PORT OF JUNEAU

CRUISE SHIP DOCK ELECTRIFICATION

35% Design Development
July 21, 2026

VICINITY MAP

LEGEND

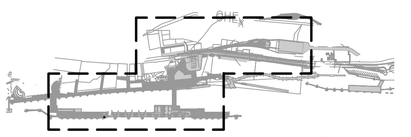
PROJECT LOCATION

N

SITE MAP

LEGEND

PROJECT LOCATION



N

SHEET INDEX

SHEET	DESCRIPTION
T0.1	TITLE SHEET
C0.1	VICINITY MAPS, TIDAL DATA AND DRAWING INDEX
C0.2	GENERAL NOTES, LEGEND AND ABBREVIATIONS
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C1.2	PARTIAL EXISTING CONDITIONS AND SURVEY CONTROL PLAN
C1.3	PARTIAL EXISTING CONDITIONS AND SURVEY CONTROL PLAN
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E2.1	OVERALL ELECTRICAL KEY PLAN
E2.2	PARTIAL ELECTRICAL SITE PLAN
E2.3	PARTIAL ELECTRICAL SITE PLAN
E2.4	PARTIAL ELECTRICAL SITE PLAN
E3.1	ENLARGED POWER PLAN - SHORE POWER SUBSTATION
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SHEET	DESCRIPTION - CONTINUED
AELP-D-T000-1	69 KV TRANSMISSION LINE INDEX OF DRAWINGS
AELP-D-T001-1	69 KV TRANSMISSION LINE ROUTE VICINITY MAP
AELP-D-T002-1	TP-69B & TP-69BG SUSPENSION STRUCTURE LAYOUT 0°-10°
AELP-D-T002-2	TP-69-3B (MOD) UNGUYED DEADEND ANGLE STRUCTURE LAYOUT 0°-1°
AELP-D-T002-3	69 KV 2-1AD SWITCH VERTICAL DE TAP STRUCTURE 0° / 90°
AELP-D-T003-1	TM-DEA SUBSTATION DEADEND ASSEMBLY
AELP-D-T003-2	TG-1 & TA-1P DOWNGUY W/ INSULATOR & CROSS PLATE ANCHOR
AELP-D-T003-3	TM-101 WOOD POLE DIRECT EMBEDMENT
AELP-D-T004-1	69 KV TRANSMISSION LINE PLAN AND PROFILE
AELP-D-T004-2	69 KV TRANSMISSION LINE PLAN AND PROFILE
AELP-D-T004-3	69 KV TRANSMISSION LINE PLAN AND PROFILE
AELP-D-T005-1	69 KV TRANSMISSION LINE STAKING SHEET
AELP-D-T006-1	69 KV TRANSMISSION LINE STRINGING SAG CHARTS
AELP-D-T006-2	69 KV TRANSMISSION LINE STRINGING SAG CHARTS
AELP-D-T006-3	69 KV TRANSMISSION LINE STRINGING SAG CHARTS
AELP-D-T006-4	69 KV TRANSMISSION LINE PHASING DIAGRAM
AELP-D-T008-1	69 KV TRANSMISSION LINE POLE SETTING DETAIL - STAKING TM-POLE
AELP-D-ZT01-1	69 KV TRANSMISSION LINE BILL OF MATERIALS

SCOPE OF PROJECT

THE PORT OF JUNEAU INTENDS TO:

1. INSTALL SHORE POWER SYSTEM AT ALASKA STEAMSHIP (AS) AND CRUISE TERMINAL (CT) DOCKS AS WELL AS FUTURE PROVISIONS FOR HOONAH TOTEM DOCK SHORE POWER SYSTEM.
2. PROVIDE SHORE POWER ELECTRICAL SERVICE ENTRANCE SUBSTATION WITH TAP FROM EXISTING 69KV AEL&P OVERHEAD LINE.
3. PROVIDE (2) SHORE POWER OIL FILLED TRANSFORMERS, 69KV PRIMARY, 11/6.6KV DUAL SECONDARY WITH AUTOMATIC LOAD TAP CHANGING SYSTEM AND ASSOCIATED NEUTRAL GROUNDING RESISTOR, AND PROVIDE SPACE FOR FUTURE THIRD TRANSFORMER OF SIMILAR RATING FOR HOONAH TOTEM DOCK.
4. PROVIDE (2) 15KV METAL CLAD MAIN SWITCHGEARS WITH MAIN, FEEDER CIRCUIT BREAKERS, NGR GROUNDING CIRCUIT BREAKERS, CAPACITOR BANK CIRCUIT BREAKERS, HUMAN MACHINE INTERFACE (HMI) SECTIONS, ASSOCIATED NEUTRAL GROUND RESISTOR, AND CAPACITOR BANKS FOR POWER FACTOR CORRECTION ALL WITHIN A E-HOUSE ENCLOSURE.
5. PROVIDE UNDERGROUND DUCTBANKS WITH CONDUIT AND CONDUCTORS REQUIRED FOR THE POWER DISTRIBUTION AND COMMUNICATION CONTROL SYSTEMS FOR THE SHORE POWER SYSTEMS.
6. PROVIDE NEW EXTENDED DECKING ABOVE WATER AND PROVIDE METAL BUILDING TO HOUSE SHORE POWER EQUIPMENT ON NEW EXTENDED DECKING.
7. PROVIDE METAL CLAD SHORE POWER CONTROL SWITCHGEAR LOCATED ON NEW EXTENDED DECKING WITHIN METAL BUILDING WITH VOLTAGE SELECTOR SWITCH AND HUMAN MACHINE INTERFACE (HMI) SECTIONS.
8. PROVIDE CABLE MANAGEMENT SYSTEM (CMS) WITHIN METAL BUILDING ON NEW EXTENDED DECKING.
9. PROVIDE 480V SERVICE, ONE FOR EACH DOCK ('AS' AND 'CT') FROM NEAREST LOCAL AEL&P SOURCE.
10. PROVIDE TRENCH-MOUNTED MOVEABLE SHORE POWER OUTLET CARRIAGE CONNECTION INTERFACE WITHIN NEW DECKING TO PROVIDE SHORE POWER CONNECTION TO BOTH 'AS' AND 'CT' DOCKS.

NO.	REVISION:	DATE:

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REVIEWED BY: VAHIK HADDADIAN, PE

ISSUED FOR: 35% DESIGN DEVELOPMENT — DATE: 07/21/2026

SUB CONSULTANT:

PROJECT: PORT OF JUNEAU
CRUISE SHIP DOCK ELECTRIFICATION

SHEET: **TITLE SHEET**

ADDRESS: 510 S FRANKLIN STREET, JUNEAU, AK 99801

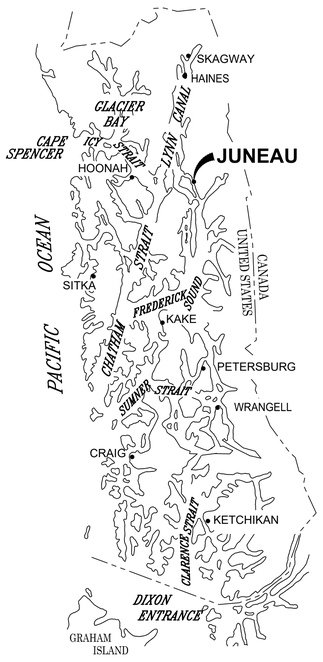
DATE: 07/21/2026

DRAWING NUMBER: **T0.1**

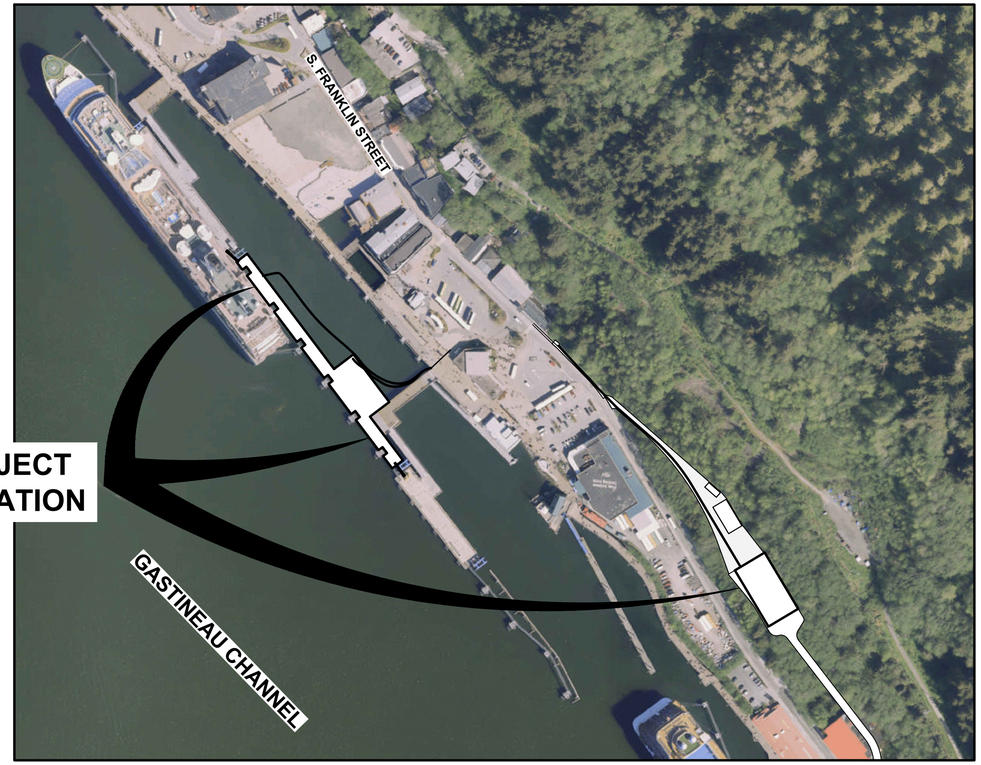
J036



VICINITY



SOUTHEAST ALASKA



VICINITY MAP

AERIAL PHOTO FROM:
CITY AND BOROUGH OF JUNEAU, 2025

DRAWING INDEX

DWG. NO.	TITLE
	GENERAL
C0.1	VICINITY MAPS, TIDAL DATA AND DRAWING INDEX
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	STRUCTURAL
C3.1	DOCK PLAN – PARTIAL
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C3.3	DOCK PLAN – PARTIAL
C3.4	DOCK SECTION
C3.5	DOCK SECTION
C3.6	DOCK SECTION

TIDAL DATA

SOURCE: NOAA NOS/CO-OPS STATION ID:
9452210 JUNEAU, ALASKA 2/6/18

DESCRIPTION	ELEV. (FT.)
HIGHEST OBSERVED WATER LEVEL	+24.58
HIGH TIDE LINE (HTL)	+20.59
MEAN HIGHER HIGH WATER (MHHW)	+16.30
MEAN HIGH WATER (MHW)	+15.34
MEAN SEA LEVEL (MSL)	+8.58
MEAN TIDE LEVEL (MTL)	+8.47
MEAN LOW WATER (MLW)	+1.60
MEAN LOWER LOW WATER (MLLW)	0.00
LOWEST OBSERVED WATER LEVEL	−6.12

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PROJECT: PORT OF JUNEAU
CRUISE SHIP DOCK ELECTRIFICATION

SHEET: VICINITY MAPS, TIDAL DATA AND DRAWING INDEX

ADDRESS: 510 S FRANKLIN STREET, JUNEAU, AK 99801

DATE: 07/21/2026

DRAWING NUMBER: C0.1

J036

GENERAL NOTES

LEGEND

EXISTING	THIS PROJECT	
x x		FENCE
Eux		ELECTRICAL (UNDERGROUND)
OHEx		ELECTRICAL (OVERHEAD)
Wx		WATER
SSx		SANITARY SEWER
Cux		COMMUNICATION (CABLE/TEL)
SDx		STORM DRAIN
FMx		FORCE MAIN
		PROPERTY LINE
		GUY WIRE ANCHOR
		BOLLARD
		POWER POLE
		LUMINAIRE
		METAL PILING
EM		ELECTRICAL METER
		FIRE HYDRANT
	5	LAYOUT POINT
		LIGHT POLE
SDMH		STORM DRAIN MANHOLE
SSMH		SANITARY SEWER MANHOLE
		WATER VALVE
UP		UTILITY POLE
		SIGN
SCP		SURVEY CONTROL
###		POINT NUMBER IDENTIFIER
100		EXISTING CONTOUR & ELEVATION
		PAVEMENT/BLACKTOP
		CONCRETE/SIDEWALK
		BUILDING

A / 1.02 — SECTION OR DETAIL CALLOUT; LOCATION OF DETAIL OR REFERENCE DRAWING

ABBREVIATIONS

A	
@	AT
AC	ASBESTOS CEMENT PIPE
ACP	ASPHALT CONCRETE PAVEMENT
ADD	ADDITIVE
ADJ	ADJUSTABLE
AKDOT&PF	ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
ALT	ALTERNATE
APPROX.	APPROXIMATE
ATS	ALASKA TIDELANDS SURVEY
AWS	AMERICAN WELDING SOCIETY
B	
BLDG	BUILDING
BTM, BOT	BOTTOM
C	
C&G	CURB & GUTTER
CB	CATCH BASIN
CBJ	CITY AND BOROUGH OF JUNEAU
CIP	CAST–IN–PLACE
CJ	CONTROL JOINT
℄	CENTER LINE
CLR	CLEAR
CMP	CORRUGATED METAL PIPE
CONC.	CONCRETE
CP	COMPLETE PENETRATION
CPP	CORRUGATED POLYETHYLENE PIPE
COR	CORNER
CSC	COUNTERSINK
CY	CUBIC YARD
D	
D/DIA	DIAMETER
DBL	DOUBLE
DIP	DUCTILE IRON PIPE
DIM	DIMENSION
DN	DOWN
DTL	DETAIL
E	
E	EAST
EA.	EACH
EG	EXISTING GROUND
EJ	EXPANSION JOINT
EL/ELEV	ELEVATION
EQ	EQUAL
EQUIP	EQUIPMENT
EXIST	EXISTING
F	
FC	FACE OF CURB
FD	FLOOR DRAIN
FG	FINISH GRADE
FH	FIRE HYDRANT, FLAT HEAD
FIN	FINISH (ED)
FM	FORCE MAIN SEWER
FT	FOOT
FTG	FOOTING
FL	FLOWLINE
G	
GAL	GALLON
GALV	GALVANIZED
GB	GRADE BREAK
GV	GATE VALVE
H	
H&T	HUB & TACK
HD	HEAVY DUTY
HDG	HOT–DIPPED GALVANIZED
HDPE	HIGH DENSITY POLYETHYLENE
HORIZ	HORIZONTAL
HSE	HOUSE
HT	HEIGHT
HWY.	HIGHWAY
I	
IAW	IN ACCORDANCE WITH
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
IN	INCH
IP	IRON PIPE
INV	INVERT
J	
JB	JUNCTION BOX
L	
LBS	POUNDS
LF	LINEAR FEET
LL	LIVE LOAD
LOC	LOCATION
LS	LUMP SUM
M	
MAX	MAXIMUM
ME	MATCH EXISTING
MECH	MECHANICAL
MFR	MANUFACTURE (R)
MH	MANHOLE
MJ	MECHANICAL JOINT
MIN	MINIMUM
MLLW	MEAN LOWER LOW WATER
MSE	MECHANICALLY STABILIZED EARTH
MTL	MATERIAL (S)
N	
N	NORTH
NFS	NON FROST SUSCEPTIBLE
NO	NUMBER
NTS	NOT TO SCALE
O	
OC	ON CENTER
OD	OUTSIDE DIAMETER
OHE	OVERHEAD ELECTRICAL
OWS	OIL–WATER SEPARATOR
P	
P	PIPE
PC	POINT OF CURVATURE, PIECE
PCC	PRECAST CONCRETE
PED	PEDESTAL
PI	POINT OF INTERSECTION
PL	PROPERTY LINE, PLATE
PRV	PRESSURE REDUCING VALVE
PSI	POUND PER SQUARE INCH
PT	POINT, PRESSURE TREATED, POINT OF TANGENCY
PVC	POINT OF VERTICAL CURVATURE, POLY VINYL CHLORIDE
Q	
QTY	QUANTITY
R	
RAD	RADIUS
RE	RIM ELEVATION
REF	REFERENCE
REINF	REINFORCEMENT
REQD	REQUIRED
RET	RETAINING
RO	ROUGH OPENING
ROW	RIGHT OF WAY
S	
S	SOUTH
SCHED	SCHEDULE
SD	STORM DRAIN
SDI	STORM DRAIN INLET STRUCTURE
SDO	STORM DRAIN OUTLET STRUCTURE
SDR	STANDARD DIMENSION RATIO
SF	SQUARE FOOT
SHLDR	SHOULDER
SI	STREET INTERSECTION
SPEC	SPECIFICATION (S)
SQ	SQUARE
SRB	SHOT ROCK BORROW
SSC	SANITARY SEWER CONNECTION
SS	STAINLESS STEEL, SANITARY SEWER
SDMH	STORM DRAIN MANHOLE
SSMH	SANITARY SEWER MANHOLE
STA	STATION
STD	STANDARD
STL	STEEL
STRG	STRONG
SW	SIDEWALK
SWR	SEWER
SY	SQUARE YARD
SYM	SYMMETRICAL
T	
t.	THICK
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROOVE
TBC	TOP BACK OF CURB
TBD	TO BE DETERMINED
TD	TRENCH DRAIN
TEL	TELEPHONE
TEMP	TEMPERATURE, TEMPORARY
TYP	TYPICAL
U	
UON	UNLESS OTHERWISE NOTED
UPC	UNIFORM PLUMBING CODE
USCG	UNITED STATES COAST GUARD
V	
VB	VALVE BOX
VERT	VERTICAL
W	
W	WEST
w/	WITH
WD	WOOD
WL	WATERLINE
WV	WATER VALVE
W/O	WITHOUT
<PT	ANGLE POINT

NO.	REVISION:	DATE:

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AEL&P since 1893 — ALASKA ELECTRIC LIGHT & POWER CO.

CITY & BOROUGH OF JUNEAU — DOCKS & HARBORS

PROJECT:
PORT OF JUNEAU
CRUISE SHIP DOCK ELECTRIFICATION

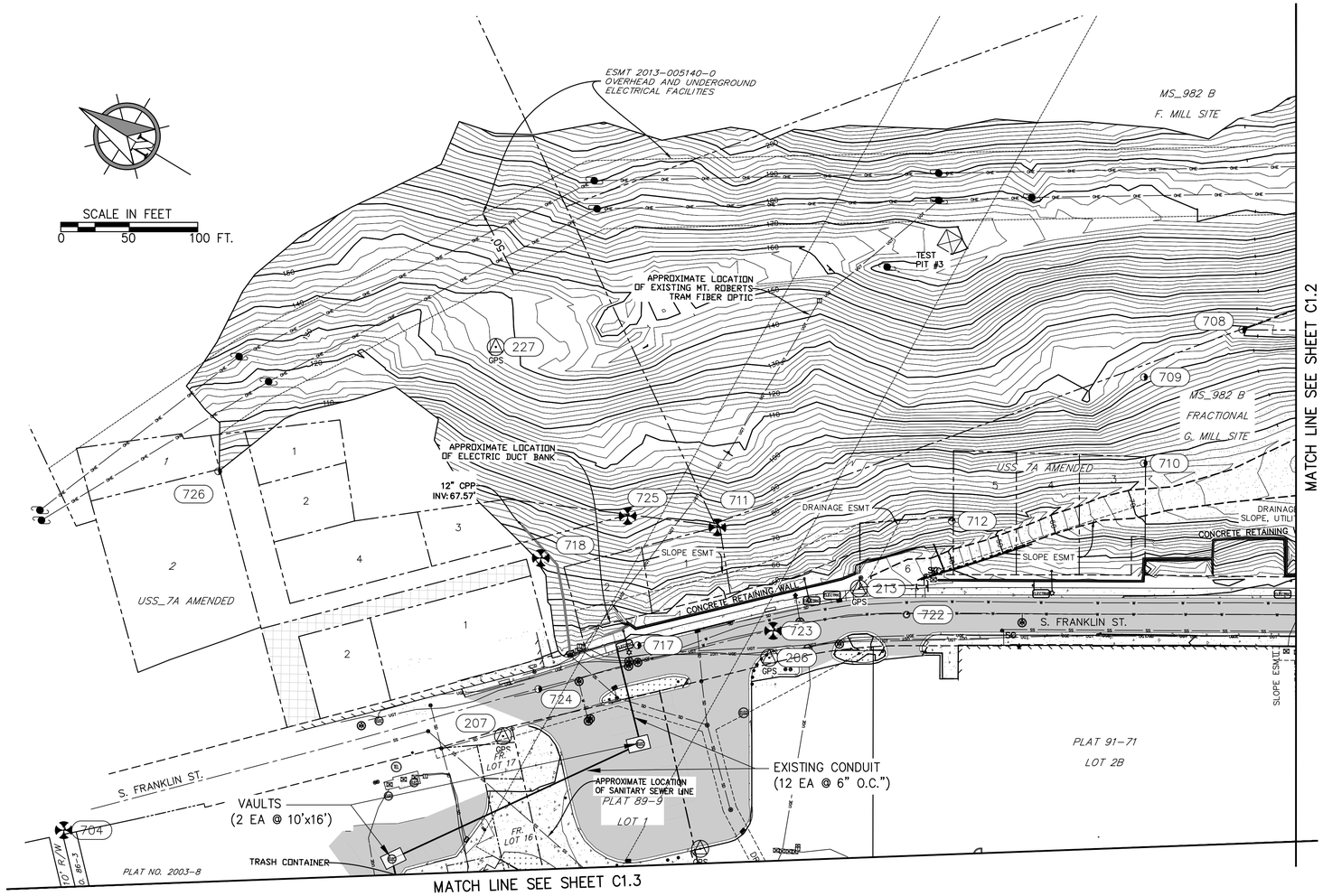
SHEET:
GENERAL NOTES, LEGEND AND ABBREVIATIONS

ADDRESS: 510 S FRANKLIN STREET, JUNEAU, AK 99801

DATE: 07/21/2026

DRAWING NUMBER: **C0.2**

J036



MATCH LINE SEE SHEET C1.2

NOTES

1. BASIS OF COORDINATES FOR THIS SURVEY ARE NAD83(2011), ALASKA STATE PLANE ZONE 1 IN U.S. SURVEY FEET, DERIVED FROM AND HOLDING VALUES PUBLISHED ON UNITED STATES ARMY CORP OF ENGINEERS (USACE) 020960 – AURORA HARBOR PCS, PROJECT CONDITIONS SURVEY, MARCH 18 – MARCH 24, 2018 FOR POINT NUMBER 509. POINT NUMBER 509 (JNU TIDAL GPS), HAS THE FOLLOWING PUBLISHED VALUES:
   N: 2362232.94
   E: 2541120.78
2. THE VERTICAL CONTROL FOR THIS SURVEY IS MEAN LOWER LOW WATER (MLLW=0.0') DERIVED FROM AND HOLDING VALUES PUBLISHED ON USACE 020960 – AURORA HARBOR PCS, PROJECT CONDITIONS SURVEY, MARCH 18 – MARCH 24, 2018 FOR POINT NUMBER 509. POINT NUMBER 509 (JNU TIDAL GPS), HAS THE FOLLOWING PUBLISHED ELEVATION:
   EL: 29.57
3. THE FIELD SURVEY WAS PERFORMED NOVEMBER 11–15, 2024, BY PND ENGINEERS.
4. ALL DIMENSIONS AND COORDINATES ARE IN U.S. SURVEY FEET UNLESS OTHERWISE NOTED.
5. THIS SURVEY WAS COMPLETED USING GNSS SURVEY TECHNIQUES. REAL TIME KINEMATICS (RTK) OBSERVATIONS WERE STORED USING TRIMBLE R12i, GNSS RECEIVERS ALONG WITH CONVENTIONAL SURVEY TECHNIQUES USING A TRIMBLE S6 TOTAL STATION.
6. UTILITY LOCATES WERE LOCATED AS MARKED BY OTHER FOR THIS SURVEY.
7. CONTOURS ARE SHOWN IN FEET, WITH ONE FOOT INTERVALS.
8. TEST PITS SHOWN HEREON ARE APPROXIMATE.
9. NO TITLE SEARCH WAS PREPARED FOR THIS SURVEY. EASEMENTS AND ENCUMBRANCES SHOWN HEREON ARE FROM PLATS OF RECORD. OTHER EASEMENTS AND ENCUMBRANCES MAY EXIST.
10. PROPERTY BOUNDARIES SHOWN HEREON ARE FOR GRAPHICAL REPRESENTATION ONLY.
11. BATHYMETRY SHOWN HERON IS COMPILATION OF PREVIOUS SURVEYS BY PND ENGINEERS AND OTHERS, 2010–2018, NOT COLLECTED THIS SURVEY.

LEGEND

- PRIMARY GPS CONTROL
- FOUND BRASS CAP
- ALUMINUM CAP FOUND
- 5/8" REBAR CAP FOUND
- ### POINT NUMBER IDENTIFIER
- EASEMENT
- RECORD STATUS
- ADOT RIGHT-OF-WAY
- 100 EXISTING CONTOUR & ELEVATION
- ELECTRIC VAULT
- ELECTRIC PEDESTAL
- TELEPHONE PEDESTAL
- SANITARY SEWER MANHOLE
- STORM DRAIN CATCH BASIN
- FIRE HYDRANT
- WATER VALVE
- BOLLARD
- ELECTRIC TRANSFORMER
- LUMINAIRE
- STREET LIGHT
- SIGN (TYP)
- POWER POLE
- GUY ANCHOR
- W_x WATER LINE
- T_x UNDERGROUND COMMUNICATIONS LINE
- OHE_x OVERHEAD ELECTRIC
- E_x UNDERGROUND ELECTRIC
- SD_x STORMDRAIN
- SS_x SANITARY SEWER
- PAVEMENT/BLACKTOP
- CONCRETE/SIDEWALK
- BUILDING
- LANDSCAPING
- LANDSCAPING
- DOCK

SURVEY CONTROL

POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
201	2361078.632	2544786.229	27.29	MAG PND WASHER
202	2361053.867	2544685.766	28.55	MAG PND WASHER
204	2361226.242	2544554.613	28.35	MAG PND WASHER
205	2361228.092	2544474.948	28.15	MAG PND WASHER
206	2361106.703	2544931.964	29.97	MAG FOUND MAG
207	2361244.411	2544783.289	28.61	MAG FOUND MAG
208	2361444.677	2544290.041	28.08	MAG PND WASHER
209	2361118.330	2544547.995	27.99	MAG PND WASHER
210	2360886.624	2544854.327	26.54	MAG PND WASHER
211	2360686.867	2545196.724	29.25	MAG MAG NAIL
212	2359844.504	2545766.401	30.76	FAC ADOT CONTROL #97
213	2361076.258	2545008.943	31.07	SPIKE FND SPIKE & WASHER
226	2360606.565	2545692.855	164.01	RBR SET 5/8" PND CONTOL
227	2361394.445	2545024.831	138.33	RBR SET 5/8" PND CONTOL

RECOVERED MONUMENTATION

POINT #	NORTHING	EASTING	DESCRIPTION
* 701	2361748.29	2544358.94	RBR [FND 5/8" NO CAP,]
* 702	2361901.38	2544265.18	FAC [FAC LS 107701,]
* 703	2361845.95	2544157.08	FAC [PND LS 107701,]
704	2361484.84	2544560.10	FBC [DOT 93 2020,]
705	2360390.92	2545361.11	FAC [3.25" ADOT&PF 7331S, ROW/L2/L18 RESET 2001]
706	2360750.82	2545415.89	RBR [NO CAP,]
707	2360813.93	2545462.04	RBR [5/8" YPC, T-N 62625]
708	2360932.48	2545314.56	FAC [3.25" TONER-NORDING PLS 6262S, F/FR G/ LOT 1 1988]
709	2360976.43	2545248.08	FAC [2" JM BEAN LS877,]
710	2360944.37	2545193.88	FAC [2" BEEAN LS877,]
711	2361187.90	2544994.31	FBC [3.25" BLM AMD S7A C10 BLK6, MS982B G C14 1961]
712	2361043.27	2545085.86	RBR [5/8" ILLEGIBLE BENT,]
713	2361168.09	2544535.08	MAG [CHILKAT PLS 12314,]

* NOT SHOWN HEREON

RECOVERED MONUMENTATION

POINT #	NORTHING	EASTING	DESCRIPTION
716	2360705.57	2545222.98	FBC [3.25" ADOT&PF LS7331, MS 982R G C5 2001]
717	2361193.94	2544890.56	FAC [2" LS54535 2001, TH-2]
718	2361287.25	2544909.10	FBC [3.25" BLM 1961, BENT POE]
719	2360365.24	2545405.98	FBC [2" ADOT,]
720	2360464.20	2545341.85	FBC [2" ADOT,]
721	2360755.77	2545176.48	FAC [3.25" ADOT LS131613-S, 2023 RESET]
722	2361036.64	2545010.26	FMON [BROKEN,]
723	2361114.29	2544950.24	FBC [2" ADOT,]
724	2361239.80	2544825.98	FAC [3.25" ADOT, RESET 2021]
725	2361248.51	2544967.92	FBC [1.5" ON BRASS ROD, L3 BLK4]
726	2361522.06	2544843.05	FAC [1.5" LS13321,]
727	2360432.39	2545426.32	FAC [ADOT 7331S RESET 2001, ROW/FR G/ LOT 2]

NO.	REVISION:	DATE:

PRIME CONSULTANT:
H3 ENGINEERING SOLUTIONS
thaddadian@h3solutions.co
(626) 319-3476

DESIGNED BY: BRANDON IVANOWICZ
REVIEWED BY: DICK SOMERVILLE, PE

ISSUED FOR: 35% DESIGN DEVELOPMENT — DATE: 07/21/2026

SUB CONSULTANT:
PND ENGINEERS, INC.
9360 Glacier Highway Suite 100
Juneau, Alaska 99801
Phone: 907-586-2093
AK. LIC# AECC250

PROJECT:
PORT OF JUNEAU
CRUISE SHIP DOCK ELECTRIFICATION

SHEET:
PARTIAL EXISTING CONDITIONS AND SURVEY CONTROL PLAN

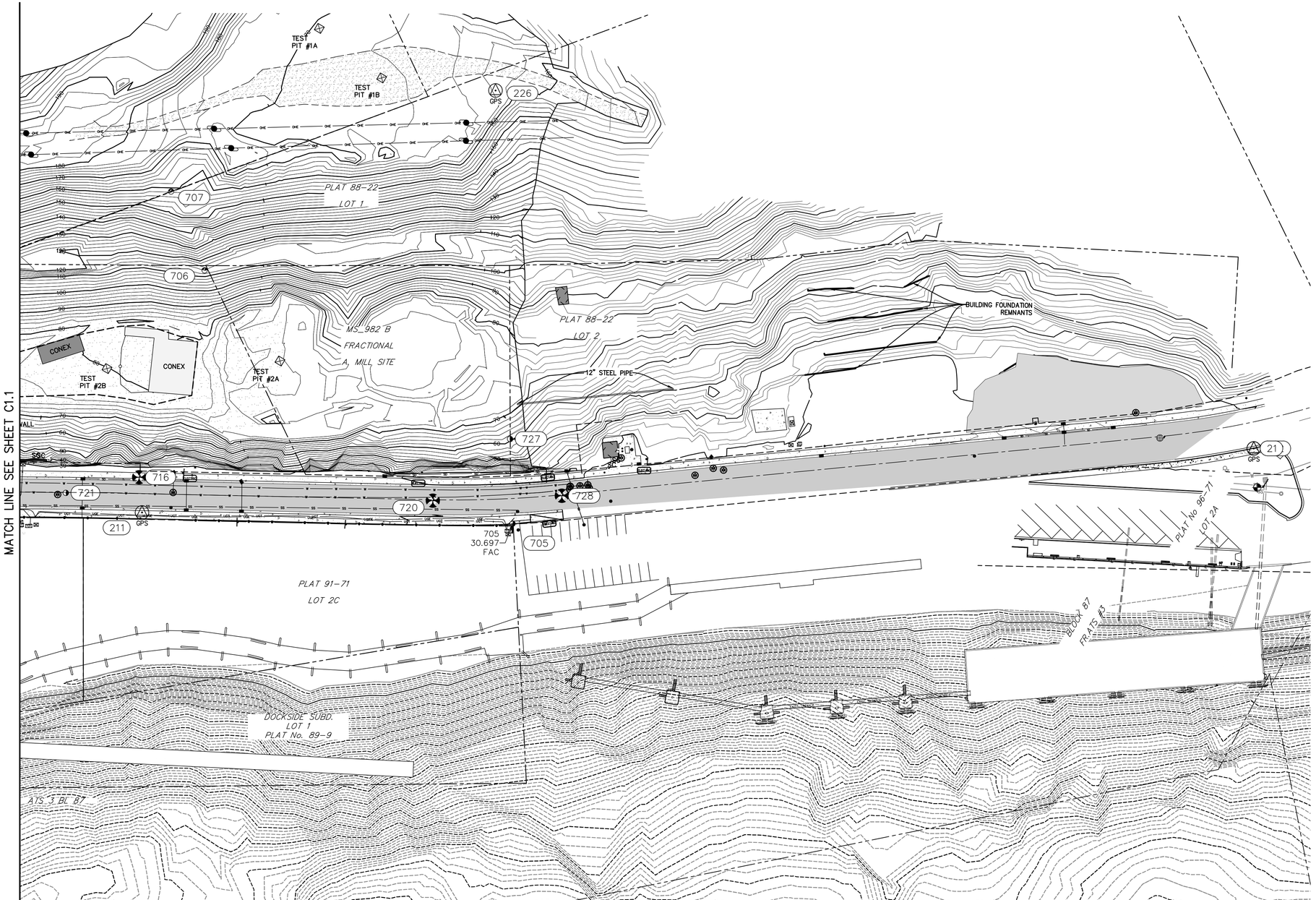
ADDRESS: 510 S FRANKLIN STREET, JUNEAU, AK 99801

DATE: 07/21/2026

DRAWING NUMBER: **C1.1**

J036

SCALE IN FEET
0 50 100 FT.



NO.	REVISION:	DATE:

PRIME CONSULTANT:
H3 ENGINEERING SOLUTIONS
thaddadian@h3solutions.co
(626) 319-3476

DESIGNED BY: BRANDON IVANOWICZ
REVIEWED BY: DICK SOMERVILLE, PE

ISSUED FOR:	DATE:
35% DESIGN DEVELOPMENT	07/21/2026

SUB CONSULTANT:
PND ENGINEERS, INC.
9360 Glacier Highway Suite 100
Juneau, Alaska 99801
Phone: 907-586-2093
AK. LIC# AECC250

AEL&P since 1893 ALASKA ELECTRIC LIGHT & POWER CO.

CITY & BOROUGH OF JUNEAU DOCKS & HARBORS

PROJECT:
PORT OF JUNEAU
CRUISE SHIP DOCK ELECTRIFICATION

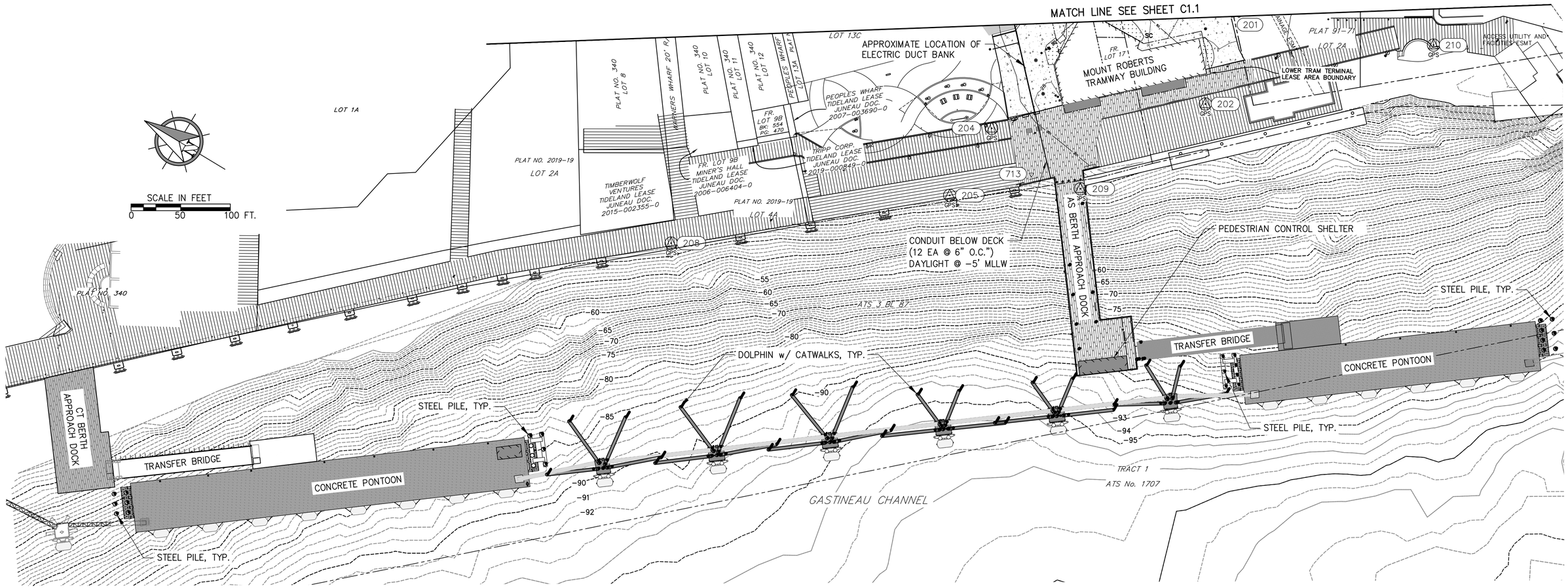
SHEET:
PARTIAL EXISTING CONDITIONS AND SURVEY CONTROL PLAN

ADDRESS: 510 S FRANKLIN STREET, JUNEAU, AK 99801

DATE: 07/21/2026

DRAWING NUMBER: **C1.2**

J036



NO.	REVISION:	DATE:

PRIME CONSULTANT:
H3 ENGINEERING SOLUTIONS
thaddadian@h3solutions.co
(626) 319-3476

DESIGNED BY: BRANDON IVANOWICZ
REVIEWED BY: DICK SOMERVILLE, PE

ISSUED FOR: 35% DESIGN DEVELOPMENT — DATE: 07/21/2026

SUB CONSULTANT:
PND ENGINEERS, INC.
9360 Glacier Highway Suite 100
Juneau, Alaska 99801
Phone: 907-586-2093
AK. LIC# AECC250

PROJECT:
PORT OF JUNEAU
CRUISE SHIP DOCK ELECTRIFICATION

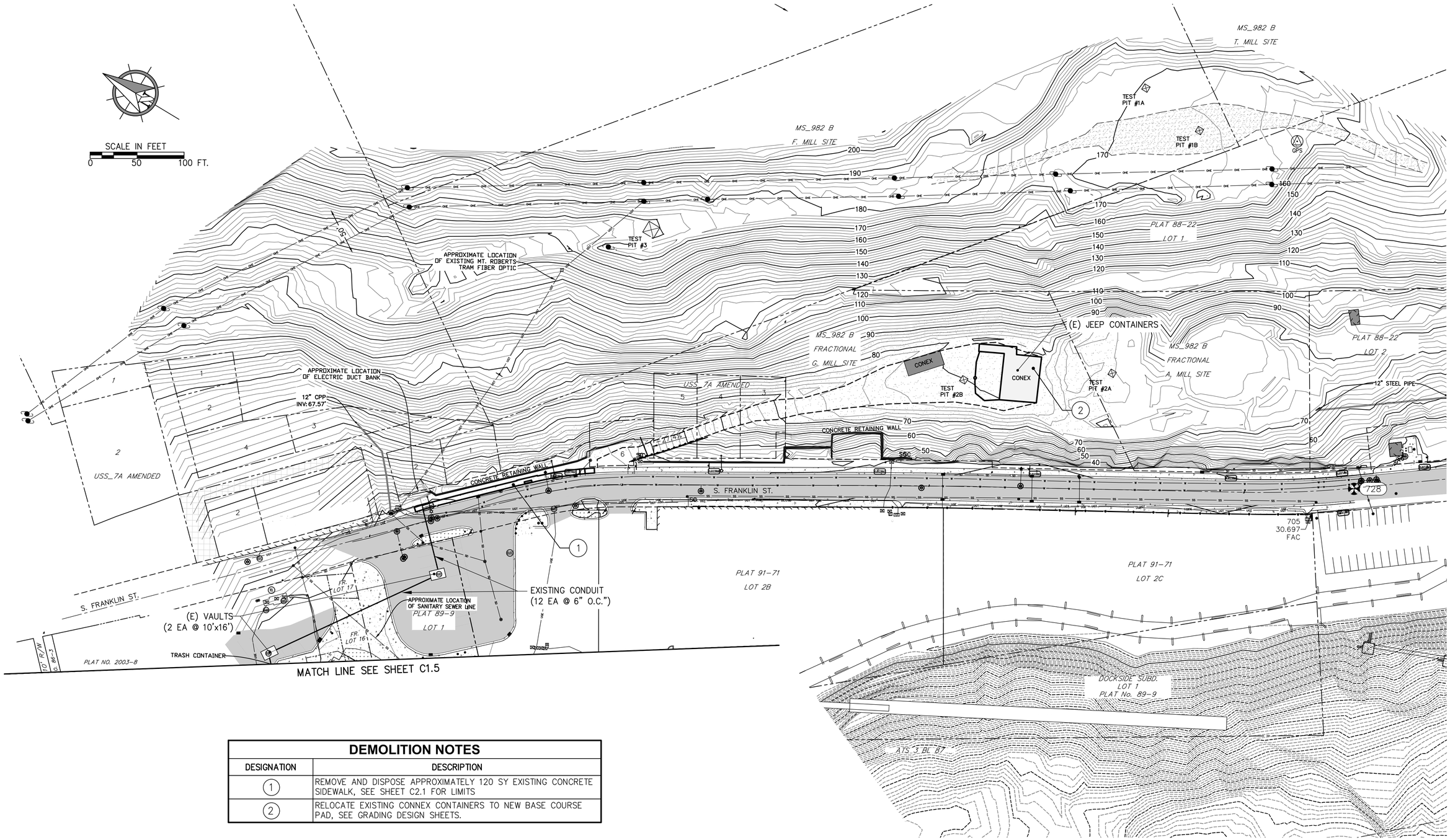
SHEET:
PARTIAL EXISTING CONDITIONS AND SURVEY CONTROL PLAN

ADDRESS: 510 S FRANKLIN STREET, JUNEAU, AK 99801

DATE: 07/21/2026

DRAWING NUMBER: **C1.3**

J036



DEMOLITION NOTES

DESIGNATION	DESCRIPTION
(1)	REMOVE AND DISPOSE APPROXIMATELY 120 SY EXISTING CONCRETE SIDEWALK, SEE SHEET C2.1 FOR LIMITS
(2)	RELOCATE EXISTING CONNEX CONTAINERS TO NEW BASE COURSE PAD, SEE GRADING DESIGN SHEETS.

