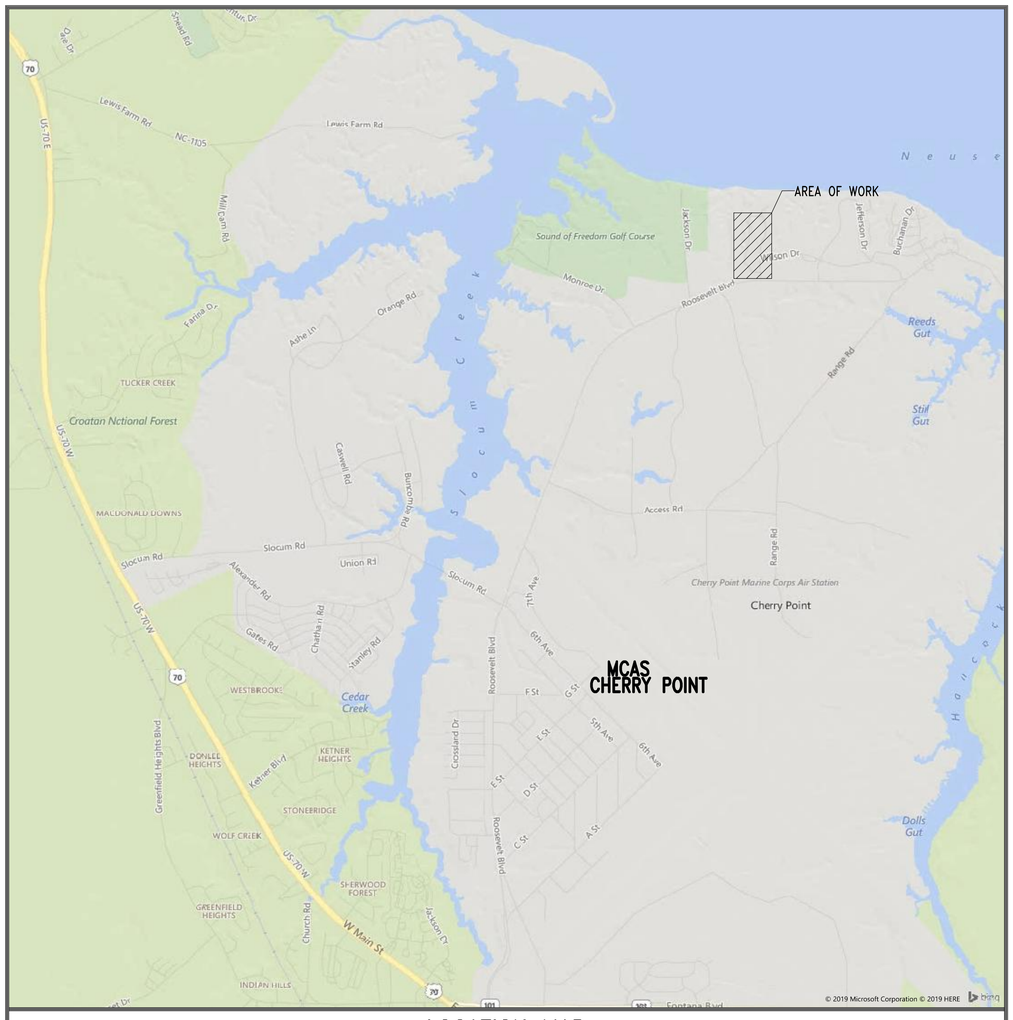
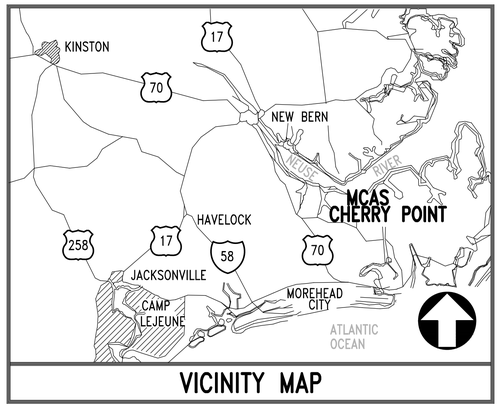
PROVIDE UTILITIES FOR COMMUNICATION TOWER B4257

MARINE CORPS AIR STATION CHERRY POINT, NORTH CAROLINA



LOCATION MAP



VICINITY MAP

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APPR | DATE | DESCRIPTION | SYM

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 046553 ENGINEER JAMES E. BARCLEY JR.
#19051 SEAL

A/E INFO

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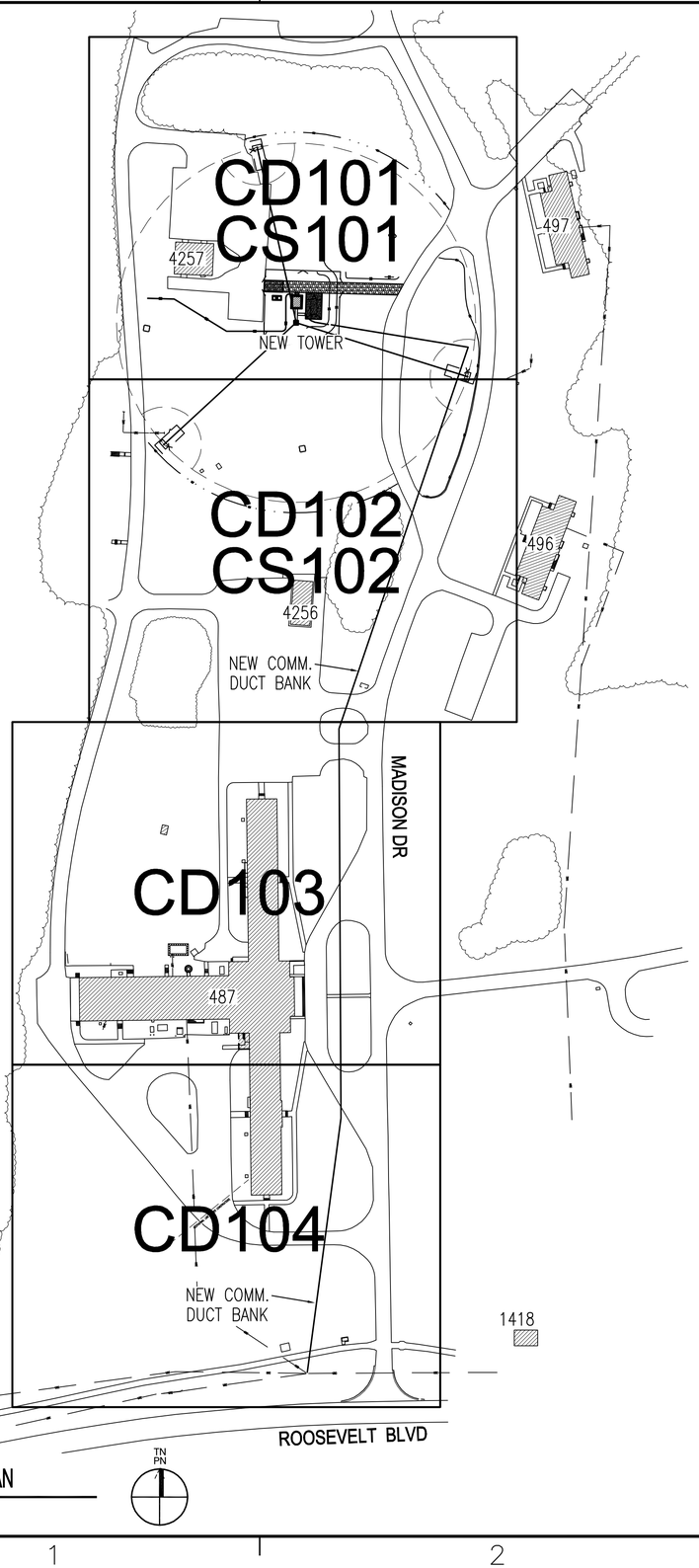
ACTIVITY
SATISFACTORY TO

DES CRW | DRW CAR | CHK JAK

U.S. MARINE CORPS AIR STATION CHERRY POINT, NORTH CAROLINA
PROVIDE UTILITIES FOR COMMUNICATION TOWER B4257
TITLE SHEET

SCALE: AS NOTED
PROJECT NO.:
MAXIMO WORK ORDER NO. 6871159
NAVFAC DRAWING NO. 12798238
SHEET 01 OF 25
G-001

DRAWFORM REVISION: 10 MAY 2014



OVERALL SITE PLAN

SCALE: 1" = 100'

ABBREVIATIONS

APPROX.	APPROXIMATE/APPROXIMATELY
CI	CAST IRON (PIPE)
CJ	CONTRACTION JOINT
DIA, ø	DIAMETER
DI	(STORM DRAIN) DROP INLET
DI	DUCTILE IRON (PIPE)
DMH	DRAINAGE MANHOLE
EJ	EXPANSION JOINT
EX, EXIST	EXISTING
HOR	HORIZONTAL
HVAC	HEATING VENTILATION AND A/C
INV	INVERT
LF	LINEAR FOOT/FEET
MAG	MAG NAIL (SURVEY CONTROL)
MAX	MAXIMUM
MH	MANHOLE
MIN	MINIMUM
OC	ON CENTER
RCP	REINFORCED CONCRETE PIPE
STA	STATION
SMH	SANITARY SEWER MANHOLE
TBM	TEMPORARY SITE BENCHMARK
TYP	TYPICAL
XFMR	PAD MOUNTED ELECTRIC TRANSFORMER

CIVIL LEGEND

EXISTING	DESCRIPTION	NEW
	WATER VALVE	
PIV	POST INDICATOR VALVE	
S	SANITARY SEWER MANHOLE	
CO	CLEANOUT	
	STORM DRAIN DROP INLET	
	FIRE HYDRANT	
TPED	COMMUNICATIONS PEDESTAL	
	UTILITY POLE/POLE WITH LIGHT	
—S—	SANITARY SEWER (GRAVITY)	
—IW—	INDUSTRIAL WASTE (GRAVITY)	
—FM—	SEWER FORCE MAIN	
—D—	STORM SEWER	
—W— / —FW—	DOMESTIC/FIRE WATER	
—G—	UNDERGROUND GAS	
—OHE—	OVERHEAD ELECTRICAL	
—UGE—	UNDERGROUND ELECTRICAL	UGE
—UGC/FO—	UNDERGROUND COMMUNICATIONS	UGC
x	FENCE	x
	CONCRETE	
	ASPHALT	
	GRAVEL	
	SURVEY CONTROL POINT	
× 5.00	SPOT ELEVATIONS	+25.7
	SOURCE/DESTINATION UNKNOWN	
	DEMOLITION ITEMS	

PROJECT PERMITTING SUMMARY

1. FAA APPROVAL HAS BEEN SECURED BY THE GOVERNMENT ASSOCIATED WITH TOWER ERECTION.

2. IF A CRANE WILL BE UTILIZED TO ERECT THE NEW TOWER, A NOTICE TO AIRMEN (NOTAM) WILL BE ISSUED BY THE GOVERNMENT.

GRAPHIC SCALE:

100 0 50 100 200

GRAPHIC SCALE: 1" = 100'

NO.	DESCRIPTION	DATE	APPR

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#19012 SEAL

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PH.(252) 633-0068

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ACTIVITY

SATISFACTORY TO

DES JKA | DRW JKA | CHK JCA

U.S. MARINE CORPS AIR STATION CHERRY POINT, NORTH CAROLINA

PROVIDE UTILITIES FOR COMMUNICATION TOWER B4257

OVERALL SITE PLAN

SCALE: AS NOTED

PROJECT NO.:

MAXIMO WORK ORDER NO. 6871159

NAVFAC DRAWING NO. 12798239

SHEET 2 OF 25

C-101

DRAWFORM REVISION: 10 MAY 2014

EXISTING CONDITIONS AND DEMOLITION PLAN

SCALE: 1" = 25'

TN
PN

GENERAL CONSTRUCTION NOTES:

1. THE LOCATION AND DEPTHS OF EXISTING UTILITIES SHOWN ARE APPROXIMATE. THE CONTRACTOR MUST BE RESPONSIBLE FOR SCANNING THE AREA OF WORK TO IDENTIFY TO HIS OWN SATISFACTION THE EXTENT OF UTILITIES PRESENT INCLUDING THE UTILITIES INDICATED TO BE PRESENT, THOSE NOT SHOWN, AND THOSE SHOWN TO BE IN A DIFFERENT LOCATION.
2. PHYSICAL SITE FEATURES OUTSIDE THE AREA OF WORK OR THOSE FEATURES NOT RELEVANT TO THE WORK BEING PERFORMED ARE NOT SHOWN FOR CLARITY.
3. ALL DISTURBED AREAS SHALL BE VEGETATED IN ACCORDANCE WITH THE PROJECT VEGETATION PLAN. SEE DETAIL A4, SHEET CS501.

DEMOLITION KEYNOTES:

1. SAW-CUT AND REMOVE ASPHALT PAVEMENT.
2. CLEAR AND GRUB EXISTING VEGETATION, THIS AREA.
3. ASPHALT CUT AND PATCH–SEE DETAIL D4, SHEET CS501.
4. CONCRETE CUT AND PATCH–SEE DETAIL B4, SHEET CS501.
5. INSTALL SILT FENCE–SEE DETAIL A1, SHEET CS501.
6. INSTALL GRAVEL CONTROL ENTRANCE–SEE DETAIL D2, SHEET CS501.
7. INSTALL DROP INLET PROTECTION–SEE DETAIL A2, SHEET CS501.

GRAPHIC SCALE:

25 0 12.5 25 50

GRAPHIC SCALE: 1" = 25'

APPR	DATE	DESCRIPTION	SYM

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DES: JKA | DRW: JKA | CHK: JCA

U.S. MARINE CORPS AIR STATION CHERRY POINT, NORTH CAROLINA

PROVIDE UTILITIES FOR COMMUNICATION TOWER B4257

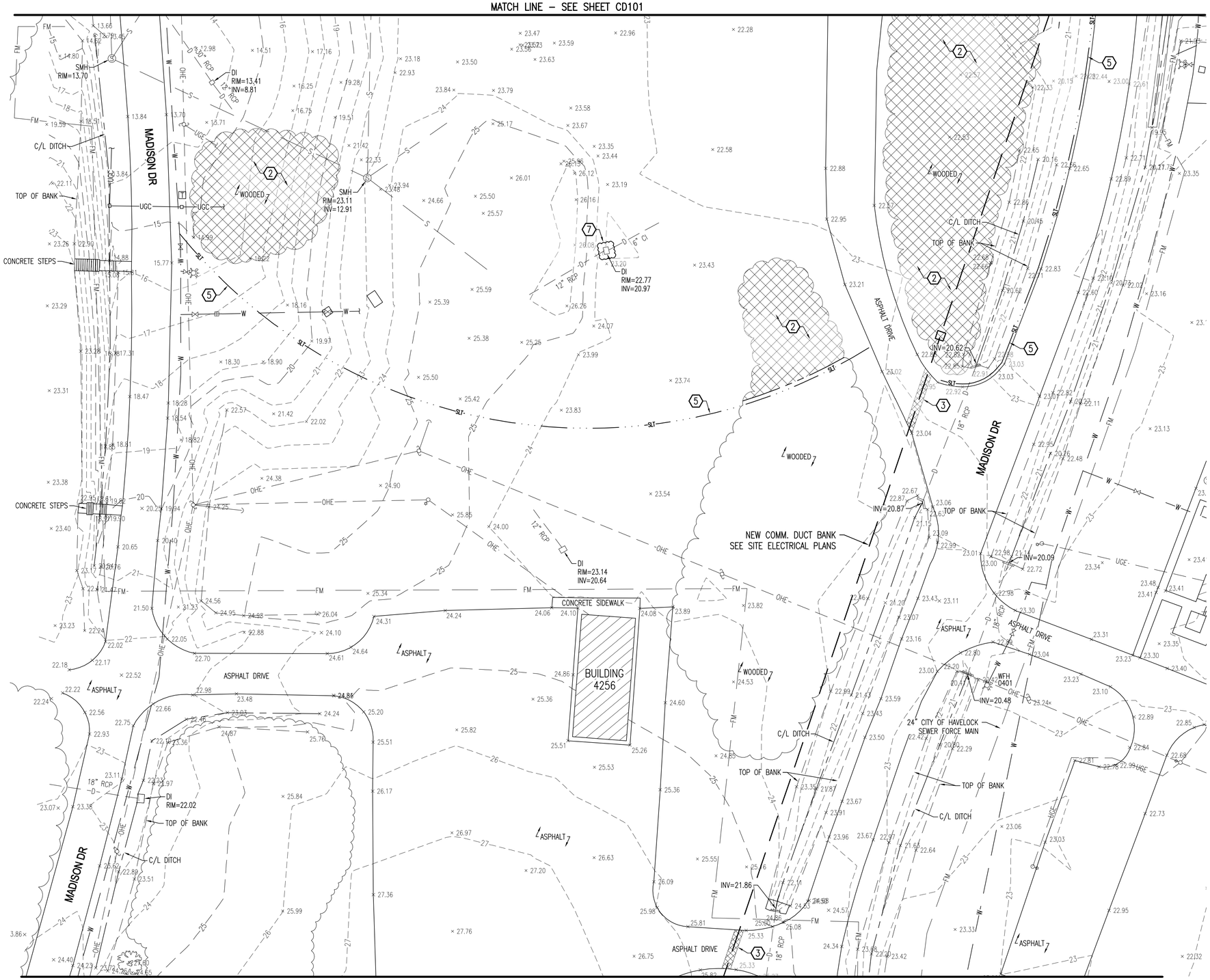
EXISTING CONDITIONS AND DEMOLITION - COMMUNICATIONS TOWER

SCALE: AS NOTED
PROJECT NO.:
MAXIMO WORK ORDER NO.: 6871159
NAVFAC DRAWING NO.: 12798240
SHEET 3 OF 25

CD101

DRAWFORM REVISION: 10 MAY 2014

MATCH LINE – SEE SHEET CD101



MATCH LINE – SEE SHEET CD103

EXISTING CONDITIONS AND DEMOLITION PLAN

SCALE: 1" = 25'

TN
PN

GENERAL CONSTRUCTION NOTES:

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DEMOLITION KEYNOTES:

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2. CLEAR AND GRUB EXISTING VEGETATION, THIS AREA.
3. ASPHALT CUT AND PATCH–SEE DETAIL D4, SHEET CS501.
4. CONCRETE CUT AND PATCH–SEE DETAIL B4, SHEET CS501.
5. INSTALL SILT FENCE–SEE DETAIL A1, SHEET CS501.
6. INSTALL GRAVEL CONTROL ENTRANCE–SEE DETAIL D2, SHEET CS501.
7. INSTALL DROP INLET PROTECTION–SEE DETAIL A2, SHEET CS501.

APPR	DATE	DESCRIPTION	SYM

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ACTIVITY

SATISFACTORY TO

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U.S. MARINE CORPS AIR STATION CHERRY POINT, NORTH CAROLINA

PROVIDE UTILITIES FOR COMMUNICATION TOWER B4257

EXISTING CONDITIONS AND DEMOLITION - COMMUNICATIONS TOWER

GRAPHIC SCALE:

25 0 12.5 25 50

GRAPHIC SCALE: 1" = 25'

SCALE: AS NOTED

PROJECT NO.:

MAXIMO WORK ORDER NO. 6871159

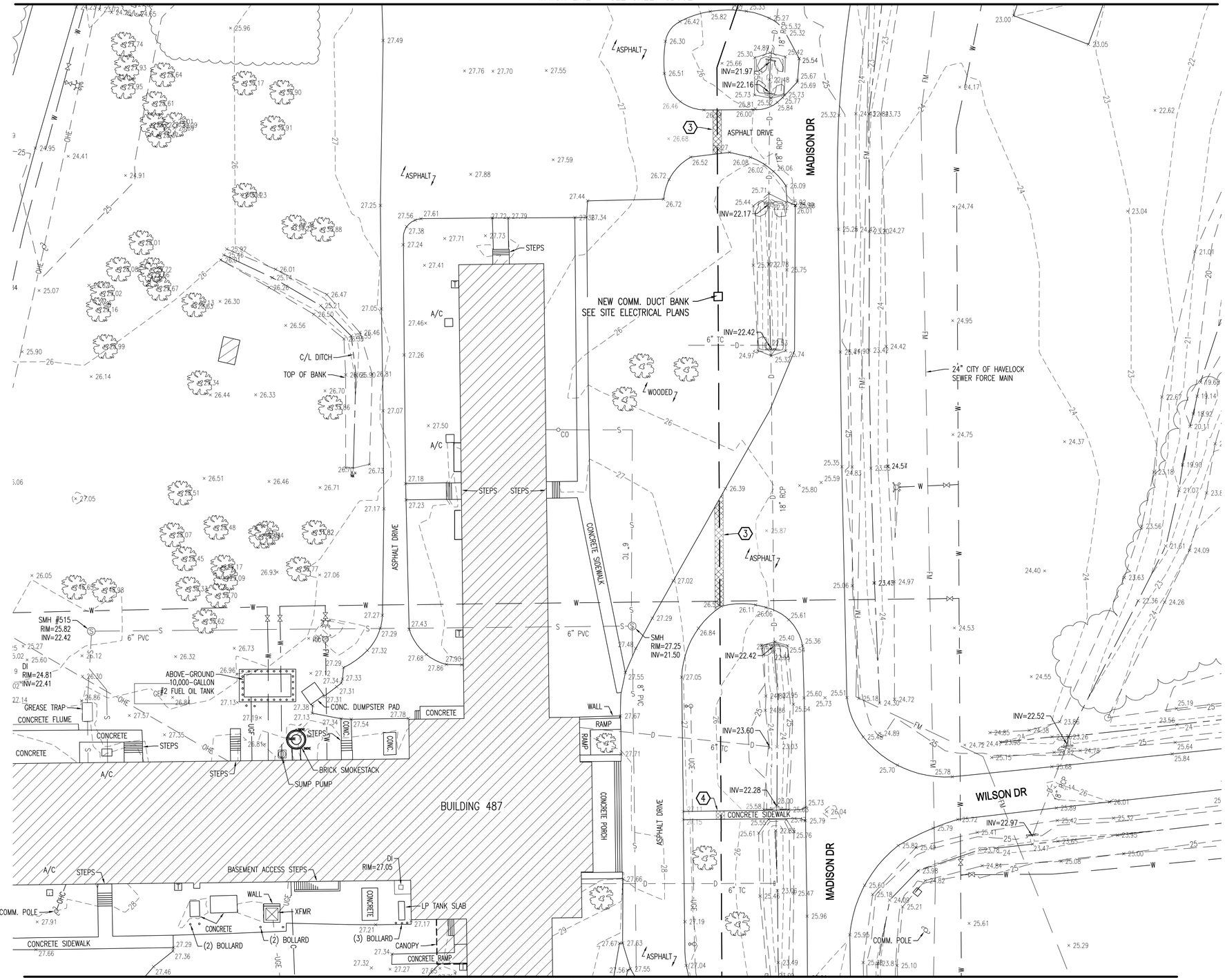
NAVFAC DRAWING NO. 12798241

SHEET 4 OF 25

CD102

DRAWFORM REVISION: 10 MAY 2014

MATCH LINE – SEE SHEET CD102



MATCH LINE – SEE SHEET CD104

EXISTING CONDITIONS AND DEMOLITION PLAN

SCALE: 1" = 25'

TN
PN

GENERAL CONSTRUCTION NOTES:

1. THE LOCATION AND DEPTHS OF EXISTING UTILITIES SHOWN ARE APPROXIMATE. THE CONTRACTOR MUST BE RESPONSIBLE FOR SCANNING THE AREA OF WORK TO IDENTIFY TO HIS OWN SATISFACTION THE EXTENT OF UTILITIES PRESENT INCLUDING THE UTILITIES INDICATED TO BE PRESENT, THOSE NOT SHOWN, AND THOSE SHOWN TO BE IN A DIFFERENT LOCATION.
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4. CONCRETE CUT AND PATCH–SEE DETAIL B4, SHEET CS501.
5. INSTALL SILT FENCE–SEE DETAIL A1, SHEET CS501.
6. INSTALL GRAVEL CONTROL ENTRANCE–SEE DETAIL D2, SHEET CS501.
7. INSTALL DROP INLET PROTECTION–SEE DETAIL A2, SHEET CS501.

GRAPHIC SCALE:

25 0 12.5 25 50

GRAPHIC SCALE: 1" = 25'

SYM	DESCRIPTION	DATE	APPR

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ACTIVITY

SATISFACTORY TO

DES JKA | DRW JKA | CHK JCA

U.S. MARINE CORPS AIR STATION CHERRY POINT, NORTH CAROLINA

PROVIDE UTILITIES FOR COMMUNICATION TOWER B4257

EXISTING CONDITIONS AND DEMOLITION - COMMUNICATIONS TOWER

SCALE: AS NOTED

PROJECT NO.:

MAXIMO WORK ORDER NO. 6871159

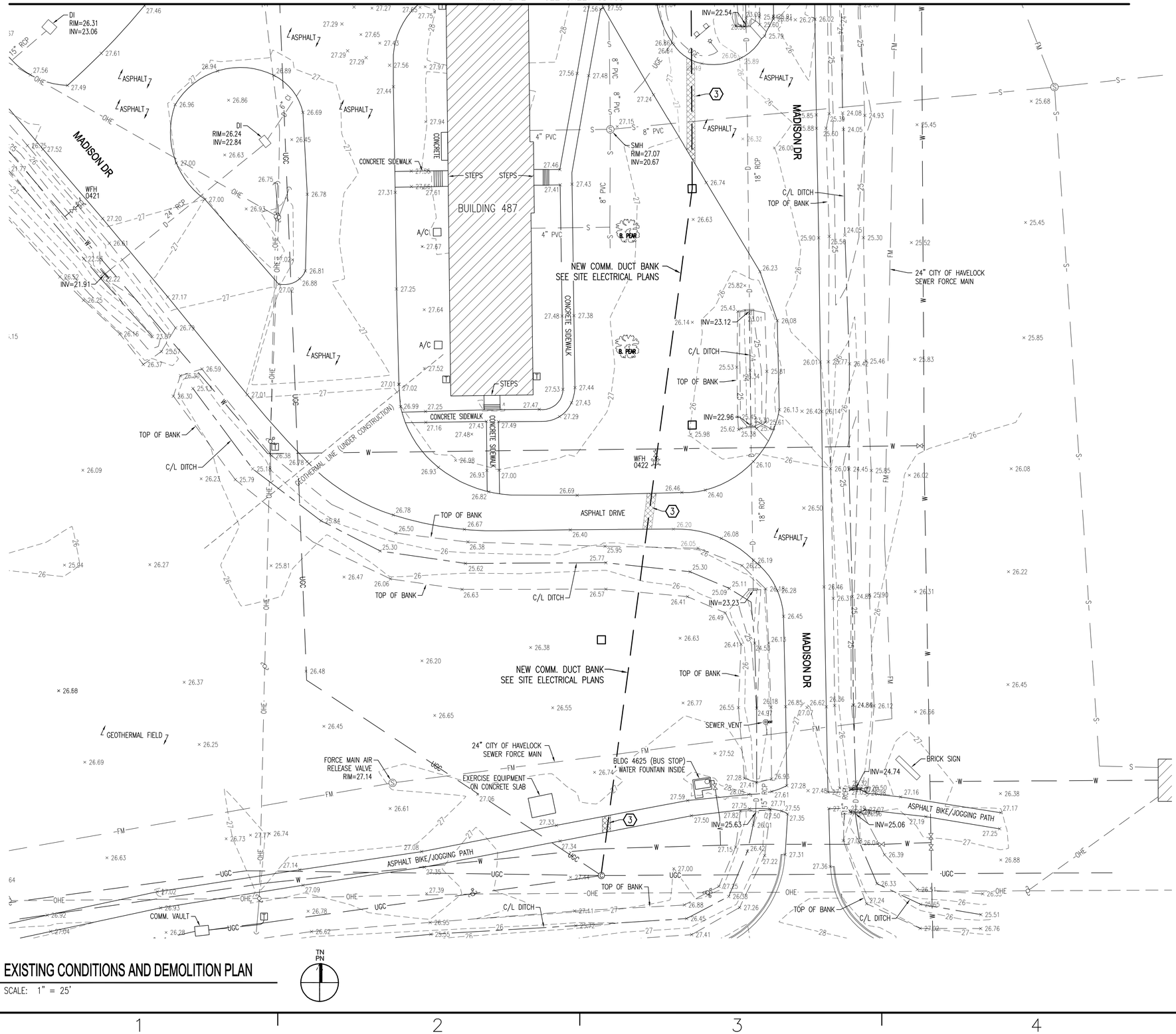
NAVFAC DRAWING NO. 12798242

SHEET 5 OF 25

CD103

DRAWFORM REVISION: 10 MAY 2014

MATCH LINE – SEE SHEET CD103



EXISTING CONDITIONS AND DEMOLITION PLAN

SCALE: 1" = 25'

GENERAL CONSTRUCTION NOTES:

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2. CLEAR AND GRUB EXISTING VEGETATION, THIS AREA.
3. ASPHALT CUT AND PATCH-SEE DETAIL D4, SHEET CS501.
4. CONCRETE CUT AND PATCH-SEE DETAIL B4, SHEET CS501.
5. INSTALL SILT FENCE-SEE DETAIL A1, SHEET CS501.
6. INSTALL GRAVEL CONTROL ENTRANCE-SEE DETAIL D2, SHEET CS501.
7. INSTALL DROP INLET PROTECTION-SEE DETAIL A2, SHEET CS501.

