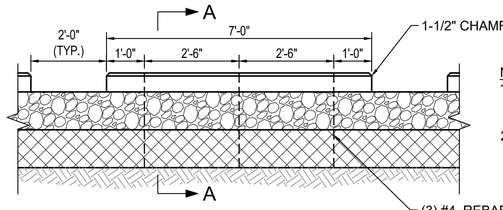
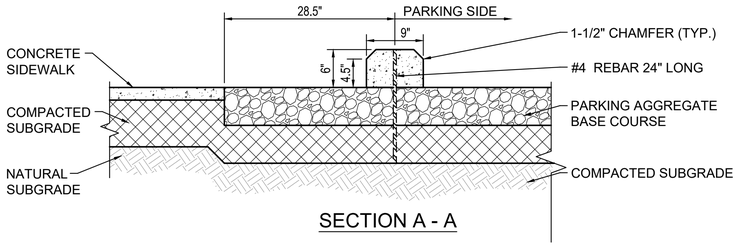


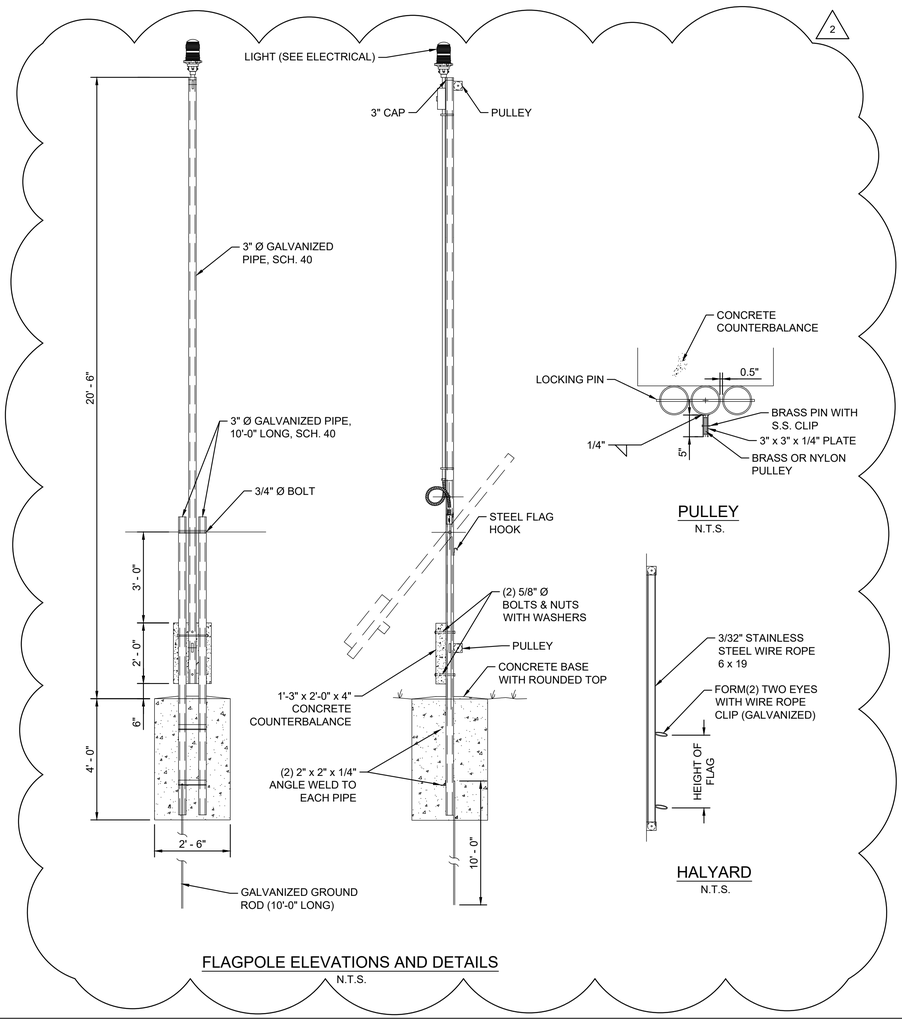
NOTES:
1.) ATTACHMENT OF THE WHEEL STOPS SHALL BE AS RECOMMENDED BY THE MANUFACTURER.
2.) WHEEL STOPS SHALL BE PLACED 28.5 INCHES FROM THE END OF THE PARKING TO THE CENTER OF THE WHEEL STOP.

