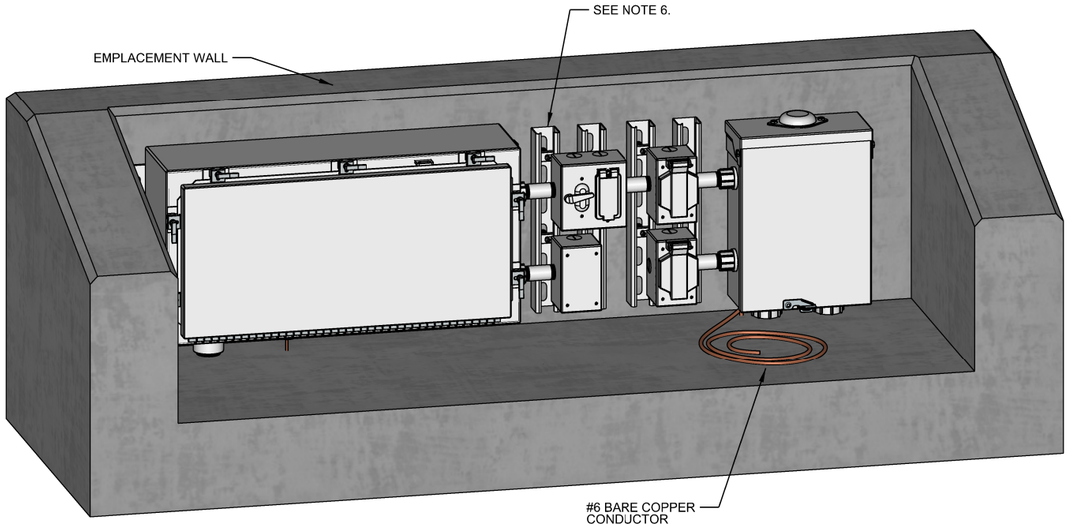
EXHIBIT P - ELECTRICAL AND COMMUNICATIONS



ISOMETRIC ELEVATION
STATIONARY INFANTRY TARGET
NOT TO SCALE

NOTES:

1. RE-USE EXISTING CABLES CONDUITS WITH POWER AND DATA CABLES ENTERING EMPLACEMENT.
2. INSTALL NEW CONDUIT HUB WITH CABLE SEAL FITTING IN NEW MTDP. SEE DETAIL ON E-07.
3. PROTECT POWER AND DATA CABLES DURING REMOVAL/DEMOLITION OF EXISTING DATA ENCLOSURE LOADCENTER. RE-TERMINATE DATA CABLES IN NEW MTDP ENCLOSURE AND POWER CABLES IN NEW LOADCENTER.
4. EQUIPMENT SHALL NOT BE MOUNTED HIGHER THAN 2" FROM TOP OF EMPLACEMENT WALL.
5. POWER TO DATA PANEL RECEPTACLE IN MTDP SHALL BE ROUTED THROUGH SINGLE POLE SINGLE THROW SWITCH.
6. OUTLET BOXES SHALL BE MOUNTED SO THAT CONDUIT RUNNING FROM OUTLETS TO LOADCENTER AND MTDP ENCLOSURES ARE PERPENDICULAR. BENDS AND CONDUIT OFFSETS TO ENTER ENCLOSURES ARE UNACCPETBLE.
7. TPR, APR AND DPR SHALL NOT BE GFCI PROTECTED.
8. PERMANENTLY LABEL THE EMPLACEMENT ACCORDING TO EXISTING LABELING SCHEME. COORDINATE LABELING WITH FT HOOD RANGE OPERATIONS.
9. PROVIDE SEAL FITTINGS AS SHOWN IN DETAILS ON SHEET E-07 FOR ALL CABLE ENTRANCES INTO NEMA 4 RATED ENCLOSURES.
10. INSTALL MYERS TYPE HUBS ON ALL CONDUIT PENETRATIONS TO SIDE OF ENCLOSURE.
11. ALL DIMENSIONS SHOWN IN INCHES UNLESS OTHERWISE NOTED.
12. PROVIDE TARGET AND AUXILIARY OUTLETS WITH NEMA 3R WET LOCATION COVERS MAKING OUTLETS SUITABLE FOR USE IN WET LOCATIONS. SEE DETAIL SHEET E-07 FOR WET LOCATION COVER. IN USE COVERS WITH COVERS INTENDED TO CLOSE OVER THE INSERTED CORD ARE NOT ACCEPTABLE AS THESE COVERS WILL NOT CLOSE OVER TARGET OR AUXILIARY CORDS.
13. DEVIATIONS TO THE EQUIPMENT SIZES, EQUIPMENT NUMBERS, RECEPTACLE COVERS, OR CABLE ENTRY METHODS INTO ENCLOSURES WILL REQUIRE RANGE TRAINING AND LAND PROGRAM HUNTSVILLE CENTER MANDATORY CENTER OF EXPERTISE APPROVAL.
14. SEE SHEET E-08 FOR ADDITIONAL INFORMATION ON MASTER TARGET DATA PANELS.

PANEL BOARD: **SIT** LOCATION: **XXXX** MOUNTED: **SURFACE** FEED: **BOTTOM**

125 AMP MAIN MAIN LUGS ONLY ASYM A.I.C MIN.: **10,000**

VOLTAGE: **240/120** PHASE: **1** WIRE: **3** RATING: **NEMA 3R**

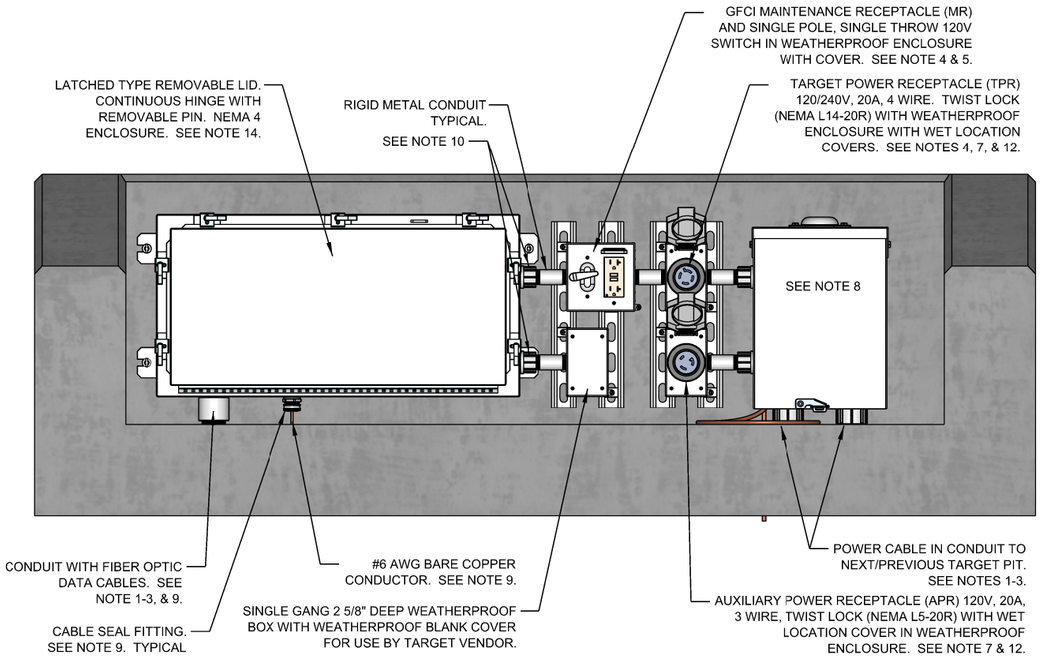
LOAD SERVED	NO. POLES	TRIP AMPS	WIRE SIZE	VA/ PHASE A	VA/ PHASE B	CKT NO.	CKT NO.	VA/ PHASE A	VA/ PHASE B	WIRE SIZE	TRIP AMPS	NO. POLES	LOAD SERVED
SURGE ARRESTOR	2	----	---	---		1	2	394		12	20	2	SIT (NEMA L14-20R & NEMA L5-20R)
					---				394				
SUB FEED THRU LUGS	2	----	---	---		5	6	50		12	20	1	TDP AND MR
					---		8		---	---	20	1	SPARE
				0	0			444	394				

TOTAL VA PHASE A: **444**
TOTAL VA PHASE B: **394**

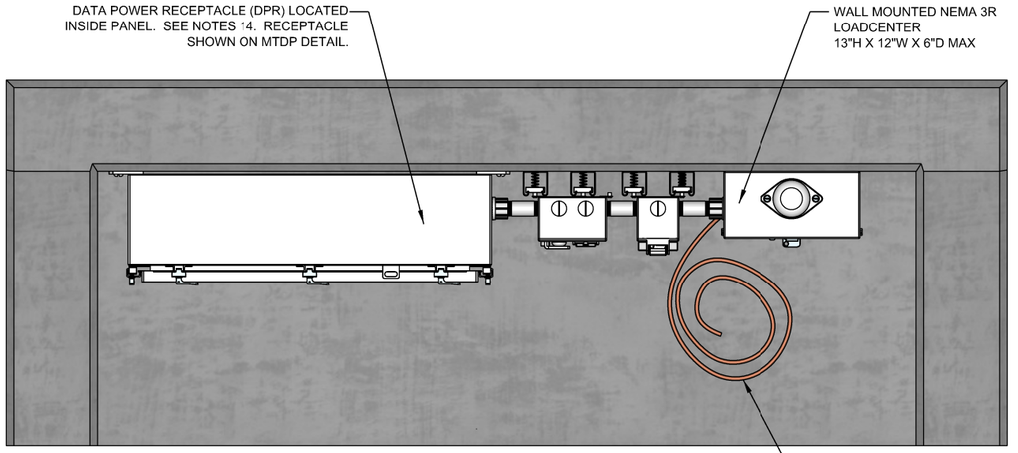
TOTAL CONNECTED WATTAGE: **838**

SUPPLIED FROM: **TRSF-XX**

TOTAL DEMAND AMPS: **3**



FRONT ELEVATION
STATIONARY INFANTRY TARGET
NOT TO SCALE



TOP ELEVATION
STATIONARY INFANTRY TARGET
NOT TO SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
SUBMITTED BY:
SIZE:
SOLICITATION NO.:
CONTRACT NO.:
PROJECT NUMBER:

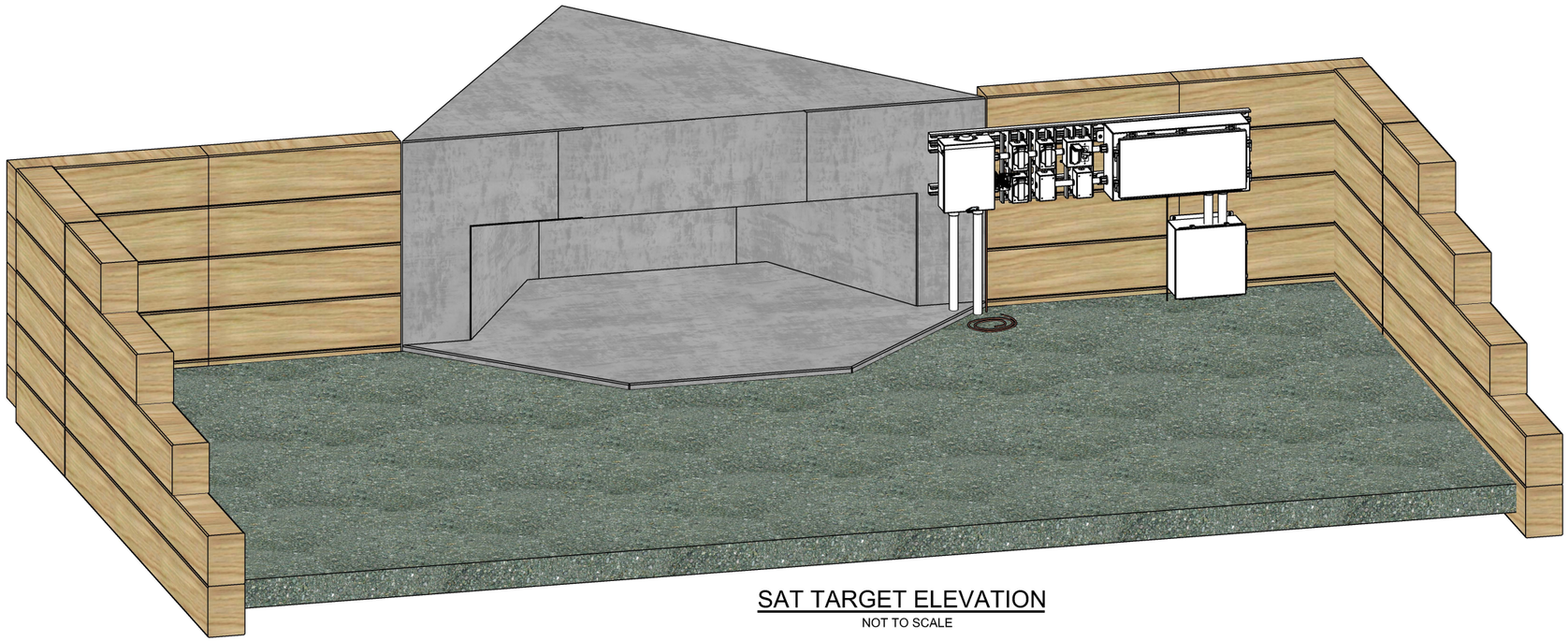
U.S. ARMY CORPS OF ENGINEERS
ENGINEERING & SUPPORT CENTER
HUNTSVILLE, ALABAMA

OCTOBER 2021

RANGE AND TRAINING LAND PROGRAM
FORT HOOD, TEXAS
DIGITAL MULTIPURPOSE TRAINING RANGE (DMPRC)