NO.	REVISION:	DATE:

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REVIEWED BY: DICK SOMERVILLE, PE

ISSUED FOR: 35% DESIGN DEVELOPMENT — DATE: 07/21/2026

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Juneau, Alaska 99801
Phone: 907-586-2093
AK. LIC# AECC250

PROJECT:
PORT OF JUNEAU
CRUISE SHIP DOCK ELECTRIFICATION

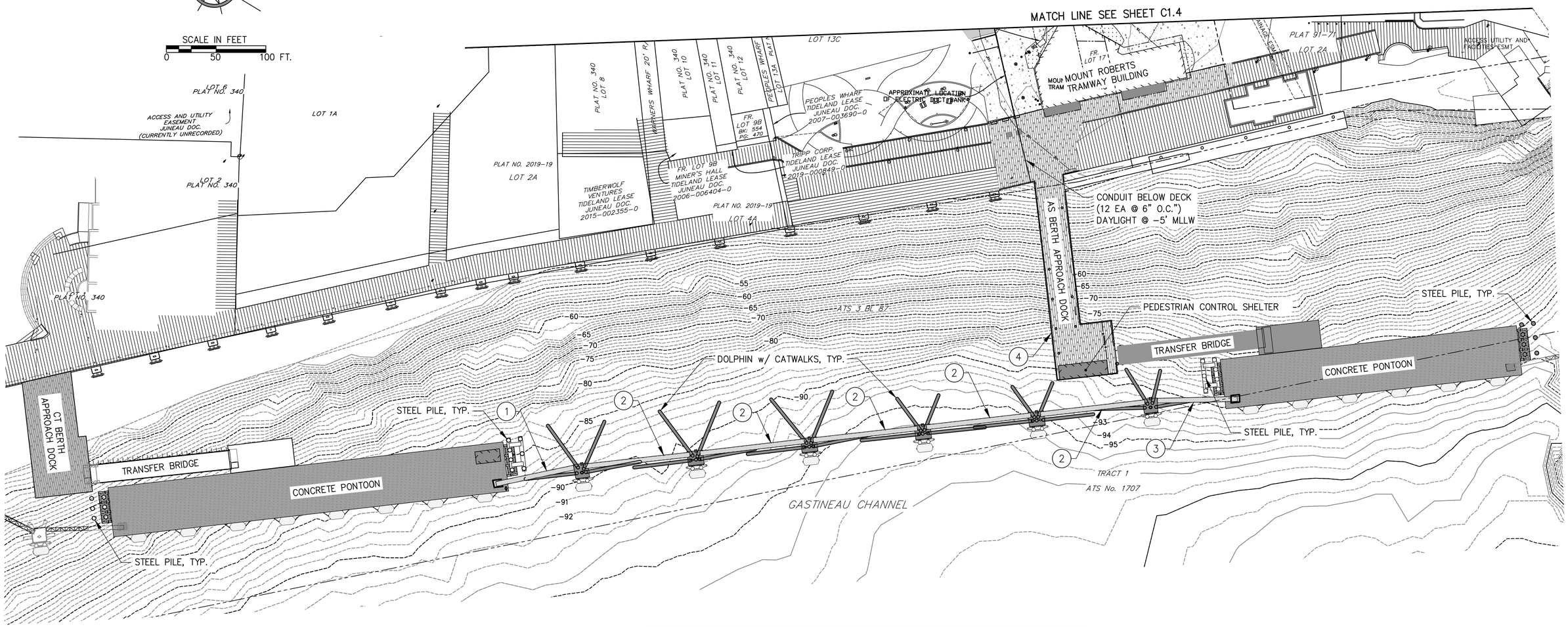
SHEET:
PARTIAL DEMOLITION PLAN

ADDRESS: 510 S FRANKLIN STREET, JUNEAU, AK 99801

DATE: 07/21/2026

DRAWING NUMBER: **C1.4**

J036



DEMOLITION NOTES

DESIGNATION	DESCRIPTION
1	REMOVE AND SALVAGE EXISTING 80' GANGWAY INCLUDING 6" WASTEWATER UTILITY LINES
2	REMOVE AND SALVAGE EXISTING 105' CATWALK INCLUDING 6" WASTEWATER UTILITY LINES
3	REMOVE AND SALVAGE EXISTING 80' GANGWAY INCLUDING 6" WASTEWATER UTILITY LINES
4	REMOVE AND DISPOSE APPROXIMATE 56' OF EXISTING APPROACH DOCK HANDRAIL AND BULLRAIL

NO.	REVISION:	DATE:

PRIME CONSULTANT:
H3 ENGINEERING SOLUTIONS
thaddadian@h3solutions.co
(626) 319-3476

DESIGNED BY: BRANDON IVANOWICZ
REVIEWED BY: DICK SOMERVILLE, PE

ISSUED FOR: 35% DESIGN DEVELOPMENT — DATE: 07/21/2026

SUB CONSULTANT:
PND ENGINEERS, INC.
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AK. LIC# AECC250

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CITY & BOROUGH OF JUNEAU DOCKS & HARBORS

PROJECT: PORT OF JUNEAU
CRUISE SHIP DOCK ELECTRIFICATION

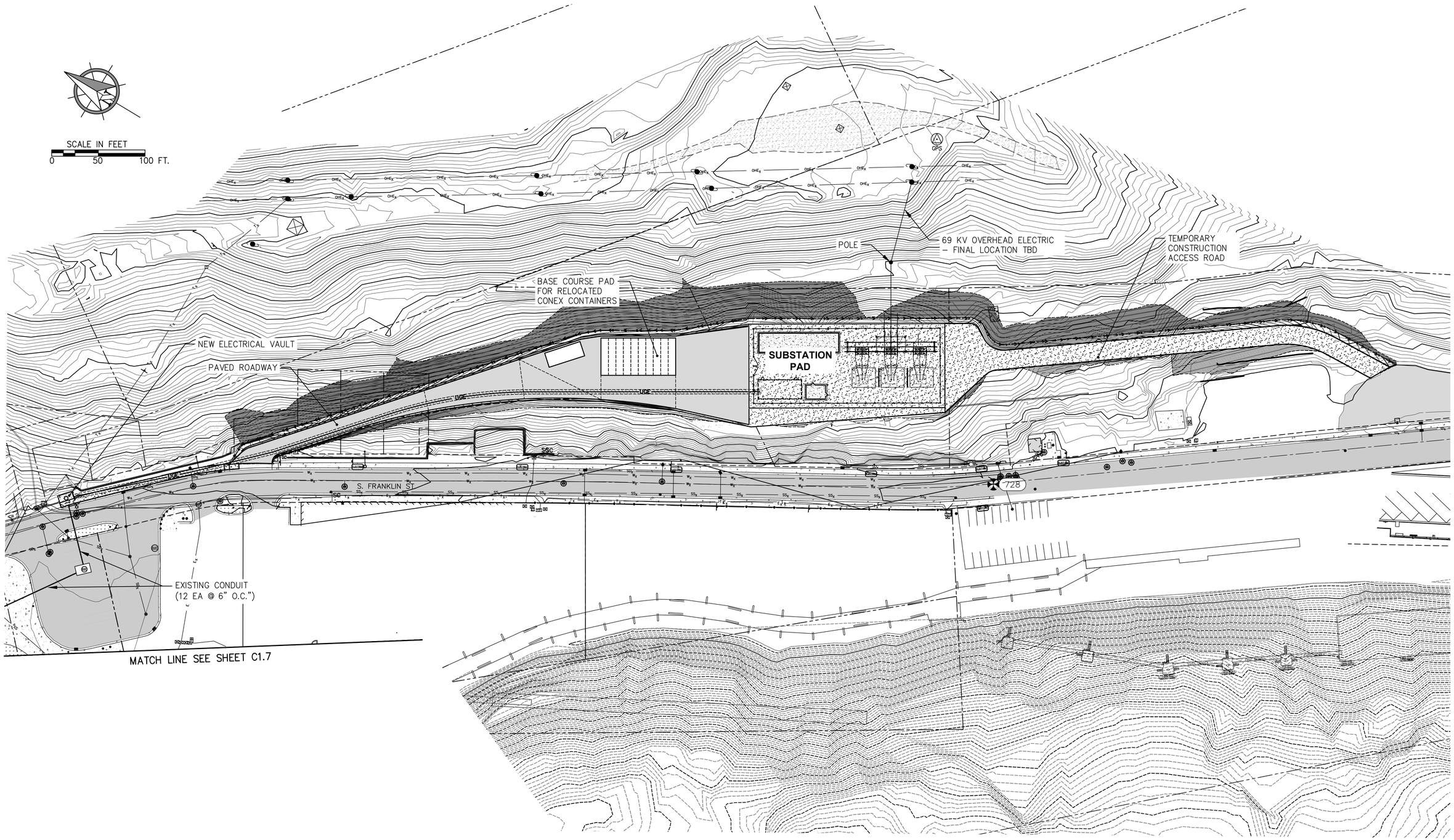
SHEET: **PARTIAL DEMOLITION PLAN**

ADDRESS: 510 S FRANKLIN STREET, JUNEAU, AK 99801

DATE: 07/21/2026

DRAWING NUMBER: **C1.5**

J036



NO.	REVISION:	DATE:

PRIME CONSULTANT:
H3 ENGINEERING SOLUTIONS
thaddadian@h3solutions.co
(626) 319-3476

DESIGNED BY: BRANDON IVANOWICZ

REVIEWED BY: DICK SOMERVILLE, PE

ISSUED FOR: 35% DESIGN DEVELOPMENT — DATE: 07/21/2026

SUB CONSULTANT:
PND ENGINEERS, INC.
9360 Glacier Highway Suite 100
Juneau, Alaska 99801
Phone: 907-586-2093
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CITY & BOROUGH OF JUNEAU DOCKS & HARBORS

PROJECT:
PORT OF JUNEAU
CRUISE SHIP DOCK ELECTRIFICATION

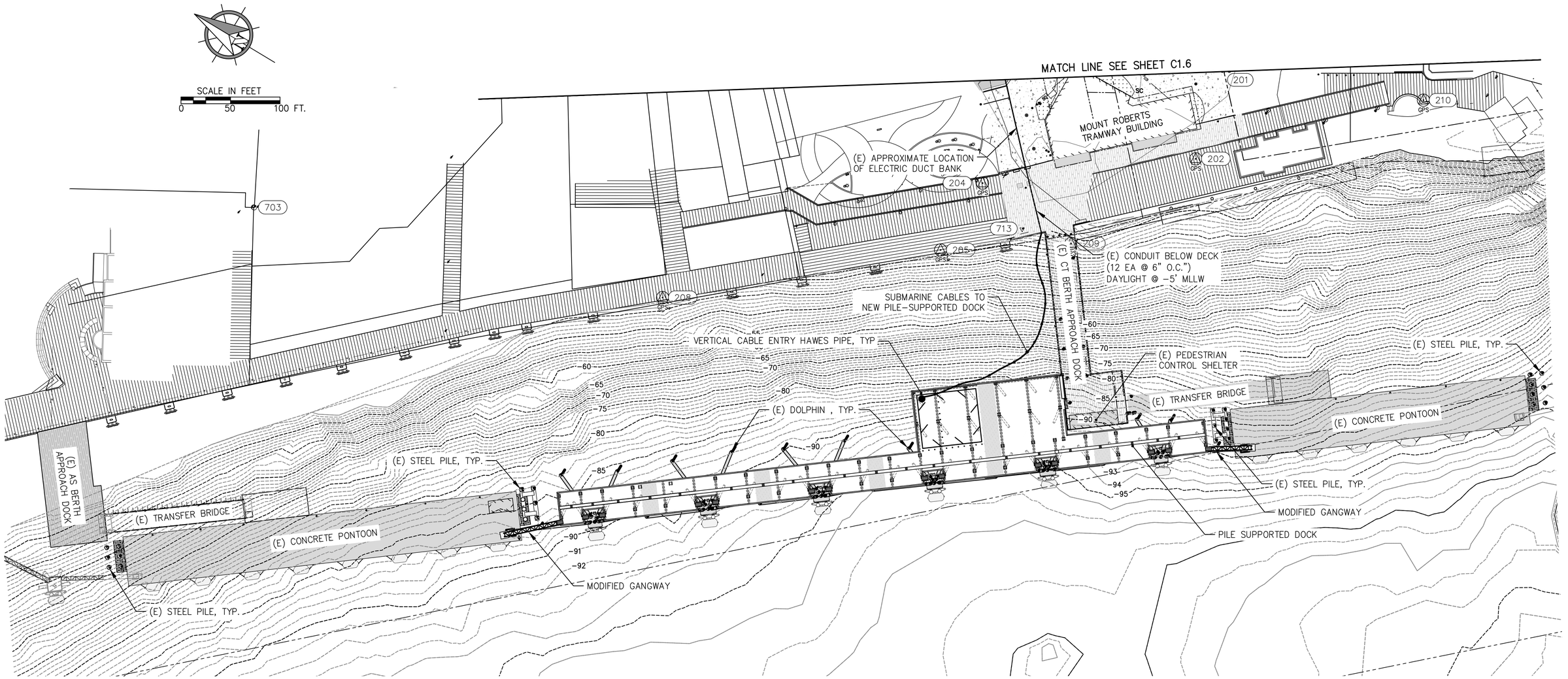
SHEET:
PARTIAL OVERALL SITE PLAN

ADDRESS: 510 S FRANKLIN STREET, JUNEAU, AK 99801

DATE: 07/21/2026

DRAWING NUMBER: **C1.6**

J036



NO.	REVISION:	DATE:

PRIME CONSULTANT:
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thaddadian@h3solutions.co
(626) 319-3476

DESIGNED BY: BRANDON IVANOWICZ
REVIEWED BY: DICK SOMERVILLE, PE

ISSUED FOR: 35% DESIGN DEVELOPMENT — DATE: 07/21/2026

SUB CONSULTANT:
PND ENGINEERS, INC.
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Juneau, Alaska 99801
Phone: 907-586-2093
AK. LIC# AECC250

PROJECT: PORT OF JUNEAU
CRUISE SHIP DOCK ELECTRIFICATION

SHEET: **PARTIAL OVERALL SITE PLAN**

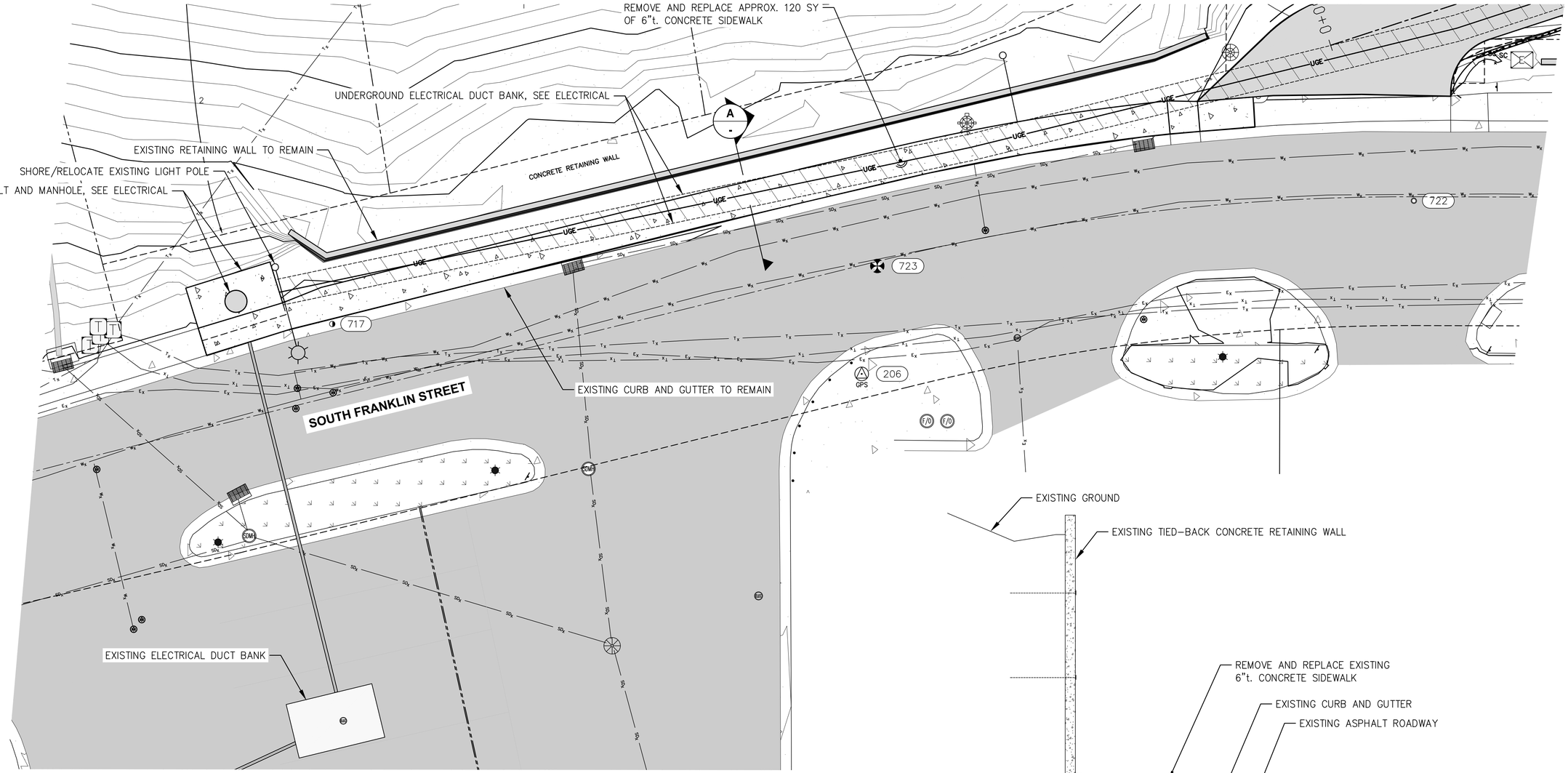
ADDRESS: 510 S FRANKLIN STREET, JUNEAU, AK 99801

DATE: 07/21/2026

DRAWING NUMBER: **C1.7**

J036

SCALE IN FEET
0 10 20 FT.



A/- SECTION AT NEW ELECTRICAL DUCT BANK

NO.	REVISION:	DATE:

PRIME CONSULTANT:
H3 ENGINEERING SOLUTIONS
thaddadian@h3solutions.co
(626) 319-3476

DESIGNED BY: BRANDON IVANOWICZ
REVIEWED BY: DICK SOMERVILLE, PE

ISSUED FOR: 35% DESIGN DEVELOPMENT — DATE: 07/21/2026

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Juneau, Alaska 99801
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AK. LIC# AECC250

CITY & BOROUGH OF JUNEAU DOCKS & HARBORS

PROJECT: PORT OF JUNEAU
CRUISE SHIP DOCK ELECTRIFICATION

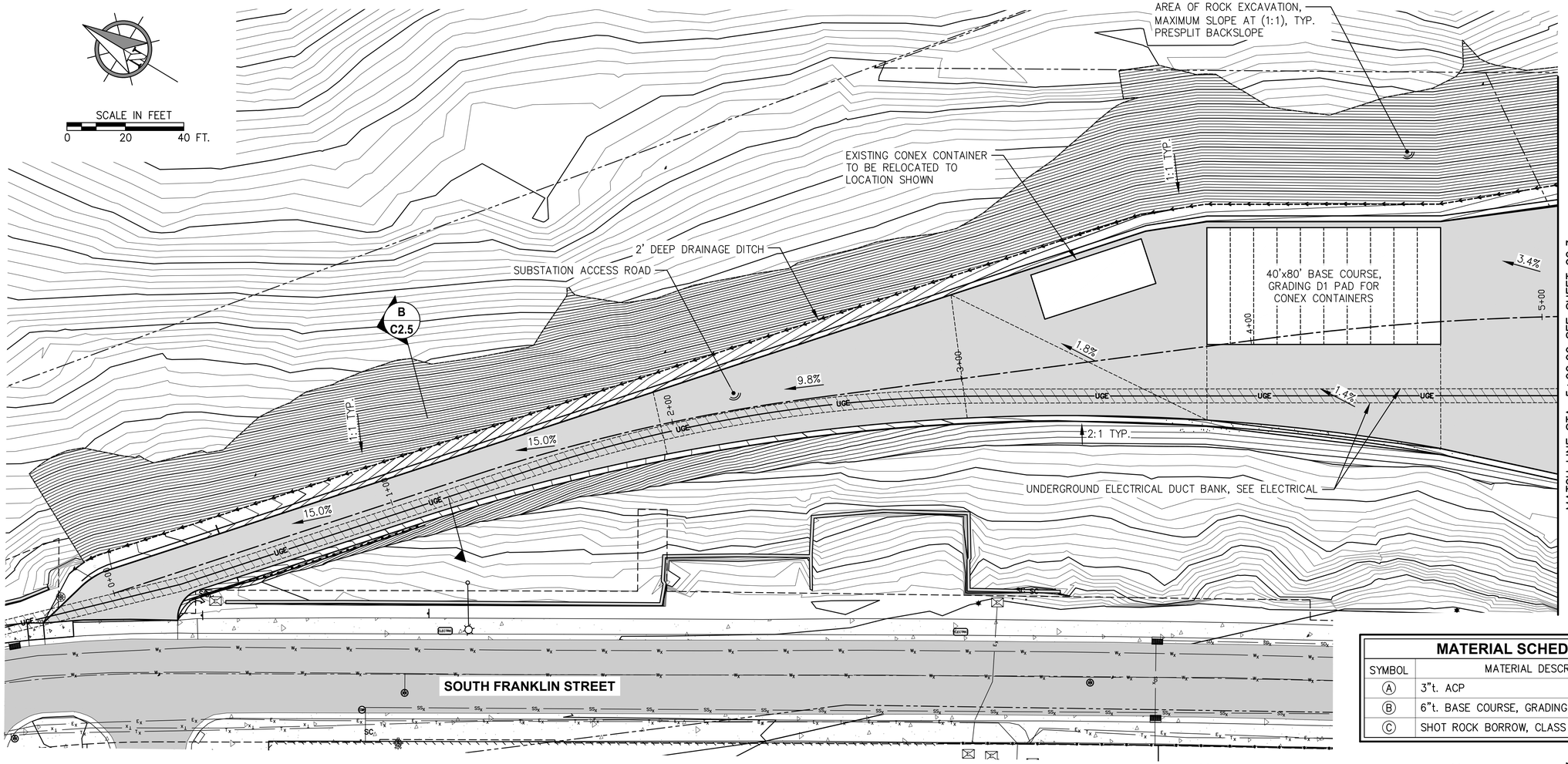
SHEET: PARTIAL GRADING PLAN - SIDEWALK REPLACEMENT

ADDRESS: 510 S FRANKLIN STREET, JUNEAU, AK 99801

DATE: 07/21/2026

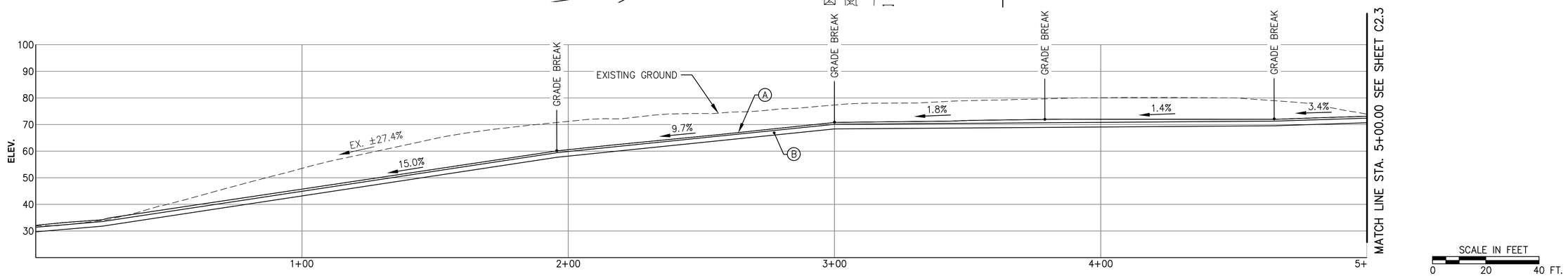
DRAWING NUMBER: C2.1

J036



MATERIAL SCHEDULE

SYMBOL	MATERIAL DESCRIPTION
(A)	3"t. ACP
(B)	6"t. BASE COURSE, GRADING D1
(C)	SHOT ROCK BORROW, CLASS A



NO.	REVISION:	DATE:

PRIME CONSULTANT:
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thaddadian@h3solutions.co
(626) 319-3476

DESIGNED BY: BRANDON IVANOWICZ
REVIEWED BY: DICK SOMERVILLE, PE

ISSUED FOR: 35% DESIGN DEVELOPMENT — DATE: 07/21/2026

SUB CONSULTANT:
PND ENGINEERS, INC.
9360 Glacier Highway Suite 100
Juneau, Alaska 99801
Phone: 907-586-2093
AK. LIC# AECC250

PROJECT:
PORT OF JUNEAU
CRUISE SHIP DOCK ELECTRIFICATION

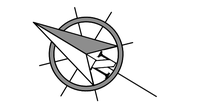
SHEET:
PARTIAL GRADING PLAN AND PROFILE - SUBSTATION ACCESS ROAD

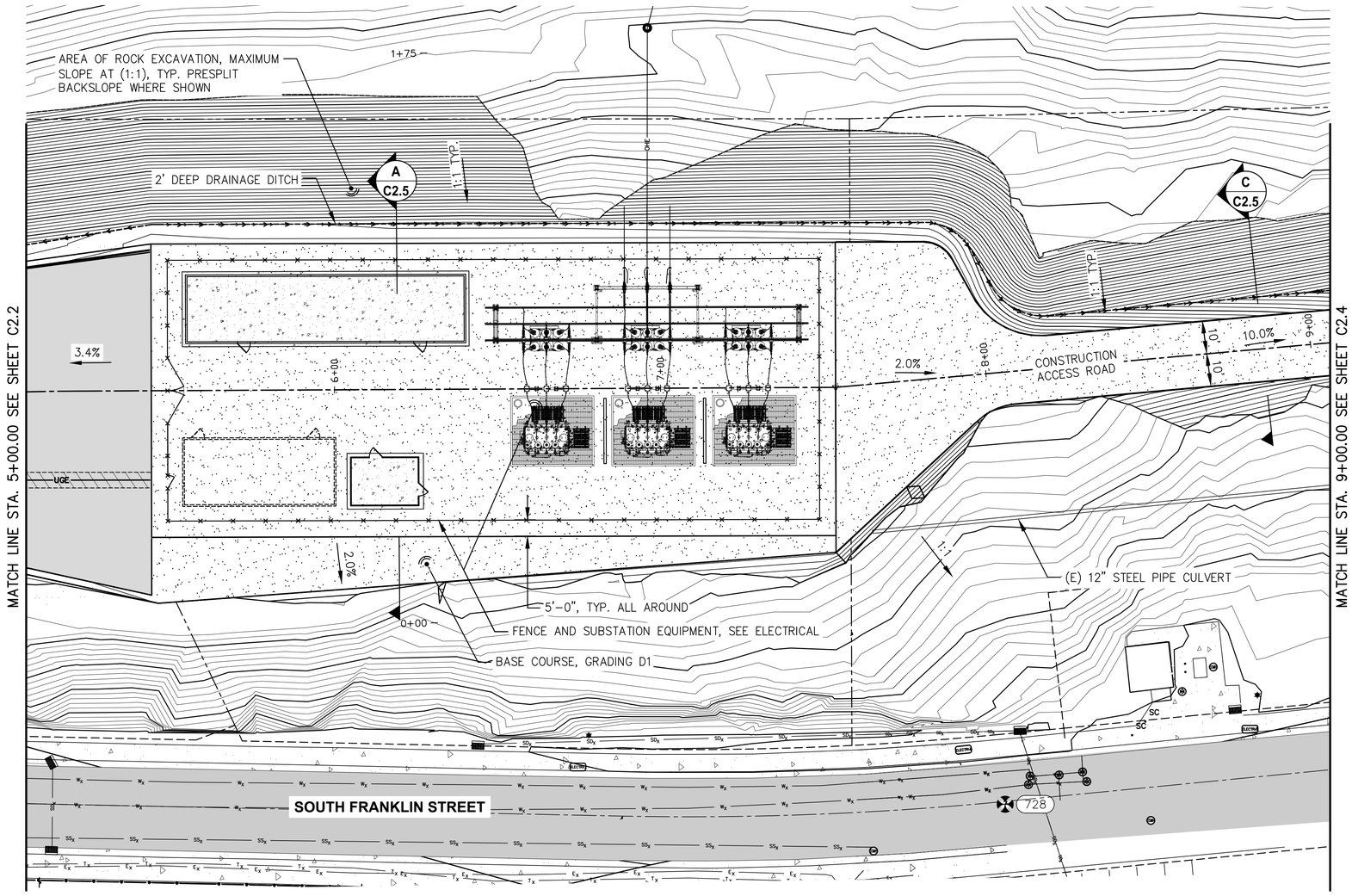
ADDRESS: 510 S FRANKLIN STREET, JUNEAU, AK 99801

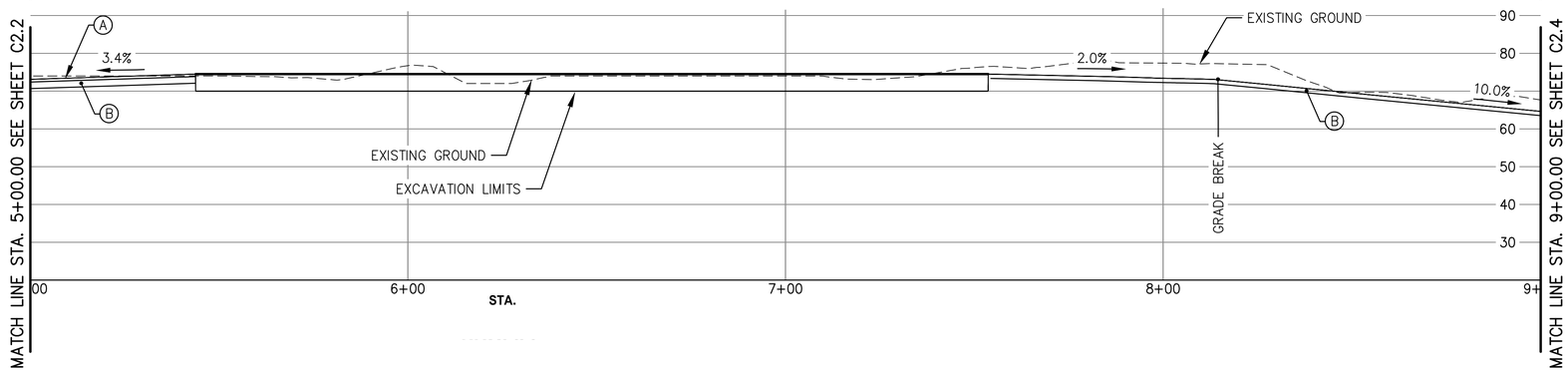
DATE: 07/21/2026

DRAWING NUMBER: **C2.2**

J036







MATERIAL SCHEDULE

SYMBOL	MATERIAL DESCRIPTION
Ⓐ	3"t. ACP
Ⓑ	6"t. BASE COURSE, GRADING D1
Ⓒ	SHOT ROCK BORROW, CLASS A

NO.	REVISION:	DATE:

PRIME CONSULTANT:
H3 ENGINEERING SOLUTIONS
thaddadian@h3solutions.co
(626) 319-3476

DESIGNED BY: BRANDON IVANOWICZ
REVIEWED BY: DICK SOMERVILLE, PE

ISSUED FOR: 35% DESIGN DEVELOPMENT — DATE: 07/21/2026

SUB CONSULTANT:
PND ENGINEERS, INC.
9360 Glacier Highway Suite 100
Juneau, Alaska 99801
Phone: 907-586-2093
AK. LIC# AECC250

AEL&P since 1893 ALASKA ELECTRIC LIGHT & POWER CO.

CITY & BOROUGH OF JUNEAU DOCKS & HARBORS

PROJECT: PORT OF JUNEAU
CRUISE SHIP DOCK ELECTRIFICATION

SHEET: **PARTIAL GRADING PLAN - SUBSTATION PAD**

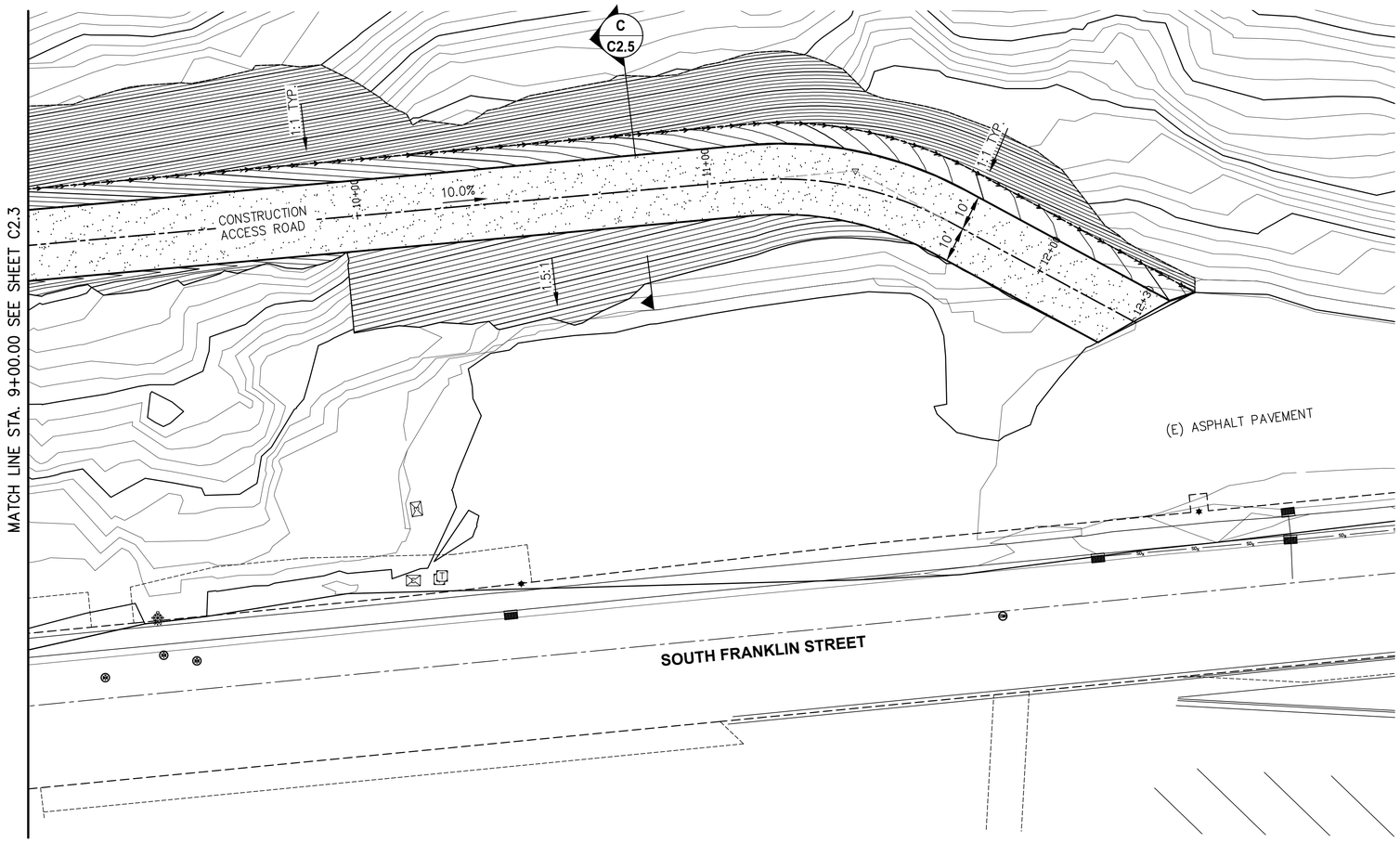
ADDRESS: 510 S FRANKLIN STREET, JUNEAU, AK 99801

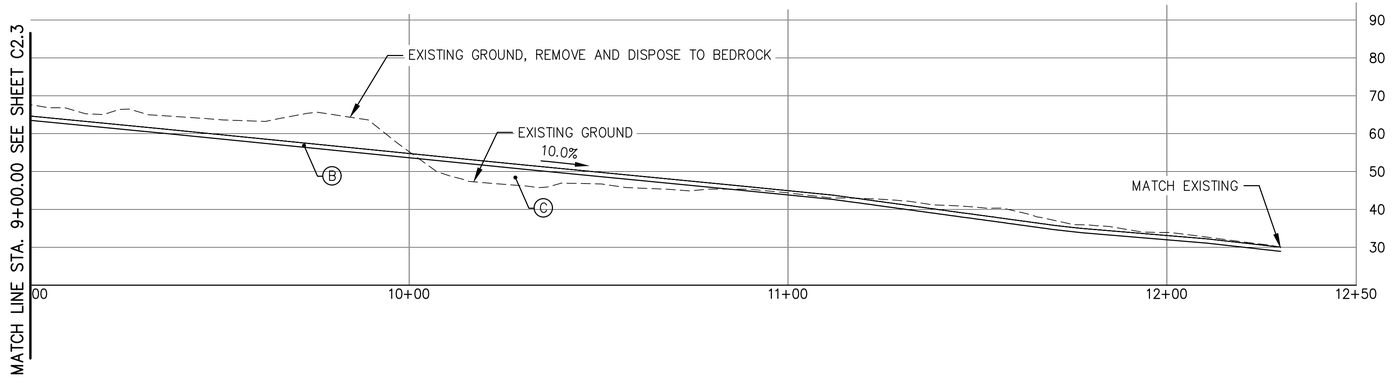
DATE: 07/21/2026

DRAWING NUMBER: **C2.3**

J036

SCALE IN FEET
0 20 40 FT.





MATERIAL SCHEDULE	
SYMBOL	MATERIAL DESCRIPTION
Ⓐ	3"t. ACP
Ⓑ	6"t. BASE COURSE, GRADING D1
Ⓒ	SHOT ROCK BORROW, CLASS A

NO.	REVISION:	DATE:

PRIME CONSULTANT:
H3 ENGINEERING SOLUTIONS
thaddadian@h3solutions.co
(626) 319-3476

DESIGNED BY: BRANDON IVANOWICZ
REVIEWED BY: DICK SOMERVILLE, PE

ISSUED FOR: 35% DESIGN DEVELOPMENT — DATE: 07/21/2026

SUB CONSULTANT:
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CITY & BOROUGH OF JUNEAU DOCKS & HARBORS

PROJECT:
PORT OF JUNEAU
CRUISE SHIP DOCK ELECTRIFICATION

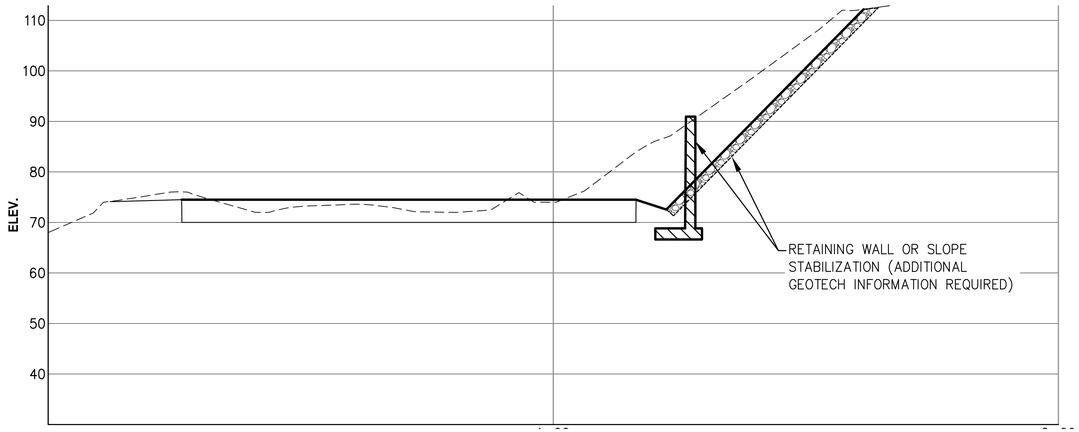
SHEET:
PARTIAL GRADING PLAN AND PROFILE - SUBSTATION ACCESS ROAD

ADDRESS: 510 S FRANKLIN STREET, JUNEAU, AK 99801

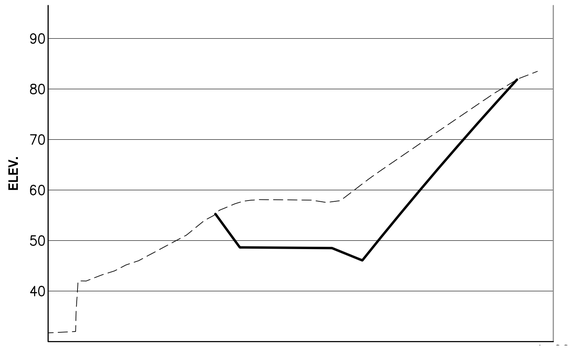
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DRAWING NUMBER: **C2.4**

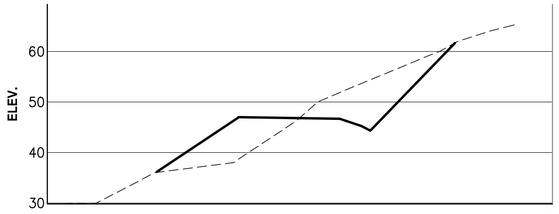
J036



A / - **SUBSTATION PAD SECTION**



B / - **SUBSTATION ACCESS ROAD SECTION**



C / - **CONSTRUCTION ACCESS ROAD**

SCALE IN FEET
0 15 30 FT.