ELEVATION



SECTION A - A

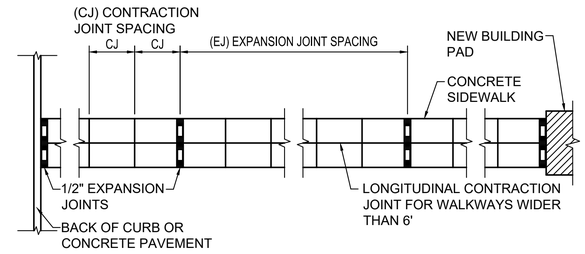
WHEEL STOP
NO SCALE



PULLEY
N.T.S.

HALYARD
N.T.S.

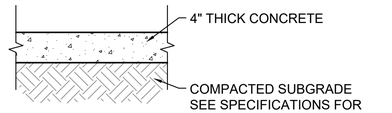
FLAGPOLE ELEVATIONS AND DETAILS
N.T.S.



JOINT SPACING FOR CONCRETE SIDEWALKS

SIDEWALK WIDTH	CONTRACTION JOINT SPACING	EXPANSION JOINT SPACING
4 FT.	4 FT.	48 FT.
5 FT.	5 FT.	48 FT.
6 FT.	6 FT.	48 FT.

STANDARD JOINT LAYOUT FOR CONCRETE SIDEWALKS
NO SCALE



SIDEWALK SECTION

GENERAL NOTES FOR CONCRETE WALKS

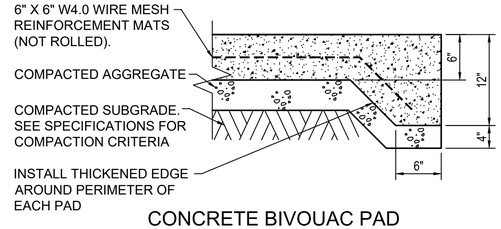
1.) SIDEWALKS SHALL HAVE A MINIMUM THICKNESS OF 4".

2.) CONTRACTION JOINTS SHALL BE FORMED (OR SAWCUT) TO A DEPTH EQUAL TO 1/4 OF THE THICKNESS OF THE SIDEWALK AND EDGED WITH 1/8 RADIUS.

3.) 1/2" EXPANSION JOINT MATERIAL SHALL BE PROVIDED AT INTERVALS NOT TO EXCEED 50 FEET AND WHERE WALKS ABUT OTHER CONCRETE STRUCTURES SUCH AS: PARALLEL AND ABUTTING CURB AND GUTTER OR ADJACENT TO BITUMINOUS PAVEMENT.

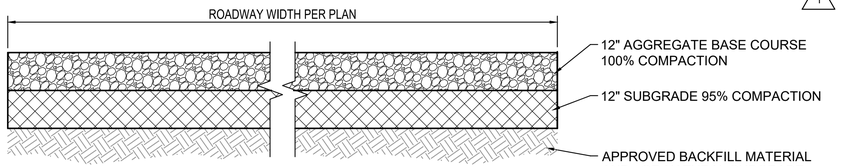
4.) TRANSVERSE SLOPES ON SIDEWALKS SHALL BE 1/4" PER FT.

5.) CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,500 PSI.