ELECTRICAL DETAILS
STATIONARY INFANTRY TARGET

SHEET ID
E-01

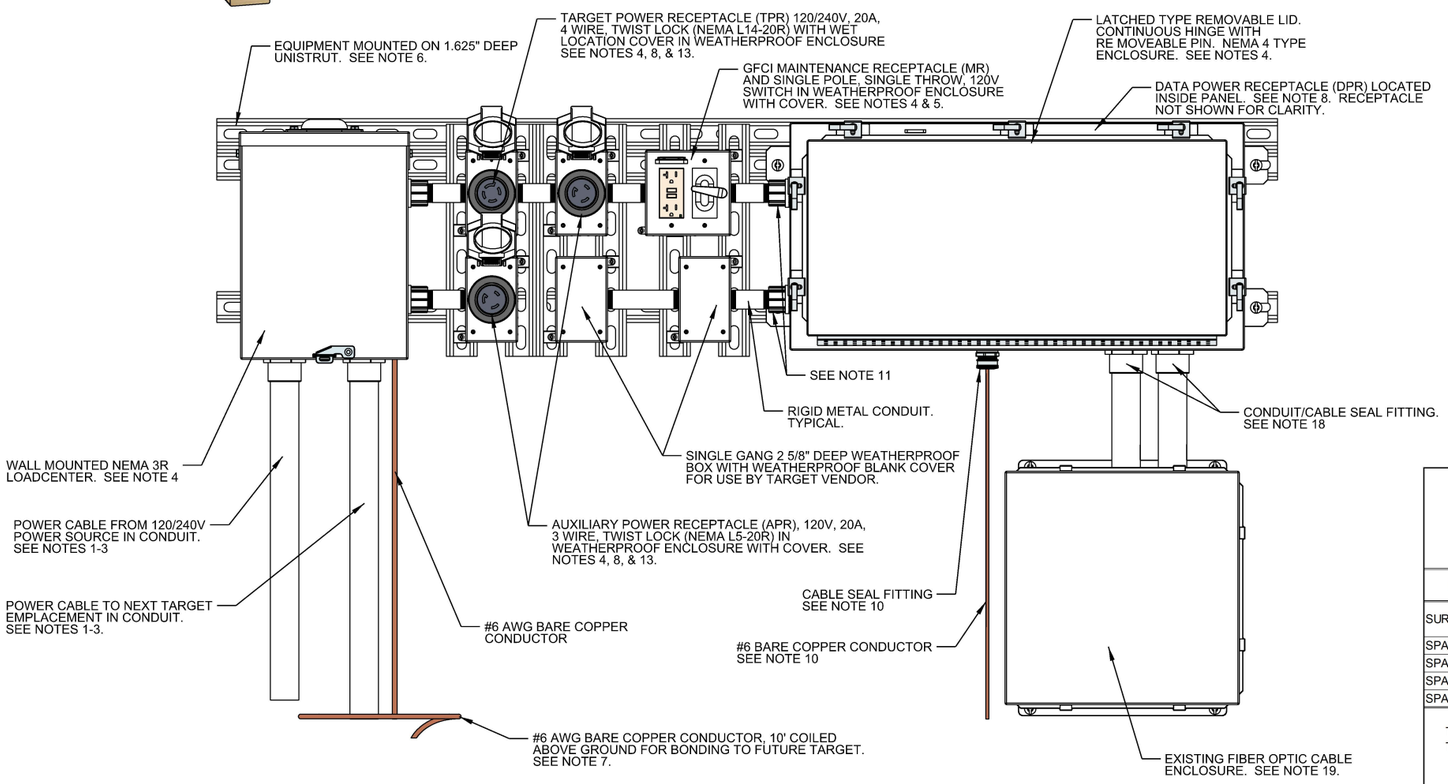


SAT TARGET ELEVATION

NOT TO SCALE

NOTES:

1. RE-USE EXISTING CABLES CONDUITS WITH POWER AND DATA CABLES ENTERING EMPLACEMENT.
2. INSTALL NEW CONDUIT HUB WITH CABLE SEAL FITTING IN NEW MTDP. SEE DETAIL ON E-07.
3. PROTECT POWER AND DATA CABLES DURING REMOVAL/DEMOLITION OF EXISTING DATA ENCLOSURE LOADCENTER. RE-TERMINATE DATA CABLES IN NEW MTDP ENCLOSURE AND POWER CABLES IN NEW LOADCENTER.
4. EQUIPMENT SHALL NOT BE MOUNTED HIGHER THAN 2" FROM TOP OF EMPLACEMENT WALL.
5. POWER TO DATA PANEL RECEPTACLE IN MTDP SHALL BE ROUTED THROUGH SINGLE POLE, SINGLE THROW SWITCH.
6. ALL EQUIPMENT SHALL BE MOUNTED ON 1.625" DEEP UNISTRUT. NO EQUIPMENT SHALL BE PERMITTED TO BE INSTALLED DIRECTLY TO CONCRETE WALL.
7. FOR FLANK TYPE SAT TARGET INCREASE THE LENGTH OF GROUND CABLE TO 18 FT.
8. TPR, APR AND DPR SHALL NOT BE GFCI PROTECTED.
9. PERMANENTLY LABEL THE EMPLACEMENT ACCORDING TO THE CIVIL AND ELECTRICAL DESIGNATIONS.
10. PROVIDE SEAL FITTINGS AS SHOWN IN DETAIL ON SHEET E-07 FOR ALL CABLE PENETRATIONS TO NEMA 4, 4X, OR 6P RATED ENCLOSURES.
11. INSTALL MYERS TYPE HUBS ON ALL CONDUIT PENETRATIONS TO SIDE OF ENCLOSURE.
12. ALL DIMENSIONS SHOWN IN INCHES UNLESS OTHERWISE NOTED.
13. PROVIDE TARGET AND AUXILIARY OUTLETS WITH NEMA 3R WET LOCATION COVERS MAKING OUTLETS SUITABLE FOR USE IN WET LOCATIONS. SEE DETAIL SHEET E-07 FOR WET LOCATION COVER. IN USE COVERS WITH COVERS INTENDED TO CLOSE OVER THE INSERTED CORD ARE NOT ACCEPTABLE AS THESE COVERS WILL NOT CLOSE OVER THE TARGET POWER OR AUXILIARY CORDS.
14. DEVIATIONS TO THE EQUIPMENT SIZES, EQUIPMENT NUMBERS, RECEPTACLE COVERS, OR CABLE ENTRY METHODS INTO ENCLOSURES WILL REQUIRE RANGE TRAINING AND LAND PROGRAM HUNTSVILLE CENTER MANDATORY CENTER OF EXPERTISE APPROVAL.
15. NOT USED.
16. SEE SHEET E-09 FOR ADDITIONAL INFORMATION ON MASTER TARGET DATA PANELS.
17. MOUNT EQUIPMENT AS LOW AS POSSIBLE ON THE FRONT WALL OF THE EMPLACEMENT. NO ELECTRICAL EQUIPMENT SHALL BE INSTALLED WITHIN 2" OF THE TOP OF THE EMPLACEMENT WALL.
18. CONDUIT/CABLE SEAL FITTING CONNECTION TO THE MTDP. SEE CONDUIT/CABLE SEAL FITTING DETAIL ON SHEET E-07.
19. EXISTING FIBER OPTIC CABLE ENCLOSURE. RE-USE EXISTING ENCLOSURE. SEAL ALL OPENINGS WITH NEMA 4 RATED PLUGS. PROVIDE NEW CONDUIT INTO NEW MTDP FOR TERMINATION OF EXISTING FIBER OPTIC CABLES INSIDE NEW MTDP.



SAT TARGET ENLARGED ELECTRICAL EQUIPMENT ELEVATION

NOT TO SCALE

PANEL BOARD: **SAT** LOCATION: **XXXXXXX** MOUNTED: **SURFACE** FEED: **BOTTOM**

XXXX MAIN MAIN LUGS ONLY ASYM A.I.C MIN.: **XXXXX**

VOLTAGE: **240/120** PHASE: **1** WIRE: **3** RATING: **NEMA 3R**

				VA/ PHASE				VA/ PHASE					
LOAD SERVED	NO. POLES	TRIP AMPS	WIRE SIZE	A	B	CKT NO.	CKT NO.	A	B	WIRE SIZE	TRIP AMPS	NO. POLES	LOAD SERVED
SURGE ARRESTOR	2	----	---	---	---	1	2	1325	---	12	20	2	SAT (NEMA L14-20R, 2-NEMA L5-20R)
									1325				
SPARE	1	20	---	---		5	6	50		12	20	1	TDP AND MR
SPACE						7	8		---	---	20	1	SPARE
SPACE						9	10					1	SPACE
SPACE						11	12					1	SPACE
				0	0			1375	1325				

TOTAL VA PHASE A: **1375**
TOTAL VA PHASE B: **1325**

TOTAL CONNECTED WATTAGE: **2,700**

SUPPLIED FROM: **TRSF-XX**

TOTAL DEMAND AMPS: **11**

US Army Corps of Engineers®

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CONTRACT NO.:
PROJECT NUMBER:

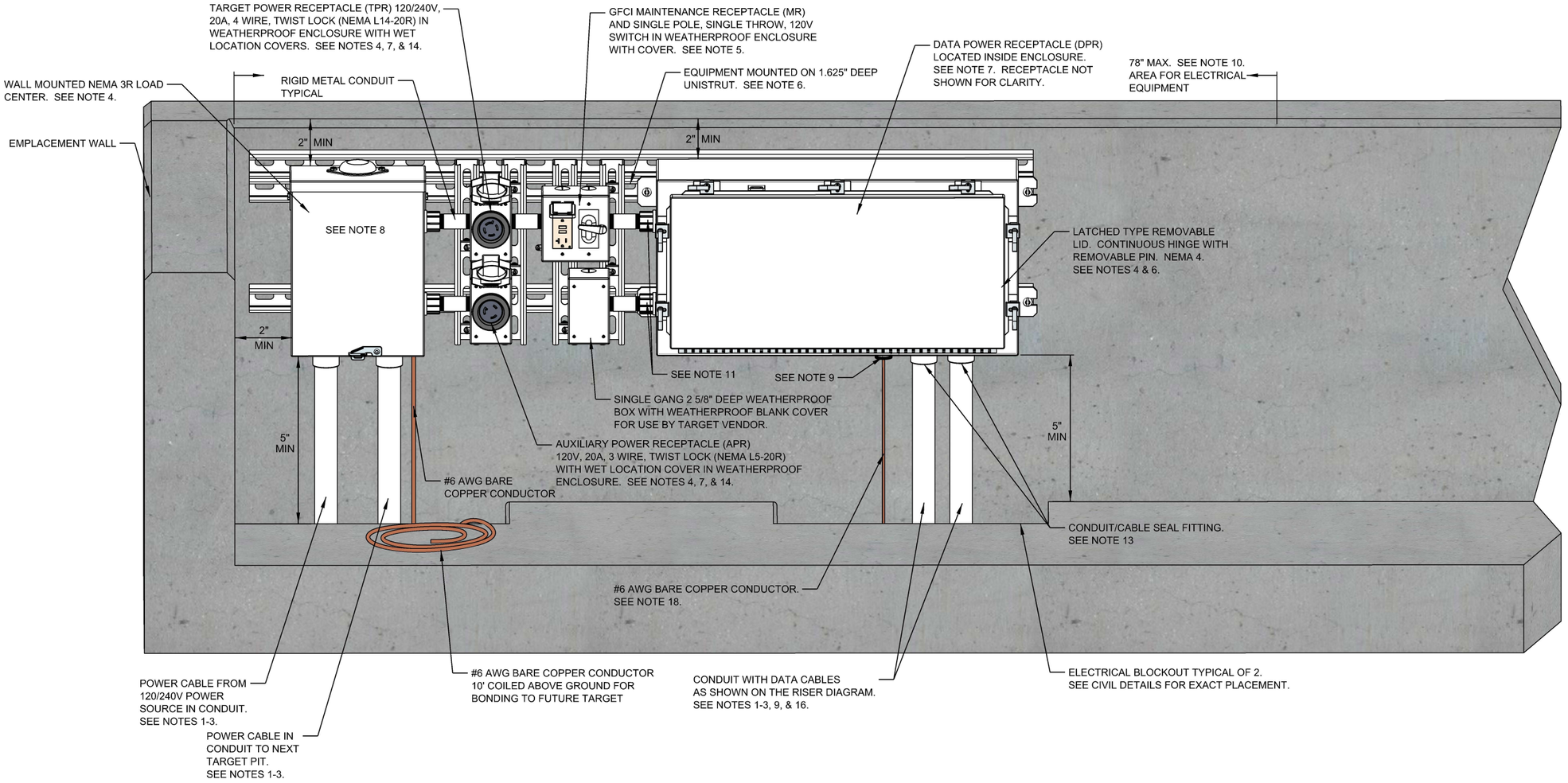
U.S. ARMY CORPS OF ENGINEERS
ENGINEERING & SUPPORT CENTER
HUNTSVILLE, ALABAMA

OCTOBER 2021

RANGE AND TRAINING LAND PROGRAM
MODERNIZED TARGET SYSTEMS
DIGITAL MULTIPURPOSE TRAINING RANGE (DMPRC)

ELECTRICAL DETAILS
STATIONARY ARMOR TARGET

SHEET ID
E-02



ELEVATION
MOVING INFANTRY TARGET

NOT TO SCALE

PANEL BOARD: **MIT** LOCATION: **XXXXXXX** MOUNTED: **SURFACE** FEED: **BOTTOM**

125 MAIN MAIN LUGS ONLY ASYM A.I.C MIN.: **10,000**

VOLTAGE: **240/120** PHASE: **1** WIRE: **3** RATING: **NEMA 3R**

				VA/ PHASE				VA/ PHASE					
LOAD SERVED	NO. POLES	TRIP AMPS	WIRE SIZE	A	B	CKT NO.	CKT NO.	A	B	WIRE SIZE	TRIP AMPS	NO. POLES	LOAD SERVED
SURGE ARRESTOR	2	----	---	---		1	2	1000		12	20	2	MIT (NEMA L14-20R & NEMA L5-20R)
					---				1000				
SPARE	1	20	---	---		5	6	50		12	20	1	TDP AND MR
SPACE						7	8		---	---	20	1	SPARE
SPACE						9	10					1	SPACE
SPACE						11	12					1	SPACE
				0	0			1050	1000				

TOTAL VA PHASE A: **1050**
TOTAL VA PHASE B: **1000**

TOTAL CONNECTED WATTAGE: **2,050**

SUPPLIED FROM: **TRSF-XX**

TOTAL DEMAND AMPS: **9**

NOTES:

1. CONDUIT TO EXTEND 5 FEET BEYOND EMPLACEMENT.
2. CABLES/CONDUITS ARE ROUTED FROM SIDE OF BERM TO PREVENT CABLE DAMAGE DURING MAINTENANCE OF BERM.
3. ROUTE UNDER SLAB. POWER AND DATA INSTALLED IN SAME TRENCH.
4. EQUIPMENT SHALL NOT BE MOUNTED HIGHER THAN 2" FROM TOP OF EMPLACEMENT WALL.
5. POWER TO DATA PANEL RECEPTACLE IN MTDP SHALL BE ROUTED THROUGH SINGLE POLE SINGLE THROW SWITCH.
6. ALL EQUIPMENT SHALL BE MOUNTED ON 1.625" DEEP UNISTRUT. NO EQUIPMENT SHALL BE PERMITTED TO BE INSTALLED DIRECTLY TO CONCRETE WALL.
7. TPR, APR AND DPR SHALL NOT BE GFCI PROTECTED.
8. PERMANENTLY LABEL THE EMPLACEMENT ACCORDING TO THE CIVIL AND ELECTRICAL DESIGNATIONS.
9. PROVIDE SEAL FITTINGS AS SHOWN IN DETAIL ON SHEET E-07 FOR ALL CABLE PENETRATIONS TO NEMA 4, 4X, OR 6P RATED ENCLOSURES.
10. INSTALL POWER AND DATA ON THE FIRST 78" OF THE FRONT WALL CLOSEST TO THE DIRECTION OF FIRE.
11. INSTALL MYERS TYPE HUBS ON ALL CONDUIT PENETRATIONS INTO THE SIDE OF THE DATA ENCLOSURE.
12. ALL DIMENSIONS SHOWN IN INCHES UNLESS OTHERWISE NOTED.
13. CONDUIT/CABLE SEAL FITTING CONNECTION TO THE MTDP. SEE CONDUIT/CABLE SEAL FITTING DETAIL ON SHEET E-07.
14. PROVIDE TARGET AND AUXILIARY OUTLETS WITH NEMA 3R WET LOCATION COVERS MAKING OUTLETS SUITABLE FOR USE IN WET LOCATIONS. SEE DETAIL SHEET E-07 FOR WET LOCATION COVER. IN USE COVERS WITH COVERS INTENDED TO CLOSE OVER THE INSERTED CORD ARE NOT ACCEPTABLE AS THESE COVERS WILL NOT CLOSE OVER THE TARGET POWER OR AUXILIARY CORDS.
15. DEVIATIONS TO THE EQUIPMENT SIZES, EQUIPMENT NUMBERS, RECEPTACLE COVERS, OR CABLE ENTRY METHODS INTO ENCLOSURES WILL REQUIRE RANGE TRAINING LAND PROGRAM, HUNTSVILLE CENTER MANDATORY CENTER OF EXPERTISE APPROVAL.
16. STUB UP CONDUIT AS CLOSE AS PRACTICAL TO CABLE FITTING.
17. SEE SHEET E-09 FOR ADDITIONAL INFORMATION ON MASTER TARGET DATA PANELS.
18. PROVIDE GROUNDING IN ACCORDANCE WITH EMPLACEMENT GROUNDING DETAIL ON SHEET E-07.

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SIZE:

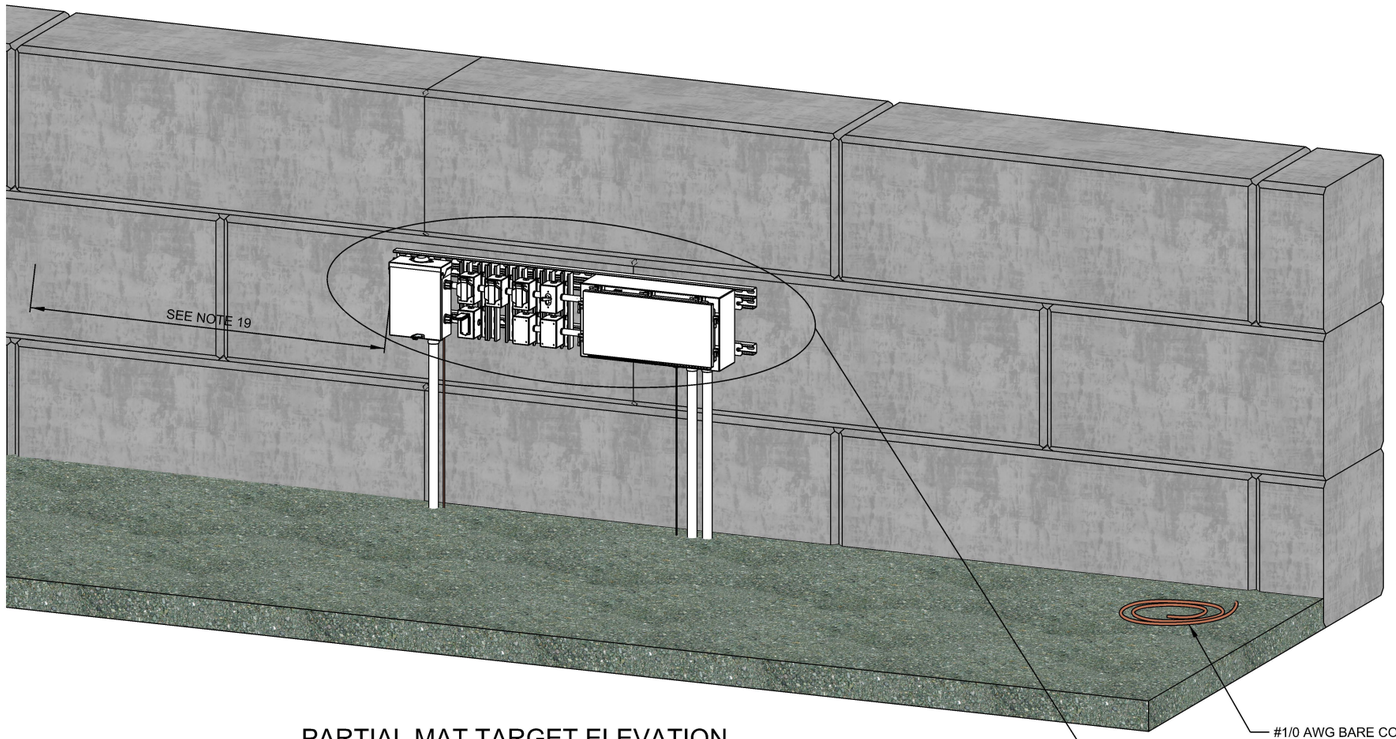
U.S. ARMY CORPS OF ENGINEERS
ENGINEERING & SUPPORT CENTER
HUNTSVILLE, ALABAMA

OCTOBER 2021

RANGE AND TRAINING LAND PROGRAM
ARMY TRAINING REQUIREMENTS
DIGITAL MULTIPURPOSE TRAINING RANGE (DMPRC)

MOVING INFANTRY TARGET
ELECTRICAL DETAILS

SHEET ID
E-03



PARTIAL MAT TARGET ELEVATION

NOT TO SCALE

PANEL BOARD: **MAT** LOCATION: **XXXXXXX** MOUNTED: **SURFACE** FEED: **BOTTOM**

235 MAIN MAIN LUGS ONLY ASYM A.I.C MIN.: **10,000**

VOLTAGE: **240/120** PHASE: **1** WIRE: **3** RATING: **NEMA 3R**

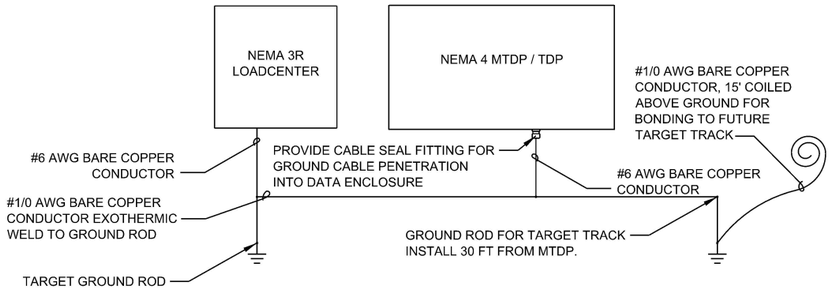
LOAD SERVED	NO. POLES	TRIP AMPS	WIRE SIZE	VA/ PHASE A	VA/ PHASE B	CKT NO.	CKT NO.	VA/ PHASE A	VA/ PHASE B	WIRE SIZE	TRIP AMPS	NO. POLES	LOAD SERVED
SURGE ARRESTOR	2	----	---	---		1	2	1900		12	20	2	MAT (NEMA L14-20R, 2-NEMA L5-20R)
					---				1900				
SPARE	1	20	---	---		5	6	50		12	20	1	TDP AND MR
SPACE						7	8		---	---	20	1	SPARE
SPACE						9	10					1	SPACE
SPACE						11	12					1	SPACE
				0	0			1950	1900				