NO.	REVISION:	DATE:

PRIME CONSULTANT:
H3 ENGINEERING SOLUTIONS
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DESIGNED BY: BRANDON IVANOWICZ
REVIEWED BY: DICK SOMERVILLE, PE

ISSUED FOR: 35% DESIGN DEVELOPMENT — DATE: 07/21/2026

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CITY & BOROUGH OF JUNEAU DOCKS & HARBORS

PROJECT:
PORT OF JUNEAU
CRUISE SHIP DOCK ELECTRIFICATION

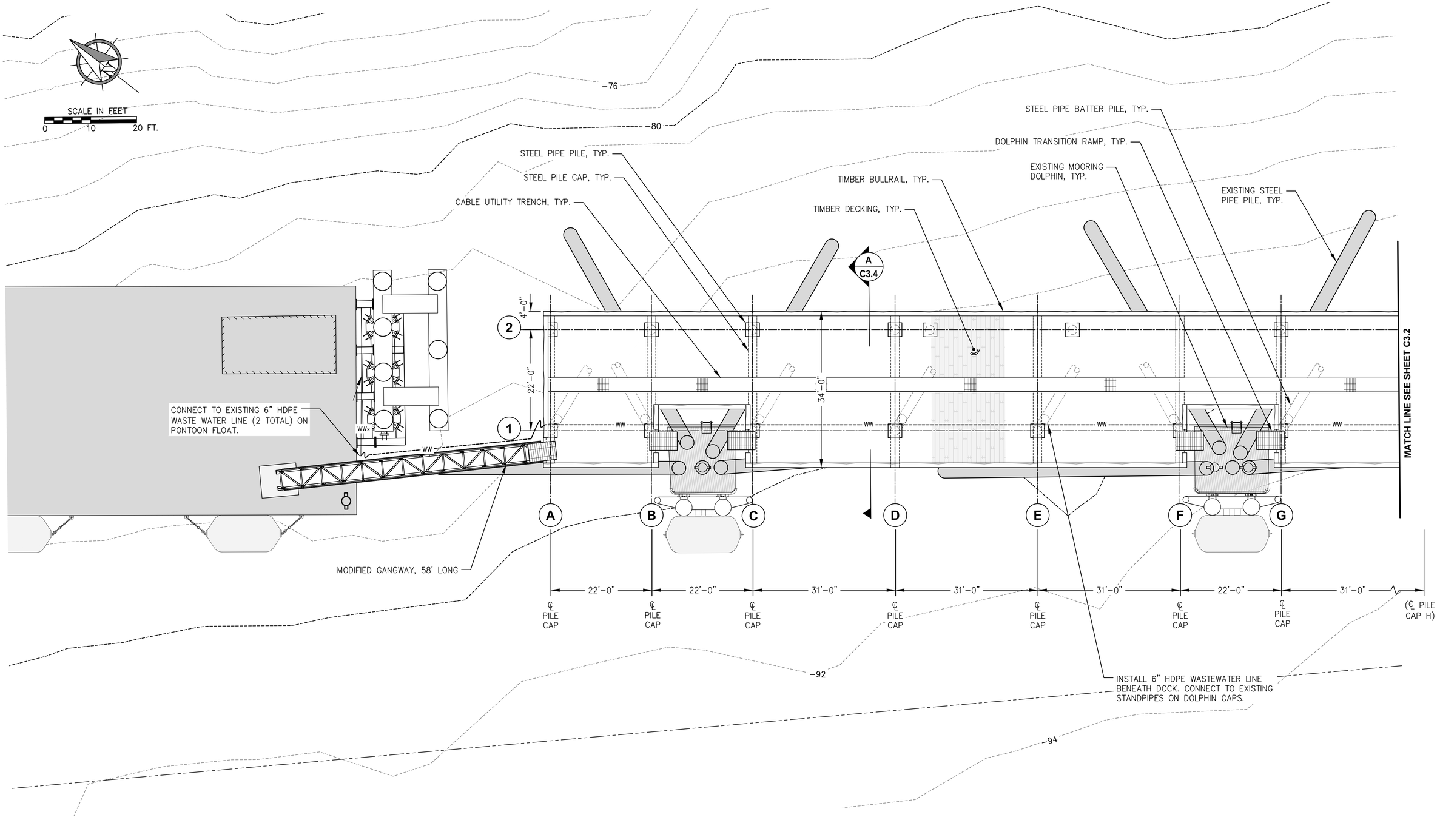
SHEET:
CIVIL DETAILS

ADDRESS: 510 S FRANKLIN STREET, JUNEAU, AK 99801

DATE: 07/21/2026

DRAWING NUMBER: **C2.5**

J036



NO.	REVISION:	DATE:

PRIME CONSULTANT:
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(626) 319-3476

DESIGNED BY: BRANDON IVANOWICZ
REVIEWED BY: DICK SOMERVILLE, PE

ISSUED FOR: 35% DESIGN DEVELOPMENT — DATE: 07/21/2026

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CITY & BOROUGH OF JUNEAU DOCKS & HARBORS

PROJECT: PORT OF JUNEAU
CRUISE SHIP DOCK ELECTRIFICATION

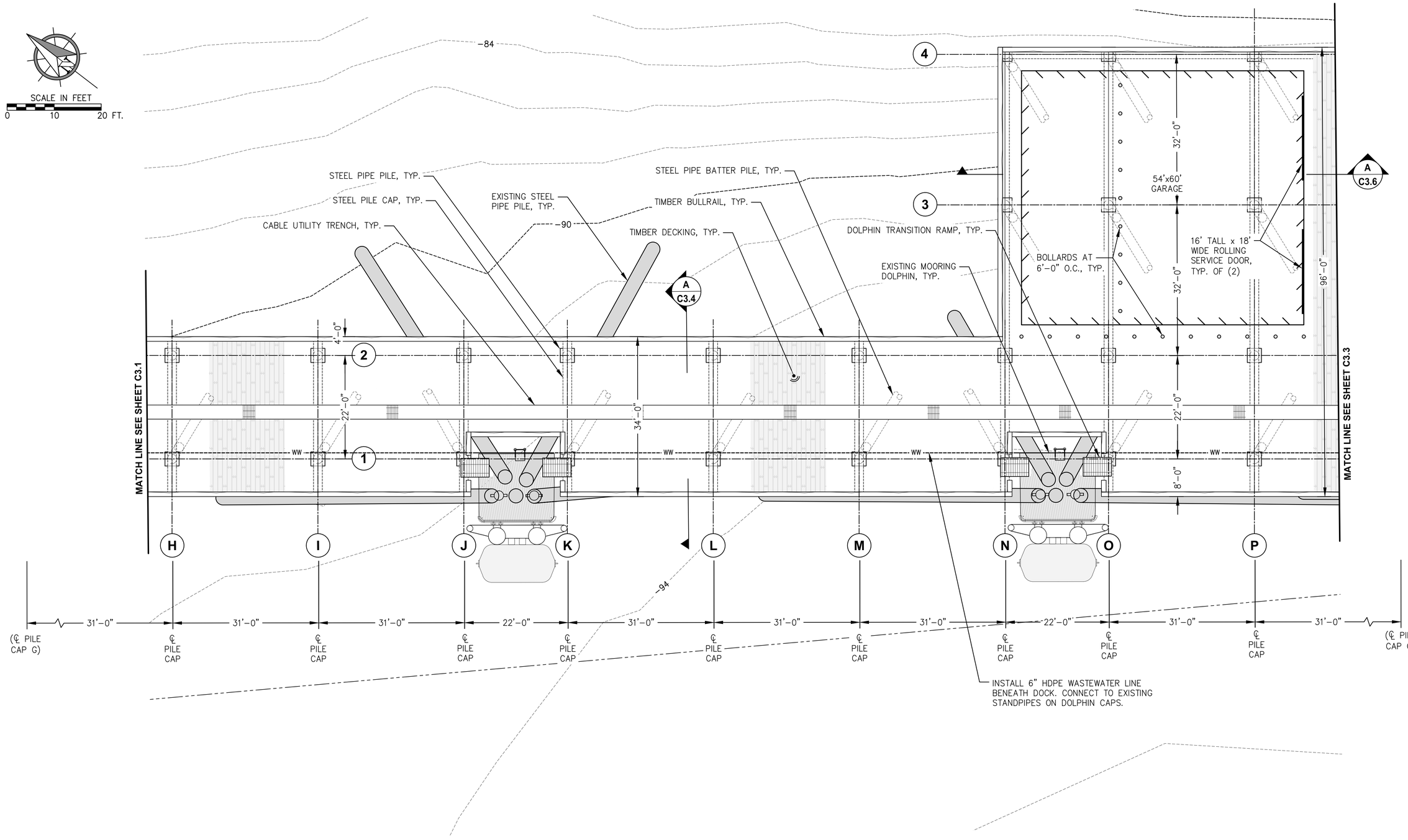
SHEET: **DOCK PLAN - PARTIAL**

ADDRESS: 510 S FRANKLIN STREET, JUNEAU, AK 99801

DATE: 07/21/2026

DRAWING NUMBER: **C3.1**

J036



NO.	REVISION:	DATE:

PRIME CONSULTANT:
H3 ENGINEERING SOLUTIONS
thaddadian@h3solutions.co
(626) 319-3476

DESIGNED BY: BRANDON IVANOWICZ
REVIEWED BY: DICK SOMERVILLE, PE

ISSUED FOR: 35% DESIGN DEVELOPMENT — DATE: 07/21/2026

SUB CONSULTANT:
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CITY & BOROUGH OF JUNEAU DOCKS & HARBORS

PROJECT: PORT OF JUNEAU
CRUISE SHIP DOCK ELECTRIFICATION

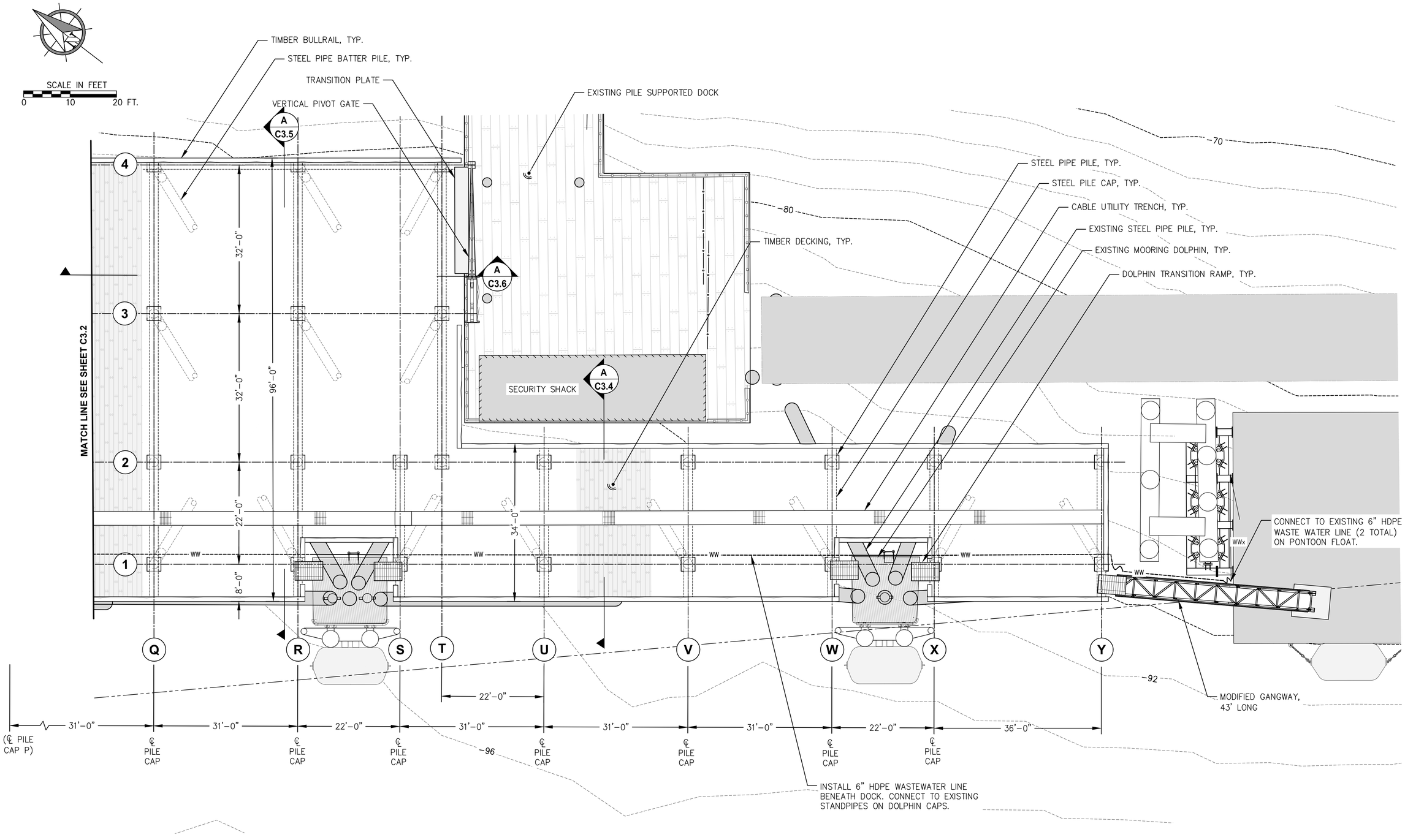
SHEET: **DOCK PLAN - PARTIAL**

ADDRESS: 510 S FRANKLIN STREET, JUNEAU, AK 99801

DATE: 07/21/2026

DRAWING NUMBER: **C3.2**

J036



NO.	REVISION:	DATE:

PRIME CONSULTANT:
H3 ENGINEERING SOLUTIONS
thaddadian@h3solutions.co
(626) 319-3476

DESIGNED BY: BRANDON IVANOWICZ
REVIEWED BY: DICK SOMERVILLE, PE

ISSUED FOR: 35% DESIGN DEVELOPMENT — DATE: 07/21/2026

SUB CONSULTANT:
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CITY & BOROUGH OF JUNEAU DOCKS & HARBORS

PROJECT: PORT OF JUNEAU
CRUISE SHIP DOCK ELECTRIFICATION

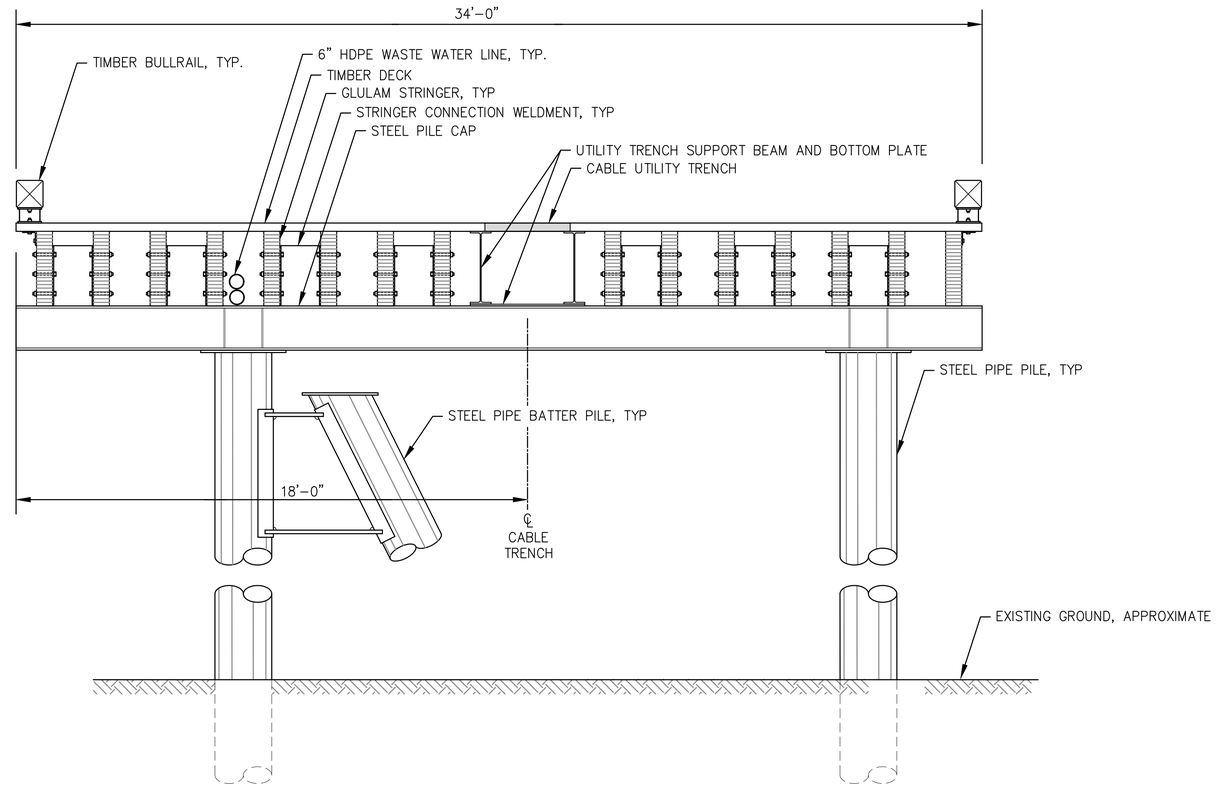
SHEET: **DOCK PLAN - PARTIAL**

ADDRESS: 510 S FRANKLIN STREET, JUNEAU, AK 99801

DATE: 07/21/2026

DRAWING NUMBER: **C3.3**

J036



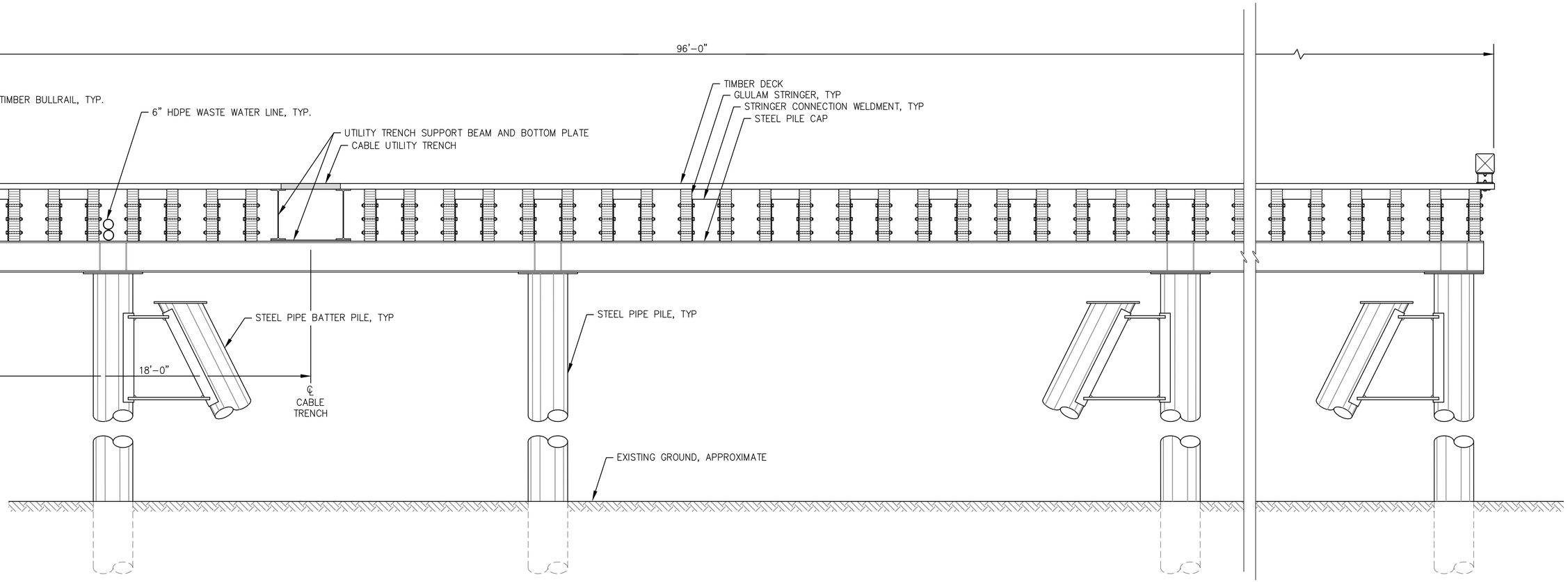
A - TYPICAL SECTION

SCALE IN FEET

0 2 4ft.

NO.	REVISION:	DATE:	PRIME CONSULTANT:		DESIGNED BY:	ISSUED FOR:	DATE:	SUB CONSULTANT:			PROJECT:	PORT OF JUNEAU CRUISE SHIP DOCK ELECTRIFICATION				
			H3 ENGINEERING SOLUTIONS thaddadian@h3solutions.co (626) 319-3476		BRANDON IVANOWICZ	35% DESIGN DEVELOPMENT	07/21/2026	P N D ENGINEERS, INC. 9360 Glacier Highway Suite 100 Juneau, Alaska 99801 Phone: 907-586-2093 AK. LIC# AECC250			SHEET:	CRUISE TERMINAL DOCK DETAILS				
					REVIEWED BY: DICK SOMERVILLE, PE						ADDRESS:	510 S FRANKLIN STREET, JUNEAU, AK 99801		DATE: 07/21/2026	DRAWING NUMBER: C3.4	

J036



A - TYPICAL SECTION

SCALE IN FEET

0 2 4ft.

NO.	REVISION:	DATE:

PRIME CONSULTANT:
H3 ENGINEERING SOLUTIONS
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DESIGNED BY: BRANDON IVANOWICZ

REVIEWED BY: DICK SOMERVILLE, PE

ISSUED FOR:	DATE:
35% DESIGN DEVELOPMENT	07/21/2026

SUB CONSULTANT:
PND ENGINEERS, INC.
9360 Glacier Highway Suite 100
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Phone: 907-586-2093
AK. LIC# AECC250

AEL&P since 1893 ALASKA ELECTRIC LIGHT & POWER CO.

CITY & BOROUGH OF JUNEAU DOCKS & HARBORS

PROJECT:
PORT OF JUNEAU
CRUISE SHIP DOCK ELECTRIFICATION

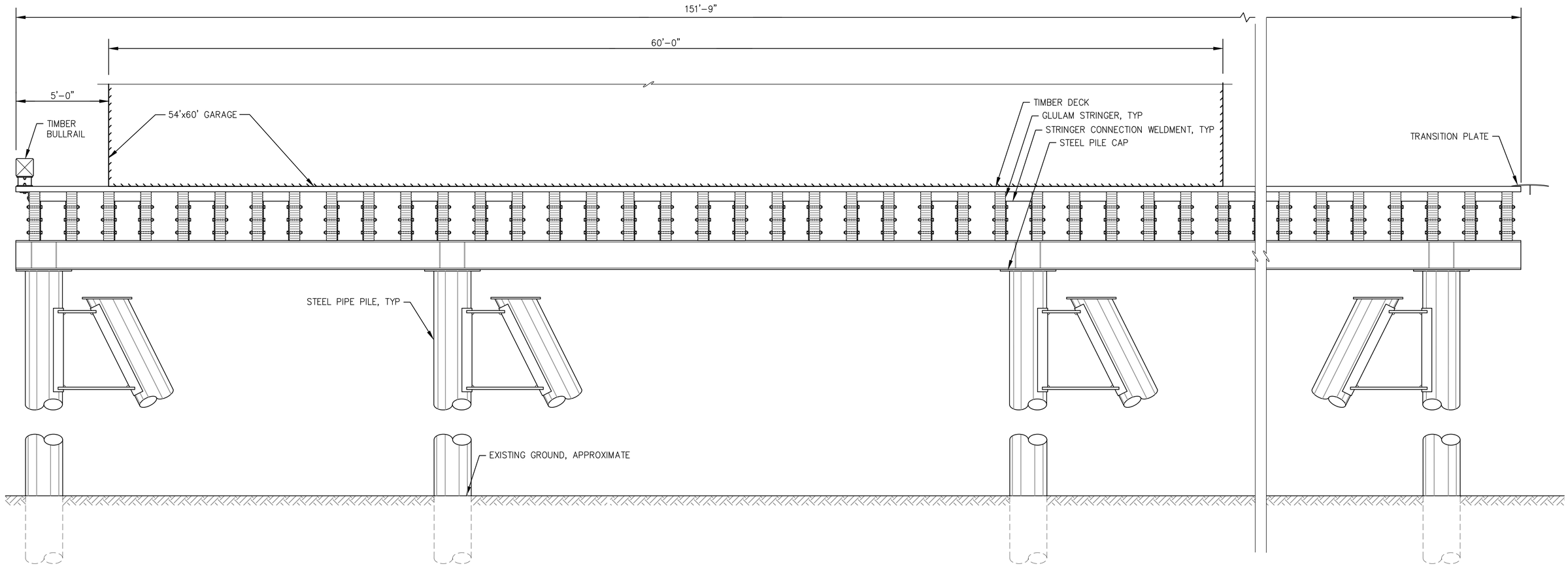
SHEET:
CRUISE TERMINAL DOCK DETAILS

ADDRESS: 510 S FRANKLIN STREET, JUNEAU, AK 99801

DATE: 07/21/2026

DRAWING NUMBER: **C3.5**

J036



A - TYPICAL SECTION

SCALE IN FEET

0 2 4ft.

NO.	REVISION:	DATE:

PRIME CONSULTANT:
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CITY & BOROUGH OF JUNEAU DOCKS & HARBORS

PROJECT:
PORT OF JUNEAU
CRUISE SHIP DOCK ELECTRIFICATION

SHEET:
ALASKA STEAMSHIP DOCK DETAILS

ADDRESS: 510 S FRANKLIN STREET, JUNEAU, AK 99801

DATE: 07/21/2026

DRAWING NUMBER: **C3.6**

J036

GENERAL NOTES:

1. ALL WORK SHALL COMPLY WITH THE LATEST ADOPTED EDITION OF THE ALASKA ELECTRICAL CODE AND ALL OTHER APPLICABLE FEDERAL AND STATE. WHERE THE CONSTRUCTION DOCUMENTS INDICATE MORE RESTRICTIVE REQUIREMENTS, THE CONSTRUCTION DOCUMENTS SHALL GOVERN BUT THE CONSTRUCTION DOCUMENTS SHALL NOT BE INTERPRETED AS AUTHORITY TO VIOLATE ANY CODE OR REGULATION.
2. ALL MATERIALS AND EQUIPMENT SHALL BE NEW, UL LISTED OR UL FIELD CERTIFIED OR APPROVED BY THE CITY OF LOS ANGELES TEST LABORATORY. ALL UL LISTED OR FIELD CERTIFIED EQUIPMENT SHALL BEAR THE UNDERWRITERS' LABEL (UL) AND SHALL BE INSTALLED IN THE MANNER FOR WHICH THEY ARE DESIGNED AND APPROVED.
3. THE CONTRACTOR SHALL NOT BORE, NOTCH OR IN ANY WAY CUT INTO ANY STRUCTURAL MEMBER WITHOUT WRITTEN APPROVAL FROM THE ARCHITECT OR STRUCTURAL ENGINEER.
4. MECHANICAL, ELECTRICAL AND PLUMBING EQUIPMENT ANCHORAGE NOTES:

   ALL MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE APPROVED CONSTRUCTION DOCUMENTS. WHERE NO DETAIL IS INDICATED, THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCES AND DISPLACEMENT REQUIREMENTS.

   A. ALL PERMANENT EQUIPMENT AND COMPONENTS.

   B. TEMPORARY OR MOVABLE EQUIPMENT THAT IS PERMANENTLY ATTACHED (EG HARD WIRED) TO THE UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER.

   C. MOVABLE EQUIPMENT WHICH IS STATIONED IN ONE PLACE FOR MORE THAN 8 HOURS AND HEAVIER THAN 400 POUNDS ARE REQUIRED TO BE ANCHORED WITH TEMPORARY ATTACHMENTS.

   THE ATTACHMENT OF THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENT SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE, BUT NEED NOT BE DETAILED ON THE PLANS. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT.

   A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVE A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORTS THE COMPONENT.

   B. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

   FOR THOSE ELEMENTS THAT DO NOT REQUIRE DETAILS ON THE APPROVED DRAWINGS, THE INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD AND THE STRUCTURAL ENGINEER. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH ABOVE REQUIREMENTS.
5. PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTES:

   PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN LATEST SECTIONS OF CBC AND ASCE.

   THE BRACING AND ATTACHMENTS TO THE STRUCTURE SHALL BE DETAILED ON THE APPROVED DRAWINGS OR THEY SHALL COMPLY WITH ONE OF THE OSHPD PRE-APPROVALS (OPA #) AS MODIFIED TO SATISFY ANCHORAGE REQUIREMENTS OF ACI 318, APPENDIX D.

   COPIES OF THE MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF HANGING AND BRACING OF THE PIPE, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS.

   THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.
6. ELECTRICAL EQUIPMENT AND DEVICES INSTALLED OUTDOORS SHALL BE ENCLOSED IN WEATHERPROOF, CORROSION RESISTANT, HOT DIPPED GALVANIZED NEMA 3R ENCLOSURES. HARDWARE SHALL BE HOT DIP GALVANIZED OR STAINLESS STEEL.
7. UNDERGROUND AND UNDER-WHARF CONDUIT SHALL BE NON-METALLIC FIBERGLASS CONDUIT, MADE BY CHAMPION, UNLESS OTHERWISE NOTED.
8. EXPOSED CONDUITS, EXCEPT CONDUITS UNDER THE WHARF, SHALL BE PVC COATED GALVANIZED STEEL, UNLESS OTHERWISE NOTED.
9. EMPTY CONDUITS SHALL BE PROVIDED WITH 1/8" DIAMETER NYLON PULL CORD RATED 1,250 POUNDS TENSILE STRENGTH. TAG CONDUITS AT EACH END IDENTIFYING THE PURPOSE OF THE CONDUIT AND THE LOCATION OF THE OTHER END. WHEN EMPTY CONDUITS TERMINATE AT PULL BOXES, TIE THE NYLON PULL CORD TO THE PULL BOX PULLING IRON, CONDUITS SHALL BE SUCCESSFULLY MANDRELLED WITH A 12" LONG MANDREL
10. CONTRACTOR SHALL MAINTAIN A MINIMUM CLEARANCE OF 6" FROM CONDUIT WHEN CROSSING ANY SUBSTRUCTURES.
11. UNDERGROUND CONDUIT BURIED STUB-OUTS SHALL BE FURNISHED WITH CONCRETE MONUMENTS, 6" X 6" X 15" DEEP BURIED FLUSH WITH GRADE OVER THE CAPPED ENDS AND A 3" SQ. BRASS PLATE IDENTIFYING THE NUMBER AND SIZE OF CONDUITS.
12. WHERE CROSSING ANY SUBSTRUCTURES WHICH ALL ARE UNKNOWN IN DEPTH, OR WHERE NEW CONDUITS CROSS EACH OTHER, OR CROSS PIPES,THE ELECTRICAL CONTRACTOR SHALL TRENCH CAREFULLY TO LOCATE ALL SUBSTRUCTURES AT THE CROSSINGS. NEW CONDUITS DEPTH AND INSTALLATIONS SHALL BE PER PLANS AT THESE CROSSINGS EXCEPT WHERE SUBSTRUCTURES OR NEW CONDUITS CROSSING MAKE THIS IMPOSSIBLE. THE ELECTRICAL CONTRACTOR SHALL REROUTE CONDUITS, OVER OR UNDER SUBSTRUCTURES TO AVOID INTERFERENCES WITH SUBSTRUCTURES AND NEW INTERFERED CONDUITS AND PIPES,WITH A MINIMUM 6" CLEARANCE IN ACCORDANCE WITH THE ELECTRICAL CODE. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE TO REPAIR ALL CONDUITS AND WIRES DAMAGED DURING CONSTRUCTION AT NO ADDITIONAL COST TO THE PORT. ELECTRICAL CONTRACTOR SHALL PROVIDE POTHOLES EVERY 20 FT AND HAND DIG TO MAKE SURE THE NEW INFRASTRUCTURE WILL NOT INTERFERE OR DAMAGE THE EXISTING INFRASTRUCTURE. CALL UNITED SERVICE ALERT (USA) AT 1-800-422-4133 FOR FURTHER INFORMATION REGARDING EXISTING SUBSTRUCTURES, TEN WORKING DAYS PRIOR TO COMMENCING WORK.
13. UNLESS OTHERWISE NOTED, ALL WIRES RATED FOR 1000V OR LESS SHALL BE COPPER, U.L. LISTED AND LABELED, TYPE THHN/THWN-2 WITH 12 AWG MINIMUM SIZE. CONDUCTORS LARGER THAN #10 AWG, CONTROL, INSTRUMENTATIONS, AND COMMUNICATION CONDUCTORS SHALL BE STRANDED.
14. FURNISH AND INSTALL ALL MATERIALS NECESSARY AND REQUIRED INCLUDING BUT NOT LIMITED TO CONDUITS, WIRES, BOXES, SWITCHES, LIGHT FIXTURES (WITH LAMPS), POLE FOUNDATIONS, RECEPTACLES, DEVICES, PANEL BOARDS, SWITCHGEARS AND ALL OTHER WORK SHOWN, NECESSARY, AND REQUIRED INCLUDING BUT NOT LIMITED TO WORK SHOWN ON THESE DRAWINGS AND ASSOCIATED SPECIFICATIONS, AND AS REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM AS INTENDED BY THESE DRAWINGS.
15. IN THE EVENT OF CONFLICT OR INCONSISTENCY BETWEEN ITEMS SHOWN IN THE PLANS WITH CODE REQUIREMENTS, THE NOTE OR CODE WHICH PRESCRIBES AND ESTABLISHES THE MORE COMPLETE WORK OR HIGHER STANDARD SHALL PREVAIL.
16. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED PERMITS AND AND ALL FEES, UNLESS OTHERWISE NOTED.
17. THE ELECTRICAL DRAWINGS ARE DIAGRAMMATIC AND DO NOT SHOW ALL OFFSETS, BENDS, FITTINGS, JUNCTION BOXES, PULL BOXES AND EXPANSION FITTINGS REQUIRED TO MEET FIELD CONDITIONS. CONTRACTOR SHALL DETERMINE ACTUAL MATERIAL AND HARDWARE REQUIREMENTS AND SHALL VERIFY ALL DIMENSIONS, EXISTING EQUIPMENT, REFERENCE AND EXISTING INFRASTRUCTURE, LOCATION OF EXISTING OBSTRUCTIONS, STRUCTURAL MEMBER LOCATIONS, BY FIELD INSPECTION, AND SHALL INCLUDE ALL HARDWARE NECESSARY IN THE BID.

GENERAL NOTES (CONTINUED):

18. CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY EXISTING SITE CONDITIONS, REQUIREMENTS, AND EXACT LOCATION OF UTILITIES PRIOR TO EXCAVATION. CONTRACTOR SHALL CONTACT EACH UTILITY OWNER TO NOTIFY AND TO COORDINATE WORK WITH THE UTILITY IN SUCH A MANNER AS TO NOT DAMAGE THE EXISTING INFRASTRUCTURE. CONTRACTOR SHALL BE RESPONSIBLE TO FULLY REPAIR ANY DAMAGE OF EXISTING INFRASTRUCTURE AND SUPERSTRUCTURES CAUSED BY CONTRACTOR OR SUBCONTRACTORS.
19. REFER TO SPECIFICATIONS FOR EQUIPMENT SUBMITTAL REQUIREMENTS.
20. CONTRACTOR SHALL PROVIDE A SET OF AS-BUILT DRAWINGS SHOWING THE LOCATIONS OF ALL UNDERGROUND CONDUITS AND EQUIPMENT INDICATING ALL CHANGES MADE DURING CONSTRUCTION AND ANY DEVIATIONS FROM THE AS BID PLANS.
21. ELECTRIC MATERIALS AND EQUIPMENT SHALL BE U.L. LISTED AND LABELED AND SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
22. CIRCUIT BREAKERS, FUSES, AND ELECTRICAL EQUIPMENT SHALL HAVE INTERRUPTING RATING NOT LESS THAN THE MAXIMUM SHORT CIRCUIT CURRENT, TO WHICH THEY MAY BE SUBJECTED.
23. THERE ARE EXISTING SCE UNDERGROUND SUBSTRUCTURE NETWORK AND OTHER EXISTING INFRASTRUCTURE IN THE VICINITY OF WORK AREA THAT MAY NOT BE SHOWN IN THESE DRAWINGS OR MAY BE UNKNOWN TO THE PORT AND TO THE ENGINEER. CONTRACTOR SHALL BE RESPONSIBLE TO NOTIFY SCE AND THE PORT TO COORDINATE FOR ALL WORK WITH SCE TO AVOID DAMAGING EXISTING SUBSTRUCTURE. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COST ARISING OF SUCH DAMAGE. CONTRACTOR SHALL BE RESPONSIBLE FOR THE RESTORATION AND REPAIR OF ALL DAMAGED EXISTING INFRASTRUCTURE THAT HAVE BEEN DAMAGED BY THE CONTRACTOR, ITS EMPLOYEES, SUBCONTRACTORS, AGENTS, REPRESENTATIVES, OR LABORERS AT CONTRACTOR'S COST AND TIME.
24. CONDUIT FEEDERS SHALL INCLUDE GROUNDING CONDUCTOR. CONTRACTOR SHALL NOT UTILIZE CONDUIT AS GROUNDING CONDUCTOR.
25. CONDUCTORS AND CURRENT CARRYING PARTS SHALL BE COPPER.
26. 8 KV SHIELDED POWER CONDUCTORS SHALL BE OKONITE OKOGUARD COMPACT STRANDED COPPER WITH 5 MIL BARE COPPER TAPE 25% OVERLAP, U.L. LISTED MV-105 WITH 133% INSULATION
27. INSTRUMENTATION AND CONTROL WIRES SHALL CONNECT THE ORIGINATION POINT TO THE INTENDED COMPONENT WITHOUT SPLICING.
28. WIRES SHALL BE IDENTIFIED AT EACH PULL BOX AND AT BOTH ENDS OF TERMINATION WITH PERMANENT APPROVED WIRE MARKING LABELS.
29. CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TEMPORARY POWER, LIGHTING AND COMMUNICATION SERVICE FOR CONSTRUCTION TEAM USE AT CONTRACTOR'S EXPENSE.
30. INSTALL CONDUITS AND WIRES WITH A MINIMUM NUMBER OF BENDS AND IN SUCH A MANNER AS TO CONFORM TO THE STRUCTURE, AVOID OBSTRUCTIONS, PRESERVE HEAD ROOM, AND KEEP OPENINGS AND PASSAGE WAYS CLEAR AND MEET ALL STRUCTURAL AND ELECTRICAL CODE REQUIREMENTS.
31. CONTRACTOR SHALL BE CALL UNITED SERVICE ALERT (USA) AT 1-800-422-4133 FOR FURTHER INFORMATION REGARDING EXISTING SUBSTRUCTURES TEN (10) WORKING DAYS PRIOR TO COMMENCING WORK.
32. POWER AND COMMUNICATION CONDUCTORS SHALL BE ONE PEICE FROM THE FIRST POINT OF TERMINATION TO THE LAST POINT OF TERMINATION WITHOUT ANY SPLICES. THE TERMINATION ENDS OF ALL CONTROL WIRES SHALL EMPLOY TERMINAL BLOCKS. NO WIRE NUTS OR SPLICES SHALL BE ALLOWED.
33. IN THE EVENT OF ENCOUNTERING GROUNDWATER, CONTRACTOR SHALL SUBMIT A DE-WATERING PLAN FOR REVIEW AND APPROVAL BY THE PORT AND THE CITY. CONTRACTOR SHALL INSTALL DE-WATERING EQUIPMENT TO REMOVE GROUNDWATER FROM AFFECTED AREAS AND SHALL PROVIDE APPROPRIATE SHORING. CONTRACTOR SHALL COLLECT THE WATER FROM DE-WATERING ACTIVITIES AND SHALL HAUL OFF TO DISPOSE OF IT. CONTRACTOR SHALL BE PAID ON A COST PER UNIT BASIS FOR SHORING, DE-WATERING AND DISPOSAL.
34. DISTANCES SHOWN ON PLANS ARE FOR CALCULATIONS PURPOSES ONLY AND NOT FOR BIDDING PURPOSES.

