

HORIZ SCALE: 1" = 20'
VERT SCALE: 1" = 2'

U.S. ARMY CORPS OF ENGINEERS ALASKA DISTRICT 3404 3RD STREET JBER, ALASKA 99506-0898	DESIGNED BY: T. WEIN	ISSUE DATE: SEPTEMBER 2024
	DRAWN BY: W. B. HANSEN	SOLUTION NO.: W9111KB-24-0001
	CHECKED BY: E. MESKER	PROJECT #: W9111KB-24-0022
	SUBMITTED BY: S. HAAN	DRAWING #: AF-561-201-01
	SIZE: A	FILE #: W9111KB-24-0022
		010022

C-306

AWARDED

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G

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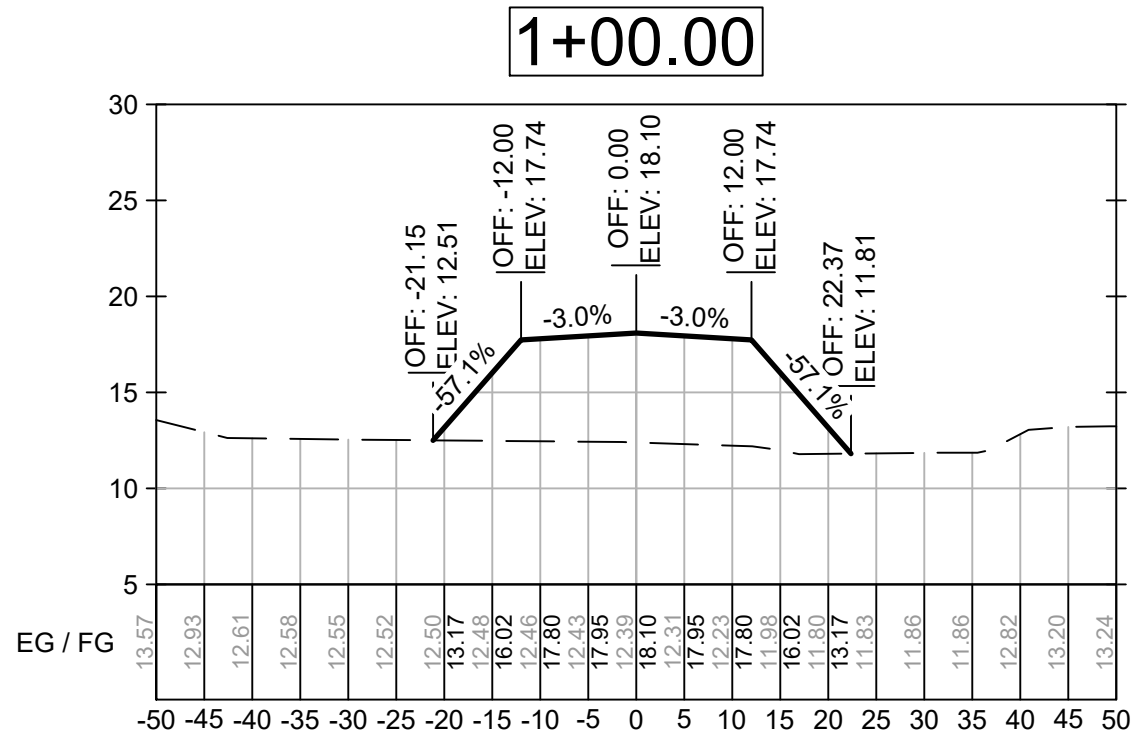
E

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A





GARAGE ROAD SECTIONS 1

HORIZ SCALE: 1" = 20'
VERT SCALE: 1" = 2'

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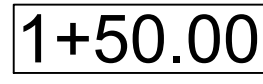
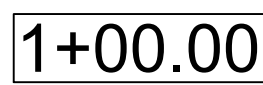
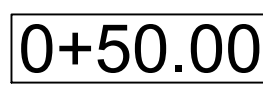
U.S. AIR FORCE	T. WEN	SEPTEMBER 2024
ALASKA DISTRICT	DRAWN BY:	SOLICITATION NO.:
2204 3RD STREET	T. WEN	W911KB-24-R-0041
JBER, ALASKA 99506-0888	CHECKED BY:	CONTRACT NO.:
	E. MESKER	W911KB-24-C-0022
	QUANTITY:	UNIT PRICE:
	S. SHAAN	AF-551-201-01
	SIZE:	FILE:
	ANSI D	OLL002-C-301 C-309.dwg
		OLI002

OLIKTOK LRRS, AK
REPAIR OLIKOTOK ROAD
CIVIL
SECTIONS
GARAGE ROAD SECTIONS 1

REFERENCE
NUMBER:

C-308

AWARDED



U.S. ARMY CORPS OF ENGINEERS	DESIGNED BY:	T. WEIN	ISSUE DATE:	SEPTEMBER 2024
ALASKA DISTRICT	DRAWN BY:	2004 STREET	SOLICITATION NO.:	W911KB-24-C-0022
JBER, ALASKA 99506-0888	CHECKED BY:	E. MESKER	CONTRACT NO.:	W911KB-24-C-0022
	SUBMITTED BY:	S. HAAN	DRAWING #:	AF-851-2017
	FILED:	ANSI Z39-18	FILE NAME:	CL1002-C-301_C-309.dwg
				CL1002

SHUM030007
OLIKTOK LRRS, AK
REPAIR OLIKTOK ROAD
CIVIL
SECTIONS
HANGER 1 ROAD SECTIONS 1

REFERENCE
NUMBER:
C-309

AWARDED

A1 **HANGER 1 ROAD SECTIONS 1**
HORIZ SCALE: 1" = 20'
VERT SCALE: 1" = 2'

HORIZ SCALE: 1" = 20'
VERT SCALE: 1" = 2'

H

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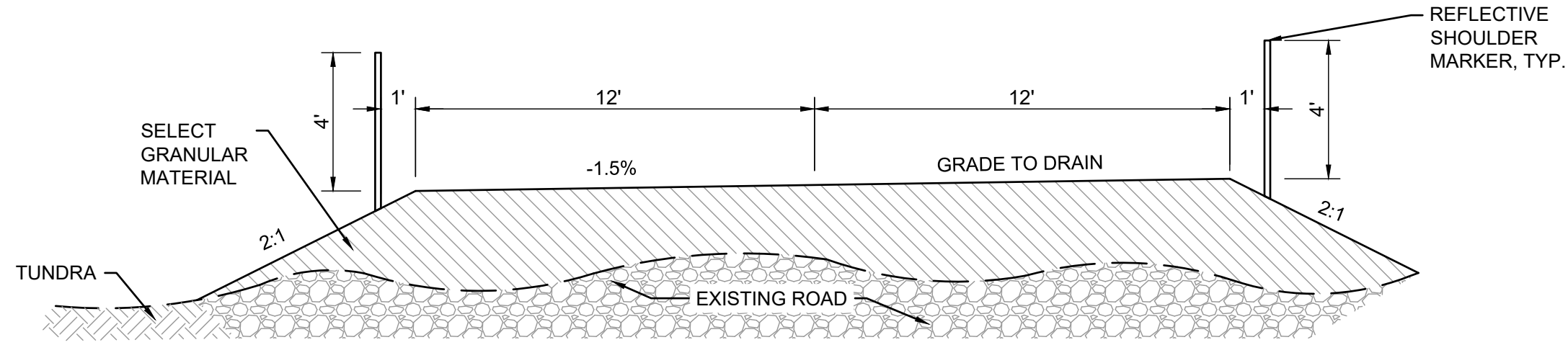
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D

C

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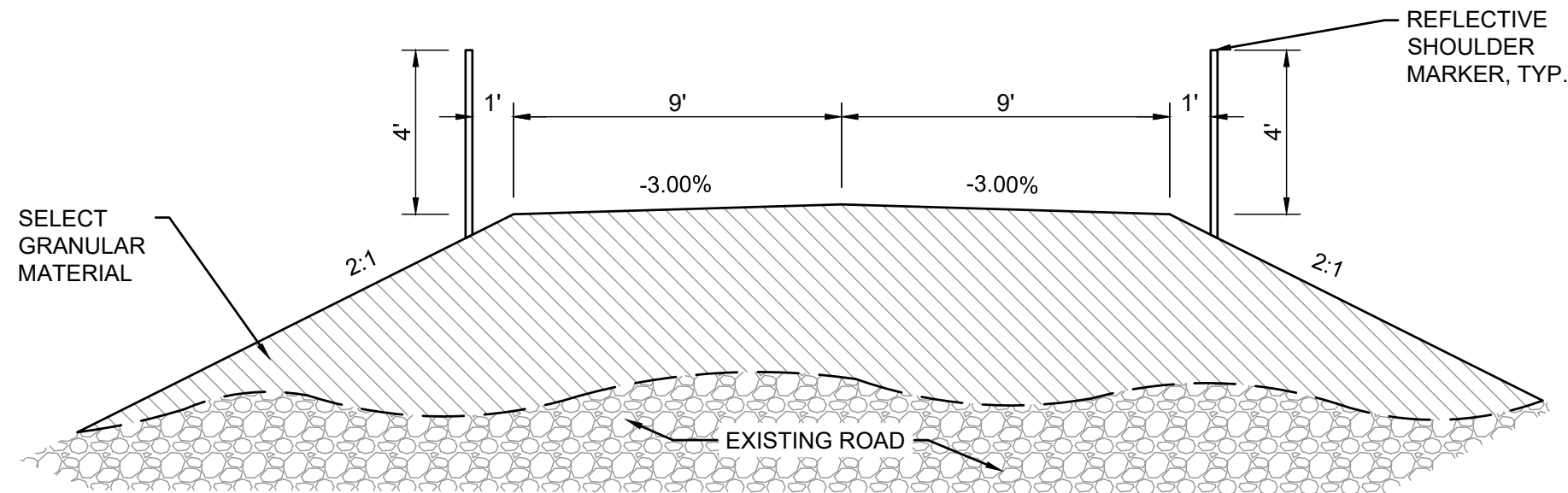
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NOTES:
1. SEE C-502 / D1 FOR TYPICAL AGGREGATE ROAD ON EXISTING ROAD OR RUNWAY.

G1 TYPICAL GARAGE ROAD CROSS-SECTION

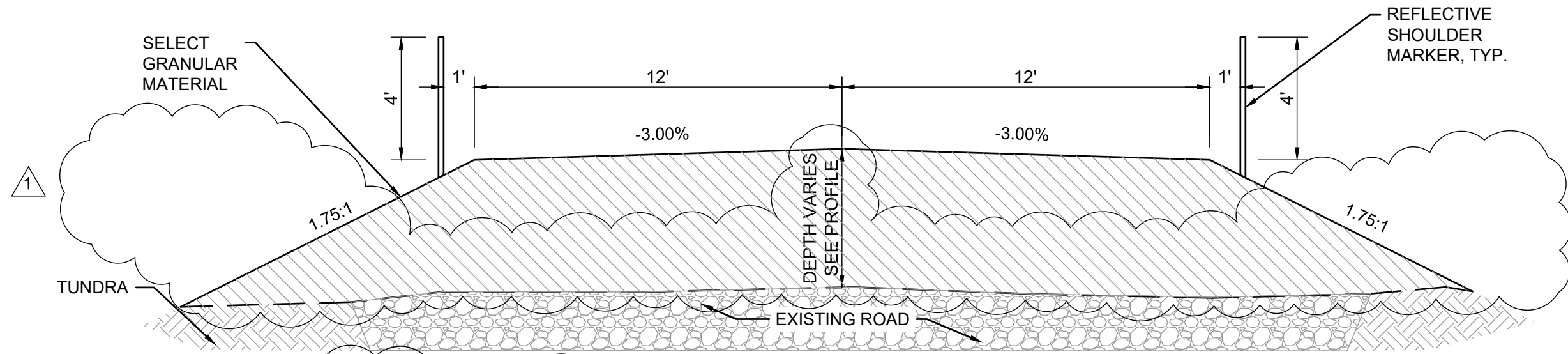
SCALE: NTS



NOTES:
1. SEE C-502 / D1 FOR TYPICAL AGGREGATE ROAD ON EXISTING ROAD OR RUNWAY.

E1 TYPICAL HANGER1 ROAD CROSS-SECTION

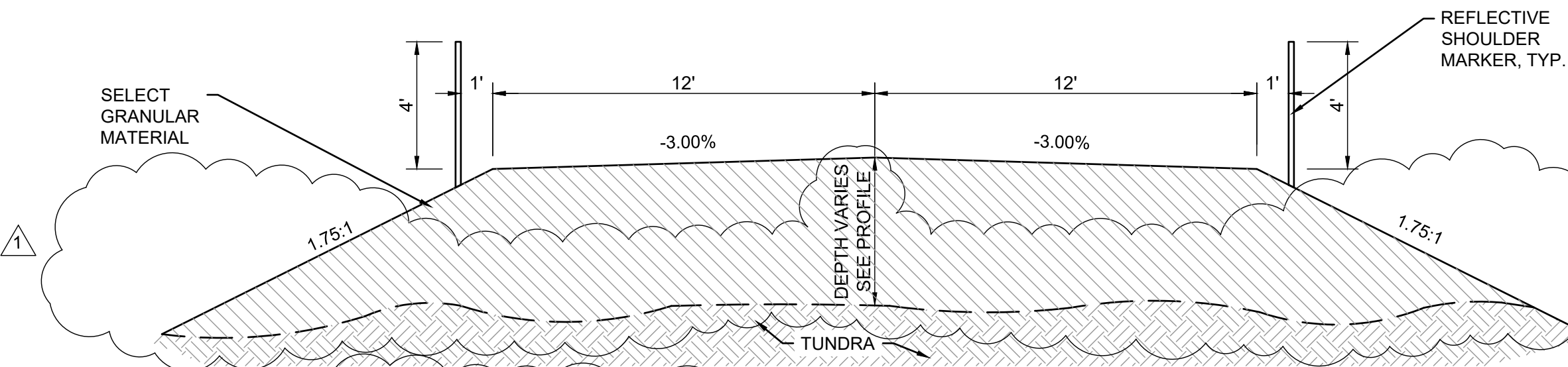
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NOTES:
1. SEE C-502 / A1 FOR TYPICAL AGGREGATE ROAD.
2. REMOVE ICE AND SNOW GREATER THAN 4-INCHES THICK PRIOR TO PLACING GRAVEL FILL MATERIAL.

C1 LRRS ACCESS ROAD TRANSITION CROSS-SECTION STA 52+00 TO 55+50

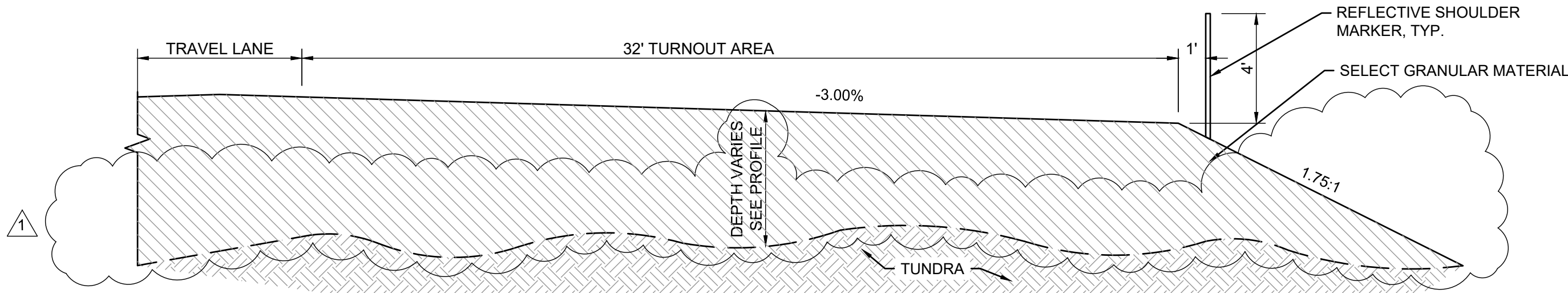
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NOTES:
1. SEE C-502 / A1 FOR TYPICAL AGGREGATE ROAD.
2. REMOVE ICE AND SNOW GREATER THAN 4-INCHES THICK PRIOR TO PLACING GRAVEL FILL MATERIAL.

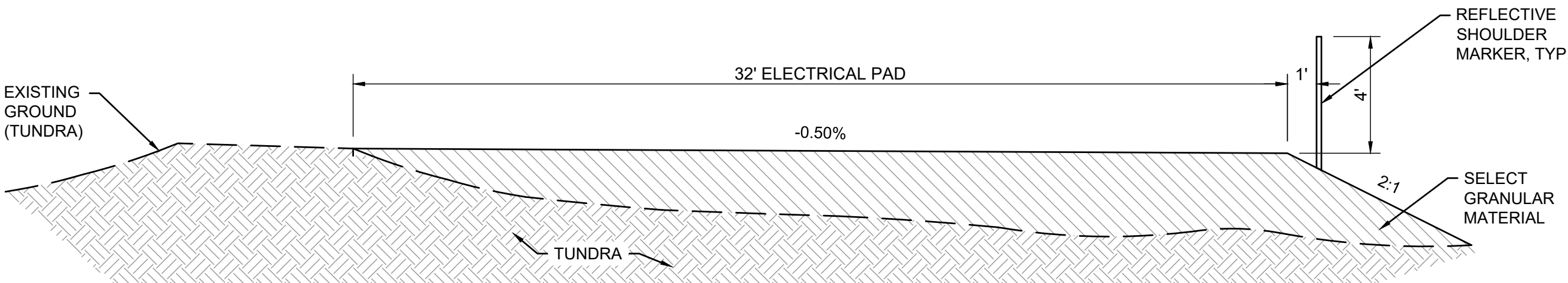
A1 LRRS ACCESS ROAD CROSS-SECTION STA 00+25 TO 52+00 AND DETOUR ROAD

SCALE: NTS



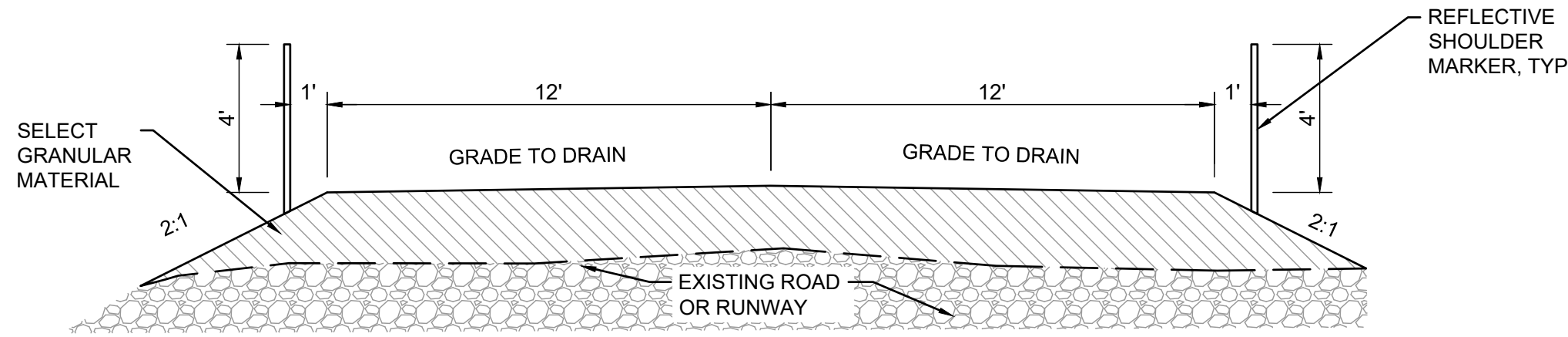
F7 TYPICAL ROAD TURNOUT CROSS-SECTION STA 13+17.18 TO 15+64.21 AND STA 36+57.33 TO 39+05.84

SCALE: NTS



E8 ELECTRICAL PAD 1 CROSS-SECTION

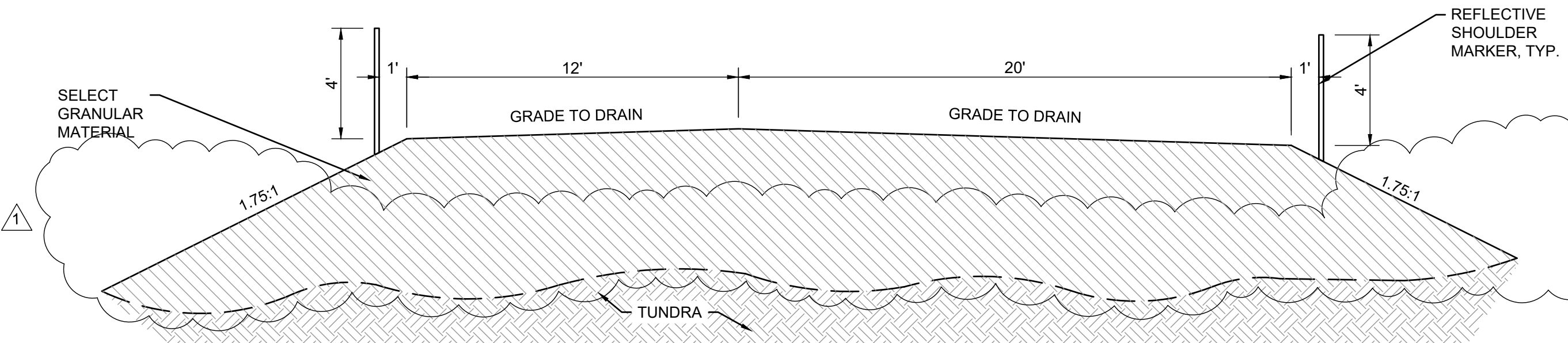
SCALE: NTS



NOTES:
1. SEE C-502 / D1 FOR TYPICAL AGGREGATE ROAD ON EXISTING ROAD OR RUNWAY.
2. SCARIFY OR ROUGHEN EXISTING SURFACE BEFORE PLACING GRAVEL FILL MATERIAL.

C7 LRRS ACCESS ROAD TRANSITION CROSS-SECTION STA 55+50 TO 62+50

SCALE: NTS



NOTES:
1. SEE C-502 / A1 FOR TYPICAL AGGREGATE ROAD.
2. SEE C-502 / D5 FOR TYPICAL INSULATION LAYOUT.
3. REMOVE ICE AND SNOW GREATER THAN 4-INCHES THICK PRIOR TO PLACING GRAVEL FILL MATERIAL.
4. INSULATION SHALL BE TYPE VII, PREFORMED RIGID CELLULAR POLYSTYRENE (RCPS) CONFORMING TO ASTM C578.

A7 DETOUR ROAD WIDENING CROSS-SECTION STA 8+50.51 TO 10+75

SCALE: NTS



DATE	DESCRIPTION	MARK
SEP 2024	AM 0004	1

ISSUE DATE	DESIGNED BY	U.S. ARMY CORPS OF ENGINEERS
SEPTEMBER 2024	T. WEN	ALASKA DISTRICT
SOLICITATION NO.	DRAWN BY	24040000000000000000
W911KB24-R-0041	T. WEN	JBER, ALASKA 95506-0888
CONTRACT NO.	CHECKED BY	
W911KB24-C-0022	E. MESKER	
DRAWING #	SUBMITTED BY	
AF-851-201-01	S. HAAN	
FILE	SN/D	FILE
OL002-C-501 TO C-502.dwg		OL002

SHUW03007
OLIKTOK LRRS, AK
REPAIR OLIKTOK ROAD
CIVIL
DETAILS
DETAILS - 1

REFERENCE
NUMBER:
C-501

AWARDED

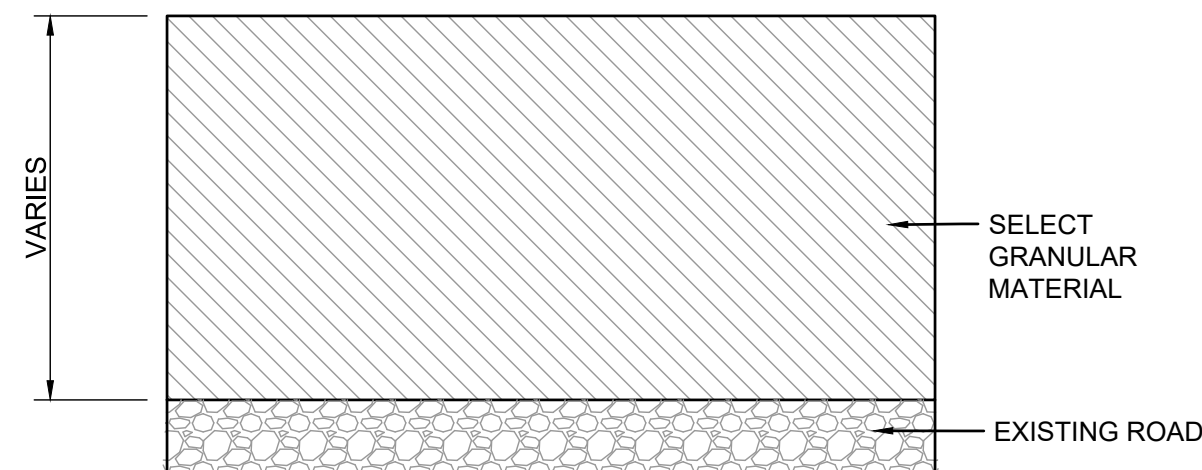
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U.S. ARMY CORPS OF ENGINEERS 2004 B STREET JBER, ALASKA 99506-0888	T. WEN DRAWN BY: W911KB-24-R-0041 T. WEN CHECKED BY: E. MESKER SUBMITTED BY: S. HAAN AF-351-201-01	SEPTEMBER 2024 SOLICITATION NO.: CONTRACT NO.: CONTRACT NO.: DRAWING #: FILE #:	01002
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OLIKTOK LRRS, AK
REPAIR OLIKTOK ROAD
CIVIL
DETAILS
DETAILS - 2

REFERENCE
NUMBER:
C-502

AWARDED

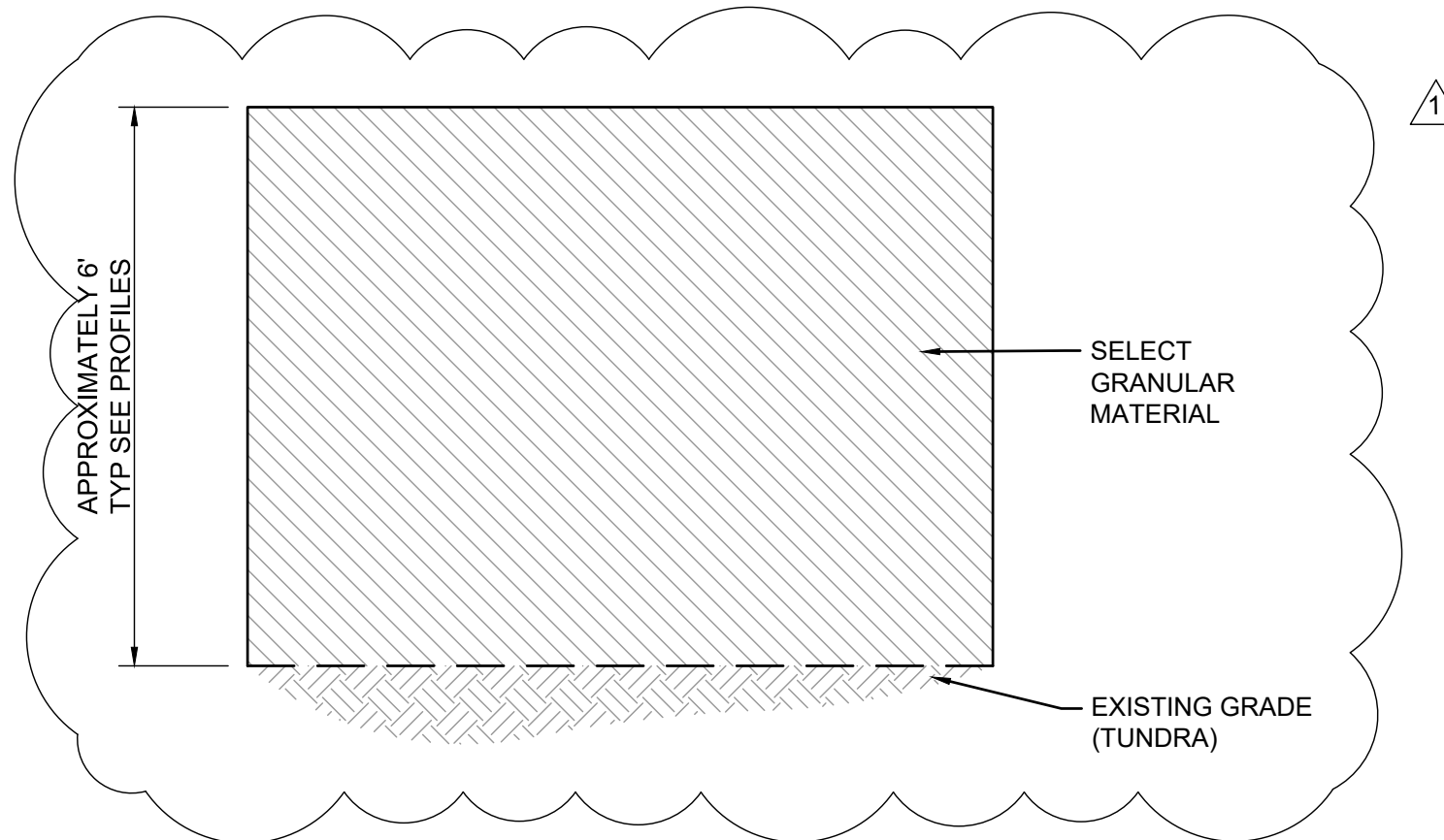


NOTES:

1. THE EXISTING ROAD SURFACE MUST BE SCARIFIED PRIOR TO THE INSTALLATION OF NEW GRANULAR MATERIAL.

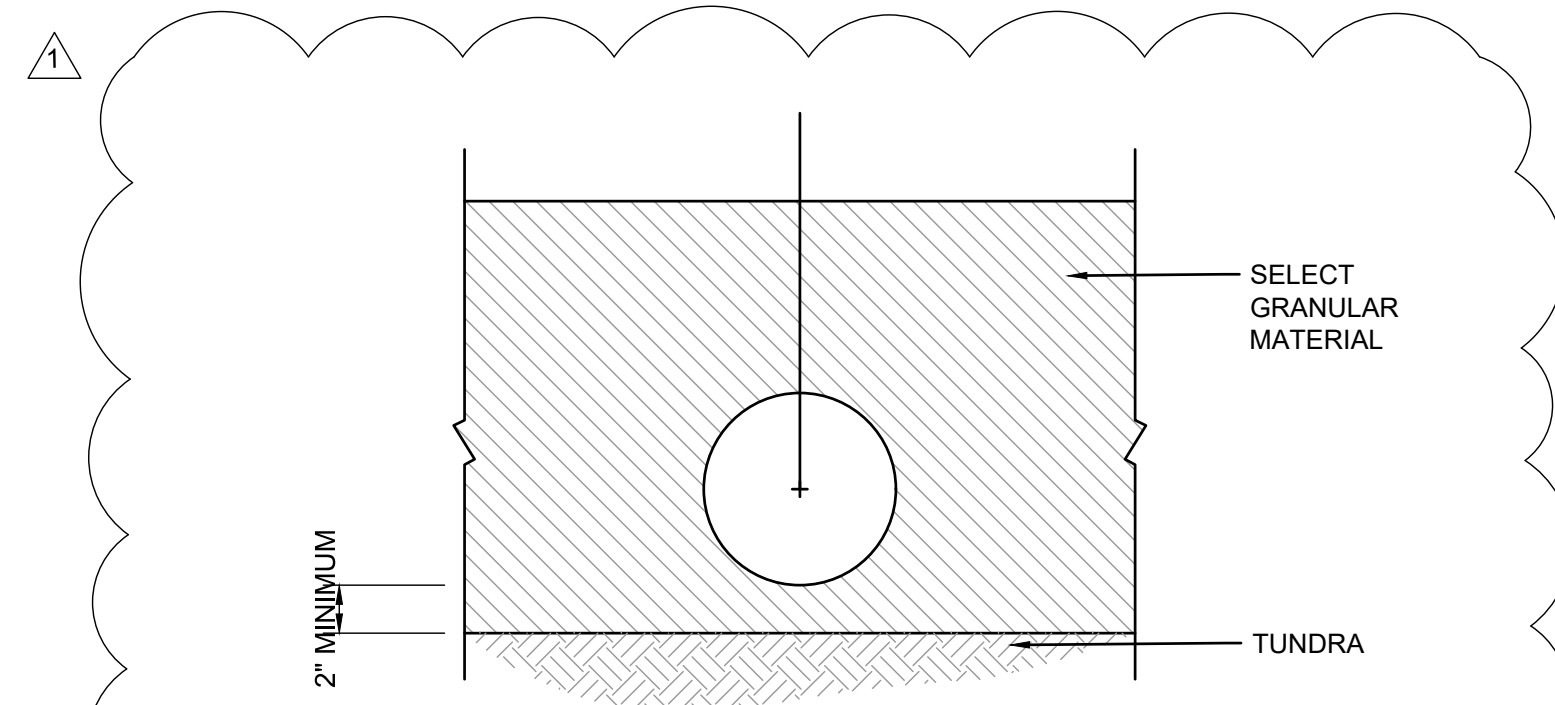
(D1) TYPICAL AGGREGATE ROAD ON EXISTING ROAD OR RUNWAY
SCALE: NTS

SCALE: NTS



A1 TYPICAL AGGREGATE ROAD

SCALE: NTS

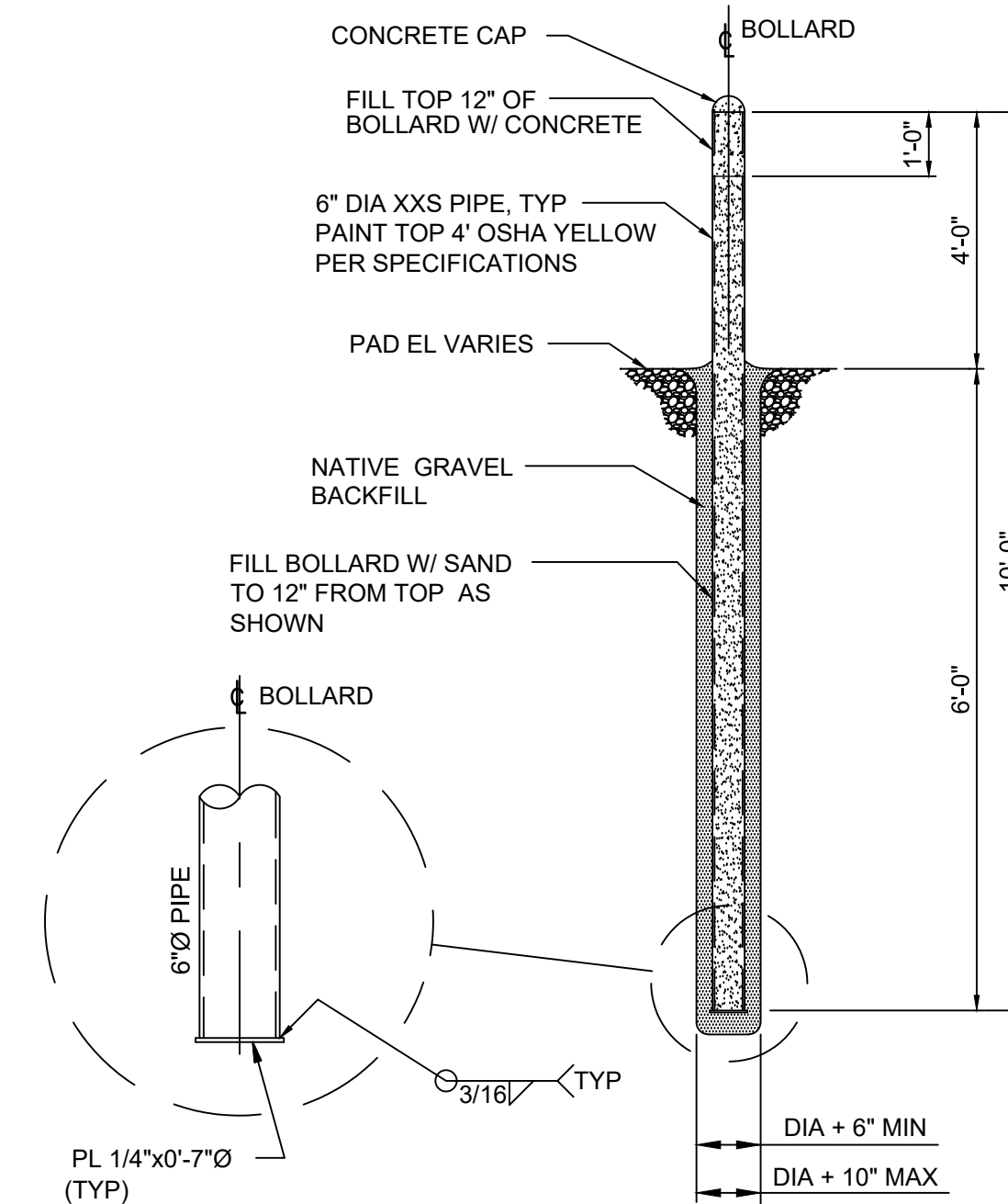


NOTES:

1. SELECT GRANULAR MATERIAL MUST BE PLACED ON UNDISTURBED TUNDRA.
2. CULVERTS SHALL EXTEND A MINIMUM OF 2 FEET BEYOND THE EMBANKMENT TOE.
3. CULVERTS MUST BE INSTALLED ABOVE THE EXISTING TUNDRA, EXCAVATION INTO THE TUNDRA IS NOT ALLOWED.
4. PROVIDE CULVERT MARKERS.
5. USE HDPE PIPE FOR CULVERTS.
6. LEVELING COURSE EXCEPT THE CULVERT OF LRRS ACCESS ROAD @ STA 58+60.00.

AF TYPICAL CULVERT EARTHWORK

SCALE: NTS



 BOLLARD EARTH WORK

SCALE: NTS

1. 2021 EDITION OF THE INTERNATIONAL BUILDING CODE.
2. UFC 1-200-01 DESIGN: GENERAL BUILDING REQUIREMENTS
3. UFC 3-301-01 STRUCTURAL ENGINEERING.

1. BUILDING RISK CATEGORY III.
2. LIVE LOADS:
 - a. ELECTRICAL PLATFORMS = 200 PSF.
 - b. STAIRS AND LANDINGS = 100 PSF OR CONCENTRATED 300 LBS, WHICHEVER PRODUCES THE GREATEST EFFECT.
 - c. GUARDRAILS/HANDRAILS = 200 LBS CONCENTRATED LOAD OR 50 LB/FT DISTRIBUTED LOAD IN ANY DIRECTION ALONG THE TOP RAIL, WHICHEVER PRODUCES THE GREATEST EFFECT.
3. GROUND SNOW LOAD = 27 PSF, $C_e=1.0$, $I_s=1.1$, $C_t=1.0$.
4. ULTIMATE WIND SPEED = 148 MPH (3-SECOND GUST), EXPOSURE D.
5. SEISMIC:
 - a. SEISMIC SOILS SITE CLASS D, $I_e=1.25$, $S_s=0.15g$, $S_1=0.07g$, $S_{ds}=0.16g$, $S_{d1}=0.10g$.
 - b. SEISMIC DESIGN CATEGORY B.
 - c. ELECTRICAL PLATFORM: STEEL ORDINARY CANTILEVERED COLUMN SYSTEMS, $R=1\frac{1}{4}$, $C_d=1\frac{1}{4}$, $\Omega=1\frac{1}{4}$, $\rho=1.0$.
6. ALL LOADS INDICATED ON THE DRAWINGS ARE NOMINAL VALUES, AS DEFINED IN IBC CHAPTER 2, UNLESS NOTED OTHERWISE.