GRAPHIC SCALE:

25 0 12.5 25 50

GRAPHIC SCALE: 1" = 25'

NO.	DESCRIPTION	DATE	APPR

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ACTIVITY

SATISFACTORY TO

DES JKA | DRW JKA | CHK JCA

U.S. MARINE CORPS AIR STATION CHERRY POINT, NORTH CAROLINA

PROVIDE UTILITIES FOR COMMUNICATION TOWER B4257

EXISTING CONDITIONS AND DEMOLITION - COMMUNICATIONS TOWER

SCALE: AS NOTED

PROJECT NO.:

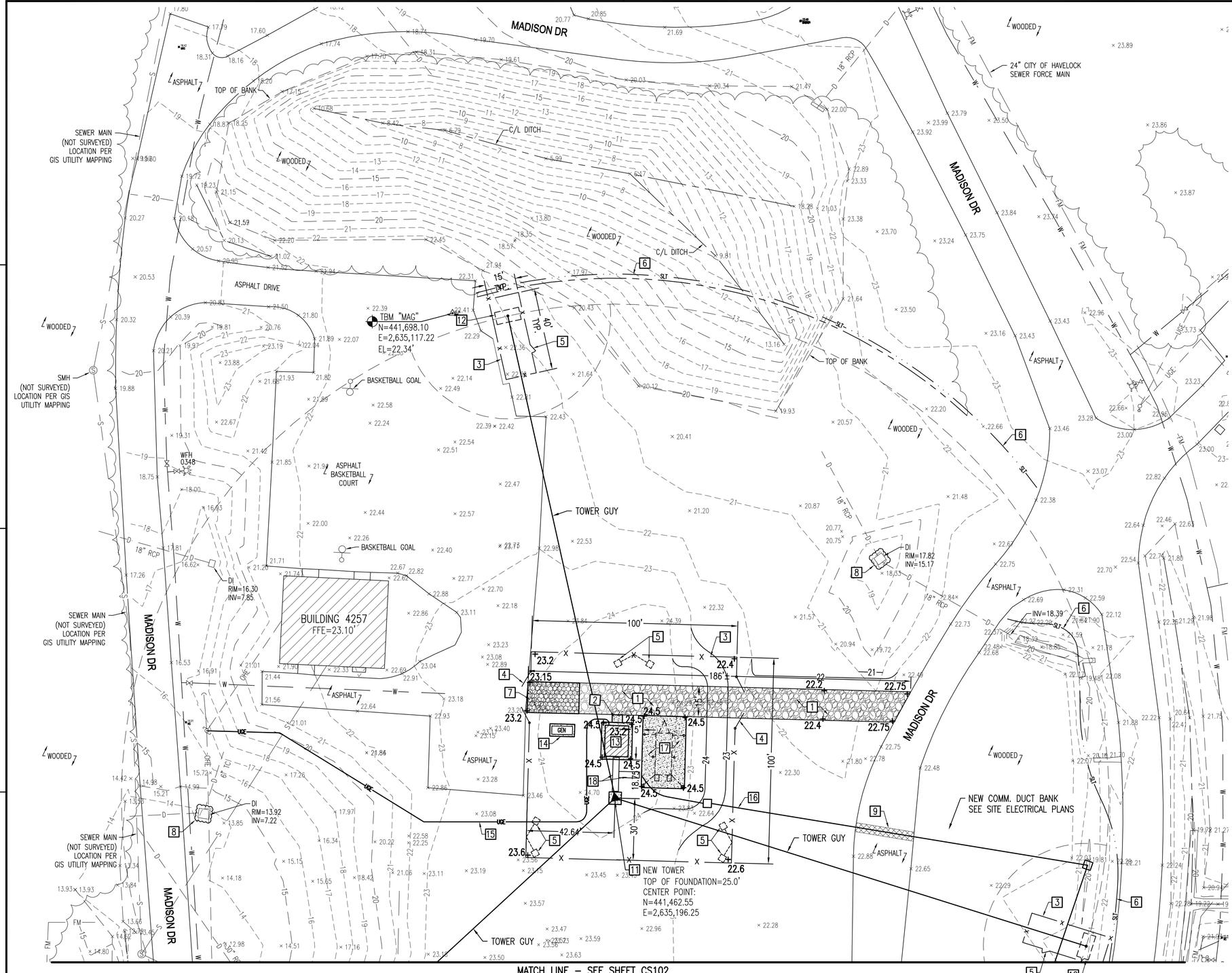
MAXIMO WORK ORDER NO.
6871159

NAVFAC DRAWING NO.
12798243

SHEET 6 OF 25

CD104

DRAWFORM REVISION: 10 MAY 2014



SITE LAYOUT AND GRADING PLAN

SCALE: 1" = 25'

TN
PN

GENERAL CONSTRUCTION NOTES:

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NEW WORK ITEMS:

1. NEW GRAVEL SURFACING–SEE DETAIL C1, SHEET CS501.
2. NEW 5'x5' CONCRETE SIDEWALK–SEE DETAIL D1, SHEET CS501.
3. NEW SECURITY FENCE–SEE DETAIL A1, SHEET CS502.
4. NEW 24' CLEAR SWING GATE–SEE DETAIL A1, SHEET CS502.
5. FENCE ANCHOR–SEE DETAIL A1, SHEET CS502.
6. INSTALL SILT FENCE–SEE DETAIL A1, SHEET CS501.
7. INSTALL GRAVEL CONTROL ENTRANCE–SEE DETAIL D2, SHEET CS501.
8. INSTALL DROP INLET PROTECTION–SEE DETAIL A2, SHEET CS501.
9. ASPHALT CUT AND PATCH–SEE DETAIL D4, SHEET CS501.
10. CONCRETE CUT AND PATCH–SEE DETAIL B4, SHEET CS501.
11. NEW TOWER AND FOUNDATION–SEE STRUCTURAL PLANS.
12. NEW CONCRETE GUY FOUNDATION–SEE STRUCTURAL PLANS.
13. NEW COMM. BUILDING AND FOUNDATION–SEE ELECTRICAL PLANS.
14. NEW GENERATOR SET AND FOUNDATION–SEE ELECTRICAL PLANS.
15. NEW UNDERGROUND ELECTRIC SERVICE TO TOWER–SEE ELECTRICAL PLANS.
16. NEW COMM. DUCTBANK–SEE ELECTRICAL PLANS.
17. NEW TEMPORARY COMMUNICTIONS TRAILER PAD–SEE STRUCTURAL DRAWINGS.
18. NEW ICE BRIDGE–SEE ELECTRICAL DRAWINGS.

GRAPHIC SCALE:

25 0 12.5 25 50

GRAPHIC SCALE: 1" = 25'

		APPR
		DATE
		DESCRIPTION
		SYM

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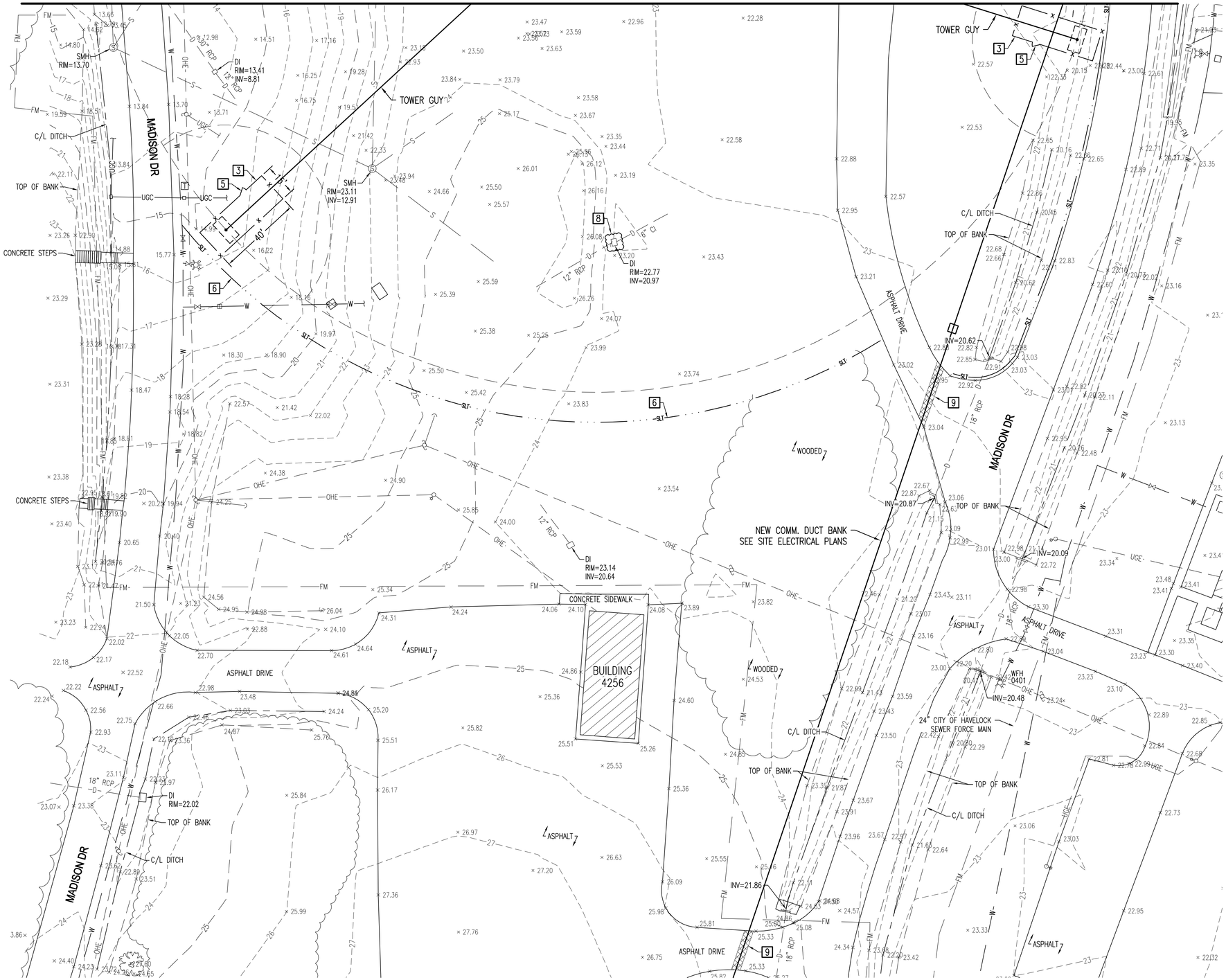
U.S. MARINE CORPS AIR STATION CHERRY POINT, NORTH CAROLINA
PROVIDE UTILITIES FOR COMMUNICATION TOWER B4257
SITE LAYOUT AND GRADING PLAN

SCALE: AS NOTED
PROJECT NO.:
MAXIMO WORK ORDER NO. 6871159
NAVFAC DRAWING NO. 12798244
SHEET 7 OF 25
CS101
DRAWFORM REVISION: 10 MAY 2014

MATCH LINE – SEE SHEET CS101



SITE LAYOUT AND GRADING PLAN

SCALE: 1" = 25'

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3. NEW SECURITY FENCE–SEE DETAIL A1, SHEET CS502.
4. NEW 24' CLEAR SWING GATE–SEE DETAIL A1, SHEET CS502.
5. NEW 18' CLEAR SWING GATE–SEE DETAIL A1, SHEET CS502.
6. INSTALL SILT FENCE–SEE DETAIL A1, SHEET CS501.
7. INSTALL GRAVEL CONTROL ENTRANCE–SEE DETAIL D2, SHEET CS501.
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14. NEW GENERATOR SET AND FOUNDATION–SEE ELECTRICAL PLANS.
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25 0 12.5 25 50

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SATISFACTORY TO

DES JKA DRW JKA CHK JCA

U.S. MARINE CORPS AIR STATION CHERRY POINT, NORTH CAROLINA

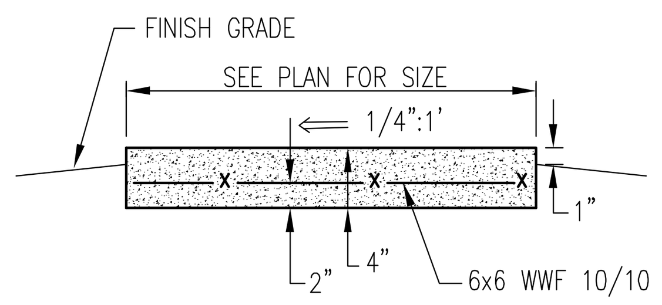
PROVIDE UTILITIES FOR COMMUNICATION TOWER B4257

SITE LAYOUT AND GRADING PLAN

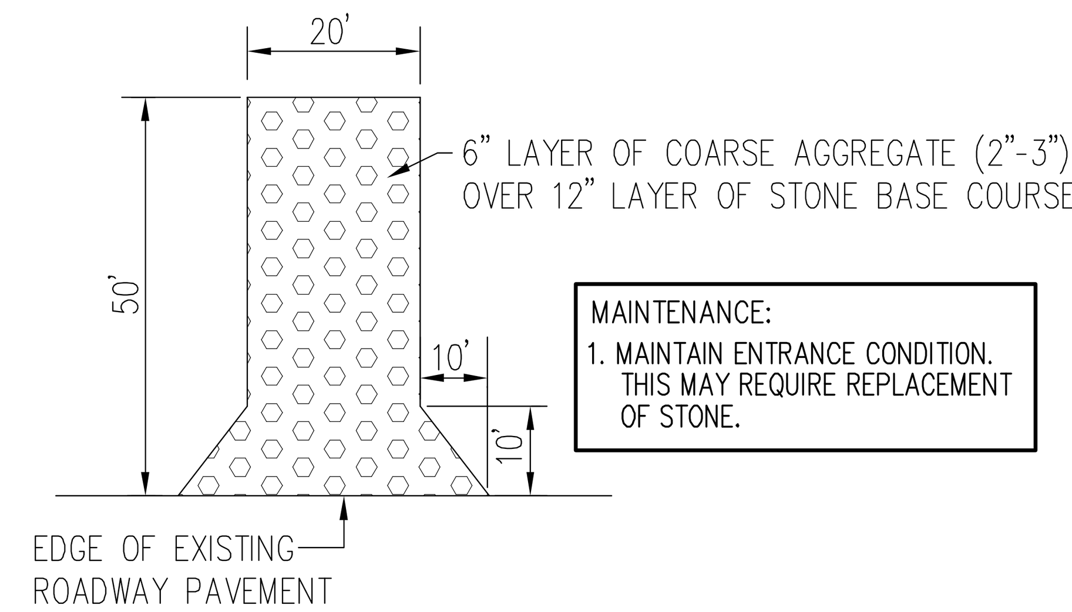
SCALE:	AS NOTED
PROJECT NO.:	
MAXIMO WORK ORDER NO.	6871159
NAVFAC DRAWING NO.	12798245
SHEET	8 OF 25

CS102

DRAWFORM REVISION: 10 MAY 2014

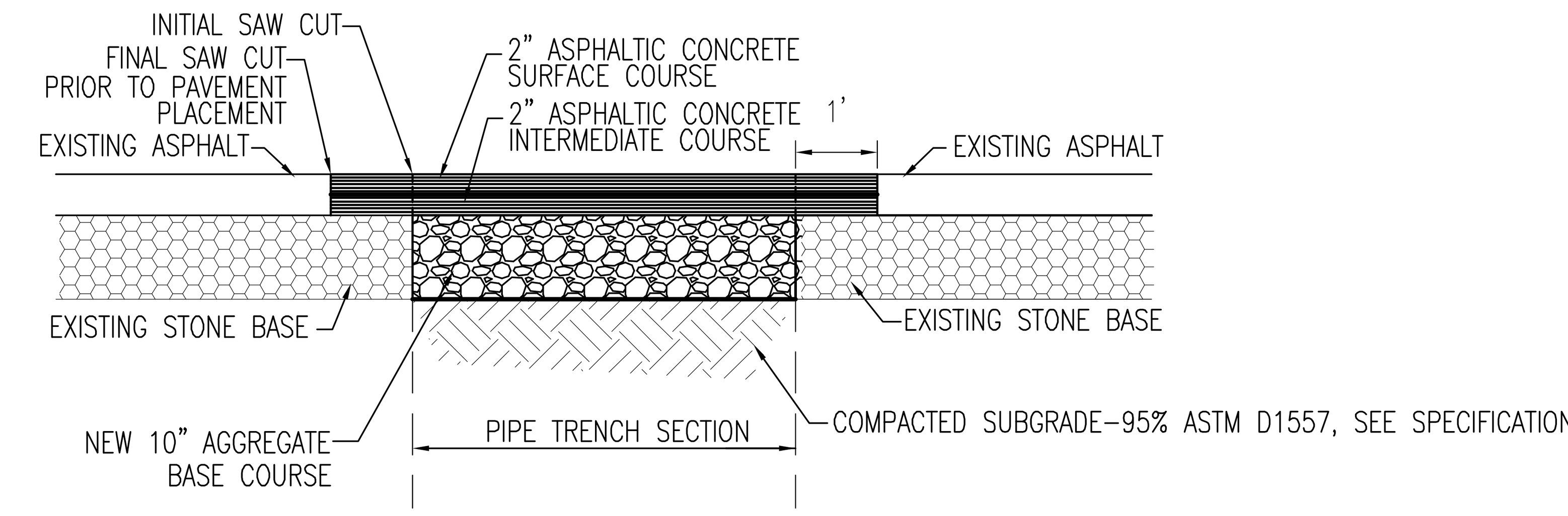


D1 CONCRETE SIDEWALK
SCALE: NTS

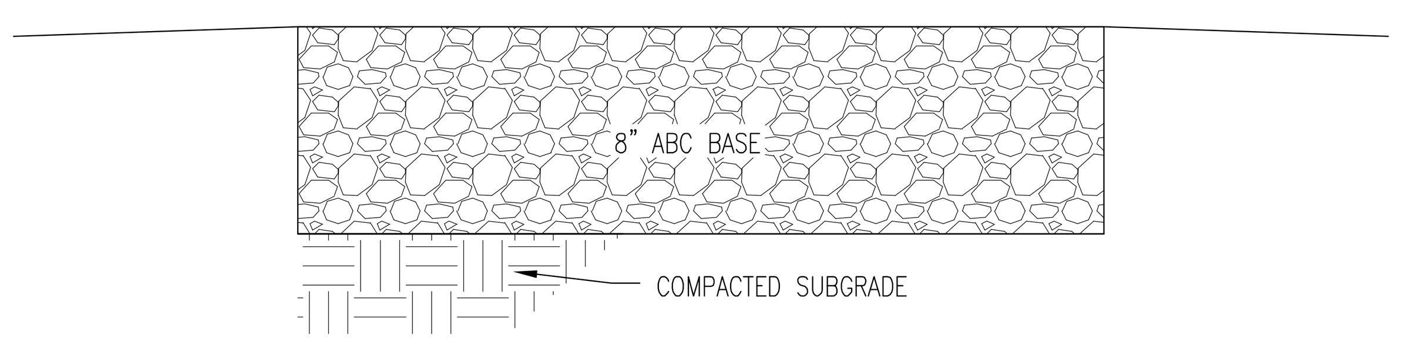


MAINTENANCE:
1. MAINTAIN ENTRANCE CONDITION. THIS MAY REQUIRE REPLACEMENT OF STONE.

D2 GRAVEL CONTROL ENTRANCE
SCALE: NTS

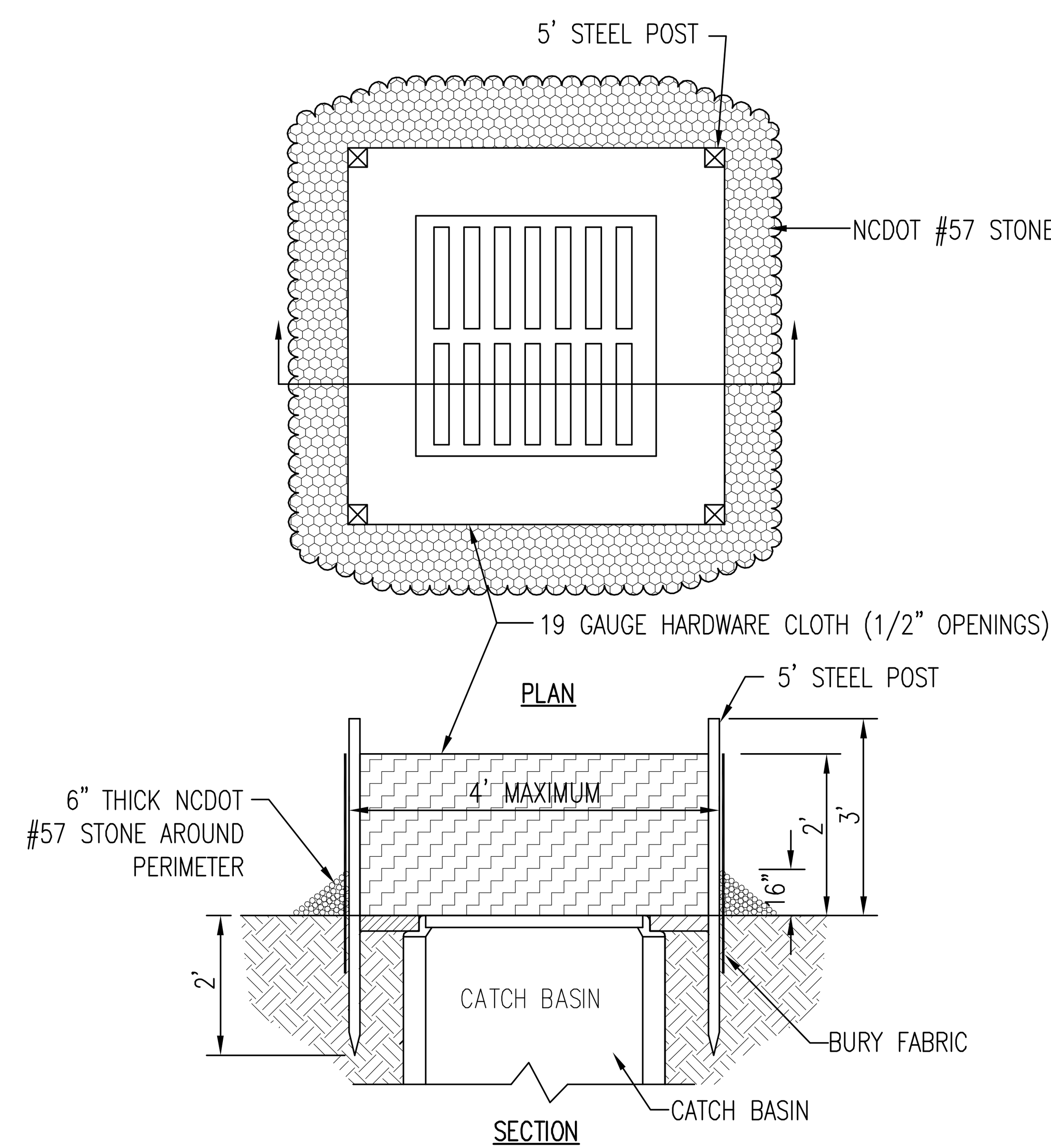


D4 ASPHALT CUT AND PATCH
SCALE: NTS



NOTE: CONTRACTOR SHALL PROVIDE 95% COMPACTION OF SUBGRADE AND STONE BASE. SUBGRADE SHALL BE PROOF ROLLED AND PASS SATISFACTORY IN THE PRESENCE OF THE ENGINEER.