ABBREVIATIONS

ABBREVIATION	DESCRIPTION
1/C	SINGLE CONDUCTOR
&	AND
@	AT
Ω	OHM
A/AMP	AMPERES
AELP / AEL&P	ALASKA ELECTRIC LIGHT AND POWER
AF	AMPERE FUSE RATING
AFC	AVAILABLE FAULT CURRENT
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISH GRADE
AIC	AMPERE INTERRUPTING CAPACITY
AL	ALUMINUM
APPROX.	APPROXIMATLY
ARCH.	ARCHITECT; ARCHITECTURAL
AS	AMPERE SWITCH RATING
ASCC	AVAILABLE SHORT CIRCUIT CURRENT
AT	AMPERE TRIP SETTING
ATS	AUTOMATIC TRANSFER SWITCH
AUTO	AUTOMATIC
AUX	AUXILIARY
AWG	AMERICAN WIRE GAUGE
BKBD	BACKBOARD
BKR	BREAKER
BLDG	BUILDING
B.S.	BARE STRANDED
C	CONDUIT
CB	CIRCUIT BREAKER
CC	CONSTANT CURRENT
AEC	ALASKA ELECTRICAL CODE
CF	CUBIC FEET
CKT	CIRCUIT
CL	CENTER LINE
CLG	CEILING
CLR	CLEARANCE
CO	CONDUIT ONLY WITH PULL NYLON PULL STRING
CT	CURRENT TRANSFORMER
CU	COPPER
DIST.	DISTANCE
DM	DIGITAL METER
DMR	DIGITAL MULTI-RELAY
DP	DISTRIBUTION PANEL
DIST.	DISTANCE
DWG	DRAWING
DWP	DEPARTMENT OF WATER & POWER
EA	EACH
ECM	ELECTRONIC CIRCUIT MONITOR
ELEC.	ELECTRICAL
EM	EMERGENCY
EMH	ELECTRICAL MANHOLE
EMT	ELECTRICAL METALLIC TUBING
EPB	EMERGENCY PUSH BUTTON
EPO	EMERGENCY POWER OFF
EPR	ETHYLENE PROPYLENE RUBBER
EQUIP	EQUIPMENT
ER	EXISTING TO BE REMOVED
ERR	EXISTING TO BE RELOCATED AND RECONNECTED
EXIST/(E)	EXISTING
EXP	EXPLOSION PROOF
FIXT	FIXTURE
FLA	FULL LOAD AMPS
FLP	FLOOD LIGHT POLE
FT	FEET
FMC	FLEXIBLE METAL CONDUIT
FO	FIBER OBTIC
GEN	GENERATOR
GFI	GROUND FAULT INTERRUPTER
GFR	GROUND FAULT RELAY
GFP	GROUND FAULT PROTECTION
GG	GREEN GROUND
GND	GROUND
HP	HORSEPOWER
HMI	HUMAN MACHINE INTERFACE
HMLP	HIGH MAST LIGHT POLE
HT	HEIGHT
HV	HIGH VOLTAGE
HZ	HERTZ
IMSPO	IGUS MOVABLE SHORE POWER OUTLET
ISC	SHORT CIRCUIT CURRENT
ISN	ISOLATED, INSULATED, NEUTRAL CONDUCTOR
J, JB, J-BOX	JUNCTION BOX
KCMIL	THOUSAND CIRCULAR MILS
KV	KILOVOLT
KVA	KILOVOLT-AMPERES
KW	KILOWATT
LF	LINEAR FEET
LFMC	LIQUIDTIGHT FLEXIBLE METAL CONDUIT
LIS	LOAD INTERRUPTER SWITCH
LIS	LOAD INTERRUPTER SWITCH
LTG	LIGHTING
LV	LOW VOLTAGE
M	METER
MAX	MAXIMUM
MCA	MAXIMUM CIRCUIT AMPACITY
MCC	MOTOR CONTROL CENTER
MFGR, MFR	MANUFACTURER
MH	MANHOLE
MI.	MECHANICAL INTERLOCK
MRCT	MULTI-RATIO CURRENT TRANSFORMER
MIN	MINIMUM
MOCP	MAXIMUM OVERCURRENT PROTECTION
MTD	MOUNTED
MTG	MOUNTING
MTR	MOTOR
MV	MEDIUM VOLTAGE
N	NORTH
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NF	NON-FUSED
NIC	NOT IN CONTRACT
NO.	NUMBER
OCPD	OVERCURRENT PROTECTIVE DEVICE
OD	OUTSIDE DIAMETER
PT	DRAWOUT TYPE VOLTAGE TRANSFORMER
PAC	PROGRAMMABLE AUTOMATION CONTROLLER
PB	PULL BOX
PC	PHOTOCELL
PF	POWER FACTOR
PH OR Ø	PHASE
PLC	PROGRAMMABLE LOGIC CONTROLLER
PNL	PANEL
POC	POINT OF CONNECTION
PRI.	PRIMARY
PVC	POLY-VINYL CHLORIDE
PWR	POWER
REC/RECEPT	RECEPTACLE
RGS	RIGID GALVANIZED STEEL
RMC	RIGID METAL CONDUIT
RM	ROOM
SCCR	SHORT CIRCUIT CURRENT RATING
SF	SQUARE FEET
SHT	SHEET
SPECS	SPECIFICATIONS
SPO	SHORE POWER OUTLET
SPV	SHORE POWER VAULT
ST	STREET
STD	STANDARD
STP	SHIELDED TWISTED PAIR
SW	SWITCH
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
TEL./TELE	TELEPHONE
TMH	TELEPHONE MANHOLE
T.O.D.	TOP OF DUCTBANK
T.O.M.	TOP OF MANHOLE
TPS	TWISTED SHIELDED PAIR
TRANSF,XFMR	TRANSFORMER
TYP	TYPICAL
UG	UNDERGROUND
UON	UNLESS OTHERWISE NOTED
V	VOLTS
VA	VOLT-AMPERES
VFD	VARIABLE FREQUENCY DRIVE
W	WATTS
W/	WITH
W/O	WITHOUT
WP	WEATHERPROOF
Z	IMPEDANCE

IF ABBREVIATIONS ARE NOT MENTIONED IN THIS TABLE AND ARE USED, REFER TO ANSI Y1.1, MILITARY STANDARD ABBREVIATIONS, AND OTHER STANDARD INDUSTRY CONVENTIONS.

SYMBOLS & LEGEND

SYMBOL	DESCRIPTION
	NEW LINEWORK THICKNESS
	EXISTING LINEWORK THICKNESS
	DEMOLISHED LINEWORK
	EXPOSED CONDUIT
	UNDERGROUND BARE COPPER GROUND WIRE
	UNDERGROUND CONDUIT OR BELOW WHARF
P	UTILITY UNDERGROUND CONDUIT (OR BELOW WHARF)
	3/4" CONDUIT, TICK MARKS INDICATE QUANTITY OF #12 AWG WIRES (UNLESS NOTED OTHERWISE, NO MARKS INDICATES 2#12 & 1#12 GND WIRES) - SMALL MARK DENOTES HOT WIRE - LARGE MARK DENOTES NEUTRAL WIRE - DIAGONAL DENOTES GROUND WIRE
A-1	BRANCH CIRCUIT HOME RUN TO PANELBOARD - CIRCUITS AT INDICATED
-	NOTE CALLOUT
- -	DETAIL CALLOUT - TOP DENOTES DETAIL NUMBER - BOTTOM DENOTES SHEET NUMBER FOR DETAIL SHOWN
- -	EQUIPMENT CALLOUT
- -	SECTION CALLOUT
-	FEEDER CALLOUT (NEW CONDUIT & NEW CONDUCTORS)
-	FEEDER CALLOUT (EXISTING CONDUIT & EXISTING CONDUCTORS)
-	FEEDER CALLOUT (EXISTING CONDUIT & NEW CONDUCTORS)
-	REVISION CALLOUT
	SWITCH
	FUSE
	TRANSFORMER
T	CONNECTION TO GROUND TRIANGLE PER PLANS
R	CONNECTION TO GROUND RING PER PLANS
	CIRCUIT BREAKER
	FUSED DISCONNECT SWITCH
	NON-FUSED DISCONNECT SWITCH
X y	WALL MOUNTED LIGHT FIXTURE - UPPER CASE LETTER INDICATES LIGHT FIXTURE CALLOUT. LOWER CASE LETTER INDICATES LIGHTING CONTROL ZONE.
	WALL MOUNTED LIGHT FIXTURE - WITH EMERGENCY BATTERY BACKUP
	SINGLE POLE SWITCH, DEVICE SHALL BE MOUNTED +48" MAX AND +36" MIN FROM THE CENTER OF DEVICE:
M	SWITCH MOTOR RATED
	JUNCTION BOX

SYMBOLS & LEGEND (CONTINUED)

RECESSED ON WALL SURFACE FLOOR OR CEILING	G=GFCI, WP=WEATHER PROOF G=GFCI, WP=WEATHER PROOF C=CEILING
	20A, 125V DUPLEX RECEPTACLE MOUNTED +15" AFF, UNLESS OTHERWISE NOTED
	20A, 125V QUAD RECEPTACLE MOUNTED +15" AFF, UNLESS OTHERWISE NOTED
	20A, 125V DUPLEX RECEPTACLE RECEPTACLE ON DEDICATED CIRCUIT
	20A, 125V CONTROLLED DUPLEX RECEPTACLE
	20A, 125V QUAD RECEPTACLE (HALF) CONTROLLED RECEPTACLE
	SPECIAL RECEPTACLE REFER TO DRAWINGS FOR NEMA CONFIGURATION
	JUNCTION BOX

SYMBOLS & LEGEND (CONTINUED)

	VOLTAGE TRANSFORMER (DRAW OUT TYPE)
K1	KIRK KEY/INTERLOCK ASSEMBLY
	MULTI-RATIO HIGH ACCURACY BUSHING MOUNTED CURRENT TRANSFORMER
	SHORE POWER OUTLET (S.P.O.) SOCKET
NGR	NEUTRAL GROUNDING RESISTOR BANK
ES	ETHERNET SWITCH
EPB	EMERGENCY PUSH BUTTON
PLC	PROGRAMMABLE LOGIC CONTROLLER
52	DRAWOUT BREAKER
86	86 LOCK OUT RELAY
86G	FAIL SAFE RELAY FOR HEALTH CHECK
R	RELAY
CC	CONTINUITY CHECK RELAY
GR	GROUND RELAY
EASERGY P3M32	SHNEIDER ELECTRIC PROTECTION AND MONITORING RELAY
POWER LOGIC	SCHNEIDER ELECTRIC ENERGY AND POWER MONITORING & MANAGEMENT SYSTEMS

NO.	REVISION:	DATE:

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DESIGNED BY: TIMOTHY HADDADIAN, PE
REVIEWED BY: VAHIK HADDADIAN, PE

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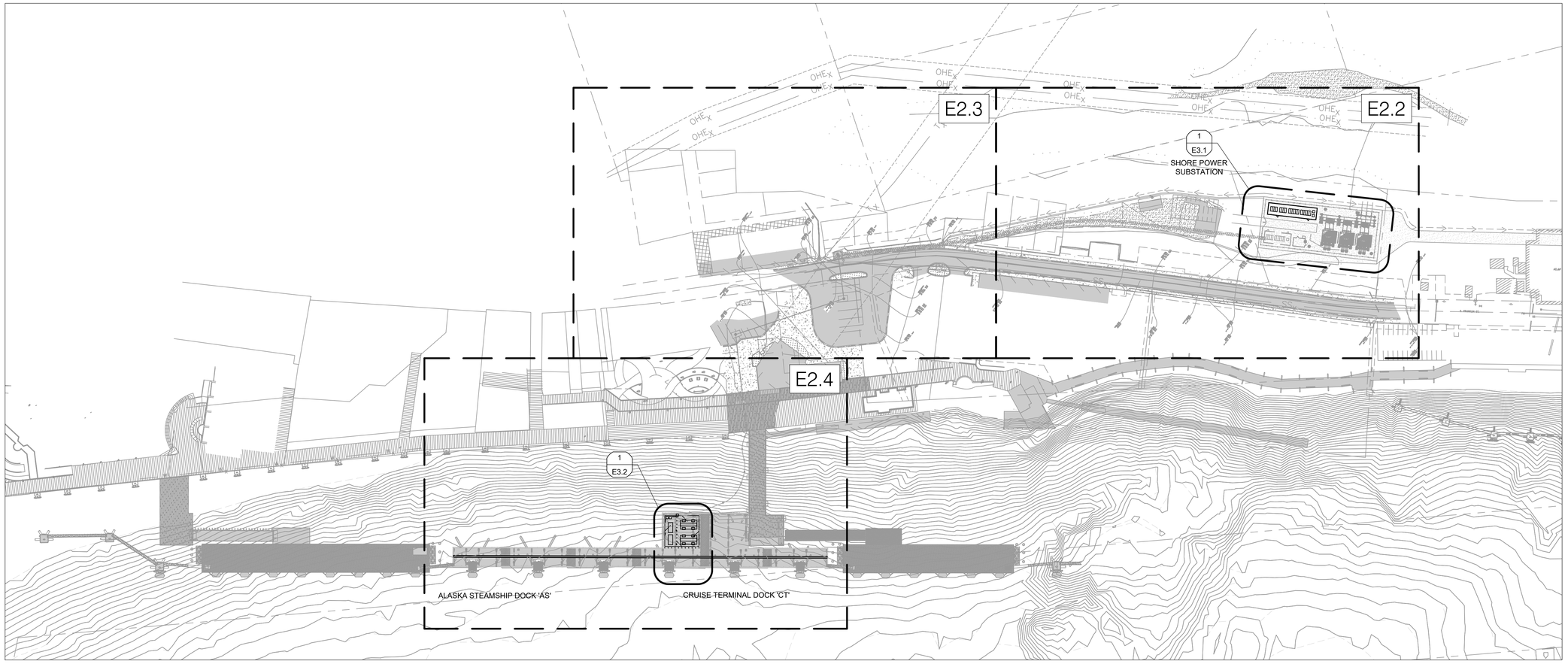
SHEET:
ELECTRICAL GENERAL NOTES, SYMBOLS, AND ABBREVIATIONS

ADDRESS: 510 S FRANKLIN STREET, JUNEAU, AK 99801

DATE: 07/21/2026

DRAWING NUMBER: **E0.1**

J036



1 OVERALL ELECTRICAL KEY PLAN

SCALE: 1" = 100'

SCALE: 1" = 100'
0 100

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CRUISE SHIP DOCK ELECTRIFICATION

SHEET: **OVERALL ELECTRICAL KEY PLAN**

ADDRESS: 510 S FRANKLIN STREET, JUNEAU, AK 99801

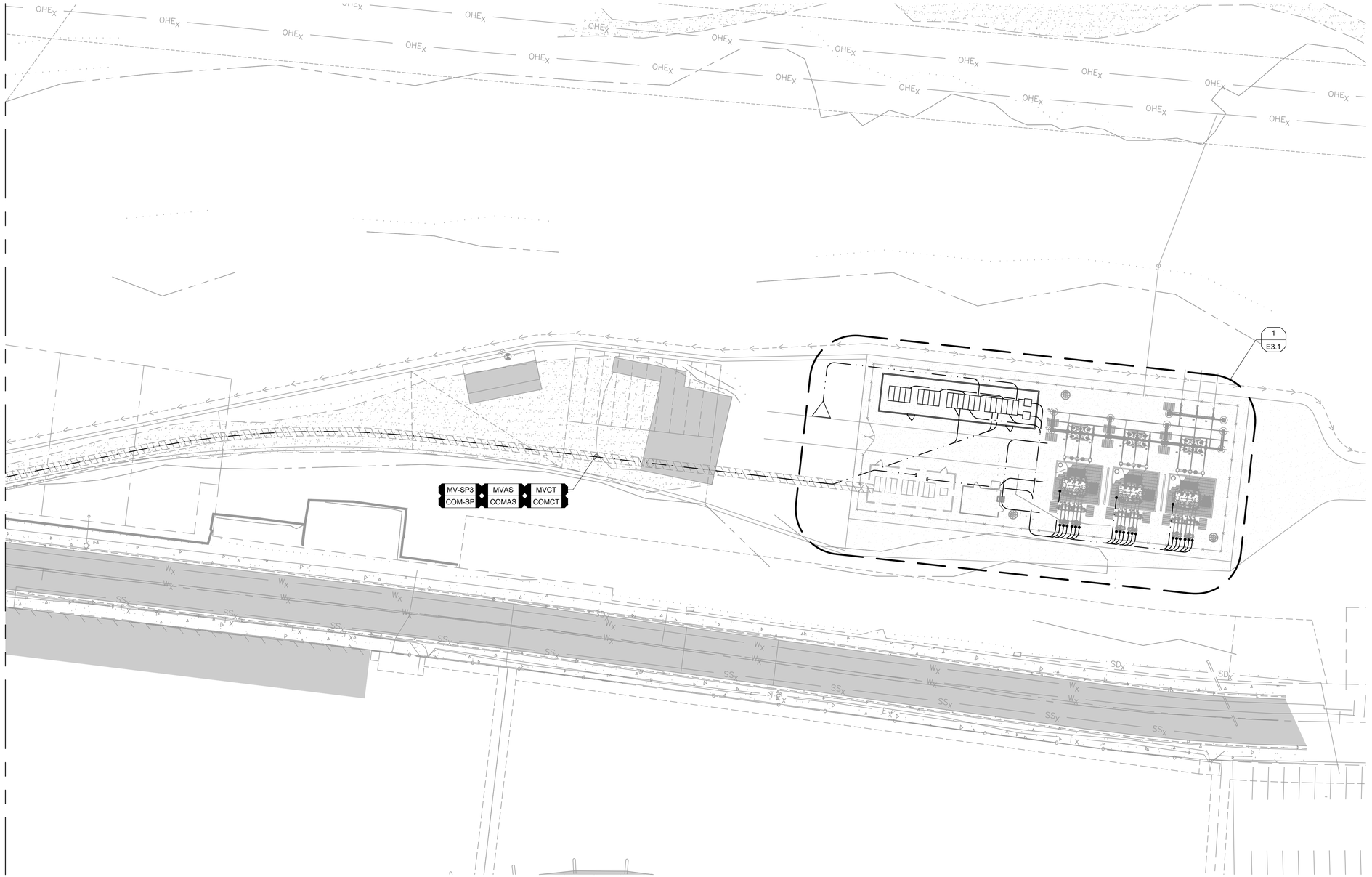
DATE: 07/21/2026

DRAWING NUMBER: **E2.1**

J036

GENERAL NOTES

1. SEE SHEET E5.1 FOR FEEDER SCHEDULE.



1 PARTIAL ELECTRICAL SITE PLAN

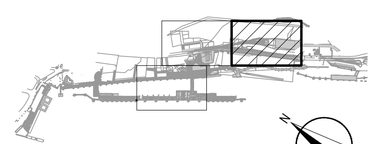
SCALE: 1" = 30'

SCALE: 1" = 30'
0 30

KEYPLAN

LEGEND

AREA



NO.	REVISION:	DATE:

PRIME CONSULTANT:
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DESIGNED BY: TIMOTHY HADDADIAN, PE

REVIEWED BY: VAHIK HADDADIAN, PE

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SHEET: **PARTIAL ELECTRICAL SITE PLAN**

ADDRESS: 510 S FRANKLIN STREET, JUNEAU, AK 99801

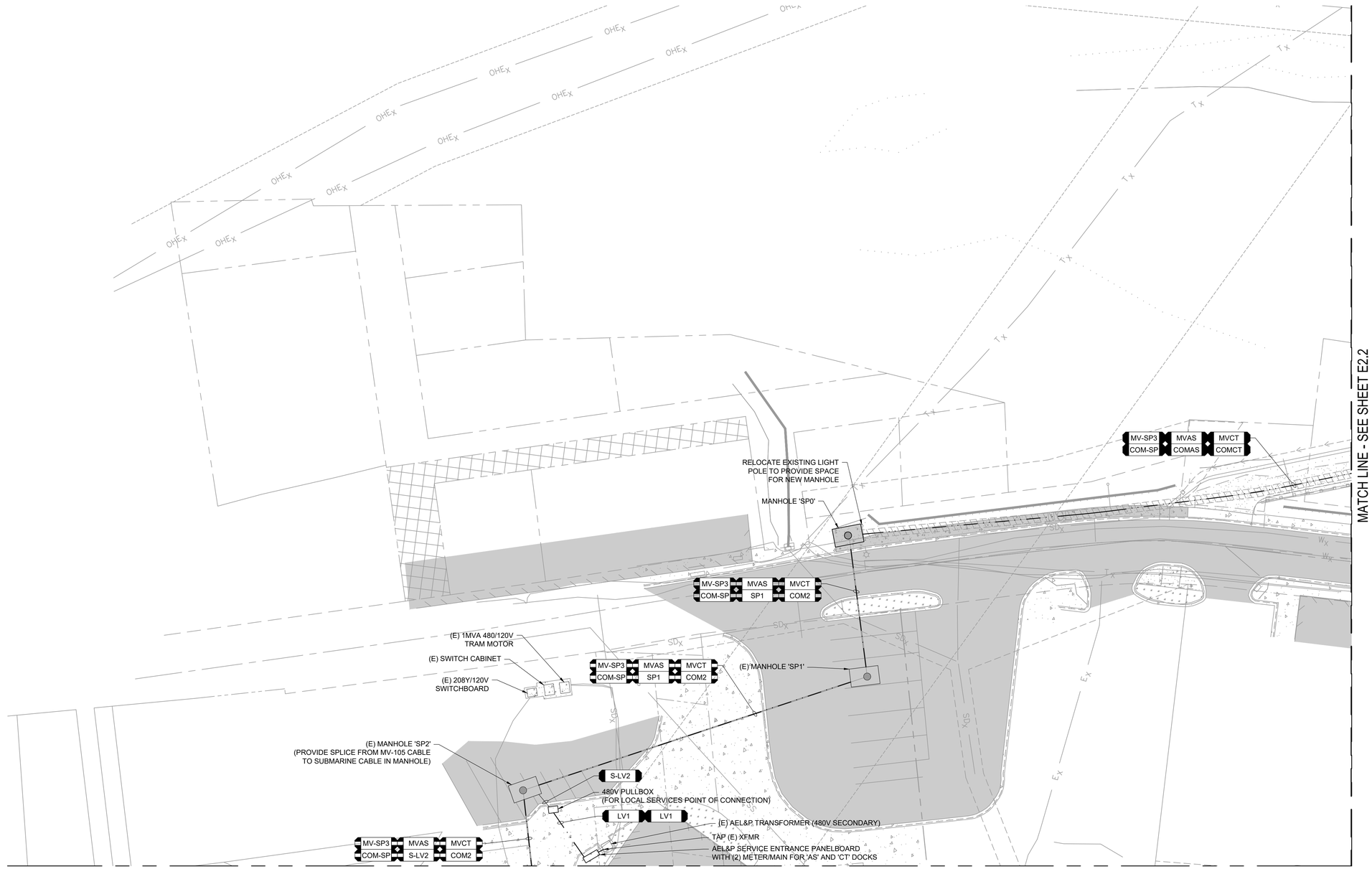
DATE: 07/21/2026

DRAWING NUMBER: **E2.2**

J036

GENERAL NOTES

1. SEE SHEET E5.1 FOR FEEDER SCHEDULE.



1 PARTIAL ELECTRICAL SITE PLAN

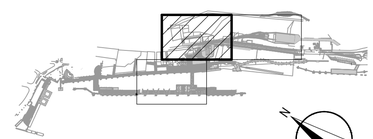
SCALE: 1" = 30'

SCALE: 1" = 30'
0 30

KEYPLAN

LEGEND

AREA



NO.	REVISION:	DATE:

PRIME CONSULTANT:
H3 ENGINEERING SOLUTIONS
thaddadian@h3solutions.co
(626) 319-3476

DESIGNED BY: TIMOTHY HADDADIAN, PE

REVIEWED BY: VAHIK HADDADIAN, PE

ISSUED FOR: 35% DESIGN DEVELOPMENT — DATE: 07/21/2026

SUB CONSULTANT:

PROJECT: PORT OF JUNEAU
CRUISE SHIP DOCK ELECTRIFICATION

SHEET: **PARTIAL ELECTRICAL SITE PLAN**

ADDRESS: 510 S FRANKLIN STREET, JUNEAU, AK 99801

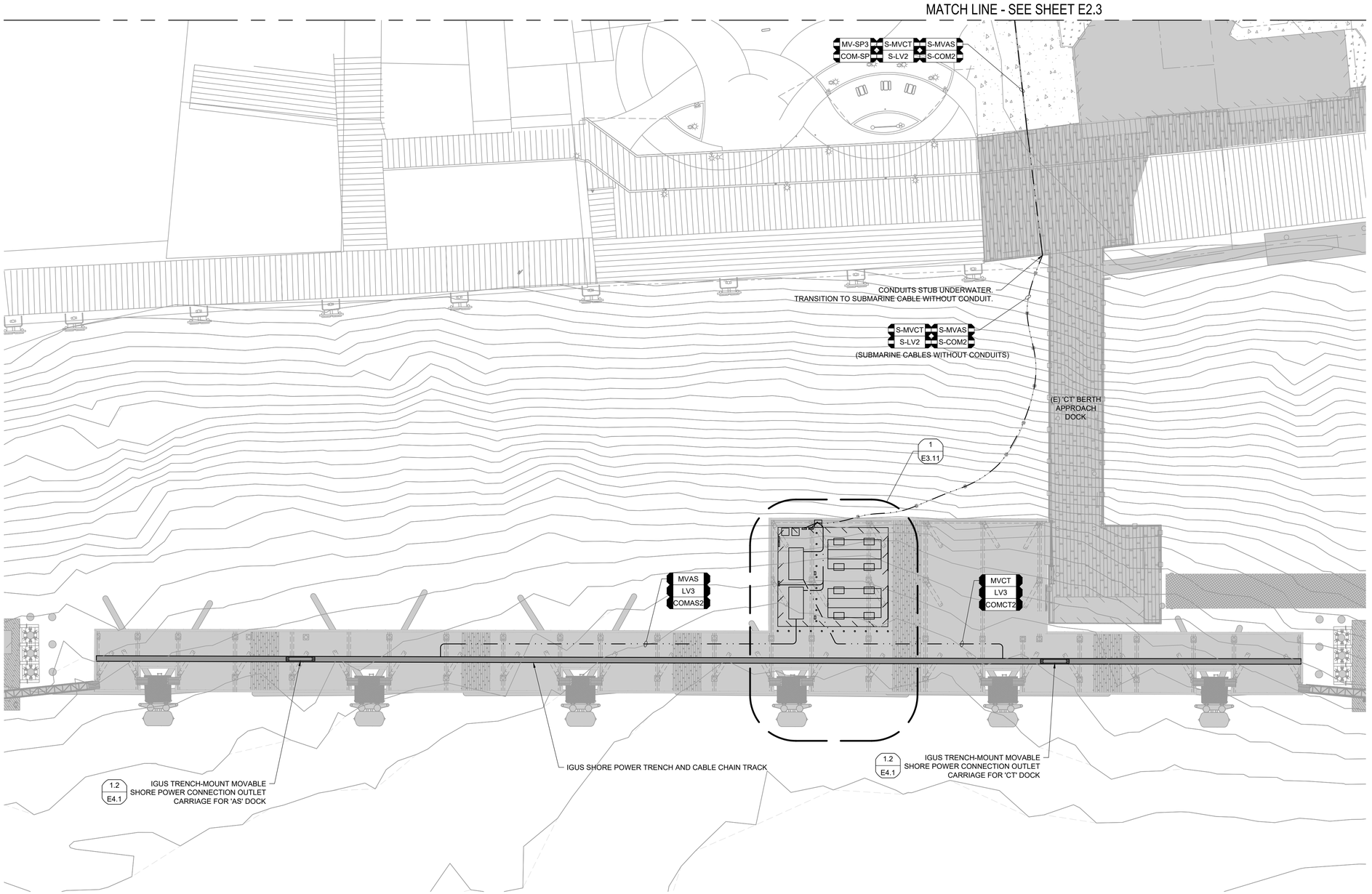
DATE: 07/21/2026

DRAWING NUMBER: **E2.3**

J036

GENERAL NOTES

1. SEE SHEET E5.1 FOR FEEDER SCHEDULE.



1 PARTIAL ELECTRICAL SITE PLAN

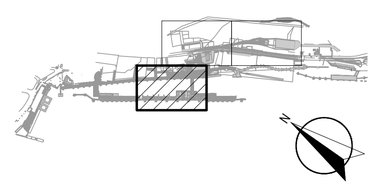
SCALE: 1" = 30'

SCALE: 1" = 30'
0 30

KEYPLAN

LEGEND

AREA



NO.	REVISION:	DATE:

PRIME CONSULTANT:
H3 ENGINEERING SOLUTIONS
thaddadian@h3solutions.co
(626) 319-3476

DESIGNED BY: TIMOTHY HADDADIAN, PE

REVIEWED BY: VAHIK HADDADIAN, PE

ISSUED FOR: 35% DESIGN DEVELOPMENT — DATE: 07/21/2026

SUB CONSULTANT:

PROJECT: PORT OF JUNEAU
CRUISE SHIP DOCK ELECTRIFICATION

SHEET: **PARTIAL ELECTRICAL SITE PLAN**

ADDRESS: 510 S FRANKLIN STREET, JUNEAU, AK 99801

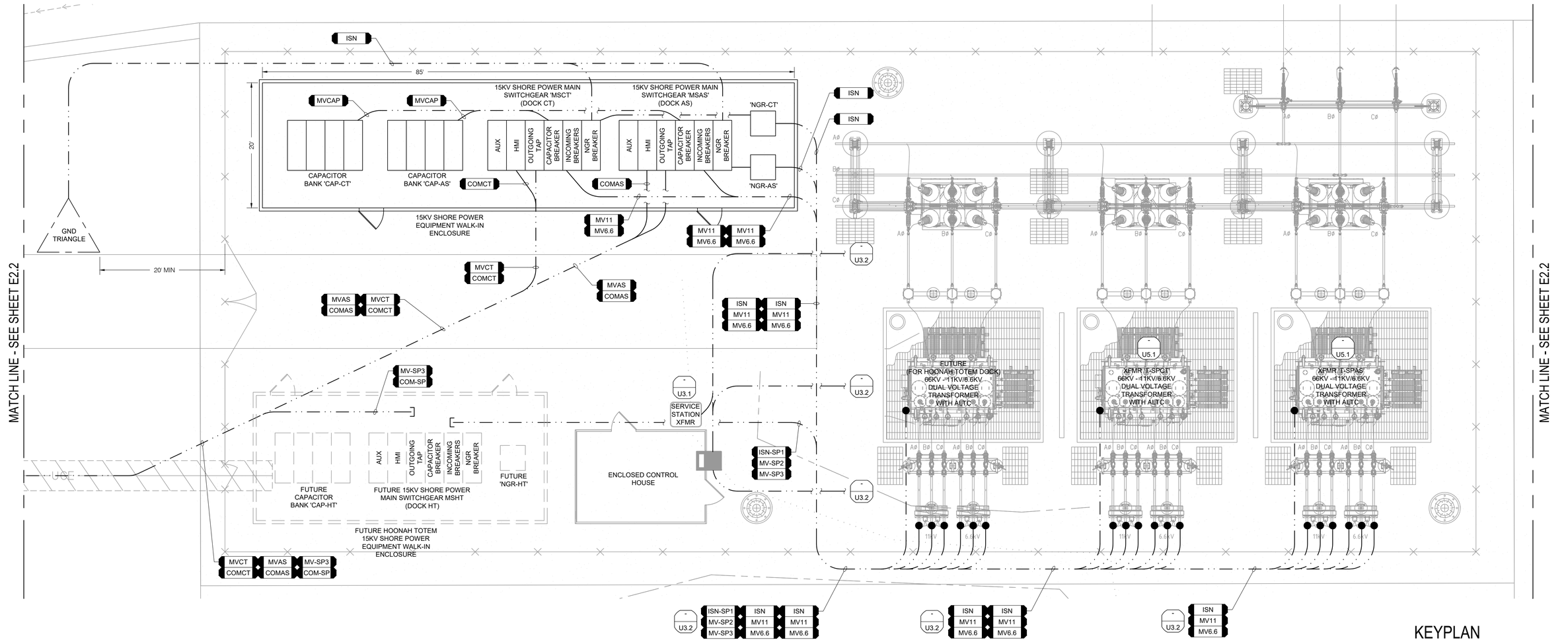
DATE: 07/21/2026

DRAWING NUMBER: **E2.4**

J036

GENERAL NOTES

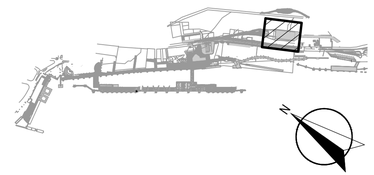
1. SEE SHEET E5.1 FOR FEEDER SCHEDULE.
2. REFER TO SHEETS U1.1 AND U5.1 FOR 66KV ELECTRICAL EQUIPMENT AND TRANSMISSION LINES.



KEYPLAN

LEGEND

AREA



1 ENLARGED POWER PLAN - SHORE POWER SUBSTATION

SCALE: 1/8" = 1'-0"

SCALE: 1/8" = 1'-0"
0 8

NO.	REVISION:	DATE:

PRIME CONSULTANT:
H3 ENGINEERING SOLUTIONS
thaddadian@h3solutions.co
(626) 319-3476

DESIGNED BY: TIMOTHY HADDADIAN, PE
REVIEWED BY: VAHIK HADDADIAN, PE

ISSUED FOR: 35% DESIGN DEVELOPMENT — DATE: 07/21/2026

SUB CONSULTANT:

PROJECT: PORT OF JUNEAU
CRUISE SHIP DOCK ELECTRIFICATION

SHEET: **ENLARGED POWER PLAN - SHORE POWER SUBSTATION**

ADDRESS: 510 S FRANKLIN STREET, JUNEAU, AK 99801

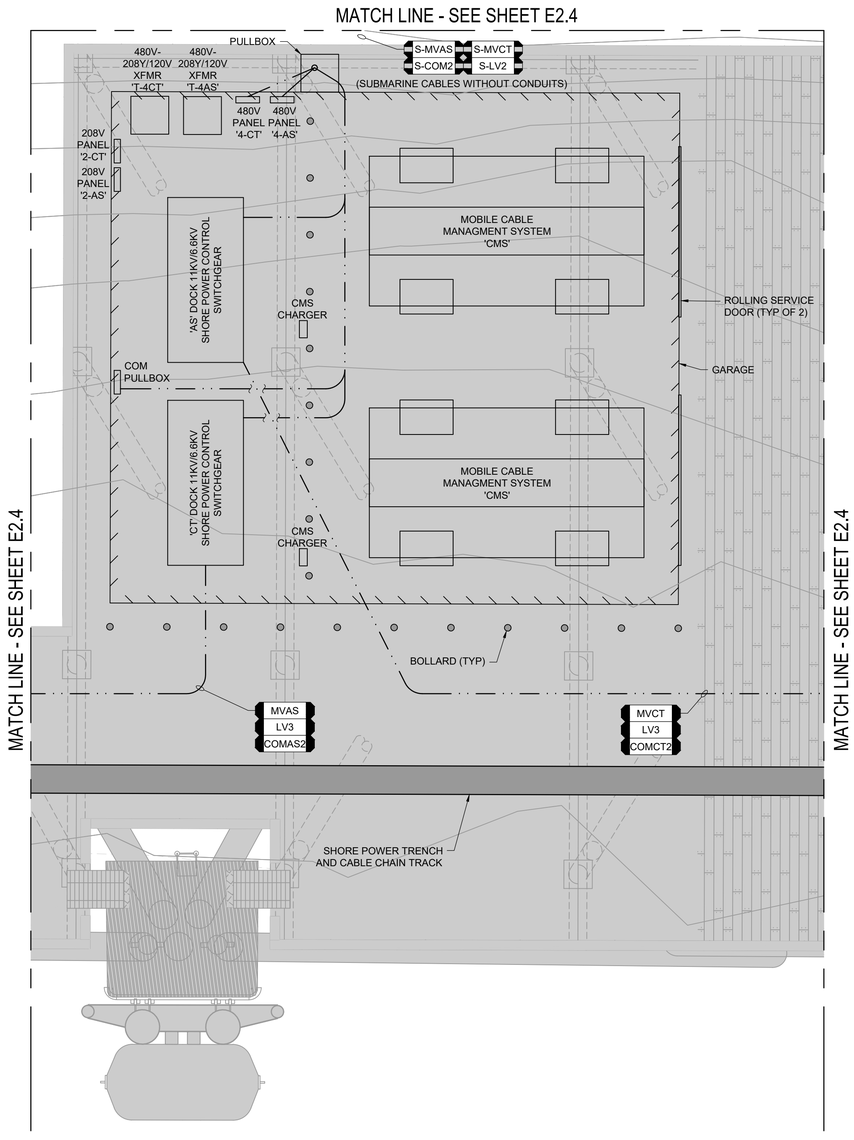
DATE: 07/21/2026

DRAWING NUMBER: **E3.1**

J036

GENERAL NOTES

1. SEE SHEET E5.1 FOR FEEDER SCHEDULE.



1 ENLARGED POWER PLAN - SHORE POWER DOCK GARAGE

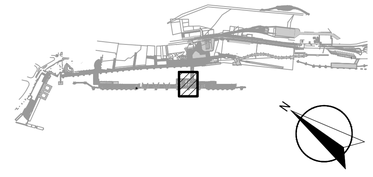
SCALE: 1/8" = 1'-0"

SCALE: 1/8" = 1'-0"
0 8

KEYPLAN

LEGEND

AREA



NO.	REVISION:	DATE:

PRIME CONSULTANT:
H3 ENGINEERING SOLUTIONS
thaddadian@h3solutions.co
(626) 319-3476

DESIGNED BY: TIMOTHY HADDADIAN, PE
REVIEWED BY: VAHIK HADDADIAN, PE

ISSUED FOR:	DATE:
35% DESIGN DEVELOPMENT	07/21/2026

SUB CONSULTANT:

PROJECT: PORT OF JUNEAU
CRUISE SHIP DOCK ELECTRIFICATION

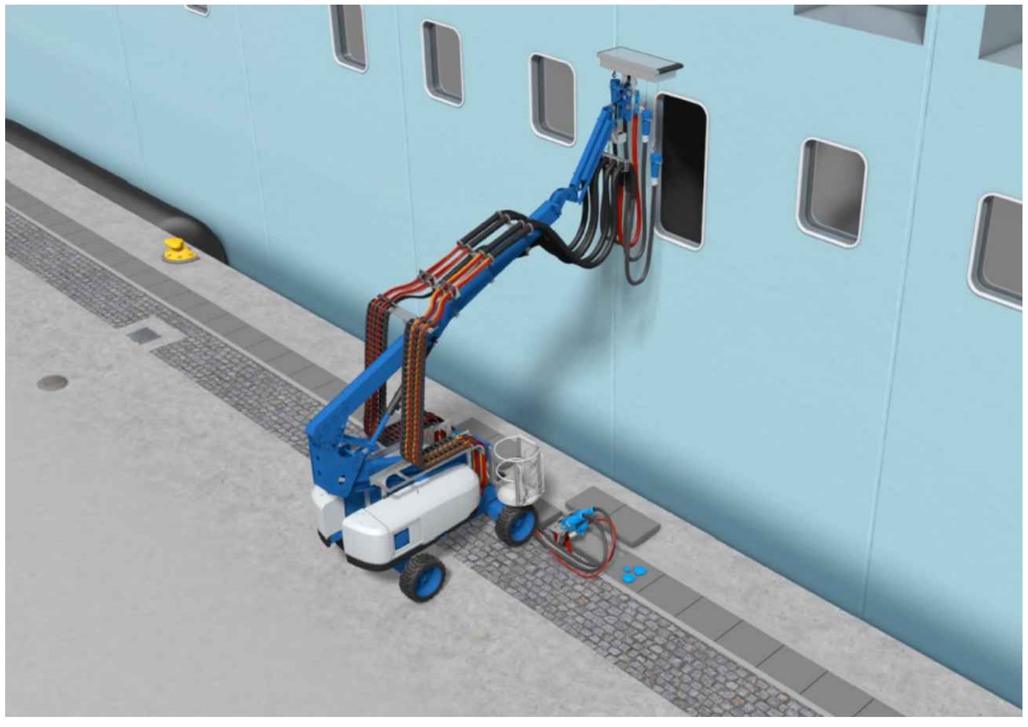
SHEET: **ENLARGED POWER PLAN - SHORE POWER DOCK GARAGE**

ADDRESS: 510 S FRANKLIN STREET, JUNEAU, AK 99801

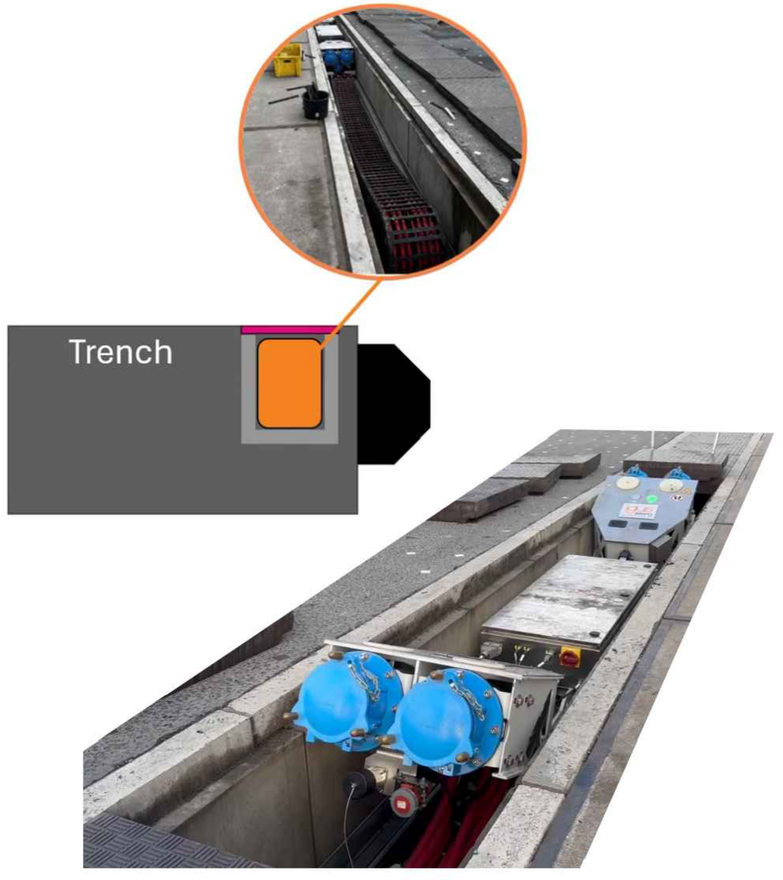
DATE: 07/21/2026

DRAWING NUMBER: **E3.11**

J036



2 SHORE POWER CONNECTION TO SHIP WITH CMS



1 MOVEABLE SHORE POWER OUTLET IN TRENCH

NO.	REVISION:	DATE:

PRIME CONSULTANT:
H3 ENGINEERING SOLUTIONS
thaddadian@h3solutions.co
(626) 319-3476

DESIGNED BY: TIMOTHY HADDADIAN, PE
REVIEWED BY: VAHIK HADDADIAN, PE

ISSUED FOR: 35% DESIGN DEVELOPMENT — DATE: 07/21/2026

SUB CONSULTANT:

PROJECT: PORT OF JUNEAU
CRUISE SHIP DOCK ELECTRIFICATION

SHEET: SHORE POWER INTERFACE 'IMSPO' ELEVATIONS

ADDRESS: 510 S FRANKLIN STREET, JUNEAU, AK 99801

DATE: 07/21/2026

DRAWING NUMBER: E4.1

J036

FEEDER SCHEDULE (NEW CONDUIT & NEW CONDUCTORS)

SYMBOLS	VOLTAGE	RATING	CONDUIT	SETS OF CONDUCTORS PER CONDUIT	NOTES
ISN	15KV	15KV, TYPE MV-105, 133% INSULATION	(1) 2"C	1#500KCMIL	ISOLATED & INSULATED NEUTRAL CONDUCTOR
ISN-SP1	-	-	(1) 2"C	-	SPARE CONDUIT WITH PULL STRING
MVAS	15KV	15KV, TYPE MV-105, 133% INSULATION	(3) 5"C	4#500KCMIL & 1#4/0GND	-
S-MVAS	15KV	15KV, TYPE MV-105, 133% INSULATION	(3) 5"C	4#500KCMIL & 1#4/0GND	SUBMARINE CABLE
MVCT	15KV	15KV, TYPE MV-105, 133% INSULATION	(3) 5"C	4#500KCMIL & 1#4/0GND	-
S-MVCT	15KV	15KV, TYPE MV-105, 133% INSULATION	(3) 5"C	4#500KCMIL & 1#4/0GND	SUBMARINE CABLE
MV-CAP	15KV	15KV, TYPE MV-105, 133% INSULATION	(2) 5"C	4#500KCMIL & 1#4/0GND	-
MV11	11KV	15KV, TYPE MV-105, 133% INSULATION	(2) 5"C	4#500KCMIL & 1#2/0GND	-
MV6.6	6.6KV	5/8KV, TYPE MV-105, 133/100% INSULATION	(3) 5"C	4#500KCMIL & 1#4/0GND	-
MV-SP2	-	-	(2) 5"C	PULL STRING	SPARE
MV-SP3	-	-	(3) 5"C	PULL STRING	SPARE
LV1	480V	1000V	6"C	4#6 & 1#10GND	-
S-LV2	480V	1000V	6"C	8#6 & 2#10GND	SUBMARINE CABLE
LV3	480V	1000V	1"C	4#6 & 2#10GND	POWER TO IMSPO
COMAS2	-	-	2"C	FIBER OPTIC CABLES	COMMUNICATION CABLES
COMCT2	-	-	2"C	FIBER OPTIC CABLES	COMMUNICATION CABLES
COMAS	-	-	5"C	FIBER OPTIC CABLES	COMMUNICATION CABLES
COMCT	-	-	5"C	FIBER OPTIC CABLES	COMMUNICATION CABLES
COM2	-	-	(2) 5"C	FIBER OPTIC CABLES	COMMUNICATION CABLES
COM-SP	-	-	5"C	PULL STRING	SPARE FOR COMMUNICATION CABLES

