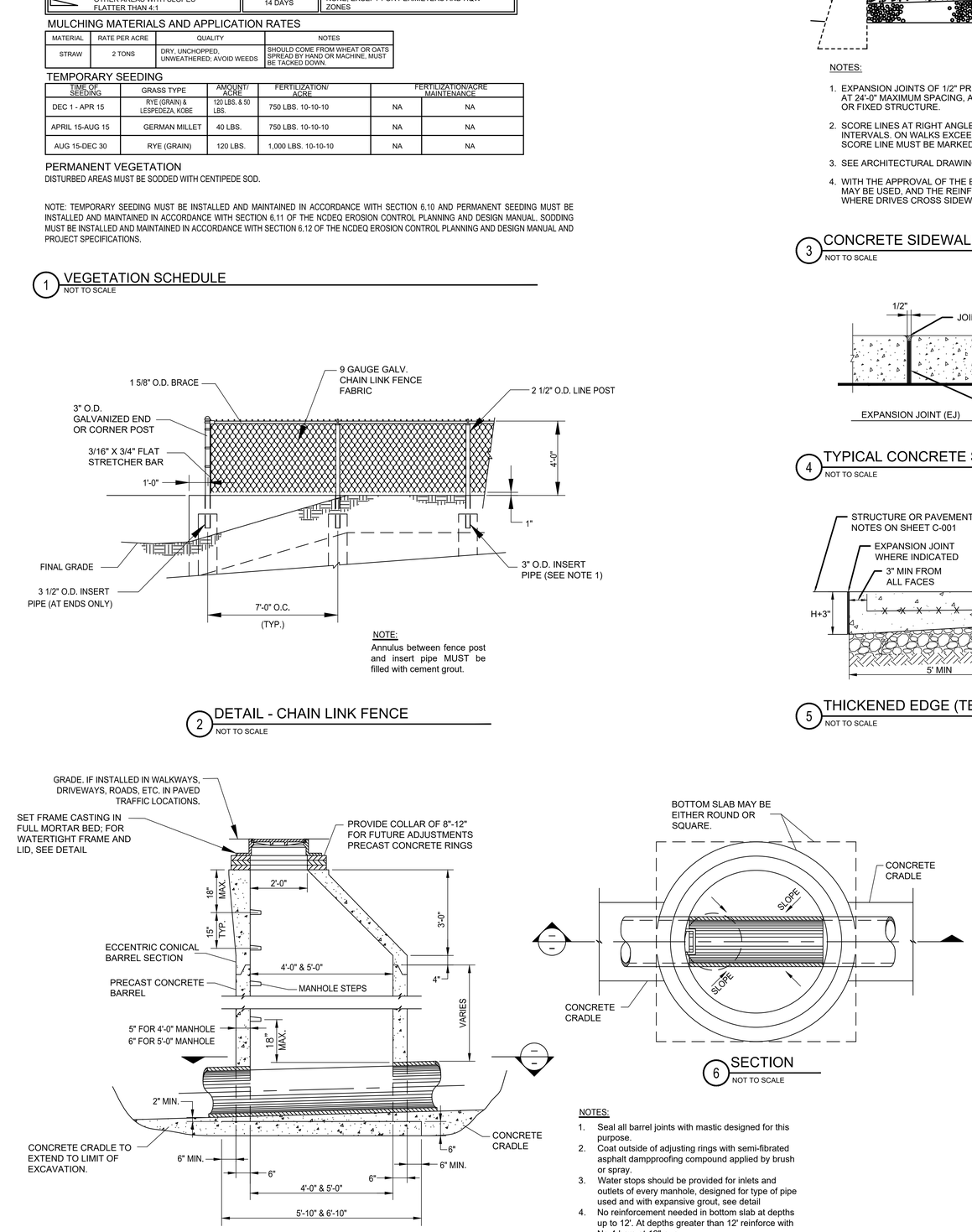
DISTURBED AREAS MUST BE SODDED WITH CENTIPEDE SOD.

NOTE: TEMPORARY SEEDING MUST BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH SECTION 6.10 AND PERMANENT SEEDING MUST BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH SECTION 6.11 OF THE NCDEQ EROSION CONTROL PLANNING AND DESIGN MANUAL. SODDING MUST BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH SECTION 6.12 OF THE NCDEQ EROSION CONTROL PLANNING AND DESIGN MANUAL AND PROJECT SPECIFICATIONS.

1 VEGETATION SCHEDULE
NOT TO SCALE

NOTE:
Annulus between fence post and insert pipe MUST be filled with cement grout.

2 DETAIL - CHAIN LINK FENCE
NOT TO SCALE

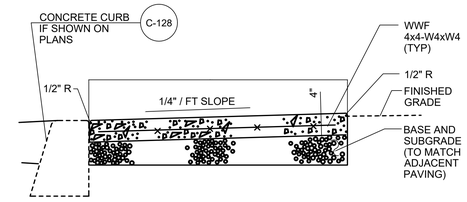


6 SECTION
NOT TO SCALE

NOTES:
1. Seal all barrel joints with mastic designed for this purpose.
2. Coat outside of adjusting rings with semi-fibrated asphalt dampproofing compound applied by brush or spray.
3. Water stops should be provided for inlets and outlets of every manhole, designed for type of pipe used and with expansive grout, see detail
4. No reinforcement needed in bottom slab at depths up to 12'. At depths greater than 12' reinforce with No.4 bars at 12" c.-c.

6 SECTION
NOT TO SCALE

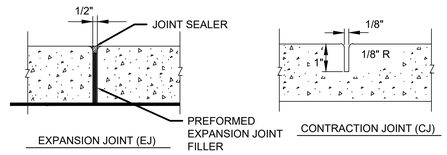
6 DETAIL - TYPICAL STANDARD PRECAST CONCRETE MANHOLE FOR PIPES UP TO 36"
NOT TO SCALE



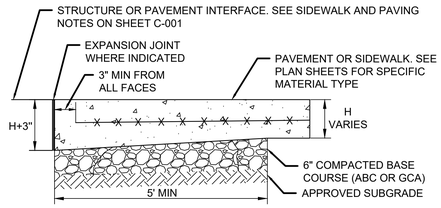
NOTES:

1. EXPANSION JOINTS OF 1/2" PREMOLDED JOINT FILLER MUST BE PLACED AT 24'-0" MAXIMUM SPACING, AND WHEN ABUTTING EXISTING CONCRETE OR FIXED STRUCTURE.
2. SCORE LINES AT RIGHT ANGLES TO CENTERLINE MUST BE MARKED AT 60" INTERVALS. ON WALKS EXCEEDING SIX FEET IN WIDTH, A CONTINUOUS SCORE LINE MUST BE MARKED ON THE CENTERLINE.
3. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL FINISH REQUIREMENTS.
4. WITH THE APPROVAL OF THE ENGINEER, FIBER REINFORCED CONCRETE MAY BE USED, AND THE REINFORCING SHOWN ABOVE MAY BE OMITTED. WHERE DRIVES CROSS SIDEWALKS, THE REINFORCING MUST REMAIN.

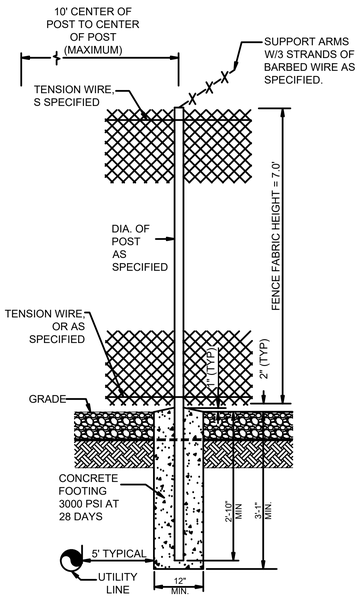
3 CONCRETE SIDEWALK
NOT TO SCALE



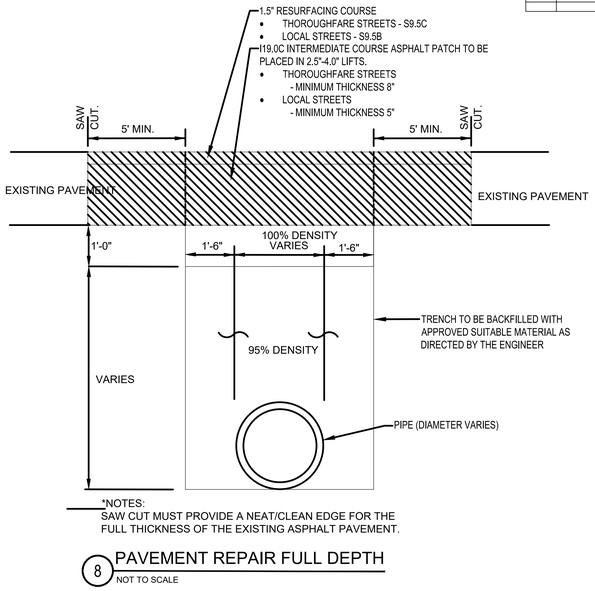
4 TYPICAL CONCRETE SIDEWALK JOINTS
NOT TO SCALE



5 THICKENED EDGE (TE)(TEJ)
NOT TO SCALE



7 CHAIN LINK FENCE FOUNDATION
NOT TO SCALE



*NOTES:
SAW CUT MUST PROVIDE A NEAT/CLEAN EDGE FOR THE FULL THICKNESS OF THE EXISTING ASPHALT PAVEMENT.

8 PAVEMENT REPAIR FULL DEPTH
NOT TO SCALE

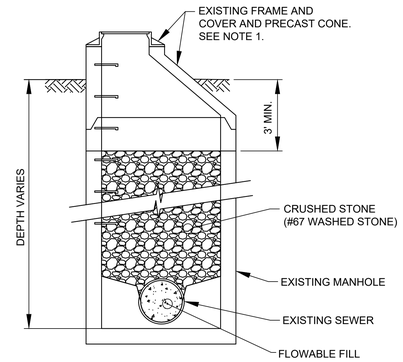
THE FOLLOWING REQUIREMENTS MUST APPLY FOR PROPOSED ABANDONMENT OF EXISTING FACILITIES UNLESS OTHERWISE SHOWN ON THE PLANS OR APPROVED BY THE ENGINEER. ALL AREAS DISTURBED BY ABANDONMENT WILL BE RESTORED.

1. ABANDONMENT OF EXISTING MANHOLES: SEE MANHOLE DEMOLITION DETAIL THIS SHEET RIGHT.
2. ABANDONMENT OF MAINS AT MANHOLES WHICH REMAIN IN SERVICE: ABANDONED MAINS AT ACTIVE MANHOLES MUST BE COMPLETELY DISCONNECTED FROM THE MANHOLE BY CUTTING THE PIPE OUTSIDE THE MANHOLE AND THEN PLUGGING THE ABANDONED MAIN AND THE MANHOLE WALL WITH WATERTIGHT MASONRY. THE INVERT MUST THEN BE REBUILT TO CONFORM WITH THE STANDARD DETAILS.
3. ABANDONMENT OF EXISTING SEWER MAINS (IN PLACE): ALL SEWER PIPE TO BE ABANDONED "IN PLACE" MUST BE COMPLETELY FILLED WITH FLOWABLE FILL FROM MANHOLE TO MANHOLE OR END TO END IF PIPE HAS BEEN CUT AND PLUGGED.

9 EXISTING SEWER ABANDONMENT NOTES
NOT TO SCALE

NOTES:

1. REMOVE TOP PORTION OF EXISTING MANHOLE TO A MINIMUM OF 3' BELOW GRADE.
2. FILL ABANDONED SEWER WITH FLOWABLE FILL. FILL ABANDONED MANHOLE WITH CRUSHED STONE.
3. IN EXCAVATED AREA, PROVIDE SUITABLE BACKFILL MATERIAL COMPACTED TO 90% OF THE MAXIMUM LABORATORY DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR METHOD AND RESTORE WITH PERMANENT SEED STABILIZATION.



10 MANHOLE DEMOLITION DETAIL
NOT TO SCALE

REVISIONS

SYM.	DESCRIPTION	DATE	APP.

NORTH CAROLINA SEAL 028619 REGISTERED ROBERT L. BERNARD 07/23/2026
23 JULY 2026

Stantec

C-401

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
MARINE CORPS BASE
MCAS NEW RIVER, NORTH CAROLINA

DES. JR
DR. JR, MC
CHK. RLB
SUBMITTED BY:
DESIGN DIR. CHRIS MAAS
APPROVED: PWO OR OICC DATE
SATISFACTORY TO: Christopher Maas 29-Jul-2026 DATE

G575 LIFT STATION REPAIRS

SITE DETAILS - G575

SIZE E1 | CODE IDENT. NO. 80091 | NAVFAC DRAWING NO. 60044591
CONSTR. CONTR. NO. N40085-26-B-0044
SCALE AS NOTED | SPEC. 05-26-0044 | SHEET 19 OF 40

MBFA NO.: 2005

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GENERAL STRUCTURAL NOTES

01 GENERAL

1. DRAWINGS SHOW TYPICAL AND CERTAIN SPECIFIC CONDITIONS ONLY. FOR DETAILS NOT SPECIFICALLY SHOWN, PROVIDE DETAILS SIMILAR TO THOSE SHOWN.
2. VERIFY EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS BEFORE STARTING WORK. NOTIFY ENGINEER OF RECORD OF DISCREPANCIES.
3. THE DESIGN, ADEQUACY AND SAFETY OF ERECTION BRACING, SHORING, AND TEMPORARY SUPPORTS ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
4. COORDINATE STRUCTURAL CONTRACT DOCUMENTS WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND CIVIL. NOTIFY CONTRACTING OFFICER OF CONFLICT OR OMISSION. CONTRACTOR TO MAKE NO DEVIATION FROM DESIGN DRAWINGS WITHOUT THE WRITTEN APPROVAL OF THE CONTRACTING OFFICER. FOR ADDITIONAL OPENINGS NOT SHOWN ON THE STRUCTURAL DRAWINGS, SEE ARCHITECTURAL, MECHANICAL AND PLUMBING DRAWINGS.
5. FOR DIMENSIONS NOT SHOWN, SEE ARCHITECTURAL, CIVIL, MECHANICAL, AND ELECTRICAL DRAWINGS.
6. REVIEW OF SUBMITTALS OR SHOP DRAWINGS BY THE CONTRACTING OFFICER DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO REVIEW AND CHECK SHOP DRAWINGS BEFORE SUBMITTAL TO THE CONTRACTING OFFICER. THE CONTRACTOR REMAINS SOLELY RESPONSIBLE FOR ERRORS AND OMISSIONS ASSOCIATED WITH THE PREPARATION OF SHOP DRAWINGS AS THEY PERTAIN TO MEMBER SIZES, DETICAIL AND DIMENSIONS SPECIFIED IN THE CONTRACT DOCUMENTS. CONTRACTOR IS ALSO RESPONSIBLE FOR MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES OF CONSTRUCTION.

02 REINFORCED CONCRETE

1. PRIOR TO CASTING FOUNDATIONS, PREPARE THE SITE IN ACCORDANCE WITH PLANS, SPECIFICATIONS AND REQUIRED COMPACTION.
2. CONCRETE WORK MUST CONFORM TO ACI 301-20, SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS. DESIGN IS BASED ON ACI 350-20, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE.
3. USE OF CALCIUM CHLORIDE, CHLORIDE IONS OR OTHER SALTS IN CONCRETE IS NOT PERMITTED.
4. CHAMFER OR ROUND EXPOSED CORNERS MINIMUM 3/4".
5. DETAIL CONCRETE REINFORCEMENT AND ACCESSORIES IN ACCORDANCE WITH CRSI STANDARDS. SUBMIT SHOP DRAWINGS FOR APPROVAL, SHOWING FABRICATION DIMENSIONS AND LOCATIONS FOR PLACING REINFORCING STEEL AND ACCESSORIES. DO NOT BEGIN FABRICATION UNTIL SHOP DRAWINGS ARE COMPLETED AND REVIEWED.
6. REINFORCING STEEL MUST CONFORM TO ASTM A615, GRADE 60, UNLESS NOTED OTHERWISE.
7. WELDED WIRE REINFORCEMENT (MESH) MUST CONFORM TO ASTM A1064/A1064M AND MUST BE PROVIDED IN FLAT SHEETS. LAP EDGES 3 CROSS WIRES MINIMUM.
8. PROVIDE CONTINUOUS REINFORCEMENT WHEREVER POSSIBLE; SPLICE ONLY AS SHOWN OR APPROVED; STAGGER SPLICES WHERE POSSIBLE; USE FULL TENSION SPLICE (CLASS "B") FOR CONTINUOUS REINFORCEMENT AND MATCHING DOWELS UNLESS NOTED OTHERWISE. LAP SPLICES MUST BE 57 BAR DIAMETERS FOR BARS SMALLER THAN #7 AND 72 BAR DIAMETERS FOR #7 & LARGER.
9. REINFORCING STEEL MUST HAVE THE FOLLOWING CONCRETE COVER UNLESS NOTED OTHERWISE:

A.	CONCRETE CAST AGAINST EARTH (NOT FORMED) . .	3"
B.	FORMED CONCRETE EXPOSED TO THE EARTH, LIQUID OR WEATHER	
	• SLABS, WALLS, AND FOOTINGS	2"
	• BEAMS (STIRRUPS) AND COLUMNS (TIES)	2"
	• BEAMS AND COLUMNS PRIMARY REINFORCEMENT	2½"
C.	CONCRETE NOT EXPOSED TO EARTH, LIQUID OR WEATHER	
	• SUSPENDED SLABS AND WALLS	
	• #14 THROUGH #18 BARS.	1½"
	• #11 BARS AND SMALLER	¾"
	• BEAMS (STIRRUPS) AND COLUMNS (TIES)	1½"
	• BEAMS AND COLUMNS PRIMARY REINFORCEMENT	2"

10. DO NOT PLACE PIPES OR DUCTS EXCEEDING ONE-THIRD THE SLAB OR WALL THICKNESS WITHIN THE SLAB OR WALL UNLESS SPECIFICALLY SHOWN AND DETAILED ON STRUCTURAL DRAWINGS. PIPES MUST BE BETWEEN THE OUTER HORIZONTAL AND VERTICAL LAYERS OF REINF.
11. DO NOT WELD OR TACK WELD REINFORCING STEEL UNLESS APPROVED OR DIRECTED BY THE ENGINEER OF RECORD.
12. REINFORCE SLAB-ON-GRADE AT PENETRATIONS AND AT RE-ENTRANT CORNERS. PLACE THREE #4x3'-0 AROUND FLOOR DRAINS. PLACE #4x4'-0" (MIN.) AT RE-ENTRANT CORNERS UNLESS NOTED OTHERWISE. HOLD REINFORCING 1" CLEAR FROM TOP OF CONCRETE.
13. WALLS AND OTHER INTERSECTING ELEMENTS MUST HAVE CORNER BARS TO PROVIDE CONTINUITY. USE CRSI STANDARDS OR AS SHOWN ON THE DRAWINGS.
14. FOR CONCRETE PAD LOCATIONS AND SIZES, SEE ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS.

03 STRUCTURAL STEEL

1. STRUCTURAL STEEL MUST BE DETAILED, FABRICATED AND ERECTED ACCORDING TO AISC "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS", LATEST EDITION.
2. CHANNELS MUST COMPLY WITH ASTM A992 GRADE 50 AND ANGLES MUST COMPLY WITH ASTM A572 GRADE 50. OTHER STRUCTURAL SHAPES MUST COMPLY WITH ASTM A992, 50 KSI YIELD. STEEL TUBES MUST COMPLY WITH ASTM A500, GRADE C 50 KSI YIELD. BASE PLATES, MISCELLANEOUS PLATES AND SHAPES MUST BE ASTM A572 GR. 50.
3. EXPOSED STRUCTURAL STEEL MUST BE HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM A123.
4. STRUCTURAL FASTENERS MUST BE GALVANIZED HIGH STRENGTH STRUCTURAL STEEL. NON-STRUCTURAL FASTENERS ARE GALVANIZED OR ZINC PLATED CARBON STEEL OR STAINLESS STEEL.
5. CONNECTION BOLTS MUST CONFORM TO ASTM F3125 GRADE A325 (OR F1852 FOR TWIST-OFF TYPE BOLT ASSEMBLIES), 3/4 INCH DIAMETER MINIMUM, UNLESS NOTED OTHERWISE.
6. ANCHOR RODS MUST CONFORM TO ASTM F1554, GRADE 55, UNLESS NOTED OTHERWISE (SEE FRAME CONNECTION DETAILS). STEEL FABRICATOR MUST SUPPLY ANCHOR BOLT LOCATION DRAWINGS.
7. INSTALLATION OF A-325 HIGH STRENGTH BOLTS MUST COMPLY WITH SECTION 8 OF THE RCSC SPECIFICATIONS FOR STRUCTURAL JOINTS USING A-325 OR A-490 BOLTS (RCSC SSJ.) UNLESS OTHERWISE SPECIFIED, JOINTS MUST BE "SNUG-TIGHTENED" OR "PRETENSIONED" IN ACCORDANCE WITH RCSC SSJ. BOLTS MUST BE TYPE "X" BEARING TYPE CONNECTIONS EXCLUDED FROM SHEAR PLANE.
8. THE STEEL FABRICATOR MUST BE THE LICENSED "DELEGATED ENGINEER" RESPONSIBLE FOR DESIGNING STEEL CONNECTIONS NOT SPECIFICALLY DETAILED ON THE DESIGN DRAWINGS, AND AS SUCH MUST SIGN AND SEAL DRAWINGS/ CALCULATIONS SHOWING DESIGNED CONNECTIONS. PROVIDE CONNECTIONS FOR REACTIONS AS SHOWN ON PLANS. WHERE REACTION IS NOT SHOWN, DESIGN CONNECTION FOR 1/2 THE TOTAL UNIFORM LOAD CAPACITY FOR NON-COMPOSITE BEAM SHOWN IN THE MAX. TOTAL UNIFORM LOAD TABLES IN THE AISC MANUAL OF STEEL CONSTRUCTION. COMPOSITE BEAMS, BRACED FRAMES, MOMENT CONNECTIONS WILL BE DESIGNED FOR LOADS INDICTED ON THE DRAWINGS OR PROVIDED BY E.O.R.
9. USE PRE-QUALIFIED WELDED JOINTS AS IN ACCORDANCE WITH AISC, AND AWS D1.1 "STRUCTURAL WELDING CODE." USE ONLY CERTIFIED WELDERS. ELECTRODES MUST CONFORM TO AWS A5 GRADE E70XX.
10. CUTS, BOLTS, AND COPING REQUIRED FOR WORK OR OTHER TRADES MUST BE SHOWN ON THE SHOP DRAWINGS AND MADE IN THE SHOP. CUTS OR BURNING HOLES IN STRUCTURAL STEEL MEMBERS IN THE FIELD WILL NOT BE PERMITTED.
11. SHOP CONNECTIONS NOT SPECIFICALLY DETAILED ON THE DRAWINGS MUST BE WELDED OR BOLTED. FIELD CONNECTIONS NOT SPECIFICALLY DETAILED ON THE DRAWINGS MUST BE BOLTED, WHERE POSSIBLE.

04 EPOXY ANCHORAGE

1. ANCHORAGE ADHESIVE MUST BE INJECTABLE, USED AS INDICATED. ADHESIVE MUST BE FURNISHED IN SIDE-BY-SIDE REFILL PACKS WHICH KEEP COMPONENT A AND COMPONENT B SEPARATE. SIDE-BY-SIDE PACKS MUST BE DESIGNED TO COMPRESS DURING USE TO MINIMIZE WASTE VOLUME. SIDE-BY-SIDE PACKS MUST ALSO BE DESIGNED TO ACCEPT STATIC MIXING NOZZLE WHICH CORRECTLY BLENDS COMPONENT A AND COMPONENT B AND ALLOWS INJECTION DIRECTLY INTO DRILLED HOLE. ONLY INJECTION TOOLS RECOMMENDED BY MANUFACTURER MUST BE USED. MANUFACTURER'S INSTRUCTIONS MUST BE FOLLOWED. INJECTION ADHESIVE MUST BE FORMULATED TO INCLUDE RESIN AND HARDENER TO PROVIDE OPTIMAL CURING SPEED AS WELL AS HIGH STRENGTH STIFFNESS.
2. CONTRACTOR TO SUBMIT ACI-CRSI ADHESIVE ANCHOR INSTALLATION CERTIFICATES FOR INSTALLERS. INSTALLERS MUST ALSO BE FAMILIAR WITH MANUFACTURER INSTALLATION REQUIREMENTS.
3. ADHESIVE/EPOXY ANCHORS MUST HAVE BEEN TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ACI 355.4 AND ICC-ES AC308.

