ORE PENINSULA REDEVELOPMENT

SKAGWAY, ALASKA

60% DESIGN - NOT FOR CONSTRUCTION

JANUARY 27, 2023

PROJECT TEAM

KPFF CONSULTING ENGINEERS – PROJECT MANAGEMENT, CIVIL AND STRUCTURAL ENGINEERING

ANCHOR QEA – DREDGING, PERMITTING, AND ENVIRONMENTAL ENGINEERING

HALEY & ALDRICH – GEOTECHNICAL ENGINEERING

BLUE COAST – COASTAL ENGINEERING

GLOSTEN – COASTAL ENGINEERING & NAVAL ARCHITECTURE

RESPEC – SURVEY, ELECTRICAL, UPLAND CIVIL

TIDAL DATUM

NOAA STATION 9452400 SKAGWAY, TAIYA INLET

HIGHEST OBSERVED WATER LEVEL (HOWL) = 24.14'

EXTREME HIGH WATER (EHW) = 23.10'

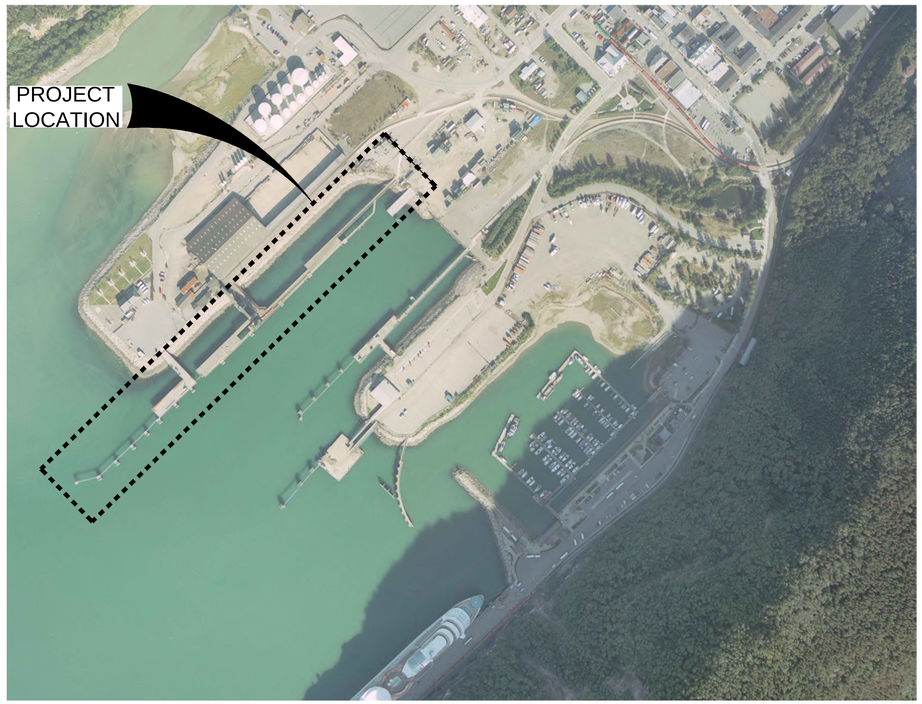
MEAN HIGHER HIGH WATER (MHHW) = 16.73'

MEAN HIGH WATER (MHW) = 15.73'

MEAN LOWER LOW WATER (MLLW) = 0.00'

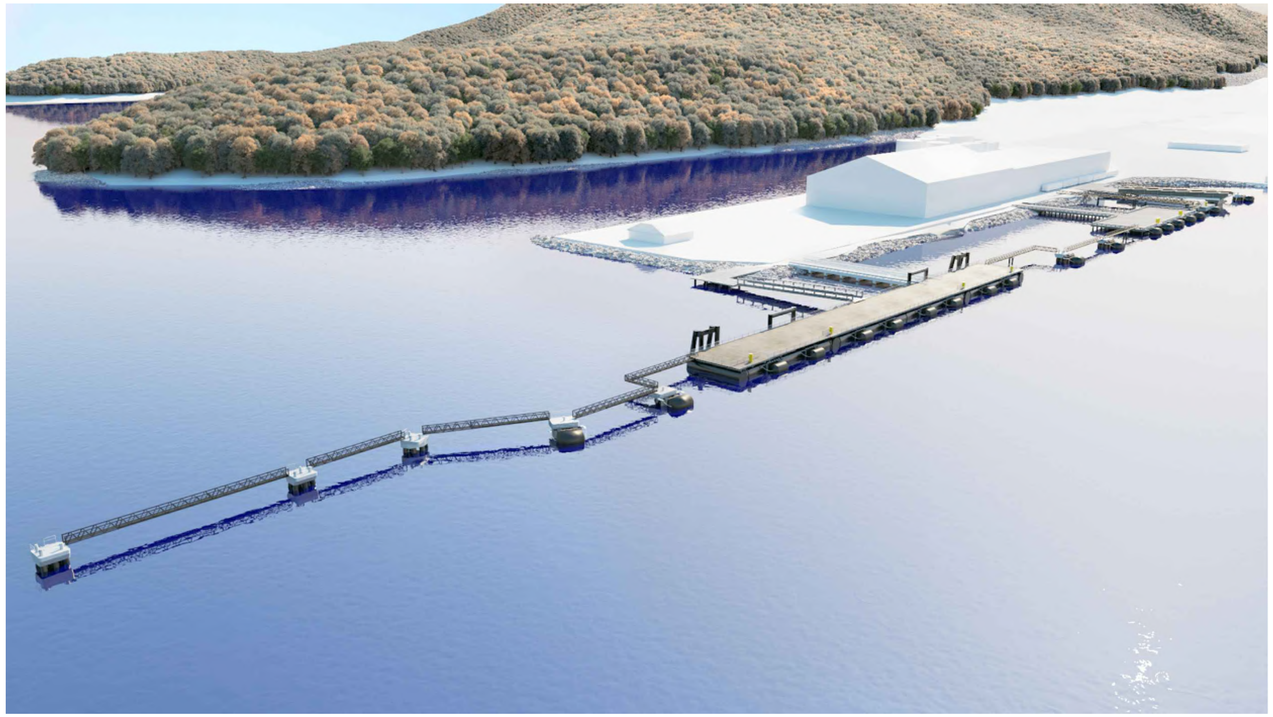
LOWEST OBSERVED WATER LEVEL (LOWL) = −6.10'

EXTREME LOW WATER (ELW) = −6.40'



PROJECT LOCATION
NTS

N



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1601 5th Avenue, Suite 1300
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(206) 382-0600 Fax (206) 382-0500

NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

TITLE SHEET AND VICINITY MAP

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
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SHEET NO.	OF

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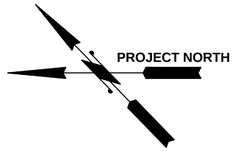
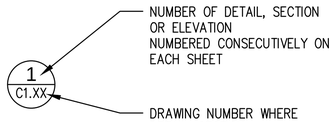
SYMBOLS



NORTH ARROW



NUMBER OF DETAIL, SECTION OR ELEVATION NUMBERED CONSECUTIVELY ON EACH SHEET

DRAWING NUMBER WHERE DETAIL, SECTION, OR ELEVATION IS DRAWN, "–" IF SAME DRAWING

SECTION

DETAIL OR SECTION
SCALE: XX" = 1'–0"

SURVEY CONTROL POINT

CONTROL POINT

N XXXX
E XXXX
COORDINATES

W(R)	WATER LINE
AIR(R)	AIR LINE
S(R)	SEWER LINE
SD(R)	STORM LINE
	RAIL LINE
PWR(R)	POWER LINE
	FENCE
	PROPERTY BOUNDARY
	LOT BOUNDARY
	EDGE OF PIER
NG(R)	NATURAL GAS LINE
SD	STORM DRAIN
PWR	POWER LINE
	R.O.W CENTERLINE
	SURVEYED WATER UTILITY SURFACE FEATURE
	SURVEYED POWER UTILITY SURFACE FEATURE
	BULKHEAD WALL
	CATCH BASIN
	CATCH BASIN (SURVEYED)
	MANHOLE/VAULT
	LIGHT POLE
	SS OR SD MANHOLE
GV	GAS VALVE
WATER	WATER VALVE
	HYDRANT
FP	FIRE PROTECTION LINE
W	DOMESTIC WATER LINE
F	FUEL LINE

ABBREVIATIONS

#	NUMBER
ø	DIAMETER
@	AT
(E)	EXISTING
AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
AC	ACRE
ACI	AMERICAN CONCRETE INSTITUTE
ACP	ASBESTOS CONCRETE PIPE OR ASPHALTIC CONCRETE PAVEMENT
ADDL	ADDITIONAL
ADJ	ADJACENT
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
ALIGN	ALIGNMENT
APPROX	APPROXIMATE
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AVE	AVENUE
AVG	AVERAGE
AWS	AMERICAN WELDING SOCIETY
B/O	BOTTOM OF WALL
B/W	BETWEEN
BLDG	BUILDING
BMP	BEST MANAGEMENT PRACTICE
BOT	BOTTOM
BP	BURIED POWER
BTW	BETWEEN
BW	BOTTOM OF WALL
CB	CATCH BASIN
CCTV	CLOSED–CIRCUIT TELEVISION
CDC	CENTER FOR DISEASE CONTROL AND PREVENTION
CDF	CONTROLLED DENSITY FILL
CDS	CONTINUOUS DOPAMINERGIC STIMULATION
CESCL	CERTIFIED EROSION AND SEDIMENT CONTROL LEAD
CESF	CHITOSAN–ENHANCED SAND FILTRATION
CF	CUBIC FOOT
CFS	CUBIC FEET PER SECOND
CG	CENTER OF GRAVITY
CJ	CONSTRUCTION JOINT
CJP	COMPLETE JOINT PENETRATION
CL	CENTERLINE
CLR	CLEARANCE
CMP	CORRUGATED METAL PIPE
CONC	CONCRETE
CONN	CONNECTION
CONT	CONTINUE(D)
COS	CITY OF SEATTLE
CRSI	CONCRETE REINFORCING STEEL INSTITUTE
CSBC	CRUSHED SURFACING BASE COURSE
CSGP	CONSTRUCTION STORMWATER GENERAL PERMIT
CSTC	CRUSHED SURFACING TOP COURSE
CSWGP	CONSTRUCTION STORMWATER GENERAL PERMIT
CY	CUBIC YARD
DD	DRY DOCK
DEG	DEGREE
DEMO	DEMOLITION
DI	DUCTILE IRON
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
DMP	DEMOLITION MANAGEMENT PLAN
DTL	DETAIL
DWG	DRAWING
DWT	DEADWEIGHT TONNAGE
E	EAST OR EASTING OR ELECTRICAL
EA	EACH
EL	ELEVATION
ELEV	ELEVATION
EPA	ENVIRONMENTAL PROTECTION AGENCY
EQ	EQUAL
ETC	ET CETERA
EX	EXISTING
EXIST	EXISTING
EXP	EXPANSION
EXT	EXTENSION
f'c	COMPRESSIVE STRENGTH OF CONCRETE AT 28 DAYS
FDC	FIRE DEPARTMENT CONNECTION
FF	FINISHED FLOOR
FG	FINISHED GRADE
FL	FLANGE
FM	FORCEMAIN
FO	FIBER OPTIC
FT	FOOT
Fy	YIELD STRENGTH
GAC	GRANULAR ACTIVATED CARBON
GAL	GALLON
GALV	GALVANIZED
GPM	GALLON PER MINUTE
H	HORIZONTAL
HAZ	HAZARDOUS
HDPE	HIGH DENSITY POLYETHYLENE
HDS	HYDRODYNAMIC SEPERATOR
HI–VIS	HIGH VISIBILITY
HMA	HOT MIX ASPHALT
HORIZ	HORIZONTAL
HOWL	HIGHEST OBSERVED WATER LEVEL
HP	HORSEPOWER
HRC	HEADED REINFORCEMENT CORPORATION
HSS	HOLLOW STRUCTURAL SECTION
HV	HIGH VISIBILITY
IBC	INTERNATIONAL BUILDING CODE
ICBO	INTERNATIONAL CONFERENCE OF BUILDING OFFICIALS
ICC	INTERNATIONAL CODE COUNCIL
ID	IDENTIFICATION OR INTERNAL DIAMETER
IE	INVERT
IN	INCH
INC	INCORPORATED
JARPA	JOINT AQUATIC RESOURCES PERMIT APPLICATION
JT	JOINT
K–FT	KILOPOUND–FEET
KSI	KILO–POUND PER SQUARE INCH
L/S	LITER PER SECOND
LB	POUND
LF	LINEAR FOOT
LL	LIVE LOAD
LLC	LIMITED LIABILITY COMPANY
LOC.	LOCATION
LOWL	LOWEST OBSERVED WATER LEVEL
LRFD	LOAD AND FACTORED RESISTANCE DESIGN
LS	LIFT STATION
LT	LEFT
LWD	LARGE WOODY DEBRIS
MAINT	MAINTENANCE
MAX	MAXIMUM
ME	MATCH EXISTING
MFR	MANUFACTURER
MH	MANHOLE
MHHW	MEAN HIGHER HIGH WATER
MHW	MEAN HIGH WATER
MIL	MILLIMETER
MIN	MINIMUM
ML	MUDLINE
MLLW	MEAN LOWER LOW WATER
MLW	MEAN LOW WATER
MOD	MODIFIED
MSP	MANUAL OF STANDARD PRACTICE
MUTCD	MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES
N	NORTH OR NORTHING
N/A	NOT APPLICABLE
NAD83	NORTH AMERICAN DATUM OF 1983
NAVD	NORTH AMERICAN VERTICAL DATUM
NC	NORMALLY CLOSED
NDPES	NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
NE	NORTHEAST
NEC	NATIONAL ELECTRICAL CODE
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NG	NATURAL GAS
NIC	NOT IN CONTRACT
NO.	NUMBER
NOAA	NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NOV.	NOVEMBER
NRD	NATURAL RESOURCE DAMAGES
NTS	NOT TO SCALE
NW	NORTHWEST
O	OYGEN
O.D.	OUTER DIAMETER
OC	ON CENTER
OHWL	ORDINARY HIGH WATER LINE
OHWM	ORDINARY HIGH WATER MARK
OPP	OPPOSITE
OWN	OTHERWISE NOTED
OXY	OXYGEN
P	POWER
P.E.	PROFESSIONAL ENGINEER
PC	PRESTRESSED CONCRETE
PCB	POLYCHLORINATED BIPHENYLS
PCF	POUNDS PER CUBIC FOOT
PDA	PILE DRIVING ANALYZER
PE	POLYETHYLENE
PG	PERFORMANCE GRADE
Ph	PHASE
PL	PLATE
PLLC	PROFESSIONAL LIMITED LIABILITY COMPANY
PO	POST OFFICE (BOX)
PROP	PROPOSED
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
PWR	POWER
QDSC	QUICK DISCONNECT SUBMERSIBLE COUPLING
QTS	QUALITY ASSUARANCE FOR THICKNESS ADJUSTMENT
Qty	QUANTITY
R	RECORD
REF	REFERENCE
REINF	REINFORCED
REV	REVISION
R.O.W.	RIGHT OF WAY
RD	ROOF DRAIN
RPM	ROTATIONS PER MINUTE
RT	RIGHT
S	SANITARY SEWER OR SOUTH
SDMH	STORM DRAIN MANHOLE
SEC	SECOND
S.E.	STRUCTURAL ENGINEER
SCH	SCHEDULE
SCH40	SCHEDULE 40
SD	STORM DRAIN
SE	SOUTHEAST
SF	SQUARE FEET
SHT	SHEET
SIM	SIMILAR
SMC	SEATTLE MUNICIPAL CODE
SPA	SPACED
SP.	SPACING
SPC	STORM PREDICTION CENTER
SPEC	SPECIFICATION
SPU	SEATTLE PUBLIC UTILITY
SQFT	SQUARE FEET
SS	SANITARY SEWER
SSMH	SANITARY SEWER MANHOLE
ST	STEAM LINE
ST.	STREET
STA	STATION
STD	STANDARD
STM	STEAM
SW	SOUTHWEST
SWDS	STORMWATER DETENTION SYSTEM
SWPPP	STORM WATER POLLUTION PREVENTION PLAN
T/	TOP OF
T/O	TOP OF
TC	TELECOMMUNICATIONS
TEMP	TEMPORARY
TESC	TEMPORARY EROSION AND SEDIMENT CONTROL
TW	TOP OF WALL
TYP	TYPICAL
UFC	UNIFORM FACILITIES CRITERIA
UHMW	ULTRA HIGH MOLECULAR WEIGHT POLYETHYLENE
UNC	UNIFIED NATIONAL COARSE
UNO	UNLESS OTHERWISE NOTED
US	UNITED STATES
USDA	UNITED STATES DEPARTMENT OF AGRICULTURE
USEPA	UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
V	VOLT OR VERTICAL
VERT	VERTICAL
VFD	VARIABLE FREQUENCY DESIGN
VIF	VERIFY IN FIELD
VP	VICE PRESIDENT
W/	WITH
W	WEST OR WATER
WA	WASHINGTON
WABO	WASHINGTON ASSOCIATION OF BUILDING OFFICIALS
WDFW	WASHINGTON DEPARTMENT OF FISH AND WILDLIFE
WHS	WELDED HEADED STUD
WP	WORKING POINT
WQ	WATER QUALITY
WSDOT	WASHINGTON DEPARTMENT OF TRANSPORTATION
WT.	WEIGHT
WWHM	WESTERN WASHINGTON HYDROLOGY MODEL
XS	EXTRA STRONG
YR	YEAR
YRS	YEARS

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NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

SYMBOLS AND ABBREVIATIONS

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO. **G3.00**	
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 – 10:10am dyu Layout: G3.00
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_G3.00 Symbols & Abbreviations.dwg

GENERAL CIVIL NOTES:

1. DATUM:

   A. VERTICAL DATUM:
   MEAN LOWER LOW WATER (MLLW=0.0') U.S. SURVEY FEET, BASED ON THE NOAA/NOS TIDAL BENCH MARK LIST: 9452400 SKAGWAY, TAIYA INLET, ALASKA PUBLISHED 05/02/2014. THIS TIDAL DATUM IS BASED ON THE 2007–2011 TIDAL EPOCH

   B. HORIZONTAL DATUM:
   ALASKA STATE PLANE, ZONE 1, NAD83, IN U.S. SURVEY FT

4. SURVEY: TOPOGRAPHIC SURVEY AND SURVEY CONTROL PROVIDED BY RESPEC.

5. BATHYMETRIC SURVEY: SOUNDINGS ARE IN U.S. SURVEY FEET AND ARE MINUS UNLESS OTHERWISE INDICATED. BATHYMETRY WAS COLLECTED BY HUGHES & ASSOCIATES ON APRIL 6–7, 2022. SOUNDINGS WERE COLLECTED USING A R2SONIC 2022 MULTIBEAM ECHOSOUNDER OPERATING AT 400 KHZ. SOUND VELOCITY THROUGH THE WATER COLUMN WAS DETERMINED WITH A VALEPORT SWIFT SOUND VELOCITY PROBE. POSITION AND VESSEL ORIENTATION WERE MEASURED USING AN APPLANIX POS MV SYSTEM. RTK CORRECTIONS WERE BROADCAST FORM A LOCAL BASE STATION OCCUPYING "SH–D 2000". DATA WAS COLLECTED ANDPROCESSED USING HYPACK 2022 SOFTWARE. HORIZONTAL AND VERTICAL CONTROL WAS SURVEYED USING RTK GNSS EQUIPMENT AND TECHNIQUES.

6. EXISTING STRUCTURES:

   A. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS OF EXISTING STRUCTURES THAT MAY IMPACT THE WORK.

   B. CONTRACTOR SHALL COORDINATE WITH THE ENGINEER, IF THERE ARE ANY CONFLICTS BETWEEN PROPOSED WORK AND EXISTING STRUCTURES TO REMAIN ON–SITE.

7. UTILITIES:

   A. CONTRACTOR SHALL PROTECT–IN–PLACE ALL UTILITIES THAT ARE NOT INDICATED FOR DEMOLITION.

   B. THE LOCATIONS OF EXISTING FEATURES AND UTILITIES SHOWN ON THE DRAWINGS ARE APPROXIMATE. ADDITIONAL UTILITIES NOT SHOWN IN THESE DRAWINGS MAY BE PRESENT. THE CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS OF ALL UTILITIES ENCOUNTERED IN THE FIELD SHALL BE RECOVERED ON THE CONTRACTOR'S RECORD DRAWINGS. CONTACT LOCAL UTILITY COMPANIES PRIOR TO ANY/ ALL EXCAVATIONS AT THE FOLLOWING TELEPHONE NUMBERS: 811 AT LEAST 48 HOURS PRIOR TO CONSTRUCTION.

15. TRAFFIC CONTROL:

   A. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY TRAFFIC CONTROL REQUIRED DURING THE PROJECT. ALL TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

9. IN WATER WORK:

   A. CONTRACTOR SHALL COORDINATE IN–WATER WORK SUCH THAT BARGES AND EQUIPMENT REMAINS ON THE PROJECT SITE TO THE MAXIMUM EXTENT FEASIBLE. WHEN WORK IS DONE OR MACHINERY IS STAGED OUTSIDE PROPERTY LIMITS, THE OWNER SHALL BE GIVEN 1 WEEK NOTICE FOR COORDINATION WITH ADJACENT PROPERTIES.

   B. ALL IN–WATER WORK TO BE CONDUCTED IN ACCORDANCE WITH WATER QUALITY MANAGEMENT AND PROTECTION PLAN, AND ALL IN–WATER WORK PERMIT REQUIREMENTS.

10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADHERING TO ALL APPLICABLE LOCAL, STATE, AND FEDERAL CODES, PERMITS AND SAFETY REQUIREMENTS.

11. PROPERTY DISTURBED DURING CONSTRUCTION THAT IS NOT IDENTIFIED FOR DEMOLITION SHALL BE RESTORED TO ITS PRE–CONSTRUCTION CONDITION OR BETTER AT NO ADDITIONAL COST TO THE OWNER UNLESS OTHERWISE INDICATED IN THE DRAWINGS OR SPECIFICATIONS.

12. EROSION CONTROL & STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

12.1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTROLLING EROSION AND SEDIMENT DURING CONSTRUCTION AND SHALL UTILIZE STATE OF ALASKA BEST MANAGEMENT PRACTICES THROUGHOUT THE WORK. ALL SURFACES THAT ARE DAMAGED BY EROSION SHALL BE RE–GRADED BY THE CONTRACTOR PRIOR TO PERFORMING ANY MEANS OF STABILIZATION. THE CONTRACTOR SHALL PREPARE A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND SUBMIT THE SWPPP TO THE ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION AND ENGINEER.

12.2. THE CONTRACTOR SHALL INSTALL TEMPORARY DEVICES CONSISTING OF BUT NOT LIMITED TO STRAW BALES, FILTER FABRIC FENCES, SILT CURTAIN OR BOOM, ETC. TO PREVENT SILT–LADEN DEWATERING EFFLUENT AND OTHER CONSTRUCTION RUNOFF FROM ENTERING ADJACENT STREAMS OR WATER BODIES. THE CONTRACTOR IS RESPONSIBLE FOR THE QUALITY OF THE DEWATERING EFFLUENT AND OTHER CONSTRUCTION RUNOFF THAT ENTERS ADJACENT STREAMS OR WATER BODIES AND IS THEREFORE RESPONSIBLE FOR VIOLATIONS AND PENALTIES RESULTING FROM CONSTRUCTION OPERATIONS. THE CONTRACTOR SHALL IMPLEMENT AN EROSION AND SEDIMENT CONTROL PLAN PER SECTIONS 01560 AND 01570 OF THE CONTRACT DOCUMENTS AND IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL LAW.

13. THE CONTRACTOR SHALL PREPARE A HAZARDOUS MATERIAL CONTROL PLAN (HMCP) FOR THE HANDLING, STORAGE, CLEAN–UP AND DISPOSAL OF PETROLEUM AND OTHER HAZARDOUS SUBSTANCES. THE CONTRACTOR SHALL LIST AND GIVE LOCATIONS AND ESTIMATED QUANTITIES OF ALL HAZARDOUS MATERIALS,INCLUDING FIELD OFFICE MATERIALS, TO BE USED ON–SITE. THE PLAN SHALL PROVIDE DETAILS FOR STORING THESE MATERIALS AS WELL AS DISPOSING OF WASTER PETROLEUM PRODUCTS AND OTHER HAZARDOUS MATERIALS GENERATED BY THE PROJECT.

13.1. THE HMCP SHALL DETAIL PROCEDURES FOR CONTAINMENT AND CLEANUP OF HAZARDOUS SUBSTANCES INCLUDING A LIST OF THE TYPES AND QUANTITIES OF EQUIPMENT AND MATERIALS AVAILABLE ON–SITE TO BE USED IN THE EVENT OF A SPILL.

13.2. THE HMCP SHALL PROVIDE DETAILS FOR PREVENTION, CONTAINMENT, CLEAN–UP AND DISPOSAL OF SOIL AND WATER CONTAINMENT BY ACCIDENTAL SPILLS, AS WELL AS UNEXPECTED CONTAMINATED SOIL AND WATER ENCOUNTERED DURING CONSTRUCTION.

14. MATCH EXISTING FINISH GRADES AT PROJECT LIMITS AND WHERE REQUIRED TO MATCH AT EXISTING ROADS. ALL REMOVED MATERIALS THAT ARE NOT SUITABLE FOR REUSE ON THE PROJECT SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND PROPERLY DISPOSED OF AT AN APPROVED SITE.

15. GRADING AND ALIGNMENT OF PIPING AND FINAL SURFACING MATERIALS ARE SUBJECT TO MINOR REVISIONS BY THE ENGINEER TO FIT SITE CONDITIONS ENCOUNTERED AND PROVIDE ADEQUATE DRAINAGE.

SLOPE PROTECTION NOTES

1. DREDGING SHALL BE DONE VIA MECHANICAL METHODS. HYDRAULIC DREDGING WILL NOT BE PERMITTED.

GENERAL UTILITY NOTES:

1. NOT ALL FITTINGS AND VARIOUS PLUMBING APPURTENANCES ARE SHOWN. CONTRACTOR SHALL USE INDUSTRY STANDARD PRACTICES TO ACHIEVE ALL CONNECTIONS NOT SPECIFIED CONSISTENT WITH APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS PER THE ENGINEER'S DIRECTION (INCIDENTAL).

2. PIPE SYSTEMS ARE ELABORATE AND SHALL REQUIRE MINOR CHANGES IN ELEVATION OR DIRECTION NOT SPECIFICALLY CALLED OUT IN THE PLANS. IN THESE INSTANCES THE CONTRACTOR SHALL SWEEP PIPE OR USE 45° OR LESS ELBOWS TO ACHIEVE REQUIRED PIP POSITIONS UNLESS OTHERWISE APPROVED BY THE ENGINEER.

3. LENGTHS OF UNISTRUT VARY. CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING LENGTHS AS REQ'D. DAMAGE TO STRUT COATINGS SHALL BE REPAIRED PER THE SPECIFICATIONS.

4. ELEC. CONDUIT SHALL BE ATTACHED TO UNISTRUT IN MANY INSTANCES & MAY NOT BE SHOWN HERE. UTILITY CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH ELECTRICAL AS REQ'D AND PROVIDING ADEQUATE LENGTHS OF STRUT AT ALL LOCATIONS. SEE ELEC. DRAWINGS.

5. REFERENCES TO BRASS OR BRONZE PIP OR FITTINGS SHALL BE TAKEN TO MEAN RED BRASS OR BRONZE IN ALL CASES, EITHER MATERIAL IS ACCEPTABLE.

CODES AND DESIGN CRITERIA

1. FIRE PROTECTION SYSTEM:

   A. FIRE PROTECTION SHALL ADHERE TO THE FOLLOWING CODE:
   A.A. NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 303, 30A, 10, 25, 72, 14.
   A.B. INTERNATIONAL FIRE CODE (IFC) 2018, CHAPTER 36 FOR MARINAS

   B. FIRE DEPARTMENT CONNECTION (FDC) WILL BE SPACED NO FURTHER THAN 150' (NFPA 14).

   C. FIRE EXTINGUISHERS ON THE FUEL FLOAT SECTION WILL MAINTAIN A MINIMUM RATING OF 40–B AND WILL BE PLACED IN PAIRS SUCH THAT NO PERSON WILL BE FURTHER THAN 30' FROM A FIRE EXTINGUISHER. THE NON FUELING SECTION OF THE FLOAT WILL HAVE FIRE EXTINGUISHERS WITH A MINIMUM RATING OF 4A (CLASS A EXTRA–HAZARD) AND WILL BE SPACED SUCH THAT NO PERSON WILL BE FURTHER THAN 75' FROM A FIRE EXTINGUISHER (NFPA 303, NFPA 10).

2. SAFETY EQUIPMENT:

   A. EMERGENCY SWIM LADDERS WILL BE SPACED AT 200' FOR WORK AREAS (UFC 4–152–01).

   B. WASHINGTON STATE CODE REQUIRES LIFE RINGS AT MAX INTERVALS OF 200' AND BE CO–LOCATED WITH SWIM LADDERS (ASCE MREP).

   C. SIGNS STATING THE FOLLOWING ARE REQUIRED: LOCATIONS OF FIRST AID FACILITIES, TELEPHONES, FIRE FIGHTING EQUIPMENT, EMERGENCY EQUIPMENT, AND FIRE EXITS. A SIGN SHOULD ALSO INCLUDE TELEPHONE NUMBERS OF CLOSE AMBULANCE SERVICE, HOSPITAL, POLICE, AND FIRE DEPARTMENT (NFPA 30A).

3. POTABLE WATER

   A. THE WATER SYSTEM WILL CONFORM TO THE 2018 UNIFORM PLUMBING CODE. MATERIALS FOR WATER PIPING AND FITTINGS SHALL COMPLY WITH THE APPLICABLE STANDARD REFERENCED IN TABLE 604.1 OF THE 2018 UNIFORM PLUMBING CODE.

5. STORM WATER

   A. FLOAT SYSTEM DOES NOT REQUIRE STORM WATER IMPROVEMENTS. STORM WATER WILL CONTINUE TO DISCHARGE DIRECTLY TO WATERWAY ON FLOAT & AND ACCESS TRESTLE.

   B. UPLAND DISTURBANCE AND STORMWATER DESIGN CAN BE REFERENCED IN THE UPLAND CIVIL SHEETS.

PORT OPERATIONS:

1. THE PORT OF SKAGWAY SERVICES FUEL BARGES ON A REGULAR BASIC W/ A FREQUENCY OF APPROXIMATE ONE BARGE EVERY 20 DAYS. CONTRACTOR MUST PROVIDE SAFE MOORAGE FOR BARGE AND STOP ALL HOT WORK WITHIN THE VICINITY DURING FUEL OPERATIONS. FUELING EXPECTED TO TAKE 36–48 HOURS.

2. ALASKA MARINE LINES (AML) REQUIRES ACCESS TO THE AML DOCK AT THE NORTH END OF THE ORE BASIN. THE CONTRACTOR SHALL COORDINATE WITH AML AND MOS TO PROVIDE ACCESS ON DAYS NEEDED.

OWNER FURNISHED ITEMS:

THE MUNICIPALITY OF SKAGWAY (MOS) HAS PRE–PROCURED THE FOLLOWING MATERIALS AND ITEMS:

1. STEEL PILE AS DETAILED IN THE DRAWINGS AND SPECIFICATIONS
2. 8'–0" DIA FLOATING FENDERS
3. 125' CATWALK
4. (4) CAPSTAN WINCHES AND CONTROLS

UNDER WATER SEA CABLE:

1. PILE INSTALLATION WILL OCCUR WITHIN CLOSE PROXIMITY TO THE EXISTING UNDER WATER SEA POWER CABLE. CONTRACTOR SHALL LOCATED AND PERFORM VISUAL (DIVER OR REMOTE OPERATOR VEHICLE (ROV) MONITORING OF THE CABLE WHILE SETTING PILES WITHIN 25' OF CABLE.

FUEL LINES:

1. THE FUEL LINES ON SITE ARE TYPICALLY KEPT FULL. THE CONTRACTOR SHALL COORDINATE WITH MOS AND PETRO MARINE TO HAVE THE LINES EMPTIED BEFORE WORK WITHIN 100' OF THE FUEL LINES CAN BE PERFORMED. CONTRACTOR MAY NOT PERFORM ANY HOT WORK WITHIN 300' OF FUEL BARGES. SEE ADDITIONAL SAFETY REQUIREMENTS WHILE WORKING NEAR FULL OR EMPTY FUEL LINES.

2. PETRO MARINE CONTACT FOR COORDINATION OR EMERGENCIES:
   TIM COCHRAN: (907) 612–0049

VIBRATION MONITORING NOTES

1. BUILDINGS:

   A. GEOTECHNICAL ENGINEER SHALL INSTRUMENT BUILDING WITH VIBRATION MONITORS AT 40 FT INTERVALS WHERE PILE EXTRACTION AND INSTALLATION WILL OCCUR WITHIN 60 FT OF THE BUILDING.

   B. CONTRACTOR SHALL RECORD SURVEY ELEVATIONS AT 40 FT INTERVALS ALONG THE LENGTH OF THE BUILDING WHERE PILE EXTRACTION AND PILE INSTALLATION WILL OCCUR WITHIN 60 FT OF THE BUILDING.

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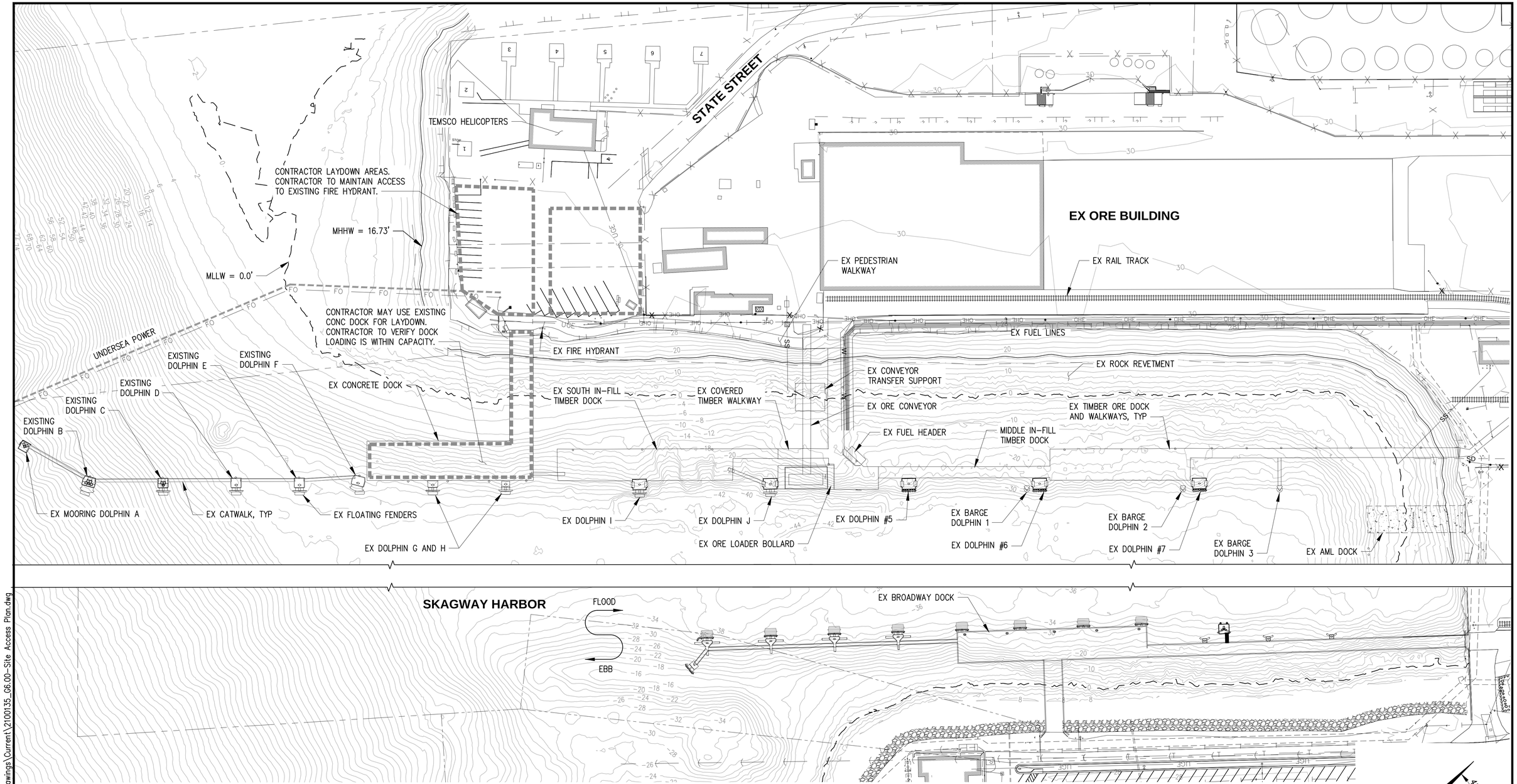
NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

GENERAL NOTES

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**G4.00**
SHEET NO.	OF

Plotted: Jan 27, 2023 – 10:10am dyu Layout: G4.00
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_G4.00 Civil General Notes.dwg



SITE ACCESS PLAN
SCALE: 1" = 60'

60% DESIGN - NOT FOR CONSTRUCTION

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SITE ACCESS PLAN

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	G6.00
SHEET NO.	OF

Plotted: Jan 27, 2023 - 10:10am dyu Layout: G6.00
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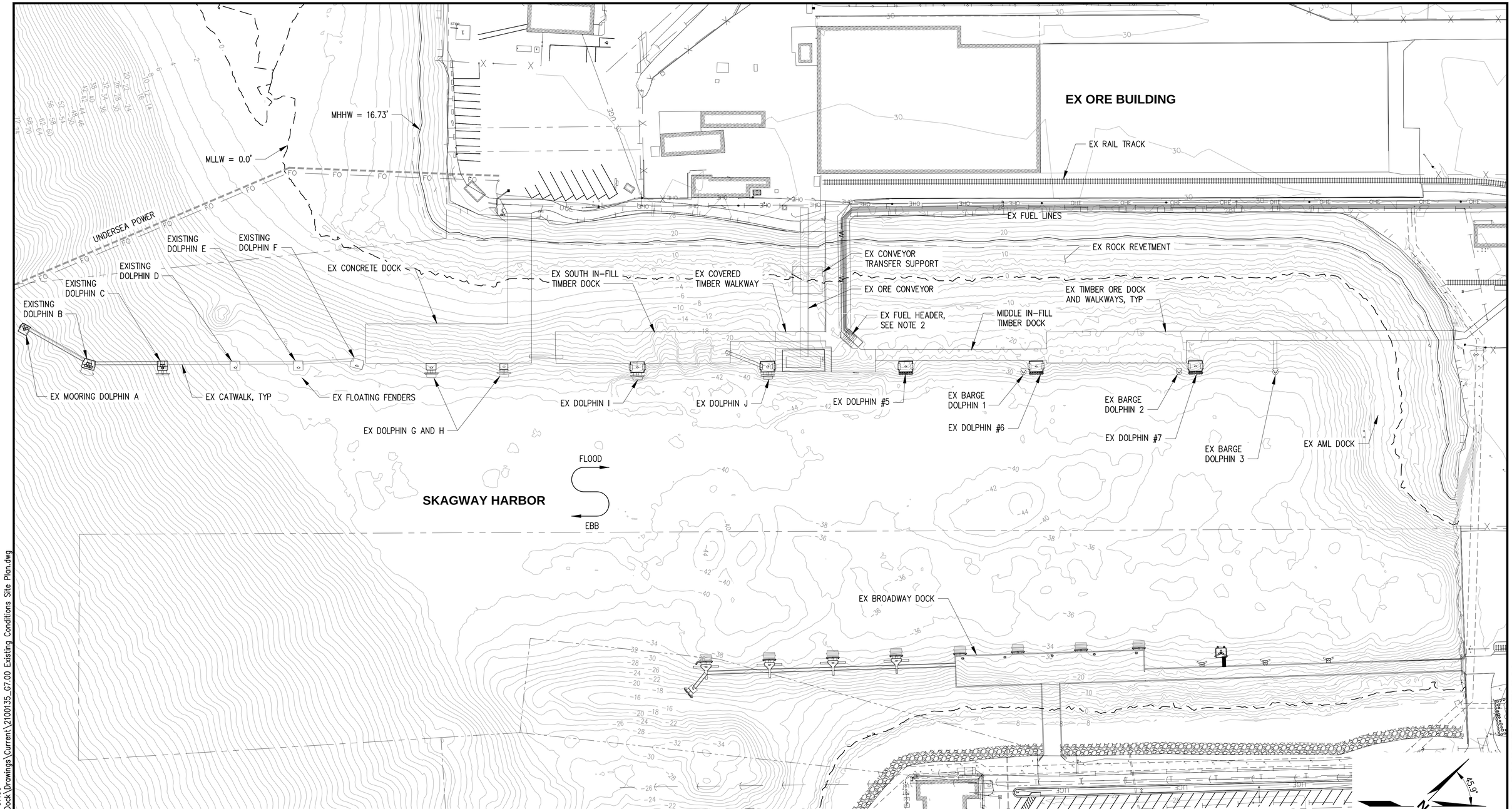

EXISTING CONDITIONS
SCALE: 1" = 60'

NOTES

1. EXISTING DOLPHIN NUMBERING IS BASED ON 1984 RECORD DRAWING AND 1992 ORE DOCK EXPANSION RECORD DRAWING.
2. FUEL HEADER AND LINES ARE KEPT FULL. CONTRACTOR MUST PROTECT-IN-PLACE.

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 - 10:11am dyu Layout: G7.00
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_G7.00 Existing Conditions Site Plan.dwg

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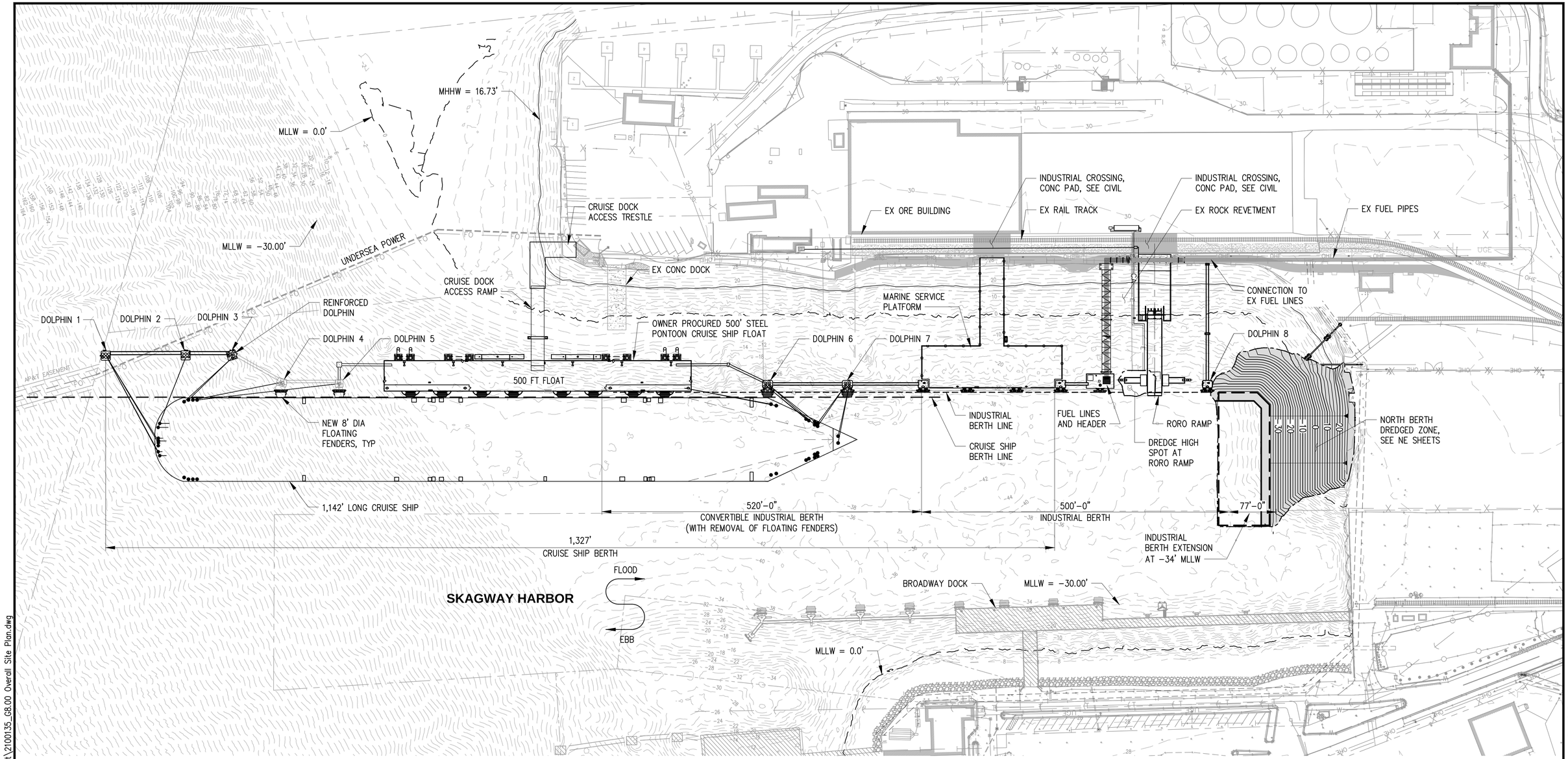
NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

EXISTING CONDITIONS SITE

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	G7.00
SHEET NO.	OF



OVERALL SITE PLAN

SCALE: 1" = 80'

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SKAGWAY, ALASKA

OVERALL SITE PLAN

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**G8.00**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 - 10:11am dyu Layout: G8.00
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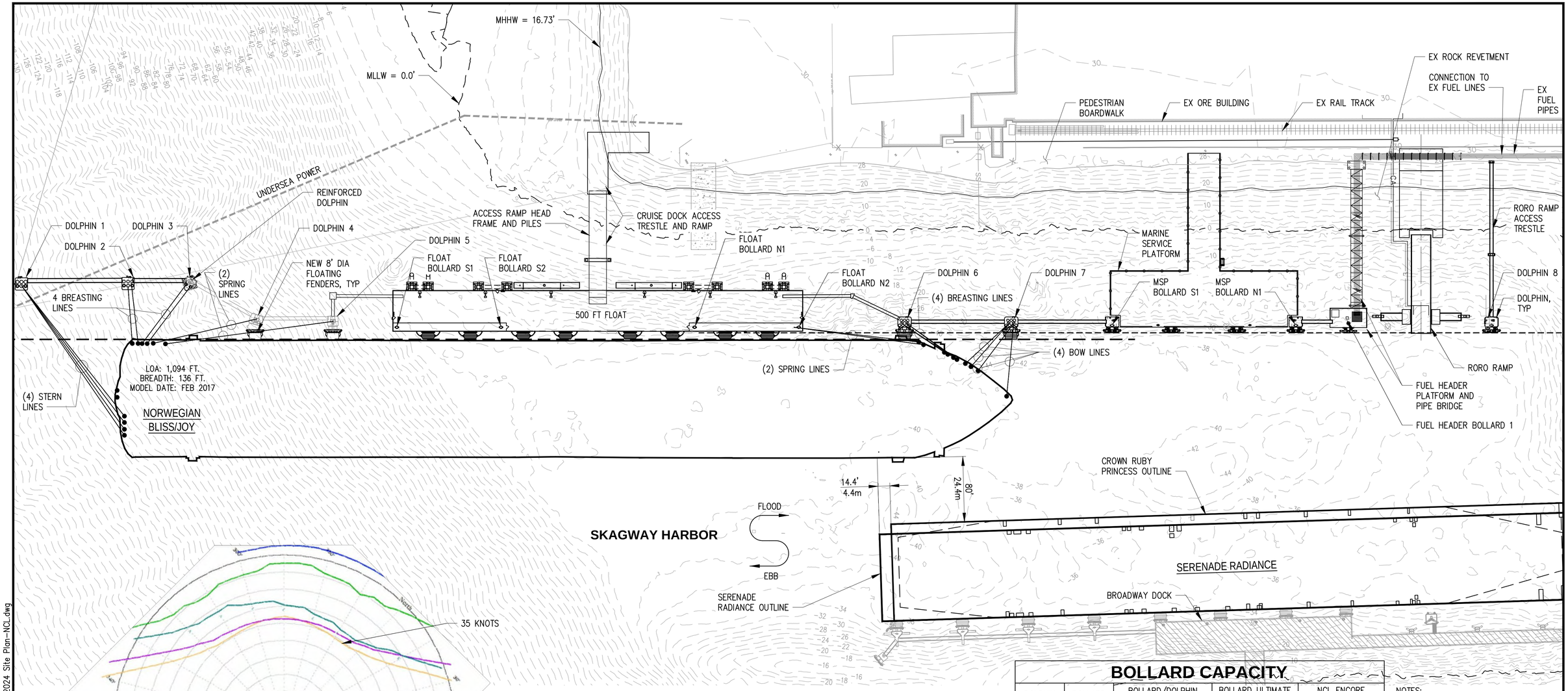
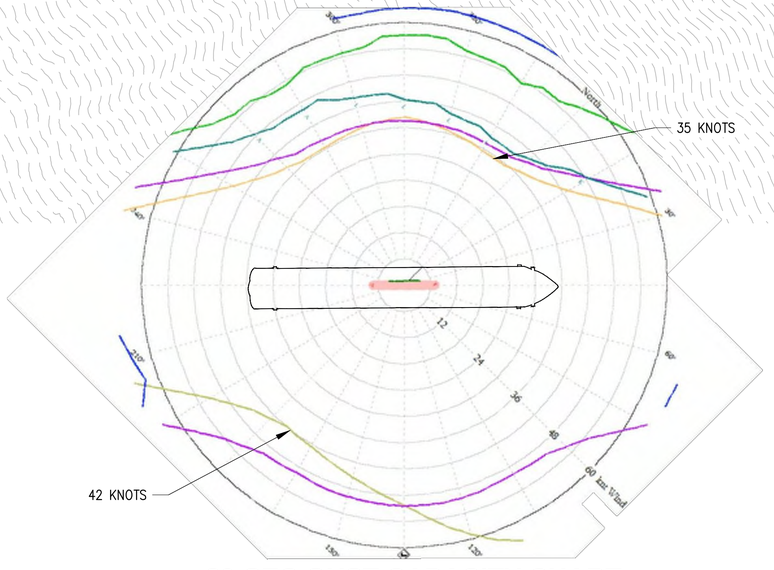




30-SEC GUST CAPACITY CHART

1 2024 SITE PLAN - NCL ENCORE
SCALE: 1" = 60'

LEGEND

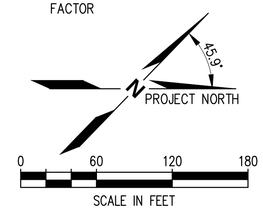
- WIND FOR 45% STRENGTH IN ANY LINE
- WIND FOR BRAKE SLIP
- WIND FOR FENDER/DOLPHIN LIMIT
- WIND FOR ±2.6FT SURGE AT TARGET
- WIND FOR ±2.6FT SWAY AT TARGET
- WIND FOR BOLLARD STRENGTH

BOLLARD CAPACITY

DOLPHIN	BOLLARD	BOLLARD/DOLPHIN ALLOWABLE CAPACITY	BOLLARD ULTIMATE CAPACITY	NCL ENCORE MOORING FORCE
1	1B1	200 TONS	300 TONS	
	1B2		300 TONS	
2	2B1	200 TONS	300 TONS	
	2B2		300 TONS	
3	3B1	150 TONS	300 TONS	
	3B2		300 TONS	
4	4B1	75 TONS	225 TONS	
5	5B1	65 TONS	195 TONS	
FLOAT S1	FS1	150 TONS	450 TONS	
FLOAT S2	FS2	150 TONS	450 TONS	
FLOAT N1	FS3	150 TONS	450 TONS	
FLOAT N2	FS4	150 TONS	450 TONS	
6	6B1	200 TONS	300 TONS	
	6B2		300 TONS	
7	7B1	200 TONS	300 TONS	
	7B2		300 TONS	

NOTES:
* BOLLARDS HARDWARE AND ATTACHMENTS ARE DESIGNED WITH A MINIMUM FACTOR OF SAFETY AGAINST FAILURE OF 3.0

** STRUCTURAL DESIGN OF DOLPHINS INCLUDE THE ALLOWABLE CAPACITY OF BOLLARDS AND A 1.6 LOAD FACTOR



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ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

2024 SITE PLAN - NCL ENCORE

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**G8.01**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 - 10:11am dyu Layout: G8.01
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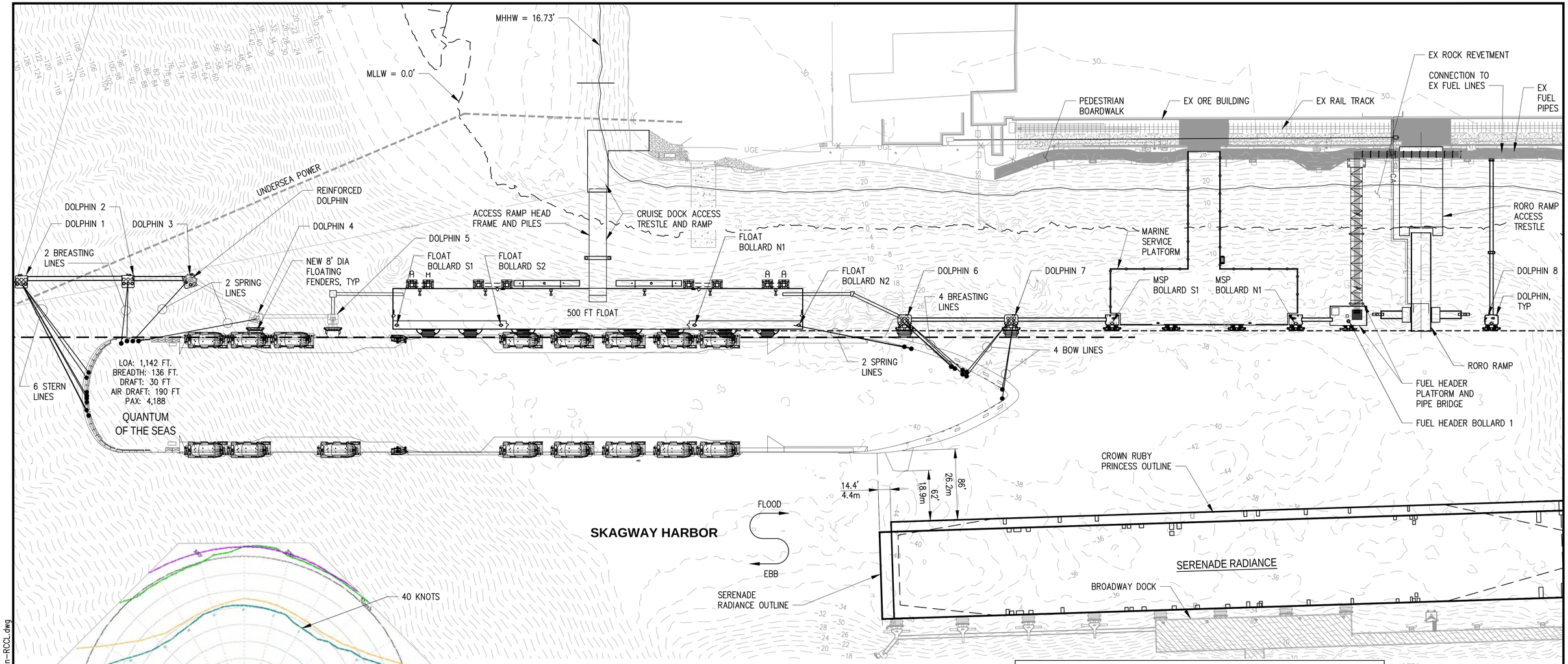
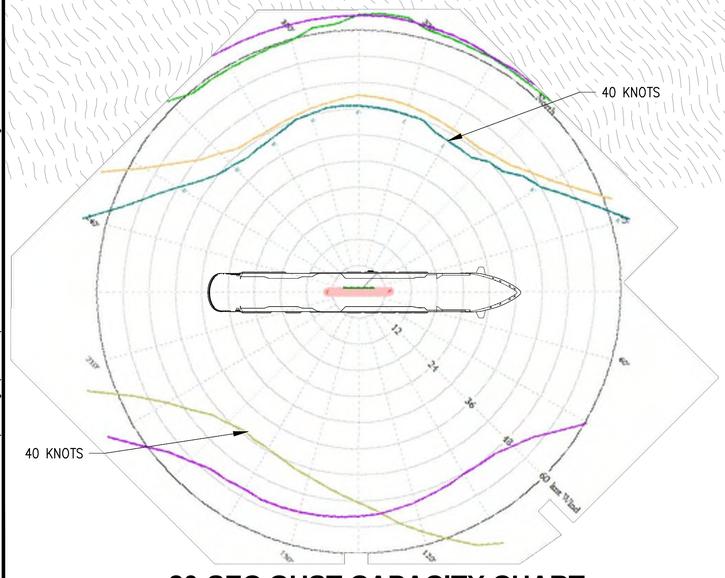




30-SEC GUST CAPACITY CHART

1 2024 SITE PLAN - RCCL QUANTUM
SCALE: 1" = 60'

LEGEND

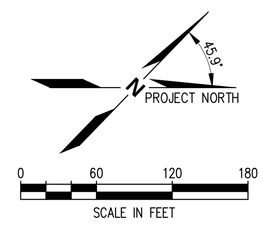
- WIND FOR 45% STRENGTH IN ANY LINE
- WIND FOR BRAKE SLIP
- WIND FOR FENDER/DOLPHIN LIMIT
- WIND FOR ±2.6FT SURGE AT TARGET
- WIND FOR ±2.6FT SWAY AT TARGET
- WIND FOR BOLLARD/DOLPHIN STRENGTH

BOLLARD CAPACITY

DOLPHIN	BOLLARD	BOLLARD/DOLPHIN ALLOWABLE CAPACITY	BOLLARD ULTIMATE CAPACITY	RCCL QUANTUM MOORING FORCE
1	1B1	200 TONS	300 TONS	
	1B2		300 TONS	
2	2B1	200 TONS	300 TONS	
	2B2		300 TONS	
3	3B1	150 TONS	300 TONS	
	3B2		300 TONS	
4	4B1	75 TONS	225 TONS	
5	5B1	65 TONS	195 TONS	
FLOAT S1	FS1	150 TONS	450 TONS	
FLOAT S2	FS2	150 TONS	450 TONS	
FLOAT N1	FS3	150 TONS	450 TONS	
FLOAT N2	FS4	150 TONS	450 TONS	
6	6B1	200 TONS	300 TONS	
	6B2		300 TONS	
7	7B1	200 TONS	300 TONS	
	7B2		300 TONS	

NOTES:
* BOLLARDS HARDWARE AND ATTACHMENTS ARE DESIGNED WITH A MINIMUM FACTOR OF SAFETY AGAINST FAILURE OF 3.0

** STRUCTURAL DESIGN OF DOLPHINS INCLUDE THE ALLOWABLE CAPACITY OF BOLLARDS AND A 1.6 LOAD FACTOR



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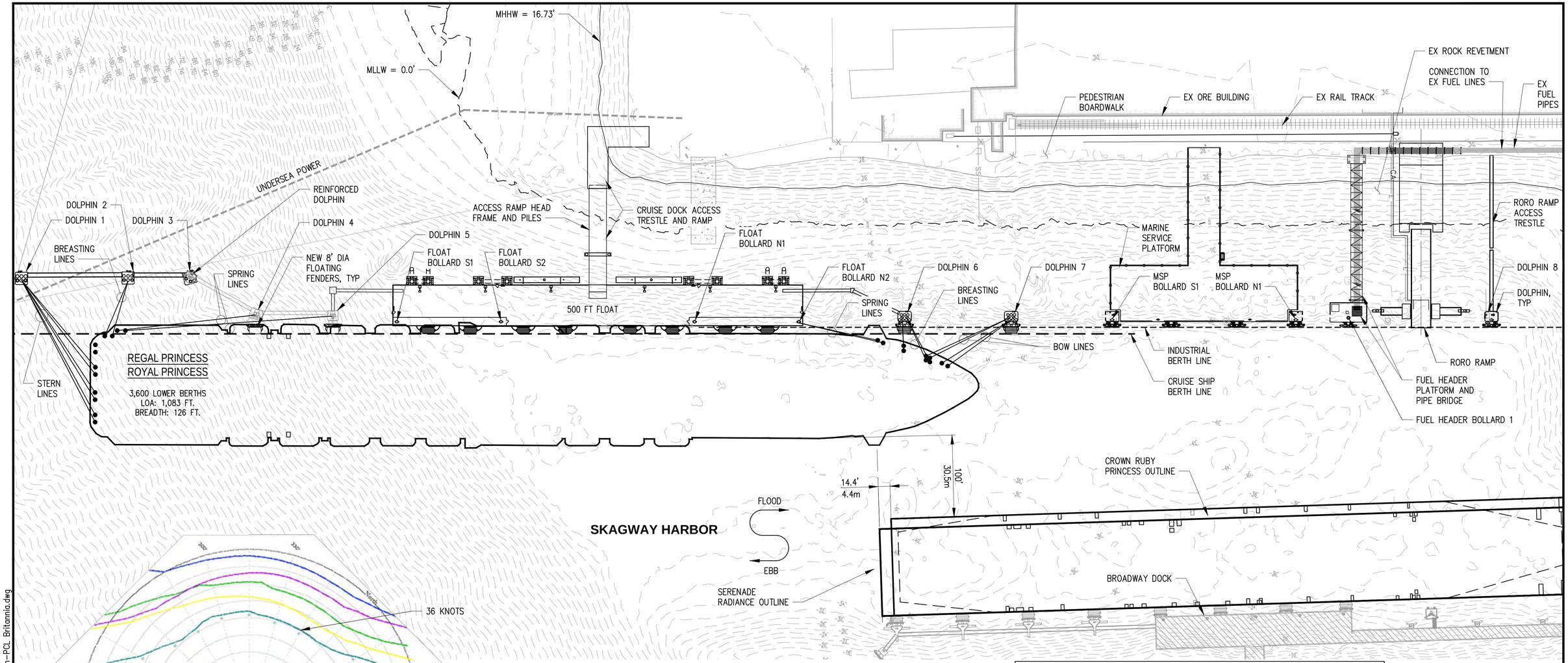
SKAGWAY, ALASKA

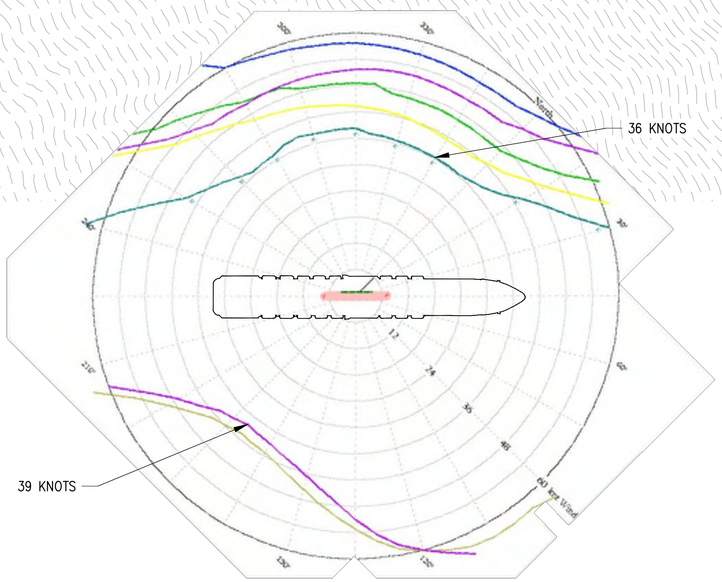
2024 SITE PLAN-RCCL QUANTUM

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**G8.02**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 - 10:12am dyu Layout: G8.02
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_G8.02 Site Plan-RCCL.dwg





30-SEC GUST CAPACITY CHART

1 2024 SITE PLAN - PCL BRITANNIA

SCALE: 1" = 60'

LEGEND

- WIND FOR 45% STRENGTH IN ANY LINE
- WIND FOR BRAKE SLIP
- WIND FOR FENDER/DOLPHIN LIMIT
- WIND FOR ±2.6FT SURGE AT TARGET
- WIND FOR ±2.6FT SWAY AT TARGET
- WIND FOR BOLLARD/DOLPHIN STRENGTH

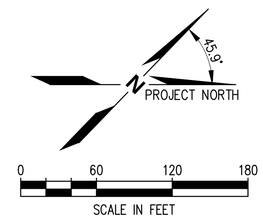
BOLLARD CAPACITY

DOLPHIN	BOLLARD	BOLLARD/DOLPHIN ALLOWABLE CAPACITY	BOLLARD ULTIMATE CAPACITY	PCL BRITANNIA MOORING FORCE
1	1B1	200 TONS	300 TONS	
	1B2		300 TONS	
2	2B1	200 TONS	300 TONS	
	2B2		300 TONS	
3	3B1	150 TONS	300 TONS	
	3B2		300 TONS	
4	4B1	75 TONS	225 TONS	
5	5B1	65 TONS	195 TONS	
FLOAT S1	FS1	150 TONS	450 TONS	
FLOAT S2	FS2	150 TONS	450 TONS	
FLOAT N1	FS3	150 TONS	450 TONS	
FLOAT N2	FS4	150 TONS	450 TONS	
6	6B1	200 TONS	300 TONS	
	6B2		300 TONS	
7	7B1	200 TONS	300 TONS	
	7B2		300 TONS	

NOTES:

* BOLLARDS HARDWARE AND ATTACHMENTS ARE DESIGNED WITH A MINIMUM FACTOR OF SAFETY AGAINST FAILURE OF 3.0

** STRUCTURAL DESIGN OF DOLPHINS INCLUDE THE ALLOWABLE CAPACITY OF BOLLARDS AND A 1.6 LOAD FACTOR



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SKAGWAY, ALASKA

2024 SITE PLAN - PCL BRITANNIA

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**G8.03**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 - 10:12am dyu Layout: G8.03
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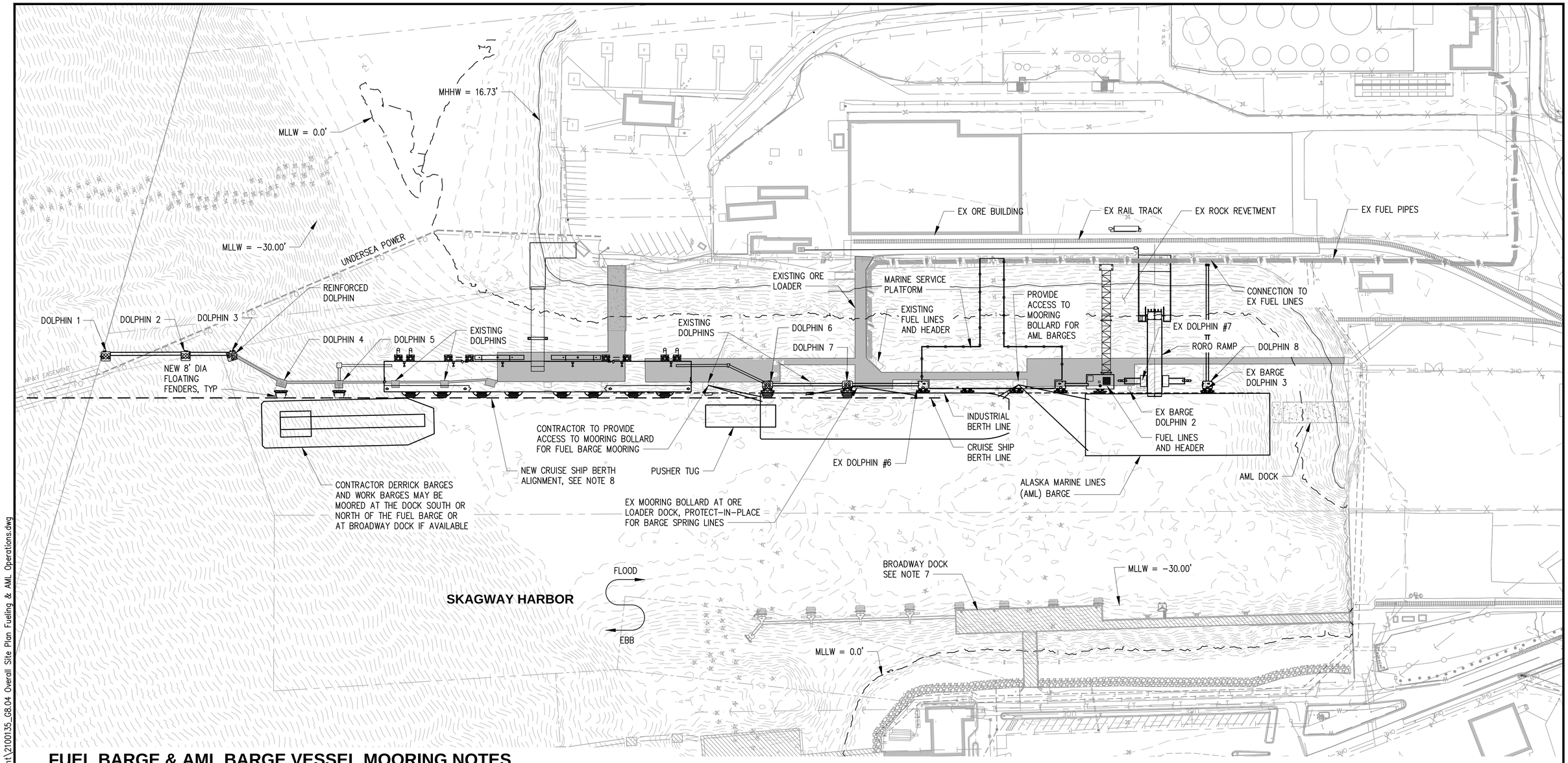
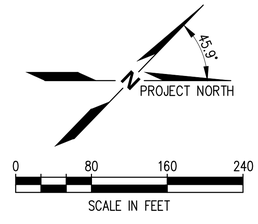


FUEL BARGE & AML BARGE VESSEL MOORING NOTES

1. CONTRACTOR SHALL PROVIDE FUEL BERTHING AND MOORAGE DURING CONSTRUCTION. CONTRACTOR SHALL KEEP THE SLIP OPEN FOR FUEL BARGE AND AML BARGE ACCESS WHEN SCHEDULED.
2. FUEL BARGE IS GENERALLY EXPECTED EVERY 20 DAYS. FUEL TRANSFER DURATION IS TYPICALLY 36–48 HOURS. AML BARGES TYPICALLY LOAD WEEKLY SUNDAY–MONDAY AND CAN VARY. CONTRACTOR TO COORDINATE WITH MOS ON SCHEDULING. CONTRACTOR SHALL KEEP THE ORE BASIN OPEN FOR AML BARGE TRAFFIC WHEN SCHEDULED.
3. NO HOT WORK WILL BE ALLOWED WITHIN 300' OF THE FUEL BARGE WHILE IN PORT. NO CRANE WORK WITHIN RANGE OF THE BARGE WILL BE PERMITTED.
4. NEW AND EXISTING STRUCTURES SHOWN IN THIS VIEW, CONTRACTOR SHALL DETERMINE PHASING OF PROJECT TO ALLOW FOR FUEL BARGE OPERATIONS.
5. CONTRACTOR SHALL SUBMIT FUEL BARGE MOORING AND BERTHING PLANS 3 WEEKS PRIOR TO FUEL BARGE ARRIVAL.
6. CONTRACTOR SHALL CONFIRM WITH MOS AND PETRO-MARINE THAT ALL FUEL LINES HAVE BEEN EMPTIED PRIOR TO RESUMING HOT WORK AND CRANE OPERATIONS IN THE FUEL LINE AND HEADER VICINITY. SEE G SHEETS FOR PETRO-MARINE CONTACT INFORMATION.
7. CONTRACTOR MAY MOOR VESSELS AND BARGES AT BROADWAY DOCK WITH FLOATING FENDERS REMOVED BY CONTRACTOR TO PREVENT DAMAGE.
8. NOTE EXISTING BERTH LINE AND CURRENT BERTH LINE.