FEEDER SCHEDULE (EXISTING CONDUIT & NEW CONDUCTORS)

SYMBOLS	VOLTAGE	RATING	CONDUIT	SETS OF CONDUCTORS PER CONDUIT	NOTES
MVAS	15KV	15KV, TYPE MV-105, 133% INSULATION	(E) (3) 6"C	4#500KCMIL & 1#2/0GND	-
S-MVAS	15KV	15KV, TYPE MV-105, 133% INSULATION	(E) (3) 6"C	4#500KCMIL & 1#2/0GND	SUBMARINE CABLE
MVCT	15KV	15KV, TYPE MV-105, 133% INSULATION	(E) (3) 6"C	4#500KCMIL & 1#4/0GND	-
S-MVCT	15KV	15KV, TYPE MV-105, 133% INSULATION	(E) (3) 6"C	4#500KCMIL & 1#4/0GND	SUBMARINE CABLE
MV-SP3	-	-	(E) (3) 6"C	PULL STRING	SPARE
S-LV2	480V	1000V	(E) 6"C	8#6 & 2#10GND	SUBMARINE CABLE
SP1	-	-	(E) (1) 6"C	PULL STRING	SPARE
COM2	-	-	(E) (2) 6"C	-	COMMUNICATION CABLES
S-COM2	-	-	(E) (2) 6"C	-	SUBMARINE CABLE
COM-SP	-	-	(E) 6"C	PULL STRING	SPARE FOR COMMUNICATION CABLES

NO.	REVISION:	DATE:

PRIME CONSULTANT:
H3 ENGINEERING SOLUTIONS
thaddadian@h3solutions.co
(626) 319-3476

DESIGNED BY: TIMOTHY HADDADIAN, PE
REVIEWED BY: VAHIK HADDADIAN, PE

ISSUED FOR: 35% DESIGN DEVELOPMENT — DATE: 07/21/2026

SUB CONSULTANT:

PROJECT: PORT OF JUNEAU
CRUISE SHIP DOCK ELECTRIFICATION

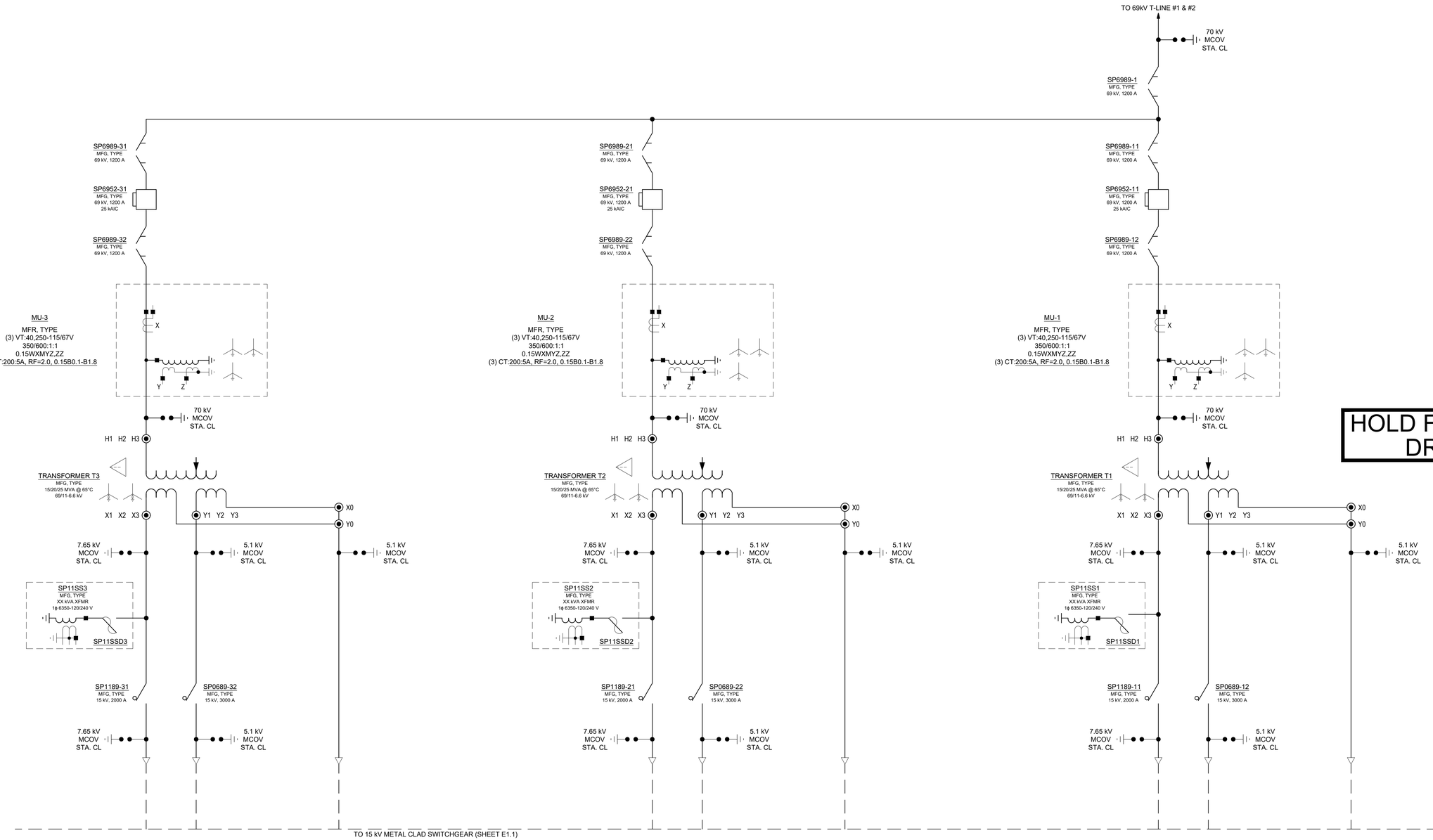
SHEET: **FEEDER SCHEDULES**

ADDRESS: 510 S FRANKLIN STREET, JUNEAU, AK 99801

DATE: 07/21/2026

DRAWING NUMBER: **E5.1**

J036



HOLD FOR VENDOR DRAWINGS

NO.	REVISION:	DATE:

PRIME CONSULTANT:
H3 ENGINEERING SOLUTIONS
thaddadian@h3solutions.co
(626) 319-3476

DESIGNED BY: JESSE R. RECTOR, ECI
REVIEWED BY: OMAR J. AVENDANO, ECI

ISSUED FOR: 35% DESIGN DEVELOPMENT — DATE: 07/21/2026

SUB CONSULTANT: ECI ELECTRICAL CONSULTANTS, INC. "Engineering with Distinction" BILLINGS, MONTANA

AEL&P since 1893 ALASKA ELECTRIC LIGHT & POWER CO.

CITY & BOROUGH OF JUNEAU DOCKS & HARBORS

PROJECT: PORT OF JUNEAU
CRUISE SHIP DOCK ELECTRIFICATION

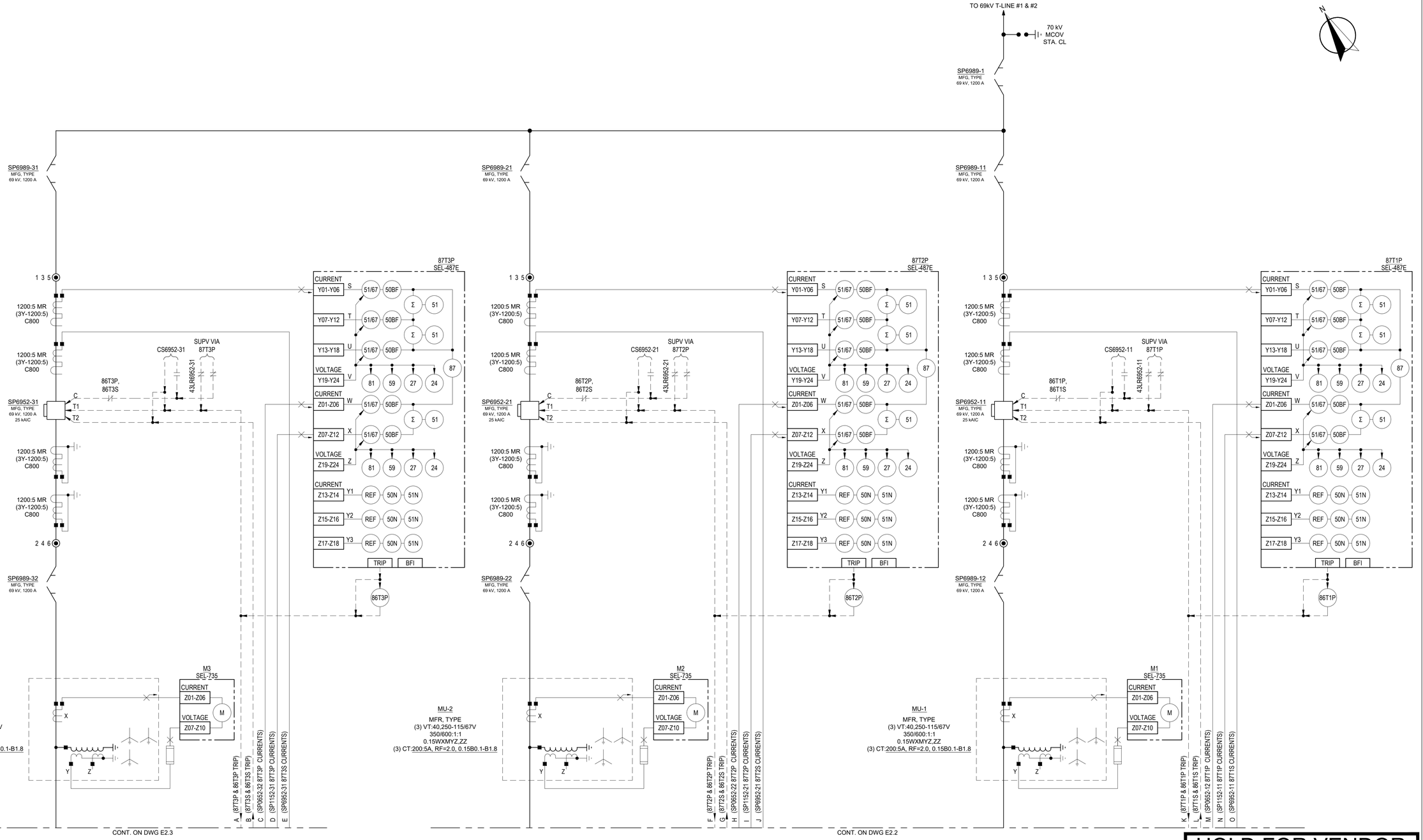
SHEET: SIMPLIFIED SINGLE LINE DIAGRAM

ADDRESS: 510 S FRANKLIN STREET, JUNEAU, AK 99801

DATE: 07/21/2026

DRAWING NUMBER: U1.1

J036



HOLD FOR VENDOR DRAWINGS

NO.	REVISION:	DATE:

PRIME CONSULTANT:
H3 ENGINEERING SOLUTIONS
thaddadian@h3solutions.co
(626) 319-3476

DESIGNED BY: JESSE R. RECTOR, ECI
REVIEWED BY: OMAR J. AVENDANO, ECI

ISSUED FOR: 35% DESIGN DEVELOPMENT — DATE: 07/21/2026

SUB CONSULTANT:
"Engineering with Distinction" ECI ELECTRICAL CONSULTANTS, INC. BILLINGS, MONTANA

AEL&P since 1893 ALASKA ELECTRIC LIGHT & POWER CO.

CITY & BOROUGH OF JUNEAU DOCKS & HARBORS

PROJECT: PORT OF JUNEAU
CRUISE SHIP DOCK ELECTRIFICATION

SHEET: RELAYING SINGLE LINE DIAGRAM (SH.1)

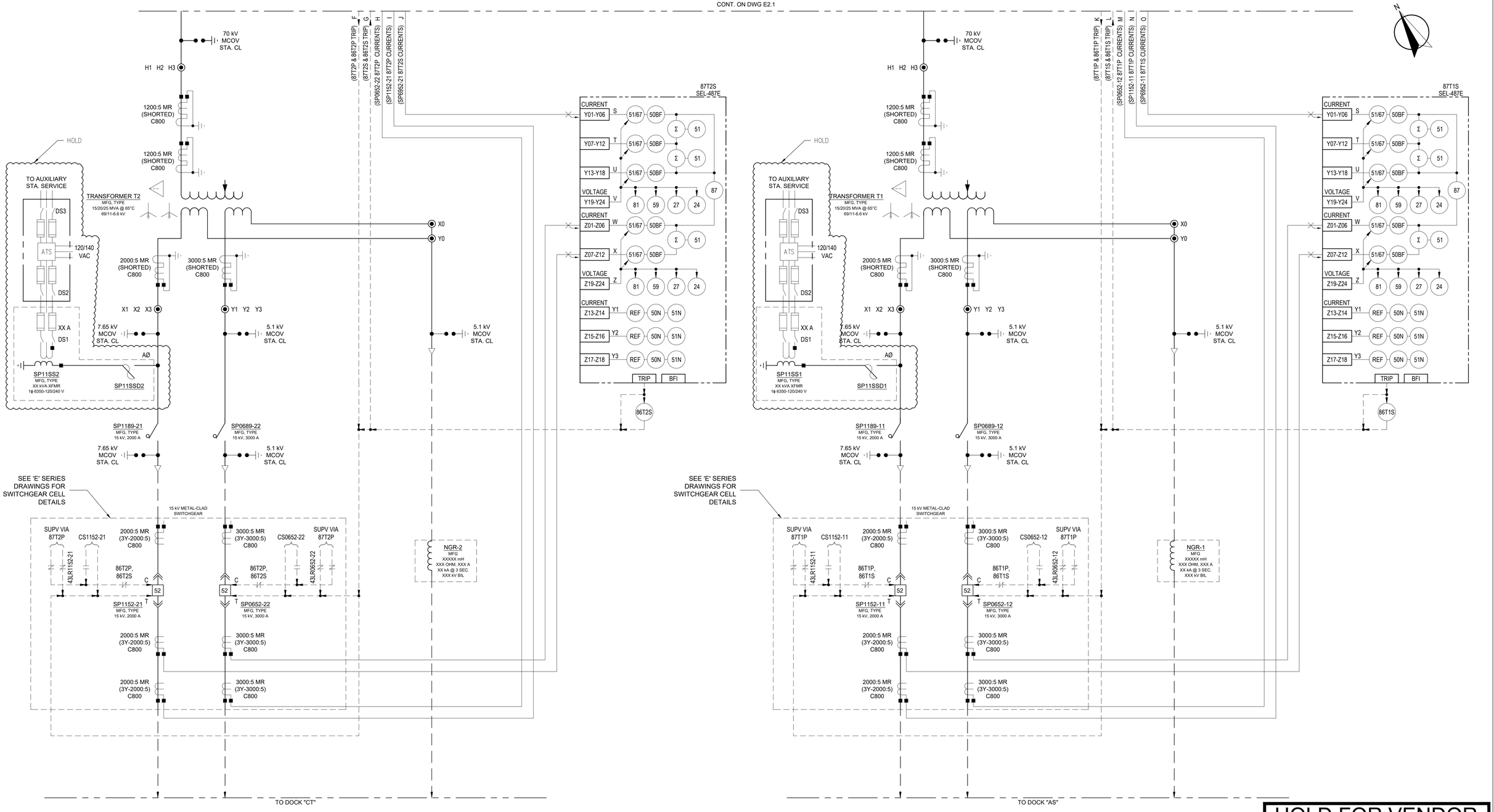
ADDRESS: 510 S FRANKLIN STREET, JUNEAU, AK 99801

DATE: 07/21/2026

DRAWING NUMBER: U2.1

J036

CONT. ON DWG E2.1



HOLD FOR VENDOR DRAWINGS

NO.	REVISION:	DATE:

PRIME CONSULTANT:
H3 ENGINEERING SOLUTIONS
thaddadian@h3solutions.co
(626) 319-3476

DESIGNED BY: JESSE R. RECTOR, ECI

REVIEWED BY: OMAR J. AVENDANO, ECI

ISSUED FOR: 35% DESIGN DEVELOPMENT — DATE: 07/21/2026

SUB CONSULTANT:
"Engineering with Distinction" ECI ELECTRICAL CONSULTANTS, INC. MILWAUKEE, WISCONSIN

AEL&P since 1893 ALASKA ELECTRIC LIGHT & POWER CO.

CITY & BOROUGH OF JUNEAU DOCKS & HARBORS

PROJECT: PORT OF JUNEAU
CRUISE SHIP DOCK ELECTRIFICATION

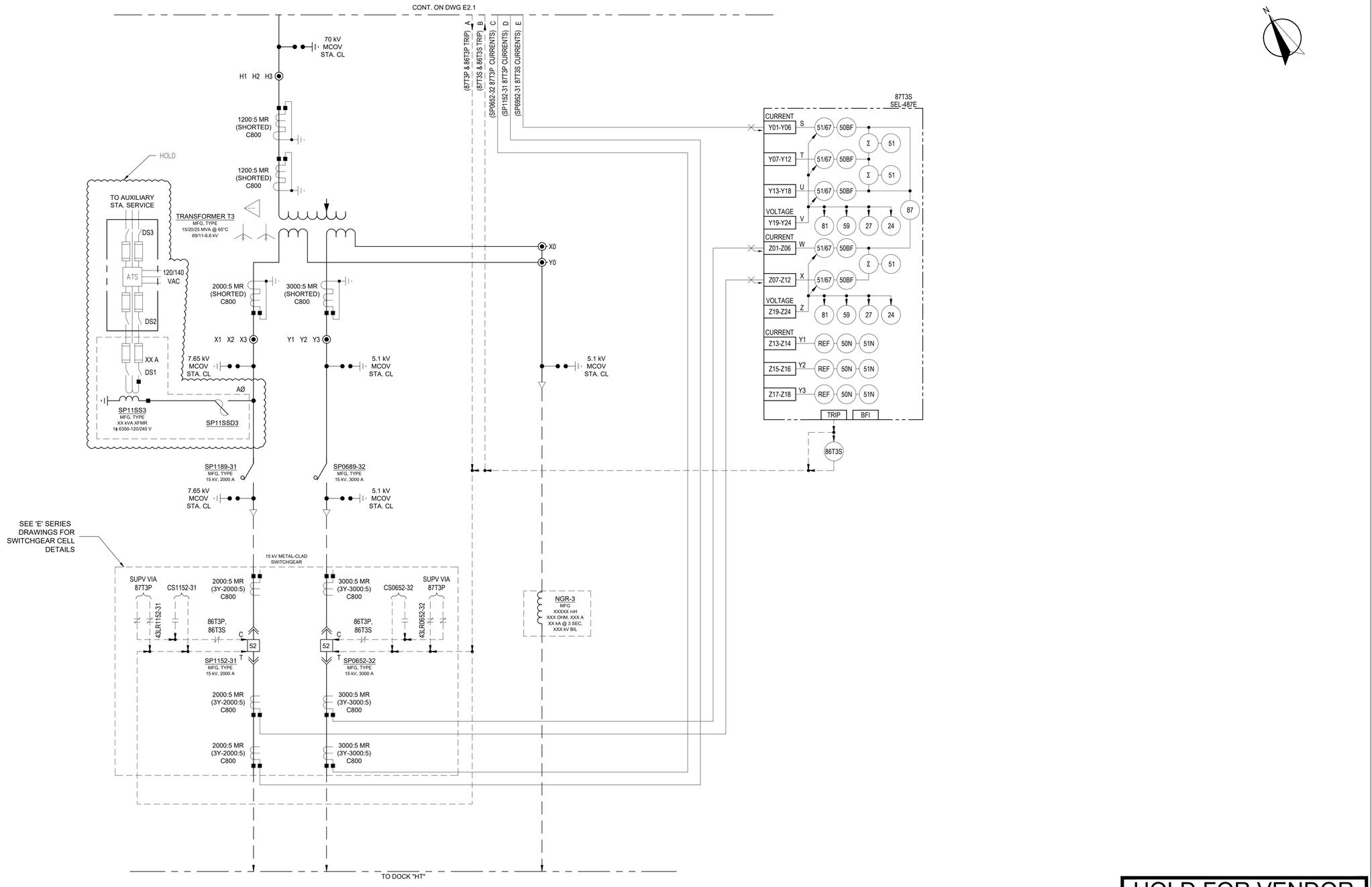
SHEET: RELAYING SINGLE LINE DIAGRAM (SH.2)

ADDRESS: 510 S FRANKLIN STREET, JUNEAU, AK 99801

DATE: 07/21/2026

DRAWING NUMBER: U2.2

J036



HOLD FOR VENDOR DRAWINGS

NO.	REVISION:	DATE:

PRIME CONSULTANT:
H3 ENGINEERING SOLUTIONS
thaddadian@h3solutions.co
(626) 319-3476

DESIGNED BY: JESSE R. RECTOR, ECI
REVIEWED BY: OMAR J. AVENDANO, ECI

ISSUED FOR: 35% DESIGN DEVELOPMENT — DATE: 07/21/2026

SUB CONSULTANT:
"Engineering with Distinction" ECI ELECTRICAL CONSULTANTS, INC. BILLINGS, MONTANA

AEL&P since 1893 ALASKA ELECTRIC LIGHT & POWER CO.

CITY & BOROUGH OF JUNEAU DOCKS & HARBORS

PROJECT: PORT OF JUNEAU
CRUISE SHIP DOCK ELECTRIFICATION

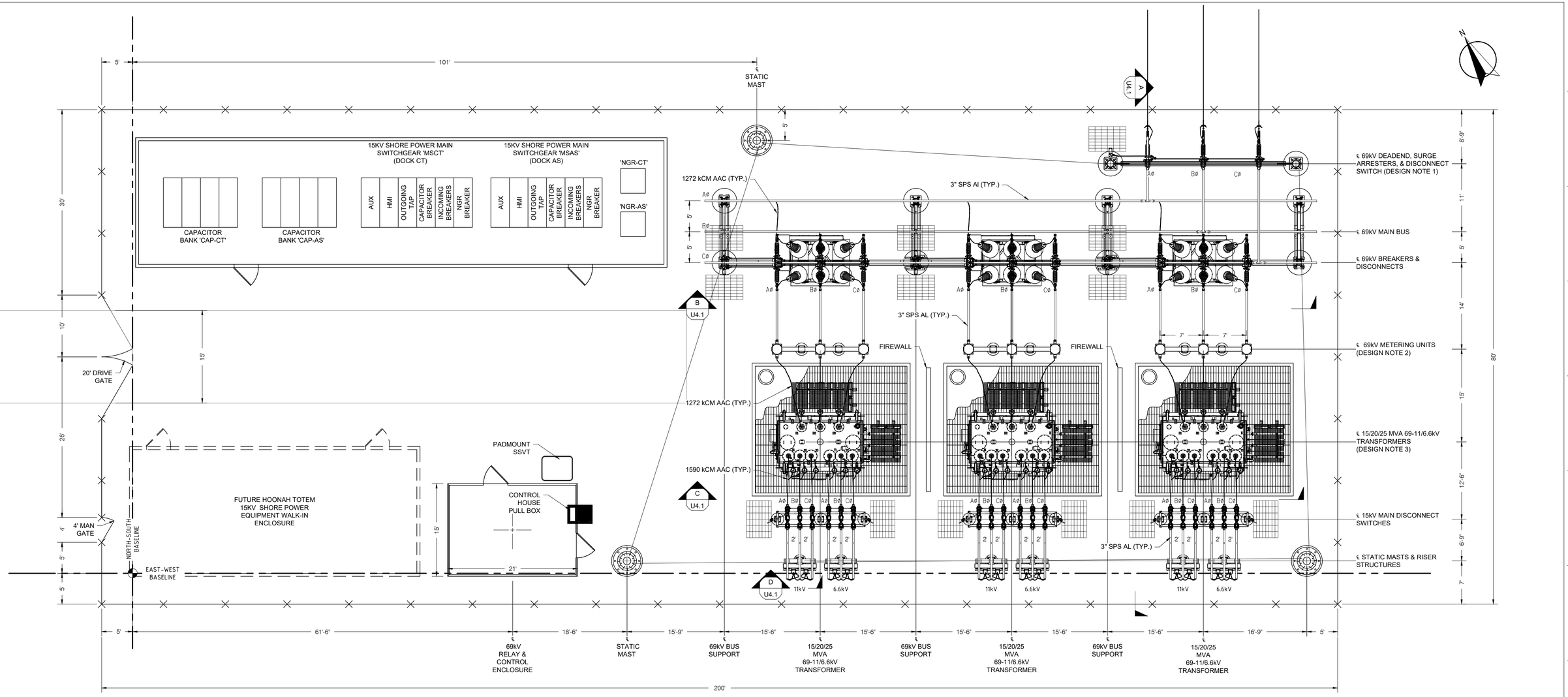
SHEET: RELAYING SINGLE LINE DIAGRAM (SH.3)

ADDRESS: 510 S FRANKLIN STREET, JUNEAU, AK 99801

DATE: 07/21/2026

DRAWING NUMBER: U2.3

J036



SCALE: 1/8" = 1'-0"

ELECTRICAL DESIGN CRITERIA

69 kV CLEARANCE: (350 kV BIL)

LIVE PARTS: MIN ø–G=25"
MIN ø–ø=31"

TO GRADE: 11'–0" (BUS)
23'–0" (DRIVEWAY)

15 kV CLEARANCE: (110 kV BIL)

LIVE PARTS: MIN ø–G=7"
MIN ø–ø=12"

TO GRADE: 9'–0" (BUS)
21'–0" (DRIVEWAY)

DESIGN NOTES

1. THE DEAD-END STRUCTURE NEEDS TO BE RE-LOCATED TO THE MAIN BUS END IN THE EAST SIDE FOR THE LOW PROFILE LINE SWITCH CONNECTED TO THE MAIN BUS. A MONOPOLE 90 DEGREE TRANSITION FROM EAST SIDE TO THE NORTH SIDE TO BE ADDED IN THE EAST AREA OUTSIDE FENCE BY THE TRANSMISSION LINE DESIGN. TO BE DISCUSSED IN THE NEXT DESIGN STAGE.
2. TO ADD ONE SET OF REVERNUE CLASS BUSHING CTS ON THE PRIMARY SIDE OF TRANSFORMER AND REVERNUE CLASS BUS VTS ON THE MAIN BUS FOR THE METERING PURPOSE ARE SUGGESTED INSTEAD OF COMBINED METERING UNIT DUE TO LIMITED FOOT PRINT OF SUBSTATION. TO BE DISCUSSED IN THE NEXT DESIGN STAGE.
3. X0 & Y0 CABLE RISER STRUCTURES PENDING FOR FINAL TRANSFORMER VENDOR'S DRAWINGS.

NO.	REVISION:	DATE:

PRIME CONSULTANT:
H3 ENGINEERING SOLUTIONS
thaddadian@h3solutions.co
(626) 319-3476

DESIGNED BY: KIERAN J. AMES, ECI
REVIEWED BY: JIANQI WANG, ECI

ISSUED FOR: 35% DESIGN DEVELOPMENT — DATE: 07/21/2026

SUB CONSULTANT:
"Engineering with Distinction"
ECI ELECTRICAL CONSULTANTS, INC.
BILLINGS, MONTANA

AEL&P since 1893 ALASKA ELECTRIC LIGHT & POWER CO.

CITY & BOROUGH OF JUNEAU DOCKS & HARBORS

PROJECT: PORT OF JUNEAU
CRUISE SHIP DOCK ELECTRIFICATION

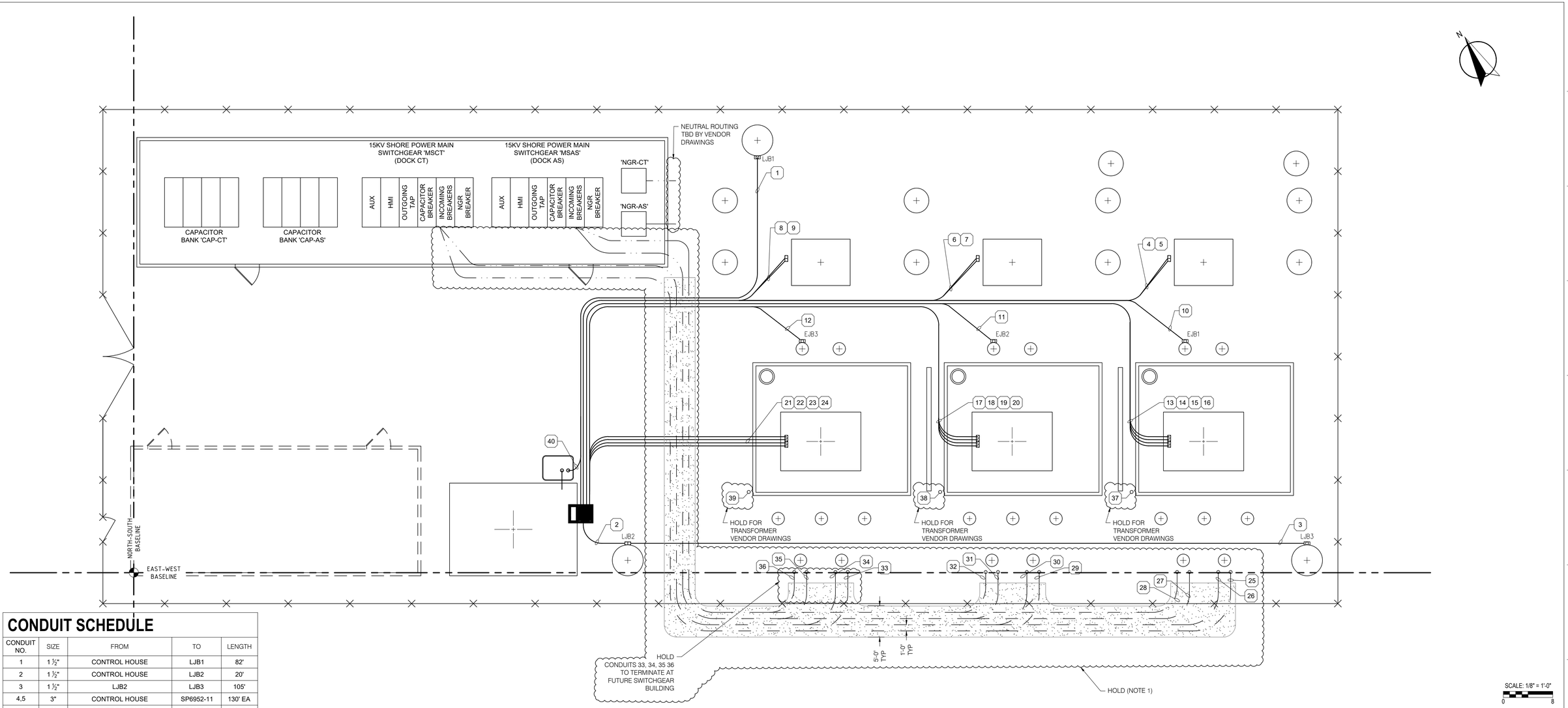
SHEET: **ENLARGED GENERAL ARRANGEMENT**

ADDRESS: 510 S FRANKLIN STREET, JUNEAU, AK 99801

DATE: 07/21/2026

DRAWING NUMBER: **U3.1**

J036



CONDUIT SCHEDULE

CONDUIT NO.	SIZE	FROM	TO	LENGTH
1	1 ½"	CONTROL HOUSE	LJB1	82'
2	1 ½"	CONTROL HOUSE	LJB2	20'
3	1 ½"	LJB2	LJB3	105'
4,5	3"	CONTROL HOUSE	SP6952-11	130' EA
6,7	3"	CONTROL HOUSE	SP6952-21	100' EA
8,9	3"	CONTROL HOUSE	SP6952-31	70' EA
10	2"	CONTROL HOUSE	MU-1	130'
11	2"	CONTROL HOUSE	MU-2	100'
12	2"	CONTROL HOUSE	MU-3	7'
13-16	4"	CONTROL HOUSE	T1	150' EA
17-20	4"	CONTROL HOUSE	T2	120' EA
21-24	4"	CONTROL HOUSE	T3	45' EA
25-26	8"	T1 6.6kV CABLE RISER	MSCT/MSAS	145'
27-28	8"	T1 11kV CABLE RISER	MSCT/MSAS	145'
29-30	8"	T2 6.6kV CABLE RISER	MSCT/MSAS	115'
31-32	8"	T2 11kV CABLE RISER	MSCT/MSAS	115'
33-34	8"	T3 6.6kV CABLE RISER	MSHT	TBD
35-36	8"	T3 11KV CABLE RISER	MSHT	TBD
37	3"	T1 CABLE RISER	NGR-AS	TBD
38	3"	T2 CABLE RISER	NGR-CT	TBD
39	3"	T3 CABLE RISER	NGR-HT	TBD
40	4"	PADMOUNT SSVT	TBD	TBD

HOLD FOR TRANSFORMER VENDOR DRAWINGS

SCALE: 1/8" = 1'-0"

0 8

LEGEND

- BASELINE MARKER
- BASELINE
- SUBSTATION FENCE
- DIRECT BURY CONTROL CONDUIT
- FEEDER CONDUITS IN DUCT BANK
- CONDUIT RISER
- EJBX/LJBX — EQUIPMENT OR LIGHT JUNCTION BOX
- DUCT BANK WITH ENGINEERED BACKFILL
- INDICATES CONDUIT NO. IN CONDUIT SCHEDULE

DESIGN NOTES

1. HOLD FEEDER CONDUIT ROUTING FOR SOIL THERMAL ANALYSIS AND DUCT BANK DETAILS

NO.	REVISION:	DATE:

PRIME CONSULTANT:
H3 ENGINEERING SOLUTIONS
thaddadian@h3solutions.co
(626) 319-3476

DESIGNED BY: KIERAN J. AMES, ECI
REVIEWED BY: JIANQI WANG, ECI

ISSUED FOR: 35% DESIGN DEVELOPMENT
DATE: 07/21/2026

SUB CONSULTANT:
"Engineering with Distinction" ECI ELECTRICAL CONSULTANTS, INC.

AEL&P since 1893 ALASKA ELECTRIC LIGHT & POWER CO.

CITY & BOROUGH OF JUNEAU DOCKS & HARBORS

PROJECT: PORT OF JUNEAU
CRUISE SHIP DOCK ELECTRIFICATION

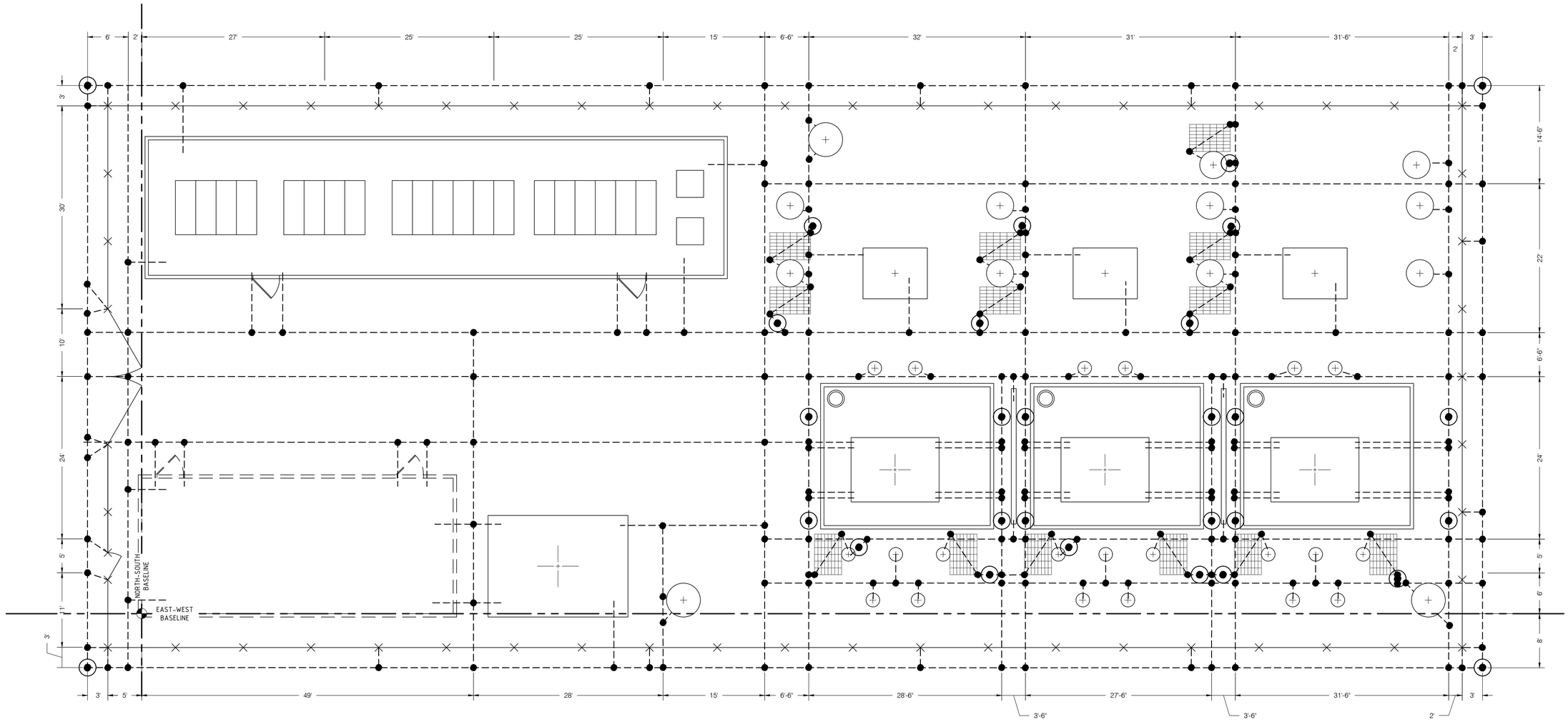
SHEET: **CONDUIT PLAN**

ADDRESS: 510 S FRANKLIN STREET, JUNEAU, AK 99801

DATE: 07/21/2026

DRAWING NUMBER: **U3.2**

J036



SCALE: 1/8" = 1'-0"

0 8

HOLD FOR GROUNDING STUDY

LEGEND

- BASELINE MARKER
- BASELINE
- SUBSTATION FENCE
- #4/0 CU GROUND CONDUCTOR
- GROUND CONNECTION
- 3/4" x 10'-0" COPPER CLAD GROUND ROD
- FENCE GROUND
- 4'-0" x 6'-0" SWITCH OPERATOR PLATFORM

GROUND GRID CRITERIA

GROUNDING SYSTEM DESIGN IS BASED ON THE FOLLOWING PARAMETERS:

- X,XXX AMP, 69 kV SINGLE PHASE TO GROUND FAULT
- 1.0 EARTH CURRENT SPLIT FACTOR
- 0.35 SECOND FAULT CLEARING TIME
- MAINTAINED 6 INCHES OF 3000 OHM-METER SURFACING MATERIAL
- 8 INCHES OF FROZEN EARTH (XXX.XXX OHM-METER)
- FOUR LAYER SOIL MODEL
- GRID IMPEDANCE: X.XXX OHMS

	RESISTIVITY	THICKNESS
TOP LAYER:	XXX.XXX OHM-METERS	X.XX FEET
SECOND LAYER:	XXX.XXX OHM-METERS	X.XX FEET
THIRD LAYER:	XXX.XXX OHM-METERS	X.XX FEET
BOTTOM LAYER:	XXX.XXX OHM-METERS	INFINITE

UPON COMPLETION OF STATION GROUNDING SYSTEM, THE RESISTANCE OF GRID TO EARTH SHALL BE DETERMINED BY A FULL FALL OF POTENTIAL TEST METHOD. A MINIMUM OF TWENTY (20) MEASUREMENTS SHALL BE TAKEN, EXTENDING FROM THE GRID OUT TO A DISTANCE OF APPROXIMATELY FIVE (5) TIMES THE LENGTH OF THE SUBSTATION DIAGONAL. THE TEST RESULTS SHALL BE PROVIDED TO THE ENGINEER AFTER GRID INSTALLATION, BUT BEFORE TRANSMISSION LINE CONDUCTOR, OPGW & COLLECTION SYSTEM FEEDER CABLE TRENCH GROUNDS ARE TERMINATED WITHIN THE SUBSTATION.

GROUND GRID FIELD MEASUREMENT: _____ OHMS
DATE TAKEN: _____

NO.	REVISION:	DATE:

PRIME CONSULTANT:
H3 ENGINEERING SOLUTIONS
thaddadian@h3solutions.co
(626) 319-3476

DESIGNED BY: KIERAN J. AMES, ECI
REVIEWED BY: JIANQI WANG, ECI

ISSUED FOR: 35% DESIGN DEVELOPMENT — DATE: 07/21/2026

SUB CONSULTANT:
"Engineering with Distinction" ECI ELECTRICAL CONSULTANTS, INC. BILLINGS, MONTANA

AEL&P since 1893 ALASKA ELECTRIC LIGHT & POWER CO.