1. THE STRUCTURAL CONSTRUCTION DOCUMENTS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OR SEQUENCE OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR AND PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING FOR LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC. THE STRUCTURAL ENGINEER SHALL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S MEANS, METHODS, TECHNIQUES, SEQUENCES FOR PROCEDURE OF CONSTRUCTION, OR THE SAFETY PRECAUTIONS AND THE PROGRAMS INCIDENT THERETO (NOR SHALL OBSERVATION VISITS TO THE SITE INCLUDE INSPECTION OF THESE ITEMS). THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND IMPLEMENTATION OF ALL SCAFFOLDING, BRACING AND SHORING.
2. CONSTRUCTION MATERIALS SHALL BE SPREAD OUT IF PLACED ON FRAMED CONSTRUCTION. LOAD SHALL NOT EXCEED THE DESIGN LIVE LOAD PER SQUARE FOOT.
3. WHERE REFERENCE IS MADE TO VARIOUS TEST STANDARDS FOR MATERIALS, SUCH STANDARDS SHALL BE THE LATEST EDITION AND/OR ADDENDA.
4. ESTABLISH AND VERIFY ALL OPENINGS AND INSERTS FOR ARCHITECTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL WITH APPROPRIATE TRADES, DRAWINGS, AND SUBCONTRACTORS PRIOR TO CONSTRUCTION.
5. NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS. WHERE NO DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT. FOR BIDDING PURPOSES, WHERE ANY MEMBER IS SHOWN BUT NOT CALLED OUT, THE LARGEST SIMILAR MEMBER SHALL BE UTILIZED.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL DIMENSIONS WITH OTHER DISCIPLINE DRAWINGS PRIOR TO START OF CONSTRUCTION. RESOLVE ANY DISCREPANCY WITH THE CO. DO NOT USE SCALED DIMENSIONS.
7. ALL DETAILS SHALL BE INCORPORATED INTO THE PROJECT AT ALL APPROPRIATE LOCATIONS, WHETHER SPECIFICALLY CUT OR NOT. TYPICAL DETAILS ARE NOT CUT ON PLANS, BUT APPLY UNLESS NOTED OTHERWISE. FOR CLARITY, DETAILS MAY SHOW ONLY ONE SIDE OF FRAMING CONDITION.
8. WHERE DISCREPANCIES OCCUR BETWEEN PLANS, DETAILS, GENERAL STRUCTURAL NOTES AND SPECIFICATIONS, THE GREATER REQUIREMENTS SHALL GOVERN.
9. ANY ENGINEERING DESIGN, PROVIDED BY OTHERS AND SUBMITTED FOR REVIEW, SHALL BEAR THE SEAL OF A REGISTERED ENGINEER QUALIFIED TO OVERSEE THE WORK.

A.B.C.	AGGREGATE BASE COURSE
A.F.F.	ABOVE FINISHED FLOOR
ALT	ALTERNATE
A.B.	ANCHOR BOLT
BAK-12	BARRIER ARRESTING KIT TYPE-12
B.F.F.	BELOW FINISHED FLOOR
B.O.B.	BOTTOM OF BEAM
B.O.D.	BOTTOM OF DECK
B.O.F.	BOTTOM OF FOOTING
B.O.S.	BOTTOM OF STEEL
BOT	BOTTOM
BRG	BEARING
C.I.P.	CAST IN PLACE
C.F.S.	COLD FORMED STEEL
C.L.	CENTERLINE
CLR	CLEAR
CONC.	CONCRETE
CONC. C.J.	CONCRETE CONTROL JOINT
C.M.U.	CONCRETE MASONRY UNIT
CONN.	CONNECTION
CONT.	CONTINUOUS
D.L.	DEAD LOAD
DIA.	DIAMETER
DN	DOWN
DWG (S)	DRAWING(S)
(E)	EXISTING
E.F.	EACH FACE
E.O.S.	EDGE OF SLAB
EQ	EQUAL
EQUIP.	EQUIPMENT
EXP. BOLT	EXPANSION BOLT
E.J.	EXPANSION JOINT
E.W.	EACH WAY
FDN	FOUNDATION
F.F.E.	FINISHED FLOOR ELEVATION
GA	GAGE
GALV	GALVANIZED
G.S.N.	GENERAL STRUCTURAL NOTES
GLB (GLULAM)	GLUED-LAMINATED BEAM
HORIZ.	HORIZONTAL
I.B.C.	INTERNATIONAL BUILDING CODE
I.C.C.	INTERNATIONAL CODE COUNCIL
I.C.F.	INSULATED CONCRETE FORM
K (KIP)	1000 POUNDS
L.L.	LIVE LOAD
LBS	POUNDS
L.L.H.	LONG LEG HORIZONTAL
L.L.V.	LONG LEG VERTICAL
MFR (S)	MANUFACTURER(S)
M.C.J.	MASONRY CONTROL JOINT
MECH.	MECHANICAL
(N)	NEW
N/A	NOT APPLICABLE
N.I.C.	NOT IN CONTRACT
N.F.S.	NON-FROST SUSCEPTIBLE
N.T.	NOT TO SCALE
O.C.	ON CENTER
OPP	OPPOSITE (MIRRORED)
P.A.F.	POWDER ACTUATED FASTENER
P.C.	PRECAST CONCRETE
PCF	POUNDS PER CUBIC FOOT
PLF	POUNDS PER LINEAR FOOT
PREFAB	PREFABRICATED
P.S.F.	POUNDS PER SQUARE FOOT
P.S.I.	POUNDS PER SQUARE INCH
REINF.	REINFORCING
SCH	SCHEDULE
SIM	SIMILAR
S.I.P.	STRUCTURAL INSULATED PANEL
S.L.R.S.	SEISMIC LOAD RESISTING SYSTEM
SP	SPACES
STD	STANDARD
T&B	TOP AND BOTTOM
T.L.	TOTAL LOAD
T.O.B.	TOP OF BEAM
T.O.C.	TOP OF CONCRETE
T.O.D.	TOP OF DECK
T.O.F.	TOP OF FOOTING
T.O.L.	TOP OF LEDGER
T.O.M.	TOP OF MASONRY
T.O.PL.	TOP OF PLATE
T.O.S.	TOP OF STEEL
T.O.W.	TOP OF WALL
TYP	TYPICAL
U.N.O.	UNLESS NOTED OTHERWISE.
VERT.	VERTICAL
W.S.P.	WOOD STRUCTURAL PANEL
W.W.F.	WELDED WIRE FABRIC
W/ (W/O)	WITH (WITHOUT)

SYMBOL	DESCRIPTION	REMARKS
	DETAIL CUTS ON PLANS	FOUNDATION DETAILS ARE 100 SERIES NUMBERS. FRAMING DETAILS ARE 200 SERIES NUMBERS.
	KEYNOTE	
	8" MASONRY WALL U.N.O.	SEE PLANS AND SCHEDULES FOR SIZE AND REINFORCING
	12" MASONRY WALL U.N.O.	SEE PLANS AND SCHEDULES FOR SIZE AND REINFORCING
	CONCRETE WALL U.N.O.	SEE PLANS AND SCHEDULES FOR SIZE AND REINFORCING
	STEEL STUD WALL U.N.O.	SEE PLANS AND SCHEDULES FOR SIZE
	WOOD STUD WALL U.N.O.	SEE PLANS AND SCHEDULES FOR SIZE
	SHEAR WALL	SEE PLANS FOR LOCATION, SIZE AND TYPE
	HOLDOWN ANCHOR	SEE PLANS FOR LOCATION AND TYPE
	MASONRY CONTROL JOINT	SEE PLANS FOR LOCATION
	CONTROL JOINT	SEE PLANS FOR LOCATION
	DIRECTION OF SLOPE	VERIFY DEPTH WITH ARCHITECTURAL AND/OR MECHANICAL DRAWINGS
	SLAB DEPRESSION/ CHANGE IN ELEVATION	VERIFY DEPTH WITH ARCHITECTURAL DRAWINGS
	FLUSH BEAM	
	DROPPED BEAM	
	BRACED FRAME MEMBERS	SEE PLANS FOR LOCATION
	RIGID (MOMENT) CONNECTION	
	SIMPLE BEAM SPLICE CONNECTION	
	CIRCULAR OR RECTANGULAR OPENING IN BEAM WEB (SIZE)	SEE TYPICAL DETAIL U.N.O.
	BEAM CAMBER	
	INDICATES NUMBER OF ROWS OF BOLTS AT BEAM TO COLUMN OR BEAM TO BEAM CONNECTION	SEE PLANS FOR LOCATION. IF NO SYMBOL INDICATED, SINGLE ROW OF BOLTS OCCURS
	TOP OF STEEL ELEVATION RELATIVE TO BOTTOM OF DECK ELEVATION	
	QUANTITY OF HEADED STUDS ON COMPOSITE STEEL BEAM	SEE G.S.N. AND TYPICAL DETAILS FOR PLACEMENT
	ELEVATION TARGET	
	REVISION SYMBOL	
	OPENING	
	MECHANICAL EQUIPMENT	VERIFY SIZE AND LOCATION WITH ARCHITECTURAL AND/OR MECHANICAL DRAWINGS
	POINT OF SUPPORT/SHORING	

	1	2	3	4	5	6	7	8	9	10	11	12	VERIFY SCALES: BAR IS ONE INCH ON ORIGINAL DRAWING 0 1"																																																															
H	FOUNDATIONS: 1. PILE DESIGN IS BASED ON "PILE FOUNDATION DESIGN IN PERENNIALY FROZEN SOILS, OLIKOTOK, ALASKA" BY USACE, ALASKA DISTRICT. 2. FOUNDATION SHALL CONSIST OF ADFREEZE STEEL PIPE PILES. 3. PILES SHALL BE INSTALLED IN AUGERED HOLES AND BACKFILLED WITH SLURRY PER THE STRUCTURAL PILE DETAILS.												US Army Corps of Engineers® Alaska District <table><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>DATE</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td rowspan="3">DESCRIPTION</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>MARK</td></tr></table>													DATE													DESCRIPTION																																					MARK
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G	STRUCTURAL STEEL: 1. MATERIALS FOR STIFFENERS, GUSSETS, CONNECTION PLATES, CAP AND BASE PLATES SHALL BE OF THE SAME GRADE STEEL AS THE MEMBERS THEY ARE ATTACHED TO UNLESS NOTED OTHERWISE (UNO). 2. TOP OF STEEL (TOS) ELEVATIONS INDICATE TOP OF MEMBER FLANGE, UNO. 3. MEMBERS SHOWN WITH A PLUS OR MINUS SIGN VALUE ON PLAN SHALL BE PLACED AT A DISTANCE HIGHER (+) OR LOWER (-) THAN THE TOP OF STEEL (TOS) ELEVATION SHOWN FOR THAT PARTICULAR PLAN. 4. ALL TEMPORARY MEMBERS SHALL BE MARKED "TEMPORARY" OR "TEMP" AND SHALL BE REMOVED AFTER INSTALLATION IS COMPLETED. ALL TEMPORARY MEMBERS SHALL BE PAINTED ORANGE. 5. ALL STEEL SHALL BE PROPERLY MARKED AND TRACKED IN ACCORDANCE WITH SPECIFICATIONS. 6. PUNCHING HOLES IN STRUCTURAL STEEL IS PROHIBITED. ALL HOLES IN STRUCTURAL STEEL SHALL BE DRILLED AND REAMED TO CORRECT SIZE. 7. ALL RE-ENTRANT CORNERS SHALL BE SHAPED NOTCH FREE PER AWS D1.1 TO A MINIMUM RADIUS OF 1 INCH. ALL NICKS AND STRESS RISERS SHALL BE REMOVED BY GRINDING. 8. STRUCTURAL STEEL WIDE FLANGE SHAPES SHALL CONFORM TO ASTM A992, SEE DRAWINGS FOR SHAPES REQUIRING LOW TEMPERATURE (LT) STEEL. 9. STRUCTURAL STEEL CHANNELS & ANGLES SHALL CONFORM TO ASTM A36 WITH FY=36 KSI MINIMUM YIELD. 10. PIPE USED FOR PILES THAT IS 6" AND LARGER DIAMETER SHALL CONFORM TO API 5L, MINIMUM GRADE 42 KSI, LOW TEMPERATURE (LT) STEEL AND PIPE THAT IS LESS THAN 6" DIAMETER SHALL CONFORM TO ASTM A333, GRADE 6, 35 KSI, STANDARD THICKNESS LOW TEMPERATURE STEEL UNO. 11. ALL PLATE 3/8" THICK AND LARGER (EXCEPT AS NOTED IN LOW TEMPERATURE AND PILE STEEL REQUIREMENTS) SHALL CONFORM TO ASTM A572 GRADE 50, LOW TEMPERATURE (LT) STEEL UNO. 12. ALL PLATE 5/16" THICK AND SMALLER (EXCEPT AS NOTED IN LOW TEMPERATURE AND PILE STEEL REQUIREMENTS) SHALL CONFORM TO ASTM A36 UNO. 13. ALL COPED STEEL SHALL BE GROUND SMOOTH AND HAVE A 1/2 INCH MINIMUM RADIUS. ALL NICKS AND STRESS RISERS SHALL BE REMOVED BY GRINDING. 14. ALL HANDRAIL (POSTS AND RAILS) FOR PLATFORMS, WALKWAYS, STAIRS AND STAIR LANDINGS SHALL BE FABRICATED FROM 1 1/2 INCH DIAMETER PIPE, ASTM A53 GRADE B OR ASTM A500, GRADE B OR C, MINIMUM WALL THICKNESS OF 0.145 INCH. AFTER FABRICATION ALL SHARP EDGES AND BURRS SHALL BE REMOVED. 15. ALL HANDRAIL SHALL BE SIDE MOUNTED UNLESS NOTED OTHERWISE ON DESIGN DRAWINGS. 16. ALL STRUCTURAL TUBE (HSS) SHALL CONFORM TO ASTM A500, GRADE B, FY=46 KSI MIN YIELD & FY/FT < 0.80. 17. ALL STRUCTURAL STEEL CONSTRUCTION SHALL CONFORM TO THE LATEST AISC HANDBOOK. STRUCTURAL STEEL MATERIALS SHALL BE AS FOLLOWS UNO.: 18. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS PRIOR TO FABRICATION. SHOP DRAWINGS SHALL INCLUDE PIECE MARKS, ERECTION PLANS SHOWING BEAM SIZES AND DETAILS WITH CORRESPONDING CONTRACT DOCUMENT INFIGATORS. SHOP DRAWINGS SHALL MAKE A DISTINCTION BETWEEN SHOP WELDS AND FIELD WELDS.																																																																											
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C																																																																												
B	FLOOR PLATE: 1. ALL FLOOR PL SHALL BE CHECKERED PLATE OF THICKNESS INDICATED, UNO. 2. CONTINUOUS PLATE OVER SUPPORTING BEAMS SHALL BE STITCH WELDED ON BOTH SIDES OF BEAMS WITH 3" IN 12" OF 3/16" FILLET WELD. MAINTAIN MIN OF 3" OF WELD ON EA SIDE OF BEAM. 3. ALL 4 FREE EDGES OF PLATE SHALL BE SEAL WELDED WITH CONTINUOUS 3/16" SQUARE GROOVE WELD TO SUPPORTING BEAMS, COLUMNS, VERTICAL BRACINGS, OR ANY MISC VERTICAL MEMBERS PENETRATING THE PLATE, UNO.																																																																											
A																																																																												

WELDING:

- LENGTH OF WELDS SHOWN ARE EFFECTIVE LENGTH AS SPECIFIED IN AWS SPECIFICATIONS. WHERE THE LENGTH OF WELD IS NOT SHOWN, IT SHALL BE FULL LENGTH OF THE JOINT. ALL BUTT WELDS SHALL BE FULL PENETRATION WELDS, UNO.
- GRIND SMOOTH WELDED JOINTS WHERE FLUSH SURFACE IS REQUIRED.
- ALL STRUCTURAL WELDING SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), STEEL CONSTRUCTION AND AWS D1.1 AND SPECIFICATIONS.
- ALL STRUCTURAL STEEL WELDING PROCEDURES SHALL BE SUBMITTED AND APPROVED PRIOR TO THE START OF WELDING. CONTRACTOR SHALL SUBMIT SPECIAL PROCEDURES FOR WELDING API 5L-X65 PIPE WHERE REQUIRED BY AWS D1.1.
- ALL WELDING SHALL BE PERFORMED BY WELDERS HOLDING VALID CERTIFICATES AND HAVING CURRENT EXPERIENCE IN THE TYPE OF WELD SHOWN ON THE DRAWINGS OR NOTES. CERTIFICATES SHALL BE THOSE ISSUED BY AN ACCEPTED TESTING AGENCY. WELDERS SHALL SUBMIT CURRENT QUALIFICATION MATRIX FOR EACH WELDING PROCESS, POSITION, DIAMETER, AND THICKNESS RANGE TO BE USED.
- ALL WELDS SHALL BE 100% VISUALLY INSPECTED IN ACCORDANCE WITH AWS D1.1.
- 100% OF ALL FULL-PENETRATION WELDS SHALL BE EITHER ULTRASONICALLY (UT) OR RADIO GRAPHICALLY (RT) INSPECTED.
- 25% OF ALL FILLET WELDS SHALL BE MAGNETICALLY (MT) INSPECTED.
- ALL WELDING SURFACES SHALL BE CLEANED FREE OF MILL SCALE AND RUST BY GRINDING OR APPROVED GRIT BLASTING AS REQUIRED.
- ALL FULL-PENETRATION BUTT WELDS SHALL USE METAL OR CERAMIC BACKING AS PERMITTED BY AWS D1.1.
- ALL WELDING PROCEDURES AND SEQUENCES SHALL BE PLANNED TO MINIMIZE WELD SHRINKAGE STRESSES THAT COULD RESULT IN DISTORTION, CRACKING OR LAMELLAR TEARING.
- WELD FILLER MATERIALS ARE IN ACCORDANCE WITH AWS D1.1 SECTION 3.3 (INCLUDING TABLE 3.1), LOW HYDROGEN WITH AN ELECTRODE STRENGTH OF 58 KSI MINIMUM YIELD STRENGTH AND 70 KSI MINIMUM TENSILE STRENGTH.
- MIN FILLET WELD SIZE SHALL BE 3/16" FOR STRUCTURAL WELDS, UNO.
- THE FOLLOWING ARE REQUIRED: REMOVAL OF RUNOFF TABS AND BACKING BARS, BACK GOUGING AND COMPLETION OF FULL PENETRATION WELDS.
- CONTRACTOR SHALL COORDINATE ALL WELDING DESIGNATIONS BETWEEN FABRICATOR AND ERECTOR (SHOP OR FIELD WELDS) REGARDLESS OF HOW THEY ARE CALLED OUT ON THE PLANS.

CONNECTIONS:

- UNLESS NOTED OTHERWISE, ALL BOLTED CONNECTIONS SHALL USE ASTM A320, GRADE L7 BOLTS WITH ASTM A194 GRADE 7L OR 4L NUTS AND F436 HARDENED STEEL WASHERS.
- A320 BOLTS SHALL BE DETAILED, FABRICATED, STORED, ERECTED, AND TENSIONED IN ACCORDANCE WITH AISC REQUIREMENTS FOR A325 BOLTS. THREADS ARE INCLUDED IN THE SHEAR PLANE FOR DESIGN. BOLT HOLES SHALL BE AISC STANDARD DIAMETER ROUND HOLES.
- ALL BOLTS SPECIFIED AS PRE-TENSIONED SHALL BE PRE-TENSIONED TO AISC A325 PRE-TENSION VALUES AND USE A LOAD INDICATING WASHER (LIW).
- A MINIMUM OF TWO 3/4" DIA BOLTS SHALL BE USED FOR EACH BOLTED CONNECTION, UNO.
- BOLTED CONNECTIONS OF NON-STRUCTURAL MEMBERS SHALL BE MADE WITH 5/8 INCH DIAMETER ASTM A307 BOLTS UNO.
- ALL BOLT HOLES AND BOLT HOLE SPACING SHALL BE AISC STANDARD DIAMETER AND SPACING UNO.

GRATING:

- PLATFORM AND STAIR GRATING SHALL BE WELDED GALVANIZED CARBON STEEL BAR GRATING AS FOLLOWS UNO. ALL EDGES SHALL BE BANDED.
 - EXTERIOR PLATFORMS AND WALKWAYS: 2-1/2" x 3/16" SERRATED BEARING BARS AT 1-3/16" OC AND CROSS BARS AT 4" OC (9-W-4, SERRATED, GALVANIZED, OR APPROVED EQUAL.)
 - EXTERIOR STAIR TREADS: 12" WIDE GRATING TREADS WITH 1-1/2" x 3/16" SERRATED BEARING BARS AT 1-3/16" OC AND CROSS BARS AT 4" OC WITH NON-SLIP NOSING (19-W-4-DP, SERRATED, GALVANIZED, OR APPROVED EQUAL.). BEARING BARS TO SPAN BETWEEN STRINGERS. ATTACH TREADS TO STRINGERS BY WELDING OR END PLATE BOLTS PER MANUFACTURER.
- ALL OPENINGS IN GRATING SHALL BE BANDED PER MANUFACTURER'S STANDARD KEEPING MINIMUM OF SAME SIZE BAR AS GRATING AND MAINTAINING 1" CLEARANCE TO PENETRATING OBJECT, UNLESS NOTED OTHERWISE.
- GRATING SHALL BE GALVANIZED AND THE TYPE AS CALLED OUT ON PLAN. STEEL SHALL MEET ASTM A1011 AND HAVE A MINIMUM YIELD STRESS OF 30 KSI.
- ALL GRATING PANEL EDGES MUST BE SUPPORTED BY STEEL FRAMING ELEMENTS TO ENSURE NO DIFFERENTIAL MOVEMENT AT PANEL JOINTS AND EDGES.
- GRATING TO BE SECURED BY REMOVABLE CLIPS OR FASTENING PER THE MANUFACTURER. PROVIDE SHOP DRAWINGS FOR GRATING AND CLIPS/CONNECTORS.

LOW TEMPERATURE STEEL:

(CHARPY V-NOTCH TEST REQUIREMENT)

- THREE FULL SIZE SPECIMENS SHALL BE TESTED FROM EACH ROLLED SHAPE OR PLATE. TEST PROCEDURE, TEST LOCATION AND RETEST OPTION SHALL BE IN ACCORDANCE WITH ASTM A370 AND ASTM A673.
- THE THREE SPECIMENS FROM STEEL USED FOR LOW TEMPERATURE SERVICE SHALL HAVE THE FOLLOWING IMPACT PROPERTIES FOR CHARPY V-NOTCH (CVN) TESTS:

STEEL TYPE	MATERIAL DESIGNATION (LOW TEMPERATURE SERVICE)	AVERAGE/MINIMUM CVN VALUES
TYPE T1	A992, API 5L	20/15 FT-LB AT -50° F
	A333	15/12 FT-LB AT -50° F
TYPE T2	A992, API 5L	20/15 FT-LB AT -20° F
	A333	15/12 FT-LB AT -20° F
TYPE T3	A992, A500	20/15 FT-LB AT 32° F
TYPE T4	A36	15/12 FT-LB AT 32° F
TYPE T5	A992, A36, A55, A500	NO CVN TEST REQUIRED

- DESIGNATION "T1" THROUGH "T5" IN PARENTHESIS, SHOWN ON THE DRAWINGS NEXT TO MEMBER SIZES, e.g. "W12x40(T1)", INDICATE THE TYPE OF MATERIAL AS DEFINED IN THE LOW TEMPERATURE SERVICE TABLE.

COATINGS:

- SUPERSTRUCTURE AND PLATFORM FRAMING STEEL SHALL BE PRIME COATED.
 - SSPC-SP6 COMMERCIAL BLAST CLEANING
 - 2.5 TO 3.5 MILS INORGANIC ZINC PRIMER (CONTAINING MINIMUM TOTAL ZINC CONTENT 80% IN DRY FILM)
- FINISH/TOP COAT:
 - HIGH BUILD INORGANIC TOP COAT COMPATIBLE WITH PRIME BY SAME MANUFACTURER
 - 3 TO 5 MILS
- HANDRAILS, GRATING, STAIR TREADS, LADDERS AND LADDER CAGES SHALL BE GALVANIZED.
- BOLTS, NUTS, AND WASHERS WHEN USED WITH GALVANIZED MEMBERS SHALL BE GALVANIZED.
- THERE SHALL BE NO SHOP COATING WITHIN 4 INCHES OF ANY FIELD WELDED CONNECTIONS. THESE AREAS SHALL BE CLEANED AND COATED AFTER WELDING.
- TEMPORARY BEAMS AND BRACES SHALL BE SPRAY PAINTED "ORANGE COLOR" AND NO PREPARATION IS REQUIRED.
- GALVANIZING SHALL BE PER ASTM A125 AND A153 WITH A MINIMUM THICKNESS OF G90.

SPILL CONTAINMENT AREAS:

- ALL FLOOR PLATES SHALL BE SEAL WELDED WITH CONTINUOUS WELDS AT ALL SEAMS. ERECTION CONTRACTOR SHALL SEAL WELD ALL CONTAINMENT AREA ERECTION JOINTS AFTER FIELD INSTALLATION IS COMPLETE.
- ALL FLOOR PENETRATIONS SHALL BE SEAL WELDED TO A HEIGHT OF NOT LESS THAN 4 INCHES ABOVE THE FLOOR.
- A PERIMETER 4" HIGH CURB USING ANGLE OR FLAT BAR SHALL BE CONTINUOUS AND SEAL WELDED TO THE FLOOR AND AT ALL JOINTS.
- THE INTERFACE BETWEEN THE PERIMETER CURB AND THE INSULATED BUILDING PANELS SHALL BE CAULKED WITH A CONTINUOUS BEAD OF HYDROCARBON RESISTANT SEALANT.

DELEGATED DESIGN / DEFERRED SUBMITTALS:

- THE FOLLOWING HAVE NOT BEEN DESIGNED BY THE STRUCTURAL ENGINEER OF RECORD AND MUST BE DESIGNED BY THE CONTRACTOR. SUBMIT DELEGATED DESIGNS AND CALCULATIONS FOR GOVERNMENT REVIEW AND APPROVAL FOR THE FOLLOWING ITEMS:

ELECTRICAL EQUIPMENT ANCHORAGE TO PLATFORM.

SHUM030007
OLIKOTOK LRRS, AK
REPAIR OLIKOTOK ROAD
STRUCTURAL
GENERAL STRUCTURAL NOTES - 2

REFERENCE
NUMBER:
S-002

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US Army Corps
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Alaska District

[illegible]

US ARMY CORPS OF ENGINEERS ALASKA DISTRICT 204 3RD STREET JBER ALASKA 99506-0688	DESIGNED BY: DRAWN BY: CHECKED BY: K. KORUNA	ISSUE DATE: SEPTEMBER 2024 W911KB-24R-0041 W911KB-24R-0041
	QUANTITY: F. BISHOP	CONTRACT NO.: W911KB-24-C-0022
	DATE SAUCED BY: AF-891-20-41	
	SIZE: FILE:	ANSI: 101002 RVT

SHUM030007
OLIKTOK LRRS, AK
REPAIR OLIKOTOK ROAD
STRUCTURAL
GENERAL STRUCTURAL NOTES - 3

REFERENCE
NUMBER:

S-003

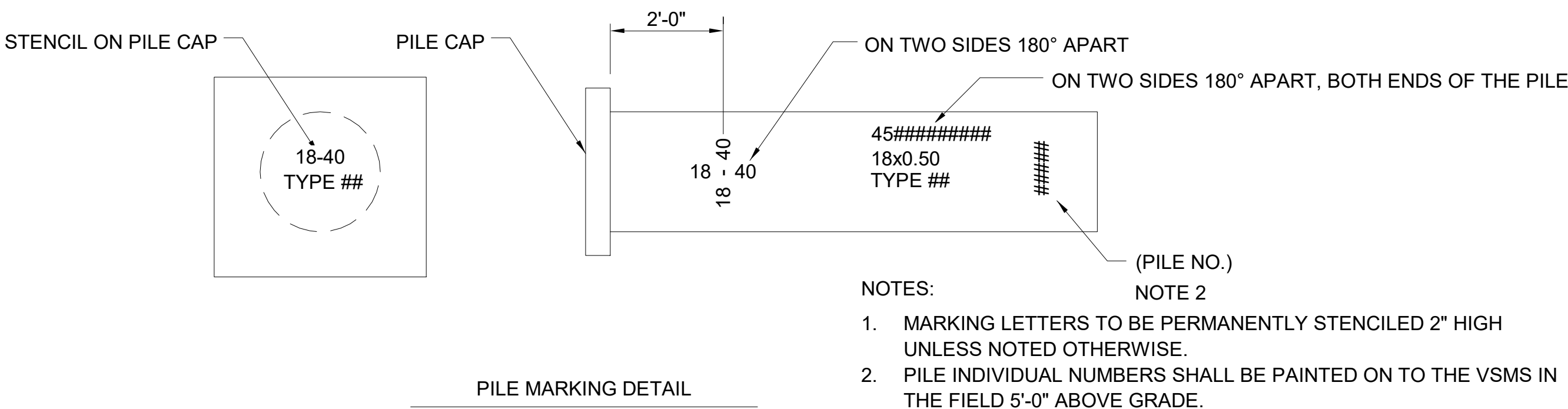
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PILE NOTES

1. PIPE USED FOR PILES, THAT IS 6" AND LARGER DIAMETER SHALL CONFORM TO API 5L, GRADE X65, (T1) LOW TEMP (LT) STEEL UNO. PLATE STEEL SHALL BE A572 GR 50, CVN 20/15 AVG/MIN (FT-LB) AT -50°F.
2. ALL WELDING PERFORMED BY WELDERS QUALIFIED AT -50°F. ALL WELDING RODS TO BE LOW-HYDROGEN. ALL STEEL SHALL BE PROPERLY MARKED AND TRACKED..
3. PILES SHALL BE MARKED AS SHOWN IN THE PILES MARKING DETAIL.
4. PILES SHALL BE INSTALLED WITH A VERTICAL AND HORIZONTAL TOLERANCES:. PILE CAP PLATE TOPS SHALL BE NOT MORE THAN ONE HALF (1/2) INCH (0.042 FEET) OUT OF DESIGN LOCATION AND SHALL NOT SLOPE MORE THAN ONE (1) PERCENT FROM THE HORIZONTAL. PILES SHALL BE WITHIN ZERO (0) INCH OR MINUS ONE (1) INCH (0.083 FEET) OF THE DESIGN ELEVATION. PILES SHALL BE INSTALLED PLUMB WITH A TOLERANCE OF 3/8" OVER 6'-0".
5. INSTALLATION CONTRACTOR SHALL IDENTIFY ALL IN-HOLE VARIATIONS FROM TYPICAL LOCAL PERMAFROST INCLUDING ICE LENSES, UNFROZEN ZONES AND ORGANIC MATERIAL LAYERS. ICE LENSES OR ABNORMAL SOIL PROFILES SHALL BE PROMPTLY REPORTED TO THE OWNER'S REPRESENTATIVE FOR POSSIBLE CORRECTIVE ACTION.
6. EMBEDDED DEPTHS SHOWN ON PILE SCHEDULE ARE MINIMUM DEPTHS.
7. CONTRACTOR SHALL COORDINATE WITH GEOTECHNICAL ENGINEER DURING ALL DRILLING OPERATIONS

PILE WELDING:

1. LENGTH OF WELDS SHOWN ARE EFFECTIVE LENGTH AS SPECIFIED IN AWS SPECIFICATIONS. WHERE THE LENGTH OF WELD IS NOT SHOWN, IT SHALL BE FULL LENGTH OF THE JOINT.
2. STRUCTURAL WELDING SHALL BE IN ACCORDANCE WITH THE AISC STEEL CONSTRUCTION MANUAL, AWS D1.1, ASME B31.4.
3. STRUCTURAL STEEL WELDING. STRUCTURAL STEEL WELDING PROCEDURES SHALL BE SUBMITTED AND APPROVED PRIOR TO THE START OF WELDING.
4. CONTRACTOR SHALL SUBMIT SPECIAL PROCEDURES FOR WELDING API 5L-X65 PIPE WHERE REQUIRED BY AWS. D1.1.
5. FABRICATORS SHALL SUBMIT CURRENT QUALIFICATION MATRIX FOR EACH WELDING PROCESS, POSITION, DIAMETER, AND THICKNESS RANGE TO BE USED.
6. WELDS SHALL BE INSPECTED PER AWS D1.1, THE SPECIFICATIONS AND AS FOLLOWS: 25% OF ALL FILLET WELDS SHALL BE MAGNETICALLY (MT) INSPECTED. 100% OF ALL CJP WELDS SHALL BE ULTRASOUND (UT) INSPECTED.
7. WELDING SURFACES SHALL BE CLEANED FREE OF MILL SCALE RUST BY GRINDING OR APPROVED GRIT BLASTING AS REQUIRED.
8. WELDING PROCEDURES AND SEQUENCES SHALL BE PLANNED TO MINIMIZE WELD SHRINKAGE STRESSES THAT COULD RESULT IN DISTORTION, CRACKING OR LAMELLAR TEARING.
9. WELD FILLER MATERIALS ARE IN ACCORDANCE WITH AWS D1.1 SECTION 3.3 (INCLUDING TABLE 3.1): LOW HYDROGEN E70XX MIN FILLET WELD SIZE SHALL BE 3/16" FOR STRUCTURAL WELDS, UNO.



- NOTES: NOTE 2
1. MARKING LETTERS TO BE PERMANENTLY STENCILED 2" HIGH UNLESS NOTED OTHERWISE.
 2. PILE INDIVIDUAL NUMBERS SHALL BE PAINTED ON TO THE VSMS IN THE FIELD 5'-0" ABOVE GRADE.

REQUIRED GEOTECHNICAL SPECIAL INSPECTIONS					
SYSTEM OR MATERIAL	INSPECTION				REMARKS
	IBC CODE REFERENCE	CODE OR STANDARD REFERENCE	FREQUENCY		
			CONTINUOUS	PERIODIC	
1. SOILS					
	1705.6	PER GEOTECHNICAL REPORT			COORDINATE ADDITIONAL REQUIREMENTS WITH THE CIVIL DRAWINGS AND EARTHWORK SPECIFICATIONS (31 00 00)
SLURRY MATERIAL VERIFICATION			X		
ADFREEZE PILE PLACEMENT			X		

REQUIRED STRUCTURAL SPECIAL INSPECTIONS					
SYSTEM OR MATERIAL	INSPECTION				REMARKS
	IBC CODE REFERENCE	CODE OR STANDARD REFERENCE	FREQUENCY		
			CONTINUOUS	PERIODIC	
1. FABRICATORS					
FABRICATED SYSTEMS AND ELEMENTS	1704.2.5			X	SPECIAL INSPECTIONS APPLY TO VERIFICATION OF DETAILED FABRICATION AND QUALITY CONTROL PROCEDURES, INCLUDING REVIEW FOR COMPLETENESS AND ADEQUACY RELATIVE TO THE CODE REQUIREMENTS. SPECIAL INSPECTIONS ARE NOT REQUIRED FOR WORK DONE ON THE PREMISES OF A FABRICATOR REGISTERED AND APPROVED TO PERFORM SUCH WORK WITHOUT SPECIAL INSPECTION. APPROVED FABRICATOR'S, UPON COMPLETION OF COMPONENT MANUFACTURING, SHALL SUBMIT A CERTIFICATE OF COMPLIANCE TO THE CONTRACTING OFFICER STATING THAT THE WORK WAS PERFORMED IN ACCORDANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS.

1. THE CONTRACTOR SHALL EMPLOY ONE OR MORE SPECIAL INSPECTORS TO PROVIDE INSPECTION AND TESTING DURING CONSTRUCTION OF THE TYPES OF WORK REQUIRING SPECIAL INSPECTION AS INDICATED ON THE DRAWINGS AND SPECIFICATION SECTION 01 45 35.
2. EACH SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE GOVERNMENT AND STRUCTURAL ENGINEER OF RECORD, FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION.
3. DUTIES AND RESPONSIBILITIES OF THE SPECIAL INSPECTOR:
 - a. THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK ASSIGNED FOR CONFORMANCE TO THE APPROVED CONSTRUCTION DOCUMENTS.
 - b. THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE GOVERNMENT, AND TO THE ENGINEER OR ARCHITECT OF RECORD. REPORTS SHALL INDICATE THAT WORK INSPECTED WAS DONE IN CONFORMANCE TO APPROVED CONSTRUCTION DOCUMENTS. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, THEN, IF UNCORRECTED, TO THE ENGINEER OR ARCHITECT OF RECORD AND THE GOVERNMENT.
 - c. UPON COMPLETION OF THE ASSIGNED WORK, THE SPECIAL INSPECTOR SHALL COMPLETE AND SIGN THE APPROPRIATE FORMS CERTIFYING THAT, TO THE BEST OF HIS KNOWLEDGE, THE WORK IS IN CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS, AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE CODE.
4. DEFINITIONS:
 - a. "CONTINUOUS" SPECIAL INSPECTION: CONTINUOUS SPECIAL INSPECTION IS THE FULL TIME OBSERVATION OF THE WORK BY THE SPECIAL INSPECTOR PRESENT IN THE WORK AREA WHENEVER WORK IS BEING PERFORMED. PERFORM CONTINUOUS SPECIAL INSPECTION WHERE SPECIFIED FOR ITEMS AS INDICATED IN THE SPECIAL INSPECTION TABLES ON THE DRAWINGS.
 - b. "PERIODIC" SPECIAL INSPECTION: PERIODIC SPECIAL INSPECTION IS THE INTERMITTENT OBSERVATION OF THE WORK BY A SPECIAL INSPECTOR PRESENT IN THE WORK AREA WHILE WORK IS BEING PERFORMED. THE INTERMITTENT OBSERVATION PERIODS SHALL BE: AT TIMES OF SIGNIFICANT WORK; RECURRENT OVER THE COMPLETE WORK PERIOD; AND TOTAL AT LEAST 25 PERCENT OF THE TOTAL WORK TIME FOR A GIVEN TASK.
 - c. PERFORM PERIODIC SPECIAL INSPECTION WHERE SPECIFIED FOR ITEMS AS INDICATED IN THE SPECIAL INSPECTION TABLES.