05 SHOP DRAWINGS FOR SPECIALTY ENGINEERED PRODUCTS:

1. SPECIALTY ENGINEERED SYSTEMS AND COMPONENTS FOR THIS PROJECT, AS A MINIMUM, REQUIRE FABRICATION AND ERECTION DRAWINGS PREPARED BY A DELEGATED ENGINEER. DELEGATED ENGINEER MUST POSSESS CURRENT PROFESSIONAL LICENSURE IN THE LOCALITY OF THE PROJECT.
2. THE FOLLOWING SYSTEMS AND COMPONENTS INCLUDE, BUT ARE NOT LIMITED TO, ITEMS THAT REQUIRE FABRICATION AND ERECTION DRAWINGS PREPARED AND STAMPED BY A DELEGATED ENGINEER (REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION):

   A. PREFABRICATED STEEL RAILINGS AND STAIRS
   B. PREFABRICATED STEEL STAIRS
   C. STRUCTURAL STEEL CONNECTIONS REQUIRING ENGINEERING
   D. CRANE BEAM, CRANE RAIL AND CONNECTIONS

3. SUBMITTALS MUST CLEARLY IDENTIFY THE SPECIFIC PROJECT AND APPLICABLE CODES, LIST THE DESIGN CRITERIA AND SHOW DETAILS AND PLANS NECESSARY FOR FABRICATION AND INSTALLATION. CALCULATIONS AND SHOP DRAWINGS MUST IDENTIFY SPECIFIC PRODUCTS UTILIZED. GENERIC PRODUCTS WILL NOT BE ACCEPTED.
4. SHOP DRAWINGS AND CALCULATIONS MUST BE PREPARED UNDER THE DIRECT SUPERVISION AND CONTROL OF THE DELEGATED ENGINEER.
5. SHOP DRAWINGS AND CALCULATIONS REQUIRE THE SEAL, DATE, AND SIGNATURE OF THE DELEGATED ENGINEER. COMPUTER PRINTOUTS ARE AN ACCEPTABLE SUBSTITUTE FOR MANUAL COMPUTATIONS PROVIDED THEY ARE ACCOMPANIED BY SUFFICIENT DESCRIPTIVE INFORMATION TO PERMIT THEIR EVALUATION. SUCH DESCRIPTIVE INFORMATION MUST BEAR THE SEAL AND SIGNATURE OF THE DELEGATED ENGINEER AS AN INDICATION THAT HE/SHE HAS ACCEPTED RESPONSIBILITY FOR THE RESULTS.
6. CATALOG INFORMATION ON STANDARD PRODUCTS AND DRAWINGS PREPARED SOLELY TO SERVE AS A GUIDE FOR FABRICATION AND INSTALLATION (SUCH AS REINFORCING STEEL SHOP DRAWINGS OR STRUCTURAL STEEL ERECTION DRAWINGS), WHICH REQUIRE NO ENGINEERING, DO NOT REQUIRE THE SEAL OF A DELEGATED ENGINEER.
7. REVIEW OF THE SUBMITTALS BY THE CONTRACTING OFFICER IS LIMITED TO VERIFYING THE FOLLOWING:

   A. THAT THE SPECIFIED STRUCTURAL SUBMITTALS HAVE BEEN FURNISHED.
   B. THAT THE STRUCTURAL SUBMITTALS HAVE BEEN SIGNED AND SEALED BY THE DELEGATED ENGINEER.
   C. THAT THE DELEGATED ENGINEER HAS UNDERSTOOD THE DESIGN INTENT AND HAS USED THE SPECIFIED STRUCTURAL CRITERIA. (NO DETAILED CHECK OF CALCULATIONS WILL BE MADE).
   D. THAT THE CONFIGURATION SET FORTH IN THE STRUCTURAL SUBMITTALS IS CONSISTENT WITH THE CONTRACT DOCUMENTS. (NO DETAILED CHECK OF DIMENSIONS OR QUANTITIES WILL BE MADE).

   SUBMITTALS NOT MEETING THE ABOVE CRITERIA WILL NOT BE REVIEWED.

06 DEMOLITION AND DECONSTRUCTION

1. CONTRACTOR TO REVIEW THE CONTRACT DOCUMENTS AND MUST BRING CONFLICTS OR QUESTIONS TO THE ATTENTION OF THE CONTRACTING OFFICER FOR RESOLUTION PRIOR TO THE COMMENCEMENT OF WORK.
2. DEMOLITION MUST BE COORDINATED BETWEEN THE ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION DRAWINGS PRIOR TO PERFORMING WORK.
3. CONTRACTOR TO ONLY REMOVE, DISASSEMBLE AND DEMOLISH EXISTING MATERIALS INDICATED ON THE DRAWINGS. CONTRACTOR TO MAKE NECESSARY PROVISIONS TO PREVENT DAMAGE TO EXISTING ELEMENTS THAT ARE BEING DISASSEMBLED FOR REUSE OR REMAINING IN PLACE.
4. ITEMS SCHEDULED FOR DEMOLITION MUST BE REMOVED IN THEIR ENTIRETY INCLUDING FRAMING, BRACKETS, ADHESIVES, FASTENERS, ASSOCIATED ACCESSORIES, HARDWARE, AND BUILT-IN ITEMS. CLEAN SURFACES TO REMAIN OF SEALANT, DIRT, AND EXTRANEOUS MATERIAL.
5. PROCEED WITH DEMOLITION OF STRUCTURAL FRAMING MEMBERS SYSTEMATICALLY, FROM HIGHER TO LOWER LEVEL. COMPLETE DEMOLITION OPERATIONS ABOVE EACH FLOOR OR TIER BEFORE DISTURBING SUPPORTING MEMBERS ON THE NEXT LOWER LEVEL.
6. DEMOLITION WORK MUST BE UNDERTAKEN IN STRICT COMPLIANCE WITH OSHA AND NEPA REQUIREMENTS.
7. CONTRACTOR TO ACCOUNT FOR MISCELLANEOUS DEMOLITION THAT IS NOT SPECIFICALLY NOTED IN THE DEMOLITION NOTES AND WHICH IS REQUIRED TO COMPLETE THE INTENT OF THE DESIGN DESCRIBED IN THE CONSTRUCTION DOCUMENTS.
8. CONTRACTOR IS RESPONSIBLE FOR REPAIR OF DAMAGE TO THE EXISTING BUILDING, MATERIALS, AND EQUIPMENT DURING DEMOLITION, INCLUDING DAMAGE FROM THE ELEMENTS. CONTRACTOR TO MAKE NECESSARY PROVISIONS TO PREVENT DAMAGE TO EXISTING ELEMENTS THAT ARE REMAINING IN PLACE.
9. CONTRACTOR TO NOTIFY THE CONTRACTING OFFICER'S REPRESENTATIVE IF DETERIORATED STRUCTURAL ELEMENTS ARE OBSERVED DURING DEMOLITION. CONTRACTOR TO RECEIVE APPROVAL PRIOR TO REPLACEMENT.
10. CONTRACTOR TO PROVIDE TEMPORARY BRACING, SHORING, GUYING OR OTHER SUPPORT MEANS TO AVOID EXCESSIVE STRESSES AND TO HOLD STRUCTURAL ELEMENTS IN PLACE DURING DEMOLITION WORK. CONTRACTOR TO PROVIDE CALCULATIONS AND DRAWINGS DEMONSTRATING ADEQUACY OF TEMPORARY SHORING, GUYING OR OTHER SUPPORT MEANS HOLDING STRUCTURAL ELEMENTS IN PLACE.

07 SPECIAL INSPECTIONS:

1. THE STRUCTURAL ENGINEER (STANTEC) IS NOT RESPONSIBLE FOR INSPECTIONS AND TESTINGS. OWNER MUST PROVIDE AN APPROVED AND QUALIFIED INSPECTION FIRM TO PERFORM INSPECTIONS & TESTING; OTHERWISE, THE OWNER WILL COORDINATE WITH THE GENERAL CONTRACTOR TO CARRY IN THEIR CONTRACT. STANTEC CAN PROVIDE AS AN ADDITIONAL SERVICE.
2. THE OWNER'S (OR GENERAL CONTRACTOR'S) INSPECTION FIRM AND TESTING LABORATORY MUST PROVIDE SPECIAL INSPECTION SERVICES AND TESTING IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE FOR THE ITEMS LISTED ON SHEETS S-003 THRU S-004. ONLY INSPECTIONS AND TESTS ARE REQUIRED FOR THE APPLICABLE MATERIALS ON THE PROJECT.
3. REFER TO SHEETS S-003 THRU S-004 FOR MINIMUM SPECIAL INSPECTION REQUIREMENTS. IN ADDITION TO THE REQUIREMENTS ON THE AFOREMENTIONED SHEETS, THE FOLLOWING GENERAL NOTES MUST ALSO BE SATISFIED IN ACCORDANCE W/ APPLICABLE CODES:

   A. SPECIAL INSPECTIONS MUST HAVE REQUIRED RELEVANT ICC, ACI, AWS, AND AISC CERTIFICATIONS FOR EACH MATERIAL AND TYPE OF INSPECTION BEING PERFORMED. THOSE ACTING AS SPECIAL INSPECTORS OR PERFORMING TESTING MUST MEET MINIMUM IBC CODE QUALIFICATION REQUIREMENTS INDICATED PRIOR TO BEGINNING CONSTRUCTION. A MINIMUM OF 5 YEARS OF EXPERIENCE PERFORMING INSPECTIONS OR TESTING OF THE SAME TYPE, COMPLEXITY, AND MAGNITUDE IS REQUIRED. THE SPECIAL INSPECTOR MUST HAVE RELATED ICC, ACI, AND AWS CERTIFICATIONS FOR THE SPECIFIC TYPE OF INSPECTION, TESTING, MATERIALS, AND CONSTRUCTION BEING PERFORMED. PRIOR TO THE START OF CONSTRUCTION, THE APPROVAL AGENCIES MUST PROVIDE WRITTEN DOCUMENTATION TO THE BUILDING OFFICIAL DEMONSTRATING THE COMPETENCE AND RELEVANT EXPERIENCE OR TRAINING OF THE SPECIAL INSPECTORS WHO WILL PERFORM THE SPECIAL INSPECTIONS AND TESTS DURING CONSTRUCTION.
   B. SPECIAL INSPECTOR MUST ELECTRONICALLY DISTRIBUTE INSPECTION REPORTS, DEFICIENCY & CORRECTION LOGS, TESTING, REPORTING LOGS, AND CORRESPONDENCE SIMULTANEOUSLY TO THE FOLLOWING PARTIES: CONTRACTOR, CONTRACTING OFFICER'S REPRESENTATIVE, AND OWNER (AS REQUIRED).
   C. THE CONTRACTOR TO MAINTAIN AN ELECTRONIC TESTING LOAD SPREADSHEET FOR INSPECTIONS, TESTING, AND OBSERVATION REPORTS. IT MUST BE WELL ORGANIZED BY DATE & REPORT NUMBER.
   D. THE SPECIAL INSPECTOR MUST DOCUMENT, LOG, AND DISTRIBUTE A WEEKLY DEFICIENCY LOG INDICATING ITEMS OR COMPONENTS THAT WERE NOT CORRECTLY INSPECTED OR COMPLETED IN THE FIELD. IF INSPECTED ITEMS WERE DEFICIENT AND REQUIRE CORRECTION, COMPLETION AND CORRECTION MUST OCCUR WITHIN 72 HOURS OF THE INSPECTION BEING PERFORMED.
   E. ICC ESR CODE REPORT NUMBERS MUST BE LISTED ON APPLICABLE INSPECTION REPORTS WITH THE RESULTS OF EACH ITEM INSPECTED.
   F. SPECIAL INSPECTION TASKS & REQUIREMENTS LISTED ON SPECIAL INSPECTION SHEETS ARE APPLICABLE FOR THE STRUCTURAL DESIGN AND STRUCTURAL COMPONENTS, AS WELL AS THOSE RELEVANT COMPONENTS FROM OTHER DISCIPLINES WHOSE DESIGN INCORPORATES TASKS LISTED IN THE SHEETS. THIS INCLUDES, BUT IS NOT LIMITED TO, FOR EXAMPLE: COMPONENTS, ANCHORS, CONNECTIONS, AND SUPPORT FRAMING. REFER TO DISCIPLINE-SPECIFIC SPECIFICATIONS FOR ADDITIONAL SPECIAL INSPECTION REQUIREMENTS.
   G. INSPECTIONS THAT ARE REQUIRED BY CODE THAT WERE NOT CORRECTLY INSPECTED MUST BE CONSIDERED NON-COMPLIANT AND INSUFFICIENT. CONTRACTOR TO EITHER REDO THE WORK AND HAVE IT INSPECTED IN COMPLIANCE WITH APLICABLE CODES, OR PROVIDE ADDITIONAL DATA THAT DEMONSTRATES OTHERWISE, AND PROVIDE PROOF OF CAPACITY/COMPLIANCE WITH THE REQUIREMENTS OF THE STRUCTURAL DRAWINGS. THIS MUST BE DONE BY MEANS OF NON-DESTRUCTIVE OR DESTRUCTIVE TESTING, OR OTHER RATIONALE APPROVED AND ACCEPTED BY BOTH THE OWNER AND CONTRACTING OFFICER'S REPRESENTATIVE.
   H. INSPECTION AND TESTING AGENCIES MUST BE OBJECTIVE, COMPETENT, AND ACT IN GOOD FAITH AND GOOD JUDGMENT. THEY MUST BE SEPARATE AND INDEPENDENT OF THE GENERAL CONTRACTOR RESPONSIBLE FOR THE WORK BEING PERFORMED, INSPECTED, AND TESTED. POTENTIAL CONFLICTS OF INTEREST MUST BE REPORTED TO THE OWNER AND STRUCTURAL ENGINEER OF RECORD.
   I. THE CONSTRUCTION OR WORK FOR WHICH SPECIAL INSPECTIONS OR TESTING IS REQUIRED MUST NOT BE COMPLETED UNTIL REQUIRED SPECIAL INSPECTIONS AND TESTING HAVE BEEN PERFORMED. ITEMS MUST REMAIN ACCESSIBLE AND EXPOSED UNTIL COMPLETION OF THE REQUIRED SPECIAL INSPECTIONS OR TESTING.
   J. INSPECTIONS MUST BE PERFORMED IN ACCORDANCE WITH THE SIGNED & SEALED STRUCTURAL DRAWINGS AND OFFICIAL PROJECT RFI RESPONSES ONLY. UNOFFICIAL EMAILS, TEXT MESSAGES, AND VERBAL DIRECTION/COMMUNICATION ARE NOT PERMITTED. BY EXTENSION, THE ABOVE ALSO APPLIES TO DEFICIENCY LOGS.
   K. STRUCTURAL OBSERVATIONS AND SITE VISITS BY THE OWNER OR THE CONTRACTING OFFICER'S REPRESENTATIVE MUST NOT BE CONSIDERED TO REPLACE CODE REQUIRED SPECIAL INSPECTION AND TESTING.

REVISIONS

SYM.	DESCRIPTION	DATE	APP.

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23 JULY 2026

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Stantec

MBFA NO.: 2505

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND

MARINE CORPS BASE

MCAS NEW RIVER, NORTH CAROLINA

DES. TF
DR. ZC
CHK. AA
SUBMITTED BY:
DESIGN DIR. CHRIS MAAS
APPROVED: PWO OR OICC DATE
SATISFACTORY TO: Christopher Maas 29-Jul-2026 DATE

G575 LIFT STATION REPAIRS

GENERAL NOTES - G575

SIZE E1 | CODE IDENT. NO. 80091 | NAVFAC DRAWING NO. 60044592
CONSTR. CONTR. NO. N40085-26-B-0044
SCALE AS NOTED | SPEC. 05-26-0044 | SHEET 20 OF 40

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08 DESIGN LOADS

RISK CATEGORY..... III

DEAD LOAD
THE WEIGHT OF PERMANENT CONSTRUCTION INCLUDING WALLS, FLOORS, CEILINGS, ROOF CLADDING - TO BE INCLUDED IN ADDITION TO SELF-WEIGHT OF MEMBERS & STRUCTURAL SLABS.

ROOFING . . . . . 10 PSF
COLLATERAL DEAD LOAD . . . . . 10 PSF
MECHANICAL/PLUMBING . . . . . 10 PSF

LIVE LOAD
ROOF . . . . . 20 PSF
SLAB-ON-GRADE (U.N.O.) . . . . . 100 PSF
MECHANICAL / ELECTRICAL ROOMS . . . . . 125 PSF

SNOW LOAD
GROUND SNOW LOAD..... 35 PSF
MINIMUM SNOW LOAD..... 32.3 PSF
SNOW EXPOSURE FACTOR..... 0.9
THERMAL FACTOR..... 1.0

WIND LOAD
ULTIMATE WIND SPEED..... 148 MPH
NOMINAL WIND SPEED (10-YEAR MRI)..... 80 MPH
WIND EXPOSURE..... C
INTERNAL PRESSURE COEFFICIENTS..... 0.00
Vasd..... 104 MPH
Vt ..... 50 MPH

SEISMIC LOAD
SEISMIC IMPORTANCE FACTOR 1.25
Ss 0.17
S1 . . . . . 0.059
SITE CLASS (TO BE CONFIRMED BY GEOTECH) . . . . . D
Sds 0.14
Sd1 . . . . . 0.083
SEISMIC DESIGN CATEGORY . . . . . B

IN ACCORDANCE WITH SECTION 706.2 (ADDITION OR REPLACEMENT OF ROOFING OR EQUIPMENT) OF THE INTERNATIONAL EXISTING BUILDING CODE (IEBC) CHAPTER 7 (ALTERATION - LEVEL 1), ANY GRAVITY LOAD CARRYING STRUCTURAL ELEMENT WHOSE GRAVITY LOAD-CARRYING CAPACITY IS NOT DECREASED CAN SUPPORT AN INCREASE IN GRAVITY LOAD OF NOT MORE THAN 5% WITHOUT NEEDING TO BE STRENGTHENED TO COMPLY WITH THE CURRENT INTERNATIONAL BUILDING CODE (IBC). STRUCTURAL ENGINEER HAS VERIFIED THAT THE PUMP CONFIGURATION AND ASSOCIATED WEIGHT DOES NOT CROSS THIS 5% THRESHOLD FOR THE LIFT STATION FOUNDATION LOADING, THIS THE FOUNDATION IS CONSIDERED TECHNICALLY COMPLIANT WITHOUT REQUIRING A FULL STRUCTURAL OVERHAUL.

09 DESIGN CRITERIA – CODES AND SPECIFICATIONS

CONSTRUCTION MUST COMPLY AS REQUIRED WITH THE FOLLOWING CRITERIA:

1. UFC 1-200-01 DOD BUILDING CODE, DECEMBER 17, 2024
2. UFC 3-301-01 STRUCTURAL ENGINEERING, JUNE 3, 2025
3. UFC 4-010-01 DOD MINIMUM ANTITERRORISM STANDARDS FOR BUILDINGS, MAY 24, 2024
4. 2024 INTERNATIONAL BUILDING CODE, 2024 IBC
5. ACI 350-20 CODE REQUIREMENTS FOR ENVIRONMENTAL ENGINEERING CONCRETE STRUCTURES.
6. ASCE/SEI 7-22 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES
7. ACI 301-20 SPECIFICATIONS FOR STRUCTURAL CONCRETE
8. ACI 318-19 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
9. AISI S100-16 (2020) w/S2-20 THE NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS
10. ANSI/AISC 360-22 SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS
11. AWS D1.1 STRUCTURAL WELDING CODE - STEEL
12. AWS D1.3 STRUCTURAL WELDING CODE - SHEET STEEL
13. TMS 402/602-22 BUILDING CODE REQUIREMENTS AND SPECIFICATION FOR MASONRY STRUCTURES.
14. 2024 NORTH CAROLINA BUILDING CODE, 2024 EXISTING BUILDING CODE

10 GEOTECHNICAL

A GEOTECHNICAL REPORT FOR G575 IS YET TO BE RECEIVED.

SITE PREPARATION AND COMPACTION MUST COMPLY WITH THE RECOMMENDATIONS OF THE FINAL GEOTECHNICAL REPORT. THE REPORT MUST BE CONSIDERED PART OF THE CONTRACT DOCUMENTS.

A QUALIFIED GEOTECHNICAL ENGINEER MUST VERIFY CONDITION AND/OR ADEQUACY OF SUBGRADES, FILLS AND BACKFILLS BEFORE PLACEMENT OF FOUNDATIONS, FOOTINGS, SLABS, WALLS, FILLS, AND BACKFILLS.

11 FOUNDATION DESIGN DATA

UNLESS NOTED OTHERWISE, CONCRETE MUST BE NORMAL WEIGHT AND HAVE THE FOLLOWING MINIMUM 28-DAY COMPRESSIVE STRENGTHS:

	f'c	W/C RATIO
FOUNDATIONS.....	5,000 PSI	0.50 MAX
SLABS-ON-GRADE.....	5,000 PSI	0.45 MAX
WALLS.....	5,000 PSI	0.45 MAX

THE DESIGN OF THE FOUNDATIONS **ASSUMES** AN ALLOWABLE SOIL BEARING PRESSURE OF **2,000 PSF** AND AN **ASSUMED** PIER END-BEARING PRESSURE OF **2,000 PSF** UNTIL FURTHER VERIFICATION CAN BE PROVIDED BY THE GEOTECHNICAL ENGINEERING REPORT.

BOTTOM OF FOOTINGS MUST BEAR A MINIMUM **2'-0"** BELOW EXTERIOR GRADE FOR FROST PROTECTION UNLESS OTHERWISE SHOWN ON PLAN OR SUGGESTED BY GEOTECH REPORT.

12 EXISTING STRUCTURE DESIGN DATA

THE EXISTING STRUCTURE IS ASSUMED TO HAVE THE FOLLOWING MATERIAL PROPERTIES IN ACCORDANCE WITH ACI 562 & ASCE 41:

CONCRETE COMPRESSIVE STRENGTH,
CONCRETE NOT OTHERWISE SPECIFIED — f'c = 4,000 PSI

STEEL REINFORCEMENT YIELD STRENGTH,
ASTM A 615 GRADE 60, DEFORMED CONFORM W/ ACI 21.2.5 — fy = 60 KSI

13 ABBREVIATIONS

ARCH.	ARCHITECT	HORIZ.	HORIZONTAL
B/	BOTTOM OF	H.S.	HEADED STUD
BRG.	BEARING	IN.	INCHES
BOTT.	BOTTOM	INFO.	INFORMATION
C/C	CENTER-TO-CENTER	INT.	INTERIOR
C.J.	CONTROL JOINT	K	KIPS
CLR.	CLEAR	KSI	KIPS PER SQUARE INCH
COL.	COLUMN	LLH	LONG LEG HORIZONTAL
C.O.R.	CONTRACTING OFFICER'S REPRESENTATIVE	LLV	LONG LEG VERTICAL
		L.W.	LONG WAYS
CONC.	CONCRETE	MANUF.	MANUFACTURER
CONN.	CONNECTION	MAX.	MAXIMUM
CONT.	CONTINUOUS	MECH.	MECHANICAL
COORD.	COORDINATE	MIN.	MINIMUM
CMU	CONCRETE MASONRY UNIT	O.C.	ON CENTER
DIM.	DIMENSION	PED	PEDESTAL
DIA.	DIAMETER	PL.	PLATE
DIST.	DISTANCE	PSF	POUNDS PER SQUARE FOOT
DWGS.	DRAWINGS	PSI	POUNDS PER SQUARE INCH
EL.	ELEVATION	QTY	QUANTITY
E.F.	EACH FACE	REF.	REFERENCE
EMBED.	EMBEDMENT	REINF.	REINFORCED
ENG.	ENGINEER	S.F.	STEPPED FOOTING
E.O.R.	ENGINEER OF RECORD	SQU.	SQUARE
EQ.	EQUAL	STL.	STEEL
E.S.	EACH SIDE	S.W.	SHORT WAYS
E.W.	EACH WAY	T/	TOP OF
EXP.	EXPANSION	TYP.	TYPICAL
EXT.	EXTERIOR	U.N.O.	UNLESS NOTED OTHERWISE
FABR.	FABRICATOR	VCJ	VERTICAL CONTROL JOINT
F.F.	FINISHED FLOOR	VIF	VERIFY IN FIELD
FFE	FINISHED FLOOR ELEVATION	VMCJ	VERTICAL MASONRY CONTROL JOINT
FTG.	FOOTING	W/	WITH
GA.	GAUGE	WWR	WELDED WIRE REINFORCEMENT
GALV.	GALVANIZED		

REVISIONS

SYM.	DESCRIPTION	DATE	APP.