CITY & BOROUGH OF JUNEAU DOCKS & HARBORS

PROJECT:
PORT OF JUNEAU
CRUISE SHIP DOCK ELECTRIFICATION

SHEET:
GROUNDING PLAN

ADDRESS: 510 S FRANKLIN STREET, JUNEAU, AK 99801

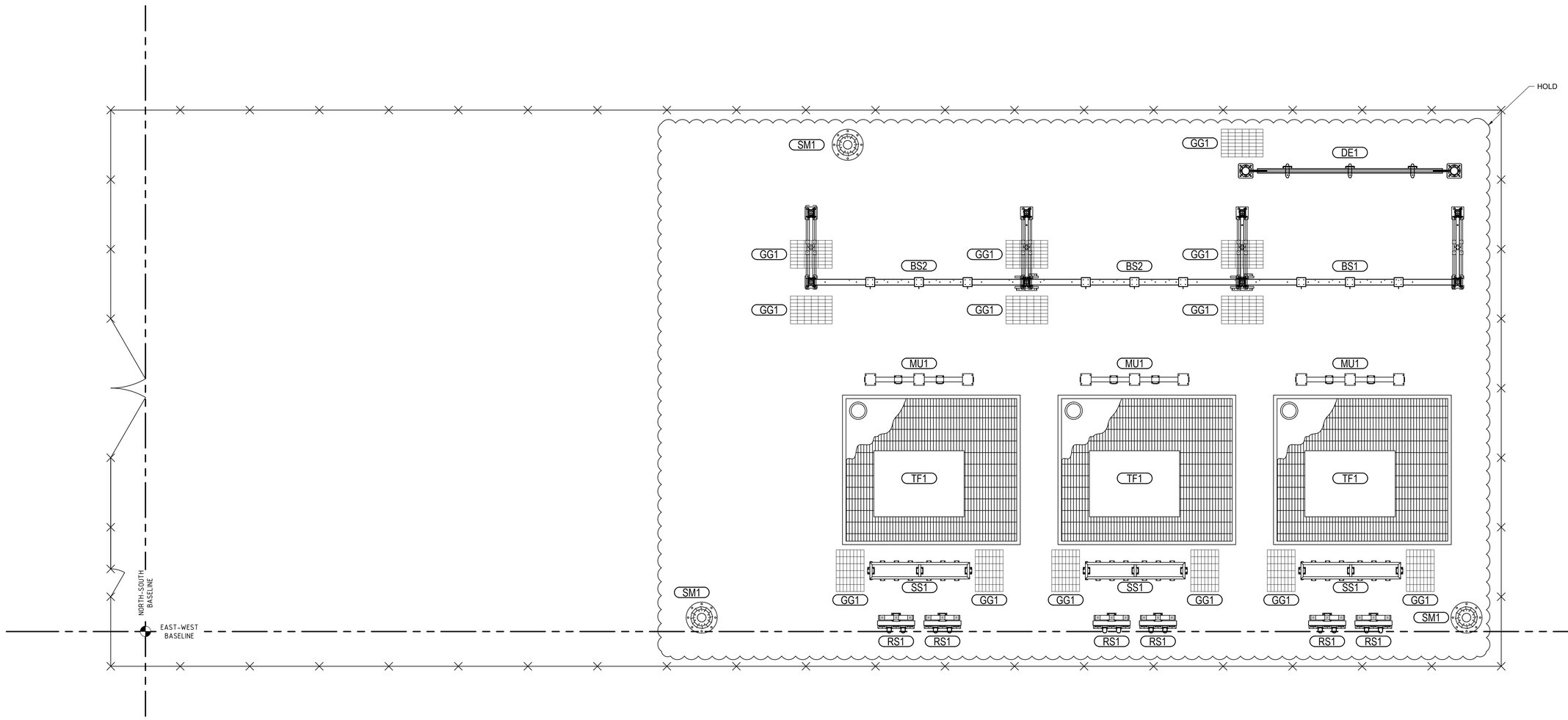
DATE: 07/21/2026

DRAWING NUMBER: **U3.3**

J036

K J H G F E D C B A

1 2 3 4 5 6 7 8 9 10 11 12 13 14



STEEL SCHEDULE

ID	QTY	DESCRIPTION	REFERENCE DRAWING
SM1	3	STATIC MAST	
DE1	1	H-FRAME DEADEND	
BS1	1	69kV BUS/SWITCH STRUCTURE	
BS2	2	69kV BUS/SWITCH ADD-ON STRUCTURE	
MU1	3	69kV METERING UNIT	
TF1	3	TRANSFORMER OIL CONTAINMENT GRATING	
GG1	13	SWITCH OPERATOR PLATFORM	
RS1	6	RISER STRUCTURE	
SS1	3	15KV SWITCH STRUCTURE	

HOLD FOR STEEL DETAILS

SCALE: 1/8" = 1'-0"
0 8

LEGEND

- BASELINE MARKER
- BASELINE
- SUBSTATION FENCE
- 4'-0" x 6'-0" SWITCH OPERATOR PLATFORM
- BS1 — STRUCTURE DESIGNATION

STRUCTURE DESIGN CRITERIA

69 kV CLEARANCE: (350 kV BIL)

LIVE PARTS: MIN ø–G=25"
MIN ø–ø=31"

TO GRADE: 11'–0" (BUS)
23'–0" (DRIVEWAY)

15 kV CLEARANCE: (110 kV BIL)

LIVE PARTS: MIN ø–G=7"
MIN ø–ø=12"

TO GRADE: 9'–0" (BUS)
21'–0" (DRIVEWAY)

NO.	REVISION:	DATE:

PRIME CONSULTANT:
H3 ENGINEERING SOLUTIONS
thaddadian@h3solutions.co
(626) 319-3476

DESIGNED BY: KIERAN J. AMES, ECI
REVIEWED BY: JIANQI WANG, ECI

ISSUED FOR: 35% DESIGN DEVELOPMENT
DATE: 07/21/2026

SUB CONSULTANT: "Engineering with Distinction" ECI ELECTRICAL CONSULTANTS, INC.

AEL&P since 1893 ALASKA ELECTRIC LIGHT & POWER CO.

CITY & BOROUGH OF JUNEAU DOCKS & HARBORS

PROJECT:
PORT OF JUNEAU
CRUISE SHIP DOCK ELECTRIFICATION

SHEET:
STEEL KEY PLAN

ADDRESS: 510 S FRANKLIN STREET, JUNEAU, AK 99801

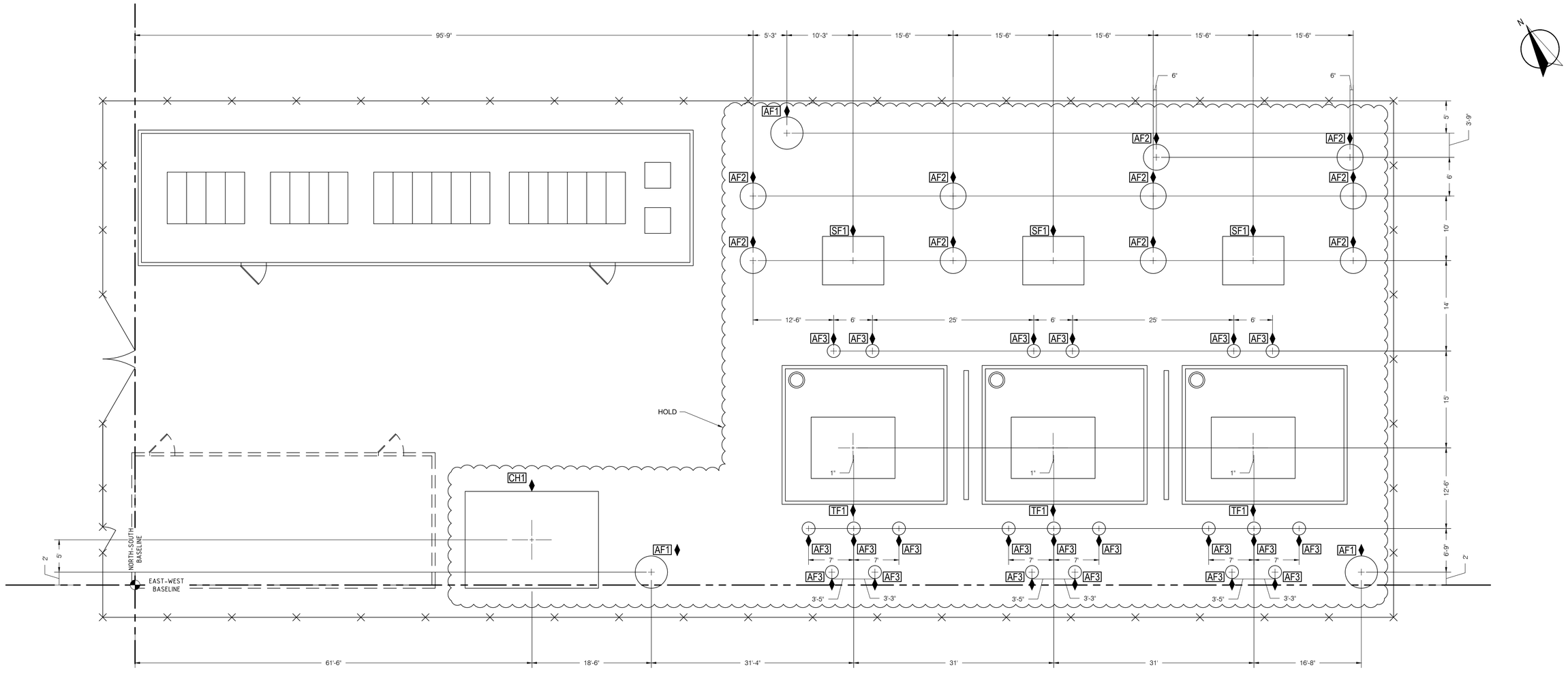
DATE: 07/21/2026

DRAWING NUMBER: **U3.4**

J036

1 2 3 4 5 6 7 8 9 10 11 12 13 14

K J H G F E D C B A



FOUNDATION SCHEDULE

ID	QTY	DESCRIPTION	REFERENCE DRAWING
AF1	3	STATIC MAST	
AF2	10	69kV BUS/SWITCH STRUCTURE	
AF3	21	69kV METERING UNIT & RISER STRUCTURE	
SF1	3	69kV BREAKER	
TF1	3	TRANSFORMER & OIL CONTAINMENT	
CH1	1	CONTROL HOUSE SLAB	

HOLD FOR FOUNDATION DETAILS

SCALE: 1/8" = 1'-0"

0 8

LEGEND

- BASELINE MARKER
- BASELINE
- SUBSTATION FENCE
- BELOW GRADE FOUNDATION
- AF2 — FOUNDATION IDENTIFICATION
- ABOVE GRADE FOUNDATION
- FOUNDATION ORIENTATION MARK

NO.	REVISION:	DATE:

PRIME CONSULTANT:
H3 ENGINEERING SOLUTIONS
thaddadian@h3solutions.co
(626) 319-3476

DESIGNED BY: KIERAN J. AMES, ECI

REVIEWED BY: JIANQI WANG, ECI

ISSUED FOR: 35% DESIGN DEVELOPMENT — DATE: 07/21/2026

SUB CONSULTANT: "Engineering with Distinction" ECI ELECTRICAL CONSULTANTS, INC. MILLERSBURG, MONTANA

AEL&P since 1893 JUNEAU ELECTRIC LIGHT & POWER CO.

CITY & BOROUGH OF JUNEAU DOCKS & HARBORS

PROJECT: PORT OF JUNEAU
CRUISE SHIP DOCK ELECTRIFICATION

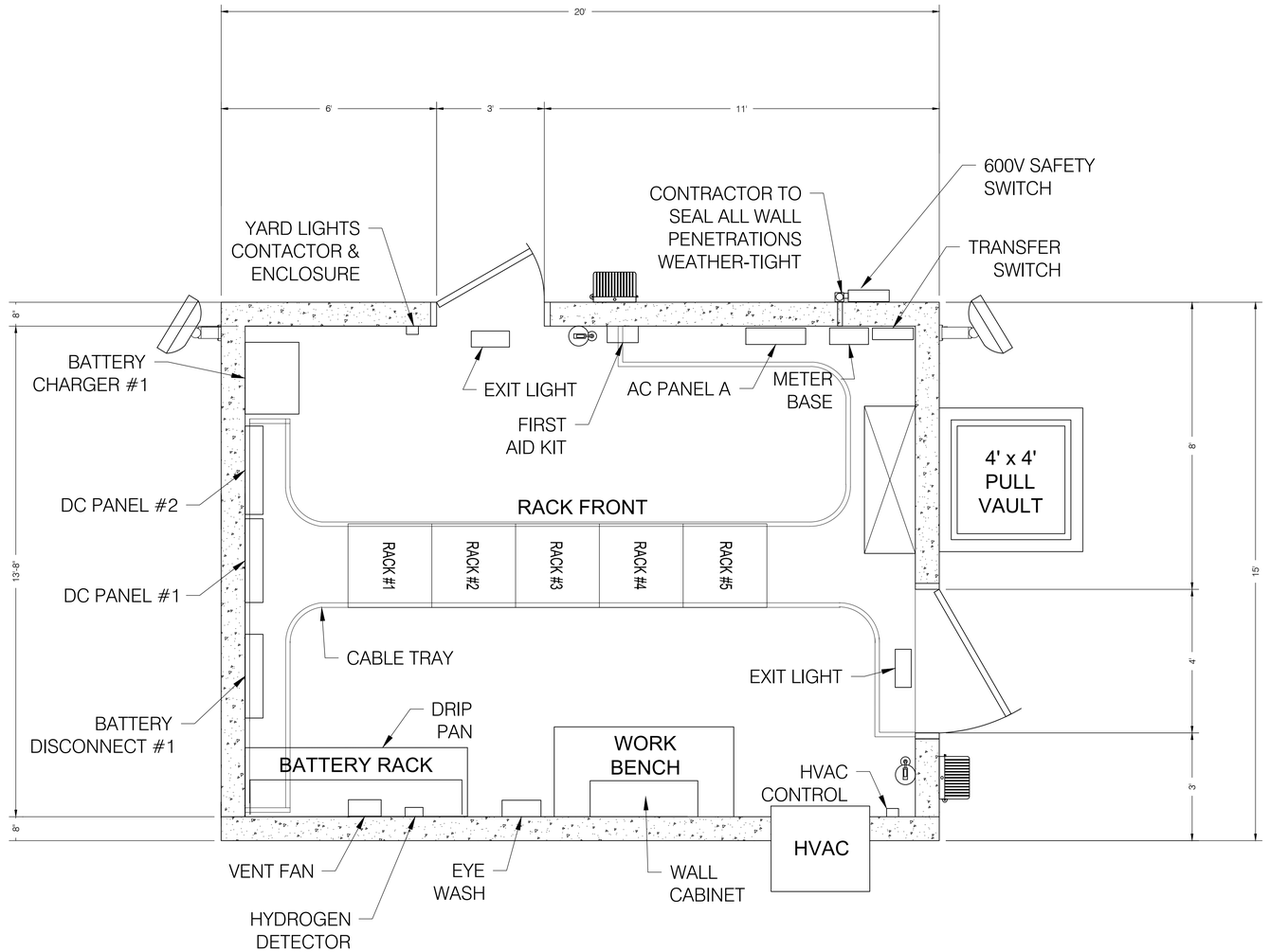
SHEET: **FOUNDATION PLAN**

ADDRESS: 510 S FRANKLIN STREET, JUNEAU, AK 99801

DATE: 07/21/2026

DRAWING NUMBER: **U3.5**

J036



SCALE: 1/2" = 1'-0"

0 2

NO.	REVISION:	DATE:

PRIME CONSULTANT:
H3 ENGINEERING SOLUTIONS
thaddadian@h3solutions.co
(626) 319-3476

DESIGNED BY: KIERAN J. AMES, ECI
REVIEWED BY: JIANQI WANG, ECI

ISSUED FOR: 35% DESIGN DEVELOPMENT — DATE: 07/21/2026

SUB CONSULTANT:
"Engineering with Distinction"
ECI ELECTRICAL CONSULTANTS, INC. BILLINGS, MONTANA

AEL&P since 1893 JUNEAU ELECTRIC LIGHT & POWER CO.

CITY & BOROUGH OF JUNEAU DOCKS & HARBORS

PROJECT: PORT OF JUNEAU
CRUISE SHIP DOCK ELECTRIFICATION

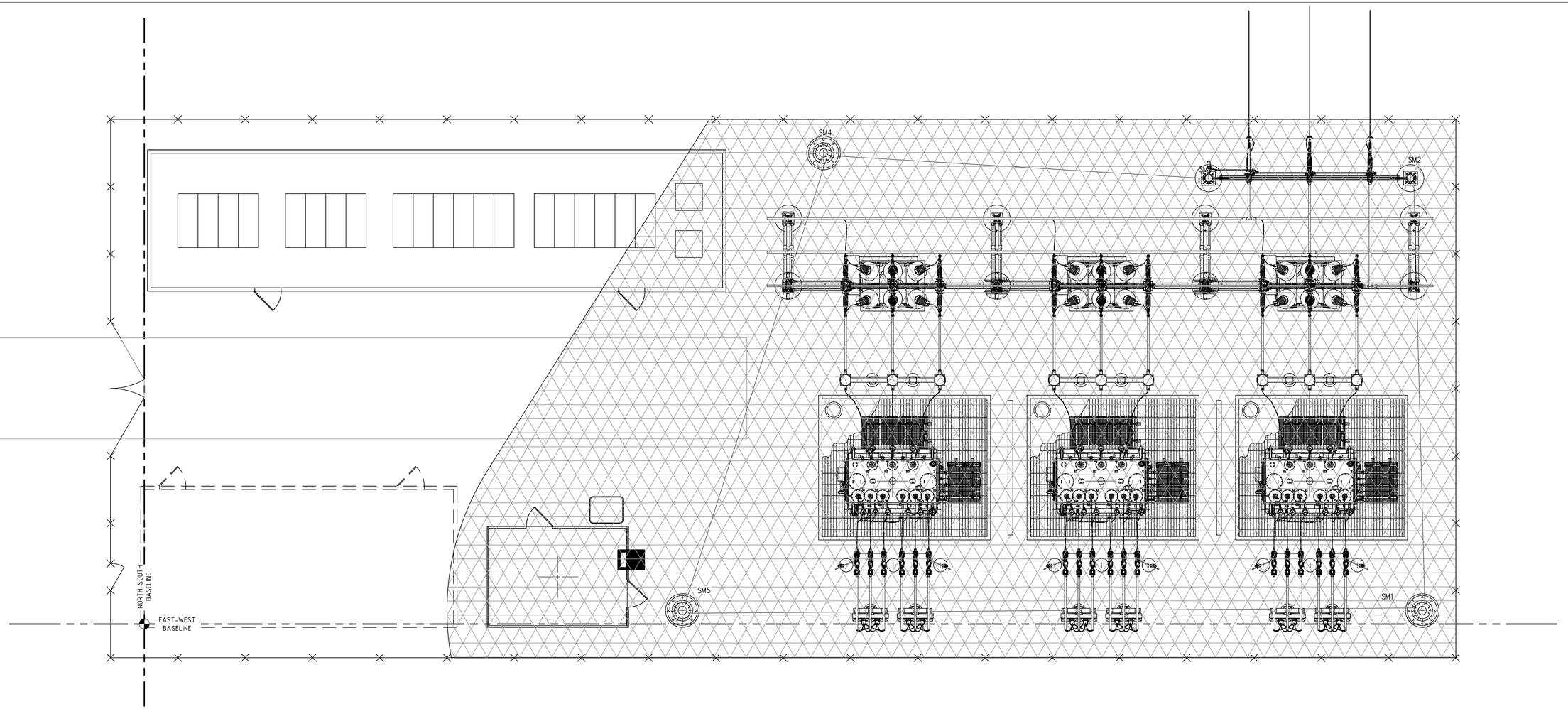
SHEET: **CONTROL ENCLOSURE PLAN VIEW**

ADDRESS: 510 S FRANKLIN STREET, JUNEAU, AK 99801

DATE: 07/21/2026

DRAWING NUMBER: **U3.6**

J036



NOTES

1. DIRECT STRIKE PROTECTION USING FIXED ANGLE METHOD: HATCHED AREA REPRESENTS ZONE OF PROTECTION 30 DEGREES OUTSIDE OF SHIELD WIRE, 45 DEGREES BETWEEN SHIELD.
2.

LEGEND

- AREA PROTECTED USING FIXED ANGLE METHOD (NOTE 1)
- FENCE
- BASELINE
- BASELINE MARKER

SCALE: 1/8" = 1'-0"
0 8

NO.	REVISION:	DATE:

PRIME CONSULTANT:
H3 ENGINEERING SOLUTIONS
thaddadian@h3solutions.co
(626) 319-3476

DESIGNED BY: KIERAN J. AMES, ECI
REVIEWED BY: JIANQI WANG, ECI

ISSUED FOR: 35% DESIGN DEVELOPMENT
DATE: 07/21/2026

SUB CONSULTANT:
"Engineering with Distinction" ECI ELECTRICAL CONSULTANTS, INC. MILLBRAE, CALIFORNIA

AEL&P since 1893 JUNEAU ELECTRIC LIGHT & POWER CO.

CITY & BOROUGH OF JUNEAU DOCKS & HARBORS

PROJECT: PORT OF JUNEAU
CRUISE SHIP DOCK ELECTRIFICATION

SHEET: **STATIC PROTECTION PLAN**

ADDRESS: 510 S FRANKLIN STREET, JUNEAU, AK 99801

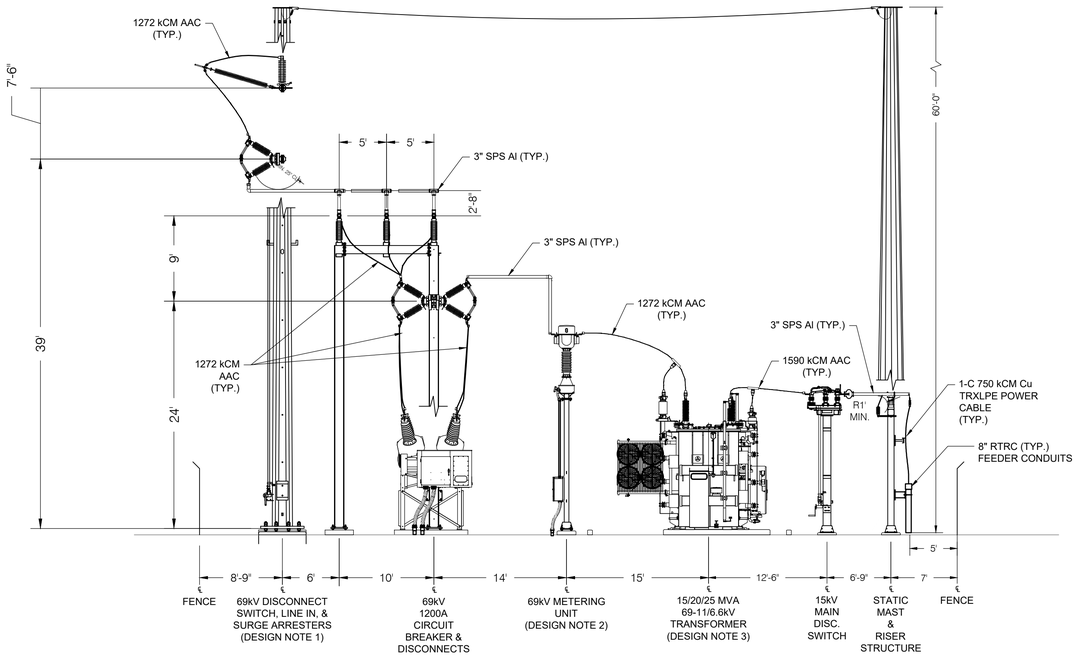
DATE: 07/21/2026

DRAWING NUMBER: **U3.7**

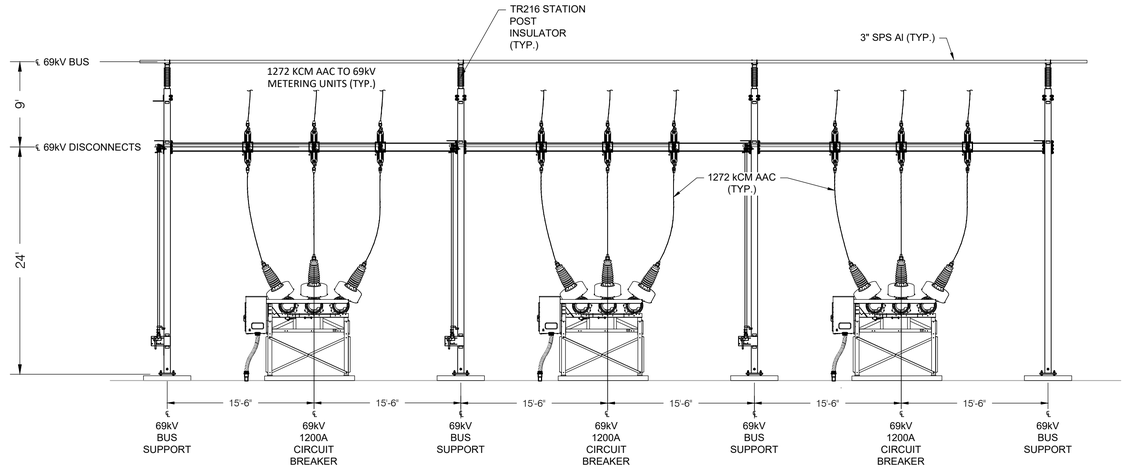
J036

1 2 3 4 5 6 7 8 9 10 11 12 13 14

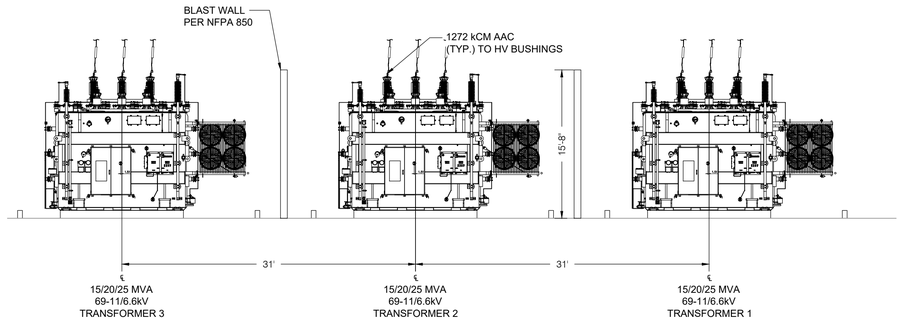
K J H G F E D C B A



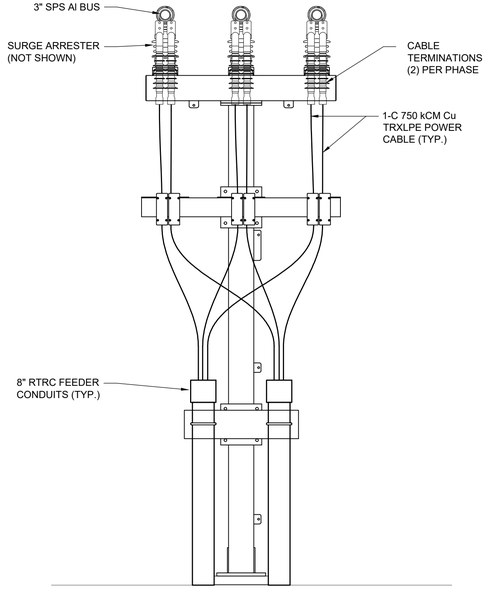
A ELEVATIONS
SCALE: 1/8" = 1'-0"



B ELEVATIONS
SCALE: 1/8" = 1'-0"



C ELEVATIONS
SCALE: 1/8" = 1'-0"



D ELEVATIONS
SCALE: 1/2" = 1'-0"

DESIGN NOTES

1. THE DEAD-END STRUCTURE NEEDS TO BE RE-LOCATED TO THE MAIN BUS END IN THE EAST SIDE FOR THE LOW PROFILE LINE SWITCH CONNECTED TO THE MAIN BUS. A MONOPOLE 90 DEGREE TRANSITION FROM EAST SIDE TO THE NORTH SIDE TO BE ADDED IN THE EAST AREA OUTSIDE FENCE BY THE TRANSMISSION LINE DESIGN. TO BE DISCUSSED IN THE NEXT DESIGN STAGE.
2. TO ADD ONE SET OF REVERNUE CLASS BUSHING CTS ON THE PRIMARY SIDE OF TRANSFORMER AND REVERNUE CLASS BUS VTS ON THE MAIN BUS FOR THE METERING PURPOSE ARE SUGGESTED INSTEAD OF COMBINED METERING UNIT DUE TO LIMITED FOOT PRINT OF SUBSTATION. TO BE DISCUSSED IN THE NEXT DESIGN STAGE.
3. X0 & Y0 CABLE RISER STRUCTURES PENDING FOR FINAL TRANSFORMER VENDOR'S DRAWINGS.

NO.	REVISION:	DATE:

PRIME CONSULTANT:
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thaddadian@h3solutions.co
(626) 319-3476

DESIGNED BY: KIERAN J. AMES, ECI
REVIEWED BY: JIANQI WANG, ECI

ISSUED FOR: 35% DESIGN DEVELOPMENT — DATE: 07/21/2026

SUB CONSULTANT: "Engineering with Distinction" ECI ELECTRICAL CONSULTANTS, INC. MILLBRAE, MONTANA

AEL&P since 1893 ALASKA ELECTRIC LIGHT & POWER CO.

CITY & BOROUGH OF JUNEAU DOCKS & HARBORS

PROJECT: PORT OF JUNEAU
CRUISE SHIP DOCK ELECTRIFICATION

SHEET: **GENERAL ARRANGEMENT - ELEVATIONS**

ADDRESS: 510 S FRANKLIN STREET, JUNEAU, AK 99801

DATE: 07/21/2026

DRAWING NUMBER: **U4.1**

J036

DRAWING INDEX		DESCRIPTION	REV	DATE	REVISION PURPOSE
AELP-D-T000-1		DRAWING INDEX	A	06/30/26	ISSUED FOR 35% REVIEW

OVERVIEW MAP		DESCRIPTION	REV	DATE	REVISION PURPOSE
AELP-D-T001-1		ROUTE VICINITY MAP	A	06/30/26	ISSUED FOR 35% REVIEW

STRUCTURE DRAWINGS	TYPE	DESCRIPTION	REV	DATE	REVISION PURPOSE
AELP-D-T002-1	TP-69B	69 kV TRANSMISSION POST SUSPENSION STRUCTURE 0°-10°	A	06/30/26	ISSUED FOR 35% REVIEW
AELP-D-T002-2	TP-69-3B	69 kV VERTICAL DOUBLE DEADEND ANGLE STRUCTURE 90°	A	06/30/26	ISSUED FOR 35% REVIEW
AELP-D-T002-3	TP-69-2D	69 kV 2-WAY SWITCH INLINE VERTICAL DEADEND/TAP STRUCTURE 0° and 90°	A	06/30/26	ISSUED FOR 35% REVIEW

ANCILLARY DRAWINGS	TYPE	DESCRIPTION	REV	DATE	REVISION PURPOSE
AELP-D-T003-1	TM-DEA	SUBSTATION DEADEND ASSEMBLIES	A	06/30/26	ISSUED FOR 35% REVIEW
AELP-D-T003-2	TG-1 / TA-1P	SINGLE DOWNGUY W/GUY STRAIN ROD / SINGLE CROSS PLATE ANCHOR	A	06/30/26	ISSUED FOR 35% REVIEW
AELP-D-T003-3	TM-101	FOUNDATION DIRECT EMBEDMENT	A	06/30/26	ISSUED FOR 35% REVIEW

PLAN & PROFILE DRAWINGS	TYPE	DESCRIPTION	REV	DATE	REVISION PURPOSE
AELP-D-T004-1	Line #2	PLAN AND PROFILE	A	06/30/26	ISSUED FOR 35% REVIEW
AELP-D-T004-2	Line #1	PLAN AND PROFILE	A	06/30/26	ISSUED FOR 35% REVIEW
AELP-D-T004-3	Line #2 TAP TO SHORE POWER SUBSTATION	PLAN AND PROFILE	A	06/30/26	ISSUED FOR 35% REVIEW

STAKING SHEETS	DESCRIPTION	REV	DATE	REVISION PURPOSE
AELP-D-T005-1	STAKING SHEET	A	06/30/26	ISSUED FOR 35% REVIEW

PHASING AND SAG CHART DRAWINGS	DESCRIPTION	REV	DATE	REVISION PURPOSE
AELP-D-T006-1	STRINGING SAG CHARTS	A	06/30/26	ISSUED FOR 35% REVIEW
AELP-D-T006-2	STRINGING SAG CHARTS	A	06/30/26	ISSUED FOR 35% REVIEW
AELP-D-T006-3	STRINGING SAG CHARTS	A	06/30/26	ISSUED FOR 35% REVIEW
AELP-D-T006-4	PHASING DIAGRAM	A	06/30/26	ISSUED FOR 35% REVIEW

FOUNDATION DRAWINGS	TYPE	DESCRIPTION	REV	DATE	REVISION PURPOSE
AELP-D-T008-1	TM-POLE	FOUNDATION DETAIL - POLE SETTING DETAIL-STAKING	A	06/30/26	ISSUED FOR 35% REVIEW

MATERIAL LIST	DESCRIPTION	REV	DATE	REVISION PURPOSE
AELP-D-ZT01-1	MATERIAL LIST	A	06/30/26	ISSUED FOR 35% REVIEW

"Engineering with Distinction"

ELECTRICAL CONSULTANTS, INC.
BILLINGS, MONTANA

INDEX OF DRAWINGS

DESCRIPTION: ALASKA ELECTRIC LIGHT & POWER
PORT OF JUNEAU CRUISE SHIP DOCK ELECTRIFICATION
69 kV TRANSMISSION LINE
INDEX OF DRAWINGS

REV	DESCRIPTION	AUTH	REV BY	DATE
A	ISSUED FOR 35% REVIEW	WDZ	PJW	06/30/26

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ALASKA ELECTRIC LIGHT & POWER COMPANY
5601 TONGSGARD COURT
JUNEAU, ALASKA 99801

SCALE: NTS
APPROVED BY: WDZ
DRAWN BY: PJW
DATE: 12/23/25

SIZE: D

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ALASKA ELECTRIC LIGHT AND POWER COMPANY

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DRAWING TYPE: INDEX OF DRAWINGS
SHEET NO.: 1
REV. NO.: A

FILE NO. AELP-D-T000-1



AELP Port of Juneau
69kV Transmission Line
Borough of Juneau, Alaska
Project Overview

- S — Proposed Substation
- Proposed Structure
- Existing Structure
- Line 1/ Line 2 Proposed 69kV Rebuild
- Proposed 69kV Line Switch Tap
- Existing 69kV Transmssion Line
- Highway
- Road



ROUTE VICINITY MAP

"Engineering with Distinction"
ELECTRICAL CONSULTANTS, INC.
BILLINGS, MONTANA

REV	DESCRIPTION	AUTH	REV BY	DATE
A	ISSUED FOR 35% REVIEW	WDZ	PJW	06/30/26

DESCRIPTION
ALASKA ELECTRIC LIGHT & POWER
PORT OF JUNEAU CRUISE SHIP DOCK ELECTRIFICATION
69 kV TRANSMISSION LINE
ROUTE VICINITY MAP

THIS DRAWING IS THE PROPERTY OF
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5601 TONGSGARD COURT
JUNEAU, ALASKA 99801

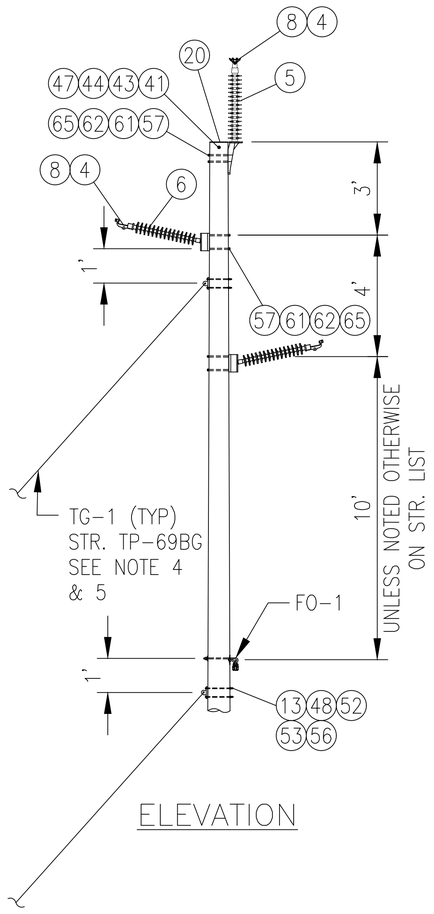
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APPROVED BY: WDZ
DRAWN BY: PJW
DATE: 12/23/25
SIZE: D

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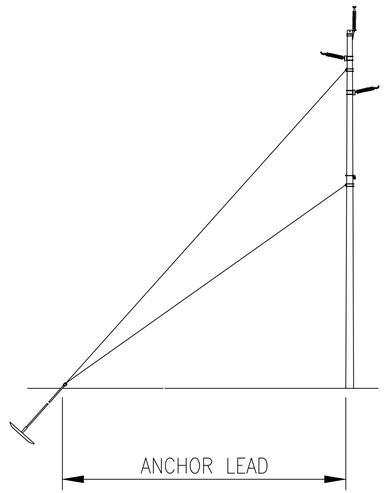
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SHEET NO.: 1
REV. NO.: A

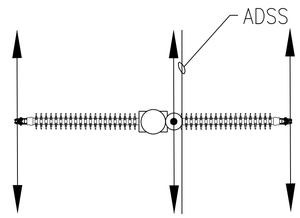
FILE NO. AELP-D-T001-1



ELEVATION



GUYING GUIDE



PLAN

ITEM	REQD.	DESCRIPTION	EQUIVALENT PRODUCT
4	3	Armor Rods, For 652.4, AAAC, "ELGIN"	Preformed AR-0135
5	1	Vertical Post Insulator, Polymer	Reliable NBVG30XH020S0-125
6	2	Horizontal Post Insulator, Polymer	Reliable NPKG30XH016S0
8	3	Conductor Clamp, Trunion Mount, Aluminum	Maclean ACTS-150-SL2
* 13	2	Pole Eye Plate, 36KIP	Maclean EPR-77A-7
20	1	Pole Cap	
41	1	Bolt, Machine, 5/8" x Length Required	
43	2	Washer, Curved, 3" x 3" x 1/4" w/11/16" Hole	
44	1	Washer, Spring, w/ 11/16" Hole	
47	1	Locknut, MF, 5/8"	
* 48	4	Bolt, Machine, 3/4" x Length Required	
* 52	4	Washer, Curved, 4" x 4" x 1/4" w/13/16" Hole	
* 53	4	Washer, Spring, w/ 13/16" Hole	
* 56	4	Locknut, MF, 3/4"	
57	6	Bolt, Machine, 7/8" x Length Required	
61	6	Washer, Curved, 4" x 4" x 1/4" w/15/16" Hole	
62	6	Washer, Spring, w/ 15/16" Hole	
65	6	Locknut, MF, 7/8"	

NOTES:

1. THE LOOP END OF THE SPRING WASHER SHALL BE POSITIONED AT THE TOP, WHERE POSSIBLE.
2. NO BOLT SHALL EXTEND MORE THAN 2-1/2" BEYOND LAST NUT OR LOCKNUT.
3. UNLESS OTHERWISE SPECIFIED, ALL BOLTS SHALL CONFORM TO ASTM SPECIFICATION A325. NUTS SHALL CONFORM TO SPECIFICATIONS REFERENCED IN ASTM SPECIFICATION A325
4. INSTALL GUYS ON TYPE TP-69G FOR LINE ANGLES BETWEEN 1° AND 10°
5. * MATERIAL FOR TYPE TP-69G ONLY

"Engineering with Distinction"

ELECTRICAL CONSULTANTS, INC.
BILLINGS, MONTANA

TP-69B

DESCRIPTION: ALASKA ELECTRIC LIGHT & POWER
69kV TRANSMISSION LINE STANDARD
TP-69B & TP-69BG
SUSPENSION STRUCTURE LAYOUT 0°-10°

REV	DESCRIPTION	AUTH	REV BY	DATE
A	ISSUED FOR 35% REVIEW	WDZ	PJW	06/30/26

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ALASKA ELECTRIC LIGHT & POWER COMPANY
5601 TONGSGARD COURT
JUNEAU, ALASKA 99801

SCALE: NTS
APPROVED BY: WDZ
DRAWN BY: PJW
DATE: 04/22/26

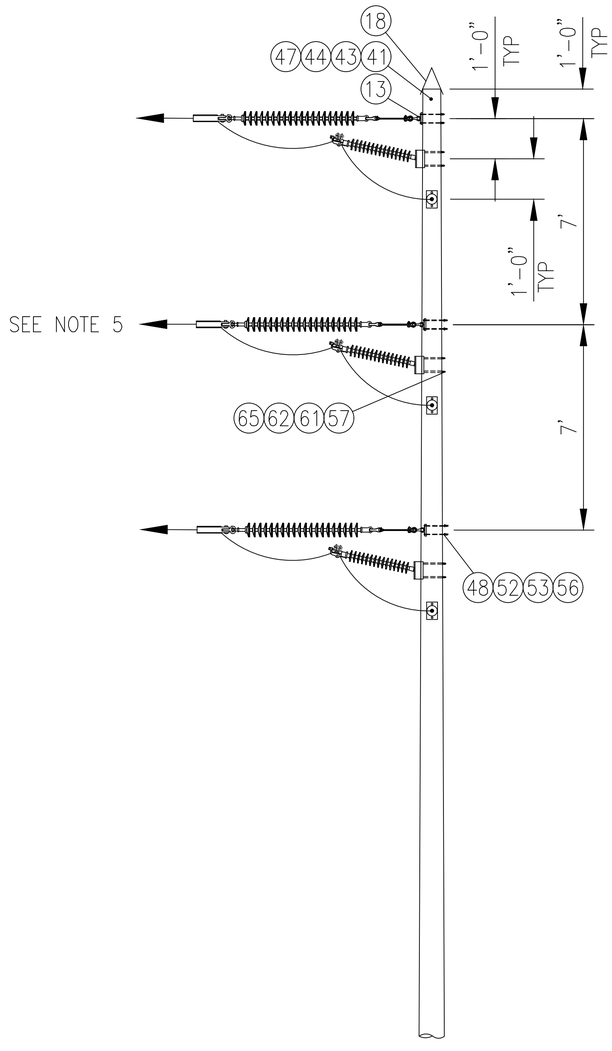
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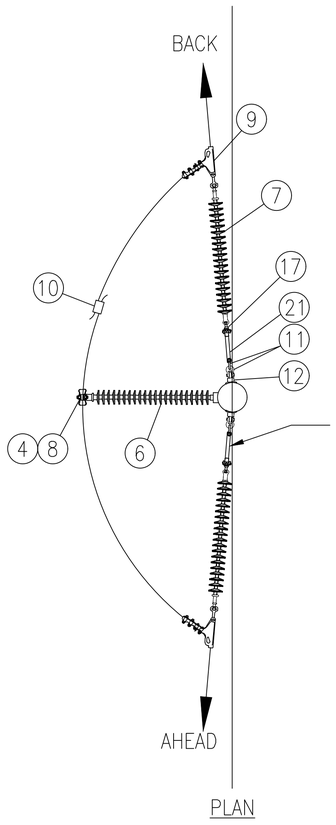
AEL&P
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DRAWING TYPE: STRUCTURE DRAWING
SHEET NO.: 1
REV. NO.: A

FILE NO. AELP-D-T002-1



ELEVATION



CLEVIS LINK NOT SHOWN TO SCALE FOR CLARITY (TYPICAL 6 PLACES) SEE NOTE 6

PLAN

ITEM	REQD.	DESCRIPTION	EQUIVALENT PRODUCT
4	3	Armor Rods, Single Support AAAC, "ELGIN"	Preformed AR-0135
6	3	Horizontal Post Insulator, Polymer	Reliable NPKG30XH016S0
7	6	Polymer Insulator, Suspension / Dead End Type	Reliable S178045VX06
8	3	Conductor Clamp, Trunion Mount, Aluminum	Maclean ACTS-150-SL2
9	6	Conductor DE, Bolted Clamp, w/Socket Eye	Maclean ADE-24-S
10	3	Wedge, Connector	Homac PT-XXXX
11	12	Anchor Shackle, 30 KIP	Maclean ASH-55
12	6	Dead End Tee, 40 KIP	Hughes 2817-A-13
13	6	Pole Eye Plate, 36 KIP	Maclean EPR-77A-7
17	6	Y-Clevis Ball, 35KIP	Maclean YCB-65A
18	1	Pole Top Bird Perch Cone	Kaddas
21	6	Clevis Link, 30", 7/8" Gap, 15/16" Hole, 45 KIP	Hughes 1906-30
41	1	Bolt, Machine, 5/8" x Length Required	
43	2	Washer, Curved, 3" x 3" x 1/4" w/11/16" Hole	
44	1	Washer, Spring, w/ 11/16" Hole	
47	1	Locknut, MF, 5/8"	
48	12	Bolt, Machine, 3/4" x Length Required	
52	12	Washer, Curved, 4" x 4" x 1/4" w/13/16" Hole	
53	12	Washer, Spring, w/ 13/16" Hole	
56	12	Locknut, MF, 3/4"	
57	6	Bolt, Machine, 7/8" x Length Required	
61	6	Washer, Curved, 4" x 4" x 1/4" w/15/16" Hole	
62	6	Washer, Spring, w/ 15/16" Hole	
65	6	Locknut, MF, 7/8"	

NOTES:

1. METAL SHIMS SHOULD BE USED TO ADJUST POST INSULATORS WHEN BRACKETS ARE LOCATED ON UNEVEN POLE SURFACES.
2. THE LOOP END OF THE SPRING WASHER SHALL BE POSITIONED AT THE TOP, WHERE POSSIBLE.
3. NO BOLT SHALL EXTEND MORE THAN 2-1/2" BEYOND LAST NUT OR LOCKNUT.
4. UNLESS OTHERWISE SPECIFIED, ALL BOLTS SHALL CONFORM TO ASTM SPECIFICATION A325. NUTS SHALL CONFORM TO SPECIFICATIONS REFERENCED IN ASTM SPECIFICATION A325.
5. BACK SPAN SHOWN ROTATED 90° FOR CLARITY.
6. USE ITEM 21 CLEVIS EXTENSION LINK AS REQUIRED TO MAINTAIN 69 kV PHASE TO POLE CLEARANCE FOR HEAVY INCLINED SPANS.