AWARDED

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**US Army Corps
of Engineers®**
Alaska District

[illegible]

US ARMY CORPS OF ENGINEERS	DESIGNED BY:	ISSUE DATE:
ALASKA DISTRICT	R. KORUNA	SEPTEMBER 2024
2204 3RD STREET	DRAWN BY:	SOLICITATION NO.:
JBER, ALASKA 99506-0888	ALASKA DISTRICT	2204 3RD STREET
	CHECKED BY:	CONTRACT NO.:
	F. BISHOP	W911KB-24-C-0022
	SUBMITTED BY:	DRAWING #:
	J. SAUCEDA	AF-851-201-01
	SIZE:	FILE:

SHUM030007
OLIKTOK LRRS, AK
REPAIR OLIKTOK ROAD
STRUCTURAL
SPECIAL INSPECTIONS - 3

REFERENCE
NUMBER:
S-013

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REQUIRED STRUCTURAL SPECIAL INSPECTIONS (CONTINUED)					
SYSTEM OR MATERIAL	INSPECTION				REMARKS
	IBC CODE	CODE OR STANDARD	FREQUENCY		
			CONTINUOUS	PERIODIC	
4. STRUCTURAL STEEL (CONTINUED)					
INSPECTION AFTER WELDING (CONTINUED)					
REPAIR ACTIVITIES	1705.2	AISC 360 N5.4	X		
DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT MEMBER			X		
INSPECTION PRIOR TO BOLTING					
MANUFACTURER'S CERTIFICATION AVAILABLE FOR FASTENER MATERIALS	1705.2	AISC 360 N5.6	X		
FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS				X	
PROPER FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH IF THREADS ARE TO BE EXCLUDED FROM SHEAR PLANE)				X	
PROPER BOLTING PROCEDURE SELECTED FOR JOINT DETAIL				X	
CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS				X	
PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED			X		
PROPER STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS AND OTHER FASTENER COMPONENTS				X	
INSPECTION DURING BOLTING					
FASTENER ASSEMBLIES, OR SUITABLE CONDITION, PLACED IN ALL HOLES AND WASHERS (IF REQUIRED) ARE POSITIONED AS REQUIRED	1705.2	AISC 360 N5.6		X	
JOINT BROUGHT TO THE SNUG-TIGHT PRIOR TO THE PRE-TENSIONING OPERATION				X	
FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING				X	
FASTENERS ARE PRE-TENSIONED IN ACCORDANCE WITH THE RCSC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGES				X	
DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTION			X		
OTHER INSPECTION TASKS					
EXPOSED CUT SURFACES AND CORNERS PRIOR TO GALVANIZING	1705.2	AISC 360 N5.7	X		
VERIFICATION OF FRAME JOINT DETAILS INCLUDING MEMBER AND COMPONENT LOCATIONS, BRACING AND STIFFENERS		AISC 360 N5.8		X	

REQUIRED TESTING FOR SPECIAL INSPECTIONS				
SYSTEM OR MATERIAL	INSPECTION			REMARKS
	IBC CODE REFERENCE	CODE OR STANDARD REFERENCE	FREQUENCY	
			CONTINUOUS	
1. GEOTECHNICAL				
PER EARTHWORK SPECIFICATION (31 00 00)				
2. STEEL				
MAGNETIC PARTICLE (MT) AND ULTRASONIC (UT) TESTING OF WELDS	1705.2.1	MT - AWS D1.1 6.14.4 UT - AWS D1.1 6.13 & 6.14.3	PER SPECIFICATIONS	
PRE-INSTALLATION VERIFICATION OF PRETENSIONED HIGH STRENGTH BOLTS	1705.2.1	RCSC SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS SECTION 7	EACH COMBINATION OF DIAMETER, LENGTH, GRADE, AND LOT TO BE USED IN THE WORK	

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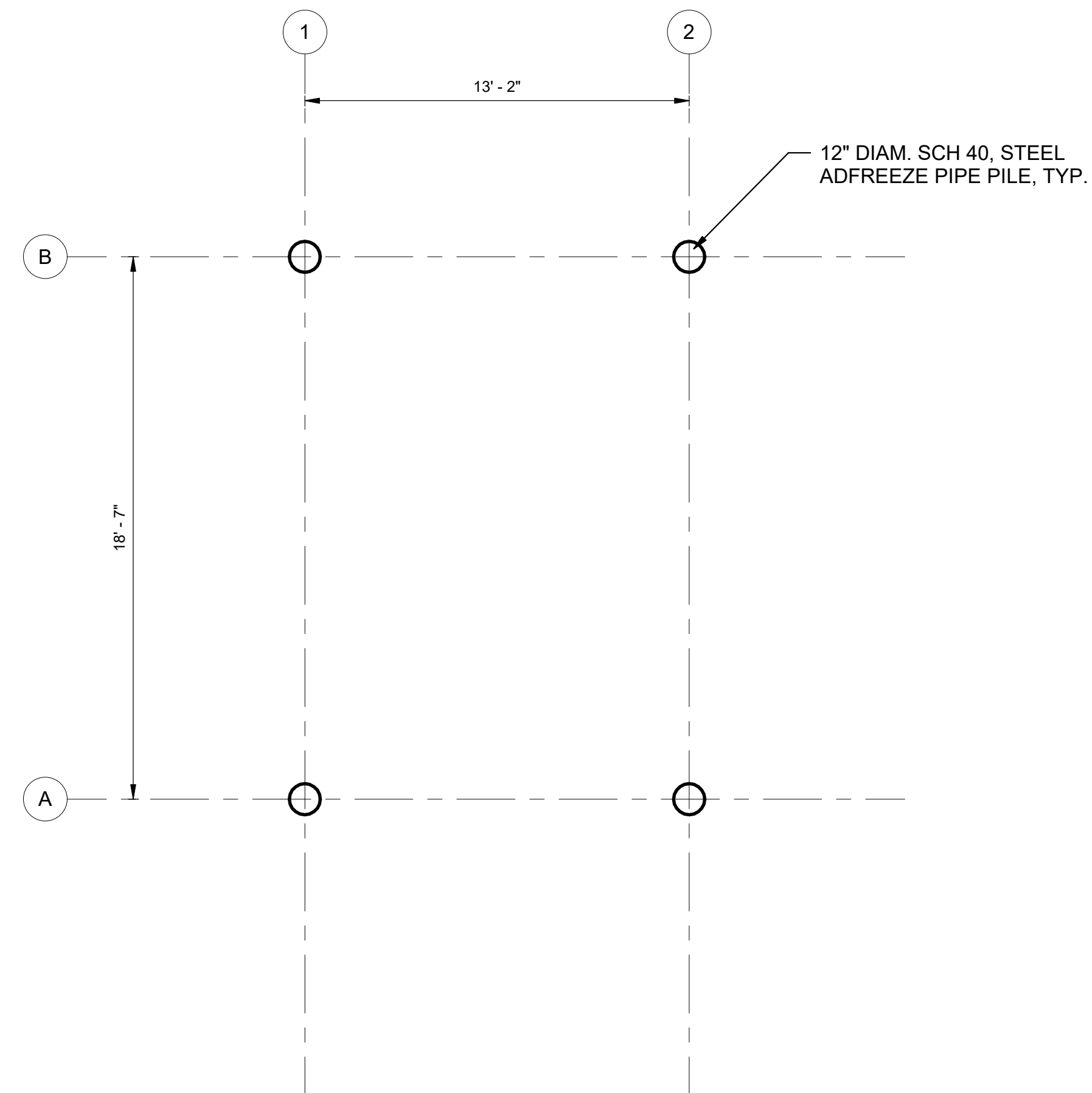
US ARMY CORPS OF ENGINEERS	ISSUE DATE:	SEPTEMBER 2024
DESIGNED BY:	R. KORUNA	
ALASKA DISTRICT	DRAWN BY:	
2204 3RD STREET	R. KORUNA	
JBER, ALASKA 99506-0989	CHECKED BY:	
	F. BISHOP	
	SUBMITTED BY:	
	J. SAUCEDA	
	DATE:	09/20/2024
	ANSI D	FILE
	PROJECT	010202 RVT

STW01030007
OLIKTOK LRRS, AK
REPAIR OLIKTOK ROAD
STRUCTURAL
ELECTRICAL PLATFORM FOUNDATION PLAN

REFERENCE
NUMBER:

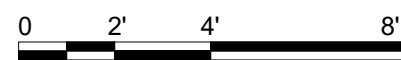
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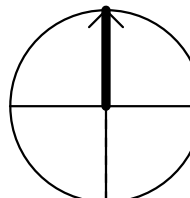


500KVA TRANSFORMER

A1 FOUNDATION PLAN

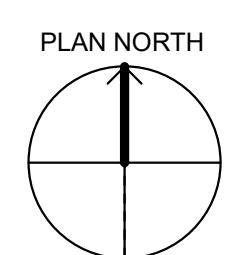
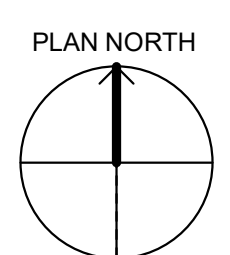
$$1/4'' = 1'-0''$$


PLAN NORTH





A1 PLATFORM LEVEL FRAMING PLAN



A7 GRATING / RAILING PLAN

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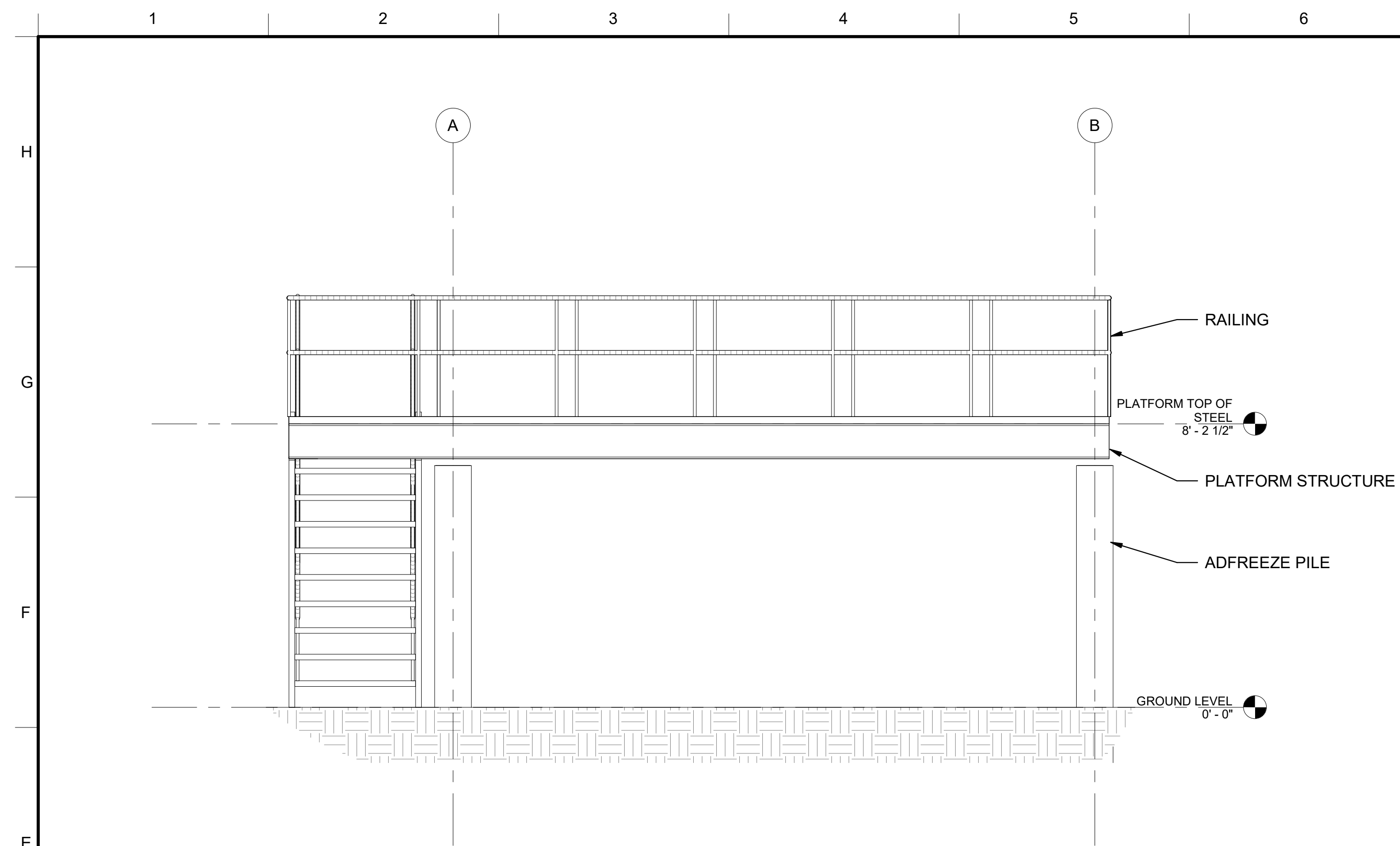
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US AIR FORCE AIRCRAFTS	SEPTEMBER 2024	SOLICITATION NO.:
ALASKA DISTRICT	R. KORUNA	BY:
2204 3RD STREET	DRIVEN BY:	CONTRACT NO.:
JBER, ALASKA 99506-0888	F. BISHOP	W911KB-24-C-0022
	CHECKED BY:	DRAWING #
	W911KB-24-C-0022	AF-831-201-01
	SUBMITTED BY:	FILE:
	ANSI D	QUID0-RVT

OLIKTOK LRRS, AK
REPAIR OLIKOTOK ROAD
STRUCTURAL
FRAMING ELEVATIONS

REFERENCE
NUMBER:
S-201

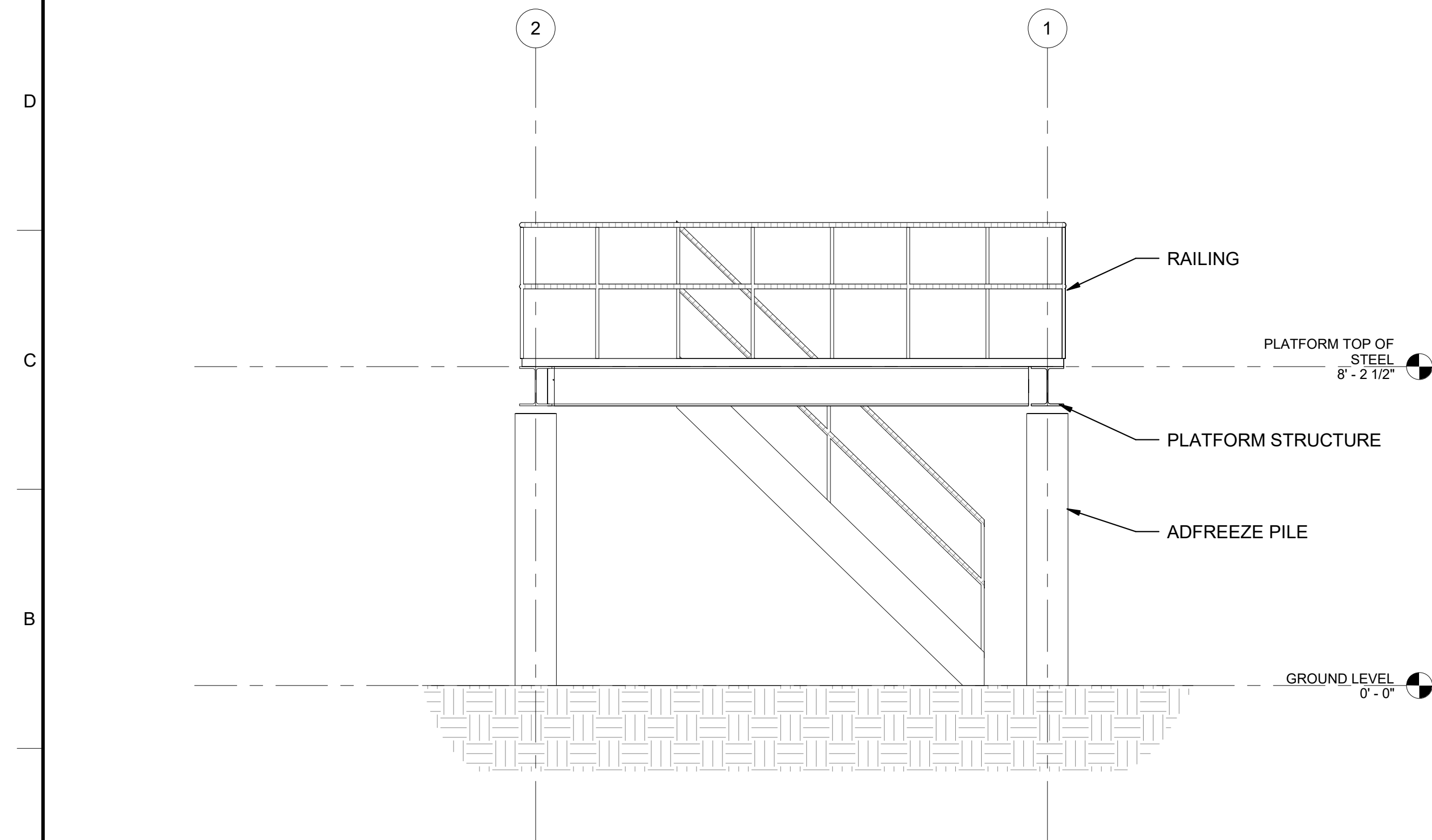
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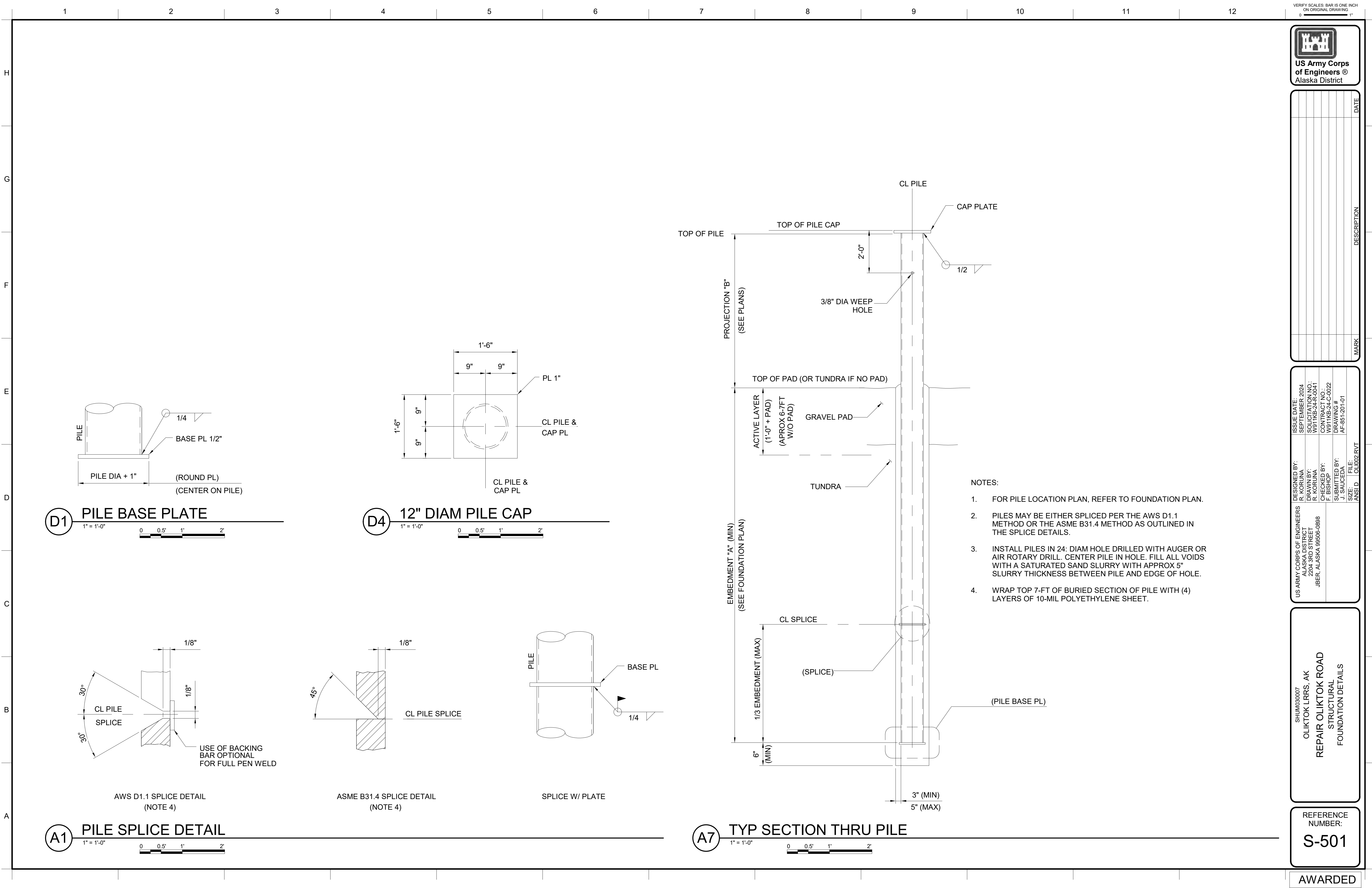
E1 EAST PLATFORM ELEVATION
3/8" = 1'-0"

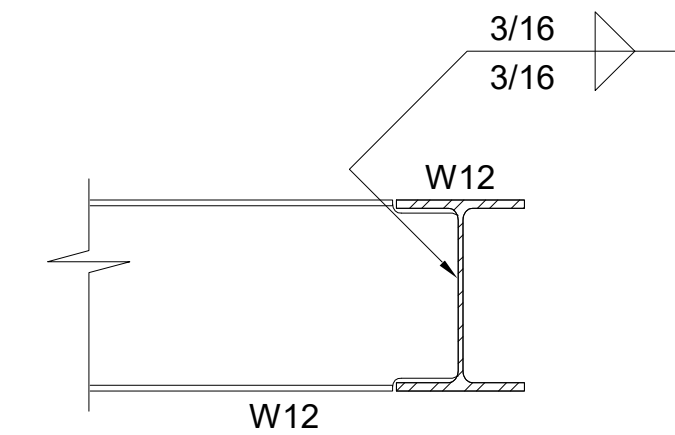
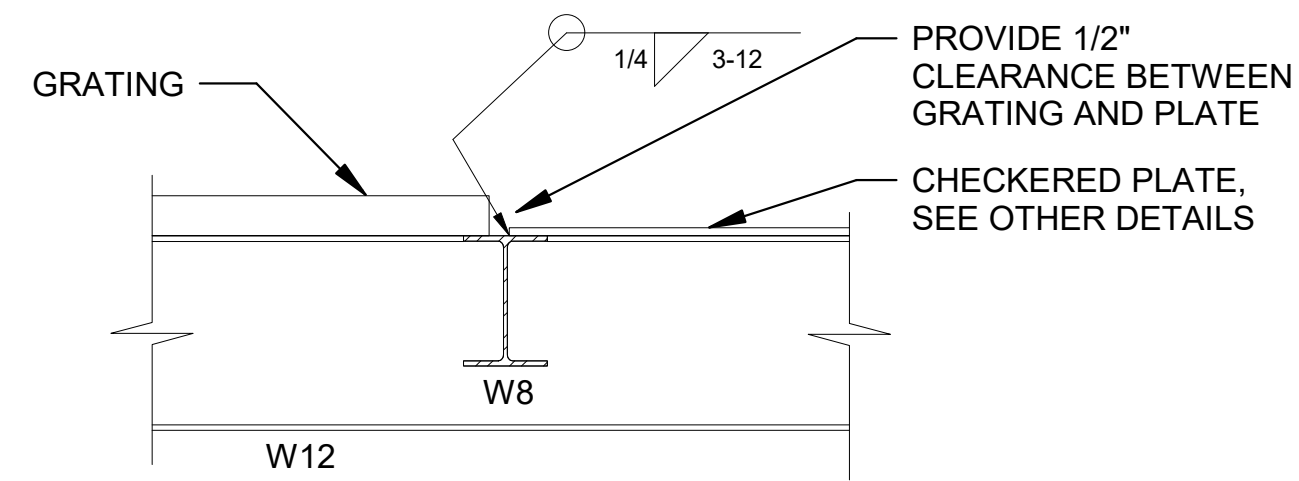


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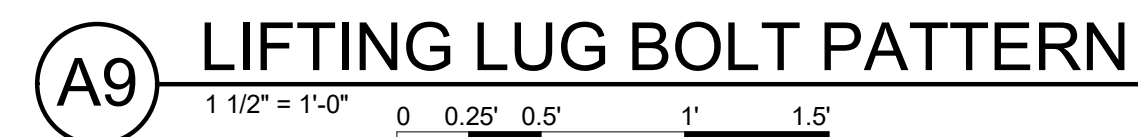
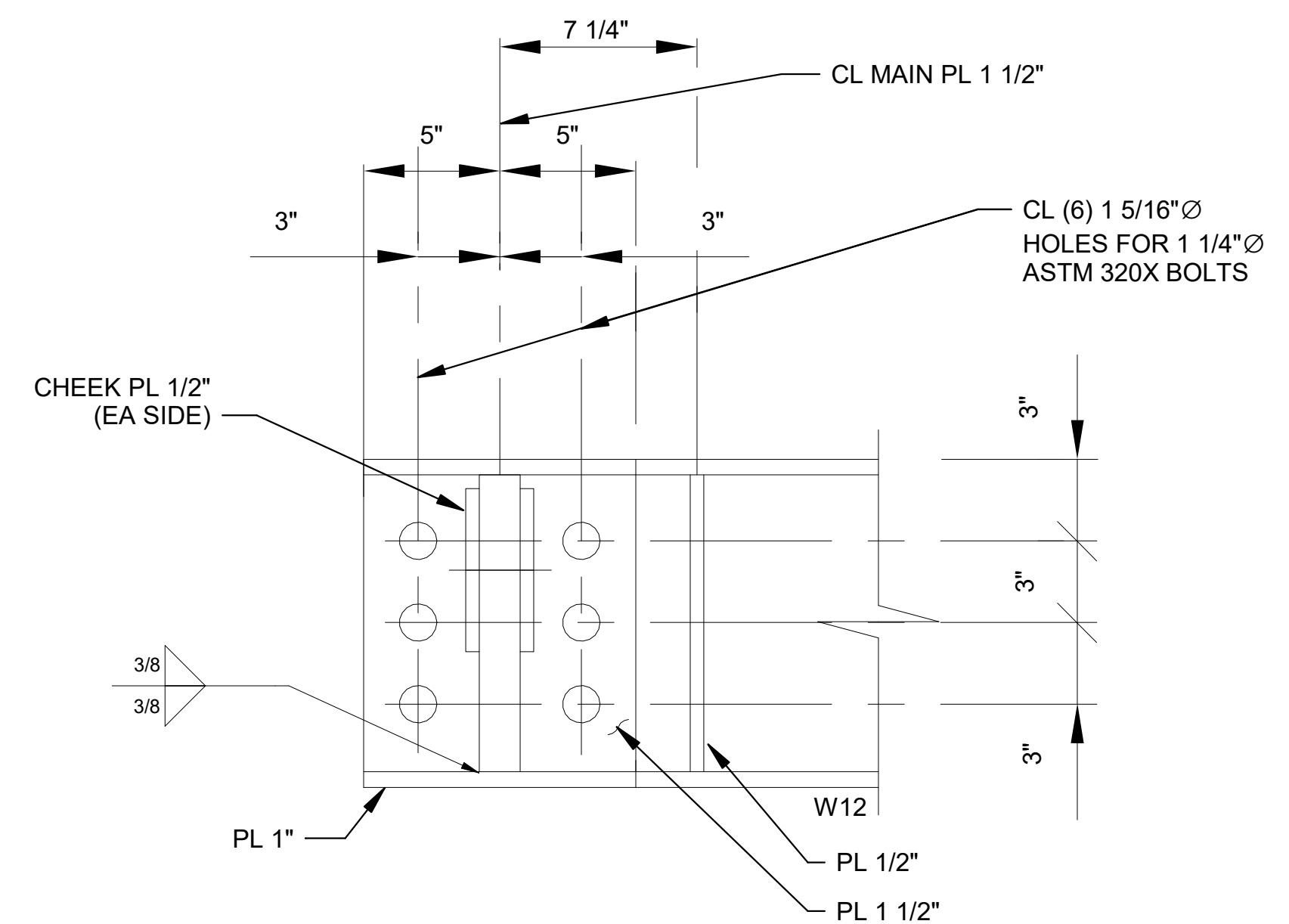
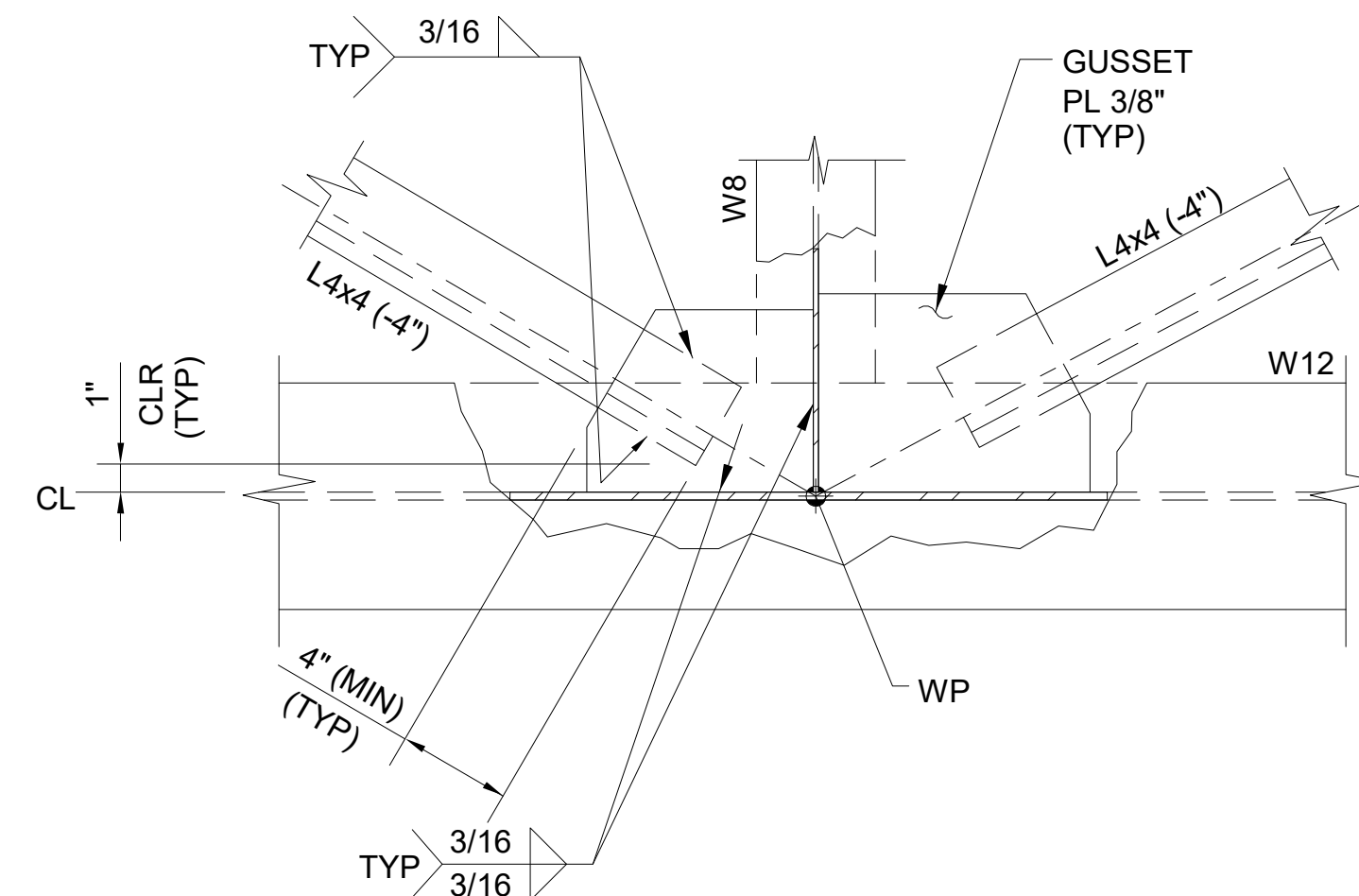
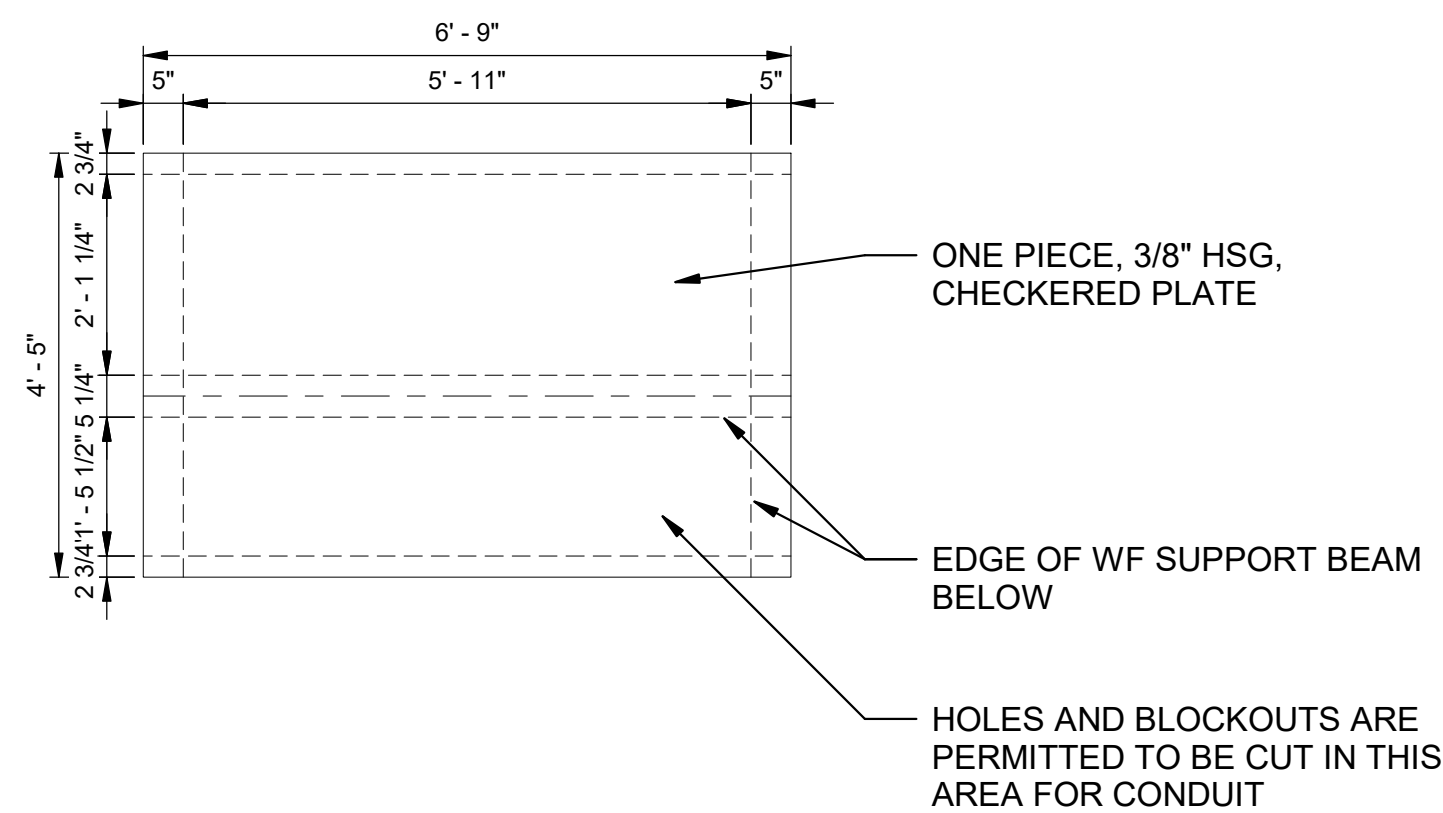
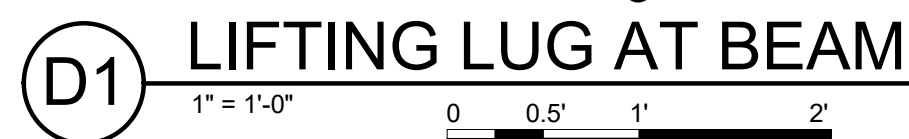
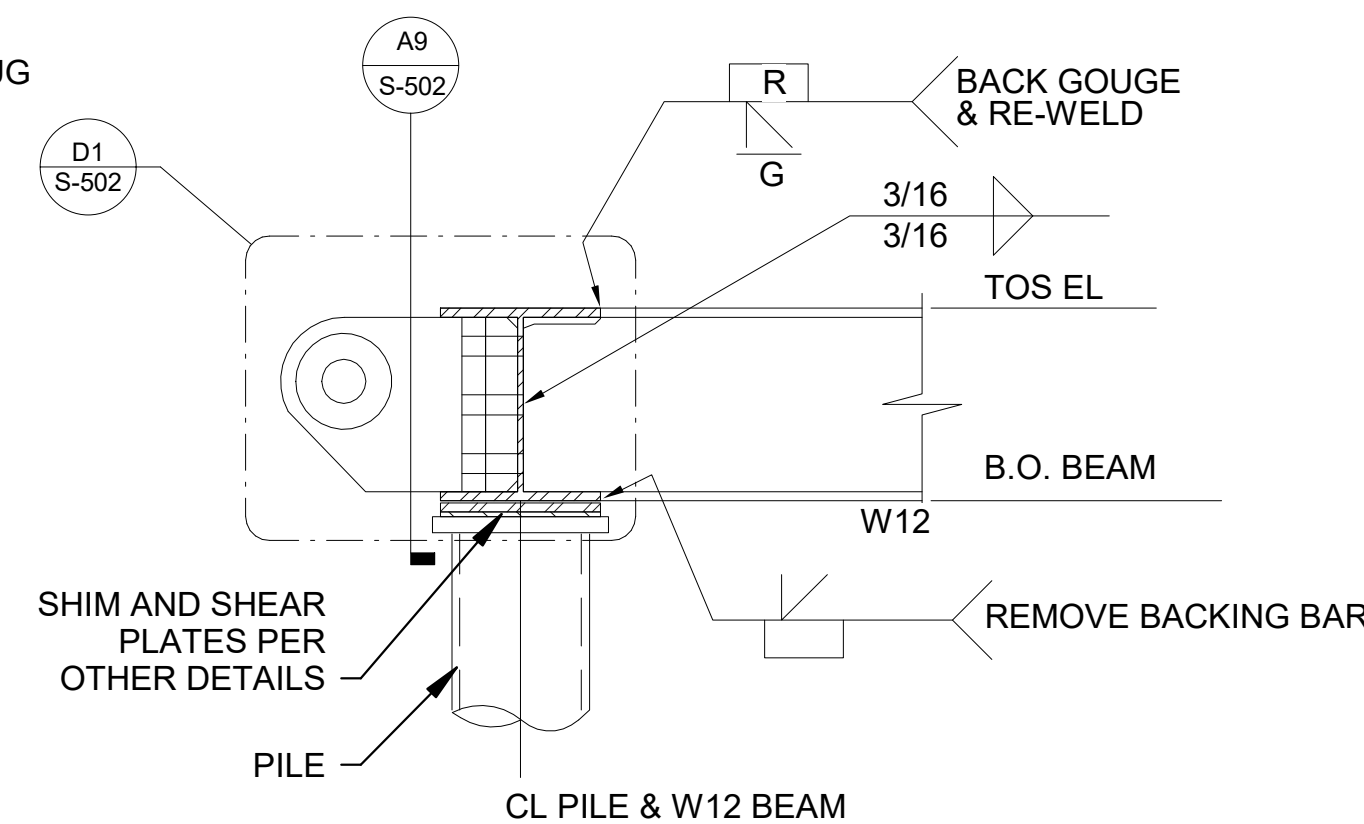
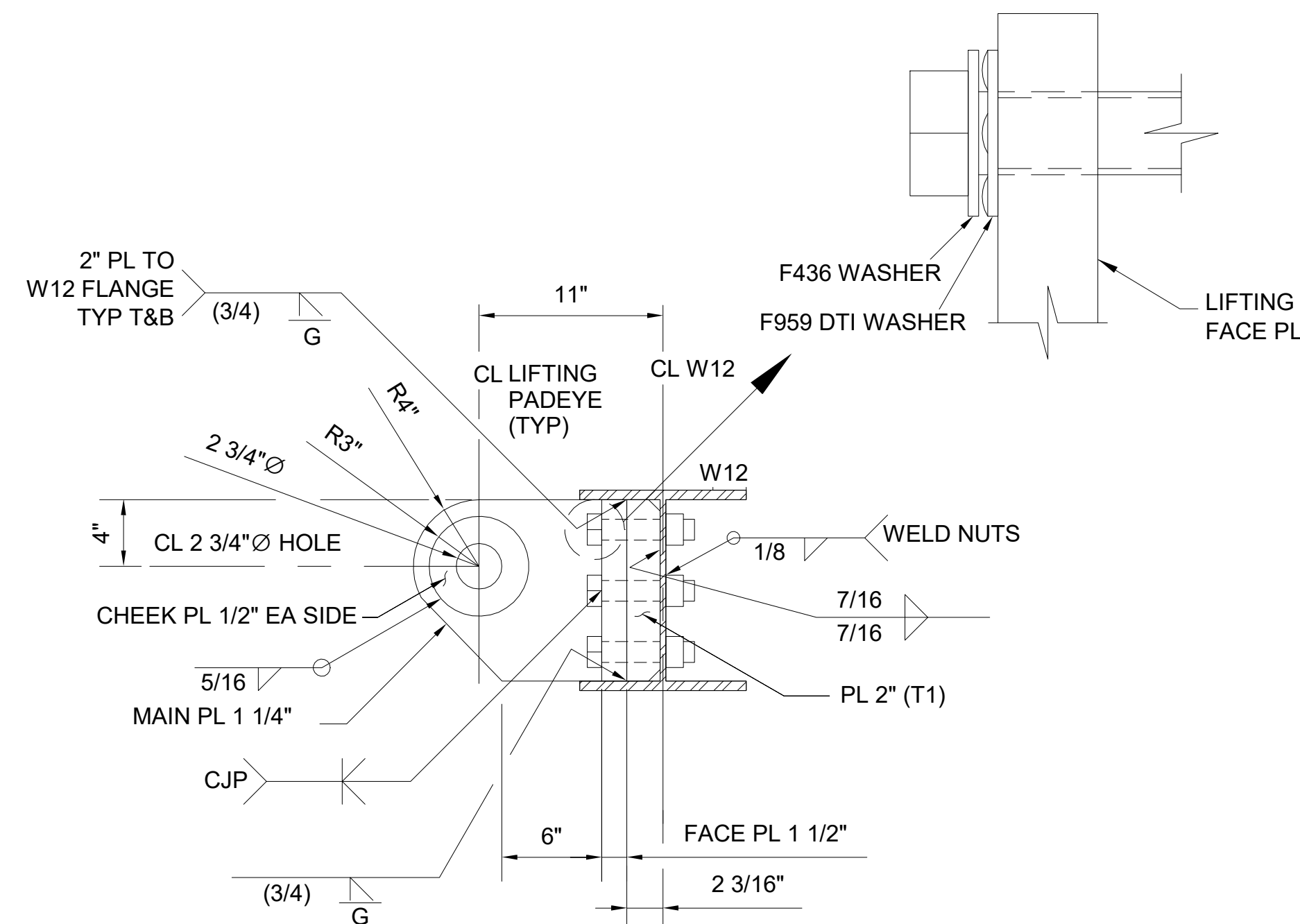
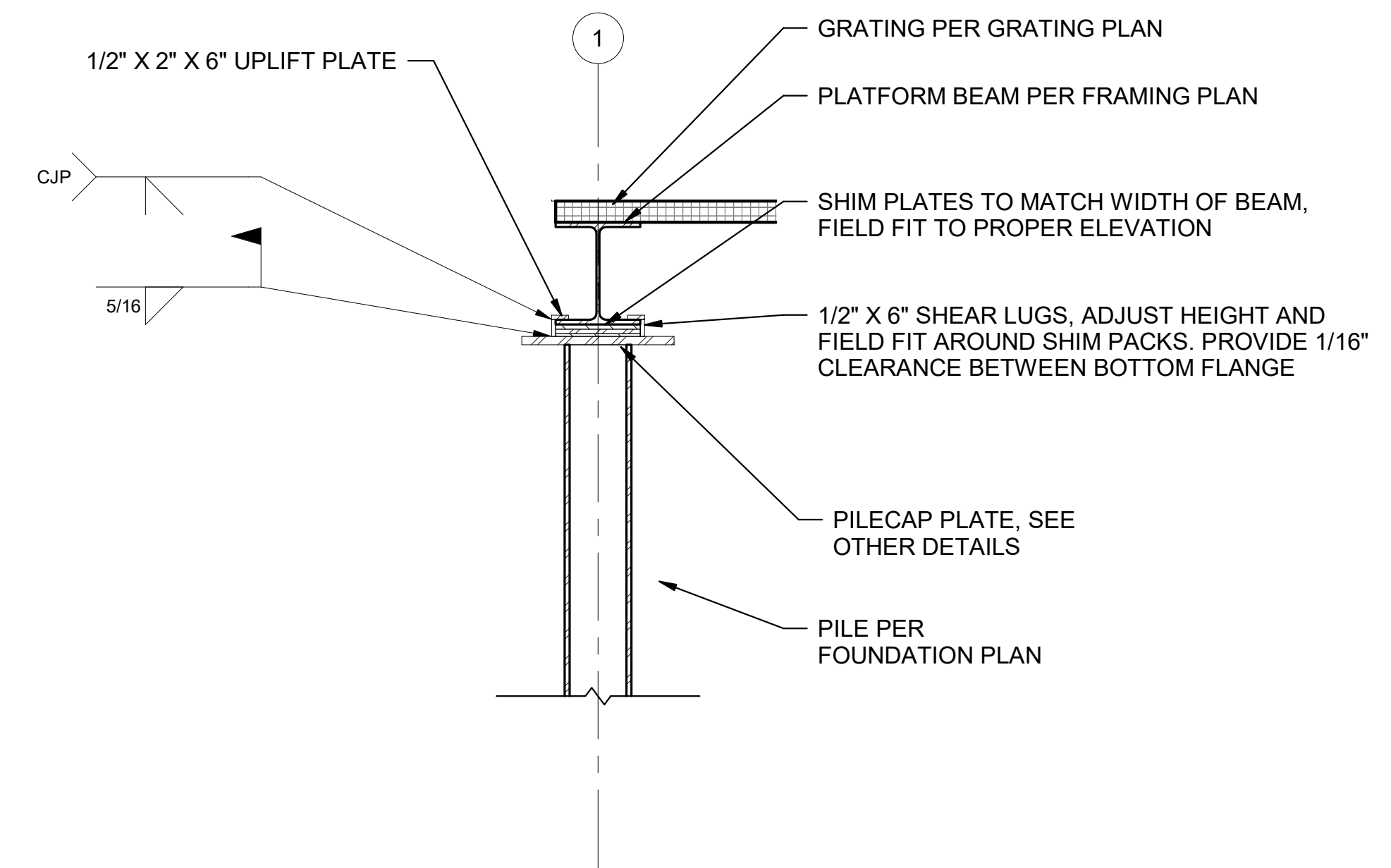
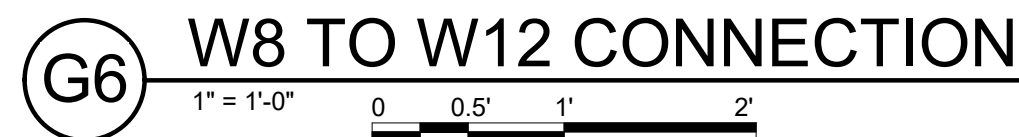
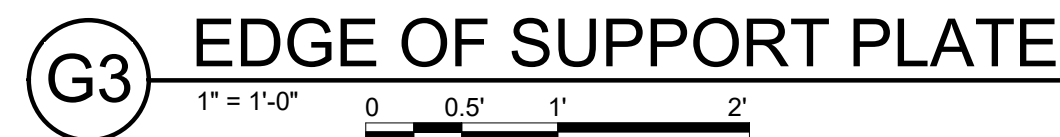