C1 GRAVEL SECTION
SCALE: NTS

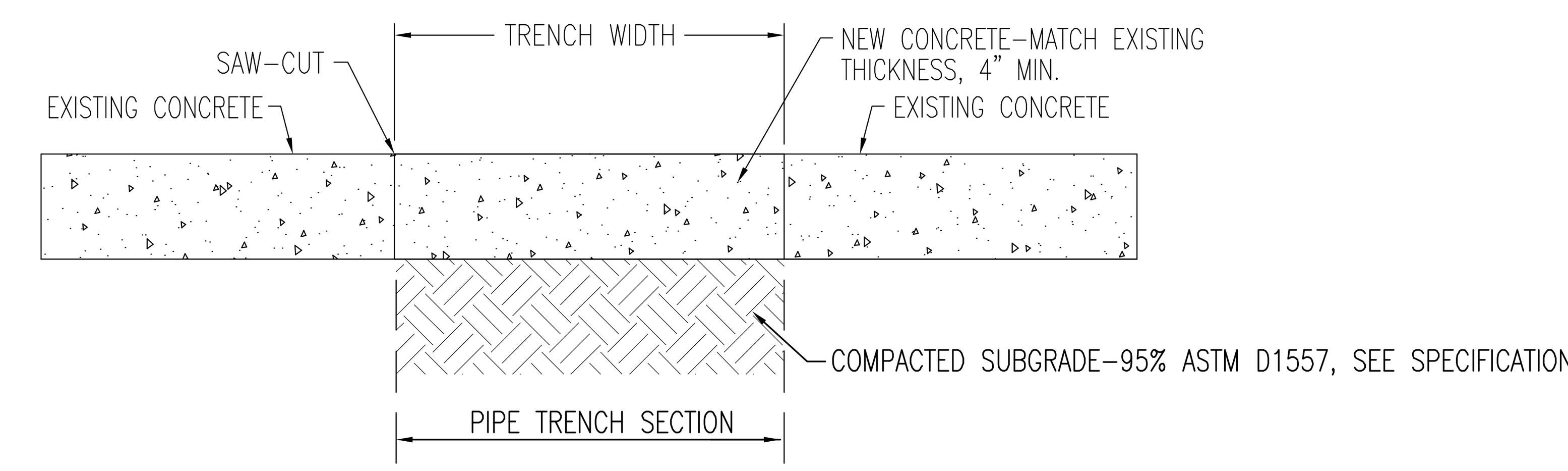


NOTE:
UNIFORMLY GRADE A SHALLOW DEPRESSION APPROACHING THE INLET.

NOTE:
PROVIDE DROP INLET PROTECTION AT ALL DRAINAGE STRUCTURES.

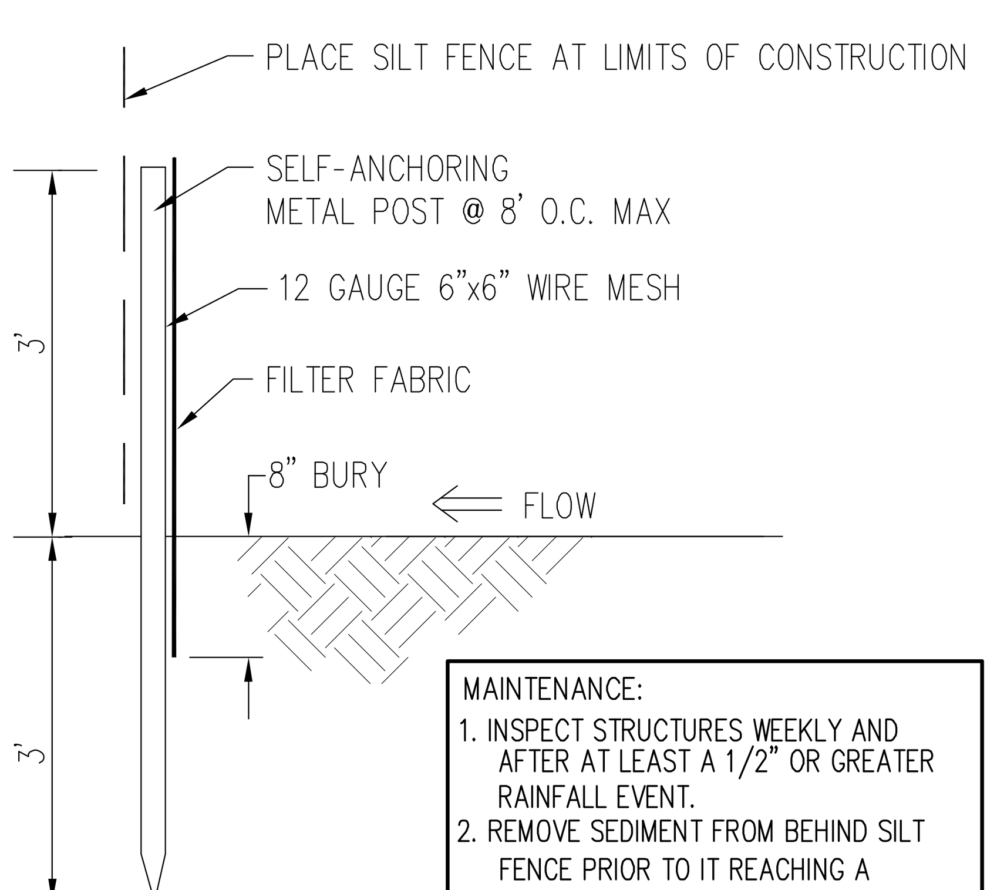
MAINTENANCE:
1. INSPECT STRUCTURES WEEKLY AND AFTER AT LEAST A 1/2" OR GREATER RAINFALL EVENT.
2. CLEAR DEBRIS AND REPLACE STONE AS NEEDED.
3. REMOVED ACCUMULATED SEDIMENT WHEN IT REACHES A MAXIMUM DEPTH OF 6 INCHES.

A2 DROP INLET PROTECTION
SCALE: NTS



NOTE: REMOVE CONCRETE TO JOINTS WHEN JOINTS ARE LOCATED WITHIN 5 FEET OF AREA OF WORK. CONCRETE FINISH & JOINT PATTERN MUST MATCH EXISTING.

B4 CONCRETE CUT AND PATCH
SCALE: NTS



MAINTENANCE:
1. INSPECT STRUCTURES WEEKLY AND AFTER AT LEAST A 1/2" OR GREATER RAINFALL EVENT.
2. REMOVE SEDIMENT FROM BEHIND SILT FENCE PRIOR TO IT REACHING A MAXIMUM DEPTH OF 6 INCHES.

A1 SILT FENCE
SCALE: NTS

TEMPORARY VEGETATIVE SEEDING
(PRIOR TO ESTABLISHING PERMANENT VEGETATION)
AFTER COMPLETION OF GRADING ACTIVITIES AND THE CONSTRUCTION OF SWALES, ALL EXPOSED AREAS MUST BE SEEDED TO THE FOLLOWING SPECIFICATIONS:

SEED BED

LIME	1-1/2 TON PER ACRE
FERTILIZER	1/2-TON PER ACRE

SEED

RYE GRAIN	50 LBS PER ACRE
TALL FESCUE	100 LBS PER ACRE

SUPPLEMENTAL SEED
MAY THROUGH AUGUST:

CENTIPEDE	5 LBS PER ACRE

PROCEDURE
STRAW MULCH MUST BE APPLIED AT A RATE WHICH WILL INSURE APPROXIMATELY 75% COVERAGE OF THE SEEDED AREA. THE STRAW AND SOWN SEED WILL BE LIGHTLY DISCED INTO THE BED TO GIVE IT FURTHER RESISTANCE TO BLOWING AND WASHING. THE CONTRACTOR MUST GUARANTEE A FULL STAND OF GRASS OVER THE ENTIRE DISTURBED AREA. IF NECESSARY THE CONTRACTOR WILL WET DOWN THE AREAS TO ASSIST IN SEED GERMINATION OR AID IN GROWTH IN TIMES OF EXCESSIVELY DRY WEATHER. A STAND OF GRASS WILL BE CONSIDERED ACCEPTABLE WHEN THE ENTIRE STAND OF GRASS IS AT LEAST FOUR INCHES HIGH AND HAS ACHIEVED AT LEAST 95% COVERAGE OF DISTURBED AREAS. RESEEDING WILL BE REQUIRED AS NECESSARY BY THE CONTRACTOR TO OBTAIN THE SPECIFIED STAND OF GRASS.

PERMANENT VEGETATION
ALL DISTURBED AREAS NOT COVERED WITH BUILDINGS, PAVEMENTS, OR OTHER IMPERMEABLE SURFACES MUST BE SODDED WITH CENTIPEDE SOLID SOD AS THE FINAL/PERMANENT VEGETATION.

SPECIAL SEEDING NOTE:
ALL DENUDED AREAS WILL, WITHIN 7 CALENDAR DAYS OF COMPLETION OF ANY PHASE OF GRADING OR CEASING OF GRADING ACTIVITIES, BE PLANTED AND PROVIDED WITH TEMPORARY OR PERMANENT GROUND COVER, DEVICES, OR STRUCTURES SUFFICIENT TO RESTRAIN EROSION.

ALL DENUDED AREAS WILL, WITHIN 7 DAYS OF COMPLETION OF CONSTRUCTION, BE PROVIDED PERMANENT GROUND COVER.

A4 VEGETATION PLAN
NOT TO SCALE

GRAPHIC SCALE:

SYM | DESCRIPTION | DATE | APPR

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Digitally signed by John K Avolis
NORTH CAROLINA PROFESSIONAL SEAL 15738 9-13-19 ENGINEER JOHN K. AVOLIS
#19012 SEAL

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A/E INFO

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO
DES JKA | DRW JKA | CHK JCA

U.S. MARINE CORPS AIR STATION CHERRY POINT, NORTH CAROLINA
PROVIDE UTILITIES FOR COMMUNICATION TOWER B4257
DETAILS

SCALE: AS NOTED
PROJECT NO.:
MAXIMO WORK ORDER NO. 6871159
NAVFAC DRAWING NO. 12798246
SHEET 9 OF 25
CS501
DRAWFORM REVISION: 10 MAY 2014

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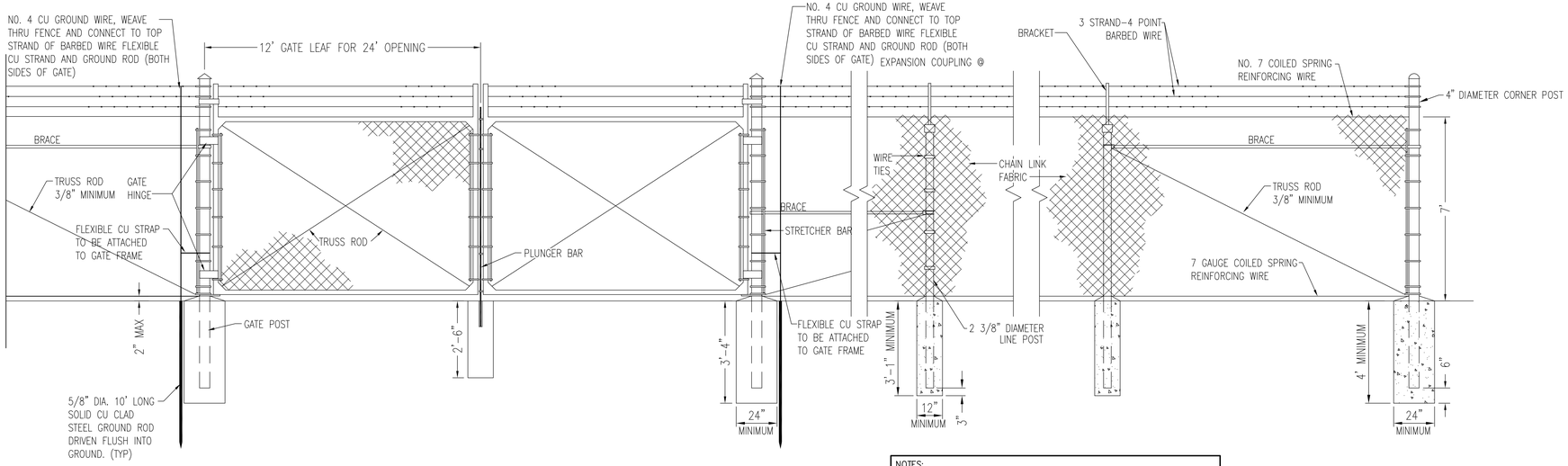
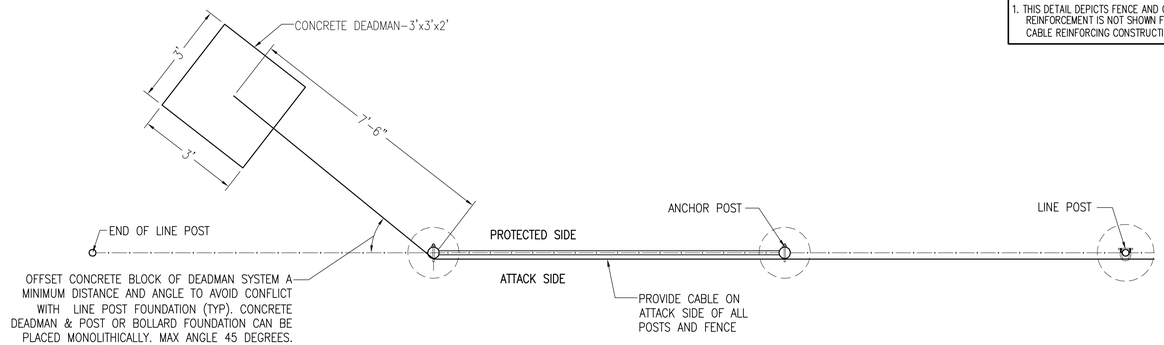
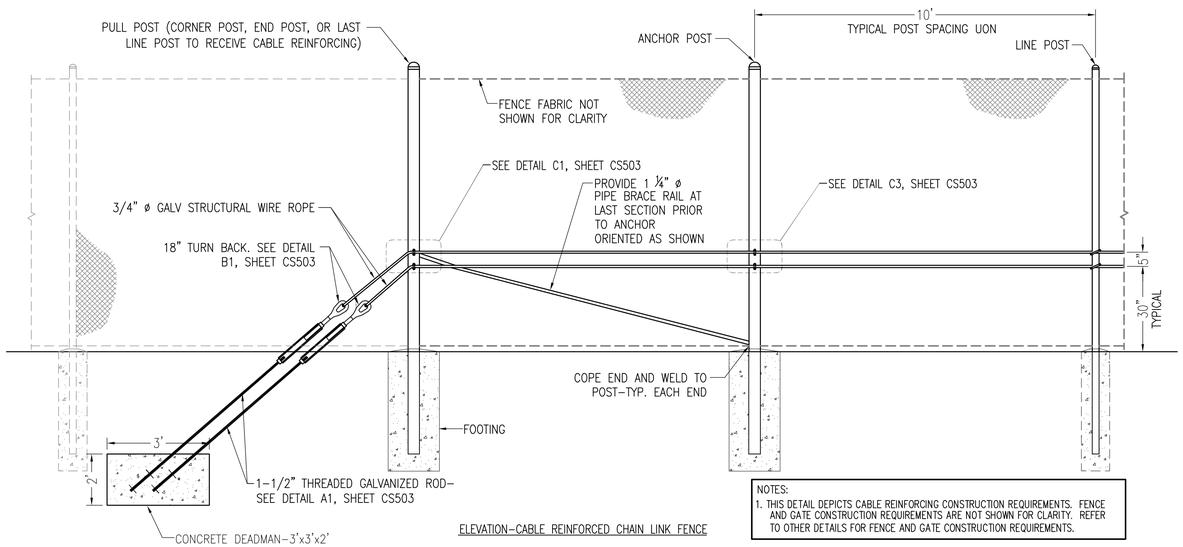


NOTES:
1. THIS DETAIL DEPICTS FENCE AND GATE CONSTRUCTION REQUIREMENTS. CABLE REINFORCEMENT IS NOT SHOWN FOR CLARITY. REFER TO OTHER DETAILS FOR CABLE REINFORCING CONSTRUCTION REQUIREMENTS.



PLAN VIEW-CABLE REINFORCED CHAIN LINK FENCE



ELEVATION-CABLE REINFORCED CHAIN LINK FENCE

NOTES:
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A1 HIGH SECURITY CHAIN LINK FENCE AND GATE

SCALE: NTS

NOTES:

1. REINFORCING CABLES SHALL BE U.S. DOMESTIC MINIMUM 3/4" ø 6x19 CLASS WIRE ROPE, REGULAR LAY, EXTRA IMPROVED PLOW STEEL (EIP), INDEPENDENT WIRE ROPE CORE (IWRC), CONFORMING TO ASTM A1023 AND GALVANIZED IN ACCORDANCE WITH ASTM A475 CLASS A, & HAVE A MINIMUM BREAKING STRENGTH OF 40,000 POUNDS (20 TONS). CABLES WITH A BLACK VINYL COATING, SHALL NOT BE IMPREGNATED.
2. CABLES SHALL BE CONTINUOUS FROM DEADMAN TO DEADMAN. NO SPLICES IN CABLE SHALL BE ALLOWED. CABLE BARRIER SHALL BE INSTALLED BETWEEN FENCE POST AND FENCE FABRIC AS PER PLANS. U-BOLTS SHALL BE INSTALLED PERPENDICULAR TO THE LAY OF THE STRANDS OF THE WIRE ROPE AND SHALL BE TIGHTENED AFTER SAG IN CABLE BARRIER HAS BEEN REMOVED. UNLESS INDICATED OTHERWISE, CONCRETE DEADMAN SPACING SHALL BE AT MAXIMUM 200' INTERVALS & TURNING POINTS (EXTERNAL CORNERS).
3. WIRE ROPE ENDS SHALL TERMINATE AROUND TURNBUCKLES, GATE POSTS OR EXTRA HEAVY-DUTY WIRE ROPE THIMBLES (AT GATES). THESE TERMINATIONS REQUIRE 18" MINIMUM OF ROPE FOR TURN BACK AND A MINIMUM OF (4)- CLIPS EACH (EQUAL SPACING).
4. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO ORDERING MATERIALS.
5. DEADMEN SHALL BE INSTALLED ON THE SECURED SIDE (INTERIOR) OF THE FENCE; WHILE CABLES SHALL BE INSTALLED ON THE EXTERIOR SIDE OF POST.
6. PROVIDE NECESSARY SLACK IN CABLES (GATES ONLY) TO ALLOW FOR FULL SWING OF ALL GATE LEAVES.
7. OFFSET DEADMAN SYSTEMS FROM FENCELINE (PLAN VIEW) TO AVOID CONFLICT WITH EXISTING FENCE POSTS.
8. ALLOW EPOXY ANCHOR BOLTS (MIN 2 DAYS) & CONCRETE DEADMEN (MIN 7 DAYS) TO CURE, PRIOR TO APPLYING LOADS (INSTALLING TURNBUCKLES & STRAIGHTENING CABLES).
9. ALL WELDING SHALL BE DONE IN ACCORDANCE WITH AWS D1.1. ALL WELD MATERIAL SHALL BE E70XX ELECTRODES.
10. STRUCTURAL STEEL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE NINTH EDITION OF THE AISC "MANUAL OF STEEL CONSTRUCTION FOR ALLOWABLE STRESS DESIGN.
11. STRUCTURAL STEEL SHALL CONFORM TO ASTM A36 AND SHALL HAVE A MINIMUM YIELD STRESS OF 36,000 PSI.
12. ALL STRUCTURAL STEEL MEMBERS AND HARDWARE USED IN CABLE ANCHORING SYSTEM SHALL BE HOT-DIPPED GALVANIZED. ANY AREAS WHERE COATING IS DAMAGED OR REMOVED SHALL BE COVERED WITH A ZINC RICH COMPOUND.
13. TURNBUCKLES SHALL BE 1¼"x18", TYPE I, GALVANIZED IN ACCORDANCE WITH ASTM F1145.
14. WIRE ROPE CLAMPS SHALL BE TYPE I, GALVANIZED, AND CONFORM TO FS FF-C-450.
15. ALL THREADED RODS, U-BOLTS, AND BOLTS SHALL CONFORM TO ASTM A307 AND SHALL BE INSTALLED WITH F844 WASHERS AND A563 NUTS. ENTIRE BOLT ASSEMBLY SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
16. ZINC RICH COMPOUND FOR REPAIRS SHALL BE 95% METALLIC ZINC, BY WEIGHT IN DRIED FILM; INSTALL AT LEAST TWO COATS, 4 MILS MIN TOTAL THICKNESS.
17. AT CABLE REINFORCING GATES, PROVIDE TWIST-OFF METAL TIES TO SECURE CABLE TO GATE FABRIC @ 24" OC & U-BOLTS TO SECURE TO GATE UPRIGHTS. MODIFY AS NEEDED TO FACILITATE OPERATION OF GATE.

GRAPHIC SCALE:

APPR | DATE | SYM | DESCRIPTION

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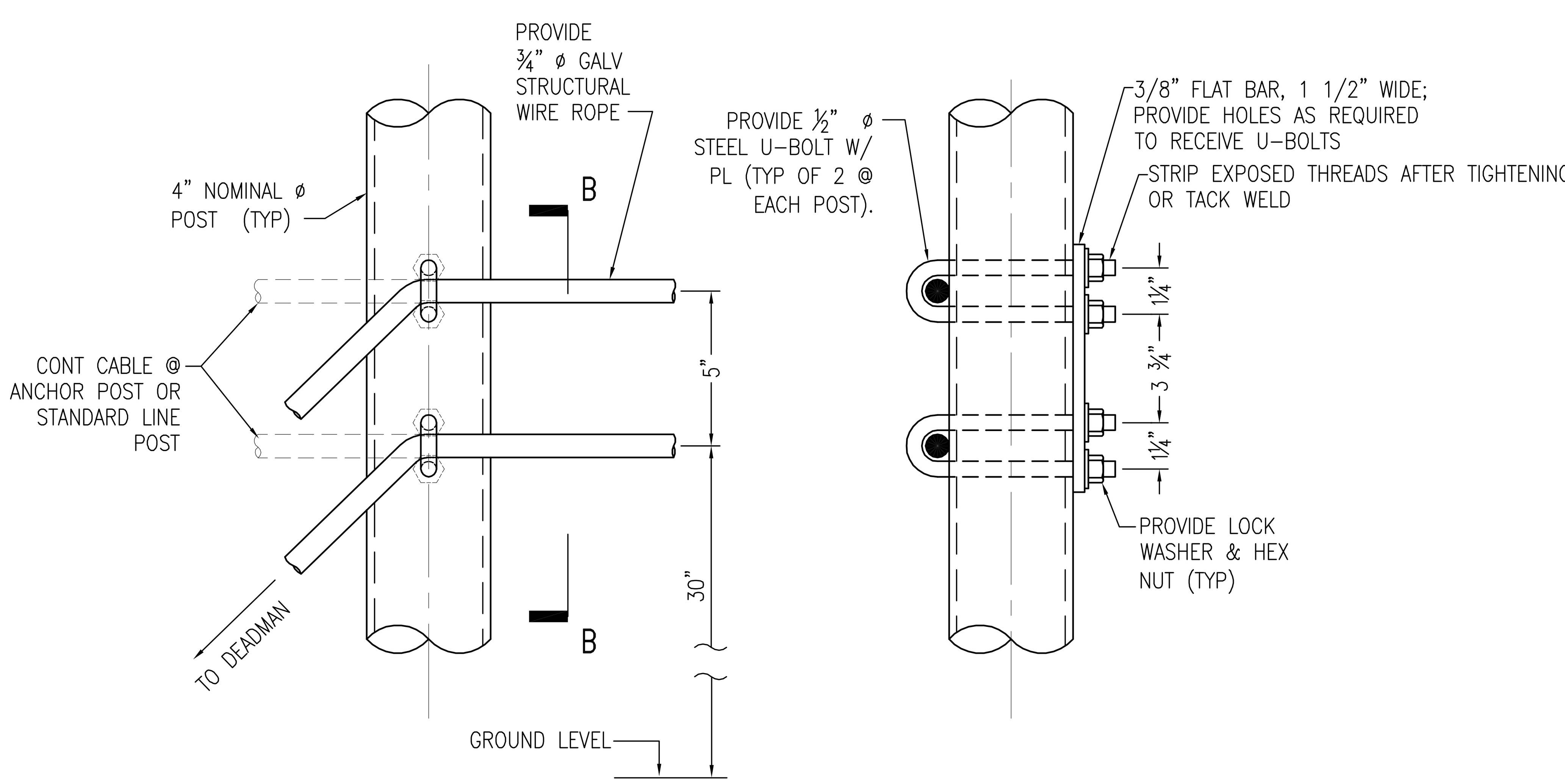
DES: JKA | DRW: JKA | CHK: JCA
PM/OM
BRANCH MANAGER
CHIEF ENG/ARCH
FIRE PROTECTION

NAVAL FACILITIES ENGINEERING COMMAND ~ MIDATLANTIC
NAVAL STATION ~ NORFOLK, VA
U.S. MARINE CORPS AIR STATION CHERRY POINT, NORTH CAROLINA
PT MARINE CORPS
PROVIDE UTILITIES FOR COMMUNICATION TOWER B4257
DETAILS

SCALE: AS NOTED
PROJECT NO.:
MAXIMO WORK ORDER NO. 6871159
NAVFAC DRAWING NO. 12798247
SHEET 10 OF 25
CS502
DRAWFORM REVISION: 10 MAY 2014



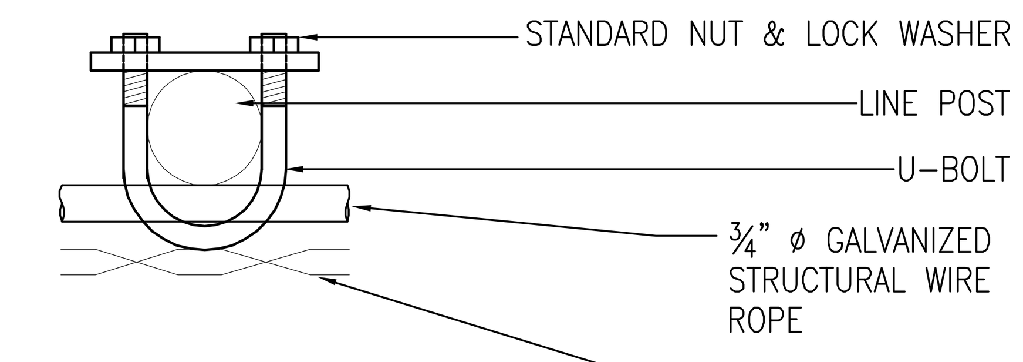
ELEVATION

SECTION B–B

CABLE ANCHORAGE @ PULL & ANCHOR POST

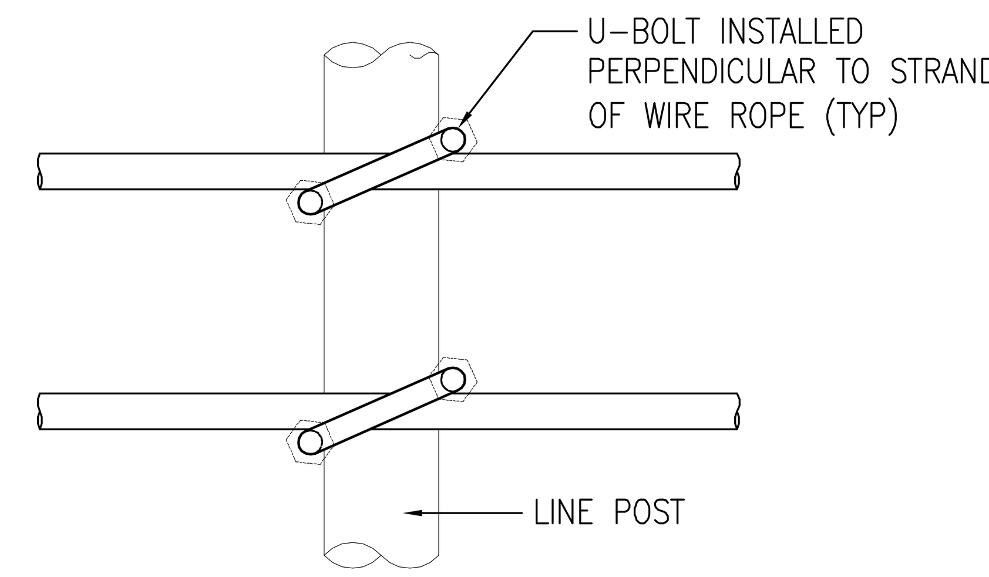
C1 CABLE ATTACHMENT AT PULL & ANCHOR POST