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23 JULY 2026

Stantec

MBFA NO.: 2505

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND

MARINE CORPS BASE
MCAS NEW RIVER, NORTH CAROLINA

DES. TF
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SUBMITTED BY:
DESIGN DIR. CHRIS MAAS
APPROVED: PWO OR OICC DATE
SATISFACTORY TO: Christopher Maas 29-Jul-2026 DATE

G575 LIFT STATION REPAIRS

GENERAL NOTES & DESIGN DATA - G575

SIZE E1 | CODE IDENT. NO. 80091 | NAVFAC DRAWING NO. 60044593
CONSTR. CONTR. NO. N40085-26-B-0044
SCALE AS NOTED | SPEC. 05-26-0044 | SHEET 21 OF 40

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IBC 2024 - TABLE 1705.3
REQUIRED SPECIAL INSPECTIONS AND TESTS OF CONCRETE CONSTRUCTION

TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION	REFERENCE STANDARD[a]	IBC REFERENCE
1. INSPECTION OF REINFORCEMENT, INCLUDING PRESTRESSING TENDONS, AND VERIFY PLACEMENT.	—	X	ACI 318: CH. 20, 25.2, 25.3, 26.6.1-26.6.3	—
2. REINFORCING BAR WELDING:				—
a. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706,	—	X	AWS D1.4 ACI 318: 26.13.1.4	
b. INSPECT WELDING OF REINFORCEMENT FOR SPECIAL MOMENT FRAMES, BOUNDARY ELEMENTS OF SPECIAL STRUCTURAL WALLS AND COUPLING BEAMS.	X	—	AWS D1.4 ACI 318: 26.13.3	
c. INSPECT WELDING REINFORCEMENT SPLICES.	X	—	—	
d. INSPECT WELDING OF PRIMARY TENSION REINFORCEMENT IN CORBELS.	X	—	—	
e. INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16".	—	X	AWS D1.4 ACI 318: 26.13.3	
f. INSPECT ALL OTHER WELDS.	—	X	AWS D1.4 ACI 318: 26.13.3	
3. INSPECT ANCHORS CAST IN CONCRETE	—	X	ACI 318: 26.13.3.3	—
4. INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS.[b]				—
a. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS.	X	—	ACI 318: 26.13.3.2	
b. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.a.	—	X	ACI 318: 26.13.3	
5. VERIFYING USE OF REQUIRED DESIGN MIX.	—	X	ACI 318: CH. 19, 26.4.3, 26.4.4	1904.1, 1904.2
6. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS,PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	X	—	ASTM C 172 ASTM C 31 ACI 318: 26.5, 26.12	—
7. INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	X	—	ACI 318: 26.5	—
8. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	—	X	ACI 318: 26.5.3-26.5.5	—
9. INSPECT PRESTRESSED CONCRETE FOR:				—
a. APPLICATION OF PRESTRESSING FORCES; AND	X	—	ACI 318: 26.10	
b. GROUTING OF BONDED PRESTRESSING TENDONS.	X	—		
10. INSPECT ERECTION OF PRECAST CONCRETE MEMBERS.	—	X	ACI 318: CH 26.9	—
11. FOR PRECAST CONCRETE DIAPHRAGM CONNECTIONS OR REINFORCEMENT AT JOINTS CLASSIFIED AS MODERATE OR HIGH DEFORMABILITY ELEMENTS (MDE OR HDE) IN STRUCTURES ASSIGNED TO SEISMIC DESIGN CATEGORY C, D, E OR F, INSPECT SUCH CONNECTIONS AND REINFORCEMENT IN THE FIELD FOR:				—
a. INSTALLATION OF EMBEDDED PARTS	X	—		
b. COMPLETION OF THE CONTINUITY OF REINFORCEMENT ACROSS JOINTS	X	—	ACI 318: 26.13.1.3	
c. COMPLETION OF CONNECTIONS IN THE FIELD	X	—	ACI 550.5	
12. INSPECT INSTALLATION TOLERANCES OF PRECAST CONCRETE DIAPHRAGM CONNECTIONS FOR COMPLIANCE WITH ACI 550.5	—	X	ACI 318: 26.13.1.3	—
13. VERIFY IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS.	—	X	ACI 318: 26.11.2	—
14. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	—	X	ACI 318: 26.11.1.2(b)	—

FOR SI: 1 INCH = 25.4 mm.

a. WHERE APPLICABLE, SEE ALSO SECTION 1705.13, SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE.

b. SPECIFIC REQUIREMENTS FOR SPECIAL INSPECTION MUST BE INCLUDED IN THE RESEARCH REPORT FOR THE ANCHOR ISSUED BY AN APPROVED SOURCE IN ACCORDANCE WITH 17.8.2 in ACI 318, OR OTHER QUALIFICATION PROCEDURES. WHERE SPECIFIC REQUIREMENTS ARE NOT PROVIDED, SPECIAL INSPECTION REQUIREMENTS MUST BE SPECIFIED BY THE REGISTERED DESIGN PROFESSIONAL AND MUST BE APPROVED BY THE BUILDING OFFICIAL PRIOR TO THE COMMENCEMENT OF THE WORK.

IBC 2024 - TABLE 1705.6
REQUIRED SPECIAL INSPECTIONS AND TESTS OF SOILS

TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODICALLY SPECIAL INSPECTION
1. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.	—	X
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.	—	X
3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.	—	X
4. DURING FILL PLACEMENT, VERIFY USE OF PROPER MATERIALS AND PROCEDURES IN ACCORDANCE WITH THE PROVISIONS OF THE APPROVED GEOTECHNICAL REPORT. VERIFY DENSITY AND LIFT THICKNESS DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	X	—
5. PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	—	X

IBC 2024 / AISC 2023
REQUIRED SPECIAL INSPECTIONS AND TESTS OF STEEL CONSTRUCTION

TYPE	SERVICE	EXTENT
1. FABRICATOR AND ERECTOR DOCUMENTS (VERIFY REPORTS AND CERTIFICATES AS LISTED IN AISC 360, SECTION N3.2 FOR COMPLIANCE WITH CONSTRUCTION DOCUMENTS).	SUBMITTAL REVIEW	EACH SUBMITTAL
2. MATERIAL VERIFICATION OF STRUCTURAL STEEL.	SHOP (3) AND FIELD INSPECTION	PERIODIC
3. STRUCTURAL STEEL WELDING:		
A. INSPECTION TASKS PRIOR TO WELDING (OBSERVE, OR PERFORM FOR EACH WELDED JOINT OR MEMBER, THE QA TASKS LISTED IN AISC 360, TABLE N5.4-1).	SHOP (3) AND FIELD INSPECTION	OBSERVE OR PERFORM AS NOTED (4)
B. INSPECTION TASKS DURING WELDING (OBSERVE, OR PERFORM FOR EACH WELDED JOINT OR MEMBER, THE QA TASKS LISTED IN AISC 360, TABLE N5.4-2).	SHOP (3) AND FIELD INSPECTION	OBSERVE (4)
C. INSPECTION TASKS AFTER WELDING (OBSERVE, OR PERFORM FOR EACH WELDED JOINT OR MEMBER, THE QA TASKS LISTED IN AISC 360, TABLE N5.4-3).	SHOP (3) AND FIELD INSPECTION	OBSERVE OR PERFORM AS NOTED (4)
D. NONDESTRUCTIVE TESTING (NDT) OF WELDED JOINTS: *SEE COMMENTARY.*		
1. COMPLETE PENETRATION GROOVE WELDS 5/16" OR GREATER IN RISK CATEGORY III OR IV.	SHOP (3) OR FIELD ULTRASONIC TESTING-100%	PERIODIC
2. COMPLETE PENETRATION GROOVE WELDS 5/16" OR GREATER IN RISK CATEGORY II.	SHOP (3) OR FIELD ULTRASONIC TESTING-10% OF WELDS MIN.	PERIODIC
3. WELDED JOINTS SUBJECT TO FATIGUE WHEN REQUIRED BY AISC 360, APPENDIX 3, TABLE A-3.1.	SHOP (3) OR FIELD RADIOGRAPHIC OR ULTRASONIC TESTING	PERIODIC
E. FABRICATOR'S NDT REPORTS WHEN FABRICATOR PERFORMS NDT.	VERIFY REPORTS	EACH SUBMITTAL
4. STRUCTURAL STEEL BOLTING:	SHOP (3) AND FIELD INSPECTION	
A. INSPECTION TASKS PRIOR TO BOLTING (OBSERVE, OR PERFORM TASKS FOR EACH BOLTED CONNECTION, IN ACCORDANCE WITH QA TASKS LISTED IN AISC 360, TABLE N5.6-1).		OBSERVE OR PERFORM AS NOTED (4)
B. INSPECTION TASKS DURING BOLTING (OBSERVE THE QA TASKS LISTED IN AISC 360, TABLE N5.6-2).		OBSERVE (4)
1. PRE-TENSIONED AND SLIP-CRITICAL JOINTS.		
A. TURN-OF-NUT WITH MATCHING MARKINGS.		PERIODIC
B. DIRECT TENSION INDICATOR.		PERIODIC
C. TWIST-OFF TYPE TENSION CONTROL BOLT.		PERIODIC
D. TURN-OF-NUT W/O MATCHING MARKINGS.		CONTINUOUS
E. CALIBRATED WRENCH.		CONTINUOUS
2. SNUG-TIGHT JOINTS.		PERIODIC
C. INSPECTION TASKS AFTER BOLTING (PERFORM TASKS FOR EACH BOLTED CONNECTION IN ACCORDANCE WITH QA TASKS LISTED IN AISC 360, TABLE N5.6-3).		PERFORM (4)
5. VISUAL INSPECTION OF EXPOSED CUT SURFACES OF GALVANIZED STRUCTURAL STEEL MAIN MEMBERS AND EXPOSED CORNERS OF THE RECTANGULAR HSS FOR CRACKS SUBSEQUENT TO GALVANIZING.	SHOP (3) AND FIELD INSPECTION	PERIODIC
6. EMBEDMENT (VERIFY DIAMETER, GRADE, TYPE, LENGTH, EMBEDMENT, SEE 1705.3 FOR ANCHORS).	FIELD INSPECTION	PERIODIC
7. VERIFY MEMBER LOCATIONS, BRACES, STIFFENERS, AND APPLICATION OF JOINT DETAILS AT EACH CONNECTION COMPLY WITH CONSTRUCTION DOCUMENTS.	FIELD INSPECTION	PERIODIC

REVISIONS

SYM.	DESCRIPTION	DATE	APP.

NORTH CAROLINA PROFESSIONAL SEAL 048129 ENGINEER ANUP ARYAL

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Stantec

MBFA NO: 2505

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND

MARINE CORPS BASE

MCAS NEW RIVER, NORTH CAROLINA

DES. TF
DR. ZC
CHK. AA
SUBMITTED BY:
DESIGN DIR. CHRIS MAAS
APPROVED: PWO OR OICC DATE
SATISFACTORY TO: DATE

Christopher Maas 29-Jul-2026

G575 LIFT STATION REPAIRS

SPECIAL INSPECTIONS - G575

SIZE	CODE IDENT. NO.	NAVFAC DRAWING NO.
E1	80091	60044594

CONSTR. CONTR. NO. N40085-26-B-0044

SCALE AS NOTED SPEC. 05-26-0044 SHEET 22 OF 40

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REVISIONS			
SYM.	DESCRIPTION	DATE	APP.

AISC - TABLE N5.4-1
INSPECTION TASKS PRIOR TO WELDING

INSPECTION TASKS PRIOR TO WELDING	QUALITY CONTROL	QUALITY ASSURANCE
WELDER QUALIFICATION RECORDS AND CONTINUITY RECORDS	P	O
WPS AVAILABLE	P	P
MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE	P	P
MATERIAL IDENTIFICATION (TYPE/GRADE)	O	O
WELDER IDENTIFICATION SYSTEM[a],[b]	O	O
FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY) - JOINT PREPARATION - DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL) - CLEANLINESS (CONDITION OF STEEL SURFACES) - TACKING (TACK WELD QUALITY AND LOCATION) - BACKING TYPE AND FIT (IF APPLICABLE)	O	O
FIT-UP OF CJP GROOVE WELDS OF HSS T-, Y- AND K-JOINTS WITHOUT BACKING (INCLUDING JOINT GEOMETRY) - JOINT PREPARATIONS - DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL) - CLEANLINESS (CONDITION OF STEEL SURFACES) - TACKING (TACK WELD QUALITY AND LOCATION)	P	O
CONFIGURATION AND FINISH OF ACCESS HOLES	O	O
FIT-UP OF FILLET WELDS - DIMENSIONS (ALIGNMENT, GAPS AT ROOT) - CLEANLINESS (CONDITION OF STEEL SURFACES) - TACKING (TACK WELD QUALITY AND LOCATION)	O	O
CHECKING WELDING EQUIPMENT	O	--

[a] THE FABRICATOR OR ERECTOR, AS APPLICABLE, MUST MAINTAIN A SYSTEM BY WHICH A WELDER WHO HAS WELDED A JOINT OF MEMBER CAN BE IDENTIFIED. STAMPS, IF USED, MUST BE THE LOW-STRESS TYPE.
[b] DIE STAMPING OF MEMBERS SUBJECTED TO FATIGUE MUST BE PROHIBITED UNLESS APPROVED BY THE ENGINEER OF RECORD.

1. OBSERVE (O): THE INSPECTOR MUST OBSERVE THESE ITEMS ON A RANDOM BASIS. OPERATION NEED NOT BE DELAYED PENDING THESE INSPECTIONS.
2. PERFORM (P): THESE TASKS MUST BE PERFORMED FOR EACH WELDED JOINT OR MEMBER.
3. WHEN A TASK IS NOTED TO BE PERFORMED BY BOTH QC AND QA IT IS PERMITTED TO COORDINATE THE INSPECTION FUNCTION BETWEEN THE QC INSPECTOR AND QA INSPECTOR SO THAT THE INSPECTION FUNCTION ARE PERFORMED BY ONLY ONE PARTY. WHEN THE QA RELIES UPON INSPECTION FUNCTIONS PERFORMED BY QC, THE APPROVAL OF THE ENGINEER OF RECORD AND THE AUTHORITY HAVING JURISDICTION.

AISC - TABLE N5.4-2
INSPECTION TASKS DURING WELDING

INSPECTION TASKS DURING WELDING	QUALITY CONTROL	QUALITY ASSURANCE
CONTROL AND HANDLING OF WELDING CONSUMABLES - PACKAGING - EXPOSURE CONTROL	O	O
NO WELDING OVER CRACKED TACK WELDS	O	O
ENVIRONMENTAL CONDITIONS - WIND SPEED WITHIN LIMITS - PRECIPITATION AND TEMPERATURE	O	O
WPS FOLLOWED - SETTINGS ON WELDING EQUIPMENT - TRAVEL SPEED - SELECTED WELDING MATERIALS - SHIELDING GAS TYPE/FLOW RATE - PREHEAT APPLIED - INTERPASS TEMPERATURE MAINTAINED (MIN./MAX.) - PROPER POSITION (F,V,H,OH)	O	O
WELDING TECHNIQUES - INTERPASS AND FINAL CLEANING - EACH PASS WITHIN PROFILE LIMITATIONS - EACH PASS MEETS QUALITY REQUIREMENTS	O	O
PLACEMENT AND INSTALLATION OF STEEL HEADED STUD ANCHORS	P	P

1. OBSERVE (O): THE INSPECTOR MUST OBSERVE THESE ITEMS ON A RANDOM BASIS. OPERATIONS NEED NOT BE DELAYED PENDING THESE INSPECTIONS.
2. PERFORM (P): THESE TASKS MUST BE PERFORMED FOR EACH WELDED JOINT OR MEMBER.

AISC - TABLE N5.4-3
INSPECTION TASKS AFTER WELDING

INSPECTION TASKS AFTER WELDING	QUALITY CONTROL	QUALITY ASSURANCE
WELDS CLEANED	O	O
SIZE, LENGTH, AND LOCATION OF WELDS	P	P
WELDS MEET VISUAL ACCEPTANCE CRITERIA - CRACK PROHIBITION - WELD/BASE-METAL FUSION - CRATER CROSS SECTION - WELD PROFILES - WELD SIZE - UNDERCUT - POROSITY	P	P
ARC STRIKES	P	P
k-AREA[a]	P	P
WELD ACCESS HOLES IN ROLLED HEAVY SHAPES AND BUILT-UP HEAVY SHAPES[b]	P	P
BACKING REMOVED AND WELD TABS REMOVED (IF REQUIRED)	P	P
REPAIR ACTIVITIES	P	P
DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER[c]	P	P
NO PROHIBITED WELDS HAVE BEEN ADDED WITHOUT THE APPROVAL OF THE EOR	O	O

[a] WHEN WELDING OF DOUBLER PLATES, CONTINUITY PLATES OR STIFFENERS HAS BEEN PERFORMED IN THE K-AREA, VISUALLY INSPECT THE WEB K-AREA FOR CRACKS WITHIN 3 INCHES (75MM) OF THE WELD.
[b] AFTER ROLLED HEAVY SHAPES (SEE SECTION A3.1C) AND BUILT-UP HEAVY SHAPES (SEE SECTION a3.14D) ARE WELDED, VISUALLY INSPECT THE WELD ACCESS HOLE FOR CRACKS.
[c] DIE STAMPING OF MEMBERS SUBJECTED TO FATIGUE MUST BE PROHIBITED UNLESS APPROVED BY THE ENGINEER OF RECORD.

1. OBSERVE (O): THE INSPECTOR MUST OBSERVE THESE ITEMS ON A RANDOM BASIS. OPERATIONS NEED NOT BE DELAYED PENDING THESE INSPECTIONS.
2. PERFORM (P): THESE TASKS MUST BE PERFORMED FOR EACH WELDED JOINT OR MEMBER.

AISC - TABLE N5.6-1
INSPECTION TASKS PRIOR TO BOLTING

INSPECTION TASKS PRIOR TO BOLTING	QUALITY CONTROL	QUALITY ASSURANCE
MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENER MATERIALS	O	P
FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS	O	O
CORRECT FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH IF THREADS ARE TO BE EXCLUDED FROM SHEAR PLANE)	O	O
CORRECT BOLTING PROCEDURE SELECTED FOR JOINT DETAIL	O	O
CONNECTING ELEMENTS, INCLUDING THE REQUIRED FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS	O	O
PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED	P	O
PROPER STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS AND OTHER FASTENER COMPONENTS	O	O

1. OBSERVE (O): THE INSPECTOR MUST OBSERVE THESE ITEMS ON A RANDOM BASIS. OPERATIONS NEED NOT BE DELAYED PENDING THESE INSPECTIONS.
2. PERFORM (P): THESE TASKS MUST BE PERFORMED FOR EACH WELDED JOINT OR MEMBER.

AISC - TABLE N5.6-2
INSPECTION TASKS DURING BOLTING

INSPECTION TASKS DURING BOLTING	QUALITY CONTROL	QUALITY ASSURANCE
FASTENER ASSEMBLIES ARE OF SUITABLE CONDITION, PLACED IN HOLES AND WASHERS AND NUTS ARE POSITIONED AS REQUIRED	O	O
JOINT BROUGHT TO THE SNUG-TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION	O	O
FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING	O	O
FASTENERS ARE PRETENSIONED IN ACCORDANCE WITH THE RCSC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM MOST RIGID POINT TOWARD THE FREE EDGES	O	O

AISC - TABLE N5.6-3
INSPECTION TASKS AFTER BOLTING

INSPECTION TASKS AFTER BOLTING	QUALITY CONTROL	QUALITY ASSURANCE
DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS	P	P

NORTH CAROLINA PROFESSIONAL SEAL 048129 ENGINEER MARK ARYAL
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23 JULY 2026

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MBFA NO.: 2505
Stantec

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
MARINE CORPS BASE
MCAS NEW RIVER, NORTH CAROLINA

DES. TF
DR. ZC
CHK. AA
SUBMITTED BY:
DESIGN DIR. CHRIS MAAS
APPROVED: PWO OR OICC DATE
SATISFACTORY TO: Christopher Maas 29-Jul-2026 DATE

G575 LIFT STATION REPAIRS

SPECIAL INSPECTIONS - G575

SIZE E1 | CODE IDENT. NO. 80091 | NAVFAC DRAWING NO. 60044595
CONSTR. CONTR. NO. N40085-26-B-0044
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REVISIONS			
SYM.	DESCRIPTION	DATE	APP.

WALL HORIZONTAL BAR TENSION DEVELOPMENT AND LAP SPLICE LENGTHS
GRADE 60 REINFORCEMENT, NORMAL WEIGHT CONCRETE

BAR SIZE	LAP CLASS	f'c = 3000 PSI	f'c = 4000 PSI	f'c = 5000 PSI	f'c = 6000 PSI	f'c = 7000 PSI	f'c = 8000 PSI
#3	A	13	12	12	12	12	12
	B	17	16	16	16	16	16
#4	A	22	19	17	16	14	14
	B	29	25	23	21	19	19
#5	A	32	28	25	23	21	20
	B	42	37	33	30	28	26
#6	A	43	37	34	31	28	27
	B	56	49	45	41	37	36
#7	A	69	60	54	49	46	43
	B	90	78	71	64	60	56
#8	A	86	74	67	61	56	53
	B	112	97	88	80	73	69
#9	A	104	90	81	74	68	64
	B	136	117	106	97	89	84
#10	A	125	108	97	88	82	77
	B	163	141	127	115	107	101
#11	A	146	127	114	104	96	90
	B	190	166	149	136	125	117

NOTES:

1. SPLICE LENGTHS ARE IN INCHES.
2. THIS TABLE MUST BE USED FOR WALL HORIZONTAL BARS ONLY. REFER TO OTHER DEVELOPMENT LENGTH TABLES FOR OTHER MEMBERS.
3. THE TENSION DEVELOPMENT LENGTH (Ld) IS EQUAL TO THE SCHEDULED "CLASS A" LAP SPLICE LENGTH.
4. FOR DETERMINING THE BAR CATEGORY, "db" IS DEFINED AS THE DIAMETER OF THE LARGER BAR BEING SPLICED.
5. THE "CATEGORY 1" LAP LENGTH MUST BE USED WHEN THE CLEAR SPACING BETWEEN BARS AT THE SPLICE IS EQUAL TO OR GREATER THAN 3db.
6. THE "CATEGORY 2" LAP LENGTH MUST BE USED WHEN THE CLEAR SPACING BETWEEN BARS AT THE SPLICE IS LESS THAN 3db AND GREATER THAN 2db.
7. WHEN THE CLEAR SPACING BETWEEN BARS AT THE SPLICE IS EQUAL TO OR LESS THAN 2db, SPLICES MUST BE STAGGERED SO THAT NO MORE THAN 50% OF BARS ARE SPLICED AT ANY GIVEN LOCATION. REFER TO "TYPICAL CLEAR SPACING CRITERIA OF LAP SPLICED BARS, STAGGERED SPLICES" FOR CRITERIA TO DETERMINE CLEAR SPACING "S" FOR BARS AT STAGGERED SPLICES.
8. FOR EPOXY-COATED BARS, MULTIPLY THE TABULATED SPLICE LENGTHS BY 1.5.
9. WHEN LAP SPLICING BARS OF DIFFERENT SIZES, THE LAP LENGTH IS DETERMINED BY THE SMALLER BAR BUT MAY NOT BE LESS THAN THE "CLASS A" SPLICE LENGTH OF THE LARGER BAR.

D1 TYPICAL WALL HORIZONTAL BAR TENSION DEVELOPMENT AND LAP SPLICE LENGTHS
NTS

SLAB TENSION DEVELOPMENT AND LAP SPLICE LENGTHS
GRADE 60 REINFORCEMENT, NORMAL WEIGHT CONCRETE

BAR SIZE	LAP CLASS	f'c = 3000 PSI		f'c = 4000 PSI		f'c = 5000 PSI		f'c = 6000 PSI		f'c = 7000 PSI		f'c = 8000 PSI	
		BOTTOM BARS	OTHER BARS	BOTTOM BARS	OTHER BARS	BOTTOM BARS	OTHER BARS	BOTTOM BARS	OTHER BARS	BOTTOM BARS	OTHER BARS	BOTTOM BARS	OTHER BARS
#3	A	12	13	12	12	12	12	12	12	12	12	12	12
	B	16	17	16	16	16	16	16	16	16	16	16	16
#4	A	17	22	15	19	13	17	12	16	12	14	12	14
	B	23	29	20	25	17	23	16	21	16	19	16	19
#5	A	25	32	21	28	19	25	18	23	16	21	15	20
	B	33	42	28	37	25	33	24	30	21	28	20	26
#6	A	33	43	29	37	26	34	24	31	22	28	21	27
	B	43	56	38	49	34	45	32	41	29	37	28	36
#7	A	53	69	46	60	42	54	38	49	35	46	33	43
	B	69	90	60	78	55	71	50	64	46	60	43	56
#8	A	66	86	57	74	51	67	47	61	44	56	41	53
	B	86	112	75	97	67	88	62	80	58	73	54	69
#9	A	80	104	69	90	62	81	57	74	53	68	49	64
	B	104	136	90	117	81	106	75	97	69	89	64	84
#10	A	96	125	83	108	75	97	68	88	63	82	59	77
	B	125	163	108	141	98	127	89	115	82	107	77	101
#11	A	113	146	98	127	87	114	80	104	74	96	69	90
	B	147	190	128	166	114	149	104	136	97	125	90	117

NOTES:

1. SPLICE LENGTHS ARE IN INCHES.
2. THIS TABLE MUST BE USED FOR SLABS ONLY. REFER TO OTHER DEVELOPMENT LENGTH TABLES FOR OTHER MEMBERS.
3. THE TENSION DEVELOPMENT LENGTH (Ld) IS EQUAL TO THE SCHEDULED "CLASS A" LAP SPLICE LENGTH.
4. A BOTTOM BAR IS DEFINED AS ANY BAR THAT DOES NOT HAVE MORE THAN 12" OF FRESH CONCRETE BELOW THE BAR.
5. OTHER BARS INCLUDE TOP BARS AND OTHER BARS THAT HAVE MORE THAN 12" OF FRESH CONCRETE BELOW THE BAR. FOR TOP REINFORCEMENT IN SLABS THAT ARE 12" THICK OR LESS, TABULATED SPLICE LENGTHS FOR BOTTOM BARS MUST BE USED.
6. FOR EPOXY-COATED BARS, MULTIPLY THE TABULATED SPLICE LENGTHS OF BOTTOM BARS BY 1.5 AND THE TABULATED SPLICE LENGTHS OF OTHER BARS BY 1.3.
7. WHEN LAP SPLICING BARS OF DIFFERENT SIZES, THE LAP LENGTH IS DETERMINED BY THE SMALLER BAR BUT MAY NOT BE LESS THAN THE "CLASS A" SPLICE LENGTH OF THE LARGER BAR.