OVERALL SITE PLAN

SCALE: 1" = 80'



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OVERALL SITE PLAN
FUELING AND AML BARGE OPERATIONS

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**G8.04**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 - 10:12am dyu Layout: G8.04
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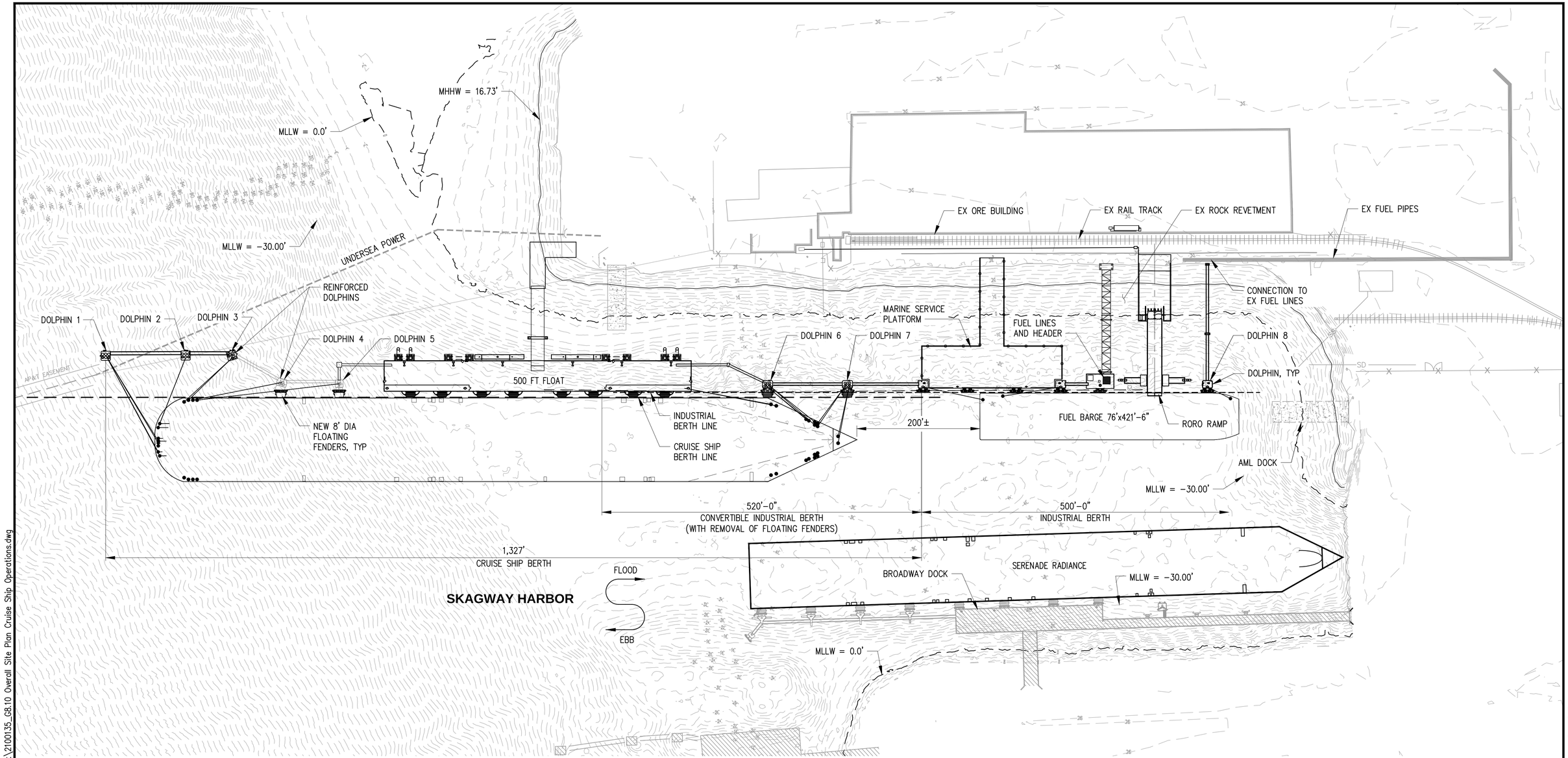

OVERALL SITE PLAN

SCALE: 1" = 80'

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 – 10:13am dyu Layout: G8.10
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_G8.10 Overall Site Plan Cruise Ship Operations.dwg

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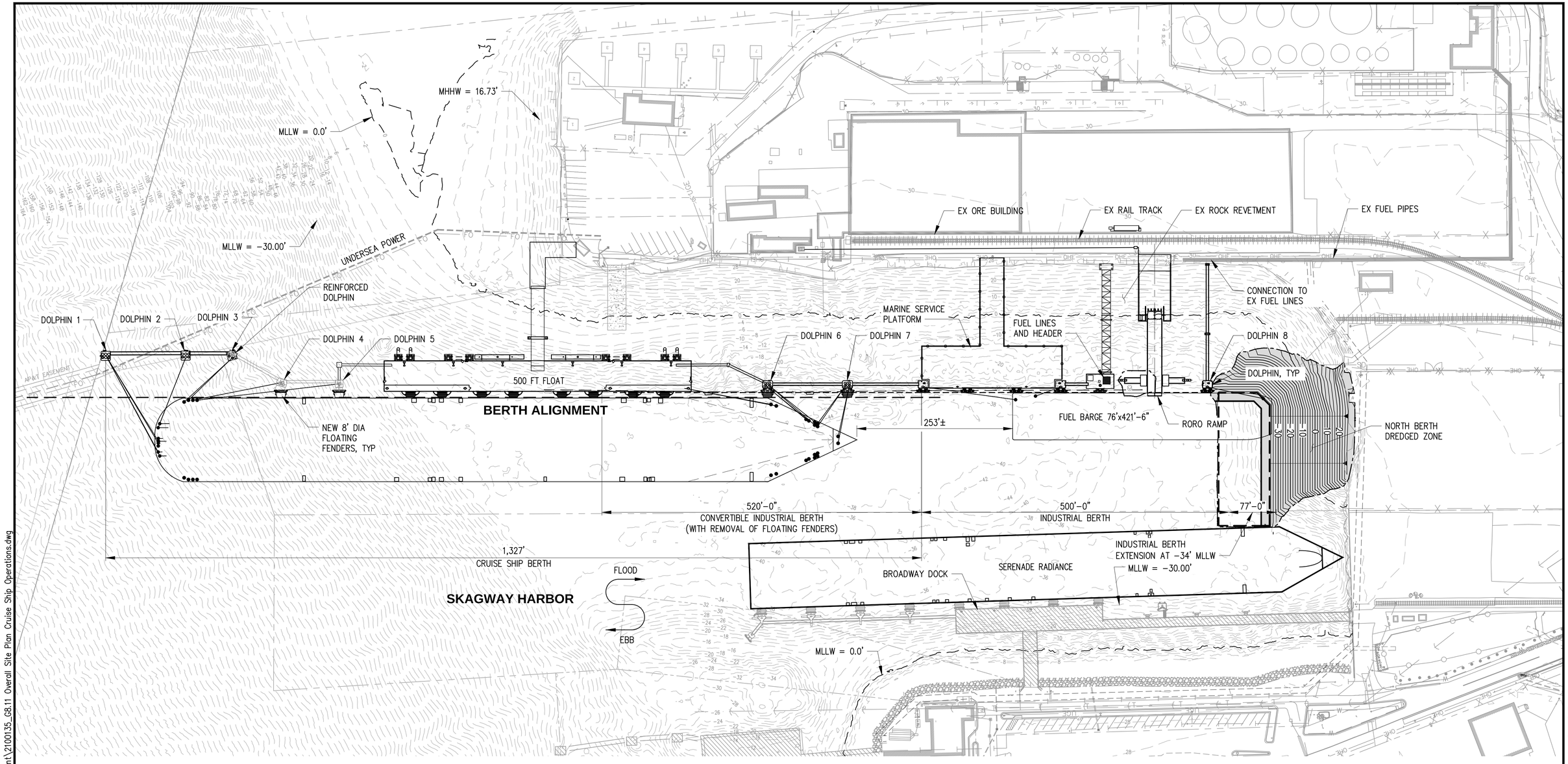
OVERALL SITE PLAN
CRUISE SHIP AND FUELING OPERATIONS

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**G8.10**
SHEET NO.	OF



OVERALL SITE PLAN

SCALE: 1" = 80'

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ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

OVERALL SITE PLAN
CRUISE SHIP AND FUELING OPERATIONS EXTENSION

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**G8.11**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 – 10:13am dyu Layout: G8.11
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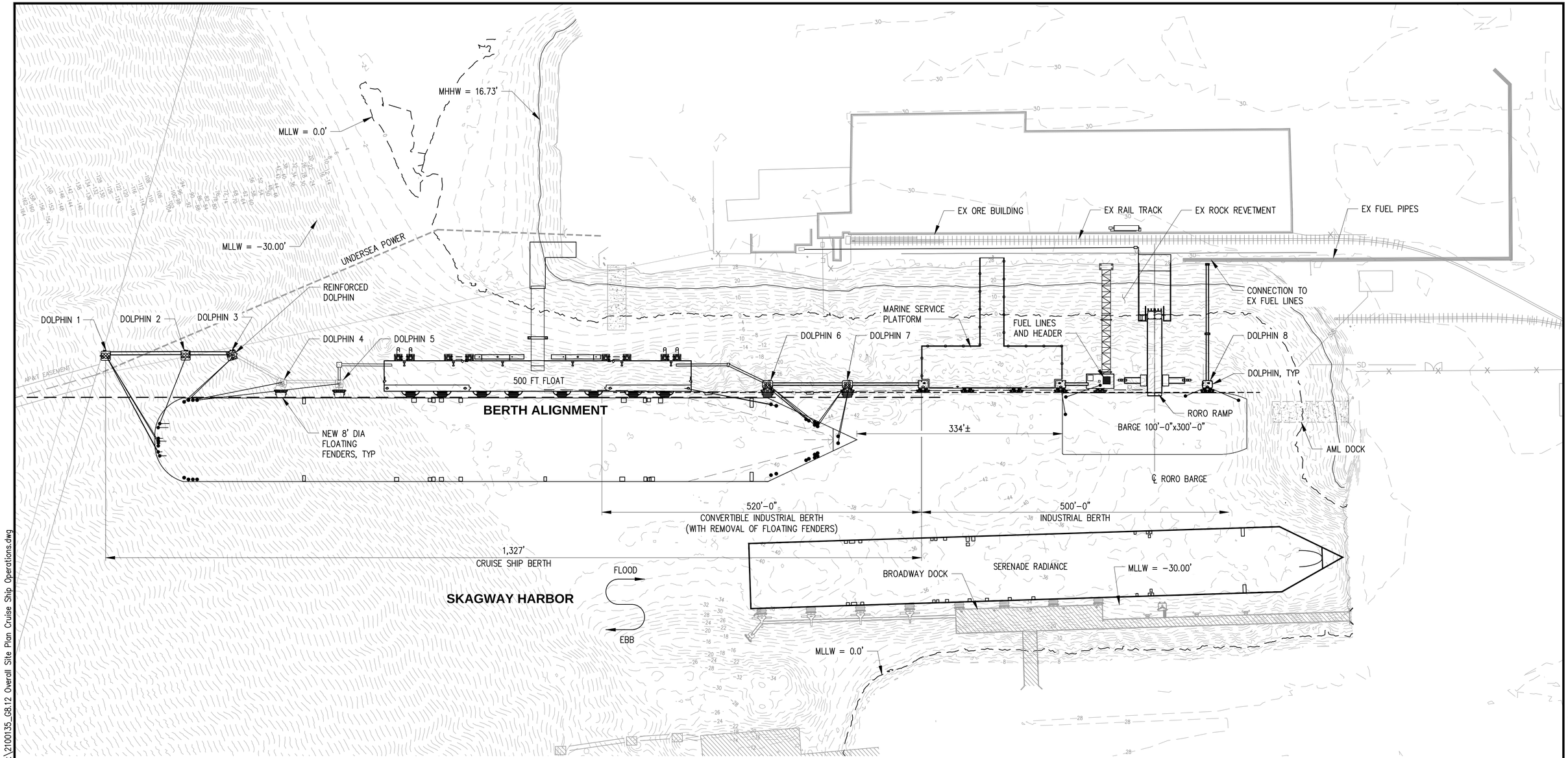

OVERALL SITE PLAN

SCALE: 1" = 80'

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NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

OVERALL SITE PLAN
CRUISE SHIP AND BARGE OPERATIONS

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	G8.12
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 – 10:13am dyu Layout: G8.12
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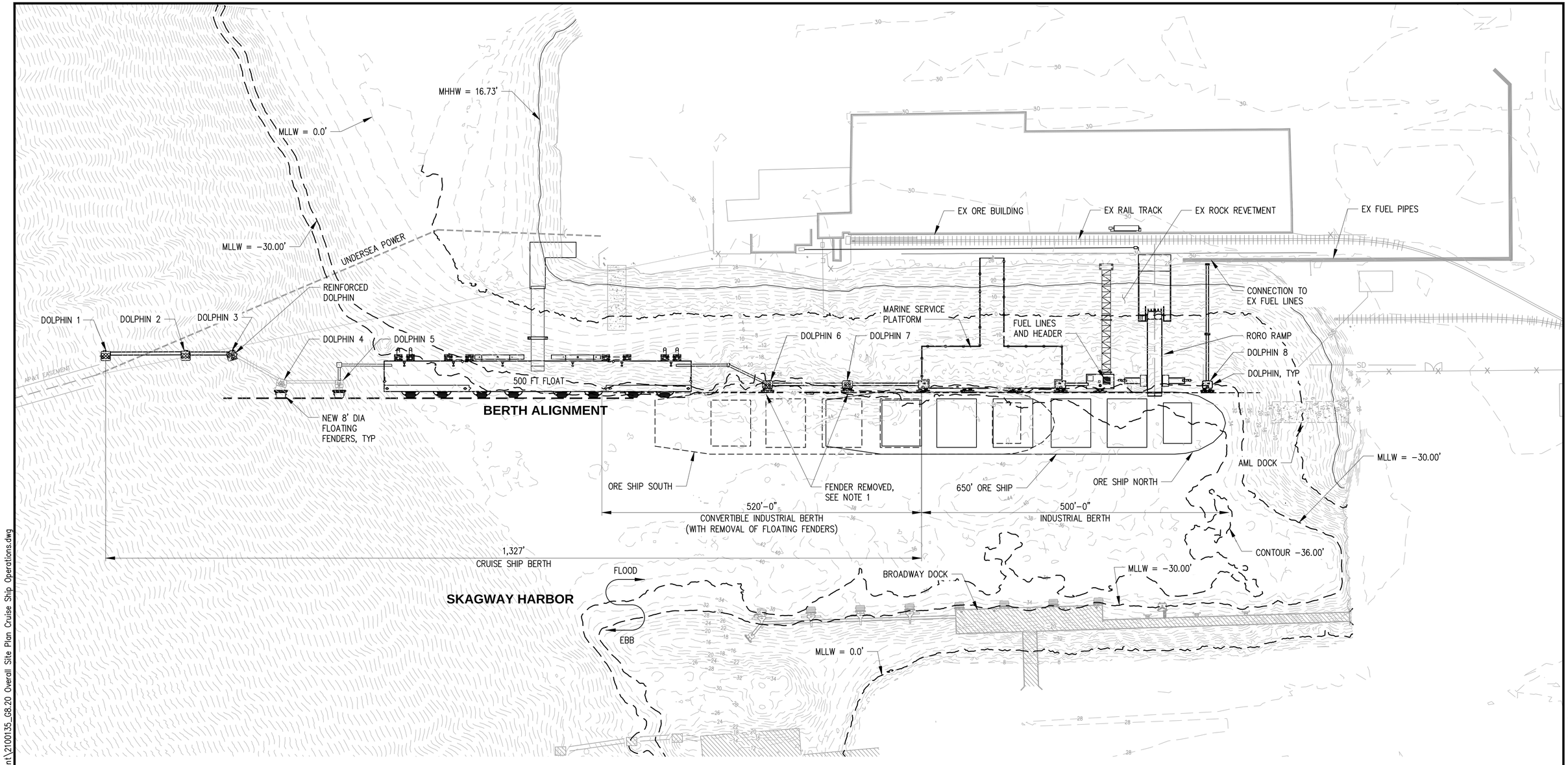
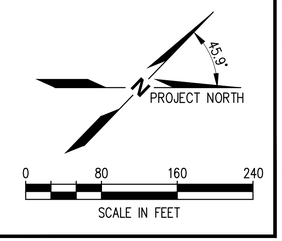


NOTES

1. FLOATING FENDERS REMOVED AT DOLPHIN 6 & 7 FOR ORE SHIP OPERATIONS.

OVERALL SITE PLAN

SCALE: 1" = 80'



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ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

OVERALL SITE PLAN
ORE SHIP OPERATIONS

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	G8.20
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 - 10:13am dyu Layout: G8.20
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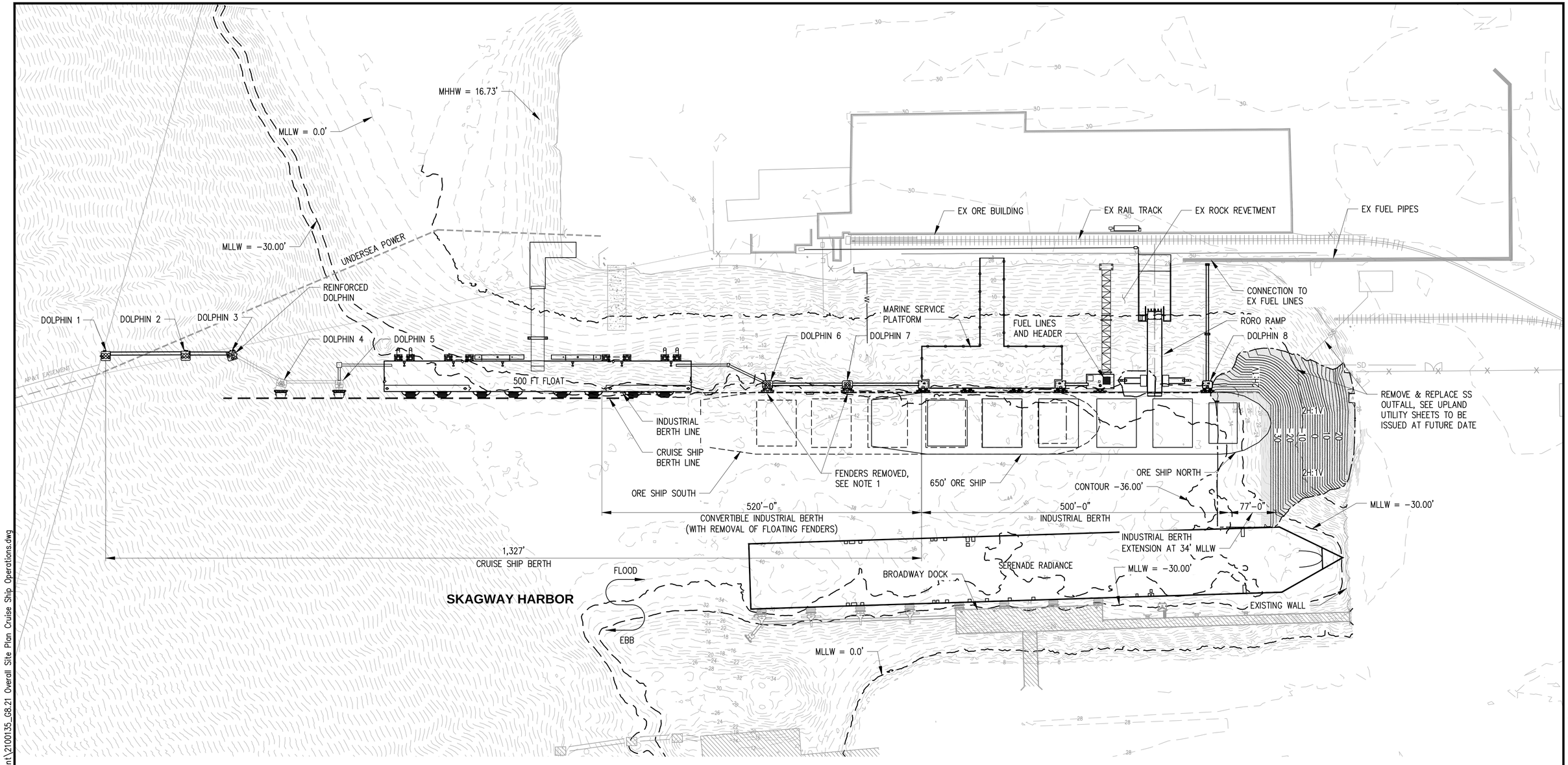
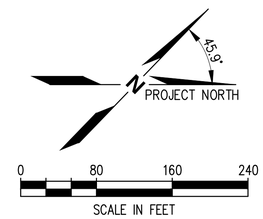


NOTES

1. FLOATING FENDERS REMOVED AT DOLPHIN 6 & 7 FOR ORE SHIP OPERATIONS.

OVERALL SITE PLAN

SCALE: 1" = 80'



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ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

OVERALL SITE PLAN
ORE SHIP OPERATIONS EXTENSION

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**G8.21**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 - 10:14am dyu Layout: G8.21
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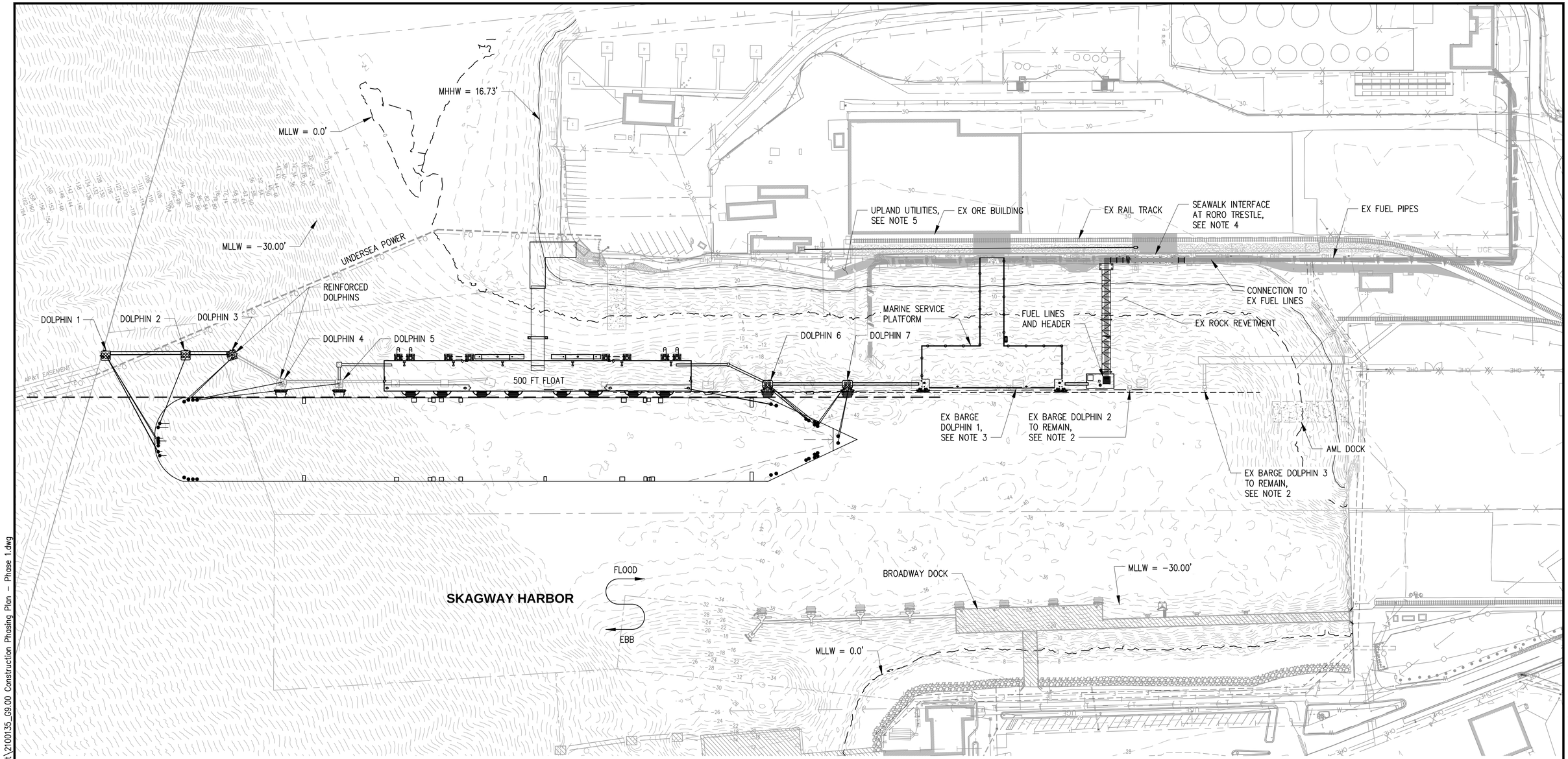
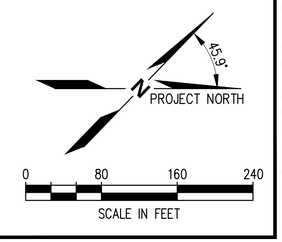


NOTES

1. AT CONTRACTOR OPTION RORO RAMP AND TRESTLE MAY BE BUILT IN SECOND SEASON.
2. BARGE DOLPHINS SHALL REMAIN FOR FUEL BARGE AND AML BARGE MOORING UNTIL SUFFICIENT MOORAGE IS BUILT.
3. EXISTING BARGE DOLPHIN #1 AND EXISTING DOLPHIN #6 SHALL REMAIN FOR BARGE MOORAGE IF MSP IS NOT BUILT IN PHASE 1.
4. FIRST TWO BENTS OF PILES SHALL BE INSTALLED AT THE RORO TRESTLE FOR THE SEAWALK AND TO PREVENT SETTLEMENT OF UTILITIES.
5. UPLAND UTILITIES SHALL NOT BE INSTALLED UNTIL THE MSP AND RORO TRESTLE FIRST FOUR BENTS OF PILES ARE INSTALLED.

CONSTRUCTION PHASING PLAN - PHASE 1

SCALE: 1" = 80'



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SKAGWAY, ALASKA

CONSTRUCTION PHASING PLAN
PHASE 1

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**G9.00**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 - 10:14am dyu Layout: G9.00
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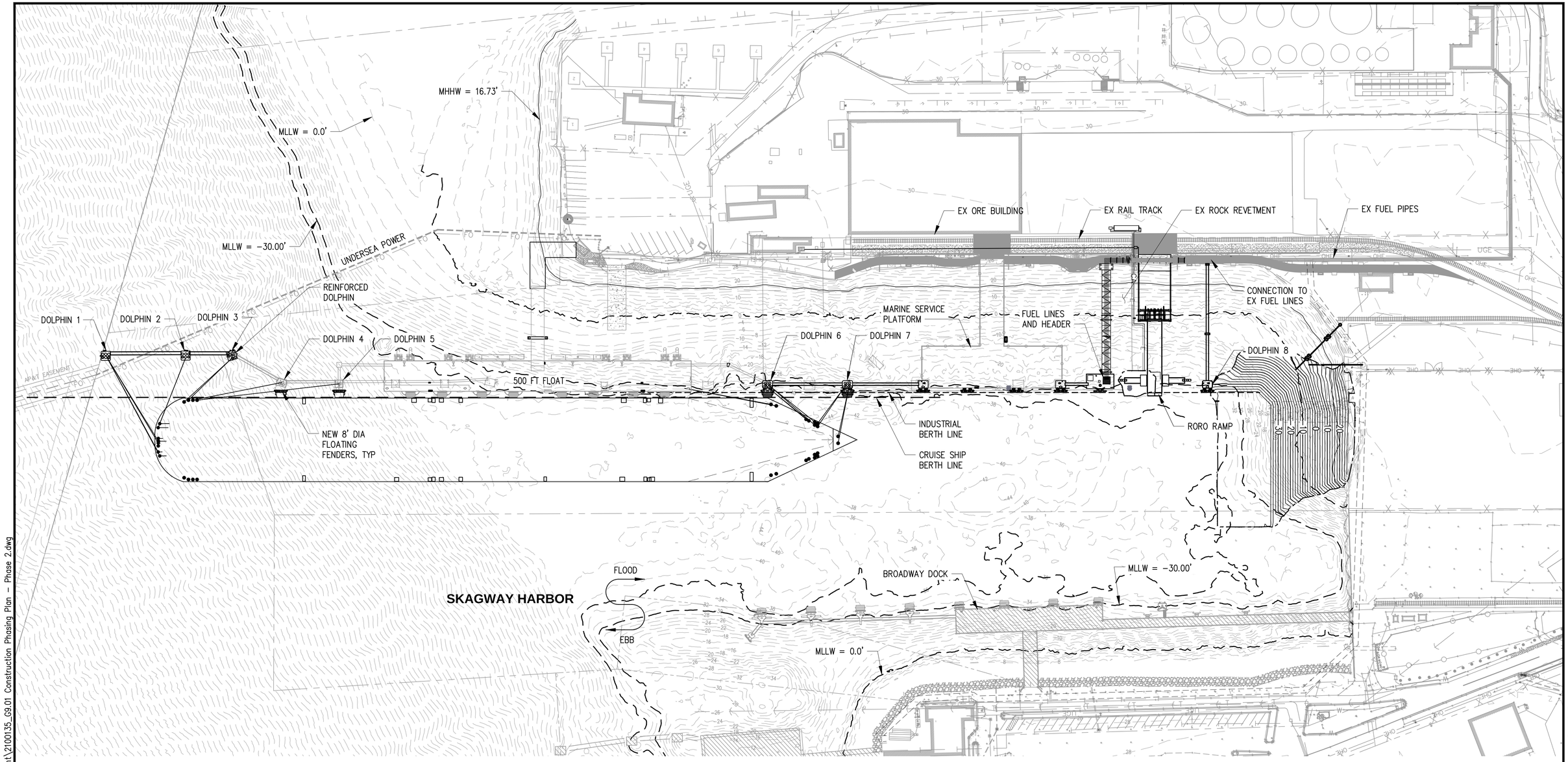
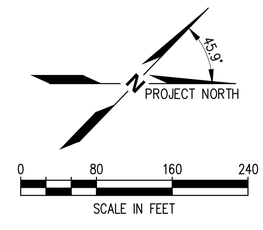


NOTES

1. AML DOCK SHALL NOT BE DEMOLISHED UNTIL THE RORO RAMP IS FULLY INSTALLED AND COMMISSIONED.

CONSTRUCTION PHASING PLAN - PHASE 2

SCALE: 1" = 80'



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SKAGWAY, ALASKA

CONSTRUCTION PHASING PLAN
PHASE 2

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**G9.01**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 - 10:15am dyu Layout: G9.01
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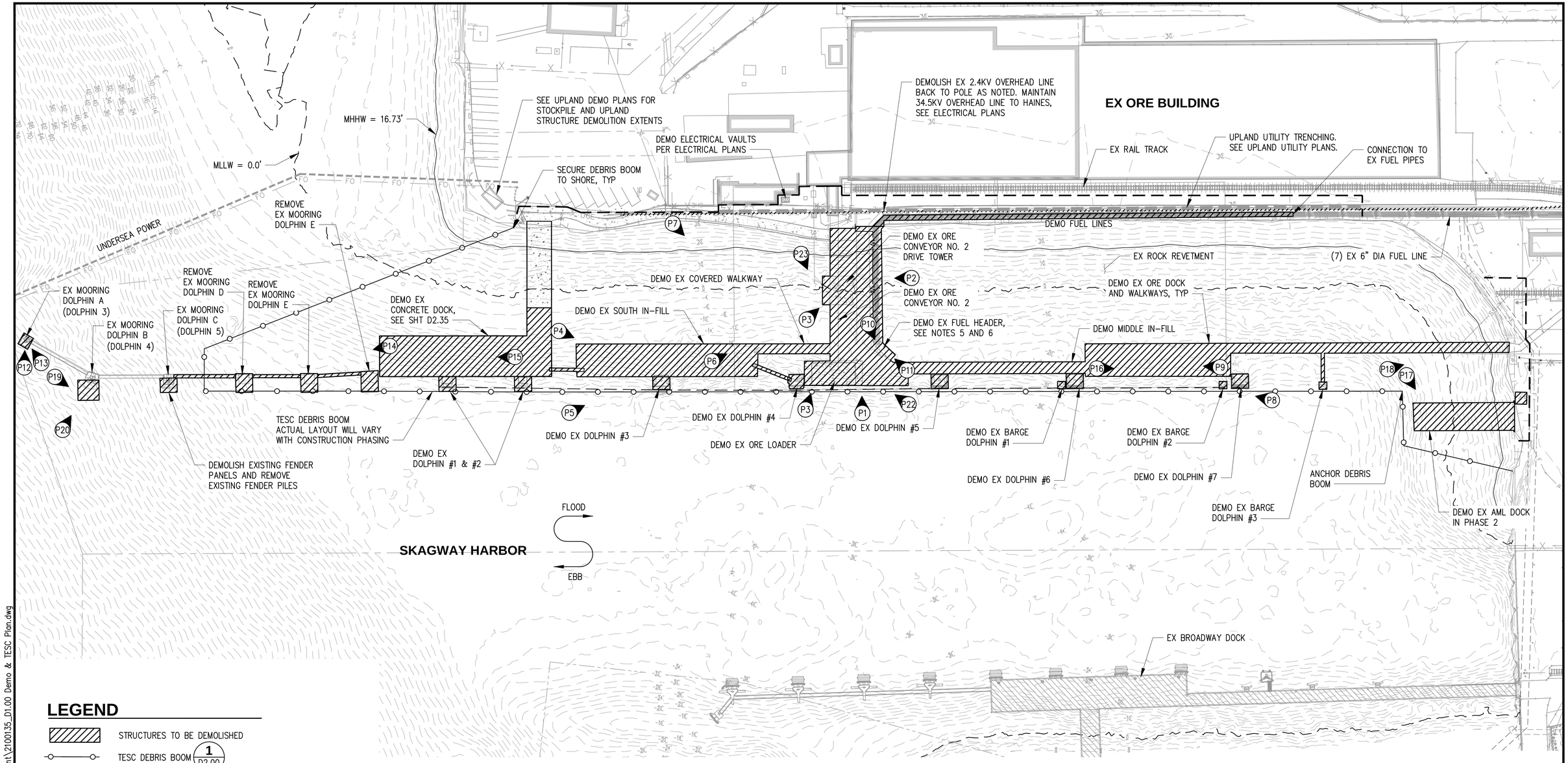


LEGEND

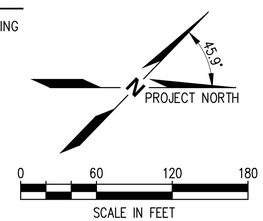
- STRUCTURES TO BE DEMOLISHED
- TESC DEBRIS BOOM (1 / D2.00)
- CONTRACTOR SECURE WORK AREA
- UTILITY TRENCH & PAVEMENT RESTORATION
- (PX) DEMO PHOTO LOCATION, SEE SHEETS D2.10 – D2.11, D2.20, D2.30 – D2.34
- CUT AND CAP (38 COUNT), SEE NOTE 5
- (XX) HORIZONTAL CONTROL POINT

DEMO AND TESC PLAN

SCALE: 1" = 60'

NOTES

1. EXISTING DOLPHIN NUMBERING IS BASED ON 1984 RECORD DRAWING AND 1992 ORE DOCK EXPANSION RECORD DRAWING.
2. TESC MEASURES SHALL BE INSTALLED PRIOR TO ALL DEMOLITION ACTIVITIES.
3. FUEL HEADER SHALL NOT BE DEMOLISHED PRIOR TO THE CONSTRUCTION OF THE REPLACEMENT FUEL HEADER.
4. TESC DEBRIS BOOM SHALL BE PLACED AROUND ANY ACTIVE WORK, DERRIK BARGES OR MATERIAL BARGES IN WITH ACTIVE LOADING OR UNLOADING, OR IF BARGES CONTAIN HAZARDOUS OR CONTAMINATED MATERIALS.
5. CONTRACTOR TO COORDINATE LINE ISOLATION AND CLEANING WITH PETRO MARINE AND ENGINEER.
6. FUEL HEADER MUST REMAIN OPERATIONAL UNTIL REPLACEMENT FUEL HEADER HAS BEEN BUILT AND COMMISSIONED.
7. SEE ADDITIONAL PHASING REQUIREMENTS IN G9 SHEETS.
8. NOTE EXISTING STEEL FENDER PILES MAY FILLED WITH CONCRETE.



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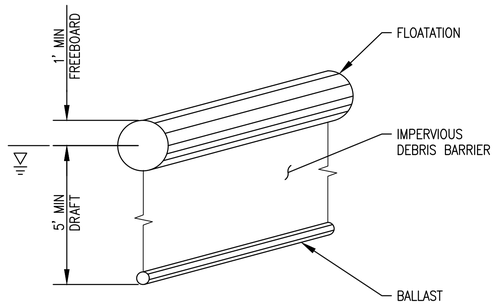
SKAGWAY, ALASKA

DEMOLITION AND TESC PLAN

DRAWN:	DYU	PROJECT NO.:	2100135
DESIGN:	JLF	SCALE:	AS SHOWN
CHECKED:	RHR	DATE:	01/27/2023
DRAWING NO.			D1.00
SHEET NO.			OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 – 10:28am dyu Layout: D1.00
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_D1.00 Demo & TESC Plan.dwg



1 D1.00 **DEBRIS BOOM**
NTS

NOTES

1. CONTRACTOR TO ADJUST TESC MEASURES TO MINIMIZE IMPACT TO HARBOR OPERATIONS DURING EACH CONSTRUCTION PHASE.
2. CONTRACTOR TO PROVIDE ANCHORING AS REQUIRED TO PREVENT BOOM FROM FLOATING OUTSIDE PROJECT LIMITS, LOCATE AS NEEDED FOR IN WATER/OVER WATER WORK.

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ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

TESC DETAILS

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
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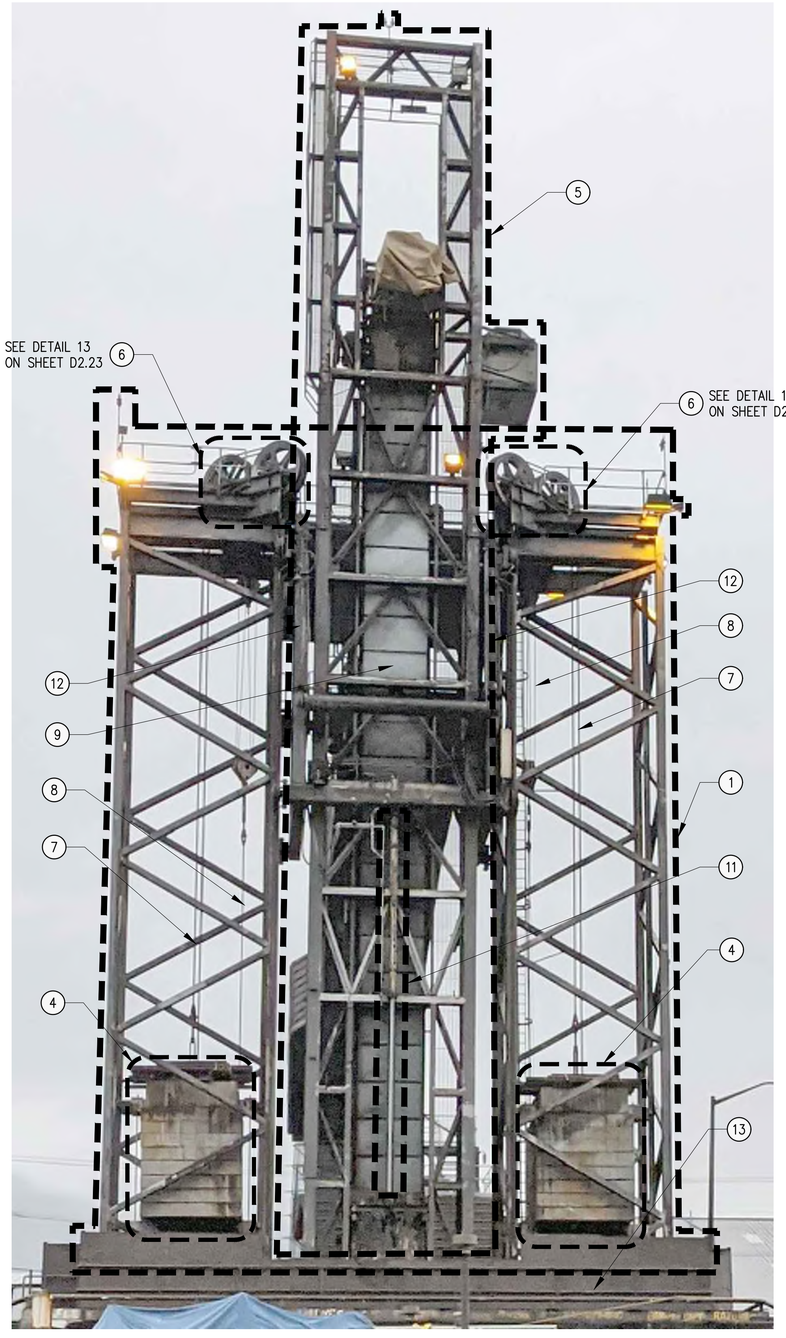


P1 PHOTO

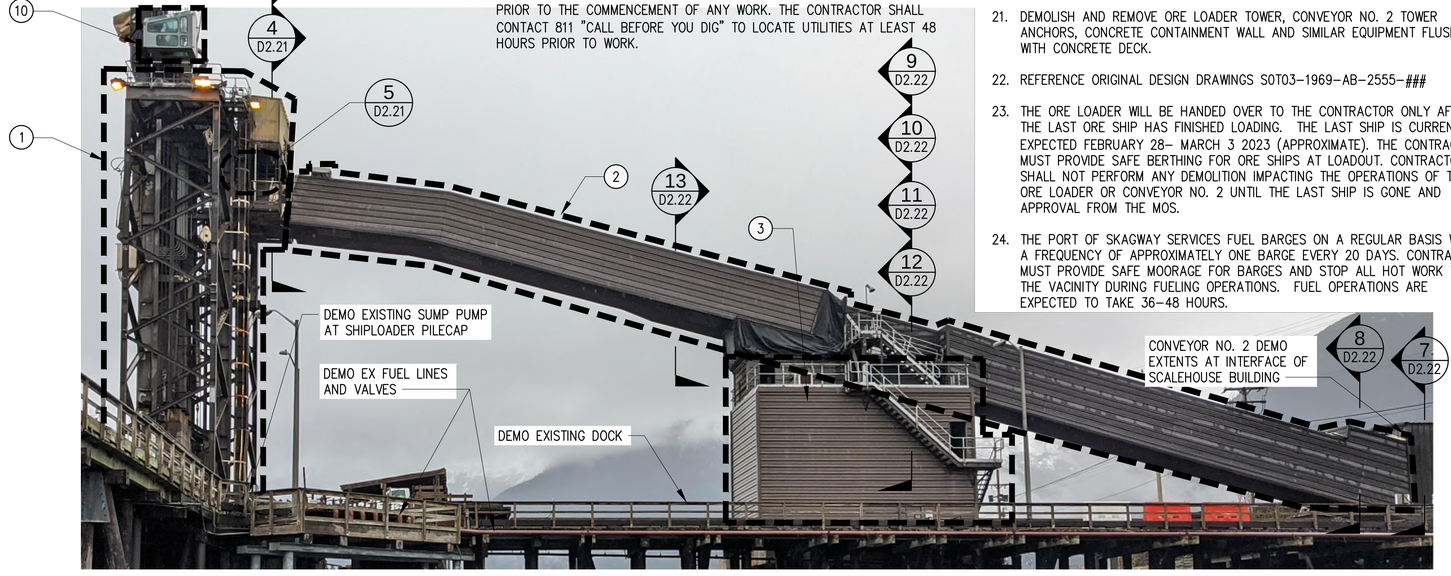
ELEVATION VIEW – FRONT OF LOADER

KEY NOTES

1. ORE LOADER TOWER
2. CONVEYOR NO. 2
3. CONVEYOR NO. 2, DRIVE TOWER
4. LOADING BOOM CONCRETE COUNTERWEIGHT
5. LOADING BOOM SHOWN IN UPRIGHT STOWED POSITION
6. LOADING BOOM COUNTERWEIGHT SHEAVES
7. LOADING BOOM COUNTERWEIGHT AND HOIST WIRE ROPES. CARE MUST BE TAKEN WHEN DE–REEVING WIRE ROPES FOR REMOVAL. STORED ENERGY MUST BE ASSESSED AND PROTECTED AGAINST.
8. LOADING BOOM HOIST WIRE ROPES. CARE MUST BE TAKEN WHEN DE–REEVING WIRE ROPES FOR REMOVAL. STORED ENERGY MUST BE ASSESSED AND PROTECTED AGAINST.
9. LOADING BOOM CONVEYOR NO. 3
10. LOADING BOOM OPERATORS CAB
11. HYDRAULIC SHUTTLE CYLINDER
12. HYDRAULIC LUFFING CYLINDERS
13. CONCRETE CONTAINMENT WALL SURROUNDING SHIPLOADER TOWER BASE

LEGEND

DEMOLITION STRUCTURES



P2 PHOTO

ELEVATION VIEW – SIDE OF LOADER AND CONVEYOR NO. 2

GENERAL DEMO NOTES

1. SEE SHEET D1.00 FOR PHOTO ORIENTATION AND LOCATION.
2. THE INTENT OF THE DEMOLITION PHOTOS ARE TO SHOW GENERAL SCOPE OF ITEMS TO BE REMOVED/DEMOLISHED. THE PHOTOS ARE FOR REFERENCE ONLY AND TO HIGHLIGHT ITEMS IN THE FOREGROUND TO BE REMOVED/DEMOLISHED. ITEMS IN THE BACKGROUND THAT ARE NOT IDENTIFIED MAY REQUIRE DEMOLITION, SEE DEMOLITION PLAN ON SHEET D1.00 FOR EXTENTS OF WORK. THE CONTRACTOR SHALL VISIT THE SITE AND SURVEY THE SCOPE OF REMOVAL.
3. STRUCTURE/EQUIPMENT IDENTIFIED IN THE KEY NOTES SHALL BE DEMOLISHED AND REMOVED UNLESS OTHERWISE NOTED "TO REMAIN".
4. ALL PILES THAT ARE IDENTIFIED TO BE DEMOLISHED ARE TO BE FULLY EXTRACTED.
5. THE DEMOLITION BOUNDARY ILLUSTRATES APPROXIMATE EXTENTS OF DEMOLITION ABOVE THE WATER SURFACE AND GROUND. ADDITIONAL DEMOLITION IS REQUIRED BELOW GROUND AND WATER SURFACE.
6. UNLESS SPECIFICALLY NOTED OTHERWISE, DEMOLISH IS DEFINED AS COMPLETE DEMOLITION, REMOVAL, AND SATISFACTORY DISPOSAL OR RECYCLING.
7. CONTRACTOR SHALL PROTECT–IN–PLACE ALL STRUCTURES, UTILITIES AND OBJECTS NOT IDENTIFIED AS BEING DEMOLISHED ON THE PLANS. ANY DAMAGE TO ITEMS NOT BEING DEMOLISHED SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT THEIR EXPENSE.
8. PRIOR TO COMMENCING DEMOLITION ACTIVITIES, THE CONTRACTOR SHALL IMPLEMENT TEMPORARY EROSION AND SEDIMENTATION CONTROL (TESC). NO DEMOLITION MATERIAL OR DEBRIS SHALL BE ALLOWED TO ENTER THE WATER.
9. CONTRACTOR SHALL VERIFY ALL LEVELS, DIMENSIONS, AND EXISTING CONDITIONS IN THE FIELD BEFORE PROCEEDING. CONTRACTOR SHALL NOTIFY THE MUNICIPALITY OF SKAGWAY (MOS) OF ANY DISCREPENCIES OR FIELD CHANGES PRIOR TO DEMOLITION. IN CASE OF DISCREPANCIES BETWEEN THE EXISTING CONDITIONS AND THE PLANS, THE CONTRACTOR SHALL OBTAIN DIRECTION FROM THE MOS BEFORE PROCEEDING.
10. A COPY OF THE PLANS SHALL BE ON–SITE WHENEVER CONSTRUCTION IS IN PROGRESS. THROUGHOUT THE PROGRESS OF THE WORK OF THIS CONTRACT, THE CONTRACTOR SHALL MAINTAIN AN ACCURATE RECORD OF ALL CHANGES IN THE CONTRACT DOCUMENTS. UPON COMPLETION OF THIS CONTRACT, THE CONTRACTOR SHALL PROVIDE ONE COMPLETE SET OF RECORD DOCUMENTS TO THE MOS.
11. THE CONTRACTOR SHALL LOCATE ALL UTILITIES WITHIN THE PROJECT SITE PRIOR TO THE COMMENCEMENT OF ANY WORK. THE CONTRACTOR SHALL CONTACT 811 "CALL BEFORE YOU DIG" TO LOCATE UTILITIES AT LEAST 48 HOURS PRIOR TO WORK.
12. ALL ACTIVATION AND DEACTIVATION OF UTILITIES SHALL BE COORDINATED WITH THE UTILITY PROVIDER AND THE MOS IN ADVANCE. PROVIDE A MINIMUM OF 3 DAYS ADVANCED WRITTEN NOTICE TO THE UTILITY PROVIDER AND THE MOS.
13. REMOVE ALL ELECTRIC POWER, LIGHTING SYSTEMS, SUMP PUMPS AND UTILITIES FROM CONVEYORS 2 AND 3 AND THE SHIPLOADER TOWER. ALL UTILITIES SHALL BE TERMINATED AND CAPPED ACCORDINGLY AT THE SHORESIDE EXTENTS OF DEMOLITION.
14. NO WORK SHALL OCCUR UNTIL THE APPROPRIATE SUBMITTALS HAVE BEEN APPROVED BY THE MOS.
15. ALL WORK SHALL CONFORM TO THE PLANS AND SITE DEMOLITION SPECIFICATION AND BE IN COMPLIANCE WITH THE PROJECT PERMITS.
16. REMOVE ALL DEMOLISHED STRUCTURES AND LOWER TO THE GROUND BY METHODS SUITABLE TO AVOID FREE FALL AND TO PREVENT GROUND IMPACT OR DUST GENERATION.
17. HAZARDOUS MATERIALS ARE PRESENT ON THIS PROJECT. THESE MATERIALS INCLUDE, BUT ARE NOT LIMITED TO LEAD BASED PAINT, LEAD AND ZINC ORE CONCENTRATE DEBRIS AND CREOSOTE PILES.
18. THE CONTRACTOR SHALL PLACE CONSTRUCTION DEBRIS CONTROL DEVICES, BOOMS, TARPAULINS, SHRINK WRAP, AND OTHER DEVICES AS NECESSARY MEETING FULL CONTAINMENT REGULATORY REQUIREMENTS TO PREVENT DEBRIS FROM ENTERING THE WATER, AND AIR BORNE MATERIALS FROM LEAVING THE IMMEDIATE VICINITY OF THE SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANUP OF ANY MATERIALS DEPOSITED OUTSIDE THE WORK AREA.
19. CONTRACTOR SHALL BE RESPONSIBLE FOR DECONSTRUCTION STABILITY AND TEMPORARY SUPPORT AS NECESSARY. DETAILED DEMOLITION PLANS SHALL BE PREPARED BY THE CONTRACTOR AND APPROVED BY THE MOS PRIOR TO MOBILIZATION.
20. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CREATING A HAZARDOUS MATERIALS ABATEMENT PLAN FOR THE MEANS AND METHODS TO FULLY CONTAIN, CAPTURE AND ABATE POTENTIAL HAZARDOUS MATERIALS INCLUDING ASBESTOS, LEAD PAINT, POLYCHLORINATED BIPHENYLS (PCB)–BASED PAINT, PCB–BASED OILS, LEAD AND ZINC ORE DUST, CREOSOTE PILINGS AND ANY OTHER HAZARDOUS SUBSTANCES IDENTIFIED DURING DEMOLITION WORK. THE PLAN SHALL DEMONSTRATE THE METHODS FOR PREVENTING ANY MATERIALS FROM ENTERING THE WATERWAY OR OTHERWISE CONTAMINATING THE AREAS AROUND THE WORK. THE USE OF WATER WILL NOT BE PERMITTED WHEN IT WILL CREATE OR RESULT IN HAZARDOUS OR OBJECTIONABLE CONDITIONS SUCH AS FLOODING OR POLLUTION.
21. DEMOLISH AND REMOVE ORE LOADER TOWER, CONVEYOR NO. 2 TOWER ANCHORS, CONCRETE CONTAINMENT WALL AND SIMILAR EQUIPMENT FLUSH WITH CONCRETE DECK.
22. REFERENCE ORIGINAL DESIGN DRAWINGS SOT03–1969–AB–2555–###
23. THE ORE LOADER WILL BE HANDED OVER TO THE CONTRACTOR ONLY AFTER THE LAST ORE SHIP HAS FINISHED LOADING. THE LAST SHIP IS CURRENTLY EXPECTED FEBRUARY 28– MARCH 3 2023 (APPROXIMATE). THE CONTRACTOR MUST PROVIDE SAFE BERTHING FOR ORE SHIPS AT LOADOUT. CONTRACTOR SHALL NOT PERFORM ANY DEMOLITION IMPACTING THE OPERATIONS OF THE ORE LOADER OR CONVEYOR NO. 2 UNTIL THE LAST SHIP IS GONE AND APPROVAL FROM THE MOS.
24. THE PORT OF SKAGWAY SERVICES FUEL BARGES ON A REGULAR BASIS WITH A FREQUENCY OF APPROXIMATELY ONE BARGE EVERY 20 DAYS. CONTRACTOR MUST PROVIDE SAFE MOORAGE FOR BARGES AND STOP ALL HOT WORK WITHIN THE VACINITY DURING FUELING OPERATIONS. FUEL OPERATIONS ARE EXPECTED TO TAKE 36–48 HOURS.

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ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

ORE LOADER DEMOLITION ELEVATIONS

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NOTES

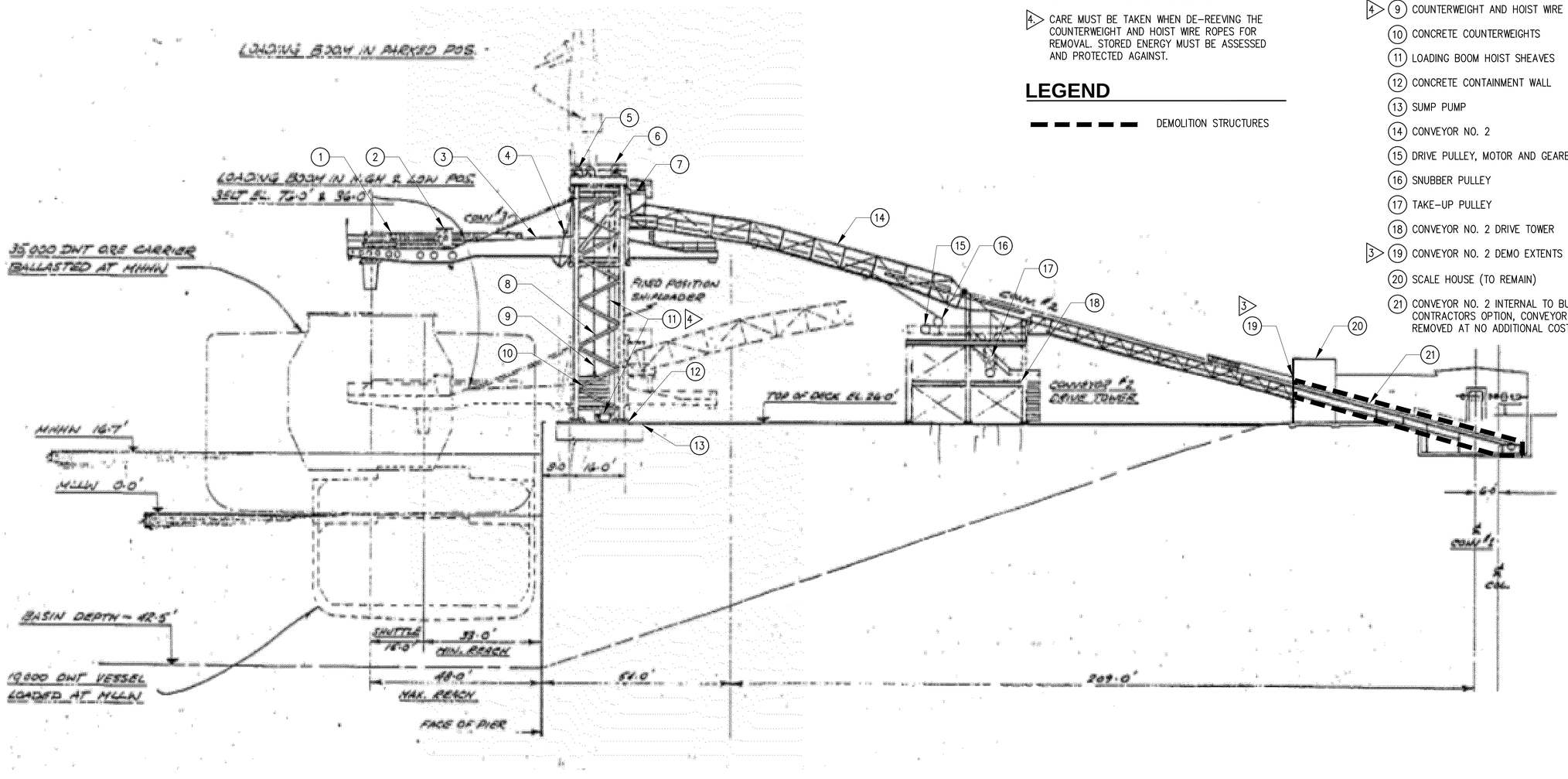
1. REFERENCE ORIGINAL DESIGN DRAWINGS SOT03-1969-AB-2555-GL-1, 2, 3 & 4 AND SOT03-1969-AB-2555-ST-5.
2. STRUCTURE/EQUIPMENT IDENTIFIED IN KEY NOTES SHALL BE DEMOLISHED AND REMOVED UNLESS OTHERWISE NOTED "TO REMAIN".
3. FOLLOWING DEMOLITION AND REMOVAL OF CONVEYOR NO. 2 AT PENETRATION OF SCALE HOUSE, CONTRACTOR SHALL STRUCTURALLY SUPPORT THE BUILDING AND ANY REMAINING EQUIPMENT AND CAP OFF ALL UTILITIES. AT EXPOSED OPENING, INSTALL NEW BUILDING SIDING MATCHING EXISTING AND ANY NECESSARY SUPPORT FRAMING FOR THE SIDING.
4. CARE MUST BE TAKEN WHEN DE-REEVING THE COUNTERWEIGHT AND HOIST WIRE ROPES FOR REMOVAL. STORED ENERGY MUST BE ASSESSED AND PROTECTED AGAINST.

LEGEND

DEMOLITION STRUCTURES

KEY NOTES

1. CONVEYOR NO. 3
2. OPERATOR CAB
3. LOADING BOOM
4. HYDRAULIC LUFFING CYLINDERS
5. LOADING BOOM COUNTERWEIGHT SHEAVES
6. LOADING BOOM HOISTING EQUIPMENT
7. HYDRAULIC POWER UNIT AND HOIST CONTROL ROOM
8. ORE LOADER TOWER
4. 9. COUNTERWEIGHT AND HOIST WIRE ROPES
10. CONCRETE COUNTERWEIGHTS
11. LOADING BOOM HOIST SHEAVES
12. CONCRETE CONTAINMENT WALL
13. SUMP PUMP
14. CONVEYOR NO. 2
15. DRIVE PULLEY, MOTOR AND GEARBOX
16. SNUBBER PULLEY
17. TAKE-UP PULLEY
18. CONVEYOR NO. 2 DRIVE TOWER
3. 19. CONVEYOR NO. 2 DEMO EXTENTS
20. SCALE HOUSE (TO REMAIN)
21. CONVEYOR NO. 2 INTERNAL TO BUILDING TO REMAIN, AT CONTRACTORS OPTION, CONVEYOR NO. 2 MAY BE REMOVED AT NO ADDITIONAL COST TO THE OWNER.



P2 PHOTO

ELEVATION VIEW – SIDE OF LOADER AND CONVEYOR NO. 2

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ORE PENINSULA REDEVELOPMENT

SKAGWAY, ALASKA

ORE LOADER DEMOLTION ELEVATION

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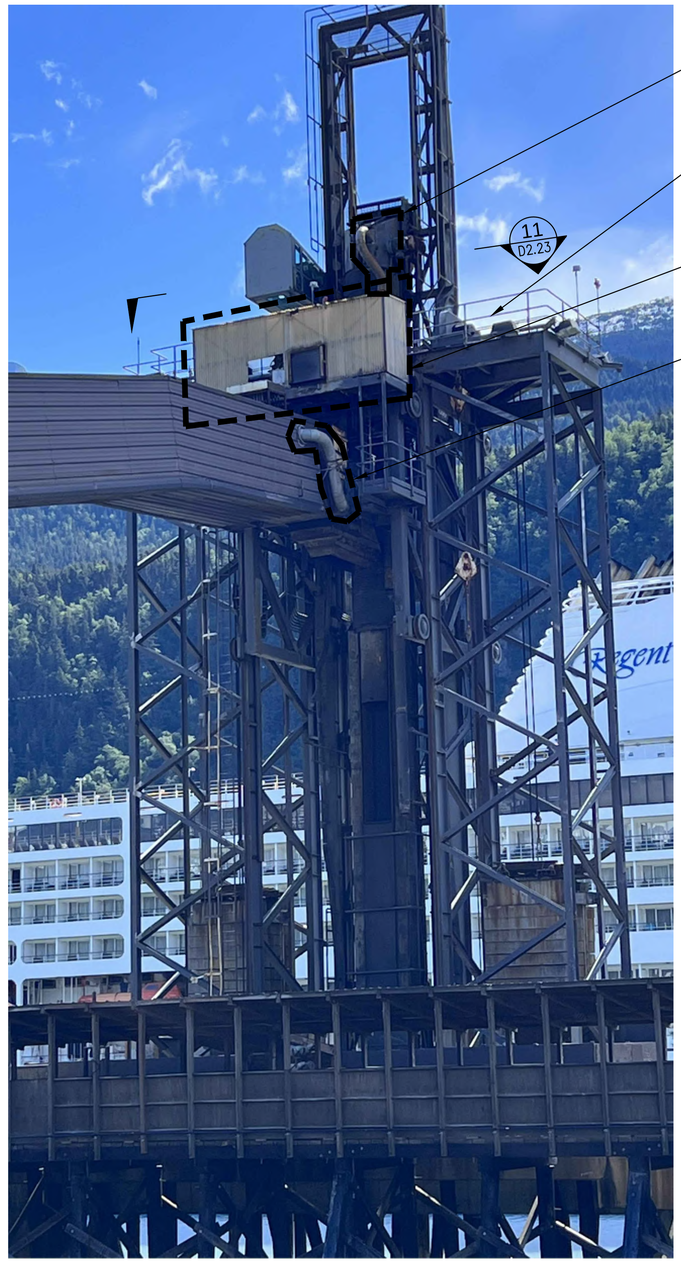
SEE DETAIL 14 ON SHEET D2.23 FOR LOADING BOOM HOIST SHEAVES

P22 PHOTO

ELEVATION VIEW – SHIP LOADER



6 SEE DETAILS 11, 12 & 13 ON SHEET D2.23 FOR LOADING BOOM HOISTING EQUIPMENT DETAILS

3 SEE DETAILS 6, 7 & 8 ON SHEET D2.21 FOR HYDRAULIC POWER UNIT AND HOIST CONTROL DETAILS

P23 PHOTO

ELEVATION VIEW – BACK OF SHIP LOADER

KEY NOTES

1. HYDRAULIC SHUTTLE CYLINDER
2. HYDRAULIC LUFFING CYLINDERS
3. HYDRAULIC POWER UNIT AND HOIST CONTROL ROOM
4. CONVEYOR NO. 3 DUST COLLECTION, RESIDUAL LEAD AND ZINC ORE DUST MAY EXIST IN DUCTWORK AND MUST BE CONTAINED AND DISPOSED OF IN ACCORDANCE WITH THE SPECIFICATIONS AND REGULATORY REQUIREMENTS.
5. CONVEYOR NO. 2 DUST COLLECTION, RESIDUAL LEAD AND ZINC ORE DUST MAY EXIST IN DUCTWORK AND MUST BE CONTAINED AND DISPOSED OF IN ACCORDANCE WITH THE SPECIFICATIONS AND REGULATORY REQUIREMENTS.
6. LOADING BOOM HOISTING EQUIPMENT
7. LOADING BOOM HOIST SHEAVES

GENERAL DEMO NOTES

1. STRUCTURE/EQUIPMENT IDENTIFIED IN KEY NOTES SHALL BE DEMOLISHED AND REMOVED UNLESS OTHERWISE NOTED "TO REMAIN".

LEGEND

DEMOLITION STRUCTURES

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ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

ORE LOADER DEMOLITION DETAILS

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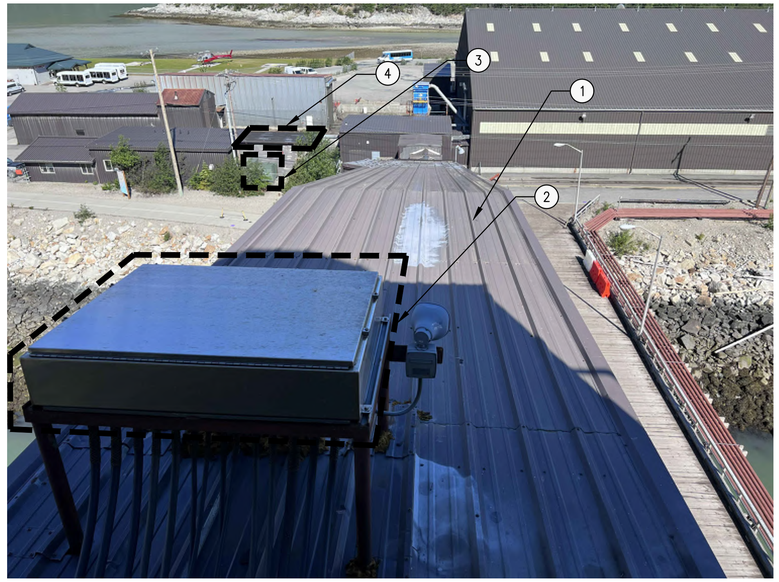
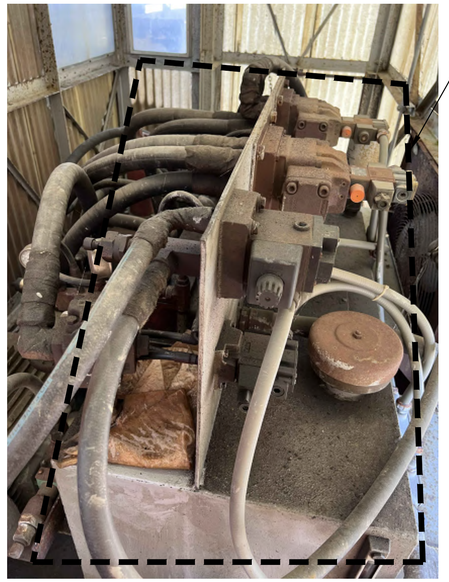


3 D2.10 **DEMO CONVEYOR NO. 2 FROM HYDRAULIC POWER UNIT ROOM**

4 D2.10 **DEMO CONVEYOR NO. 2 FROM BELOW HYDRAULIC POWER UNIT ROOM**

5 D2.10 **DEMO CONVEYOR NO. 2 DUST COLLECTION BELOW HYDRAULIC POWER UNIT ROOM**



6 D2.20 **DEMO HYDRAULIC POWER UNIT**

7 D2.20 **DEMO SHIP LOADER BOOM CONTROL PANEL**

8 D2.20 **DEMO SHIP LOADER BOOM CONTROL JUNCTION BOX**

NOTES

1. REFERENCE ORIGINAL DESIGN DRAWING SOTO3-1969-AB-2555-ST-5.
2. STRUCTURE/EQUIPMENT IDENTIFIED IN KEY NOTES SHALL BE DEMOLISHED AND REMOVED UNLESS OTHERWISE NOTED "TO REMAIN".

KEYNOTES

1. CONVEYOR NO. 2
2. ELECTRICAL JUNCTION BOX
3. PAD MOUNTED TRANSFORMER AND SWITCHGEAR (TO REMAIN)
4. MCC ROOM (TO REMAIN)
5. HYDRAULIC POWER UNIT AND RESERVOIR
6. LOADING BOOM HOIST CONTROL PANEL
7. ELECTRICAL JUNCTION BOX

LEGEND

DEMOLITION STRUCTURES

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ORE LOADER DEMOLITION DETAILS

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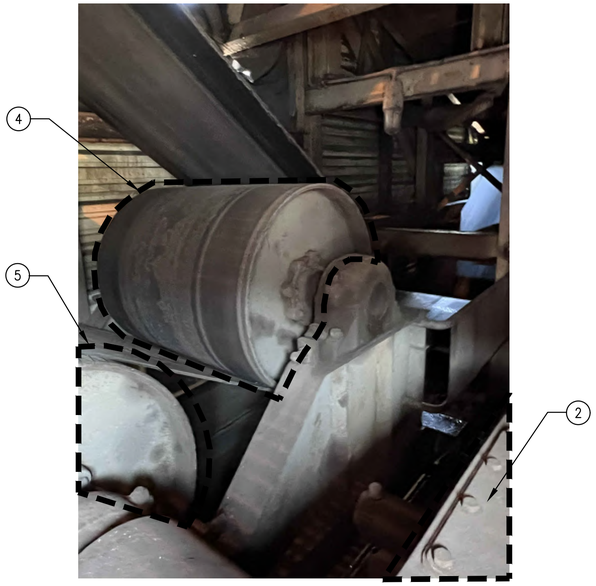
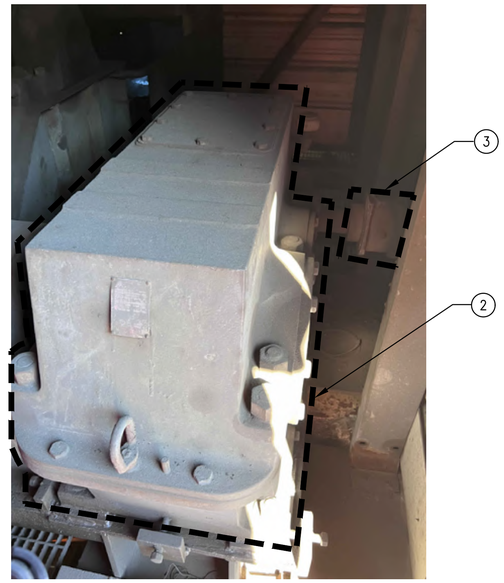
7 D2.10 **DEMO CONVEYOR NO. 2**

8 D2.10 **DEMO CONVEYOR NO. 2**



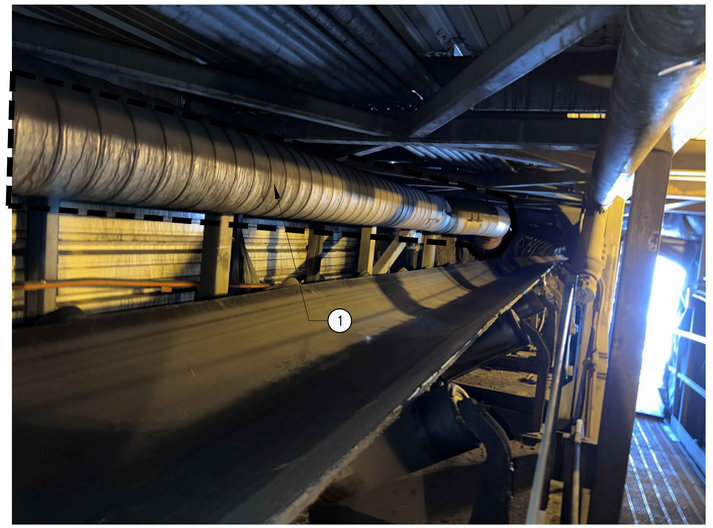
9 D2.10 **DEMO CONVEYOR NO. 2 DRIVE PULLEY**



10 D2.10 **DEMO CONVEYOR NO. 2 DRIVE MOTOR AND GEAR REDUCER**

11 D2.10 **DEMO CONVEYOR NO. 2 TAKE-UP TURN PULLEYS**

12 D2.10 **DEMO CONVEYOR NO. 2 TAKE-UP PULLEY**



13 D2.10 **DEMO CONVEYOR NO. 2**

NOTES

1. REFERENCE ORIGINAL DESIGN DRAWING SOT03-1969-AB-2555-ST-5
2. STRUCTURE/EQUIPMENT IDENTIFIED IN KEY NOTES SHALL BE DEMOLISHED AND REMOVED UNLESS OTHERWISE NOTED "TO REMAIN".

KEYNOTES

1. CONVEYOR NO. 2 DUST COLLECTION, RESIDUAL LEAD AND ZINC ORE DUST MAY EXIST IN DUCTWORK AND MUST BE CONTAINED AND DISPOSED OF IN ACCORDANCE WITH THE SPECIFICATIONS AND REGULATORY REQUIREMENTS.
2. CONVEYOR NO. 2 DRIVE GEAR REDUCER
3. CONVEYOR NO. 2 DRIVE ELECTRIC MOTOR
4. CONVEYOR NO. 2 SNUBBER PULLEY
5. CONVEYOR NO. 2 DRIVE PULLEY

LEGEND

DEMOLITION STRUCTURES

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ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

ORE LOADER DEMOLITION DETAILS

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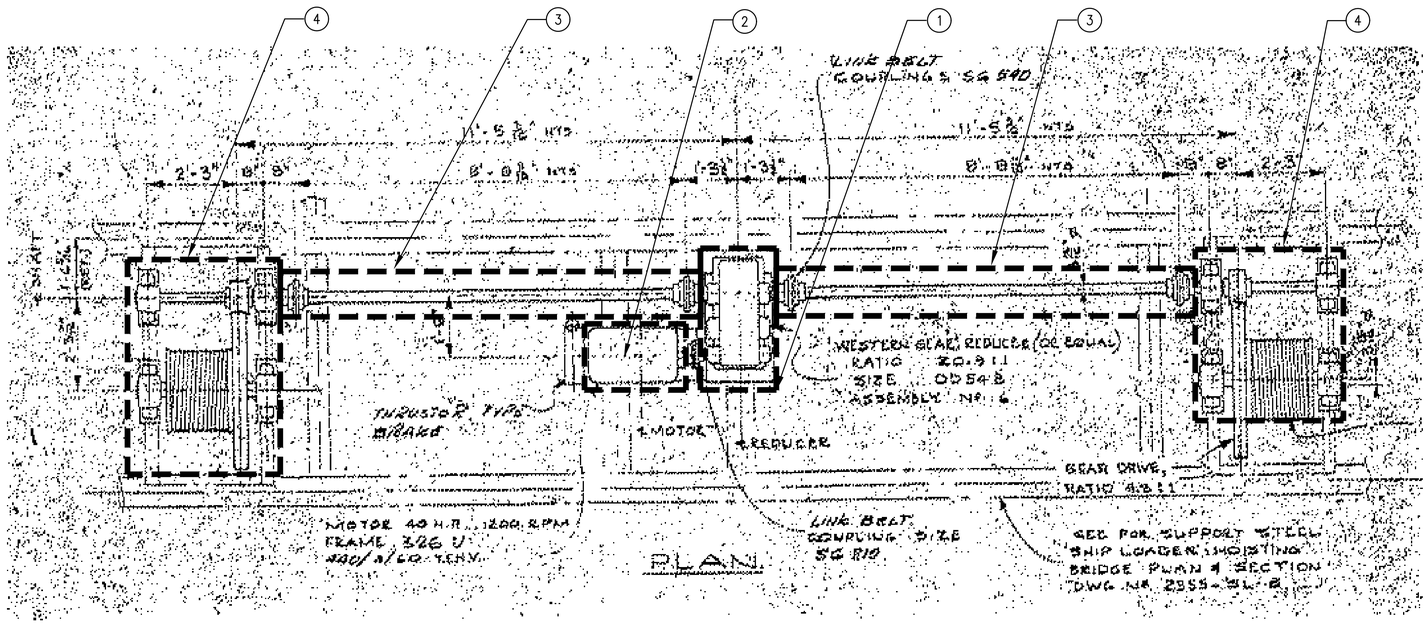


KEYNOTES

1. BOOM HOIST GEAR REDUCER
2. BOOM HOIST ELECTRIC MOTOR
3. BOOM HOIST DRIVE SHAFT
4. BOOM HOIST WIRE ROPE DRUM ASSEMBLY
5. BOOM HOIST SHEAVE ASSEMBLY
6. BOOM COUNTERWEIGHT SHEAVE ASSEMBLY
7. BOOM COUNTERWEIGHT
8. CONCRETE CONTAINMENT WALL SURROUNDING SHIPLOADER TOWER BASE, REMOVE FLUSH WITH CONCRETE
9. SHIPLOADER TOWER ANCHORS, REMOVE FLUSH WITH CONCRETE

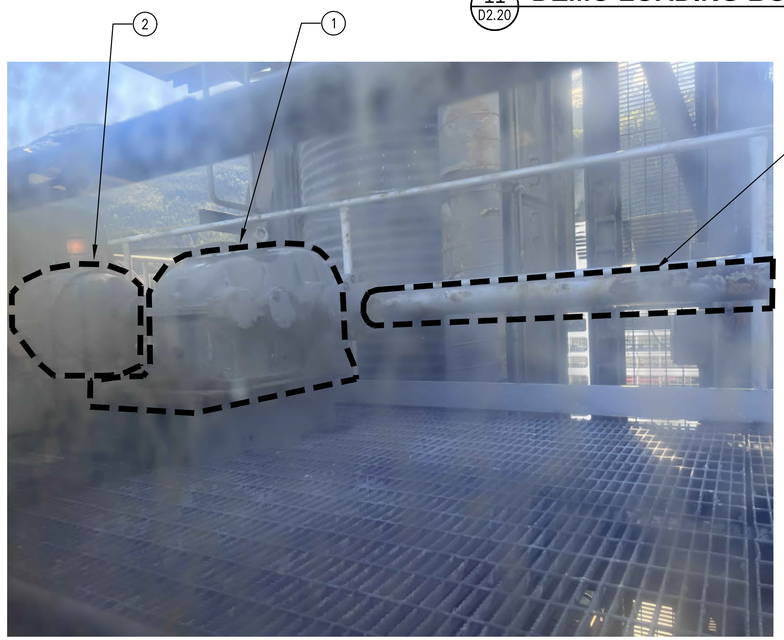
LEGEND

DEMOLITION STRUCTURES

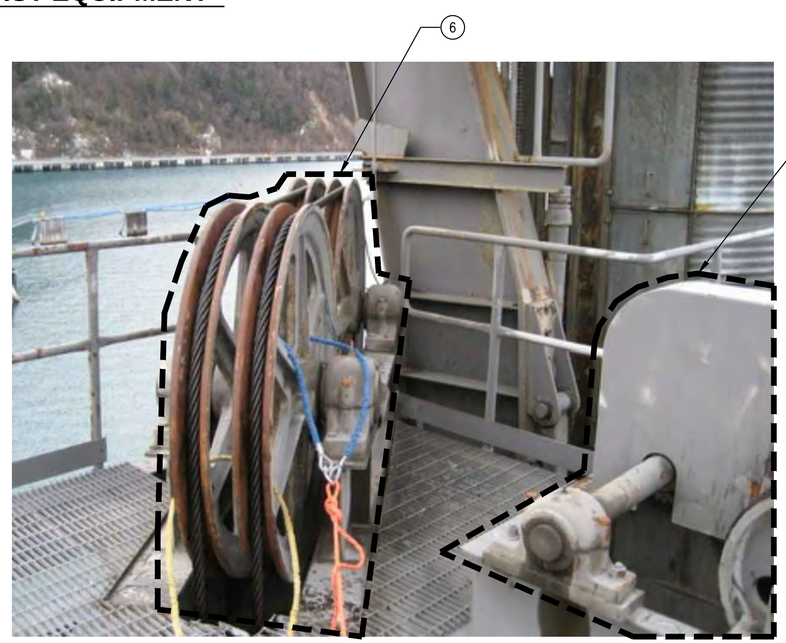
NOTES

1. CARE MUST BE TAKEN WHEN DE-REEVING WIRE ROPES FOR REMOVAL, STORED ENERGY MUST BE ASSESSED AND PROTECTED AGAINST.
2. LOADING BOOM OPERATION – COUNTERWEIGHT (CW) REEVING:
   –CW IS HUNG FROM THE CW WIRE ROPES, WHICH ARE ROUTED FROM THE TOPSIDE OF THE CW, UP AND OVER THE SHEAVES LOCATED ON THE HOIST PLATFORM AND THEN ATTACHED TO THE LOADING BOOM HOIST FRAME. AS THE CW IS RAISED/LOWERED THE LOADING BOOM IS LOWERED/RAISED.
   –THE BOOM HOIST WIRE ROPES ARE ROUTED FROM THE HOIST DRUM LOCATED AT THE TOP OF THE TOWER ON THE HOISTING PLATFORM, DOWN THE TOWER AND THROUGH THE BOOM HOIST SHEAVES LOCATED AT THE BASE OF THE SHIPLOADER AND BACK UP WHERE THEY ARE ATTACHED TO THE UNDERSIDE OF THE CW. THE PURPOSE OF THE BOOM HOIST WIRE ROPES IS TO PULL DOWN ON THE CW TO RAISE THE LOADING BOOM OR PAYOUT WIRE ROPE ALLOWING THE CW TO RAISE, WHICH LOWERS THE LOADING BOOM.
3. REFERENCE ORIGINAL DESIGN DRAWINGS SOT03-1969-AB-2555-SL-9, SOT03-1969-AB-2555-SL-15 AND SOT03-1969-AB-2555-SL-16
4. STRUCTURE/EQUIPMENT IDENTIFIED IN KEY NOTES SHALL BE DEMOLISHED AND REMOVED UNLESS OTHERWISE NOTED "TO REMAIN".

11 D2.20 DEMO LOADING BOOM HOIST EQUIPMENT



12 D2.20 DEMO LOADING BOOM HOIST MOTOR AND GEAR REDUCER



D2.10 13 D2.20 DEMO LOADING BOOM COUNTERWEIGHT SHEAVES AT HOIST PLATFORM

14 D2.20 DEMO LOADING BOOM HOIST SHEAVES AT SHIPLOADER BASE

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ORE LOADER DEMOLITION DETAILS

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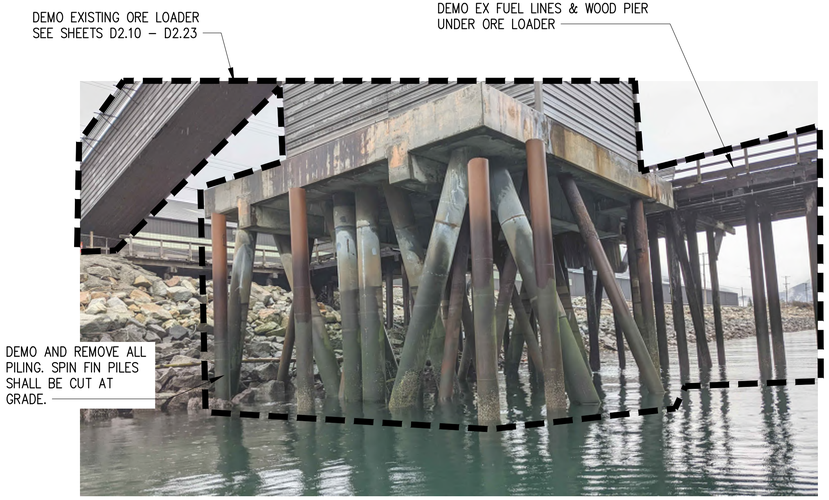
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_D2.23 ORE LOADER DEMOLITION DETAILS .dwg

LEGEND

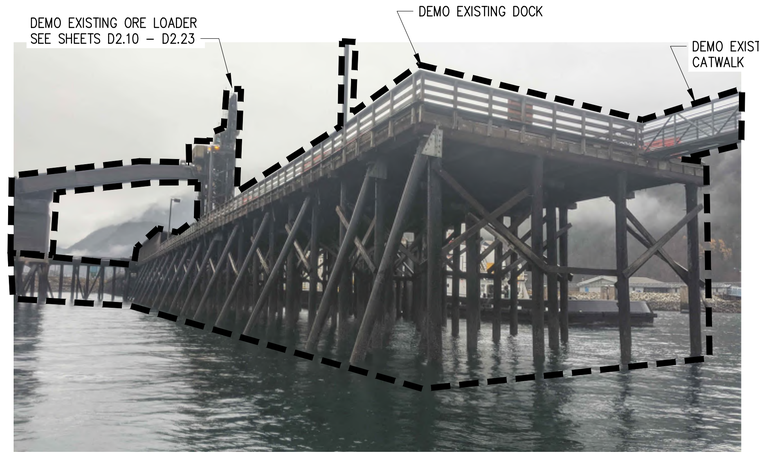
DEMOLITION STRUCTURES

GENERAL DEMO NOTES

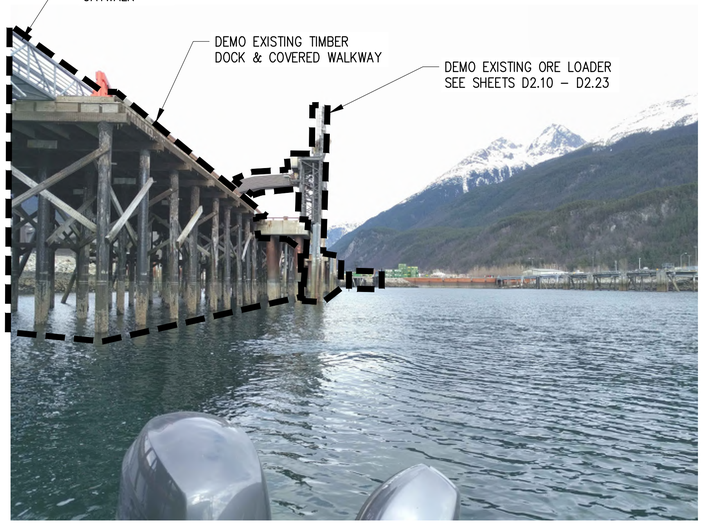
1. SEE SHEET D1.00 FOR PHOTO ORIENTATION AND LOCATION.
2. THE INTENT OF THE DEMOLITION PHOTOS ARE TO SHOW GENERAL SCOPE OF ITEMS TO BE REMOVED/DEMOLISHED. THE PHOTOS ARE FOR REFERENCE ONLY AND TO HIGHLIGHT ITEMS IN THE FOREGROUND TO BE REMOVED/DEMOLISHED. ITEMS IN THE BACKGROUND THAT ARE NOT IDENTIFIED MAY REQUIRE DEMOLITION, SEE DEMOLITION PLAN FOR EXTENTS OF WORK. THE CONTRACTOR SHALL VISIT THE SITE AND SURVEY THE SCOPE OF REMOVAL.
3. ALL PILES THAT ARE IDENTIFIED TO BE DEMOLISHED ARE TO BE FULLY EXTRACTED.
4. THE DEMOLITION BOUNDARY ILLUSTRATES APPROXIMATE EXTENTS OF DEMOLITION ABOVE THE WATER SURFACE AND GROUND. ADDITIONAL DEMOLITION IS REQUIRED BELOW GROUND AND WATER SURFACE.
5. UNLESS SPECIFICALLY NOTED OTHERWISE, DEMOLISH IS DEFINED AS COMPLETE DEMOLITION, REMOVAL, AND SATISFACTORY DISPOSAL OR RECYCLING.
6. CONTRACTOR SHALL PROTECT-IN-PLACE ALL STRUCTURES, UTILITIES AND OBJECTS NOT IDENTIFIED AS BEING DEMOLISHED ON THE PLANS. ANY DAMAGE TO ITEMS NOT BEING DEMOLISHED SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT THEIR EXPENSE.
7. PRIOR TO COMMENCING DEMOLITION ACTIVITIES, THE CONTRACTOR SHALL IMPLEMENT TEMPORARY EROSION AND SEDIMENTATION CONTROL (TESC). NO DEMOLITION MATERIAL OR DEBRIS SHALL BE ALLOWED TO ENTER THE WATER.