NOT TO SCALE



PLAN

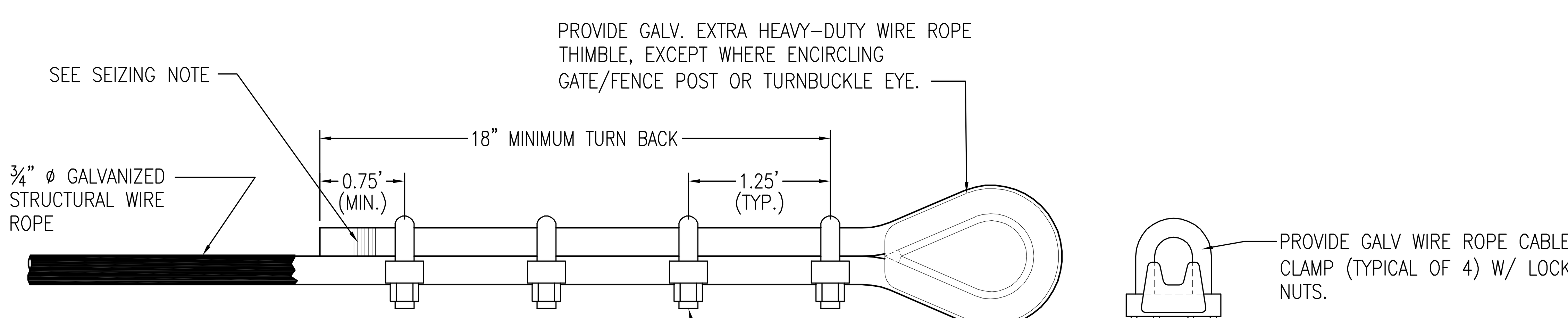
(* OUTSIDE OF CABLE IF INSTALLING NEW FENCE; INSIDE OF CABLE IF RETROFITTING EXIST FENCE)



ELEVATION

C3 CABLE ATTACHMENT AT LINE POST

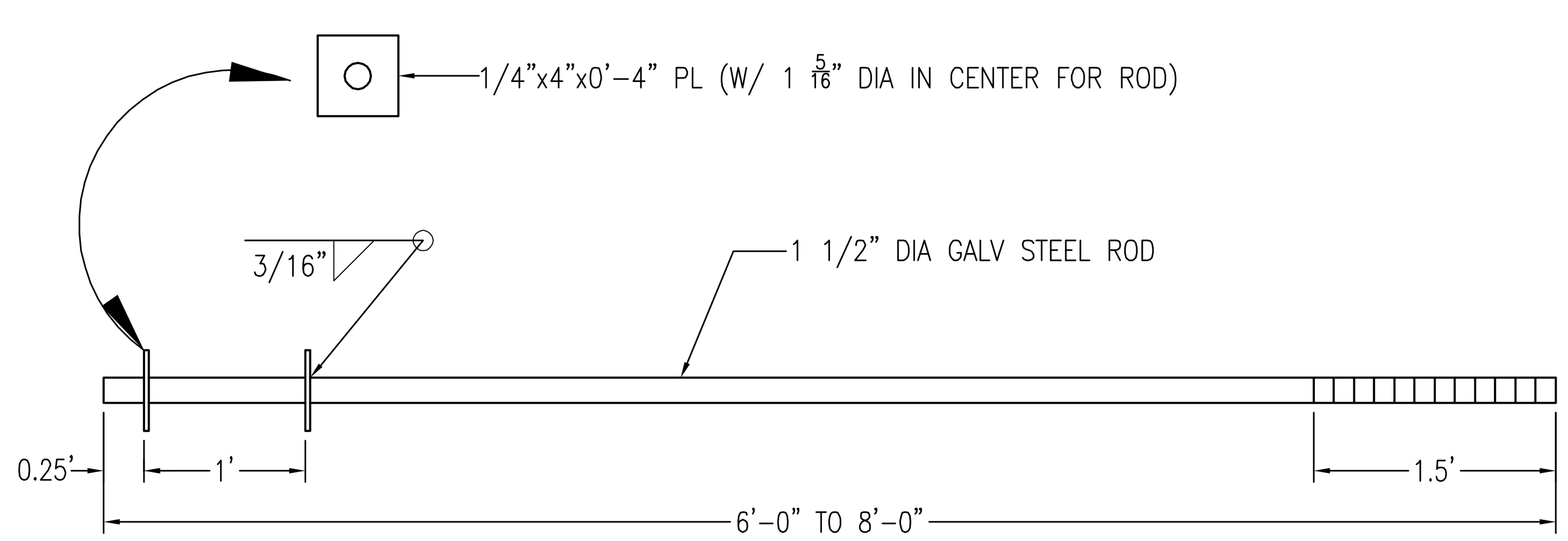
NOT TO SCALE



SEIZING NOTE: WIND SEIZING WIRE IN A TIGHT SPIRAL AROUND THE ROPE END TO A 1" LENGTH OF SEIZING. TWIST THE TWO ENDS OF THE SEIZING WIRE AT THE CENTER OF THE SEIZING LENGTH. USE ZINC COATED STEEL WIRE.

B1 TYPICAL TURNBUCKLE AND CLAMP DETAIL

NOT TO SCALE



A1 DEADMAN ANCHOR ROD

NOT TO SCALE

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NAVAL FACILITIES ENGINEERING COMMAND ~ MIDATLANTIC
NAVAL STATION – NORFOLK, VA
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PROVIDE UTILITIES FOR COMMUNICATION TOWER B4257

DETAILS

SCALE: AS NOTED
PROJECT NO.:
MAXIMO WORK ORDER NO. 6871159
NAVFAC DRAWING NO. 12798248
SHEET 11 OF 25

CS503

DRAWFORM REVISION: 10 MAY 2014

FILE NAME: P:\19012_Provide Utilities for Communication Tower, Cherry Point (PACE)\dwg\100.dwg LAYOUT NAME: 12798248 PLOTTED: Monday, September 16, 2019 – 10:18am

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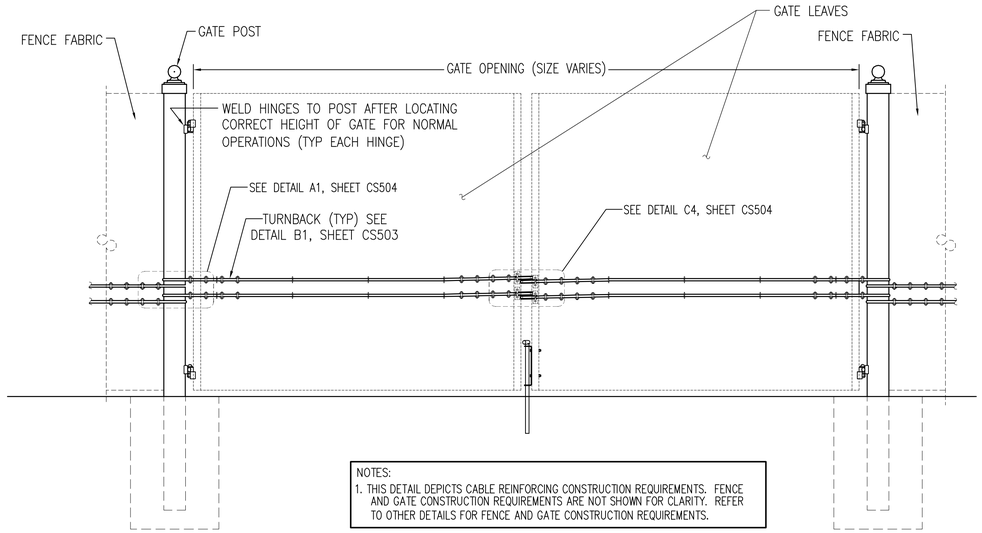

NOTES:
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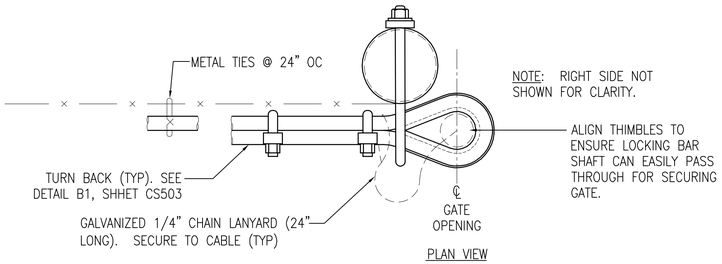
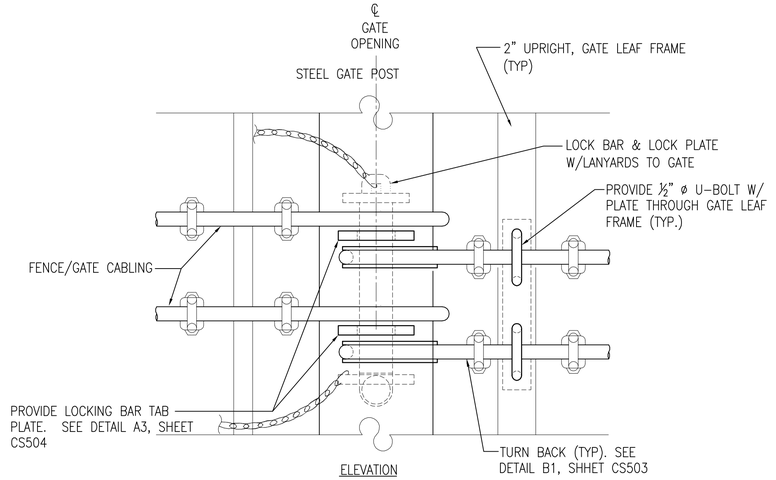
C1 CABLE REINFORCEMENT AT CHAIN LINK GATE

NOT TO SCALE



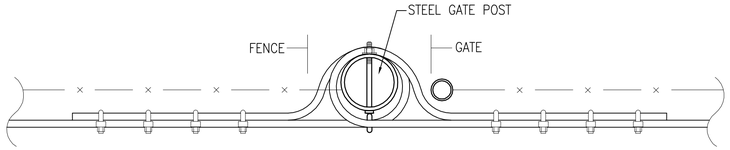
PLAN VIEW



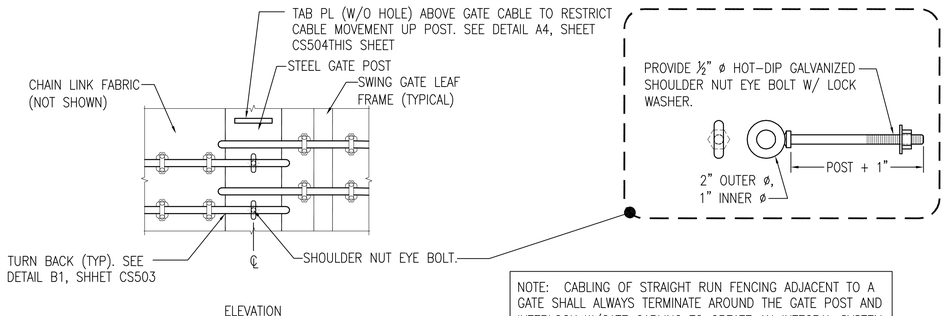
ELEVATION

C4 CABLE ATTACHMENT AT CHAIN LINK GATE END

NOT TO SCALE



PLAN VIEW

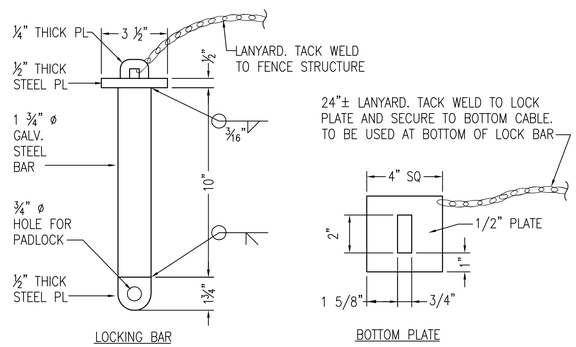


ELEVATION

NOTE: CABLING OF STRAIGHT RUN FENCING ADJACENT TO A GATE SHALL ALWAYS TERMINATE AROUND THE GATE POST AND INTERLOCK W/GATE CABLING TO CREATE AN INTEGRAL SYSTEM.

A1 CABLE ATTACHMENT AT CHAIN LINK GATE POST

NOT TO SCALE

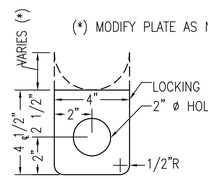


LOCKING BAR

BOTTOM PLATE

A3 LOCKING BAR AND PLATE

NOT TO SCALE



NOTE: POSTS THAT ARE TO RECEIVE LOCKING BAR TAB PLATES WILL NOT REQUIRE SHOULDER NUT EYE BOLTS, AS FENCE/GATE CABLING WILL REST ON PLATES TO KEEP FROM SAGGING OR SLIPPING.

A4 LOCKING BAR TAB PLATE

NOT TO SCALE

GRAPHIC SCALE:

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NAVAL STATION ~ NORFOLK, VA
PT. MARINE CORPS
U.S. MARINE CORPS AIR STATION CHERRY POINT, NORTH CAROLINA
PROVIDE UTILITIES FOR COMMUNICATION TOWER B4257
DETAILS

SCALE: AS NOTED
PROJECT NO.:
MAXIMO WORK ORDER NO. 6871159
NAVFAC DRAWING NO. 12798249
SHEET 12 OF 25
CS504
DRAWFORM REVISION: 10 MAY 2014

GENERAL NOTES:

GENERAL NOTES:

1. ALL WORK SHALL COMPLY WITH THE CODES LISTED BELOW AND IN THE SPECIFICATIONS.
2. THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH THE PROVISIONS OF THE INTERNATIONAL BUILDING CODE, 2015 EDITION, AS MODIFIED BY UFC 1-200-01, AND IN ACCORDANCE WITH UFC 3-301-01 "STRUCTURAL ENGINEERING", DATED 01 JUNE 2013, CHANGE 4, NOVEMBER 2018.
3. VERIFY ALL DRAWINGS FOR COORDINATION BETWEEN TRADES, LOCATE SLOTS, SLEEVES AND TRENCHES AS REQUIRED FOR MECHANICAL TRADES. PROVIDE AND INSTALL ANCHORS, INSERTS, HANGERS, ETC. AS REQUIRED FOR VARIOUS TRADES.
4. THE CONTRACTOR IS RESPONSIBLE FOR DIMENSIONS, ELEVATIONS, ETC., NECESSARY FOR THE PROPER CONSTRUCTION AND ALIGNMENT OF THE NEW PORTIONS OF THE STRUCTURE TO THE EXISTING STRUCTURE. MAKE ALL MEASUREMENTS NECESSARY PRIOR TO THE FABRICATION AND ERECTION OF STRUCTURAL MEMBERS.
5. SUBMIT SHOP DRAWINGS OF REINFORCEMENT DETAILS, STRUCTURAL STEEL, METAL BUILDING DRAWINGS AND CALCULATIONS ETC. FOR APPROVAL BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR MUST CHECK ALL DIMENSIONS AND ACCEPT FULL RESPONSIBILITY FOR DIMENSIONAL CORRECTNESS.
6. UNDER NO CIRCUMSTANCES IS REPRODUCTION OF CONTRACT DRAWINGS TO BE USED AS SHOP DRAWINGS.
7. PROVIDE ALL TEMPORARY GUYING AND BRACING REQUIRED TO ERECT AND HOLD THE STRUCTURE IN PROPER ALIGNMENT UNTIL ALL STRUCTURAL WORK AND CONNECTIONS HAVE BEEN COMPLETED.
8. IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONTRACTOR IS SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITION OF JOB SITE INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK.
9. THE DUTY OF THE CONTRACTING OFFICER IN CONDUCTING CONSTRUCTION REVIEW OF CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF ADEQUACY OF CONTRACTOR'S SAFETY MEASURES IN, ON, OR NEAR THE CONSTRUCTION SITE.
10. TYPICAL DETAILS AND GENERAL NOTES APPLY TO ALL PARTS OF THE JOB EXCEPT WHERE SPECIFICALLY DETAILED OR NOTED OTHERWISE.
11. STRUCTURAL DRAWINGS SHOW ONLY THE BASIC STRUCTURAL FRAMING. REFER TO ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR NON-STRUCTURAL ITEMS WHICH REQUIRE SPECIAL PROVISIONS DURING THE CONSTRUCTION OF THE STRUCTURAL FRAME.
12. INFORM THE CONTRACTING OFFICER IN WRITING OF ANY DEVIATION FROM THE CONTRACT DOCUMENTS. THE CONTRACTOR IS NOT RELIEVED OF THE RESPONSIBILITY OF SUCH DEVIATION BY THE CONTRACTING OFFICER REVIEW OF SHOP DRAWINGS, PRODUCT DATA, ETC. UNLESS THE CONTRACTOR HAS SPECIFICALLY INFORMED THE CONTRACTING OFFICER OF SUCH DEVIATION AT THE TIME OF SUBMISSION, AND THE CONTRACTING OFFICER HAS GIVEN WRITTEN APPROVAL TO THE SPECIFIC DEVIATION.
13. BEFORE ANY BURNING/WELDING/SOLDERING, THE CONTRACTOR MUST OBTAIN A PERMIT FROM THE MCAS CHERRY POINT FIRE DEPARTMENT (252-466-2241) AND NOTIFY THE CONTRACTING OFFICER. A FIRE WATCH MUST BE MAINTAINED BOTH DURING AND AT LEAST 30 MINUTES AFTER BURNING/WELDING/SOLDERING WORK.
14. THE CONTRACTOR IS RESPONSIBLE FOR CLEAN-UP OF THE SITE AT THE COMPLETION OF EACH WORK PERIOD, COMPLETING CLEAN-UP IN TIME TO NOT CAUSE INTERFERENCE WITH NORMAL FACILITY OPERATIONS. AFTER ALL CONSTRUCTION IS COMPLETE PER THIS DRAWING(S), THE CONTRACTOR MUST REMOVE AND DISPOSE OF ALL SCRAP MATERIALS AND THOROUGHLY CLEAN THE CONSTRUCTION ARE
15. THE CONTRACTOR IS RESPONSIBLE FOR, AND IS REQUIRED TO MAKE GOOD AT HIS OWN EXPENSE, ANY AND ALL DAMAGES TO ANY WORK OR MATERIALS IN PLACE ON THE PREMISES, OR INCLUDED IN THIS CONTRACT, DURING THE EXECUTION OF THIS CONTRACT.
16. MECHANICAL UNIT WEIGHTS AND LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE. CONTRACTOR SHALL VERIFY LOCATIONS AND WEIGHTS SHOWN AND REPORT DISCREPANCIES TO THE ARCHITECT.

STRUCTURAL STEEL NOTES:

1. STRUCTURAL STEEL MUST COMPLY WITH THE FOURTEENTH EDITION OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC 360-10) "STEEL CONSTRUCTION MANUAL" - LRFD.
2. STRUCTURAL STEEL MUST BE NEW, CLEAN, AND STRAIGHT, AND CONFORM TO THE FOLLOWING:
   A) STEEL W-SHAPES - ASTM A992, GRADE 50
   B) PIPE COLUMN - ASTM A53, STANDARD
   C) THREADED RODS - ASTM A36, GRADE 36
   D) HIGH STRENGTH BOLTS - ASTM A325
   E) ALL OTHER STEEL SHAPES - ASTM A36, UNLESS OTHERWISE NOTED.
3. WELDING MUST COMPLY WITH THE "STRUCTURAL WELDING CODE - STEEL" (AWS D1.1). WELD ELECTRODES MUST BE E70XX.UNLESS OTHERWISE NOTED, MINIMUM WELD SIZE MUST BE 3/16" CONTINUOUS FILLET WELDS
4. HIGH STRENGTH BOLTS MAY BE TIGHTENED TO SNUG TIGHT POSITION.
5. ALL STEEL MUST BE GALVANIZED IN ACCORDANCE TO ASTM A123 OR ASTM A153. GALVANIZE AFTER FABRICATION WHERE PRACTICAL. REPAIR DAMAGED GALVANIZED COATING USING ASTM A780 ZINC-RICH PAINT.

CAST IN PLACE CONCRETE NOTES:

1. CAST IN PLACE CONCRETE MUST COMPLY WITH THE AMERICAN CONCRETE INSTITUTE (ACI 318-14), COMMENTARY, (ACI 318R-14), AND THE SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS (ACI 301-16).
2. ALL CONCRETE MUST BE NORMAL WEIGHT AGGREGATE CONCRETE HAVING A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS AS FOLLOWS:
   A) CONCRETE DRILLED PIERS: 5,000 PSI
   B) CONCRETE SLABS & OTHERWISE NOTED: 5,000 PSI
   C) CONCRETE FOOTINGS: 3,000 PSI

   CONCRETE EXPOSED TO WEATHER MUST BE AIR ENTRAINED.
3. ALL REINFORCING STEEL MUST CONFORM TO THE FOLLOWING:
   A) REINFORCING BARS - ASTM A615, GRADE 60
4. HOLD ALL REINFORCING STEEL SECURELY IN PLACE TO PREVENT DISLOCATION DURING THE POURING OPERATION. SUPPORT FOUNDATION REINFORCING BARS ON HIGH CHAIRS AND BAR SPACERS OF SUITABLE DESIGN, OR CONCRETE BLOCKS HAVING THE SAME MINIMUM COMPRESSIVE STRENGTH OF THE CONCRETE SLAB.
5. REINFORCING STEEL MUST BE PROPERLY SUPPORTED PRIOR TO PLACING CONCRETE. HOOKING OF STEEL IS NOT PERMITTED.
6. DETAILING OF ALL CONCRETE STEEL REINFORCEMENT MUST BE IN ACCORDANCE WITH THE MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES (ACI-315).
7. DO NOT PLACE CONCRETE UNTIL ALL EMBEDDED WORK HAS BEEN INSTALLED, TESTED AND INSPECTED.
8. UNLESS OTHERWISE NOTED CONTINUOUS REINFORCING MUST BE LAPPED AS FOLLOWS:
   #7 AND GREATER: 56 BAR DIAMETERS
   #6 AND SMALLER: 34 BAR DIAMETERS
9. EXCEPT AS OTHERWISE SHOWN MINIMUM PROTECTION (CONCRETE COVER) FOR REINFORCING STEEL MUST BE AS FOLLOWS:
   CONCRETE SURFACES CAST AGAINST SOIL: 3"
   ALL OTHER CONCRETE SURFACES: 2"

POST INSTALLED ANCHORS:

1. POST-INSTALLED ANCHORS MUST COMPLY WITH THE AMERICAN CONCRETE INSTITUTE (ACI- 318-11). SUBMIT PRODUCT DATA DEMONSTRATING THAT THE PRODUCT IS CAPABLE OF ACHIEVING THE PERFORMANCE VALUES INDICATED IN THE DRAWINGS. PRODUCT SHALL HAVE AN ICC ESR SHOWING COMPLIANCE WITH THE RELEVANT BUILDING CODE.
2. PROVIDE ANCHORS OF SIZE AND SPACE AS INDICATED, WITH A MINIMUM SAFE WORKING ALLOWABLE CAPACITY AS LISTED BELOW. THE CAPACITIES ARE BASED ON COMBINED SHEAR AND TENSION LOADING:

   CONCRETE:
   ¾" ANCHOR: SHEAR = 4000 LB, TENSION = 8000 LB
3. ANCHOR CAPACITY IS DEPENDENT ON SPACING BETWEEN ADJACENT ANCHORS AND PROXIMITY OF ANCHORS TO EDGE OF CONCRETE. INSTALL ANCHORS IN ACCORDANCE WITH SPACING AND EDGE DISTANCED INDICATED IN THE DRAWINGS.
4. INSTALL ANCHORS PER THE MANUFACTURER INSTRUCTIONS, AS INCLUDED IN THE ANCHOR PACKAGING.
5. DRILL CORRECT HOLE SIZES FOR MECHANICAL ANCHORS WITH CARBIDE-TIPPED DRILL BITS MEETING THE DIAMETER REQUIREMENTS OF ANSI B212.15.
6. DO NOT DISTURB OR APPLY LOAD TO ADHESIVE ANCHORS PRIOR TO FULL CURE OF THE ADHESIVE.

FOUNDATION NOTES:

1. FOUNDATIONS FOR THIS STRUCTURE HAVE BEEN DESIGNED IN ACCORDANCE WITH THE RECOMMENDATIONS IN THE GEOTECHNICAL EXPLORATION REPORT, PREPARED BY DELTA OAKS GROUP AND DATED APRIL 19, 2018.
2. THE ENTIRE STRUCTURE MUST BE FOUNDED ON VERY WELL COMPACTED STRUCTURAL FILL OR UNDISTURBED SOIL WITH A DESIGN BEARING PRESSURE OF 1500 P.S.F.
3. DO NOT INSTALL FOUNDATION WORK UNTIL IT HAS BEEN COORDINATED WITH ADJACENT UNDERGROUND UTILITIES. FOOTINGS MUST BE SLEEVED OR LOWERED WHERE REQUIRED. DO NOT INSTALL UTILITIES UNDER ISOLATED COLUMN FOOTINGS. INSTALL UTILITIES PERPENDICULAR TO WALL FOOTINGS.