A1 NORTH PLATFORM ELEVATION
3/8" = 1'-0" 0 1' 2' 4' 6'





G1 W12 NON-MOMENT CONN



ARMY CORPS OF ENGINEERS ALASKA DISTRICT 2204 3RD STREET JBER, ALASKA 99506-0898	DESIGNED BY: R. KORUNA	ISSUE DATE: SEPTEMBER 2024
	DRAWN BY: R. KORUNA	SOLICITATION NO.: W911KB-24-R-0041
	CHECKED BY: F. BISHOP	CONTRACT NO.: W911KB-24-C-0022
	SUBMITTED BY: J. SAUCEDA	DRAWING #: AF-851-201-01
	SIZE:	FILE:
	ANSI D	OLI002.RVT

OLIKTOK LRRS, AK REPAIR OLIKOTOK ROAD STRUCTURAL PLATFORM DETAILS

REFERENCE
NUMBER:
S-502

AWARDED

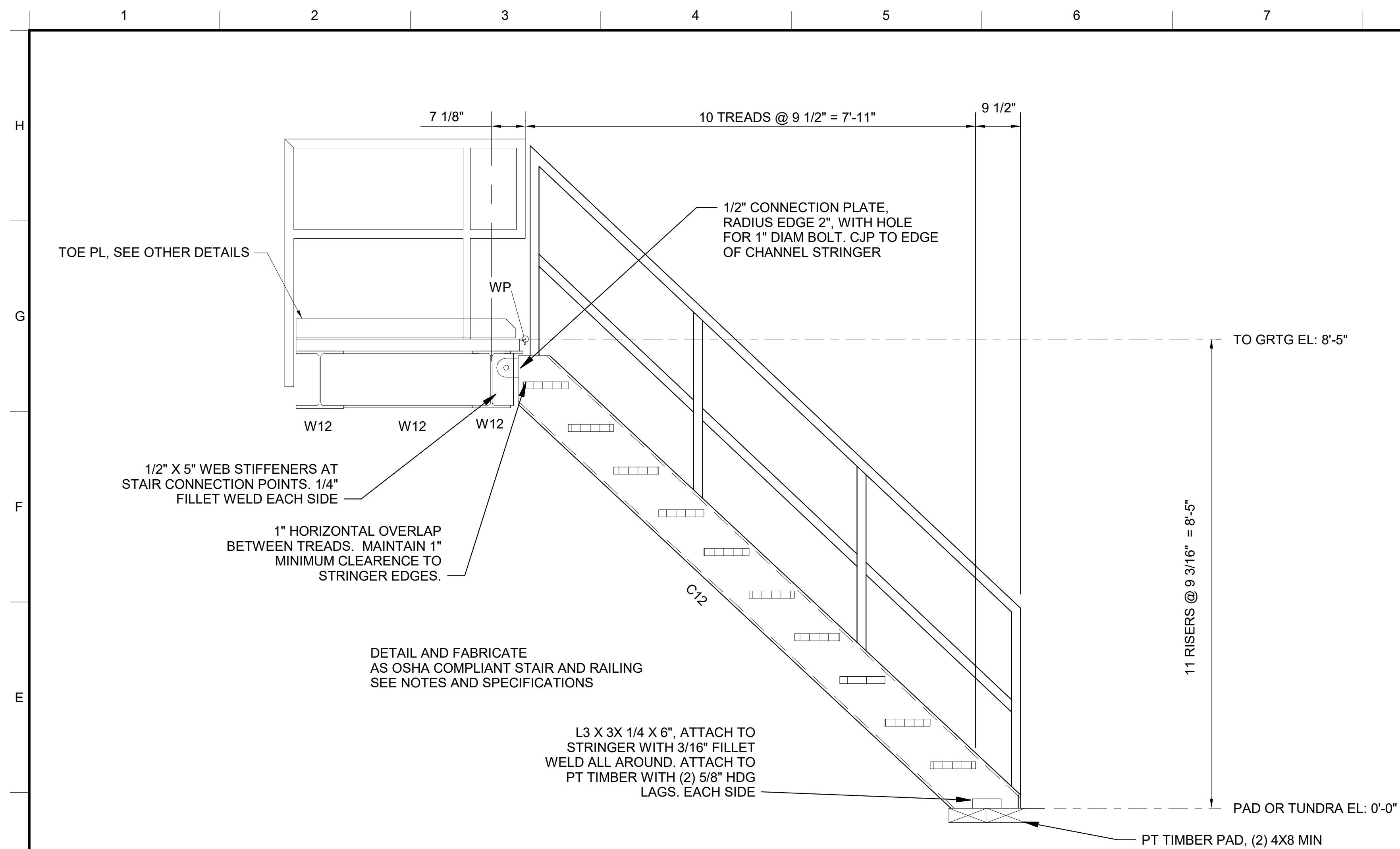
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US AIR FORCE ENGINEERS	R. KORUNA	SEPTEMBER 2024
ALASKA DISTRICT	DRAWN BY:	SOLICITATION NO.:
2204 3RD STREET	R. KORUNA	W911KB-24-R-0041
JBER, ALASKA 99506-0888	CHECKED BY:	CONTRACT NO.:
	F. BISHOP	W911KB-24-C-0022
	SUBMITTED BY:	DRAWING #
	J. SAUCEDA	AF-551-201-101
	SIZE:	FILE:
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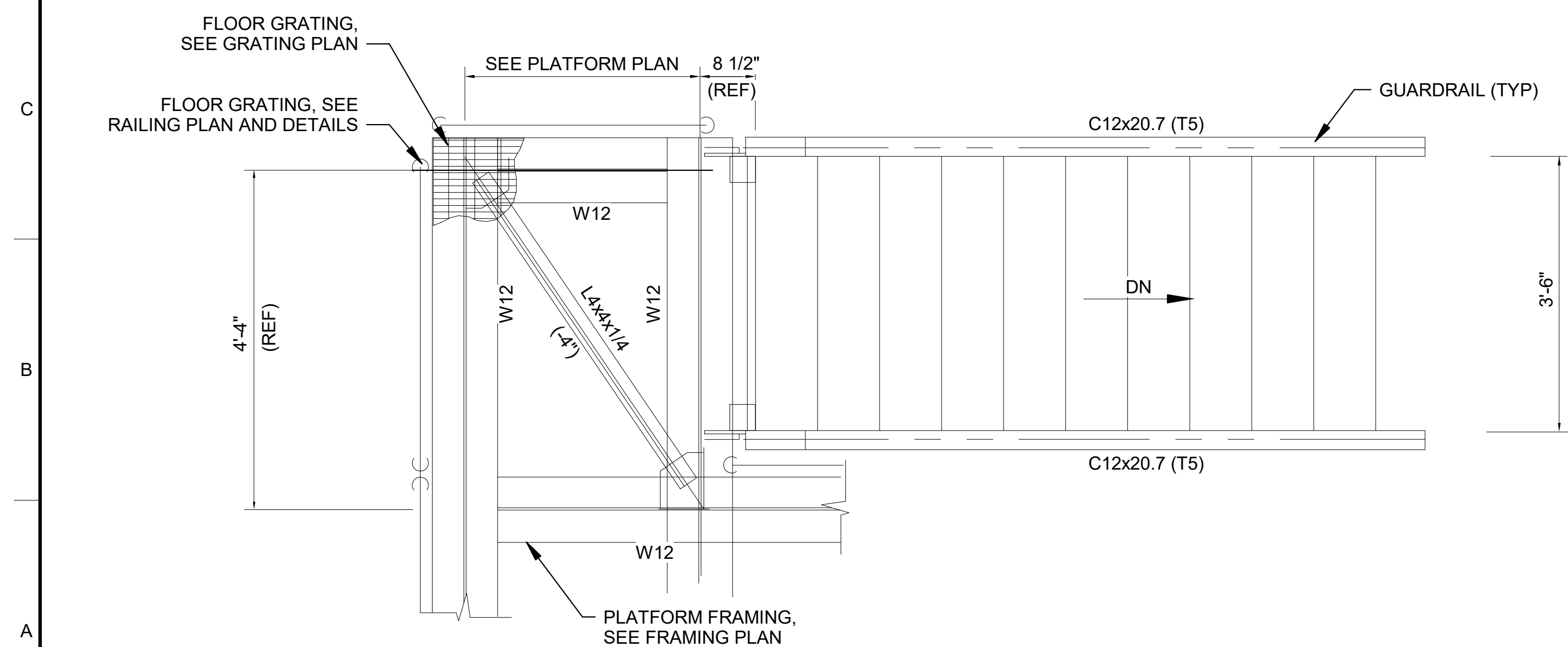
OLIKTOK LRRS, AK REPAIR OLIKTOK ROAD STRUCTURAL STAIR DETAILS

REFERENCE
NUMBER:
S-503

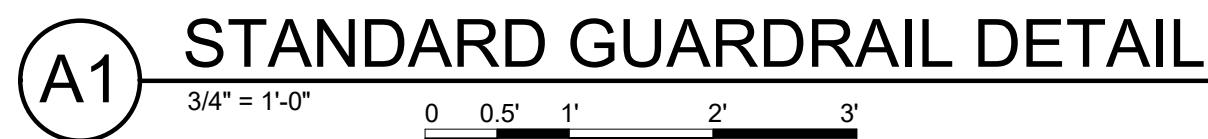
AWARDED



D1 STAIR SECTION
3/4" = 1'-0"
0 0.5' 1'



A1 STAIR PLAN



1. PLATFORM ISOMETRIC VIEW I FOR INFORMATION ONLY REGARDING GUARDRAILS. REFER TO RAILING DETAIL SHEETS FOR ADDITIONAL INFORMATION.
2. FOR STRUCTURAL GENERAL NOTES REFER TO PROJECT GENERAL NOTES.
3. ALL PIPE GUARDRAIL, HANDRAIL AND POSTS SHALL BE 1-1/2" SCHEDULE 40 PIPE W/ A MIN YIELD STRESS F_y 35 KSI UNLESS NOTED.
4. GUARDRAILS AND HANDRAILS SHALL BE SHOP FABRICATED IN SECTIONS NO LONGER THAN 19'-6" MAX FOR 3 POST RAIL, AND 27'-6" MAX FOR 4 POST RAIL, W/ ANGLED RETURN NOT TO EXCEED 1'-6".
5. RAILS SHALL BE CJP WELDED FOR IN LINE SPLICES AND ELBOWS AND A MINIMUM OF 1/4" FILLET ALL AROUND (OR CJP) BETWEEN HORIZONTAL RAILS AND VERTICAL POSTS. VERTICAL RAILS SHALL BE WELDED WITH A MINIMUM 1/4" FILLET ALL AROUND (OR CJP) TO STRINGERS AT STAIRS.
6. SHOP SHALL ASSEMBLE IN SECTION CURVED COMPONENTS OF GUARDRAILS, HANDRAILS AND TOE PLS AS LARGE AS POSSIBLE FOR SHIPPING.
7. REMOVE ALL SHARP EDGES & BURRS FROM GUARDRAIL AND HANDRAIL.
8. ALL TOE PL SHALL BE 1/4" x 4".
9. WELDING SHALL BE PERFORMED PER AWS D1.1 USING E70XX PROCESSES.
10. ALL HANDRAIL AND GUARDRAIL SHALL BE CONTINUOUS. TOE PLATES SECTIONS SHALL HAVE BOLTED CONNECTIONS TO ADJACENT TOE PLATES.
11. ALL GUARDRAIL, HANDRAIL, SHALL BE GALVANIZED.
12. CLIP ANGLE SPACING:
PROVIDE CLIP ANGLE LOCATED CLOSE TO MID-SPAN OF THE TOE PLATE IF SPACING OF THE POSTS IS MORE THAN 5'-0". PROVIDE CLIP ANGLE AT THE UNSUPPORTED ENDS OF THE TOE PLATE IF THE UNSUPPORTED LENGTH EXCEEDS 12".

**US Army Corps
of Engineers®**
Alaska District

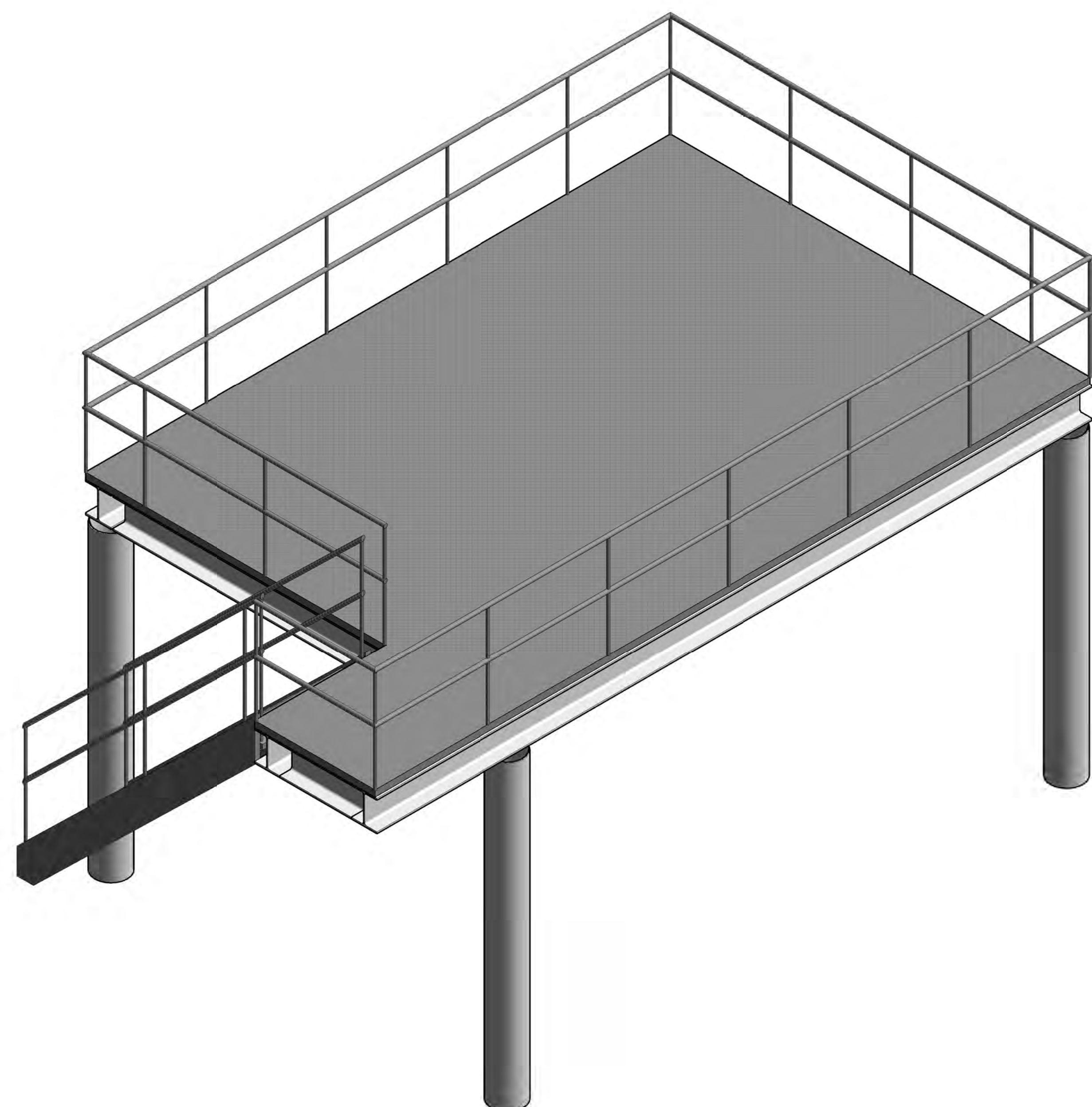
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US ARMY CORPS OF ENGINEERS ALASKA DISTRICT 2204 3RD STREET JBER, ALASKA 99506-0988	DESIGNED BY: R. KORUNA CHECKED BY: R. KORUNA F. BISHOP SUBMITTED BY: J. SAUCEDA	ISSUE DATE: SEPTEMBER 2024 SOLICITATION NO.: W911KB-24-R-0041 CONTRACT NO.: W911KB-24-C-0022 DRAWING # AF-351-201-01
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SHUM030007
OLIKTOK LRRS, AK
REPAIR OLIKOTOK ROAD
STRUCTURAL
3D REPRESENTATIONS

REFERENCE
NUMBER:
S-901

AWARDED

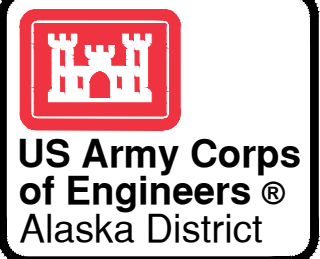


A1 PLATFORM 3D VIEW



SHEET NOTES #

1. THE EXISTING ENDS OF LINES SHALL BE DISCONNECTED. THE CABLE WILL BE ABANDONED IN PLACE.
2. THE EXISTING TRANSFORMER SHALL BE DEMOLISHED AND REMOVED FROM SITE. SEE SHEET ED103 FOR ADDITIONAL DETAILS.
3. CONTRACTOR SHALL DISCONNECT THE EXISTING LINES FROM BUS-2, IN THE SEAWATER TREATMENT PLANT.



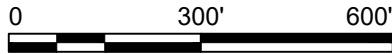
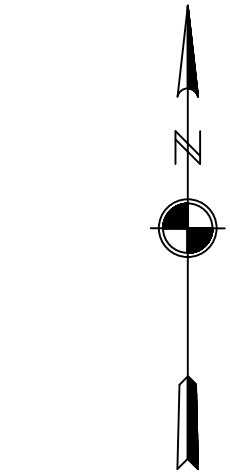
MARK	DESCRIPTION	DATE

U.S. ARMY CORPS OF ENGINEERS ALASKA DISTRICT 2245 REISTREET JBER, ALASKA 99506-0888	DESIGNED BY: Z.SAM	ISSUE DATE: SEPTEMBER 2024
	DRAWN BY: Z.SAM	SOLICITATION NO.: W911KB24-R-0041
	CHECKED BY: R. RO	CONTRACT NO.: W911KB24-C-0022
	SUBMITTED BY: J.SAUCEDA	DRAWING #: AF-861-201-01
	FILE ASSTD	FILE OL1002-ED100.dwg
		OL1002

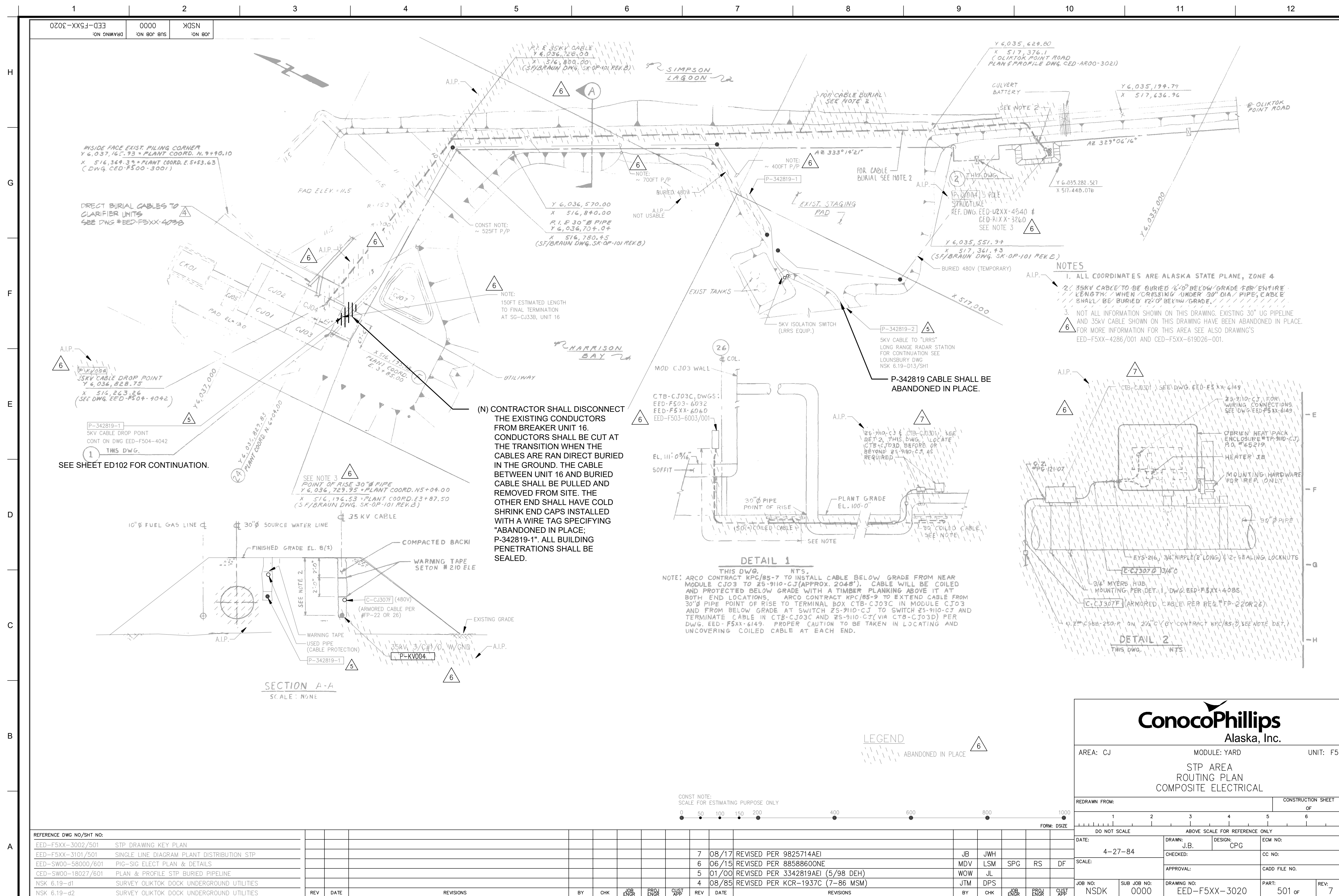
SHUW030007
OLIKTOK LRRS, AK
REPAIR OLIKTOK ROAD
ELECTRICAL
PLANS
DEMOLITION SITE PLAN OVERVIEW

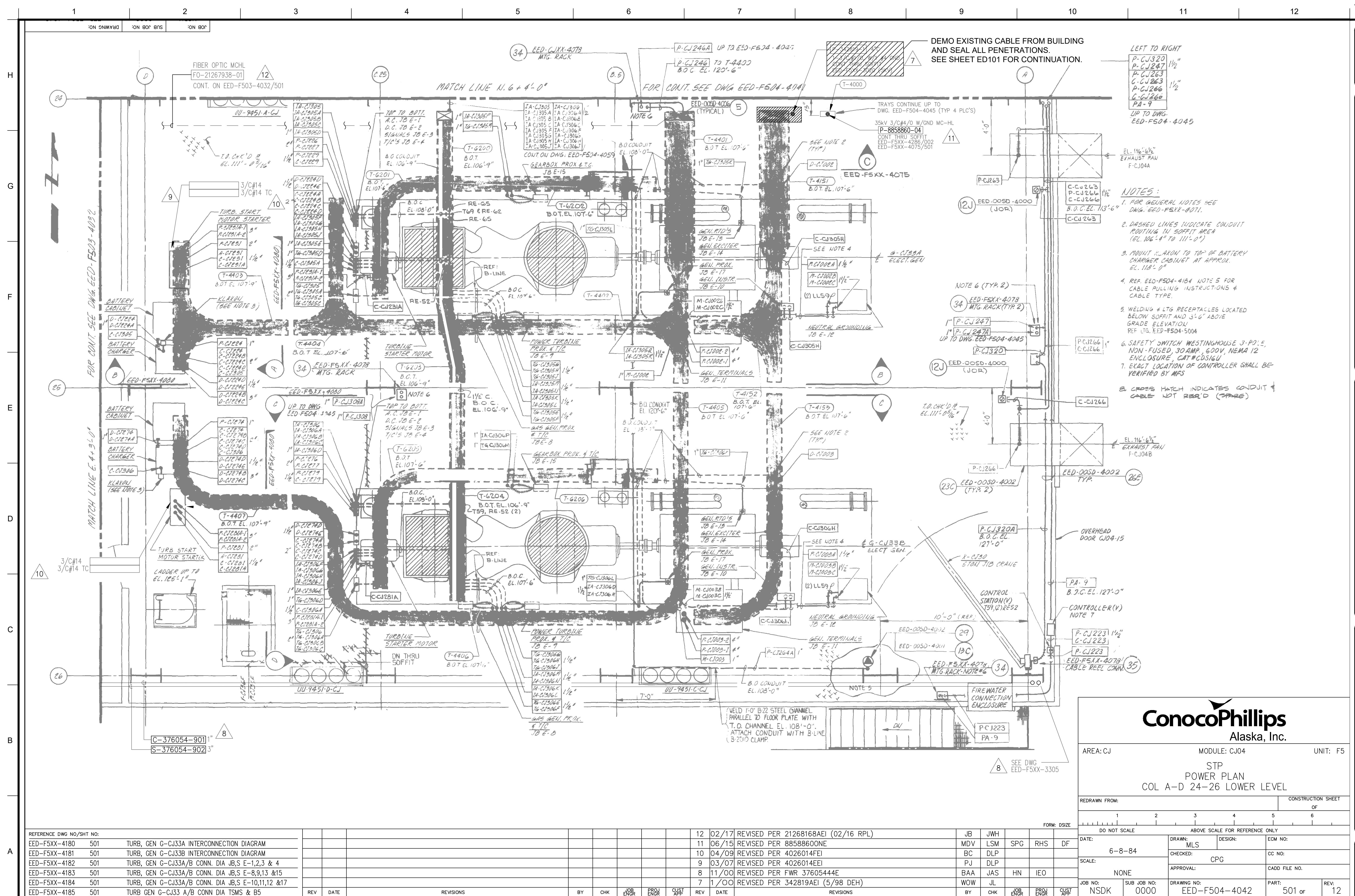
REFERENCE
NUMBER:
ED100

AWARDED



A1 SITE DEMO PLAN OVERVIEW
SCALE: 1" = 300'





[illegible]

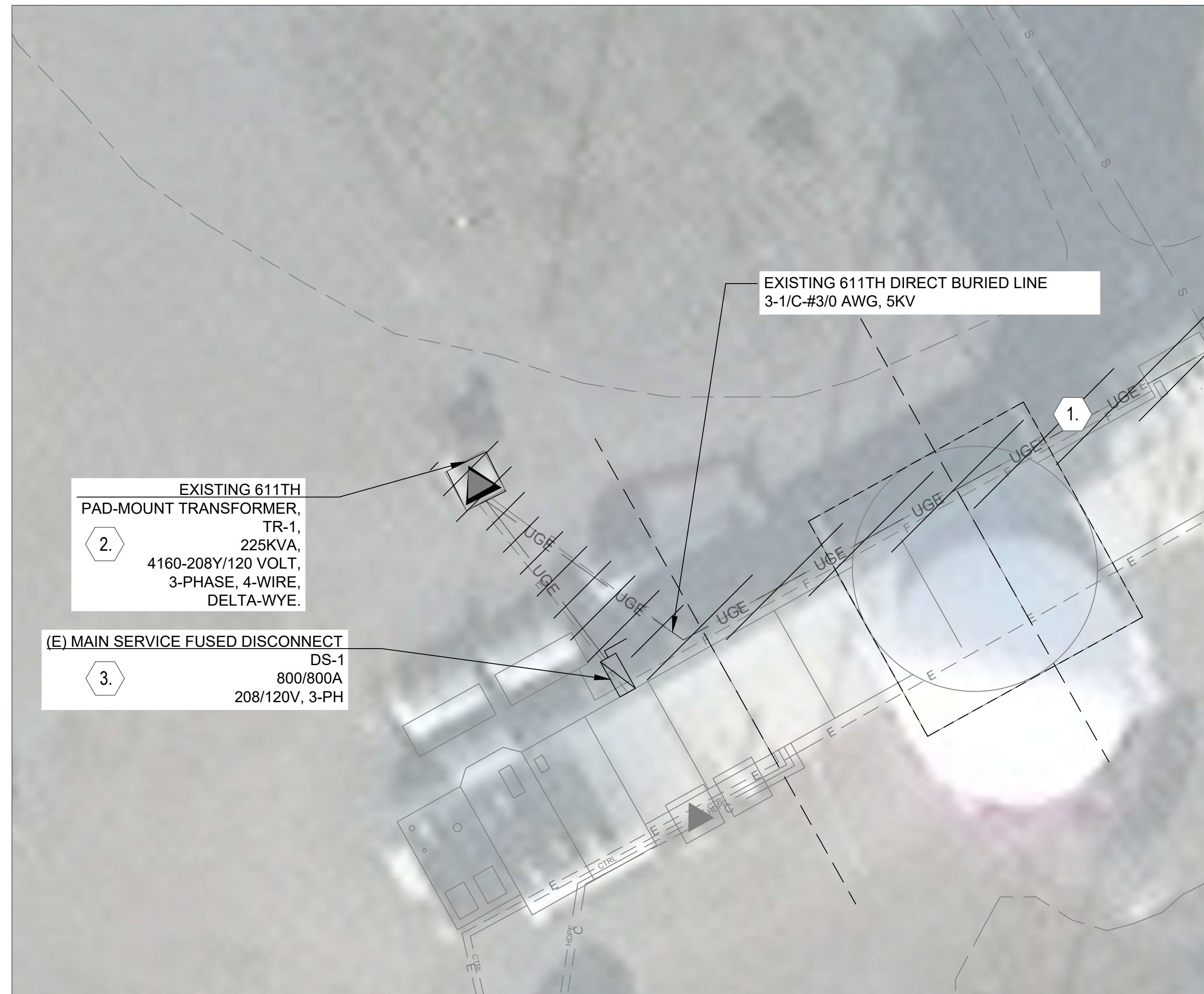
U.S. ARMY CORPS OF ENGINEERS ALASKA DISTRICT 2204 3RD STREET JBER, ALASKA 99506-0888	DESIGNED BY: Z.SAM	ISSUE DATE: SEPTEMBER 2024
	DRAWN BY: Z.SAM	SOLICITATION NO: W911KB-24-R-0041
	CHECKED BY: R. RO	CONTRACT NO.: W911KB-24-C-0022
	SUBMITTED BY: J.SAUCEDA	DRAWING #: AF-351-201-01
	SIZE: ANSI D	FILE: OL1002-ED103.dwg
		QL0002

SHUM030007
OLIKTOK LRRS
REPAIR OLIKTOK
ELECTRICAL
PLANS
LRRS DEMOLITION SITE

REFERENCE
NUMBER:

ED103

AWARDED



B1 LRRS SITE DEMO PLAN
SCALE: 1" = 20'

DETAIL NOTES

1. THE EXISTING ENDS OF LINES SHALL BE DISCONNECTED. THE CABLE WILL BE ABANDONED IN PLACE.
2. THE EXISTING TRANSFORMER SHALL BE DEMOLISHED AND REMOVED FROM SITE.
3. CONTRACTOR SHALL DISCONNECT AND REMOVE THE SECONDARY CONDUCTORS FROM TR-1 TO DS-1. DS-1 SHALL REMAIN IN PLACE AND RECONNECTED TO THE NEW TRANSFORMER TR-2. THE TR-1 PRIMARY CONDUCTORS SHALL HAVE COLD SHRINK END CAPS INSTALLED WITH A WIRE TAG SPECIFYING "ABANDONED IN PLACE; P-342819-1". ALL BUILDING PENETRATIONS SHALL BE SEALED.
4. CONTRACTOR SHALL DISCONNECT THE INCOMING LINE FROM TR-1 TO DS-1. DS-1 SHALL REMAIN IN PLACE AND RECONNECTED TO THE NEW TRANSFORMER TR-2.