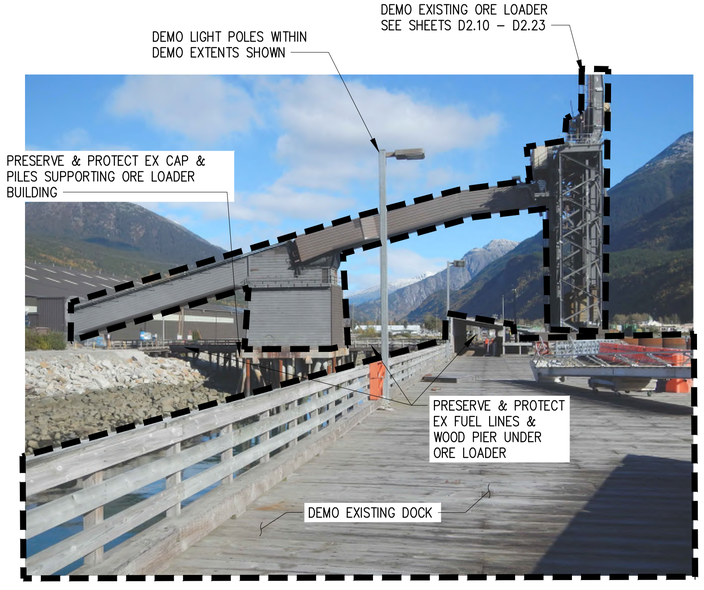
P3 PHOTO
ORE LOADER PILES



P4 PHOTO
EXISTING TIMBER DOCK AND ORE LOADER



P5 PHOTO
EXISITNG TIMBER DOCK AND CATWALK



P6 PHOTO
EXISITNG TIMBER DOCK AND ORE LOADER

P7 PHOTO
EXISITNG TIMBER DOCK AND ORE LOADER

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NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

DEMOLITION DETAILS

DRAWN: DYU	PROJECT NO.: 2100135
DESIGN: JLF	SCALE: AS SHOWN
CHECKED: DWH	DATE: 01/27/2023
DRAWING NO.	**D2.30**
SHEET NO.	OF

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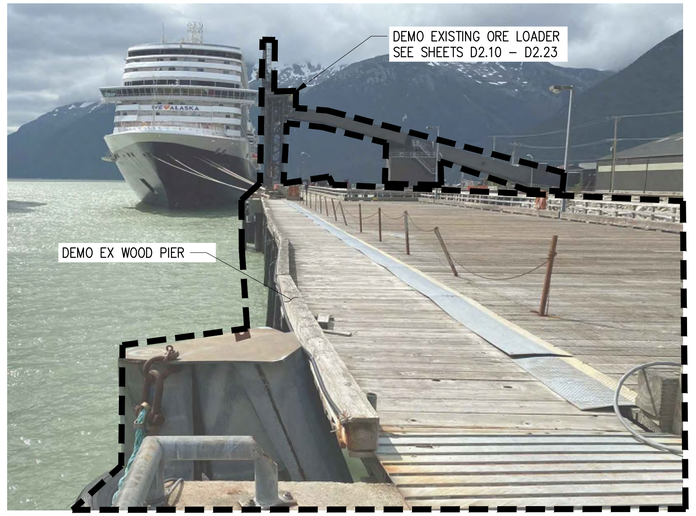
P8 PHOTO

EXISITNG TIMBER DOCK AND ORE LOADER

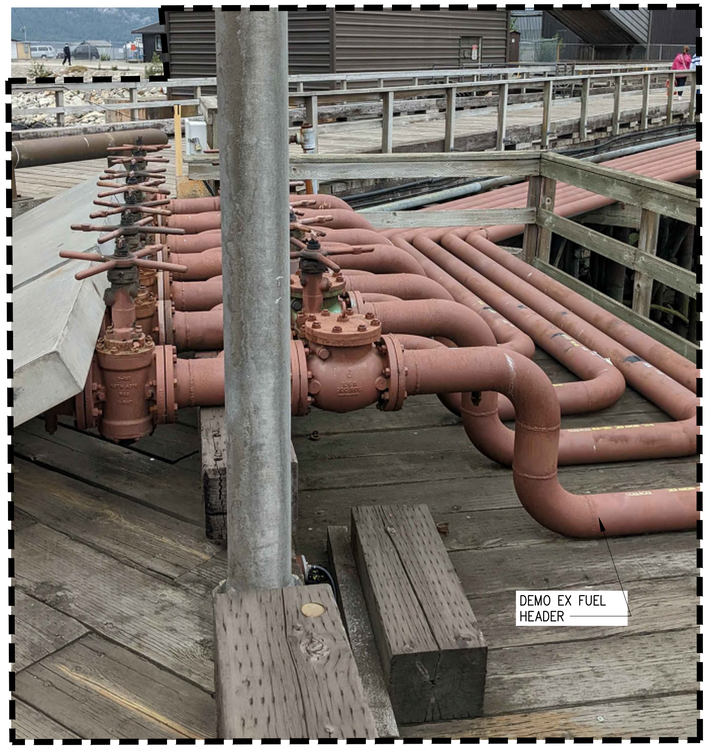


P9 PHOTO

EXISITNG TIMBER DOCK AND ORE LOADER

P10 PHOTO

EXISITNG TIMBER DOCK AND FUEL HEADER



P11 PHOTO

EXISITNG TIMBER DOCK AND FUEL HEADER

GENERAL DEMO NOTES

1. SEE SHEET D1.00 FOR PHOTO ORIENTATION AND LOCATION.
2. THE INTENT OF THE DEMOLITION PHOTOS ARE TO SHOW GENERAL SCOPE OF ITEMS TO BE REMOVED/DEMOLISHED. THE PHOTOS ARE FOR REFERENCE ONLY AND TO HIGHLIGHT ITEMS IN THE FOREGROUND TO BE REMOVED/DEMOLISHED. ITEMS IN THE BACKGROUND THAT ARE NOT IDENTIFIED MAY REQUIRE DEMOLITION, SEE DEMOLITION PLAN FOR EXTENTS OF WORK. THE CONTRACTOR SHALL VISIT THE SITE AND SURVEY THE SCOPE OF REMOVAL.
3. ALL PILES THAT ARE IDENTIFIED TO BE DEMOLISHED ARE TO BE FULLY EXTRACTED.
4. THE DEMOLITION BOUNDARY ILLUSTRATES APPROXIMATE EXTENTS OF DEMOLITION ABOVE THE WATER SURFACE AND GROUND. ADDITIONAL DEMOLITION IS REQUIRED BELOW GROUND AND WATER SURFACE.
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6. CONTRACTOR SHALL PROTECT–IN–PLACE ALL STRUCTURES, UTILITIES AND OBJECTS NOT IDENTIFIED AS BEING DEMOLISHED ON THE PLANS. ANY DAMAGE TO ITEMS NOT BEING DEMOLISHED SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT THEIR EXPENSE.
7. PRIOR TO COMMENCING DEMOLITION ACTIVITIES, THE CONTRACTOR SHALL IMPLEMENT TEMPORARY EROSION AND SEDIMENTATION CONTROL (TESC). NO DEMOLITION MATERIAL OR DEBRIS SHALL BE ALLOWED TO ENTER THE WATER.

LEGEND

DEMOLITION STRUCTURES

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NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

DEMOLITION DETAILS

DRAWN: DYU	PROJECT NO.: 2100135
DESIGN: JLF	SCALE: AS SHOWN
CHECKED: DWH	DATE: 01/27/2023
DRAWING NO.	D2.31
SHEET NO.	OF

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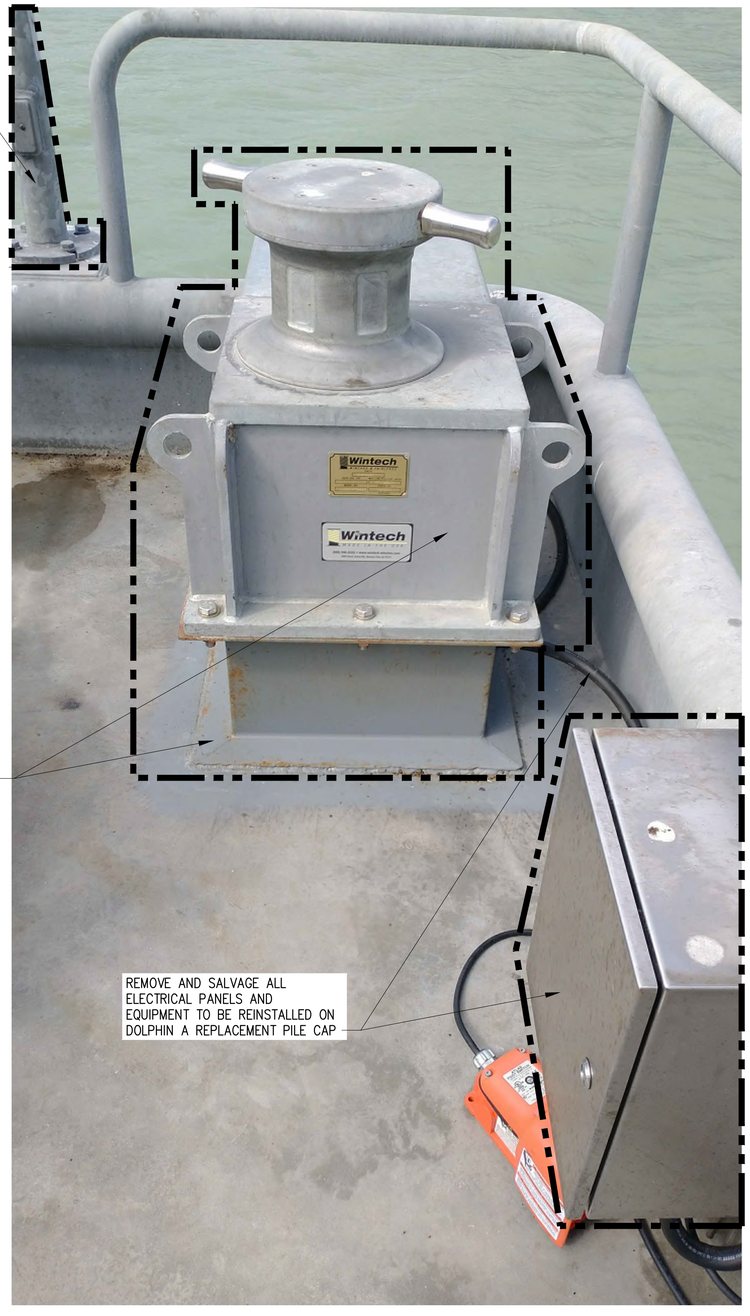
P12 PHOTO

EXISTING DOLPHIN A

UNBOLT AND SALVAGE LIGHT POLE TO BE RE-INSTALLED ON REPLACEMENT CAP

TEMPORARY REMOVE CATWALK AND REINSTALL ONTO REPLACEMENT PILE CAP. PULL ALL ELECTRICAL CONDUCTORS/WIRE BACK TO EXISTING DOLPHINS REMAINING TO BE RE-PULLED/INSTALLED.

CUT OFF EX PILE CAP. CUT PILES 1" BELOW CAP OR LESS TO ACCEPT REPLACEMENT CAP. SEE RECORD DRAWING FOR ADDITIONAL INFORMATION



P13 PHOTO

EXISTING DOLPHIN A

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LEGEND

DEMOLITION STRUCTURES

SALVAGE ITEMS AND STRUCTURES

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DEMOLITION DETAILS

DRAWN: DYU	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: RHR	DATE: 01/27/2023
DRAWING NO.	D2.32
SHEET NO.	OF

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P14 PHOTO

EXISTING CATWALK AND DOLPHINS

P15 PHOTO

EXISTING CONC DOCK

P16 PHOTO

EXISTING TIMBER DOCK

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DEMOLITION STRUCTURES

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DEMOLITION DETAILS

DRAWN: DYU	PROJECT NO.: 2100135
DESIGN: NFA	SCALE: AS SHOWN
CHECKED: RHR	DATE: 01/27/2023
DRAWING NO.	D2.33
SHEET NO.	OF

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Plotted: Jan 27, 2023 - 10:30am dyu Layout: D2.33
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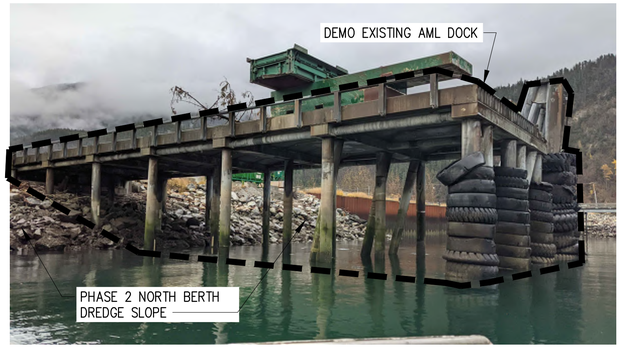
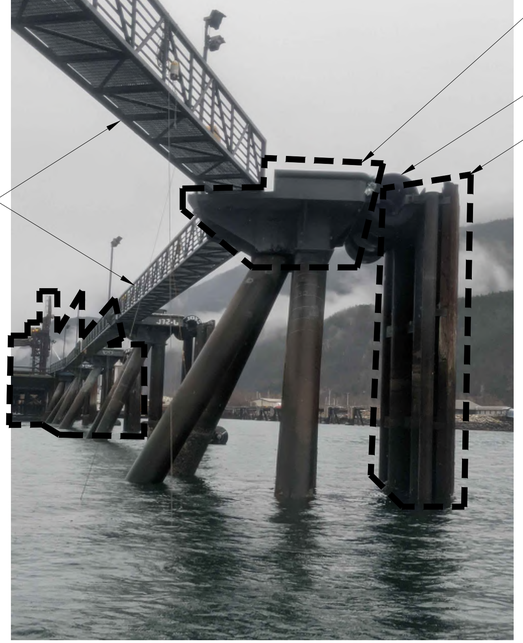


P17 PHOTO

EXISITNG AML DOCK

P18 PHOTO

EXISTING STRUCTURE ADJACENT TO AML DOCK



P19 PHOTO

EXISITNG DOLPHIN B

P20 PHOTO

EXISITNG DOLPHIN B

GENERAL DEMO NOTES

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DEMOLITION STRUCTURES

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ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

DEMOLITION DETAILS

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: JF	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	D2.34
SHEET NO.	OF

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Plotted: Jan 27, 2023 - 10:30am dyu Layout: D2.34
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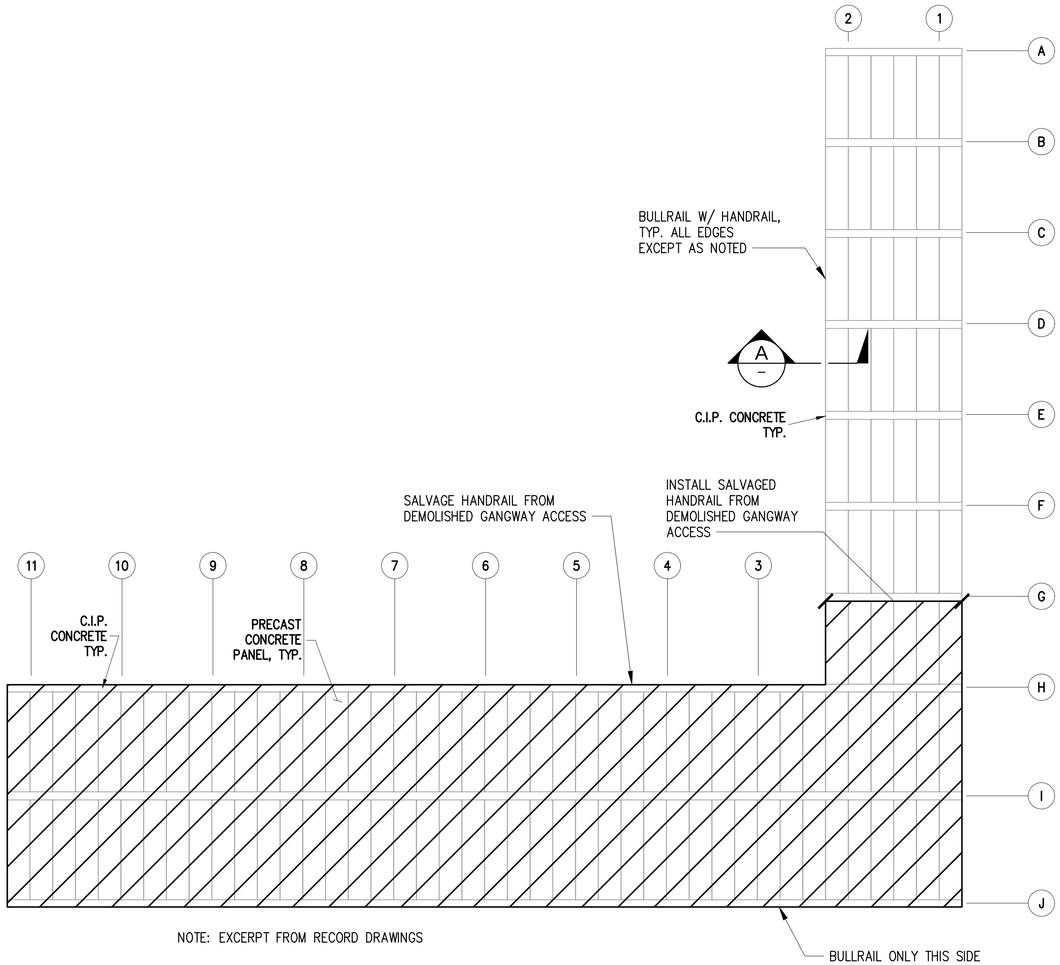
NOTES

1. FOR MECHANICAL ANCHOR REMOVAL, REMOVE ANCHOR AND FILL VOID WITH NON SHRINK GROUT.

LEGEND

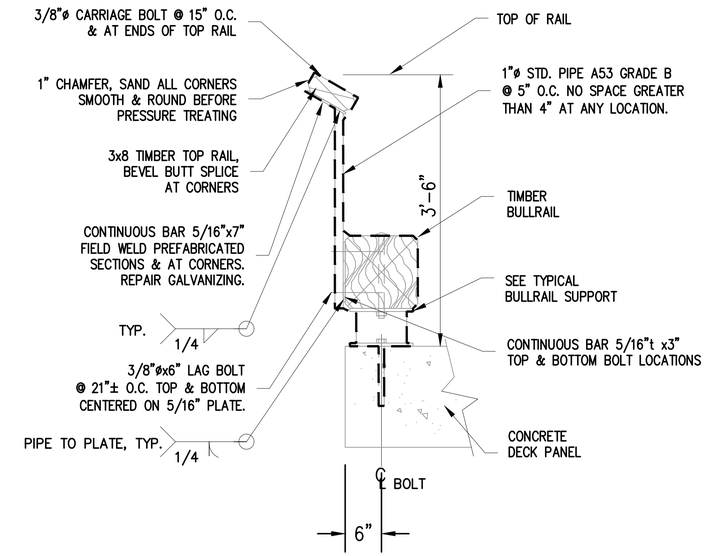
DEMOLITION STRUCTURES

STRUCTURES TO BE DEMOLISHED



NOTE: EXCERPT FROM RECORD DRAWINGS

4 / D1.00 **DEMO BULLRAIL FOR GANGWAY ACCESS PLAN**
SCALE: NTS



NOTE: EXCERPT FROM RECORD DRAWINGS

A / – **BULLRAIL HANDRAIL TYPICAL SECTION**
SCALE: NTS

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DEMOLITION DETAILS

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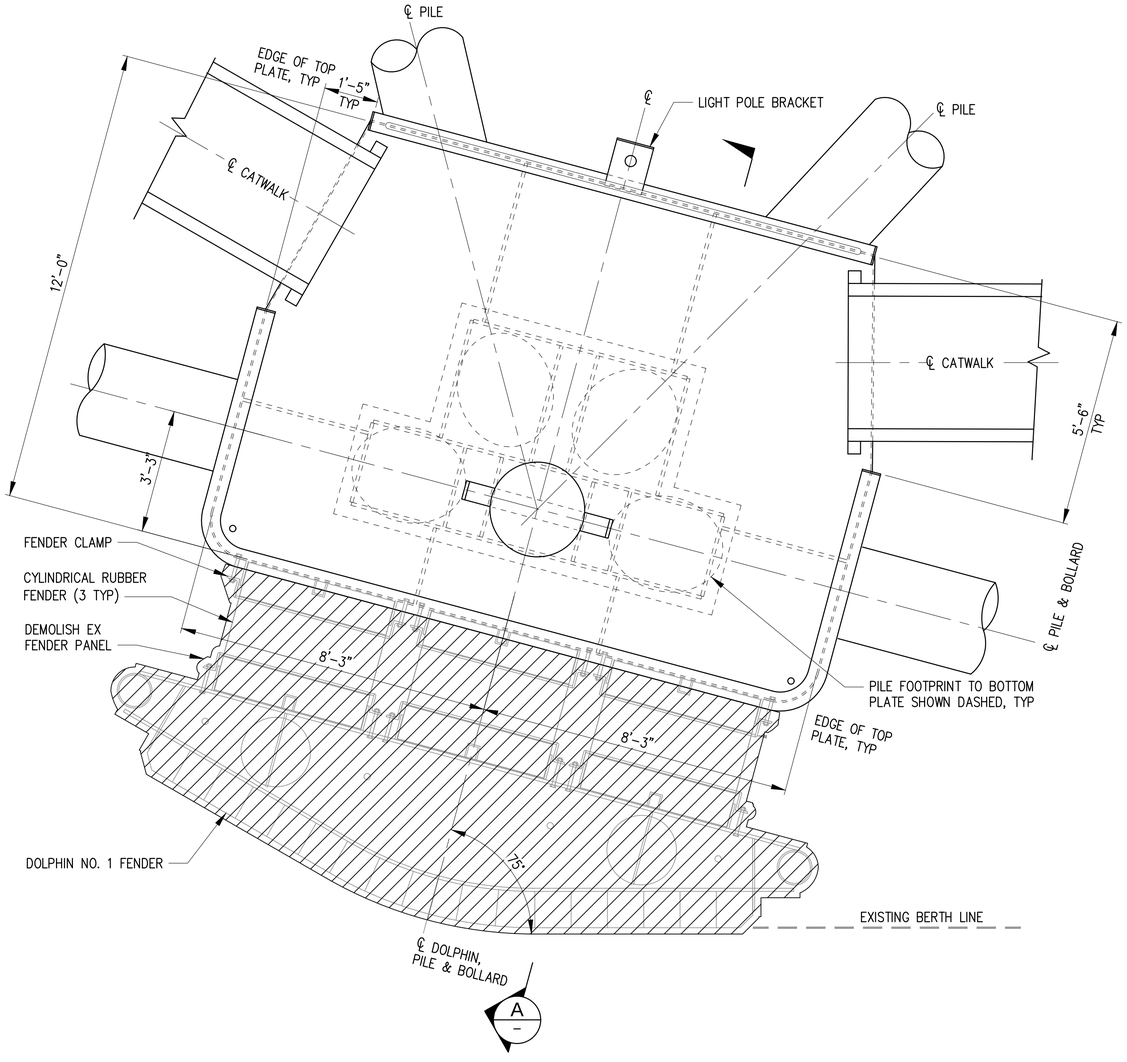
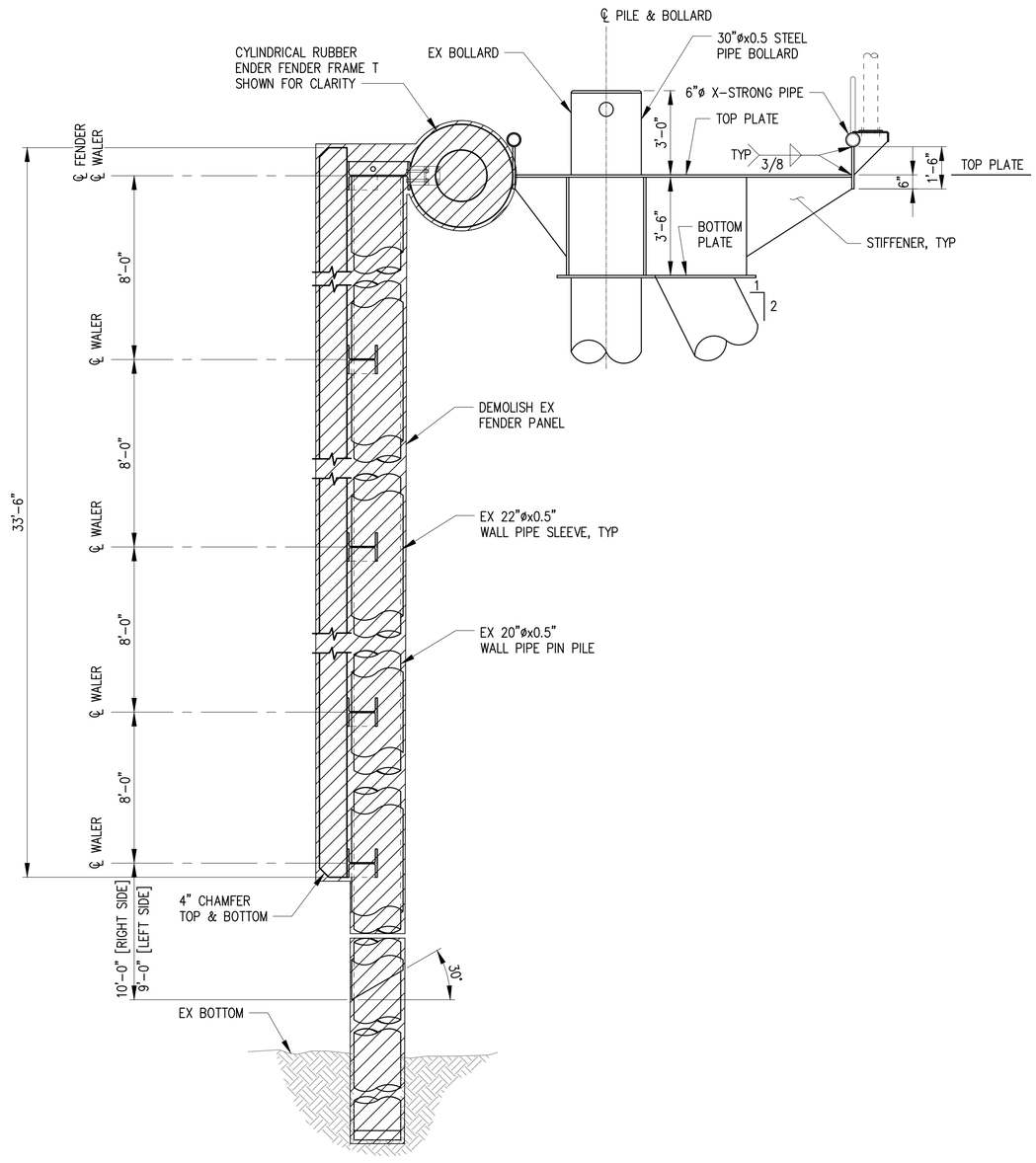
DESIGN: NFA	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**D2.35**
SHEET NO.	OF



1 D1.00 **DOLPHIN 4 DEMOLITION PLAN**
SCALE: NTS



A D1.00 **DOLPHIN 4 DEMOLITION SECTION**
SCALE: NTS

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DOLPHIN 4
DEMOLITION DETAILS

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**D2.36**
SHEET NO.	OF

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Plotted: Jan 27, 2023 – 10:30am dyu Layout: D2.36
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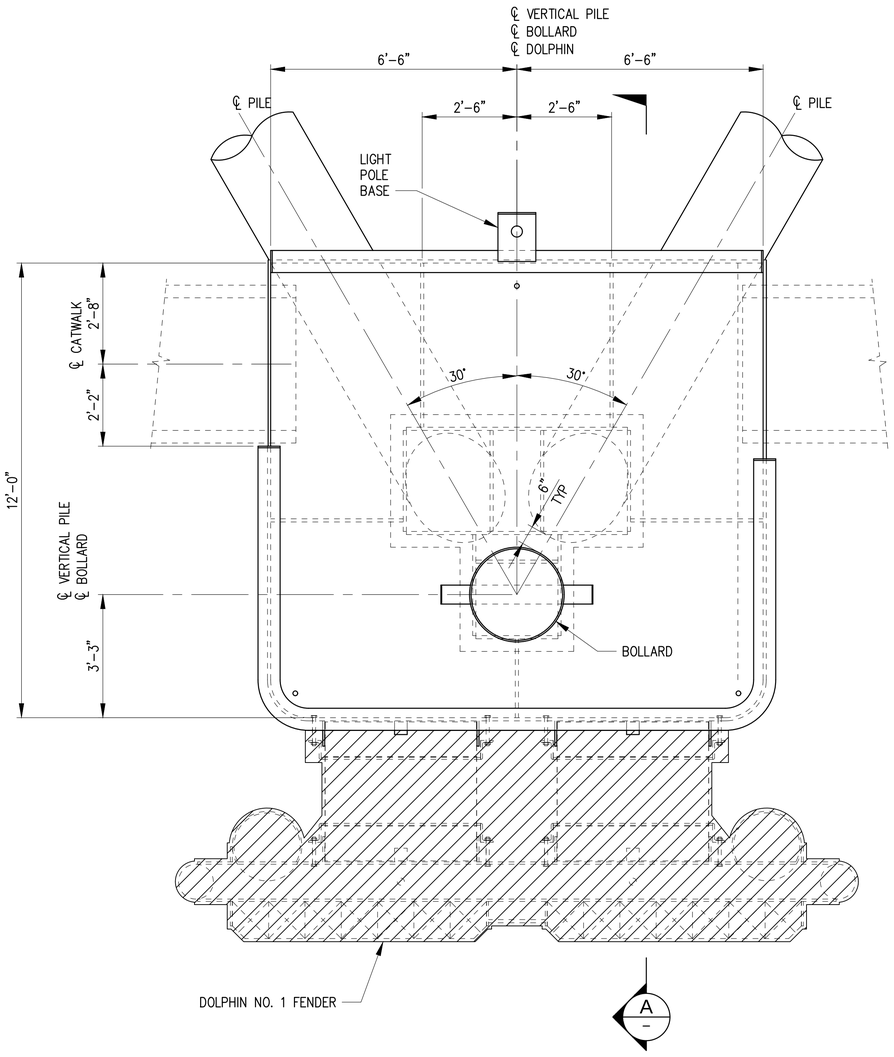
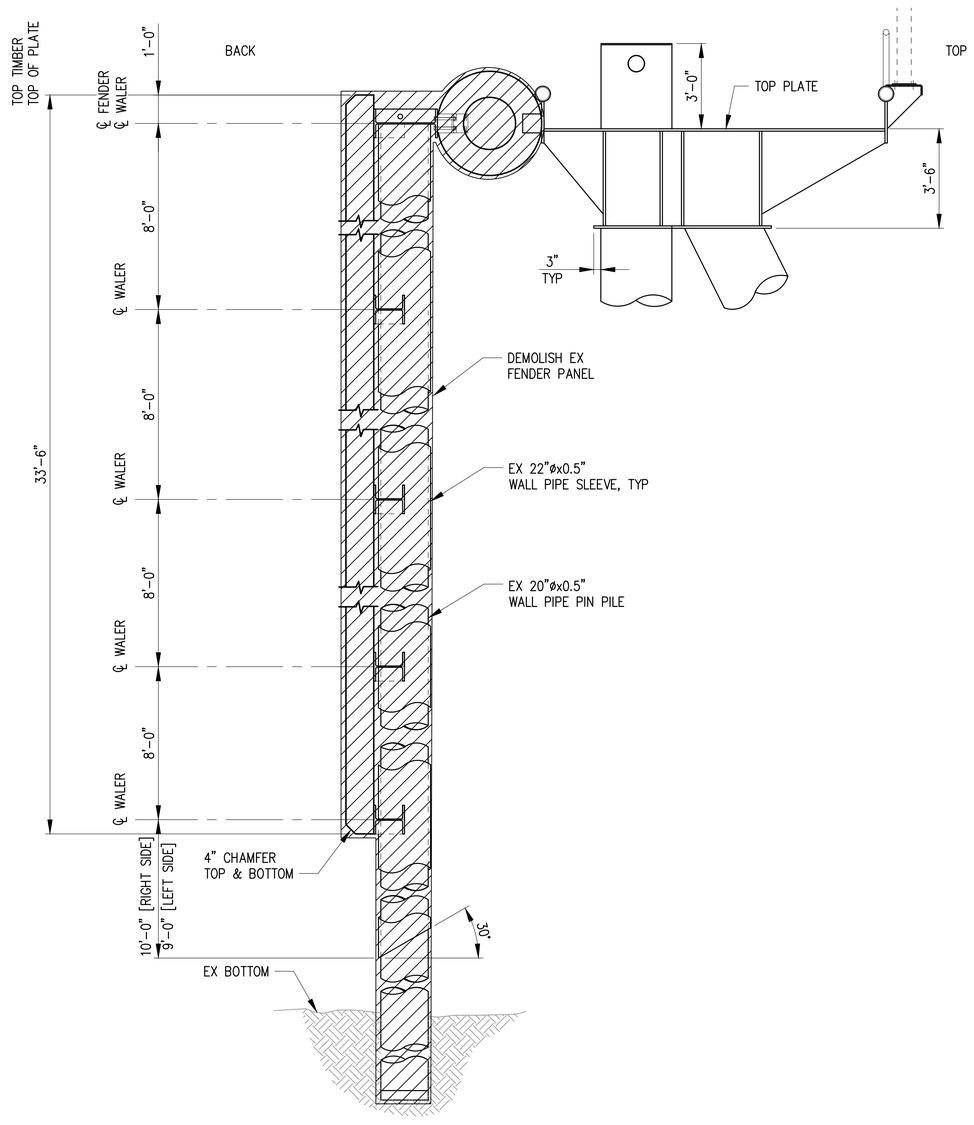


1 D1.00 **DOLPHIN 5 DEMOLITION PLAN**
SCALE: NTS



A D1.00 **DOLPHIN 5 DEMOLITION SECTION**
SCALE: NTS

LEGEND

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DOLPHIN 5
DEMOLITION DETAILS

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
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DRAWING NO.	**D2.37**
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GENERAL CONSTRUCTION NOTES

1. TOPOGRAPHIC AND UNDERGROUND UTILITY SURVEY USED FOR THESE DRAWINGS WAS PERFORMED BY RESPEC FROM OCTOBER 2020 TO JANUARY 2021.
2. LARGE BOULDERS, HARDPAN, STUMPS, LOGS, ORGANICS AND GROUND WATER MAY BE ENCOUNTERED AT VARIOUS DEPTHS DURING UTILITY TRENCHING OPERATIONS.
3. LOCATION AND GRADES OF WATER PIPING AND PIPE LENGTHS ARE SUBJECT TO MINOR REVISIONS AS APPROVED BY THE ENGINEER.
4. CONNECTIONS TO EXISTING SIDE STREETS AND DRIVEWAYS ARE APPROXIMATE AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
5. LOCATIONS OF EXISTING UNDERGROUND SEWER, WATER, TELEPHONE, CABLE TELEVISION, AND POWER UTILITIES SHOWN ON THESE PLANS WERE DERIVED FROM MUNICIPALITY OF SKAGWAY AS-BUILTS OR FIELD LOCATES. ACTUAL LOCATIONS MAY VARY FROM THOSE SHOWN. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING, PROTECTING, AND MAINTAINING THE UTILITIES THROUGHOUT THE CONSTRUCTION OF THIS PROJECT. ANY DAMAGE RESULTING TO THESE UNDERGROUND UTILITIES DURING CONSTRUCTION SHALL BE PAID FOR BY THE CONTRACTOR AND SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT. CALL MUNICIPALITY OF SKAGWAY PUBLIC WORKS DEPARTMENT AT 983-2449, PRIOR TO ANY EXCAVATION ACTIVITIES.
6. ALL ITEMS DESIGNATED TO BE REMOVED SHALL BE DISPOSED OF AT AN APPROVED DISPOSAL SITE, EXCEPT AS NOTED IN THE CONTRACT DOCUMENTS.
7. SAWCUT AS NECESSARY ALONG THE BACK OF EXISTING SIDEWALKS AND ACCESS ROADS THAT ARE TO REMAIN TO PROVIDE A NEAT MATCH LINE AT ALL DRIVEWAY AND SIDEWALK APPROACHES.
8. ONLY HORIZONTAL ELBOW FITTINGS (BENDS) ARE SHOWN ON THE PLANS. ADDITIONAL FITTINGS WILL BE REQUIRED FOR VERTICAL DEFLECTIONS NEAR CONNECTION TO EXISTING PIPES, AND AT OTHER LOCATIONS REQUIRING GRADE CHANGES TO AVOID CONFLICTS.
9. THE CONTRACTOR SHALL NOT STORE MATERIALS OR EQUIPMENT OR OPERATE EQUIPMENT WITH ITS TRACKS OR WHEELS PLACED ON PRIVATE PROPERTY WITHOUT WRITTEN APPROVAL FROM THE PROPERTY OWNER.
10. THE CONTRACTOR SHALL NOTIFY THE MUNICIPALITY OF SKAGWAY PUBLIC WORKS DEPARTMENT AT 983-2449 OF PROPOSED WATER SERVICE INTERRUPTION AT LEAST 48 HOURS PRIOR TO SHUT DOWN OR FLUSHING OF MAINLINE WATER PIPE.
11. CONTRACTOR SHALL REFERENCE ALL EXISTING SURVEY MONUMENTS PRIOR TO CONSTRUCTION THAT WILL BE DISTURBED DURING HIS WORK, AND REMONUMENT AFTER CONSTRUCTION OPERATIONS. ALL WORK SHALL BE DONE BY, OR UNDER THE DIRECTION OF, AN ALASKA REGISTERED LAND SURVEYOR. ALL EXISTING SURVEY MONUMENTS ARE NOT NECESSARILY SHOWN ON THE PLANS.
12. ALL NON-CONTAMINATED ITEMS DESIGNATED TO BE REMOVED SHALL BE DISPOSED OF AT THE MOS 15 ACRE DISPOSAL SITE. COORDINATE WITH MOS PUBLIC WORKS DIRECTOR ON SPECIFIC DISPOSAL PILE LOCATIONS.
13. THE CONTRACTOR SHALL INSTALL AND MAINTAIN EROSION CONTROL DEVICES DURING CONSTRUCTION, AS INDICATED ON THE CONTRACTOR'S APPROVED EROSION CONTROL PLAN. THE AREA OF THE UPLANDS DISTURBANCE IS LESS THAN 1 ACRE.
14. THE CONTRACTOR SHALL PERFORM WORK IN ACCORDANCE WITH MOS NOISE ORDINANCE REQUIREMENTS PER CHAPTER 9.03 NOISE CONTROL OF THE MOS MUNICIPAL CODE. THIS IS FROM 6:00AM TO 10:00PM DURING THE CONSTRUCTION SEASON.

ABBREVIATIONS

AC	ASBESTOS CEMENT
ACS	ALASKA COMMUNICATIONS SYSTEMS
ADOT&PF	ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
AML	ALASKA MARINE LINES
APPROX.	APPROXIMATE
CB	CATCH BASIN
CHB	CHORD BEARING
CHL	CHORD LENGTH
CI	CAST IRON
C/L	CENTERLINE
CIP	CAST IRON PIPE
CLR	CLEAR
CMP	CORRUGATED METAL PIPE
CONC	CONCRETE
CONT	CONTINUOUS
CP	CONTROL POINT
CPP	CORRUGATED POLYETHYLENE PIPE
CTE	CONNECT TO EXISTING
CU	COPPER
CY	CUBIC YARD
DI	DUCTILE IRON
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
DOT/PF	DEPARTMENT OF TRANSPORTATION/ PUBLIC FACILITIES
DWGS	DRAWINGS
E	EASTING
(E)	EXISTING
EG	EXISTING GRADE
EJ	EAST JORDAN
EL/ELEV	ELEVATION
EP	EDGE OF PAVEMENT
EQ	EQUAL
EW	EACH WAY
EXIST	EXISTING
EXP	EXPANSION
FG	FINISH GRADE
FH	FIRE HYDRANT
FL	FLOW LINE
FM	FORCE MAIN
FT	FEET
GALV	GALVANIZED
GCI	GENERAL COMMUNICATION INC.
GPM	GALLONS PER MINUTE
GPR	GROUND PENETRATING RADAR
GV	GATE VALVE
HDG	HOT DIP GALVANIZED
HDPE	HIGH DENSITY POLYETHYLENE
HP	HIGH POINT
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
L	LENGTH
LBS	POUNDS
LT	LEFT
MAX	MAXIMUM
MH	MANHOLE
MIN	MINIMUM
MJ	MECHANICAL JOINT
MJRJ	MECHANICAL JOINT RESTRAINED JOINT
MOS	MUNICIPALITY OF SKAGWAY
MSP	MARINE SERVICES PLATFORM
MTE	MATCH TO EXISTING
N	NORTHING
N/A	NOT APPLICABLE
NIC	NOT IN CONTRACT
NF	NEENAH FOUNDRY CO.
NFS	NON-FROST SUSCEPTIBLE
No.	NUMBER
NTS	NOT TO SCALE
OC	ON CENTER
OFCO	OLYMPIC FOUNDRY CO.
OSHA	OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION
PERF	PERFORATED
P/L	PROPERTY LINE
PP	POWER POLE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
RORO	ROLL ON ROLL OFF
RT	RIGHT
SS	SANITARY SEWER
SSCO	SANITARY SEWER CLEANOUT
SSMH	SANITARY SEWER MANHOLE
STA	STATION
STD	STANDARD
TBM	TEMPORARY BENCHMARK
TBC	TOP BACK OF CURB
TOB	TOP OF BANK
TOP	TOP OF PIPE
TYP	TYPICAL
U/G	UNDERGROUND
UGU	UNDERGROUND UTILITY
UON	UNLESS OTHERWISE NOTED
VERT	VERTICAL
W/	WITH

SECTION NUMBER

1
C100

SHEET NUMBER

REFERENCE BUBBLE EXPLANATION

N.T.S.

SYMBOLS

EXISTING	PROPOSED	
		PROPERTY LINE
		PROJECT BASELINE
		TEMPORARY BENCH MARK
32.0		GROUND CONTOUR
		TOP OF BANK
		FILL SLOPE LIMITS
		SANITARY SEWER MANHOLE
		SANITARY SEWER SERVICE W/ CLEANOUT
		STORM DRAIN PIPE
		STORM DRAIN CATCH BASIN
		ASPHALT SURFACE
		CONCRETE SURFACE
		CURB & GUTTER
		SAWCUT LIMITS
		EDGE OF GRAVEL
	GB	GRADE BREAK
		WATER LINE / WATER SERVICE
		WATER VALVE WITH VALVE BOX
		FIRE HYDRANT
		LIGHT POLE
		WATER HOT BOX ENCLOSURE
UGE	UGE	UNDERGROUND ELECTRIC LINE
OHE OHE		OVERHEAD UTILITY LINE
		POWER POLE
		GUY WIRE
UGU		UNDERGROUND UTILITY LINE
		ELECTRIC TRANSFORMER
P		PHONE PEDESTAL
T T		TELEPHONE LINE
F F		ABOVE GROUND FUEL LINES
UF UF		UNDERGROUND FUEL LINES
		SIGN
X X X		CHAIN LINK FENCE
		STRUCTURE
		PROTECTION BOLLARD
		PAVEMENT MARKING
		TRAIN TRACKS

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NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT

SKAGWAY, ALASKA

GENERAL NOTES, ABBREVIATIONS & SYMBOLS

DRAWN: MSM	PROJECT NO.:10849.22001
DESIGN: MSM	SCALE: AS SHOWN
CHECKED: JMP	DATE: 01/27/2023
DRAWING NO.	**C0.10**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

SKAGWAY RIVER

SKAGWAY AIRPORT

PETRO MARINE

STATE STREET

MAIN STREET

TEMSCO

ORE TERMINAL BUILDING

BEGIN BASELINE
STA "'S" 10+00
N:2785745.03
E:2376265.23

END BASELINE
STA "'S" 28+00
N:2787000.95
E:2377554.67

C1.04 C2.00 C3.00
C1.05 C2.01 C3.01
C1.06 C2.02 C3.02
C1.07 C2.03 C3.03
C1.08 C2.04 C3.04
C2.05 C3.05
C1.09 C2.06

CRUISE SHIP DOCK

MARINE SERVICE PLATFORM

RO/RO

SKAGWAY HARBOR

BROADWAY DOCK

BROADWAY STREET

70 35 0 70 140 210
SCALE IN FEET
CONTOUR INTERVAL = 1 FOOT

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ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

SHEET KEY MAP

DRAWN: MSM	PROJECT NO.:10849.22001
DESIGN: MSM	SCALE: AS SHOWN
CHECKED: JMP	DATE: 01/27/2023
DRAWING NO.	**C0.20**
SHEET NO.	OF

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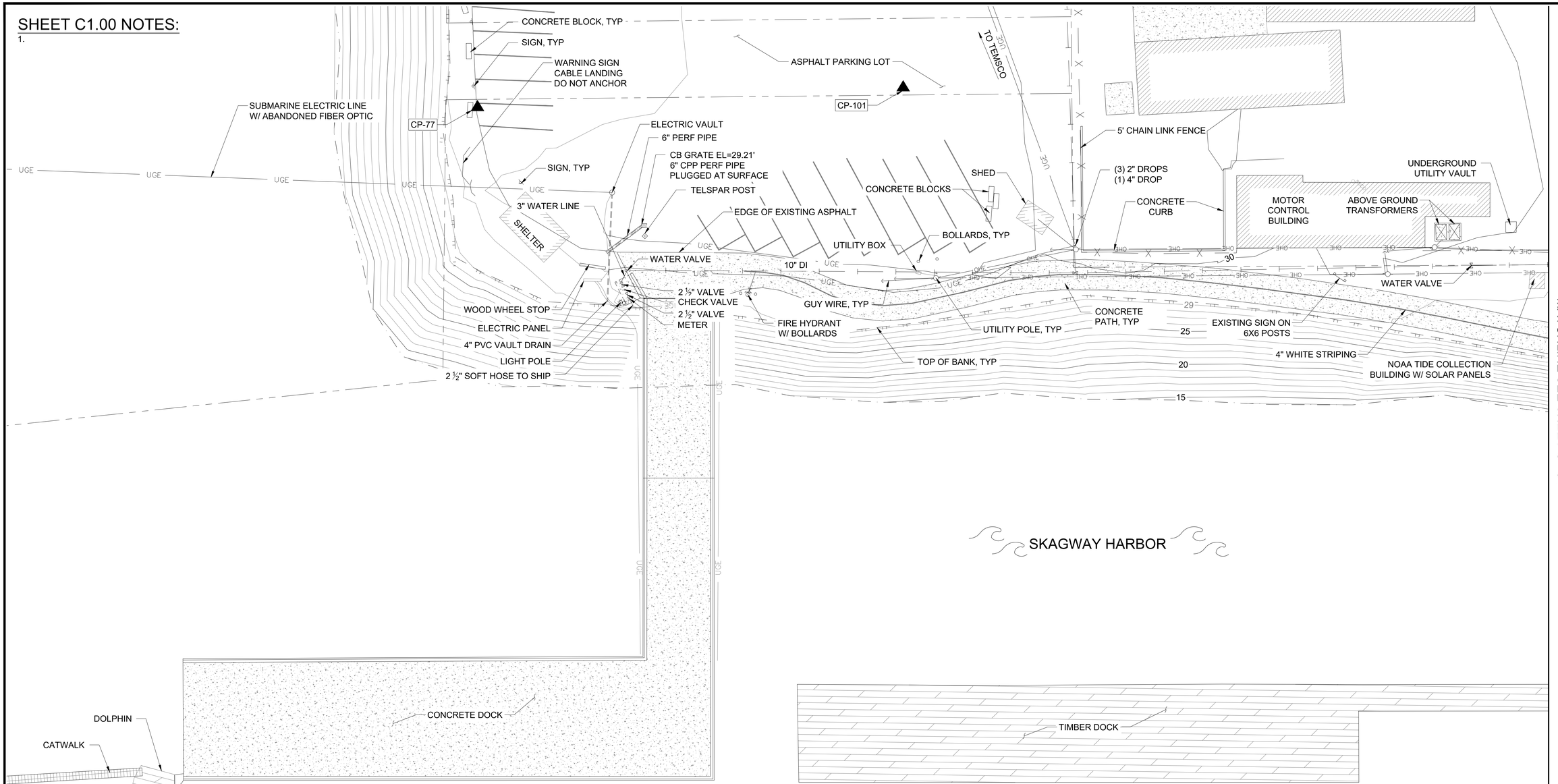
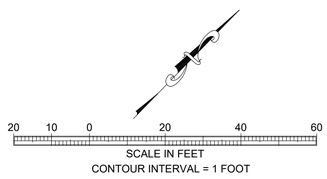
Plotted: Jan 26, 2023 - 8:47am Micki.Minsch Layout: Sheet Key Map
N:\Projects\10849.22001-KPFF_SGY_WF\C\C2001cnst10849.22001.dwg

SHEET C1.00 NOTES:

1.





SURVEY CONTROL POINT SUMMARY TABLE

POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
CP-77	2785834.36	2376291.13	28.72	SET MAG NAIL
CP-101	2785955.82	2376405.36	29.47	SET MAG NAIL

DIAL BEFORE YOU DIG!
U/G WATER, SEWER
983-2449
U/G POWER, TELEPHONE & T.V.
983-2202
UTILITIES SHOWN ON THIS DRAWING INDICATE EXISTENCE ONLY AND DO NOT SUBSTITUTE FOR FIELD LOCATES

MATCHLINE SEE SHEET C1.01

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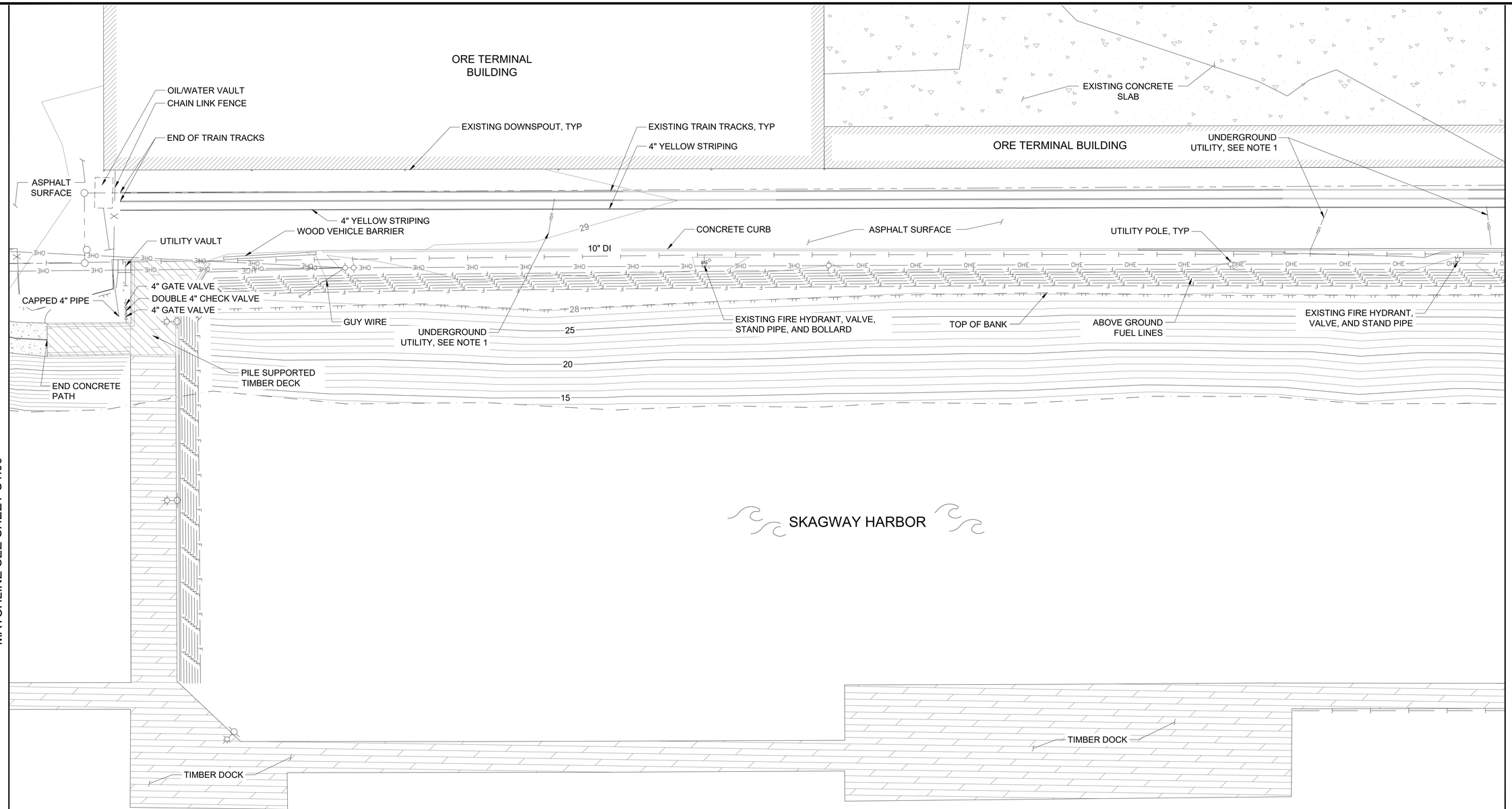
ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

EXISTING SITE CONDITIONS

DRAWN: MSM	PROJECT NO.:10849.22001
DESIGN: MSM	SCALE: AS SHOWN
CHECKED: JMP	DATE: 01/27/2023
DRAWING NO.	**C1.00**
SHEET NO.	OF

Plotted: Jan 26, 2023 – 8:47am Micki.Minsch Layout: C1.0
N:\Projects\10849.22001-KPFF_SGY_WF\C\C1001cnst10849.22001.dwg



MATCHLINE SEE SHEET C1.00

MATCHLINE SEE SHEET C1.02

SHEET C1.01 NOTES:

1. UNDERGROUND UTILITY LOCATED DURING GPR SURVEY. UTILITY SIZE, TYPE, AND DEPTH UNKNOWN.

DIAL BEFORE YOU DIG!
U/G WATER, SEWER
983-2449
U/G POWER, TELEPHONE & T.V.
983-2202
UTILITIES SHOWN ON THIS DRAWING INDICATE EXISTENCE ONLY AND DO NOT SUBSTITUTE FOR FIELD LOCATES

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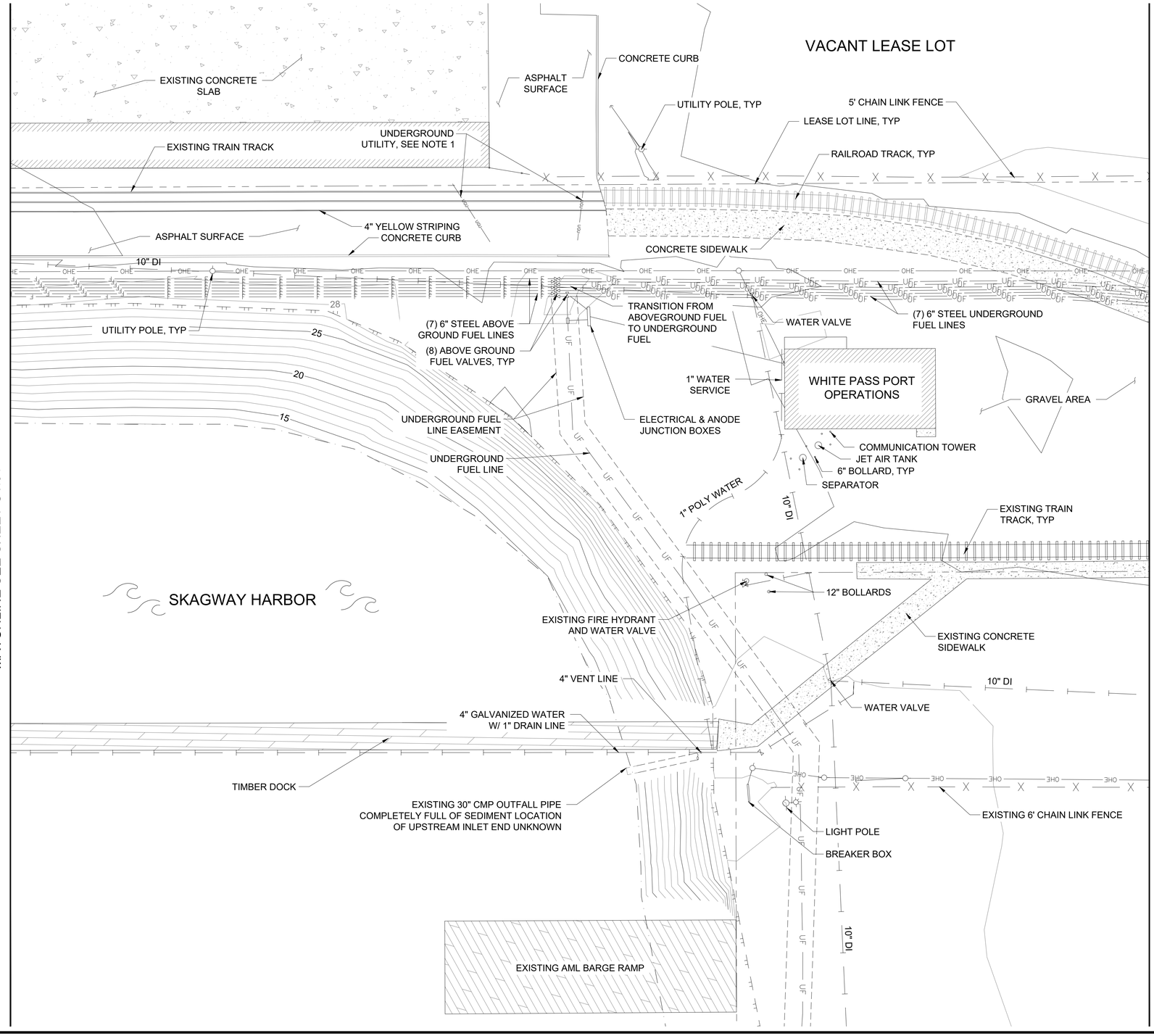
ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

EXISTING SITE CONDITIONS

DRAWN: MSM	PROJECT NO.: 0849.22001
DESIGN: MSM	SCALE: AS SHOWN
CHECKED: JMP	DATE: 01/27/2023
DRAWING NO.	**C1.01**
SHEET NO.	OF

Plotted: Jan 26, 2023 - 8:47am Micki.Minsch Layout: C1.1
N:\Projects\0849.22001-KPFF_SGY_WF\C\C1001const0849.22001.dwg



MATCHLINE SEE SHEET C1.01

MATCHLINE SEE SHEET C1.03

20 10 0 20 40 60
SCALE IN FEET

SHEET C1.02 NOTES:

1. UNDERGROUND UTILITY LOCATED DURING GPR SURVEY. UTILITY SIZE, TYPE, AND DEPTH UNKNOWN.

DIAL BEFORE YOU DIG!
U/G WATER, SEWER
983-2449
U/G POWER, TELEPHONE & T.V.
983-2202
UTILITIES SHOWN ON THIS DRAWING INDICATE EXISTENCE ONLY AND DO NOT SUBSTITUTE FOR FIELD LOCATES

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ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

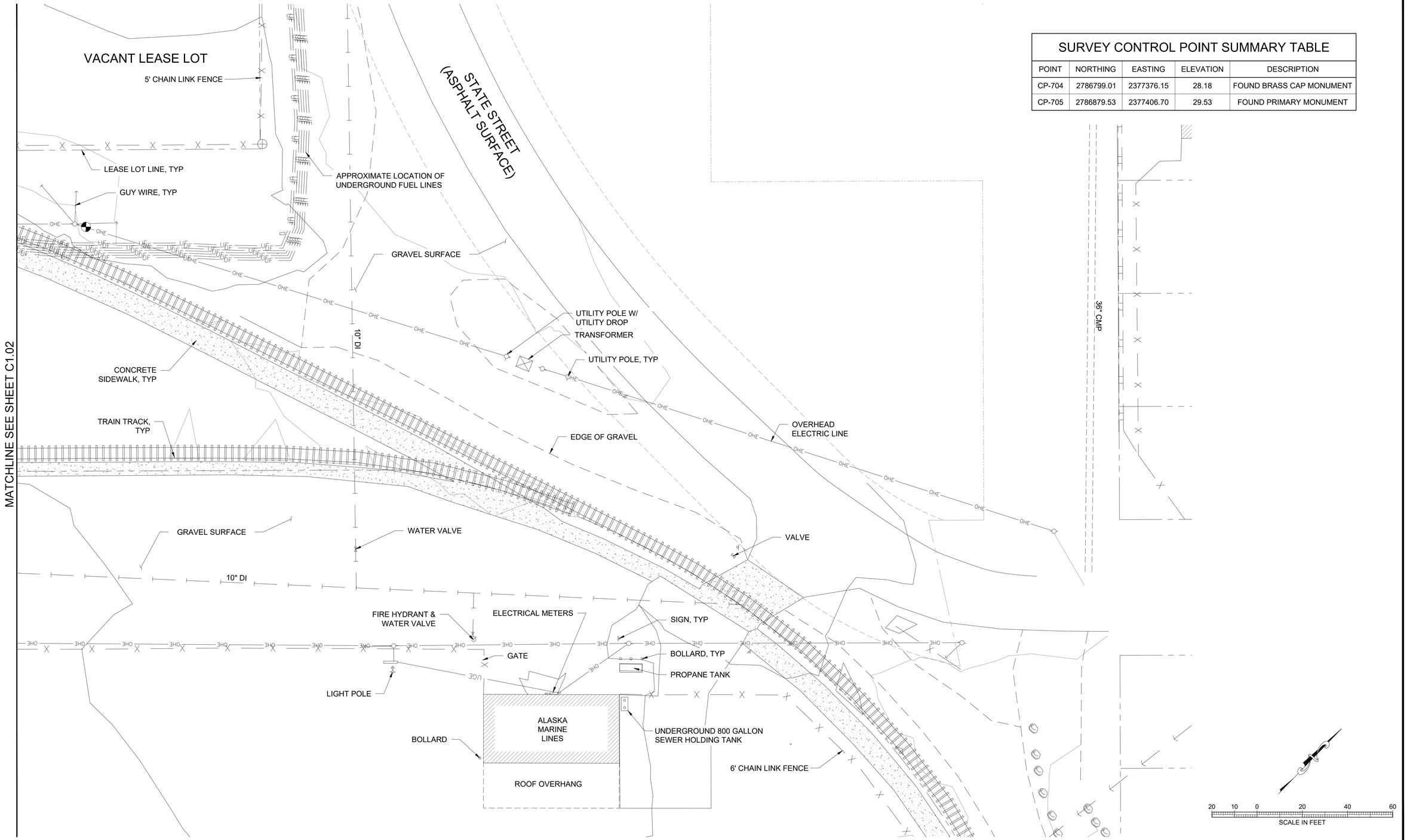
EXISTING SITE CONDITIONS

DRAWN: MSM	PROJECT NO.:10849.22001
DESIGN: MSM	SCALE: AS SHOWN
CHECKED: JMP	DATE: 01/27/2023
DRAWING NO.	**C1.02**
SHEET NO.	OF

Plotted: Jan 26, 2023 – 8:47am Micki.Minsch Layout: C1.2
N:\Projects\10849.22001-KPFF_SCY_WF\C\C1001cnst10849.22001.dwg

SURVEY CONTROL POINT SUMMARY TABLE

POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
CP-704	2786799.01	2377376.15	28.18	FOUND BRASS CAP MONUMENT
CP-705	2786879.53	2377406.70	29.53	FOUND PRIMARY MONUMENT



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ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

EXISTING SITE CONDITIONS

DRAWN:	MSM	PROJECT NO.:	10849.22001
DESIGN:	MSM	SCALE:	AS SHOWN
CHECKED:	JMP	DATE:	01/27/2023
DRAWING NO.			**C1.03**
SHEET NO.		OF	

Plotted: Jan 26, 2023 – 8:47am Mick.Minsch Layout: C1.3
N:\Projects\10849.22001-KPFF_Scy_WF\C\C1001cnst10849.22001.dwg

DEMOLITION LEGEND

1. ALL ITEMS DESIGNATED FOR REMOVAL SHALL BE DISPOSED OF AT AN APPROVED DISPOSAL SITE
2. PROTECT AND MAINTAIN ALL ITEMS NOT DESIGNATED FOR REMOVAL

- [A] REMOVE AND DISPOSE OF FIRE HYDRANT, HYDRANT VALVE AND BOLLARDS. RETURN SALVAGED FIRE HYDRANT TO MOS.
- [B] SEE ELECTRICAL SHEETS FOR DEMO INFORMATION
- [C] REMOVE AND DISPOSE OF WOOD BARRIER.
- [D] REMOVE AND SALVAGE 2 ½" VALVES, WATER METER, 3" WATER LINE, AND BACK FLOW PREVENTER AND RETURN TO MOS.
- [E] STRUCTURE TO BE REMOVED BY OTHERS.

CONCRETE BLOCK, TYP
SIGN, TYP
ASPHALT PARKING LOT
TO TEMSCO
SUBMARINE ELECTRIC LINE W/ ABANDONED FIBER OPTIC
WARNING SIGN CABLE LANDING DO NOT ANCHOR
UNDERGROUND ELECTRIC VAULT
6" PERF PIPE
CB GRATE EL=29.21'
6" CPP PERF PIPE PLUGGED AT SURFACE
TELSPAR POST
EDGE OF EXISTING ASPHALT
SHED
CONCRETE BLOCKS
"S" 10+00
"S" 10+00.00 P.I.
"S" 11+00
"S" 12+00
SHELTER
UTILITY BOX
GUY WIRES
BOLLARDS, TYP
6" AND 2" UTILITY
3" WATER LINE
WATER VALVE
WOOD WHEEL STOP
2 ½" VALVE
CHECK VALVE
2 ½" VALVE
METER
10" DI
UTILITY POLE, TYP
ELECTRIC PANEL
4" PVC VAULT DRAIN
LIGHT POLE
2 ½" SOFT HOSE TO SHIP
TOP OF BANK, TYP
SKAGWAY HARBOR

DIAL BEFORE YOU DIG!
U/G WATER, SEWER
983-2449
U/G POWER, TELEPHONE & T.V.
983-2202
UTILITIES SHOWN ON THIS DRAWING INDICATE EXISTENCE ONLY AND DO NOT SUBSTITUTE FOR FIELD LOCATES

10 5 0 10 20 30
SCALE IN FEET
CONTOUR INTERVAL = 1 FOOT

MATCHLINE STA "S" 13+00 (SEE SHEET C1.05)

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 26, 2023 – 8:47am Mick.Minsch Layout: C1.04
N:\Projects\10849.22001-KPFF_Scy_WF\C\C102cnst10849.22001.dwg

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ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

UPLANDS SITE DEMO PLAN

DRAWN: MSM	PROJECT NO.:10849.22001
DESIGN: MSM	SCALE: AS SHOWN
CHECKED: JMP	DATE: 01/27/2023
DRAWING NO.	**C1.04**
SHEET NO.	OF

MATCHLINE STA "S" 13+00 (SEE SHEET C1.04)

MATCHLINE STA "S" 16+04 (SEE SHEET C1.06)

ORE TERMINAL BUILDING

CONCRETE CURB

ASPHALT SURFACE

10" DI

TO TEMSCO

5' CHAIN LINK FENCE

(3) 2" DROPS
(1) 4" DROP

"S" 13+00

"S" 14+00

"S" 15+00

"S" 16+00

5' CHAIN LINK FENCE

CONCRETE CURB

PROTECT & MAINTAIN EXISTING SIGN ON 6X6 PT POSTS

ABOVE GROUND TRANSFORMERS

UNDERGROUND UTILITY VAULT

UTILITY POLE W/ (1) 4" DROP

WATER VALVE

GUY WIRES

NOAA TIDE COLLECTION BUILDING W/ SOLAR PANELS

OIL/WATER VAULT

4" DRAIN

DOWNSPOUT, TYPICAL

END TRAIN TRACKS

ASPHALT SURFACE

4" YELLOW STRIPING

SAWCUT

SAWCUT

10" DI

10" DI

UTILITY VAULT PROTECT & MAINTAIN

UTILITY POLE, TYP

GRAVEL SURFACE

ASPHALT SURFACE

4" GATE VALVE

4" WATER

TOP OF BANK

CAPPED 4" PIPE

DOUBLE 4" CHECK VALVE

4" GATE VALVE

WATER VALVE

TOP OF BANK, TYP

4" WHITE STRIPING

CONCRETE PATH

30

29

28

25

20

15

DEMOLITION LEGEND

1. ALL ITEMS DESIGNATED FOR REMOVAL SHALL BE DISPOSED OF AT AN APPROVED DISPOSAL SITE
2. PROTECT AND MAINTAIN ALL ITEMS NOT DESIGNATED FOR REMOVAL

- A SAWCUT, REMOVE AND DISPOSE OF ASPHALT SURFACE
- B REMOVE AND DISPOSE OF TIMBER VEHICLE BARRIER
- C SEE ELECTRICAL SHEETS FOR ELECTRICAL DEMO INFORMATION
- D SEE DOCK STRUCTURAL PLANS FOR DOCK DEMO INFORMATION
- E FIELD LOCATE EXISTING 4" TEE AND CAP TEE, REMOVE EXISTING 4" WATER PIPE, GATE VALVES AND CHECK VALVES
- F BEGIN ABANDONMENT OF EXISTING 10" DI WATER MAIN TO NORTH.
- G SEE MECHANICAL FOR ABOVE GROUND FUEL PIPE INFORMATION

ASPHALT TO BE REMOVED

10 5 0 10 20 30

SCALE IN FEET
CONTOUR INTERVAL = 1 FOOT

SKAGWAY HARBOR

DIAL BEFORE YOU DIG!
U/G WATER, SEWER
983-2449
U/G POWER, TELEPHONE & T.V.
983-2202
UTILITIES SHOWN ON THIS DRAWING INDICATE EXISTENCE ONLY AND DO NOT SUBSTITUTE FOR FIELD LOCATES

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 26, 2023 – 8:47am Micki.Minsch Layout: C1.05
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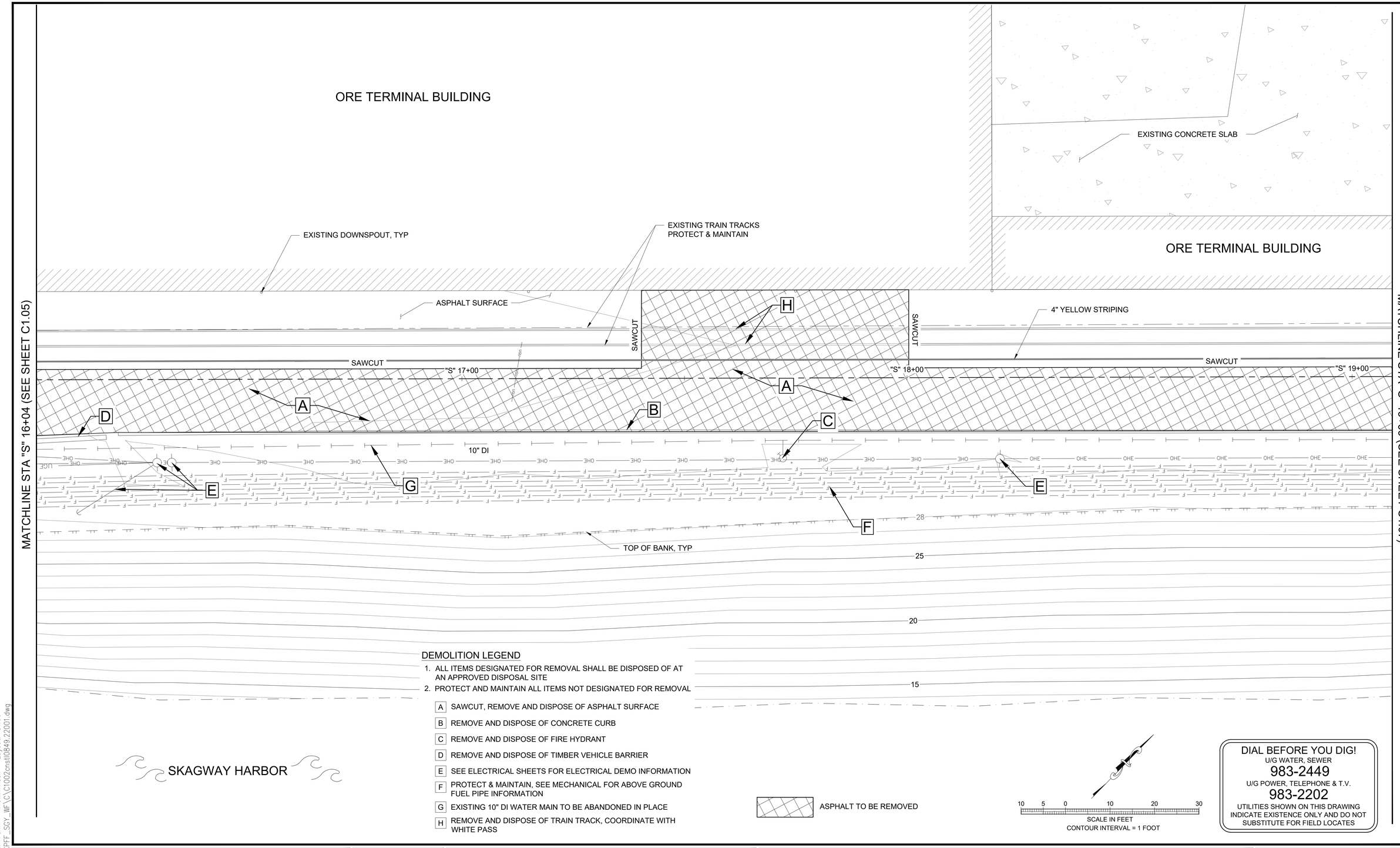
NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT

SKAGWAY, ALASKA

UPLANDS SITE DEMO PLAN

DRAWN: MSM	PROJECT NO.:10849.22001
DESIGN: MSM	SCALE: AS SHOWN
CHECKED: JMP	DATE: 01/27/2023
DRAWING NO.	C1.05
SHEET NO.	OF



DEMOLITION LEGEND

1. ALL ITEMS DESIGNATED FOR REMOVAL SHALL BE DISPOSED OF AT AN APPROVED DISPOSAL SITE
2. PROTECT AND MAINTAIN ALL ITEMS NOT DESIGNATED FOR REMOVAL

- A SAWCUT, REMOVE AND DISPOSE OF ASPHALT SURFACE
- B REMOVE AND DISPOSE OF CONCRETE CURB
- C REMOVE AND DISPOSE OF FIRE HYDRANT
- D REMOVE AND DISPOSE OF TIMBER VEHICLE BARRIER
- E SEE ELECTRICAL SHEETS FOR ELECTRICAL DEMO INFORMATION
- F PROTECT & MAINTAIN, SEE MECHANICAL FOR ABOVE GROUND FUEL PIPE INFORMATION
- G EXISTING 10" DI WATER MAIN TO BE ABANDONED IN PLACE
- H REMOVE AND DISPOSE OF TRAIN TRACK, COORDINATE WITH WHITE PASS

ASPHALT TO BE REMOVED

10 5 0 10 20 30
SCALE IN FEET
CONTOUR INTERVAL = 1 FOOT

DIAL BEFORE YOU DIG!
U/G WATER, SEWER
983-2449
U/G POWER, TELEPHONE & T.V.
983-2202
UTILITIES SHOWN ON THIS DRAWING INDICATE EXISTENCE ONLY AND DO NOT SUBSTITUTE FOR FIELD LOCATES

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NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

UPLANDS SITE DEMO PLAN

DRAWN:	MSM	PROJECT NO.:	10849.22001
DESIGN:	MSM	SCALE:	AS SHOWN
CHECKED:	JMP	DATE:	01/27/2023
DRAWING NO.			C1.06
SHEET NO.		OF	

Plotted: Jan 26, 2023 – 8:47am Mick.Minsch Layout: C1.06
N:\Projects\10849.22001-KPFF_Scy_WF\C\C1002cnst10849.22001.dwg

DIAL BEFORE YOU DIG!
U/G WATER, SEWER
983-2449
U/G POWER, TELEPHONE & T.V.
983-2202
UTILITIES SHOWN ON THIS DRAWING INDICATE EXISTENCE ONLY AND DO NOT SUBSTITUTE FOR FIELD LOCATES

MATCHLINE STA "S" 19+09 (SEE SHEET C1.06)

MATCHLINE STA "S" 22+14 (SEE SHEET C1.08)

EXISTING CONCRETE SLAB

ORE TERMINAL BUILDING

ASPHALT SURFACE

EXISTING TRAIN TRACK
PROTECT & MAINTAIN

4" YELLOW STRIPING

SAWCUT

SAWCUT

SAWCUT

SAWCUT

"S" 20+00

"S" 21+00

"S" 22+00

A

B

C

D

E

F

G

10" DI

TOP OF BANK, TYP

29

28

25

20

15

OHE

DEMOLITION LEGEND

1. ALL ITEMS DESIGNATED FOR REMOVAL SHALL BE DISPOSED OF AT AN APPROVED DISPOSAL SITE
2. PROTECT AND MAINTAIN ALL ITEMS NOT DESIGNATED FOR REMOVAL

- A SAWCUT, REMOVE AND DISPOSE OF ASPHALT SURFACE
- B REMOVE AND DISPOSE OF CONCRETE CURB
- C REMOVE AND DISPOSE OF FIRE HYDRANT
- D SEE ELECTRICAL SHEETS FOR ELECTRICAL DEMO INFORMATION
- E PROTECT AND MAINTAIN, SEE MECHANICAL FOR ABOVE GROUND FUEL PIPE INFORMATION
- F EXISTING 10" DI WATER MAIN TO BE ABANDONED IN PLACE
- G REMOVE AND DISPOSE OF TRAIN TRACK, COORDINATE WITH WHITE PASS

10 5 0 10 20 30
SCALE IN FEET
CONTOUR INTERVAL = 1 FOOT

ASPHALT TO BE REMOVED

SKAGWAY HARBOR

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ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

UPLANDS SITE DEMO PLAN

DRAWN: MSM	PROJECT NO.:10849.22001
DESIGN: MSM	SCALE: AS SHOWN
CHECKED: JMP	DATE: 01/27/2023
DRAWING NO.	C1.07
SHEET NO.	OF

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ASPHALT TO BE REMOVED

CONCRETE TO BE REMOVED

DEMOLITION LEGEND

1. ALL ITEMS DESIGNATED FOR REMOVAL SHALL BE DISPOSED OF AT AN APPROVED DISPOSAL SITE
2. PROTECT AND MAINTAIN ALL ITEMS NOT DESIGNATED FOR REMOVAL

- A SAWCUT, REMOVE AND DISPOSE OF ASPHALT SURFACE
- B REMOVE AND DISPOSE OF CONCRETE CURB
- C SAWCUT, REMOVE AND DISPOSE OF CONCRETE SIDEWALK
- D SEE ELECTRICAL SHEETS FOR DEMO ELECTRICAL INFORMATION
- E PROTECT AND MAINTAIN, SEE MECHANICAL FOR UNDERGROUND FUEL PIPE INFORMATION
- F REMOVE AND RESET EXISTING RAILROAD TRAIN TRACKS, TIMBER TIES, AND RAILROAD BALLAST ROCK. COORDINATE WITH WHITE PASS RAILROAD COMPANY.
- G REMOVE AND RELOCATE FUEL DETECTION ELECTRICAL & ANODE JUNCTION BOXES, SEE ELECTRICAL.