ENTERPRISE MOBILE LAND RADIO (ELMR) SHELTER SPECIFICATIONS:

1. THE BASIS OF DESIGN SHELTER STRUCTURE FOR THIS PROJECT IS A PRECAST REINFORCED CONCRETE SHELTER MANUFACTURED BY VFP INC., 1701 MIDLAND ROAD, SALEM, VA 24153.
2. THE INTENT OF THIS SOLICITATION IS TO ENSURE FULL AND OPEN COMPETITION. THE CONTRACTOR MAY PROVIDE AN ALTERNATE PRODUCT IF THAT PRODUCT CAN MATCH THE REQUIRED PERFORMANCE SPECIFICATIONS DESCRIBED BELOW AND ON MECHANICAL AND ELECTRICAL DRAWINGS, AND PROVIDE AN EQUIVALENT QUALITY PRODUCT.
3. DESIGN PRE-ENGINEERED PRECAST CONCRETE BUILDING SYSTEM IN ACCORDANCE WITH THE ACI 318-14, "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE." CONCRETE REINFORCING INSTITUTE, "MANUAL OF STANDARD PRACTICE", IBC 2015, AND ANSI/ASCE 7-10 "BUILDING CODE REQUIREMENT FOR MINIMUM DESIGN LOADS IN BUILDINGS AND OTHER STRUCTURES".
4. THE CONTRACTOR MUST SUBMIT SHOP DRAWINGS PREPARED BY A PROFESSIONAL ENGINEER FOR THE DESIGN OF THE PRECAST BUILDING SYSTEMS INCLUDING ROOF SLABS, WALLS, CONNECTIONS, AND ANCHORAGE CONNECTIONS AND REACTIONS APPLIED TO THE SUPPORTING STRUCTURE/FOUNDATION.
5. SHOP DRAWING APPROVAL MUST BE OBTAINED PRIOR TO FABRICATION OF ANY REINFORCING STEEL, FORMS, BUILDING COMPONENTS, OR PLACING ANY FOUNDATIONS.
6. PRECAST BUILDING ANCHORAGE LOCATIONS TO FOUNDATION HAVE NOT BEEN LOCATED. CONTRACTOR MUST COORDINATE LAYOUT AND DESIGN WITH PRECAST BUILDING MANUFACTURER BEFORE CONSTRUCTION.
7. THE CONTRACTOR MUST COORDINATE ALL EQUIPMENT TO BE HUNG FROM THE STRUCTURE WITH THE PRECAST BUILDING MANUFACTURER BEFORE CONSTRUCTION BEGINS.
8. THE SHELTER MUST BE A PRE-ENGINEERED PRECAST CONCRETE STRUCTURE WITH THE FOLLOWING PROPERTIES:
   a. SIZE NOMINAL 11'-6" WIDE (12'-0" WIDE AT ROOF OVERHANG) EXTERIOR X NOMINAL 15' LONG EXTERIOR X NOMINAL 9'-2" HIGH INTERIOR, ONE ROOM SHELTER
   b. STANDARD CONSTRUCTION IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.
   c. THE STRUCTURAL LOADING OF THE PROPOSED SHELTER IS AS FOLLOWS:
      c.1. 200 POUNDS PER SQUARE FOOT DISTRIBUTED FLOOR LOADING WHILE ON FOUNDATION
      c.2. 125 POUNDS PER SQUARE FOOT DISTRIBUTED FLOOR LOADING WHILE LIFTING
      c.3. 100 POUNDS PER SQUARE FOOT DISTRIBUTED ROOF LOAD
      c.4. WIND LOAD AS INDICATED IN DESIGN CRITERIA NOTES
      c.5. SEISMIC LOADS AS LISTED IN DESIGN CRITERIA NOTES
   d. EXPOSED AGGREGATE EXTERIOR FINISH
   e. THE PROPOSED SHELTER WALLS ARE CAPABLE OF STOPPING 30.06 RIFLE FIRE PER UL752 REQUIREMENTS.
   f. UNLESS OTHERWISE SPECIFIED, THE SHELTER DOOR IS NOT BULLET RESISTANT
   g. THE PROPOSED SHELTER WALLS WILL PROVIDE A TWO HOUR FIRE RATING
   h. THE WALLS AND CEILING WILL BE INSULATED TO R-11 WITH HARDBOARD INSULATION
   i. THE INTERIOR WALLS AND CEILING WILL BE SHEATHED WITH ¾" OSB BACKED WHITE HDPE BOARD
   j. LIGHT COLORED INDUSTRIAL GRADE VINYL TILE FLOOR COVERING
   k. ONE (1) 48" WIDE X 96" HIGH INSULATED STEEL EXTERIOR DOOR, WITH ALUMINUM CONTINUOUS TAMPER-PROOF HINGE, PASSAGE STYLE LEVER HANDLE, DEADBOLT LOCKSET AND FIBERGLASS WEATHER HOOD
   l. ONE (1) HYDRAULIC DOOR CLOSER

COMMUNICATIONS TOWER SCOPE OF WORK:

1. THE WORK INCLUDES THE ERECTION AND PAINTING OF AN EXISTING GOVERNMENT FURNISHED COMMUNICATIONS TOWER (INCLUDING ANCHOR ASSEMBLY, GUY WIRE, AND ATTACHMENTS) IN ACCORDANCE WITH THE TOWER MANUFACTURER'S INSTRUCTIONS.

DESIGN CRITERIA NOTES:

1. LOADS USED IN THE DESIGN OF THIS STRUCTURE ARE AS FOLLOWS:
2. BUILDING RISK CATEGORY: II
3. UNIFORM LIVE LOADS:
   SLAB ON GRADE 250 PSF
   ROOF 20 PSF
4. ROOF SNOW LOADS:
   GROUND SNOW LOAD Pg = 10 PSF
   SNOW EXPOSURE FACTOR Ce = 1.0
   SNOW LOAD IMPORTANCE FACTOR I =1.0
   THERMAL FACTOR Ct=1.0
   FLAT ROOF SNOW LOAD: Pf = 14 PSF
   RAIN ON SNOW SURCHARGE LOAD= 5 PSF
5. WIND LOADS:
   ULTIMATE WIND SPEED = 138 MPH
   NOMINAL WIND SPEED (ASD) = 107 MPH
   EXPOSURE CATEGORY (MAIN WINDFORCE-RESISTING SYSTEM): C
   EXPOSURE CATEGORY (COMPONENTS AND CLADDING): C
   INTERNAL PRESSURE COEFFICIENT: +/- 0.18 (ENCLOSED)

   COMPONENTS AND CLADDING: WIND PRESSURE TO BE USED FOR DESIGN OF EXTERIOR COMPONENTS AND CLADDING MATERIALS NOT SPECIFICALLY DESIGNED ON THESE DRAWINGS MUST BE DESIGN FOR A NET UPLIFT OF 25 PSF.
6. SEISMIC LOADS:
   IMPORTANCE FACTOR I = 1.0
   Ss = .12g
   S1 = .06g
   SOIL SITE CLASS D (PRESUMPTIVE)
   SEISMIC DESIGN CATEGORY B
6. TOWER FOUNDATIONS DESIGN LOADS: (PER TOWER DESIGNER)

   TOWER BASE REACTIONS:
   SHEAR: 2.0 KIPS
   GRAVITY: 245.0 KIPS

   GUY BASE REACTIONS:
   VERTICAL: -105.0 KIPS
   HORIZONTAL: 131.0 KIPS
   RESULTANT: 168.0 KIPS

ABBREVIATIONS:

CJ	CONSTRUCTION JOINT
CL	CENTER LINE
CLR	CLEAR
COLS	COLUMNS
CONC	CONCRETE
CONT	CONTINUOUS
DIA, ø	DIAMETER
DWG/DWGS	DRAWINGS
EA	EACH
EL, ELEV	ELEVATION
EQ, EQUIV	EQUAL, EQUIVALENT
EMBED	EMBEDED
EW	EACH WAY
EXIST	EXISTING
f'c	COMPRESSIVE STRESS
GALV	GALVANIZED
GFM	GOVERNMENT FURNISHED MATERIAL(S)
HORIZ	HORIZONTAL
JT	JOINT
KSI	KILOPOUNDS (KIPS) PER SQUARE INCH
L	ANGLE
MAX	MAXIMUM
MFR	MANUFACTURER
MIN	MINIMUM
#	NUMBER
NTS	NOT TO SCALE
OC	ON CENTER
PVMT	PAVEMENT
PEB	PRE-ENGINEERED METAL BUILDING
REINF	REINFORCE, -MENT
REQD	REQUIRED
SF	SQUARE FEET
SJ	SAWCUT JOINT
TYP	TYPICAL
TOC	TOP OF CONCRETE
UON	UNLESS OTHERWISE NOTED
W/	WITH

APPR	DATE	DESCRIPTION	SYM

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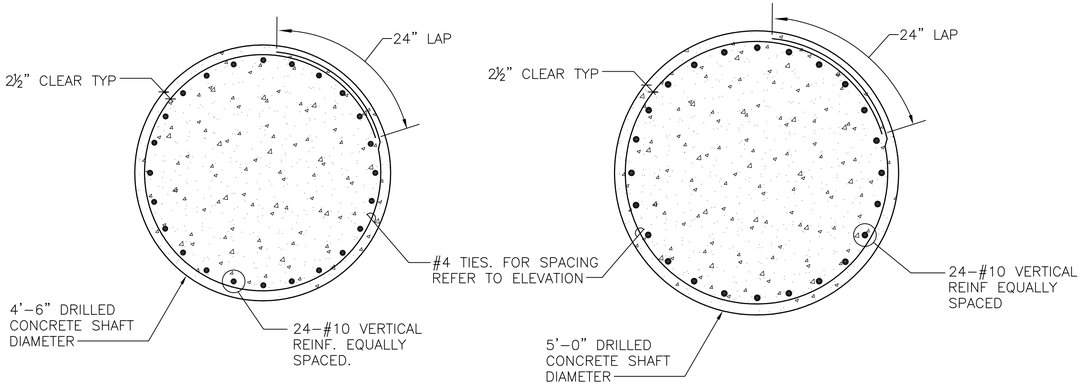
U.S. MARINE CORPS AIR STATION CHERRY POINT, NORTH CAROLINA
PROVIDE UTILITIES FOR COMMUNICATION TOWER B4257
GENERAL NOTES AND ABBREVIATIONS

SCALE:
PROJECT NO.:
MAXIMO WORK ORDER NO. 6871159
NAVFAC DRAWING NO. 12798250
SHEET 13 OF 25

S-001

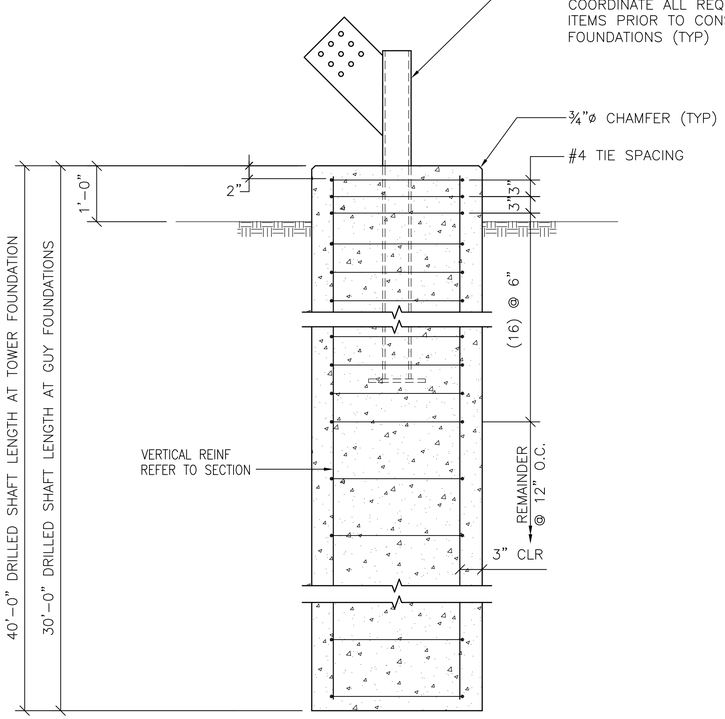
DRAWFORM REVISION: 10 MAY 2014



PLAN AT GUY FOUNDATIONS

PLAN AT TOWER FOUNDATION

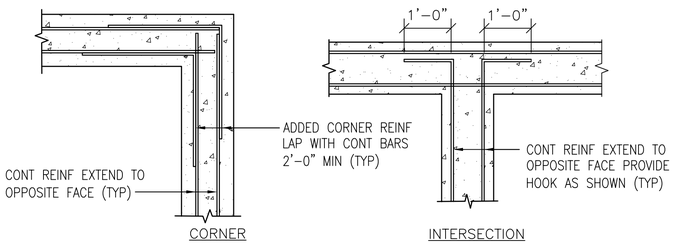
FOR ALL GROUNDING REQUIREMENTS AND DETAILS REFER TO ELECTRICAL DRAWINGS (TYP)



ELEVATION

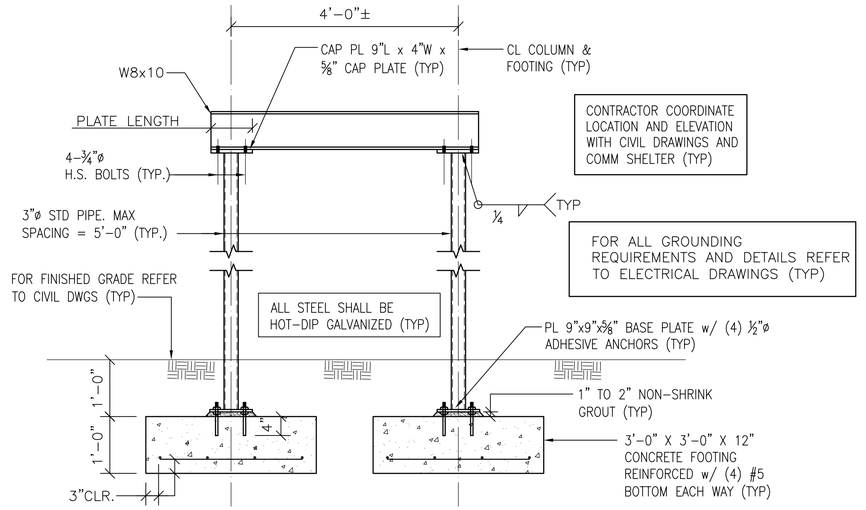
A1 TYPICAL TOWER SUPPORT FOUNDATION DETAILS

SCALE: NTS



C3 TYPICAL DETAIL SHOWING CONTINUOUS REINFORCING AT CORNERS AND INTERSECTIONS

SCALE: NTS



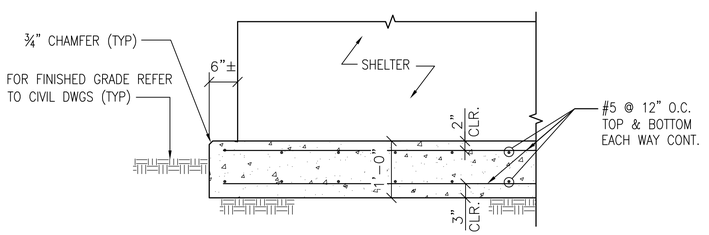
CONTRACTOR COORDINATE LOCATION AND ELEVATION WITH CIVIL DRAWINGS AND COMM SHELTER (TYP)

FOR ALL GROUNDING REQUIREMENTS AND DETAILS REFER TO ELECTRICAL DRAWINGS (TYP)

B3 TYPICAL ICE BRIDGE DETAIL

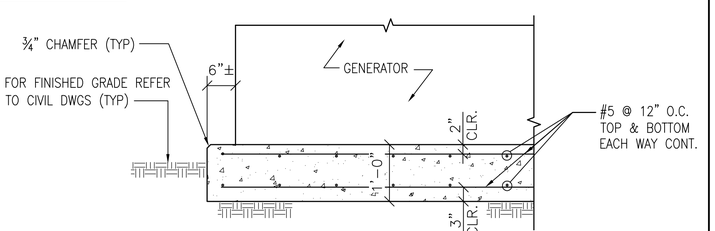
SCALE: NTS

FOR ALL GROUNDING REQUIREMENTS AND DETAILS REFER TO ELECTRICAL DRAWINGS (TYP)



A2 TYPICAL COMM SHELTER & TEMPORARY TRAILER FOUNDATION DETAIL

SCALE: NTS



A4 TYPICAL GENERATOR FOUNDATION DETAIL

SCALE: NTS

			APPR
			DATE
			DESCRIPTION
			SYM

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ACTIVITY

SATISFACTORY TO

DES	DRW	CHK

U.S. MARINE CORPS AIR STATION CHERRY POINT, NORTH CAROLINA

PROVIDE UTILITIES FOR COMMUNICATION TOWER B4257

TYPICAL DETAILS

SCALE: NONE

PROJECT NO.:

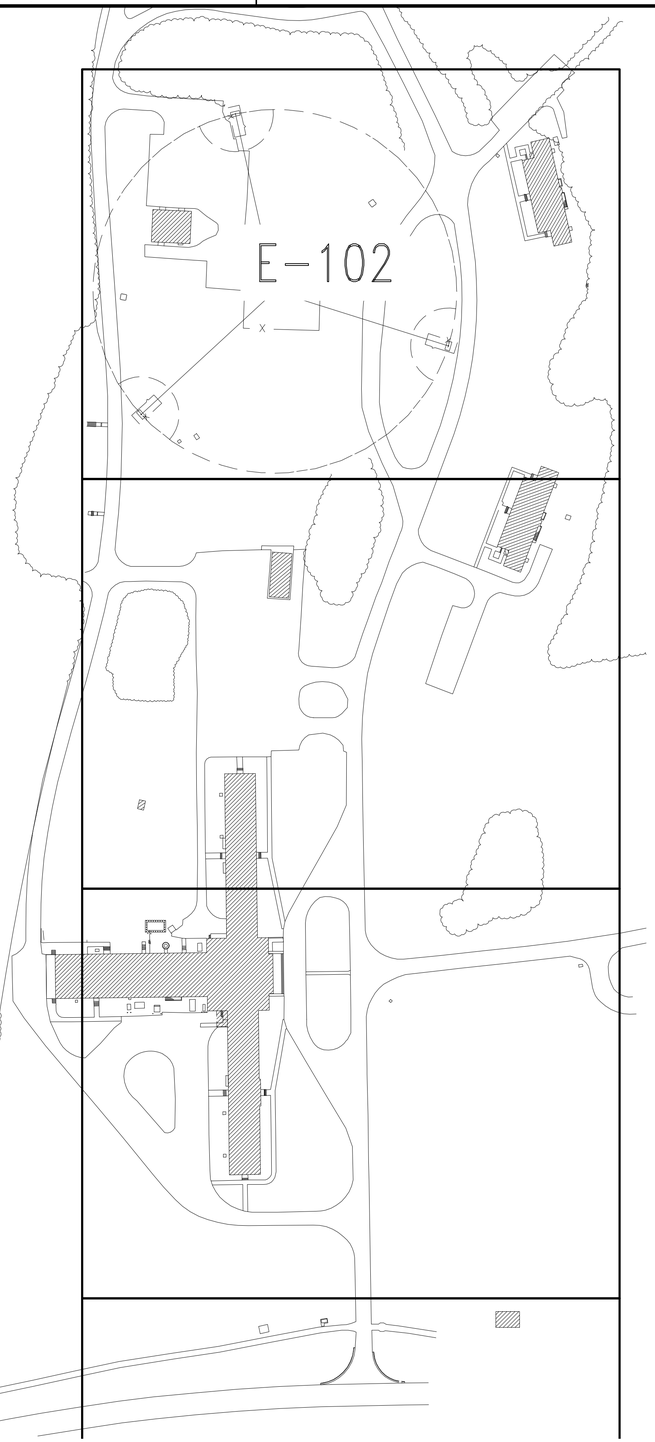
MAXIMO WORK ORDER NO. 6871159

NAVFAC DRAWING NO. 12798251

SHEET 14 OF 25

S–501

DRAWFORM REVISION: 10 MAY 2014



OVERAL ELECTRICAL SITE PLAN, GENERAL NOTES & LEGEND

SCALE: 1" = 100' - 0"

GENERAL ELECTRICAL NOTES

GENERAL: UNLESS SPECIFICALLY INDICATED OTHERWISE, ALL WORK SHOWN ON ELECTRICAL DRAWINGS IS NEW WORK TO BE PROVIDED UNDER THIS CONTRACT.

COORDINATION: COORDINATE AND COOPERATE WITH ALL TRADES ON THE PROJECT. THE CONTRACTOR SHALL REVIEW ALL CONTRACT DOCUMENTS INCLUDING CIVIL, AND STRUCTURAL DRAWINGS AND SPECIFICATIONS. CONTRACTOR SHALL COORDINATE AND ADJUST ACCORDINGLY AS DIRECTED BY THE CONTRACTING OFFICER.

AS-BUILT DRAWINGS: SECURE AN EXTRA SET OF ELECTRICAL DRAWINGS TO BE KEPT ON SITE AND MARK, DAILY, THE DRAWINGS IN RED AS THE PROJECT PROGRESSES IN ORDER TO KEEP AN ACCURATE RECORD OF ALL DEVIATIONS BETWEEN THE WORK SHOWN ON THE DRAWINGS AND THE WORK WHICH IS ACTUALLY INSTALLED. THESE MARKED DRAWINGS SHALL REFLECT ANY AND ALL CHANGES AND REVISIONS TO THE ORIGINAL DESIGN WHICH EXISTS IN THE COMPLETED WORK. DELIVER THE MARKED DRAWINGS TO THE ENGINEER AT PROJECT CLOSE-OUT.

TESTS: TEST ALL WIRING FOR CONTINUITY AND GROUNDS BEFORE CONNECTING ANY FIXTURES OR DEVICES. PERFORM INSULATION RESISTANCE TESTS ON ALL WIRING #6 OR LARGER TO ENSURE THAT ALL PORTIONS ARE FREE FROM SHORT-CIRCUITS AND GROUNDS.

INSPECTIONS: ARRANGE ALL NECESSARY INSPECTIONS. DELIVER ALL REQUIRED INSPECTION CERTIFICATES TO THE CONTRACTING OFFICER.

GROUNDING: PROVIDE GROUNDING IN ACCORDANCE WITH THE NEC FOR THE ENTIRE ELECTRICAL SYSTEM INCLUDING EQUIPMENT FRAMES CONDUITS, SWITCHES, CONTROLLERS, WIRE-WAYS, NEUTRAL CONDUCTORS, AND OTHER EQUIPMENT. PROVIDE A GROUNDING CONDUCTOR IN ALL POWER CONDUITS.

LABELS: PROVIDE LABELS FOR ALL PANELBOARDS, CABINETS, AND SAFETY SWITCHES. LABELS SHALL BE MACHINE ENGRAVED, LAMINATED PLASTIC, PERMANENTLY ATTACHED WITH SELF-TAPPING SCREWS OR RIVETS. DO NOT USE SELF-ADHESIVE LABELS. LABEL SHALL INDICATE EQUIPMENT DESIGNATION AND ASSOCIATED PANEL AND CIRCUIT THAT SERVES IT.

MOTOR COORDINATION: MOTORS, MOTOR STARTERS, CONTROLLERS, INTEGRAL DISCONNECT SWITCHES, AND CONTACTORS SHALL BE PROVIDED WITH THEIR RESPECTIVE PIECES OF EQUIPMENT BY THE EQUIPMENT SUPPLIER. COMMUNICATE WITH THE TRADES PROVIDING THE EQUIPMENT, VERIFYING ALL REQUIREMENTS, PROVIDE ALL ELECTRICAL CONNECTIONS REQUIRED THEREIN, AND INSTALL MOTOR STARTERS.

CONNECTION DETAILS: SECURE APPROVED SHOP DRAWINGS SHOWING WIRING DIAGRAMS, ROUGH-IN AND HOOK UP DETAILS FROM OTHER INVOLVED CONTRACTORS FOR EQUIPMENT WHICH MUST BE CONNECTED ELECTRICALLY.

LIGHTING CONTROL TESTING: UPON COMPLETION OF THE INSTALLATION OF ALL LIGHTING SYSTEMS AND CONTROL DEVICES, CONTRACTOR SHALL CONFIRM PROPER OPERATION OF ALL LIGHTING CONTROLS, AND DEMONSTRATE PROPER OPERATION TO THE CONTRACTING OFFICER.

CLEAN UP: ON PROJECT CLOSE-OUT CLEAN ALL ELECTRICAL DEVICES, LIGHTING FIXTURES, LENSES, AND REMOVE ALL PAINT SPATTERS FROM DEVICES, FIXTURES AND PLATES. REPAIR ALL INOPERATIVE LIGHTING FIXTURES.

OWNER STANDARDS: ALL WORK SHALL COMPLY WITH THE OWNER'S PUBLISHED STANDARDS WHICH ARE AVAILABLE DIRECTLY FROM THE OWNER.

ELECTRICAL LEGEND

POWER

- ▼ POLE MOUNTED TRANSFORMER, AS INDICATED ON PLANS
- ▽ EXISTING POLE MOUNTED TRANSFORMER, AS INDICATED ON PLANS
- ——UE—— UNDERGROUND SECONDARY, CONCRETE ENCASED, TOP 24" BFG, UON.
- - - E7.2 - - - EXISTING 7.2KV, 1 PHASE, 2 WIRE OVERHEAD CIRCUIT TO REMAIN.
- - - SEC - - - EXISTING OVERHEAD SECONDARY CONDUCTOR 240/120V TRIPLEX UON.
- ——GR—— UNDERGROUND GROUND RING CONDUCTOR, TOP 24" BFG, UON.
- ◉ HANDHOLE (UG-6, TYPE 5, UON). SEE DETAIL "UG-6" ON SHEET E-502.
- ● EXISTING UTILITY POLE
- ⊙ GROUND ROD

GENERAL

- [1] NEW WORK NOTE SYMBOL

ABBREVIATIONS

A	AMPERE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AIC	AMPERE INTERRUPTING CAPACITY
ATS	AUTOMATIC TRANSFER SWITCH
BFG	BELOW FINISHED GRADE
C	CONDUIT
CKT	CIRCUIT
CB	CIRCUIT BREAKER
EC	EMPTY CONDUIT
ECB	ENCLOSED CIRCUIT BREAKER
ELMR	ENTERPRISE LAND MOBILE RADIO
ETR	EXISTING TO REMAIN
FLA	FULL LOAD AMPS
GFI	GROUND FAULT INTERRUPTER
GFCI	GOVERNMENT FURNISHED, CONTRACTOR INSTALLED
GND	GROUND
KAIC	THOUSAND AMPERE INTERRUPTING CAPACITY
KVA	KILO-VOLT-AMPERES
KW	KILO-WATTS
LTG	LIGHTING
MCA	MINIMUM CIRCUIT AMPS
MCB	MAIN CIRCUIT BREAKER
MFR	MANUFACTURER
MLO	MAIN LUGS ONLY
MTD	MOUNTED
NEC	NATIONAL ELECTRICAL CODE
NF	NON-FUSED
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OC	ON CENTER
P	POLE
PF	POWER FACTOR
PNL	PANEL
Ø	PHASE
PRI	PRIMARY
PVC	POLYVINYL CHLORIDE
SEC	SECONDARY
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
V	VOLT
W	WATTS/WIRE
WP	WEATHERPROOF

COMMUNICATION TOWER SCOPE OF WORK:

THE WORK INCLUDES THE ERECTION AND PAINTING OF AN EXISTING GOVERNMENT FURNISHED COMMUNICATIONS TOWER (INCLUDING ANCHOR ASSEMBLY, GUY WIRE, AND ATTACHMENTS) IN ACCORDANCE WITH THE TOWER MANUFACTURER'S INSTRUCTIONS. SEE PROJECT MANUAL FOR COMMUNICATIONS TOWER SPECIFICATIONS. THE WORK ALSO INCLUDES PROVIDING TWO TRANSMIT ANTENNAS AND ONE RECEIVE ANTENNA ON THE COMMUNICATIONS TOWER, PROVIDING AN ENTERPRISE LAND MOBILE RADIO (ELMR) SHELTER AND ALL ASSOCIATED EQUIPMENT, NEW TELECOMMUNICATIONS DUCTBANK (OUTSIDE PLANT RACEWAY, MANHOLE, INFRASTRUCTURE, AND CABLING), ELECTRICAL SERVICE TO THE ELMR SHELTER AND INCIDENTAL RELATED WORK.