"Engineering with Distinction"
ELECTRICAL CONSULTANTS, INC.
BILLINGS, MONTANA

TP-69-3B

DESCRIPTION: ALASKA ELECTRIC LIGHT & POWER
69kV TRANSMISSION LINE STANDARD
TP-69-3B (MOD) UNGUYED
DEADEND ANGLE STRUCTURE LAYOUT 0°-1°

REV	DESCRIPTION	AUTH	REV BY	DATE
A	ISSUED FOR 35% REVIEW	WDZ	PJW	06/30/26

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5601 TONGSGARD COURT
JUNEAU, ALASKA 99801

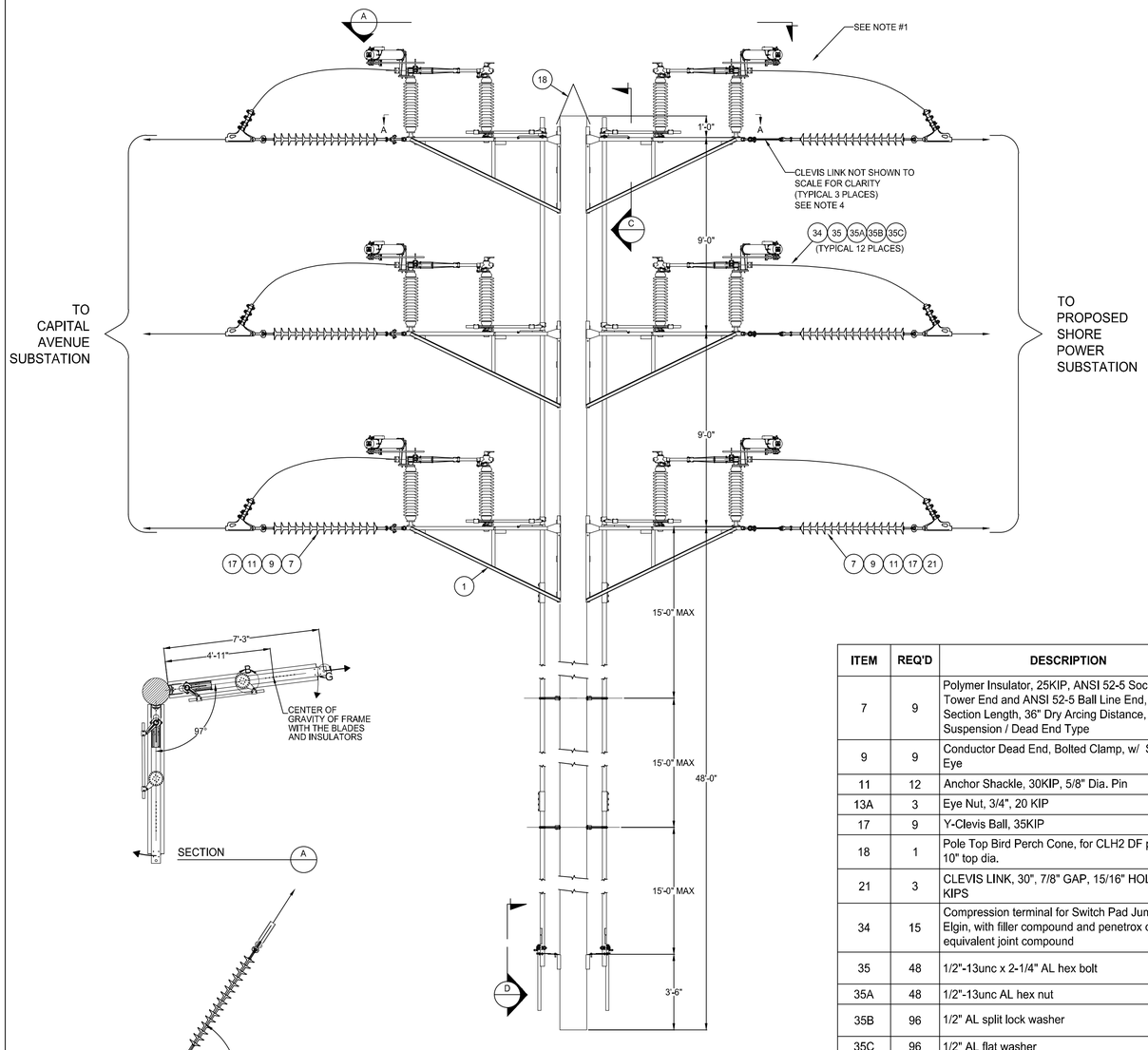
SCALE: NTS
APPROVED BY: WDZ
DRAWN BY: PJW
DATE: 04/22/26
SIZE: D

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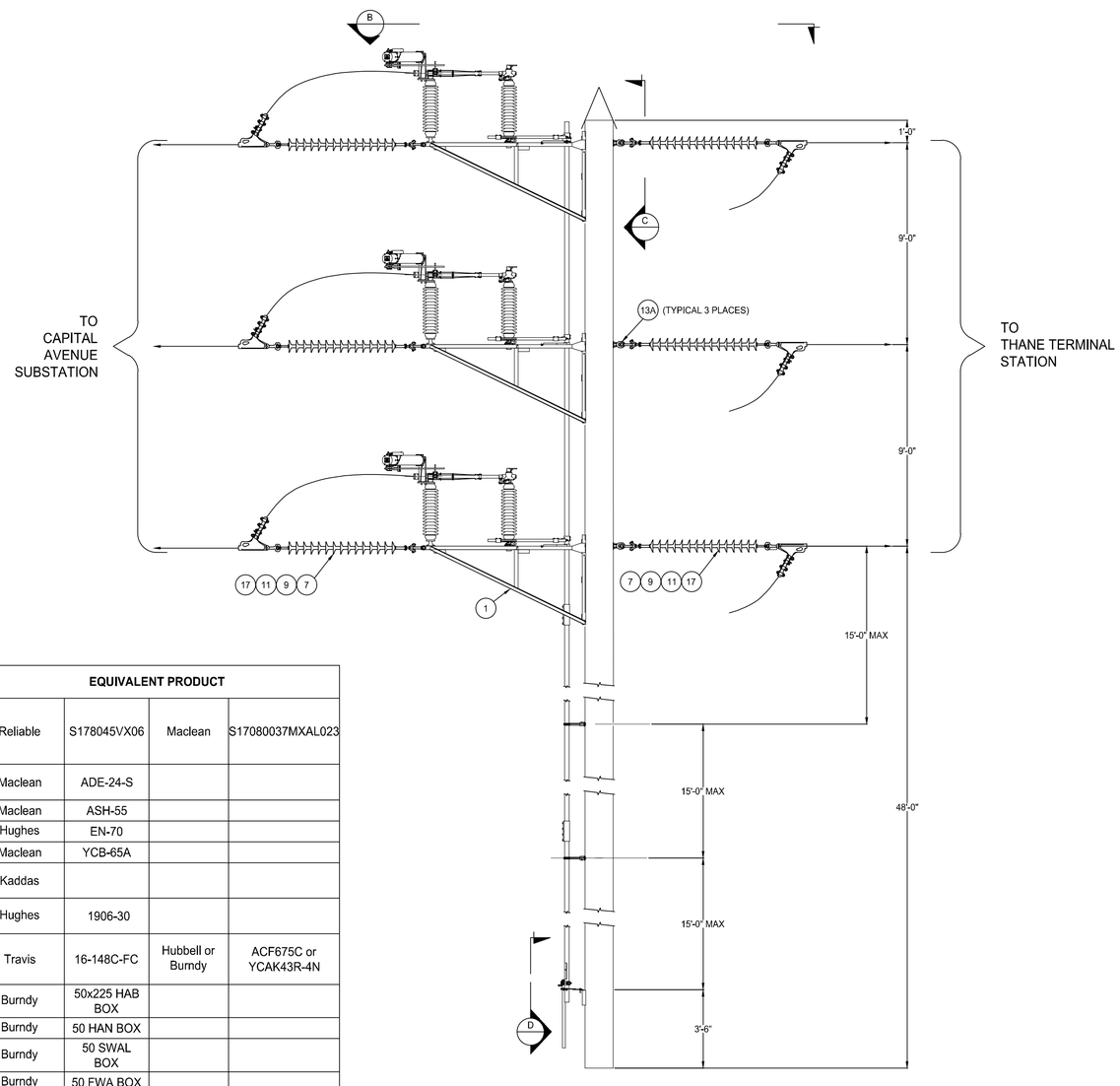
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SHEET NO.: 1
REV. NO.: A

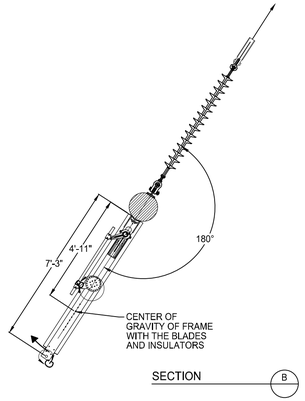
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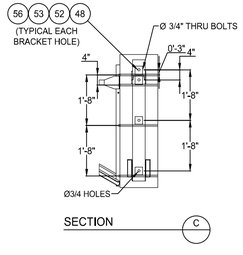


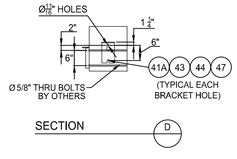
ELEVATION
(POSITION TO THANE TERMINAL STATION
NOT SHOWN FOR CLARITY)



ELEVATION
(POSITION TO PROPOSED SHORE POWER SUBSTATION
NOT SHOWN FOR CLARITY)







ITEM	REQ'D	DESCRIPTION	EQUIVALENT PRODUCT			
7	9	Polymer Insulator, 25KIP, ANSI 52-5 Socket Tower End and ANSI 52-5 Ball Line End, 45" Section Length, 36" Dry Arcing Distance, Suspension / Dead End Type	Reliable	S178045VX06	Maclean	S17080037MXAL023
9	9	Conductor Dead End, Bolted Clamp, w/ Socket Eye	Maclean	ADE-24-S		
11	12	Anchor Shackle, 30KIP, 5/8" Dia. Pin	Maclean	ASH-55		
13A	3	Eye Nut, 3/4", 20 KIP	Hughes	EN-70		
17	9	Y-Clevis Ball, 35KIP	Maclean	YCB-65A		
18	1	Pole Top Bird Perch Cone, for CLH2 DF poles w/ 10" top dia.	Kaddas			
21	3	CLEVIS LINK, 30", 7/8" GAP, 15/16" HOLE, 45 KIPS	Hughes	1906-30		
34	15	Compression terminal for Switch Pad Jumpers, Elgin, with filler compound and penetrox or equivalent joint compound	Travis	16-148C-FC	Hubbell or Burndy	ACF675C or YCAK43R-4N
35	48	1/2"-13unc x 2-1/4" AL hex bolt	Burndy	50x225 HAB BOX		
35A	48	1/2"-13unc AL hex nut	Burndy	50 HAN BOX		
35B	96	1/2" AL split lock washer	Burndy	50 SWAL BOX		
35C	96	1/2" AL flat washer	Burndy	50 FWA BOX		
41A	4	Bolt, Machine, 5/8" x 20", w/ Nut				
43	4	Washer, Curved, 3" x 3" x 1/4" w/ 11/16" Hole				
44	4	Washer, Spring, w/ 11/16" Hole				
47	4	Locknut, MF, 5/8"				
48	24	Bolt, Machine, 3/4" x As Req'd, w/ Nut				
52	24	Washer, Curved, 4" x 4" x 1/4" w/ 13/16" Hole				
53	24	Washer, Spring, w/ 13/16" Hole				
56	24	Locknut, MF, 3/4"				

NOTES:
1. REFER TO TURNER ELECTRIC DRAWING SK160604 OR HUBBELL EQUIVALENT. OFFSET SWITCH FRAMES 2" TO ACCOMMODATE THRU BOLTS.
2. SWITCH JUMPERS NOT SHOWN FOR CLARITY CIRCUIT FROM THANE TO CAPITAL IS THRU, SHORE POWER SUB IS TAP.
3. SEE DWG AELP-D-T008-1 POLE SETTING DETAIL - STAKING FOR GUY AND ANCHOR REQUIREMENTS.
4. USE ITEM 21 CLEVIS EXTENSION LINK AS REQUIRED TO MAINTAIN 69 KV PHASE TO POLE CLEARANCE FOR HEAVY INCLINED SPANS.

"Engineering with Distinction"
ELECTRICAL CONSULTANTS, INC.
BILLINGS, MONTANA

TP-69-2D

DESCRIPTION: ALASKA ELECTRIC LIGHT & POWER
69kV TRANSMISSION LINE STANDARD
TP-69-2D
69 kV 2-1AD SWITCH VERTICAL DE TAP STRUCTURE 0° / 90°

REV	DESCRIPTION	AUTH	REV BY	DATE
A	ISSUED FOR 35% REVIEW	WDZ	PJW	06/30/26

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SCALE: NTS
APPROVED BY: WDZ
DRAWN BY: PJW
DATE: 04/22/26
SIZE: D

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DRAWING TYPE	SHEET NO.	REV. NO.
STRUCTURE DRAWING	1	A

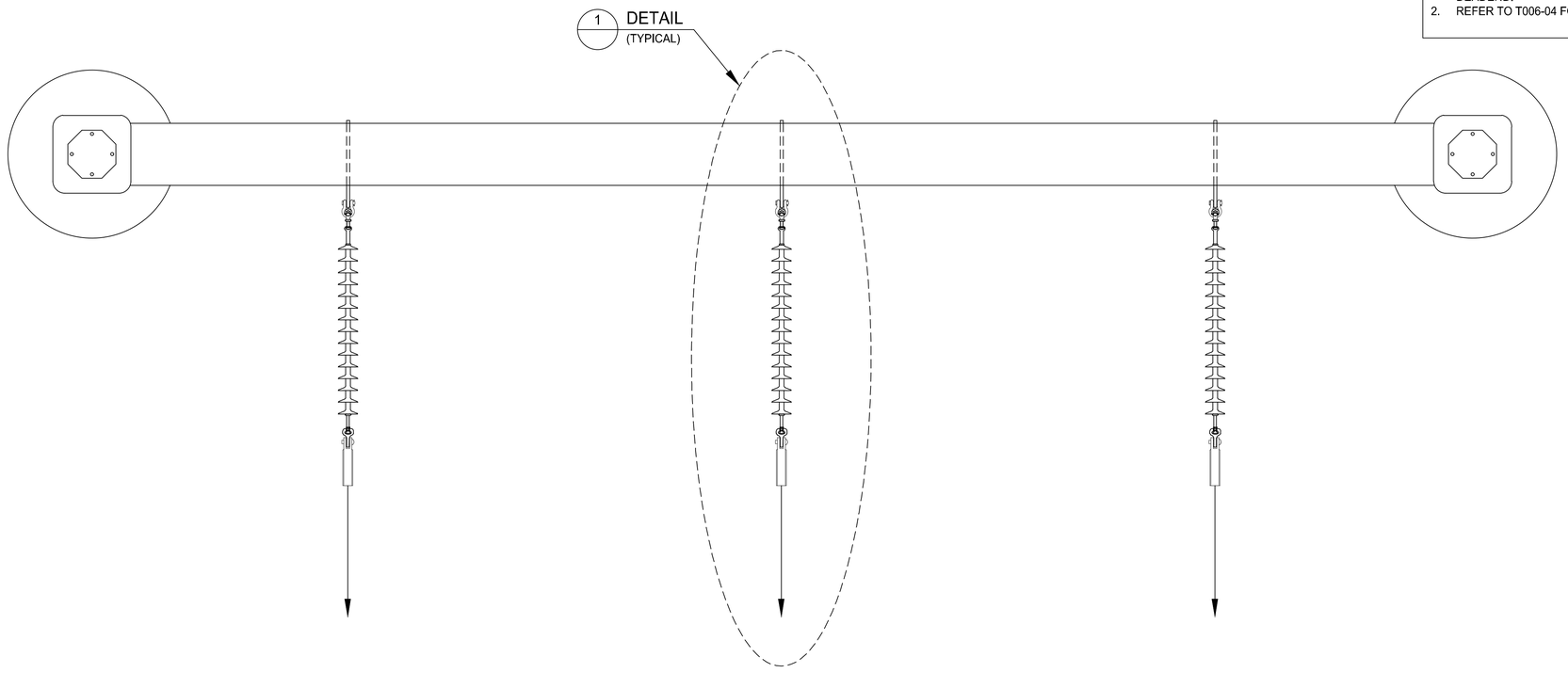
FILE NO. AELP-D-T002-3

STRUCTURE BILL OF MATERIAL

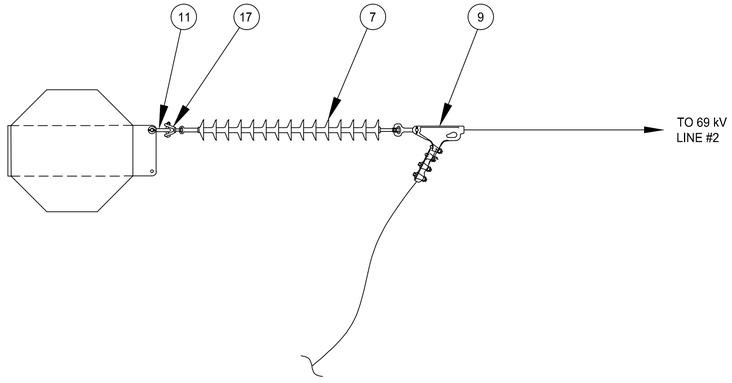
ITEM	REQ'D	DESCRIPTION	EQUIVALENT PRODUCT
7	3	INSULATOR, SUSPENSION, COMPOSITE, SOCKET-BALL	RELIABLE S178045VX06
9	3	CLAMP, STRAIN DEADEND, SOCKET END	MACLEAN ADE-24-S
11	3	ANCHOR SHACKLE, 30 KIP	MACLEAN ASH-55
17	3	Y-CLEVIS BALL, 35 KIP	MACLEAN YCB-65A

NOTES:

1. REFER TO U5.1 FOR THE SHORE POWER PROJECT SUBSTATION GENERAL ARRANGEMENT AND ELEVATIONS FOR THE 69 KV DEADEND.
2. REFER TO T006-04 FOR ORIENTATION AND PHASING REQUIREMENTS.



PLAN



652.4 AAAC "ELGIN"
JUMPERS TO SWITCH/BUS
BY SUBSTATIONS
REFER TO E5.1

DETAIL
PHASE ATTACHMENT 1

"Engineering with Distinction"
ECI ELECTRICAL CONSULTANTS, INC.
BILLINGS, MONTANA

TM-DEA

DESCRIPTION: ALASKA ELECTRIC LIGHT & POWER
69kV TRANSMISSION LINE STANDARD
TM–DEA
SUBSTATION DEADEND ASSEMBLY

REV	DESCRIPTION	AUTH	REV BY	DATE
A	ISSUED FOR 35% REVIEW	WDZ	PJW	06/30/26

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SCALE: NTS
APPROVED BY: WDZ
DRAWN BY: PJW
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SIZE: D

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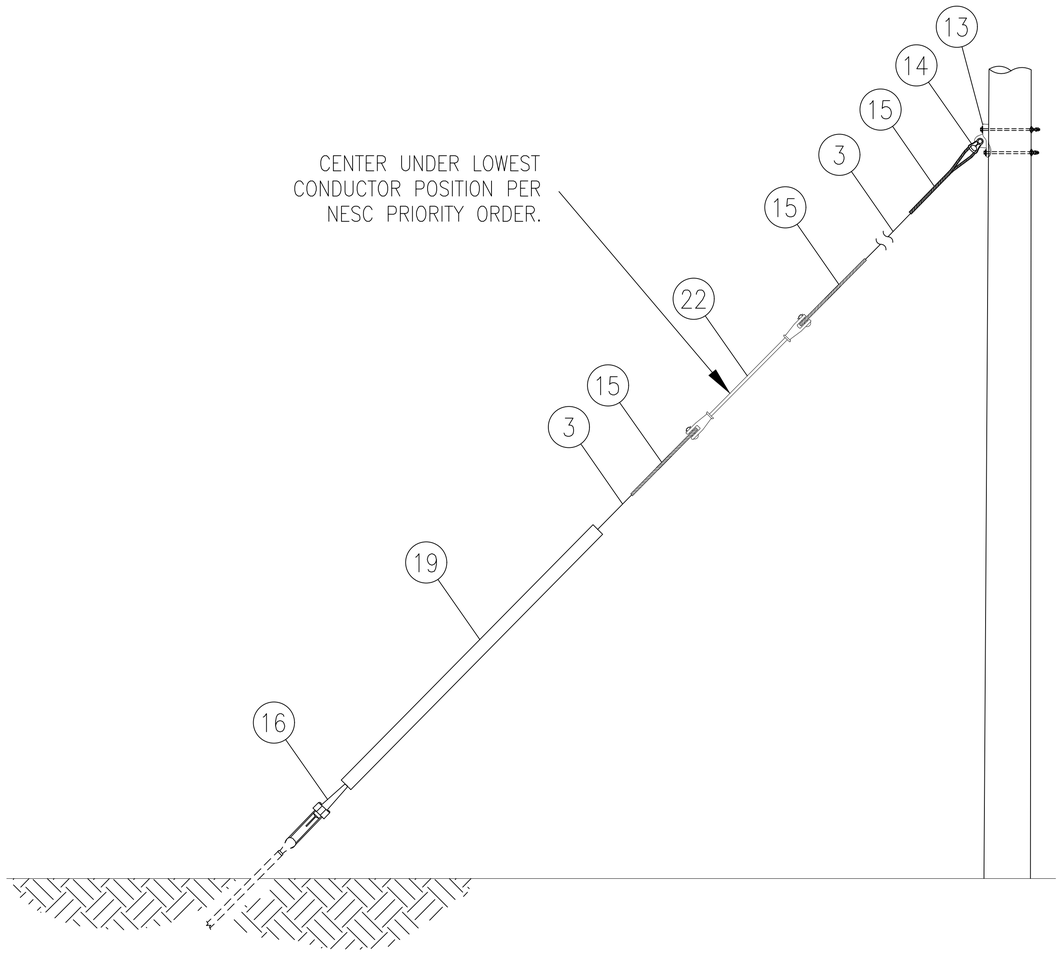
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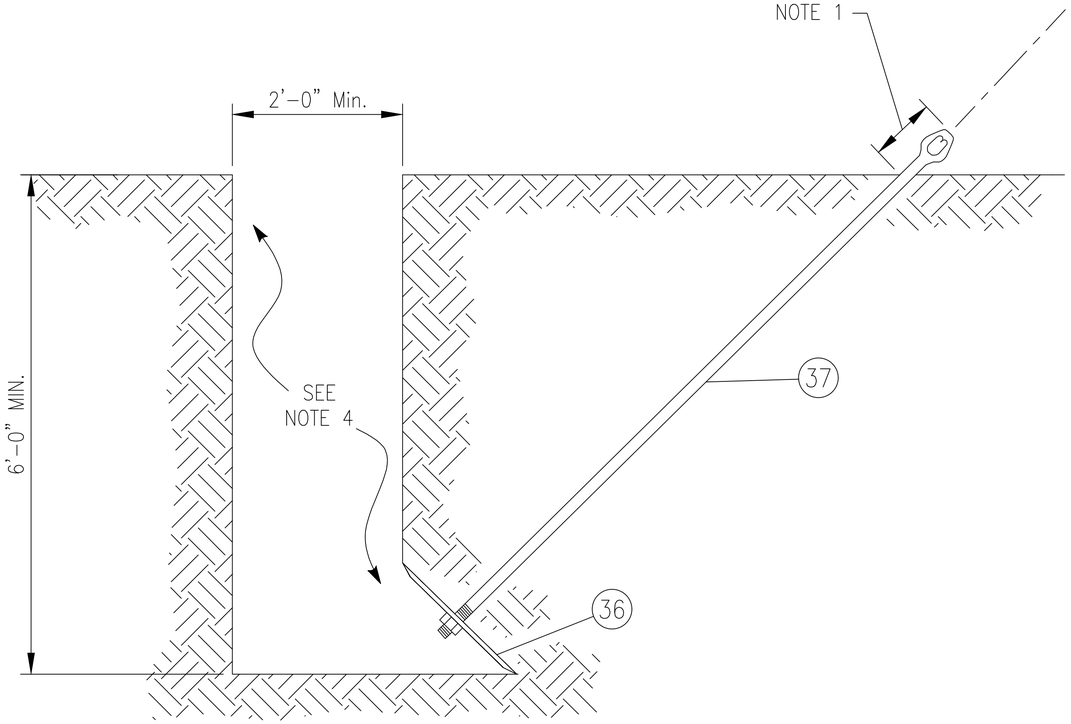
DRAWING TYPE	SHEET NO.	REV. NO.
ANCILLARY	1	A

FILE NO. AELP–D–T003–1

ITEM	REQD.	DESCRIPTION	EQUIVALENT PRODUCT
3	As Req'd	Guy Wire, 18M" Alumoweld,.417" Dia., 18,000 Lb.	Alumoweld 18M Guy Strand
13	1	Pole Eye Plate, 36KIP	Maclean EPR-77A-7
14	1	Clevis Thimble, 30KIP	Maclean FSA-88A-5
15	3	Guy Grips, 18M, Alumoweld	Preformed AWDE-4124
16	1	Automatic Grips, Alumoweld	Maclean 5203
19	1	Guy Guard, Yellow, 8'	Preformed PG5518
22	1	Strain Insulator, Clevis/Clevis w/2 Rollers	Hughes CF694-36-R2

ITEM	REQD.	DESCRIPTION	EQUIVALENT PRODUCT
36	1	Anchor, Cross-Plate, 24", Galv. 1" Rod, 36 kips	Chance X24
37	1	Anchor Rod, Tripleye Adapter, 1" x 8 ft.	Chance 7568





NOTES:

1. MAXIMUM PROJECTION AFTER LOADING IS 8 INCHES. IF SOIL CLASS AT DEPTH OF ANCHOR IS WORSE THAN A.B. CHANCE CLASS 5 OR COMPETENT ROCK, USE OF ANOTHER ANCHOR TYPE MAY BE REQUIRED BY THE ENGINEER.
2. ANCHORS SHALL BE INSTALLED IN LINE WITH THE GUYS.
3. SELECT BACKFILL AS REQUIRED BY THE ENGINEER.
4. PULL TEST ANCHOR TO 20 KIPS THIS PROJECT.

"Engineering with Distinction"
ELECTRICAL CONSULTANTS, INC.
BILLINGS, MONTANA

TG-1 / TA-1P

DESCRIPTION: ALASKA ELECTRIC LIGHT & POWER
69kV TRANSMISSION LINE STANDARD
TG-1 & TA-1P
DOWNGUY W/INSULATOR & CROSS PLATE ANCHOR

REV	DESCRIPTION	AUTH	REV BY	DATE
A	ISSUED FOR 35% REVIEW	WDZ	PJW	06/30/26

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JUNEAU, ALASKA 99801

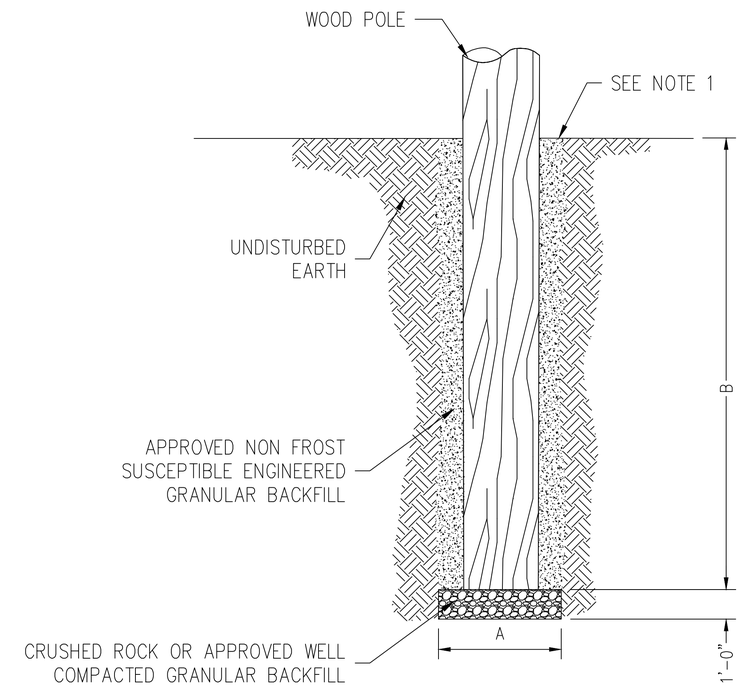
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DRAWN BY: PJW
DATE: 06/16/26
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DRAWING TYPE	SHEET NO.	REV. NO.
FOUNDATION DRAWING	1	A

FILE NO. AELP-D-T003-2



TM-101

STR. NO.	POLE TOP RAKE (IN)	"A" (FT)	"B" (FT)
14283	0'-6"	3'-0"	13'-0"
14283-1A	0	3'-0"	10'-0"
14285	0	3'-0"	7'-6"
14286	0	3'-0"	7'-6"
14288	0	3'-0"	8'-0"

ITEM	REQD.	DESCRIPTION	EQUIVALENT PRODUCT
91	2	WOOD POLE, DOUGLAS FIR, 55 FT, CLASS 1	STELLA JONES
92	1	WOOD POLE, DOUGLAS FIR, 60 FT, CLASS H1	STELLA JONES
93	1	WOOD POLE, DOUGLAS FIR, 70 FT, CLASS H2	STELLA JONES
94	1	WOOD POLE, DOUGLAS FIR, 80 FT, CLASS 1	STELLA JONES

NOTES:

1. A CORRUGATED METAL PIPE (CMP) OR APPROVED EQUAL HDPE PIPE MAY BE USED TO CASE THE HOLE WHERE POOR SOILS AND/OR SHALLOW GROUND WATER EXISTS.
2. REFER TO STAKING SHEETS AND PLAN AND PROFILE DRAWINGS FOR ASSEMBLY DETAILS.
3. EMBEDMENT BASED ON PND INTERPRETED SOIL PROFILES FROM TEST PITS TP-1A AND TP-1B DATED 12/18/2024.

"Engineering with Distinction"
ELECTRICAL CONSULTANTS, INC.
BILLINGS, MONTANA

TM-101

DESCRIPTION: ALASKA ELECTRIC LIGHT & POWER
69kV TRANSMISSION LINE STANDARD
TM-101
WOOD POLE DIRECT EMBEDMENT

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JUNEAU, ALASKA 99801

SCALE: NTS
APPROVED BY: WDZ
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DATE: 12/23/25
SIZE: D

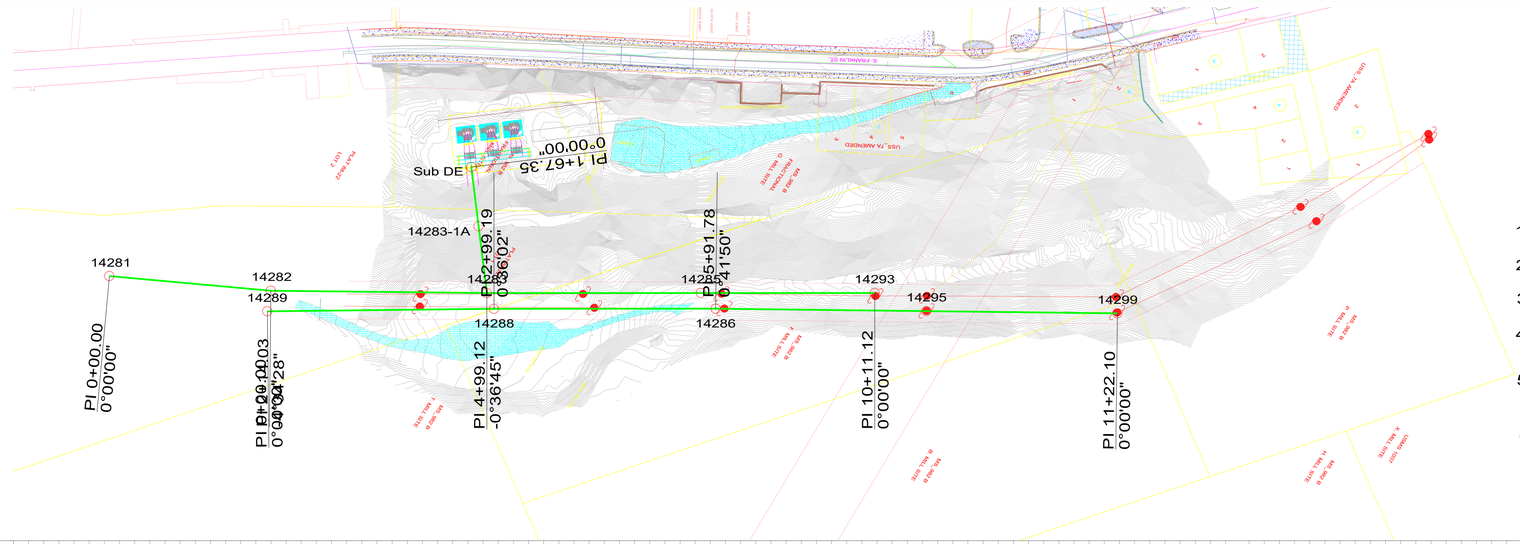
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SHEET NO.: 1
REV. NO.: A

REV	DESCRIPTION	AUTH	REV BY	DATE
A	ISSUED FOR 35% REVIEW	WDZ	PJW	06/30/26

FILE NO. AELP-D-T003-3

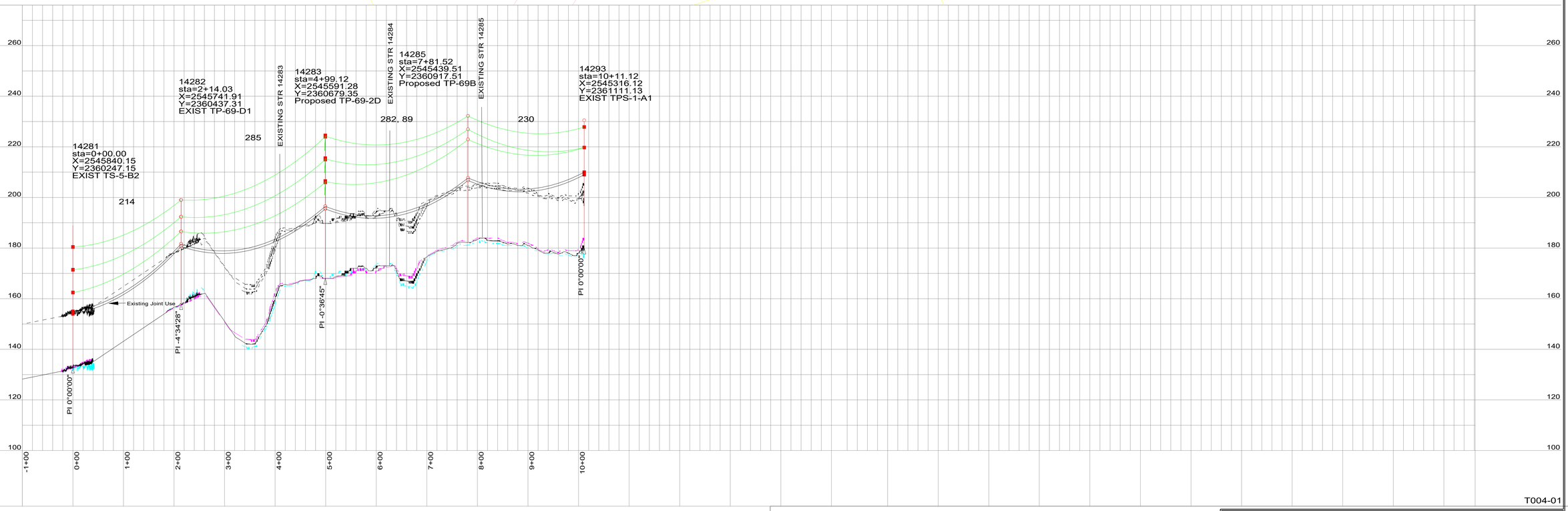


100.0 ft. Horiz. Scale

20.0 ft. Vert. Scale

NOTE:

1. 69 KV CLEARANCE LINE DISPLAYED AT 21.7 FT.
2. 69 KV CONDUCTOR DISPLAYED AT 212°F
3. EXISTING JOINT USE UNDERBUILD SHOWN ON LINE #2 IS ASSUMED.
4. MAXIMUM WIRE TENSION AT NESC HEAVY INITIAL CONDITION IS 850 LBS UNDER REDUCED TENSION FOR PROPOSED SHORE POWER LINE TAP.
5. MAXIMUM WIRE TENSION OF EXISTING 652.4 AAAC "ELGIN" USING LIDAR TEMPERATURE OF 65° AND 26 MW LOADING, NO WIND FOR LINE CIRCUIT #1 AND 2 IS ASSUMED 3200 LBS AT NESC HEAVY, INITIAL. SUBJECT TO LIDAR VERIFICATION.
6. GROUND PROFILE IS BASED ON PND ENGINEERING NOVEMBER 2024 SURVEY AND ADOT LIDAR MERGE. ADOT FREE LIDAR WAS USED FOR EXISTING WIRE SURVEY. ECI RECOMMENDS A FULL LIDAR OF THE EXISTING LINE BE PERFORMED PRIOR TO MATERIAL ORDERING AND FINAL DESIGN TO CORRECT REGISTRATION ERRORS FOUND IN THE LIDAR SURVEY AND TO ENSURE ACCURATE LINE TENSIONS.



T004-01

"Engineering with Distinction"

ELECTRICAL CONSULTANTS, INC.