MATCHLINE STA "S" 22+14 (SEE SHEET C1.07)

CONCRETE CURB

ASPHALT SURFACE

GUY WIRE

UTILITY POLE, TYP

VACANT LEASE LOT

ORE TERMINAL BUILDING

12' CHAIN LINK GATE

LEASE LOT LINE, TYP

EXISTING TRAIN TRACKS, TYP

5' EXISTING CHAIN LINK FENCE

EXISTING TRAIN TRACKS
PROTECT & MAINTAIN

ASPHALT SURFACE

4" YELLOW STRIPING

"S" 23+00

"S" 24+00

"S" 25+00

A

B

C

F

F STA 24+99.9, 21.9' RT

(6) 6" STEEL UNDERGROUND
FUEL LINES

D

10" DI

TRANSITION FROM
ABOVEGROUND FUEL TO
UNDERGROUND FUEL

E

WATER VAVLE

(6) 6" STEEL ABOVE
GROUND FUEL LINES

PROTECT & MAINTAIN EXISTING
ABOVE GROUND FUEL VALVES, TYP

G

ROOF ORVERHANG

EXISTING CONCRETE
SIDEWALK

TOP OF BANK

WHITE PASS PORT
OPERATIONS

GRAVEL SURFACE

GRAVEL SURFACE

COMMUNICATION TOWER

JET AIR TANK

6" BOLLARD, TYP

SEPARATOR

1" POLY WATER

WATER MAIN

DIAL BEFORE YOU DIG!
U/G WATER, SEWER
983-2449
U/G POWER, TELEPHONE & T.V.
983-2202
UTILITIES SHOWN ON THIS DRAWING INDICATE EXISTENCE ONLY AND DO NOT SUBSTITUTE FOR FIELD LOCATES

10 5 0 10 20 30
SCALE IN FEET
CONTOUR INTERVAL = 1 FOOT

MATCHLINE SEE SHEET C1.09

60% DESIGN - NOT FOR CONSTRUCTION

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NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

UPLANDS SITE DEMO PLAN

DRAWN: MSM	PROJECT NO.:10849.22001
DESIGN: MSM	SCALE: AS SHOWN
CHECKED: JMP	DATE: 01/27/2023
DRAWING NO.	**C1.08**
SHEET NO.	OF

Plotted: Jan 26, 2023 - 8:47am Micki.Minsch Layout: C1.08
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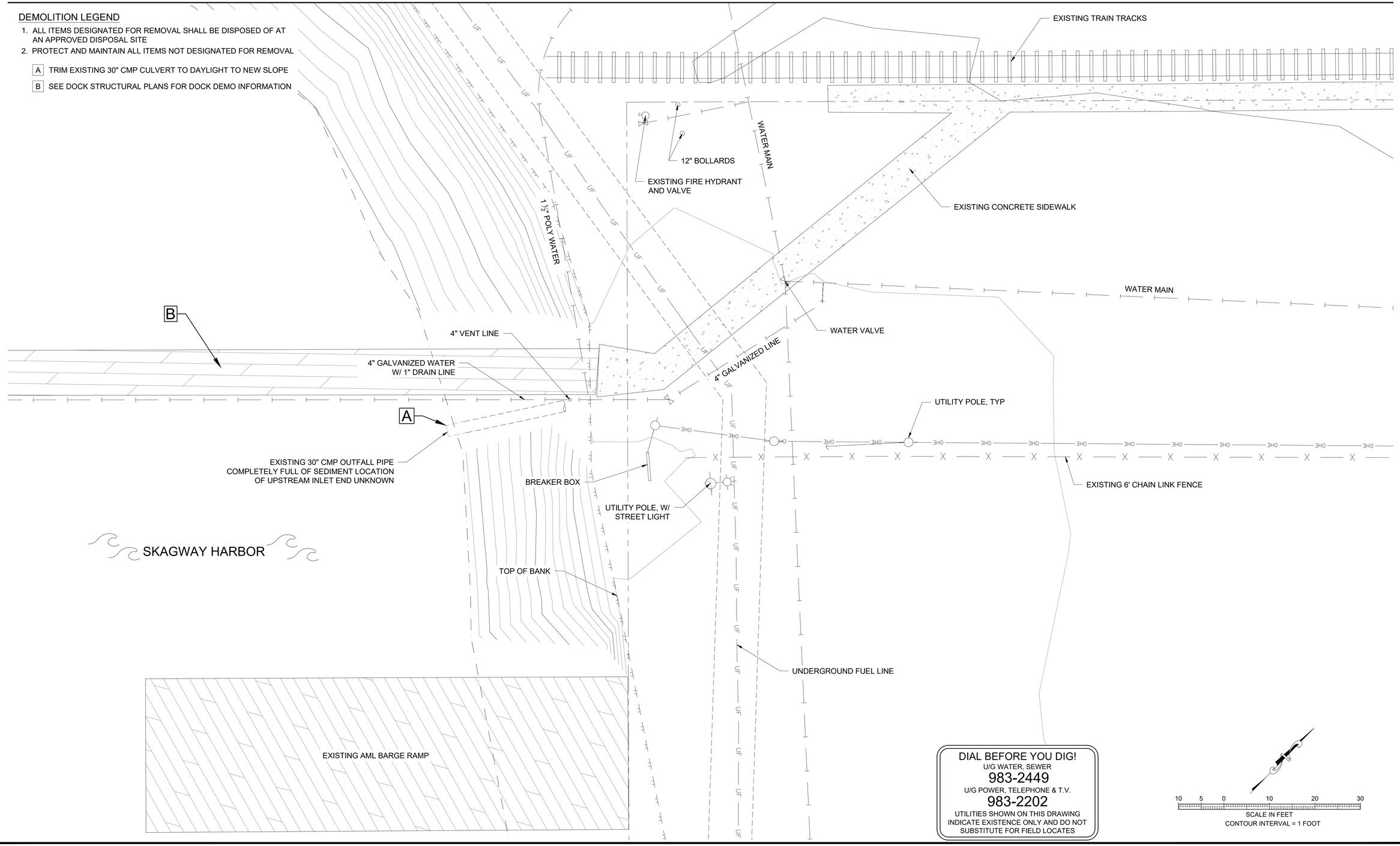
MATCHLINE SEE SHEET C1.08

DEMOLITION LEGEND

1. ALL ITEMS DESIGNATED FOR REMOVAL SHALL BE DISPOSED OF AT AN APPROVED DISPOSAL SITE
2. PROTECT AND MAINTAIN ALL ITEMS NOT DESIGNATED FOR REMOVAL

A TRIM EXISTING 30" CMP CULVERT TO DAYLIGHT TO NEW SLOPE

B SEE DOCK STRUCTURAL PLANS FOR DOCK DEMO INFORMATION



DIAL BEFORE YOU DIG!
U/G WATER, SEWER
983-2449
U/G POWER, TELEPHONE & T.V.
983-2202
UTILITIES SHOWN ON THIS DRAWING INDICATE EXISTENCE ONLY AND DO NOT SUBSTITUTE FOR FIELD LOCATES

10 5 0 10 20 30
SCALE IN FEET
CONTOUR INTERVAL = 1 FOOT

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ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

UPLANDS SITE DEMO PLAN

DRAWN: MSM	PROJECT NO.:10849.22001
DESIGN: MSM	SCALE: AS SHOWN
CHECKED: JMP	DATE: 01/27/2023
DRAWING NO.	**C1.09**
SHEET NO.	OF

Plotted: Jan 26, 2023 - 8:48am Mick:Minsch Layout: C1.09
N:\Projects\10849.22001-KPFF_SGY_WF\C\C1002cnstl0849.22001.dwg

SHEET C2.00 NOTES:

1. PROVIDE ALL ADAPTERS, ELBOWS AND OTHER FITTINGS NECESSARY TO CONNECT TO DISSIMILAR PIPE SIZES, MATERIALS AND DEPTHS.
2. SEE SHEET C3.00 FOR GRADING INFORMATION.

CONCRETE BLOCK, TYP

SIGN, TYP

ASPHALT PARKING LOT

TO TEMSCO

UGE

TOP OF BANK, TYP

SUBMARINE ELECTRIC LINE
W/ ABANDONED FIBER OPTIC

WARNING SIGN CABLE LANDING
DO NOT ANCHOR

UNDERGROUND
ELECTRIC VAULT

6" PERF PIPE

CB GRATE EL=29.21'
6" CPP PERF PIPE
PLUGGED AT SURFACE

TELSPAR POST

EDGE OF EXISTING ASPHALT

UNDERGROUND POWER,
SEE ELECTRICAL

CONCRETE BLOCKS

NEW 6" THICK CONCRETE
SURFACE, SEE NOTE 2

SIGN, TYP

BEGIN BASELINE
STA "'S" 10+00
N:2785745.03
E:2376265.23

"S" 11+00

"S" 12+00

SAWCUT & MTE

STA"S" 10+96.8, 17.3' RT
INSTALL STANDPIPE
SEE DETAIL 2 SHEET C5.06

STA"S" 11+00.9, 18.0' RT
CAP 10" DI

PROPOSED STEEL ACCESS
RAMP TO CRUISE SHIP DOCK
FLOAT, SEE MARINE SHEETS

10" DI

STA "S" 11+39.4, 17.9' RT
CONNECT TO EXISTING
WATER MAIN

STA "S" 10+55.9, 22.2' RT CONNECT TO
CRUISE SHIP WATER DRY STANDPIPE
SYSTEM, SEE DETAIL 2, SHEET C5.06

STA "S" 11+06.0, 24.6' RT
INSTALL FIRE HYDRANT

INSTALL HOT BOX ENCLOSURE,
SEE DETAIL SHEET C2.07

4" PVC VAULT DRAIN
PROTECT & MAINTAIN

ELECTRICAL
TRANSFORMERS,
SEE ELECTRICAL

LIGHT POLE

MTE

NEW 6" THICK CONCRETE
SURFACE, SEE NOTE 2

PROPOSED 4" FIRE PROTECTION LINE, SEE MARINE

PROPOSED 6" WATER SERVICE LINE, SEE MARINE

EXISTING CRUISE SHIP
DOCK TO REMAIN

SKAGWAY HARBOR

29 28 25 20 15

10 5 0 10 20 30
SCALE IN FEET
CONTOUR INTERVAL = 1 FOOT

DIAL BEFORE YOU DIG!
U/G WATER, SEWER
983-2449
U/G POWER, TELEPHONE & T.V.
983-2202
UTILITIES SHOWN ON THIS DRAWING
INDICATE EXISTENCE ONLY AND DO NOT
SUBSTITUTE FOR FIELD LOCATES

MATCHLINE STA "S" 13+00 (SEE SHEET C2.01)

60% DESIGN - NOT FOR CONSTRUCTION

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ORE PENINSULA REDEVELOPMENT

SKAGWAY, ALASKA

UPLANDS UTILITY PLAN VIEW

DRAWN:	MSM	PROJECT NO.:	10849.22001
DESIGN:	MSM	SCALE:	AS SHOWN
CHECKED:	JMP	DATE:	01/27/2023
DRAWING NO.			**C2.00**
SHEET NO.		OF	

Plotted: Jan 26, 2023 – 8:48am Mick:Minsch Layout: C2.0
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DIAL BEFORE YOU DIG!
U/G WATER, SEWER
983-2449
U/G POWER, TELEPHONE & T.V.
983-2202
UTILITIES SHOWN ON THIS DRAWING INDICATE EXISTENCE ONLY AND DO NOT SUBSTITUTE FOR FIELD LOCATES

ORE TERMINAL BUILDING

MATCHLINE STA "S" 13+00 (SEE SHEET C2.00)

MATCHLINE STA "S" 16+04 (SEE SHEET C2.02)

CONCRETE CURB
5' CHAIN LINK FENCE
ASPHALT SURFACE
TRANSFORMERS, SEE ELECTRICAL
(3) 2" DROPS
(1) 4" DROP
5' CHAIN LINK FENCE
CONCRETE CURB
PROTECT & MAINTAIN EXISTING SIGN ON 6X6 PT POSTS
UNDERGROUND POWER, SEE ELECTRICAL
ABOVE GROUND TRANSFORMERS
UNDERGROUND UTILITY VAULT
"S" 13+00
"S" 14+00
"S" 15+00
"S" 16+00
UGE
30
10" DI
WATER VALVE
GRAVEL SURFACE
TOP OF BANK, TYP
4" WHITE STRIPING
CONCRETE PATH
UNDERGROUND POWER, SEE ELECTRICAL
NOAA TIDE COLLECTION BUILDING W/ SOLAR PANELS
29
25
20
15
OIL/WATER VAULT
END TRAIN TRACKS
ASPHALT SURFACE
STA "S" 15+92.8, 4.7' RT INSTALL 90° BEND
4" YELLOW STRIPING
SAWCUT & MTE
NEW 6" THICK CONCRETE SURFACE SEE NOTE 2
SDCB
SD-1
UTILITY VAULT PROTECT & MAINTAIN
ASPHALT SURFACE
4" GATE VALVE
4" WATER
CURB AND GUTTER
P-1
CAPPED 4" PIPE
TOP OF BANK
DOUBLE 4" CHECK VALVE
4" GATE VALVE
STA "S" 15+87.4, 41.1' RT P-1 IE=25.50
BEGIN 12' WIDE ELEVATED SEAWALK W/ HANDRAILS
STA 15+92.79, 15.69'RT FIELD LOCATE EXISTING 10" DI WATER LINE, INSTALL 10X10X10 TEE AND 10" GATE VALVE
DOWNSPOUT, TYPICAL
SKAGWAY HARBOR

10 5 0 10 20 30
SCALE IN FEET
CONTOUR INTERVAL = 1 FOOT

SHEET C2.01 NOTES:

1. PROVIDE ALL ADAPTERS, ELBOWS AND OTHER FITTINGS NECESSARY TO CONNECT TO DISSIMILAR PIPE SIZES, MATERIALS AND DEPTHS. .
2. SEE SHEET C3.01 FOR GRADE INFORMATION.

SD-1 TYPE III CB	
STA "S" 15+87.4, 12.4' RT	
GRATE EL=	28.57
P-1 IE=	26.07
16" SUMP	

STORM DRAIN PIPE SUMMARY

PIPE	DIA.	LENGTH	TYPE	SLOPE
P-1	12"	28.7'	CPP	2.00%

NOTE: PIPE LENGTHS AND SLOPES ARE MEASURED AND CALCULATED FROM CENTER TO CENTER OF STRUCTURES, UNLESS OTHERWISE NOTED.

60% DESIGN - NOT FOR CONSTRUCTION

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ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

UPLANDS UTILITY PLAN VIEW

DRAWN:	MSM	PROJECT NO.:	10849.22001
DESIGN:	MSM	SCALE:	AS SHOWN
CHECKED:	JMP	DATE:	01/27/2023
DRAWING NO.			C2.01
SHEET NO.		OF	

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SD-2 TYPE III CB	
STA "S" 17+97.3, 12.5' RT	
GRATE EL=	29.02
P-2 IE=	26.52
16" SUMP	

STORM DRAIN PIPE SUMMARY				
PIPE	DIA.	LENGTH	TYPE	SLOPE
P-2	12"	25.7'	CPP	2.00%
NOTE: PIPE LENGTHS AND SLOPES ARE MEASURED AND CALCULATED FROM CENTER TO CENTER OF STRUCTURES, UNLESS OTHERWISE NOTED.				

MATCHLINE STA "S" 16+04 (SEE SHEET C2.01)

MATCHLINE STA "S" 19+09 (SEE SHEET C2.03)

ORE TERMINAL BUILDING

EXISTING TRAIN TRACKS PROTECT & MAINTAIN

EXISTING DOWNSPOUT, TYP

UNDERGROUND UTILITY, SEE NOTE 2

STA "S" 17+10.16, 4.79'RT INSTALL 10X6X10 TEE AND FIRE HYDRANT ASSEMBLY

STA 17+17.00, 4.79'RT CONNECT TO NEW 10' DI WATER MAIN, INSTALL 10X3X10 TEE W/ 3" GATE VALVE

UNDERGROUND POWER, SEE ELECTRICAL

CONNECT TO EXISTING 10' DI WATER MAIN, INSTALL 10X4X10 TEES WITH (2) 4" GATE VALVES

PROPOSED 10" DI WATER MAIN

ASPHALT SURFACE

NEW 10" THICK CONCRETE SURFACE SEE NOTE 4

SAWCUT & MTE

4" YELLOW STRIPING

NEW 6" THICK CONCRETE SURFACE SEE NOTE 3

10" DI

"S" 17+00

"S" 18+00

"S" 19+00

SDCB, TYP

SD-2

NEW 6" THICK CONCRETE SURFACE

CURB AND GUTTER SEE NOTE 3

EXISTING 10" DI WATER MAIN TO BE ABANDONED IN PLACE

EXISTING CONCRETE SLAB

ORE TERMINAL BUILDING

UNDERGROUND POWER, SEE ELECTRICAL

12' WIDE ELEVATED SEAWALK W/ HANDRAILS

ELECTRICAL TRANSFORMERS, SEE ELECTRICAL

STA "S" 17+10.1, 15.7'RT INSTALL FIRE HYDRANT

STA"S" 17+22.6, 15.74' RT INSTALL STANDPIPE SEE DETAIL 2, SHEET C5.06

INSTALL HOT BOX ENCLOSURE, SEE DETAIL SHEET C2.08

INSTALL 40' WIDE DOUBLE SWING GATE

NEW 10" THICK CONCRETE SURFACE

STA "S" 17+48.6, 47.9' RT CONNECT TO MSP WATER DRY STANDPIPE SYSTEM, SEE DETAIL 2, SHEET C5.06

STA "S" 17+97.3, 38.2' RT P-2 IE= 26.01

TOP OF EXISTING BANK

BENCH ON CANTILEVER PLATFORM, TYP, SEE ARCHITECTURAL

BENCH, SEE ARCHITECTURAL

PROPOSED 4" FIRE PROTECTION LINE, SEE MARINE

PROPOSED 3" WATER SERVICE LINE, SEE MARINE

MARINE SERVICES PLATFORM, SEE MARINE

SKAGWAY HARBOR

SHEET C2.02 NOTES:

1. PROVIDE ALL ADAPTERS, ELBOWS AND OTHER FITTINGS NECESSARY TO CONNECT TO DISSIMILAR PIPE SIZES, MATERIALS AND DEPTHS.
2. UNDERGROUND UTILITY LOCATED DURING GPR SURVEY. UTILITY SIZE, TYPE, AND DEPTH UNKNOWN.
3. SEE SHEET C3.02 FOR GRADE INFORMATION.
4. REPAINT EXISTING RAIL ROAD MARKINGS WHERE REMOVED BY CONTRACTOR FOR THE 10" THICK CONCRETE SECTION WORK. MATCH EXISTING COLOR AND WIDTH.

10 5 0 10 20 30

SCALE IN FEET
CONTOUR INTERVAL = 1 FOOT

DIAL BEFORE YOU DIG!
U/G WATER, SEWER
983-2449
U/G POWER, TELEPHONE & T.V.
983-2202
UTILITIES SHOWN ON THIS DRAWING INDICATE EXISTENCE ONLY AND DO NOT SUBSTITUTE FOR FIELD LOCATES

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ORE PENINSULA REDEVELOPMENT

SKAGWAY, ALASKA

UPLANDS UTILITY PLAN VIEW

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DRAWING NO.			C2.02
SHEET NO.		OF	

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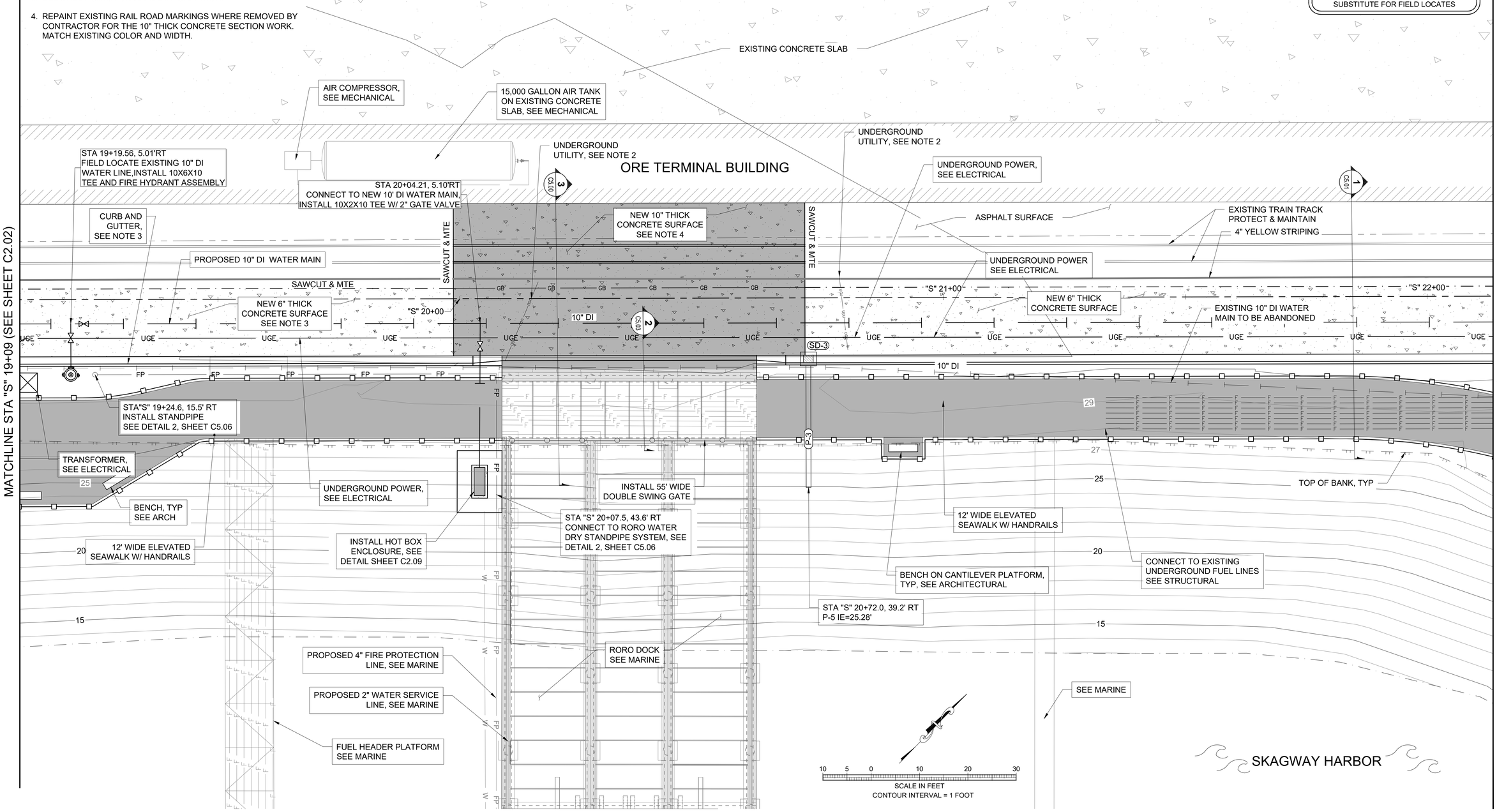
SHEET C2.03 NOTES:

1. PROVIDE ALL ADAPTERS, ELBOWS AND OTHER FITTINGS NECESSARY TO CONNECT TO DISSIMILAR PIPE SIZES, MATERIALS AND DEPTHS.
2. UNDERGROUND UTILITY LOCATED DURING GPR SURVEY. UTILITY SIZE, TYPE, AND DEPTH UNKNOWN.
3. SEE SHEET C3.03 FOR GRADE INFORMATION.
4. REPAINT EXISTING RAIL ROAD MARKINGS WHERE REMOVED BY CONTRACTOR FOR THE 10" THICK CONCRETE SECTION WORK. MATCH EXISTING COLOR AND WIDTH.

SD-3 TYPE III CB	
STA "S" 21+66.0, 12.7' RT	
GRATE EL=	29.75
P-3 IE=	25.81
16" SUMP	

STORM DRAIN PIPE SUMMARY				
PIPE	DIA.	LENGTH	TYPE	SLOPE
P-3	12"	26.6'	CPP	2.00%
NOTE: PIPE LENGTHS AND SLOPES ARE MEASURED AND CALCULATED FROM CENTER TO CENTER OF STRUCTURES, UNLESS OTHERWISE NOTED.				

DIAL BEFORE YOU DIG!
U/G WATER, SEWER
983-2449
U/G POWER, TELEPHONE & T.V.
983-2202
UTILITIES SHOWN ON THIS DRAWING INDICATE EXISTENCE ONLY AND DO NOT SUBSTITUTE FOR FIELD LOCATES



60% DESIGN - NOT FOR CONSTRUCTION

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ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

UPLANDS UTILITY PLAN VIEW

DRAWN:	MSM	PROJECT NO.:	10849.22001
DESIGN:	MSM	SCALE:	AS SHOWN
CHECKED:	JMP	DATE:	01/27/2023
DRAWING NO.			C2.03
SHEET NO.		OF	

Plotted: Jan 26, 2023 - 8:48am Micki.Minsch Layout: C2.3
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SHEET C2.04 NOTES:

1. PROVIDE ALL ADAPTERS, ELBOWS AND OTHER FITTINGS NECESSARY TO CONNECT TO DISSIMILAR PIPE SIZES, MATERIALS AND DEPTHS.
2. UNDERGROUND UTILITY LOCATED DURING GPR SURVEY. UTILITY SIZE, TYPE, AND DEPTH UNKNOWN.
3. SEE SHEET C3.04 FOR GRADE INFORMATION.

DIAL BEFORE YOU DIG!
U/G WATER, SEWER
983-2449
U/G POWER, TELEPHONE & T.V.
983-2202
UTILITIES SHOWN ON THIS DRAWING INDICATE EXISTENCE ONLY AND DO NOT SUBSTITUTE FOR FIELD LOCATES

MATCHLINE STA "S" 22+14 (SEE SHEET C2.03)

MATCHLINE STA "S" 25+18 (SEE SHEET C2.05)

ORE TERMINAL BUILDING

VACANT LEASE LOT

CONCRETE CURB
ASPHALT SURFACE
GUY WIRE
UTILITY POLE, TYP
STA 23+01.27, 8.99'LT
BEGIN RAILROAD TRACK
REMOVAL AND REPLACEMENT
12' CHAIN LINK GATE
PROPOSED 10" DI
WATER MAIN
LEASE LOT LINE, TYP
STA 23+55.95, 5.48'RT
INSTALL 10X10X10 TEE WITH (2)
GATE VALVES. INSTALL 22 LF
OF 10" DI PIPE TO CONNECT
EXISTING VALVE
UNDERGROUND POWER,
SEE ELECTRICAL
5' EXISTING CHAIN LINK FENCE
EXISTING TRAIN TRACKS
PROTECT & MAINTAIN
ASPHALT SURFACE
GRAVEL SURFACE
STA 24+99.89, 21.85'RT
END RAILROAD TRACK
REMOVAL AND REPLACEMENT
4" YELLOW STRIPING
SAWCUT & MTE
"S" 23+00
NEW 6" THICK
CONCRETE SURFACE
SEE NOTE 3
"S" 24+00
"S" 25+00
10" DI
6'-6"
CURB AND GUTTER
END CURB AND GUTTER
SEE NOTE 3
GRAVEL LIMITS
UNDERGROUND
UTILITY, SEE NOTE 2
WATER VAVLE
UNDERGROUND POWER
SEE ELECTRICAL
SAWCUT & MTE
10" DI
TRANSITION FROM
ABOVEGROUND FUEL TO
UNDERGROUND FUEL
EXISTING CONCRETE SIDEWALK,
PROTECT & MAINTAIN
(7) 6" STEEL ABOVE
GROUND FUEL LINES
(7) 6" STEEL UNDERGROUND
FUEL LINES
EXISTING TRAIN TRACKS
PROTECT & MAINTAIN
ABOVE GROUND
FUEL VALVES, TYP
12' WIDE ELEVATED
SEAWALK W/ HANDRAILS
BENCH ON CANTILEVER
PLATFORM, TYP, SEE
ARCHITECTURAL
ROOF ORVERHANG
WHITE PASS PORT
OPERATIONS
GRAVEL AREA
ELECTRICAL & ANODE
JUNCTION BOXES TO BE
RELOCATED, SEE ELECTRICAL
COMMUNICATION TOWER
JET ALL TANK
6" BOLLARD, TYP
SEPARATOR
UNDERGROUND FUEL
LINE EASEMENT
TOP OF BANK
1" POLY WATER
WATER MAIN

SCALE IN FEET
CONTOUR INTERVAL = 1 FOOT

MATCHLINE SEE SHEET C2.06

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 26, 2023 – 8:48am Micki.Minsch Layout: c2.04
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ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

UPLANDS UTILITY PLAN VIEW

DRAWN: MSM	PROJECT NO.:10849.22001
DESIGN: MSM	SCALE: AS SHOWN
CHECKED: JMP	DATE: 01/27/2023
DRAWING NO.	**C2.04**
SHEET NO.	OF

SHEET C2.05 NOTES:

1. PROVIDE ALL ADAPTERS, ELBOWS AND OTHER FITTINGS NECESSARY TO CONNECT TO DISSIMILAR PIPE SIZES, MATERIALS AND DEPTHS.

DIAL BEFORE YOU DIG!
U/G WATER, SEWER
983-2449
U/G POWER, TELEPHONE & T.V.
983-2202
UTILITIES SHOWN ON THIS DRAWING INDICATE EXISTENCE ONLY AND DO NOT SUBSTITUTE FOR FIELD LOCATES

MATCHLINE STA "S" 25+18 (SEE SHEET C2.04)

VACANT LEASE LOT

EXISTING CHAIN LINK FENCE

LEASE LOT LINE, TYP

GRAVEL SURFACE

C5.07 4

GRAVEL LIMITS

"S" 26+00

"S" 27+00

END BASELINE
STA "'S" 28+00
N:2787000.95
E:2377554.67

6'-6"

10" DI

UGE

STA 26+48.10, 5.76'RT
FIELD LOCATE EXISTING 10" DI WATER LINE,
INSTALL 10X10X10 TEE AND 10" GATE VALVE

PROPOSED 10" DI WATER MAIN

REMOVE & RESET SURVEY MONUMENT

UNDERGROUND FUEL LINES

JUNCTION BOX

ELECTRICAL VAULT SEE ELECTRICAL

10" DI

STATE STREET (ASPHALT SURFACE)

GRAVEL SURFACE

EDGE OF PAVEMENT

UNDERGROUND POWER LINE, SEE ELECTRICAL

UTILITY POLE TYP

UTILITY POLE W/ UTILITY DROP

TRANSFORMER

OHE

EXISTING TRAIN TRACKS, TYP

GRAVEL SURFACE

MTE

12' WIDE ELEVATED SEAWALK W/ HANDRAILS, SEE TYPICAL SECTION ON SHEET C3.05

EXISTING CONCRETE SIDEWALK PROTECT & MAINTAIN

30

31

10 5 0 10 20 30
SCALE IN FEET
CONTOUR INTERVAL = 1 FOOT

60% DESIGN - NOT FOR CONSTRUCTION

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ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

UPLANDS UTILITY PLAN VIEW

DRAWN: MSM	PROJECT NO.:10849.22001
DESIGN: MSM	SCALE: AS SHOWN
CHECKED: JMP	DATE: 01/27/2023
DRAWING NO.	**C2.05**
SHEET NO.	OF

MATCHLINE SEE SHEET C2.04

SHEET C2.06 NOTES:

1. PROVIDE ALL ADAPTERS, ELBOWS AND OTHER FITTINGS NECESSARY TO CONNECT TO DISSIMILAR PIPE SIZES, MATERIALS AND DEPTHS.

EXISTING TRAIN TRACKS

12" BOLLARDS

WATER MAIN

EXISTING FIRE HYDRANT AND VALVE

EXISTING CONCRETE SIDEWALK

1½" POLY WATER

DREDGING LIMITS SEE DREDGING PLAN

WATER MAIN

WATER VALVE

4" VENT LINE

4" GALVANIZED WATER W/ 1" DRAIN LINE

4" GALVANIZED LINE

UTILITY POLE, TYP

CUT EXISTING 30" CMP CULVERT TO DAYLIGHT TO NEW SLOPE

BREAKER BOX

EXISTING 6' CHAIN LINK FENCE

UTILITY POLE, W/ STREET LIGHT

UNDERGROUND FUEL LINE EASEMENT

SKAGWAY HARBOR

TOP OF BANK

UNDERGROUND FUEL LINE

EXISTING AML BARGE RAMP

DIAL BEFORE YOU DIG!
U/G WATER, SEWER
983-2449
U/G POWER, TELEPHONE & T.V.
983-2202
UTILITIES SHOWN ON THIS DRAWING INDICATE EXISTENCE ONLY AND DO NOT SUBSTITUTE FOR FIELD LOCATES

10 5 0 10 20 30
SCALE IN FEET
CONTOUR INTERVAL = 1 FOOT

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 26, 2023 - 8:49am Micki.Minsch Layout: C2.6
N:\Projects\10849.22001-KPFF_SGY_WF\C\C2001cnstl0849.22001.dwg

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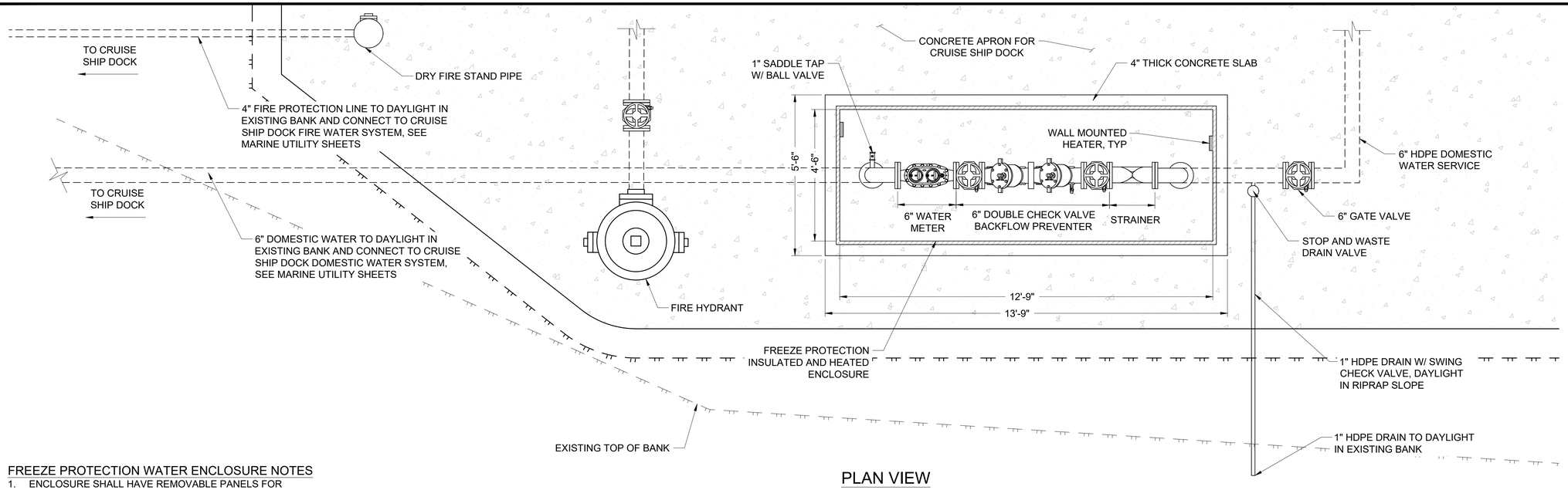
Fax: 907.586.3771
AECC163270

NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

UPLANDS UTILITY PLAN VIEW

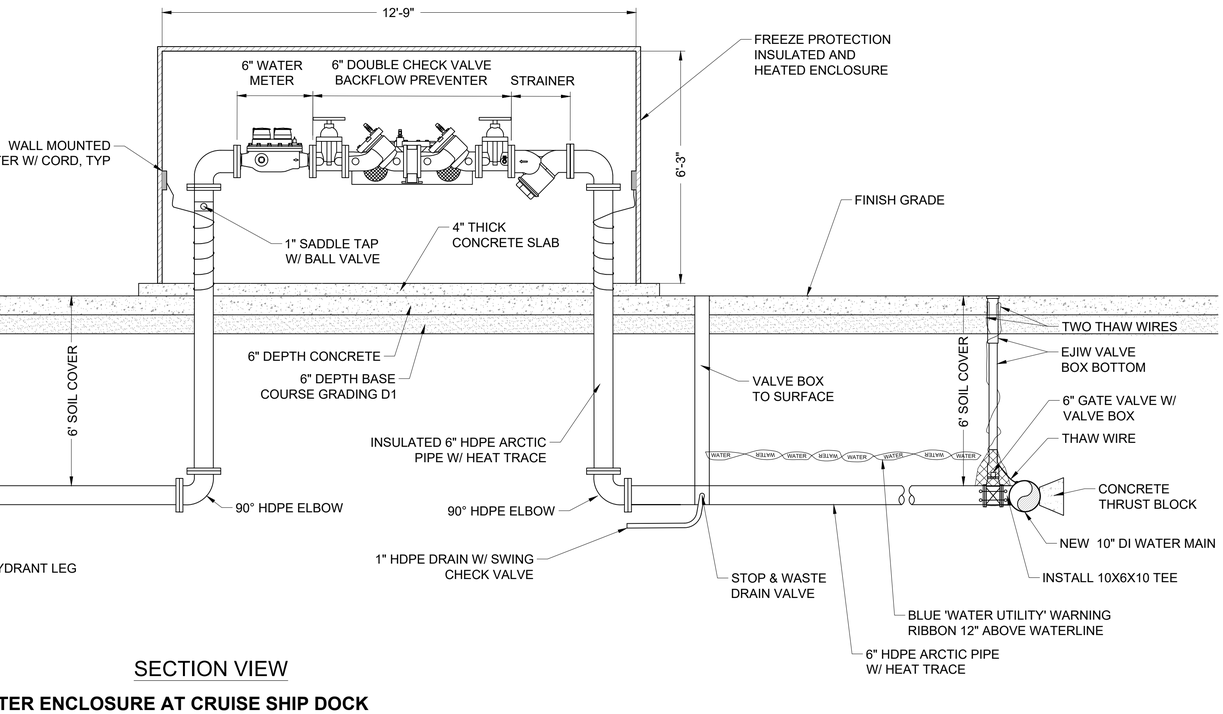
DRAWN: MSM	PROJECT NO.: 10849.22001
DESIGN: MSM	SCALE: AS SHOWN
CHECKED: JMP	DATE: 01/27/2023
DRAWING NO.	C2.06
SHEET NO.	OF



PLAN VIEW

FREEZE PROTECTION WATER ENCLOSURE NOTES

1. ENCLOSURE SHALL HAVE REMOVABLE PANELS FOR MAINTENANCE ACCESS.
2. ALL PIPE FITTINGS INSIDE ENCLOSURE SHALL BE FLANGED WITH MJ CONNECTIONS.
3. HOT BOX TO BE HUBBELL UTILITY SOLUTIONS BRAND, DUAL ALUMINUM MODEL HB10FE-DT (54"WX153"LX75"H) W/ TWO(2) 1900W HEATERS MOUNTED TO THE SIDES OF THE BOX THAT DO NOT HAVE DOORS.



SECTION VIEW

1 C2.07 **FREEZE PROTECTION WATER ENCLOSURE AT CRUISE SHIP DOCK**

SCALE: NTS

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NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT

SKAGWAY, ALASKA

CRUISE SHIP HOT BOX PLAN & PROFILE

DRAWN:	MSM	PROJECT NO.:	10849.22001
DESIGN:	MSM	SCALE:	AS SHOWN
CHECKED:	JMP	DATE:	01/27/2023
DRAWING NO.		**C2.07**	
SHEET NO.		OF	

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 26, 2023 - 8:49am Mick.Minsch Layout: C2.06
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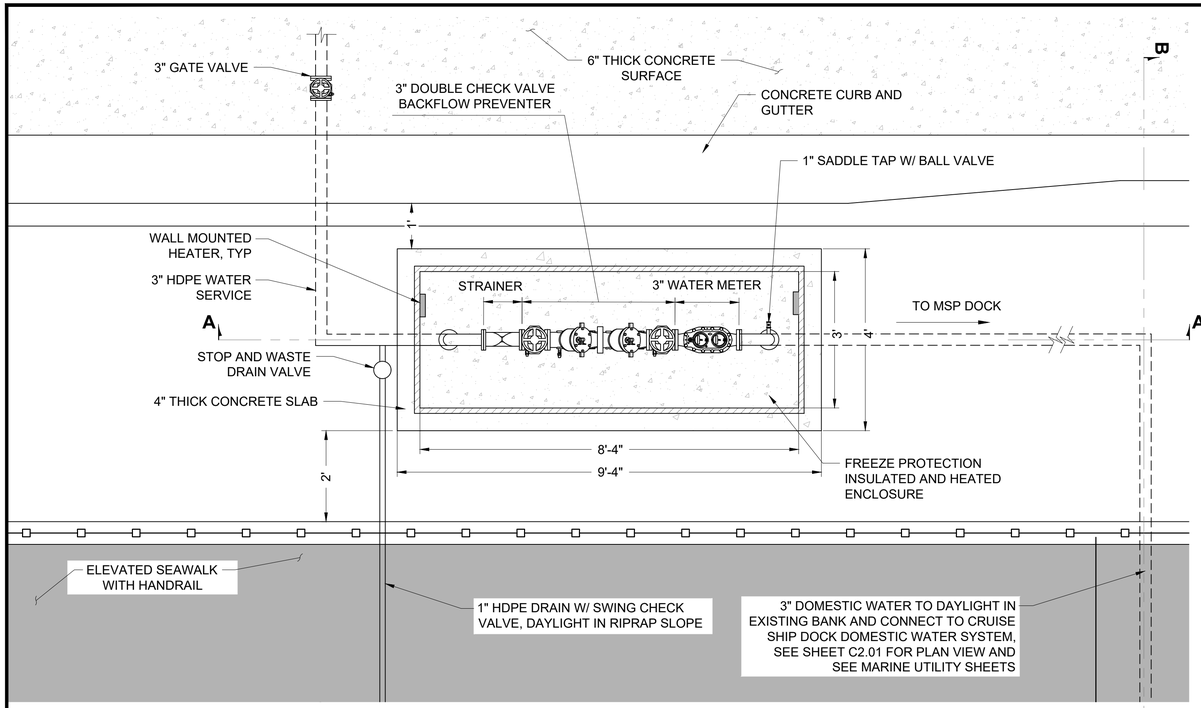
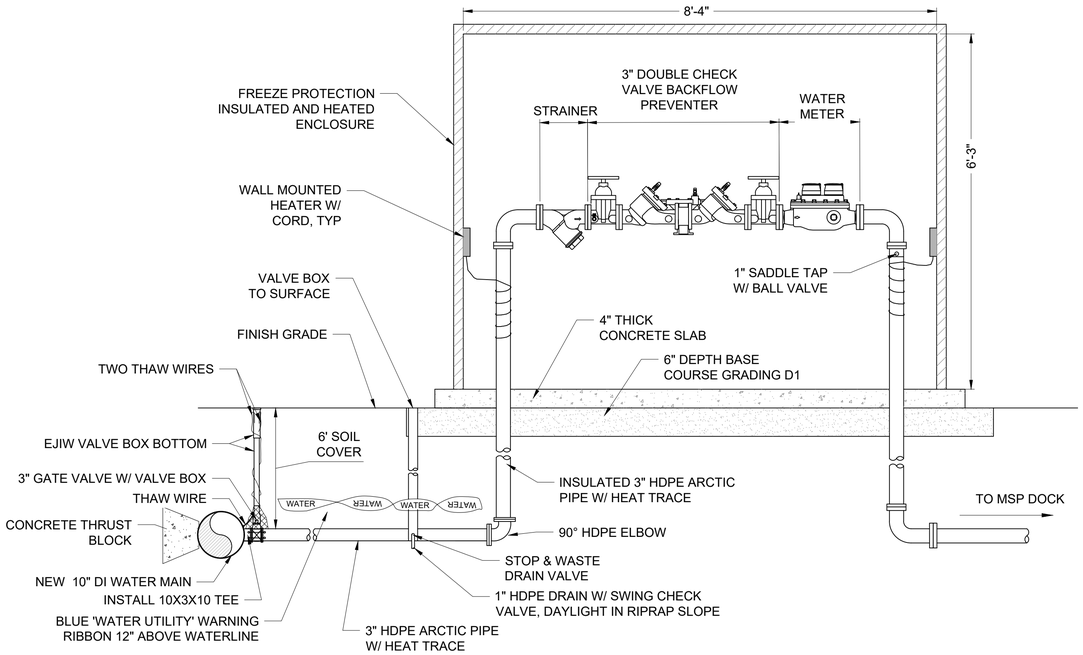
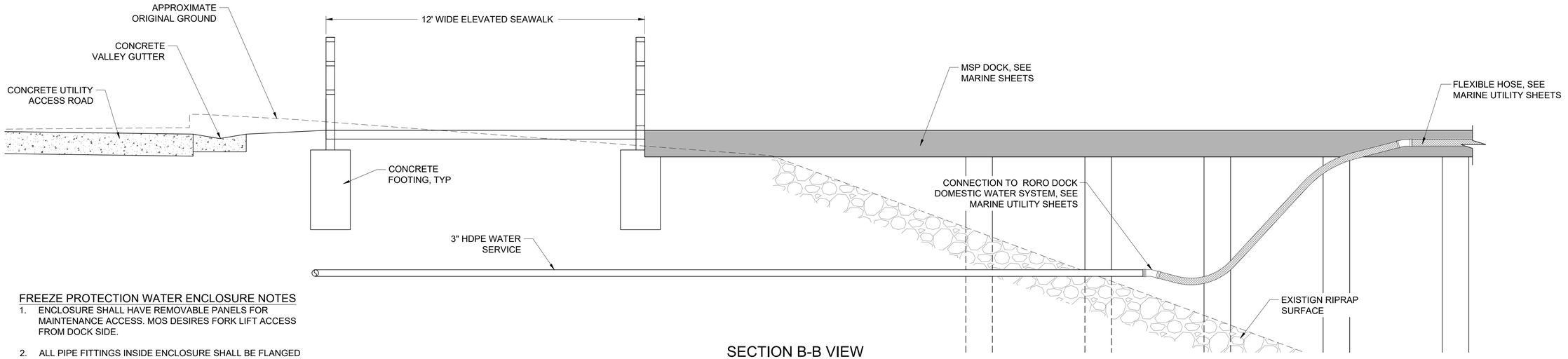


PLAN VIEW



SECTION A-A VIEW



SECTION B-B VIEW

FREEZE PROTECTION WATER ENCLOSURE NOTES

1. ENCLOSURE SHALL HAVE REMOVABLE PANELS FOR MAINTENANCE ACCESS. MOS DESIRES FORK LIFT ACCESS FROM DOCK SIDE.
2. ALL PIPE FITTINGS INSIDE ENCLOSURE SHALL BE FLANGED WITH MJ CONNECTIONS.
3. HOT BOX TO BE HUBBELL UTILITY SOLUTIONS BRAND, FLIP-TOP FIBERGLASS ENCLOSURE MODEL HBF6E (36"WX100"LX75"H) W/ TWO (2) 1900W HEATERS.

1 C2.08 **FREEZE PROTECTION WATER ENCLOSURE AT MSP DOCK**

SCALE: NTS

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AECC163270

NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

MSP HOT BOX PLAN & PROFILE

DRAWN: MSM	PROJECT NO.:10849.22001
DESIGN: MSM	SCALE: AS SHOWN
CHECKED: JMP	DATE: 01/27/2023
DRAWING NO.	**C2.08**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 26, 2023 - 8:49am Mick:Minsch Layout: C2.07
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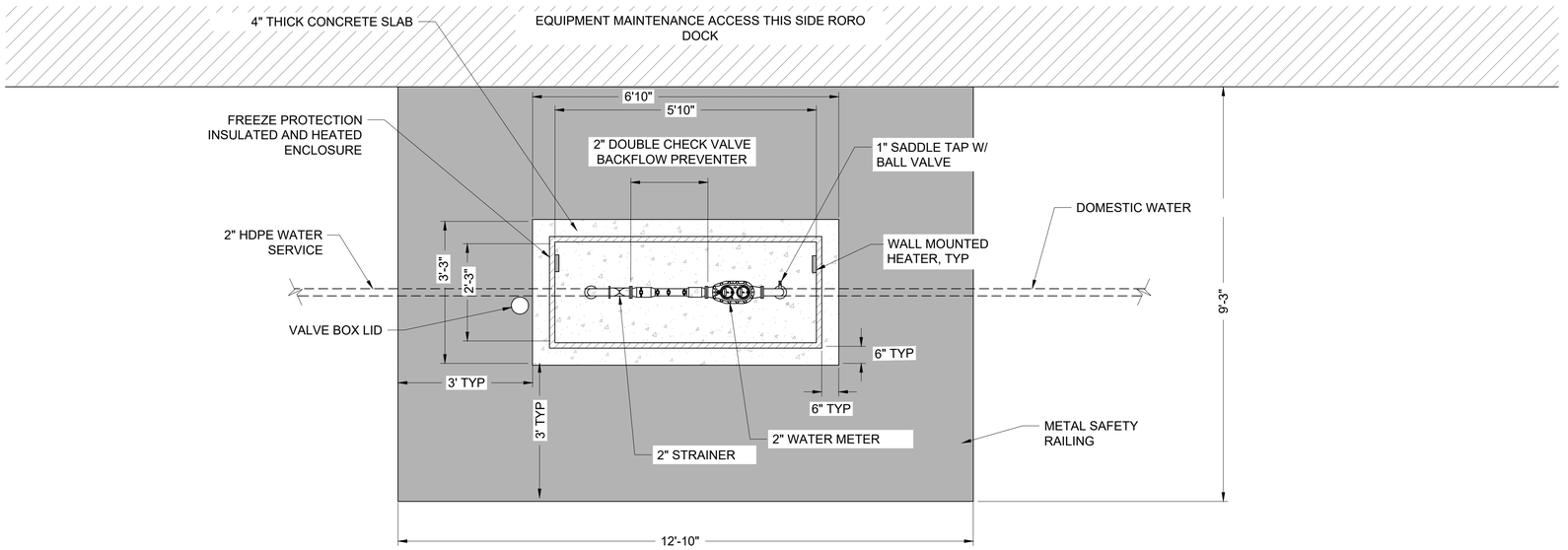
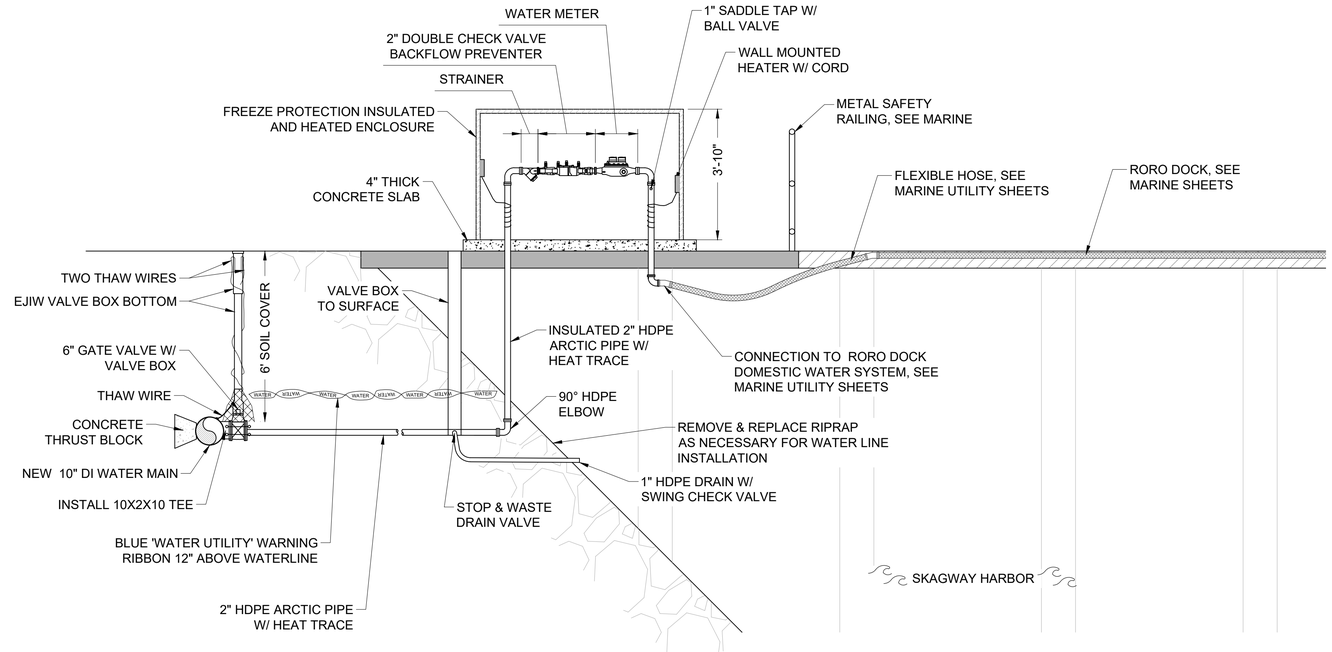
FREEZE PROTECTION WATER ENCLOSURE NOTES

1. ENCLOSURE SHALL HAVE REMOVABLE PANELS FOR MAINTENANCE ACCESS. MOS DESIRES FORK LIFT ACCESS FROM DOCK SIDE.
2. ALL PIPE FITTINGS INSIDE ENCLOSURE SHALL BE FLANGED WITH MJ CONNECTIONS.
3. HOT BOX TO BE HUBBELL UTILITY SOLUTIONS BRAND, FLIP-TOP FIBERGLASS ENCLOSURE MODEL HB3N (27"WX70"LX46"H) W/ TWO (2) 1000W HEATERS.



PLAN VIEW



SECTION VIEW

1 / C2.09 **FREEZE PROTECTION WATER ENCLOSURE AT RORO DOCK**

SCALE: NTS

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NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

RORO HOT BOX PLAN & PROFILE

DRAWN: MSM	PROJECT NO.:10849.22001
DESIGN: MSM	SCALE: AS SHOWN
CHECKED: JMP	DATE: 01/27/2023
DRAWING NO.	**C2.09**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

SHEET C3.00 NOTES:

1. SEE SHEET C3.06 FOR GRADE POINT INFORMATION.

ASPHALT PARKING LOT

PARKING STALL STRIPING, TYP

BEGIN BASELINE
STA "S" 10+00
N:2785745.03
E:2376265.23

"S" 11+00

"S" 12+00

PROPOSED STEEL ACCESS RAMP TO CRUISE SHIP DOCK FLOAT, SEE MARINE SHEETS

NEW 6" THICK CONCRETE SURFACE

CONCRETE PATH
4" WHITE STRIPING

FIRE HYDRANT

R=3'

R=20'

NEW 6" THICK CONCRETE SURFACE

TOP OF BANK, TYP

EXISTING CRUISE SHIP DOCK TO REMAIN

SKAGWAY HARBOR

UGE

MTE

SCALE IN FEET
CONTOUR INTERVAL = 1 FOOT

DIAL BEFORE YOU DIG!
U/G WATER, SEWER
983-2449
U/G POWER, TELEPHONE & T.V.
983-2202
UTILITIES SHOWN ON THIS DRAWING INDICATE EXISTENCE ONLY AND DO NOT SUBSTITUTE FOR FIELD LOCATES

MATCHLINE STA "S" 13+00 (SEE SHEET C3.01)

60% DESIGN - NOT FOR CONSTRUCTION

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NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT

SKAGWAY, ALASKA

UPLANDS GRADING PLAN

DRAWN: MSM	PROJECT NO.:10849.22001
DESIGN: MSM	SCALE: AS SHOWN
CHECKED: JMP	DATE: 01/27/2023
DRAWING NO.	**C3.00**
SHEET NO.	OF

Plotted: Jan 26, 2023 - 8:49am Micki.Minsch Layout: Grading 1
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MATCHLINE STA "S" 13+00 (SEE SHEET C2.00)

MATCHLINE STA "S" 16+04 (SEE SHEET C2.02)

ASPHALT SURFACE

ASPHALT SURFACE

RAILROAD TRACKS, PROTECT & MAINTAIN

ASPHALT SURFACE

ABOVE GROUND TRANSFORMERS

"S" 14+00

"S" 15+00

"S" 16+00

3+00

5' CHAIN LINK FENCE

CONCRETE CURB

SAWCUT & MTE

NEW 6" THICK CONCRETE SURFACE

SAWCUT & MTE

SD-1

15

17

18

14

16

PC: "W" 10+79.18

"W" 11+00

GRAVEL SURFACE

WATER VALVE

TOP OF BANK, TYP

4" WHITE STRIPING

CONCRETE PATH

NOAA TIDE COLLECTION BUILDING W/ SOLAR PANELS

L=31.05, R=94.00
Δ = 18°55'42"

PT: "W" 11+10.23

BEGIN BASELINE
STA "W" 28+00
N:2786051.60
E:2376656.55

SKAGWAY HARBOR

10 5 0 10 20 30
SCALE IN FEET
CONTOUR INTERVAL = 1 FOOT

SHEET C3.01 NOTES:

1. SEE SHEET C3.06 FOR GRADE POINT INFORMATION.

DIAL BEFORE YOU DIG!
U/G WATER, SEWER
983-2449
U/G POWER, TELEPHONE & T.V.
983-2202
UTILITIES SHOWN ON THIS DRAWING INDICATE EXISTENCE ONLY AND DO NOT SUBSTITUTE FOR FIELD LOCATES

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 26, 2023 - 8:49am Micki.Minsch Layout: Grading 2
N:\Projects\0849.22001-KPFF_SGY_WF\C\C2003cnstl0849.22001.dwg

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Fax: 907.586.3771
AECC163270

NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT

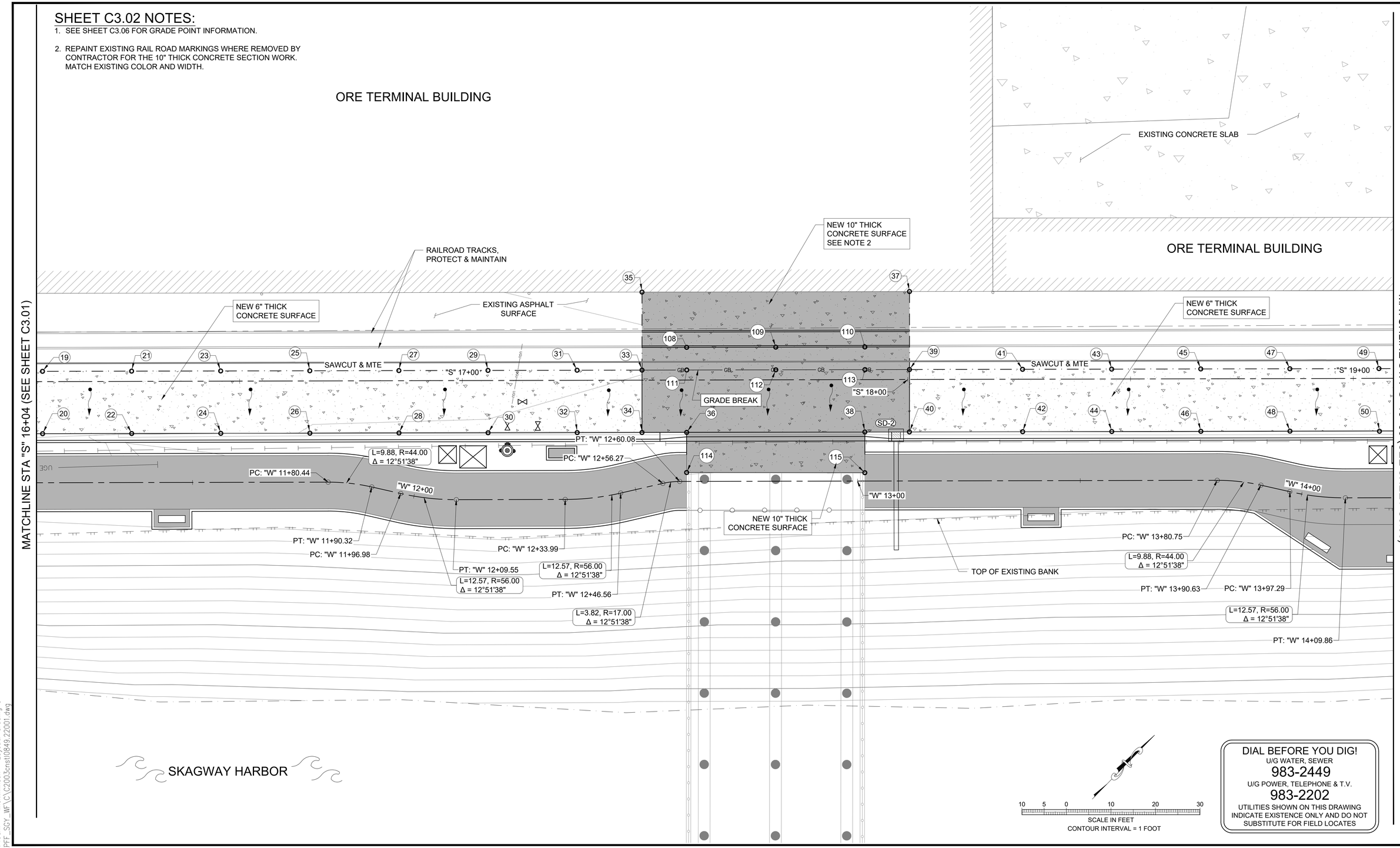
SKAGWAY, ALASKA

UPLANDS GRADING PLAN

DRAWN: MSM	PROJECT NO.:0849.22001
DESIGN: MSM	SCALE: AS SHOWN
CHECKED: JMP	DATE: 01/27/2023
DRAWING NO.	**C3.01**
SHEET NO.	OF

SHEET C3.02 NOTES:

1. SEE SHEET C3.06 FOR GRADE POINT INFORMATION.
2. REPAINT EXISTING RAIL ROAD MARKINGS WHERE REMOVED BY CONTRACTOR FOR THE 10" THICK CONCRETE SECTION WORK. MATCH EXISTING COLOR AND WIDTH.



MATCHLINE STA "S" 16+04 (SEE SHEET C3.01)

MATCHLINE STA "S" 19+09 (SEE SHEET C3.03)

DIAL BEFORE YOU DIG!
U/G WATER, SEWER
983-2449
U/G POWER, TELEPHONE & T.V.
983-2202
UTILITIES SHOWN ON THIS DRAWING INDICATE EXISTENCE ONLY AND DO NOT SUBSTITUTE FOR FIELD LOCATES

60% DESIGN - NOT FOR CONSTRUCTION

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NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

UPLANDS GRADING PLAN

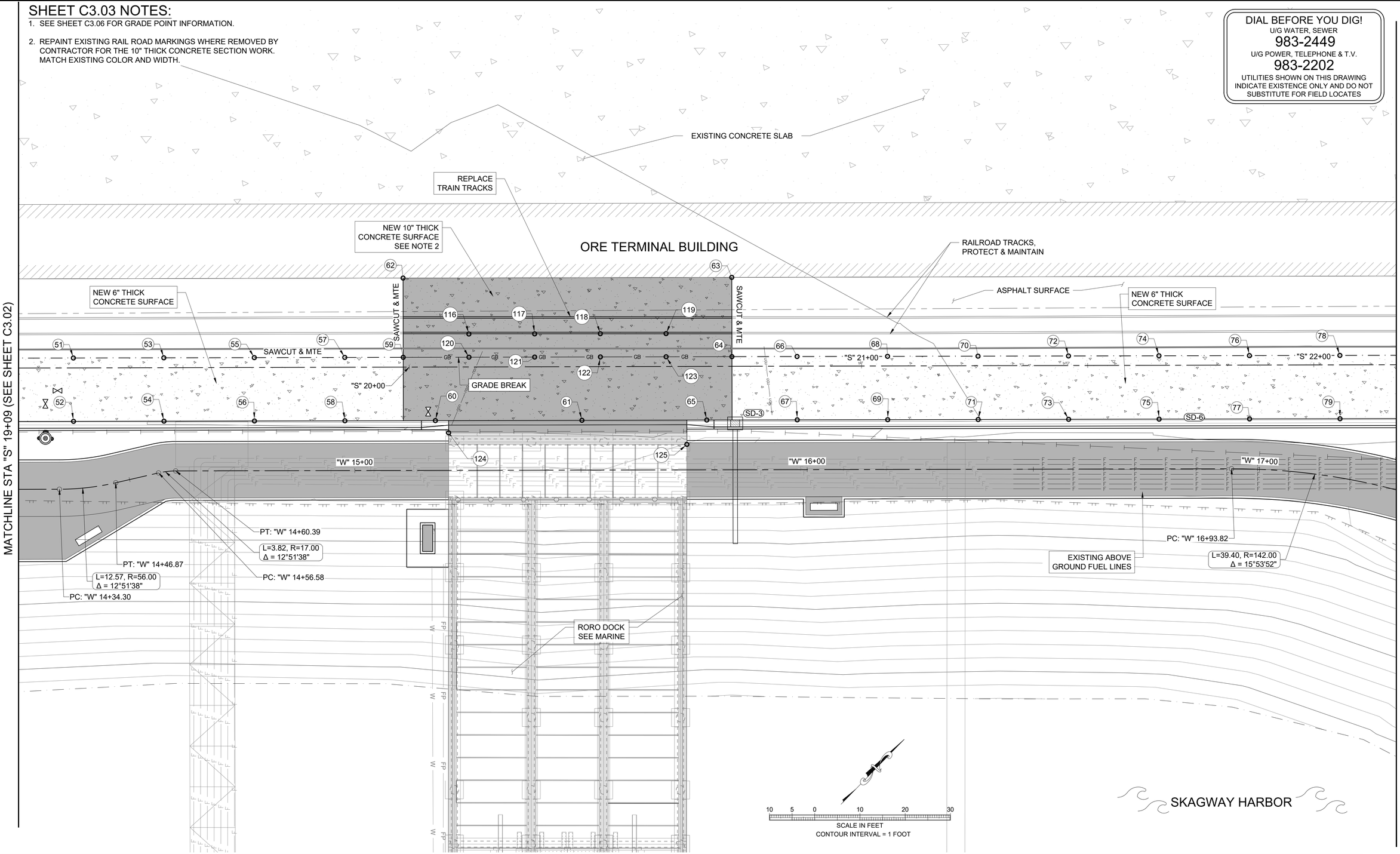
DRAWN: MSM	PROJECT NO.:10849.22001
DESIGN: MSM	SCALE: AS SHOWN
CHECKED: JMP	DATE: 01/27/2023
DRAWING NO.	**C3.02**
SHEET NO.	OF

Plotted: Jan 26, 2023 - 8:49am Micki.Minsch Layout: Grading 3
N:\Projects\10849.22001-KPFF_SGY_WF\C\C2003cnst\10849.22001.dwg

SHEET C3.03 NOTES:

1. SEE SHEET C3.06 FOR GRADE POINT INFORMATION.
2. REPAINT EXISTING RAIL ROAD MARKINGS WHERE REMOVED BY CONTRACTOR FOR THE 10" THICK CONCRETE SECTION WORK. MATCH EXISTING COLOR AND WIDTH.