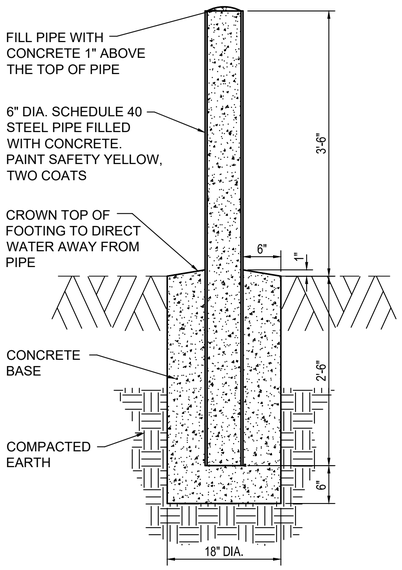


CONCRETE BIVOUAC PAD
NO SCALE

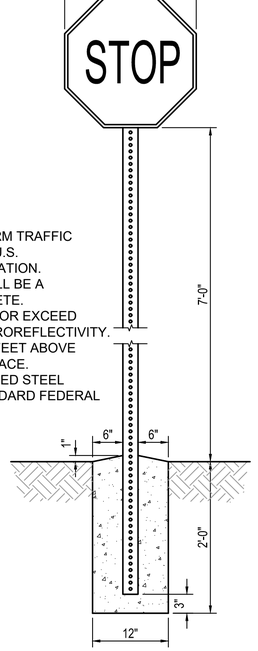
1



TYPICAL SECTION FOR GRAVEL AREAS AND ROADWAYS
NO SCALE



BOLLARD
NO SCALE



NOTES:
1.) REFER TO MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), U.S. DEPARTMENT OF TRANSPORTATION.
2.) CONCRETE FOUNDATION SHALL BE A MINIMUM OF 3,000 PSI CONCRETE.
3.) SIGNS/MARKERS SHALL MEET OR EXCEED MUTCD STANDARDS FOR RETROREFLECTIVITY.
4.) SIGNS SHALL BE MOUNTED 7 FEET ABOVE GRADE TO BOTTOM OF SIGN FACE.
5.) POSTS TO BE 2" X 2" GALVANIZED STEEL SQUARE POST, PAINTED STANDARD FEDERAL COLOR 20059 BROWN.

R1-1 STOP SIGN
NO SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE
2	REVISED IN ACCORDANCE WITH AMENDMENT 0004	17 AUG 2023
1	REVISED IN ACCORDANCE WITH AMENDMENT 0003	11 AUG 2023

DESIGNED BY: G. OGREN
DRAWN BY: G. OGREN
CHECKED BY: R. RADTKE
SUBMITTED BY: DEACON
SIZE: ANSI D
ISSUE DATE: JUNE 2023
SOLICITATION NO.: W912HN-23-B-3001
CONTRACT NO.:
CATEGORY CODE: 178-65-01

U.S. ARMY CORPS OF ENGINEERS
SAVANNAH DISTRICT
100 W. OGLETHORPE AVE.
SAVANNAH, GA 31401

FORT LIBERTY - NORTH CAROLINA
AUTOMATED MULTIPURPOSE TRAINING RANGE (MPTR)
FY23, PN 96182
VOLUME 1 - SITE

CIVIL SITE
LAYOUT DETAILS

SHEET ID
CS501

READY TO ADVERTISE (RTA)

P:\CIVIL\3D PROJECTS\BRA1331105_CIVIL\CAD\PLAN SHEETS\PN96182_CS501-CS503.DWG
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LEGEND