DESCRIPTION

PORT OF JUNEAU SHORE POWER LINE # 2 TAP
69 KV TRANSMISSION LINE

	DESCRIPTION	AUTH	REV BY	DATE
A	ISSUED FOR 35% REVIEW	WDZ	WDZ	06/30/26

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5601 TONGSGARD COURT
JUNEAU, ALASKA 99801

SCALE: AS NOTED
APPROVED BY: WDZ
DRAWN BY: WDZ
DATE: 12/23/225

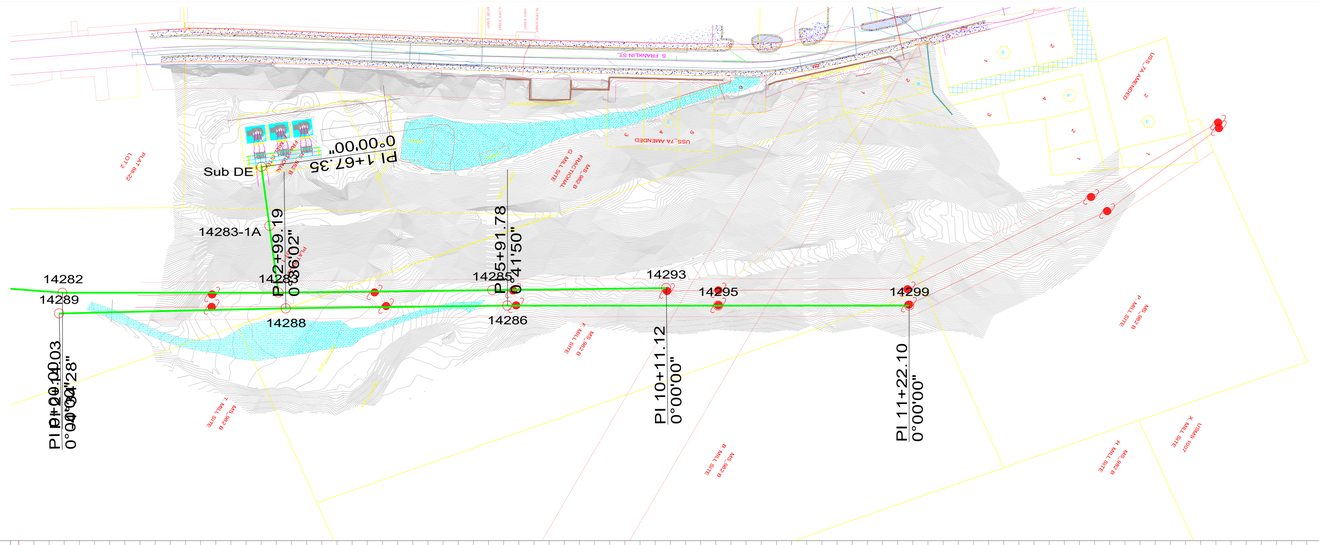
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DRAWING TYPE	SHEET NO.	REV. NO.
PLAN AND PROFILE	1 OF 1	A

FILE NO. AELP-D-T004-1

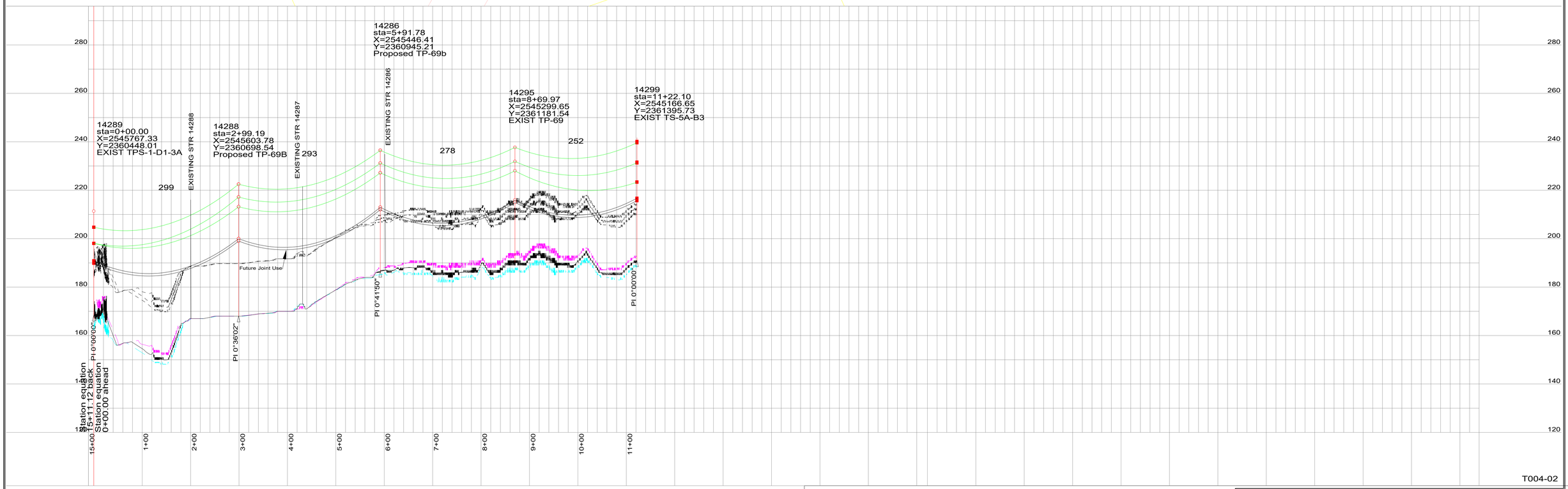


100.0 ft. Horiz. Scale

20.0 ft. Vert. Scale

NOTE:

1. 69 KV CLEARANCE LINE DISPLAYED AT 21.7 FT.
2. 69 KV CONDUCTOR DISPLAYED AT 212°F
3. EXISTING JOINT USE UNDERBUILD SHOWN ON LINE #2 IS ASSUMED.
4. MAXIMUM WIRE TENSION AT NESC HEAVY INITIAL CONDITION IS 850 LBS UNDER REDUCED TENSION FOR PROPOSED SHORE POWER LINE TAP.
5. MAXIMUM WIRE TENSION OF EXISTING 652.4 AAAC "ELGIN" USING LIDAR TEMPERATURE OF 65° AND 26 MW LOADING, NO WIND FOR LINE CIRCUIT #1 AND 2 IS ASSUMED 3200 LBS AT NESC HEAVY, INITIAL. SUBJECT TO LIDAR VERIFICATION.
6. GROUND PROFILE IS BASED ON PND ENGINEERING NOVEMBER 2024 SURVEY AND ADOT LIDAR MERGE. ADOT FREE LIDAR WAS USED FOR EXISTING WIRE SURVEY. ECI RECOMMENDS A FULL LIDAR OF THE EXISTING LINE BE PERFORMED PRIOR TO MATERIAL ORDERING AND FINAL DESIGN TO CORRECT REGISTRATION ERRORS FOUND IN THE LIDAR SURVEY AND TO ENSURE ACCURATE LINE TENSIONS.



T004-02

"Engineering with Distinction"

ELECTRICAL CONSULTANTS, INC.

A	ISSUED FOR 35% REVIEW	WDZ	WDZ	06/30/26
	DESCRIPTION	AUTH	REV BY	DATE

DESCRIPTION

PORT OF JUNEAU SHORE POWER LINE # 2 TAP
69 KV TRANSMISSION LINE

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5601 TONGSGARD COURT
JUNEAU, ALASKA 99801

SCALE: AS NOTED
APPROVED BY: WDZ
DRAWN BY: WDZ
DATE: 12/23/225

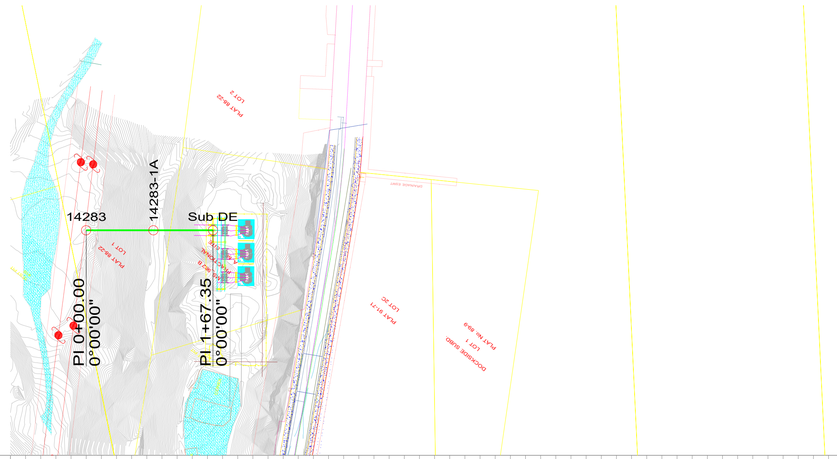
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PLAN AND PROFILE	1 OF 1	A

FILE NO. AELP-D-T004-2



100.0 ft. Horiz. Scale

20.0 ft. Vert. Scale

NOTE:

1. 69 KV CLEARANCE LINE DISPLAYED AT 21.7 FT.
2. 69 KV CONDUCTOR DISPLAYED AT 212°F
3. EXISTING JOINT USE UNDERBUILD SHOWN ON LINE #2 IS ASSUMED.
4. MAXIMUM WIRE TENSION AT NESC HEAVY INITIAL CONDITION IS 850 LBS UNDER REDUCED TENSION FOR PROPOSED SHORE POWER LINE TAP.
5. MAXIMUM WIRE TENSION OF EXISTING 652.4 AAAC "ELGIN" USING LIDAR TEMPERATURE OF 65° AND 26 MW LOADING, NO WIND FOR LINE CIRCUIT #1 AND 2 IS ASSUMED 3200 LBS AT NESC HEAVY, INITIAL. SUBJECT TO LIDAR VERIFICATION.
6. GROUND PROFILE IS BASED ON PND ENGINEERING NOVEMBER 2024 SURVEY AND ADOT LIDAR MERGE. ADOT FREE LIDAR WAS USED FOR EXISTING WIRE SURVEY. ECI RECOMMENDS A FULL LIDAR OF THE EXISTING LINE BE PERFORMED PRIOR TO MATERIAL ORDERING AND FINAL DESIGN TO CORRECT REGISTRATION ERRORS FOUND IN THE LIDAR SURVEY AND TO ENSURE ACCURATE LINE TENSIONS.



T004-03

"Engineering with Distinction"

ELECTRICAL CONSULTANTS, INC.

A	ISSUED FOR 35% REVIEW	WDZ	WDZ	06/30/26
	DESCRIPTION	AUTH	REV BY	DATE

DESCRIPTION
PORT OF JUNEAU SHORE POWER LINE # 2 TAP
69 KV TRANSMISSION LINE

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SCALE: AS NOTED
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PLAN AND PROFILE	1 OF 1	A

FILE NO. AELP-D-T004-3

69 kV STRUCTURE LIST

ALASKA ELECTRIC LIGHT AND POWER
LINE #1 / #2 69 kV TRANSMISSION LINE
PORT OF JUNEAU SHORE POWER SUBSTATION LINE TAP

STR. No.	STRUCTURE TYPE	STATION (FT)	SPAN AHEAD (FT)	RULING SPAN (FT)	LINE ANGLE (DEGREES)	POLE CLASS	POLE LENGTH (FT)	EMBEDDED LENGTH (FT)	COORDINATE (FT)		CTR. LINE ELEV. (FT)	COMMENTS
									EASTING	NORTHING		
LINE #2												
14281	TS-5-B2	0+00	214	**256**		H1	70		2545840.15	2360247.15	133.00	EXISTING POLE, (2) 1AD 69 kV SWITCHES AHEAD AND TO LINE#1, RE-SAG AND CLIP CONDUCTOR AHEAD
14282	TP-69-D1	2+14	285		4° 34' 28" LT	2	60	8	2545741.91	2360437.31	158.08	EXISTING POLE, MIDDLE PHASE GUY SPAN WIRE TO LINE #1 STR 14289
14283	TP-69-2D	4+99	282	**260**	0° 36' 45" LT	H2	70	13	2545591.28	2360679.35	168.00	NEW POLE, INSTALL (1) TM-101, (2) 1AD 69 kV SWITCHES TO PROPOSED SHORE POWER SUB AND AHEAD, (2) TG-1, (1) TA-1P WITH 20' LEAD ON BISECTOR
14285	TP-69B	7+82	230			1	55	7.5	2545439.51	2360917.51	182.22	NEW POLE, INSTALL (1) TM-101, REMOVE STR 14284 155' BACK ON LINE 1' ABOVE EXISTING JOINT USE
14293	TPS-1-A1	10+11				2	50	7	2545316.12	2361111.13	179.99	EXISTING POLE, X-ARM DDE, RE-SAG AND CLIP EXISTING CONDUCTOR BACK
LINE #1												
14289	TPS-1-D1-3A	0+00	299	**282**		2	55	7.5	2545767.33	2360448.01	168.37	EXISTING POLE, X-ARM DDE, RE-SAG AND CLIP EXISTING CONDUCTOR AHEAD
14288	TP-69B	2+99	293		0° 36' 2" RT	H1	60	8	2545603.78	2360698.54	168.00	NEW POLE, INSTALL (1) TM-101, REMOVE STR 14287 140' AHEAD
14286	TP-69b	5+92	278		0° 41' 51" RT	1	55	7.5	2545446.41	2360945.21	186.48	NEW POLE, INSTALL (1) TM-101
14295	TP-69	8+70	252			2	55	7.5	2545299.66	2361181.54	190.20	EXISTING POLE
14299	TS-5A-B3	11+22				2	60	8	2545166.65	2361395.73	190.85	EXISTING POLE, DDE, RE-SAG AND CLIP EXISTING CONDUCTOR BACK
LINE #2 TAP TO PROPOSED POJ SUBSTATION												
14283	TP-69-2D	0+00	89	**81**					2545591.28	2360679.35	168.00	NEW POLE, INSTALL (1) TM-101, (2) 1AD 69 kV SWITCHES, (2) TG-1, (1) TA-1P 20' LEAD, INSTALL NEW 3PH AAAC "ELGIN" AHEAD
14283-1A	TP-69-3B (mod)	0+89	79	**58**		1	80	10	2545522.77	2360622.84	114.25	NEW POLE, INSTALL (1) TM-101
Sub DE	H-Frame DE	1+67				Cust	Stl	Fnd	2545462.11	2360572.80	74.00	INSTALL (1) TM-DEA

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ECI ELECTRICAL CONSULTANTS, INC.
BILLINGS, MONTANA

STAKING SHEET

DESCRIPTION: ALASKA ELECTRIC LIGHT & POWER
PORT OF JUNEAU CRUISE SHIP DOCK ELECTRIFICATION
69 kV TRANSMISSION LINE
STAKING SHEET

REV	DESCRIPTION	AUTH	REV BY	DATE
A	ISSUED FOR 35% REVIEW	WDZ	PJW	06/30/26

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5601 TONGSGARD COURT
JUNEAU, ALASKA 99801

SCALE: NTS
APPROVED BY: WDZ
DRAWN BY: PJW
DATE: 12/23/25
SIZE: D

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ALASKA ELECTRIC LIGHT AND POWER COMPANY

DRAWING TYPE: STAKING
SHEET NO.: 1
REV. NO.: A

FILE NO. AELP-D-T005-1

Stringing Chart

Section from structure #14289 to structure #14299
Cable 'elgin_aaac', Ruling span (ft) 282.02
Results below for condition 'Creep RS'
Calculations done using actual span lengths and vertical projections

---Span--- From--- Str.	Set	---Span--- To--- Str.	Set	Span Length (ft-in)	Measurement Type	Temperature (deg F) 30	35	40	45	50	55	60	65	70	75	80	Span Vertical Projection (ft-in)
14289	1	14288	1	299-2	Mid Span Sag (ft-in)	6-7	6-9	6-11	7-1	7-3	7-5	7-7	7-8	7-10	8-0	8-2	17-4
14288	1	14286	1	292-7		6-4	6-6	6-7	6-9	6-11	7-1	7-3	7-4	7-6	7-8	7-9	14-0
14286	1	14295	1	278-2		5-8	5-10	6-0	6-1	6-3	6-5	6-6	6-8	6-9	6-11	7-0	0-11
14295	1	14299	1	252-1		4-8	4-9	4-11	5-0	5-2	5-3	5-4	5-5	5-7	5-8	5-9	-1-2
14289	1	14288	1	299-2	3 Wave Time (Sec.)	7.68	7.78	7.87	7.96	8.05	8.13	8.22	8.30	8.38	8.45	8.53	17-4
14288	1	14286	1	292-7		7.51	7.60	7.69	7.78	7.87	7.95	8.03	8.11	8.19	8.27	8.34	14-0
14286	1	14295	1	278-2		7.14	7.22	7.31	7.40	7.48	7.56	7.63	7.71	7.78	7.85	7.92	0-11
14295	1	14299	1	252-1		6.47	6.55	6.63	6.70	6.77	6.85	6.92	6.99	7.05	7.12	7.18	-1-2
14289	1	14299	1	0-0	Horiz Tension (lbs)	1041.32	1016.22	991.99	969.53	948.82	928.99	910.04	892.41	875.66	859.78	844.79	0-0

Stringing Chart

Section from structure #14289 to structure #14299 (EXISTING LINE FOR SAGGING REFERENCE CHECKS ONLY)
Cable 'elgin_aaac', Ruling span (ft) 232.251
Results below for condition 'Creep RS'
Calculations done using actual span lengths and vertical projections

---Span--- From--- Str.	Set	---Span--- To--- Str.	Set	Span Length (ft-in)	Measurement Type	Temperature (deg F) 30	35	40	45	50	55	60	65	70	75	80	Span Vertical Projection (ft-in)
14289	1	14288	1	201-4	Mid Span Sag (ft-in)	2-9	2-10	3-0	3-1	3-2	3-3	3-5	3-6	3-7	3-8	3-9	11-4
14288	1	14287	1	230-3		3-7	3-9	3-11	4-0	4-2	4-3	4-5	4-7	4-8	4-10	4-11	5-10
14287	1	14286	1	170-4		2-0	2-1	2-2	2-2	2-3	2-4	2-5	2-6	2-7	2-8	2-8	12-8
14286	1	14295	1	268-2		4-11	5-1	5-3	5-5	5-8	5-10	6-0	6-2	6-4	6-6	6-8	2-9
14295	1	14299	1	252-1		4-4	4-6	4-8	4-10	5-0	5-2	5-4	5-5	5-7	5-9	5-11	-1-6
14289	1	14288	1	201-4	3 Wave Time (Sec.)	4.96	5.06	5.16	5.25	5.34	5.42	5.50	5.58	5.66	5.73	5.80	11-4
14288	1	14287	1	230-3		5.67	5.79	5.89	6.00	6.10	6.19	6.29	6.38	6.46	6.55	6.63	5-10
14287	1	14286	1	170-4		4.20	4.29	4.36	4.44	4.52	4.59	4.66	4.72	4.79	4.85	4.91	12-8
14286	1	14295	1	268-2		6.60	6.74	6.86	6.98	7.10	7.21	7.32	7.43	7.53	7.63	7.72	2-9
14295	1	14299	1	252-1		6.21	6.34	6.45	6.57	6.68	6.78	6.88	6.98	7.08	7.17	7.26	-1-6
14289	1	14299	1	0-0	Horiz Tension (lbs)	1129.12	1084.68	1045.51	1009.87	976.85	946.48	918.74	892.76	868.98	846.96	826.26	0-0

"Engineering with Distinction"
ELECTRICAL CONSULTANTS, INC.
BILLINGS, MONTANA

STRINGING SAG CHARTS

DESCRIPTION
ALASKA ELECTRIC LIGHT & POWER
PORT OF JUNEAU CRUISE SHIP DOCK ELECTRIFICATION
69 kV TRANSMISSION LINE
STRINGING SAG CHARTS

REV	DESCRIPTION	AUTH	REV BY	DATE
A	ISSUED FOR 35% REVIEW	WDZ	PJW	06/30/26

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SCALE: NTS
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DRAWN BY: PJW
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DRAWING TYPE: STRINGING SAG CHARTS
SHEET NO.: 1
REV. NO.: A

FILE NO. AELP-D-T006-1

Stringing Chart

Section from structure #14281 to structure #14283
Cable 'elgin_aaac', Ruling span (ft) 255.966
Results below for condition 'Creep RS'
Calculations done using actual span lengths and vertical projections

Span From Str.	Span From Set	Span To Str.	Span To Set	Span Length (ft-in)	Measurement Type	Temperature (deg F) 30	35	40	45	50	55	60	65	70	75	80	Span Vertical Projection (ft-in)
14281	1	14282	1	213-11	Mid Span Sag (ft-in)	3-3	3-4	3-5	3-7	3-8	3-9	3-10	3-11	4-0	4-1	4-2	21-3
14282	1	14283	2	285-0		5-9	5-11	6-1	6-4	6-6	6-8	6-10	7-0	7-2	7-3	7-5	22-4
14281	1	14282	1	213-11	3 Wave Time (Sec.)	5.39	5.47	5.56	5.64	5.72	5.79	5.86	5.93	6.00	6.06	6.13	21-3
14282	1	14283	2	285-0		7.17	7.29	7.40	7.50	7.61	7.70	7.80	7.90	7.99	8.07	8.16	22-4
14281	1	14283	2	0-0	Horiz Tension (lbs)	1084.15	1051.14	1019.88	991.26	964.40	940.18	916.84	895.25	875.42	856.48	838.41	0-0

Stringing Chart

Section from structure #14283 to structure #14293
Cable 'elgin_aaac', Ruling span (ft) 259.887
Results below for condition 'Creep RS'
Calculations done using actual span lengths and vertical projections

Span From Str.	Span From Set	Span To Str.	Span To Set	Span Length (ft-in)	Measurement Type	Temperature (deg F) 30	35	40	45	50	55	60	65	70	75	80	Span Vertical Projection (ft-in)
14283	1	14285	1	282-5	Mid Span Sag (ft-in)	5-8	5-10	6-0	6-2	6-4	6-6	6-8	6-10	7-0	7-2	7-3	12-1
14285	1	14293	1	229-7		3-9	3-10	4-0	4-1	4-2	4-4	4-5	4-6	4-7	4-9	4-10	-4-11
14283	1	14285	1	282-5	3 Wave Time (Sec.)	7.13	7.23	7.34	7.44	7.54	7.64	7.73	7.82	7.90	7.99	8.07	12-1
14285	1	14293	1	229-7		5.79	5.88	5.97	6.05	6.13	6.21	6.28	6.35	6.42	6.49	6.56	-4-11
14283	1	14293	1	0-0	Horiz Tension (lbs)	1077.15	1045.01	1014.63	987.77	961.79	938.00	915.98	894.83	875.45	856.94	839.31	0-0

Stringing Chart

Section from structure #14281 to structure #14293 (EXISTING LINE FOR SAGGING REFERENCE CHECKS ONLY)
Cable 'elgin_aaac', Ruling span (ft) 202.788
Results below for condition 'Creep RS'
Calculations done using actual span lengths and vertical projections

Span From Str.	Span From Set	Span To Str.	Span To Set	Span Length (ft-in)	Measurement Type	Temperature (deg F) 30	35	40	45	50	55	60	65	70	75	80	Span Vertical Projection (ft-in)
14281	1	14282	1	213-11	Mid Span Sag (ft-in)	2-10	3-0	3-2	3-4	3-6	3-8	3-9	3-11	4-1	4-2	4-4	21-3
14282	1	14283	1	196-11		2-5	2-7	2-8	2-10	2-11	3-1	3-2	3-4	3-5	3-7	3-8	16-9
14283	1	14284	1	215-7		2-11	3-1	3-3	3-5	3-6	3-8	3-10	4-0	4-1	4-3	4-5	10-4
14284	1	14285	1	182-6		2-1	2-2	2-4	2-5	2-6	2-8	2-9	2-10	2-11	3-1	3-2	9-3
14285	1	14293	1	202-1		2-7	2-8	2-10	3-0	3-1	3-3	3-4	3-6	3-7	3-9	3-10	-6-6
14281	1	14282	1	213-11	3 Wave Time (Sec.)	5.06	5.20	5.34	5.46	5.59	5.71	5.82	5.93	6.03	6.13	6.23	21-3
14282	1	14283	1	196-11		4.65	4.79	4.91	5.03	5.14	5.25	5.35	5.45	5.55	5.64	5.73	16-9
14283	1	14284	1	215-7		5.09	5.23	5.37	5.50	5.62	5.74	5.85	5.96	6.07	6.17	6.26	10-4
14284	1	14285	1	182-6		4.31	4.43	4.54	4.65	4.76	4.86	4.95	5.05	5.14	5.22	5.30	9-3
14285	1	14293	1	202-1		4.77	4.90	5.03	5.15	5.27	5.38	5.48	5.59	5.68	5.78	5.87	-6-6
14281	1	14293	1	0-0	Horiz Tension (lbs)	1230.36	1163.07	1106.33	1054.87	1008.67	967.75	930.35	896.46	866.09	838.36	812.82	0-0

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ELECTRICAL CONSULTANTS, INC.
BILLINGS, MONTANA

STRINGING SAG CHARTS

DESCRIPTION
ALASKA ELECTRIC LIGHT & POWER
PORT OF JUNEAU CRUISE SHIP DOCK ELECTRIFICATION
69 kV TRANSMISSION LINE
STRINGING SAG CHARTS

REV	DESCRIPTION	AUTH	REV BY	DATE
A	ISSUED FOR 35% REVIEW	WDZ	PJW	06/30/26

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DRAWN BY: PJW
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DRAWING TYPE: STRINGING SAG CHARTS
SHEET NO.: 2
REV. NO.: A

FILE NO. AELP-D-T006-2

Stringing Chart

Section from structure #14283 to structure #14283-1A
Cable 'elgin_aaac', Ruling span (ft) 81.3108
Results below for condition 'Initial RS'
Calculations done using actual span lengths and vertical projections

Span From Str.	Span From Set	Span To Str.	Span To Set	Span Length (ft-in)	Measurement Type	Temperature (deg F) 30	35	40	45	50	55	60	65	70	75	80	Span Vertical Projection (ft-in)
14283	3	14283-1A	2	88-10	Mid Span Sag (ft-in)	2-11	2-11	3-0	3-1	3-1	3-2	3-2	3-3	3-3	3-4	3-4	-39-0
14283	3	14283-1A	2	0-0	Horiz Tension (lbs)	226.89	223.75	220.32	216.89	214.03	211.17	208.31	205.45	202.88	200.31	198.02	0-0

Stringing Chart

Section from structure #14283-1A to SHORE POWER SUB DE
Cable 'elgin_aaac', Ruling span (ft) 57.9148
Results below for condition 'Initial RS'
Calculations done using actual span lengths and vertical projections

Span From Str.	Span From Set	Span To Str.	Span To Set	Span Length (ft-in)	Measurement Type	Temperature (deg F) 30	35	40	45	50	55	60	65	70	75	80	Span Vertical Projection (ft-in)
14283-1A	1	Sub DE	1	78-8	Mid Span Sag (ft-in)	3-7	3-8	3-8	3-9	3-10	3-11	4-0	4-0	4-1	4-2	4-3	-72-3
14283-1A	1	Sub DE	1	0-0	Horiz Tension (lbs)	180.33	176.92	173.79	170.66	167.53	164.97	162.41	159.85	157.30	155.30	152.75	0-0

"Engineering with Distinction"

ELECTRICAL CONSULTANTS, INC.
BILLINGS, MONTANA

STRINGING SAG CHARTS

DESCRIPTION
ALASKA ELECTRIC LIGHT & POWER
PORT OF JUNEAU CRUISE SHIP DOCK ELECTRIFICATION
69 kV TRANSMISSION LINE
STRINGING SAG CHARTS

REV	DESCRIPTION	AUTH	REV BY	DATE
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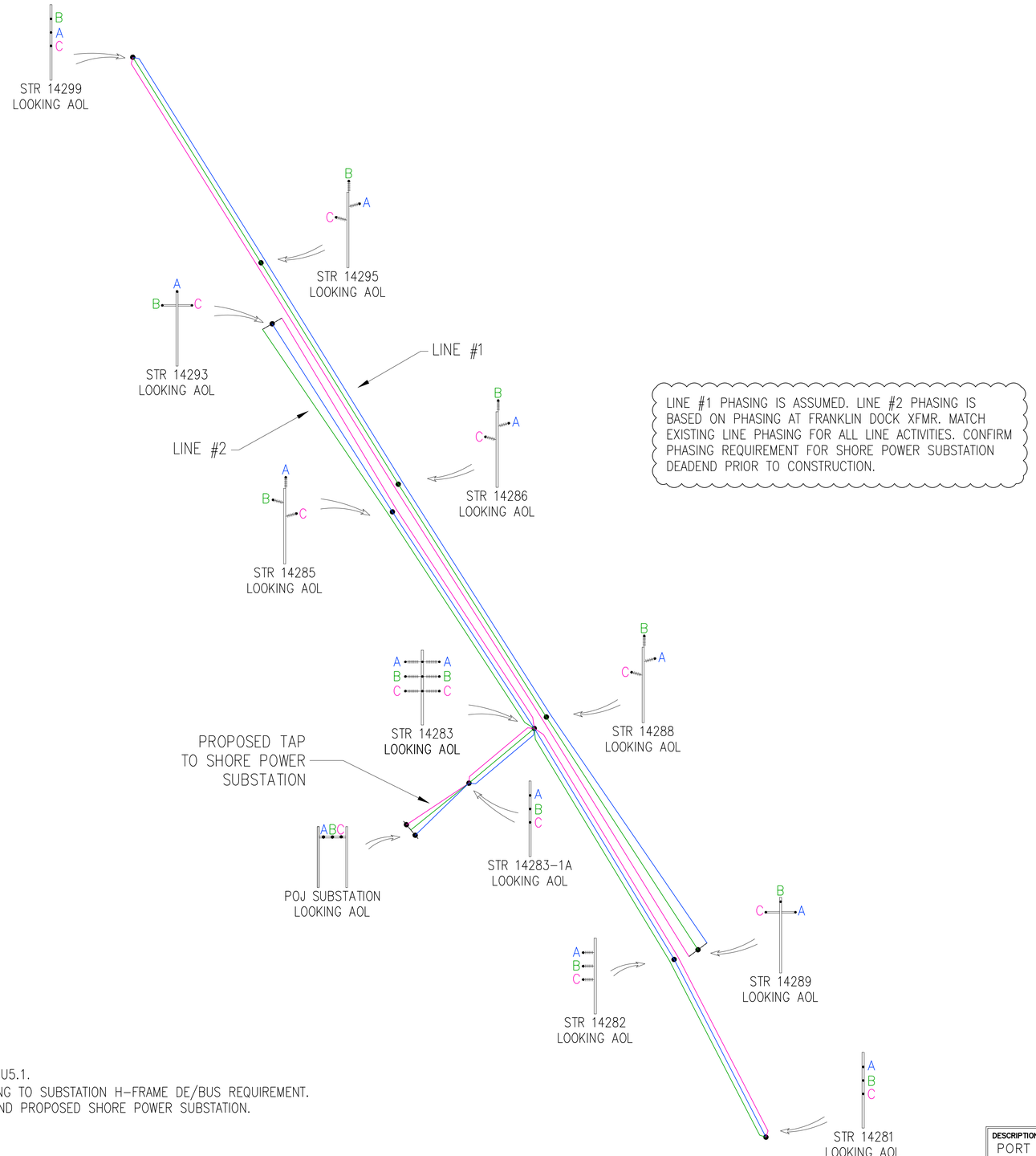
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DRAWING TYPE: STRINGING SAG CHARTS
SHEET NO.: 3
REV. NO.: A

FILE NO. AELP-D-T006-3





LINE #1 PHASING IS ASSUMED. LINE #2 PHASING IS BASED ON PHASING AT FRANKLIN DOCK XFMR. MATCH EXISTING LINE PHASING FOR ALL LINE ACTIVITIES. CONFIRM PHASING REQUIREMENT FOR SHORE POWER SUBSTATION DEADEND PRIOR TO CONSTRUCTION.

NOTES:
1. REFER TO SHORE POWER SUBSTATION GENERAL ARRANGEMENT, DRAWING U5.1.
2. LINE PHASING IS ASSUMED AT 35% DESIGN. MATCH EXISTING LINE PHASING TO SUBSTATION H-FRAME DE/BUS REQUIREMENT.
3. AOL IS AHEAD ON LINE DIRECTION LOOKING TOWARDS CAPITAL AVENUE AND PROPOSED SHORE POWER SUBSTATION.

"Engineering with Distinction"

ELECTRICAL CONSULTANTS, INC.
BILLINGS, MONTANA

PHASING DIAGRAM

DESCRIPTION: ALASKA ELECTRIC LIGHT & POWER
PORT OF JUNEAU CRUISE SHIP DOCK ELECTRIFICATION
69 kV TRANSMISSION LINE
PHASING DIAGRAM

REV	DESCRIPTION	AUTH	REV BY	DATE
A	ISSUED FOR 35% REVIEW	WDZ	PJW	06/30/26

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JUNEAU, ALASKA 99801

SCALE: NTS
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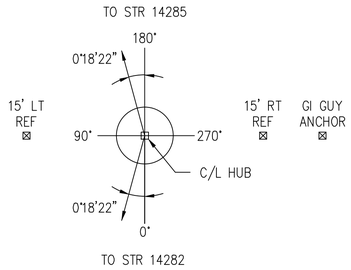
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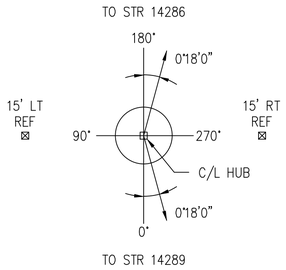
DRAWING TYPE	SHEET NO.	REV. NO.
PHASING DIAGRAM	1	A

FILE NO. AELP-D-T006-4

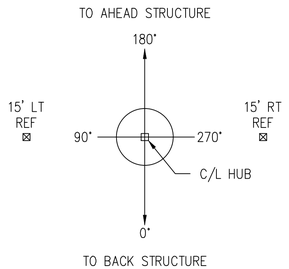
Structure Number	Easting (ft)	Northing (ft)	Elevation (ft)	Stake Description
14283	2545578.59	2360671.36	168.00	Left Ref Stake C/L Hub
14283	2545603.87	2360687.34	168.00	Right Ref Stake C/L Hub
14283	2545591.28	2360679.35	168.00	C/L Hub
14283	2545608.69	2360690.32	168.00	Guy Anchor
14285	2545426.86	2360909.45	175.38	Left Ref Stake C/L Hub
14285	2545452.16	2360925.57	183.59	Right Ref Stake C/L Hub
14285	2545439.51	2360917.51	182.22	C/L Hub
14288	2545591.18	2360690.41	168.00	Left Ref Stake C/L Hub
14288	2545616.38	2360706.67	168.15	Right Ref Stake C/L Hub
14288	2545603.78	2360698.54	168.00	C/L Hub
14286	2545433.72	2360937.22	184.00	Left Ref Stake C/L Hub
14286	2545459.11	2360953.2	190.57	Right Ref Stake C/L Hub
14286	2545446.41	2360945.21	186.48	C/L Hub
14283-1A	2545532.32	2360611.27	114.58	Left Ref Stake C/L Hub
14283-1A	2545513.23	2360634.41	113.97	Right Ref Stake C/L Hub
14283-1A	2545522.77	2360622.84	114.25	C/L Hub
Sub DE	2545471.65	2360561.23	74.00	Left Ref Stake C/L Hub
Sub DE	2545452.56	2360584.37	74.00	Right Ref Stake C/L Hub
Sub DE	2545462.11	2360572.8	74.00	C/L Hub



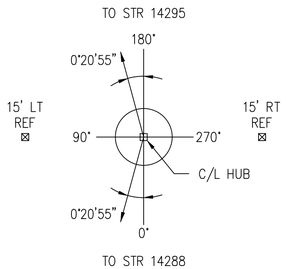
STR 14283



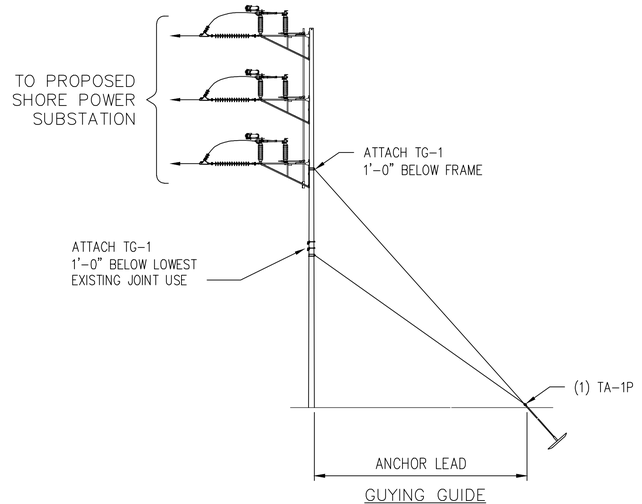
STR 14288



STR 14285 AND 14283-1A



STR 14286



GUYING GUIDE

NOTES:

1. OFFSETS, REFERENCE/ALIGNMENT POINTS (R.P.'S) AND ELEVATION BENCH MARKS (B.M.'S) ARE FIELD STAKED. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALIGNMENT OF THE POLE AND ANCHOR ASSEMBLIES PRIOR TO BACK FILLING HOLES. CONTACT THE ENGINEER OR OWNERS REPRESENTATIVE IF THERE IS ANY UNCERTAINTY AND/OR THE STAKES ARE DISTURBED OR MISSING.

"Engineering with Distinction"
ELECTRICAL CONSULTANTS, INC.
BILLINGS, MONTANA

TM-POLE

DESCRIPTION
ALASKA ELECTRIC LIGHT & POWER
PORT OF JUNEAU CRUISE SHIP DOCK ELECTRIFICATION
69 kV TRANSMISSION LINE
POLE SETTING DETAIL – STAKING TM-POLE

REV	DESCRIPTION	AUTH	REV BY	DATE
A	ISSUED FOR 35% REVIEW	WDZ	PJW	06/30/26

THIS DRAWING IS THE PROPERTY OF
ALASKA ELECTRIC LIGHT & POWER COMPANY
5601 TONGSGARD COURT
JUNEAU, ALASKA 99801

SCALE: NTS
APPROVED BY: WDZ
DRAWN BY: PJW
DATE: 12/23/25
SIZE: D

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ALASKA ELECTRIC LIGHT AND POWER COMPANY

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DRAWING TYPE: FOUNDATION DETAIL
SHEET NO.: 1
REV. NO.: A

FILE NO. AELP-D-T008-1

ALASKA ELECTRIC LIGHT and POWER Company
Port of Juneau 69 kV Transmission Line Project
MASTER MATERIALS LIST

DATE: 6/23/26 Rev: A

ITEM NO.	QUANTITY	DESCRIPTION	MANUFACTURER	MANUFACTURER CATALOG NO.	TP-69B	TP-69-2D	TP-69-3B	TG-1	TA-1P	TM-101	TM-DEA	MISC
					3	1	1	2	1	5	1	1
3	150 FT	Guy Wire, 18M" Alumoweld,.417" Dia., 18,000 Lb.	Alumoweld	18M Guy Strand				75				
4	12	Armor Rods, For 652.4, AAAC, "ELGIN"	PREFORMED	AR-0135	3		3					
5	3	Vertical Post Insulator, Polymer	RELIABLE	NBVG30XH020S0-125	1							
6	9	Horizontal Post Insulator, Polymer	RELIABLE	NPKG30XH016S0	2		3					
7	18	Polymer Insulator, Suspension / Dead End Type	RELIABLE	S178045VX06		9	6				3	
8	12	Conductor Clamp, Trunion Mount, Aluminum	Maclean	ACTS-150-SL2	3		3					
9	18	Conductor DE, Bolted Clamp, w/Socket Eye	Maclean	ADE-24-S		9	6				3	
10	3	Wedge, Connector	Homac	PT-XXXX			3					
11	27	Anchor Shackle, 30 KIP	Maclean	ASH-55		12	12				3	
12	6	Dead End Tee, 40 KIP	Hughes	2817-A-13			6					
13	8	Pole Eye Plate, 36KIP	Maclean	EPR-77A-7			6	1				
13A	3	EYE-NUT, 3/4", 20 KIP	Hughes	EN-70		3						
14	2	Clevis Thimble, 30KIP	Maclean	FSA-88A-5				1				
15	6	Guy Grips, 18M, Alumoweld	Preformed	AWDE-4124				3				
16	2	Automatic Grips, Alumoweld	Maclean	5203				1				
17	18	Y-Clevis Ball, 35KIP	Maclean	YCB-65A		9	6				3	
18	2	Pole Top Bird Perch Cone	Kaddas			1	1					
19	2	Guy Guard, Yellow, 8'	Preformed	PG5518				1				
20	3	Pole Cap			1							
21	9	Clevis Link,30",7/8" Gap,15/16" Hole,45 Kips	Hughes	1906-30		3	6					
22	2	Strain Insulator, Clevis/Clevis w/2 Rollers	Hughes	CF694-36-R2				1				
34	15	Compression Terminal, AAAC "ELGIN", w/filler compound and penetrox	Travis	16-148C-FC		15						
35	48	1/2" - 13 UNC x 2-1/4" AL Hex Bolt	Burndy	50X225 HAB BOX		48						
35A	48	1/2" - 13 UNC AL Hex Nut	Burndy	50 HAN BOX		48						
35B	96	1/2" AL Split Lock Washer	Burndy	50 SWAL BOX		96						
35C	96	1/2" AL Flat Washer	Burndy	50 FWA BOX		96						
36	1	Anchor, Cross-Plate, 24", Galv. , 1" Rod, 36 Kips	Chance	X24					1			
37	1	Anchor Rod, Tripleye Adapter, 1" x 8 ft.	Chance	7568					1			
41	4	Bolt, Machine, 5/8" x Length Required	HB		1		1					
41A	4	Bolt, Machine, 5/8" x 20", w/Nut				4						
43	12	Washer, Curved, 3" x 3" x 1/4" w/11/16" Hole	HB	SCW3-60	2	4	2					
44	8	Washer, Spring, w/ 11/16" Hole	HB	2702.6	1	4	1					
47	8	Locknut, MF, 5/8"	HB	MF60	1	4	1					
48	36	Bolt, Machine, 3/4" x Length Required, w/Nut	HB			24	12					
52	36	Washer, Curved, 4" x 4" x 1/4" w/13/16" Hole	HB			24	12					
53	36	Washer, Spring, w/ 13/16" Hole	HB			24	12					
56	36	Locknut, MF, 3/4"	HB			24	12					
57	24	Bolt, Machine, 7/8" x Length Required	HB		6		6					
61	24	Washer, Curved, 4" x 4" x 1/4" w/15/16" Hole	HB		6		6					
62	24	Washer, Spring, w/ 15/16" Hole	HB	#2702.8	6		6					
65	24	Locknut, MF, 7/8"	HB	#MF80	6		6					
80	13	Select Rock Backfill, Per C.Y.								2.5		
81	5	Culvert, ribbed, polyurethane, 3' dia X 15' length								1		
85	1	NUMBER "14283", ALUMINUM, 6"	TECH PRODUCTS									1
86	1	NUMBER "14283-1A", ALUMINUM, 6"	TECH PRODUCTS									1
87	1	NUMBER "14285", ALUMINUM, 6"	TECH PRODUCTS									1
88	1	NUMBER "14286", ALUMINUM, 6"	TECH PRODUCTS									1
89	1	NUMBER "14288", ALUMINUM, 6"	TECH PRODUCTS									1
90	750 FT	652.4 AAAC "ELGIN" CONDUCTOR										750
91	2	WOOD POLE, DOUGLAS FIR, 55 FT, CLASS 1										2
92	1	WOOD POLE, DOUGLAS FIR, 60 FT, CLASS H1										1
93	1	WOOD POLE, DOUGLAS FIR, 70 FT, CLASS H2										1
94	1	WOOD POLE, DOUGLAS FIR, 80 FT, CLASS 1										1
97	0											

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ELECTRICAL CONSULTANTS, INC.
BILLINGS, MONTANA

BILL OF MATERIALS

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PORT OF JUNEAU CRUISE SHIP DOCK ELECTRIFICATION
69 kV TRANSMISSION LINE
BILL OF MATERIALS

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