B7 TR-1 DEMO PLAN
SCALE: NTS

DETAIL NOTES

1. THE EXISTING TRANSFORMER SHALL BE DEMOLISHED AND REMOVED FROM SITE.
2. CONTRACTOR SHALL DISCONNECT AND REMOVE THE SECONDARY CONDUCTORS FROM TR-1 TO DS-1. DS-1 SHALL REMAIN IN PLACE AND BE CONNECTED TO THE NEW TRANSFORMER TR-2. THE FLEX CONDUIT SHALL BE REMOVED AND DISPOSED OF OFF SITE. THE RIGID STEEL STUBS SHALL BE ABANDONED IN PLACE. GALVANIZED STEEL END CAPS SHALL BE INSTALLED ON THE TWO CONDUITS.
3. THE TR-1 PRIMARY CONDUCTORS SHALL BE CUT BACK INTO THE J-BOX AND HAVE COLD SHRINK END CAPS INSTALLED WITH A WIRE TAG SPECIFYING "ABANDONED IN PLACE; P-342819-1". ALL BOX PENETRATIONS SHALL BE SEALED.
4. WOOD SUPPORT STRUCTURE WILL BE ABANDONED IN PLACE.



1. CONOCOPHILLIPS SHALL PERFORM THE FINAL CONNECTION ON POLE LRRS1 AND THEIR EXISTING AERIAL LINES.
2. GOVERNMENT AND CONOCOPHILLIPS SHALL BE PROVIDED ACCESS ALONG THE NEW POWER LINES FOR INSPECTION OF THE NEW POWER LINES VIA VEHICLES AND DRONES. ALL COORDINATION WITH CONOCOPHILLIPS WILL BE THROUGH THE GOVERNMENT.

U.S. ARMY CORPS OF ENGINEERS ALASKA DISTRICT 2204 3RD STREET JBER, ALASKA 99506-0898	DESIGNED BY: Z. SAM	ISSUE DATE: 2024
	DRAWN BY: Z. SAM	SOLICITATION #: W911KB-24-R-0041
	CHECKED BY: R. RO	CONTRACT NO.: W911KB-24-C-0022
	SUBMITTED BY: J. SAUCEDA	DRAWING #: AF-451-201-01
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REFERENCE
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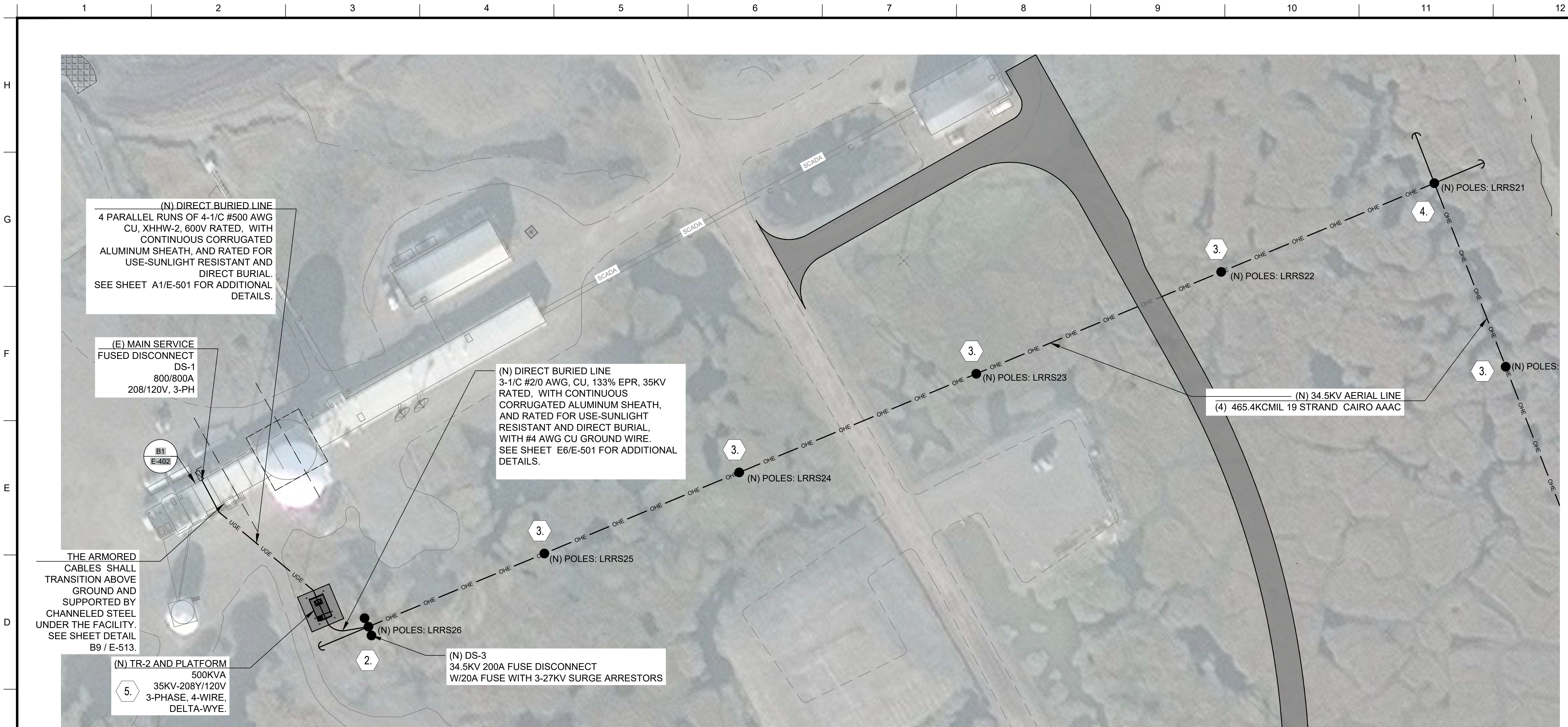
E-100

A1 SITE ELECTRICAL DESIGN OVERVIEW
SCALE: 1" = 300'



NEW PROPOSED ROAD.
SEE CIVIL SECTION FOR MORE DETAIL.

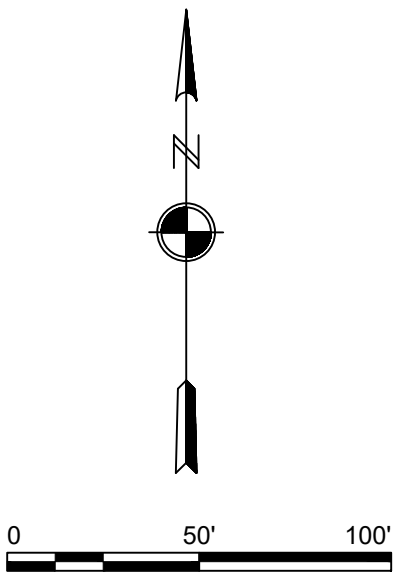




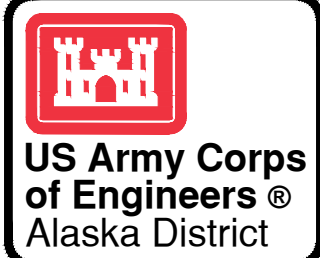
C1 SITE PLAN I
SCALE: 1" = 50'

SHEET NOTES #

- SEE SHEET E-100 FOR SITE PLAN OVERVIEW.
- SEE SHEET E-510 FOR TYPICAL POLE DETAIL.
- SEE SHEET E-507 FOR TYPICAL POLE DETAIL.
- SEE SHEET E-504 FOR TYPICAL POLE DETAIL.
- SEE SHEET E-502FOR TRANSFORMER DETAIL.



MATCHLINE - SEE REF B1/E-102



DATE	DESCRIPTION	MARK

U.S. ARMY CORPS OF ENGINEERS ALASKA DISTRICT JBER, ALASKA 99506-0888	DESIGNED BY: Z.SAM	ISSUE DATE: SEPTEMBER 2024
	DRAWN BY: Z.SAM	SOLICITATION NO.: W911KB24-R-0041
	CHECKED BY: R. RO	CONTRACT NO.: W911KB24-C-0022
	SUBMITTED BY: J.SAUCEDA	DRAWING #: AF-851-201-01
	FILE SAS D	FILE OL1002-E-101 to E-104.dwg

SHUW030007
OLIKTOK LRRS, AK
REPAIR OLIKTOK ROAD
ELECTRICAL
PLANS
ENLARGE SITE PLAN I

REFERENCE
NUMBER:
E-101

AWARDED

[illegible]

U.S. ARMY CORPS OF ENGINEERS	ALASKA DISTRICT ALASKA STATE STREET JBER, ALASKA 99506-0888	DRAWN BY: Z SAM	DATE DRAWN: SEPTEMBER 24, 1991
		CHECKED BY: R. RO	CONTRACT NO.: W11KRB-24-C-0022
		SUBMITTED BY:	DRAWING #: AF-651-701
		SIZE:	FILE: ANSI D
			QUANTITY: E-101 to E-104.dwg
			Q1002

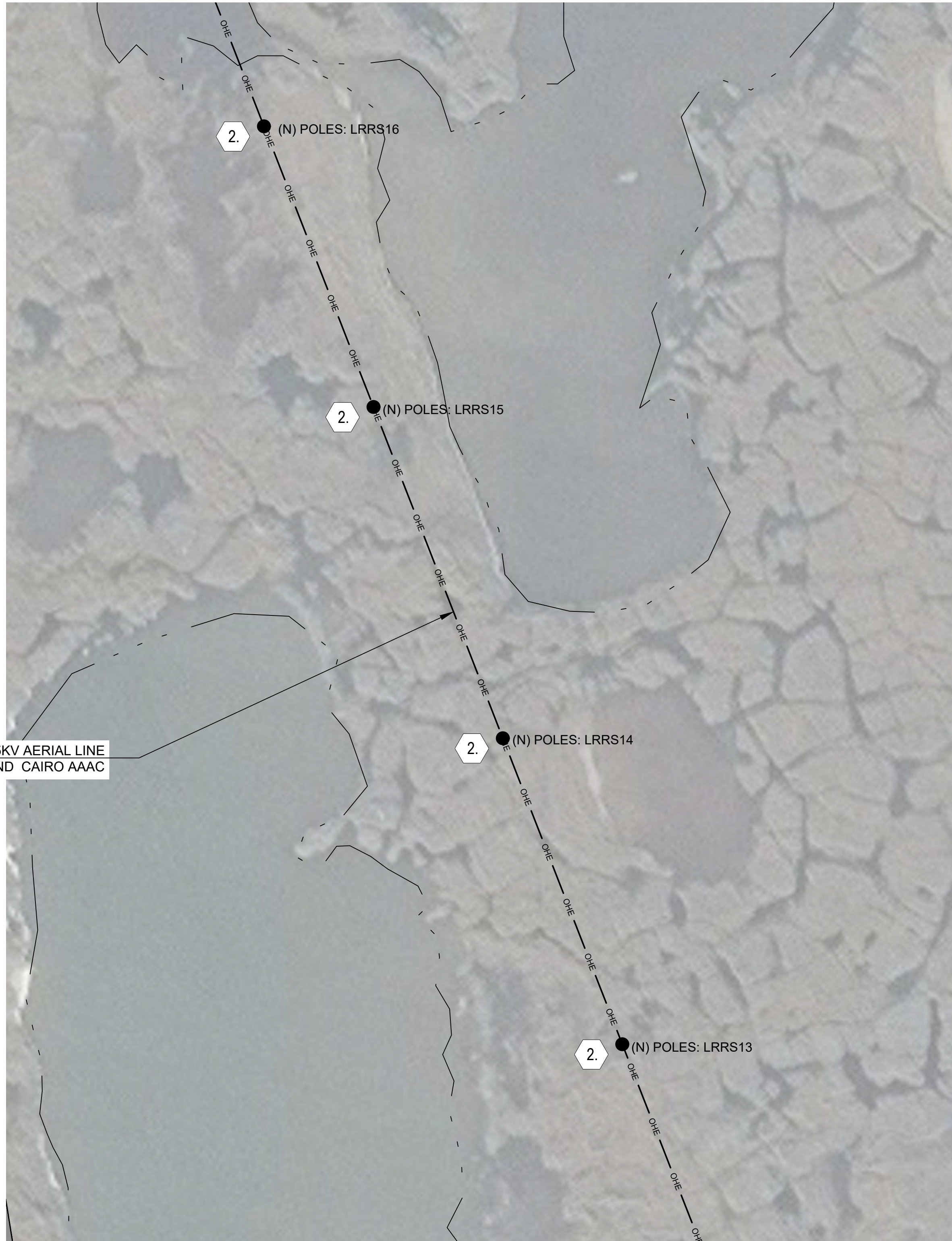
OLIKTOK LRRS
REPAIR OLIKTOK
ELECTRICAL
PLANS
ENLARGE SITE PLAN

REFERENCE
NUMBER:

E-102

AWARDED

MATCHLINE - SEE REF B1/E-102



MATCHLINE - SEE REF B7/E-102

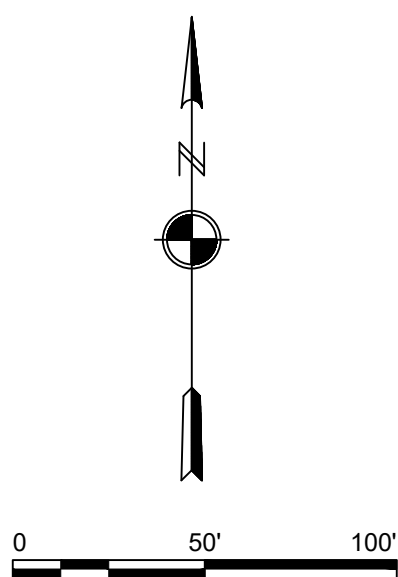
MATCHLINE - SEE REF A1/E-103

B1 SITE PLAN II
SCALE: 1" = 50'

B7 **SITE PLAN III**
SCALE: 1" = 50'

SHEET NOTES #

1. SEE SHEET E-100 FOR SITE PLAN OVERVIEW.
2. SEE SHEET E-507 FOR TYPICAL POLE DETAIL.





U.S. ARMY CORPS OF ENGINEERS CHICKASAW DIVISION 2204 3RD STREET JBER, ALASKA 99506-0888	SEPTEMBER 2024 Z SAM DRAWN BY: W911KRB-24-R-0041 Z SAM CHECKED BY: R. RO SUBMITTED BY: DRAWING #: W911KRB-24-C-022 DATE: FILE:	SOLICITATION NO: CONTRACT NO.: DRAWING #: ANSI Z SIZE: 11x17	OL1002 FILE: OL1002-E-101 to E-104.dwg
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REFERENCE
NUMBER:

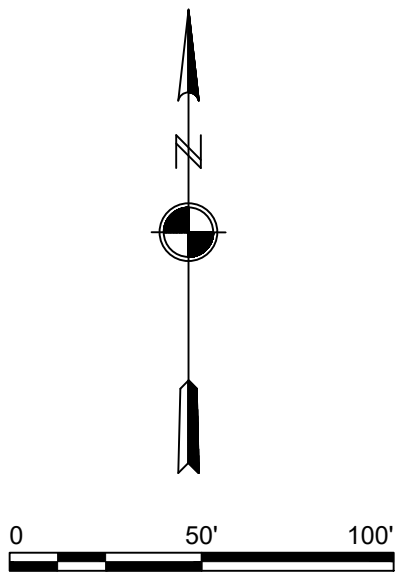
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AWARDED

MATCHLINE - SEE REF A1/E-103

MATCHLINE - SEE REF A1/E-104

1. SEE SHEET E-100 FOR SITE PLAN OVERVIEW.
2. SEE SHEET E-507 FOR TYPICAL POLE DETAIL.
3. SEE SHEET E-508 FOR TYPICAL POLE DETAIL.

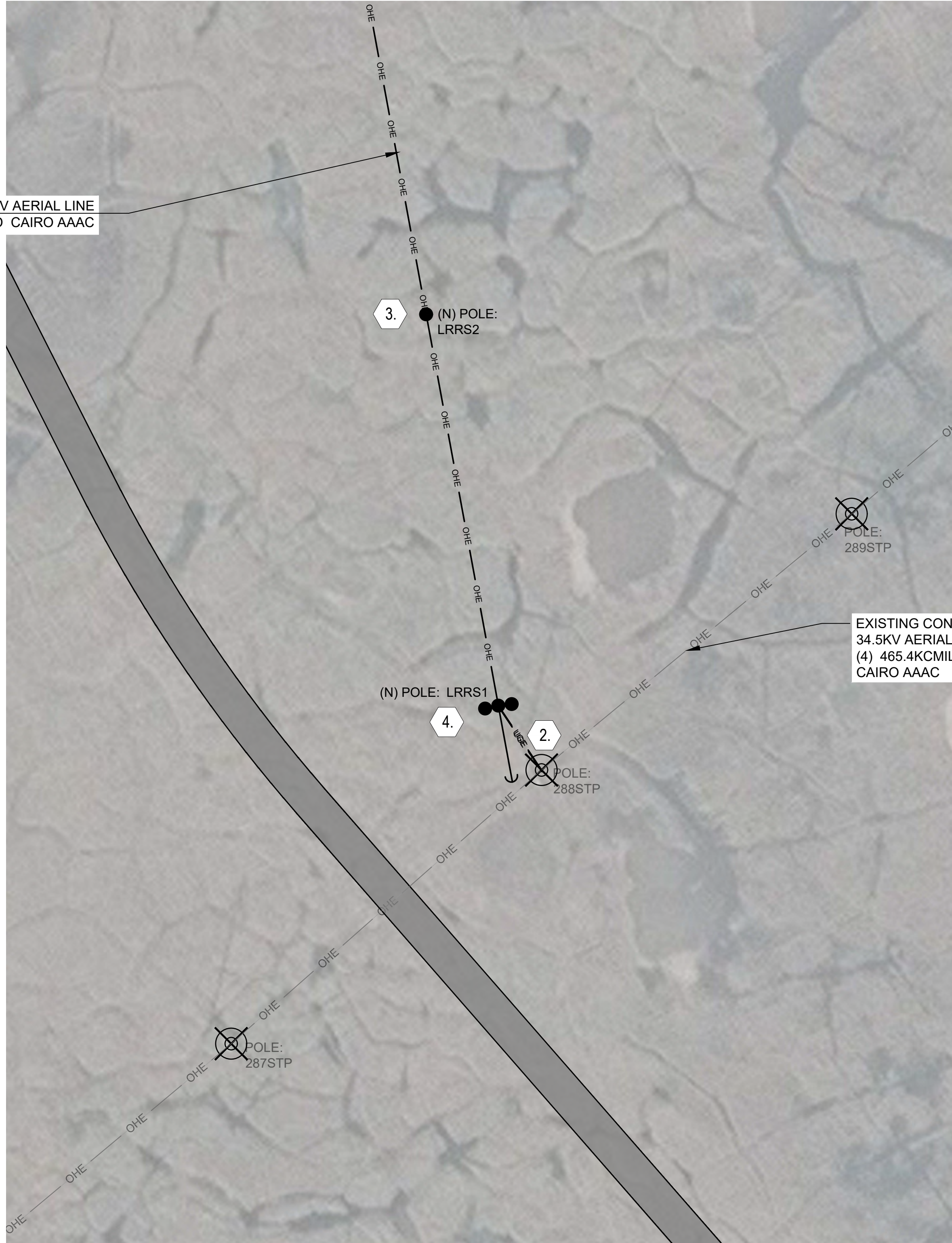


[illegible]

REFERENCE
NUMBER:
E-104

AWARDED

MATCHLINE - SEE REF A1/E-104



EXISTING CONOCOPHILLIPS
34.5KV AERIAL LINE
(4) 465.4KCMIL 19 STRANDED
CAIRO AAAC

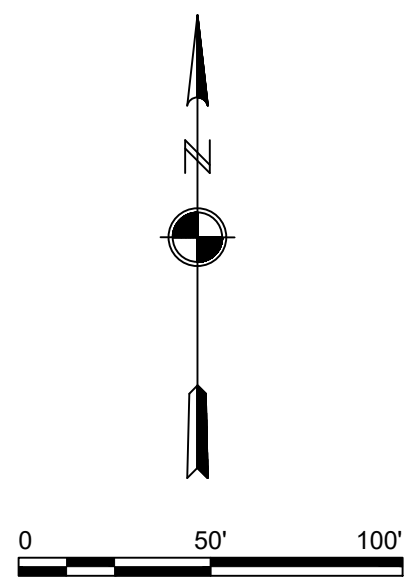
MATCHLINE - SEE REF A7/E-104

A7 SITE PLAN VII
SCALE: 1" = 50'

#

1. SEE SHEET E-100 FOR SITE PLAN OVERVIEW.
2. CONOCOPHILLIPS SHALL PERFORM THE CONNECTION FROM POLE LRRS1 AND THEIR EXISTING POLE 288STP. POLE LRRS1 SHALL BE INSTALLED WITHIN 50 FT OF POLE 288STP. CONOCOPHILLIPS WILL BE INSTALLING (3) 1/C CABLES WITH #4/0 BARE COPPER GROUND IN A NEW TRENCH FROM 288STP TO A NEW PLATFORM MOUNTED 3-PHASE FUSED DISCONNECT SWITCH. THE PLATFORM WILL BE CLOSER TO THE ROAD FOR EASIER ACCESS. CONOCOPHILLIPS WILL TRENCH FROM THE NEW PLATFORM TO

3. LRRS1. THE DISCONNECT SWITCH AND METER WILL BE MOUNTED ON THE PLATFORM, BY CONOCOPHILLIPS. SEE SHEET E-507 FOR TYPICAL POLE DETAIL.
4. SEE SHEET E-509 FOR TYPICAL POLE DETAIL.



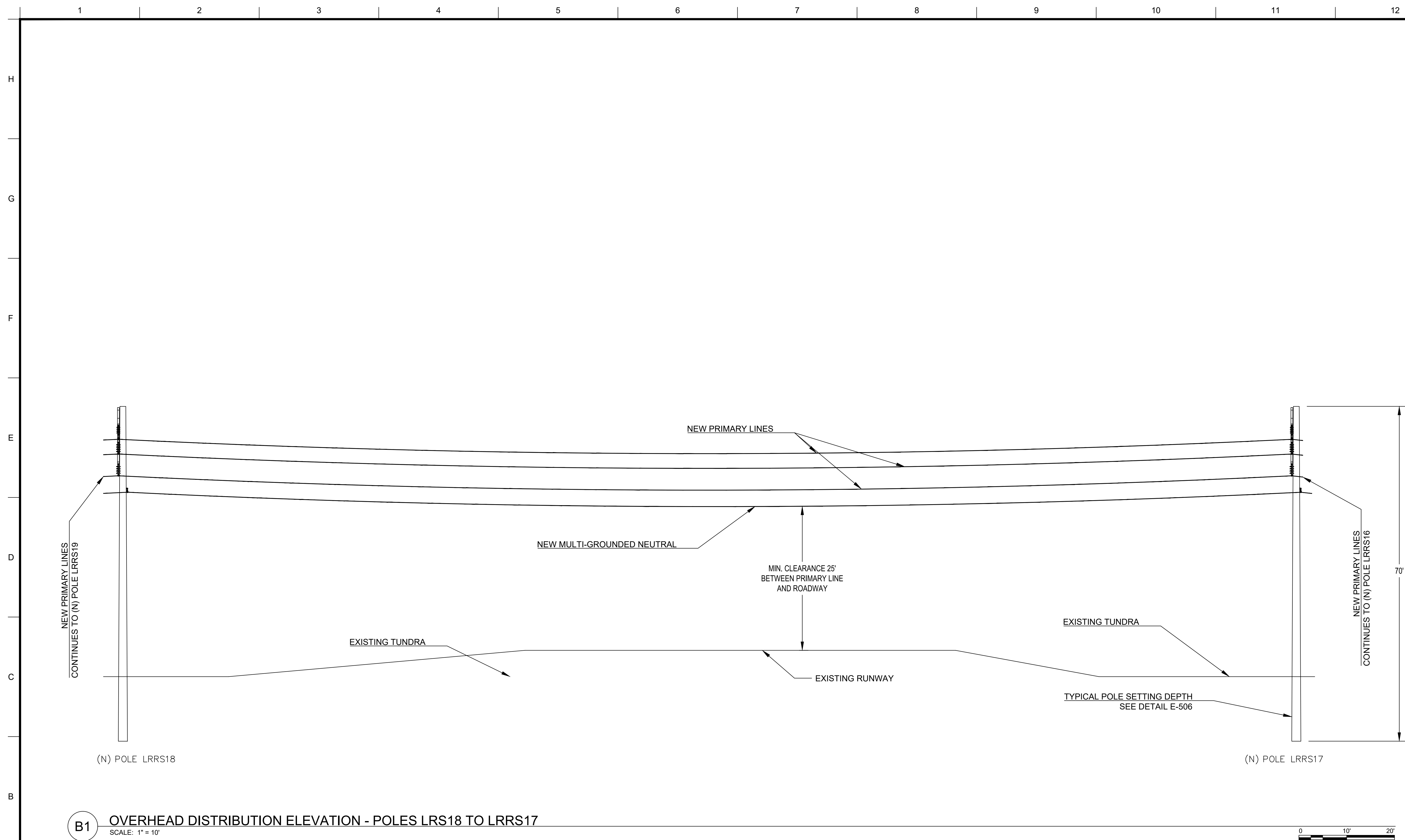
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U.S. ARMY CORPS OF ENGINEERS	ISSUE DATE:	SEPTEMBER 2024
ALASKA DISTRICT	BY:	W911KB-24-C-0022
2204 3RD STREET	CHECKED BY:	W911KB-24-C-0022
JBER, ALASKA 99506-0898	SUBMITTED BY:	DRAWING #:
	J.S.AUCEDA	AF-851-201-01
	SIZE:	FILE:
		0002-E-2011.dwg
		01002

SHUM030007
OLIKTOK LRRS, AK
REPAIR OLIKTOK ROAD
ELECTRICAL
ELEVATIONS
OVERHEAD DISTRIBUTION ELEVATION 2 of 2

REFERENCE
NUMBER:
E-202

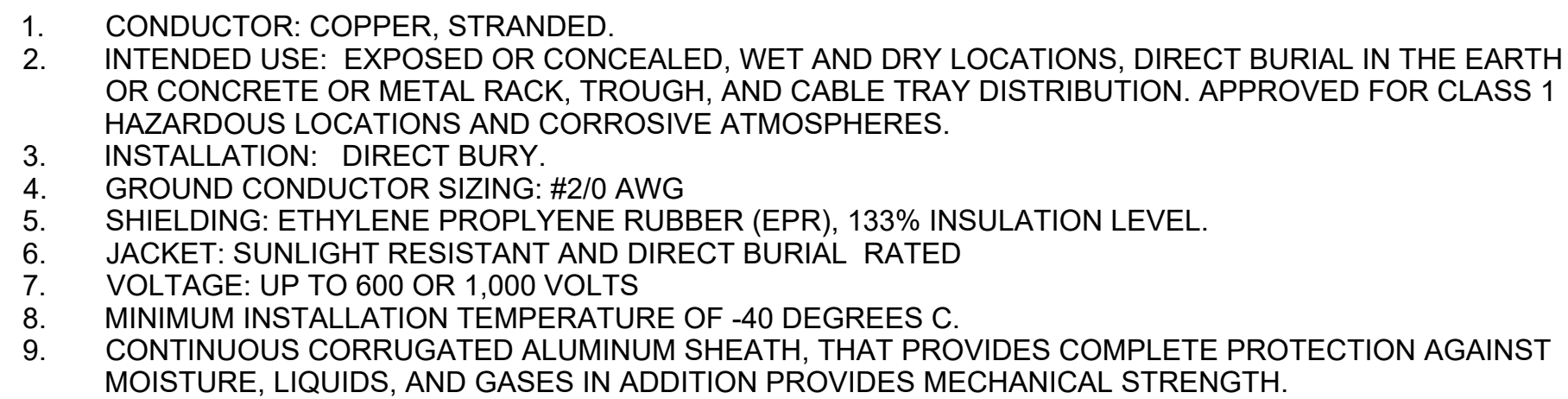
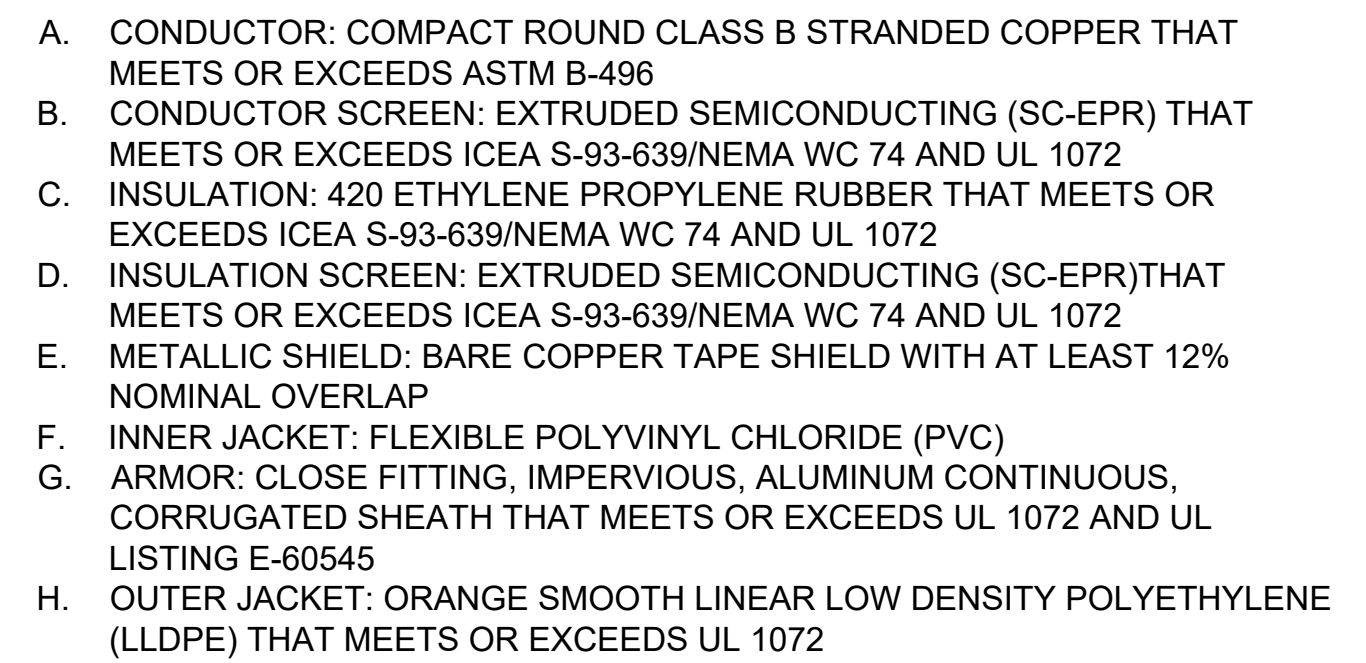
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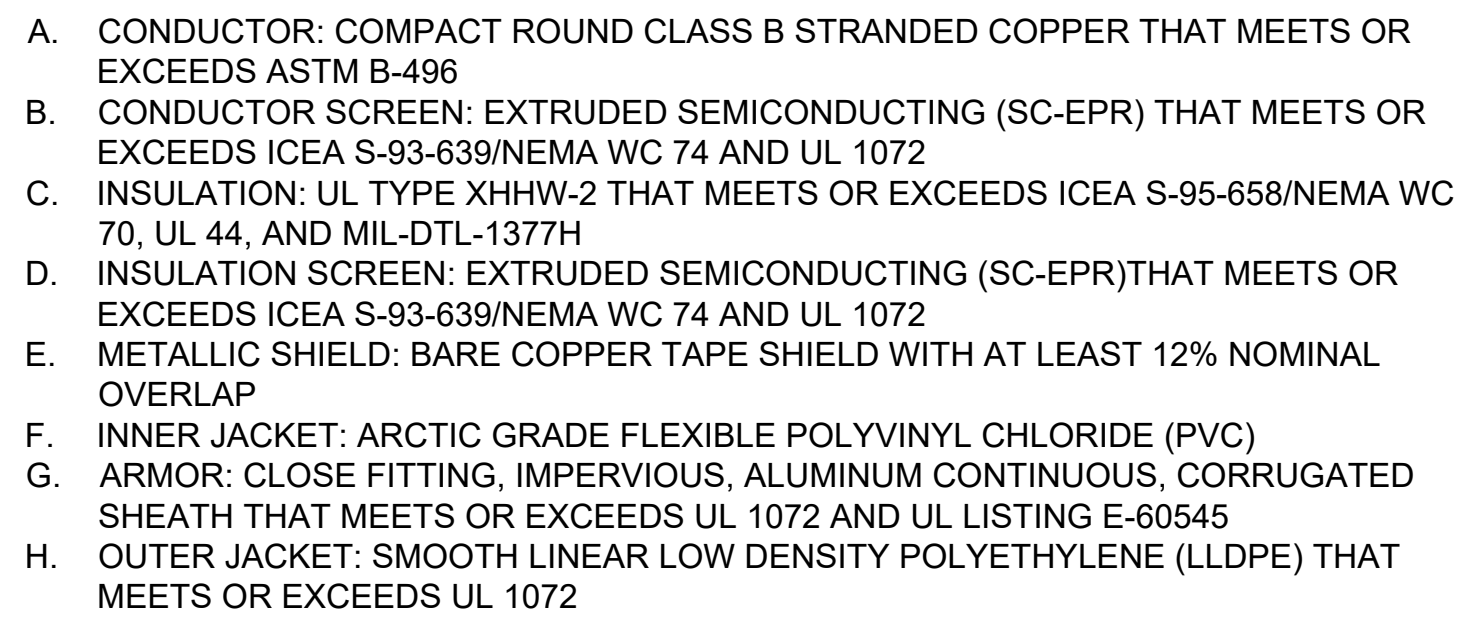
1. CONDUCTOR: COPPER, STRANDED.
2. INTENDED USE: EXPOSED OR CONCEALED, WET AND DRY LOCATIONS, DIRECT BURIAL IN THE EARTH OR CONCRETE OR METAL RACK, TROUGH, AND CABLE TRAY DISTRIBUTION. APPROVED FOR CLASS 1 HAZARDOUS LOCATIONS AND CORROSIVE ATMOSPHERES.
3. INSTALLATION: DIRECT BURY.
4. GROUND CONDUCTOR SIZING: #4 AWG
5. SHIELDING: ETHYLENE PROPYLENE RUBBER (EPR), 133% INSULATION LEVEL.
6. JACKET: SUNLIGHT RESISTANT AND DIRECT BURIAL RATED
7. VOLTAGE: UP TO 35,000 VOLTS
8. MINIMUM INSTALLATION TEMPERATURE OF -40 DEGREES C.
9. CONTINUOUS CORRUGATED ALUMINUM SHEATH, THAT PROVIDES COMPLETE PROTECTION AGAINST MOISTURE, LIQUIDS, AND GASES IN ADDITION PROVIDES MECHANICAL STRENGTH.

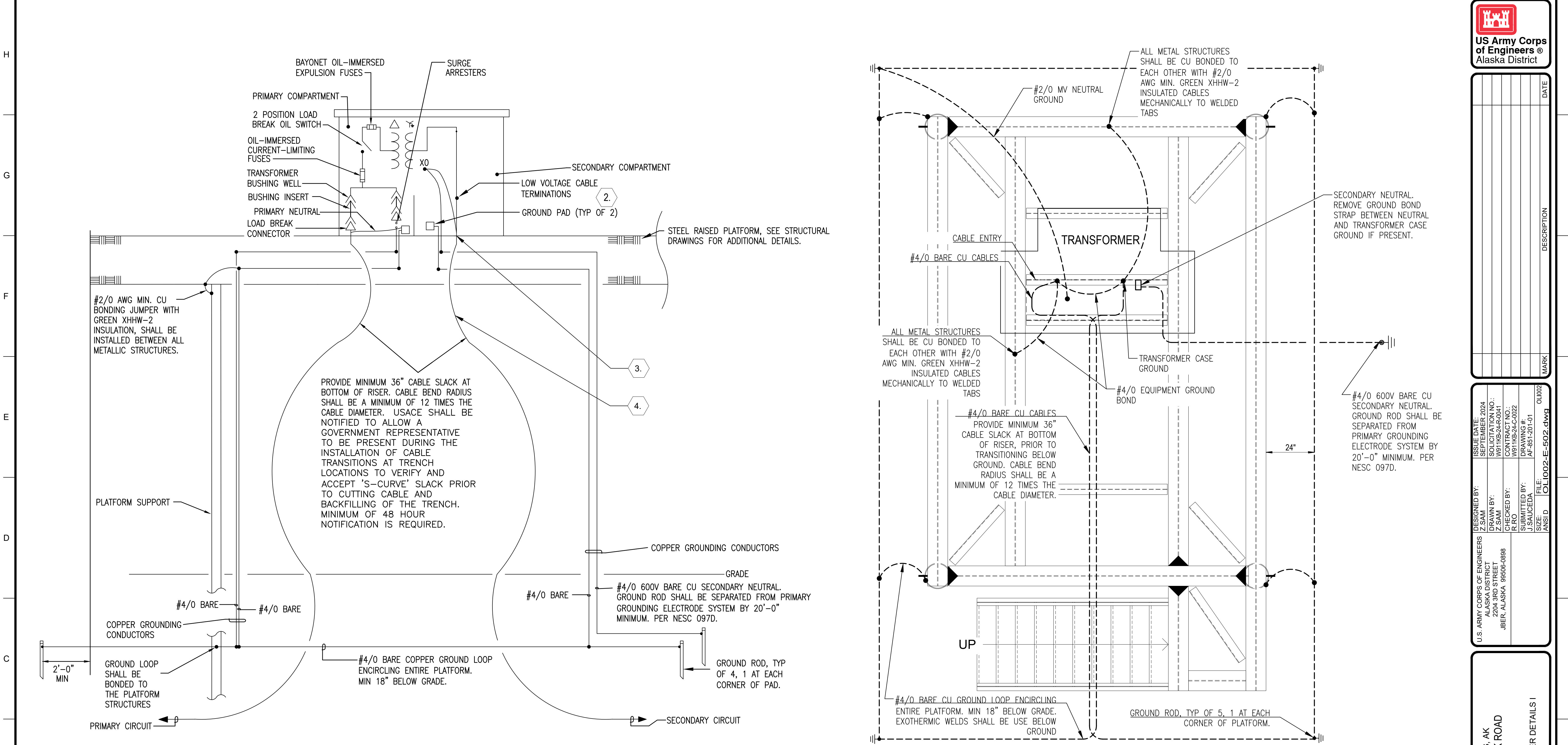
SIZE	CLASS	COND. TYPE	INSULATION	SHIELD	AMPACITY
4/0	MV105	STRANDED COPPER	EPR	COPPER SHIELD	290



SIZE	CLASS	COND. TYPE	INSULATION	SHIELD	AMPACITY
500	I, II, III, DIV 1 & 2	STRANDED COPPER	XHHW-2	COPPER SHIELD	344

A1 600V ARMORED CABLE
SCALE: NTS





B1

35KV TO 208V PAD-MOUNT TRANSFORMER DETAIL I

SCALE: NTS

B7

TRANSFORMER GROUND DIAGRAM PLAN VIEW

SCALE: NTS

SHEET NOTES

#

1.