EXISTING	NEW	
	· \ · \ · \ · \ · \ · \ ·	DEMOLITION
		POLE MOUNTED LUMINAIRE
— — EPx —		PRIMARY POWER DISTRIBUTION, AERIAL
—— EPx ——	—— EP ——	PRIMARY POWER DISTRIBUTION, UNDERGROUND
—— ESx ——	—— ES ——	SECONDARY POWER DISTRIBUTION, UNDERGROUND
		PAD MOUNTED TRANSFORMER
$\square_J$	$\blacksquare_J$	SECTIONALIZING TERMINAL CABINET
$\square_S$	$\blacksquare_S$	PAD MOUNTED SWITCH
		PANELBOARD
		UTILITY POLE
		UTILITY POLE WITH UNDERGROUND RISER
—— COMx ——	—— COM ——	UNDERGROUND COMMUNICATIONS LINE
$\square_C$	$\blacksquare_C$	TELECOMMUNICATIONS MANHOLE
$\square_H$	$\blacksquare_H$	TELECOMMUNICATIONS HANDHOLE
	—— EG ——	#1/0 ACSR, LIGHTNING PROTECTION CONDUCTOR, CATENARY TO POLE-MOUNTED AIR TERMINAL(S)
	— · EG — · EG —	CLASS I CONDUCTOR, COPPER, COUNTERPOISE
		POLE-MOUNTED AIR TERMINAL WITH #1/0 CU DOWN CONDUCTOR TO GROUND ROD
		GUY WIRE AND ANCHOR PIN

SITE GENERAL NOTES

1. ALL WORK SHALL BE COORDINATED WITH THE NEW AND EXISTING UTILITIES THAT ARE SHOWN ON THE CIVIL, LANDSCAPE, ENVIRONMENTAL, AND MECHANICAL SITE DRAWINGS. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO POWER, COMMUNICATIONS, LIGHTING, STORM DRAINS, SANITARY SEWERS, WATER LINES, STEAM LINES, HIGH TEMP WATER LINES, CHILLED WATER LINES, AND GAS LINES.
2. THE LOCATIONS OF NEW AND EXISTING UTILITIES SHOWN ON THE DRAWINGS ARE APPROXIMATE. THE EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD BY THE CONTRACTOR.
3. THE CONTRACTOR SHALL COORDINATE THE EXACT ROUTING OF THE ELECTRICAL AND COMMUNICATIONS SERVICE DUCTLINES INTO THE BUILDING WITH THE STRUCTURAL FOOTINGS TO AVOID CONFLICT. SEE THE INTERIOR ELECTRICAL POWER AND SIGNAL PLANS FOR THE LOCATION OF THE ELECTRICAL SERVICE ENTRANCE EQUIPMENT AND THE COMMUNICATION HEAD-END EQUIPMENT.
4. IDENTIFIED UTILITIES DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED BY THE CONTRACTOR IMMEDIATELY AND AT NO ADDITIONAL COST TO THE GOVERNMENT.

SITE TELECOM SCOPE OF WORK NOTES

1. ALL SITE TELECOMMUNICATIONS WORK SHALL BE PROVIDED BY THE CONTRACTOR, THIS INCLUDES, BUT IS NOT LIMITED TO: DEMOLITION, NEW WORK, SPLICES, AND TESTING.
2. ALL WORK SHALL BE IN ACCORDANCE WITH THE US ARMY INFORMATION SYSTEMS ENGINEERING COMMAND (USAISEC) OUTSIDE PLANT DESIGN AND PERFORMANCE REQUIREMENTS (OSPDPR), AND THE I3A CRITERIA.
3. THE CONTRACTOR SHALL STAKE THE ROUTE OF EACH LINE AND INDICATE THE EXACT LOCATION OF NEW DUCTS, DUCT TERMINATIONS, HANDHOLES, AND HANDHOLE ORIENTATIONS FOR APPROVAL BY THE FORT BRAGG NETWORK ENTERPRISE CENTER (NEC POC: KEITH ROGERS (910) 396-4475) AND THE CONTRACTING OFFICER'S REPRESENTATIVE (COR).
4. THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE NEC AND THE COR PRIOR TO DEMOLISHING ANY EXISTING COMMUNICATIONS EQUIPMENT, DUCTLINES, OR CABLING AND PRIOR TO BACKFILLING COMMUNICATIONS DUCTLINE TRENCHES.
5. COMMUNICATIONS DUCTLINE SPARES SHALL BE CLEANED AND MANDRELLED. MANDRELLING SHALL BE WITNESSED BY REPRESENTATIVES OF THE COR AND NEC.
6. NEW COMMUNICATIONS DUCTLINE SPARES SHALL BE SEALED, CAPPED, AND TAGGED. SEALS SHALL BE MECHANICAL TYPE. SPARE DUCTLINES SHALL INCLUDE A PULL STRING.