TOTAL VA PHASE A: **1950**
TOTAL VA PHASE B: **1900**

TOTAL CONNECTED WATTAGE: **3,850**

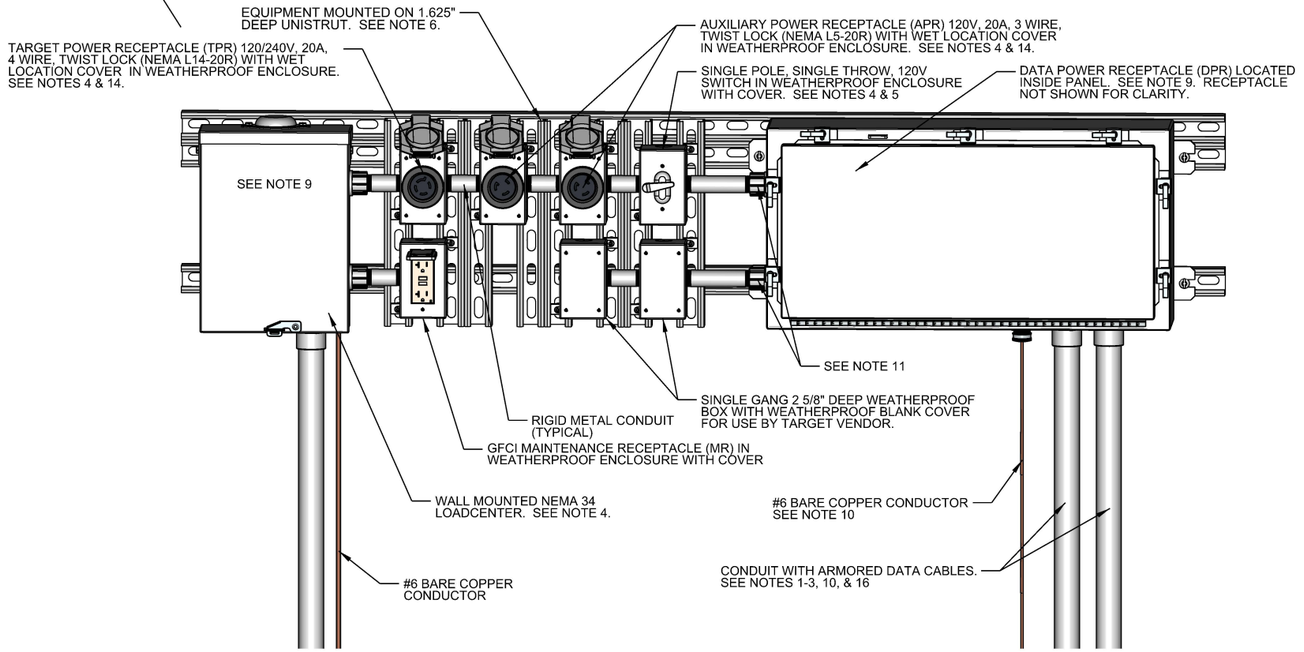
SUPPLIED FROM: **TRSF-XX**

TOTAL DEMAND AMPS: **16**



EMPLACEMENT GROUNDING DETAIL

NOT TO SCALE



MAT TARGET ENLARGED ELECTRICAL EQUIPMENT ELEVATION

NOT TO SCALE

NOTES:

1. CONDUIT TO EXTEND 5 FEET BEYOND EMPLACEMENT.
2. CABLES/CONDUITS ARE ROUTED FROM SIDE OF BERM TO PREVENT CABLE DAMAGE DURING MAINTENANCE OF BERM.
3. ROUTE UNDER SLAB. POWER AND DATA INSTALLED IN SAME TRENCH.
4. EQUIPMENT SHALL NOT BE MOUNTED HIGHER THAN 2" FROM TOP OF EMPLACEMENT WALL.
5. POWER TO DATA PANEL RECEPTACLE IN MTDP SHALL BE ROUTED THROUGH SIGN LE POLE, SINGLE THROW SWITCH.
6. ALL EQUIPMENT SHALL BE MOUNTED ON 1.625" DEEP UNISTRUT. NO EQUIPMENT SHALL BE PERMITTED TO BE INSTALLED DIRECTLY TO THE CONCRETE WALL.
7. NOT USED.
8. TPR, APR AND DPR SHALL NOT BE GFCI PROTECTED.
9. PERMANENTLY LABEL THE EMPLACEMENT ACCORDING TO THE CIVIL AND ELECTRICAL DESIGNATIONS.
10. PROVIDE SEAL FITTINGS AS SHOWN IN DETAIL ON SHEET E-07 FOR ALL CABLE PENETRATIONS TO NEMA 4, 4X, OR 6P RATED ENCLOSURES.
11. INSTALL MYERS TYPE HUBS ON ALL CONDUIT PENETRATIONS TO SIDE OF ENCLOSURE.
12. ALL DIMENSIONS SHOWN IN INCHES UNLESS OTHERWISE NOTED.
13. IF TARGET IS BATTERY OPERATED WITH NO AC POWER PROVIDED, THE TARGET GROUND ROD SHALL BE INSTALLED WITH A 15' COILED #1/0 AWG BARE COPPER GROUND CABLE FOR FUTURE BONDING TO THE TARGET MECHANISM.
14. PROVIDE TARGET AND AUXILIARY OUTLETS WITH NEMA 3R WET LOCATION COVERS MAKING OUTLETS SUITABLE FOR USE IN WET LOCATIONS. SEE DETAIL SHEET E-07 FOR WET LOCATION COVER. IN USE COVERS WITH COVERS INTENDED TO CLOSE OVER THE INSERTED CORD ARE NOT ACCEPTABLE AS THESE COVERS WILL NOT CLOSE OVER THE TARGET POWER OR AUXILIARY CORDS.
15. DEVIATIONS TO THE EQUIPMENT SIZES, EQUIPMENT NUMBERS, RECEPTACLE COVERS, OR CABLE ENTRY METHODS INTO ENCLOSURES WILL REQUIRE RANGE TRAINING AND LAND PROGRAM HUNTSVILLE CENTER MANDATORY CENTER OF EXPERTISE APPROVAL.
16. CONDUIT STUBBED UP AS CLOSE TO CABLE SEAL FITTING AS POSSIBLE.
17. EQUIPMENT IS SHOWN AT THE PREFERRED MOUNTING HEIGHT. UNDER NO CIRCUMSTANCE SHOULD ANY EQUIPMENT BE INSTALLED SUCH THAT THE TOP OF THE EQUIPMENT IS LESS THAN 2" FROM THE TOP OF THE EMPLACEMENT WALL.
18. SEE SHEET E-09 FOR ADDITIONAL INFORMATION ON MASTER TARGET DATA PANELS.
19. INSTALL NEW TARGET EQUIPMENT APPROXIMATELY 20 FT FROM EXISTING MAT EQUIPMENT AND POWER CENTER EQUIPMENT. EXTEND POWER AND DATA FROM POWER CENTER DISTRIBUTION PANEL AND FIBER PATCH PANEL IN PVC CONDUIT.

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ISSUE DATE:
SOLICITATION NO.:
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U.S. ARMY CORPS OF ENGINEERS
ENGINEERING & SUPPORT CENTER
HUNTSVILLE, ALABAMA

OCTOBER 2021

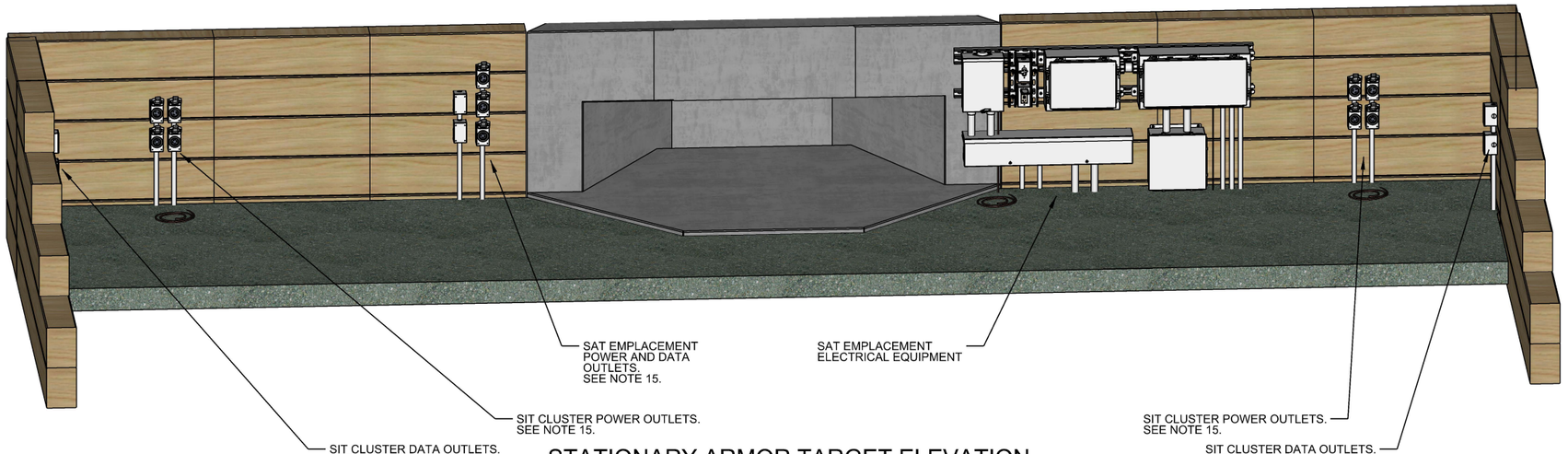
RANGE AND TRAINING LAND PROGRAM
FIXED FACILITY TRAINING RANGE
DIGITAL MULTIPURPOSE TRAINING RANGE (DMPRC)

ELECTRICAL DETAILS

MOVING ARMOR TARGET

SHEET ID

E-04

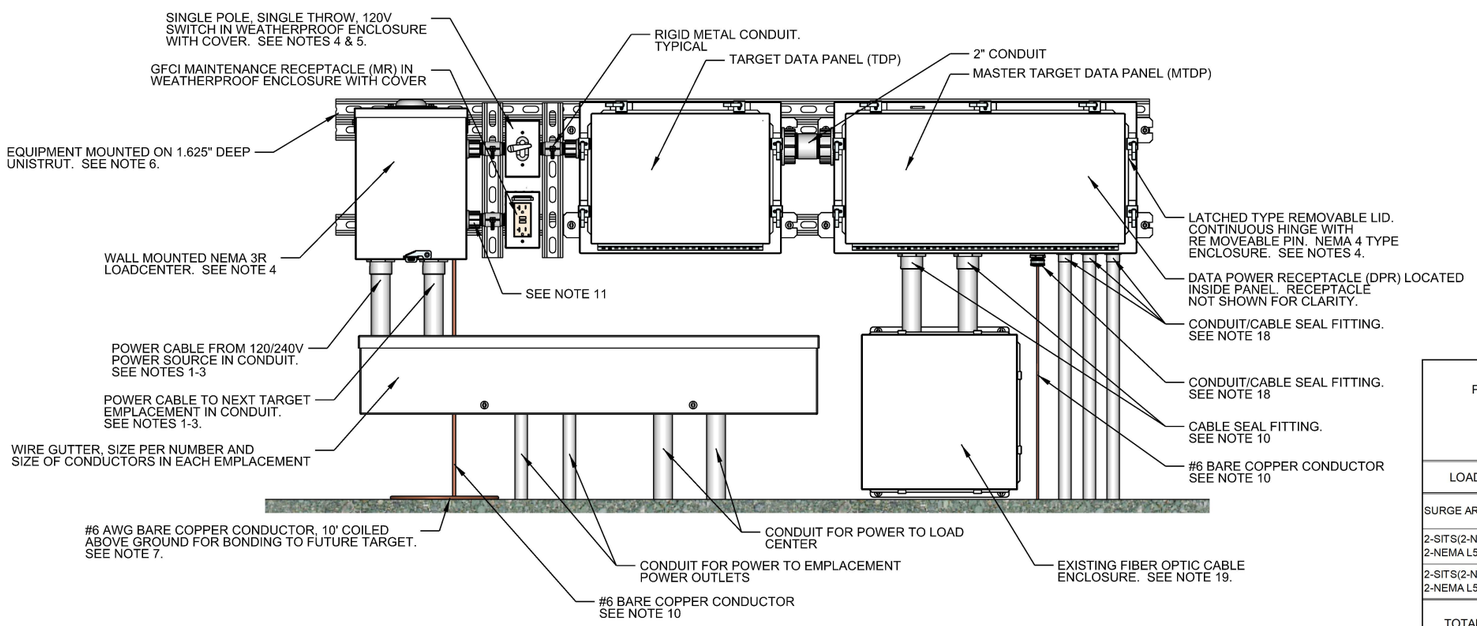


STATIONARY ARMOR TARGET ELEVATION

NOT TO SCALE

NOTES:

1. RE-USE EXISTING CABLES CONDUITS WITH POWER AND DATA CABLES ENTERING EMPLACEMENT.
2. INSTALL NEW CONDUIT HUB WITH CABLE SEAL FITTING IN NEW MTDP. SEE DETAIL ON E-07.
3. PROTECT POWER AND DATA CABLES DURING REMOVAL/DEMOLITION OF EXISTING DATA ENCLOSURE LOADCENTER. RE-TERMINATE DATA CABLES IN NEW MTDP ENCLOSURE AND POWER CABLES IN NEW LOADCENTER.
4. EQUIPMENT SHALL NOT BE MOUNTED HIGHER THAN 2" FROM TOP OF EMPLACEMENT WALL.
5. POWER TO DATA PANEL RECEPTACLE IN MTDP SHALL BE ROUTED THROUGH SINGLE POLE, SINGLE THROW SWITCH.
6. ALL EQUIPMENT SHALL BE MOUNTED ON 1.625" DEEP UNISTRUT. NO EQUIPMENT SHALL BE PERMITTED TO BE INSTALLED DIRECTLY TO CONCRETE WALL.
7. FOR FLANK TYPE SAT TARGET INCREASE THE LENGTH OF GROUND CABLE TO 18 FT.
8. TPR, APR AND DPR SHALL NOT BE GFCI PROTECTED.
9. PERMANENTLY LABEL THE EMPLACEMENT ACCORDING TO THE CIVIL AND ELECTRICAL DESIGNATIONS.
10. PROVIDE SEAL FITTINGS AS SHOWN IN DETAIL ON SHEET E-07 FOR ALL CABLE PENETRATIONS TO NEMA 4, 4X, OR 6P RATED ENCLOSURES.
11. INSTALL MYERS TYPE HUBS ON ALL CONDUIT PENETRATIONS TO SIDE OF ENCLOSURE.
12. ALL DIMENSIONS SHOWN IN INCHES UNLESS OTHERWISE NOTED.
13. PROVIDE TARGET AND AUXILIARY OUTLETS WITH NEMA 3R WET LOCATION COVERS MAKING OUTLETS SUITABLE FOR USE IN WET LOCATIONS. SEE DETAIL SHEET E-07 FOR WET LOCATION COVER. IN USE COVERS WITH COVERS INTENDED TO CLOSE OVER THE INSERTED CORD ARE NOT ACCEPTABLE AS THESE COVERS WILL NOT CLOSE OVER THE TARGET POWER OR AUXILIARY CORDS.
14. DEVIATIONS TO THE EQUIPMENT SIZES, EQUIPMENT NUMBERS, RECEPTACLE COVERS, OR CABLE ENTRY METHODS INTO ENCLOSURES WILL REQUIRE RANGE TRAINING AND LAND PROGRAM HUNTSVILLE CENTER MANDATORY CENTER OF EXPERTISE APPROVAL.
15. SEE SHEET E-06 FOR DETAILS ON SAT POWER AND DATA OUTLETS, SIT POWER OUTLETS, AND SIT DATA OUTLETS.
16. SEE SHEET E-09 FOR ADDITIONAL INFORMATION ON MASTER TARGET DATA PANELS.
17. MOUNT EQUIPMENT AS LOW AS POSSIBLE ON THE FRONT WALL OF THE EMPLACEMENT. NO ELECTRICAL EQUIPMENT SHALL BE INSTALLED WITHIN 2" OF THE TOP OF THE EMPLACEMENT WALL.
18. CONDUIT/CABLE SEAL FITTING CONNECTION TO THE MTDP. SEE CONDUIT/CABLE SEAL FITTING DETAIL ON SHEET E-07.
19. EXISTING FIBER OPTIC CABLE ENCLOSURE. RE-USE EXISTING ENCLOSURE. SEAL ALL OPENINGS WITH NEMA 4 RATED PLUGS. PROVIDE NEW CONDUIT INTO NEW MTDP FOR TERMINATION OF EXISTING FIBER OPTIC CABLES INSIDE NEW MTDP.



STATIONARY ARMOR TARGET ELECTRICAL EQUIPMENT ELEVATION

NOT TO SCALE

PANEL BOARD: **SAT-SIT CLUSTER** LOCATION: **XXXXXXX** MOUNTED: **SURFACE** FEED: **BOTTOM**

125 MAIN MAIN LUGS ONLY ASYM A.I.C MIN.: **10,000**

VOLTAGE: **240/120** PHASE: **1** WIRE: **3** RATING: **NEMA 3R**

LOAD SERVED	NO. POLES	TRIP AMPS	WIRE SIZE	VA/ PHASE A	VA/ PHASE B	CKT NO.	CKT NO.	VA/ PHASE A	VA/ PHASE B	WIRE SIZE	TRIP AMPS	NO. POLES	LOAD SERVED
SURGE ARRESTOR	2	----	---	---		1	2	1325		12	20	2	SAT (NEMA L14-20R, 2-NEMA L5-20R)
					---				1325				
2-SITS(2-NEMA L14-20R, 2-NEMA L5-20R)	2	20	12	788		5	6	50		12	20	1	TDP AND MR
					788	7	8		---	---	20	1	SPARE
2-SITS(2-NEMA L14-20R, 2-NEMA L5-20R)	2	20	12	788		9	10	---		---	20	1	SPARE
					788	11	12					1	SPACE
				1576	1576			1375	1325				

TOTAL VA PHASE A: **2951**
TOTAL VA PHASE B: **2901**

TOTAL CONNECTED WATTAGE: **5,852**

SUPPLIED FROM: **TRSF-XX**

TOTAL DEMAND AMPS: **24**

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U.S. ARMY CORPS OF ENGINEERS
ENGINEERING & SUPPORT CENTER
HUNTSVILLE, ALABAMA

OCTOBER 2021

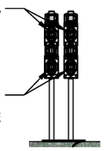
RANGE AND TRAINING LAND PROGRAM
MILITARY MUNITIONS DESIGN CENTER
DIGITAL MULTIPURPOSE TRAINING RANGE (DMPRC)

ELECTRICAL DETAILS
STATIONARY ARMOR TARGET WITH
4-MAN STATIONARY INFANTRY TARGET CLUSTER

SHEET ID
E-05

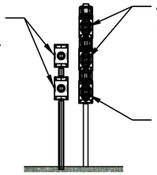
STATIONARY INFANTRY TARGET CLUSTER DATA OUTLETS ELEVATION

NOT TO SCALE



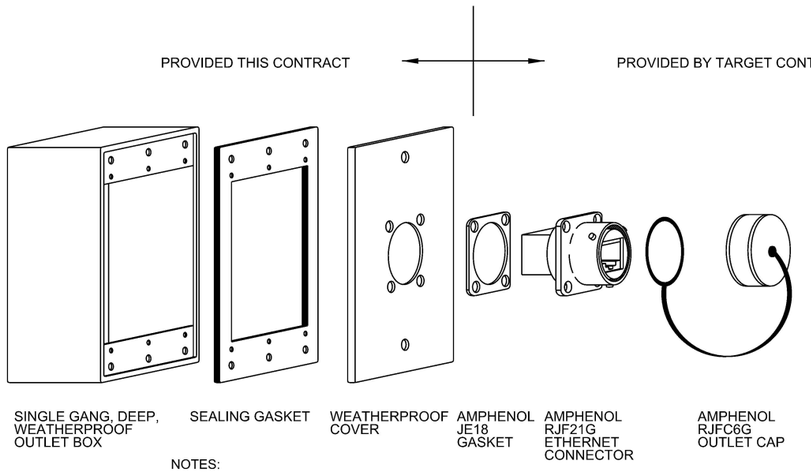
STATIONARY INFANTRY TARGET CLUSTER POWER OUTLETS ELEVATION

NOT TO SCALE



STATIONARY ARMOR TARGET POWER AND DATA OUTLETS ELEVATION

NOT TO SCALE



NOTES:

1. CONSTRUCTION CONTRACTOR TO PROVIDE BLANK WEATHERPROOF COVER. ALL OPENINGS IN COVER FOR WEAHTERPROOF DATA CONNECTOR WILL BE DONE BY THE TARGET VENDOR DURING THE TARGET INSTALLATION.

DATA OUTLET RESPONSIBILITY REFERENCE DETAIL

NOT TO SCALE

NOTES:

1. TARGET DATA OUTLET SHALL HAVE 6" - 12" OF CAT 6 CABLE COILED AND TERMINATED WITH A MAIL RJ-45 CONNECTOR. INSTALL SEALING GASKET AND WEATHERPROOF COVER. ALL OTHER DATA OUTLET RQUIREMENTS WILL BE INSTALLED BY TARGET VENDOR UNDER A SEPERATE COTRACT. SEE DATA OUTLET RESPONSIBILITY REFERENCE DETAIL FOR MORE INFORMATION ON HOW DATA OUTLET WILL BE INSTALLED.
2. ALL OUTLETS SHALL BE MOUNTED ON THE EMPLACEMENT WALL AS LOW AS POSSIBLE. UNDER NO CIRCUMSTANCE SHALL THE OUTLETS BE INSTALLED WITHIN 2" FROM THE TOP OF THE EMPLACEMENT WALL.
3. TARGET POWER OUTLETS AND AUXILIARY POWER OUTLETS SHALL NOT BE GFCI PROTECTED.
4. PROVIDE TARGET AND AUXILIARY OUTLETS WITH NEMA 3R WET LOCATION COVERS MAKING OUTLETS SUITABLE FOR USE IN WET LOCATIONS. SEE DETAIL SHEET E-07 FOR WET LOCATION COVER. IN USE COVERS WITH COVERS INTENDED TO CLOSE OVER THE INSERTED CORD ARE NOT ACCEPTABLE AS THESE COVERS WILL NOT CLOSE OVER THE TARGET POWER OR AUXILIARY CORDS.

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U. S. ARMY CORPS OF ENGINEERS
ENGINEERING & SUPPORT CENTER
HUNTSVILLE, ALABAMA

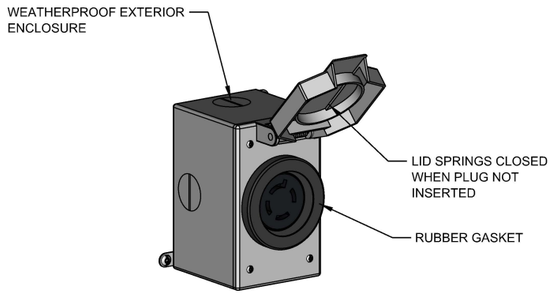
OCTOBER 2021

RANGE AND TRAINING LAND PROGRAM
FORT HUACHUCA, ARIZONA
DIGITAL MULTIPURPOSE TRAINING RANGE (DMPRC)

ELECTRICAL DETAILS
STATIONARY ARMOR TARGET WITH
4-MAN STATIONARY INFANTRY TARGET CLUSTER

SHEET ID

E-06

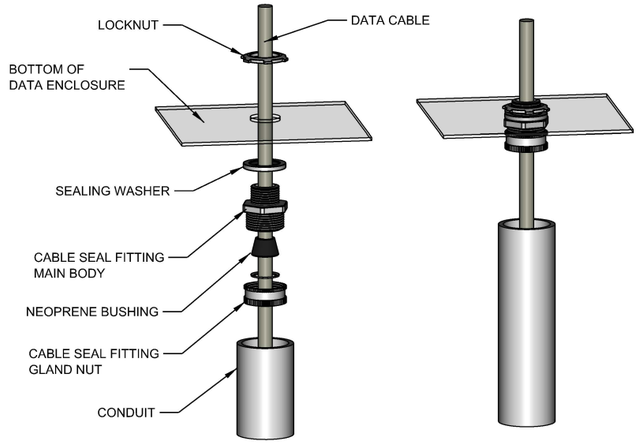


NOTE:

WEATHERPROOF, IN-USE WET LOCATION COVERS SHALL BE PROVIDED WITH ETHYLENE PROPYLENE RUBBER GASKETS AROUND THE FACE OF THE RECEPTACLE TO PREVENT THE ENTRANCE OF MOISTURE AND DIRT WITH COVER OPEN AND PLUG INSERTED. COVER SHALL ACCEPT MALE PLUG WITH DIAMETER OF 1.8" - 1.95".