DIAL BEFORE YOU DIG!
U/G WATER, SEWER
983-2449
U/G POWER, TELEPHONE & T.V.
983-2202
UTILITIES SHOWN ON THIS DRAWING INDICATE EXISTENCE ONLY AND DO NOT SUBSTITUTE FOR FIELD LOCATES



MATCHLINE STA "S" 19+09 (SEE SHEET C3.02)

MATCHLINE STA "S" 22+14 (SEE SHEET C3.04)

60% DESIGN - NOT FOR CONSTRUCTION

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AECC163270

NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

UPLANDS GRADING PLAN

DRAWN: MSM	PROJECT NO.:10849.22001
DESIGN: MSM	SCALE: AS SHOWN
CHECKED: JMP	DATE: 01/27/2023
DRAWING NO.	**C3.03**
SHEET NO.	OF

Plotted: Jan 26, 2023 - 8:49am Micki.Minsch Layout: Grading 4
N:\Projects\10849.22001-KPFF_SGY_WF\C\C2003cnstl0849.22001.dwg

SHEET C3.04 NOTES:

1. SEE SHEET C3.06 FOR GRADE POINT INFORMATION.

DIAL BEFORE YOU DIG!
U/G WATER, SEWER
983-2449
U/G POWER, TELEPHONE & T.V.
983-2202
UTILITIES SHOWN ON THIS DRAWING INDICATE EXISTENCE ONLY AND DO NOT SUBSTITUTE FOR FIELD LOCATES

MATCHLINE STA "S" 22+14 (SEE SHEET C3.03)

MATCHLINE STA "S" 25+18 (SEE SHEET C3.05)

VACANT LEASE LOT

ORE TERMINAL BUILDING

RAILROAD TRACKS, PROTECT & MAINTAIN

NEW 6" THICK CONCRETE SURFACE

ASPHALT SURFACE

CHAIN LINK FENCE

R=790'

R=400'

R=300'

R=390'

R=290'

SAWCUT & MTE

CURB AND GUTTER

END CURB AND GUTTER

"S" 23+00

"S" 24+00

"S" 25+00

UNDERGROUND FUEL LINES

ABOVE GROUND FUEL LINES

ABOVE GROUND FUEL VALVES

"W" 18+00

"W" 19+00

"W" 20+00

EXISTING CONCRETE SIDEWALK

PC: "W" 17+46.50

PT: "W" 17+33.22

L=42.68, R=158.00
Δ = 15°28'42"

PT: "W" 17+89.19

TOP OF BANK

WHITE PASS PORT OPERATIONS

GRAVEL AREA

SKAGWAY HARBOR

10 5 0 10 20 30
SCALE IN FEET
CONTOUR INTERVAL = 1 FOOT

60% DESIGN - NOT FOR CONSTRUCTION

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ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

UPLANDS GRADING PLAN

DRAWN: MSM	PROJECT NO.:10849.22001
DESIGN: MSM	SCALE: AS SHOWN
CHECKED: JMP	DATE: 01/27/2023
DRAWING NO.	C3.04
SHEET NO.	OF

Plotted: Jan 26, 2023 – 8:49am Micki.Minsch Layout: Grading 5
N:\Projects\10849.22001-KPFF_SGY_WF\C\C2003cnst10849.22001.dwg

SHEET C3.05 NOTES:

1. SEE SHEET C3.06 FOR GRADE POINT INFORMATION.

DIAL BEFORE YOU DIG!
U/G WATER, SEWER
983-2449
U/G POWER, TELEPHONE & T.V.
983-2202
UTILITIES SHOWN ON THIS DRAWING INDICATE EXISTENCE ONLY AND DO NOT SUBSTITUTE FOR FIELD LOCATES

MATCHLINE STA "S" 25+18 (SEE SHEET C3.04)

EXISTING CHAIN LINK FENCE

LEASE LOT LINE, TYP

NEW 10" THICK CONCRETE SURFACE

"S" 26+00

"S" 27+00

END BASELINE
STA "S" 28+00
N:2787000.95
E:2377554.67

STATE STREET
(ASPHALT SURFACE)

END BASELINE
STA "W" 28+00
N:2786793.64
E:2377399.32

EXISTING CONCRETE SIDEWALK

10 5 0 10 20 30
SCALE IN FEET
CONTOUR INTERVAL = 1 FOOT

60% DESIGN - NOT FOR CONSTRUCTION

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AECC163270

NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

UPLANDS GRADING PLAN

DRAWN: MSM	PROJECT NO.:10849.22001
DESIGN: MSM	SCALE: AS SHOWN
CHECKED: JMP	DATE: 01/27/2023
DRAWING NO.	C3.05
SHEET NO.	OF

Plotted: Jan 26, 2023 - 8:49am Micki.Minsch Layout: Grading 6
N:\Projects\10849.22001-KPFF_SGY_WF\C\C2003cnst10849.22001.dwg

GRADE POINT SUMMARY TABLE

POINT No.	STATION	OFFSET	ELEVATION	DESCRIPTION
1	10+93.9	8.2' LT	29.01	EC/MTE
2	11+07.7	0.1' RT	29.01	EC/MTE
3	11+21.6	8.4' RT	29.01	EC/MTE
4	11+34.7	9.7' RT	29.01	EC/MTE
5	11+43.7	27.6' RT	29.26	EC/MTE
6	11+05.9	27.5' RT	28.74	EC/MTE
7	11+04.0	26.8' RT	28.74	EC
8	10+93.8	18.7' RT	29.02	EC
9	11+73.5	29.0' RT	28.45	EC/MTE
10	11+73.5	33.7' RT	28.45	EC
11	12+22.3	40.6' RT	28.45	EC
12	12+29.6	40.3' RT	28.45	EC
13	12+39.3	38.1' RT	28.45	EC/MTE
14	15+43.3	15.3' RT	28.40	EC
15	15+43.5	2.3' LT	28.33	EC/MTE
16	15+77.4	16.3' RT	28.63	EC
17	15+85.8	2.3' LT	28.71	EC/MTE
18	15+85.8	11.7' RT	28.41	EC
19	16+05.8	2.3' LT	28.69	EC/MTE
20	16+05.8	11.7' RT	28.47	EC
21	16+25.8	2.3' LT	28.66	EC/MTE
22	16+25.8	11.7' RT	28.53	EC
23	16+45.8	2.3' LT	28.64	EC/MTE
24	16+45.8	11.7' RT	28.59	EC
25	16+65.8	2.3' LT	28.77	EC/MTE
26	16+65.8	11.7' RT	28.65	EC
27	16+85.8	2.3' LT	28.81	EC/MTE
28	16+85.8	11.7' RT	28.71	EC
29	17+05.8	2.3' LT	28.88	EC/MTE
30	17+05.8	11.7' RT	28.77	EC
31	17+25.8	2.3' LT	28.94	EC/MTE
32	17+25.8	11.7' RT	28.83	EC
33	17+40.4	2.3' LT	28.99	EC/MTE
34	17+40.3	11.7' RT	28.88	EC
35	17+40.4	19.8' LT	29.10	EC/MTE
36	17+50.3	11.7' RT	28.91	EC
37	18+00.4	19.7' LT	29.42	EC/MTE
38	17+90.3	11.8' RT	29.03	EC
39	18+00.4	2.2' LT	29.22	EC/MTE
40	18+00.3	11.8' RT	29.06	EC
41	18+25.8	2.2' LT	29.34	EC/MTE
42	18+25.8	11.8' RT	29.12	EC

GRADE POINT SUMMARY TABLE

POINT No.	STATION	OFFSET	ELEVATION	DESCRIPTION
43	18+45.8	2.2' LT	29.33	EC/MTE
44	18+45.8	11.8' RT	29.17	EC
45	18+65.8	2.2' LT	29.33	EC/MTE
46	18+65.8	11.8' RT	29.23	EC
47	18+85.8	2.2' LT	29.40	EC/MTE
48	18+85.8	11.8' RT	29.28	EC'
49	19+05.8	2.2' LT	29.41	EC/MTE
50	19+05.9	11.9' RT	29.33	EC
51	19+25.8	2.2' LT	29.45	EC/MTE
52	19+25.8	11.8' RT	29.38	EC
53	19+45.8	2.2' LT	29.51	EC/MTE
54	19+45.8	11.8' RT	29.43	EC
55	19+65.8	2.2' LT	29.56	EC/MTE
56	19+65.8	11.8' RT	29.48	EC
57	19+85.8	2.2' LT	29.62	EC/MTE
58	19+85.8	11.8' RT	29.53	EC
59	19+98.7	2.2' LT	29.65	EC/MTE
60	20+05.8	11.8' RT	29.59	EC
61	20+38.2	11.9' RT	29.67	EC
62	19+98.7	19.7' LT	29.76	EC/MTE
63	20+71.4	19.7' LT	29.95	EC/MTE
64	20+71.4	2.1' LT	29.90	EC/MTE
65	20+65.8	11.9' RT	29.74	EC
66	20+85.8	2.1' LT	29.94	EC/MTE
67	20+85.8	11.9' RT	29.80	EC
68	21+05.8	2.1' LT	29.98	EC/MTE
69	21+05.8	11.9' RT	29.86	EC
70	21+25.8	2.1' LT	30.02	EC/MTE
71	21+25.8	11.9' RT	29.92	EC
72	21+45.8	2.1' LT	30.09	EC/MTE
73	21+45.8	11.9' RT	29.98	EC
74	21+65.8	2.1' LT	30.16	EC/MTE
75	21+65.8	11.9' RT	30.04	EC
76	21+85.8	2.1' LT	30.24	EC/MTE
77	21+85.8	11.9' RT	30.10	EC
78	22+05.8	2.1' LT	30.33	EC/MTE
79	22+05.8	11.9' RT	30.16	EC
80	22+25.8	2.1' LT	30.38	EC/MTE
81	22+25.8	11.9' RT	30.22	EC
82	22+45.8	2.1' LT	30.43	EC/MTE
83	22+45.8	11.9' RT	30.28	EC
84	22+65.8	2.1' LT	30.48	EC/MTE

GRADE POINT SUMMARY TABLE

POINT No.	STATION	OFFSET	ELEVATION	DESCRIPTION
85	22+65.8	11.9' RT	30.34	EC
86	22+85.8	2.1' LT	30.44	EC/MTE
87	22+85.8	11.9' RT	30.40	EC
88	23+02.8	2.1' LT	30.59	EC/MTE
89	23+03.6	11.9' RT	30.45	EC
90	23+02.6	4.4' LT	30.56	EC/MTE
91	23+15.6	11.9' RT	30.39	EC
92	23+15.6	4.3' LT	30.58	EC/MTE
93	23+28.5	11.9' RT	30.32	EC
94	23+28.5	4.3' LT	30.60	EC/PC
95	23+51.7	11.9' RT	30.37	EC
96	23+51.7	3.8' LT	30.65	EC/MPC
97	23+74.9	11.9' RT	30.42	EC
98	23+74.9	2.7' LT	30.68	EC/PCC
99	23+99.0	11.9' RT	30.48	EC
100	23+99.0	0.4' LT	30.70	EC/MPC
101	24+14.2	11.9' RT	30.52	EC
102	24+22.9	3.3' RT	30.68	EC/PCC
103	24+21.2	13.1' RT	30.68	EC/PCC
104	24+40.6	7.1' RT	30.74	EC/MPC
105	24+38.1	16.8' RT	30.55	EC/MPC
106	24+57.9	12.0' RT	30.78	EC/PT/MTE
107	24+54.9	21.4' RT	30.60	EC/PT/MTE
108	17+50.4	7.3' LT	28.96	TC
109	17+70.4	7.3' LT	29.03	TC
110	17+90.4	7.3' LT	29.19	TC
111	17+50.4	2.3' LT	28.95	TC/GB
112	17+70.4	2.2' LT	29.02	TC/GB
113	17+90.4	2.2' LT	29.15	TC/GB
114	17+50.3	20.8' RT	29.00	EC
115	17+90.3	20.9' RT	29.00	EC
116	20+13.2	7.3' LT	29.70	TC
117	20+27.8	7.3' LT	29.74	TC
118	20+42.3	7.3' LT	29.79	TC
119	20+56.8	7.3' LT	29.83	TC
120	20+13.2	2.2' LT	29.67	TC/GB
121	20+27.8	2.2' LT	29.72	TC/GB
122	20+42.3	2.1' LT	29.76	TC/GB
123	20+56.8	2.1' LT	29.80	TC/GB
124	20+08.7	14.6' RT	29.42	EC
125	20+61.4	17.2' RT	29.69	EC

SHEET C3.06 NOTES:

1. SEE SHEETS C3.00-C3.05 FOR GRADE POINT LOCATIONS.

ABBREVIATIONS

EC	EDGE OF CONCRETE
GB	GRADE BREAK
LT	LEFT
MPC	MID POINT OF CURVE
MTE	MATCH TO EXISTING
No.	NUMBER
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
PT	POINT OF TANGENCY
RT	RIGHT
TC	TOP OF CONCRETE

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 26, 2023 - 8:49am Micki.Minsch Layout: Summary Tables
N:\Projects\0849.22001-KPFF_SGY_WF\C\C2003cnst0849.22001.dwg

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NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA
GRADE POINT SUMMARY TABLES

DRAWN:	MSM	PROJECT NO.:	0849.22001
DESIGN:	MSM	SCALE:	AS SHOWN
CHECKED:	JMP	DATE:	01/27/2023
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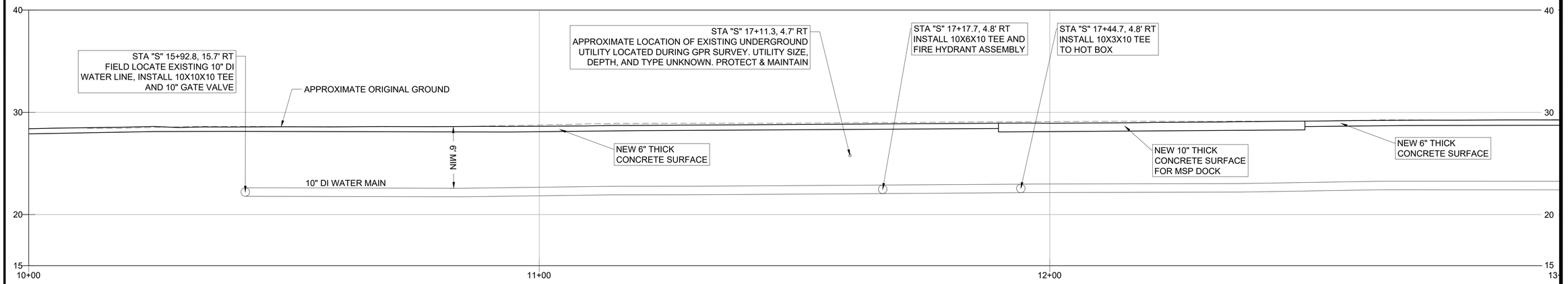
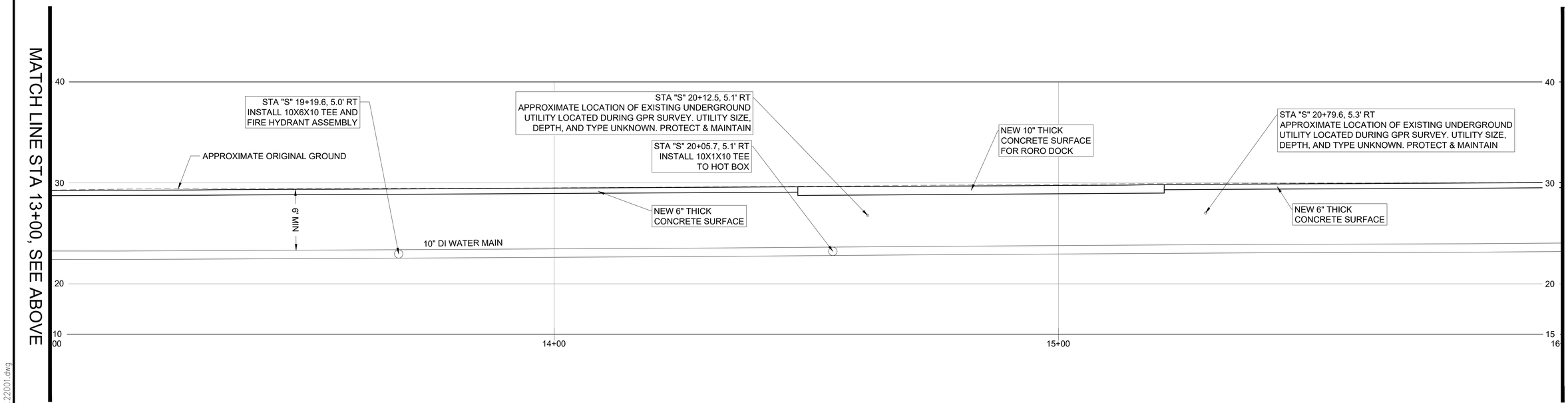
SHEET NO.		OF	





SHEET C4.00 NOTES:

1. EXISTING 10" DI WATER MAIN NOT SHOWN FOR CLARITY.

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ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

WATER PROFILE VIEW

DRAWN: MSM	PROJECT NO.:10849.22001
DESIGN: MSM	SCALE: AS SHOWN
CHECKED: JMP	DATE: 01/27/2023
DRAWING NO.	**C4.00**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 26, 2023 - 8:50am Micki.Minsch Layout: C2.06
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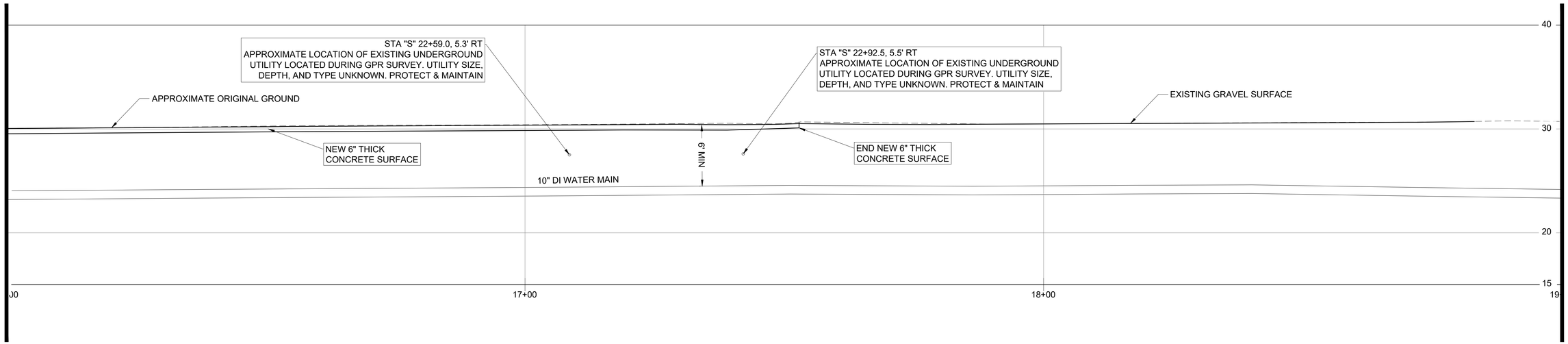

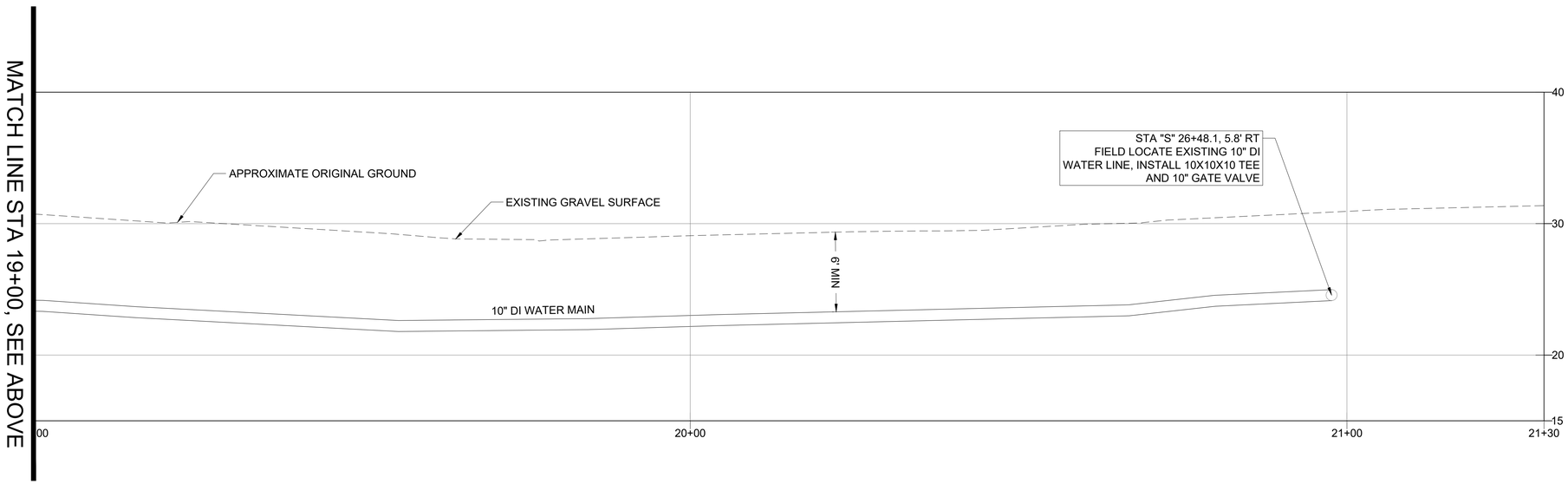

SHEET 4.01 NOTES:

1.

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ORE PENINSULA REDEVELOPMENT

SKAGWAY, ALASKA

WATER PROFILE VIEW

DRAWN:	MSM	PROJECT NO.:	10849.22001
DESIGN:	MSM	SCALE:	AS SHOWN
CHECKED:	JMP	DATE:	01/27/2023
DRAWING NO.			**C4.01**
SHEET NO.		OF	

Plotted: Jan 26, 2023 - 8:50am Mick.Minsch Layout: C2.07
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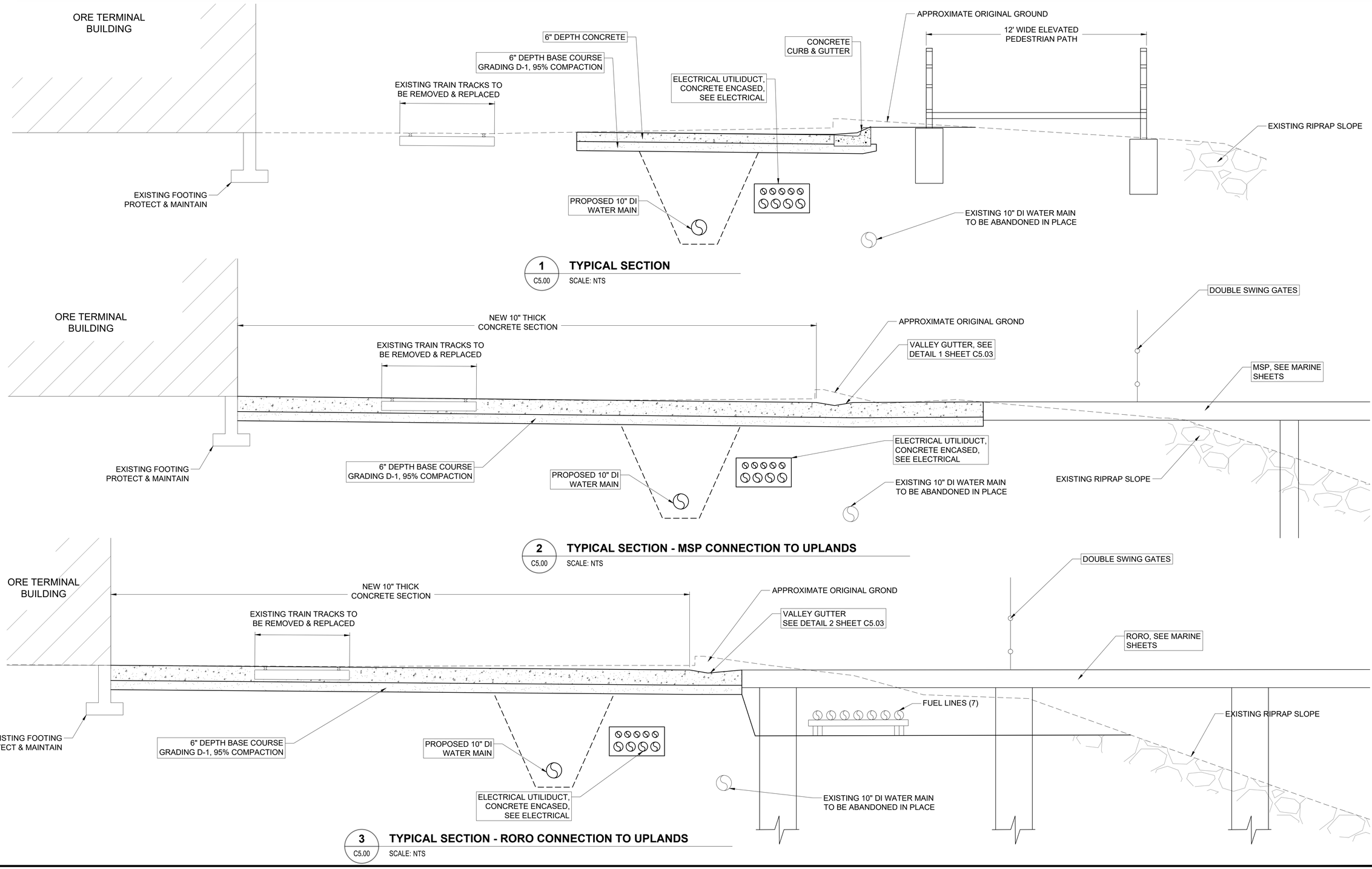

1 / C5.00 — TYPICAL SECTION
SCALE: NTS

2 / C5.00 — TYPICAL SECTION - MSP CONNECTION TO UPLANDS
SCALE: NTS

3 / C5.00 — TYPICAL SECTION - RORO CONNECTION TO UPLANDS
SCALE: NTS

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ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

TYPICAL SECTIONS

DRAWN: MSM	PROJECT NO.:10849.22001
DESIGN: MSM	SCALE: AS SHOWN
CHECKED: JMP	DATE: 01/27/2023
DRAWING NO.	**C5.00**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 26, 2023 – 8:50am Micki.Minsch Layout: C3.0
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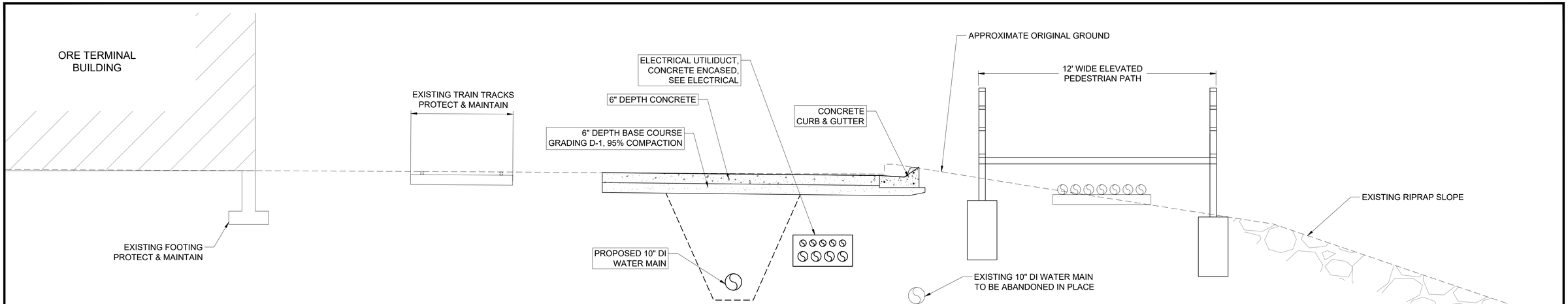

1 TYPICAL SECTION
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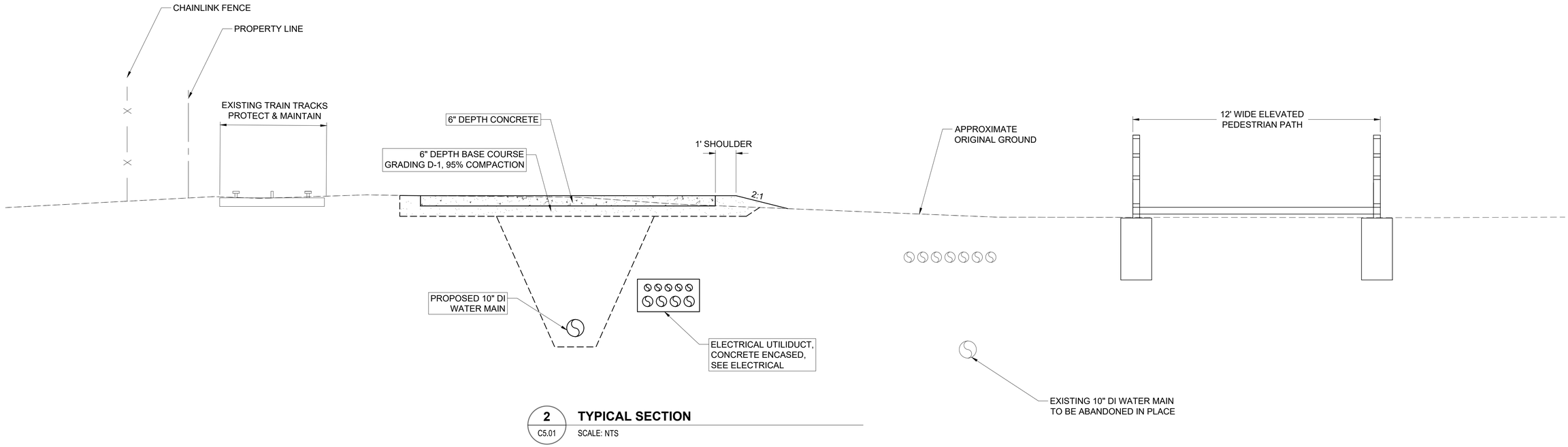

2 TYPICAL SECTION
C5.01 SCALE: NTS

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NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

TYPICAL SECTIONS

DRAWN: MSM	PROJECT NO.:10849.22001
DESIGN: MSM	SCALE: AS SHOWN
CHECKED: JMP	DATE: 01/27/2023
DRAWING NO.	**C5.01**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 26, 2023 - 8:50am Micki.Minsch Layout: C3.01
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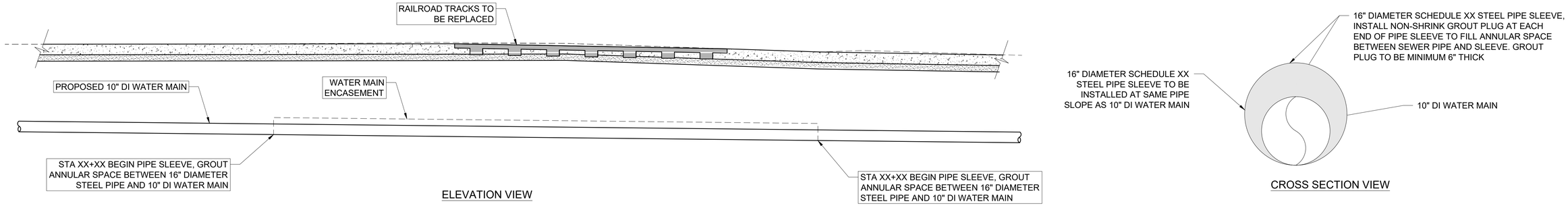
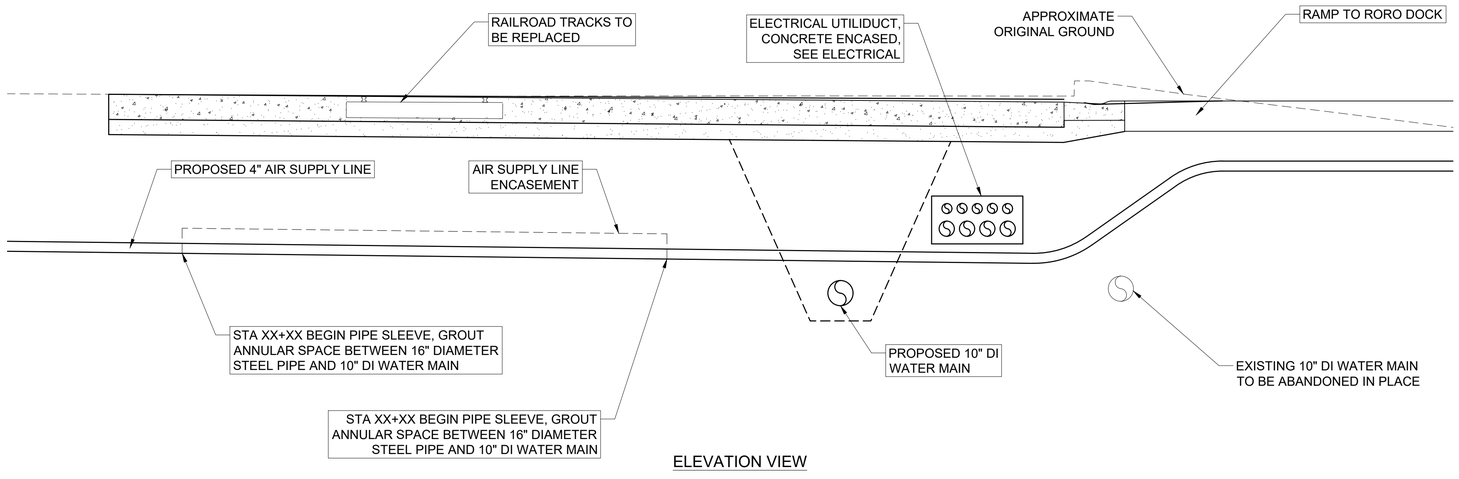


1 C5.02 **TYPICAL SECTION - WATER & TRAIN TRACK CROSSING**

SCALE: NTS

RAILROAD TRACK UTILITY CROSSING NOTES:

1. CONTRACTOR IS REQUIRED TO COORDINATE WITH WHITE PASS RAILROAD COMPANY A MINIMUM OF 72 HOURS PRIOR TO BEGINNING WORK AT THE RAILROAD TRACK CROSSING. CALL MARK TAYLOR, P.E. AT (907) 612-0570.
2. WHITE PASS RAILROAD STAFF WILL BE RESPONSIBLE FOR REMOVING AND REPLACING BALLAST ROCK MATERIAL BENEATH RAILROAD TIMBER TIES AND FOR REMOVING AND RESETTING TIMBER TRACK TIES. CONTRACTOR WILL HAVE TO WORK AROUND STEEL RAILROAD TRACKS AS THEY ARE TO BE LEFT IN PLACE DURING UTILITY INSTALLATION WORK.
3. RAILROAD UTILITY CROSSING WORK TO BE COMPLETED BY MONTH DAY, 2023.



2 C5.02 **TYPICAL SECTION - AIR SUPPLY & TRAIN TRACK CROSSING**

SCALE: NTS

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NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

TYPICAL SECTIONS

DRAWN: MSM	PROJECT NO.:10849.22001
DESIGN: MSM	SCALE: AS SHOWN
CHECKED: JMP	DATE: 01/27/2023
DRAWING NO.	**C5.02**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 26, 2023 - 8:50am Mick:Minsch Layout: C3.02
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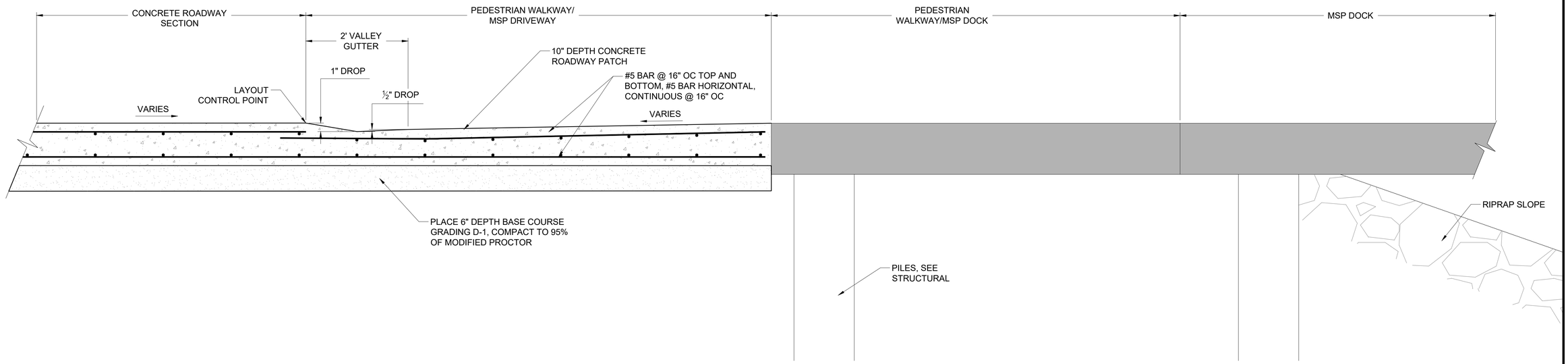
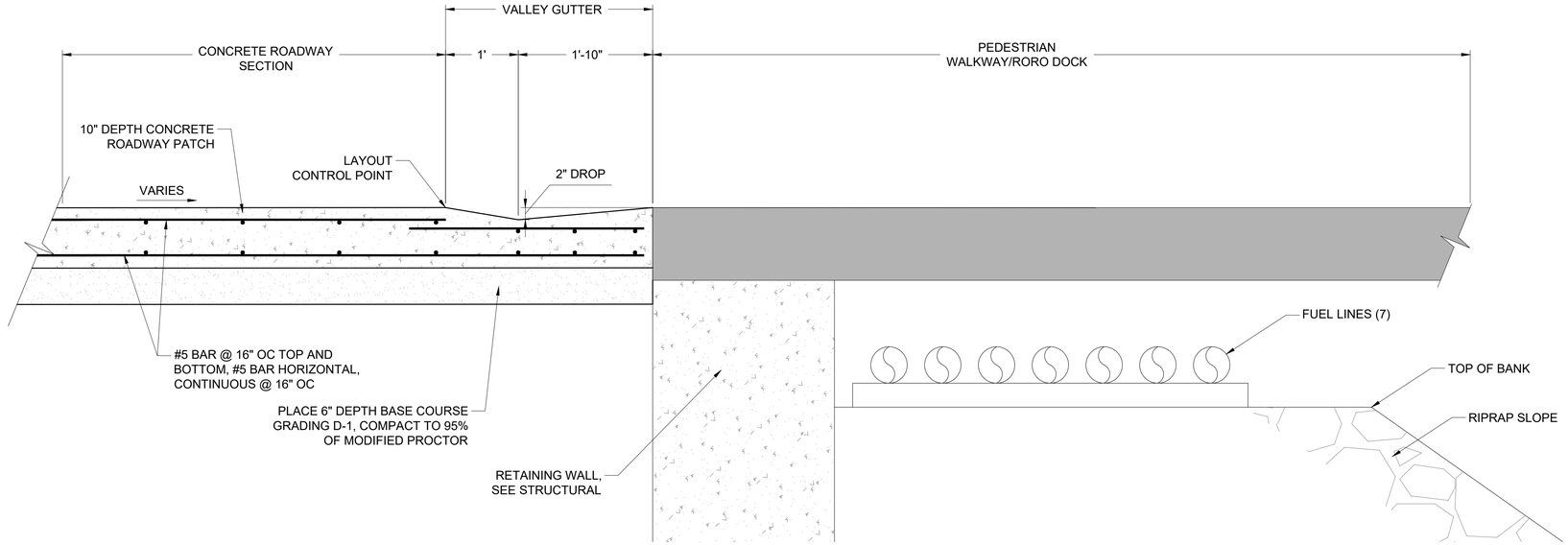


1 / C5.03 — ROADWAY CONNECTION TO MSP - SECTION

SCALE: NTS



2 / C5.03 — ROADWAY CONNECTION TO RORO - SECTION

SCALE: NTS

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NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT

SKAGWAY, ALASKA

TYPICAL SECTIONS

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DESIGN: MSM	SCALE: AS SHOWN
CHECKED: JMP	DATE: 01/27/2023
DRAWING NO.	**C5.03**
SHEET NO.	OF

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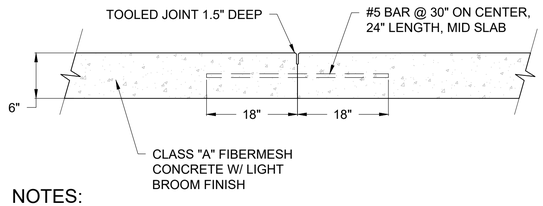
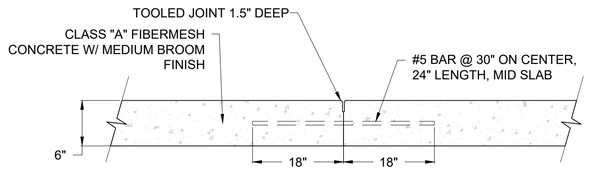


NOTES:

1. LONGITUDINAL & TRANSVERSE TOOLED JOINTS TO BE SPACED TO RESULT IN SQUARE AS POSSIBLE JOINTING PATTERN.
2. LONGITUDINAL JOINTS SHALL BE INSTALLED AT COLD JOINT LOCATIONS FOR END OF DAYS POUR.
3. CONTRACTOR EXPANSION JOINT MATERIAL (1/2") SHALL BE PLACED AROUND WATER VALVE BOXES, MANHOLE LIDS, AND CATCH BASINS THAT ARE WITHIN THE CONCRETE ROADWAY FOR FULL DEPTH OF CONCRETE.

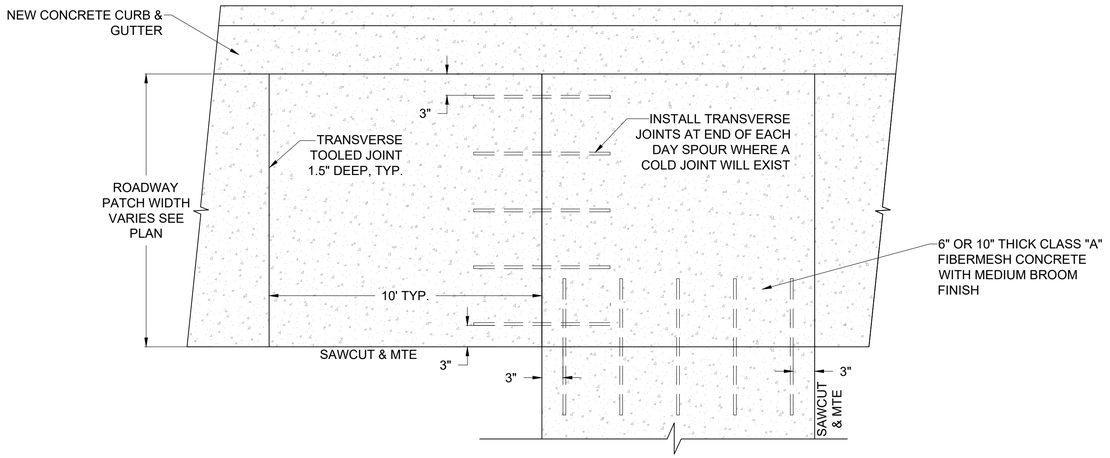
1 LONGITUDINAL JOINT DETAIL

C5.04 SCALE: NTS



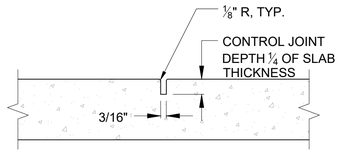
NOTES:

1. TRANSVERSE JOINTS SHALL BE INSTALLED AT COLD JOINT LOCATIONS FOR END OF DAYS POUR.

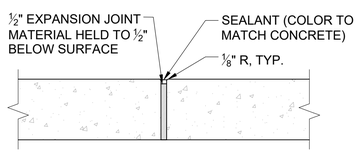


2 CONCRETE PATCH DETAIL

C5.04 SCALE: NTS



CONTROL JOINT



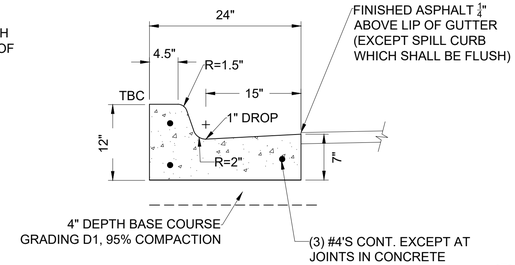
EXPANSION JOINT

NOTES:

1. UNLESS OTHERWISE NOTED, CONTROL JOINTS SHALL OCCUR AT DISTANCES EQUAL TO THE WIDTH OF SIDEWALKS (8' MAX), WITH EXPANSION JOINTS NO FARTHER THAN 20 FEET APART.
2. UNLESS OTHERWISE NOTED, ALL CONCRETE FLATWORK TO BE OF LIGHT BROOM FINISH, WITH PATTERN RUNNING PERPENDICULAR TO FLOW OF TRAFFIC.

3 CONCRETE EXPANSION & CONTROL JOINTS

C5.04 SCALE: NTS

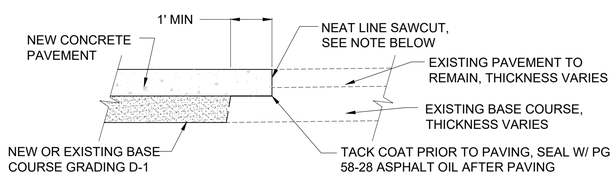


CONCRETE CURB NOTES:

1. CONCRETE SHALL BE FIBER MESH REINFORCED IN ACCORDANCE WITH SPECIFICATION SECTION 32 1315 - SIDEWALK, CURB AND GUTTER. REBAR IN CURB IS ALLOWED AS SHOWN.
2. CONCRETE INTERNATIONAL CORPORATION ASHFORD FORMULA OR APPROVED EQUAL SHALL BE APPLIED AS A CURING COMPOUND. APPLICATION SHALL CONFORM TO THE MANUFACTURERS RECOMMENDATIONS.
3. COLD JOINTS ARE REQUIRED EVERY 10' MAXIMUM. ALL JOINTS AND SEAMS SHALL BE EDGED.
4. STEEL TROWELING FINISH REQUIRED PRIOR TO BROOM FINISHING ON ALL SURFACES.
5. CURB AND GUTTER TRANSITION DESIGN TO BE APPROVED BY THE ENGINEER.
6. ALL REINFORCING STEEL MUST HAVE A MINIMUM OF 2" OF CONCRETE COVER WHEN SUBSTITUTED FOR FIBER MESH.
7. MINIMUM LONGITUDINAL SLOPE FOR CURB AND GUTTER SHALL BE NO LESS THAN 0.5%.

5 SPILL CURB AND GUTTER

C5.04 SCALE: NTS



NOTE:
SAWCUT OF EXISTING PAVEMENT SHALL NOT BE MADE UNTIL 24 HOURS PRIOR TO FINAL PAVING.

4 PAVEMENT MATCH JOINT DETAIL

C5.04 SCALE: NTS

60% DESIGN - NOT FOR CONSTRUCTION

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NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

CONSTRUCTION DETAILS

DRAWN: MSM	PROJECT NO.: 10849.22001
DESIGN: MSM	SCALE: AS SHOWN
CHECKED: JMP	DATE: 01/27/2023
DRAWING NO.	**C5.04**
SHEET NO.	OF

Plotted: Jan 26, 2023 - 8:51am Micki.Minsch Layout: C5.04
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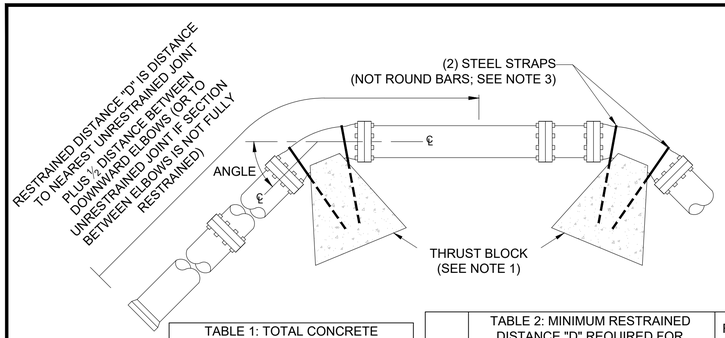


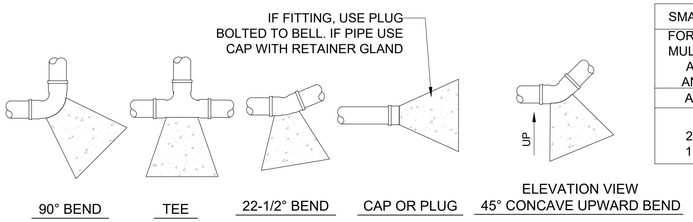
TABLE 1: TOTAL CONCRETE REQUIRED (CY)				
PIPE SIZE	ANGLE			
	11.25°	22.5°	45°	90°
8"	0.3	0.5	1.1	2.6

PIPE SIZE	TABLE 2: MINIMUM RESTRAINED DISTANCE "D" REQUIRED FOR ELIMINATION OF THRUST BLOCKS (FT)				REDUCTION ALLOWED (CY) FROM TABLE 1 PER 10' OF "D" (RESTRAINED DISTANCE)
	ANGLE				
	11.25°	22.5°	45°	90°	
8"	11	23	48	117	0.22

NOTES:

1. ALL DOWNWARD CONCAVE BENDS MUST EITHER BE CONNECTED TO A CONCRETE THRUST BLOCK AT LEAST AS LARGE AS INDICATED IN TABLE 1, BE CONNECTED TO RESTRAINED PIPE FOR THE MINIMUM DISTANCE GIVEN IN TABLE 2, OR A COMBINATION OF THE TWO. EXAMPLE OF COMBINATION: 45-DEGREE BEND IN 16" PIPE 16' FROM ANOTHER CONCAVE DOWNWARD BEND AND 4 STICKS (18' EACH) FROM NEAREST UNRESTRAINED JOINT - IF NOT RESTRAINED, THE VOLUME OF THE REQUIRED THRUST BLOCK WOULD BE 6.9 CY AS GIVEN BY TABLE 1. HOWEVER SINCE THERE IS A RESTRAINED LENGTH "D" = (½ x 16') + (4 x 18') = 80' THE SIZE OF THE BLOCK CAN BE REDUCED. THIS REDUCTION IS GIVEN BY THE LAST COLUMN OF TABLE 2 TO BE 8 x 0.59 CY = 4.7 CY SO THAT THE BLOCK NEEDS TO BE ONLY 6.9 - 4.7 = 2.2 CY.
2. THRUST BLOCKS SHALL BE POURED SO THAT JOINTS OF FITTINGS, INCLUDING ALL NUTS AND FOLLOWERS, REMAIN ACCESSIBLE.
3. CENTER OF MASS OF THRUST BLOCK MUST BE BELOW PIPE AND CONNECTED TO PIPE WITH TWO STEEL STRAPS. EACH STRAP IS TO HAVE A CROSS-SECTIONAL AREA OF AT LEAST ½ SQUARE INCH PER 4 CUBIC YARDS OF CONCRETE. IF STRAPS ARE NOT STAINLESS, PIPE AND STRAPS SHALL BE ISOLATED FROM DIRECT CONTACT WITH A PLASTIC INSULATOR.
4. REGARDLESS OF SIZE OF THRUST BLOCK, WATER PIPE JOINTS AT ANGLE MUST BE RESTRAINED.
5. CONCRETE THRUST BLOCKS SHALL BE 2500 PSI AND ARE BASED ON 150 PSI WATER PRESSURE. ALL OTHER CONDITIONS ARE SUBJECT TO THE ENGINEER'S REVIEW AND APPROVAL.
6. DEDUCTION D IS ALLOWED ONLY WHEN CONDITIONS LISTED IN NOTE 5 ARE MET. ENTIRE SECTION D IS BURIED AT LEAST 5' DEEP, AND PIPE IS BEDDED IN CLEAN SAND FOR ENTIRE LENGTH OF D.
7. FIELD-LOCK GASKETS, MEGA-LUG COUPLINGS AND FORD UNIFLANGE COUPLINGS ARE THE ONLY APPROVED MEANS OF RESTRAINING JOINTS.
8. RESTRAINED LENGTHS USED IN PLACE OF HORIZONTAL THRUST BLOCKS MAY NOT OVERLAP.

1 DOWNWARD CONCAVE THRUST BLOCK
C5.05 — SCALE: NTS



PLAN VIEWS

SMALL ANGLE ADJUSTMENT	
FOR ANGLES LESS THAN 90° MULTIPLY VOLUMES, AREAS AND LENGTHS FOR 90° ANGLE BY THIS FACTOR	
ANGLE	FACTOR
45°	0.414
22-1/2°	0.199
11-1/4°	0.098

PIPE SIZE	TEES, CAPS, AND PLUGS		90° BENDS		ALTERNATIVE RESTRAINED LENGTH IN ALL DIRECTIONS (FEET) - SEE NOTE 5		
	MIN. CONCRETE VOLUME (CY)	MIN. BEARING AREA (SF)	MIN. CONCRETE VOLUME (CY)	MIN. BEARING AREA (SF)	TEES	90° BENDS	CAPS & PLUGS
8"	0.2	3.5	0.4	4.9	15	23	47

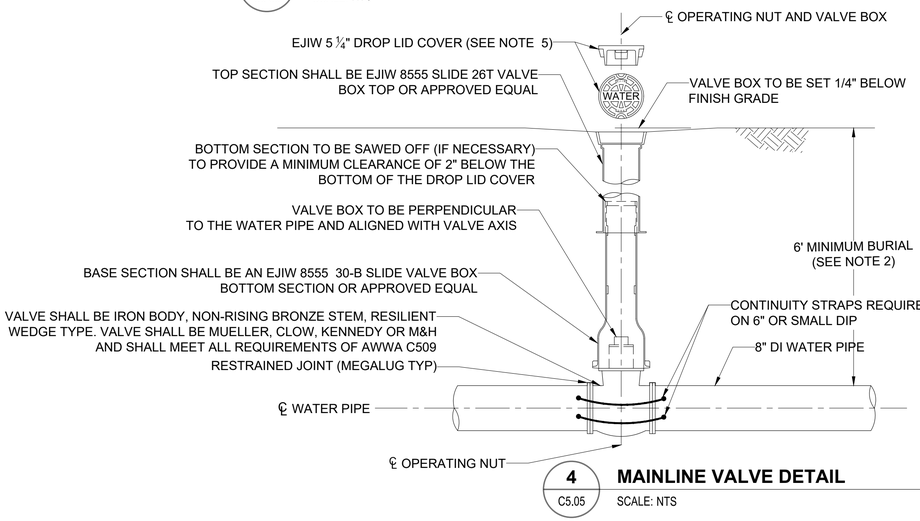
NOTES:

1. CENTER OF MASS OF THRUST BLOCK MUST LAY OPPOSITE TO AND ALIGNED AGAINST THE DIRECTION OF THRUST.
2. THRUST BLOCKS SHALL BE POURED SO THAT JOINTS OF FITTINGS, INCLUDING ALL NUTS AND FOLLOWERS REMAIN ACCESSIBLE.
3. CONCRETE THRUST BLOCKS SHALL BE POURED AGAINST UNDISTURBED EARTH. UNSTABLE OR UNSUITABLE MATERIALS SHALL BE REMOVED, REPLACED AND/OR COMPACTED AS DETERMINED BY THE ENGINEER.
4. VOLUME AND BEARING SURFACE OF 2,500 P.S.I. CONCRETE THRUST BLOCKS ARE BASED ON 150 P.S.I. WATER PRESSURE AND SOIL BEARING CAPACITY OF 2,000 P.S.F. ALL OTHER PRESSURE AND/OR SOIL CONDITIONS ARE SUBJECT TO THE ENGINEER'S REVIEW AND APPROVAL.
5. THRUST BLOCKS MAY BE OMITTED IF ALL JOINTS WITHIN MINIMUM DISTANCE GIVEN BY THE ABOVE TABLE ARE RESTRAINED AND PIPE IS BEDDED IN SAND. THE DISTANCES APPEARING IN THE TABLE ASSUME THAT THE PIPE BURIED AT LEAST 5-FEET DEEP AND THAT SOIL CONDITIONS ARE AS LISTED IN NOTE 4. THE INFORMATION IN THE TABLE IS BASED ON DIPRA'S "THRUST RESTRAINT FOR DUCTILE IRON PIPE" WHICH SHOULD BE CONSULTED IF THESE ASSUMPTIONS ARE NOT MET. SUBJECT TO THE CONDITIONS LISTED IN NOTE 4, A COMBINATION OF A SMALLER THRUST BLOCK AND A REDUCED LENGTH OF RESTRAINED PIPE IS ALLOWED PER THE FOLLOWING FORMULA:

$$\frac{\text{ACTUAL BEARING AREA OF BLOCK}}{\text{BEARING AREA REQUIRED BY TABLE}} + \frac{\text{ACTUAL RESTRAINED LENGTH OF PIPE}}{\text{RESTRAINED LENGTH REQUIRED BY TABLE}} \geq 1.1$$

6. THRUST BLOCKS ARE REQUIRED FOR ALL BENDS, TEES, PLUGS AND CAPS IN PIPE 4-INCH AND LARGER EXCEPT AS LISTED IN NOTE 5.
7. REGARDLESS OF SIZE OF THRUST BLOCKS ALL JOINTS AT BENDS, TEES, PLUGS AND CAPS MUST BE RESTRAINED.
8. RESTRAINED LENGTHS USED IN PLACE OF THRUST BLOCKS MAY NOT OVERLAP.
9. FIELD-LOCK GASKETS, MEGA-LUG AND UNIFLANGE COUPLINGS ARE THE ONLY APPROVED MEANS OF RESTRAINING PIPE.

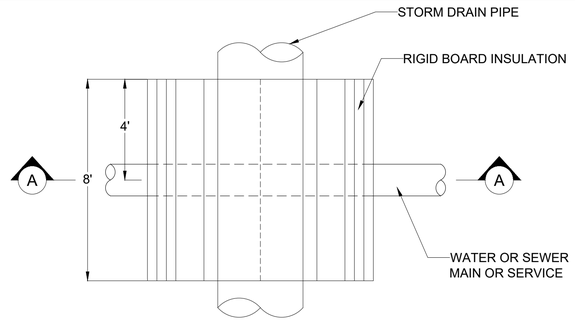
2 HORIZONTAL & CONCAVE UPWARD THRUST BLOCKS
C5.05 — SCALE: NTS



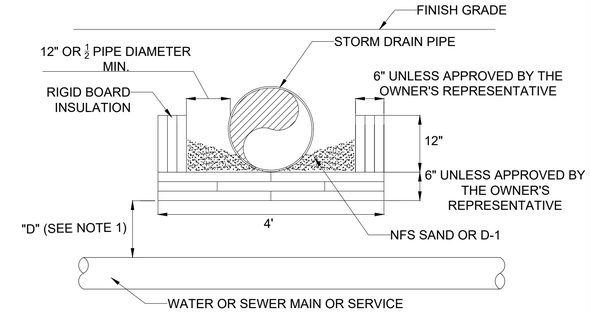
NOTES:

1. MAINLINE VALVES REQUIRE THRUST BLOCKS PER DETAIL ON THIS SHEET.
2. IF WATER MAIN IS MORE THAN 6' DEEP, USE 4" ID CAST IRON SOIL PIPE WITH TOP SECTION EJIW 8555 SLIDE (26T OR 16T) VALVE BOX.
3. THIS DETAIL APPLIES TO ALL MAINLINE VALVES AND WATER VALVES 4" IN DIAMETER OR GREATER.
4. NO MORE THAN (1) VALVE BOX PAVING RISER IS ALLOWED PER VALVE.
5. VALVE BOX COVER SHALL BE 5 ¼" DROP LID TYPE WITH 1" RAISED LETTERING (RECESSED FLUSH) AND (2) CLOSED PICK HOLES.

4 MAINLINE VALVE DETAIL
C5.05 — SCALE: NTS



PLAN VIEW

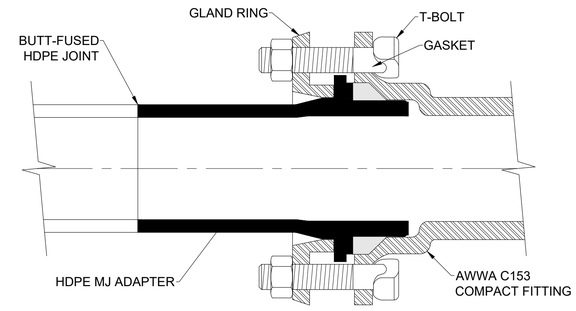


SECTION "A-A"

NOTES:

1. INSTALL INSULATION AS SHOWN WHEN "D" IS LESS THAN 5'-0" FOR WATER PIPE OR 3'-8" FOR SEWER PIPE. INSULATION SHALL COMPLY WITH SPECIFICATION SECTION 221116.
2. PIPE INSULATION SHALL BE 8'-0" IN LENGTH, CENTERED OVER EXISTING WATER OR SEWER PIPE.
3. PIPE INSULATION WITH R-FACTOR EQUAL TO RIGID BOARD MAY BE SUBSTITUTED IF APPROVED BY THE OWNER'S REPRESENTATIVE.
4. CROSSING SHALL BE PROTECTED WITH A MINIMUM 6" OF INSULATION BOARDS WITH A 12" OVERLAP AS SHOWN.

3 HORIZONTAL & CONCAVE UPWARD THRUST BLOCKS
C5.05 — SCALE: NTS



5 TYPICAL HDPE MJ CONNECTION TO DI FITTING
C5.05 — SCALE: NTS

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ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

CONSTRUCTION DETAILS

DRAWN:	MSM	PROJECT NO.:	10849.22001
DESIGN:	MSM	SCALE:	AS SHOWN
CHECKED:	JMP	DATE:	01/27/2023
DRAWING NO.			C5.05
SHEET NO.		OF	

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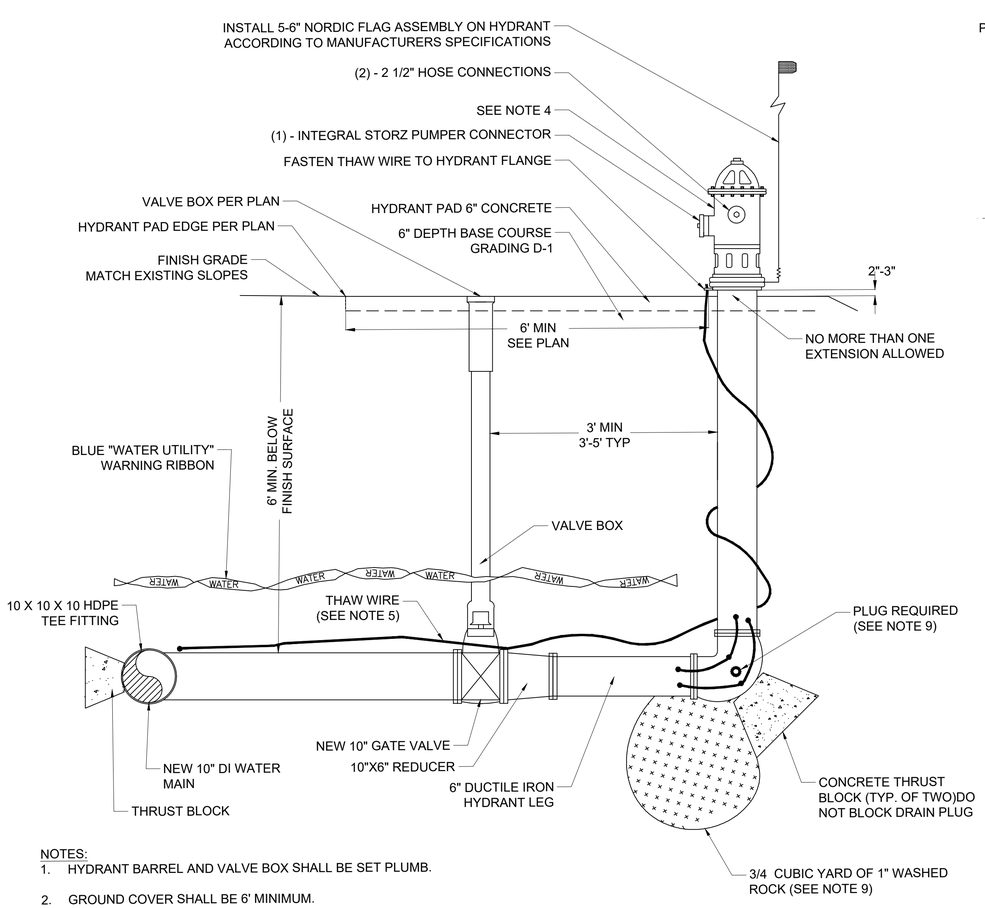
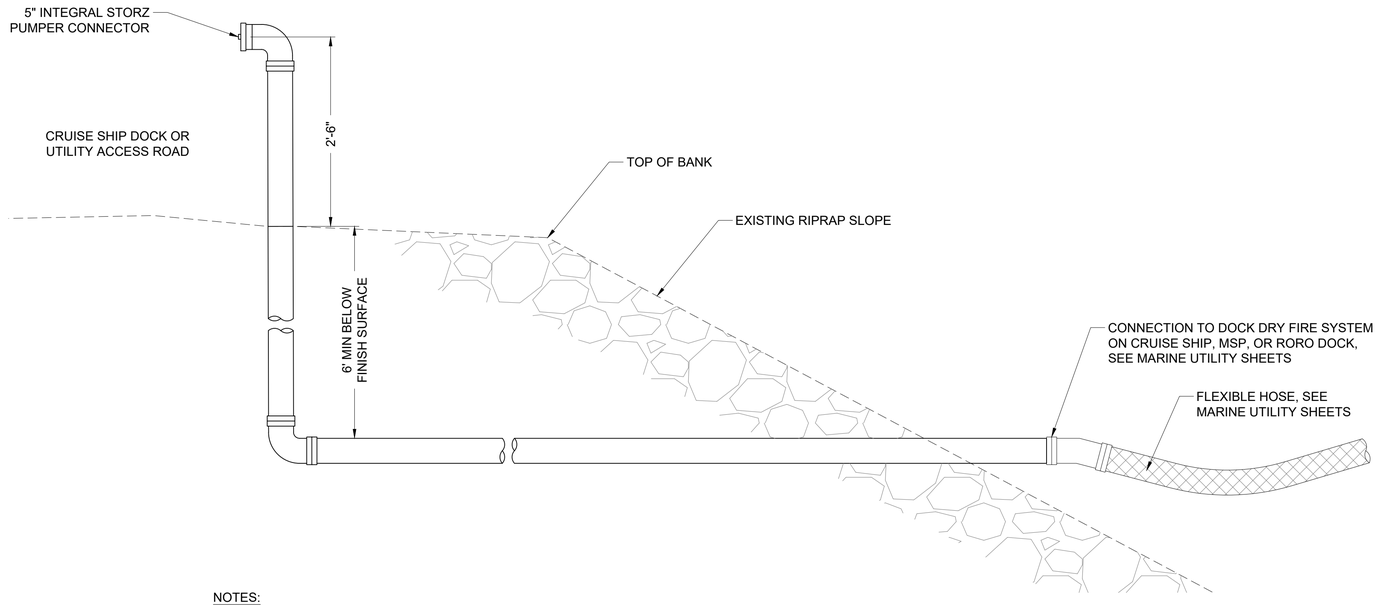


NOTES:

1. HYDRANT BARREL AND VALVE BOX SHALL BE SET PLUMB.
2. GROUND COVER SHALL BE 6' MINIMUM.
3. WATER PIPE SHALL BE 8" HDPE AND ALL CONNECTIONS SHALL BE MEGALUGGED OR CONNECTED WITH LOCKING FIELD GASKETS.
4. ALL HYDRANTS SHALL BE PAINTED CATERPILLAR YELLOW, AND THE NUMBER OF FEET TO VALVE SHALL BE PRINTED IN BLACK 1/2" BLOCK LETTERS JUST BELOW TOP BONNET. PORT CAPS SHALL BE COLOR CODED PER NFPA STANDARD 291.
5. THAW WIRE SHALL BE #2 COPPER WITH TYPE THW INSULATION. THAW WIRE SHALL BE BOLTED OR CAD WELDED TO THE TEE AT THE MAIN. CONTINUITY STRAPS ARE REQUIRED ON 6" DIP.
6. HYDRANT SHALL BE MUELLER CENTURION 200 OR 250 WITH INTEGRAL STORZ PUMPER CONNECTION OR APPROVED EQUAL.
7. THIS DETAIL TO BE USED FOR ALL HYDRANTS AND BLOW-OFFS.
8. FIRE HYDRANT TO THE VALVE SHALL BE TESTED TO A MINIMUM OF 200 PSI FOR TWO (2) HOURS SPECIFICATION SECTION 02601 ARTICLE 3.5 PARAGRAPH B 2.
9. WATER DEPARTMENT SHALL DETERMINE FOR EACH HYDRANT INSTALLATION IF HYDRANT PLUGS SHALL BE REMOVED FOR SELF DRAINING. DO NOT BLOCK PLUG WITH THRUST BLOCK.

1 C5.06 **FIRE HYDRANT DETAIL**
SCALE: NTS



NOTES:

1. PROVIDE CLEAR AREA AROUND EACH STANDPIPE FOR EMERGENCY OPERATIONS STAGING AREA. AREA SHALL CONFORM TO NFPA 303.
2. AN APPROVED SIGN READING "FIRE EQUIPMENT STAGING AREA - KEEP CLEAR" SHALL BE PROVIDED AT EACH STAGING AREA.
3. PIPE MATERIAL SHALL CONFORM TO NFPA 14.

2 C5.06 **STANDPIPE SECTION**
SCALE: NTS

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ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

CONSTRUCTION DETAILS

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CHECKED: JMP	DATE: 01/27/2023
DRAWING NO.	**C5.06**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 26, 2023 - 8:51am Micki.Minsch Layout: C5.06
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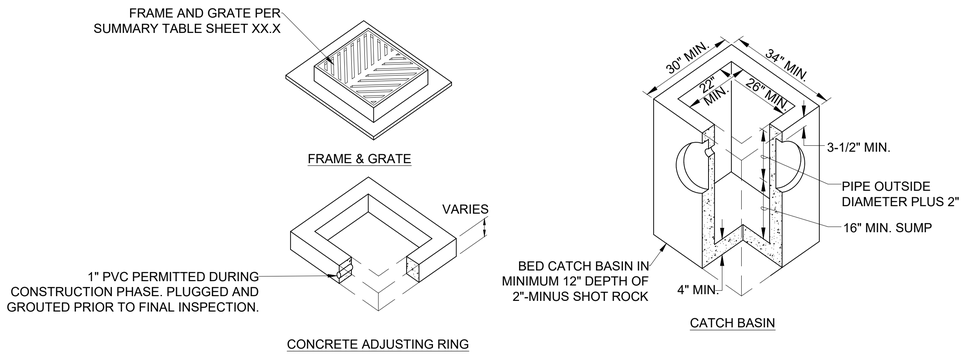
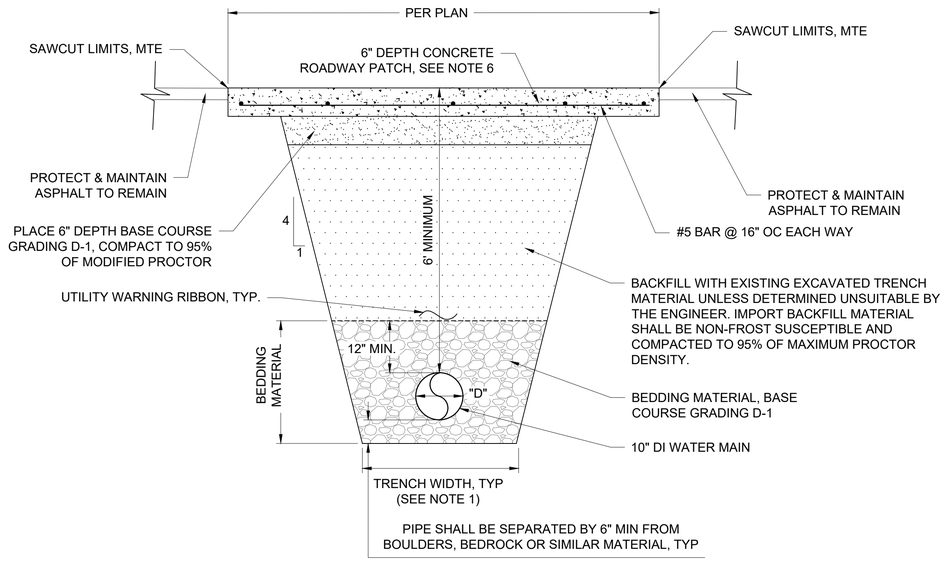


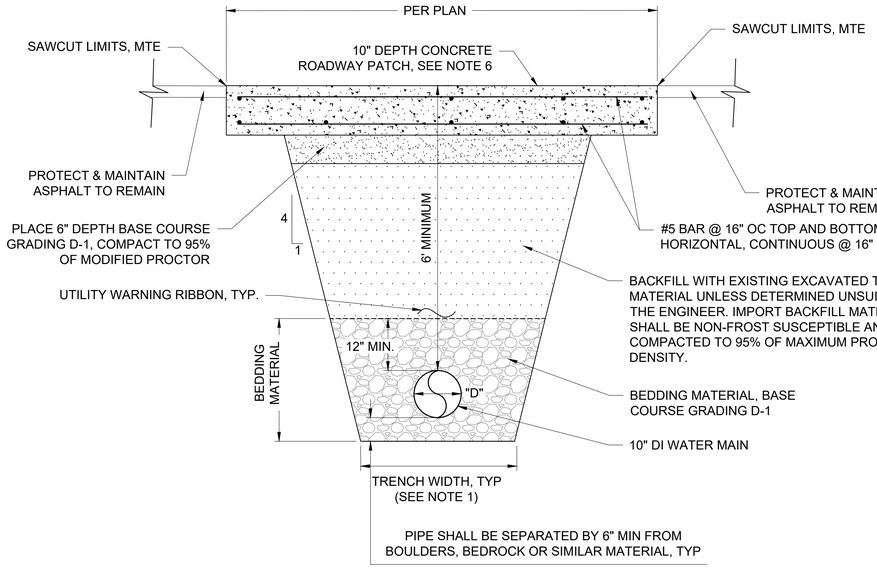
NOTES:

1. ALL JOINTS BETWEEN SECTIONS AND BETWEEN FRAME AND CONCRETE SECTIONS SHALL BE GROUTED INSIDE AND OUTSIDE.
2. ENTIRE KNOCKOUT IS TO BE REMOVED AND SEALED SHUT AROUND PIPE. ALL PIPES ARE TO EXTEND MIN. 1" AND MAX. 3" INTO CATCH BASIN.
3. FRAME AND GRATE SHALL BE DUCTILE IRON. FRAME MAY BE CAST INTO THE TOP UNIT OR PLACED OVER THE OPENING AS APPROVED BY THE ENGINEER. FRAME AND GRATE MUST BE OF A TYPE THAT WILL NOT CREATE A HAZARD FOR BICYCLE TRAFFIC.
4. CATCH BASIN SHALL MEET HIGHWAY STANDARD-20 LOAD REQUIREMENTS.
5. MINIMUM STEEL SHALL BE SPECIFIED BY ASTM C-478-69.
6. MINIMUM SUMP DEPTH SHALL BE 16".
7. ADJUSTING RING SHALL BE THE SAME SIZE AS THE CATCH BASIN.
8. NO BRICKS, WOOD OR OTHER MATERIALS PERMITTED FOR ADJUSTING GRADE, SOLID RISER OR FORMED AND FILLED WITH CONCRETE.

1 C5.07 **STORM DRAIN CATCH BASIN TYPE III**
SCALE: NTS



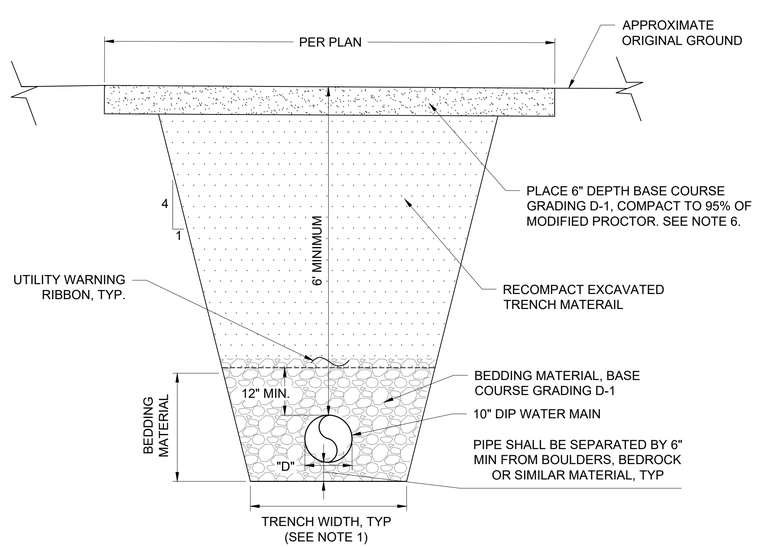
2 C5.07 **PIPE TRENCH DETAIL - 6" CONCRETE**
SCALE: NTS



3 C5.07 **PIPE TRENCH DETAIL - 10" CONCRETE**
SCALE: NTS

TYPICAL SECTION NOTES:

1. MINIMUM TRENCH WIDTH SHALL BE NOMINAL DIAMETER ("D") PLUS 2'.
2. BEDDING AND BACKFILL SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY AND THROUGHOUT THE DEPTH OF EACH LIFT. EXISTING MATERIAL FROM THE TRENCH SHALL BE USED AS BACKFILL UNLESS DETERMINED UNSUITABLE BY THE ENGINEER. LIFT DEPTH SHALL BE 12" MAXIMUM. ADDITIONAL DEPTH UP TO 18" MAXIMUM MAY BE APPROVED BY THE OWNER'S REPRESENTATIVE.
3. CONTRACTOR TO UTILIZE A TRENCH BOX OR SIMILAR APPROVED SHORING SYSTEM DURING UNDERGROUND WATER UTILITY INSTALLATION WORK TO MINIMIZE UNDERMINING OF EXISTING PAVEMENT, CONCRETE SIDEWALKS, AND SLOUGHING OF EXISTING SAND & GRAVEL ROADWAY EMBANKMENT MATERIAL. PAVEMENT SAWCUT WIDTHS SHOWN ARE A MAXIMUM.
4. CONTRACTOR TO CONFORM WITH CURRENT OSHA REGULATIONS FOR UTILITY TRENCHING.
5. EXISTING ASPHALT PAVEMENT ON THE ACCESS ROAD IS APPROXIMATELY 2"-3" THICK.
6. EXISTING GRAVEL SURFACED AREAS TO BE RESURFACED WITH 6" DEPTH BASE COURSE GRADING D-1 AT ALL DISTURBED AREAS FROM NEW WATER MAIN PIPE. PLACE, GRADE AND COMPACT D-1 TO ACHIEVE A LEVEL SURFACE AND ENSURE POSITIVE DRAINAGE.
7. REPLACE ALL PAINTED TRAFFIC MARKINGS ON THE ACCESS ROAD AND SIDEWALK WHERE REMOVED BY THE CONTRACTOR FOR TRENCHING AND PATCHING OPERATIONS PER ADOT&PF REQUIREMENTS.



4 C5.07 **PIPE TRENCH DETAIL - GRAVEL**
SCALE: NTS

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ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

CONSTRUCTION DETAILS

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SHEET NO.		OF	

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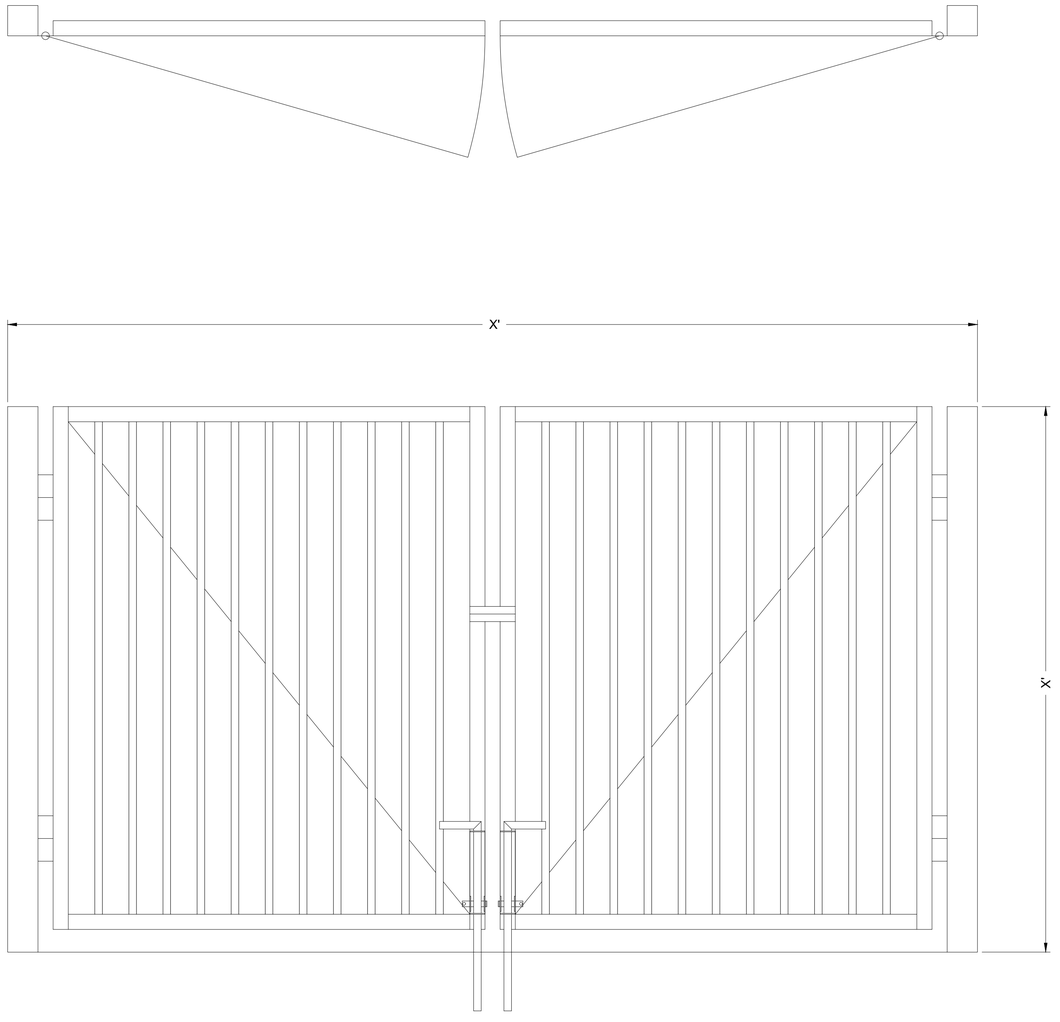
NOTES:
1.



1 C5.08 **DOUBLE SWING GATE DETAIL**
SCALE: NTS

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SKAGWAY, ALASKA

CONSTRUCTION DETAILS

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SHEET NO.	OF

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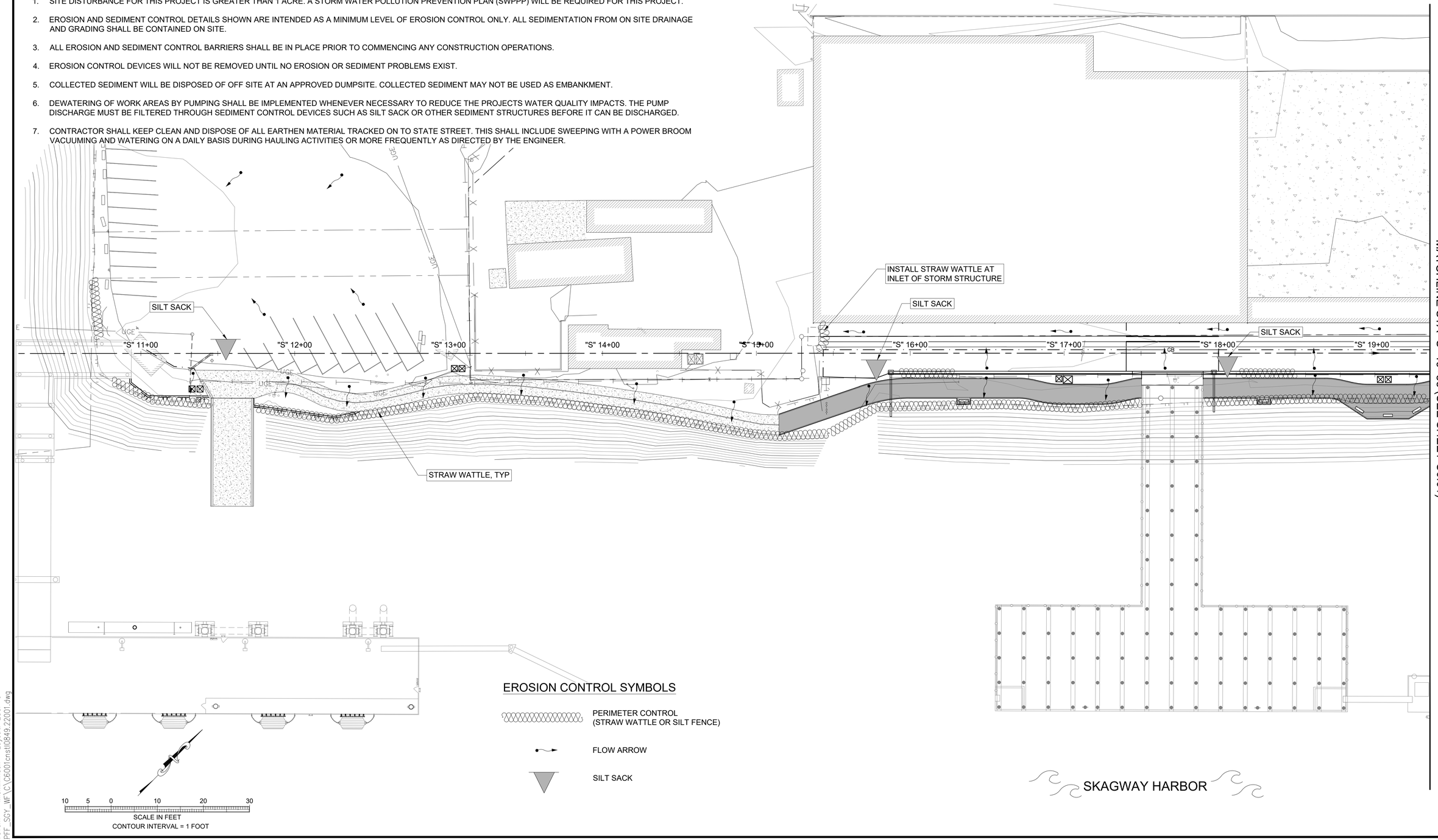
EROSION & SEDIMENT CONTROL NOTES:

1. SITE DISTURBANCE FOR THIS PROJECT IS GREATER THAN 1 ACRE. A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) WILL BE REQUIRED FOR THIS PROJECT.
2. EROSION AND SEDIMENT CONTROL DETAILS SHOWN ARE INTENDED AS A MINIMUM LEVEL OF EROSION CONTROL ONLY. ALL SEDIMENTATION FROM ON SITE DRAINAGE AND GRADING SHALL BE CONTAINED ON SITE.
3. ALL EROSION AND SEDIMENT CONTROL BARRIERS SHALL BE IN PLACE PRIOR TO COMMENCING ANY CONSTRUCTION OPERATIONS.
4. EROSION CONTROL DEVICES WILL NOT BE REMOVED UNTIL NO EROSION OR SEDIMENT PROBLEMS EXIST.
5. COLLECTED SEDIMENT WILL BE DISPOSED OF OFF SITE AT AN APPROVED DUMPSITE. COLLECTED SEDIMENT MAY NOT BE USED AS EMBANKMENT.
6. DEWATERING OF WORK AREAS BY PUMPING SHALL BE IMPLEMENTED WHENEVER NECESSARY TO REDUCE THE PROJECTS WATER QUALITY IMPACTS. THE PUMP DISCHARGE MUST BE FILTERED THROUGH SEDIMENT CONTROL DEVICES SUCH AS SILT SACK OR OTHER SEDIMENT STRUCTURES BEFORE IT CAN BE DISCHARGED.
7. CONTRACTOR SHALL KEEP CLEAN AND DISPOSE OF ALL EARTHEN MATERIAL TRACKED ON TO STATE STREET. THIS SHALL INCLUDE SWEEPING WITH A POWER BROOM VACUUMING AND WATERING ON A DAILY BASIS DURING HAULING ACTIVITIES OR MORE FREQUENTLY AS DIRECTED BY THE ENGINEER.