D4 TYPICAL SLAB TENSION DEVELOPMENT AND LAP SPLICE
NTS

WALL VERTICAL BAR TENSION DEVELOPMENT AND LAP SPLICE LENGTHS
GRADE 60 REINFORCEMENT, NORMAL WEIGHT CONCRETE

BAR SIZE	LAP CLASS	f'c = 3000 PSI		f'c = 4000 PSI		f'c = 5000 PSI		f'c = 6000 PSI		f'c = 7000 PSI		f'c = 8000 PSI	
		CATEGORY 1	CATEGORY 2	CATEGORY 1	CATEGORY 2	CATEGORY 1	CATEGORY 2	CATEGORY 1	CATEGORY 2	CATEGORY 1	CATEGORY 2	CATEGORY 1	CATEGORY 2
#4	A	17	17	15	15	15	15	15	15	15	15	15	15
	B	22	22	19	19	17	17	16	16	15	15	15	15
#5	A	21	25	19	21	19	19	19	19	19	19	19	19
	B	27	32	24	28	21	25	19	23	19	21	19	20
#6	A	25	33	23	29	23	26	23	24	23	23	23	23
	B	33	43	28	37	25	34	23	31	23	28	23	27
#7	A	41	48	35	42	32	38	29	34	27	32	27	30
	B	53	63	46	54	41	49	38	45	35	41	33	39
#8	A	51	55	44	48	40	43	36	39	34	36	31	34
	B	66	72	57	62	51	56	47	51	44	47	41	44
#9	A	62	62	54	54	48	48	44	44	41	41	38	38
	B	81	81	70	70	63	63	57	57	53	53	50	50
#10	A	71	71	61	61	55	55	50	50	47	47	44	44
	B	92	92	80	80	71	71	65	65	60	60	56	56
#11	A	84	84	73	73	65	65	60	60	55	55	52	52
	B	109	109	95	95	85	85	77	77	72	72	67	67

NOTES:

1. SPLICE LENGTHS ARE IN INCHES.
2. THIS TABLE MUST BE USED FOR WALL VERTICAL BARS ONLY. REFER TO OTHER DEVELOPMENT LENGTH TABLES FOR WALL HORIZONTAL BARS AND OTHER MEMBERS.
3. THE TENSION DEVELOPMENT LENGTH (Ld) IS EQUAL TO THE SCHEDULED "CLASS A" LAP SPLICE LENGTH.
4. FOR DETERMINING THE BAR CATEGORY, "db" IS DEFINED AS THE DIAMETER OF THE LARGER BAR BEING SPLICED.
5. THE "CATEGORY 1" LAP LENGTH MUST BE USED WHEN THE CLEAR SPACING BETWEEN BARS AT THE SPLICE IS EQUAL TO OR GREATER THAN 3db.
6. THE "CATEGORY 2" LAP LENGTH MUST BE USED WHEN THE CLEAR SPACING BETWEEN BARS AT THE SPLICE IS LESS THAN 3db AND GREATER THAN 2db.
7. WHEN THE CLEAR SPACING BETWEEN BARS AT THE SPLICE IS EQUAL TO OR LESS THAN 2db, SPLICES MUST BE STAGGERED SO THAT NO MORE THAN 50%OF BARS ARE SPLICED AT ANY GIVEN LOCATION. REFER TO "TYPICAL CLEAR SPACING CRITERIA OF LAP SPLICED BARS, STAGGERED SPLICES" FOR CRITERIA TO DETERMINE CLEAR SPACING "S" FOR BARS AT STAGGERED SPLICES.
8. FOR EPOXY-COATED BARS, MULTIPLY THE TABULATED SPLICE LENGTHS BY 1.5.
9. WHEN LAP SPLICING BARS OF DIFFERENT SIZES, THE LAP LENGTH IS DETERMINED BY THE SMALLER BAR BUT MAY NOT BE LESS THAN THE "CLASS A" SPLICE LENGTH OF THE LARGER BAR.

C1 TYPICAL WALL VERTICAL BAR TENSION DEVELOPMENT AND LAP SPLICE LENGTHS
NTS

COMPRESSION DEVELOPMENT AND LAP SPLICE LENGTHS
GRADE 60 REINFORCEMENT

BAR SIZE	DEVELOPMENT LENGTH						LAP LENGTH
	f'c=3000 PSI	f'c=4000 PSI	f'c=5000 PSI	f'c=6000 PSI	f'c=7000 PSI	f'c=8000 PSI	ALL f'c
#3	9	8	8	8	8	8	12
#4	11	10	9	9	9	9	15
#5	14	12	12	12	12	12	19
#6	17	15	14	14	14	14	23
#7	20	17	16	16	16	16	27
#8	22	19	18	18	18	18	30
#9	25	22	21	21	21	21	34
#10	28	25	23	23	23	23	39
#11	31	27	26	26	26	26	43

NOTES:

1. SPLICE LENGTHS ARE IN INCHES.
2. DEVELOPMENT LENGTHS LISTED ABOVE MUST ONLY BE USED FOR BAR END TERMINATIONS (NOT LAPS) SPECIFICALLY DESIGNATED AS COMPRESSION BARS.
3. LAP LENGTHS LISTED ABOVE MUST ONLY BE USED FOR BAR LAP SPLICES SPECIFICALLY DESIGNATED AS COMPRESSION SPLICES.
4. IF BAR TERMINATIONS OR SPLICES ARE NOT SPECIFICALLY DESIGNATED AS COMPRESSION, THE REQUIRED TENSION DEVELOPMENT LENGTH MUST BE USED.
5. WHEN BARS OF DIFFERENT SIZE ARE LAP SPLICED, THE SPLICE LENGTH MUST BE THE LARGER OF EITHER THE DEVELOPMENT LENGTH OF THE LARGER BAR OR THE LAP LENGTH OF THE SMALLER BAR.
6. LENGTHS LISTED ARE VALID FOR BOTH NORMAL WEIGHT AND LIGHTWEIGHT CONCRETE.

C4 TYPICAL COMPRESSION DEVELOPMENT AND LAP SPLICE LENGTHS
NTS

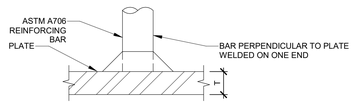
COLUMN TENSION DEVELOPMENT AND LAP SPLICE LENGTHS
GRADE 60 REINFORCEMENT, NORMAL WEIGHT CONCRETE

BAR SIZE	LAP CLASS	f'c = 3000 PSI		f'c = 4000 PSI		f'c = 5000 PSI		f'c = 6000 PSI		f'c = 7000 PSI		f'c = 8000 PSI	
		CATEGORY 1	CATEGORY 2	CATEGORY 1	CATEGORY 2	CATEGORY 1	CATEGORY 2	CATEGORY 1	CATEGORY 2	CATEGORY 1	CATEGORY 2	CATEGORY 1	CATEGORY 2
#5	A	19	21	19	19	19	19	19	19	19	19	19	19
	B	24	27	21	24	19	21	19	19	19	19	19	19
#6	A	23	30	23	26	23	23	23	23	23	23	23	23
	B	30	38	26	33	23	30	23	27	23	25	23	24
#7	A	33	44	29	38	27	34	27	31	27	29	27	27
	B	43	57	37	49	33	44	31	40	28	37	27	35
#8	A	39	52	34	45	30	40	30	37	30	34	30	32
	B	50	67	43	58	39	52	36	47	33	44	31	41
#9	A	44	59	38	51	34	46	34	42	34	39	34	36
	B	57	76	50	66	45	59	41	54	38	50	35	47
#10	A	51	66	44	57	39	51	39	47	39	43	39	40
	B	66	85	57	74	51	66	47	60	43	56	40	52
#11	A	57	71	49	62	44	55	43	51	43	47	43	44
	B	74	92	64	80	57	72	52	66	48	61	45	57

NOTES:

1. SPLICE LENGTHS ARE IN INCHES.
2. THIS TABLE MUST BE USED FOR COLUMNS ONLY. REFER TO OTHER DEVELOPMENT LENGTH TABLES FOR OTHER MEMBERS.
3. THE TENSION DEVELOPMENT LENGTH (Ld) IS EQUAL TO THE SCHEDULED "CLASS A" LAP SPLICE LENGTH.
4. FOR DETERMINING THE BAR CATEGORY, "db" IS DEFINED AS THE DIAMETER OF THE LARGER BAR BEING SPLICED.
5. THE "CATEGORY 1" LAP LENGTH MUST BE USED WHEN THE CLEAR SPACING BETWEEN BARS AT THE SPLICE IS EQUAL TO OR GREATER THAN 3db.
6. THE "CATEGORY 2" LAP LENGTH MUST BE USED WHEN THE CLEAR SPACING BETWEEN BARS AT THE SPLICE IS LESS THAN 3db AND GREATER THAN 2db.
7. WHEN THE CLEAR SPACING BETWEEN BARS AT THE SPLICE IS EQUAL TO OR LESS THAN 2db, SPLICES MUST BE STAGGERED SO THAT NO MORE THAN 50% OF BARS ARE SPLICED AT ANY GIVEN LOCATION. REFER TO "TYPICAL CLEAR SPACING CRITERIA OF LAP SPLICED BARS, STAGGERED SPLICES" FOR CRITERIA TO DETERMINE CLEAR SPACING "S" FOR BARS AT STAGGERED SPLICES.
8. IN CASES WHERE BAR SPACING IS NOT THE SAME AT DIFFERENT COLUMN FACES, THE SMALLER SPACING MUST BE USED TO DETERMINE THE APPLICABLE SPLICE CATEGORY.
9. FOR EPOXY-COATED BARS, MULTIPLY THE TABULATED SPLICE LENGTHS BY 1.5.
10. WHEN LAP SPLICING BARS OF DIFFERENT SIZES, THE LAP LENGTH IS DETERMINED BY THE SMALLER BAR BUT MAY NOT BE LESS THAN THE "CLASS A" SPLICE LENGTH OF THE LARGER BAR.

A1 TYPICAL COLUMN TENSION DEVELOPMENT AND LAP SPLICE LENGTHS
NTS



DEVELOPMENT OF WELDABLE REINFORCEMENT
GRADE 60 REINFORCEMENT, E70 ELECTRODE

BAR SIZE	NOMINAL WELD SIZE (INCHES)	MINIMUM PLATE THICKNESS, T (INCHES)
#3	1/4	1/4
#4	5/16	1/4
#5	3/8	1/4
#6	7/16	5/16
#7	1/2	3/8
#8	9/16	7/16
#9	5/8	1/2
#10	11/16	9/16
#11	3/4	5/8

A4 TYPICAL DEVELOPMENT OF WELDABLE REINFORCEMENT
NTS

NORTH CAROLINA PROFESSIONAL SEAL 048129 ENGINEER ANUP ARYAL
Anup Aryal 2026.07.20 14:03:23-04'00'
23 JULY 2026

S-005

Stantec

MBFA NO. 2505

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND

MARINE CORPS BASE

MCAS NEW RIVER, NORTH CAROLINA

DES. TF
DR. ZC
CHK. AA
SUBMITTED BY:
DESIGN DIR. CHRIS MAAS
APPROVED: PWO OR OICC DATE
SATISFACTORY TO: DATE
Christopher Maas 29-Jul-2026

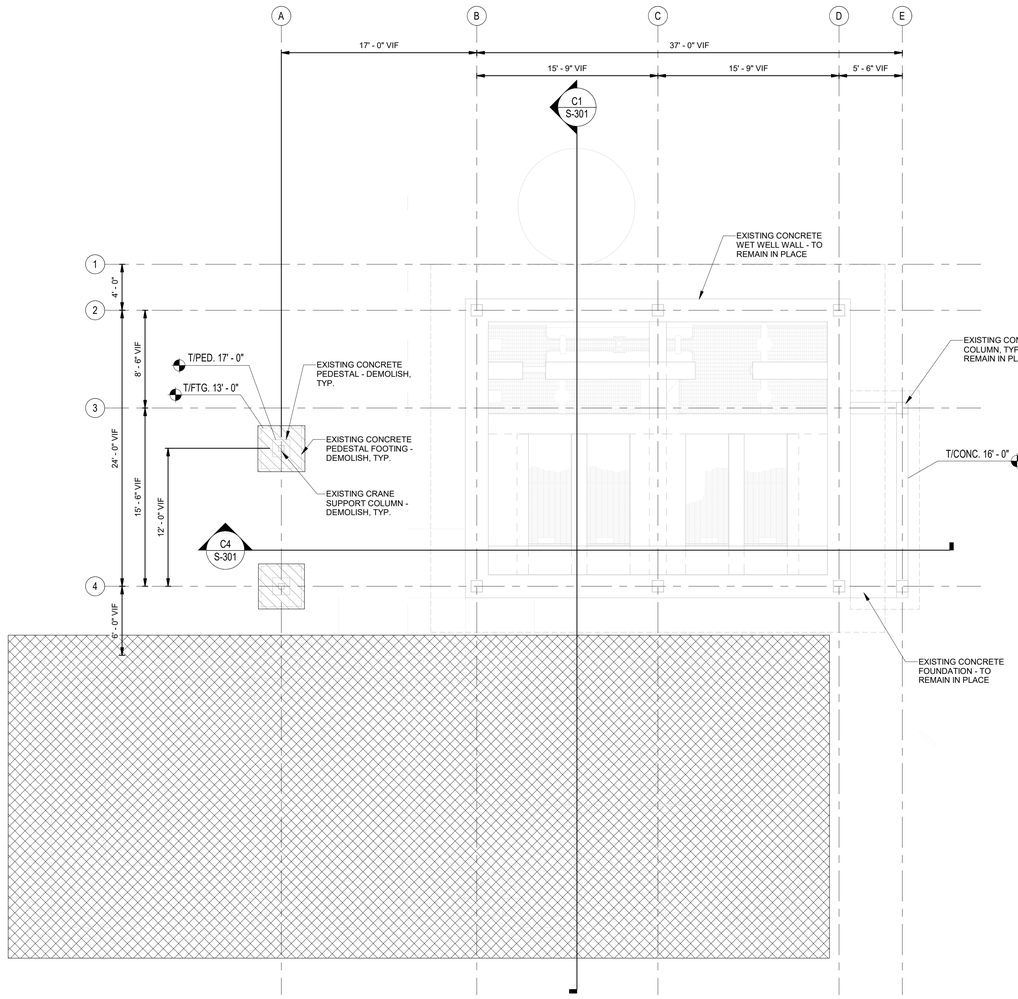
G575 LIFT STATION REPAIRS

CONCRETE REINFORCEMENT SCHEDULES - G575

SIZE	CODE IDENT. NO.	NAVFAC DRAWING NO.
E1	80091	60044596
		CONSTR. CONTR. NO. N40085-26-B-0044
SCALE AS NOTED	SPEC. 05-26-0044	SHEET 24 OF 40

File Path: Autodesk Docs://175578902_CampLeJeune_LSG575/175578902_CAMP_LEJEUNE_G575_STRU.rvt
Print Date: 7/20/2026 1:59:17 PM

REVISIONS			
SYM.	DESCRIPTION	DATE	APP.



B2 EXISTING OVERALL LIFT STATION PLAN

3/16" = 1'-0"

FOUNDATION PLAN NOTES:

1. VERIFY FIELD CONDITIONS PRIOR TO BEGINNING WORK. REPORT DISCREPANCIES IN DIMENSIONS BETWEEN DIFFERENT DRAWINGS TO THE CONTRACTING OFFICER PRIOR TO BEGINNING WORK IN AREAS THAT WILL BE AFFECTED.
2. REFER TO MEP & CIVIL DRAWINGS FOR ADDITIONAL DIMENSIONS, SITE PLANS OR INFORMATION NOT INDICATED.
3. SLAB-ON-GRADE / SHALLOW FOUNDATIONS BEAR ON SOILS WITH AN ASSUMED MINIMUM BEARING PRESSURE OF 2,000 PSF AND SOIL SUBGRADE MODULUS, k, OF 150 PCI. EMBEDDED COLUMNS / PIERS TERMINATE WITHIN SOILS WITH AN ASSUMED MINIMUM BEARING OF 2,000 PSF. GEOTECHNICAL INVESTIGATIONS AND RECOMMENDATIONS REMAIN PENDING GEOTECHNICAL REPORT. FINAL FOUNDATIONS / SLAB-ON-GRADE DESIGN MUST BE COORDINATED UPON RECEIPT OF GEOTECHNICAL REPORT AND MAY VARY FROM THAT SHOWN.
4. CONTRACTOR MUST VERIFY THE CONDITION AND SIZE OF THE EXISTING FOUNDATIONS, COLUMNS AND BEAMS PRIOR TO INSTALLING COMPONENTS. CONTRACTOR MUST NOTIFY THE CONTRACTING OFFICER'S REPRESENTATIVE IF DAMAGE TO EXISTING FOUNDATIONS OR FRAMING IS DISCOVERED.
5. FINISH FLOOR ELEVATION 16'-0". COORDINATE FINISH FLOOR ELEVATION WITH UPDATED SURVEY.

DEMOLITION/DECONSTRUCTION SHEET NOTES:

1. REFER TO MEP AND CIVIL DRAWINGS FOR DECONSTRUCTION & DEMOLITION PLANS PRIOR TO PERFORMING WORK.
2. CONTRACTOR MUST ONLY REMOVE, DISASSEMBLE AND DEMOLISH EXISTING MATERIALS INDICATED ON THE DRAWINGS. CONTRACTOR MUST MAKE NECESSARY PROVISIONS TO PREVENT DAMAGE TO EXISTING ELEMENTS THAT ARE BEING DISASSEMBLED FOR REUSE OR REMAINING IN PLACE.
3. CONTRACTOR MUST NOTIFY THE CONTRACTING OFFICER'S REPRESENTATIVE IF ANY ADDITIONAL DETERIORATED STRUCTURAL ELEMENTS ARE OBSERVED THAT AREN'T INDICATED ON THE DRAWINGS. CONTRACTOR MUST RECEIVE APPROVAL PRIOR TO REPLACEMENT.
4. CONTRACTOR MUST PROVIDE TEMPORARY BRACING, SHORING, GUYING OR OTHER SUPPORT MEANS TO AVOID EXCESSIVE STRESSES AND TO HOLD STRUCTURAL ELEMENTS IN PLACE DURING DEMOLITION WORK. CONTRACTOR MUST PROVIDE CALCULATIONS AND DRAWINGS DEMONSTRATING ADEQUACY OF TEMPORARY SHORING, GUYING OR OTHER SUPPORT MEANS HOLDING STRUCTURAL ELEMENTS IN PLACE.
5. PATCH/FILL EXISTING CONCRETE PENETRATIONS AND ENSURE SURFACES ARE FLUSH PRIOR TO PERFORMING WORK.

LEGEND:

= AREA TO BE DEMOLISHED

= NOT IN CONTRACT

PLAN NORTH

GRAPHIC SCALE:

3/16" =1'-0" 0' 4' 8' 12'

NORTH CAROLINA PROFESSIONAL SEAL 048129 ENGINEER ANUP ARYAL

Aryal, Anup
2026.07.23 14:03:33-04'00'

23 JULY 2026

S-101

Stantec

MBFA NO.: 2505

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND

MARINE CORPS BASE

MCAS NEW RIVER, NORTH CAROLINA

DES.	TF
DR.	ZC
CHK.	AA
SUBMITTED BY:	
DESIGN DIR.	CHRIS MAAS
APPROVED: PWO OR OICC	DATE
SATISFACTORY TO	DATE

Christopher Maas 29-Jul-2026

G575 LIFT STATION REPAIRS

EXISTING LIFT STATION PLAN - G575

SIZE	CODE IDENT. NO.	NAVFAC DRAWING NO.
E1	80091	60044597

CONSTR. CONTR. NO. N40085-26-B-0044

SCALE AS NOTED SPEC. 05-26-0044 SHEET 25 OF 40

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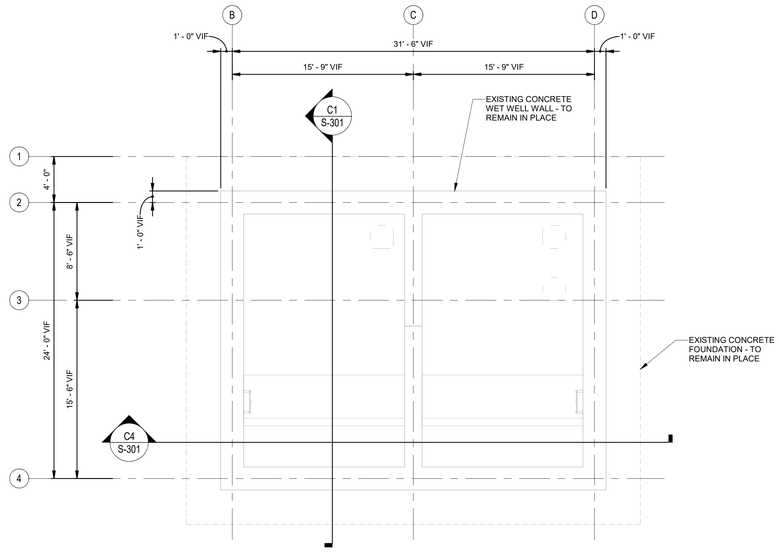
Print Date: 7/20/2026 1:59:17 PM

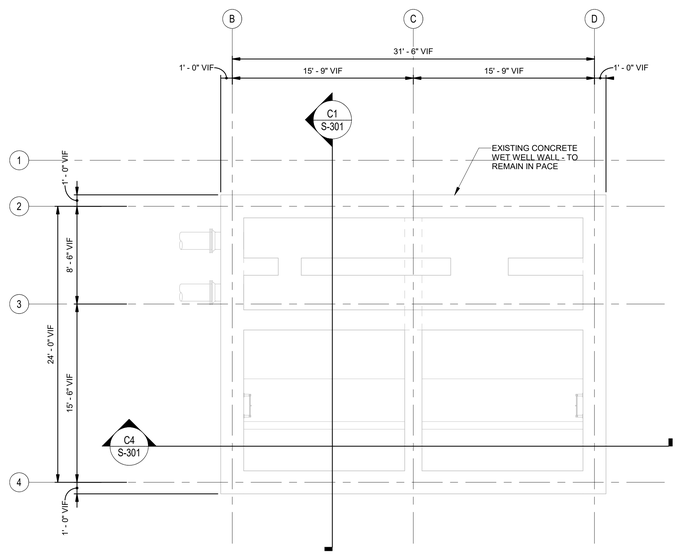
REVISIONS			
SYM.	DESCRIPTION	DATE	APP.

FOUNDATION PLAN NOTES:

1. VERIFY FIELD CONDITIONS PRIOR TO BEGINNING WORK. REPORT DISCREPANCIES IN DIMENSIONS BETWEEN DIFFERENT DRAWINGS TO THE CONTRACTING OFFICER PRIOR TO BEGINNING WORK IN AREAS THAT WILL BE AFFECTED.
2. REFER TO MEP & CIVIL DRAWINGS FOR ADDITIONAL DIMENSIONS, SITE PLANS OR INFORMATION NOT INDICATED.
3. SLAB-ON-GRADE / SHALLOW FOUNDATIONS BEAR ON SOILS WITH AN ASSUMED MINIMUM BEARING PRESSURE OF 2,000 PSF AND SOIL SUBGRADE MODULUS, k, OF 150 PCI. EMBEDDED COLUMNS / PIERS TERMINATE WITHIN SOILS WITH AN ASSUMED MINIMUM BEARING OF 2,000 PSF. GEOTECHNICAL INVESTIGATIONS AND RECOMMENDATIONS REMAIN PENDING GEOTECHNICAL REPORT. FINAL FOUNDATIONS / SLAB-ON-GRADE DESIGN MUST BE COORDINATED UPON RECEIPT OF GEOTECHNICAL REPORT AND MAY VARY FROM THAT SHOWN.
4. CONTRACTOR MUST VERIFY THE CONDITION AND SIZE OF THE EXISTING FOUNDATIONS, COLUMNS AND BEAMS PRIOR TO INSTALLING COMPONENTS. CONTRACTOR MUST NOTIFY THE CONTRACTING OFFICER'S REPRESENTATIVE IF DAMAGE TO EXISTING FOUNDATIONS OR FRAMING IS DISCOVERED.
5. FINISH FLOOR ELEVATION 16'-0". COORDINATE FINISH FLOOR ELEVATION WITH UPDATED SURVEY.



C2 EXISTING LOWER WETWELL PLAN
3/16" = 1'-0"



A2 EXISTING INFLUENT CHANNEL PLAN
3/16" = 1'-0"

PLAN NORTH

GRAPHIC SCALE:
3/16" =1'-0" 0' 4' 8' 12'

NORTH CAROLINA PROFESSIONAL SEAL 048129 ENGINEER ANUP ARYAL
Anup Aryal, Anup
2026.07.23 14:03:42-04'00'
23 JULY 2026

S-102

Stantec

MBFA NO: 2505

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND

MARINE CORPS BASE
MCAS NEW RIVER, NORTH CAROLINA

DES.	TF
DR.	ZC
CHK.	AA
SUBMITTED BY:	
DESIGN DIR.	CHRIS MAAS
APPROVED: PWO OR OICC	DATE
SATISFACTORY TO: Christopher Maas 29-Jul-2026	DATE

G575 LIFT STATION REPAIRS

EXISTING LIFT STATION PLANS - G575

SIZE	CODE IDENT. NO.	NAVFAC DRAWING NO.
E1	80091	60044598
		CONSTR. CONTR. NO. N40085-26-B-0044
SCALE AS NOTED	SPEC. 05-26-0044	SHEET 26 OF 40

File Path: Autodesk Docs://175578902_CampLeJeune_LSG575/175578902_CAMP LEJEUNE_G575_STRU.rvt
Print Date: 7/20/2026 1:59:18 PM

REVISIONS			
SYM.	DESCRIPTION	DATE	APP.