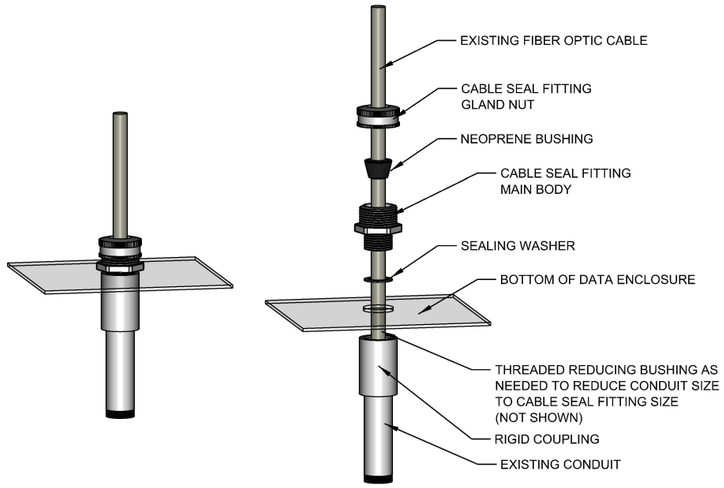
WET LOCATION RECEPTACLE COVER

NOT TO SCALE



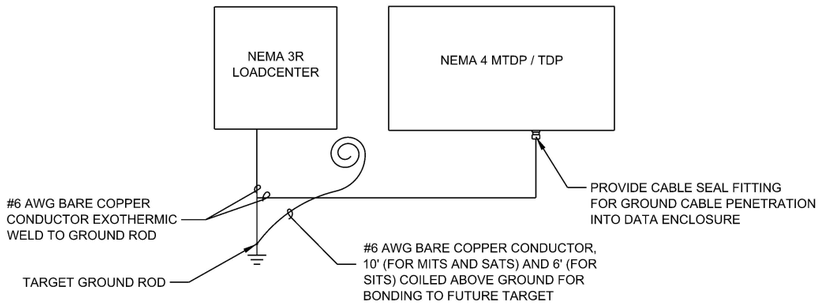
CABLE SEAL FITTING DETAIL

NOT TO SCALE



CONDUIT / CABLE SEAL FITTING DETAIL

NOT TO SCALE



NOTE:

THIS DETAIL DEPICTS GROUNDING REQUIREMENTS FOR SITS, SATS, AND MITS. SEE SHEET E-4 FOR MAT GROUNDING DETAIL.

EMPLACEMENT GROUNDING DETAIL

NOT TO SCALE

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ENGINEERING & SUPPORT CENTER
HUNTSVILLE, ALABAMA

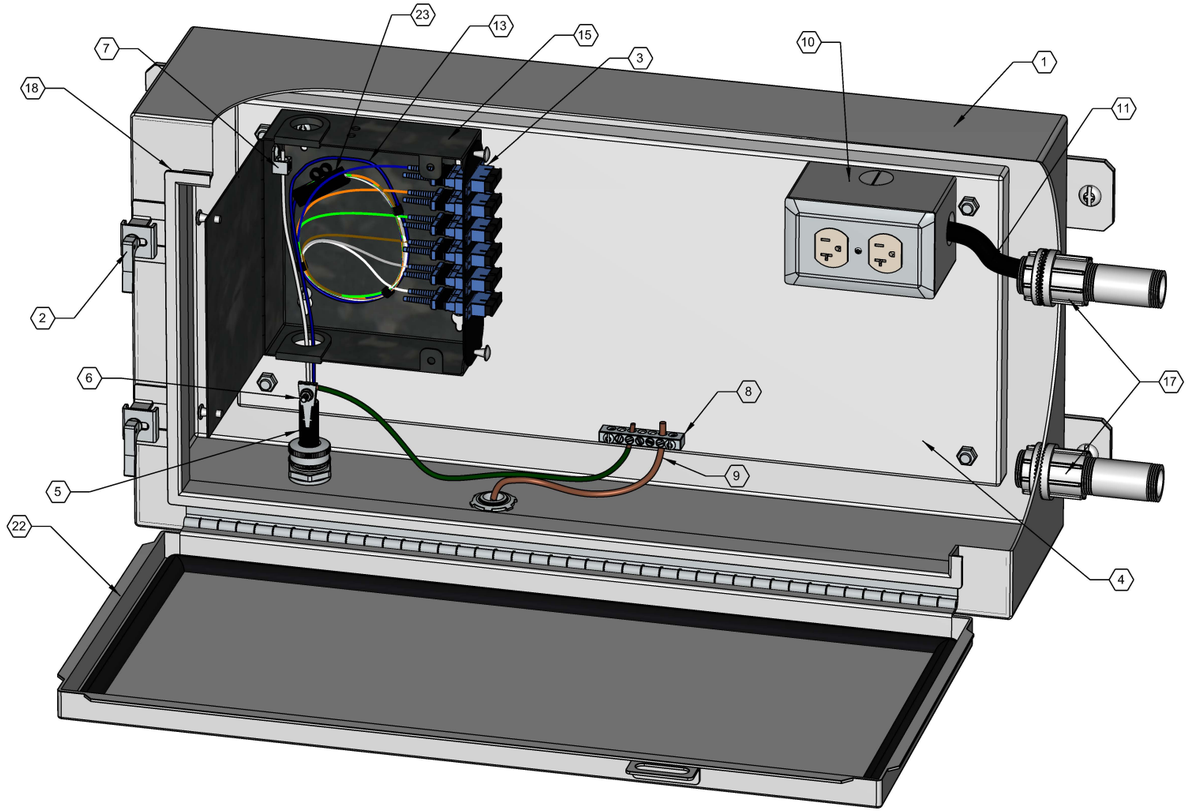
OCTOBER 2021

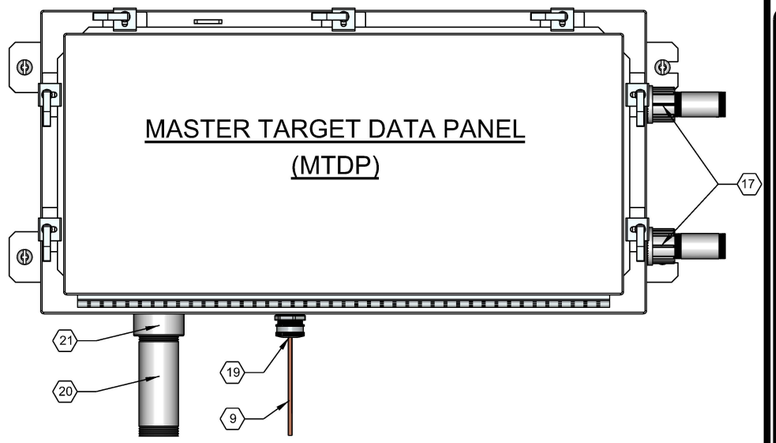
RANGE AND TRAINING LAND PROGRAM
FORT HUACHUCA, ARIZONA
DIGITAL MULTIPURPOSE TRAINING RANGE (DMPRC)

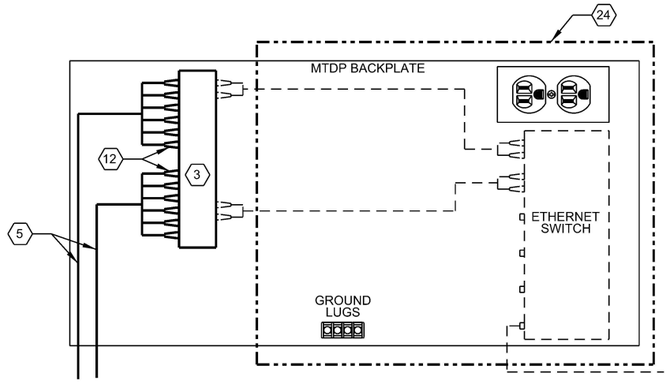
TYPICAL TARGET EMPLACEMENT
ELECTRICAL DETAILS

SHEET ID

E-07







TYPICAL MASTER TARGET DATA PANEL (MTDP) DETAIL AT TARGET EMPLACEMENT

NOT TO SCALE

KEYED NOTES REPRESENTED WITH ⟨#⟩:

1. ENCLOSURE SHALL BE 16 GAUGE MINIMUM GALVANIZED STEEL SHEET METAL WITH WALL MOUNT BRACKETS. ENCLOSURE SHALL CARRY A NEMA 4 RATING AND BE TESTED BY UL OR OTHER APPROVED TESTING AGENCY.
2. PROVIDE ENCLOSURE WITH FAST OPERATING CLAMP ASSEMBLY. BOLT TYPE CLAMPS ARE NOT ACCEPTABLE.
3. INJECTION-MOLDED PLASTIC CONNECTOR 12 PORT PATCH PANEL.
4. METAL BACK PLATE TO SECURE COMPONENTS INSIDE ENCLOSURE.
5. 6-STRAND ARMORED TYPE FIBER OPTIC CABLE(S) WITH CENTRAL STRENGTH MEMBER. SECURE FIBER OPTIC CABLE CENTRAL MEMBER INSIDE MTDP ENCLOSURE.
6. METALLIC CABLE SHEATH GROUNDING CLAMP AND GROUNDING CONNECTOR, BOND CABLE ARMOR/SHIELD TO MTDP BACK PLATE GROUNDING BAR. ALL GROUND CABLES NOT SHOWN FOR CLARITY.
7. CENTRAL MEMBER STRAIN-RELIEF BRACKET.
8. GROUND BAR - SECURE TO METAL BACK PLATE.
9. #6 AWG BARE COPPER GROUNDING CONDUCTOR.
10. DATA PANEL RECEPTACLE (DPR) - 20 AMP, 125 VOLT, 2 POLE, 3 WIRE GROUNDING TYPE IN A STANDARD SINGLE-GANG METAL BOX AND GALVANIZED STEEL DEVICE PLATE. CONNECT DPR AHEAD OF GFCI MAINTENANCE RECEPTACLE TO AVOID NUISANCE TRIPPING.
11. 2/C #12 WITH GROUND CORD IN CONDUIT FROM CIRCUIT BREAKER LOADCENTER FOR 120 VOLT, 1-PHASE SERVICE TO DUPLEX RECEPTACLE. RECEPTACLE SHALL NOT BE FED FROM ANY GROUND FAULT INTERRUPTING DEVICE.
12. FIELD INSTALLABLE "SC" CONNECTORS WITH BEND PROTECTOR. ALL CONNECTORS NOT SHOWN FOR CLARITY.
13. FIBER OPTIC CABLE BUFFER TUBES WITH 6-STRANDS OF FIBER, EACH. PROVIDE 2' SLACK EACH END.
14. NOT USED.
15. WALL MOUNTED SINGLE PANEL HOUSING FOR FIBER OPTIC CABLE TERMINATIONS. FIBER OPTIC BUFFER TUBE SLACK AND FAN OUT KIT SHALL BE CONTAINED WITHIN HOUSING. HOUSING SHALL BE COMPATIBLE WITH 12 PORT PATCH PANEL.
16. NOT USED.
17. PROVIDE MYERS HUB TYPE FITTING AT CONDUIT PENETRATION.
18. MTDP SHALL HAVE A ROLLED FLANGE AROUND PERIMETER OF OPENING.
19. PROVIDE ONE CABLE SEAL FITTING FOR EACH CABLE. SEE TYPICAL CABLE SEAL FITTING DETAIL ON SHEET E-07.
20. EXISTING CONDUIT FOR FIBER OPTIC CABLES.
21. CONDUIT/CABLE SEAL FITTING CONNECTION TO THE MTDP. SEE CONDUIT/CABLE SEAL FITTING DETAIL ON SHEET E-07.
22. HINGED COVER WITH CORROSION - RESISTANT STAINLESS STEEL CAPTIVE CLAMPS. HINGE MUST HAVE REMOVABLE PIN. PROVIDE A SEAMLESS FOAM-IN-PLACE GASKET FOR A WATERTIGHT AND DUST TIGHT SEAL.
23. FIBER OPTIC FAN-OUT KIT OR SPLICE KIT WITH PIGTAILS.
24. PROVIDE 14" X 10" SPACE FOR INSTALLATION OF TARGET COMMUNICATIONS EQUIPMENT. POWER OUTLET AND GROUND LUG ARE ONLY COMPONENTS INSTALLED IN THIS SPACE THAT IS NOT BY THE TARGET VENDOR. AREA MEASURED FROM SIDE OF ENCLOSURE NOT EDGE OF BACKPLATE.