THE TRANSFORMERS SHALL BE INSTALLED ON RAISED PLATFORMS. SEE STRUCTURAL DRAWINGS FOR ADDITIONAL DETAILS.

2.

OIL FILLED TRANSFORMER SHALL USE ENVIRONMENTALLY FRIENDLY BIODEGRADABLE TYPE OIL, INSTEAD OF MINERAL OIL. THE OIL SHALL HAVE A FREEZING POINT AT -50 DEGREES C OR COLDER. THE OIL SHALL HAVE A POUR POINT AND DECRYSTALLIZATION POINT AT OR BELOW -50 DEGREES C, PER ASTM D97 STANDARDS. THE FLASH POINT SHALL BE AT OR ABOVE 270 DEGREE C AND THE FIRE POINT SHALL BE AT OR ABOVE 306 DEGREES C, PER ASTM D92 STANDARDS. THE OIL SHALL SHOW NO SIGNS OF TOXICITY FROM AN LD50 ORAL TOXICITY TEST. THE OIL SHALL PASS AN AMES TEST AND BE DETERMINED TO BE NON-MUTAGENIC.

3.

INSTALL STAINLESS STEEL CABLE PENETRATION SEALANTS AT EACH PENETRATION. SEE SHEET A1/E-503 FOR ADDITIONAL DETAILS.

4.

PROVIDE STAINLESS STEEL CONDUIT RISER SUPPORT GRIPS, TO SUPPORT EACH CABLE.

5.

GROUNDING BUSHINGS SHALL BE USED ON ALL PENETRATIONS.

6.

SEE DETAILS ON SHEETS E-513 AND E-514 FOR GROUNDING DETAILS.

US Army Corps of Engineers® Alaska District

ISSUE DATE: SEPTEMBER 2024

DESIGNED BY: Z.SAM

DRAWN BY: Z.SAM

CHECKED BY: R.R.O

SUBMITTED BY: J.SAUCEA

FILE: CL1002-E-502.dwg

ASST: J.SAM

U.S. ARMY CORPS OF ENGINEERS

ALASKA DISTRICT

2200 PERMANENT

JBER, ALASKA 99506-0888

SOLICITATION NO.: W911KB24-R-0041

CONTRACT NO.: W911KB24-C-0022

DRAWING #: AT-851-201-01

OL1002

SHUW030007

OLIKTOK LRRS, AK

REPAIR OLIKTOK ROAD

ELECTRICAL

DETAILS

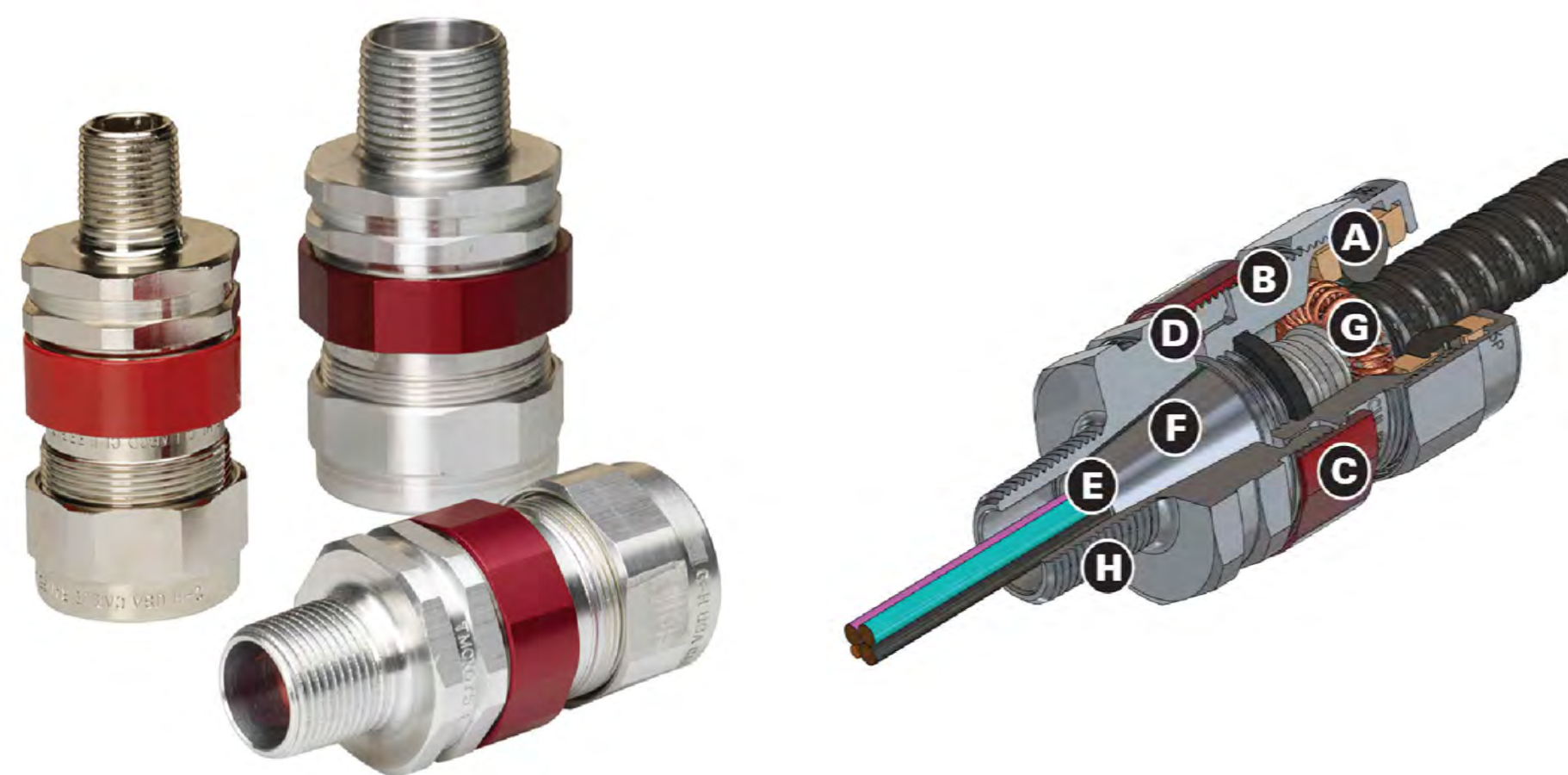
PADMOUNTTRANSFORMER DETAILS I

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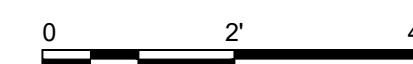
E-502

AWARDED

1. SEE STRUCTURAL DRAWINGS FOR ADDITIONAL DETAILS ON THE RAISED PLATFORM.
2. SEE CIVIL DRAWINGS FOR PROTECTIVE BOLLARD LOCATIONS AROUND THE RAISED PLATFORM.



- A: CAPTIVE SEALING AND BACK NUT - THE USE OF RETAINING RINGS WITH SNAP-IN FEATURE TORE RETAIN ALL OF THE COMPONENTS IN THE ENTRY END OF THE GLAND.
- B: INTEGRAL UNION - 2-PIECE ASSEMBLY GLAND, MINIMIZING TIGHTENING AND LOOSENING OF THE NUTS.
- C: ANODIZED NUT
- D: ANTI-ROTATION FEATURE FOR SINGLE TOOL ASSEMBLY; THE SPLINED SHAFT ENSURES THAT THE TWO ASSEMBLIES LOCK TOGETHER AND DO NOT ROTATE DURING ASSEMBLY
- E: BARRIER COMPOUNDS; TYPICAL EPOXY COMPOUND TO ALLOW FOR RAPID CURING AND ASSEMBLY IN ANY ORIENTATION.
- F: CONICAL COMPOUND CHAMBER; TO ENSURE THAT DOUBLE THE MISALIGNMENT CAN BE ACCEPTED WITHOUT RISK OF BINDING.
- G: CAPTIVE GARTER SPRING; COPPER FLASHED STAINLESS STEEL ENSURING GOOD CONNECTIVITY, STRENGTH, AND CORROSION RESISTANCE.
- H: NPT AND ISO THREADS



A1 ARMORED CABLE GLANDS

DETAIL NOTES

1. ARMORED CABLE GLANDS SHALL BE USED FOR ALL PENETRATIONS, BOTH FOR NEW CONDUITS AND FOR PLUGGING EXISTING CABLE PENETRATIONS.
2. ARMORED CABLE GLANDS SHALL BE COMPATIBLE WITH THE ARMORED CABLES SPECIFIED IN THE DESIGN.
3. ARMORED CABLE GLANDS SHALL BE CLASS 1, DIV 1 AND DIV 2, CERTIFIED. ADDITIONALLY IT SHALL BE UL, CLASS 1, 2, 3, AND NEMA 4X OR 6P CERTIFIED.
4. ARMORED CABLE GLANDS SHALL BE STAINLESS STEEL, RATED FOR CORROSION RESISTANCE AND MAINTAIN INTEGRITY IN HARSH ENVIRONMENTS. USE OF NEOPRENE SEAL TO ALLOW FOR USE IN TEMPERATURES FROM -60 DEGREES C TO POSITIVE 60 DEGREES C.
5. COLD SHRINK SHALL BE INSTALLED TO PROVIDE EXTRA PROTECTION, WHEN POSSIBLE.

[illegible]

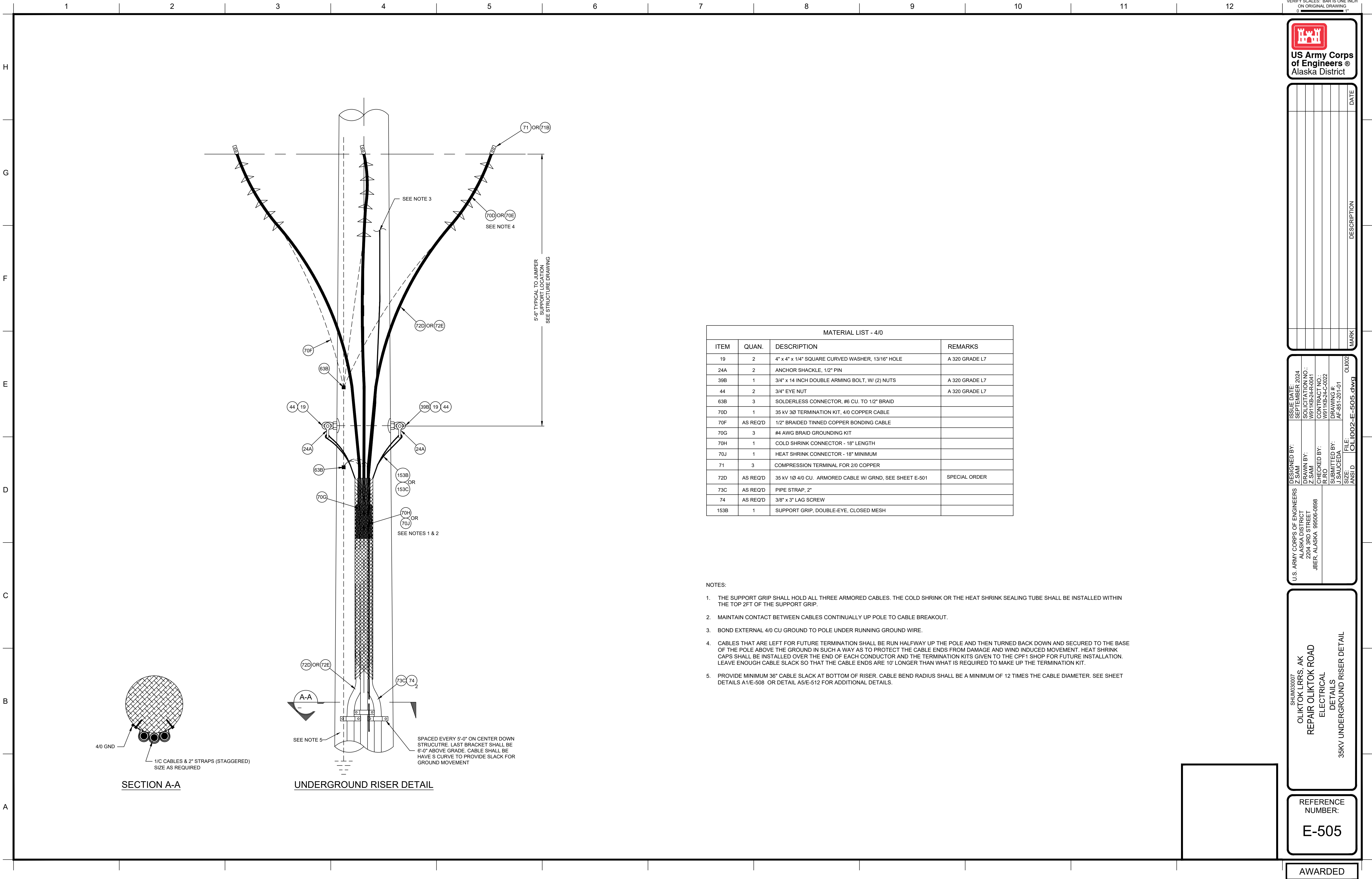
U.S. ARMY CORPS OF ENGINEERS ALASKA DISTRICT 2204 3RD STREET JBER, ALASKA 99506-0898	DESIGNED BY: Z. SAM	ISSUE DATE: SEPTEMBER 2024
	DRAWN BY:	SOLICITATION NO.: W911K8-24-0-001
	CHECKED BY: R. RO	CONTRACT NO. W911K8-24-0-002
	SUBMITTED BY: J. SAUCEDA	DRAWING #: AF-351-201
	SIZE: ANSI D	FILE: OL1002-E-504.dwg
		OL1002

SHUM030007
OLIKTOK LRRS, AK
REPAIR OLIKTOK ROAD
ELECTRICAL
DETAILS
DOUBLE DEAD END AERIAL POLE DETAILS

REFERENCE
NUMBER:
E-504



- NOTES:
1. BOLTS THAT NEED TO BE CUT OFF TO SHORTEN MUST BE CUT ALL THE WAY THROUGH WITH A HACKSAW (NOT CUT PARTIALLY AND BROKEN OFF), EXPOSED ENDS OF CUT BOLTS SHALL BE PAINTED WITH ZINC RICH PAINT.
 2. ALL HOLES IN POLE SHALL BE DRILLED PRIOR TO TREATMENT. POLES SHALL MEET RUS SPECIFICATION 1728F-700. POLE SUPPLIER SHALL VERIFY THAT POLE DIAMETER DOES NOT EXCEED SPECIFIED BOLT LENGTHS.
 3. ALL MACHINE BOLTS ARE TO HAVE A 6" MINIMUM THREAD LENGTH.
 4. INVERT VIBRATION DAMPENERS ON TOP (A) PHASE.
 5. FOR 2-WAY ANGLE OR 3-WAY ARRANGEMENTS DELETE ITEMS 32, 36, 37, 42, 45, 63 & 104A.
 6. FOR 3-WAY ARRANGEMENTS ADD (15) ITEM 4, (3) ITEM 15, (3) ITEM 23, (1) ITEM 24, (4) ITEM 26, (2) ITEM 71, & (4) ITEM 108.
 7. ALWAYS INSTALL DOUBLE TONGUE DEAD ENDS ON TAPS (BOM ITEM 26)
 8. CURVED SQUARE WASHER (ITEM 32) IS CURVED EDGE-TO-EDGE. SUBSTITUTE ITEM 19 FOR SITUATIONS WHERE A CORNER-TO-CORNER CURVE IS BETTER.
 9. PROVIDE MINIMUM 36" CABLE SLACK AT BOTTOM OF THE RISER. CABLE BEND RADIUS SHALL BE A MINIMUM OF 12 TIMES THE CABLE DIAMETER. SEE SHEET E-508 FOR CABLE SLACK DETAIL.



POLE SETTING DEPTHS

POLE LENGTH	SETTING DEPTH "X"
25'	11'-6"
50'	11'-6"
60'	12'-6"
65'	13'-0"
70'	13'-6"
75'	14'-0"
80'	14'-6"

USE EXCAVATED MATERIAL TO FORM CROWN AROUND POLE

EXISTING GRADE

BACKFILL TO NORMAL GROUND LEVEL USING POLYURETHANE RIGID FOAM OR SAND SLURRY.

AT ALL POLES WITH UNDERGROUND RISERS, THAT PORTION OF THE CABLES BELOW GRADE SHALL BE ENCLOSED WITHIN THE BACKFILL MATERIAL ENVELOPE.

BUTT PLATE GROUNDING DETAIL
TYPICAL

POLE SETTING DEPTH "X"

POLE Ø PLUS

COPPER BUTT PLATE

4/0 AWG 19 STRAND BARE COPPER GROUND WIRE

MIN. ~6'

MIN. ~7'

R3'-0" TYP TRANSITION

BOTTOM RISER STRAP

PROVIDE MINIMUM 36" CABLE SLACK AT BOTTOM OF RISER. CABLE BEND RADIUS SHALL BE A MINIMUM OF 12 TIMES THE CABLE DIAMETER. USACE SHALL BE NOTIFIED TO ALLOW A GOVERNMENT REPRESENTATIVE TO BE PRESENT DURING THE INSTALLATION OF CABLE TRANSITIONS AT TRENCH LOCATIONS TO VERIFY AND ACCEPT 'S-CURVE' SLACK PRIOR TO CUTTING CABLE AND BACKFILLING OF THE TRENCH. MINIMUM OF 48 HOUR NOTIFICATION IS REQUIRED.

U.S. ARMY CORPS OF ENGINEERS
ALASKA DISTRICT
JBER, ALASKA 99506-0888

DESIGNED BY:
Z.SAM

DRAWN BY:
Z.SAM

CHECKED BY:
R.O.

SUBMITTED BY:
J.SAUCEDA

ISSUE DATE:
SEPTEMBER 2024

SOLICITATION NO.:
W911KB24-R-0041

CONTRACT NO.:
W911KB24-C-0022

DRAWING #:
AF-891-201-01

FILE:
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ASST D

OL1002

U.S. ARMY CORPS OF ENGINEERS
ALASKA DISTRICT
JBER, ALASKA 99506-0888

SHUW030007

OLIKTOK LRRS, AK
REPAIR OLIKTOK ROAD
ELECTRICAL
DETAILS

TYPICAL 34.5KV OVERHEAD STRUCTURE DETAILS

REFERENCE NUMBER:
E-506

AWARDED

A1

TYPICAL POLE DETAIL

SCALE: NTS

A7

TYPICAL TYPE I ANCHOR INSTALLATION

SCALE: NTS

SHEET NOTES:

1. ALL HOLES SHALL BE DRILLED OR AUGERED. THE SOIL SHALL BE REMOVED FROM THE HOLES MECHANICALLY OR BY COMPRESSED AIR. NO DRILLING MUD OR OTHER FLUIDS SHALL BE USED. NO THAWING WITH STEAM, WATER, OR OTHER METHODS WILL BE PERMITTED.

2. POLE HOLES SHALL BE AT LEAST 4 INCHES LARGER THAN THE BUTT DIAMETER OF THE POLE. THE EXCAVATED HOLE SHALL BE AT LEAST AS LARGE AT THE BOTTOM AS AT THE TOP. ALL HOLES SHALL BE COVERED IMMEDIATELY AND KEPT COVERED UNTIL FILLED.

3. IN THE EVENT OF OVERDRILL, THE HOLES SHALL BE BACKFILLED TO THE REQUIRED DEPTH USING ONLY MOIST, THAWED SAND, OR GRAVEL, MATERIALS EXCAVATED FROM THE POLE HOLE MAY NOT BE USED.

3.1. SAND SOURCE FOR SLURRY MIX SHALL BE FREE FROM ALL ORGANIC MATTER AND SHALL MEET ASTM C33. THE MAXIMUM SIZE AGGREGATE SHALL BE 3/8 INCH AND SHALL PASS THROUGH A US STANDARD SQUARE 1/2 MESH SIEVE.

3.2. WATER USED FOR SLURRY MIXING SHALL BE CLEAN AND FREE FROM INJURIOUS AMOUNTS OF OILS, ACIDS, ALKALIES, ORGANICS, AND OTHER DETRIMENTAL MATERIALS.

3.3. SLURRY, WHEN MIXED, SHALL HAVE A CONSISTENCY, SUCH THAT A 6 INCH PLUS OR MINUS 1 INCH SLUMP IS OBTAINED BASED ON ASTM C143. THE TEMPERATURE OF THE SLURRY, WHEN PLACED , SHALL BE 45 DEGREES F PLUS OR MINUS 5 DEGREES.

4. IF DURING EXCAVATION FREE WATER, ICE LENSES OR PEAT ARE ENCOUNTERED, IMMEDIATELY NOTIFY USACE COR AND CONOCOPHILLIPS. THE CONTRACTOR WILL INCREASE THE POLE SET DEPTH ON A 1 FT UNACCEPTABLE MATERIAL ENCOUNTERED TO 1 FT INCREASE POLE SET DEPTH OR RELOCATE THE STRUCTURE TO AN ADJACENT LOCATION WHERE MORE SUITABLE MATERIAL EXISTS.

5. POLES SHALL BE SET PLUMB BEFORE BACK FILL IS PLACED. POLES SHALL REMAIN PLUMB AFTER BACKFILL AND CONDUCTORS ARE INSTALLED.

6. SURPLUS EXCAVATED SOIL SHALL BE BANKED UP AND TAMPED AROUND THE POLE TO A HEIGHT OF 6 INCHES ABOVE THE NATURAL GRADE AND SLOPE AWAY FROM THE POLES.

[illegible]

U.S. ARMY CORPS OF ENGINEERS ALASKA DISTRICT 2204 3RD STREET JBER, ALASKA 99506-0898	DESIGNED BY: ZSAM	ISSUE DATE: SEPTEMBER 2024
	DRAWN BY: ZSAM	SOLICITATION NO.: W911KB-24-R-0041
	CHECKED BY: RHO	PROJECT NO.: W911KB-A-0002
	SUBMITTED BY: J SAUCEDA	DRAWING #: AF-351-201-01
	SIZE: ANSI D	FILE: Q1002-E-507.dwg
		Q1002

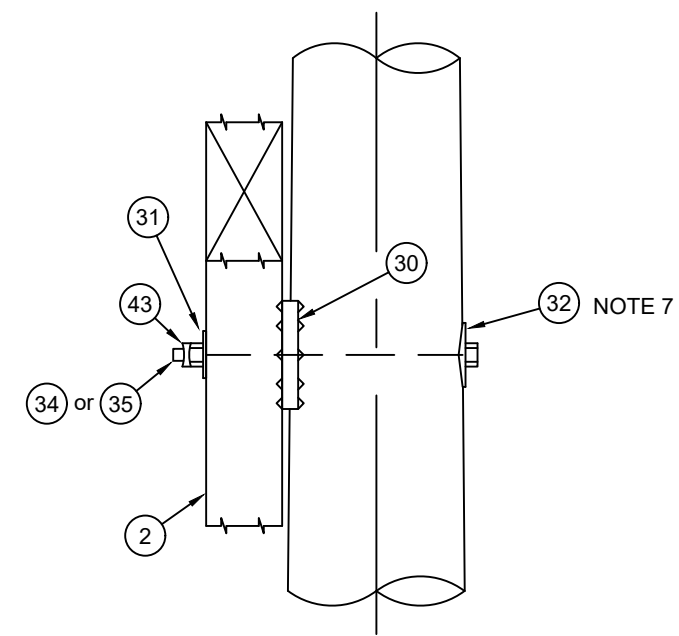
SHUM030007
OLIKTOK LRRS, AK
REPAIR OLIKTOK ROAD
ELECTRICAL
DETAILS
TYPICAL TYPE I TANGENT GLASS INSULATOR DETAIL

REFERENCE
NUMBER:
E-507

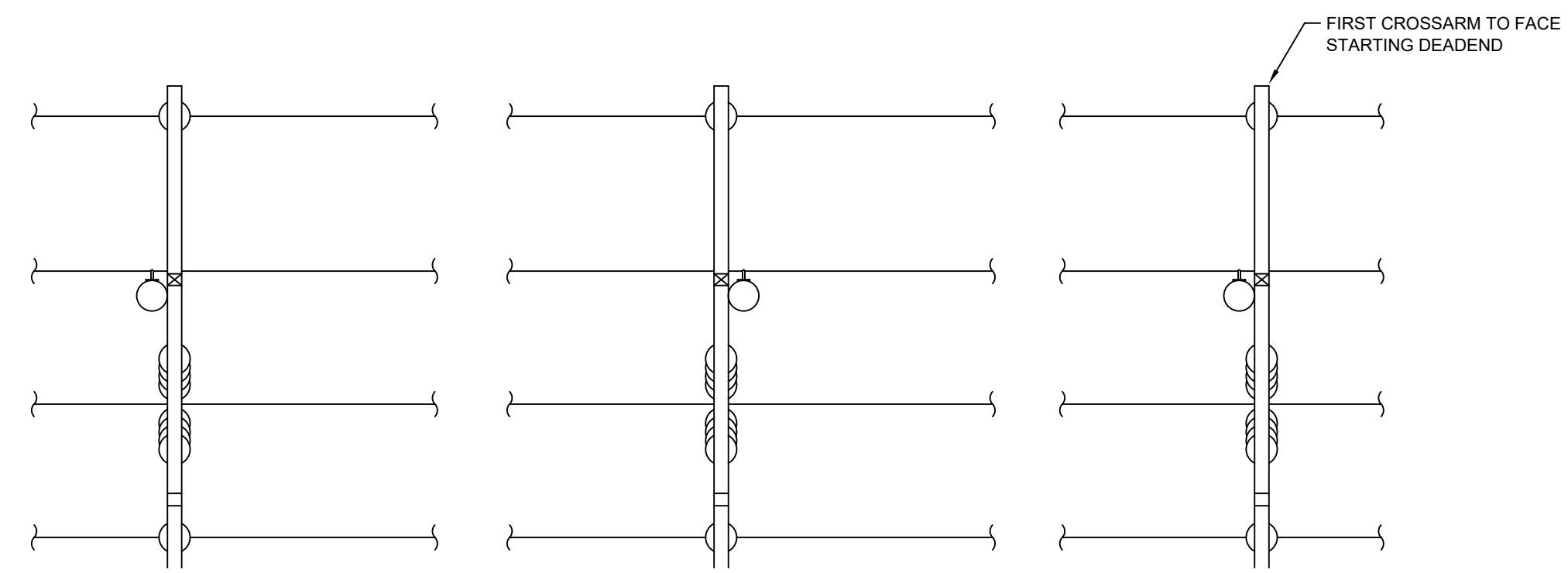
AWARDED



1. BOLTS THAT NEED TO BE CUT OFF TO SHORTEN MUST BE CUT ALL THE WAY THROUGH WITH A HACKSAW (NOT CUT PARTIALLY AND BROKEN OFF). EXPOSED ENDS OF CUT BOLTS SHALL BE PAINTED WITH ZINC RICH PAINT.
2. ALL HOLES IN POLE SHALL BE DRILLED PRIOR TO TREATMENT. POLES SHALL MEET RUS SPECIFICATION 1728F-700. POLE SUPPLIER SHALL VERIFY THAT POLE DIAMETER DOES NOT EXCEED SPECIFIED BOLT LENGTHS.
3. ALL MACHINE BOLTS ARE TO HAVE A 6" MINIMUM THREAD LENGTH.
4. INVERT VIBRATION DAMPENERS ON TOP (A) PHASE.
5. ORIENT BOLT HEADS FOR GROUND CLEVIS ON THE POLE SIDE AND THE NUT(S) AWAY FROM THE POLE FOR GOOD MAINTENANCE ACCESS.
6. SEE E-511 FOR CONDUCTOR AND GROUND ASSEMBLY DETAILS.
7. CURVED SQUARE WASHER (ITEM 32) IS CURVED EDGE-TO-EDGE. SUBSTITUTE ITEM 19 FOR SITUATIONS WHERE A CORNER-TO-CORNER CURVE IS BETTER.
8. KUPARUK HAS UPGRADED TO GLASS INSULATOR, MASTER MATERIAL LIST ITEM 4D. IF PORCELAIN IS USED DURING LINE REPAIR/MAINTENANCE USE MASTER MATERIAL LIST ITEM 4.
9. PROVIDE MINIMUM 36" CABLE SLACK AT BOTTOM OF RISER. CABLE BEND RADIUS SHALL BE A MINIMUM OF 12 TIMES THE CABLE DIAMETER. SEE DETAIL A1/E-506 FOR ADDITIONAL DETAILS.

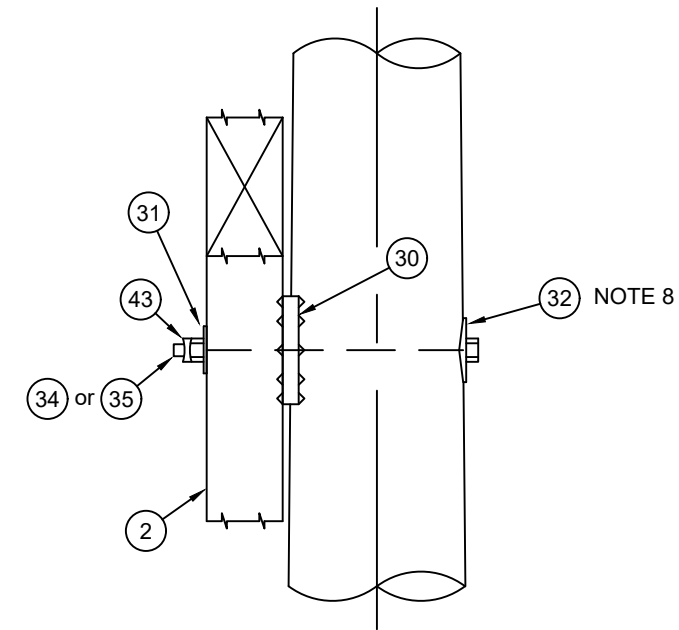


CROSSARM TO POLE CONNECTION



CROSSARM FACING PLAN
TYPICAL

A1 TYPICAL TYPE I TANGENT GLASS INSULATOR
SCALE: NTS

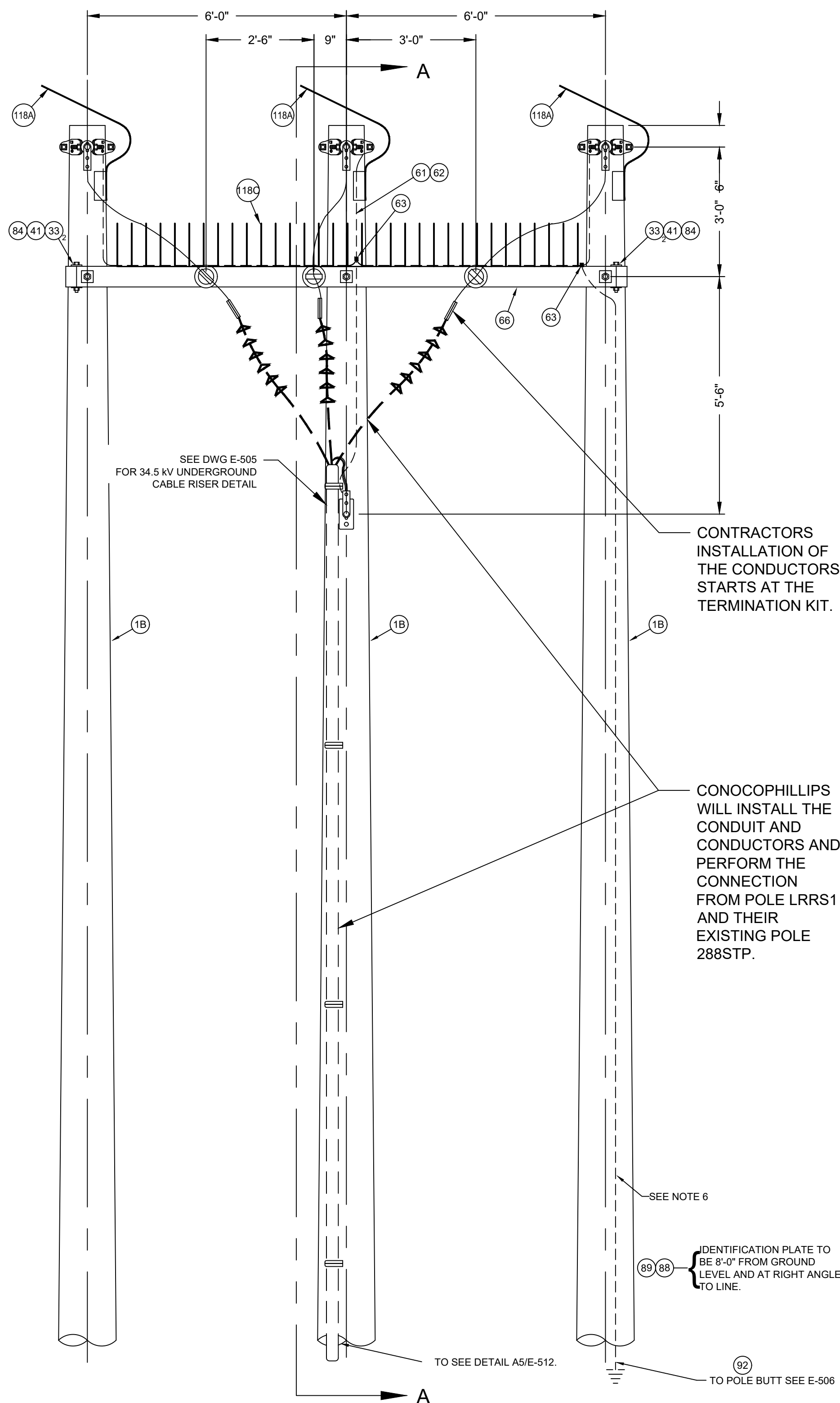


NOTES:

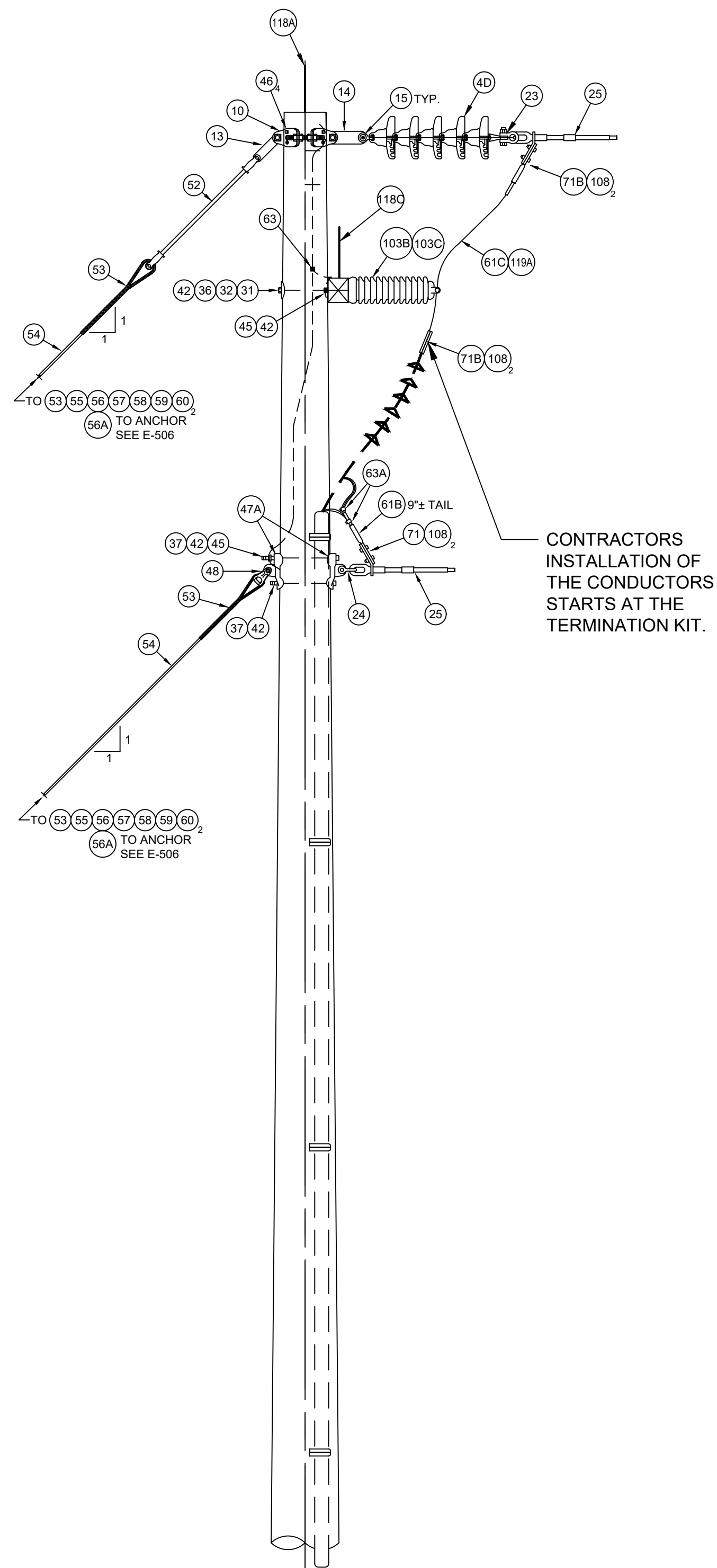
1. BOLTS THAT NEED TO BE CUT OFF TO SHORTEN MUST BE CUT ALL THE WAY THROUGH WITH A HACKSAW (NOT CUT PARTIALLY AND BROKEN OFF). EXPOSED ENDS OF CUT BOLTS SHALL BE PAINTED WITH ZINC RICH PAINT.
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3. ALL MACHINE BOLTS ARE TO HAVE A 6" MINIMUM THREAD LENGTH.
4. INVERT VIBRATION DAMPENERS ON TOP (A) PHASE.
5. ORIENT BOLT HEADS FOR GROUND CLEVIS ON THE POLE SIDE AND THE NUT(S) AWAY FROM THE POLE FOR GOOD MAINTENANCE ACCESS.
6. FOR GUY & ANCHORING MATERIALS & METHODS NOT SHOWN ON THIS SHEET SEE SHEET E-506.
7. SEE E-511 OF THIS DRAWING FOR CONDUCTOR AND GROUND ASSEMBLY DETAILS.
8. CURVED SQUARE WASHER (ITEM 32) IS CURVED EDGE-TO-EDGE. SUBSTITUTE ITEM 19 FOR SITUATIONS WHERE A CORNER-TO-CORNER CURVE IS BETTER.
9. PROVIDE MINIMUM 36" CABLE SLACK AT BOTTOM OF RISER. CABLE BEND RADIUS SHALL BE MINIMUM 12 TIMES THE CABLE DIAMETER. SEE DETAIL A1/E-506 FOR ADDITIONAL DETAILS.
10. KUPARUK HAS UPGRADED TO GLASS INSULATOR, MASTER MATERIAL LIST ITEM 4D. IF PORCELAIN IS USED DURING LINE REPAIR/MAINTENANCE USE MASTER MATERIAL LIST ITEM 4.