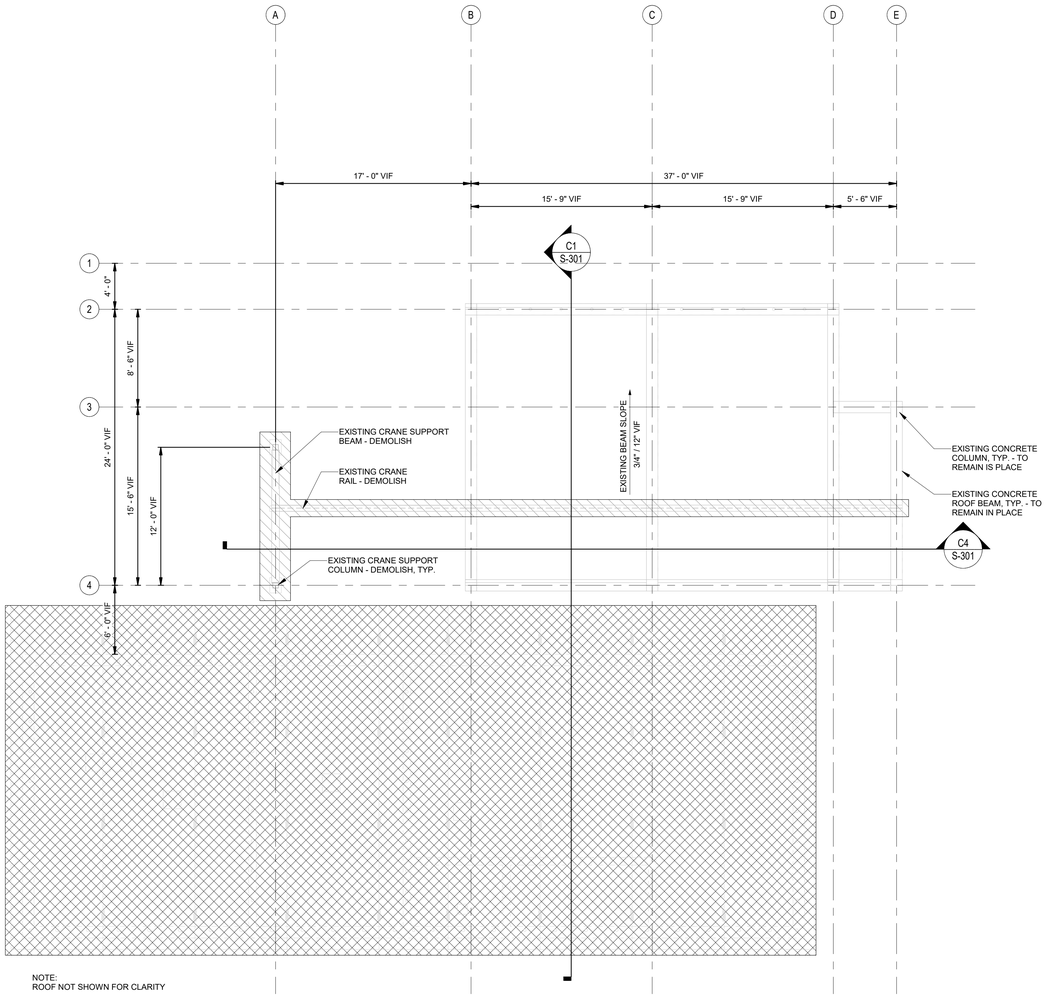
DEMOLITION/DECONSTRUCTION SHEET NOTES:

1. REFER TO MEP AND CIVIL DRAWINGS FOR DECONSTRUCTION & DEMOLITION PLANS PRIOR TO PERFORMING WORK.
2. CONTRACTOR MUST ONLY REMOVE, DISASSEMBLE AND DEMOLISH EXISTING MATERIALS INDICATED ON THE DRAWINGS. CONTRACTOR MUST MAKE NECESSARY PROVISIONS TO PREVENT DAMAGE TO EXISTING ELEMENTS THAT ARE BEING DISASSEMBLED FOR REUSE OR REMAINING IN PLACE.
3. CONTRACTOR MUST NOTIFY THE CONTRACTING OFFICER'S REPRESENTATIVE IF ANY ADDITIONAL DETERIORATED STRUCTURAL ELEMENTS ARE OBSERVED THAT AREN'T INDICATED ON THE DRAWINGS. CONTRACTOR MUST RECEIVE APPROVAL PRIOR TO REPLACEMENT.
4. CONTRACTOR MUST PROVIDE TEMPORARY BRACING, SHORING, GUYING OR OTHER SUPPORT MEANS TO AVOID EXCESSIVE STRESSES AND TO HOLD STRUCTURAL ELEMENTS IN PLACE DURING DEMOLITION WORK. CONTRACTOR MUST PROVIDE CALCULATIONS AND DRAWINGS DEMONSTRATING ADEQUACY OF TEMPORARY SHORING, GUYING OR OTHER SUPPORT MEANS HOLDING STRUCTURAL ELEMENTS IN PLACE.
5. PATCH/FILL EXISTING CONCRETE PENETRATIONS AND ENSURE SURFACES ARE FLUSH PRIOR TO PERFORMING WORK.

LEGEND:

= AREA TO BE DEMOLISHED

= NOT IN CONTRACT



NOTE:
ROOF NOT SHOWN FOR CLARITY

B1 EXISTING CRANE FRAMING PLAN
3/16" = 1'-0"

PLAN NORTH

GRAPHIC SCALE:
3/16" =1'-0"
0' 4' 8' 12'

NORTH CAROLINA PROFESSIONAL SEAL 048129 ENGINEER ANUP ARYAL
Aryal, Anup
2026.07.20 14:03:53-04'00'
23 JULY 2026

S-103

MBFA NO.: 2505

Stantec

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND

MARINE CORPS BASE

MCAS NEW RIVER, NORTH CAROLINA

DES. TF
DR. ZC
CHK. AA
SUBMITTED BY:
DESIGN DIR. CHRIS MAAS
APPROVED: PWO OR OICC DATE
SATISFACTORY TO: DATE
Christopher Maas 29-Jul-2026

G575 LIFT STATION REPAIRS

EXISTING CRANE FRAMING PLAN - G575

SIZE	CODE IDENT. NO.	NAVFAC DRAWING NO.
E1	80091	60044599
		CONSTR. CONTR. NO. N40085-26-B-0044
SCALE AS NOTED	SPEC. 05-26-0044	SHEET 27 OF 40

File Path: Autodesk Docs://175578902_CampLeJeune_LSG575/175578902_CAMP_LEJEUNE_G575_STRU.rvt
Print Date: 7/20/2026 1:59:18 PM

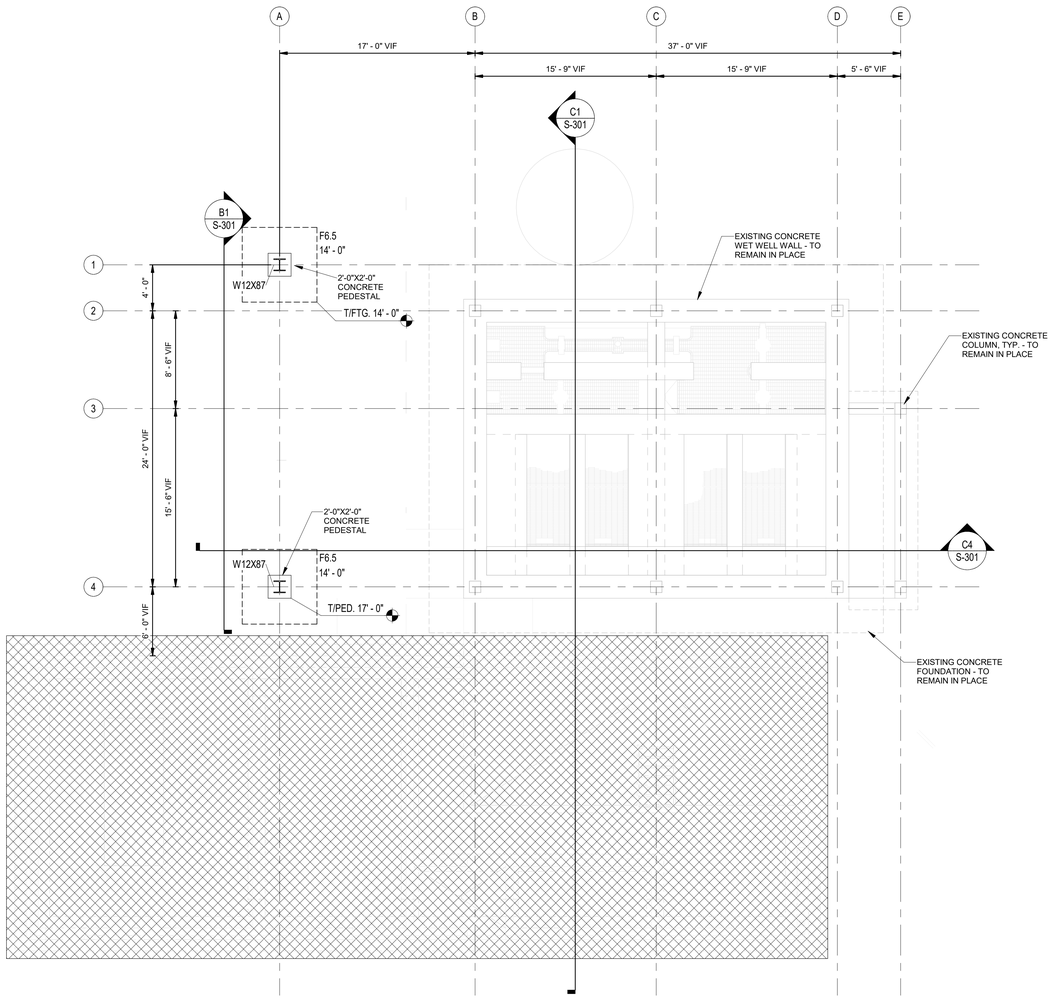
REVISIONS			
SYM.	DESCRIPTION	DATE	APP.

FOUNDATION PLAN NOTES:

1. VERIFY FIELD CONDITIONS PRIOR TO BEGINNING WORK. REPORT DISCREPANCIES IN DIMENSIONS BETWEEN DIFFERENT DRAWINGS TO THE CONTRACTING OFFICER PRIOR TO BEGINNING WORK IN AREAS THAT WILL BE AFFECTED.
2. REFER TO ARCHITECTURAL & CIVIL DRAWINGS FOR ADDITIONAL DIMENSIONS, SITE PLANS OR INFORMATION NOT INDICATED.
3. REFER TO ARCHITECTURAL, MEP AND CIVIL DRAWINGS FOR ADDITIONAL DECONSTRUCTION & DEMOLITION PLANS PRIOR TO PERFORMING WORK.
4. SLAB-ON-GRADE / SHALLOW FOUNDATIONS BEAR ON SOILS WITH AN ASSUMED MINIMUM BEARING PRESSURE OF 2,000 PSF AND SOIL SUBGRADE MODULUS, k, OF 150 PCI. EMBEDDED COLUMNS / PIERS TERMINATE WITHIN SOILS WITH AN ASSUMED MINIMUM END-BEARING OF 2,000 PSF. GEOTECHNICAL INVESTIGATIONS AND RECOMMENDATIONS REMAIN PENDING GEOTECHNICAL REPORT. FINAL FOUNDATIONS / SLAB-ON-GRADE DESIGN MUST BE COORDINATED UPON RECEIPT OF GEOTECHNICAL REPORT AND MAY VARY FROM THAT SHOWN.
5. CONTRACTOR MUST VERIFY THE CONDITION AND SIZE OF THE EXISTING FOUNDATIONS PRIOR TO INSTALLING COMPONENTS. CONTRACTOR MUST NOTIFY THE CONTRACTING OFFICER'S REPRESENTATIVE IF FOUNDATION DAMAGE IS DISCOVERED.
6. ANY EQUIPMENT ADDED/REPLACED MUST BE OF SIMILAR WEIGHT TO EXISTING EQUIPMENT.
7. FINISH FLOOR ELEVATION 16'-0". COORDINATE FINISH FLOOR ELEVATION WITH UPDATED SURVEY.

LEGEND:

= NOT IN CONTRACT



B1 OVERALL LIFT STATION PLAN
3/16" = 1'-0"

COLUMN FOOTING SCHEDULE				
	DIMENSIONS			
MARK	WIDTH	LENGTH	DEPTH	REINFORCING STEEL
F6.5	6' - 6"	6' - 6"	1' - 6"	6-#6 BARS E.W. TOP AND BOTTOM

PLAN NORTH

GRAPHIC SCALE:
3/16" =1'-0" 0' 4' 8' 12'

NORTH CAROLINA PROFESSIONAL SEAL 048129 ENGINEER ANUP ARYAL
Aryal, Anup
2026.07.20 14:04:06-04'00'
23 JULY 2026

S-111

Stantec

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
MARINE CORPS BASE
MCAS NEW RIVER, NORTH CAROLINA

MBFA NO.: 2505

DES. TF
DR. ZC
CHK. AA
SUBMITTED BY:
DESIGN DIR. CHRIS MAAS
APPROVED: PWO OR OICC DATE
SATISFACTORY TO: DATE
Christopher Maas 29-Jul-2026

G575 LIFT STATION REPAIRS
LIFT STATION FOUNDATION PLAN - G575

SIZE E1 | CODE IDENT. NO. 80091 | NAVFAC DRAWING NO. 60044600
CONSTR. CONTR. NO. N40085-26-B-0044
SCALE AS NOTED | SPEC. 05-26-0044 | SHEET 28 OF 40

File Path: Autodesk Docs://175578902_CampLeJeune_LSG575/175578902_CAMP_LEJEUNE_G575_STRU.rvt
Print Date: 7/20/2026 1:59:18 PM

REVISIONS			
SYM.	DESCRIPTION	DATE	APP.

STEEL FRAMING NOTES:

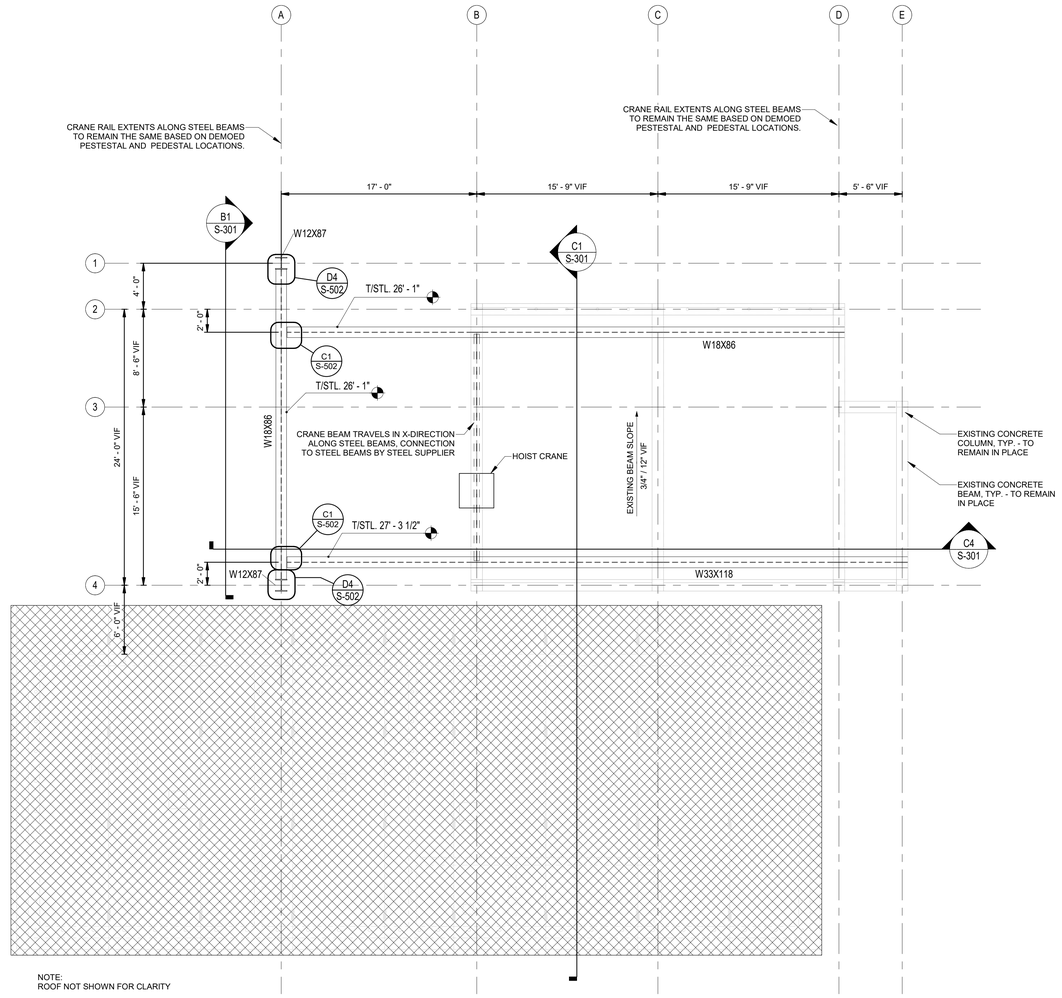
1. FABRICATOR MUST SELECT TYPICAL BEAM CONNECTIONS FROM THESE DETAILS USING LOAD REACTIONS GIVEN ON THE PLAN (AS _K) OR SCHEDULE. WHERE NOT GIVEN ON PLAN, BEAM REACTION AT EACH END MUST BE ASSUMED TO BE 55 PERCENT OF THE MAXIMUM TOTAL ALLOWABLE (ASD) UNIFORM LOAD FOR THE BEAM SIZE AND SPAN GIVEN IN THE 50 KSI TABLES IN PART 2 OF THE AISC STEEL CONSTRUCTION MANUAL.
2. BEAM REACTIONS ARE IN KIPS, AT SERVICE LOADS (UNFACTORED).
3. SLOTTED HOLES ARE NOT PERMISSIBLE EXCEPT WHERE SHOWN.
4. COMPLY WITH AISC MIN. EDGE DISTANCES.
5. VERIFY T/STL. ELEVATION BASED ON EXISTING STRUCTURAL ELEVATION.

CRANE NOTES:

1. CRANE STOPS AND ASSOCIATED HARDWARE AND CONNECTION BY CRANE SUPPLIER.
2. THE MAXIMUM PUMP WEIGHT CARRIED BY CRANE MUST NOT EXCEED 2800 LBS.
3. CRANE IS ASSUMED TO BE 2TONS CAPACITY. CRANE SUPPORT BEAMS ARE DESIGNED FOR 2 TONS CAPACITY WITH 25% VERTICAL IMPACT LOADING AND ADDITIONAL LATERAL LOAD OF 20% RATED CAPACITY OF THE CRANE.
4. CONTRACTOR MUST PROVIDE CRANE CUT SHEET INDICATING FINAL LOADS IMPOSED BY CRANE ON CRANE SUPPORTING STRUCTURES.
5. PROVIDE CONNECTION OF HOIST CRANE TO CRANE BEAM SUCH THAT CRANE MOVES ALONG THE LENGTH OF THE CRANE BEAM. PROVIDE ROLLER CONNECTION TO THE CRANE BEAM TO STEEL BEAM SUCH THAT THE CRANE BEAM CAN MOVE ALONG THE LENGTH OF THE STEEL BEAM. THESE CONNECTIONS ARE DELEGATED DESIGN AND MUST BE PROVIDED BE CRANE SUPPLIER.
6. CRANE SUPPLIER MUST VERIFY CLEARANCE AND MAXIMUM CRANE HOOK HEIGHT AS CALLED OUT ON STRUCTURAL DRAWINGS.
7. CONTRACTOR MUST PROVIDE A NAVAL CRANE CENTER (NCC) CERTIFIED CRANE AS BASIS OF DESIGN.

LEGEND:

▨ = NOT IN CONTRACT



NOTE:
ROOF NOT SHOWN FOR CLARITY

B2 CRANE FRAMING PLAN
3/16" = 1'-0"

PLAN NORTH

GRAPHIC SCALE:
3/16" =1'-0" 0' 4' 8' 12'

NORTH CAROLINA PROFESSIONAL SEAL 048129 ENGINEER ANUP ARYAL
Anup Aryal 2026.07.20 14:04:28-04'00'
23 JULY 2026

S-112

Stantec

MBFA NO.: 2505

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND

MARINE CORPS BASE
MCAS NEW RIVER, NORTH CAROLINA

G575 LIFT STATION REPAIRS

CRANE FRAMING PLAN - G575

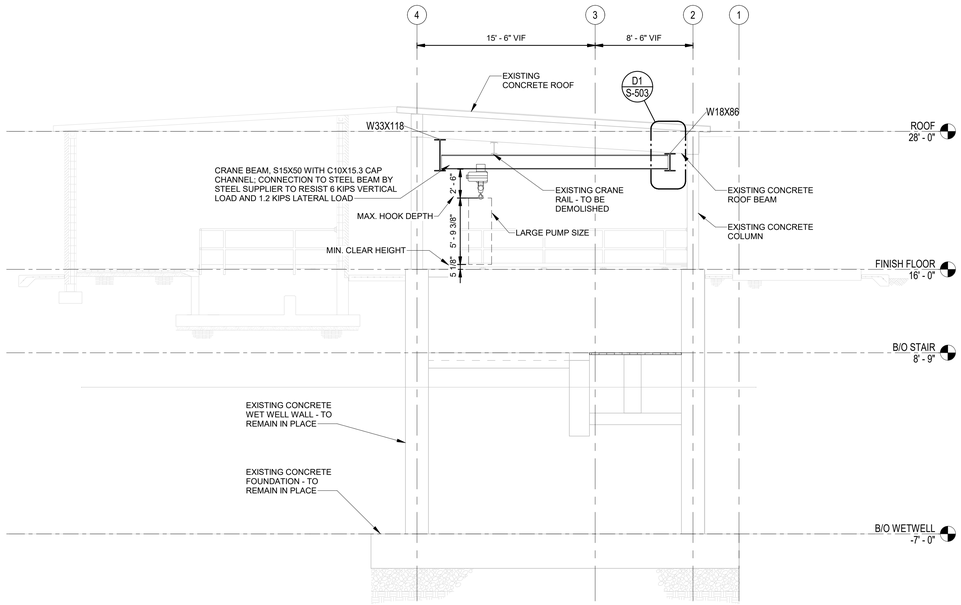
DES.	TF
DR.	ZC
CHK.	AA
SUBMITTED BY:	
DESIGN DIR.	CHRIS MAAS
APPROVED: PWO OR OICC	DATE
SATISFACTORY TO:	DATE

Christopher Maas 29-Jul-2026

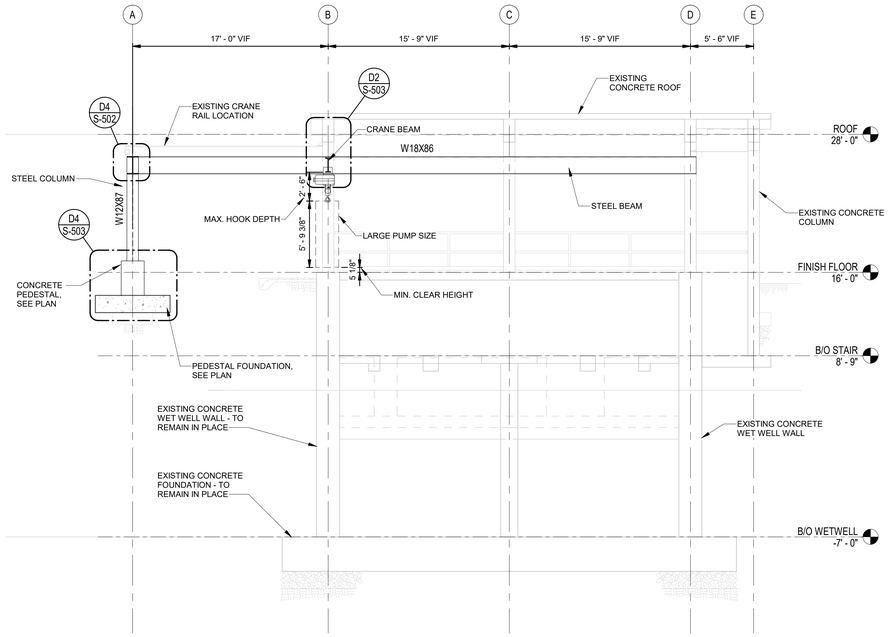
SIZE	CODE IDENT. NO.	NAVFAC DRAWING NO.
E1	80091	60044601
		CONSTR. CONTR. NO. N40085-26-B-0044
SCALE AS NOTED	SPEC. 05-26-0044	SHEET 29 OF 40

File Path: Autodesk Docs://175578902_CampLeJeune_LSG575/175578902_CAMP_LEJEUNE_G575_STRU.rvt
Print Date: 7/20/2026 1:59:18 PM

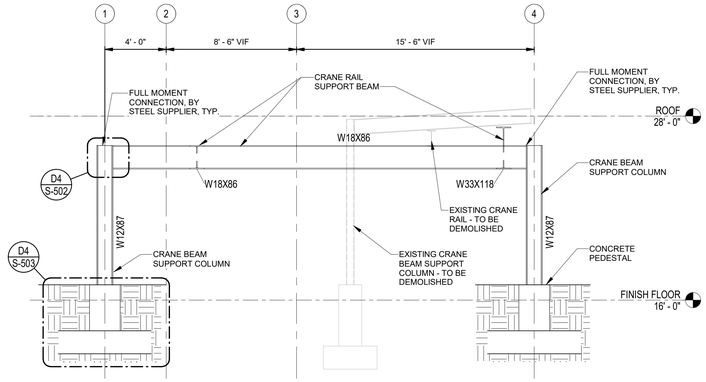
REVISIONS			
SYM.	DESCRIPTION	DATE	APP.