GRAPHIC SCALE:

1"=100' 0' 100' 200' 300' 400'

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DATE	
DESCRIPTION	
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#19051 SEAL

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 046553 ENGINEER JAMES E. BARCLEY JR.

A/E INFO

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO
DES KPM | DRW ADR | CHK JEB

U.S. MARINE CORPS AIR STATION CHERRY POINT, NORTH CAROLINA

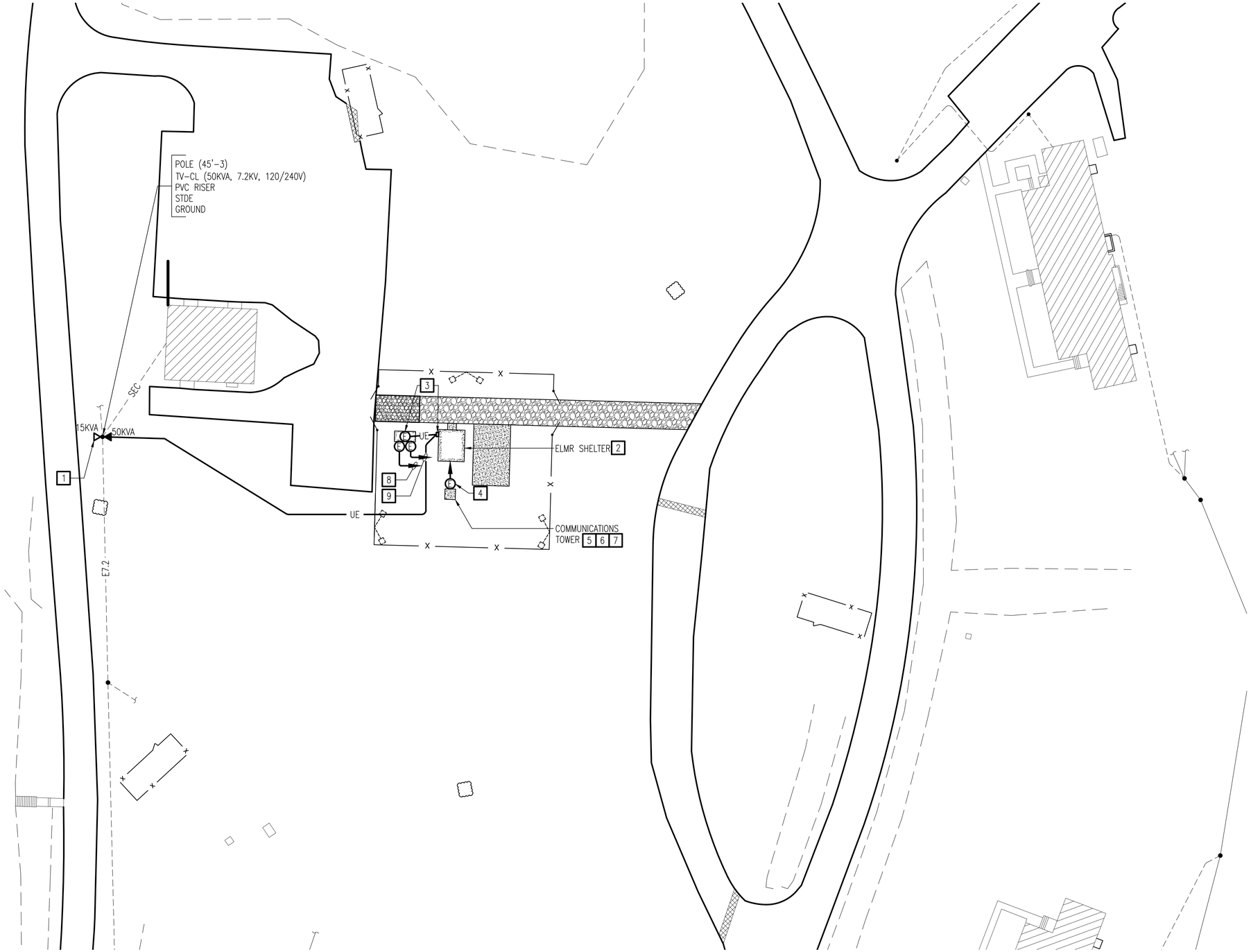
PROVIDE UTILITIES FOR COMMUNICATION TOWER B4257

OVERAL ELECTRICAL SITE PLAN, GENERAL NOTES & LEGEND

SCALE: AS NOTED
PROJECT NO.:
MAXIMO WORK ORDER NO. 6871159
NAVFAC DRAWING NO. 12798252
SHEET 15 OF 25

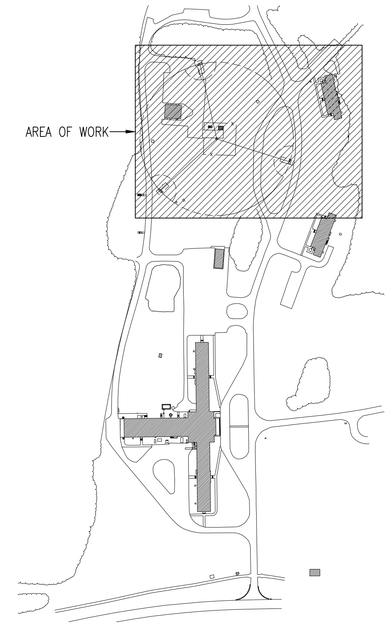
E-101

DRAWFORM REVISION: 10 MAY 2014



NOTES THIS SHEET

1. REMOVE EXISTING 15KVA POLE MOUNTED TRANSFORMER. RETAIN EXISTING SECONDARY CONNECTIONS FROM POLE MOUNTED SITE LIGHT AND EXISTING OVERHEAD BUILDING CONNECTION.
2. PROVIDE AND INSTALL ELMR. REFER TO SHEET E-503 FOR ELMR DETAILS.
3. INSTALL GENERATOR AND ATS PROVIDED WITH ELMR. REFER TO "POWER RISER DIAGRAM" ON SHEET E-502 AND SHEET E-503 FOR DETAILS AND SPECIFICATIONS.
4. EXISTING TOWER LIGHTS. CONNECT TO SPARE 120V, 20A CIRCUIT BREAKER IN ELMR PANELBOARD. COORDINATE CONNECTION DETAILS WITH EXISTING TOWER.
5. PROVIDE TOWER GROUNDING PER MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS. CONNECT TOWER GROUNDING WITH SYSTEM GROUNDING AT SERVICE ENTRANCE. REFER TO GROUND RISER DIAGRAM ON SHEET E-502.
6. TOWER MUST BE PAINTED IN ACCORDANCE WITH FCC AND FAA TOWER MARKING REQUIREMENTS 47 CFR PART 17 AND AC 70/7460-1-OBSTRUCTION MARKING AND LIGHTING.
7. PROVIDE (3) ANTENNAS MOUNTED TO TOWER. REFER TO SHEET E-503 FOR DETAILS AND SPECIFICATIONS.
8. BATTERY CHARGER, 120V. CONNECT TO 20A-1P SPARE CIRCUIT BREAKER IN ELMR PANELBOARD.
9. WATER JACKET HEATER, 240V. CONNECT TO 20-2P SPARE CIRCUIT BREAKER IN ELMR PANELBOARD.



KEYPLAN
NO SCALE

ELECTRICAL SITE PLAN
SCALE: 1" = 30' - 0"

GRAPHIC SCALE:
1" = 30'-0" 30' 15' 0' 30' 60' 90'

APPR	
DATE	
DESCRIPTION	
STM	

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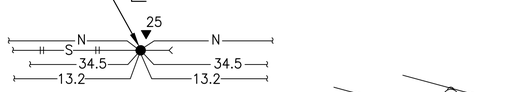
ELECTRICAL SITE PLAN

SCALE: AS NOTED
PROJECT NO.:
MAXIMO WORK ORDER NO.
6871159
NAVFAC DRAWING NO.
12798253
SHEET 16 OF 25

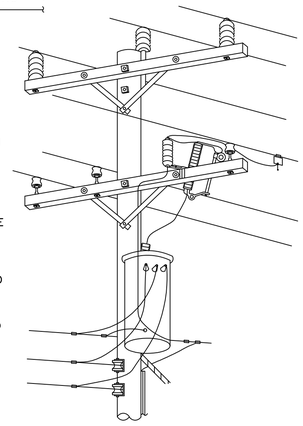
E-102

DRAWFORM REVISION: 10 MAY 2014

POLE # ___ (45'-3)
X-FB, 35FR3
X-FB, 15F3
TF (25KVA, 13.2 GRD. Y/7.6 KV – 120/240 V.)
S1, SDE2
GUY (5/16")
ANCHOR (10" SCREW) (12' GUY LEAD)
GROUND



PLAN VIEW



NOTES

1. THE SYMBOLS LISTED ABOVE INCLUDE MATERIALS (DESCRIBED BY OVERHEAD SKETCHES) WHICH ARE GRAPHICALLY ILLUSTRATED BY THIS PICTURE. SEE SKETCH OH-1.3A FOR EXPLANATORY NOTES.
2. EACH SKETCH CONTAINS MATERIAL ITEMS WHICH COMPRISE A PART OF EACH INDIVIDUAL SYMBOL REFERENCED BY THAT SKETCH, THESE ITEMS ARE INDICATED BY CIRCLED NUMERALS WHICH ARE IDENTIFIED BY SKETCHES OH-1.5 AND OH-1.5A.
3. SPACING REQUIREMENTS RELATED TO INDIVIDUAL COMPONENTS OF A SYMBOL ARE INDICATED ON THE APPROPRIATE SKETCH. VERTICAL SPACING REQUIREMENTS BETWEEN CIRCUITS AND/OR SYSTEMS ARE INDICATED ON SKETCH OH-1.4. ALL OTHER SEPARATIONS BETWEEN CIRCUITS, EQUIPMENT, ETC., SHALL CONFORM TO THE NATIONAL ELECTRICAL SAFETY CODE, IEEE C2.

METHOD OF SHOWING SYMBOLS

SKETCH DATE	JUNE 2002	STYLE	OH-1.3

POLE LINE MATERIAL LIST

1. FLAT STEEL BRACE (TWO PIECES)
2. MACHINE BOLT, 3/8" X LENGTH NEEDED WITH WASHER, NUT AND LOCKWASHER
3. 8' WOOD CROSSARM WITH CROSS SECTION DIMENSIONS OF 3 1/2" X 4 1/2"
4. MACHINE BOLT, 5/8" X LENGTH NEEDED WITH WASHER, NUT AND LOCKWASHER
5. TIMBER CONNECTOR
6. LAGSCREW, 1/2" X 4"
7. ANGLE STEEL BRACE (TWO PIECES)
8. MACHINE BOLT, 1/2" X LENGTH NEEDED, WITH WASHER, NUT & LOCKWASHER
9. DEADEND BOX
10. STEEL PIN
11. PIN INSULATOR
12. GRID GAIN, USED ONLY WHEN THERE IS NO POLE GAIN
13. ANGLE STEEL BRACE (ONE PIECE)
14. 10' WOOD CROSSARM WITH CROSS SECTION DIMENSIONS OF 3 1/2" X 4 1/2"
15. 5/8" EYE NUT
16. 5/8" EYE BOLT, LENGTH AS NEEDED, WITH WASHER, NUT & LOCKWASHER
17. EXTENSION LINK
18. BELL TYPE SUSPENSION INSULATOR WITH CONNECTING HARDWARE
19. STRAIN CLAMP
20. STEEL ANGLE PIN
21. CLUSTER MOUNTING BRACKET, STEEL
22. TRANSFORMER GROUNDING CONNECTION
23. STIRRUP
24. SECONDARY LEAD SUPPORT BRACKET
25. ADAPTER PLATE FOR CLUSTER MOUNTING
26. CLEVIS BRACKET FOR SPOOL INSULATOR
27. SPOOL INSULATOR
28. U BOLT CLAMP
29. PREFORMED GUY GRIP
30. GUY HOOK
31. GUY STRAIN INSULATOR
32. GUY WIRE, SIZE AS SPECIFIED
33. #4 WP CU. SOFT DRAWN GROUND WIRE
34. GROUND CLAMP
35. CONDUIT COUPLING
36. CONDUIT BEND
37. INSULATED BUSHING
38. PERFORATED STRAPPING, 1-1/2" WIDE
39. HOT LINE CLAMP
40. FUSED CUTOUT, AS SPECIFIED
41. SURGE ARRESTER, AS SPECIFIED
42. POLE TOP PIN (RIDGE PIN) – 24 INCHES LONG
43. CROSSARM ANGLE PIN
44. ANGLE POLE TOP PIN
45. WEATHERPROOF SOFT DRAWN WIRE-SIZE
    (a) TO MATCH OR EXCEED AMPACITY OF CONNECTING CABLE, OR
    (b) AT 125% OF TRANSFORMER FULL LOAD CURRENT, BUT NOT LESS THAN NO. 4 AWG

POLE LINE MATERIAL LIST

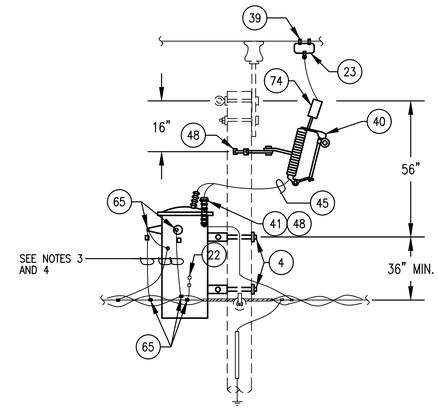
SKETCH DATE	JUNE 2002	STYLE	OH-1.5

POLE LINE MATERIAL LIST

46. TRI-MOUNT BRACKET
47. TERMINATOR
48. MOUNTING BRACKET
49. CABLE GRIP HANGER
50. HOSE CLAMP
51. STUD, 3/4" X 1-3/4"
52. LINE POST INSULATOR
53. TRIPLE INSULATOR BRACKET
54. ANGLE CLAMP
55. INSULATOR, LINE POST CLAMP
56. 4' CROSSARM
57. CROSSARM GAIN BRACKET
58. PULLEY BRACKET
59. WEDGE CLAMP
60. MIDSPAN SERVICE CLAMP
61. STUD, 7"
62. SADDLE, ANGLE
63. SADDLE CROSSARM
64. FITTING, POLE TOP
65. CONNECTOR
66. SUSPENSION CLAMP
67. TIE, SERVICE CABLE
68. 54" FIBERGLASS STRAIN INSULATOR
69. PVC RISER SHIELD
70. PVC EXTENSION SHIELD
71. PVC BACK PLATE
72. 8' WOOD CROSSARM WITH CROSS SECTION DIMENSIONS OF 4 3/4" X 5 3/4"
73. 10' WOOD CROSSARM WITH CROSS SECTION DIMENSIONS OF 4 3/4" X 5 3/4"
74. BACK-UP CURRENT LIMITING FUSE

POLE LINE MATERIAL LIST

SKETCH DATE	JUNE 2002	STYLE	OH-1.5A



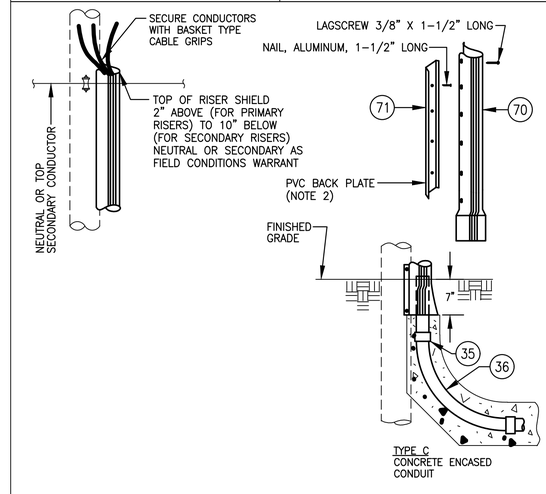
SIDE ELEVATION

NOTES

1. DRAWING REPRESENTS TV-CL. OMIT ITEM (74) FOR SYMBOL TV.
2. MODIFY CONNECTIONS AS REQUIRED TO ACCOMODATE TRANSFORMERS WITH PRIMARY BUSHING ARRANGEMENTS OTHER THAN SHOWN.
3. WHEN TRANSFORMER SECONDARY LEADS CONNECT TO OPEN WIRE OR TRIPLEX SECONDARY, CONDUCTOR SHALL HAVE 600 VOLT INSULATION RATING AND MINIMUM AMPACITY OF 125% OF TRANSFORMER FULL LOAD SECONDARY CURRENT.
4. WHEN TRANSFORMER PROVIDES UNDERGROUND SERVICE, SIZE SECONDARY OR SERVICE CONDUCTORS AS INDICATED.

TV-CL, TV (0-15KV)

SKETCH DATE	JUNE 2002	STYLE	OH-28



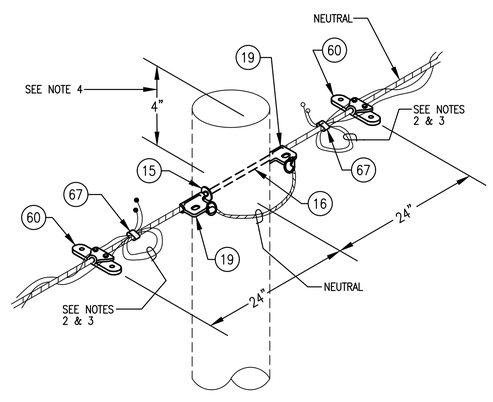
NOTES

1. INSTALL RISER ON SIDE OR QUARTER OF POLE AWAY FROM CLIMBING SURFACE.
2. INSTALL BACK PLATE WITH THE RISER SHIELD FROM THE BOTTOM OF THE POLE.

CONDUIT LOCATION

PVC RISER SHIELD
(SIZE & TYPE AS INDICATED)

SKETCH DATE	JUNE 2002	STYLE	OH-34

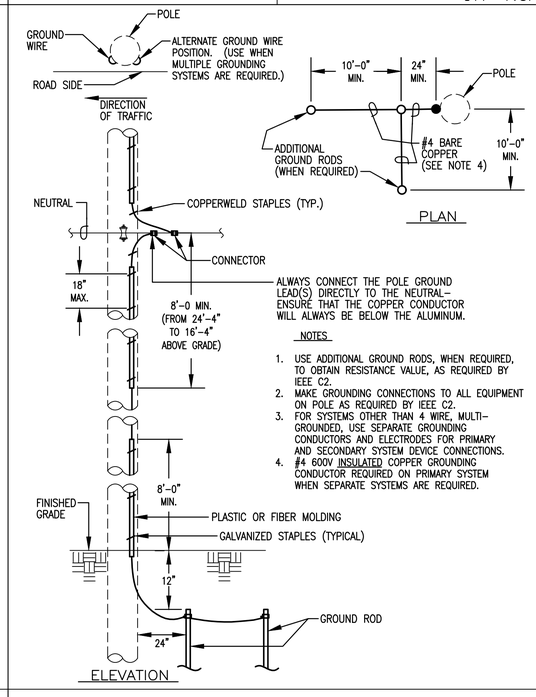


NOTES

1. DRAWING REPRESENTS A STDDE OR SQDDE. OMIT ONE EACH OF ITEMS (19) (60) AND (67) FOR USE WITH STDE OR SQDE.
2. CABLE MAY EXTEND ON THROUGH WITHOUT BEING CUT, WHEN REQUIRED.
3. COIL CONDUCTORS SO THEY WILL BE LONG ENOUGH TO BE JOINED AND SPLICED TOGETHER.
4. WHEN USED AT TOP OF POLE, INSTALL MACHINE BOLT 4" DOWN FROM TOP OF POLE.

STDDE, SQDDE, STDE, SQDE
(0-600V)

SKETCH DATE	JUNE 2002	STYLE	OH-40



NOTES

1. USE ADDITIONAL GROUND RODS, WHEN REQUIRED, TO OBTAIN RESISTANCE VALUE, AS REQUIRED BY IEEE C2.
2. MAKE GROUNDING CONNECTIONS TO ALL EQUIPMENT ON POLE AS REQUIRED BY IEEE C2.
3. FOR SYSTEMS OTHER THAN 4 WIRE, MULTI-GROUNDED, USE SEPARATE GROUNDING CONDUCTORS AND ELECTRODES FOR PRIMARY AND SECONDARY SYSTEM DEVICE CONNECTIONS.
4. #4 600V INSULATED COPPER GROUNDING CONDUCTOR REQUIRED ON PRIMARY SYSTEM WHEN SEPARATE SYSTEMS ARE REQUIRED.

GROUND

SKETCH DATE	JUNE 2002	STYLE	OH-41

NO.	DESCRIPTION	DATE	APPR

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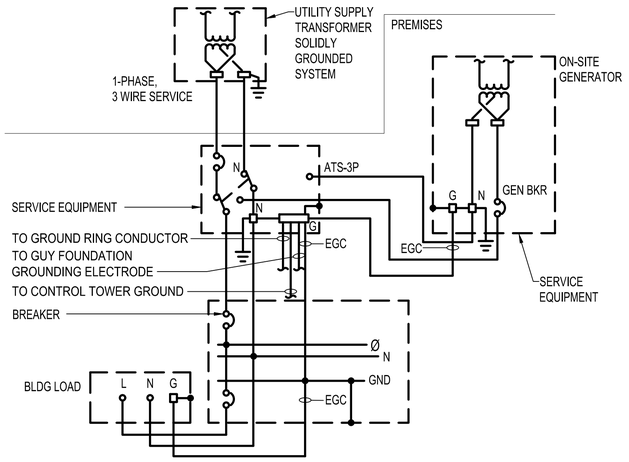
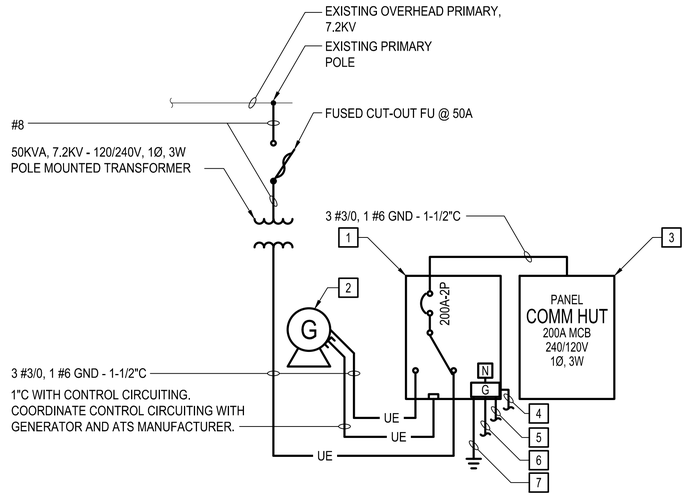
CHERRY POINT, NORTH CAROLINA
PROVIDE UTILITIES FOR COMMUNICATION TOWER B4257
ELECTRICAL DETAILS

SCALE: AS NOTED
PROJECT NO.:
MAXIMO WORK ORDER NO.
6871159
NAVFAC DRAWING NO.
12798254
SHEET 17 OF 25
E-501
DRAWFORM REVISION: 10 MAY 2014



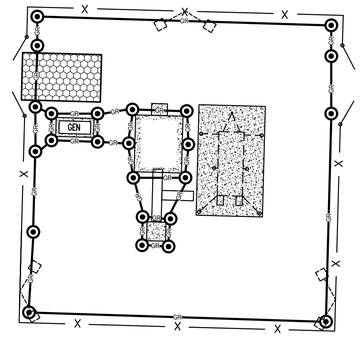
GROUND RISER DIAGRAM

NO SCALE



POWER RISER DIAGRAM

NO SCALE

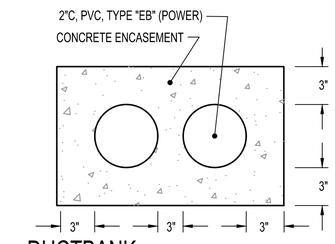


NOTES:

1. A GROUND ROD MUST BE PROVIDED AT EACH FENCE POST. GROUND ROD SHALL BE CONNECTED TO GROUND RING AND SHALL BE BONDED TO FENCE POST.
2. GROUND RING SHALL BE BONDED TO GROUNDING SYSTEM AT SERVICE ENTRANCE EQUIPMENT. REFER TO GROUND RISER DIAGRAM THIS SHEET.
3. ALL PIECES OF THE ICE BRIDGE SHALL BE CONNECTED TO THE GROUND RING. PROVIDE GROUND JUMPERS AS REQUIRED TO ENSURE ALL PIECES ARE INTERCONNECTED.

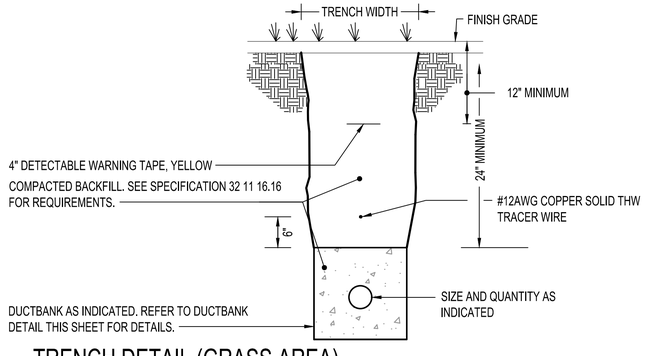
ENLARGED GROUND RING PLAN

1/2" = 1'-0"



DUCTBANK

NO SCALE

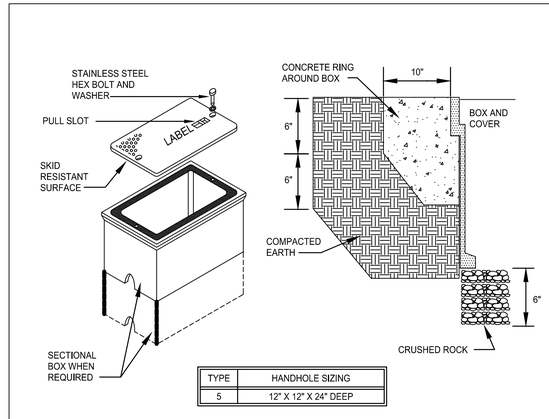


TRENCH DETAIL (GRASS AREA)

NO SCALE

NOTES THIS SHEET

1. ATS PROVIDED WITH ELMR. REFER TO SHEET E-503 FOR SPECIFICATIONS AND DETAILS.
2. GENERATOR PROVIDED WITH ELMR. REFER TO SHEET E-503 FOR SPECIFICATIONS AND DETAILS.
3. PANELBOARD PROVIDED WITH ELMR. REFER TO SHEET E-503 FOR SPECIFICATIONS AND DETAILS.
4. #4 GND TO CONCRETE ENCASED ELECTRODE AT TOWER GUY CONCRETE FOUNDATION, TYP OF (3). REFER TO CIVIL DRAWINGS FOR LOCATIONS AND STRUCTURAL DRAWINGS FOR DETAILS. PROVIDE AN ADDITIONAL GROUND ROD AT EACH GUY FOUNDATION WITH #4 GND CONNECTED TO GUY FOUNDATION CONCRETE ENCASED ELECTRODE. PROVIDE #4 GND TO CONNECT TOWER GUY TO CONCRETE ENCASED ELECTRODE.
5. #4 GND TO CONTROL TOWER GROUND
6. #4 GND TO GROUNDING RING
7. #4 GND TO CONCRETE ENCASED ELECTRODE



TYPE	HANDHOLE SIZING
5	12" X 12" X 24" DEEP

HANDHOLE REQUIREMENTS

1. HOUSING SHALL BE A POLYMER CONCRETE REINFORCED WITH A HEAVY WEAVE FIBERGLASS REINFORCING WITH COMPRESSIVE STRENGTH OF NO LESS THAN 10,000 PSI.
2. COVER AND BOX SHALL WITHSTAND A SERVICE LOAD OF NO LESS THAN 15,000 LBS OVER A 10" x 10" AREA.
3. PROVIDE STAINLESS STEEL BOLTS AND INSERTS.
4. PROVIDE WITH (2) 2 1/2" MOUSEHOLES.
5. PROVIDE LABEL "ELECTRICAL" FOR POWER HANDHOLES OR "TELEPHONE" FOR TELEPHONE HANDHOLES, OR AS INDICATED.