MATERIAL LIST			
ITEM	QUANTITY	DESCRIPTION	REMARKS
1A	1 EA	70 FT CLASS H-2 FULLY TREATED DOUGLAS FIR POLE	4 BELLS = 40KV
2	1 EA	CROSSARM ASSEMBLY, 4-5/8" x 7-1/2" DOUGLAS FIR	
3	1 EA	DOUGLAS FIR FACE MOUNTING BRACE	
4D	12 EA	22,000 LB GLASS INSULATOR W/ ZINC LINK, 5-3/4" x 10"	4 BELLS = 40KV; NOTE 10
5A	1 EA	SHIELD WIRE SUPPORT BRACKET 16"	
6	4 EA	ALUMINUM SUSPENSION CLAMP	
7	4 SETS	ARMOR RODS FOR 465 KCM AAC "CAIRO"	
8	18 IN +/-	5/8" BRAIDED TINNED COPPER BONDING CABLE	
15	1 EA	BALL Y-CLEVIS	
16	2 EA	BALL Y-CLEVIS 30000 LB HOT LINE EXTENSION LINK	
18	0 EA	V-STRING YOKE	
19	A/R	4" x 4" x 1/4" SQUARE CURVED WASHER, 13/16" HOLE	NOTE 8
20B	1 EA	Y-CLEVIS EYE	
21A	3 EA	SOCKET EYE	
22A	1 EA	CLEVIS EYE	
30	3 EA	4" x 6-3/4" CROSSARM GAIN	
31	3 EA	4" x 4" x 1/4" SQUARE WASHER, 13/16" HOLE	
32	5 EA	4" x 4" x 1/4" SQUARE CURVED WASHER, 13/16" HOLE	NOTE 8
34	2 EA	3/4" x 20" MACHINE BOLT WITH NUT	A320, GRADE L7
35	1 EA	3/4" x 18" MACHINE BOLT WITH NUT	A320, GRADE L7
36	2 EA	3/4" x 16" MACHINE BOLT WITH NUT	A320, GRADE L7
38	3 EA	3/4" x 9-1/2" WASHER HEAD BOLT WITH 3" TAPPED WASHERS	A320, GRADE L7
42	6 EA	3/4" HEX NUT	A194, GRADE 7
43	7 EA	3/4" JAM NUT	A194, GRADE 7
45	6 EA	3/4" BONDING CLIP	
46	1 EA	1/2" x 4" LAG SCREW	
61	90 FT +/-	#6 AWG SOLID SDB COPPER WIRE	ASTM B-3
62	90 EA +/-	1/2" x 2" COPPERWELD STAPLE	
63	2 EA	SOLDERLESS CONNECTOR	
88	1 EA	IDENTIFICATION PLATE (SIMILAR TO ECM 8416009AEI)	CUSTOM
89	6 EA	NAIL, 3" LONG x 10D, GALVANIZED	
92	1 EA	COPPER BUTT PLATE	
116	AS REQ'D	VIBRATION DAMPER	

1. BOLTS THAT NEED TO BE CUT OFF TO SHORTEN MUST BE CUT ALL THE WAY THROUGH WITH A HACKSAW (NOT CUT PARTIALLY AND BROKEN OFF). EXPOSED ENDS OF CUT BOLTS SHALL BE PAINTED WITH ZINC RICH PAINT.
2. ALL HOLES IN POLE SHALL BE DRILLED PRIOR TO TREATMENT. POLES SHALL MEET RUS SPECIFICATION 1728F-700. POLE SUPPLIER SHALL VERIFY THAT POLE DIAMETER DOES NOT EXCEED SPECIFIED BOLT LENGTHS.
3. ALL MACHINE BOLTS ARE TO HAVE A 6" MINIMUM THREAD LENGTH.
4. BIRD PERCH DETERRENT SPIKES SHALL BE INSTALLED ON THE POST INSULATOR CROSSARM.
5. CURVED SQUARE WASHER (ITEM 32) IS CURVED EDGE-TO-EDGE. SUBSTITUTE ITEM 19 FOR SITUATIONS WHERE A CORNER-TO-CORNER CURVE IS BETTER.
6. PROVIDE MINIMUM 36" CABLE SLACK AT THE BOTTOM OF THE RISER. CABLE BEND RADIUS SHALL BE MINIMUM 12 TIMES THE CABLE DIAMETER. SEE SHEET DETAILS A1/E-508 OR DETAIL A5/E-512 FOR ADDITIONAL DETAILS.
7. KUPARUK HAS UPGRADED TO GLASS INSULATOR, MASTER MATERIAL LIST ITEM 4D. IF PORCELAIN IS USED DURING LINE REPAIR/MAINTENANCE USE MASTER MATERIAL LIST ITEM 4.



SCALE: NTS



SECTION A-A

MATERIAL LIST			
ITEM	QUANTITY	DESCRIPTION	REMARKS
1B	3 EA	60 FT CLASS H-2 FULLY TREATED DOUGLAS FIR POLE	
4D	15 EA	22,000 LBF GLASS INSULATOR W/ ZINC LINK, 5-3/4" X 10"	NOTE 7
10	3 EA	POLE BAND, 7"-10" DIA WITH BONDING BOLT	
13	3 PAIR	3/8" x 2" x 9-1/2" CONNECTING LINKS, 15/16" HOLES	
14	3 PAIR	3/8" x 3" x 10" CONNECTING LINKS, 1-1/16" HOLES	
15	3 EA	BALL Y-CLEVIS	
19	A/R	4" x 4" x 1/4" SQUARE CURVED WASHER, 13/16" HOLE	NOTE 5
23	3 EA	SOCKET CLEVIS	
24	1 EA	ANCHOR SHACKLE	
25	4 EA	COMPRESSION DEAD-END ASSEMBLY FOR 465.4 kcm	
31	3 EA	4" x 4" x 1/4" SQUARE WASHER, 13/16" HOLE	
32	3 EA	4" x 4" x 1/4" SQUARE CURVED WASHER, 13/16" HOLE	NOTE 5
33	4 EA	2" x 1/4" ROUND WASHER, 9/16" HOLE	
36	3 EA	3/4" x 16" MACHINE BOLT WITH NUT	
37	2 EA	3/4" x 14" MACHINE BOLT WITH NUT	
41	2 EA	1/2" x 7" MACHINE BOLT WITH NUT	
42	8 EA	3/4" HEX NUT	
45	4 EA	3/4" BONDING CLIP	
46	12 EA	1/2" x 4" LAG SCREW	
47A	2 EA	UNIVERSAL GUYING ATTACHMENT	
48	1 EA	THIMBLE CLEVIS, 0.88" CABLE, 25,000 LBS	
52	3 EA	30,000 LB FIBER GLASS STRAIN INSULATOR	
53	8 EA	BIG GRIP DEAD-END FOR 25M STRAND	
54	250 FT	25M 7-STRAND ALUMOWELD GUY STRAND	
55	4 EA	1" TRIPLEYE EYENUT	
56	4 EA	1" x 7'-0" ANCHOR ROD, 1" THREAD	
56A	4 EA	1" x 7'-0" ANCHOR ROD, 3" THREAD	
57	4 EA	1" COUPLING	
58	4 EA	1/2" X 10" DIA ANCHOR PLATE	
59	4 EA	4" X 4" x 1/2" SQUARE WASHER, 1-1/8" HOLE	
60	8 EA	1" HEAVY SQUARE NUT	
61	80 FT +/-	#6 AWG SOLID SDB COPPER WIRE	
61B	5 FT +/-	4/0 STRANDED SDB COPPER WIRE, 19 STRAND	
61C	25 FT +/-	500 MCM STRANDED SDB COPPER WIRE, 19 STRAND	
62	80 EA +/-	1/2" x 2" COPPERWELD STAPLE	
63	1 EA	SOLDERLESS CONNECTOR	
63A	2 EA	SOLDERLESS CONNECTOR, #1 CU TO 4/0 CU	
66	1 EA	4-3/4" x 5-3/4" x 13'-0" DOUGLAS FIR CROSSARM	
71	1 EA	COMPRESSION TERMINAL FOR 4/0 COPPER	
71B	6 EA	COMPRESSION TERMINAL FOR 500 MCM COPPER	
84	2 EA	1/2" MF LOCKNUT	
88	1 EA	IDENTIFICATION PLATE (SIMILAR TO ECM 8416009AEI)	CUSTOM, NOT SHOWN
89	6 EA	NAIL, 3" LONG x 10D, GALVANIZED	NOT SHOWN
92	1 EA	COPPER BUTT PLATE	NOT SHOWN
103B	3 EA	HORIZ CLAMPTOP POST INSULATOR, 69kV, WITH CLAMP	NOT SHOWN
103C	3 EA	INSULATOR MOUNTING STUD, NUT, WASHER & LOCKNUT	NOT SHOWN
108	14 EA	1/2" x 13" 316SSTL STEEL HEX BOLT, 2" LONG WITH NUT	NOT SHOWN
116	AS REQ'D	VIBRATION DAMPER, ID 1.211 - 1.330", 9.9 LBS	NOT SHOWN
118A	3 EA	RAPTOR GUARD, POLE TOP	
118C	AS REQ'D	RAPTOR GUARD, SPIKES	
119A	1 EA	INSULATOR, CABLE, 5/8" LINE HOSE, 50 FT ROLL	

1. BOLTS THAT NEED TO BE CUT OFF TO SHORTEN MUST BE CUT ALL THE WAY THROUGH WITH A HACKSAW (NOT CUT PARTIALLY AND BROKEN OFF). EXPOSED ENDS OF CUT BOLTS SHALL BE PAINTED WITH ZINC RICH PAINT.
2. ALL HOLES IN POLE SHALL BE DRILLED PRIOR TO TREATMENT. POLES SHALL MEET RUS SPECIFICATION 1728F-700. POLE SUPPLIER SHALL VERIFY THAT POLE DIAMETER DOES NOT EXCEED SPECIFIED BOLT LENGTHS.
3. ALL MACHINE BOLTS ARE TO HAVE A 6" MINIMUM THREAD LENGTH.
4. BOND ALL POLE BANDS.
5. THE SECOND SET OF FUSE CUTOUTS ON THE BACK SIDE OF THE POLES ARE FOR AUXILIARY LOADS SUCH AS RIGS AND MAY OR MAY NOT BE REQUIRED, DEPENDING ON THE LOCATION.
6. PROVIDE A MINIMUM OF 36" CABLE SLACK AT THE BOTTOM OF THE RISER. CABLE BEND RADIUS SHALL BE MINIMUM 12 TIMES THE CABLE DIAMETER. SEE SHEET E-508 FOR CABLE SLACK DETAIL.
7. KUPARUK HAS UPGRADED TO GLASS INSULATOR, MASTER MATERIAL LIST ITEM 4D. IF PORCELAIN IS USED DURING LINE REPAIR/MAINTENANCE USE MASTER MATERIAL LIST ITEM 4.



MATERIAL LIST			MATERIAL LIST		
ITEM	QUANTITY	DESCRIPTION	ITEM	QUANTITY	DESCRIPTION
1B	3 EA	60 FT CLASS H-2 FULLY TREATED DOUGLAS FIR POLE	112	6 EA	5/8" x 16" MACHINE BOLT WITH NUT
4D	15 EA	22,000 LBF GLASS INSULATOR W/ ZINC LINK, 5-3/4" X 10", NOTE 7	116B	AS REQ'D	VIBRATION DAMPER, ID ID 0.771 - 0.870", 9.9 LBS
10	3 EA	POLE BAND, 7"-10" DIA WITH BONDING BOLT	118A	3 EA	RAPTOR GUARD, POLE TOP
13	3 PAIR	3/8" x 2" x 9-1/2" CONNECTING LINKS, 15/16" HOLES	118B	1 EA	RAPTOR GUARD 24" UPRIGHT POLE MOUNT
14	3 PAIR	3/8" x 3" x 10" CONNECTING LINKS, 1-1/16" HOLES	118C	6 EA	AVIAN PERCH DETERRENT, SPIKES
15	3 EA	BALL Y-CLEVIS	119	3 EA	INSULATOR, LINE POST/CABLE TRUNNION WITH 36" GUT BOTH SIDES
20	3 EA	Y-CLEVIS EYE	119A	1 EA	INSULATOR, CABLE, 5/8" LINE HOSE, 50 FT ROLL
23	3 EA	SOCKET CLEVIS	ITEMS NOT SHOWN: 88, 89, 92108, 112, 116B		
24	1 EA	ANCHOR SHACKLE			
25	4 EA	COMPRESSION DEAD-END ASSEMBLY FOR 465.4 kcm			
31	15 EA	4" x 4" x 1/4" SQUARE WASHER, 13/16" HOLE			
32	3 EA	4" x 4" x 1/4" SQUARE CURVED WASHER, 13/16" HOLE			
32A	6 EA	4" x 4" x 1/4" SQUARE CURVED WASHER, 11/16" HOLE			
33	44 EA	2" x 1/4" ROUND WASHER, 9/16" HOLE			
36	3 EA	3/4" x 16" MACHINE BOLT WITH NUT			
37	2 EA	3/4" x 14" MACHINE BOLT WITH NUT			
39A	6 EA	3/4" x 26" DOUBLE ARMING BOLT WITH (2) NUTS			
41	34 EA	1/2" x 7" MACHINE BOLT WITH NUT			
42	17 EA	3/4" HEX NUT			
42A	6 EA	5/8" SQUARE NUT			
42B	3 EA	1/2" SQUARE NUT			
43	1 EA	3/4" JAM NUT			
45	1 EA	3/4" BONDING CLIP			
45A	3 EA	5/8" BONDING CLIP			
45B	3 EA	1/2" BONDING CLIP			
46	12 EA	1/2" x 4" LAG SCREW			
47A	2 EA	UNIVERSAL GUYING ATTACHMENT			
48	1 EA	THIMBLE CLEVIS, 0.88" CABLE, 25,000 LBS			
52	3 EA	30,000 LB FIBER GLASS STRAIN INSULATOR			
53	8 EA	BIG GRIP DEAD-END FOR 25M STRAND			
54	265 FT +/-	25M 7-STRAND ALUMOWELD GUY STRAND			
55	4 EA	1" TRIPLEYE EYENUT			
56	4 EA	1" x 7'-0" ANCHOR ROD, 1" THREAD			
56A	4 EA	1" x 7'-0" ANCHOR ROD, 3" THREAD			
57	4 EA	1" COUPLING			
58	4 EA	1/2" X 10" DIA ANCHOR PLATE			
59	4 EA	4" X 4" x 1/2" SQUARE WASHER, 1-1/8" HOLE			
60	8 EA	1" HEAVY SQUARE NUT			
61	100 FT +/-	#6 AWG SOLID SDB COPPER WIRE			
61A	AS REQ'D	#2 STRANDED SDB COPPER WIRE, 7 STRAND			
61B	85 FT +/-	4/0 STRANDED SDB COPPER WIRE, 19 STRAND			
62	160 EA +/-	1/2" x 2" COPPERWELD STAPLE			
63	3 EA	SOLDERLESS CONNECTOR			
63A	1 EA	SOLDERLESS CONNECTOR, #1 CU TO 4/0 CU			
66	5 EA	4-3/4" x 5-3/4" x 13'-0" DOUGLAS FIR CROSSARM			
67B	1 EA	3-POLE VERTICAL BREAK 45kV SWITCH, 600A			
68B	6 EA	34.5kV FUSE DISCONNECT, 200A			
69Z	6 EA	POWER FUSE, 200A			
71	24 EA	COMPRESSION TERMINAL FOR 4/0 COPPER			
84	34 EA	1/2" MF LOCKNUT			
87	1 EA	COMPRESSION TERMINAL FOR #2 COPPER			
88	1 EA	IDENTIFICATION PLATE (SIMILAR TO ECM 8416009AEI)			
89	6 EA	NAIL, 3" LONG x 10D, GALVANIZED			
92	1 EA	COPPER BUTT PLATE			
103B	3 EA	HORIZ CLAMPTOP POST INSULATOR, 69kV, WITH CLAMP			
103C	2 EA	INSULATOR MOUNTING STUD, NUT, WASHER & LOCKNUT, 3/4" X 8"			
104A	1 EA	HORIZ CLAMPTOP POST INSULATOR, 69kV, WITH CLAMP, GAIN BASE			
108	44 EA	1/2" x 13" 316SSTL STEEL HEX BOLT, 2" LONG WITH NUT			

[illegible]

U.S. ARMY CORPS OF ENGINEERS ALASKA DISTRICT 2204 98D STREET JBER, ALASKA 99506-0888	DESIGNED BY: Z SAM	ISSUE DATE: SEPTEMBER 2024
	DRAWN BY: Z SAM	SOLICITATION NO.: W911KB-Z4-R-0041
	CHECKED BY: R RO	CONTRACT NO.: W911KB-Z4-C-0022
	SUBMITTED BY: J SANCHEZ	DRAWING NO: AP-851-201-01
	FILE NO: JAN02-5-511-4242	01002

SHUM030007
OLIKTOK LRPS, AK
REPAIR OLIKTOK ROAD
ELECTRICAL
DETAILS
CONDUCTOR AND GROUND WIRE ASSEMBLY DETAILS

REFERENCE
NUMBER:
E-511

AWARDED



V-STRING SUSPENSION ASSEMBLY - CONDUCTOR

STRUCTURE TYPE I

SCALE: NTS



SUSPENSION ASSEMBLY - CONDUCTOR STRUCTURE TYPES I II & III



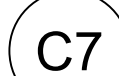
SUSPENSION ASSEMBLY - GROUND WIRE STRUCTURE TYPE I



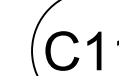
SUSPENSION ASSEMBLY - GROUND WIRE STRUCTURE TYPES III & IV



VIBRATION DAMPERS SUSPENSION



DEAD END ASSEMBLY - CONDUCTOR STRUCTURE TYPES V VI VII VIII & X



DEAD END ASSEMBLY - GROUND WIRE STRUCTURE TYPES V VI VIII & X



VIBRATION DAMPERS - DEAD END
SCALE: NTS



AIR FLOW SPOILER

SCALE: NTS

SHEET NOTES:

1. ARMOR RODS AND SUSPENSION GRIPS SHOWN ARE FOR CAIRO 465 KCM AAAC CONDUCTORS. OTHER CONDUCTORS SUCH AS GREELEY 927 KCM MAY REQUIRE ALTERNATE RODS AND GRIPS.
2. MINIMUM OF TWO VIBRATION DAMPERS SHALL BE INSTALLED PER CONDUCTOR, BETWEEN EACH WIRE ATTACHMENT POINTS.
3. AIR FLOW SPOILER SHALL BE PLACED ON ALL AERIAL LINES, PER MANUFACTURES RECOMMENDED DISTANCES, WITH A MINIMUM OF TWO INSTALLED PER CONDUCTOR, BETWEEN EACH WIRE ATTACHMENT POINTS.
4. ALL INSULATORS SHALL BE MADE OF PORCELAIN OR CLASS CONSTRUCTION.



1. SIGNS SHALL BE 1MM (MIN) WHITE ENAMEL COATED ALUMINUM OR PAINTED STEEL WITH REFLECTIVE YELLOW BACKGROUND AND BLACK LETTERS.
2. SIGNS WILL BE MOUNTED ON IRREGULAR CURVED SURFACES (POWER POLES) AND NEED TO BE ABLE TO FLEXIBLE.
3. SIGNS SHALL BE RATED FOR OUTDOOR USE AND -40 DEG F TO +176 DEG F.
4. CORNERS SHALL HAVE 0.25" RADIUS.
5. 5/16" OR 3/8" DIAMETER HOLES SHALL BE PROVIDED IN EACH CORNER.
6. SIGNS SHALL BE FASTENED TO WOODEN POWER POLES WITH 1/4" X 1-1/2" GALVANIZED LAG SCREWS.

SCALE: NTS



1. BENDS IN THE 33 KV CABLE MUST BE FORMED WITH A PIPE BENDER OR OTHER MEANS TO ENSURE THE CABLE MINIMUM BEND RADIUS IS NOT EXCEEDED. THE MINIMUM BEND RADIUS IS 7 TIMES THE CABLE O.D.
2. ENSURE THAT ALL TRENCHING SPOILS ARE COLLECTED FOR RE-USE AS TRENCH BACKFILL. UTILIZE A BARRIER UNDER SPOILS TO PREVENT MIXING SNOW/ICE WITH TRENCHING SPOILS.
3. USACE SHALL BE NOTIFIED TO ALLOW A GOVERNMENT REPRESENTATIVE TO BE PRESENT DURING THE INSTALLATION OF CABLE TRANSITIONS AT TRENCH LOCATIONS TO VERIFY AND ACCEPT 'S-CURVE' SLACK PRIOR TO CUTTING CABLE AND BACKFILLING OF THE TRENCH. MINIMUM OF 48 HOUR NOTIFICATION IS REQUIRED.

SCALE: NTS

MATERIAL LIST - TRENCH TO POLE TRANSITION		
ITEM	QUANTITY	DESCRIPTION
6	AS REQ'D	CABLE TIE, 1/2"
7	AS REQ'D	LOCKING HEAD, CABLE TIE
61B	AS REQ'D	4/0 AWG SDB COPPER WIRE, 19 STRAND
72B	AS REQ'D	35 KV PRIMARY CABLES

MATERIAL DESCRIPTIONS			
ITEM	QTY	DESCRIPTION	REMARKS
1	1	SUPPORT GRIP, HEAVY DUTY SEE SIZE TABLE BELOW	
2	1 OR 2	TURNBUCKLE, STEEL, GALV. 7/8" X 12", ONE JAW END, ONE EYE END	
3	1 OR 2	J-BOLT, 1/2" - 13 X 8" LG, WITH NUT	
4	2 OR 4	WASHER, FLAT. 1/2". 316SS, 250/BOX	
5	2 OR 4	WASHER, LOCK. 1/2". 316SS, 125/BOX	



- DETAIL NOTES:
1. SELECT CLOSED MESH WHEN CABLE END IS AVAILABLE. OTHERWISE USE SPLIT MESH
 2. INSTALLATION ANGLE IS 0-15 DEG FOR MAXIMUM BREAKING STRENGTH



MESH GRIP SIZE TABLE OPTION INCLUDES NUMBER & LETTER			
DETAIL OPTION NUMBER (IF USED)	CABLE O.D. RANGE (INCHES)	EYE DIM (INCHES)	MESH DIM (INCHES)
01	2-2.49	12	36
02	2.5-2.99	12	38
03	3-3.49	12	40
04	3.5-3.99	12	44

SCALE: NTS

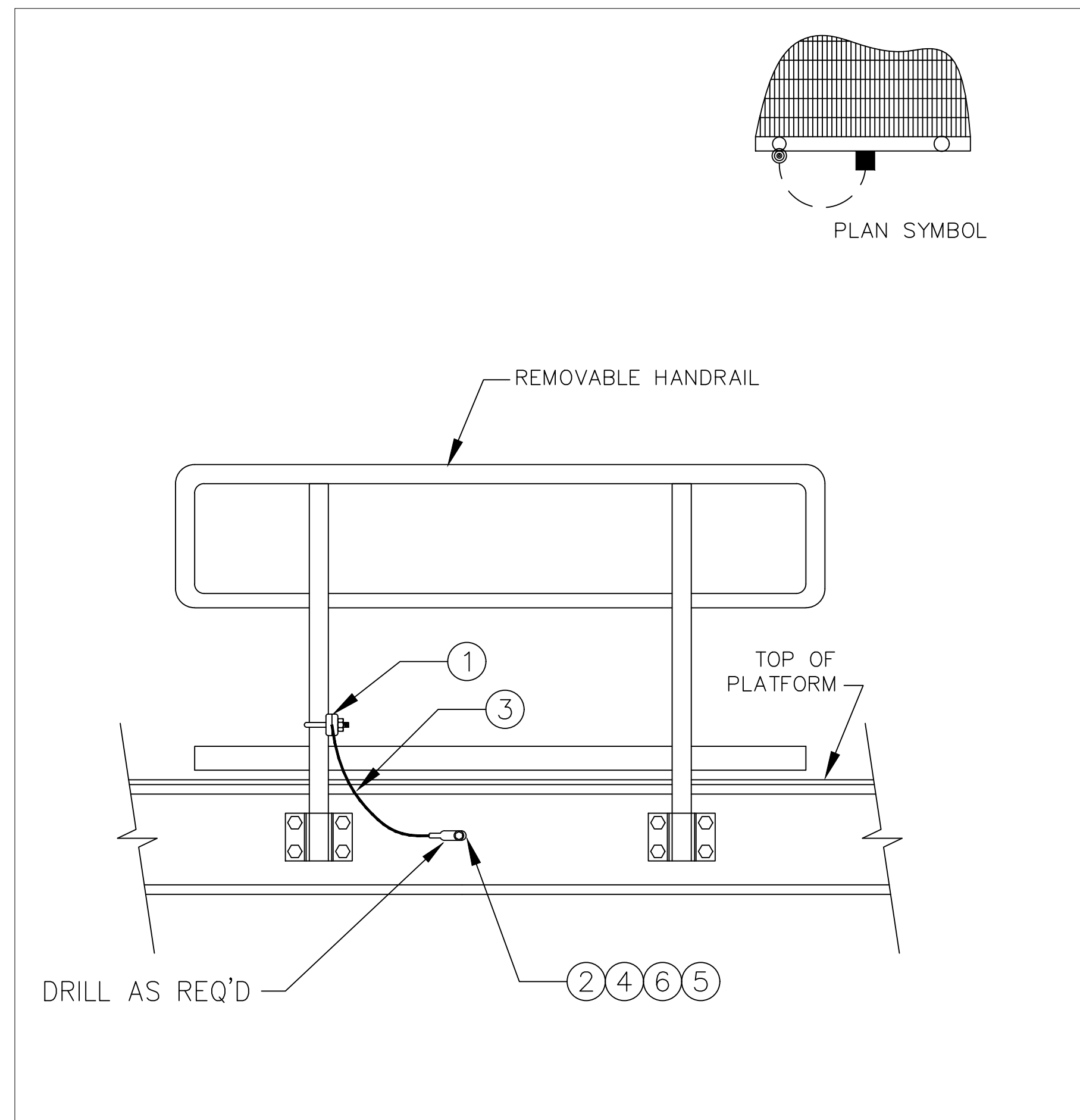
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U.S. ARMY CORPS OF ENGINEERS ATTENTION: PROJECT MANAGER 2204 3RD STREET JBER, ALASKA 99506-0808	SEPTEMBER 2024 Z.SAM SOLICITATION NO.: W911KB-24-R-0041 CONTRACT NO.: W911KB-24-C-0022 CHECKED BY: R.R.O. SUBMITTED BY: J.S.AUCEDA DRAWING #: AF-361-201-01	FILE NAME 1002-E-513.dwg 010022
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OLIKTOK LRRS, AK
REPAIR OLIKOTK ROAD
ELECTRICAL
DETAILS
TYPICAL BONDING DETAILS 1 OF 2

REFERENCE
NUMBER:
E-513

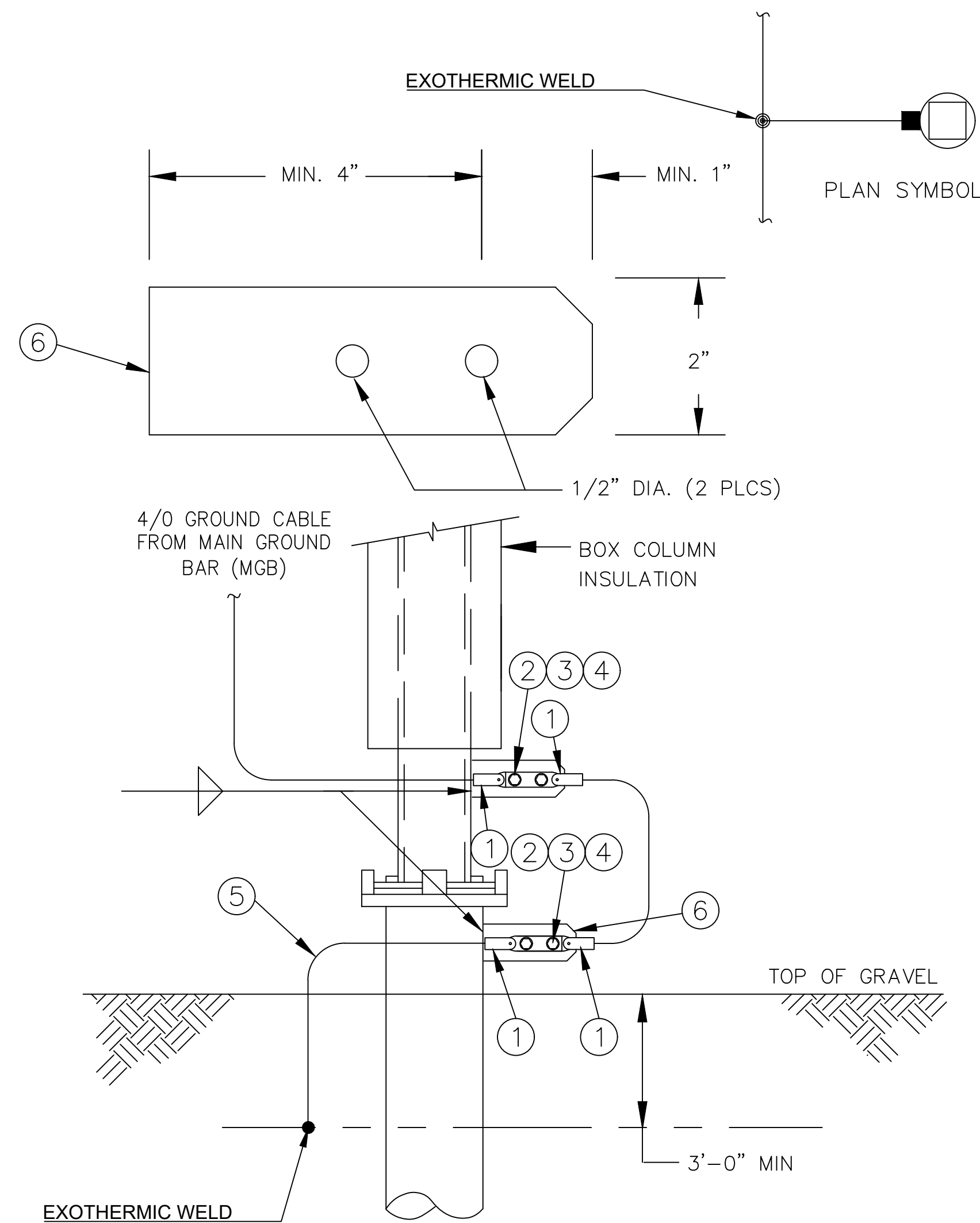
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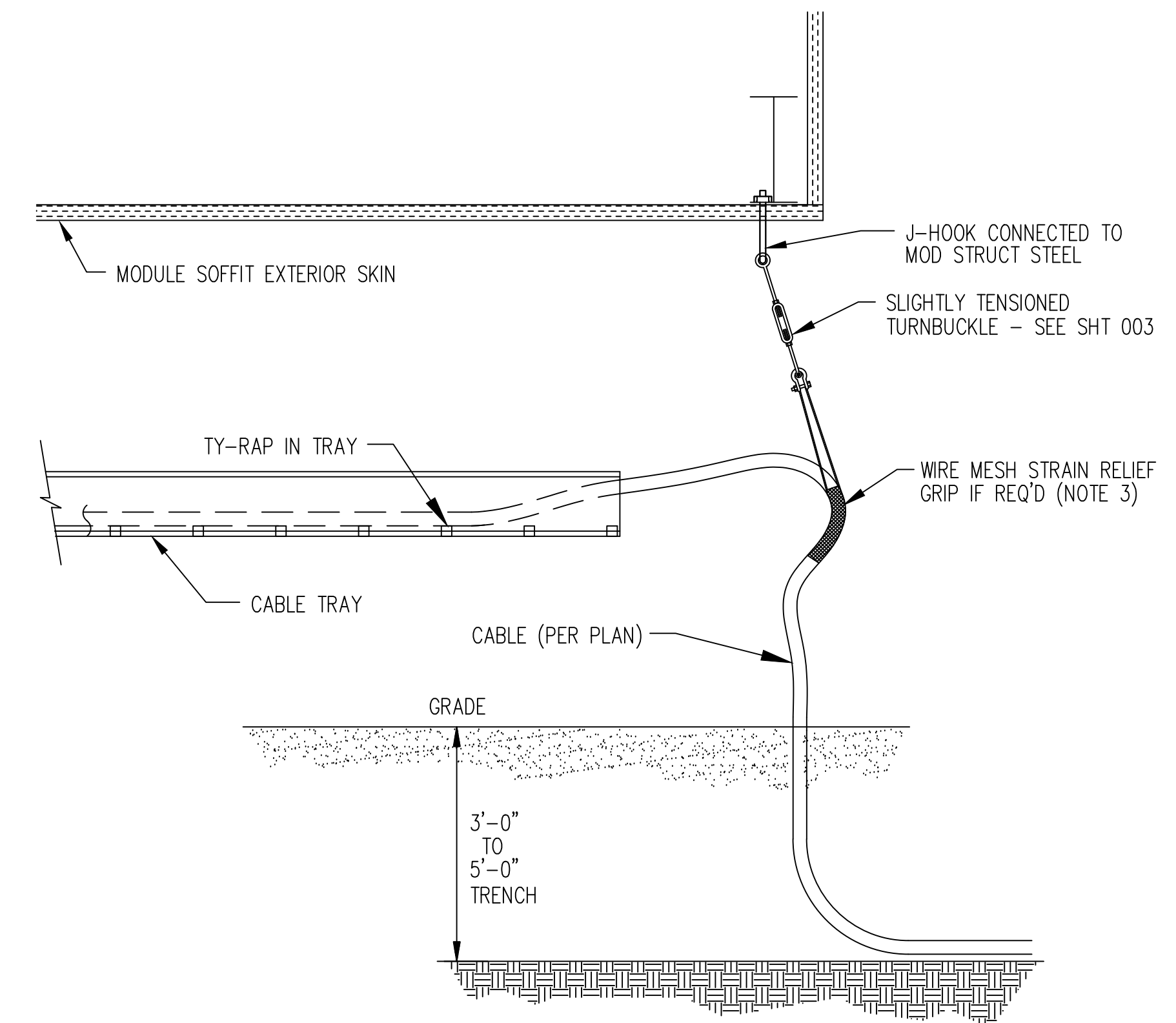
DETAIL NOTES:

1. HANDRAILS THAT ARE NOT REMOVEABLE AND BOLTED TO THE STRUCTURE DO NOT REQUIRE BONDING.
2. HANDRAILS THAT ARE NOT REQUIRED TO BE REMOVABLE FOR EQUIPMENT OR PLATFORM ACCESS ARE TO BE BONDED WITH A SMALL TACK WELD.

MATERIAL DESCRIPTIONS			
ITEM	QTY	UNIT	DESCRIPTION
1	1	EA	CONNECTOR, GROUND CABLE TO PIPE, #2/0-#250 MCM, IPS: 1-1/2", ROD RANGE: 1-5/8" OR 1-7/8"
2	1	EA	TERMINAL, 1-HOLE, #2/0 AWG, NON-INSULATED CRIMP TYPE, 1/2" BOLT HOLE SIZE, CU
3	2	EA	CABLE #2/0 AWG, XHHW, GREEN, COPPER, STRANDED
4	4	EA	BOLT, HEX HEAD, 1/2" X 1-1/2", STAINLESS W/NUT
5	2	EA	WASHER, FLAT, STAINLESS, 1/2", A304/A316
6	3	FT	WASHER, SPRING (LOCK), STAINLESS, 1/2", A304/A316



MATERIAL DESCRIPTIONS			
ITEM	QTY	UNIT	DESCRIPTION
1	4	EA	LUG, COMPRESSION, CU, GROUNDING, #4/0 STR, 2-HOLE, 1/2" STUD.
2	4	EA	BOLT, HEX HEAD, 1/2" X 1-1/2", STAINLESS W/NUT
3	8	EA	WASHER, FLAT, STAINLESS, 1/2". A304/A316
4	4	EA	WASHER, SPRING (LOCK), STAINLESS, 1/2", A304/A316
5	15	FT	WIRE, #4/0 AWG, XHHW, STRANDED, GREEN
6	1	EA	PLATE, STEEL, A-36, 1/4" THK, 6" X 2", CUT FROM STOCK (AAI 131-4203)



DETAIL NOTES:

1. CABLE INSTALLATIONS FROM A BURIED TRENCH TO CABLE TRAY SHALL PROVIDE ADEQUATE SLACK FORMED INTO AN S-CURVE TO PREVENT CABLE DAMAGE WITH SETTLING OR HEAVING.
2. MINIMUM BEND RADIUS SHOULD BE 10X CABLE OUTER DIAMETER (OD) WHERE POSSIBLE BUT NOT LESS THAN 8X CABLE OD OR MANUFACTURER'S SPEC'S.
3. CABLE S-CURVES SHALL BE SUPPORTED PER NEC ARTICLE 330. WHERE THE S-CURVE LOOP EXCEEDS 6 FT BETWEEN GRADE AND THE CABLE TRAY, SUPPLEMENTAL WIRE MESS STRAIN SHALL BE PROVIDED TO MEET CODE BUT ALLOW FOR UNRESTRICTED VERTICAL CABLE MOVEMENT CAUSED BY SUBSIDENCE OR FROST HEAVING OF THE GROUND OR SUPPORT STRUCTURE. SEE SHEET E-512 FOR WIRE MESS CONNECTION AND MATERIAL DETAILS.