C1 SECTION 1
3/16" = 1'-0"



C4 SECTION 2
3/16" = 1'-0"



B1 SECTION 3
1/4" = 1'-0"

NORTH CAROLINA PROFESSIONAL SEAL 048129 ENGINEER ANUP ARYAL
Anup Aryal
2026.07.23 14:04:39-04'00'
23 JULY 2026

S-301

Stantec

NBFA NO.: 2505

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND

MARINE CORPS BASE

MCAS NEW RIVER, NORTH CAROLINA

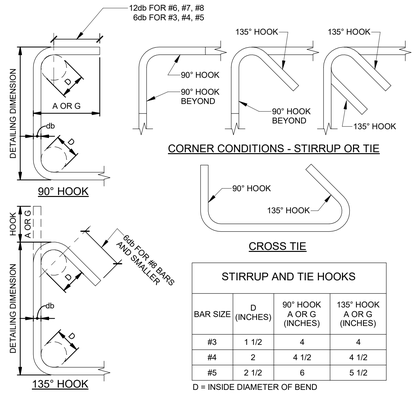
DES. TF
DR. ZC
CHK. AA
SUBMITTED BY:
DESIGN DIR. CHRIS MAAS
APPROVED: PWO OR OICC DATE
SATISFACTORY TO: DATE
Christopher Maas 29-Jul-2026

G575 LIFT STATION REPAIRS

SECTIONS - G575

SIZE E1 | CODE IDENT. NO. 80091 | NAVFAC DRAWING NO. 60044602
CONSTR. CONTR. NO. N40085-26-B-0044
SCALE AS NOTED | SPEC. 05-26-0044 | SHEET 30 OF 40

File Path: Autodesk Docs://175578902_CampLeJeune_LSG575/175578902_CAMP_LEJEUNE_G575_STRU.rvt
Print Date: 7/20/2026 1:59:19 PM

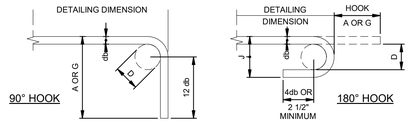


STIRRUP AND TIE HOOKS			
BAR SIZE	D (INCHES)	90° HOOK A OR G (INCHES)	135° HOOK A OR G (INCHES)
#3	1 1/2	4	4
#4	2	4 1/2	4 1/2
#5	2 1/2	6	5 1/2

D = INSIDE DIAMETER OF BEND

D1 TYPICAL STIRRUP AND TIE HOOK TYPES

1" = 1'-0"



END HOOK DIMENSIONS				
BAR SIZE	FINISHED BEND DIAMETER D, (INCHES)	180° HOOKS		90° HOOK
		A OR G, (INCHES)	J, (INCHES)	A OR G, (INCHES)
#3	2 1/4	5	3	6
#4	3	6	4	8
#5	3 3/4	7	5	10
#6	4 1/2	8	6	12
#7	5 1/4	10	7	14
#8	6	11	8	16
#9	9 1/2	15	11 3/4	19
#10	10 3/4	17	13 1/4	22
#11	12	19	14 3/4	24
#14	18 1/4	27	21 3/4	31
#18	24	36	28 1/2	41

D = INSIDE DIAMETER OF BEND

D2 TYPICAL END HOOK TYPES

1" = 1'-0"

REVISIONS			
SYM.	DESCRIPTION	DATE	APP.

NORTH CAROLINA PROFESSIONAL SEAL 048129 ENGINEER ANUP ARYAL

Aryal, Anup
2026.07.23 14:04:49-04'00'

23 JULY 2026

S-501

Stantec

MBFA NO.: 2505

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND

MARINE CORPS BASE

MCAS NEW RIVER, NORTH CAROLINA

DES. TF
DR. ZC
CHK. AA
SUBMITTED BY:
DESIGN DIR. CHRIS MAAS
APPROVED: PWO OR OICC DATE
SATISFACTORY TO: Christopher Maas 29-Jul-2026 DATE

G575 LIFT STATION REPAIRS

TYPICAL FOUNDATION DETAILS - G575

SIZE E1 | CODE IDENT. NO. 80091 | NAVFAC DRAWING NO. 60044603
CONSTR. CONTR. NO. N40085-26-B-0044
SCALE AS NOTED | SPEC. 05-26-0044 | SHEET 31 OF 40

File Path: Autodesk Docs://175578902_CampLeJeune_LSG575/175578902_CAMP LEJEUNE_G575_STRU.rvt
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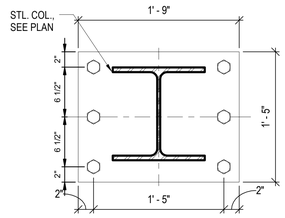
REVISIONS			
SYM.	DESCRIPTION	DATE	APP.



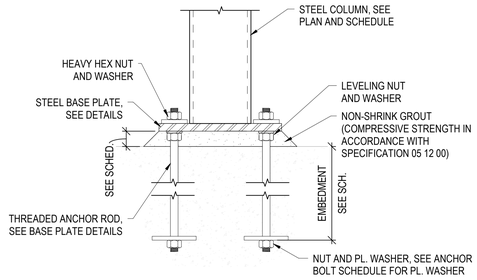
W12 COLUMNS (>W12x53)

* = COLUMN WALL THICKNESS OR COLUMN WEB THICKNESS - 1/16"

BASE PLATE SCHEDULE			
COLUMN SIZE	BASE PLATE	ANCHOR BOLTS	NOTES
>W12x53	PL 1 3/4" X 21" X 17"	(6) 1"Ø F1554, EMBED 12" INTO CONCRETE	

NOTES:
1. REFER TO TYPICAL COLUMN BASE PLATE DETAILS FOR ANCHOR ROD SIZE AND EMBEDMENT.
2. UNLESS NOTED OTHERWISE, ANCHOR ROD NUTS MUST BE TIGHTENED TO A "SNUG TIGHT" CONDITION AS DEFINED BY AISC AFTER THE CONCRETE IS AT LEAST 14 DAYS OLD.
3. THE HOLE IN THE PLATE WASHER MUST BE 1/16" LARGER THAN THE ROD DIAMETER.

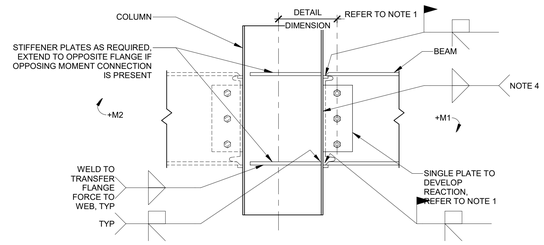
D1 TYPICAL GRAVITY COLUMN BASE PLATES
NTS



ANCHOR BOLT SCHEDULE							
ANCHOR BOLT Ø	MATERIAL GRADE	EMBED. LENGTH	MIN. THREADED PROJ.	GROUT BED	BASEPLATE HOLE Ø	PLATE WASHER	WELD SIZE
1" Ø	F1554-36	12"	6"	2"	1 7/8" Ø	3/8"x3" Ø	1/4"

NOTES:
1. REFER TO TYPICAL COLUMN BASE PLATE DETAILS FOR ANCHOR ROD SIZE AND EMBEDMENT.
2. UNLESS NOTED OTHERWISE, ANCHOR ROD NUTS MUST BE TIGHTENED TO A "SNUG TIGHT" CONDITION AS DEFINED BY AISC AFTER THE CONCRETE IS AT LEAST 14 DAYS OLD.
3. THE HOLE IN THE PLATE WASHER MUST BE 1/16" LARGER THAN THE ROD DIAMETER.
4. PROVIDE LEVELING PLATES AND NUTS AS REQUIRED. STEEL SHIMS MAY BE USED AT CONTRACTOR'S OPTION.
5. DAMAGE THREADS IN TWO (2) PLACES BELOW BOTTOM HEX NUT TO PREVENT LOOSENING.
6. PLATE WASHERS MUST BE WELDED TO BASE PLATES FOR ELEMENTS OF LATERAL- LOAD-RESISTING SYSTEM.
7. LOCATION AND ELEVATION OF ANCHOR BOLTS MUST BE VERIFIED BY SURVEYOR PRIOR TO ERECTION. WHERE ANCHOR BOLTS ARE OUT OF TOLERANCE, CONTRACTOR MUST COORDINATE REPAIR WITH STRUCTURAL ENGINEER OF RECORD.

D2 TYPICAL ANCHOR ROD DETAIL
NTS



NOTES:
1. SLIP-CRITICAL BOLTED SHEAR CONNECTION USING A325 BOLTS, UNLESS NOTED OTHERWISE.
   BOLTS IN WEB CONNECTION MUST BE SNUG-TIGHTENED ONLY PRIOR TO WELDING FLANGES AND PRETENSIONED AFTER WELDING FLANGES.
2. REFER TO SPECIFICATIONS FOR CONNECTION DESIGN CRITERIA.
3. PROVIDE PREDESIGNED SHEAR CONNECTIONS AS SHOWN IN AMERICAN INSTITUTE OF STEEL CONSTRUCTION MANUAL WHERE APPLICABLE.
4. MINIMUM FILLET WELD SIZE FOR SINGLE PLATE SHEAR CONNECTIONS MUST BE 5/8 TIMES THE PLATE THICKNESS.
5. WHEN BEAM FRAMES ON ONLY ONE SIDE OF COLUMN OR WHEN BEAM MOMENTS ARE SIGNIFICANTLY UNBALANCED (M1 + M2 >>0), STRENGTHEN COLUMN WEB AS REQUIRED.
6. CJP WELDS: CVN = 20FT-LBS AT 40°F.

D4 TYPICAL MOMENT CONNECTION AT COLUMN FLANGE
NTS

BEAM REACTION TABLE	
BEAM SIZE	FACTORED SHEAR REACTION (KIPS)
W18	120
W33	180

C1 TYPICAL BEAM TO BEAM SHEAR CONNECTION
NTS

NORTH CAROLINA PROFESSIONAL SEAL 048129 ENGINEER ANUP ARYAL
Anup Aryal
2026.07.20 14:05:00-04'00'
23 JULY 2026

S-502

Stantec

MBFA NO.: 2505

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND

MARINE CORPS BASE

MCAS NEW RIVER, NORTH CAROLINA

G575 LIFT STATION REPAIRS

TYPICAL STEEL DETAILS - G575

DES.	TF
DR.	ZC
CHK.	AA
SUBMITTED BY:	
DESIGN DIR.	CHRIS MAAS
APPROVED: PWO OR OICC	DATE
SATISFACTORY TO:	DATE

Christopher Maas 29-Jul-2026

SIZE	CODE IDENT. NO.	NAVFAC DRAWING NO.
E1	80091	60044604
		CONSTR. CONTR. NO. N40085-26-B-0044
SCALE AS NOTED	SPEC. 05-26-0044	SHEET 32 OF 40

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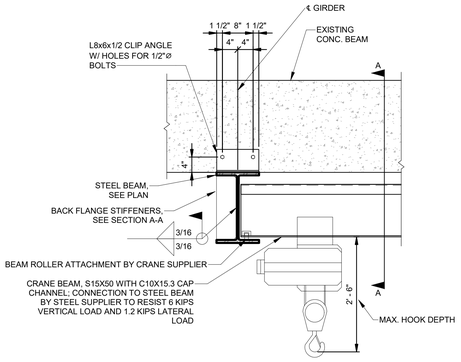
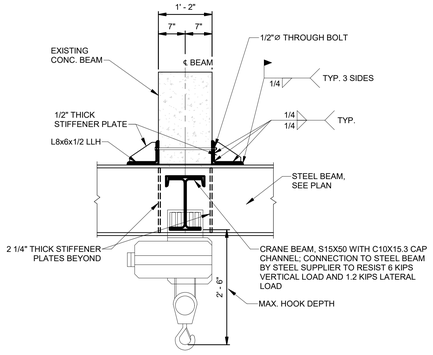


CRANE ATTACHMENT TO CONC. BEAM DETAIL A

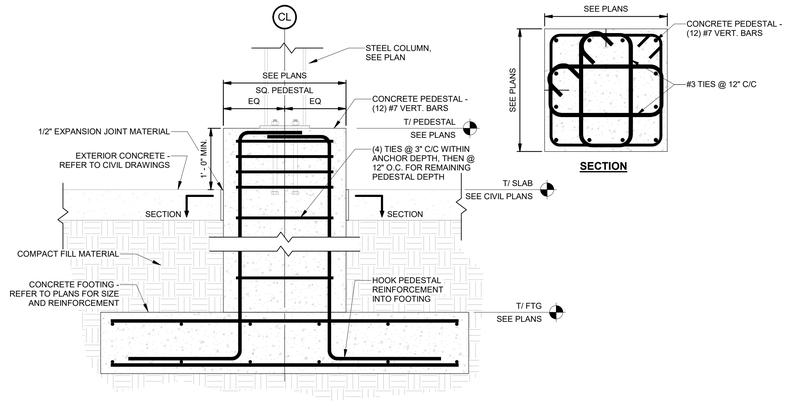
D1 NTS



SECTION A-A

CRANE ATTACHMENT TO CONC. BEAM DETAIL B

D2 NTS



SECTION

TYPICAL PEDESTAL AND FOUNDATION DETAIL

D4 NTS

REVISIONS			
SYM.	DESCRIPTION	DATE	APP.

NORTH CAROLINA PROFESSIONAL SEAL 048129 ENGINEER ANUP ARYAL

Aryal, Anup
2026.07.23 14:05:12-04'00'

23 JULY 2026

S-503

Stantec

MBFA NO: 2505

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND

MARINE CORPS BASE

MCAS NEW RIVER, NORTH CAROLINA

DES. TF
DR. ZC
CHK. AA
SUBMITTED BY:
DESIGN DIR. CHRIS MAAS
APPROVED: PWO OR OICC DATE
SATISFACTORY TO: Christopher Maas 29-Jul-2026 DATE

G575 LIFT STATION REPAIRS

TYPICAL CONCRETE DETAILS - G575

SIZE	CODE IDENT. NO.	NAVFAC DRAWING NO.
E1	80091	60044605

CONSTR. CONTR. NO. N40085-26-B-0044

SCALE AS NOTED | SPEC. 05-26-0044 | SHEET 33 OF 40

File Path: Autodesk Docs://175578902_CampLeJeune_LSG575/175578902_CAMP LEJEUNE_G575_STRU.rvt
Print Date: 7/20/2026 1:59:19 PM

ELECTRICAL LEGEND

GENERAL

- (#) DEMOLITION AND NEW WORK NOTE - REFER TO "DEMOLITION NOTES" AND "NEW WORK NOTES" FOR EACH SHEET
- ◇ SPECIALTY NOTE - REFER TO "SPECIALTY NOTES" FOR EACH SHEET
- #. GENERAL NOTE - REFER TO "GENERAL NOTES" FOR EACH SHEET
- ——— OBJECTS ON DRAWINGS AT THIS LINETYPE ARE CATEGORIZED AS NEW OR PROPOSED FOR CONSTRUCTION, UON.
- - - - - OBJECTS ON DRAWINGS AT THIS LINETYPE ARE CATEGORIZED AS EXISTING TO BE REMOVED-DEMOLISHED, UON.
- ····· OBJECTS ON DRAWINGS AT THIS LINETYPE ARE CATEGORIZED AS EXISTING TO REMAIN, UON.
- NEW TO EXISTING CONNECTION
- REMOVE TO THIS POINT

LIGHTING

- XX LUMINAIRE TYPE. SEE LUMINAIRE SCHEDULE, SHEET ELXXX.
- LED LUMINAIRE. (⊣ INDICATES BRACKET, WALL MOUNTED.)
- LED EMERGENCY LUMINAIRE. (⊣ INDICATES BRACKET, WALL MOUNTED.)
- HIGH INTENSITY DISCHARGE (H.I.D.) OR COMPACT FLUORESCENT LUMINAIRE. (⊣ INDICATES BRACKET, WALL MOUNTED.)
- LED EXIT LUMINAIRE. ARROW, WHEN USED, INDICATES DIRECTION. (⊣ INDICATES BRACKET, WALL MOUNTED.) FILLED IN QUADRANT(s) OF SYMBOL INDICATES NUMBER AND ORIENTATION OF ILLUMINATED FACES.
- EMERGENCY BATTERY POWERED LED LIGHTING UNIT.
- S# TOGGLE SWITCH, 20A, 120/277V. MOUNT 48" AFF UON. SUBSCRIPT "2" = 2 WAY, "3" = 3 WAY, "4" = 4 WAY.
- S_D DIMMER SWITCH. (WATTAGE AS REQUIRED TO CONTROL THE LUMINAIRE(S) CONNECTED UON.) MOUNT 48" AFF UON.
- S_{OS} OCCUPANCY SENSOR CONTROLLER, DUAL TECHNOLOGY. WALL MOUNTED 48" AFF UON.
- (OS) OCCUPANCY SENSOR, DUAL TECHNOLOGY. CEILING MOUNTED UON.
- TS TIME SWITCH

DISTRIBUTION

- 208Y/120V PANELBOARD.
- 240Y/120V PANELBOARD.
- 480Y/277V PANELBOARD.
- T DRY-TYPE TRANSFORMER. "T" DENOTES TRANSFORMER IDENTIFICATION

WIRE, CONDUIT, AND RACEWAY

- BRANCH CIRCUIT OR FEEDER WIRING IN CONDUIT. NO TICK MARKS INDICATE 2-#12 CONDUCTORS & 1-#12 GND. IN 1/2" CONDUIT UON. CONDUIT LARGER THAN 1/2" & WIRE LARGER THAN #12 MUST BE INDICATED.
- L2A-1,3 HOMERUN TO PANEL. PANEL & CIRCUIT DESIGNATIONS AS INDICATED.
- CONDUIT TURNED UP
- CONDUIT TURNED DOWN
- LADDER RACK CABLE TRAY, SIZE AND TYPE AS INDICATED.
- WIRE BASKET CABLE TRAY, SIZE AND TYPE AS INDICATED.

POWER

- 30A, 120V SINGLE OUTLET NEMA 6-30 WITH MATCHING PLUG.
- 20A, 120V DUPLEX CONVENIENCE RECEPTACLE. MOUNT 18" AFF UON. 'GFI' DENOTES INTERNAL GROUND FAULT INTERRUPTER, 'WP' DENOTES WEATHER PROOF ENCLOSURE AND 'C' DENOTES FLUSH MOUNTED IN CEILING
- 20A, 120V DUPLEX CONVENIENCE RECEPTACLE UTILIZING GROUND FAULT PROTECTION. MOUNT 6" ABOVE COUNTER UON. 'WP' DENOTES WEATHER PROOF ENCLOSURE
- QUADRUPLEX CONVENIENCE RECEPTACLE MOUNTED IN TWO-GANG OUTLET BOX - EACH RATED 20A, 125 VOLTS WITH SINGLE COVER PLATE, MOUNT 18" AFF, UON.
- 20A, 120V FLUSH FLOOR DUPLEX RECEPTACLE
- SPECIAL PURPOSE RECEPTACLE. NEMA 14-30R, RATED 30A, 125/250V
- J JUNCTION BOX. MINIMUM 4" SQUARE X 2 1/8" SIZE PER NEC.
- (J) SYSTEMS FURNITURE CONNECTION.
- GROUND BAR
- CEILING FAN, THREE SPEED REVERSIBLE

EQUIPMENT CONNECTIONS

- E EQUIPMENT CONNECTION
- M MOTOR CONNECTION. HP AS INDICATED.
- S_M MOTOR RATED SWITCH OR MANUAL MOTOR STARTER WITH OVERLOADS.
- MAGNETIC MOTOR STARTER
- MANUAL MOTOR STARTER
- 3P 30 20 3R DISCONNECT SWITCH, 3P = NO. OF POLES, 30 = SWITCH RATING, 20 = FUSE RATING (NF = INDICATES NON-FUSED), 3R INDICATES NEMA RATING.
- DISCONNECT SWITCH PROVIDED INTEGRAL WITH EQUIPMENT
- ASD ADJUSTABLE SPEED DRIVE

LIGHTNING PROTECTION

- DRIVEN GROUND ROD. "T" INDICATES GROUND ROD TEST AND INSPECTION POCKET.
- AIR TERMINAL
- BOND CONNECTION EXOTHERMICALLY WELD, UON.
- G—G GROUND CONDUCTOR - DESCRIPTION AS INDICATED.
- M—M MAIN LIGHTNING CONDUCTOR - DESCRIPTION AS INDICATED.
- B—B BONDING CONDUCTOR - DESCRIPTION AS INDICATED.
- D—D DOWN CONDUCTOR - DESCRIPTION AS INDICATED.

TELEPHONE/DATA

- TELEPHONE OUTLET. MOUNT 18" AFF. UON.
- DATA OUTLET. MOUNT 18" AFF. UON.
- COMBINATION VOICE/DATA OUTLET. MOUNT 18" AFF. UON.
- VOICE/DATA OUTLET. FLUSH FLOOR MOUNT.
- TELEPHONE TERMINAL BACKBOARD
- LAN AND DATA SYSTEM MULTI-PORT PATCH PANEL.
- TYPE "F" CONNECTOR FOR CABLE TELEVISION. SYSTEM MOUNTED IN SINGLE GANG BOX WITH FACEPLATE.
- TMGB TELECOMMUNICATIONS MAIN GROUNDING BUSBAR
- TGB TELECOMMUNICATIONS GROUNDING BUSBAR

SITE

- MANHOLE OR HANDHOLE. SUBSCRIPT 'M' DENOTES MANHOLE AND SUBSCRIPT 'H' DENOTES HANDHOLE.
- CONCRETE ENCASED DUCTBANK SECTION LOOKING IN DIRECTION OF ARROWS
  - SPARE DUCT (TYPICAL)
  - HEAVY LINE INDICATES BOTTOM OF DUCT.
  - EXISTING CABLE DESIGNATION (TYPICAL) DESCRIPTION PER CABLE SCHEDULE, SHEET ES###
  - OCCUPIED DUCT, UNIDENTIFIED CABLE
  - NEW CABLE DESIGNATION (TYPICAL) DESCRIPTION PER CABLE SCHEDULE, SHEET ES###
- DIRECT BURIED CONDUIT SECTION LOOKING IN DIRECTION OF ARROWS
  - SPARE CONDUIT (TYPICAL)
  - HEAVY LINE INDICATES BOTTOM OF CONDUIT.
  - EXISTING CABLE DESIGNATION (TYPICAL) DESCRIPTION PER CABLE SCHEDULE, SHEET ES###
  - OCCUPIED CONDUIT, UNIDENTIFIED CABLE
  - NEW CABLE DESIGNATION (TYPICAL) DESCRIPTION PER CABLE SCHEDULE, SHEET ES###
- UC UNDERGROUND COMMUNICATION
- UP UNDERGROUND PRIMARY CONCRETE ENCASED IN DUCTBANK SEE CABLE SCHEDULE SHEET ES###
- US UNDERGROUND SECONDARY CONCRETE ENCASED IN DUCTBANK SEE CABLE SCHEDULE SHEET ES###
- UL UNDERGROUND LIGHTING CIRCUIT, 2#10, 1#10G, 2"C UON.
- OC OVERHEAD COMMUNICATION
- OP OVERHEAD PRIMARY
- OS OVERHEAD SECONDARY
- OL OVERHEAD LIGHTING
- LIGHTING POLE WITH LUMINAIRE AND INTEGRAL PHOTOCELL
- BOLLARD LIGHT
- T PAD MOUNTED TRANSFORMER. "T" DENOTES TRANSFORMER IDENTIFICATION
  - HEAVY LINE INDICATES FRONT OF TRANSFORMER
- PAD MOUNTED SWITCH
- POLE MOUNTED TRANSFORMER
- CTC MEDIUM VOLTAGE ABOVE GROUND CABLE TERMINATING CABINET. CABINET MUST ALLOW FOR A 3-WAY, THREE-PHASE TAP CONFIGURATION UNLESS NOTED OTHERWISE.
- POWER POLE (HEIGHT AND CLASS AS INDICATED).