SITE ELECTRICAL (ROCA) SCOPE OF WORK NOTES

1. THESE NOTES REFLECT THE SCOPE OF WORK FOR THE ROCA AND ALONG PLANK ROAD. SEE VOLUME 4, SHEET ES601 FOR SITE ELECTRICAL (DOWNRANGE) SCOPE OF WORK NOTES.
2. ALL WORK DONE BY SANDHILLS UTILITY SERVICES (SUS) SHALL BE PERFORMED UNDER A SEPARATE CONTRACT. UNLESS OTHERWISE INDICATED, SUS WILL PROVIDE UNDERGROUND DISTRIBUTION SUCH AS PRIMARY CABLING & CONDUIT, PAD MOUNTED TRANSFORMERS, SECTIONALIZING CABINETS, EQUIPMENT PADS, RISER ASSEMBLIES, PRIMARY CONNECTIONS, ETC. SANDHILLS UTILITY SERVICES (SUS) TO PROVIDE FINAL DETERMINATION OF TRANSFORMER SIZE.
3. THE CONTRACTOR SHALL PROVIDE ALL SERVICE ENTRANCE CABLE FROM THE TRANSFORMER(S) TO THE MAIN DISTRIBUTION PANEL(S) (SUS WILL MAKE THE CONNECTIONS AT THE TRANSFORMER). CURRENT RATED TRANSFORMER (CT) METERING WILL BE PROVIDED BY SUS AT THE TRANSFORMER LOCATION.

SITE LIGHTING SCOPE OF WORK NOTES

1. ALL SITE LIGHTING SHALL BE PROVIDED BY THE CONTRACTOR.

SITE LIGHTNING PROTECTION SCOPE OF WORK NOTES

1. ALL SITE LIGHTNING PROTECTION SHALL BE PROVIDED BY THE CONTRACTOR.

ABBREVIATIONS

A	AMPERE
AFF	ABOVE FINISHED FLOOR
ATC	ASTRONOMICAL TIME CLOCK
C	CONDUIT
CATV	CABLE TELEVISION
CB	CIRCUIT BREAKER
CKT	CIRCUIT
DTR	DATA TERMINATION RACK
GFCI	GOVERNMENT FURNISHED CONTRACTOR INSTALLED
GFGI	GOVERNMENT FURNISHED GOVERNMENT INSTALLED
GFI	GROUND FAULT INTERRUPTER
GFP	GROUND FAULT PROTECTION
HACR	HEATING AIR CONDITIONING REFRIGERATION
HP	HORSEPOWER
HPF	HIGH POWER FACTOR
HT	HEIGHT
HZ	HERTZ
IDS	INTRUSION DETECTION SYSTEM
KWH	KILOWATT HOUR
LED	LIGHT EMITTING DIODE
LVS	LOW VOLTAGE SWITCH
MCB	MOLDED CASE CIRCUIT BREAKER
MFR	MANUFACTURER
MH	MOUNTING HEIGHT
MLO	MAIN LUGS ONLY
MMF	MULTI-MISSION FACILITY
NEC	NETWORK ENTERPRISE CENTER
NF	NON FUSED
NIC	NOT IN CONTRACT
NO.	NUMBER
PH	PHASE
R/W	RACEWAY
SUS	SANDHILLS UTILITY SERVICES
TV	TELEVISION
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
TYP	TYPICAL
UL	UNDERWRITERS LABORATORY
UOI	UNLESS OTHERWISE INDICATED
UON	UNLESS OTHERWISE NOTED
V	VOLT
WP	WEATHERPROOF