EROSION CONTROL SYMBOLS

PERIMETER CONTROL (STRAW WATTLE OR SILT FENCE)

FLOW ARROW

SILT SACK

MATCHLINE STA "S" 19+38 (SEE SHEET C6.01)

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ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA
EROSION & SEDIMENT CONTROL PLAN

DRAWN: MSM	PROJECT NO.:10849.22001
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SHEET NO.	OF

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EROSION & SEDIMENT CONTROL NOTES:

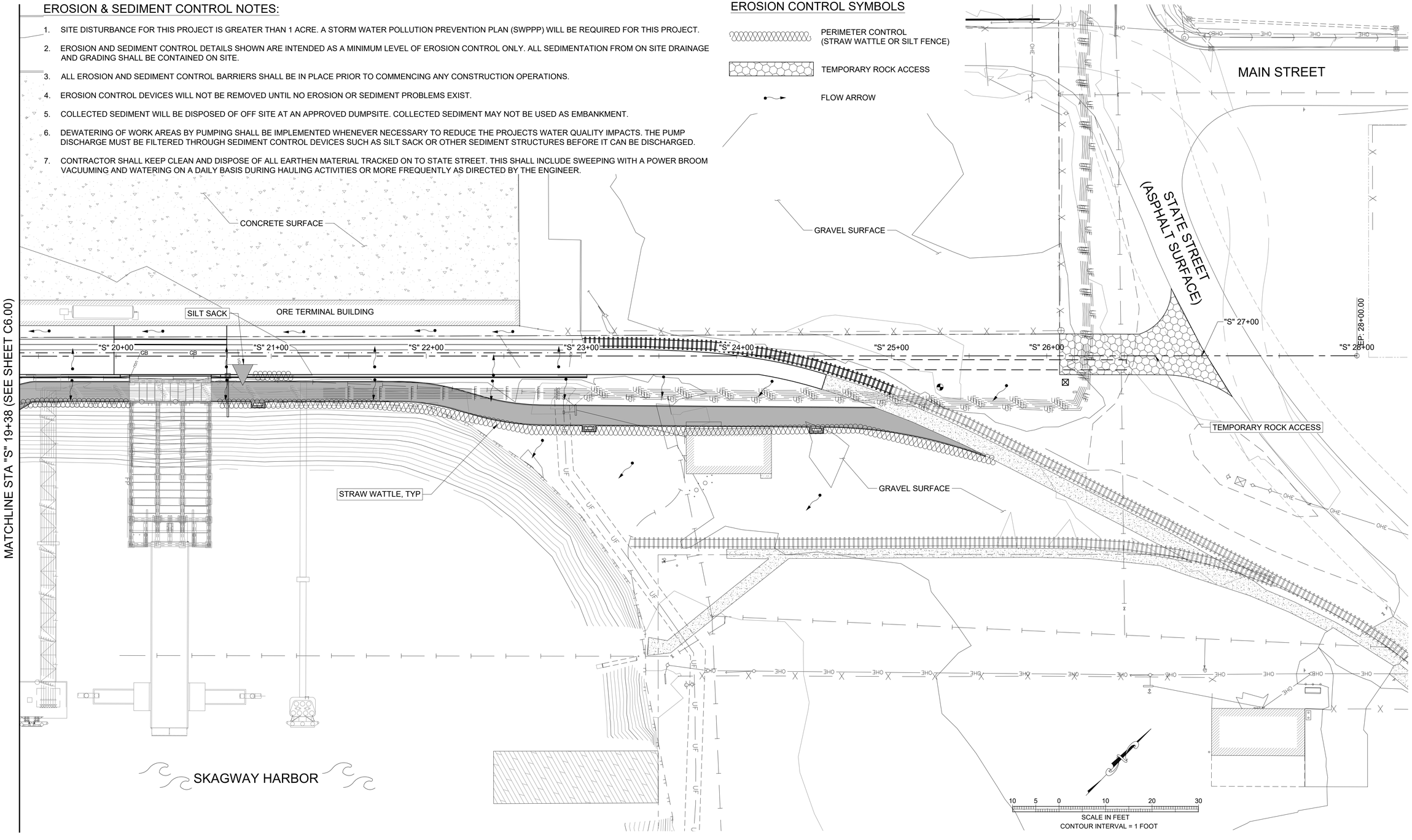
1. SITE DISTURBANCE FOR THIS PROJECT IS GREATER THAN 1 ACRE. A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) WILL BE REQUIRED FOR THIS PROJECT.
2. EROSION AND SEDIMENT CONTROL DETAILS SHOWN ARE INTENDED AS A MINIMUM LEVEL OF EROSION CONTROL ONLY. ALL SEDIMENTATION FROM ON SITE DRAINAGE AND GRADING SHALL BE CONTAINED ON SITE.
3. ALL EROSION AND SEDIMENT CONTROL BARRIERS SHALL BE IN PLACE PRIOR TO COMMENCING ANY CONSTRUCTION OPERATIONS.
4. EROSION CONTROL DEVICES WILL NOT BE REMOVED UNTIL NO EROSION OR SEDIMENT PROBLEMS EXIST.
5. COLLECTED SEDIMENT WILL BE DISPOSED OF OFF SITE AT AN APPROVED DUMPSITE. COLLECTED SEDIMENT MAY NOT BE USED AS EMBANKMENT.
6. DEWATERING OF WORK AREAS BY PUMPING SHALL BE IMPLEMENTED WHENEVER NECESSARY TO REDUCE THE PROJECTS WATER QUALITY IMPACTS. THE PUMP DISCHARGE MUST BE FILTERED THROUGH SEDIMENT CONTROL DEVICES SUCH AS SILT SACK OR OTHER SEDIMENT STRUCTURES BEFORE IT CAN BE DISCHARGED.
7. CONTRACTOR SHALL KEEP CLEAN AND DISPOSE OF ALL EARTHEN MATERIAL TRACKED ON TO STATE STREET. THIS SHALL INCLUDE SWEEPING WITH A POWER BROOM VACUUMING AND WATERING ON A DAILY BASIS DURING HAULING ACTIVITIES OR MORE FREQUENTLY AS DIRECTED BY THE ENGINEER.

EROSION CONTROL SYMBOLS

PERIMETER CONTROL (STRAW WATTLE OR SILT FENCE)

TEMPORARY ROCK ACCESS

FLOW ARROW



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ORE PENINSULA REDEVELOPMENT

SKAGWAY, ALASKA

EROSION & SEDIMENT CONTROL PLAN

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Plotted: Jan 26, 2023 - 8:51am Mick.Minsch Layout: ESCP 1
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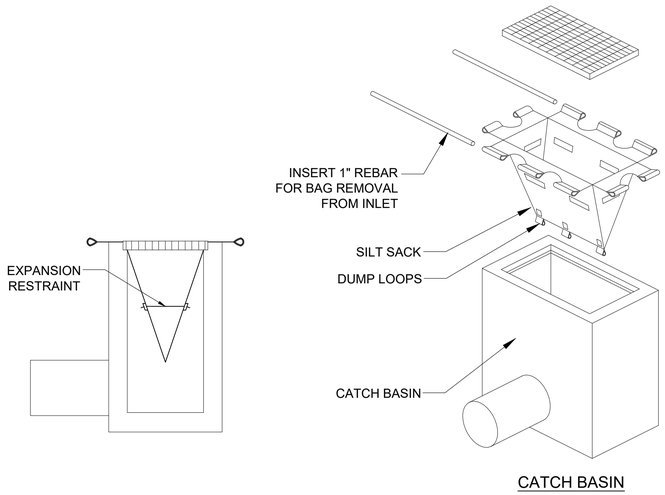
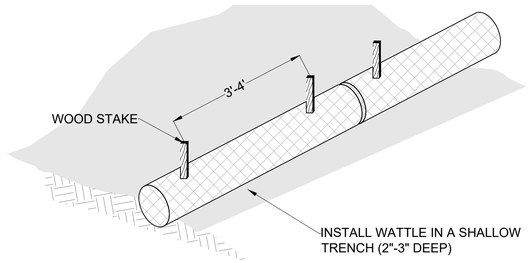
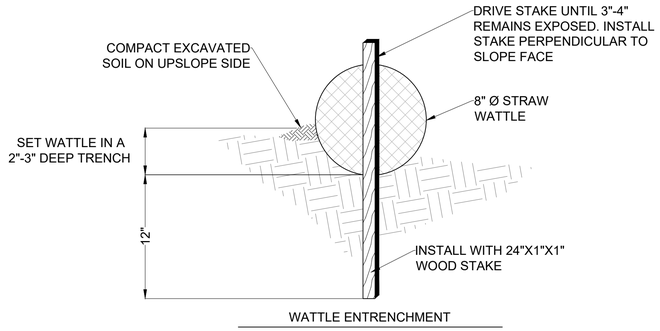


CATCH BASIN

1 SILT SACK DETAIL
C6.02 SCALE: NTS



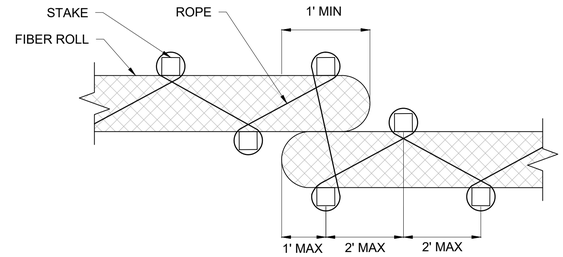
TYPICAL WATTLE ELEVATION VIEW



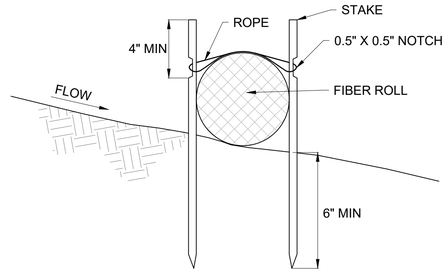
WATTLE ENTRENCHMENT

NOTES:
1. BEGIN AT THE LOCATION WHERE THE WATTLE IS TO BE INSTALLED BY EXCAVATING A 2"-3" DEEP x 9" WIDE TRENCH ALONG THE CONTOUR OF THE SLOPE. EXCAVATED SOIL SHOULD BE PLACED UP-SLOPE FROM THE ANCHOR TRENCH.
2. PLACE THE WATTLE IN THE TRENCH SO THAT IT CONTOURS TO THE SOIL SURFACE. COMPACT SOIL FROM THE EXCAVATED TRENCH AGAINST THE WATTLE ON THE UPHILL SIDE. ADJACENT WATTLES SHOULD TIGHTLY ABUT EACH OTHER.
3. SECURE THE WATTLE WITH 24" STAKES EVERY 3-4' AND WITH A STAKE ON EACH END. STAKES SHOULD BE DRIVEN THROUGH THE MIDDLE OF THE WATTLE LEAVING AT LEAST 3-4" OF STAKE EXTENDING ABOVE THE WATTLE. STAKES SHOULD BE DRIVEN PERPENDICULAR TO SLOPE FACE.

2 STRAW WATTLE STAKE INSTALLATION DETAIL
C6.02 SCALE: NTS



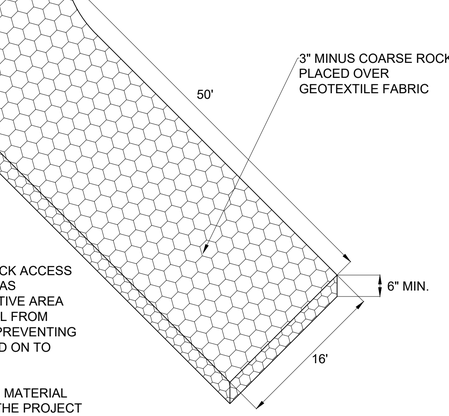
PLAN



SECTION

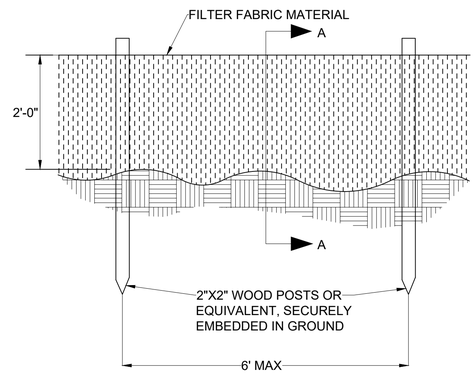
NOTES:
1. ALL-PURPOSE BIODEGRADABLE ROPE $\frac{3}{16}$ OR LARGER.
2. THE FIBER ROLL NETTING MAY BE UV-DEGRADABLE POLYPROPYLENE, BIODEGRADABLE BURLAP, JUTE OR COIR. THE FILLINGS MAY BE STRAW, FLAX, RICE, OR COCONUT FIBER. MINIMUM DIAMETER OF 6 INCHES.
3. STAKES ARE TO BE 1-INCH BY 1-INCH WOODEN STAKES 24 INCHES LONG (18 INCHES IF SOILS ARE ROCKY) OR $\frac{3}{8}$-INCH REBAR WITH SAFETY CAPS.
4. PLACE FIBER ROLLS PERPENDICULAR TO FLOW AND PARALLEL TO THE SLOPE CONTOUR.
5. AT THE END OF THE ROLL, TURN THE END UPSLOPE TO PREVENT RUN-OFF FROM GOING AROUND THE ROLL END.
6. REMOVE ACCUMULATED SEDIMENT UPSLOPE OF THE ROLL BEFORE IT REACHES ONE-HALF THE DISTANCE BETWEEN THE TOP OF THE FIBER ROLL AND THE GROUND SURFACE.

3 STRAW WATTLE ROPE INSTALLATION DETAIL
C6.02 SCALE: NTS

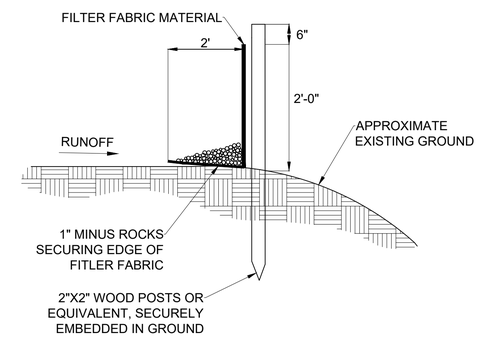


NOTES:
1. MAINTENANCE OF TEMPORARY ROCK ACCESS SHALL INCLUDE REPLACING ROCK AS REQUIRED TO MAINTAIN AN EFFECTIVE AREA FOR SHEDDING EARTHEN MATERIAL FROM CONSTRUCTION EQUIPMENT AND PREVENTING MATERIAL FROM GETTING TRACKED ON TO STATE STREET.
2. CLEAN AND REMOVE ALL TRACKED MATERIAL (MUD, SILT, DEBRIS, ETC.) OFF OF THE PROJECT SITE DAILY AND DISPOSE OF MATERIAL AT AN APPROVED DISPOSAL LOCATION.
3. TEMPORARY ROCK ACCESS APPROACHES SHALL BE INSTALLED AS SHOWN ON THE EROSION AND SEDIMENT CONTROL PLAN OR AS DIRECTED BY THE ENGINEER.

4 TEMPORARY ROCK ACCESS DETAIL
C6.02 SCALE: NTS



ELEVATION VIEW



SECTION "A-A"

5 SILT FENCE DETAIL
C6.02 SCALE: NTS

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RESPEC
Juneau, AK
9109 Mendenhall Mall Rd. Ste. 4
Juneau, AK 99801
Phone: 907.780.6060
Fax: 907.586.3771
AECC163270

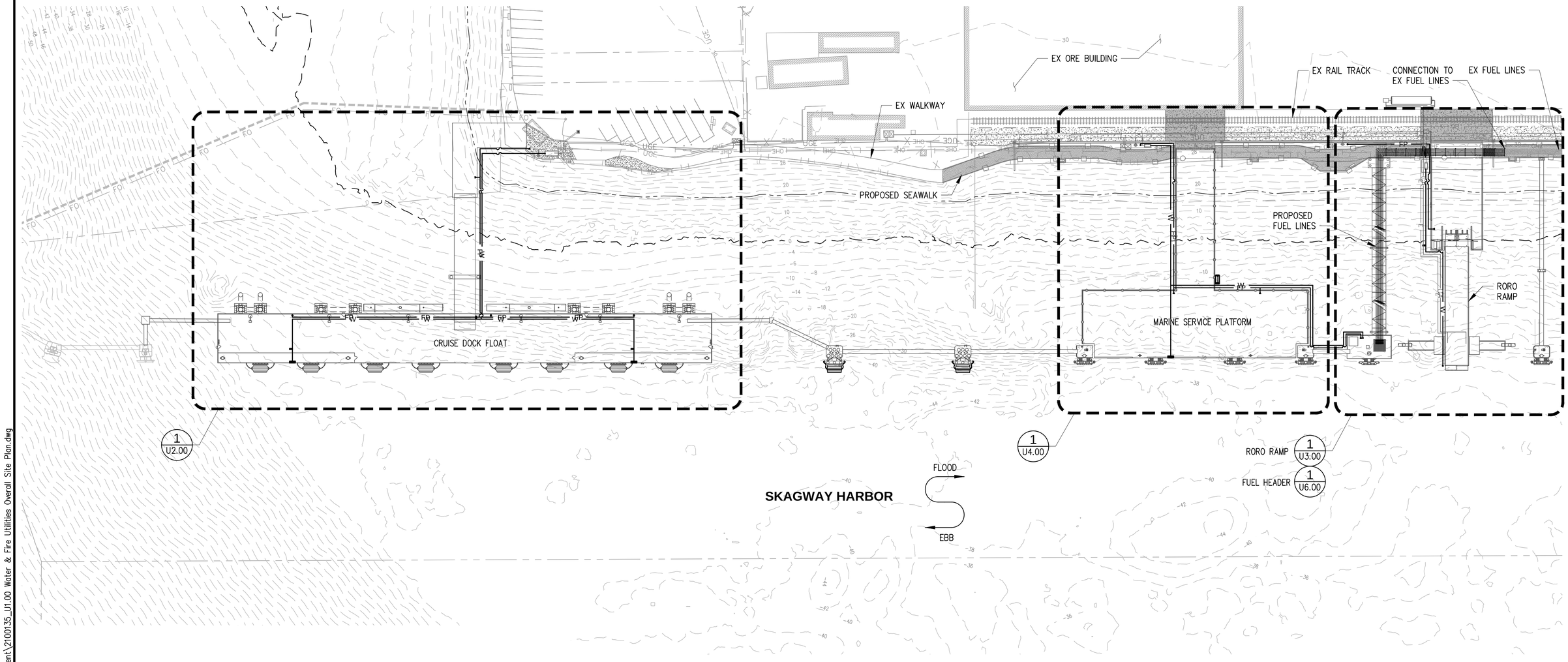
NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

EROSION & SEDIMENT CONTROL DETAILS

DRAWN: MSM	PROJECT NO.:10849.22001
DESIGN: MSM	SCALE: AS SHOWN
CHECKED: JMP	DATE: 01/27/2023
DRAWING NO.	C6.02
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION



NOTES

1. DOMESTIC WATER SYSTEM SHALL CONSIST OF VARIABLE DIAMETER HDPE PIPING AND HDPE ARCTIC PIPE WITH HEAT TRACE AND ALUMINUM JACKET. SEE U2.00, U3.00, AND U4.00 FOR DIAMETERS AND PIPE TYPES FOR EACH STRUCTURE.
2. FUEL SYSTEM SHALL TIE IN TO EXISTING FUEL LINES AND CONSIST OF 6"ø ASTM A53 GRADE B, SCHEDULE 40 STEEL PIPING, SEE MECHANICAL PLANS.
3. SEE UPLAND CIVIL PLANS FOR CONNECTION DETAILS TO UPLAND UTILITIES.
4. SEE ELECTRICAL PLANS FOR VESSEL AND DOCK POWER SERVICE LINES.

LEGEND

FP	DRY FIRE PROTECTION LINE
W	DOMESTIC WATER LINE
F	6" FUEL LINE

1 – OVERALL UTILITY SITE PLAN

SCALE: 1" = 50'

PROJECT NORTH (45.9°)

0 50 100 150

SCALE IN FEET

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NO.	DATE	BY	REVISION

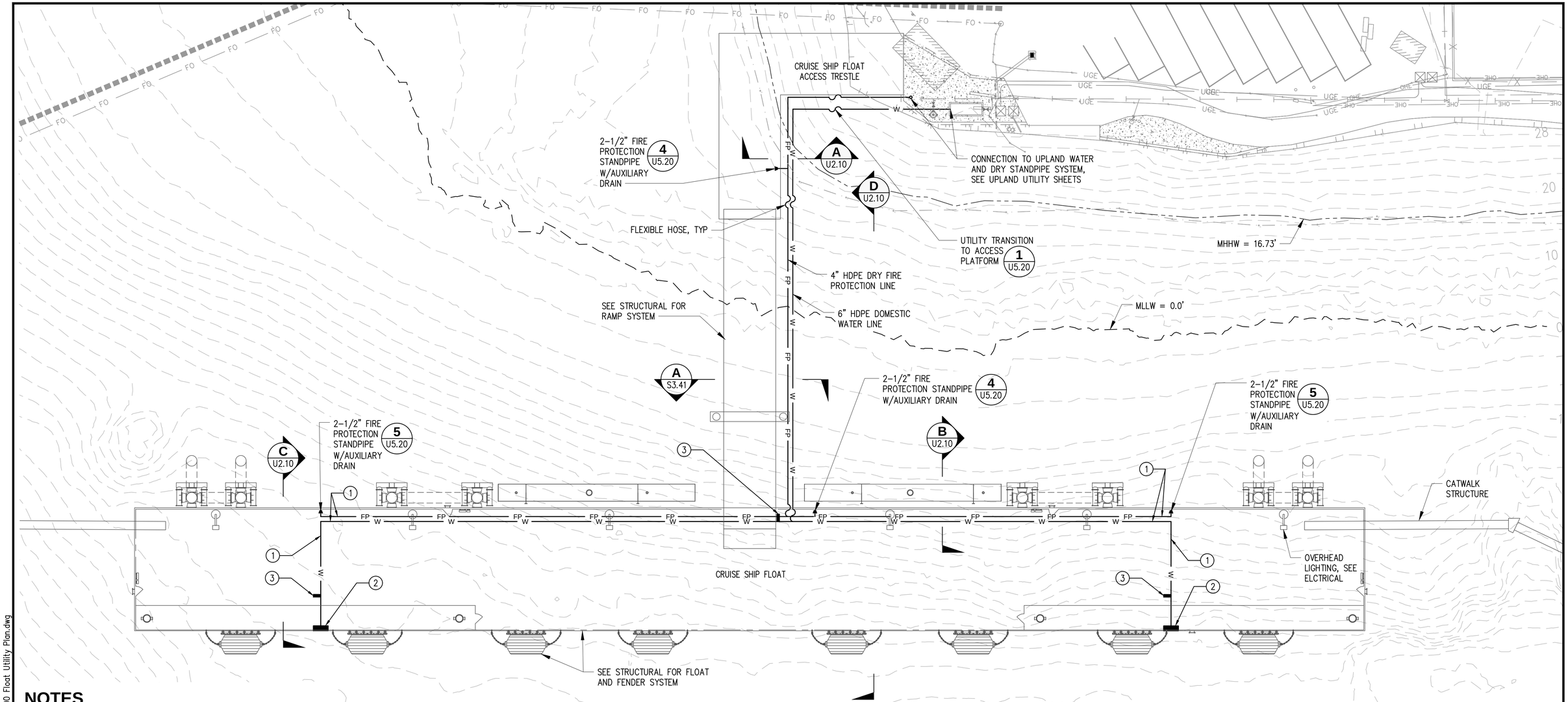
ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

OVERALL UTILITY PLAN

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: SK	DATE: 01/27/2023
DRAWING NO.	**U1.00**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 – 10:35am dyu Layout: U1.00
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_U1.00 Water & Fire Utilities Overall Site Plan.dwg



NOTES

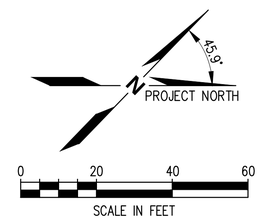
1. CONTRACTOR SHALL ALLOW FOR PIPE EXPANSION AND CONTRACTION AT PIPE SUPPORT LOCATIONS UNLESS NOTED OTHERWISE FOR RIGID PIPE LOCATIONS.
2. CONTRACTOR SHALL DESIGN FIRE SUPPRESSION SYSTEM TO WITHSTAND MINIMUM OF 2.5 KIPS OF THRUST.
3. MINIMUM FLOW TO EACH FIRE PROTECTION STANDPIPE IS 250 GALLONS PER MINUTE.

CONSTRUCTION NOTES

1. EXPANSION JOINT 6 U5.21
2. BULLRAIL WATER UTILITY VAULT 4 U5.21
3. FREEZE PROTECTION VALVE 5 U5.21

1 U1.00 CRUISE SHIP FLOAT UTILITY SITE PLAN

SCALE: 1" = 20'



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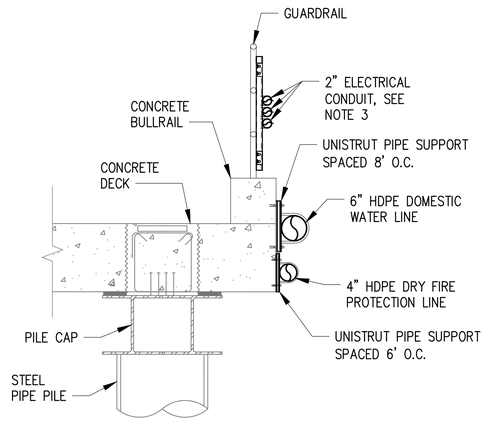
SKAGWAY, ALASKA

FLOAT UTILITY PLAN

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: SK	DATE: 01/27/2023
DRAWING NO.	**U2.00**
SHEET NO.	OF

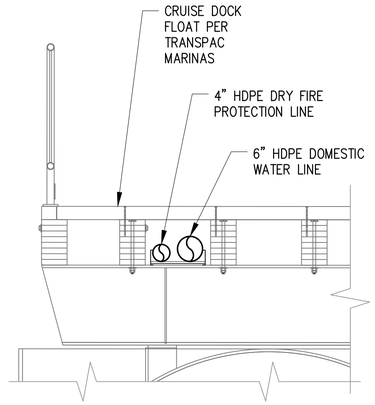
60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 - 10:36am dyu Layout: U2.00
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_U2.00 Float Utility Plan.dwg



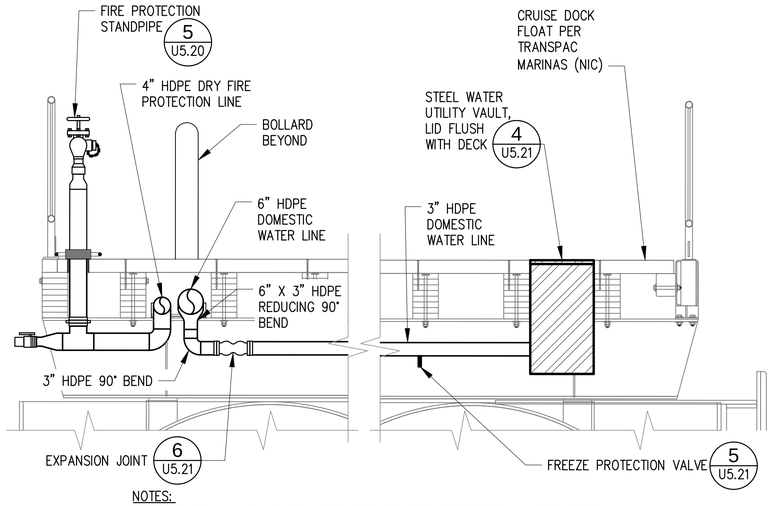
CRUISE DOCK FLOAT ACCESS TRESTLEUTILITY ROUTING SECTION

A U2.00 SCALE: NTS



CRUISE DOCK FLOAT UTILITY ROUTING SECTION

B U2.00 SCALE: NTS



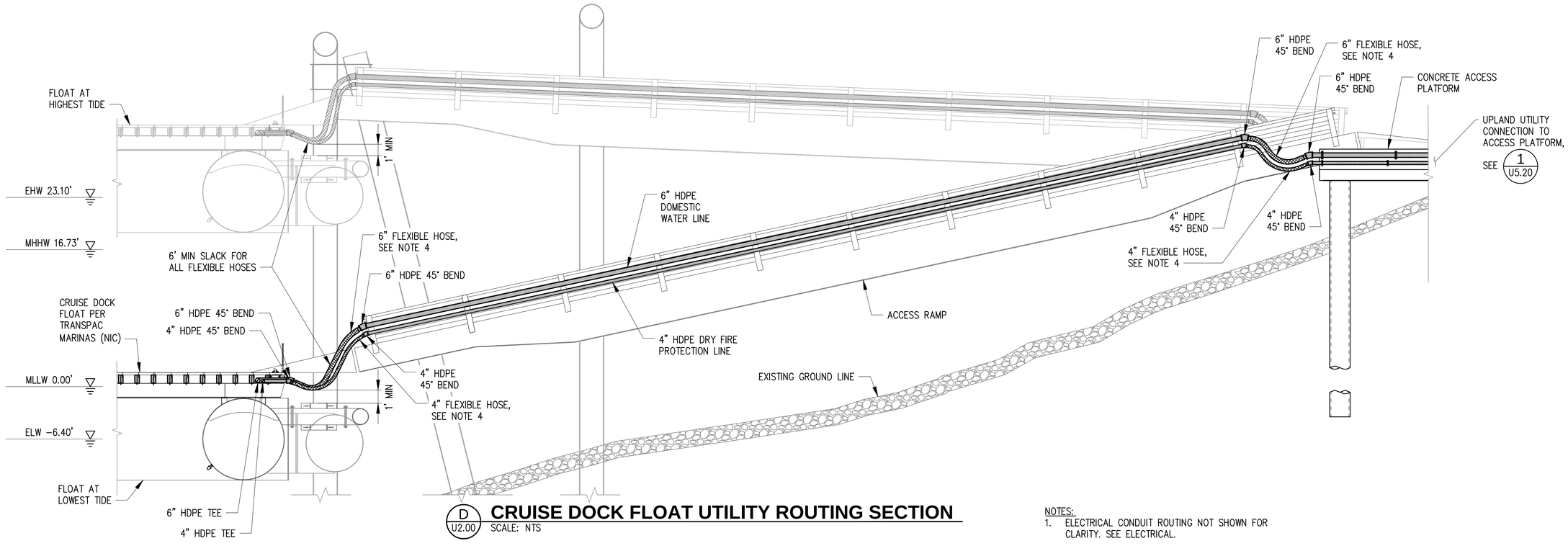
NOTES:
1. SEE DETAIL 4 ON SHEET U5.20 FOR DRY FIRE PROTECTION LINE ROUTING DETAILS TO FIRE PROTECTION STANDPIPE.

CRUISE DOCK FLOAT ROUTING TO UTILITY VAULT

C U2.00 SCALE: NTS

NOTES

1. ALL HDPE VALVES AND FITTINGS TO BE WELDED UNLESS OTHERWISE NOTED.
2. ALL UTILITY SUPPORTS AND HANGERS SHALL BE HOT DIPPED GALVANIZED.
3. FOR ELECTRICAL CONDUIT MATERIAL, ROUTING, AND CONNECTION DETAILS SEE ELECTRICAL.
4. CONTRACTOR TO FIELD ADJUST MOUNTS AND HOSE LENGTHS TO ENSURE:
   - 4.1. THE MANUFACTURER'S MINIMUM HOSE BEND RADIUS IS NOT EXCEEDED THROUGHOUT THE TIDE CYCLE.
   - 4.2. SUFFICIENT HOSE LENGTH IS AVAILABLE TO ACCOMMODATE THE FULL TIDAL RANGE WITH A MIN. SLACK OF 6' AND A MIN. CLEARANCE OF 1' BETWEEN HOSE AND CRUISE DOCK FLOAT.
   - 4.3. THE HOSES ARE MOUNTED TO MINIMIZE ENTANGLEMENT WITH THE FLOATS AND/OR EACH OTHER.



CRUISE DOCK FLOAT UTILITY ROUTING SECTION

D U2.00 SCALE: NTS

NOTES:
1. ELECTRICAL CONDUIT ROUTING NOT SHOWN FOR CLARITY. SEE ELECTRICAL.

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SKAGWAY, ALASKA

FLOAT UTILITY SECTION

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: SK	DATE: 01/27/2023
DRAWING NO.	**U2.10**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 - 10:36am dyu Layout: U2.10
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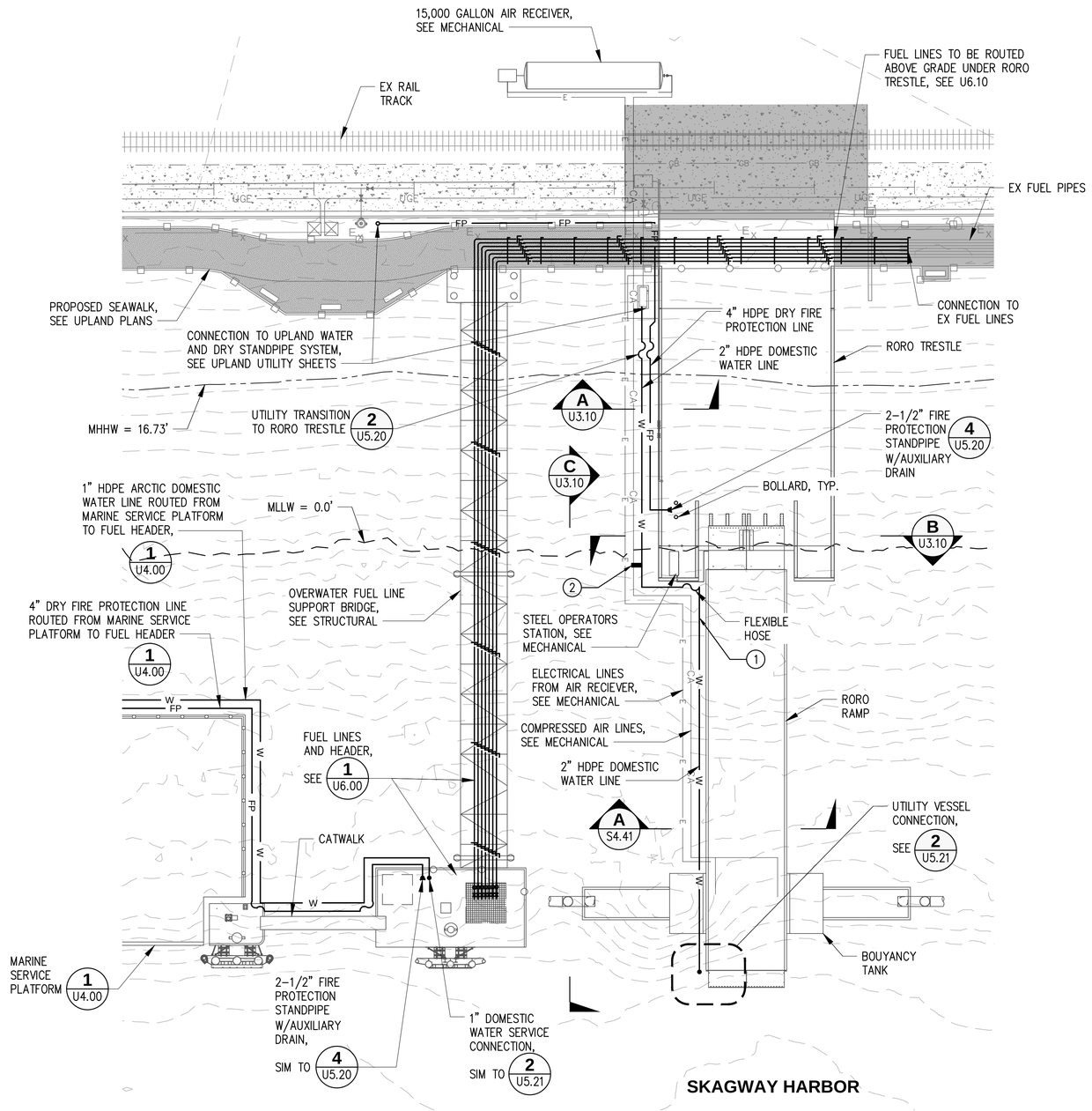


1 U1.00 RORO RAMP AND FUEL HEADER UTILITY SITE PLAN

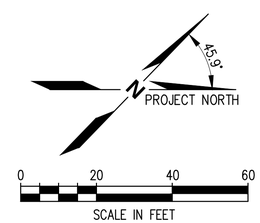
SCALE: 1" = 20'

NOTES

1. CONTRACTOR SHALL ALLOW FOR PIPE EXPANSION AND CONTRACTION AT PIPE SUPPORT LOCATIONS UNLESS NOTED OTHERWISE FOR RIGID PIPE LOCATIONS.
2. CONTRACTOR SHALL DESIGN FIRE SUPPRESSION SYSTEM TO WITHSTAND MINIMUM OF 2.0 KIPS OF THRUST.
3. MINIMUM FLOW TO EACH FIRE PROTECTION STANDPIPE IS 250 GALLONS PER MINUTE.
4. FOR DETAILED GRADING PLAN OF RORO ACCESS TRESTLE, REFER TO SHEET U3.20.

CONSTRUCTION NOTES

1. EXPANSION JOINT 6 U5.21
2. FREEZE PROTECTION VALVE 5 U5.21



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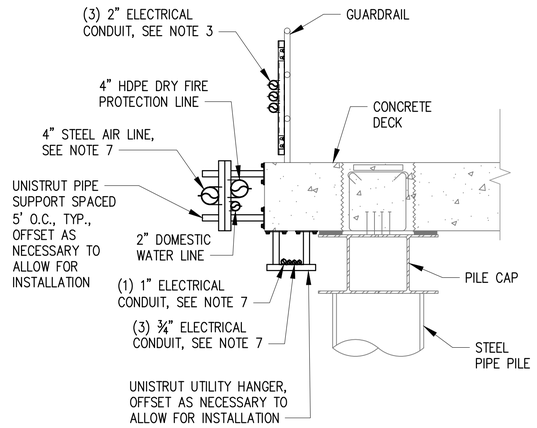
RORO RAMP UTILITY PLAN

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: SK	DATE: 01/27/2023
DRAWING NO.	U3.00
SHEET NO.	OF

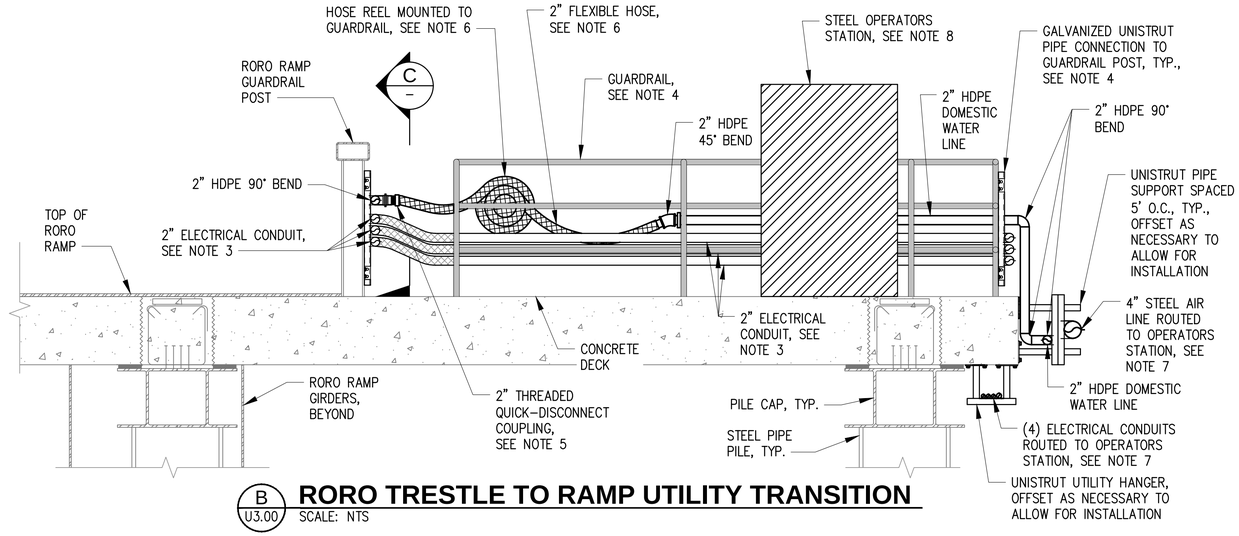
60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 – 10:36am dyu Layout: U3.00
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_U3.00 RoRo Ramp Utility Plan.dwg



RORO TRESTLE UTILITY ROUTING SECTION

A / U3.00 SCALE: NTS

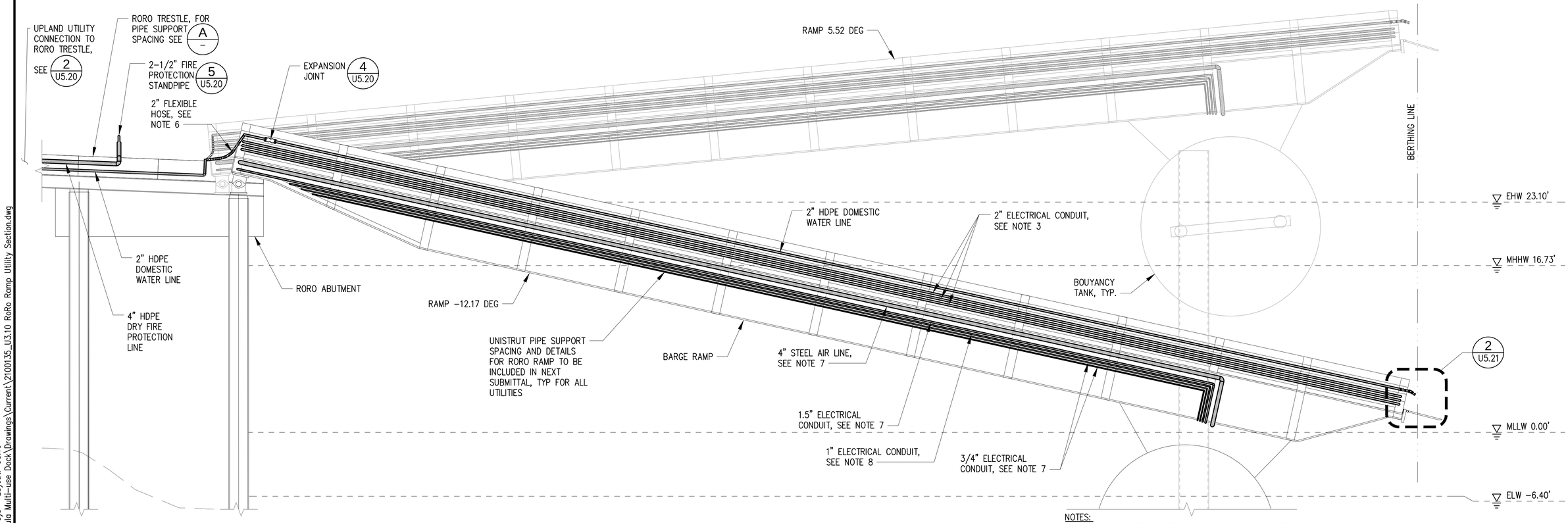


RORO TRESTLE TO RAMP UTILITY TRANSITION

B / U3.00 SCALE: NTS

NOTES

1. ALL HDPE VALVES AND FITTINGS TO BE WELDED UNLESS OTHERWISE NOTED.
2. ALL UTILITY SUPPORTS AND HANGERS SHALL BE HOT DIPPED GALVANIZED.
3. FOR ELECTRICAL CONDUIT MATERIAL, ROUTING, AND CONNECTION DETAILS SEE ELECTRICAL.
4. ELECTRICAL CONDUIT AND DOMESTIC WATER LINE TO BE ROUTED ON EXTERIOR GUARDRAIL WITH GALVANIZED UNISTRUT PIPE CONNECTION TO GUARDRAIL POSTS.
5. HOSE CONNECTION TO BE THREADED QUICK–DISCONNECT COUPLING TO ALLOW FOR HOSE DISCONNECTION AND STORAGE IN TIMES OF NON–USE.
6. CONTRACTOR TO FIELD ADJUST MOUNTS, HOSE REEL, AND HOSE LENGTH TO ENSURE:
   - 6.1. THE MANUFACTURER'S MINIMUM HOSE BEND RADIUS IS NOT EXCEEDED THROUGHOUT THE TIDE CYCLE AND RORO RAMP MOVEMENT.
   - 6.2. SUFFICIENT HOSE LENGTH IS AVAILABLE TO ACCOMMODATE THE FULL TIDAL RANGE AND RORO RAMP MOVEMENT WITH A MIN. SLACK OF 1' AT EXTREME LOW WATER.
   - 6.3. THE HOSE CAN BE PROPERLY STORED ON HOSE REEL WITHOUT ENTANGLEMENT OR TRIP HAZARDS WHEN DISCONNECTED FROM RORO RAMP DOMESTIC WATER LINE.
7. FOR COMPRESSED AIR SYSTEM AND HYDRAULICS SYSTEM ROUTING DETAILS, SEE MECHANICAL.



RORO RAMP UTILITY ROUTING SECTION

C / U3.00 SCALE: NTS

NOTES:
1. AIR AND ELECTRICAL TRANSITIONS FROM RORO TRESTLE TO RORO RAMP NOT SHOWN FOR CLARITY. SEE MECHANICAL AND ELECTRICAL.
2. STEEL UTILITY ENCLOSURE W/ CONTROL PANEL NOT SHOWN FOR CLARITY. SEE B / –

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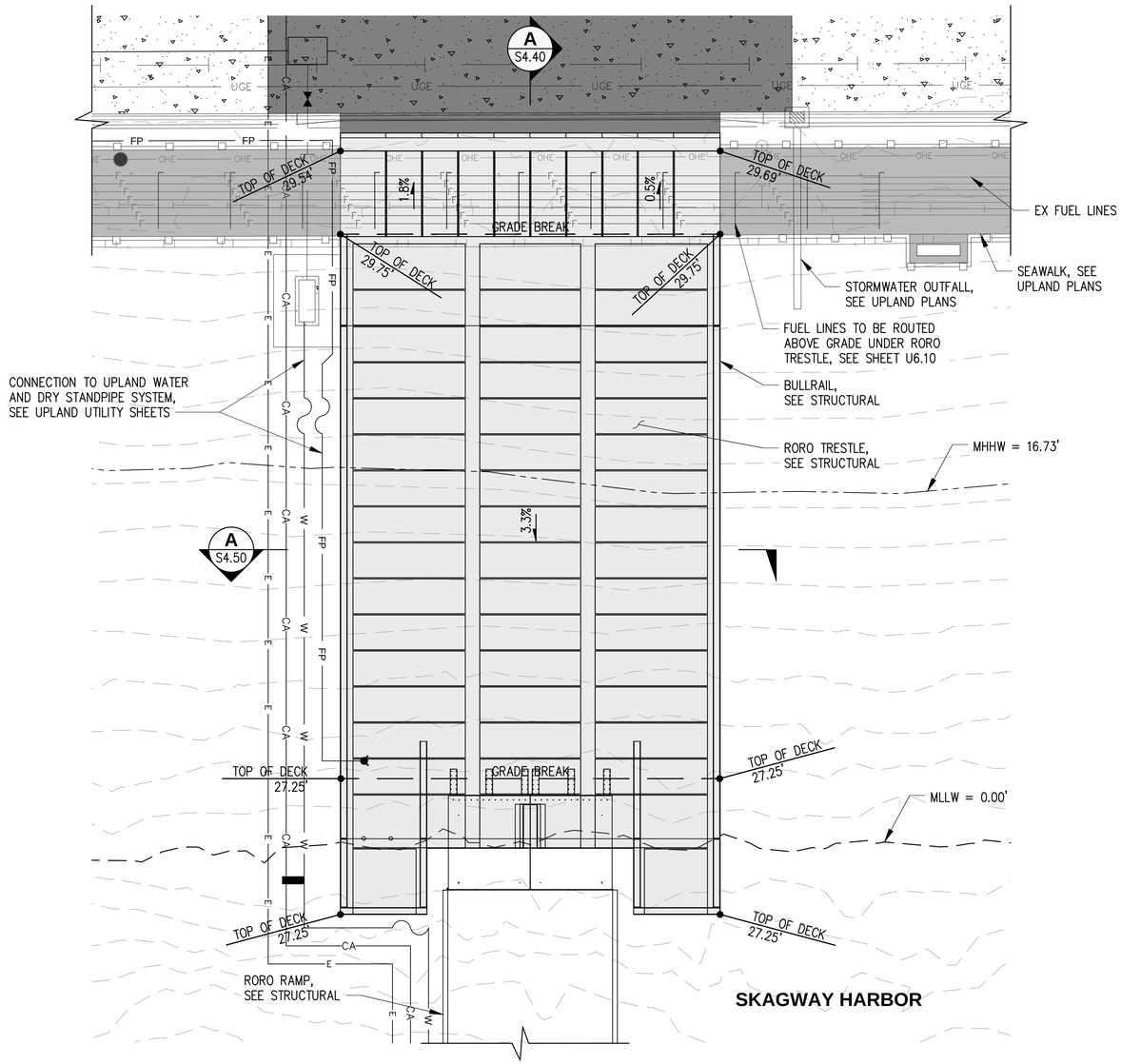
RORO RAMP UTILITY SECTION

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: SK	DATE: 01/27/2023
DRAWING NO.	**U3.10**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 – 10:42am dyu Layout: U3.10
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_U3.10 RoRo Ramp Utility Section.dwg



NOTES

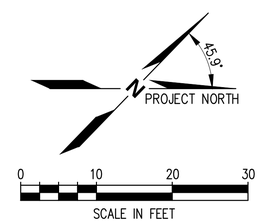
1. ALL SPOT ELEVATIONS REPRESENT TOP OF PAVEMENT.
2. STRAIGHT GRADES SHALL BE MAINTAINED BETWEEN SPOT ELEVATIONS UNLESS OTHERWISE NOTED.
3. SEE SHEET U3.00 FOR RORO RAMP UTILITY PLAN.

LEGEND

W	2" HDPE DOMESTIC WATER LINE
FP	4" HDPE DRY FIRE PROTECTION LINE
	GRADE BREAK
▲	2-1/2" FIRE PROTECTION STANDPIPE W/ AUXILARY DRAIN

RORO RAMP GRADING PLAN

SCALE: 1" = 10'



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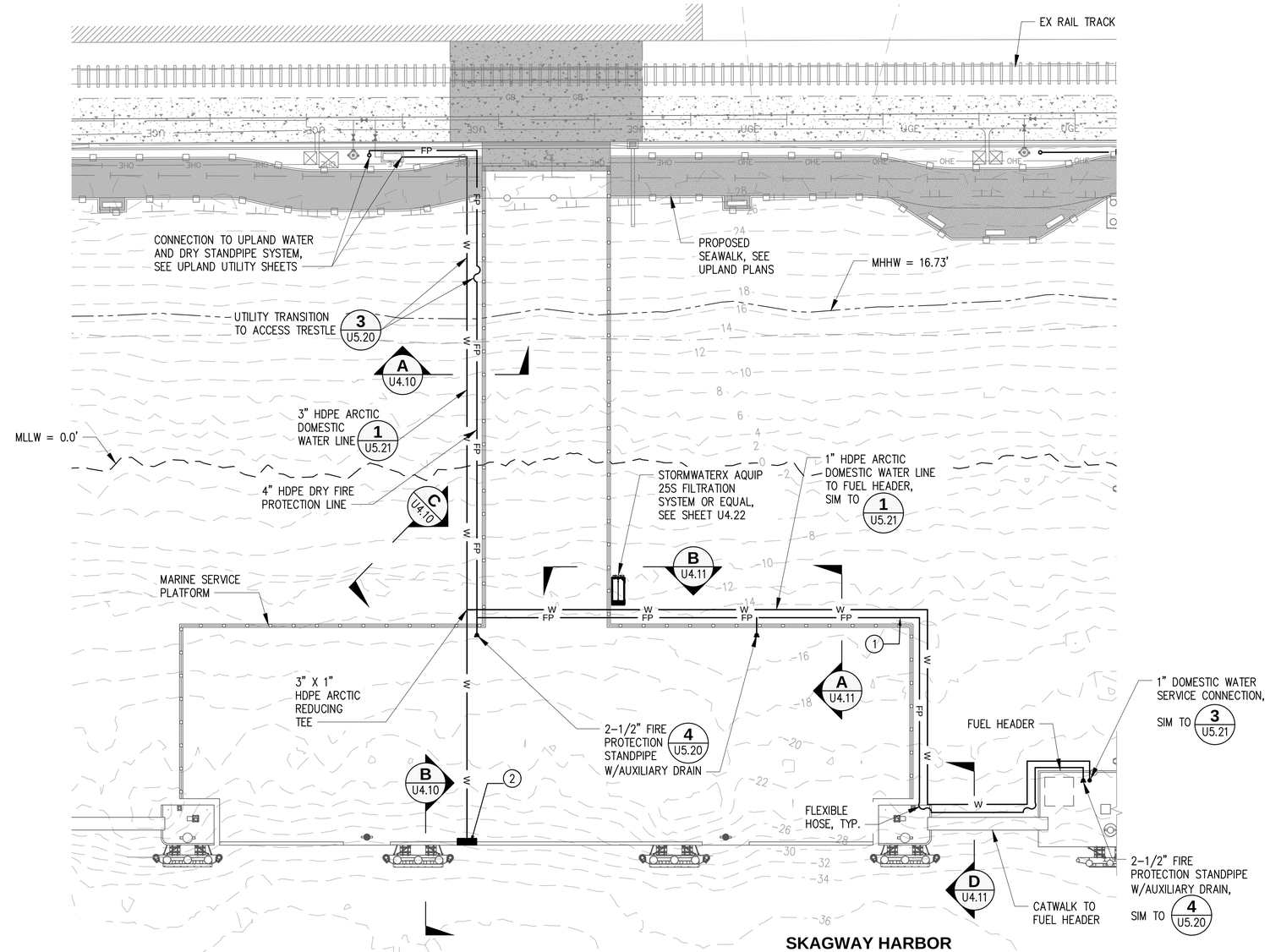
NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

RORO RAMP GRADING PLAN

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: BD	SCALE: AS SHOWN
CHECKED: SK	DATE: 01/27/2023
DRAWING NO.	**U3.20**
SHEET NO.	OF

Plotted: Jan 27, 2023 - 10:37am dyu Layout: U3.20
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_U3.20 RoRo Ramp Grading Plan.dwg



1 U1.00 MARINE SERVICES PLATFORM UTILITY SITE PLAN

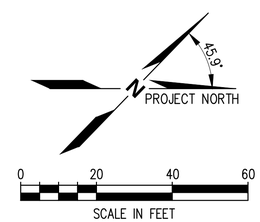
SCALE: 1" = 20'

NOTES

1. CONTRACTOR SHALL ALLOW FOR PIPE EXPANSION AND CONTRACTION AT PIPE SUPPORT LOCATIONS UNLESS NOTED OTHERWISE FOR RIGID PIPE LOCATIONS.
2. CONTRACTOR SHALL DESIGN FIRE SUPPRESSION SYSTEM TO WITHSTAND MINIMUM OF 2.2 KIPS OF THRUST.
3. MINIMUM FLOW TO EACH FIRE PROTECTION STANDPIPE IS 250 GALLONS PER MINUTE.
4. FOR DETAILED GRADING PLAN OF MARINE SERVICE PLATFORM, REFER TO SHEET U4.20.

CONSTRUCTION NOTES

1. EXPANSION JOINT 6 U5.21
2. BULLRAIL WATER UTILITY VAULT 3 U5.21



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SKAGWAY, ALASKA

MARINE SERVICES PLATFORM UTILITY PLAN

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: SK	DATE: 01/27/2023
DRAWING NO.	U4.00
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 - 10:37am dyu Layout: U4.00
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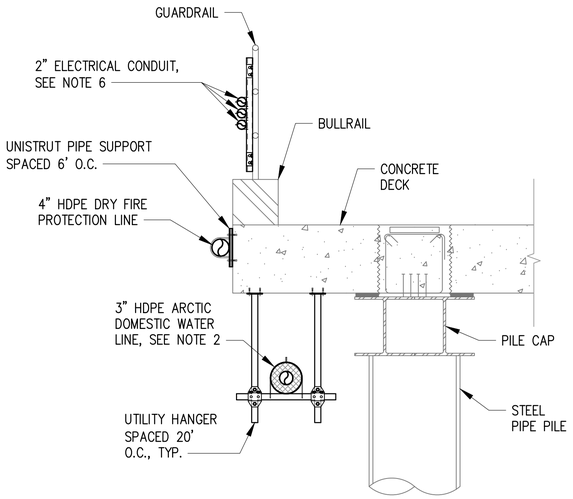
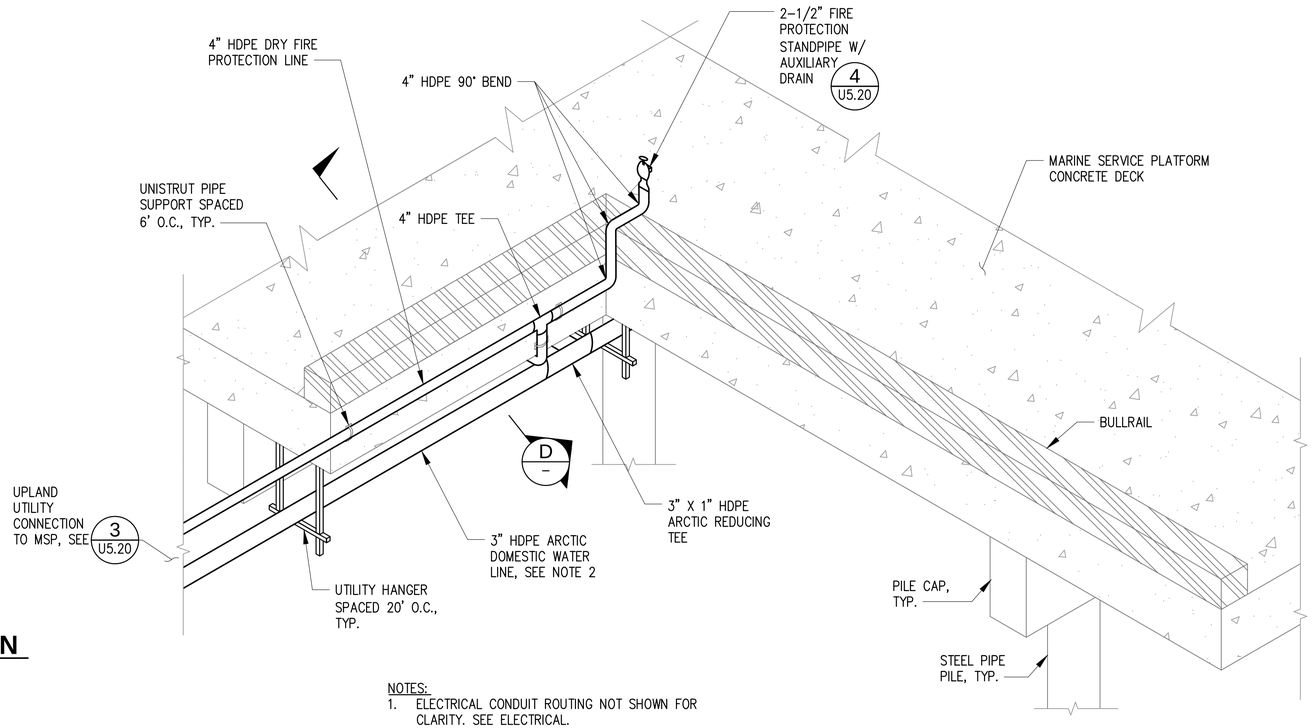


A U4.00 **MSP UTILITY ROUTING SECTION**
SCALE: NTS

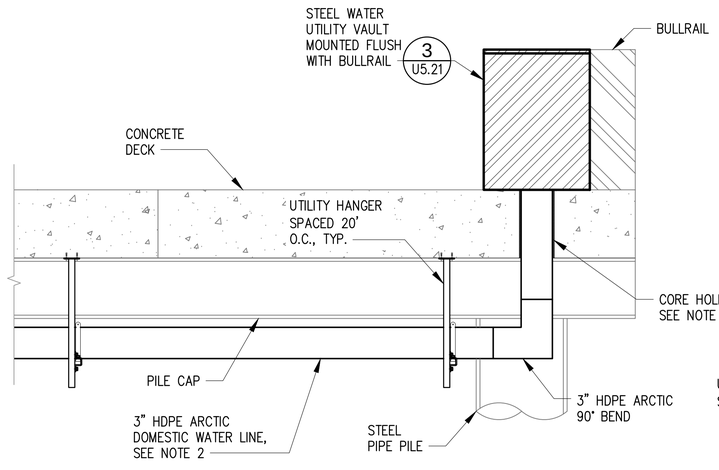


NOTES:
1. ELECTRICAL CONDUIT ROUTING NOT SHOWN FOR CLARITY. SEE ELECTRICAL.

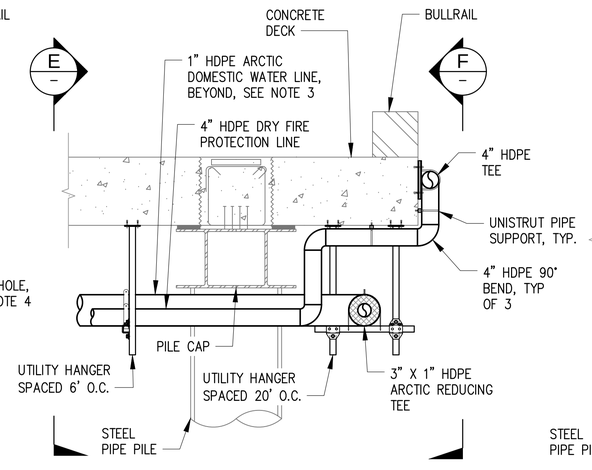
C U4.00 **UTILITY TRANSITION UNDER MSP ISOMETRIC SECTION**
SCALE: NTS

NOTES

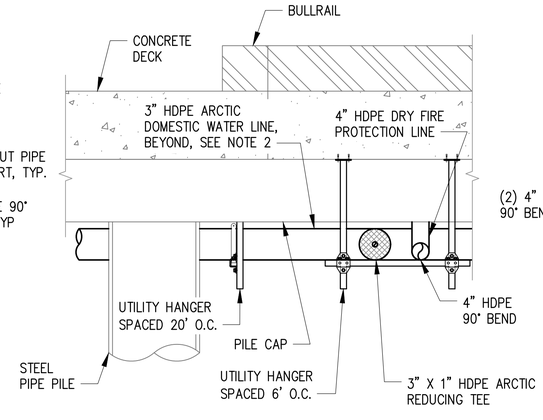
1. ALL HDPE VALVES AND FITTINGS TO BE WELDED UNLESS OTHERWISE NOTED.
2. DOMESTIC WATER PIPE ROUTED TO BULLRAIL WATER VAULT TO BE 3" DIAMETER HDPE WITH 8.25" DIAMETER ALUMINUM JACKET, INSULATION, AND HEAT TRACE. SEE DETAIL 1 ON SHEET U5.21.
3. DOMESTIC WATER PIPE ROUTED TO FUEL HEADER TO BE 1" DIAMETER HDPE WITH 8.25" DIAMETER ALUMINUM JACKET, INSULATION, AND HEAT TRACE. SIMILAR TO DETAIL 1 ON SHEET U5.21.
4. CORE HOLE DIAMETER TO BE 1" LARGER THAN PIPE DIAMETER. FILL ANNULAR SPACE BETWEEN PIPE AND CORE HOLE WALL WITH COMPRESSIBLE ETHAFOAM PAD.
5. ALL UTILITY SUPPORTS AND HANGERS SHALL BE HOT DIPPED GALVANIZED.
6. FOR ELECTRICAL CONDUIT MATERIAL, ROUTING, AND CONNECTION DETAILS SEE ELECTRICAL.



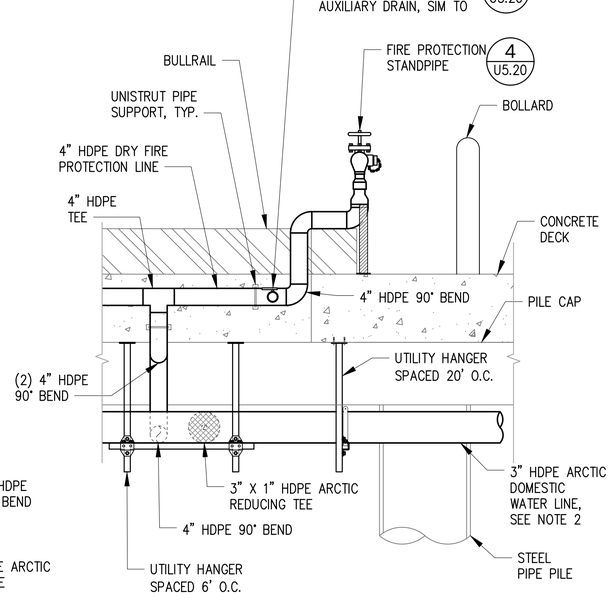
B U4.00 **MSP UTILITY ROUTING TO BULLRAIL**
SCALE: NTS



D – **SECTION**
SCALE: NTS



E – **SECTION**
SCALE: NTS



F – **SECTION**
SCALE: NTS

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NO.	DATE	BY	REVISION

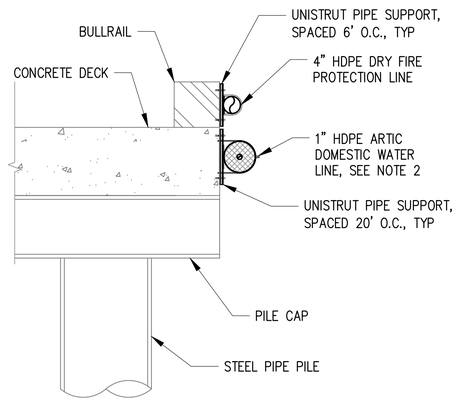
ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

MARINE SERVICES PLATFORM
UTILITY SECTION

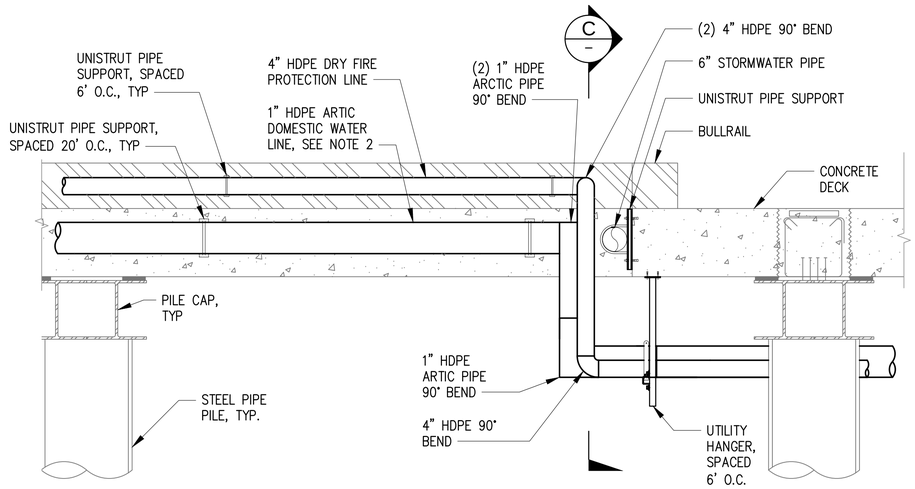
DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: SK	DATE: 01/27/2023
DRAWING NO.	**U4.10**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 – 10:37am dyu Layout: U4.10
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_U4.10 Marine Services Platform Utility Section.dwg



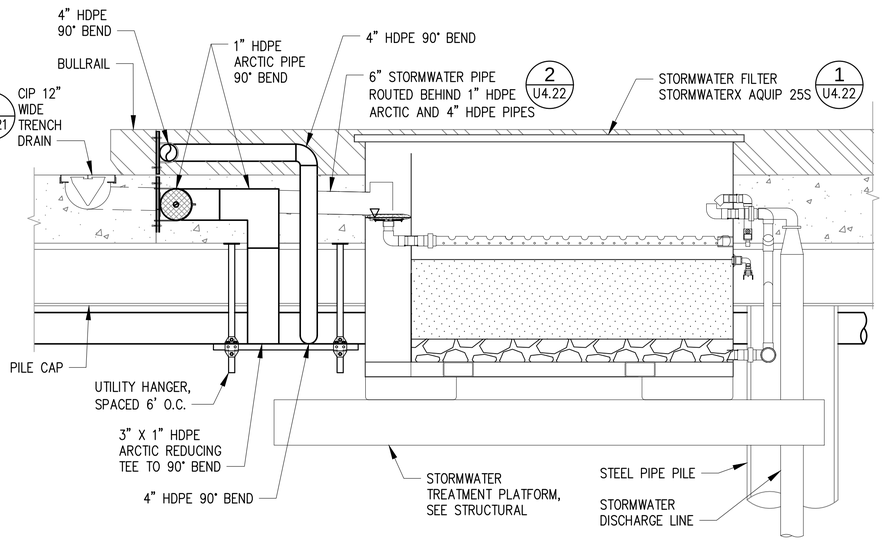
A U4.00 **MSP UTILITY ROUTING SECTION**
SCALE: NTS



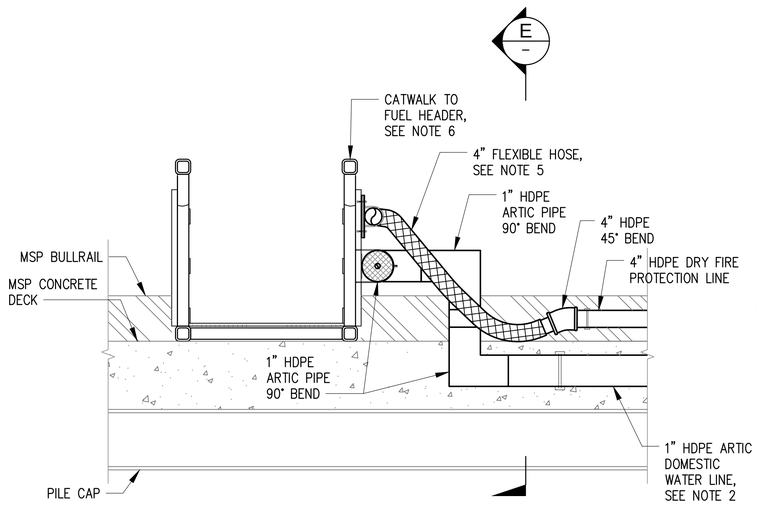
B U4.00 **MSP UTILITY ROUTING SECTION**
SCALE: NTS

NOTES

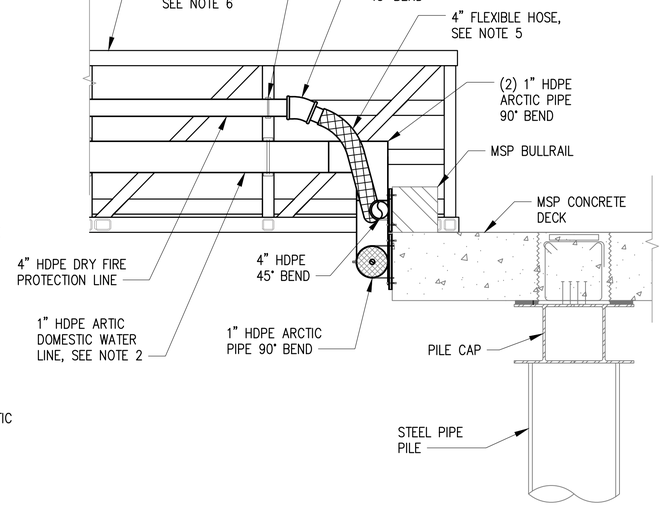
1. ALL HDPE VALVES AND FITTINGS TO BE WELDED UNLESS OTHERWISE NOTED.
2. DOMESTIC WATER PIPE TO BE 1" DIAMETER HDPE WITH 8.25" DIAMETER ALUMINUM JACKET, INSULATION, AND HEAT TRACE. SIMILAR TO DETAIL 1 ON SHEET U5.21.
3. ALL UTILITY SUPPORTS AND HANGERS SHALL BE HOT DIPPED GALVANIZED.
4. GUARDRAIL NOT SHOWN FOR CLARITY. SEE STRUCTURAL.
5. CONTRACTOR TO FIELD ADJUST MOUNTS AND HOSE LENGTHS TO ENSURE:
   - 5.1. THE MANUFACTURER'S MINIMUM HOSE BEND RADIUS IS NOT EXCEEDED.
   - 5.2. SUFFICIENT HOSE LENGTH IS AVAILABLE WITH A MIN. SLACK OF 6' AND A MIN. VERTICAL CLEARANCE OF 1'.
   - 5.3. THE HOSE IS MOUNTED TO MINIMIZE ENTANGLEMENT WITH SURROUNDING OBSTRUCTIONS.
6. CATWALK AND CATWALK UTILITY SUPPORTS TO BE DESIGNED BY CONTRACTOR, SEE S5.40 FOR MORE DETAILS.



C – **MSP UTILITY ROUTING SECTION**
SCALE: NTS



D U4.00 **CATWALK UTILITY ROUTING SECTION**
SCALE: NTS



E – **CATWALK UTILITY ROUTING SECTION**
SCALE: NTS

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NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

MARINE SERVICE PLATFORM
UTILITY SECTIONS

DRAWN: JO	PROJECT NO.: 2100135
DESIGN: JO	SCALE: AS SHOWN
CHECKED: SK	DATE: 01/27/2023
DRAWING NO.	**U4.11**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 – 10:37am dyu Layout: U4.11
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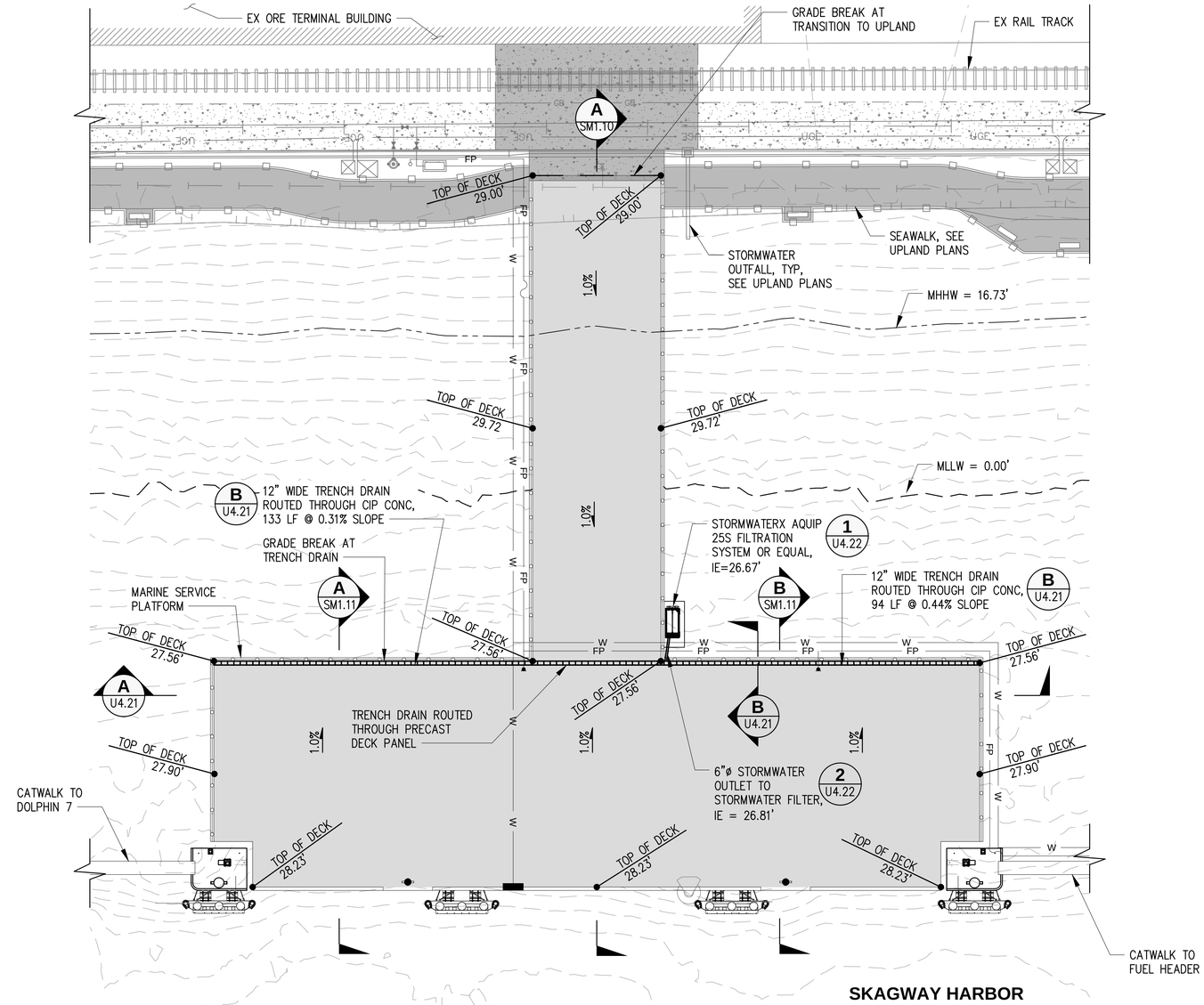


MARINE SERVICES PLATFORM GRADING AND DRAINAGE PLAN

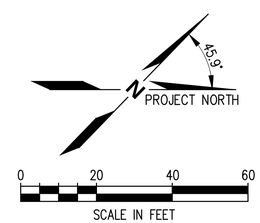
SCALE: 1" = 20'

NOTES

1. ALL SPOT ELEVATIONS REPRESENT TOP OF PAVEMENT.
2. STRAIGHT GRADES SHALL BE MAINTAINED BETWEEN SPOT ELEVATIONS UNLESS OTHERWISE NOTED.
3. SEE SHEET U4.00 FOR MSP UTILITY PLAN.