STANDARD ELECTRICAL HANDHOLE (NONTRAFFIC)
(COMPOSITE/FIBERGLASS) TYPES 5, 6, 7, 8 & 9

SKETCH DATE	JUNE 2002	STYLE	UG-6

APPR	DATE	DESCRIPTION	STM

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FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO

DES: XXX | DRW: XXX | CHK: XXX

U.S. MARINE CORPS AIR STATION CHERRY POINT, NORTH CAROLINA

PROVIDE UTILITIES FOR COMMUNICATION TOWER B4257

ELECTRICAL DETAILS

SCALE: AS NOTED

PROJECT NO.:

MAXIMO WORK ORDER NO.
6871159

NAVFAC DRAWING NO.
12798255

SHEET 18 OF 25

E-502

DRAWFORM REVISION: 10 MAY 2014

ENTERPRISE LAND MOBILE RADIO (ELMR) SHELTER SPECIFICATIONS:

1. THE BASIS OF DESIGN SHELTER STRUCTURE FOR THIS PROJECT IS A PRECAST REINFORCED CONCRETE SHELTER MANUFACTURED BY VFP INC., 1701 MIDLAND ROAD, SALEM, VA 24153.

2. THE INTENT OF THIS SOLICITATION IS TO ENSURE FULL AND OPEN COMPETITION. THE CONTRACTOR MAY PROVIDE AN ALTERNATE PRODUCT IF THAT PRODUCT CAN MATCH THE REQUIRED PERFORMANCE SPECIFICATIONS DESCRIBED BELOW AND ON MECHANICAL AND ELECTRICAL DRAWINGS, AND PROVIDE AN EQUIVALENT QUALITY PRODUCT.

POWER DISTRUBUTION

- ONE (1) MOV ONLY LIGHTNING ARRESTOR; GE MODEL TLE120S050WM.
- ONE (1) 200 AMP, 10,000 AIC, 120/240 VAC, SINGLE PHASE, 60 HZ, 42 SPACE MAIN BREAKER, BOLT-IN UTILITY POWER DISTRIBUTION PANEL, IN A NEMA-1 SURFACE MOUNT ENCLOSURE.
- CIRCUIT BREAKERS FOR ALL HUT MANUFACTURER INSTALLED EQUIPMENT AND CUSTOMER LOADS AS SPECIFIED.
- ONE (1) SHELTER WALL PENETRATION TO SERVE AS UTILITY POWER SERVICE ENTRY.
- FOUR (4) 20 AMP SPECIFICATION GRADE DUPLEX RECEPTACLES.
- ONE (1) 20 AMP SPECIFICATION GRADE EXTERIOR DUPLEX RECEPTACLE ON A GROUND FAULT INTERRUPTER CIRCUIT.
- TWO (2) EQUIPMENT AC CIRCUIT DROPS UP TO 30 AMPS ROUTED IN CONDUIT OR WIREWAY TO CUSTOMER SPECIFIED LOCATIONS ON THE CEILING ABOVE CUSTOMER EQUIPMENT RACKS. FLEXIBLE CONDUIT INCLUDING CIRCUIT CONDUCTORS WILL BE COILED AND TAGGED FOR IDENTIFICATION WITH ENOUGH LENGTH TO REACH THE FLOOR AND AN ADDITIONAL FOUR FEET (4') OF CIRCUIT CONDUCTORS TO BE CUT TO LENGTH AND TERMINATED BY THE CUSTOMER. COORDINATE ALL REQUIREMENTS WITH THE COTR.

LIGHTING

- THREE (3) FOUR FOOT, SURFACE MOUNTED LED LIGHT FIXTURES.
- ONE (1) EXTERIOR LED DOOR LIGHT WITH PHOTO CELL CONTROL.
- ONE (1) EMERGENCY LIGHT.

HVAC

- TWO (2) ONE TON, 240 VOLT, SINGLE PHASE, 10 EER WALL MOUNT AIR CONDITIONING UNITS, WITH LOW AMBIENT AND COMPRESSOR ANTI CYCLE CONTROLS, ECONOMIZERS, COATED COILS, INTEGRAL 3 KW RESISTANCE HEAT STRIPS AND WASHABLE DUST FILTERS.
- REDUNDANT LEAD/LAG CONTROLS ALLOWING APPROXIMATELY EQUAL OPERATING TIME ON EACH AIR CONDITIONING UNIT.

ALARM DEVICE CONTACTS

THE FOLLOWING ALARM DEVICE CONTACTS WILL BE WIRED AND BROUGHT TO A LOCATION SPECIFIED BY THE CUSTOMER. THE ALARM WIRES WILL BE COILED AND TAGGED FOR IDENTIFICATION. PROVIDE TERMINATIONS AT CUSTOMER EQUIPMENT.

THERE ARE NO PROVISIONS FOR AUDIBLE, VISUAL OR REMOTE ALARM MONITORING OFFERED, EXCEPT WHERE IT IS INTEGRAL TO THE DEVICE OFFERED OR STATED OTHERWISE IN THE PROPOSAL.

- ONE (1) LINE VOLTAGE SMOKE DETECTOR.
- ONE (1) INTRUSION ALARM SWITCH WITH FORM "C" CONTACTS RATED .1 AMPS AT 28 VDC.
- ONE (1) HIGH TEMPERATURE ALARM.
- ONE (1) LOW TEMPERATURE ALARM.
- ONE (1) AIR CONDITIONER FAILURE ALARM.
- ONE (1) AIR CONDITIONER COMPRESSOR HIGH AND LOW HEAD PRESSURE LOCKOUT SWITCH ALARM.
- ONE (1) UTILITY POWER FAILURE ALARM.
- ONE (1) SET OF GENERATOR ALARMS.

GROUNDING

- PROVISIONS FOR THE CONNECTION OF A GROUNDING ELECTRODE CONDUCTOR AT THE SHELTER SERVICE EQUIPMENT.
- ONE HARRIS STANDARD GROUND SYSTEM CONSISTING OF A 2 AWG STRANDED GREEN INSULATED COPPER HALO, APPROXIMATELY 6 INCHES BELOW THE CEILING, WITH VERTICAL 2 AWG BARE/TINNED COPPER DROPS THROUGH THE FLOOR AT EACH CORNER. A LENGTH OF WIRE IS COILED AT EACH DROP TO ALLOW ATTACHMENT TO AN EXTERIOR RING GROUND SYSTEM TO BE INSTALLED BY THE CONTRACTOR.
- ONE (1) 1/4" X 4" X 12" ISOLATED COPPER TELCO GROUND PLATE.
- TWO (2) 1/4" X 4" X 20" ISOLATED COPPER MAIN GROUND PLATES.

GENERATOR SET

PROVIDE AND INSTALL A STANDBY GENERATOR POWER SYSTEM WITH FEATURES AS DESCRIBED BELOW:
Quantity: 1

- TYPE: STANDBY RATED
- FUEL TYPE: DIESEL
- BASIS OF DESIGN: GENERAC MODEL SD035
- OUTPUT KW: 35
- PHASE: SINGLE
- VOLTAGE: 120/240V
- FREQUENCY: 60 HZ
- ENCLOSURE: OUTDOOR
- FUEL TANK TYPE: SUBBASE 132 GALLONS
- FUEL PIPING: INCLUDED
- ENGINE COOLANT HEATER: VOLT: 110
- OIL & ANTIFREEZE: INCLUDED
- BATTERY AND BATTERY RACK:INCLUDED
- BATTERY VOLTAGE: 12 VDC
- BATTERY CABLES: INCLUDED
- MUFFLER TYPE: CRITICAL
- FLEXIBLE EXHAUST SECTION: INCLUDED

AUTOMATIC TRANSFER SWITCH INSTALLED IN THE SHELTER

- QUANTITY: 1
- BASIS OF DESIGN: GENERAC MODEL GT200
- APPLICATION: UTILITY TO GENSET
- AMPERE RATING: 200
- VOLTAGE: 120/240V
- PHASE: SINGLE
- FREQUENCY: 60HZ
- NEUTRAL KIT: INCLUDED
- EXERCISER: 7-DAY
- ENCLOSURE: NEMA-1

WARRANTY

- ONE YEAR FROM DATE OF CONDUCT STARTUP AND TESTING BY A MANUFACTURER'S AUTHORIZED REPRESENTATIVES OF ALL SYSTEMS PROVIDED WITH THE SHELTER AT THE SITE AFTER INSTALLATION IS COMPLETE. SUBMIT REPORT TO THE GOVERNMENT FOR REVIEW AND APPROVAL.

UPS

PROVIDE AN UNINTERRUPTIBLE POWER SYSTEM WITH FEATURES AS DESCRIBED BELOW:

- QUANTITY: 1
- TYPE: DOUBLE CONVERSION
- BASES OF DESIGN: EATON MODEL POWERWARE 9170
- OUTPUT KVA RATING: 18 KVA
- INPUT PHASE: SINGLE PHASE
- INPUT VOLTAGE: 120/240V
- OUTPUT PHASE: SINGLE
- OUTPUT VOLTAGE: 120/240V
- FREQUENCY: 60 HZ
- FULL LOAD BATTERY BACKUP MINUTES: 6
- WARRANTY: MANUFACTURER'S STANDARD
- STARTUP: AT VFP FACTORY

INSTALLATION WIRING AND CONDUIT PER MANUFACTURER'S INSTRUCTION AND THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE NFPA70.

ACCESORIES

- ONE (1) EIGHT – PORT/WAVEGUIDE ENTRY PANEL WITH 6" SLEEVES AND PROTECTIVE BLANK COVERS.
- THIRTY FEET (30') OF 12" WIDE CABLE LADDER/TRAY.
- ONE (1) 4' X 8' X 3/4" EQUIPMENT MOUNTING BOARD.
- ONE (1) PORTABLE 10 POUND CO2 FIRE EXTINGUISHER.
- ONE (1) SERVICE MANUAL.
- PROVIDE THREE (3) SETS OF SHELTER DRAWINGS WITH EACH SHELTER UNIT ORDER. TYPICAL FOUNDATION DRAWINGS BASED UPON NORMAL SOIL CONDITIONS ARE AVAILABLE TO SUPPORT CALCULATIONS FOR RECOMMENDED SHELTER TIE DOWN LOCATIONS. NO OTHER FOUNDATION DRAWINGS ARE OFFERED IN THE PROPOSED SHELTER PRICE. ADDITIONAL FOUNDATION DRAWINGS CAN BE PROVIDED AND WILL BE NEGOTIATED SEPARATELY.
- ALL WIRING WILL BE INSTALLED IN SURFACE MOUNTED CONDUIT OR WIREWAYS IF SPECIFIED AND WILL BE IN FULL COMPLIANCE WITH ANSI/NFPA-70 – THE NATIONAL ELECTRICAL CODE, LATEST REVISION.
- SHELTER IS TO BE BUILT ACCORDING THE LATEST UFC AND IBC EDITIONS AND STATE AND LOCAL REQUIREMENTS.

COMMUNICATION TOWER ANTENNAS:

GENERAL:

PROVIDE TWO TRANSMIT ANTENNAS AND ONE RECEIVE ANTENNA ON THE ELMR TOWER. WORK MUST BE PERFORMED BY AN AUTHORIZED HARRIS CORPORATION DISTRIBUTOR IN ORDER TO MAINTAIN WARRANTY ON EQUIPMENT. SEE PROJECT MANUAL FOR TRANSMIT AND RECEIVE ANTENNA SPECIFICATIONS.

- PROVIDE AND INSTALL (1) DB SPECTRA DS3A09P36-U RECEIVE ANTENNA AT TOP OF TOWER
- PROVIDE AND INSTALL (2) DB SPECTRA DS3A03P36-U TRANSMIT ANTENNAS 20'DOWN FROM RECEIVE ANTENNA.
- PROVIDE AND INSTALL (2) 6'STANDOFF MOUNTS.
- PROVIDE AND INSTALL (3) 1-5/8"COAX RUNS, (1) TO EACH ANTENNA WITH CONNECTORS, GROUND KITS AND MOUNTING HARDWARE.
- PROVIDE AND INSTALL (6) 1/2"JUMPERS (3) TOP AND (3) SHELTER.
- PROVIDE AND INSTALL (3) SURGE ARRESTORS.
- COMPLETE TESTING PER CUSTOMER SPECIFICATIONS.

APPR	DATE	DESCRIPTION	SYM

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 046553 ENGINEER JAMES E. BARCLEY JR.

#19051 SEAL

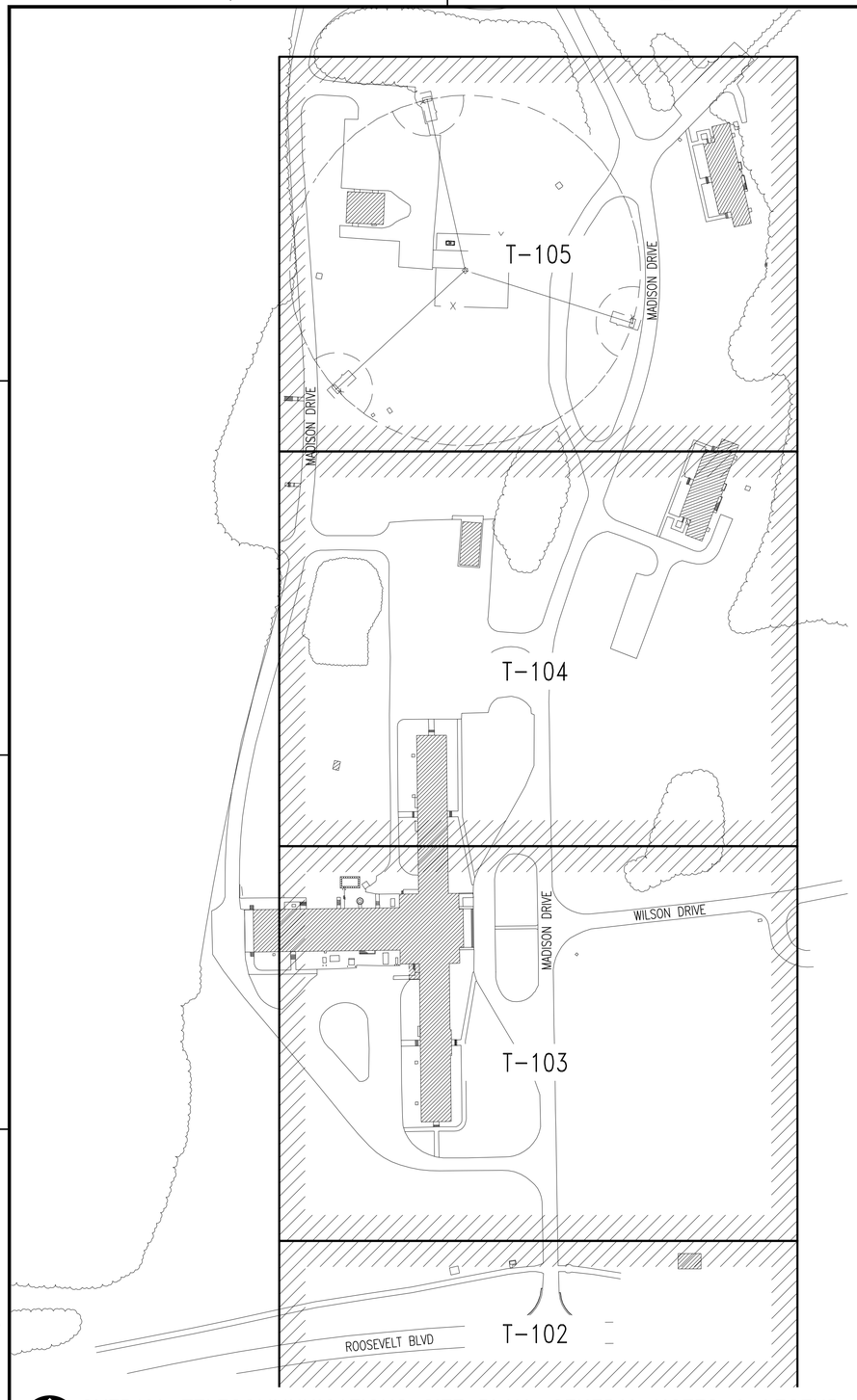
A/E INFO

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO
DES XXX | DRW XXX | CHK XXX

U.S. MARINE CORPS AIR STATION
CHERRY POINT, NORTH CAROLINA
PROVIDE UTILITIES FOR COMMUNICATION TOWER B4257
ELMR AND ANTENNA NOTES

SCALE: AS NOTED
PROJECT NO.:
MAXIMO WORK ORDER NO.
6871159
NAVFAC DRAWING NO.
12798256
SHEET 19 OF 25
E-503

DRAWFORM REVISION: 10 MAY 2014



OVERALL TELECOMMUNICATIONS SITE PLAN, GENERAL NOTES & LEGEND
SCALE: 1" = 100' - 0"

GENERAL SPECIAL SYSTEM NOTES

GENERAL SPECIAL SYSTEMS

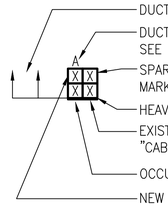
THE GENERAL CONTRACTOR SHALL PROVIDE A COMPLETION SCHEDULE BROKEN DOWN BY VARIOUS CONSTRUCTION PHASES. THE CONTRACTOR SHALL COORDINATE TURN OVER WITH VENDORS, AND SHALL TURN OVER AREAS WITH ADEQUATE TIME FOR VENDOR FINISH WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY EXTRA VENDOR COST RESULTING FROM INCORRECT SYSTEMS ROUGH-IN.

THE CONTRACTOR SHALL COORDINATE AND PROVIDE ALL REQUIRED RACEWAY SYSTEMS AS INDICATED

LEGEND & ABBREVIATIONS

TELECOMMUNICATIONS

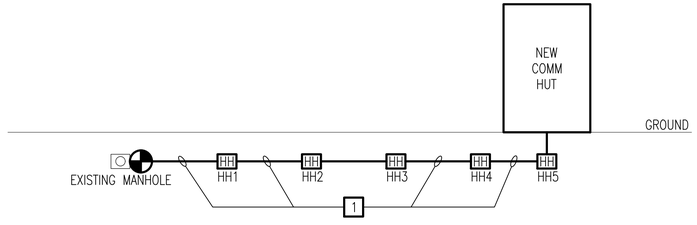
- HH — HAND HOLE, 4' X 4' X 4' OF PRECAST CONCRETE, TYPE 2, SEE DETAIL SHEET T-501
- MAN HOLE, EXISTING
- —UGC— UNDERGROUND COMMUNICATION – EXISTING
- —UT— UNDERGROUND TELECOMMUNICATION DUCT BANK
- NEW WORK CONNECTION POINT



- DUCTBANK SECTION LOOKING IN DIRECTION OF ARROWS.
- DUCTBANK TYPE (NO LETTER INDICATES EXISTING DUCTBANK), SEE "DUCTBANK DETAILS" SHEET T-502.
- SPARE DUCT (TYPICAL). ALL SPARE DUCTS ARE ASSIGNED A CABLE MARK DESCRIPTION PER DUCTBANK CABLE SCHEDULE THIS SHEET.
- HEAVY LINE INDICATES BOTTOM OF DUCT
- EXISTING CABLE DESIGNATION (TYPICAL) DESCRIPTION PER DUCTBANK "CABLE SCHEDULE" ON THIS SHEET.
- OCCUPIED DUCT, UNIDENTIFIED CABLE.
- NEW CABLE DESIGNATION (TYPICAL) DESCRIPTION PER DUCTBANK CABLE SCHEDULE ON THIS SHEET.

ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
ARA	AREA OF REFUGE ASSISTANCE
BEP	BUILDING ENTRANCE PROTECTOR
BFF	BELOW FINISHED FLOOR
BFG	BELOW FINISHED GRADE
C	CONDUIT
CE	COMPROMISING EMANATIONS
CTTA	CERTIFIED TEMPEST TECHNICAL AUTHORITY
EF	ENTRANCE FACILITY
ETR	EXISTING TO REMAIN
EXIST	EXISTING
FMCP	FIRE ALARM/MASS NOTIFICATION CONTROL PANEL
GND	GROUND
MDF	MAIN DISTRIBUTION FRAME
MH	MANHOLE
MIN	MINIMUM
MMFO	MULTIMODE FIBER OPTIC
NEC	NATIONAL ELECTRICAL CODE
OSP	OUTSIDE PLANT
PDU	POWER DISTRIBUTION UNIT
PNL	PANEL
PVC	POLYVINYL CHLORIDE
RAF	RAISED ACCESS FLOOR
REQ'D	REQUIRED
SCH	SCHEDULE
SMFO	SINGLE MODE FIBER OPTIC
SQ	SQUARE
STR	STRAND



OSP TELECOMMUNICATIONS RISER DIAGRAM
NO SCALE

GRAPHIC SCALE:

1"=100' 0' 100' 200' 300' 400'

APPR	DATE	DESCRIPTION	SYM

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NORTH CAROLINA PROFESSIONAL SEAL 046553 ENGINEER JAMES E. BARKLEY JR.
#19051 SEAL

A/E INFO

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO
DES CRW | DRW CAR | CHK JAK

U.S. MARINE CORPS AIR STATION
CHERRY POINT, NORTH CAROLINA
PROVIDE UTILITIES FOR COMMUNICATION TOWER B4257
OVERALL TELECOMM. SITE PLAN, GENERAL NOTES & LEGEND

SCALE: AS NOTED
PROJECT NO.:
MAXIMO WORK ORDER NO.
6871159
NAVFAC DRAWING NO.
12798257
SHEET 20 OF 25

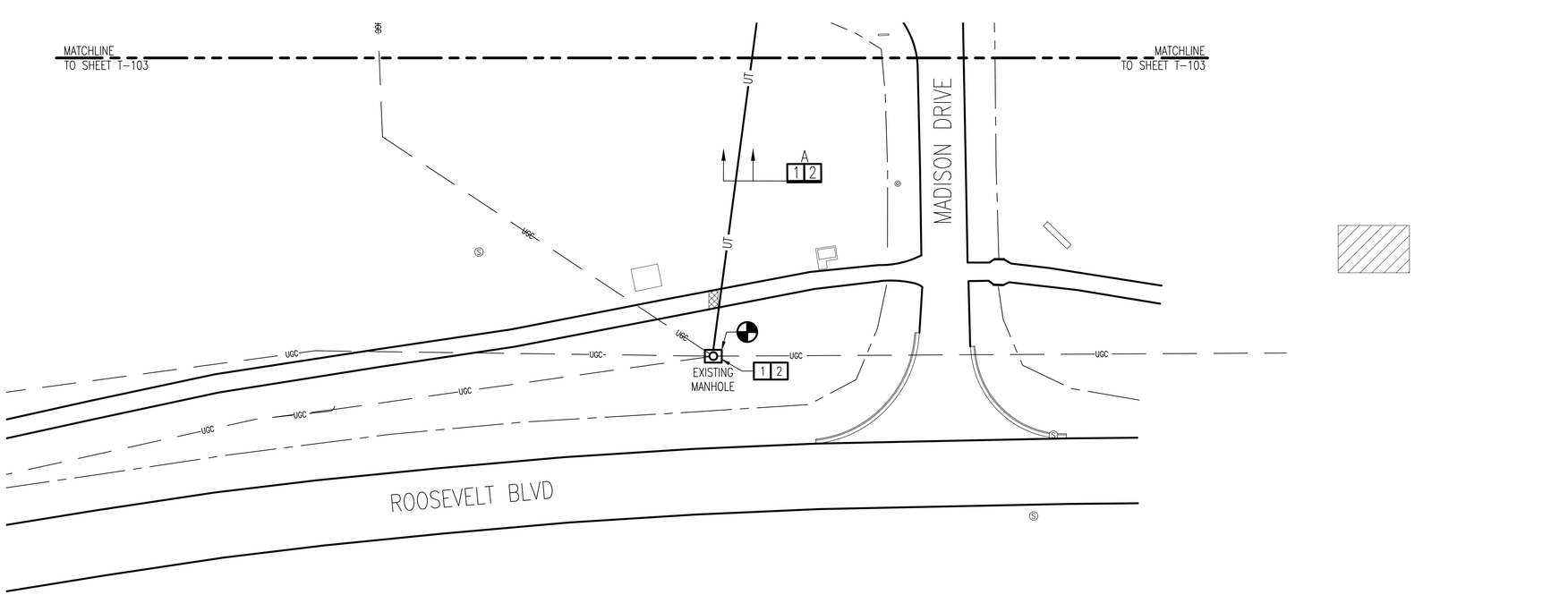
T-101

DRAWFORM REVISION: 10 MAY 2014

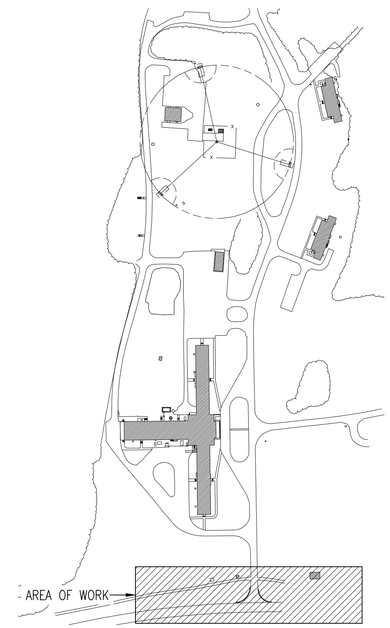
NOTES THIS SHEET

1. PROVIDE ±50' MAINTENANCE SLACK LOOP OF CABLING IN HAND HOLE.
2. CONTRACTOR SHALL TEST CABLES TO ENSURE INTEGRITY AFTER INSTALLATION. BASE COMMUNICATIONS SHALL PROVIDE ALL REQUIRED SPLICE MATERIAL AND PERFORM ALL REQUIRED SPLICING IN EXISTING MANHOLE.