SHEET INDEX

LUMINAIRE SCHEDULE

LUMINAIRE MARK	SOURCE TYPE	LUMINAIRE VOLTAGE	LUMINAIRE WATTAGE	INITIAL LUMENS	DISTRIBUTION TYPE	REMARKS
S1	LED	240 V	122 W	15,300	TYPE IV	DARK BRONZE FINISH;
S2	RED LED	240 V	60 W	3,000	FLOOD	DARK BRONZE FINISH; PROVIDE POLE TWIN ARM MOUNT;
OB	INCAN.	240 V	70 W	-	-	INCANDESCENT BULB, RED POLYCARBONATE LENS

POLE SCHEDULE

POLE MARK	MINIMUM POLE HEIGHT (FEET)	S1 LUMINAIRE QUANTITIES	S2 LUMINAIRE QUANTITIES	OB LUMINAIRE QUANTITIES	REMARKS
P1	40	1	2	0	
P2	40	0	0	0	PROVIDE CATENARY CONDUCTORS BETWEEN POLES AS INDICATED
P3	40	1	2	0	PROVIDE CATENARY CONDUCTORS BETWEEN POLES AS INDICATED
P4	24.5	0	0	1	FLAG POLE WITH OBSTRUCTION LIGHT

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE
1	REVISED IN ACCORDANCE WITH AMENDMENT 0004	17AUG2023

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AEC_NCS_4_MONO.STB

DESIGNED BY:	H. TAYLOR
DRAWN BY:	H. TAYLOR
CHECKED BY:	R. DAVIS
SUBMITTED BY:	J. DEACON
SIZE:	ANSI D
ISSUE DATE:	JUNE 2023
SOLICITATION NO.:	W912HN-23-B-3001
CONTRACT NO.:	-
CATEGORY CODE:	178-45-01

U.S. ARMY CORPS OF ENGINEERS
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FORT LIBERTY, NORTH CAROLINA
AUTOMATED MULTIPURPOSE TRAINING RANGE (MPTR)
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VOLUME 1 - SITE

ELECTRICAL SITE LEGEND AND NOTES

SHEET ID

ES001

READY TO ADVERTISE (RTA)

MATCH LINE SEE SHEET ES120

SANDY GROVE CHURCH ROAD

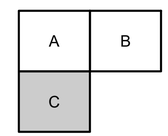
LP-30
2#12, 1#12G,
1/2" C

P4

1

GENERAL SHEET NOTES

KEY PLAN



KEY MAP

N

0' 30' 60'

SCALE: 1" = 30'

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE
1	REVISED IN ACCORDANCE WITH AMENDMENT 0004	17AUG2023

DESIGNED BY: H. TAYLOR	ISSUE DATE: JUNE 2023
DRAWN BY: H. TAYLOR	SOLICITATION NO.: W912HN-23-B-3001
CHECKED BY: R. DAVIS	CONTRACT NO.: _
SUBMITTED BY: DEACON	CATEGORY CODE: 178-65-01
SIZE: ANSI D	