MTDP DATA WIRING SCHEMATIC

PROVIDED BY MCA CONTRACTOR

PROVIDED BY OPA CONTRACTOR

GENERAL NOTES:

1. THIS DETAIL ONLY APPLIES FOR THE STATIONARY TARGET EMPLACEMENTS (SIT).
2. TERMINATE ALL FIBER OPTIC CABLES ENTERING OR LEAVING WITH "SC" CONNECTORS. ALL 6 STRANDS OF FIBER ARE REQUIRED TO BE TERMINATED AT EACH EMPLACEMENT.
3. PROVIDE CABLE IDENTIFICATION DIRECTORY ON INSIDE OF COVER.
4. LABEL ALL CABLES WITH ADHESIVE POLYETHYLENE WRAP AROUND LASER PRINTED LABELS INDICATING CABLE DESTINATION AND CABLE TYPE.
5. MASTER TARGET DATA PANEL (MTDP) SHALL BE 24"W X 12"H X 6"D.

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HUNTSVILLE, ALABAMA

OCTOBER 2021

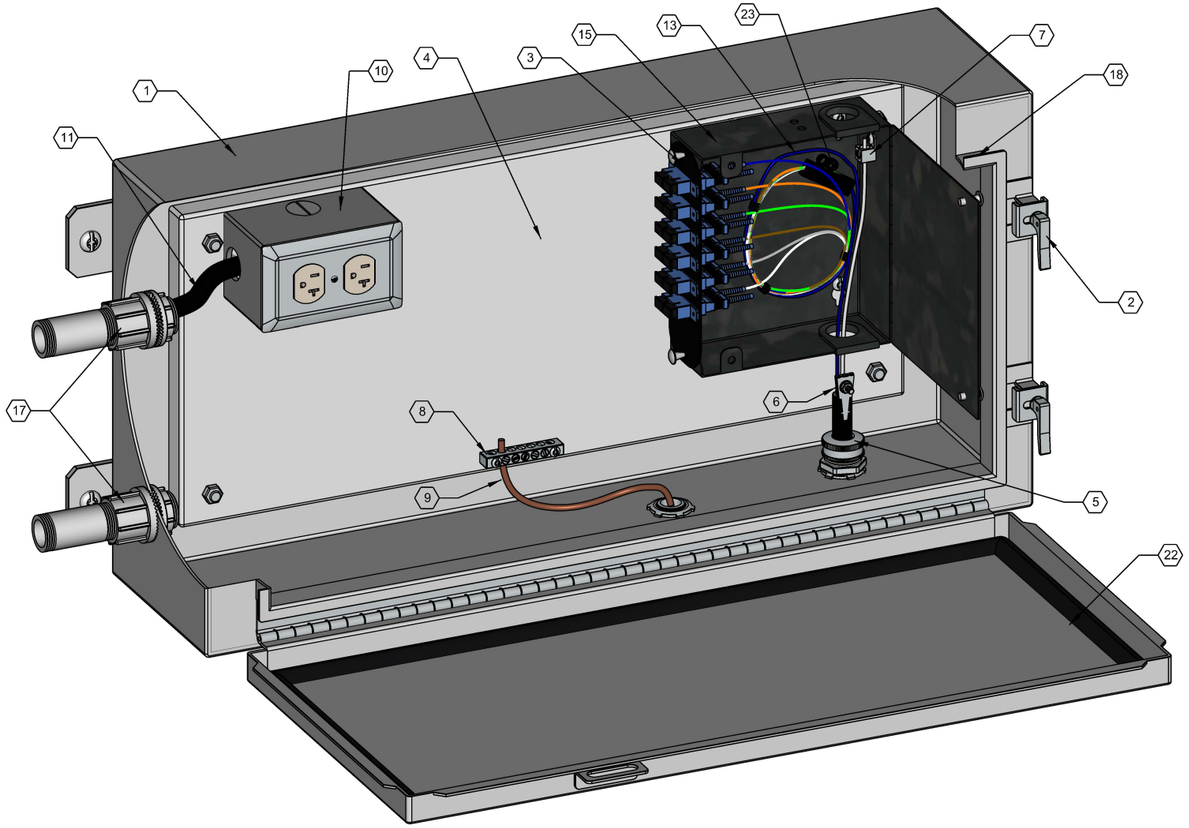
RANGE AND TRAINING LAND PROGRAM
FIXED DIGITAL MULTIPURPOSE TARGET
DIGITAL MULTIPURPOSE TRAINING RANGE (DMPRC)

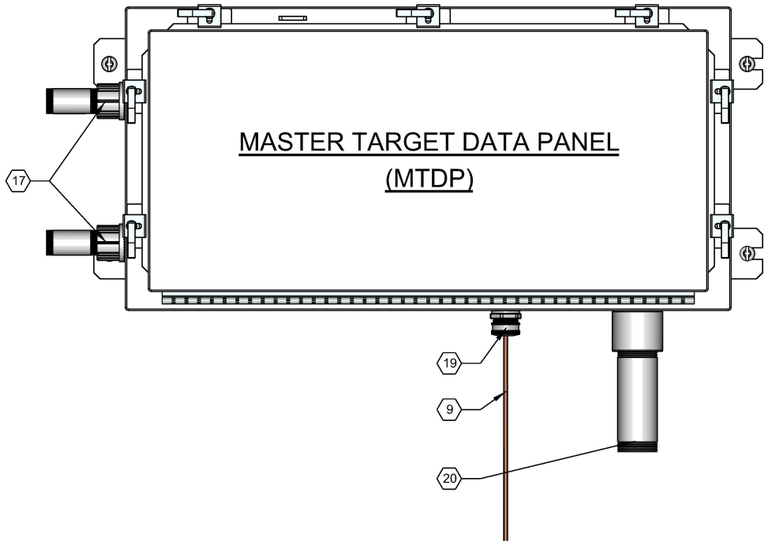
ELECTRICAL DETAILS

MASTER TARGET DATA PANEL - SIT EMPLACEMENTS

SHEET ID

E-08



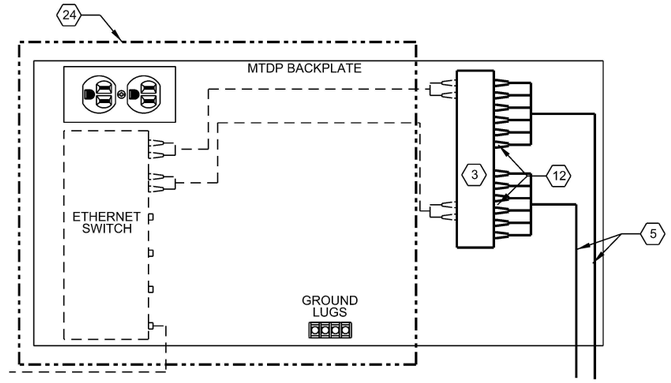


TYPICAL MASTER TARGET DATA PANEL (MTDP) DETAIL AT TARGET EMPLACEMENT

NOT TO SCALE

KEYED NOTES REPRESENTED WITH ⟨#⟩:

1. ENCLOSURE SHALL BE 16 GAUGE MINIMUM GALVANIZED STEEL SHEET METAL WITH WALL MOUNT BRACKETS. ENCLOSURE SHALL CARRY A NEMA 4 RATING AND BE TESTED BY UL OR OTHER APPROVED TESTING AGENCY.
2. PROVIDE ENCLOSURE WITH FAST OPERATING CLAMP ASSEMBLY. BOLT TYPE CLAMPS ARE NOT ACCEPTABLE.
3. INJECTION-MOLDED PLASTIC CONNECTOR 12 PORT PATCH PANEL.
4. METAL BACK PLATE TO SECURE COMPONENTS INSIDE ENCLOSURE.
5. 6-STRAND ARMORED TYPE FIBER OPTIC CABLE(S) WITH CENTRAL STRENGTH MEMBER. SECURE FIBER OPTIC CABLE CENTRAL MEMBER INSIDE MTDP ENCLOSURE.
6. METALLIC CABLE SHEATH GROUNDING CLAMP AND GROUNDING CONNECTOR, BOND CABLE ARMOR/SHIELD TO MTDP BACK PLATE GROUNDING BAR. ALL GROUND CABLES NOT SHOWN FOR CLARITY.
7. CENTRAL MEMBER STRAIN-RELIEF BRACKET.
8. GROUND BAR - SECURE TO METAL BACK PLATE.
9. #6 AWG BARE COPPER GROUNDING CONDUCTOR.
10. DATA PANEL RECEPTACLE (DPR) - 20 AMP, 125 VOLT, 2 POLE, 3 WIRE GROUNDING TYPE IN A STANDARD SINGLE-GANG METAL BOX AND GALVANIZED STEEL DEVICE PLATE. CONNECT DPR AHEAD OF GFCI MAINTENANCE RECEPTACLE TO AVOID NUISANCE TRIPPING.
11. 2/C #12 WITH GROUND CORD IN CONDUIT FROM CIRCUIT BREAKER LOADCENTER FOR 120 VOLT, 1-PHASE SERVICE TO DUPLEX RECEPTACLE. RECEPTACLE SHALL NOT BE FED FROM ANY GROUND FAULT INTERRUPTING DEVICE.
12. FIELD INSTALLABLE "SC" CONNECTORS WITH BEND PROTECTOR. ALL CONNECTORS NOT SHOWN FOR CLARITY.
13. FIBER OPTIC CABLE BUFFER TUBES WITH 6-STRANDS OF FIBER, EACH. PROVIDE 2' SLACK EACH END.
14. NOT USED.
15. WALL MOUNTED SINGLE PANEL HOUSING FOR FIBER OPTIC CABLE TERMINATIONS. FIBER OPTIC BUFFER TUBE SLACK AND FAN OUT KIT SHALL BE CONTAINED WITHIN HOUSING. HOUSING SHALL BE COMPATIBLE WITH 12 PORT PATCH PANEL.
16. NOT USED.
17. PROVIDE MYERS HUB TYPE FITTING AT CONDUIT PENETRATION.
18. MTDP SHALL HAVE A ROLLED FLANGE AROUND PERIMETER OF OPENING.
19. PROVIDE ONE CABLE SEAL FITTING FOR EACH CABLE. SEE TYPICAL CABLE SEAL FITTING DETAIL ON SHEET E-07.
20. CONDUIT FOR FIBER OPTIC CABLES.
21. NOT USED
22. HINGED COVER WITH CORROSION - RESISTANT STAINLESS STEEL CAPTIVE CLAMPS. HINGE MUST HAVE REMOVABLE PIN. PROVIDE A SEAMLESS FOAM-IN-PLACE GASKET FOR A WATERTIGHT AND DUST TIGHT SEAL.
23. FIBER OPTIC FAN-OUT KIT OR SPLICE KIT WITH PIGTAILS.
24. PROVIDE 14" X 10" SPACE FOR INSTALLATION OF TARGET COMMUNICATIONS EQUIPMENT. POWER OUTLET AND GROUND LUG ARE ONLY COMPONENTS INSTALLED IN THIS SPACE THAT IS NOT BY THE TARGET VENDOR. AREA MEASURED FROM SIDE OF ENCLOSURE NOT EDGE OF BACKPLATE.



MTDP DATA WIRING SCHEMATIC

PROVIDED BY MCA CONTRACTOR

PROVIDED BY OPA CONTRACTOR

GENERAL NOTES:

1. TERMINATE ALL FIBER OPTIC CABLES ENTERING OR LEAVING WITH "SC" CONNECTORS. ALL 6 STRANDS OF FIBER ARE REQUIRED TO BE TERMINATED AT EACH EMPLACEMENT.
2. PROVIDE CABLE IDENTIFICATION DIRECTORY ON INSIDE OF COVER.
3. LABEL ALL CABLES WITH ADHESIVE POLYETHYLENE WRAP AROUND LASER PRINTED LABELS INDICATING CABLE DESTINATION AND CABLE TYPE.
4. MASTER TARGET DATA PANEL (MTDP) SHALL BE 24"W X 12"H X 6"D.
5. ALL COMPONENTS INSTALLED INSIDE MTDP ENCLOSURES SHALL BE SECURED BY MECHANICAL MEANS. ADHESIVES ARE NOT ALLOWED FOR SECURING COMPONENTS INSIDE MTDP ENCLOSURES.