ABBREVIATIONS

1/C	ONE CONDUCTOR
A	AMPERAGE OR AMPS
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
ARF	ABOVE RAISED FLOOR
ASD	ADJUSTABLE SPEED DRIVE
BFG	BELOW FINISED GRADE
BH	BASEBOARD HEATER
BKR	BREAKER
C	CONDUIT
CB	CIRCUIT BREAKER
CKT	CIRCUIT
DWG	DRAWING
EA	EACH
EC	EMPTY CONDUIT
ELEC	ELECTRICAL
EMT	ELECTRICAL METALLIC TUBING
ENCL	ENCLOSURE
EQUIP	EQUIPMENT
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
EXIST	EXISTING
EXP	EXPLOSION PROOF EQUIPMENT
FCU	FAN COIL UNIT
FT	GOVERNMENT FURNISHED CONTRACTOR INSTALLED
GFCI	
GFE	GOVERNMENT FURNISHED EQUIPMENT
GFGI	
GFI	GROUND FAULT INTERRUPTER
GND	GROUND
HGT	HEIGHT
HID	HIGH INTENSITY DISCHARGE
HP	HORSEPOWER
HUB	COMPUTER DISTRIBUTION HUB
LED	LIGHT EMITTING DIODE
LTS	LUMINAIRE
MCB	MAIN CIRCUIT BREAKER
MDP	MAIN DISTRIBUTION PANEL
MECH	MECHANICAL
MLO	MAIN LUGS ONLY
MTD	MOUNTED
MTG HT	MOUNTING HEIGHT
NEC	NATIONAL ELECTRICAL CODE
NF	NON FUSIBLE
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NTS	NOT TO SCALE
OBI	OUTLET BASE INFEED
OS	OCCUPANCY SENSOR
PNL	PANEL
PNLBD	PANELBOARD
PVC	POLYVINYL CHLORIDE CONDUIT
QU	QUANTITY
REC	RECEPTACLE
REQ'D	REQUIRED
RGS	RIGID GALVANIZED STEEL
RM	ROOM
SHT	SHEET
SUB	SUBSTATION
SWBD	SWITCHBOARD
T	TELEPHONE
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
V	VOLTAGE OR VOLTS
VRF	VARIABLE REFRIGERANT FLOW UNIT
W	WIRE
WP	WEATHERPROOF
WW	WIREWAY (TROUGH)
X	IN SCHEDULES, ITEM NOT APPLICABLE
XFMR	TRANSFORMER
Ø	PHASE

GENERAL NOTES

1. ALL ELECTRICAL WORK AND MATERIAL IS NEW AND MUST BE PROVIDED BY THE CONTRACTOR UON.
2. AN EQUIPMENT GROUND WIRE MUST BE RUN WITH FEEDERS AND BRANCH CIRCUITS.
3. WIRING MUST BE AS PER VERSION OF THE NATIONAL ELECTRICAL CODE (NEC) ADOPTED WHEN THE PERMIT APPLICATION IS FILED.
4. ELECTRICAL EQUIPMENT MUST BE IDENTIFIED AND LABELED.
5. FEEDERS/CIRCUITS MUST BE IDENTIFIED AT EACH END OF THE WIRE AND AT EVERY SPLICE OR JUNCTION/PULL BOX.
6. PROVIDE NAMEPLATES ON THE EXTERIOR OF ELECTRICAL PANELS AND ENCLOSURES AS FOLLOWS:

PANEL XXXXX	DEVICE ID
100A, 208Y/120V-30, 4W	DEVICE RATING
FED FROM PANEL MDP	POWER SOURCE
INSTALLED 2019	INSTALLATION DATE
DRAWING NO. ##,###,###	NAVFAC DRAWING NUMBER

   FOR DISCONNECT SWITCHES AND MOTOR STARTERS, THE TOP LINE MUST BE THE NAME/DESIGNATION OF EQUIPMENT BEING FED BY SAME.
7. PROVIDE NEW TYPED DIRECTORIES FOR PANELS (NEW OR MODIFIED) INCLUDED IN THIS PROJECT.
8. INTERIOR WIRING SYSTEMS MUST BE CONCEALED IN FINISHED AREAS WITH FLUSH MOUNTED BOXES/DEVICES, UON.
9. DRAWINGS ARE BASED ON EXISTING BUILDING PLANS AND FIELD INVESTIGATIONS. CONTRACTOR MUST VISIT THE EXISTING SITE AND ACQUAINT HIMSELF/HERSELF WITH THE EXISTING CONDITIONS. CONTRACTOR MUST EXAMINE DRAWINGS TO AVOID CONFLICT.
10. COORDINATE LOCATION AND POWER REQUIREMENTS OF ELECTRICAL DEVICES WITH MECHANICAL, PLUMBING, ARCHITECTURAL AND FIRE PROTECTION DRAWINGS.
11. EXISTING ELECTRICAL DEVICES SHOWN BUT NOT CIRCUITED MUST REMAIN ON THEIR EXISTING CIRCUIT.
12. PROVIDE ARC-FLASH LABELS ON ALL PANELS/DISCONNECT SWITCHES AS PER UFC 3-560-01 AND NFPA 70E. SEE DETAIL PLATE ON SHEET EP###.
13. SINGLE PHASE CIRCUITS MUST CONSIST OF MINIUM 2#12 & 1#12 GND. IN 3/4"C UON. THREE PHASE BRANCH CIRCUITS CONSIST OF MINIMUM 3#12 & 1#12 GND IN 3/4"C UON.
14. REFER TO PLANS FOR CONDUCTOR SIZING. COMPLY WITH THE FOLLOWING GUIDELINES FOR CONDUCTOR RUN LENGTHS:

    20A,120V CIRCUITS LONGER THAN 100' - USE #10 AWG TO LIMIT VOLTAGE DROP ON BRANCH CIRCUITS TO 3%

    20A, 120V CIRCUITS LONGER THAN 150' - USE #8 AWG TO LIMIT VOLTAGE DROP ON BRANCH CIRCUITS TO 3%

    20A, 277V CIRCUITS LONGER THAN 150' - USE #10 AWG TO LIMIT VOLTAGE DROP ON BRANCH CIRCUITS TO 3%
15. COORDINATE ELECTRICAL WORK WITH ARCHITECTURAL, MECHANICAL AND FIRE PROTECTION WORK PRIOR TO FABRICATION AND INSTALLATION TO PREVENT CONFLICTS. NOTIFY CONTRACTING OFFICER WHERE CONFLICTS ARE DISCOVERED PRIOR TO CONSTRUCTION AND BEFORE BEGINNING WORK IN THOSE AREAS. ALL CONFLICTS THAT ARISE DUE TO LACK OF COORDINATION MUST BE RECTIFIED BY THE CONTRACTOR AT NO COST TO THE GOVERNMENT.

GENERAL DEMOLITION NOTES

A. ALL MATERIALS REMOVED UNDER DEMOLITION MUST BECOME THE PROPERTY OF THE CONTRACTOR AND MUST BE REMOVED COMPLETELY OFF SITE UNLESS OTHERWISE NOTED.

CONSTRUCTION NOTES

1. CONTRACTOR MUST PROVIDE A MINIMUM OF 2 WEEKS NOTICE OF POWER OUTAGES TO ACTIVITY AND GOVERNMENT OFFICIAL.

REVISIONS

SYM.	DESCRIPTION	DATE	APP.

NORTH CAROLINA PROFESSIONAL SEAL 048137 ENGINEER BRADLEY C. BUCHANAN
23 JULY 2026

E-001

MBFA NO.: 2505

Stantec

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND

MARINE CORPS BASE

MCAS NEW RIVER, NORTH CAROLINA

DES. MN
DR. DS
CHK. JL
SUBMITTED BY:
DESIGN DIR. CHRIS MAAS
APPROVED: PWO OR OICC DATE
SATISFACTORY TO: Christopher Maas 29-Jul-2026 DATE

G575 LIFT STATION REPAIRS

ELECTRICAL SYMBOLS LEGEND - G575

SIZE	CODE IDENT. NO.	NAVFAC DRAWING NO.
E1	80091	60044606

CONSTR. CONTR. NO. N40085-26-B-0044

SCALE AS NOTED | SPEC. 05-26-0044 | SHEET 34 OF 40

REVISIONS			
SYM.	DESCRIPTION	DATE	APP.

SHEET KEYNOTES

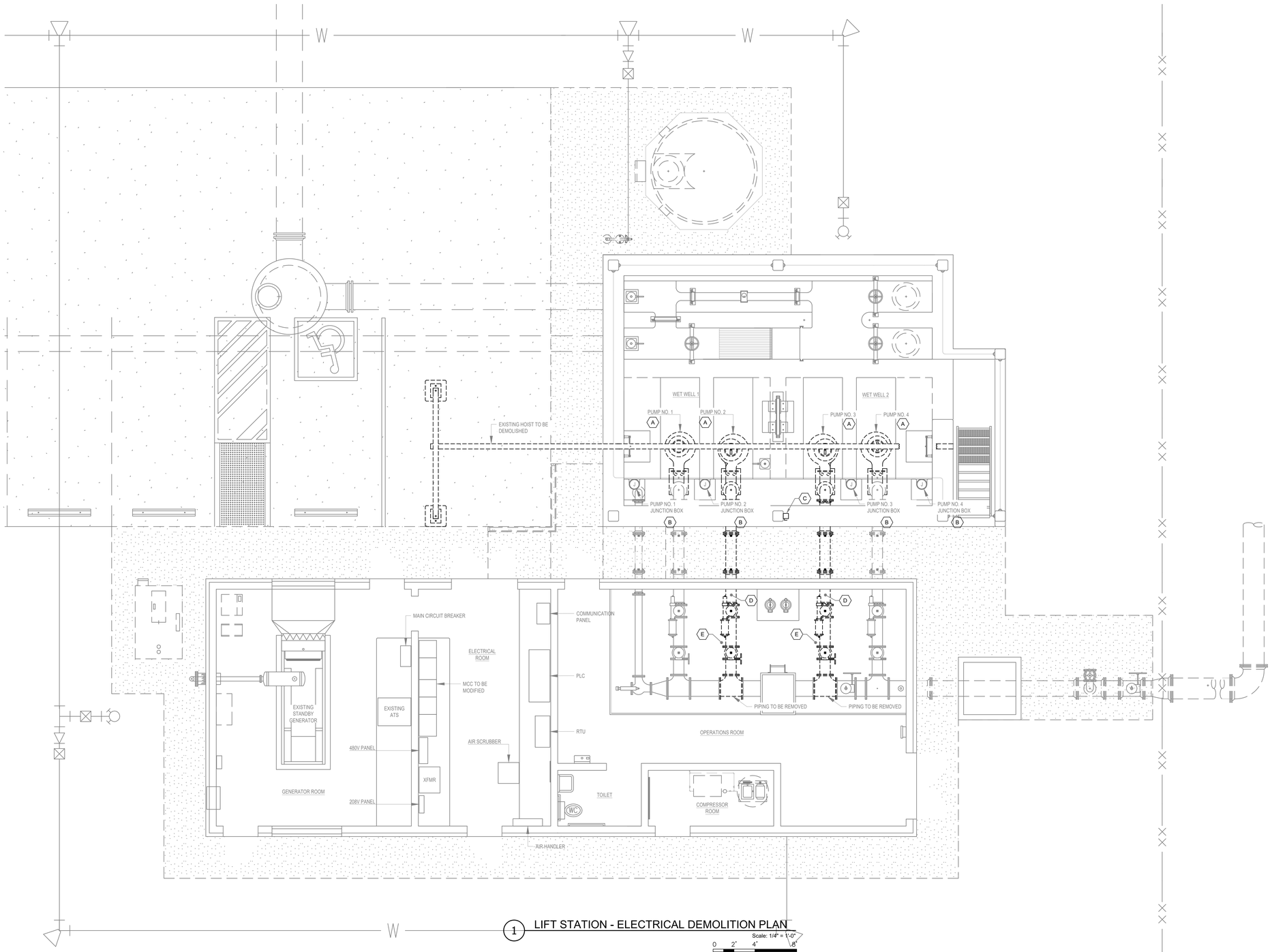
A. REMOVE SEWERAGE PUMP.

B. JUNCTION BOX TO REMAIN.

C. REMOVE HOIST DISCONNECT SWITCH.

D. PUMP DISCHARGE PRESSURE SWITCH. REMOVE AND PROTECT FOR REUSE AFTER NEW PIPING IS PROVIDED.

E. PROTECT CHECK VALVE PROXIMITY SWITCH FROM DAMAGE WHEN PIPING IS BEING REMOVED.



1 LIFT STATION - ELECTRICAL DEMOLITION PLAN

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

0 2' 4' 8'

NORTH CAROLINA PROFESSIONAL SEAL 048137 ENGINEER BRADLEY C. BUCHANAN 7/30/2026

23 JULY 2026

ED-101

MBFA NO.: 2505

Stantec

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND

MARINE CORPS BASE

MCAS NEW RIVER, NORTH CAROLINA

DES. MN

DR. DS

CHK. JL

SUBMITTED BY:

DESIGN DIR. CHRIS MAAS

APPROVED: PWO OR OICC DATE

SATISFACTORY TO: Christopher Maas 29-Jul-2026 DATE

G575 LIFT STATION REPAIRS

ELECTRICAL DEMOLITION PLAN - G575

SIZE	CODE IDENT. NO.	NAVFAC DRAWING NO.
E1	80091	60044607

CONSTR. CONTR. NO. N40085-26-B-0044

SCALE AS NOTED SPEC. 05-26-0044 SHEET 35 OF 40

REVISIONS			
SYM.	DESCRIPTION	DATE	APP.

SHEET KEYNOTES

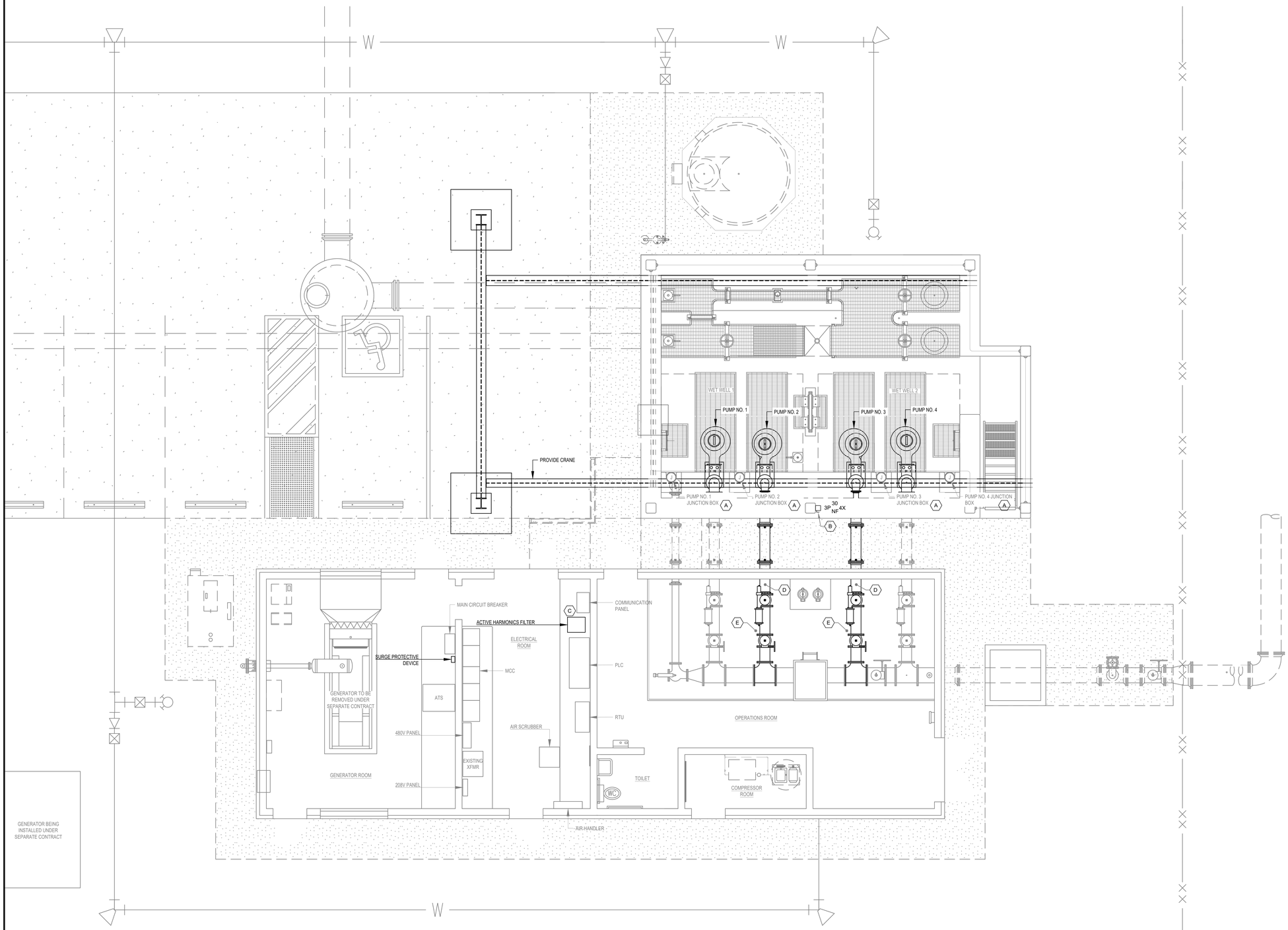
A. PUMP JUNCTION BOX TO BE REUSED. REFER TO ONE LINE DIAGRAM AND EXISTING JUNCTION BOX DETAIL FOR MORE INFORMATION.

B. PROVIDE CRANE DISCONNECT SWITCH.

C. ACTIVE HARMONICS FILTER CANNOT BE WALL MOUNTED IN THE SPACE SHOWN BECAUSE OF CONDUITS ROUTED ALONG THE WALL. PROVIDE STRUT CHANNEL MOUNTING RACK TO FACILITATE THE INSTALLATION. ENSURE SELECTED FILTER FITS IN THE AVAILABLE SPACE.

D. REINSTALL AND RECONNECT PRESSURE SWITCH REMOVED AS PART OF THE DEMOLITION.

E. ADJUST CHECK VALVE AND PROXIMITY SWITCH TO RESTORE CHECK VALVE POSITION FEED BACK T THE PLC.



1 LIFT STATION - ELECTRICAL PLAN

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

0 2' 4' 8'

NORTH CAROLINA PROFESSIONAL SEAL 048137 ENGINEER BRADLEY C. BUCHANAN 9/30/2026

23 JULY 2026

EP-101

MBFA NO: 2505

Stantec

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND

MARINE CORPS BASE

MCAS NEW RIVER, NORTH CAROLINA

DES. MN
DR. DS
CHK. JL
SUBMITTED BY:
DESIGN DIR. CHRIS MAAS
APPROVED: PWO OR OICC DATE
SATISFACTORY TO: Christopher Maas 29-Jul-2026 DATE

G575 LIFT STATION REPAIRS

ELECTRICAL PLAN - G575

SIZE	CODE IDENT. NO.	NAVFAC DRAWING NO.
E1	80091	60044608
		CONSTR. CONTR. NO. N40085-26-B-0044
SCALE AS NOTED	SPEC. 05-26-0044	SHEET 36 OF 40

REVISIONS			
SYM.	DESCRIPTION	DATE	APP.

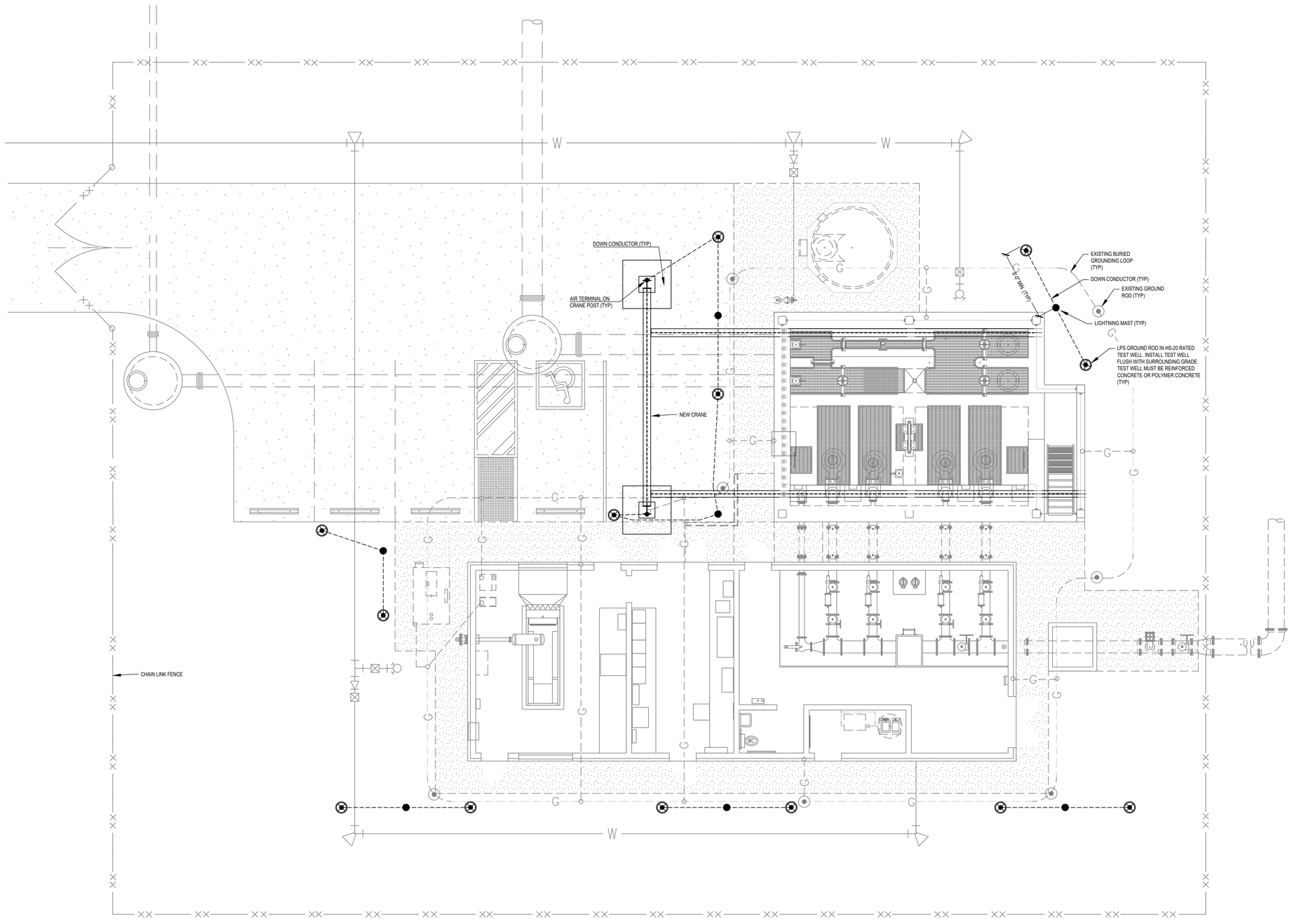
GENERAL NOTES

A. PROVIDE CLASS III MAST LIGHTNING PROTECTION SYSTEM.

B. MAST HEIGHT MUST EXTEND 25'-0" ABOVE GRADE.

C. VERIFY LOCATION OF THE UNDERGROUND UTILITIES PRIOR TO INSTALLING LIGHTNING PROTECTION SYSTEM.

D. REPAIR ANY TRENCHING, BORING OR EXCAVATIONS MADE AS PART OF THE WORK.



1 LIFT STATION - LIGHTNING PROTECTION PLAN

Scale: 3/16" = 1'-0"

0 4' 8' 12'

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 048137 BRADLEY C. BUCHANAN 7/30/2026

23 JULY 2026

EP-102

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DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND

MARINE CORPS BASE

MCAS NEW RIVER, NORTH CAROLINA

MBFA NO.: 2505

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DR. DS
CHK. JL
SUBMITTED BY:
DESIGN DIR. CHRIS MAAS
APPROVED: PWO OR OICC DATE
SATISFACTORY TO: Christopher Maas 29-Jul-2026 DATE

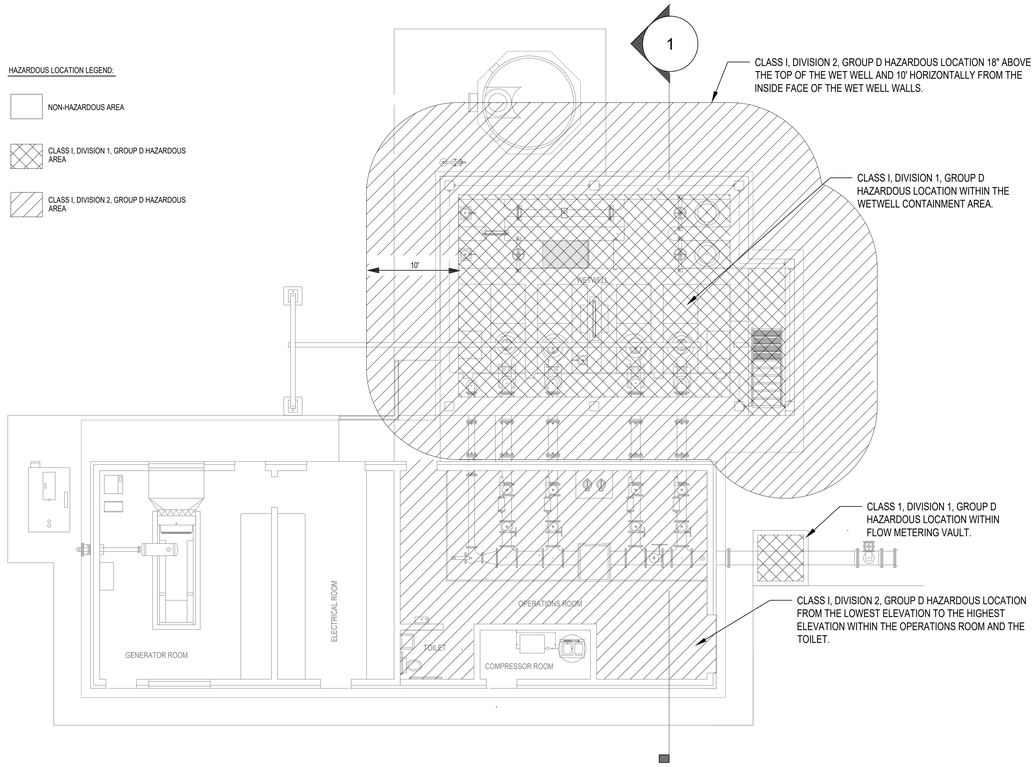
G575 LIFT STATION REPAIRS

LIGHTNING PROTECTION PLAN - G575

SIZE E1 | CODE IDENT. NO. 80091 | NAVFAC DRAWING NO. 60044609

CONSTR. CONTR. NO. N40085-26-B-0044

SCALE AS NOTED | SPEC. 05-26-0044 | SHEET 37 OF 40

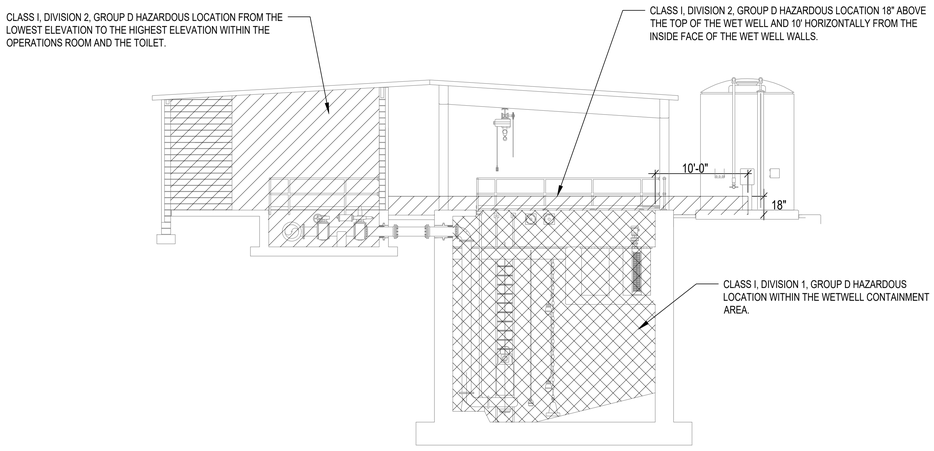


NOTE:

1. ALL METHODS AND MATERIALS FURNISHED MUST BE SUITABLE FOR THE CLASSIFICATION OF THE AREA IN WHICH THE EQUIPMENT IS INSTALLED.