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SAVANNAH DISTRICT
100 W. OGLETHORPE AVE.
SAVANNAH, GA 31401

FORT LIBERTY, NORTH CAROLINA
AUTOMATED MULTIPURPOSE TRAINING RANGE (MPTR)
FY23, PN 96182
VOLUME 1 - SITE

SITE LIGHTING PLAN - AREA C

SHEET ID

ES122

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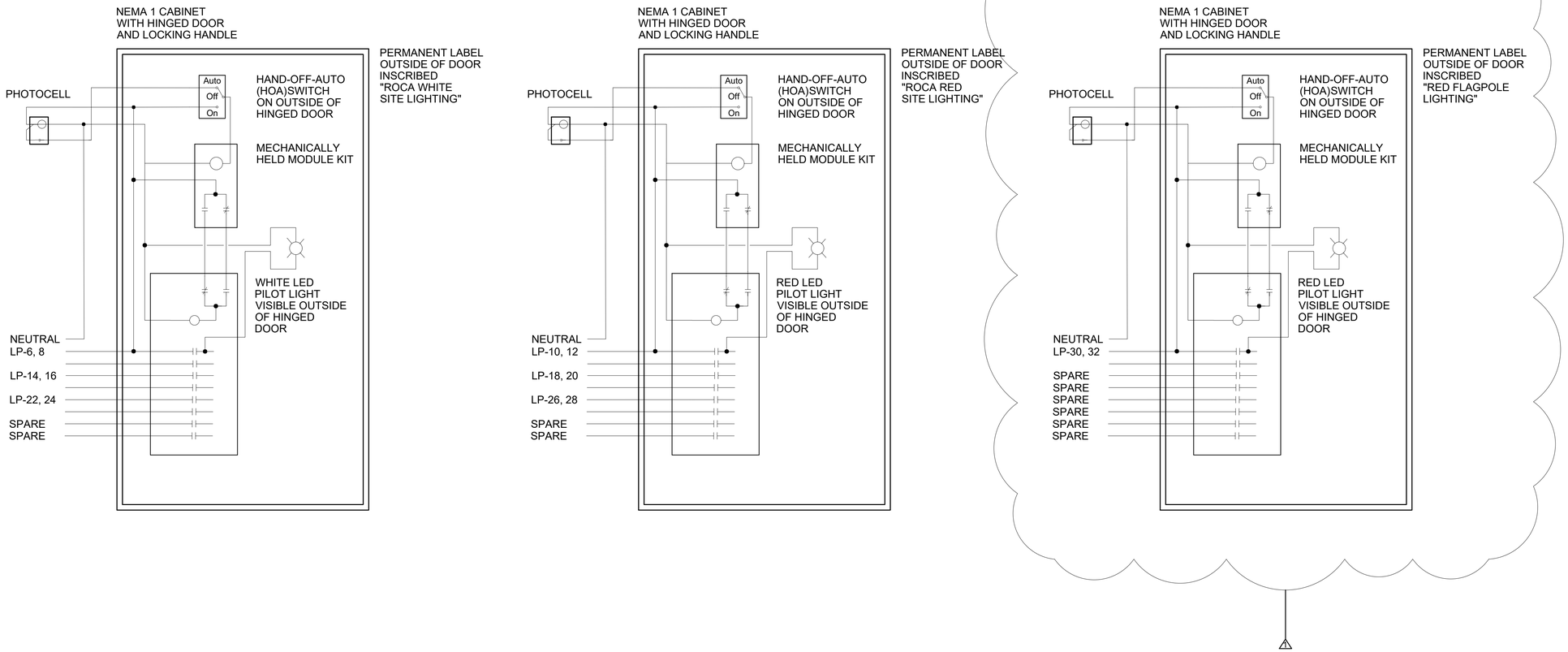

1 SITE LIGHTING CONTACTOR DIAGRAMS

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE
1	REVISED IN ACCORDANCE WITH AMENDMENT 0004	17AUG2023

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DESIGNED BY: H. TAYLOR
DRAWN BY: H. TAYLOR
CHECKED BY: R. DAVIS
SUBMITTED BY: SUPERVISORY
SIZE: ANSI D
ISSUE DATE: JUNE 2023
SOLICITATION NO.: W912HN-23-B-3001
CONTRACT NO.: -
CATEGORY CODE: 170-45-01

U.S. ARMY CORPS OF ENGINEERS
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FORT LIBERTY, NORTH CAROLINA
AUTOMATED MULTIPURPOSE TRAINING RANGE (MPTR)
FY23, PN 96182
VOLUME I - SITE

SITE LIGHTING CONTACTOR DIAGRAMS

SHEET ID

ES503

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