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U.S. ARMY CORPS OF ENGINEERS
ENGINEERING & SUPPORT CENTER
HUNTSVILLE, ALABAMA

OCTOBER 2021

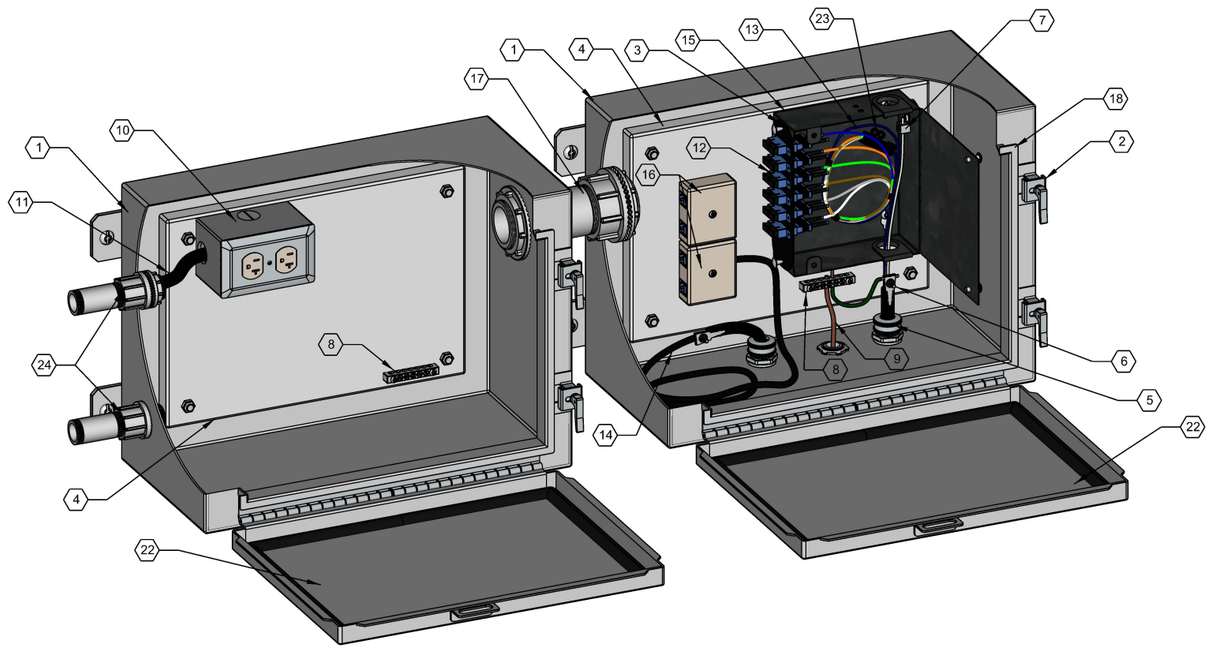
RANGE AND TRAINING LAND PROGRAM
FIBER OPTIC CABLE SYSTEMS
DIGITAL MULTIPURPOSE TRAINING RANGE (DMPRC)

ELECTRICAL DETAILS

MASTER TARGET DATA PANEL - FIBER OPTIC CABLES

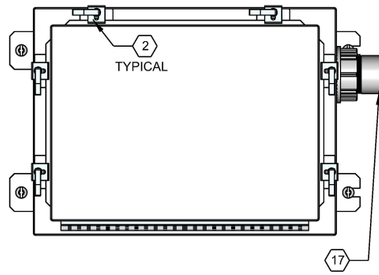
SHEET ID

E-09



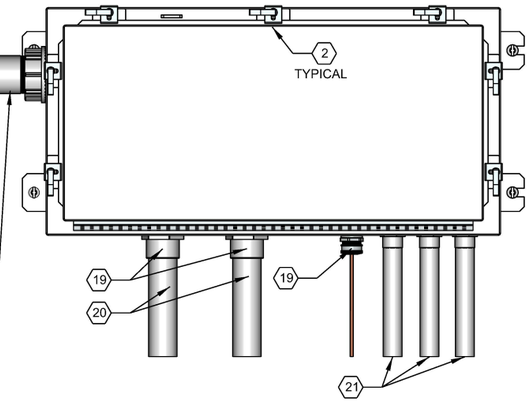
TARGET DATA PANEL

SEE GENERAL NOTE 4



(MASTER) TARGET DATA PANEL

SEE GENERAL NOTE 4

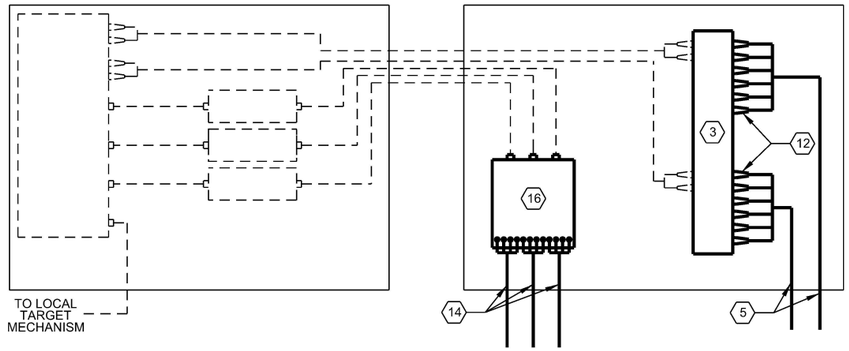


TYPICAL FACADE/CLUSTER MASTER TARGET DATA PANEL (MTDP) DETAIL AT TARGET EMPLACEMENT

NOT TO SCALE

KEYED NOTES REPRESENTED WITH (#):

1. ENCLOSURE SHALL BE 16 GAUGE MINIMUM GALVANIZED STEEL SHEET METAL WITH WALL MOUNT BRACKETS. ENCLOSURE SHALL CARRY A NEMA 4 RATING AND BE TESTED BY UL OR OTHER APPROVED TESTING AGENCY.
2. PROVIDE ENCLOSURE WITH FAST OPERATING CLAMP ASSEMBLY. BOLT TYPE CLAMPS ARE NOT ACCEPTABLE. TYPICAL FOR BOTH ENCLOSURES.
3. INJECTION-MOLDED PLASTIC CONNECTOR 12 PORT PATCH PANEL WITH SUPPORT BRACKETS FOR FIELD INSTALLABLE SC CONNECTORS.
4. METAL BACK PLATE TO SECURE COMPONENTS INSIDE ENCLOSURE.
5. 6-STRAND ARMORED TYPE FIBER OPTIC CABLE(S) WITH CENTRAL STRENGTH MEMBER. SECURE FIBER OPTIC CABLE CENTRAL MEMBER INSIDE MTDP ENCLOSURE.
6. METALLIC CABLE SHEATH GROUNDING CLAMP AND GROUNDING CONNECTOR, BOND CABLE ARMOR/SHIELD TO MTDP BACK PLATE GROUNDING BAR. ALL GROUND CABLES NOT SHOWN FOR CLARITY.
7. CENTRAL MEMBER STRAIN-RELIEF BRACKET.
8. GROUND BAR - SECURE TO METAL BACK PLATE. BOND ALL GROUND BARS TOGETHER WITH A #6 AWG COPPER GROUND CONDUCTOR. GROUND CONDUCTOR NOT SHOW IN THIS DETAIL.
9. #6 AWG BARE COPPER GROUNDING CONDUCTOR.
10. DATA PANEL RECEPTACLE (DPR) - 20 AMP, 125 VOLT, 2 POLE, 3 WIRE GROUNDING TYPE IN A STANDARD SINGLE-GANG METAL BOX AND GALVANIZED STEEL DEVICE PLATE. CONNECT DPR AHEAD OF GFCI MAINTENANCE RECEPTACLE TO AVOID NUISANCE TRIPPING.
11. 2/C #12 WITH GROUND CORD IN CONDUIT FROM SINGLE POLE SINGLE THROW SWITCH FOR 120 VOLT, 1-PHASE SERVICE TO DUPLEX RECEPTACLE. SEE TARGET EMPLACEMENT ELECTRICAL DETAIL FOR SWITCH LOCATIONS.
12. FIELD INSTALLABLE "SC" CONNECTORS WITH BEND PROTECTOR. ALL CONNECTORS NOT SHOWN FOR CLARITY.
13. FIBER OPTIC CABLE BUFFER TUBES WITH 6-STRANDS OF FIBER, EACH. PROVIDE 2' SLACK EACH END, COIL AROUND RADIUS CONTROL GUIDES.
14. INDOOR/OUTDOOR RATED CATEGORY 6 CABLES TO TARGET DATA OUTLETS. COIL 3' SLACK IN MTDP. COIL 6"-12" OF CABLE IN TARGET OUTLET AND TERMINATE CABLE WITH MALE RJ-45 CONNECTOR. SAT-SIT CLUSTER EMPLACEMENTS MAY HAVE AS MANY AS 5 CAT 6 DATA CABLES SERVING TARGET MECHANISMS. ONLY ONE CABLE SHOWN ON THIS DETAIL FOR CLARITY.
15. WALL MOUNTED SINGLE PANEL HOUSING FOR FIBER OPTIC CABLE TERMINATIONS. FIBER OPTIC BUFFER TUBE SLACK AND FAN OUT KIT SHALL BE CONTAINED WITHIN HOUSING. HOUSING SHALL BE COMPATIBLE WITH 12 PORT PATCH PANEL.
16. PROVIDE MODULAR JACK WITH 110 BLOCKS ON LINE SIDE AND RJ45 OUTLETS ON EQUIPMENT SIDE TO TERMINATE CAT 6 CABLES ENTERING OR EXITING ENCLOSURE.
17. 2" CONDUIT WITH MYERS HUBS WHERE CONDUIT PENETRATES EACH ENCLOSURE. CONDUIT USE BY TARGET INSTALLER.
18. MTDP SHALL HAVE A ROLLED FLANGE AROUND PERIMETER OF OPENING.
19. PROVIDE ONE CABLE SEAL FITTING FOR EACH CABLE. SEE "TYPICAL CABLE SEAL FITTING DETAIL," SHEET E-07.
20. NOT USED.
21. CONDUIT WITH CAT 6 CABLES, SEE TARGET EMPLACEMENT PLAN AND ELEVATION.
22. HINGED COVER WITH CORROSION-RESISTANT STAINLESS STEEL CAPTIVE CLAMPS. HINGE MUST HAVE REMOVABLE PIN. PROVIDE A SEAMLESS FOAM-IN-PLACE GASKET FOR A WATERTIGHT AND DUST TIGHT SEAL.
23. FIBER OPTIC FAN-OUT KIT OR SPLICE KIT WITH PIGTAILS.
24. PROVIDE MYERS HUB FITTING AT CONDUIT PENETRATION.
25. CONDUIT/CABLE SEAL FITTING CONNECTION TO THE MTDP. SEE CONDUIT/CABLE SEAL FITTING DETAIL ON SHEET E-07.



MTDP DATA WIRING SCHEMATIC

PROVIDED BY MCA CONTRACTOR

PROVIDED BY OPA CONTRACTOR

GENERAL NOTES:

1. TERMINATE ALL FIBER OPTIC CABLES ENTERING OR LEAVING WITH "SC" CONNECTORS. ALL 6 STRANDS OF FIBER ARE REQUIRED TO BE TERMINATED AT EACH EMPLACEMENT.
2. PROVIDE CABLE IDENTIFICATION DIRECTORY ON INSIDE OF COVER.
3. LABEL ALL CABLES WITH ADHESIVE POLYETHYLENE WRAP AROUND LASER PRINTED LABELS INDICATING CABLE DESTINATION AND CABLE TYPE.
4. TARGET DATA PANEL ENCLOSURES SHALL BE 16"W X 12"H X 6"D. MATER TARGET DATA PANEL ENCLOSURES SHALL BE 24"W X 12"H X 6"D.
5. ALL COMPONENTS INSTALLED INSIDE MTDP ENCLOSURES SHALL BE SECURED BY MECHANICAL MEANS. ADHESIVES ARE NOT ALLOWED FOR SECURING COMPONENTS INSIDE MTDP ENCLOSURES.

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE:
SOLICITATION NO.:
CONTRACT NO.:
PROJECT NUMBER:

DESIGNED BY:
DRAWN BY:
CHECKED BY:
SUBMITTED BY:
SIZE:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING & SUPPORT CENTER
HUNTSVILLE, ALABAMA

OCTOBER 2021

RANGE AND TRAINING LAND PROGRAM
ARMY STANDARD TARGETRY
DIGITAL MULTIPURPOSE TRAINING RANGE (DMPRC)

ELECTRICAL DETAILS
FACADE/CLUSTER MASTER TARGET DATA PANEL
FIBER OPTIC CABLES

SHEET ID

E-10