LEGEND

W	3" AND 1" HDPE ARCTIC DOMESTIC WATER LINE, SEE SHEET U4.00 FOR SIZING LOCATIONS
FP	4" HDPE DRY FIRE PROTECTION LINE
	GRADE BREAK
▲	2-1/2" FIRE PROTECTION STANDPIPE W/ AUXILARY DRAIN



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NO.	DATE	BY	REVISION

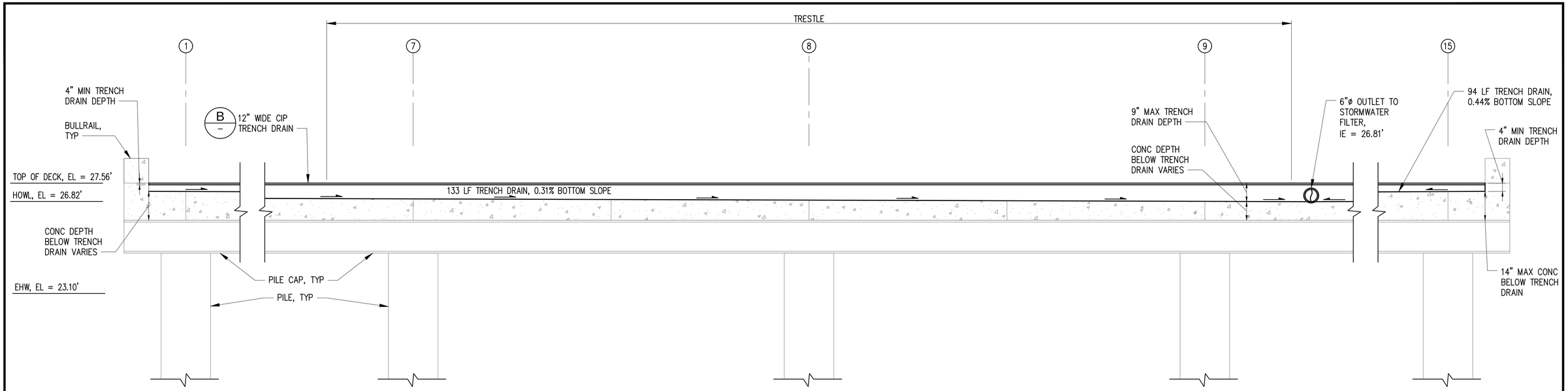
ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

MARINE SERVICES PLATFORM GRADING AND DRAINAGE PLAN

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: SK	DATE: 01/27/2023
DRAWING NO.	U4.20
SHEET NO.	OF

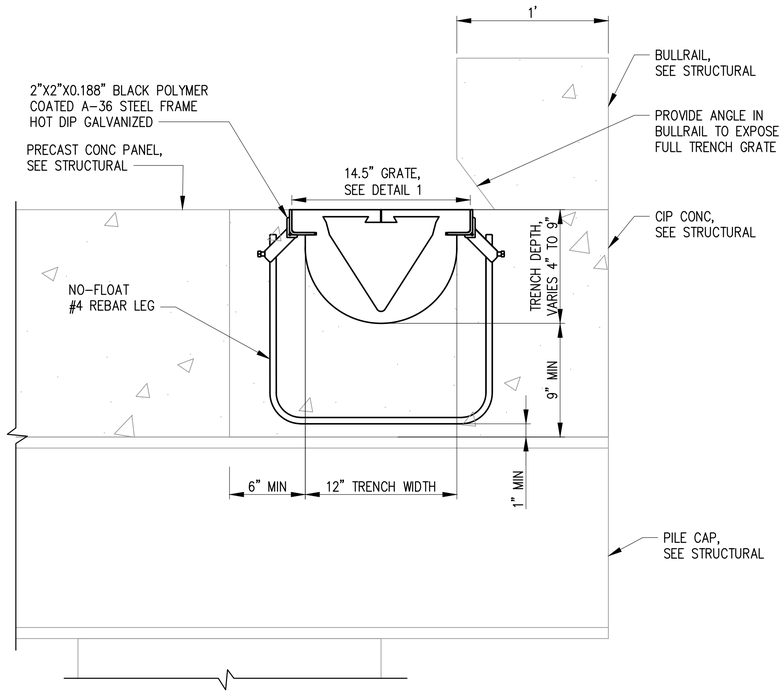
60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 - 10:38am dyu Layout: U4.20
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_U4.20 Marine Services Platform Grading & Drainage Plan.dwg



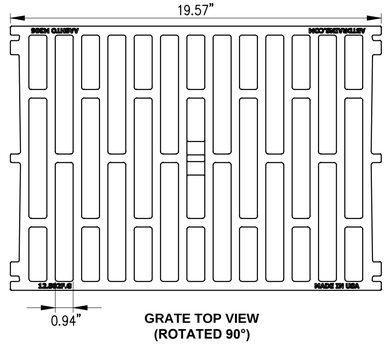
A U4.20 CIP TRENCH DRAIN CROSS SECTION

SCALE: NTS



B U4.20 CIP TRENCH DRAIN CROSS SECTION

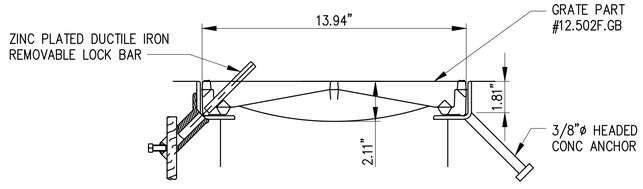
SCALE: NTS



GRATE TOP VIEW (ROTATED 90°)

NOTES

1. SERIES NUMBER: TR12-12.502F.GB-G25E
2. GRATE: #12.502F.GB
   - 2.1. DUCTILE IRON PER ASTEM A536 GRADE 80-55-06 (UNCOATED)
   - 2.2. OPEN AREA: 0.699 SF PER LF
   - 2.3. LOAD RATING: 100,000 LBS PER FAA SPEC. AC150/5320-6 AND 1235 PSI PER AASHTO M-306 TEST METHOD.
   - 2.4. MADE IN THE USA
3. CONCRETE: CONCRETE THICKNESS AND REINFORCEMENT PER STRUCTURAL ENGINEER'S SPECIFICATION FOR THE APPLICATION.
4. FORM RELEASE: NON-PETROLEUM BASED.



GRATE END VIEW

1 – CIP TRENCH DRAIN GRATE DETAIL

SCALE: NTS

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NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

MARINE SERVICES PLATFORM GRADING AND DRAINAGE SECTIONS

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: SK	DATE: 01/27/2023
DRAWING NO.	U4.21
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 - 10:38am dyu Layout: U4.21
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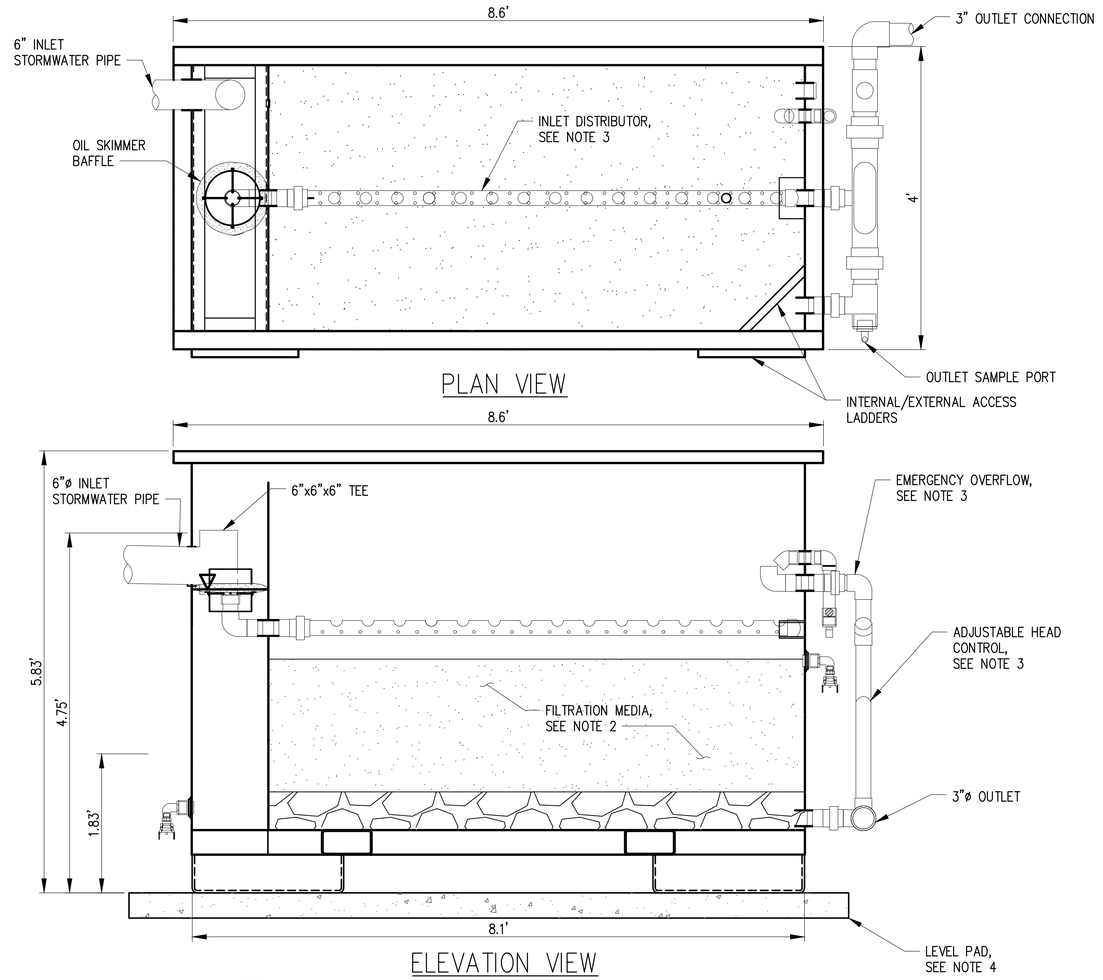
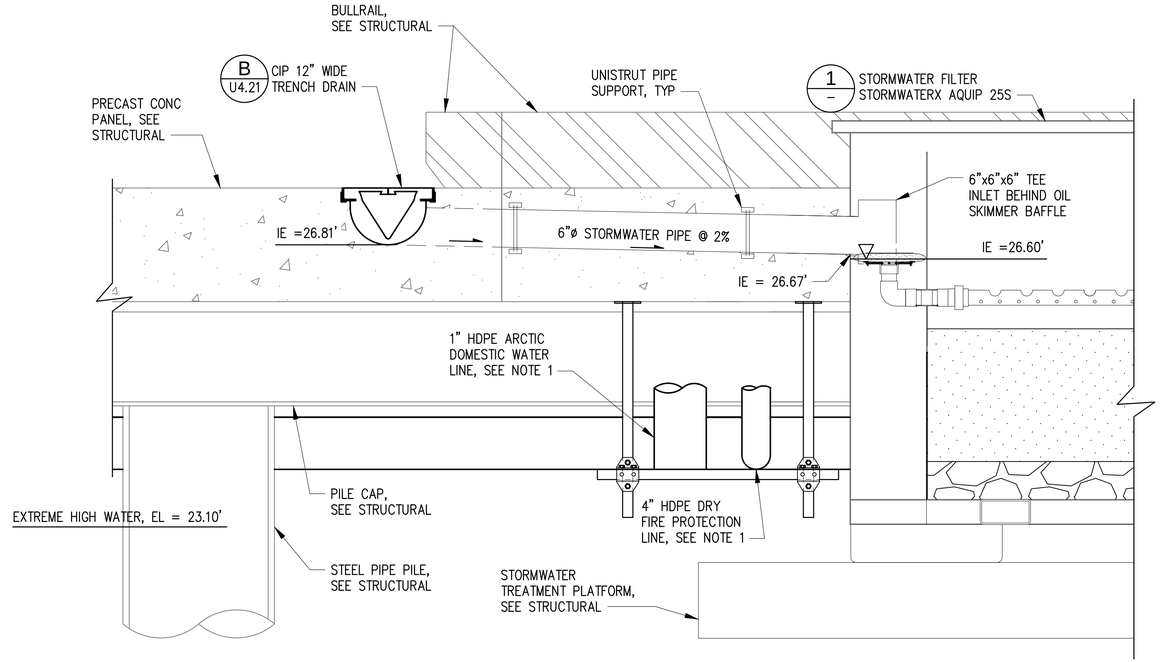


NOTES:

1. AQUIP FILTRATION SYSTEM BY STORMWATERX LLC – PORTLAND, OREGON – 800.680.3543 (U.S. PATENT NO. 8,002,974).
2. PRETREATMENT AND FILTER MEDIA COMBINATION DEPENDENT ON POLLUTANT REMOVAL REQUIREMENTS. MODELS: SBE: OMNIPLEX & INERT/SORPTIVE MEDIA, SXI: SETTLING PRETREATMENT AND INERT MEDIA.
3. INTERNAL APPURTENANCES BY STORMWATERX INCLUDING INLET AND OUTLET SAMPLE PORTS, INLET FLOW CONTROL AND CHECK VALVES, INLET DISTRIBUTOR, UNDERDRAIN SYSTEM, EMERGENCY OVERFLOW AND ADJUSTABLE HEAD CONTROL.
4. SYSTEM REQUIRES LEVEL SURFACE FOR 5'x12' FOOTPRINT AND LOAD BEARING CAPACITY OF 13,700LBS.
5. INLET AND OUTLET PIPING CONNECTION SIZE AS NOTED. CONNECTION PIPING PROVIDED BY OTHERS. CENTER INLET STANDARD, INLET CONNECTION LEFT OR RIGHT (RIGHT SHOWN). OPTIONAL LEFT OR RIGHT OUTLET (LEFT OUTLET SHOWN).
6. THE OPERATING WATER SURFACE HEIGHT IS 4'–9" ABOVE BOTTOM OF STRUCTURE.

1 / U4.20 STORMWATERX AQUIP 25S STORMWATER FILTER

SCALE: NTS



NOTES:

1. SEE SHEET U4.11 FOR ROUTING OF 4" HDPE DRY FIRE PROTECTION LINE AND 1" HDPE ARCTIC DOMESTIC WATER LINE.

2 / U4.20 TRANSITION FROM TRENCH DRAIN TO STORMWATER FILTER

SCALE: NTS

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NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

MARINE SERVICES PLATFORM
GRADING AND DRAINAGE DETAILS

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: SK	DATE: 01/27/2023
DRAWING NO.	**U4.22**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 – 10:38am dyu Layout: U4.22
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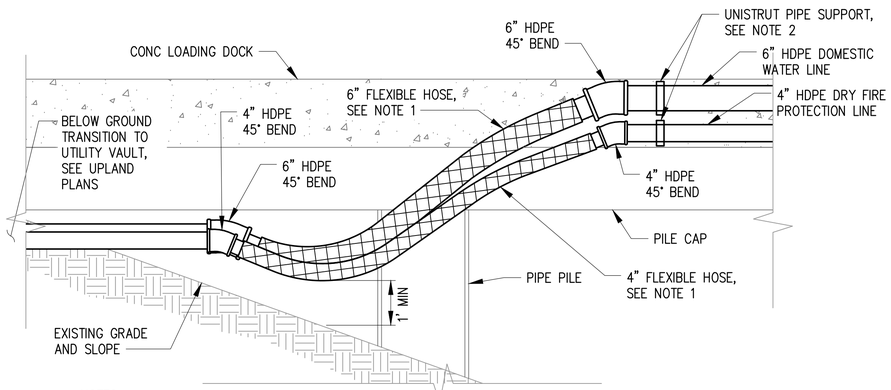
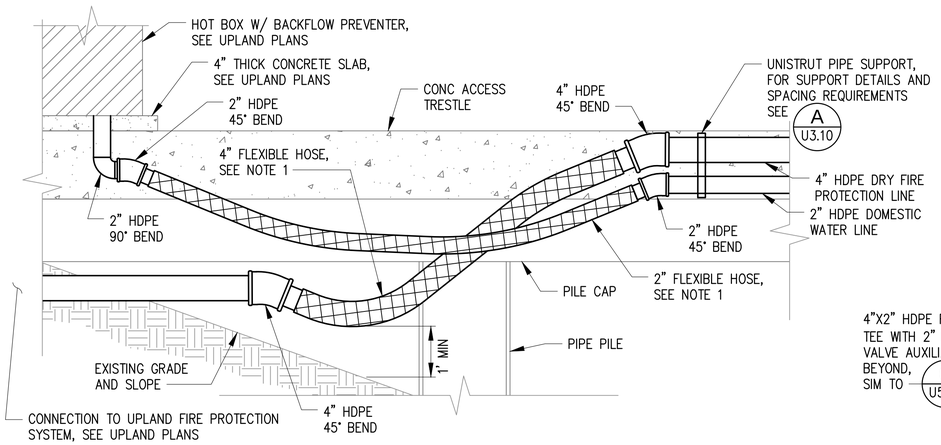


NOTES:
1. CONTRACTOR TO FIELD ADJUST MOUNTS AND HOSE LENGTHS TO ENSURE:
   1.1. THE MANUFACTURER'S MINIMUM HOSE BEND RADIUS IS NOT EXCEEDED.
   1.2. SUFFICIENT HOSE LENGTH IS AVAILABLE WITH A MIN. SLACK OF 6' AND A MIN. VERTICAL CLEARANCE OF 1'.
   1.3. THE HOSES ARE MOUNTED TO MINIMIZE ENTANGLEMENT WITH SURROUNDING OBSTRUCTIONS AND/OR EACH OTHER.
2. UTILITY ROUTING CONFIGURATION AND SUPPORTS VARIES BETWEEN STRUCTURES. SEE SHEETS U2.10 AND U3.10 FOR UTILITY ROUTING AND SUPPORT SPACING SPECIFIC TO CRUISE DOCK ACCESS TRESTLE AND RORO ACCESS TRESTLE.

UPLAND UTILITY TRANSITION TO CRUISE SHIP FLOAT ACCESS TRESTLE

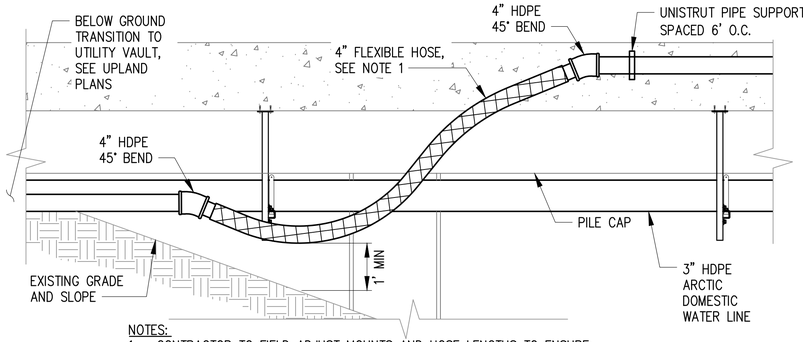
1 / U2.00 SCALE: NTS



NOTES:
1. CONTRACTOR TO FIELD ADJUST MOUNTS AND HOSE LENGTHS TO ENSURE:
   1.1. THE MANUFACTURER'S MINIMUM HOSE BEND RADIUS IS NOT EXCEEDED.
   1.2. SUFFICIENT HOSE LENGTH IS AVAILABLE WITH A MIN. SLACK OF 6' AND A MIN. VERTICAL CLEARANCE OF 1'.
   1.3. THE HOSES ARE MOUNTED TO MINIMIZE ENTANGLEMENT WITH SURROUNDING OBSTRUCTIONS AND/OR EACH OTHER.
2. ELECTRICAL AND AIR UTILITIES NOT SHOWN FOR CLARITY. SEE SHEET U3.10.

UPLAND UTILITY TRANSITION TO RORO ACCESS TRESTLE

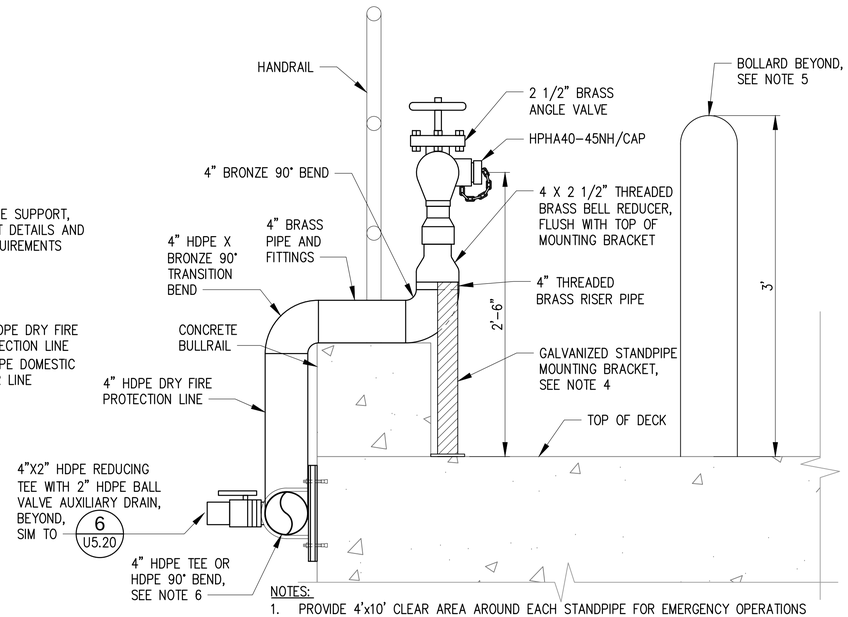
2 / U3.00 SCALE: NTS



NOTES:
1. CONTRACTOR TO FIELD ADJUST MOUNTS AND HOSE LENGTHS TO ENSURE:
   1.1. THE MANUFACTURER'S MINIMUM HOSE BEND RADIUS IS NOT EXCEEDED.
   1.2. SUFFICIENT HOSE LENGTH IS AVAILABLE WITH A MIN. SLACK OF 6' AND A MIN. CLEARANCE OF 1' BETWEEN HOSE AND CRUISE DOCK FLOAT.
   1.3. THE HOSES ARE MOUNTED TO MINIMIZE ENTANGLEMENT WITH SURROUNDING OBSTRUCTIONS.

UPLAND UTILITY TRANSITION TO MSP

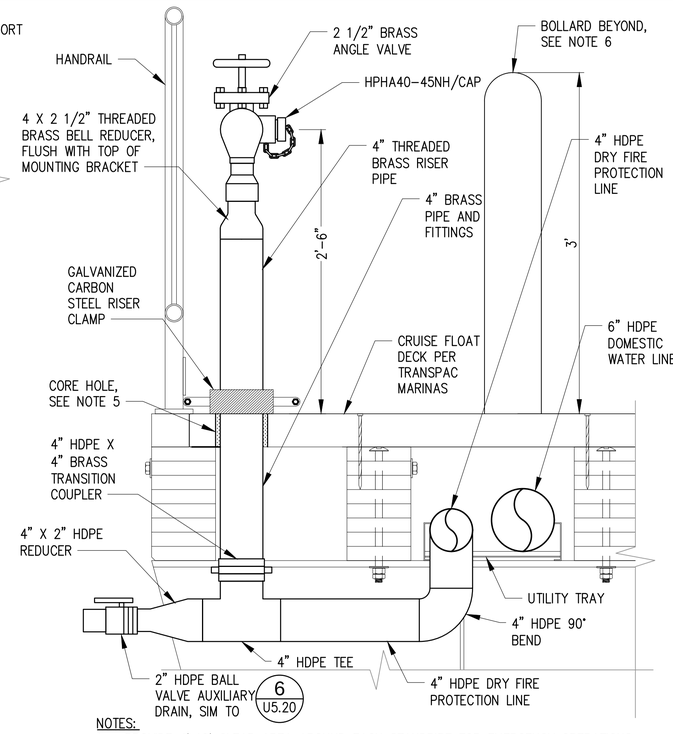
3 / U4.00 SCALE: NTS



NOTES:
1. PROVIDE 4'x10' CLEAR AREA AROUND EACH STANDPIPE FOR EMERGENCY OPERATIONS STAGING AREA. AREA SHALL CONFORM TO NFPA 303.
2. AN APPROVED SIGN READING "FIRE EQUIPMENT STAGING AREA – KEEP CLEAR" SHALL BE PROVIDED AT EACH STAGING AREA.
3. PIPE MATERIAL SHALL CONFORM TO NFPA 14.
4. SECURE STANDPIPE TO WITHSTAND FORCES DETAILED IN NFPA 36.
5. BOLLARD SPACING TO ADHERE TO THE 2018 INTERNATIONAL FIRE CODE.
6. PIPE FITTINGS VARY BASED ON STRUCTURE LOCATION. SEE U3.00 AND U4.00 FOR FDC LOCATIONS AND FITTING NEEDS.
7. ALL HDPE FLANGES, VALVES, AND FITTINGS TO BE WELDED UNLESS OTHERWISE NOTED.

MSP AND RORO ACCESS TRESTLE FIRE PROTECTION STANDPIPE W/AUXILIARY DRAIN

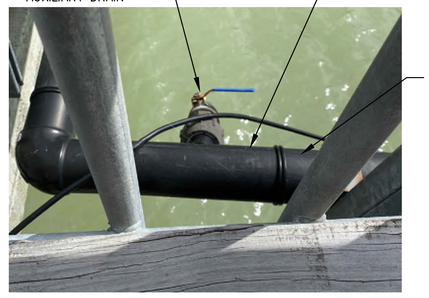
U3.00 4 / U4.00 SCALE: NTS



NOTES:
1. PROVIDE 4'x10' CLEAR AREA AROUND EACH STANDPIPE FOR EMERGENCY OPERATIONS STAGING AREA. AREA SHALL CONFORM TO NFPA 303.
2. AN APPROVED SIGN READING "FIRE EQUIPMENT STAGING AREA – KEEP CLEAR" SHALL BE PROVIDED AT EACH STAGING AREA.
3. ALL SUBMERGED DRY FIRE LINE PIPING TO BE BUOYANTLY NEUTRAL.
4. PIPE MATERIAL SHALL CONFORM TO NFPA 14.
5. CORE HOLE DIAMETER TO BE 1" LARGER THAN PIPE DIAMETER. FILL ANULAR SPACE BETWEEN PIPE AND CORE HOLE WALL WITH COMPRESSIBLE ETHAFOAM PAD.
6. BOLLARD SPACING TO ADHERE TO THE 2018 INTERNATIONAL FIRE CODE.
7. ALL HDPE FLANGES, VALVES, AND FITTINGS TO BE WELDED UNLESS OTHERWISE NOTED.

CRUISE SHIP FLOAT FIRE PROTECTION STANDPIPE SECTION

5 / U2.00 SCALE: NTS



AUXILIARY DRAIN FOR DRY FIRE LINE

U3.00 6 / U4.00 SCALE: NTS

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 – 10:38am dyu Layout: U5.20
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_U5.20 Utility Details – 1.dwg

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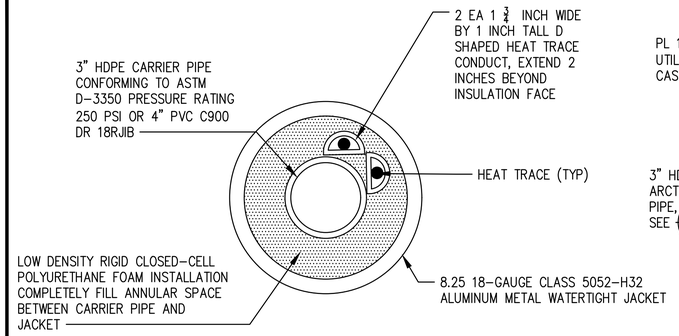
NO.	DATE	BY	REVISION

UTILITY HANGER SPACED 20' O.C., TYP.

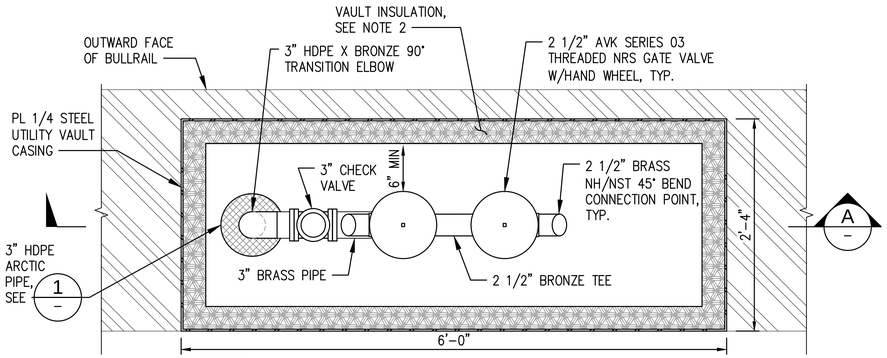
ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

UTILITY DETAILS - 1

DRAWN:	JH	PROJECT NO.:	2100135
DESIGN:	ED	SCALE:	AS SHOWN
CHECKED:	SK	DATE:	01/27/2023
DRAWING NO.			**U5.20**
SHEET NO.		OF	



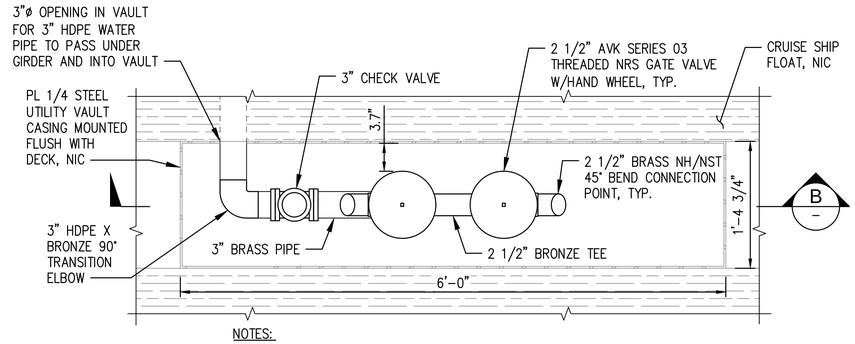
1 U4.00 ARCTIC PIPE SECTION
SCALE: NTS



NOTES:

1. ALL FLANGES, VALVES, AND FITTINGS TO BE THREADED UNLESS OTHERWISE NOTED.
2. VAULT INSULATION SHALL BE SPRAY ON POLYURETHANE OR MAY BE RIGID BOARD TYPE PROVIDED BOARDS ARE GLUED OR OTHERWISE SECURELY ATTACHED TO INSIDE OF VAULT. VAULT INSULATION SHALL BE A MINIMUM OF 3 INCH THICKNESS.
3. CORE HOLE DIAMETER TO BE 1" LARGER THAN PIPE DIAMETER. FILL ANNULAR SPACE BETWEEN PIPE AND CORE HOLE WALL WITH COMPRESSIBLE ETHAFOAM PAD.

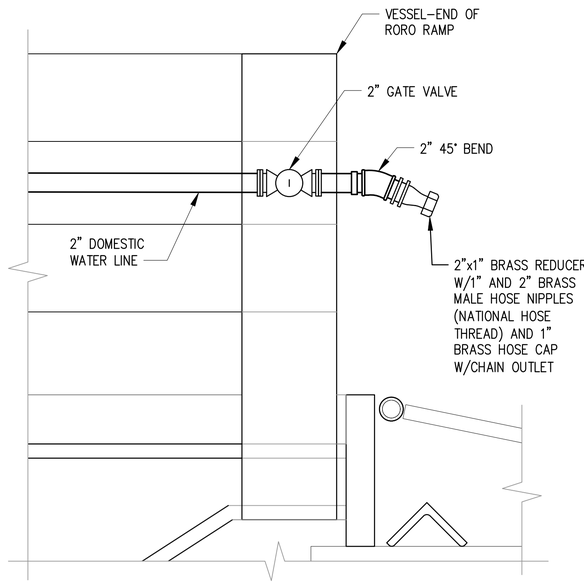
3 U4.00 MARINE SERVICE PLATFORM WATER UTILITY VAULT PLAN VIEW
SCALE: NTS



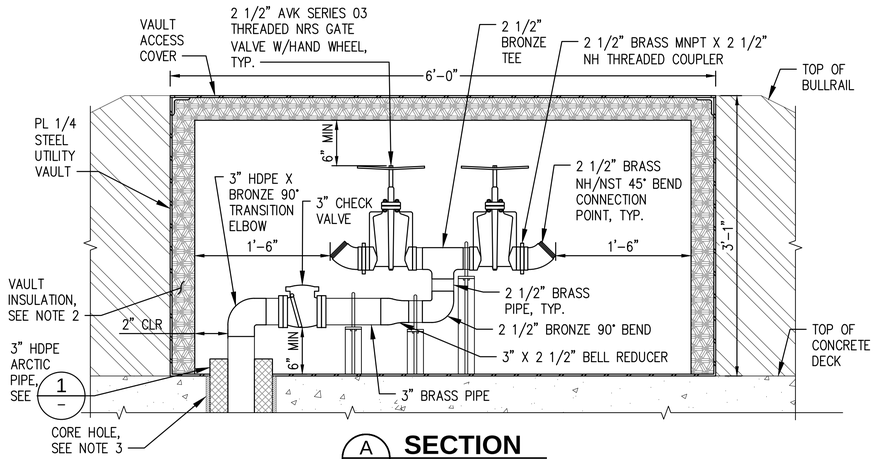
NOTES:

1. ALL FLANGES, VALVES, AND FITTINGS TO BE THREADED UNLESS OTHERWISE NOTED.

4 U2.00 CRUISE DOCK FLOAT WATER UTILITY VAULT PLAN VIEW
SCALE: NTS



2 U3.00 RORO RAMP UTILITY VESSEL CONNECTION
SCALE: NTS



A – SECTION
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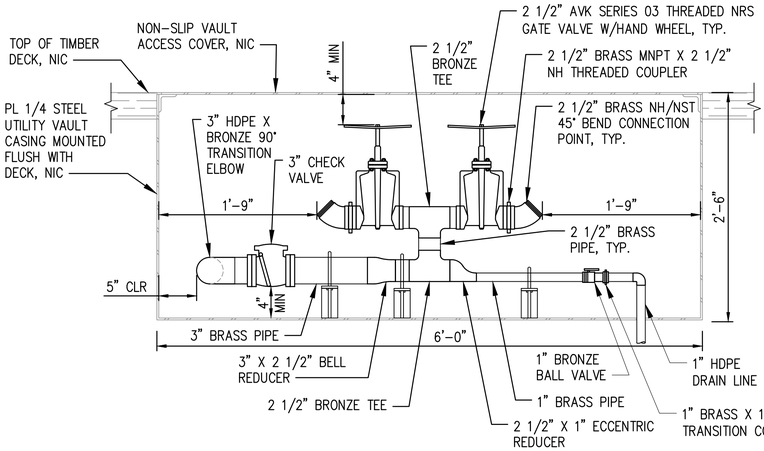

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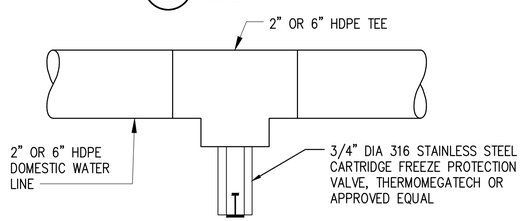
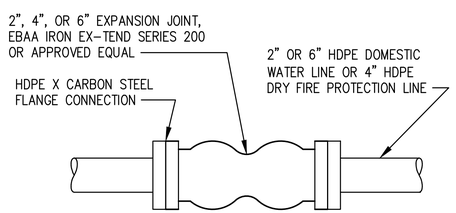
SCALE: NTS



NOTES:
1. FREEZE PROTECTION VALVE TO BE POSITIONED BELOW DOMESTIC WATER PIPE.

5 U2.00 U3.00 TYPICAL FREEZE PROTECTION VALVE
SCALE: NTS



6 U2.00 U3.00 U4.00 TYPICAL EXPANSION JOINT
SCALE: NTS

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NO.	DATE	BY	REVISION

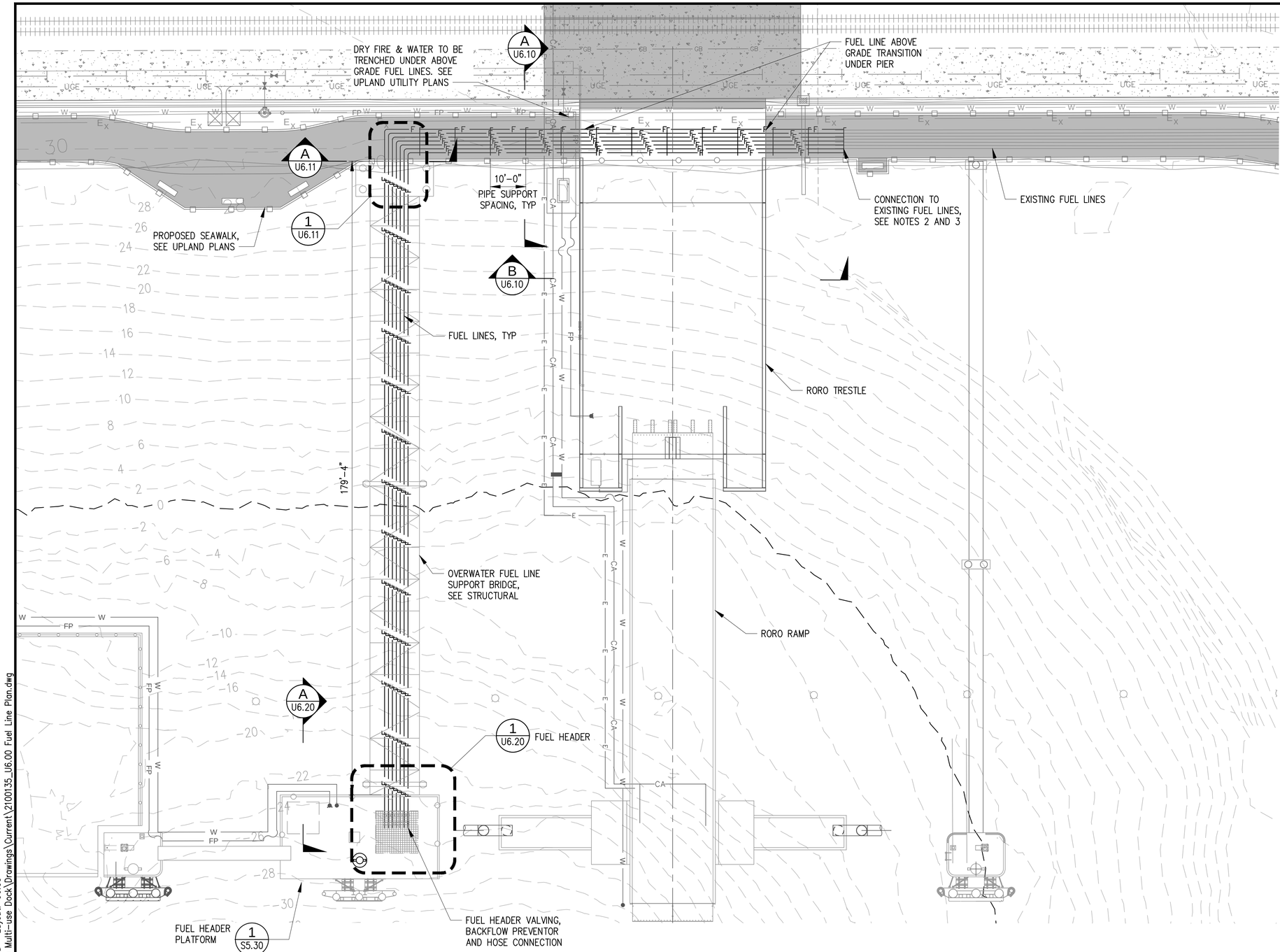
ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

UTILITY DETAILS - 2

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: SK	DATE: 01/27/2023
DRAWING NO.	U5.21
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

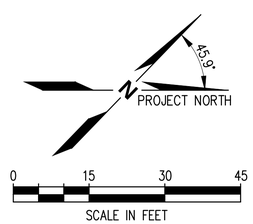
Plotted: Jan 27, 2023 - 10:38am dyu Layout: U5.21
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_U5.21 Utility Details - 2.dwg



1 U1.00 **FUEL LINE PLAN**
SCALE: 1" = 15'

NOTES

1. NEW STEEL FUEL PIPE SHALL BE ASTM A53 GRADE B, 6" SCHEDULE 40, COATED PER SPECIFICATIONS, BUT NOT GALVANIZED.
2. EXISTING FUEL LINE SHALL BE CUT AND REMOVED IN ACCORDANCE WITH THE UTILITY DEMOLITION SPECIFICATIONS.
3. CONTRACTOR TO PROVIDE TEMPORARY FLANGE JOINTS AND HOSES AS NECESSARY TO MAINTAIN FUEL SERVICE AT ALL PHASES OF CONSTRUCTION.



60% DESIGN - NOT FOR CONSTRUCTION

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FUEL LINE PLAN

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: JLF	SCALE: AS SHOWN
CHECKED: SK	DATE: 01/27/2023
DRAWING NO.	**U6.00**
SHEET NO.	OF

Plotted: Jan 27, 2023 - 10:39am dyu Layout: U6.00
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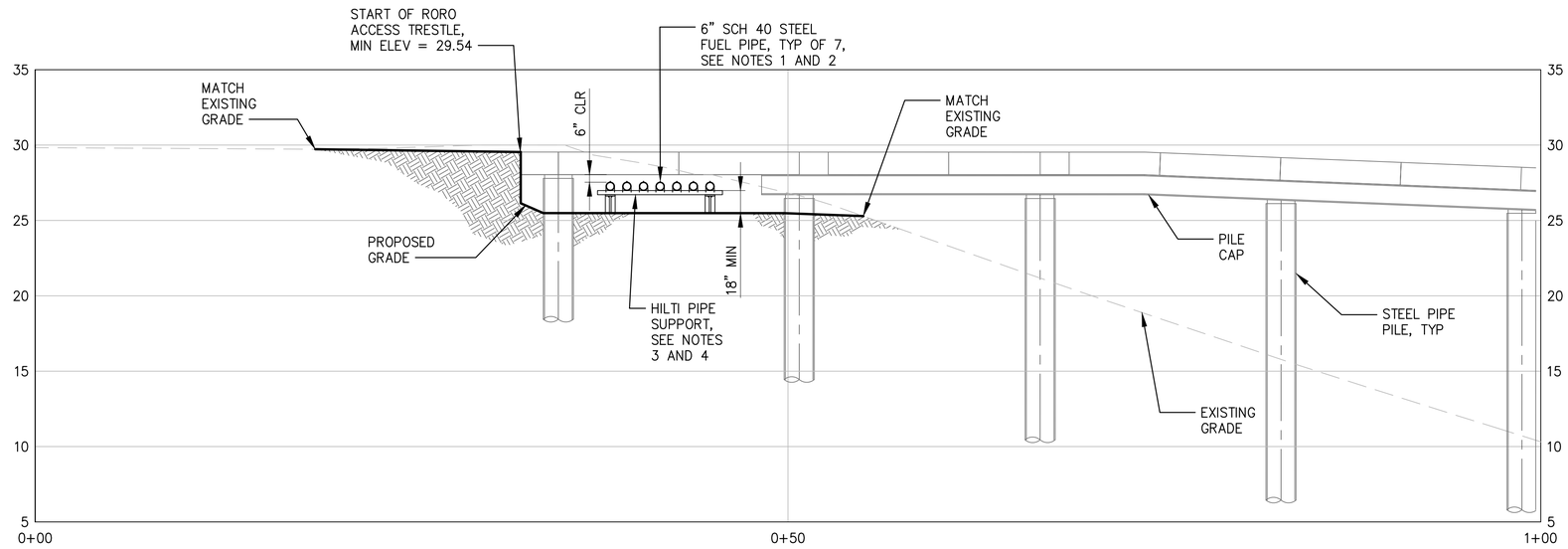
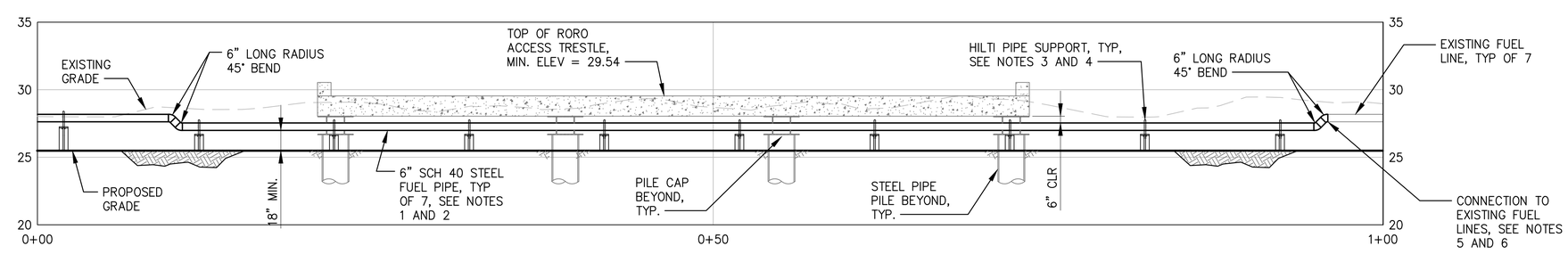


A U6.00 **FUEL LINE ROUTING SECTION**
SCALE: 1" = 5'



B U6.00 **FUEL LINE ROUTING PROFILE**
SCALE: 1" = 5'

NOTES

1. NEW STEEL FUEL PIPE SHALL BE ASTM A53 GRADE B, 6" SCHEDULE 40, COATED PER SPECIFICATIONS. BUT NOT GALVANIZED.
2. MAINTAIN 18" MINIMUM CLEARANCE BELOW BOTTOM OF PIPE, FLANGE, OR VALVE PROVIDING CLEARANCE FOR INSTALLATION AND REMOVAL.
3. PIPE SUPPORTS AND HANGERS TO MAINTAIN 10' MAXIMUM SPACING.
4. ALL UTILITY SUPPORTS SHALL BE HOT DIPPED GALVANIZED OR 316 STAINLESS STEEL.
5. EXISTING FUEL LINE SHALL BE CUT AND REMOVED IN ACCORDANCE WITH THE UTILITY DEMOLITION SPECIFICATIONS.
6. CONTRACTOR TO PROVIDE TEMPORARY FLANGE JOINTS AND HOSES AS NECESSARY TO MAINTAIN FUEL SERVICE AT ALL PHASES OF CONSTRUCTION.
7. AIR, ELECTRICAL, DOMESTIC WATER, AND DOMESTIC FIRE UTILITIES NOT SHOWN FOR CLARITY, SEE U3.10.
8. SEE SHEET U3.20 FOR RORO ACCESS TRESTLE GRADING DETAILS.
9. SEE UPLAND PLANS FOR UPLAND GRADING DETAILS.

0 5 10 15
SCALE IN FEET

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SKAGWAY, ALASKA

FUEL LINE SECTIONS

DRAWN: JO	PROJECT NO.: 2100135
DESIGN: JO	SCALE: AS SHOWN
CHECKED: SK	DATE: 01/27/2023
DRAWING NO.	**U6.10**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 – 10:39am dyu Layout: U6.10
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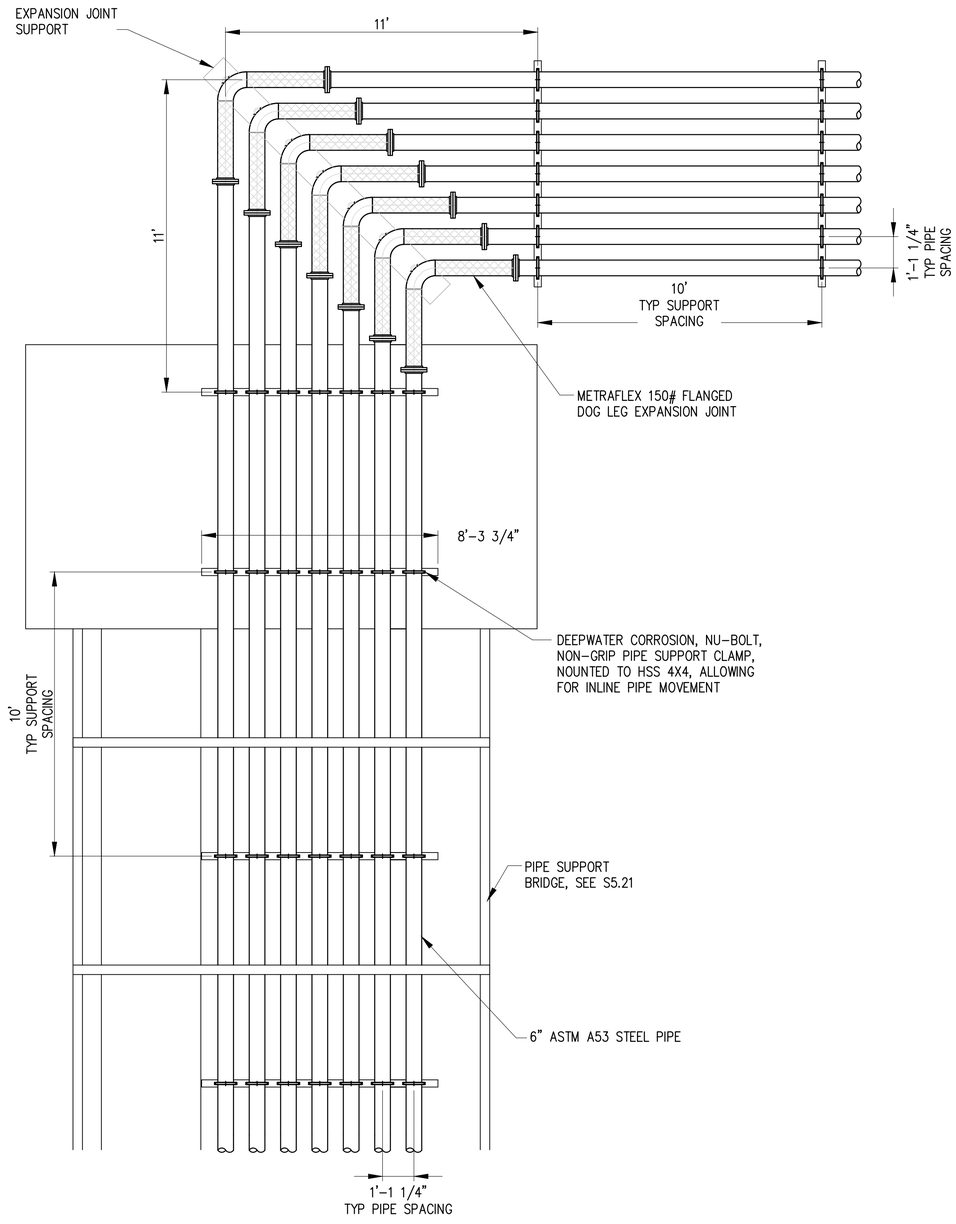
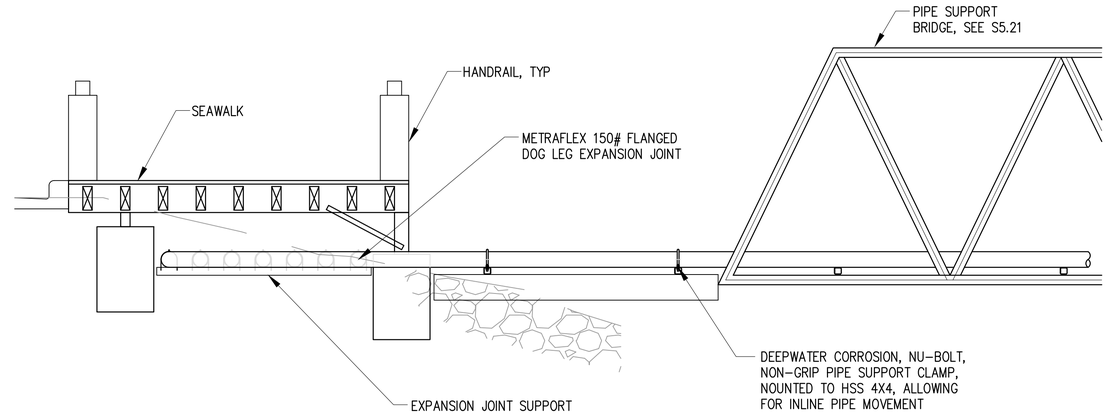


1 U6.00 **FUEL LINE PLAN**
SCALE: 3/8" = 1'-0"



A U6.00 **FUEL LINE SECTION**
SCALE: 3/8" = 1'

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 - 10:39am dyu Layout: U6.11
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_U6.11 Fuel Line Sections & Details.dwg

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NO.	DATE	BY	REVISION

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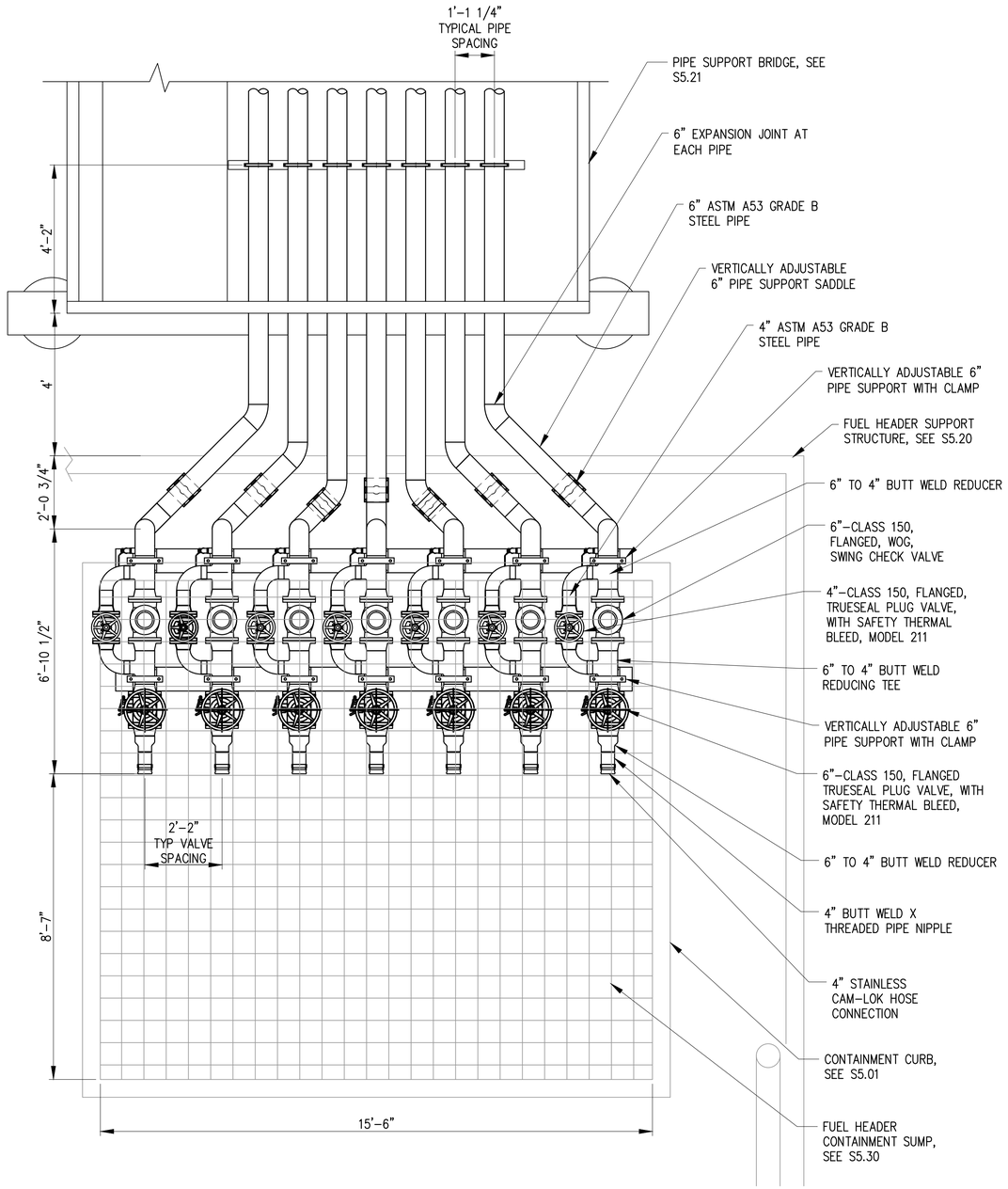
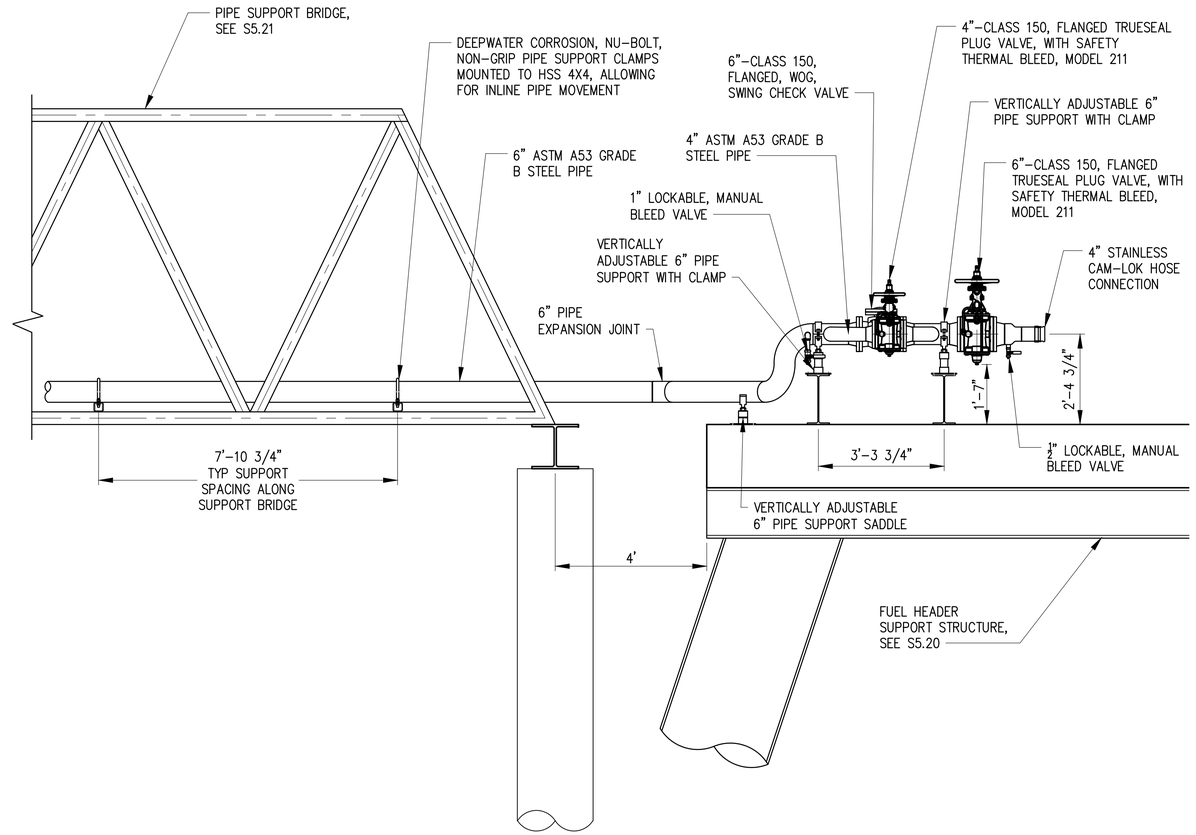
SKAGWAY, ALASKA

FUEL LINE
SECTIONS AND DETAILS

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: JLF	SCALE: AS SHOWN
CHECKED: SK	DATE: 01/27/2023
DRAWING NO.	**U6.11**
SHEET NO.	OF



1 U6.00 **FUEL HEADER PLAN**
SCALE: 1/2" = 1'-0"



A U6.00 **FUEL HEADER SECTION**
SCALE: 1/2" = 1'-0"

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NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

FUEL HEADER SECTIONS AND DETAILS

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: JLF	SCALE: AS SHOWN
CHECKED: SK	DATE: 01/27/2023
DRAWING NO.	**U6.20**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 - 10:39am dyu Layout: U6.20
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GENERAL NOTES

1. THESE NOTES CONTAIN GENERAL INFORMATION AND ARE NOT COMPLETE FOR CONSTRUCTION PURPOSES. THE CONTRACTOR SHALL VERIFY INFORMATION GIVEN HERE AND OTHER DOCUMENTS AND BRING ANY CONFLICTS TO THE ATTENTION OF THE ENGINEER.

2. SHOP DRAWINGS AND MATERIAL SPECIFICATIONS SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO ANY FABRICATION OR CONSTRUCTION FOR ALL STRUCTURAL ITEMS.

3. DESIGN DRAWINGS AND CALCULATIONS OR SHOP DRAWINGS, FOR THE DESIGN AND FABRICATION OF ITEMS THAT ARE DESIGNED BY OTHERS SHALL BEAR THE SEAL AND SIGNATURE OF THE ALASKA STATE REGISTERED PROFESSIONAL ENGINEER WHO IS RESPONSIBLE FOR THE DESIGN AND SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION SUBMITTED CALCULATIONS ARE FOR INFORMATION ONLY AND WILL NOT BE STAMPED OR RETURNED.

4. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS BEFORE COMMENCING ANY DEMOLITION. CONTRACTOR SHALL PROVIDE ADEQUATE SHORING AND BRACING OF ALL STRUCTURAL MEMBERS, EXISTING CONSTRUCTION AND SOIL EXCAVATIONS, AS REQUIRED, AND IN A MANNER SUITABLE TO THE WORK SEQUENCE. TEMPORARY SHORING AND BRACING SHALL NOT BE REMOVED UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED IN ACCORDANCE WITH THE DRAWINGS AND MATERIALS HAVE ACHIEVED DESIGN STRENGTH. NO REINFORCING BARS IN EXISTING CONSTRUCTION SHALL BE CUT UNLESS DIRECTED TO BY THE ENGINEER OR AS SHOWN ON THE DRAWINGS.

CODES AND STANDARDS

1. ALL METHODS AND MATERIALS SHALL CONFORM TO THE INTERNATIONAL BUILDING CODE (IBC) 2021 EDITION AS AMENDED AND ADOPTED BY THE STATE OF ALASKA.

2. AMERICAN SOCIETY OF CIVIL ENGINEERS "SEISMIC DESIGN OF PIERS AND WHARVES" ASCE 61-14 (ASCE)

3. AMERICAN SOCIETY OF CIVIL ENGINEERS "MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES" ASCE 7-16 (ASCE).

4. REINFORCED CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF ACI 301-10 "SPECIFICATIONS FOR STRUCTURAL CONCRETE" AND ACI 318-14 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" (AISC).

5. STRUCTURAL AND MISCELLANEOUS STEEL FABRICATION AND ERECTION SHALL CONFORM TO THE AISC 360-16 "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES" (AISC).

6. AMERICAN WELDING SOCIETY "STRUCTURAL WELDING CODE-REINFORCING STEEL INCLUDING METAL INSERTS AND CONNECTIONS IN REINFORCED CONCRETE CONSTRUCTION" AWS D1.4-2017.

7. AMERICAN WELDING SOCIETY "STRUCTURAL WELDING-STEEL" AWS D1.1-2015.

8. AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS LRFD BRIDGE DESIGN SPECIFICATIONS, 9TH EDITION (AASHTO).

GEOTECHNICAL REPORT

SEE THE GEOTECHNICAL REPORT PRELIMINARY GEOTECHNICAL RECOMMENDATIONS FOR SKAGWAY ORE PENINSULA DOCK AND TRANSFER BRIDGE, SKAGWAY, ALASKA PREPARED BY HART CROWSER, DATED 2022-03-08 FOR COMPLETE INFORMATION. EARTHWORK MATERIAL BACKFILL AND COMPACTION SHALL BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT.

CORROSION

EPOXY COATINGS ARE ASSUMED TO HAVE A 15 YEAR SERVICE LIFE, UNO.

FOLLOWING THE ASSUMED SERVICE LIFE OF EPOXY COATINGS, MEMBERS ARE ASSUMED TO EXPERIENCE 0.003 IN/YEAR OF CORROSION LOSS IN THE SPLASH ZONE.

RORO RAMP AND CRUISE DOCK ACCESS RAMP EPOXY COATINGS SHALL BE MAINTAINED FOR THE LIFE OF RESPECTIVE STRUCTURES.

SITE WAVE CRITERIA

50-YEAR RETURN PERIOD: Hs=6.9 FT,
T_{p1}=4.5 sec, T_{p2}=5.0 sec, T_{p3}=5.5 sec

100-YEAR RETURN PERIOD: Hs=7.5 FT,
T_{p1}=4.6 sec, T_{p2}=5.1 sec, T_{p3}=5.6 sec

DREDGE

DESIGN ASSUMES A FUTURE DREDGE DEPTH OF -45.00' MLLW.

CONCRETE

CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF ACI 318-14, "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" CHAPTER 19 OF THE IBC AND ACI 301-10, "SPECIFICATIONS FOR STRUCTURAL CONCRETE". FORMWORK SHALL BE DESIGNED IN ACCORDANCE WITH THE ACI "MANUAL OF CONCRETE PRACTICE", LATEST EDITION. REINFORCING STEEL SHALL BE DETAILED AND PLACED IN ACCORDANCE WITH THE ACI "MANUAL OF CONCRETE PRACTICE", LATEST EDITION. REINFORCING STEEL SHALL BE SUPPORTED AS SPECIFIED BY THE 'CRSI MANUAL OF STANDARD PRACTICE.

CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST 24 HOURS PRIOR TO PLACING CONCRETE.

ALL EXPOSED CORNERS SHALL BE CHAMFERED 3/4" UNLESS OTHERWISE NOTED ON DRAWINGS.

CONSTRUCTION JOINTS IN BEAMS, JOISTS, OR SLABS ARE TO BE LOCATED BETWEEN THE 1/4 POINT AND CENTERLINE OF SPAN, OR AS DIRECTED BY THE ENGINEER. ALL CONSTRUCTION JOINTS SHALL BE SHOWN ON SHOP DRAWINGS AND ARE SUBJECT TO THE APPROVAL OF THE ENGINEER.

DO NOT PLACE OR CUT HOLES IN CONCRETE WITHOUT PRIOR APPROVAL OF THE ENGINEER.

NO PIPES OR CONDUIT SHALL BE EMBEDDED IN SLABS OR WALLS UNLESS APPROVED BY AND COORDINATED WITH THE ENGINEER. ALUMINUM CONDUITS SHALL NOT BE PLACED IN CONCRETE.

CURING
MAINTAIN CONCRETE TEMPERATURE AT OR ABOVE 50°F FOR THE FIRST 6 DAYS AFTER PLACEMENT. AFTER 6 DAYS, WITH ADDITIONAL CURING TIME AS DEFINED BELOW, CONCRETE TEMPERATURE MAY BE MAINTAINED BETWEEN 32°F AND 50°F.

CURING OPERATIONS SHALL BE UNINTERRUPTED UNTIL THE REQUIRED CONCRETE PROPERTIES, STRENGTH, AND DURABILITY HAVE DEVELOPED OR UNTIL THERE IS REASONABLE ASSURANCE THESE PROPERTIES WILL BE ACHIEVED AFTER THE CURING OPERATIONS HAVE BEEN TERMINATED.

CURING OPERATIONS MAY BE TERMINATED AFTER BOTH OF THE FOLLOWING CONDITIONS ARE SATISFIED:

1. THE CONCRETE HAS CURED FOR:
   A. AT LEAST 7 DAYS.
   B. AT LEAST 10 DAYS WHEN FLY ASH OR GROUND GRANULATED BLAST FURNACE SLAG IN EXCESS OF 10 PERCENT BY WEIGHT OF THE PORTLAND CEMENT ARE USED IN THE MIX. ADD ONE ADDITIONAL DAY OF CURING TO THE REQUIREMENTS DEFINED ABOVE, FOR EACH DAY OR PORTION OF A DAY THE CONCRETE TEMPERATURE FALLS BELOW 50°F DURING THE CURING PERIOD.

2. THE COMPRESSIVE STRENGTH FROM INFORMATIONAL FIELD TESTS REACHES THE FOLLOWING:
   A. 70% OF THE SPECIFIED COMPRESSIVE STRENGTH IF POST CURING CONCRETE TEMPERATURE IS EXPECTED TO REMAIN AT OR ABOVE 50°F UNTIL 100% OF THE SPECIFIED COMPRESSIVE STRENGTH IS ATTAINED.
   B. 100% OF THE SPECIFIED COMPRESSIVE STRENGTH, IF POST CURING CONDITIONS ARE EXPECTED TO ALLOW THE CONCRETE TEMPERATURE TO FALL BELOW 50°F BEFORE 100% OF THE SPECIFIED COMPRESSIVE STRENGTH IS ATTAINED.

NONSHRINK GROUT
NONSHRINK GROUT SHALL HAVE MINIMUM F'c = 8,000 PSI

NONSHRINK GROUT SHALL BE IN ACCORDANCE WITH ASTM C 1107, GRADE C

REINFORCING STEEL
DEFORMED BARS ASTM A 615, GRADE 60

MINIMUM LAP SPLICE LENGTH SCHEDULE

BAR SIZE	f'c = 5,000 psi	
	TOP BARS	OTHER BARS
#4	2'-5"	1'-11"
#5	3'-0"	2'-4"
#6	3'-8"	2'-10"
#7	5'-3"	4'-1"
#8	6'-0"	4'-8"
#9	6'-9"	5'-3"
#10	7'-8"	5'-11"
#11	8'-6"	6'-6"

SCHEDULE NOTES:
- TOP BARS ARE DEFINED AS ANY HORIZONTAL BAR PLACED SUCH THAT MORE THAN 12" OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE BAR IN ANY SINGLE POUR.
- STAGGER ALL LAP SPLICES IN ADJACENT BARS BY ONE LAP LENGTH MINIMUM.
- NO MORE THAN 50% OF THE REINFORCING BARS IN ANY LAYER SHALL BE SPLICED AT ONE LOCATION.
- INCREASE LAP SPLICE LENGTH OF EPOXY-COATED BARS BY 50%.

AT THE CONTRACTOR'S OPTION AND WITH THE ENGINEER'S APPROVAL, HEADED DEFORMED BARS MAY BE USED IN LIEU OF REINFORCING BARS SHOWN WITH STANDARD 90 OR 180 DEGREE HOOKS AND MECHANICAL SPLICES MAY BE USED IN LIEU OF LAP SPLICES. USE OF HEADED DEFORMED BARS IS TO CONFORMANCE WITH ACI 318 SECTION 18.2.7 AND REQUIRES SUBMITTAL OF AN ICC-ES OR IAPMO UES REPORT VALID FOR THE 2015 IBC.

REINFORCING STEEL SHALL HAVE PROTECTION AS FOLLOW, UNLESS NOTED OTHERWISE:

CONCRETE COVER

EXPOSURE	MEMBER	REINFORCEMENT	COVER
CAST AGAINST AND PERMANENTLY IN CONTACT WITH GROUND	ALL	ALL	3"
EXPOSED TO WEATHER OR IN CONTACT WITH GROUND	ALL	#6 AND LARGER #5 AND SMALLER	2" 1 1/2"
NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND	SLABS, JOISTS, AND WALLS	#14 AND #18 #11 AND SMALLER	1 1/2" 3/4"
	BEAMS, COLUMNS, AND PEDESTALS	ALL	1 1/2"

WELDING OF REINFORCING, WHERE APPROVED BY THE ENGINEER, SHALL BE PERFORMED USING LOW HYDROGEN ELECTRODES AND PREHEATEDIN ACCORDANCE WITH AWS D1.4, REINFORCING STEEL WELDING CODE. WELDERS AND WELDING PROCEDURES SHALL BE QUALIFIED IN ACCORDANCE WITH AWS D1.4. MATERIALS SHALL CONFORM TO THE FOLLOWING:

REINFORCING BARS TO BE WELDED ASTM A 706, GRADE 60, LOW ALLOY
WELDING ELECTRODES E80XX

ALL REINFORCEMENT SHALL BE EQUALLY SPACED WITHIN EACH MEMBER UNLESS NOTED OTHERWISE.

CONCRETE MIXTURES
CONCRETE MIXTURES SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:

CONCRETE MIXTURES

f'c (PSI)	TEST AGE (DAYS)	EXPOSURE CLASS			
5,000	28	F3	S3	W1	C2

CONCRETE MIXTURES SHALL CONFORM TO THE MOST STRINGENT REQUIREMENTS FOR EXPOSURE CLASSES SPECIFIED IN THE TABLE ABOVE AND ACI 318 TABLE 19.3.2.1.

WATER-REDUCING ADMIXTURES MAY BE INCORPORATED IN CONCRETE MIX DESIGNS, BUT SHALL CONFORM TO ASTM C 494, AND BE USED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. CALCIUM CHLORIDE OR OTHER WATER-SOLUBLE CHLORIDE ADMIXTURES SHALL NOT BE USED.

CONCRETE CONT'D

WATER/CEMENTITIOUS MATERIALS RATIO SHALL BE MEASURED BY WEIGHT AND SHALL BE BASED ON THE TOTAL CEMENTITIOUS MATERIAL. WATER/CEMENTITIOUS MATERIALS RATIO AND WATER CONTENT SHALL BE DETERMINED BY THE SUPPLIER BASED ON STRENGTH REQUIREMENTS AND SHALL NOT EXCEED THE MAXIMUM WATER/CEMENTITIOUS MATERIAL RATIO AND/OR WATER CONTENT IF SHOWN ABOVE OR IN ACI 318 TABLE 19.3.2.1 FOR THE EXPOSURE CLASSES LISTED.

FIELD-MEASURED SLUMP SHALL CONFORM TO THE SUBMITTED CONCRETE MIX DESIGN. TOLERANCE OF SLUMP SHALL CONFORM TO ASTM C 94.

ALL CONCRETE SUBJECT TO EXPOSURE CLASSES F1, F2 OR F3 SHALL BE AIR ENTRAINED. AIR-ENTRAINING AGENTS SHALL CONFORM TO ASTM C 260. THE AMOUNT OF ENTRAINED AIR SHALL BE ACCORDING TO ACI 318 TABLE 19.3.3.1 WITH A FIELD TOLERANCE OF ±1.5 PERCENT BY VOLUME. THE AMOUNT OF ENTRAINED AIR SHALL BE MEASURED IN THE FIELD AT THE DISCHARGE FROM THE TRUCK.

THE CONTRACTOR SHALL SUBMIT CONCRETE MIX DESIGNS FOR APPROVAL 2 WEEKS PRIOR TO PLACING ANY CONCRETE. THE MIX DESIGN SHALL BE IN CONFORMANCE WITH ACI 318, CHAPTER 19. THE SUBMITTAL SHALL INDICATE WHERE EACH CONCRETE MIX IS TO BE USED ON THE PROJECT, AS WELL AS THE MAXIMUM AGGREGATE SIZE OF EACH MIX. COARSE AGGREGATE SHALL BE 3/4" NOMINAL AND CONFORM TO ASTM C33.

ANCHORS

POST-INSTALLED ANCHORS
PROVIDE POST-INSTALLED ANCHORS PER THE FOLLOWING SCHEDULE UNLESS NOTED OTHERWISE:

ANCHORS IN CONCRETE

ANCHOR TYPE	APPROVED ANCHOR(S)
ADHESIVE	HILTI HAS THREADED ROD IN HIT-RE 500 V3
MECHANICAL	HILTI KWIK BOLT TZ

USE OF ALTERNATE PRODUCTS, OR OF POST-INSTALLED ANCHORS AT LOCATIONS NOT SHOWN IN THESE DRAWINGS, IS SUBJECT TO THE APPROVAL OF THE ENGINEER. SUBMIT PROPOSED ANCHORS TO THE ENGINEER WITH AN ICC-ES OR IAPMO UES REPORT VALID FOR THE 2018 IBC. SUBMITTED ICC-ES AND IAPMO UES REPORTS SHALL DEMONSTRATE THAT THE ANCHORS ARE SUITABLE FOR USE IN CRACKED CONCRETE OR UNCRACKED, FULLY GROUTED REINFORCED CONCRETE MASONRY UNITS. WHERE ANCHORS RESIST SEISMIC LOADS, SUBMITTED ICC-ES AND IAPMO UES REPORTS SHALL DEMONSTRATE THAT THE ANCHORS ARE SUITABLE FOR THE RESISTANCE OF SEISMIC LOADS.

INSTALL ALL ANCHORS PER MANUFACTURER'S RECOMMENDATIONS.

ADHESIVES SHALL NOT BE INSTALLED PRIOR TO THE CONCRETE REACHING AN AGE OF 21 DAYS AS REQUIRED BY ACI 318.

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Plotted: Jan 27, 2023 - 10:46am dyu Layout: S1.00
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NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

STRUCTURAL NOTES

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**S1.00**
SHEET NO.	OF

STRUCTURAL STEEL

STEEL MATERIALS

WIDE FLANGE SHAPES (W AND WT)	ASTM A 992
PLATES (PL), BARS	ASTM A 36 TYP ASTM A 572 GRADE 50 WHERE NOTED
ANGLES (L), CHANNELS (C AND MC)	ASTM A 36
STRUCTURAL TUBES (HSS)	ASTM A 500, GRADE C
STEEL PIPE	ASTM A 53, GRADE B
STEEL PIPE PILES	ASTM A 252, GRADE 3 (MOD), Fy = 50 ksi UNO
STRUCTURAL BOLTS	ASTM F 3125, GRADE A 325
ANCHOR RODS	ASTM F 1554, GRADE 55, UNO
THREADED RODS	ASTM A 36, UNO
WELDING ELECTRODES	E70XX, TYP
HEADED SHEAR STUDS	ASTM A 108
CHAINS	GRADE 100

STRUCTURAL STEEL DESIGN, FABRICATION AND ERECTION SHALL CONFORM TO THE REQUIREMENTS OF IBC CHAPTER 22. ALL MEMBERS ARE TO BE ERECTED WITH NATURAL MILL CAMBER OR INDUCED CAMBER UP, UNLESS OTHERWISE NOTED ON THE PLANS. SUBSTITUTION OF MEMBER SIZES OR STEEL GRADE WILL NOT BE ALLOWED WITHOUT PRIOR APPROVAL BY THE ENGINEER.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ERECTION AIDS AND JOINT PREPARATIONS THAT INCLUDE, BUT ARE NOT LIMITED TO, ERECTION ANGLES, LIFT HOLES AND OTHER AIDS, WELDING PROCEDURES, REQUIRED ROOT OPENINGS, ROOT FACE DIMENSIONS, GROOVE ANGLES, BACKING BARS, COPES, SURFACE ROUGHNESS VALUES, AND UNEQUAL PARTS.