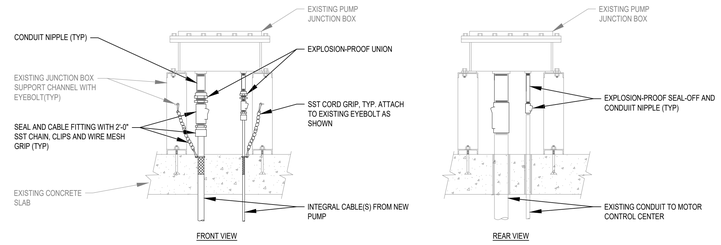
HAZARDOUS AREA CLASSIFICATION PLAN

NO SCALE



1 / : HAZARDOUS LOCATION SECTION

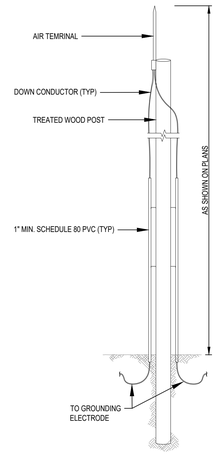
NO SCALE



NOTES:

1. SIZE NEW RACEWAYS AND FITTINGS TO SUIT INSTALLED CONDITIONS. VERIFY DIAMETER OF JUNCTION THREADED BOSSES.
2. INSTALL SEAL-OFFS 18" ABOVE SLAB, MINIMUM.
3. PLUG ANY UNUSED HOLES IN THE EXISTING JUNCTION BOX

E-020 EXISTING PUMP JUNCTION BOX DETAIL



NOTES:

1. WOOD SPECIES FOR POLE MUST BE SOUTHERN YELLOW PINE.
2. POLE EMBEDDED DEPTH MUST BE PER POLE VENDOR RECOMMENDATIONS FOR THE INSTALLED LOCATION.
3. MATERIALS AND INSTALLATION MUST BE PER SECTION 26 41 00 - LIGHTNING PROTECTION SYSTEM.

E-030 LIGHTNING MAST DETAIL

REVISIONS			
SYM.	DESCRIPTION	DATE	APP.

NORTH CAROLINA PROFESSIONAL SEAL 048137 ENGINEER BRADLEY C. BUCHANAN 7/30/2026

23 JULY 2026

EP-501

MBFA NO. 2505

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DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND

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DESIGN DIR. CHRIS MAAS
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SATISFACTORY TO: Christopher Maas 29-Jul-2026 DATE

G575 LIFT STATION REPAIRS

ELECTRICAL DETAILS - G575

SIZE E1 | CODE IDENT. NO. 80091 | NAVFAC DRAWING NO. 60044610

CONSTR. CONTR. NO. N40085-26-B-0044

SCALE AS NOTED | SPEC. 05-26-0044 | SHEET 38 OF 40

REVISIONS			
SYM.	DESCRIPTION	DATE	APP.

GENERAL NOTES

A. COORDINATE THE WORK IN A MANNER THAT MINIMIZES DISRUPTION TO THE OPERATION OF THE FACILITY. FUNCTIONALITY OF EACH REPLACEMENT PUMP MUST BE VERIFIED FOR ACCEPTANCE BEFORE MOVING ONTO THE NEXT PUMP. PROVIDE LARGER PUMPS AND ASD'S BEFORE PROVIDING THE SMALLER PUMPS.

B. AFTER REMOVAL, RETURN REMOVED ASD'S TO THE GOVERNMENT.

C. BASIS OF DESIGN FOR THE SMALL AND LARGE PUMPS IS FLYGT NP3202-642IMP AND NP3315.095 RESPECTIVELY. ANY ADDITIONAL MATERIAL AND LABOR REQUIRED TO ACCOMMODATE A DIFFERENT PUMP SELECTION MUST BE PROVIDED AT THE CONTRACTOR'S OWN COST.

D. PROVIDE ALL MATERIALS AND LABOR REQUIRED FOR FULLY FUNCTIONAL ASD'S.

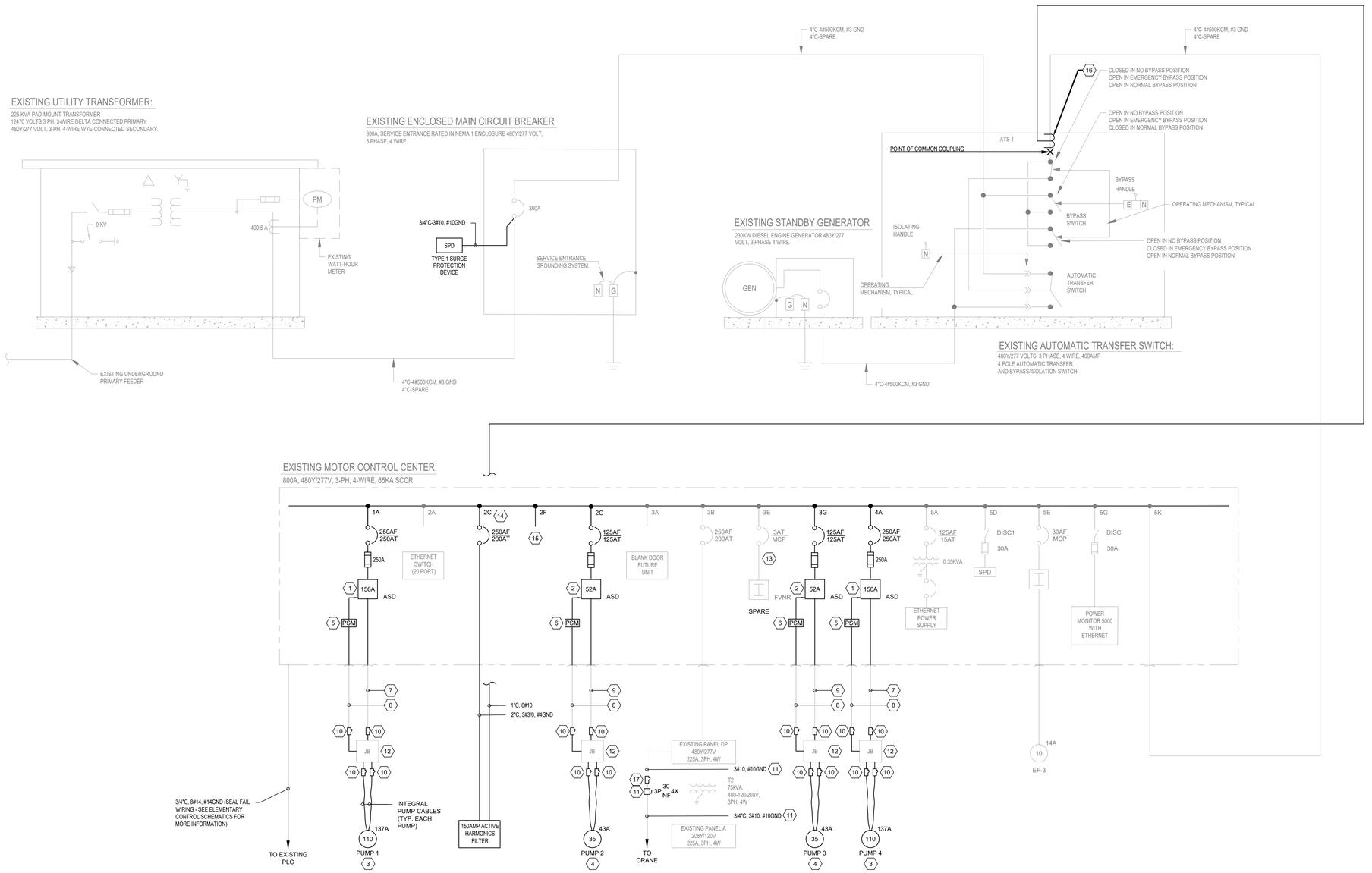
E. AMPERE INTERRUPTING CAPACITY OF ALL CIRCUIT BREAKERS IN THE MCC MUST MATCH THE SHORT CIRCUIT RATING OF THE MCC.

F. PROVIDE ETHERNET PATCH CABLES OF SUFFICIENT LENGTH WHERE REQUIRED FOR RELOCATED OR REPLACEMENT MOTOR CONTROLLERS. PROVIDE LABELS FOR ANY CABLES PROVIDED AND APPLY LABEL TO MATCH EXISTING LABELING SCHEME.

G. COORDINATE WITH MCC VENDOR TO ENSURE ALL REQUIRED APPURTENANCES INCLUDING INTERNAL WIRING, MOUNTING BRACKETS AND HARDWARE ARE PROVIDED.

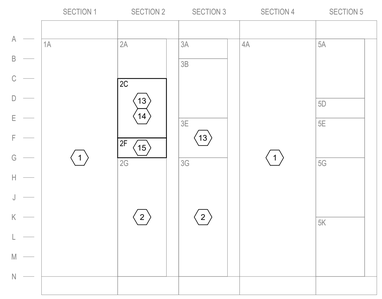
SHEET KEYNOTES

1. REMOVE 75HP ASD ALONG WITH MOUNTING BACK-PLATE. PROVIDE FACTORY-ASSEMBLED 125HP ASD MOTOR CONTROLLER.
2. REMOVE 20HP ASD ALONG WITH MOUNTING BACK-PLATE. PROVIDE FACTORY-ASSEMBLED 40HP ASD MOTOR CONTROLLER.
3. REMOVE 77HP PUMP. PROVIDE 110HP PUMP.
4. REMOVE 20HP PUMP. PROVIDE 35HP PUMP.
5. PUMP SENSOR MONITOR FURNISHED BY PUMP VENDOR. MUST BE FACTORY-INSTALLED AND WIRED WHEN THE ASD MOTOR CONTROLLER COMPARTMENT IS ASSEMBLED.
6. PUMP SENSOR MONITOR FURNISHED BY PUMP VENDOR. MUST BE FACTORY-INSTALLED AND WIRED WHEN THE ASD MOTOR CONTROLLER COMPARTMENT IS ASSEMBLED.
7. REMOVE PUMP POWER LEADS. PROVIDE 3#3/0, #6GND CIRCUIT. ROUTE IN EXISTING 2" CONDUIT.
8. REMOVE PUMP SENSOR MONITOR CONDUCTORS. PROVIDE 2#14, #14GND. ROUTE IN EXISTING 3/4" CONDUIT.
9. REMOVE PUMP POWER LEADS AND REPLACE WITH 3#6, #10GND CIRCUIT. ROUTE IN EXISTING 1-1/4" CONDUIT.
10. PROVIDE EXPLOSION PROOF SEAL-OFF. REFER TO EXISTING PUMP JUNCTION BOX DETAIL FOR MORE INFORMATION.
11. PROVIDE CRANE DISCONNECT. REUSE EXISTING 15A CIRCUIT BREAKER IN EXISTING 480V PANEL. REUSE EXISTING CONDUIT FROM 480V PANEL TO DISCONNECT. PROVIDE CONDUCTORS AS SHOWN.
12. PUMP JUNCTION BOX TO BE REUSED.
13. REMOVE EXISTING SPARE FULL VOLTAGE STARTER UNIT IN COMPARTMENT 2C ALONG WITH COMPARTMENT DOOR AND INSTALL AT AVAILABLE SPACE 3E.
14. PROVIDE 200 AMP FEEDER BREAKER IN COMPARTMENT 2C AS SHOWN. PROVIDE DOOR ALONG WITH ALL REQUIRED APPURTENANCES.
15. PROVIDE BLANK DOOR FOR COMPARTMENT 2F.
16. PROVIDE CURRENT TRANSFORMERS, TYPE AND QUANTITY AS ACCEPTED BY THE FILTER VENDOR. CT RATIO MUST BE 200:5 UNLESS OTHERWISE DIRECTED BY THE FILTER VENDOR. PROVIDE GROUNDED SHORTING BLOCK IN ATS WITH SPACE FOR TERMINATING AT LEAST THREE CURRENT TRANSFORMERS.
17. PROVIDE EXPLOSION PROOF SEAL-OFF.
18. PROGRAM ACTIVE HARMONICS FILTER TO LIMIT TOTAL HARMONIC CURRENT DEMAND DISTORTION TO 8 PERCENT.



MODIFIED ONE-LINE DIAGRAM

NO SCALE



MCC FRONT ELEVATION

NO SCALE

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 048137 BRADLEY C. BUCHANAN 7/30/2026

23 JULY 2026

EP-601

Stantec

MBFA NO.: 2305

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND

MARINE CORPS BASE

MCAS NEW RIVER, NORTH CAROLINA

DES. MN
DR. DS
CHK. JL
SUBMITTED BY:
DESIGN DIR. CHRIS MAAS
APPROVED: PWO OR OICC DATE
SATISFACTORY TO: DATE
Christopher Maas 29-Jul-2026

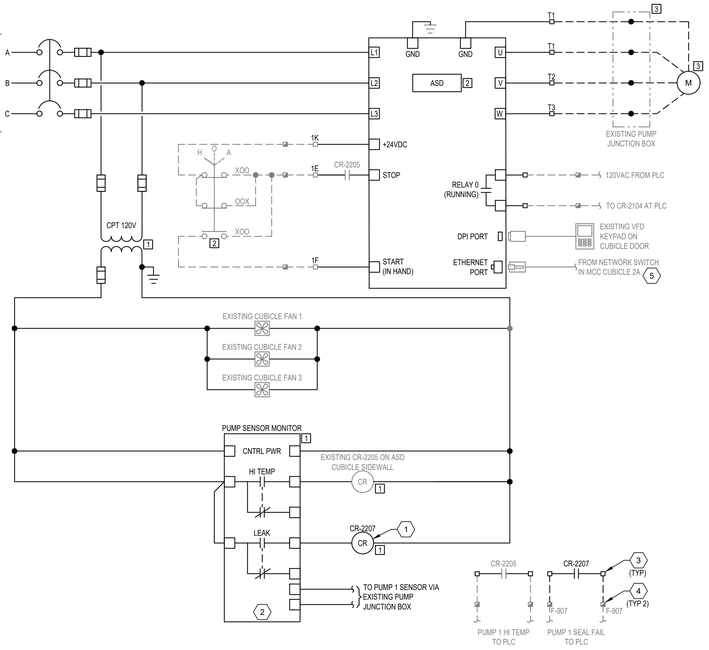
G575 LIFT STATION REPAIRS

ONE LINE DIAGRAM - G575

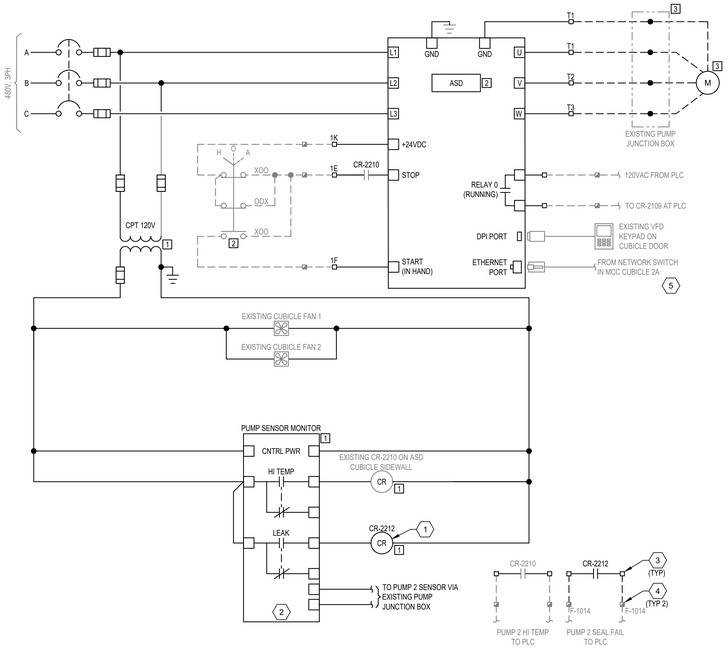
SIZE E1 | CODE IDENT. NO. 80091 | NAVFAC DRAWING NO. 60044611

CONSTR. CONTR. NO. N40085-26-B-0044

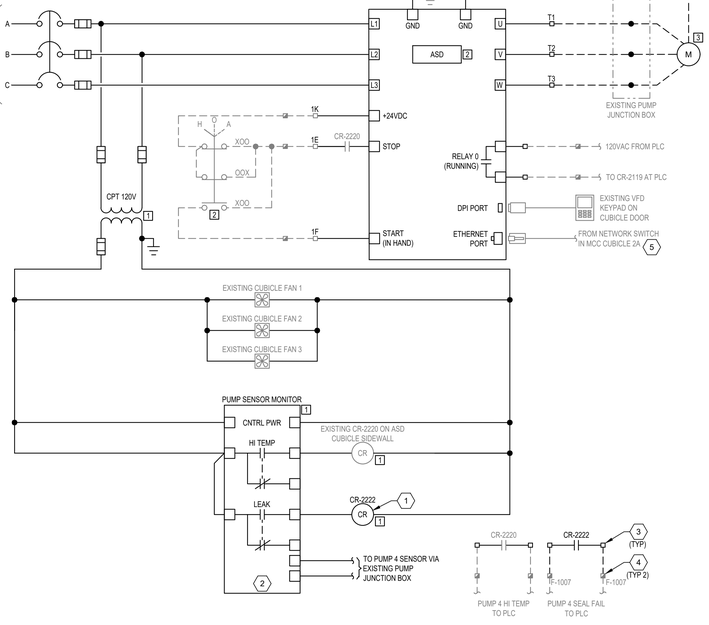
SCALE AS NOTED | SPEC. 05-26-0044 | SHEET 39 OF 40



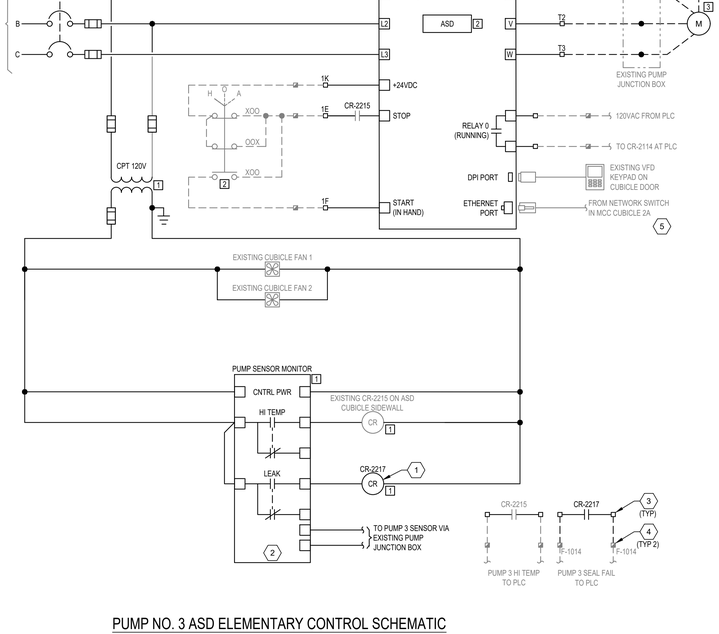
PUMP NO. 1 ASD ELEMENTARY CONTROL SCHEMATIC



PUMP NO. 2 ASD ELEMENTARY CONTROL SCHEMATIC



PUMP NO. 4 ASD ELEMENTARY CONTROL SCHEMATIC



PUMP NO. 3 ASD ELEMENTARY CONTROL SCHEMATIC

COMPONENT LOCATION KEY
- [1] LOCATED IN VFD CUBICLE
- [2] LOCATED IN PLC
- [3] LOCATED IN FIELD

LINEWORK KEY
- EXISTING EQUIPMENT
- EQUIPMENT TO BE PROVIDED

WIRING KEY
- FIELD WIRING
- INTERNAL WIRING

FIELD WIRING TERMINAL KEY
- FIELD WIRING TERMINAL IN MCC
- FIELD WIRING TERMINAL IN PLC

REVISIONS

SYM.	DESCRIPTION	DATE	APP.

GENERAL NOTES

A. REPLACE ASD FOR PUMP NO. 1 THROUGH NO. 4.

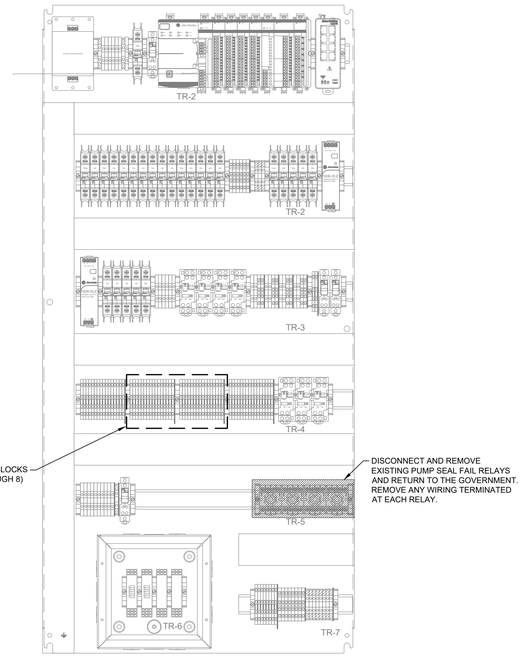
B. IN ADDITION TO ASD PARAMETER SETTINGS, ANY SETTING CHANGES AT THE MCC NETWORK SWITCH AND AT THE EXISTING PLC REQUIRED TO ESTABLISH FULL COMMUNICATIONS WITH THE REPLACEMENT ASD'S MUST BE COMPLETED AS PART OF THE WORK.

C. COORDINATE WITH VENDOR AND PROVIDE FACTORY-UPDATED MCC SHOP DRAWINGS TO REFLECT AS-BUILT ARRANGEMENT.

D. FOR NEW WIRING INSIDE THE PLC, WIRING COLOR SCHEME AND SIZES MUST MATCH EXISTING. WIRE IDENTIFICATION MUST MIRROR EXISTING SCHEME.

SHEET KEYNOTES

1. PROVIDE CONTROL RELAY TO EXISTING MCC CABINET AND WIRE AS SHOWN.
2. PROVIDE PUMP SENSOR MONITOR.
3. FIELD TERMINAL.
4. EXISTING FUSED TERMINAL BLOCK IN PLC, RAIL "TR-4" (SEE BACK PANEL LAYOUT BELOW).
5. WHERE THE EXISTING ETHERNET PATCH CORD LENGTH IS INSUFFICIENT TO TERMINATE AT ASD, PROVIDE REPLACEMENT PATCH CORD.



EXISTING PLC BACK-PLATE LAYOUT

NORTH CAROLINA PROFESSIONAL SEAL 048137 ENGINEER BRADLEY C. BUCHANAN
9/30/2026
23 JULY 2026

MBFA NO: 2305

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APPROVED: PWO OR OICC DATE
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EP-602

G575 LIFT STATION REPAIRS

ELEMENTARY CONTROL SCHEMATICS - G575

SIZE E1 | CODE IDENT. NO. 80091 | NAVFAC DRAWING NO. 60044612
CONSTR. CONTR. NO. N40085-26-B-0044
SCALE AS NOTED | SPEC. 05-26-0044 | SHEET 40 OF 40