(B9)

SUPPORT BURIED CABLE TRANSITION TO TRAY

SCALE: NTS

(A1)

TYPICAL HANDRAIL BONDING

SCALE: NTS

(A5

TYPICAL STRUCTURAL SUPPORT BONDING

SCALE: NTS

[illegible]

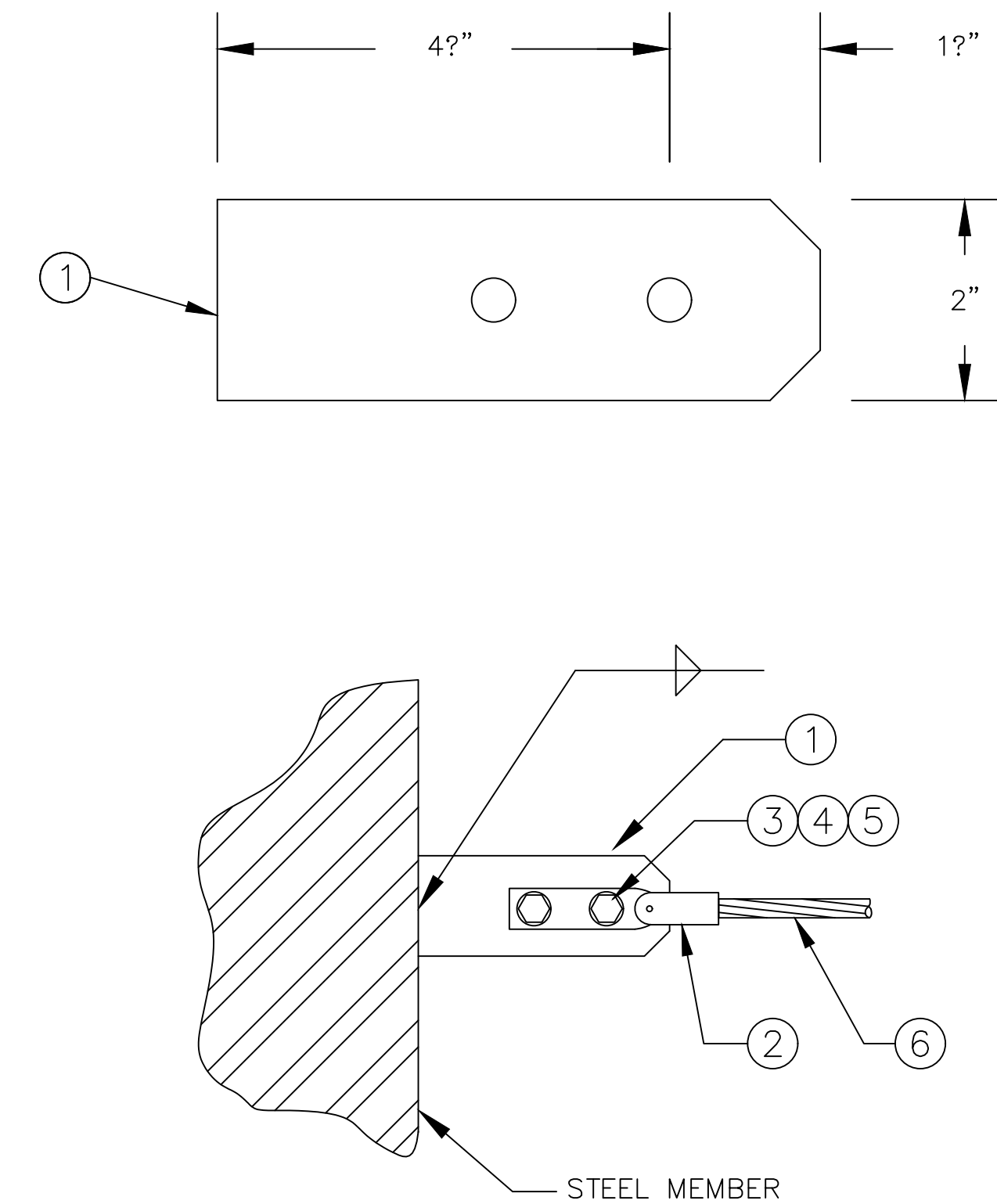
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ALASKA DISTRICT	7-5AM	SEPTEMBER 2024
2204 3RD STREET	DRAWN BY:	SOLICITATION NO.:
JBER, ALASKA 99506-0898	7-5AM	2204 3RD STREET
	CHECKED BY:	CONTRACT NO.:
	R.RO	W911KB-24-C-0022
	SUBMITTED BY:	DRAWING #:
	7-5AM	AF-514-207-01
	FILED:	
	ANSI	FILED
		CL1002-E-514.dwg
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SHUW030007
OLIKTOK LRRS, AK
REPAIR OLIKOTOK ROAD
ELECTRICAL
DETAILS
TYPICAL BONDING DETAILS 2 OF 2

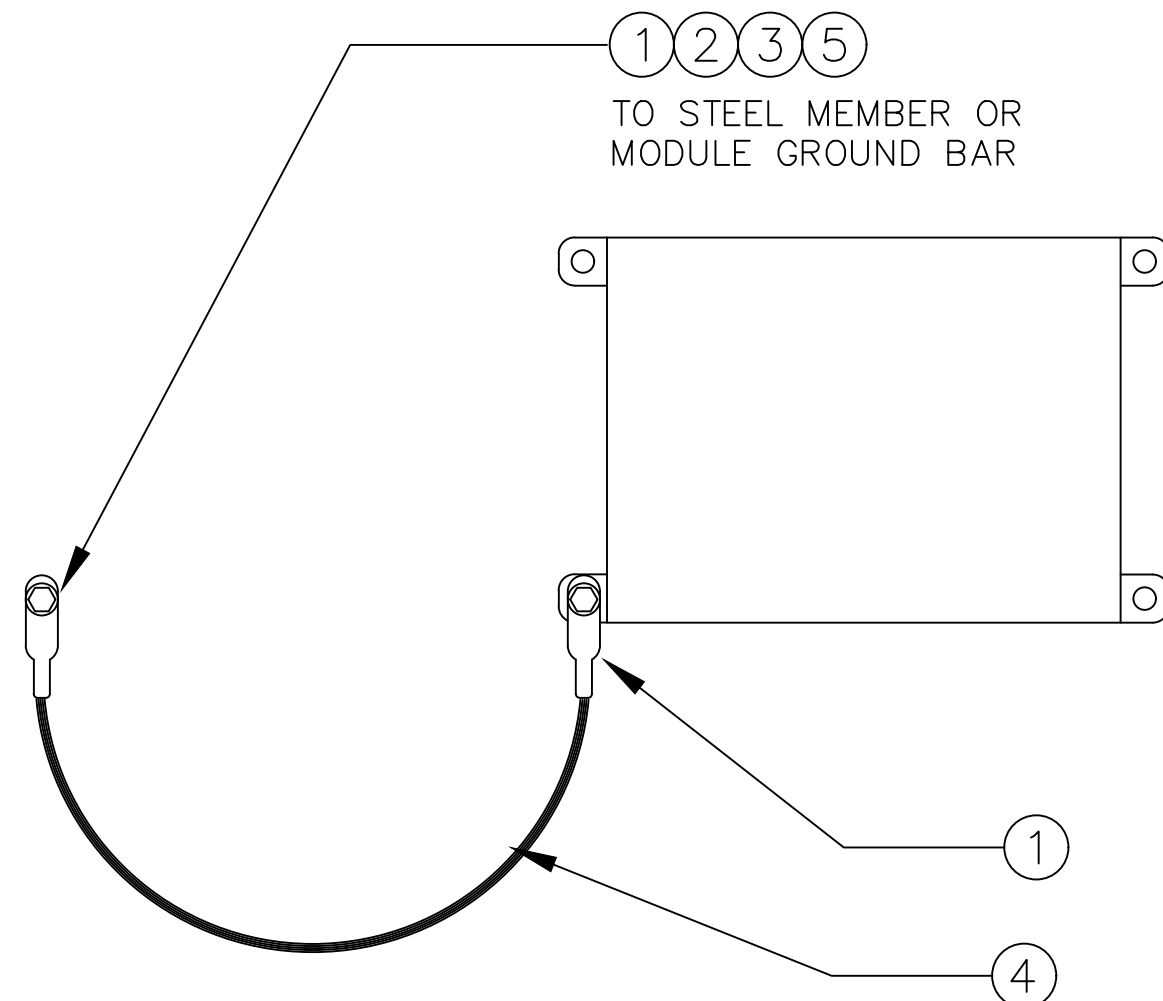
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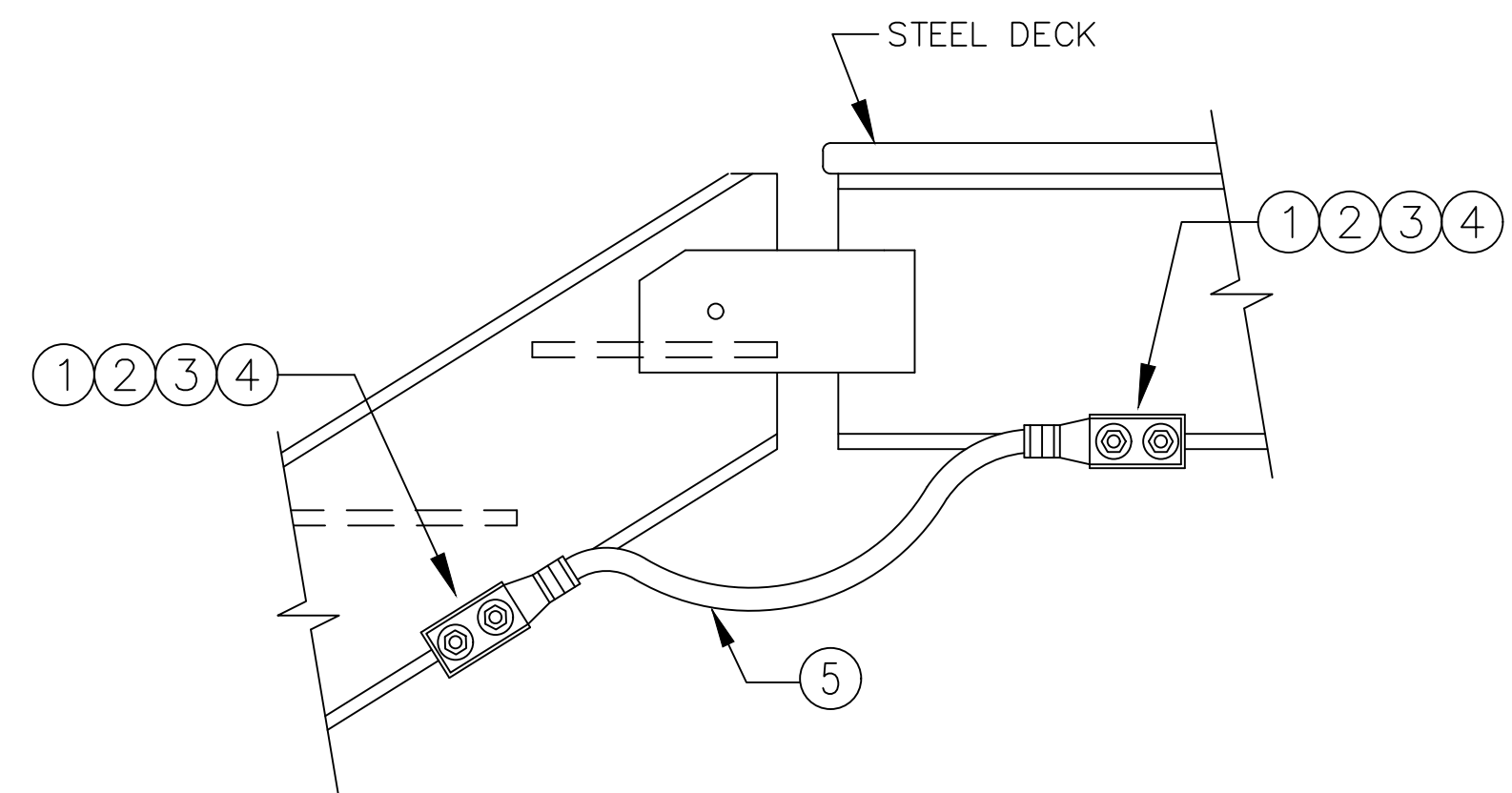
AWARDED



MATERIAL DESCRIPTIONS			
ITEM	QTY	UNIT	DESCRIPTION
1	1	EA	PLATE STEEL, A-36, 1/4" THK, 6" X 2", CUT FROM STOCK (AAI 131-4203)
2	1	EA	LUG, COMPRESSION, CU, GROUNDING #4/0 AWG, 2-HOLE, 1/2" STUD.
3	2	EA	BOLT, HEX HEAD, 1/2" X 1-1/2", STAINLESS W/NUT
4	4	EA	WASHER, FLAT, STAINLESS, 1/2", A304/A316
5	2	EA	WASHER, SPRING (LOCK), STAINLESS, 1/2", A304/A316
6	3	FT	CABLE #4/0 AWG, XHHW, GREEN, COPPER, STRANDED



MATERIAL DESCRIPTIONS			
ITEM	QTY	UNIT	DESCRIPTION
1	2	EA	TERMINAL, 1-HOLE, #4/0 AWG, NON-INSULATED CRIMP TYPE, 1/2" BOLT HOLE SIZE, CU
2	1	EA	BOLT, HEX HEAD, 1/2" X 1-1/2", STAINLESS W/NUT
3	1	EA	WASHER, SPRING (LOCK), STAINLESS, 1/2", A304/A316
4	50	FT	WIRE, #4/0 AWG, XHHW, STRANDED, GREEN
5	2	EA	WASHER, FLAT, STAINLESS, 1/2", A304/A316



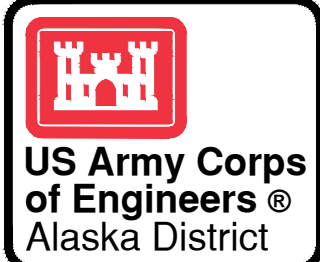
MATERIAL DESCRIPTIONS			
ITEM	QTY	UNIT	DESCRIPTION
1	2	EA	BOLT, HEX HEAD, 1/2" X 1-1/2", STAINLESS W/NUT
2	4	EA	WASHER, FLAT, STAINLESS, 1/2", A304/A316
3	2	EA	WASHER, SPRING (LOCK), STAINLESS, 1/2", A304/A316
4	2	EA	TERMINAL, 2-HOLE, #4/0 AWG, NON-INSULATED CRIMP TYPE, 1/2" BOLT HOLE SIZE, CU
5	3	FT	WIRE, #4/0 AWG, XHHW, STRANDED, GREEN

A1 **GROUNDING CLIP FOR STEEL STRUCTURES**
SCALE: NTS

A5 **GROUNDING GENERAL EQUIPMENT**
SCALE: NTS

A9 **GROUNDING METAL STAIRS**
SCALE: NTS

1. THE EXISTING ENDS OF LINES SHALL BE DEMOLISHED TO ALLOW FOR THE LINE TO BE ABANDONED IN PLACE AND BURIED .
2. THE EXISTING TRANSFORMER SHALL BE DEMOLISHED AND REPLACED. SEE SHEETS ED100 AND E-100 FOR ADDITIONAL DETAILS.
3. EXISTING UTILITY METER IS TO BE DEMOLISHED AND REPLACED.

[illegible]

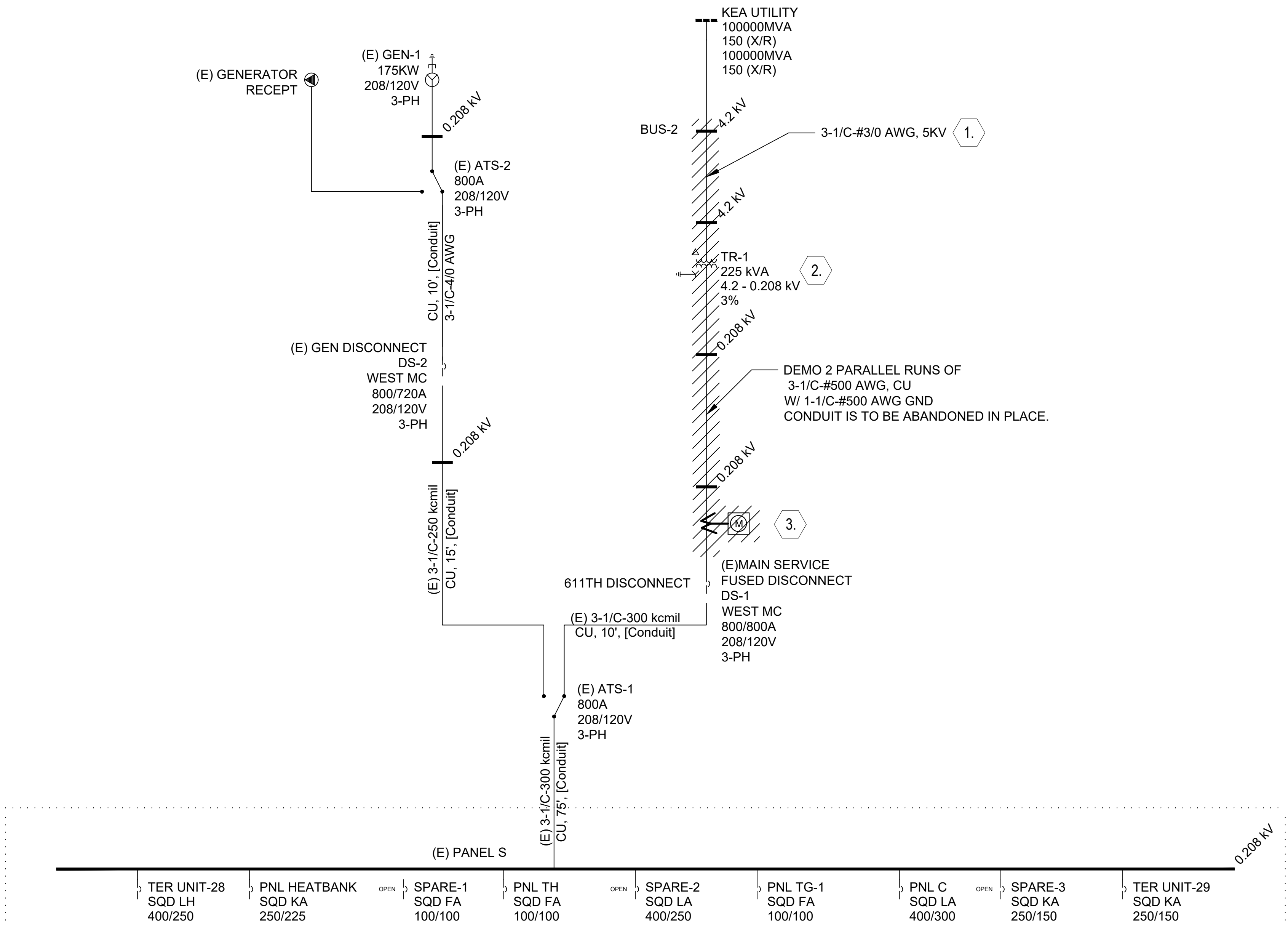
U.S. ARMY CORPS OF ENGINEERS	DESIGNED BY:	ISSUE DATE:
ALASKA DISTRICT	DRAWN BY:	SEPTEMBER 2024
2204 3RD STREET	CHECKED BY:	7:58AM
JBER, ALASKA 99506-0898	R. RO	
	SUBMITTED BY:	
	DATE SUBMITTED:	
	SIZE:	
	ANSI:	
	FILE:	
	OL1002-ED600.dwg	OL1002

SHUM030007
OLIKTOK LRRS, AK
REPAIR OLIKOTOK ROAD
ELECTRICAL
SCHEDULES AND DIAGRAMS
EXISTING ONE-LINE DIAGRAM I

REFERENCE
NUMBER:

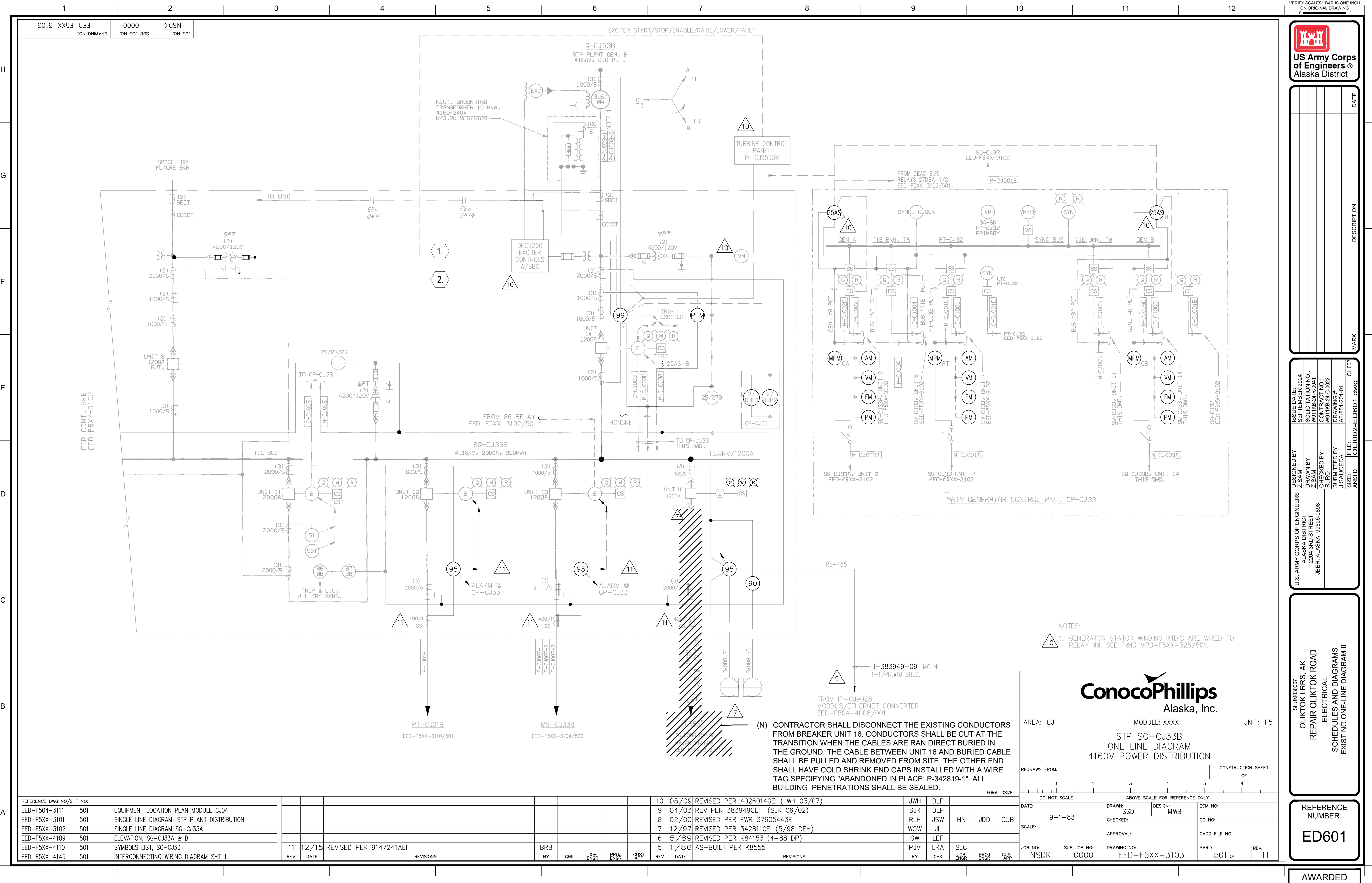
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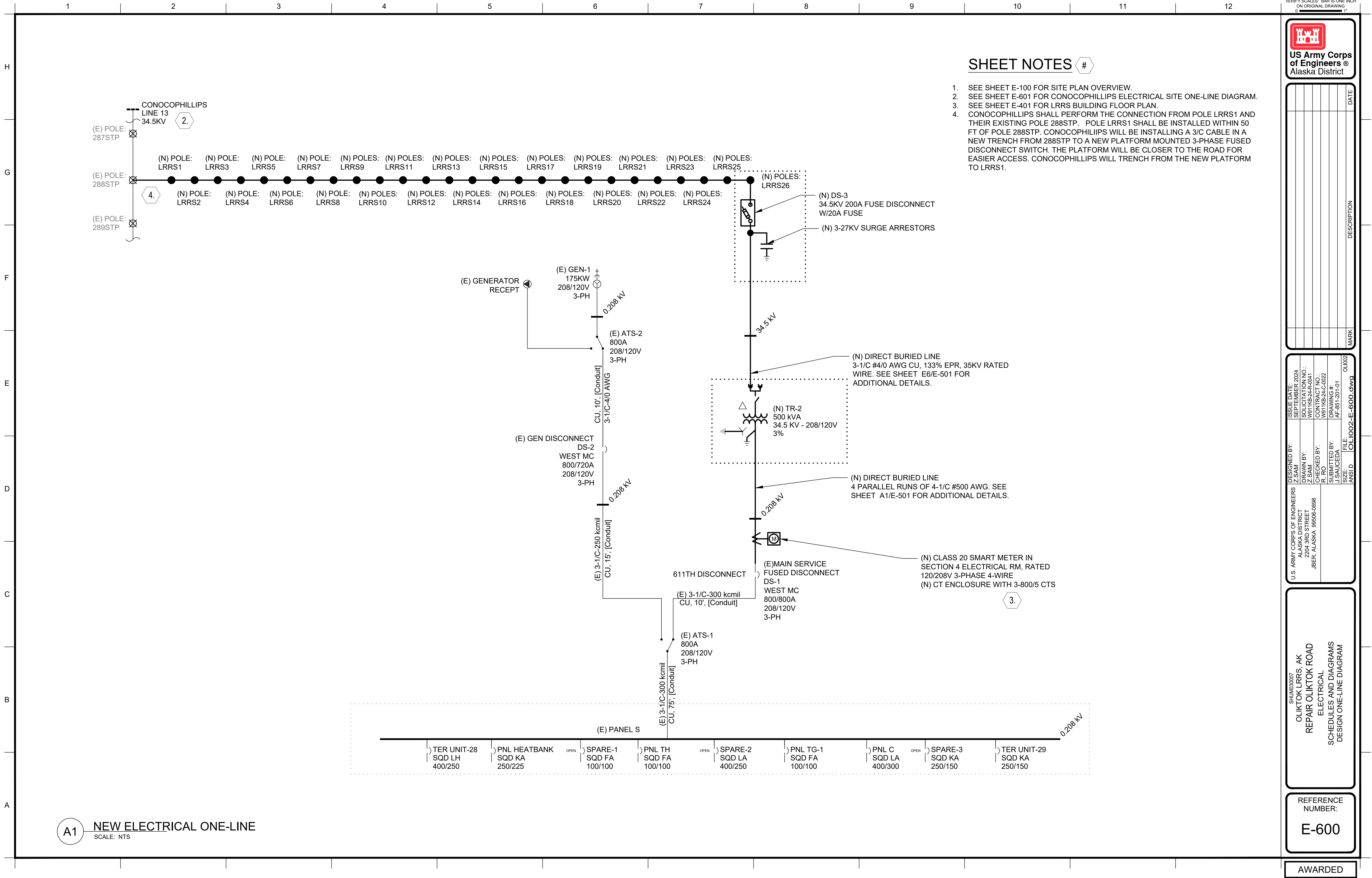
AWARDED



B1) EXISTING ONE-LINE DIAGRAM
SCALE: NTS

SCALE: NTS





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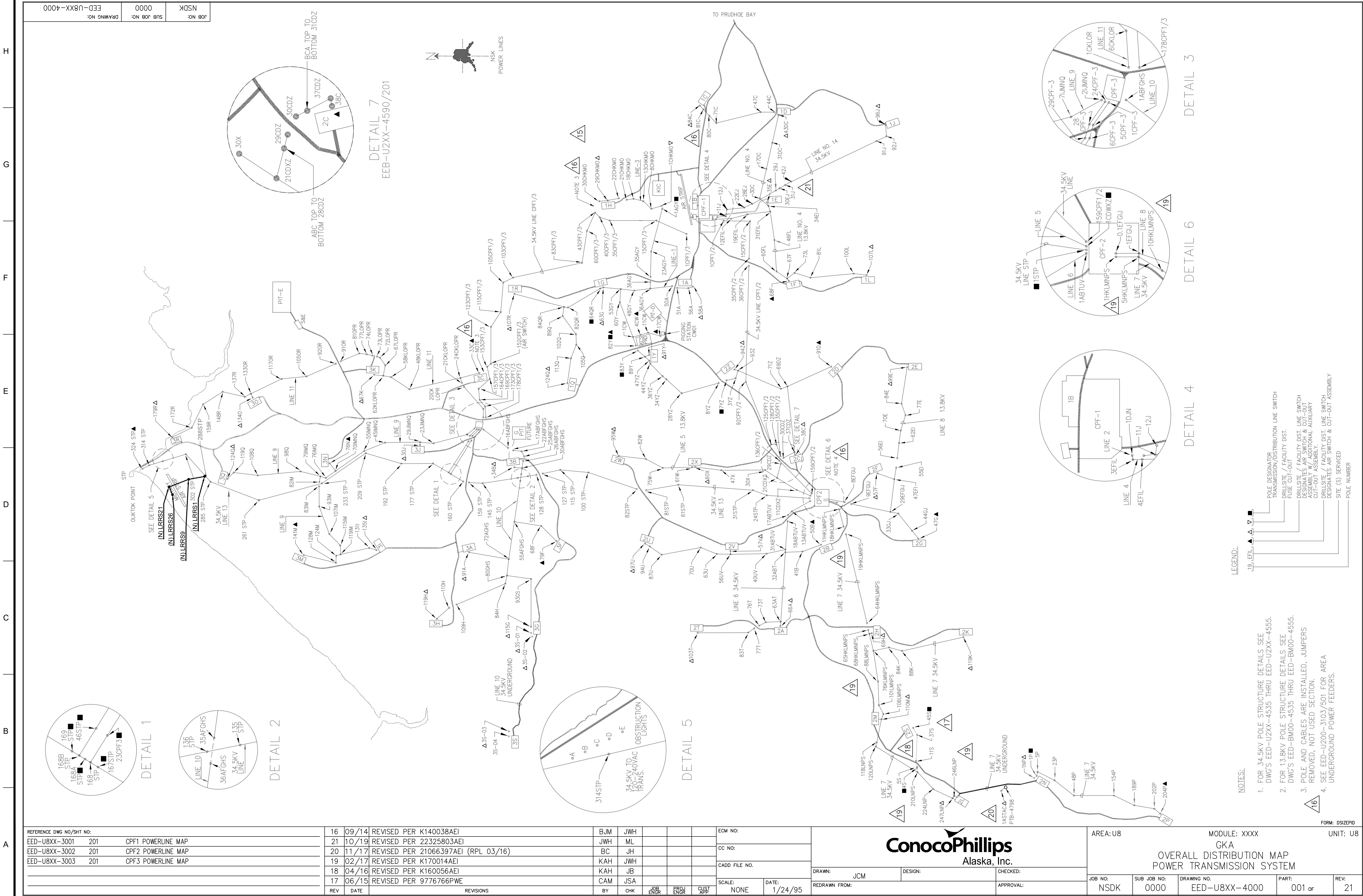
U.S. ARMY CORPS OF ENGINEERS ALASKA DISTRICT 2204 3RD STREET JBER, ALASKA 99506-0898	DESIGNED BY: Z SAM 2/2/01	ISSUE DATE: SEPTEMBER 2024
	DRAWN BY: W1911KB-24-R041	PROJECT NO.: W911KB-24-C-0022
	CHECKED BY: R RO	CONTRACT NO.: W911KB-24-C-0022
	SUBMITTED BY: J SAUCEDA	DRAWING #: AF-351-201-01
SIZE: ANSI D	FILE: OL1002-E-601.dwg	OL1002

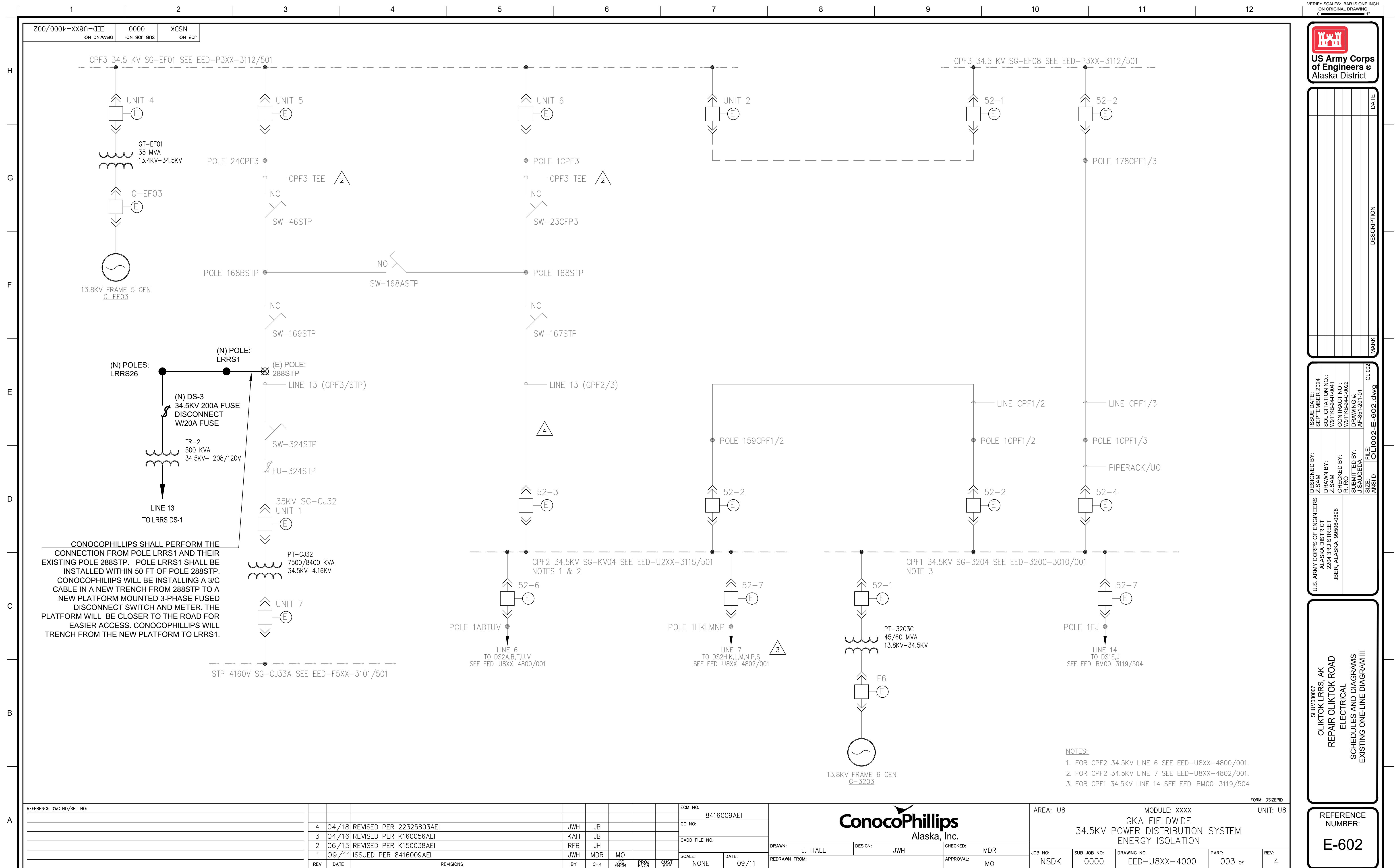
SHUM030007
OLIKTOK LRRS, AK
REPAIR OLIKOTOK ROAD
ELECTRICAL
SCHEDULES AND DIAGRAMS
SITE ONE-LINE DIAGRAM

REFERENCE
NUMBER:

E-601

1	2	3	4	5	6	7	8	9	10	11	12
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	1	2	3	4	5	6	7	8	9	10	11	12	VERIFY SCALES: BAR IS ONE INCH ON ORIGINAL DRAWING 1"												
	STRUCTURE SCHEDULE																								
	STATUS	STRUCTURE NUMBER	GRID NUMBER	SHEET NUMBER	BACK SPAN (FT)	LINE ANGLE		PRIMARY					GUY			ANCHOR		SECONDARY AND SERVICE			MISCELLANEOUS		METER	REMARKS	
CONDUCTOR								POLE OR TRENCH	POLE TOP/UG		TRANSFORMER	GROUND	NO.	UNIT	LEAD (FT)	NO.	UNIT	WIRE SIZE	NO.	UNIT					
NO.									TYPE	NO.												UNIT			UNIT
	I	LRRS1			0			4	465.4 AAAC	60/H-2	1	TYPE VI		TYPE I	4	TYPE III &IV	70	4	TYPE I						
	I	LRRS2			250			4	465.4 AAAC	70/H-2	1	TYPE I		TYPE I											
	I	LRRS3			250			4	465.4 AAAC	70/H-2	1	TYPE I		TYPE I											
	I	LRRS4			250			4	465.4 AAAC	70/H-2	1	TYPE I		TYPE I											
	I	LRRS5			250			4	465.4 AAAC	70/H-2	1	TYPE I		TYPE I											
	I	LRRS6			250			4	465.4 AAAC	70/H-2	1	TYPE I		TYPE I											
	I	LRRS7			250			4	465.4 AAAC	70/H-2	1	TYPE I		TYPE I											
	I	LRRS8			250			4	465.4 AAAC	70/H-2	1	TYPE I		TYPE I											
	I	LRRS9			250	11°	L	4	465.4 AAAC	70/H-2	1	TYPE II		TYPE I	2	TYPE III &IV	85	2	TYPE I						
	I	LRRS10			210			4	465.4 AAAC	70/H-2	1	TYPE I		TYPE I											
	I	LRRS11			150			4	465.4 AAAC	70/H-2	1	TYPE I		TYPE I											
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	I	LRRS20			240			4	465.4 AAAC	70/H-2	1	TYPE I		TYPE I											
	I	LRRS21			180	90°	L	4	465.4 AAAC	70/H-2	1	TYPE III		TYPE I	8	TYPE III &IV	85	8	TYPE I						
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	I	LRRS25			200			4	465.4 AAAC	70/H-2	1	TYPE I		TYPE I											
	I	LRRS26			175			4	465.4 AAAC	60/H-2	1	TYPE VIII		TYPE I	4	TYPE III &IV	70	4	TYPE I						
	STATUS ABBREVIATIONS: E=EXISTING, I=INSTALL, R=RETIRE																								



US Army Corps
of Engineers®
Alaska District

																									DATE
																									DESCRIPTION
																									MARK

U.S. ARMY CORPS OF ENGINEERS
ALASKA DISTRICT
2205 REISTER
JBER, ALASKA 99506-0888

DESIGNED BY:
Z.SAM
DRAWN BY:
Z.SAM
CHECKED BY:
R. RO
SUBMITTED BY:
J.SAUCEDA

ISSUE DATE:
SEPTEMBER 2024
SOLICITATION NO.:
W911KG24-R-0041
CONTRACT NO.:
W911KG24-C-0022
DRAWING #:
AF-861-201-01

FILE
CL002-E-603.dwg
OL002

SHUW030007
OLIKTOK LRRS, AK
REPAIR OLIKTOK ROAD
ELECTRICAL
SCHEDULES AND DIAGRAMS
STRUCTURE SCHEDULE

REFERENCE
NUMBER:
E-603

AWARDED