DUCTBANK CABLE SCHEDULE		
DESIGNATION	DUCT SIZE (IN.)	CONDUCTORS / DESCRIPTION
1	4"	PROVIDE (1) 3" 3-CELL, MAXCELL FABRIC-MESH INNERDUCT AND (1) 24 STRAND SMFO OSP CABLE. INSTALL CABLE WITHIN INNERDUCT.
2	4"	PROVIDE (1) 25 PAIR COPPER, OSP TELEPHONE CABLE AND (1) PULL STRING (1/2" MULE TAPE)



TELECOMMUNICATIONS SITE PLAN
SCALE: 1" = 30' - 0"



KEYPLAN
NO SCALE

GRAPHIC SCALE:
1" = 30'-0" 30' 15' 0' 30' 60' 90'

APPR	
DATE	
DESCRIPTION	
SYM	

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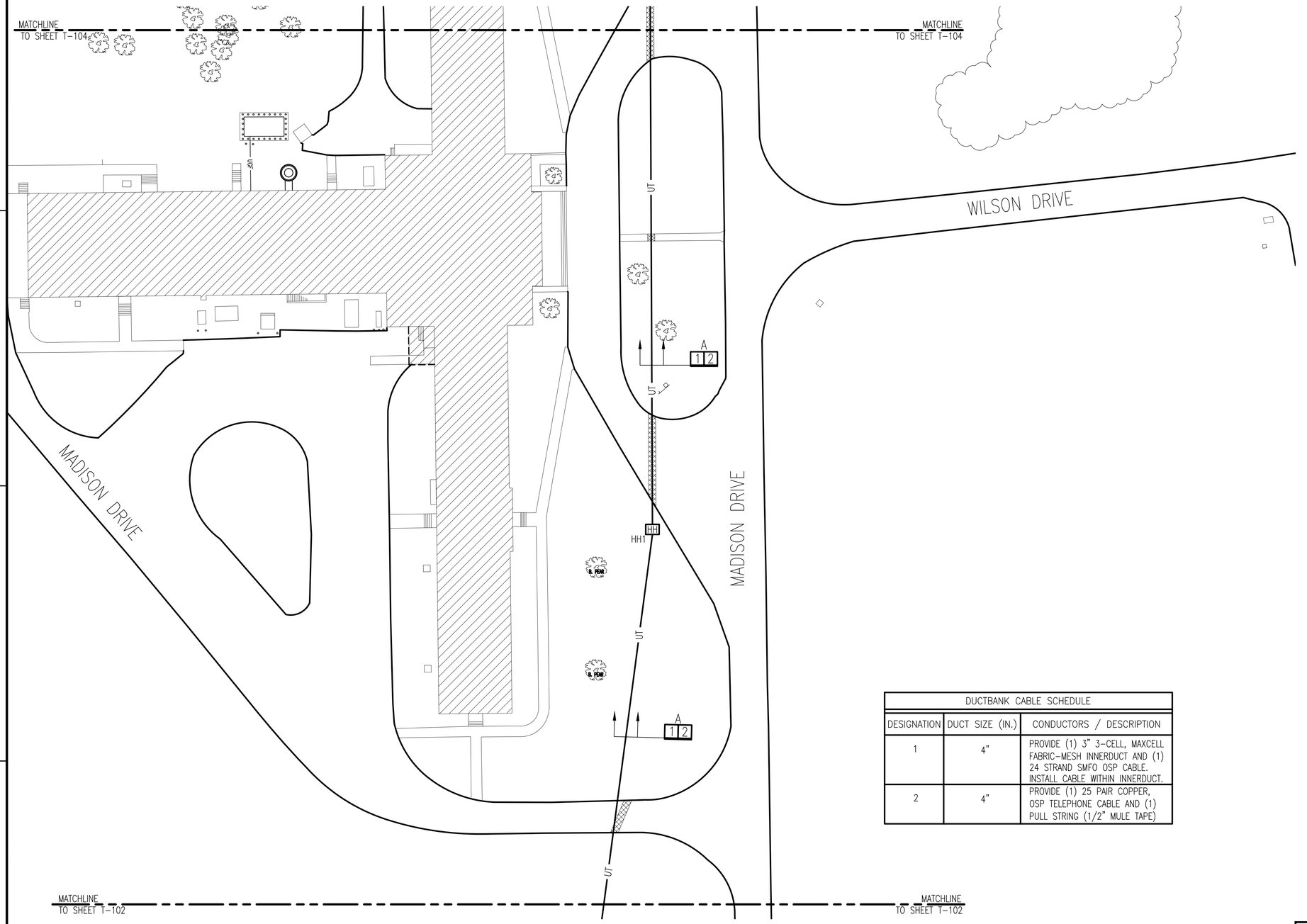
ACTIVITY
SATISFACTORY TO
DES: CRW | DRW: CAR | CHK: JAK

U.S. MARINE CORPS AIR STATION
CHERRY POINT, NORTH CAROLINA
PROVIDE UTILITIES FOR COMMUNICATION TOWER B4257
TELECOMMUNICATIONS SITE PLAN

SCALE: AS NOTED
PROJECT NO.:
MAXIMO WORK ORDER NO.
6871159
NAVFAC DRAWING NO.
12798258
SHEET 21 OF 25

T-102

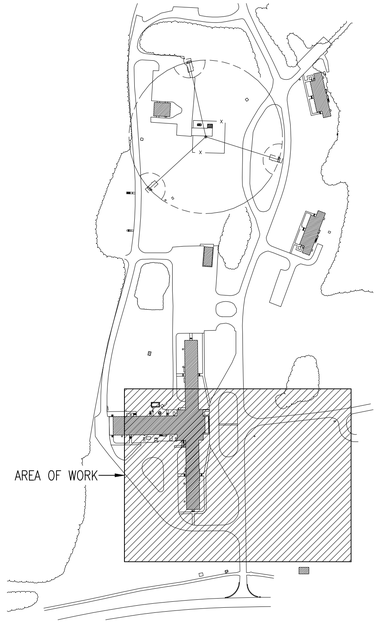
DRAWFORM REVISION: 10 MAY 2014



TELECOMMUNICATIONS SITE PLAN

SCALE: 1" = 30' – 0"

DUCTBANK CABLE SCHEDULE		
DESIGNATION	DUCT SIZE (IN.)	CONDUCTORS / DESCRIPTION
1	4"	PROVIDE (1) 3" 3-CELL, MAXCELL FABRIC-MESH INNERDUCT AND (1) 24 STRAND SMFO OSP CABLE. INSTALL CABLE WITHIN INNERDUCT.
2	4"	PROVIDE (1) 25 PAIR COPPER, OSP TELEPHONE CABLE AND (1) PULL STRING (1/2" MULE TAPE)



KEYPLAN

NO SCALE

GRAPHIC SCALE:

1" = 30'-0" 30' 15' 0' 30' 60' 90'

APPR	
DATE	
DESCRIPTION	
NO.	
SYM	

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#19051 SEAL

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ACTIVITY

SATISFACTORY TO

DES CRW | DRW CAR | CHK JAK

U.S. MARINE CORPS AIR STATION
CHERRY POINT, NORTH CAROLINA

PROVIDE UTILITIES FOR COMMUNICATION TOWER B4257

TELECOMMUNICATIONS SITE PLAN

SCALE: AS NOTED

PROJECT NO.:

MAXIMO WORK ORDER NO.
6871159

NAVFAC DRAWING NO.
12798259

SHEET 22 OF 25

T-103

DRAWFORM REVISION: 10 MAY 2014

MATCHLINE TO SHEET T-105

MATCHLINE TO SHEET T-105

MADISON DRIVE

MADISON DRIVE

UT

UT

UT

UT

UT

HH

HH2

1

A
1 2

A
1 2

CO

CO

CO

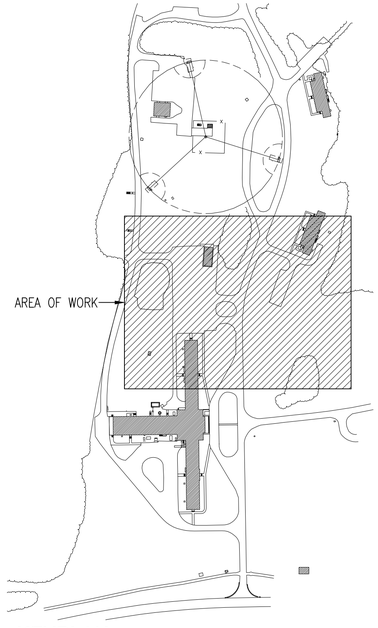
MATCHLINE TO SHEET T-103

MATCHLINE TO SHEET T-103

NOTES THIS SHEET

1 PROVIDE ±50' MAINTENANCE SLACK LOOP OF CABLING IN HAND HOLE.

DUCTBANK CABLE SCHEDULE		
DESIGNATION	DUCT SIZE (IN.)	CONDUCTORS / DESCRIPTION
1	4"	PROVIDE (1) 3" 3-CELL, MAXCELL FABRIC-MESH INNERDUCT AND (1) 24 STRAND SMFO OSP CABLE. INSTALL CABLE WITHIN INNERDUCT.
2	4"	PROVIDE (1) 25 PAIR COPPER, OSP TELEPHONE CABLE AND (1) PULL STRING (1/2" MULE TAPE)



KEYPLAN

NO SCALE

TELECOMMUNICATIONS SITE PLAN

SCALE: 1" = 30' - 0"

GRAPHIC SCALE:

1" = 30'-0" 30' 15' 0' 30' 60' 90'

APPR	
DATE	
DESCRIPTION	
SCM	

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#19051 SEAL

A/E INFO

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ACTIVITY

SATISFACTORY TO

DES CRW | DRW CAR | CHK JAK

U.S. MARINE CORPS AIR STATION CHERRY POINT, NORTH CAROLINA

PROVIDE UTILITIES FOR COMMUNICATION TOWER B4257

TELECOMMUNICATIONS SITE PLAN

SCALE: AS NOTED

PROJECT NO.:

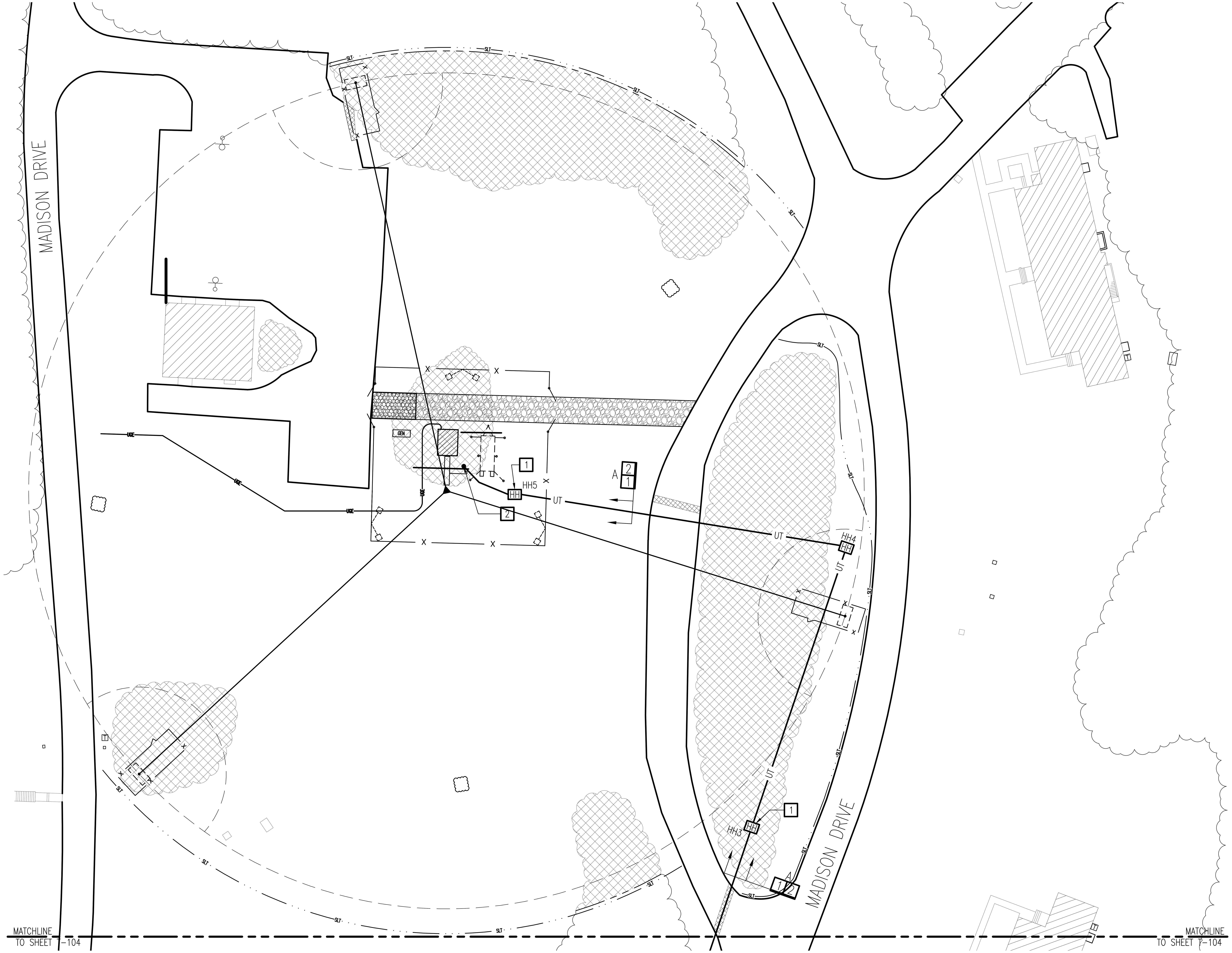
MAXIMO WORK ORDER NO. 6871159

NAVFAC DRAWING NO. 12798260

SHEET 23 OF 25

T-104

DRAWFORM REVISION: 10 MAY 2014



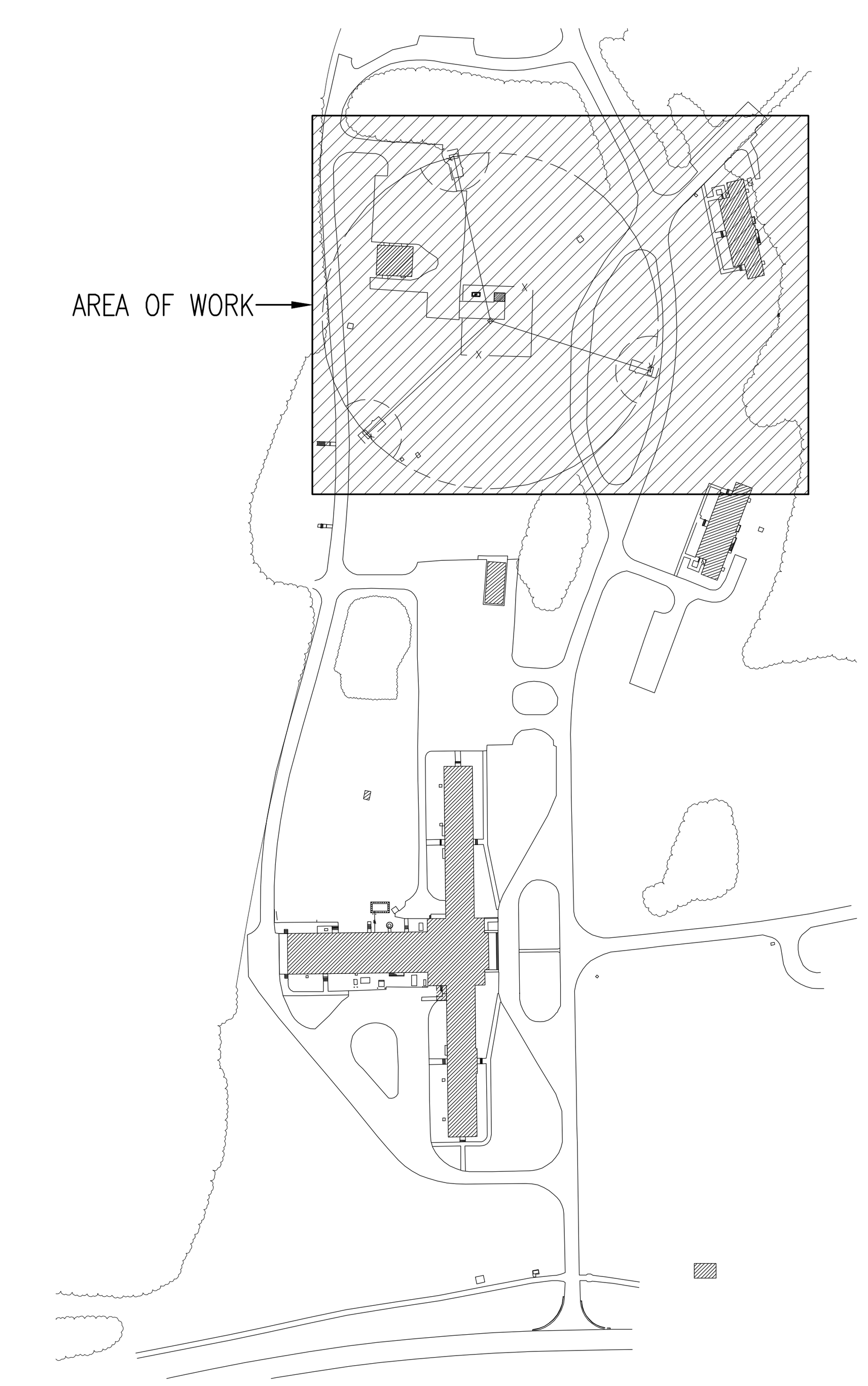
TELECOMMUNICATIONS SITE PLAN

SCALE: 1" = 30' – 0"

NOTES THIS SHEET

1. PROVIDE ±50' MAINTENANCE SLACK LOOP OF CABLING IN HAND HOLE.
2. COORDINATE WITH OWNER AND COMMUNICATION HUT PROVIDER FOR EXACT ENTRY METHOD OF OSP CONDUIT/CABLING INTO NEW COMMUNICATIONS HUT PRIOR TO INSTALLATION.

DUCTBANK CABLE SCHEDULE		
DESIGNATION	DUCT SIZE (IN.)	CONDUCTORS / DESCRIPTION
1	4"	PROVIDE (1) 3" 3–CELL, MAXCELL FABRIC–MESH INNERDUCT AND (1) 24 STRAND SMFO OSP CABLE. INSTALL CABLE WITHIN INNERDUCT.
2	4"	PROVIDE (1) 25 PAIR COPPER, OSP TELEPHONE CABLE AND (1) PULL STRING (1/2" MULE TAPE)



KEYPLAN

NO SCALE

GRAPHIC SCALE:

1" = 30'–0" 30' 15' 0' 30' 60' 90'

SYM	DESCRIPTION	DATE	APPR

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NORTH CAROLINA PROFESSIONAL SEAL 046553 ENGINEER JAMES E. BARKLEY JR. 09/13/19
#19051 SEAL

A/E INFO

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ACTIVITY
SATISFACTORY TO

DES CRW | DRW CAR | CHK JAK

U.S. MARINE CORPS AIR STATION CHERRY POINT, NORTH CAROLINA

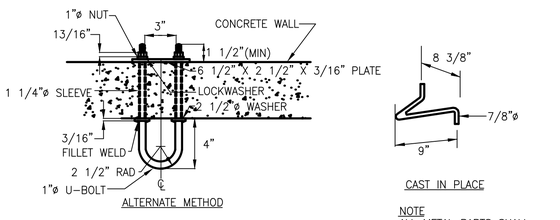
PROVIDE UTILITIES FOR COMMUNICATION TOWER B4257

TELECOMMUNICATIONS SITE PLAN

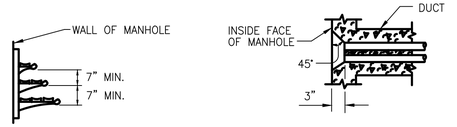
SCALE: **AS NOTED**
PROJECT NO.:
MAXIMO WORK ORDER NO. **6871159**
NAVFAC DRAWING NO. **12798261**
SHEET **24** OF **25**

T–105

DRAWFORM REVISION: 10 MAY 2014



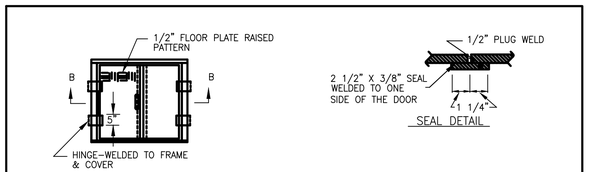
DETAIL OF PULLING-IN IRON



NOTE: BOND CABLE RACKS TO GROUND ROD WITH #6AWG COPPER MINIMUM

DETAILS
(PULLING-IN IRONS, CABLE RACK AND DUCT ENTRANCE)

SKETCH DATE	JUNE 2002	STYLE	UG-7

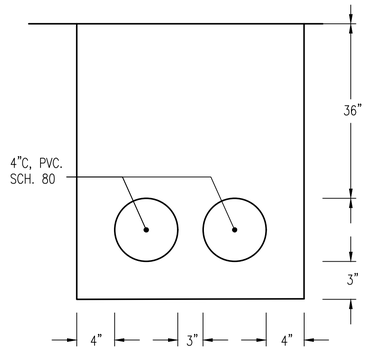


NOTES:
1. FOR DETAILS OF CABLE RACKS, DUCT ENTRANCE AND PULLING-IN IRONS, SEE PLATE UG-7 ABOVE.
2. MINIMUM CONCRETE COMPRESSIVE STRENGTH SHALL BE 3000 PSI.

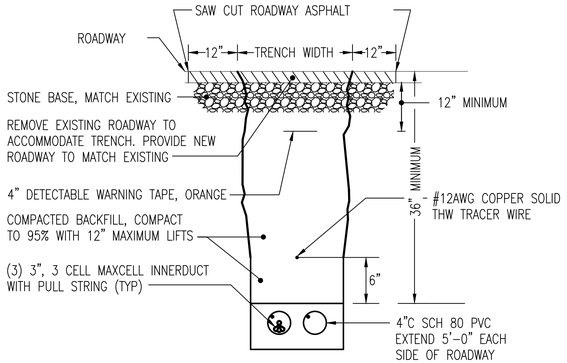
HANDHOLE TYPE	DIMENSIONS A
2	4'-0"

STANDARD ELECTRICAL HANDHOLE (NONTRAFFIC)
TYPE 2

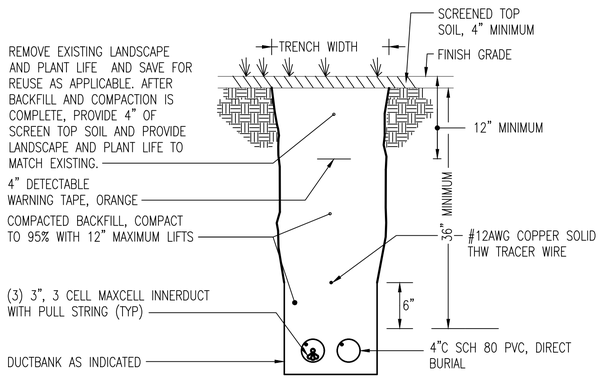
SKETCH DATE	JUNE 2002	STYLE	UG-4



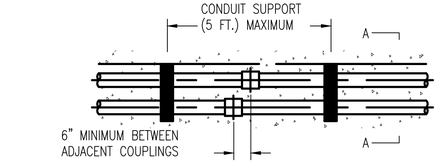
DUCTBANK TYPE "A"
NO SCALE

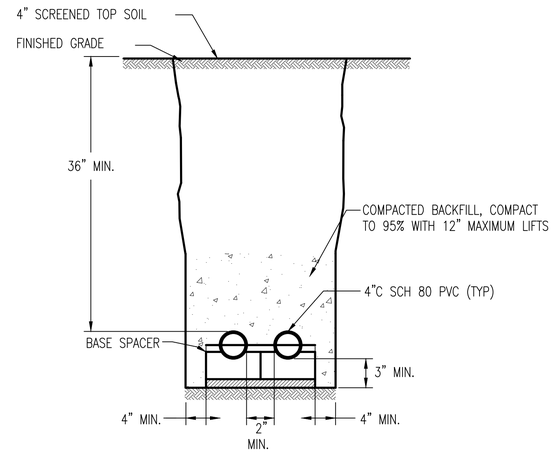


DUCTBANK TRENCH DETAIL (PAVED AREA) - TYPE B
NO SCALE



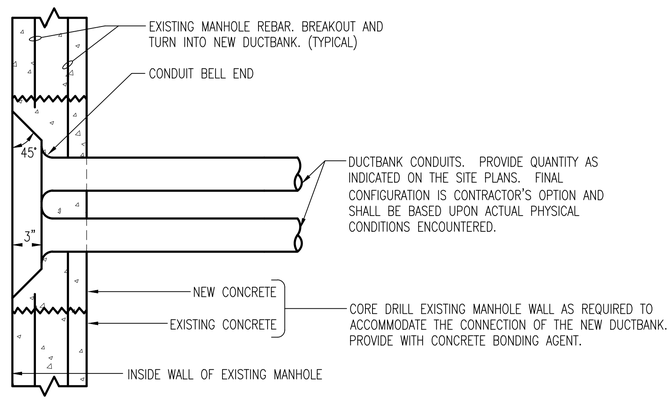
DUCTBANK TRENCH DETAIL (GRASS AREA) - TYPE A
NO SCALE





DUCT BANK NOTES:
1) FOR SIZE AND NUMBER OF CONDUITS AS WELL AS DUCT BANK FORMATION, SEE PLANS.

DIRECT BURIED DUCT BANK DETAILS - TYPICAL ARRANGEMENTS
NO SCALE



NOTES :
1. FOR NON-METALLIC CONDUITS, TERMINATE WITH PLASTIC COUPLINGS SET FLUSH WITH END OF CONCRETE ENVELOPE AND INSTALL PLASTIC PLUGS.
2. COUNTERPOISE AND WARNING TAPE NOT SHOWN FOR CLARITY.

NEW DUCTBANK CONNECTION TO EXISTING MANHOLE (TYPICAL)
NO SCALE

APPR	DATE	DESCRIPTION	SYM

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A/E INFO
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DES: CRW DRW: CAR CHK: JAK

U.S. MARINE CORPS AIR STATION CHERRY POINT, NORTH CAROLINA
PROVIDE UTILITIES FOR COMMUNICATION TOWER B4257
TELECOMMUNICATIONS SITE DETAILS

SCALE: AS NOTED
PROJECT NO.:
MAXIMO WORK ORDER NO. 6871159
NAVFAC DRAWING NO. 12798262
SHEET 25 OF 25
T-501
DRAWFORM REVISION: 10 MAY 2014