BEAMS AND JOISTS SHALL BE EQUALLY SPACED IN A BAY UNLESS NOTED OTHEWISE ON PLAN.

WELDING
ALL WELDING SHALL BE IN CONFORMANCE WITH AISC AND AWS STANDARDS, AND SHALL BE PERFORMED BY AWS CERTIFIED WELDERS, CERTIFIED FOR WELDS MADE. ONLY WELDS THAT ARE PREQUALIFIED, AS DEFINED BY AWS, OR QUALIFIED BY TESTING SHALL BE USED. SHOP DRAWINGS SHALL SHOW ALL WELDING WITH AWS A2.4 SYMBOLS. WELDS SHOWN ON THE DRAWINGS ARE MINIMUM SIZES. INCREASE WELD SIZE TO AWS MINIMUM SIZES BASED ON THICKNESS. MINIMUM WELD SIZE SHALL BE 3/16–INCH, UNLESS NOTED OTHERWISE. THE WELDS SHOWN ARE FOR THE FINAL CONNECTIONS. FIELD WELD SYMBOLS ARE SHOWN WHERE FIELD WELDS ARE REQUIRED BY THE STRUCTURAL DESIGN. WHERE FIELD WELD IS NOT INDICATED, THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING IF A WELD SHOULD BE SHOP OR FIELD–WELDED IN ORDER TO FACILITATE THE STRUCTURAL STEEL ERECTION.

GALVANIZING
STRUCTURAL STEEL AND CONNECTIONS WHICH ARE EXPOSED TO WEATHER AND NOT TO BE PAINTED AS WELL AS PLATES AND OTHER STEEL ITEMS EMBEDDED IN CONCRETE SHALL BE HOT–DIPPED GALVANIZED AFTER FABRICATION IN COMPLIANCE WITH ASTM A123 GR 100 OR ASTM A153 AS APPLICABLE.

ALL GALVANIZING AT FIELD WELDS AND WHERE THE ORIGINAL COATING IS DAMAGED SHALL BE REPAIRED ACCORDING TO ASTM A780, METHOD A1 USING ZINC WELD STICK.

COATINGS
CLEAN, PREPARE, AND SHOP PRIME STRUCTURAL STEEL MEMBERS IN ACCORDANCE WITH SSPC STANDARDS SP–10.

ALL STEEL INCLUDING GALVANIZED STEEL, SHALL BE COATED WITH THE FOLLOWING PAINT SYSTEM OR APPROVED EQUAL:
1ST COAT: 7 MILS OF CARBOGUARD 890
2ND COAT: 7 MILS OF CARBOGUARD 890
3RD COAT: 2 MILS OF CARBOTHANE 134 (COLOR PER OWNER)

EPOXY COATING SHALL EXTEND TO 10' BELOW THE MUDLINE.

PILING

PILING TO BE FURNISHED BY THE OWNER AND INSTALLED BY THE CONTRACTOR.

PILES SHALL BE DRIVEN TO THE MINIMUM TIP ELEVATIONS AND REQUIRED GEOTECHNICAL CAPACITIES INDICATED ON THE DRAWINGS.

PILE HAMMER AND DRIVING PLAN SHALL BE APPROVED BY ENGINEER. PILE DRIVING METHODS SHALL ALIGN WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER AND PROJECT PERMITS. SEE SPECIFICATIONS.

PLUMB PILES SHALL BE DRIVEN WITH 1/4" PER 10' PILE LENGTH, AND WITHIN 3" OF THE DESIGN HORIZONTAL POSITION.

BATTER PILES SHALL BE DRIVEN TO WITHIN 1/4" PER 10' OF PILE LENGTH OF THE DESIGNATED BATTER, AND WITHIN 3" OF THE DESIGN HORIZONTAL POSITION.

PILES HITTING OBSTACLES AND MISALIGNED PILES OUTSIDE SPECIFIED TOLERANCES SHALL BE PULLED BY THE CONTRACTOR WITH A VIBRATORY HAMMER AND REDRIVEN AT NO ADDITIONAL COST TO THE OWNER.

ALL PILE CUTOFFS SHORTER THAN 20'–0" BECOME PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE.

PILE INSTALLATION SHALL BE CONTINUOUSLY MONITORED BY THE GEOTECHNICAL ENGINEER.

VIBRATORY AND IMPACT PILE DRIVING SHALL BE IN ACCORDANCE WITH PROJECT SPECIFICATIONS AND PERMITS.

UHMW

ALL ULTRA HIGH MOLECULAR WEIGHT (UHMW) POLYETHYLENE COMPONENTS SHALL BE MANUFACTURED FROM VIRGIN POLYETHYLENE MATERIAL, BE UV STABILIZED, AND SHALL BE PARTIALLY OR FULLY CROSSLINKED. UHMW COMPONENTS SHALL BE BLACK IN COLOR AND SUITABLE FOR MARINE ENVIRONMENTS UNLESS NOTED OTHERWISE.

DESIGN CRITERIA

1. DEAD LOADS

   A. CONCRETE 160 PCF
   B. STEEL 490 PCF

2. DESIGN LIVE LOADS

   A. 40 PSF UNIFORM LIVE LOAD – CATWALKS
   B. 85 PSF UNIFORM LIVE LOAD – PUBLIC GANGWAYS

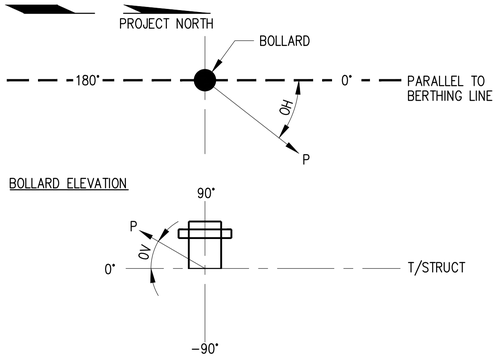
3. DESIGN WIND PARAMETERS
   (FOR CATWALKS AND DOLPHIN DESIGN, NOT MOORING)

   A. EXPOSURE CATEGORY: D
   B. WIND SPEED: 130 MPH
   C. Kz = 1.0
   D. Kzc = 1.0
   E. Kd = 0.85
   F. G = 0.85

4. BERTHING LOADS

A. BERTHING VELOCITY	1.20 KNOTS
B. BERTHING ANGLE	10.00 DEG
C. ABNORMAL IMPACT FACTOR	1.50
D. DESIGN ENERGY	520.87 KIP–FT

BOLLARDS PLAN

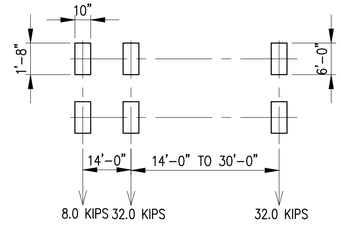


BOLLARD ELEVATION

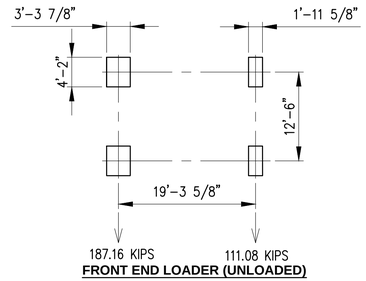
LOCATION	RATED CAPACITY P (EA)	RANGE OF HORIZONTAL ANGLE OH	RANGE OF VERTICAL ANGLE OV
DOLPHIN A' BOLLARDS	100 TONS	10° TO 70°	–15° TO +30°
DOLPHIN A BOLLARDS	82.5 TONS	0° TO 100°	–15° TO +30°
SHIP LOADER PLATFORM BOLLARDS	150 TONS	0 TO 180°	0° TO +60°
CONVEYOR SUPPORT BOLLARD	165 TONS	0 TO 180°	0° TO +60°
DOLPHIN K' AND L'	200 TONS	0 TO 180°	0° TO +60°

ROLL ON ROLL OFF (RORO) TRESTLE AND RAMP LOADS

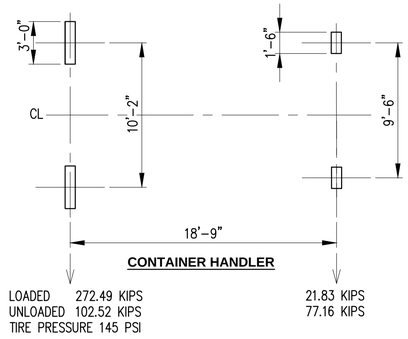
DISTRIBUTED LIVE LOAD 1000 PSF
(ONLY APPLIED TO THE RORO AND MSP TRESTLE)



HL-93 TRUCK

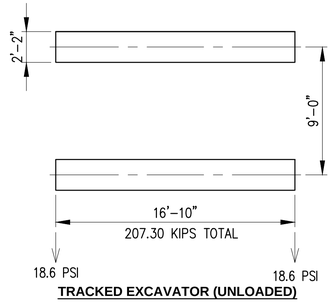


FRONT END LOADER (UNLOADED)



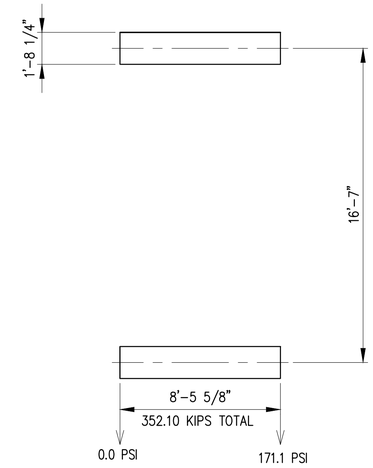
CONTAINER HANDLER

LOADED 272.49 KIPS 21.83 KIPS
UNLOADED 102.52 KIPS 77.16 KIPS
TIRE PRESSURE 145 PSI



TRACKED EXCAVATOR (UNLOADED)

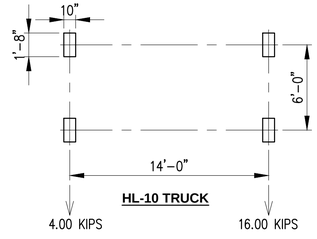
ROLL ON ROLL OFF (RORO) TRESTLE AND RAMP LOADS CONT.



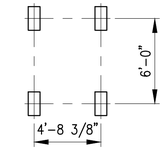
TRACKED CRANE (UNLOADED)

CRUISE DOCK ACCESS TRESTLE AND RAMP LOADS

DISTRIBUTED LIVE LOAD (ONLY APPLIED TO THE RORO TRESTLE)	90 PSF
POINT LIVE LOAD	4.00 KIPS



HL-10 TRUCK



LOADED 11.90 KIPS 1.69 KIPS
UNLOADED 3.49 KIPS 5.19 KIPS
MAX 18.00 KIPS

FORKLIFT

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NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

STRUCTURAL NOTES

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**S1.01**
SHEET NO.	OF

Plotted: Jan 27, 2023 – 10:46am dyu Layout: S1.01
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_S1.01 Structural Notes.dwg

SPECIAL INSPECTION SCHEDULE

ESTABLISHED PER 2018 IBC SECTION 110 & CHAPTER 17

ITEM	CONTINUOUS INSPECTION	PERIODIC INSPECTION	COMMENTS
PILES			
PILE DRIVING	X		BY GEOTECHNICAL ENGINEER OF RECORD
CONCRETE			
REINFORCING PLACEMENT		X	
REINFORCING WELDING		X	
ANCHOR BOLTS & INSERTS		X	
PREPARATION OF TEST SPECIMENS	X		
CONCRETE CORING	X		
THREADED ROD GROUTING	X		
GROUT CURING		X	
STRUCTURAL STEEL			
FABRICATION & ERECTION		X	
SINGLE PASS FILLET WELDS ≤ 5/16"		X	REF. NOTE 5
FILLET WELDS > 5/16"	X		REF. NOTE 5
PARTIAL/COMPLETE PENETRATION WELD	X		REF. NOTE 5 AND 6

SPECIAL INSPECTION SCHEDULE NOTES

1. THE ITEMS CHECKED WITH AN "X" SHALL BE INSPECTED IN ACCORDANCE WITH IBC CHAPTER 17 BY A CERTIFIED INSPECTOR FROM AN ESTABLISHED TESTING AGENCY. FOR ADDITIONAL MATERIAL SAMPLING AND TESTING REQUIREMENTS, REFER TO THE CIVIL BASIS OF DESIGN, THE STRUCTURAL NOTES AND THE NOTES BELOW. THE TESTING AGENCY SHALL SEND COPIES OF ALL STRUCTURAL TESTING AND INSPECTION REPORTS DIRECTLY TO THE ENGINEER. ANY MATERIALS WHICH FAIL TO MEET THE PROJECT SPECIFICATIONS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENGINEER. SPECIAL INSPECTION TESTING REQUIREMENTS APPLY EQUALLY TO ALL BIDDER DESIGNED COMPONENTS.

2. SPECIAL INSPECTION IS NOT REQUIRED FOR WORK PERFORMED ON THE PREMISES OF AN APPROVED FABRICATOR PER IBC SECTION 1704.2.5.2.

3. CONTINUOUS SPECIAL INSPECTION MEANS THAT THE SPECIAL INSPECTOR IS ON THE SITE AT ALL TIMES OBSERVING THE WORK REQUIRING SPECIAL INSPECTION (IBC 1702). PERIODIC SPECIAL INSPECTION MEANS THAT THE SPECIAL INSPECTOR IS ON SITE AT TIME INTERVALS NECESSARY TO CONFIRM THAT ALL WORK REQUIRING SPECIAL INSPECTION IS IN COMPLIANCE.

4. INSPECTION REQUIREMENTS FOR SYSTEMS DESIGNED BY OTHERS SHALL BE DEFINED BY THE REGISTERED DESIGN PROFESSIONAL RESPONSIBLE FOR THEIR DESIGN.

5. ALL WELDS SHALL BE VISUALLY INSPECTED.

6. ALL COMPLETE AND PARTIAL PENETRATION WELDS SHALL BE TESTED ULTRASONICALLY OR BY USING ANOTHER APPROVED METHOD.

ABBREVIATIONS

#	NUMBER
ø	DIAMETER
&	AND
@	AT
AB	ANCHOR BOLT
ACI	AMERICAN CONCRETE INSTITUTE
ADD'L	ADDITIONAL
API	AMERICAN PETROLEUM INSTITUTE
APPROX	APPROXIMATE
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AWS	AMERICAN WELDING SOCIETY
B/	BACK OR BOTTOM OF
B/W	BETWEEN
CONC	CONCRETE
DEMO	DEMOLITION
DF	DIESEL FUEL
DIA	DIAMETER
DWG	DRAWING
EA	EACH
EFF	EFFECTIVE
EJ	EXPANSION JOINT
EL	ELEVATION
EW	EACH WAY
EX	EXISTING
EXP	EXPANSION
FRP	FIBER-REINFORCED POLYMER
GALV	GALVANIZED
IBC	INTERNATIONAL BUILDING CODE
IN	INCH
JT	JOINT
KSI	KIPS PER SQUARE INCH
PL	PLATE
MAX	MAXIMUM
MED	MEDIUM
MLLW	MEAN LOWER LOW WATER
MIN	MINIMUM
No.	NUMBER
OC	ON CENTER
ORIG	ORIGINAL
PSI	POUNDS PER SQUARE INCH
REF	REFERENCE
REINF	REINFORCING
REQ'D	REQUIRED
SCH	SCHEDULE
SIM	SIMILAR
SPA	SPACE, SPACING, SPACED
SS	STAINLESS STEEL
T/	TOP OF
TEMP	TEMPORARY
TESC	TEMPORARY EROSION AND SEDIMENT CONTROL
THRU	THROUGH
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VIF	VERIFY IN FIELD
W/	WITH
WS	WATER SERVICE
WTS	WELDED THREADED STUD

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NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

STRUCTURAL NOTES

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**S1.02**
SHEET NO.	OF

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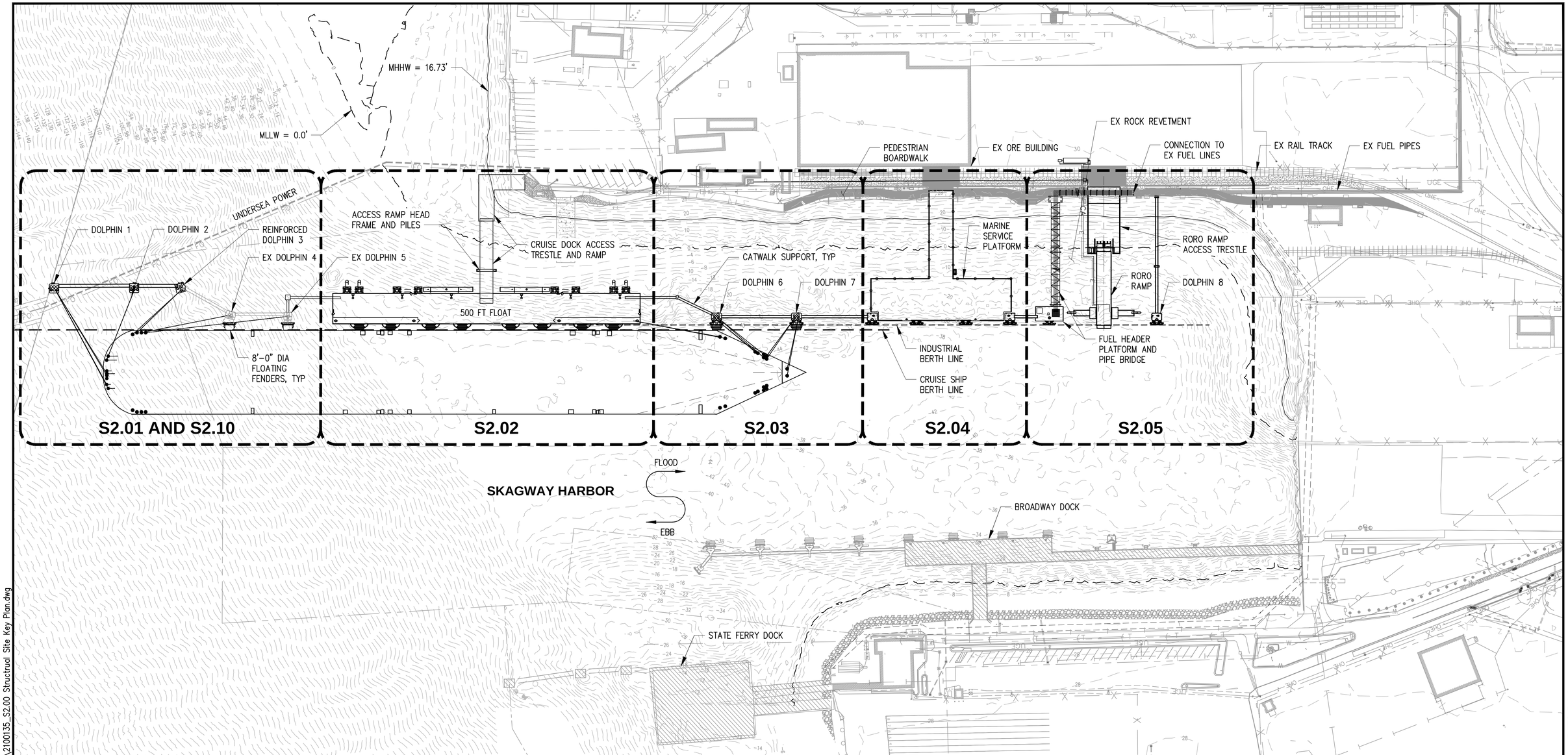
Plotted: Jan 27, 2023 - 10:46am dyu Layout: S1.02-Structural Notes
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_S1.02 Structural Notes.dwg



1 **STRUCTURAL SITE PLAN**
SCALE: 1" = 80'

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STRUCTURAL SITE KEY PLAN

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**S2.00**
SHEET NO.	OF

Plotted: Jan 30, 2023 - 9:36am dyu Layout: S2.00
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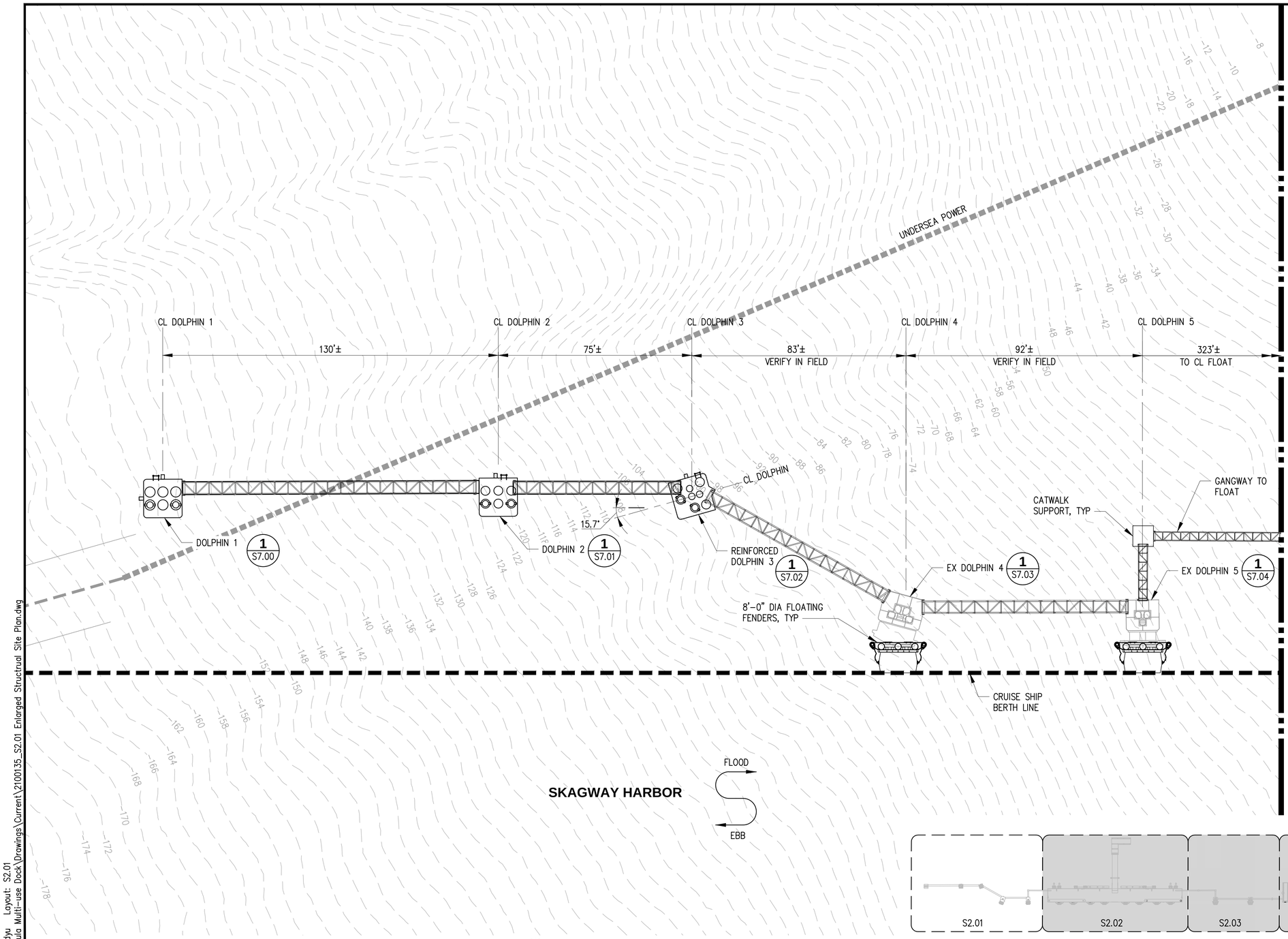

MATCHLINE - SEE S2.02

1 S2.00 **ENLARGED STRUCTURAL SITE PLAN**
SCALE: 1" = 20'

KEY PLAN

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 30, 2023 – 8:41am dyu Layout: S2.01
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_S2.01 Enlarged Structrual Site Plan.dwg

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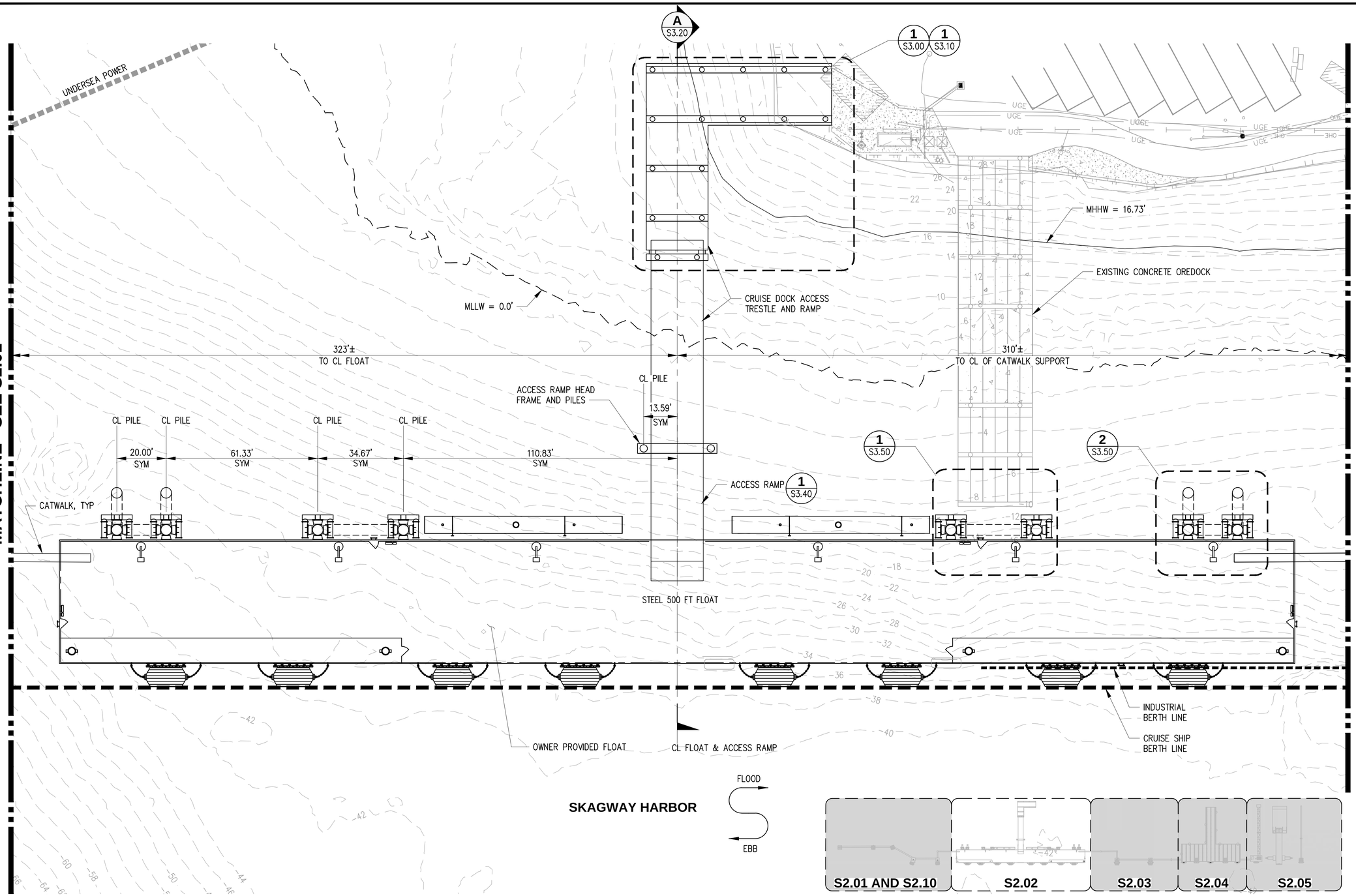
ENLARGED STRUCTURAL SITE PLAN 1

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**S2.01**
SHEET NO.	OF



MATCHLINE - SEE S2.01

MATCHLINE - SEE S2.03

1 – ENLARGED STRUCTURAL SITE PLAN

SCALE: 1" = 20'

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 30, 2023 – 8:56am dyu Layout: S2.02
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_S2.02 Enlarged Structural Site Plan.dwg

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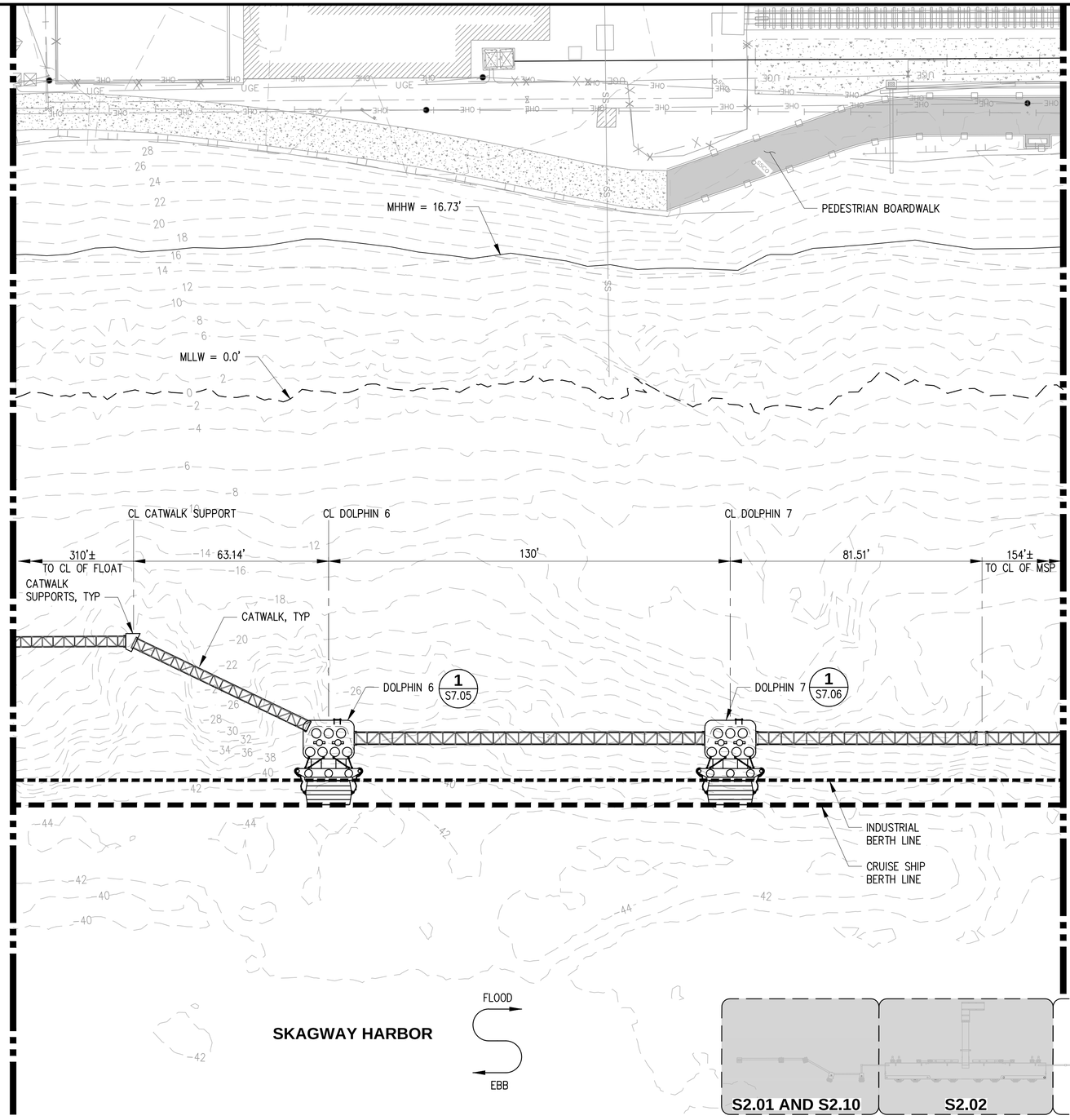
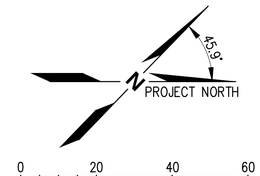
ENLARGED STRUCTURAL SITE PLAN 2

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**S2.02**
SHEET NO.	OF



1 – **ENLARGED STRUCTURAL SITE PLAN**
SCALE: 1" = 20'

KEY PLAN



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ORE PENINSULA REDEVELOPMENT
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ENLARGED STRUCTURAL SITE PLAN 3

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**S2.03**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 30, 2023 – 9:05am dyu Layout: S2.03
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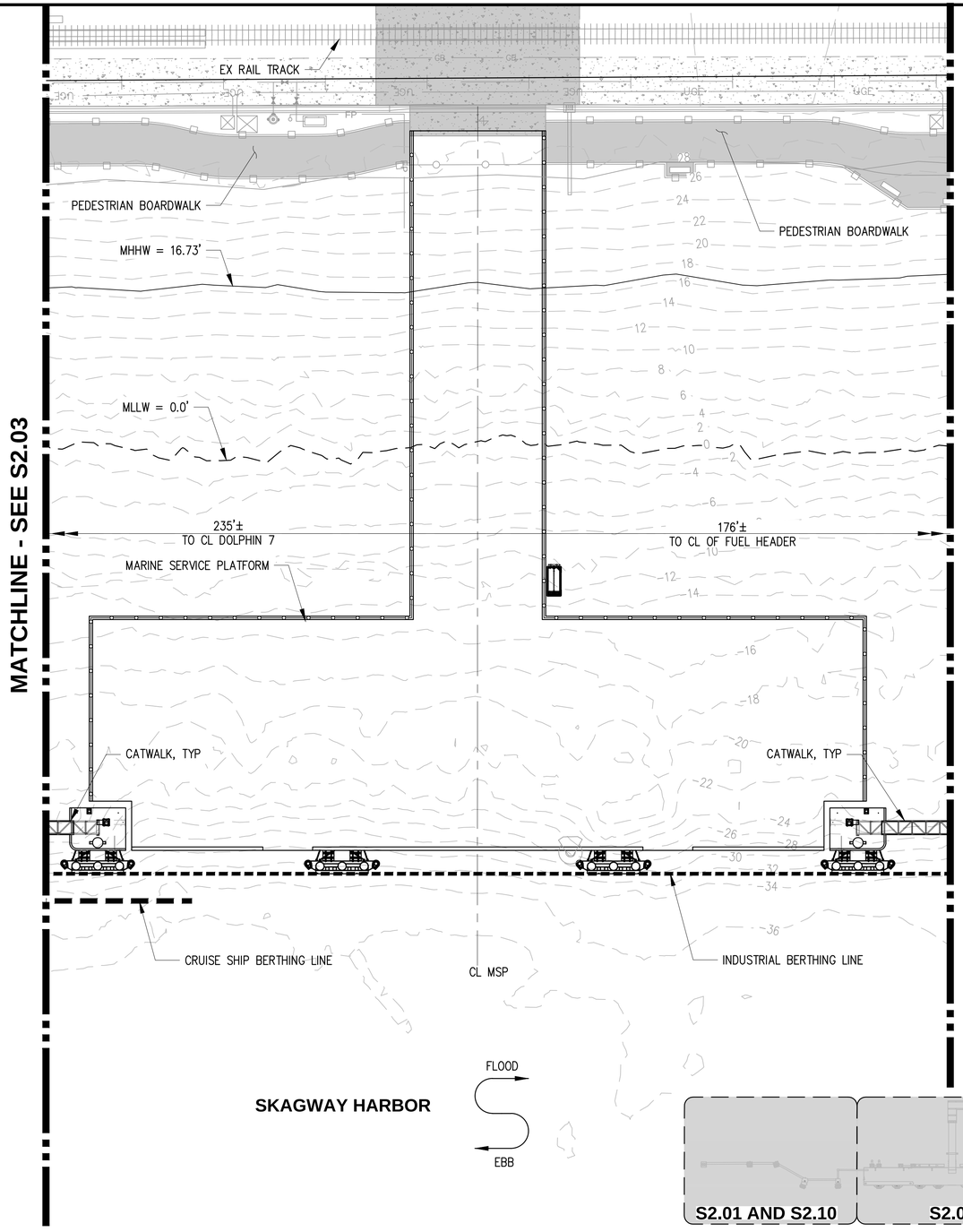

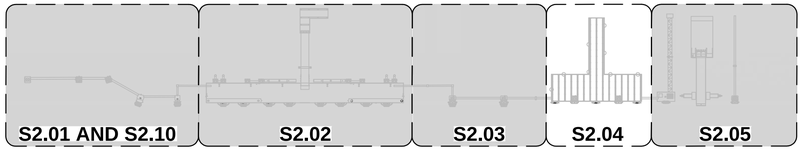

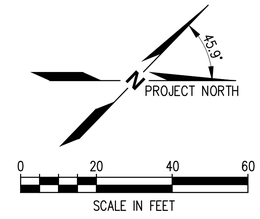

1 — **ENLARGED STRUCTURAL SITE PLAN**
SCALE: 1" = 20'

KEY PLAN

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ENLARGED STRUCTURAL SITE PLAN 4

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**S2.04**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 30, 2023 - 9:10am dyu Layout: S2.04
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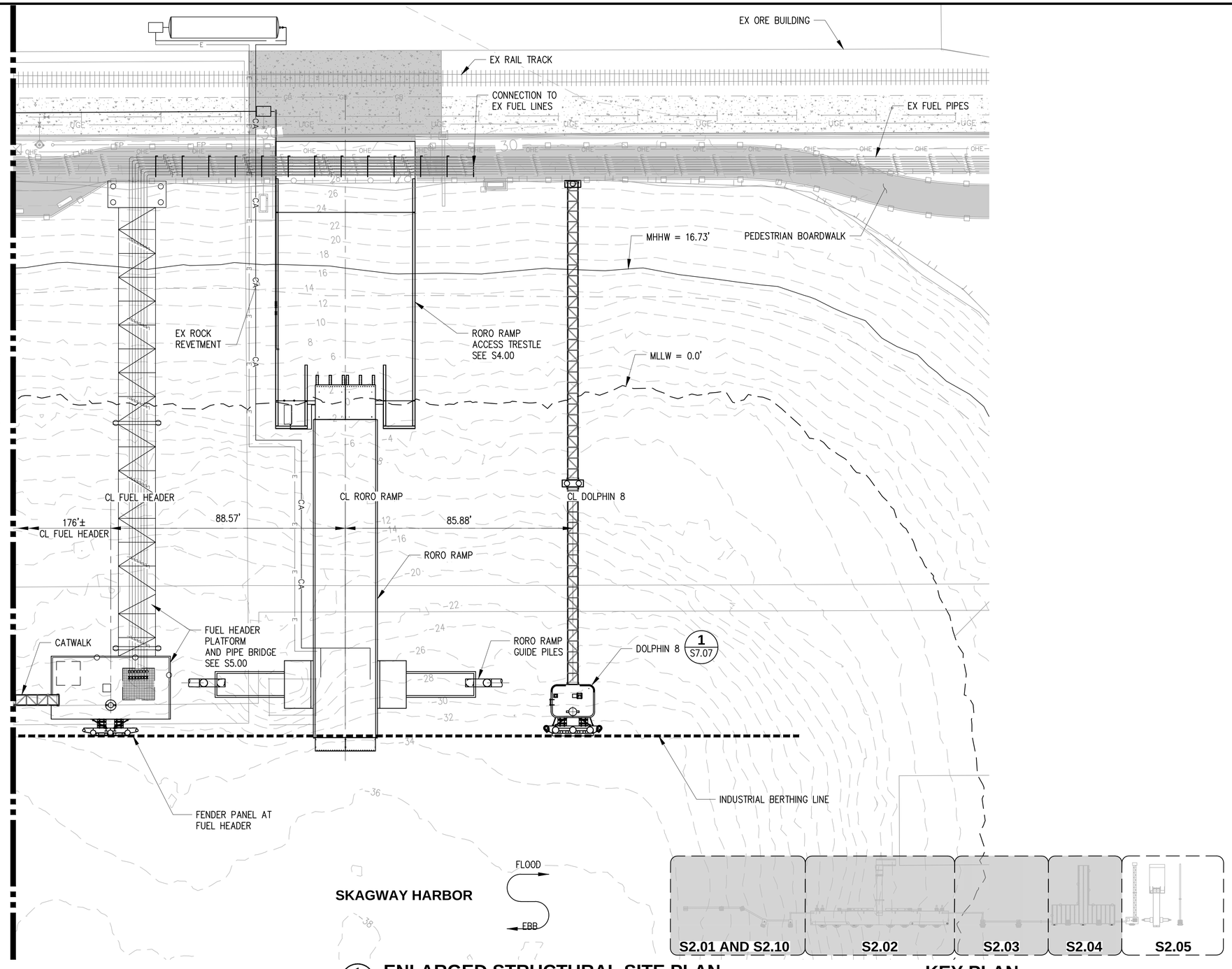

MATCHLINE - SEE S2.04

1 ENLARGED STRUCTURAL SITE PLAN
SCALE: 1" = 20'

KEY PLAN

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ORE PENINSULA REDEVELOPMENT
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ENLARGED STRUCTURAL SITE PLAN 5

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**S2.05**
SHEET NO.	OF

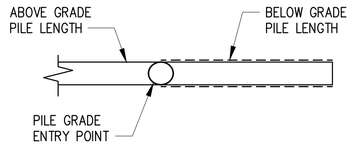
60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 30, 2023 - 9:18am dyu Layout: S2.05
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_S2.05 Enlarged Structrual Site Plan.dwg

NOTES

1. THE CONTRACTOR SHALL PERFORM AN UNDERWATER INVESTIGATION PER THE SPECIFICATIONS.
2. THE CONTRACTOR SHALL SUBMIT A WORK PLAN INCLUDING A DESCRIPTION OF HOW THE UNDERSEA POWER CABLE WILL BE MONITORED DURING PILE DRIVING ACTIVITIES FOR DOLPHINS 1 AND 2 TO ENSURE THAT THE CABLE IS NOT DAMAGED.
3. THE UNDERSEA POWER CABLE SHALL BE CONTINUOUSLY MONITORED DURING ALL PILE DRIVING ACTIVITIES FOR DOLPHINS 1 AND 2 PILES THAT ENTER THE SOIL WITHIN 30' OF THE UNDERSEA POWER CABLE ALIGNMENT.

LEGEND



1 S2.01 **UNDERSEA POWER CABLE MANAGEMENT**
SCALE: 1" = 16'

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NO.	DATE	BY	REVISION

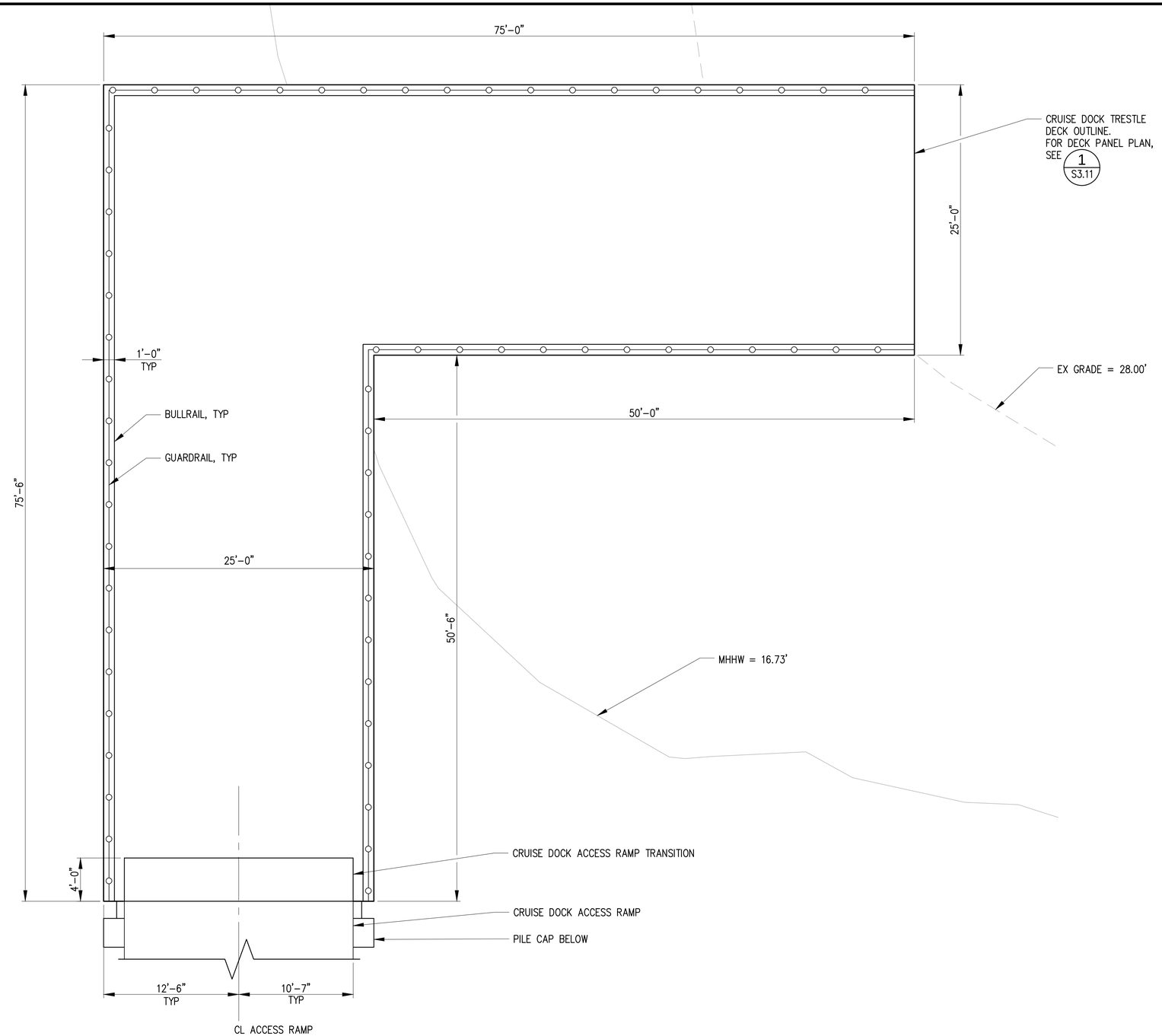
ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

STRUCTURAL PILE PLAN AT UNDERSEA POWER CABLE

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**S2.10**
SHEET NO.	

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 30, 2023 – 9:20am dyu Layout: S2.10
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_S2.10 Undersea Power Cable Management.dwg



1 S2.02 CRUISE DOCK TRESTLE SURFACE FEATURES

SCALE: 3/16" = 1'-0"

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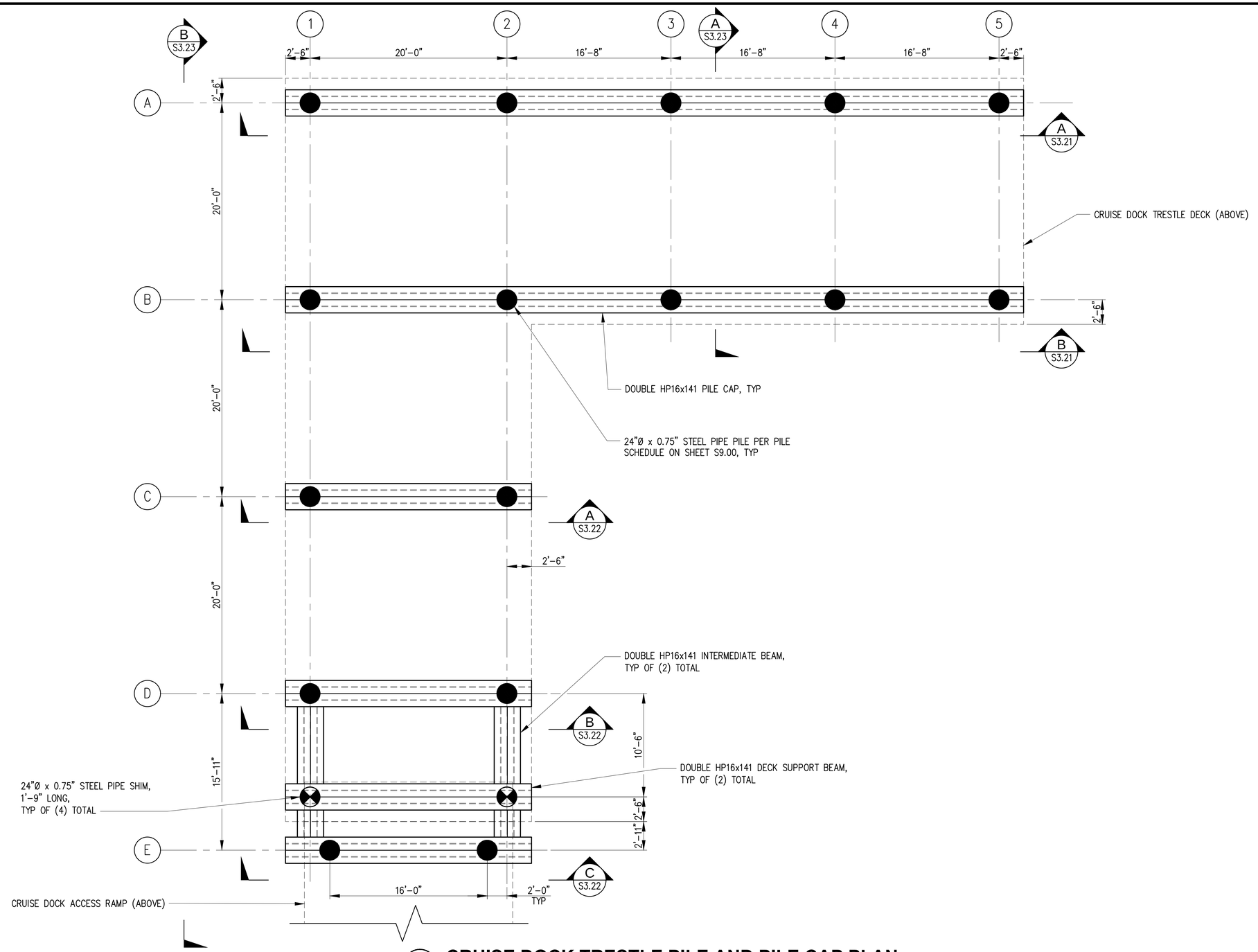
ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

CRUISE DOCK TRESTLE SURFACE FEATURES PLAN

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: KPT	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**S3.00**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 - 11:38am gmachuca Layout: S3.00
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_S3.00 Cruise Dock Trestle Surface Features Plan.dwg



1 S2.02 CRUISE DOCK TRESTLE PILE AND PILE CAP PLAN

SCALE: 3/16" = 1'–0"

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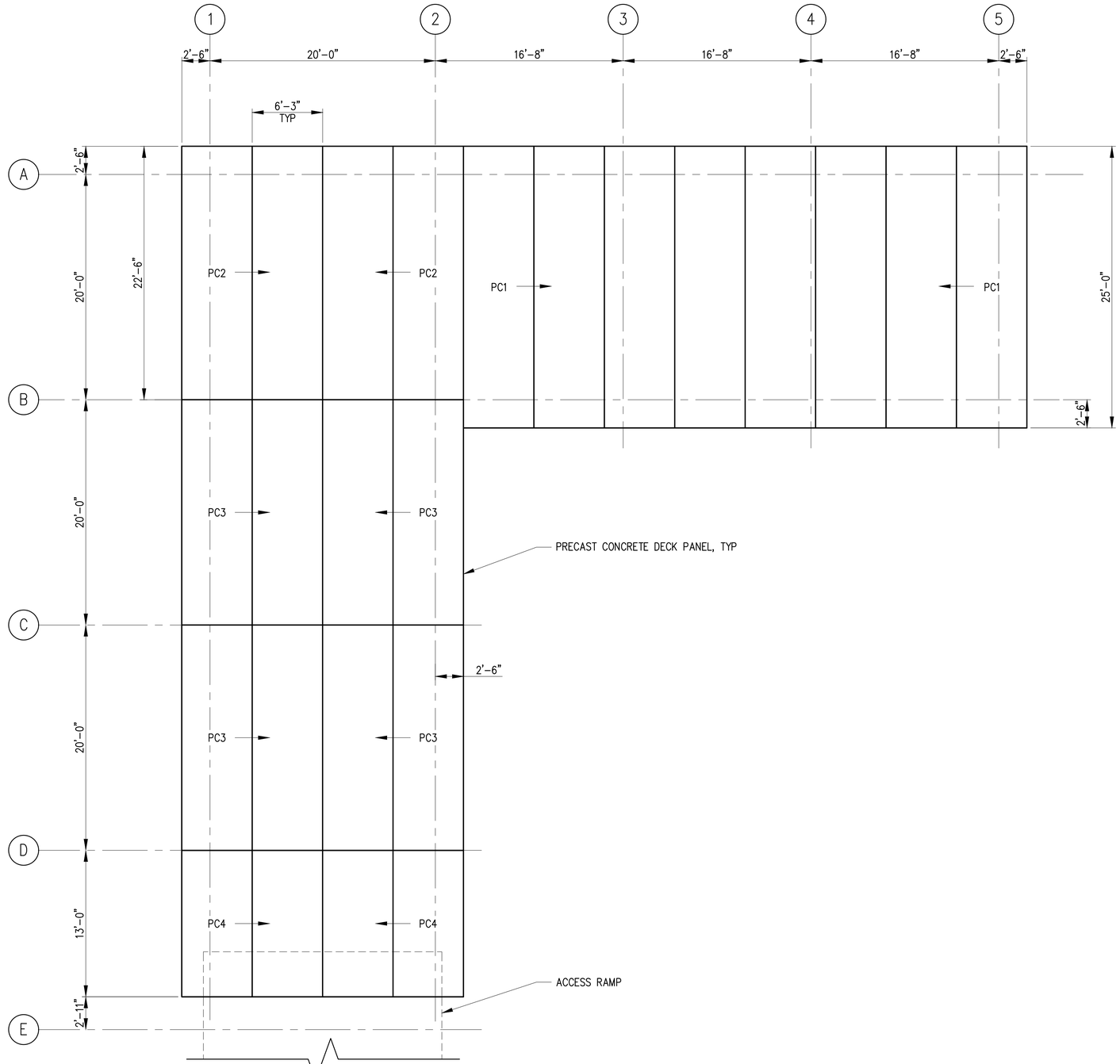
ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

CRUISE DOCK TRESTLE
PILE AND PILE CAP PLAN

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: KPT	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**S3.10**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 – 11:39am gmachuca Layout: S3.10
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_S3.10 Cruise Dock Trestle Pile and Pile Cap Plan.dwg

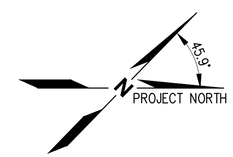


LEGEND:

PCX	PRECAST DECK PANEL TYPE,

1 S3.00 **CRUISE DOCK TRESTLE DECK PANEL PLAN**

SCALE: 3/16" = 1'-0"



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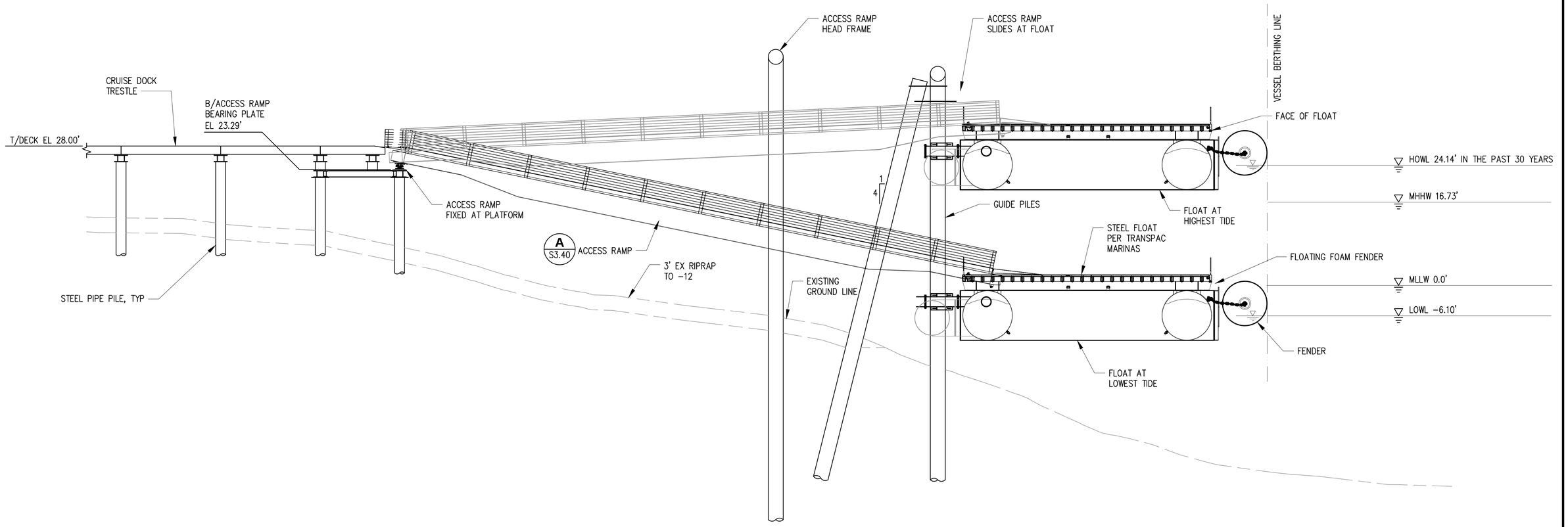
SKAGWAY, ALASKA

CRUISE DOCK TRESTLE DECK PANEL PLAN

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**S3.11**
SHEET NO.	OF

Plotted: Jan 27, 2023 - 11:41am gmachuca Layout: S3.11-Cruise Dock Trestle Deck Panel Plan
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_S3.11 Cruise Dock Trestle Deck Panel Plan.dwg



A S2.02 ACCESS RAMP RANGE OF MOTION

SCALE: 1" = 10'

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ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

CRUISE DOCK TRESTLE
ACCESS RAMP RANGE OF MOTION

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**S3.20**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 - 10:48am dyu Layout: S3.20
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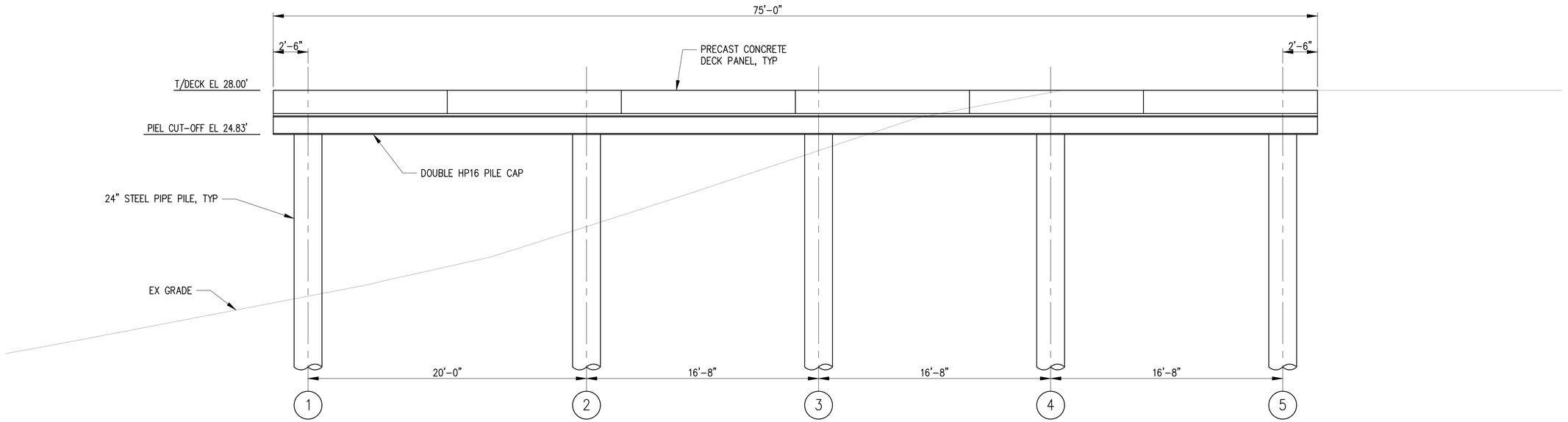
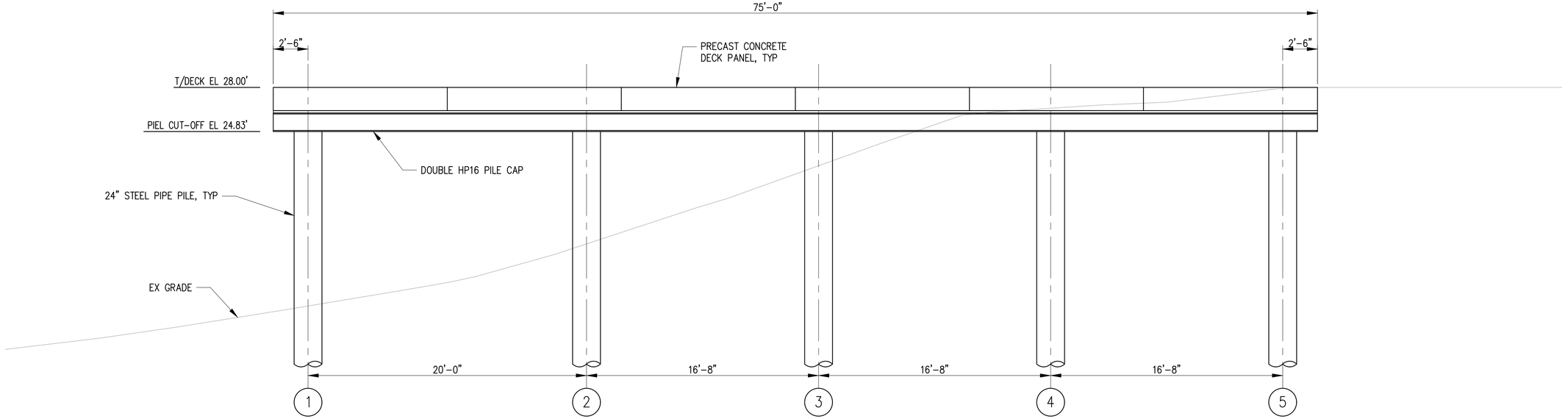


A S3.10 **CRUISE DOCK TRESTLE CROSS SECTION AT BENT A**
SCALE: 1/4" = 1'-0"



B S3.10 **CRUISE DOCK TRESTLE CROSS SECTION AT BENT B**
SCALE: 1/4" = 1'-0"

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NO.	DATE	BY	REVISION

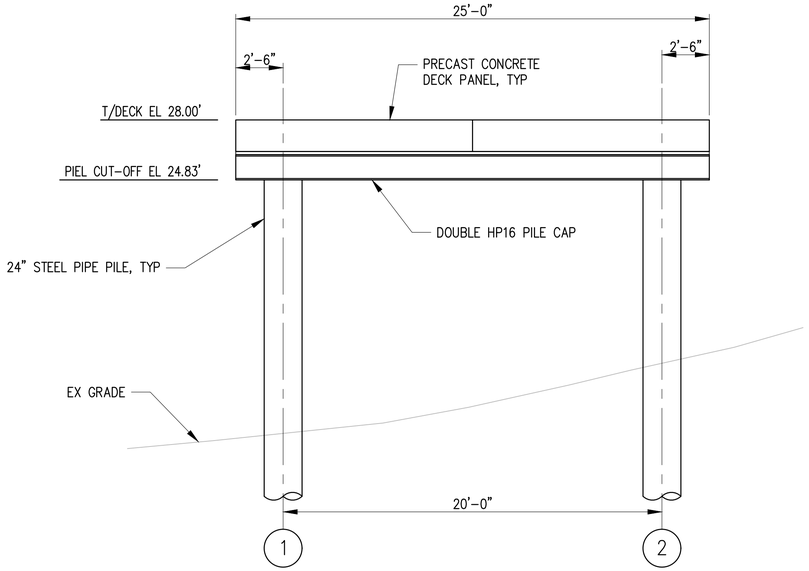
ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

CRUISE DOCK TRESTLE SECTIONS

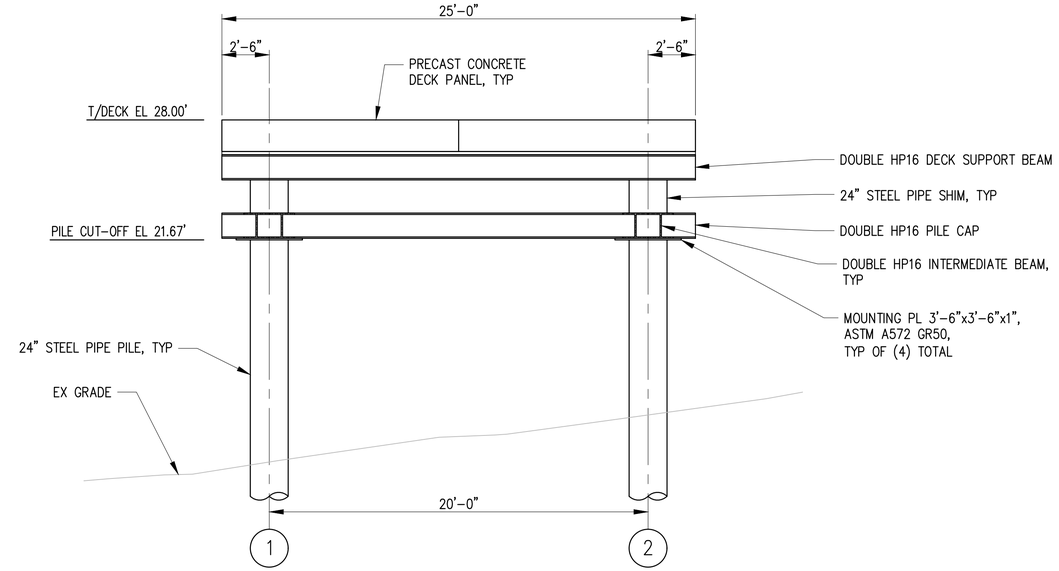
DRAWN: JH	PROJECT NO.: 2100135
DESIGN: KPT	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**S3.21**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

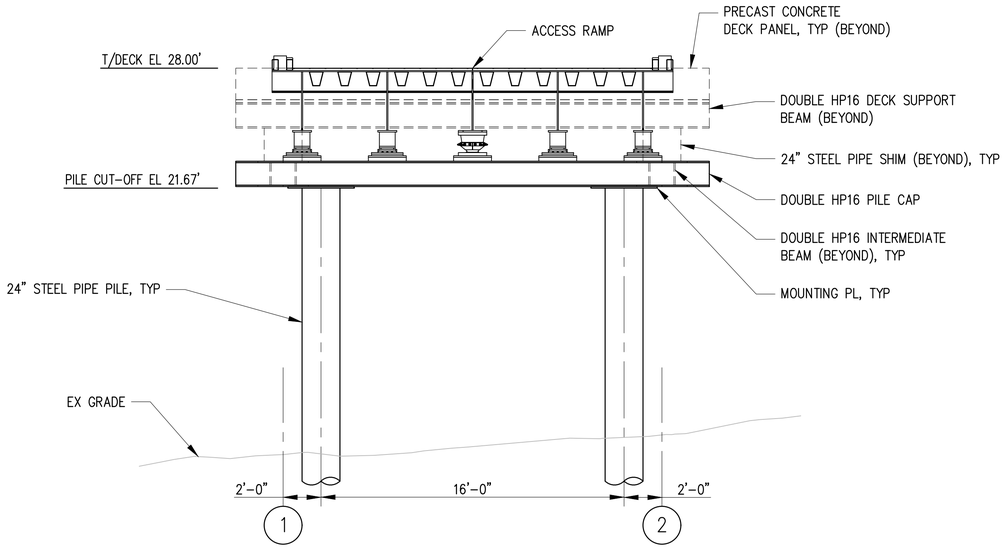
Plotted: Jan 27, 2023 - 10:48am dyu Layout: S3.21
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_S3.21 Cruise Dock Trestle Sections.dwg



A S3.10 **CRUISE DOCK TRESTLE CROSS SECTION AT BENT C**
SCALE: 1/4" = 1'-0"



B S3.10 **CRUISE DOCK TRESTLE CROSS SECTION AT BENT D**
SCALE: 1/4" = 1'-0"



C S3.10 **CRUISE DOCK TRESTLE CROSS SECTION AT BENT E**
SCALE: 1/4" = 1'-0"

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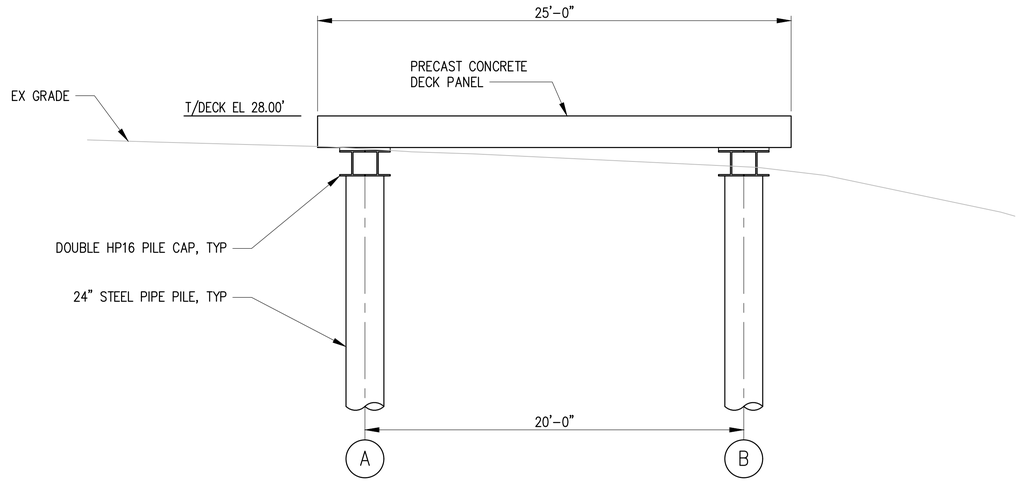
SKAGWAY, ALASKA

CRUISE DOCK TRESTLE SECTIONS

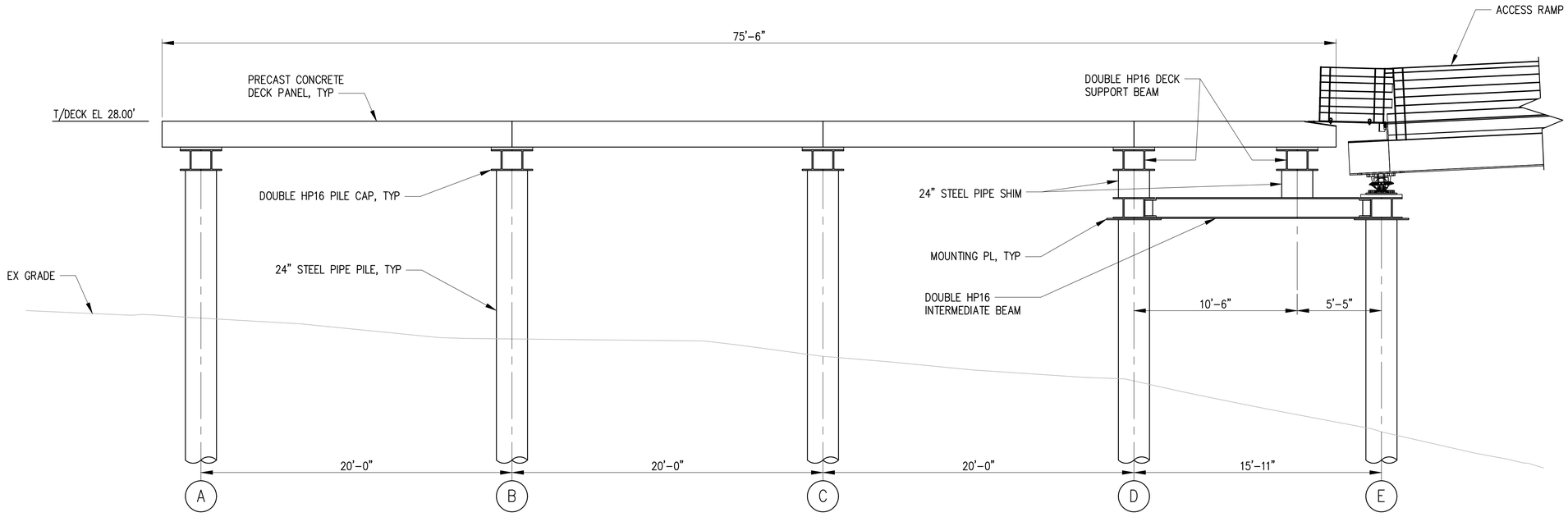
DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**S3.22**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 - 10:49am dyu Layout: S3.22
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_S3.22 Cruise Dock Trestle Sections.dwg



A / S3.10 **CRUISE DOCK TRESTLE CROSS SECTION**
SCALE: 1/4" = 1'-0"



B / S3.10 **CRUISE DOCK TRESTLE CROSS SECTION**
SCALE: 1/4" = 1'-0"

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NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

CRUISE DOCK TRESTLE SECTIONS

DRAWN: DYU	PROJECT NO.: 2100135
DESIGN: KPT	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**S3.23**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 - 10:49am dyu Layout: S3.23
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_S3.23 Cruise Dock Trestle Sections.dwg

GENERAL NOTES

1. THE NOTES ON THIS DRAWING ARE FOR THE CRUISE DOCK ACCESS RAMP. SEE DRAWING S1.00 FOR PROJECT STRUCTURAL NOTES.

2. THESE NOTES CONTAIN GENERAL INFORMATION AND ARE NOT COMPLETE FOR CONSTRUCTION PURPOSES. THE CONTRACTOR SHALL VERIFY INFORMATION GIVEN HERE AND OTHER DOCUMENTS AND BRING ANY CONFLICTS TO THE ATTENTION OF THE ENGINEER.

3. SHOP DRAWINGS AND MATERIAL SPECIFICATIONS SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO ANY FABRICATION OR CONSTRUCTION FOR ALL STRUCTURAL ITEMS.

4. ALL DIMENSIONS AND ELEVATIONS ARE HORIZONTAL AND VERTICAL UNLESS OTHERWISE NOTED.

CODES AND STANDARDS

1. ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THESE PLANS. THE INTERNATIONAL BUILDING CODE (IBC) 2021 EDITION AS AMENDED AND ADOPTED BY THE STATE OF ALASKA, AND PROJECT SPECIAL PROVISIONS.

2. DESIGN SPECIFICATIONS, ANALYSIS AND DESIGN CALCULATIONS CONFORM, AT A MINIMUM, TO THE FOLLOWING SPECIFICATIONS:

   AASHTO LRFD GUIDE SPECIFICATIONS FOR THE DESIGN OF PEDESTRIAN BRIDGES, 2ND EDITION, 2019, WITH 2015 INTERIM REVISIONS.

   AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 9TH EDITION, 2020.

   AASHTO GUIDE SPECIFICATIONS FOR LRFD SEISMIC BRIDGE DESIGN, 2ND EDITION, 2011, WITH INTERIMS THROUGH 2022.

3. AASHTO/ AWS D1.5M/ D1.5: BRIDGE WELDING CODE INCLUDING INTERIM REVISIONS.

GEOTHECNICAL REPORT

SEE DRAWING S1.00 FOR PROJECT STRUCTURAL NOTES.

CORROSION

EPOXY COATINGS ARE ASSUMED TO HAVE A 15 YEAR SERVICE LIFE, UNO.

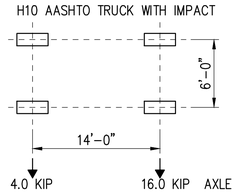
FOLLOWING THE ASSUMED SERVICE LIFE OF EPOXY COATINGS, MEMBERS ARE ASSUMED TO EXPERIENCE 0.003 IN/YEAR OF CORROSION LOSS IN THE SPLASH ZONE.

CRUISE DOCK ACCESS RAMP EPOXY COATINGS SHALL BE MAINTAINED FOR THE LIFE OF THE STRUCTURE.

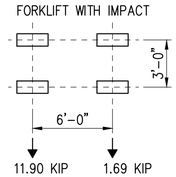
DESIGN LOADS

1. DEAD LOAD
   STEEL = 490 PCF
   UTILITIES = 81 LB / FT ON NORTH RAILING
   FALSEWORK SHALL BE CAREFULLY RELEASED TO PREVENT IMPACT OR UNDUE STRESS ON THE STRUCTURE

2. LIVE LOAD
   VEHICLES = TWO LANES
   H10 AASHTO TRUCK WITH IMPACT



   FORKLIFT WITH IMPACT



   PEDESTRIAN = 90 PSF
   FULL WIDTH OR COMBINED WITH ONE LANE OF VEHICLE

3. RAILING LOAD
   VEHICULAR = TEST LEVEL ONE (TL-1) AS DEFINED IN AASHTO LRFD BRIDGE DESIGN SPEC, TABLE A13.2-1
   PEDESTRIAN = 50 PLF (HORIZONTALLY AND VERTICALLY)
   200 LB POINT LOAD

4. SEISMIC
   AASHTO LRFD OPERATIONAL CLASSIFICATION = OTHER (NOT CRITICAL OR ESSENTIAL) DESIGN SPECTRAL ACCELERATION = 0.860g
   BASIS FOR DESIGN SPECTRAL ACCELERATION = ASCE 7 RISK-TARGETED MAXIMUM CONSIDERED EARTHQUAKE, MULTI-PERIOD DESIGN SPECTRUM
   EXT EVENT I, LL LOAD FACTOR, γ.EQ = 0.5

STRUCTURAL STEEL

STEEL MATERIALS

WIDE FLANGE SHAPES (W AND WT)	ASTM A 992
PLATES (PL), BARS	ASTM A 36 TYP ASTM A 572 GRADE 50 WHERE NOTED
ANGLES (L), CHANNELS (C AND MC)	ASTM A 36
STRUCTURAL TUBES (HSS)	ASTM A 500, GRADE C
STEEL PIPE	ASTM A 53, GRADE B
STEEL PIPE PILES	ASTM A 252, GRADE 3 (MOD), Fy = 50 ksi UNO
STRUCTURAL BOLTS	ASTM F 3125, GRADE A 325
ANCHOR RODS	ASTM F 1554, GRADE 55, UNO
THREADED RODS	ASTM A 36, UNO
WELDING ELECTRODES	E70XX, TYP
HEADED SHEAR STUDS	ASTM A 108
CHAINS	GRADE 100

STRUCTURAL STEEL DESIGN, FABRICATION AND ERECTION SHALL CONFORM TO THE REQUIREMENTS OF IBC CHAPTER 22. ALL MEMBERS ARE TO BE ERECTED WITH NATURAL MILL CAMBER OR INDUCED CAMBER UP, UNLESS OTHERWISE NOTED ON THE PLANS. SUBSTITUTION OF MEMBER SIZES OR STEEL GRADE WILL NOT BE ALLOWED WITHOUT PRIOR APPROVAL BY THE ENGINEER.

MEMBER MARKED (FCM) ARE FRACTURE CRITICAL MEMBERS AND SHALL MEET THE FRACTURE CONTROL REQUIREMENTS OF SPECIAL PROVISIONS.

MEMBERS MARKED (V) ARE MAIN LOAD CARRYING TENSION MEMBERS OR TENSION COMPONENTS OF FLEXURAL MEMBERS AND SHALL MEET THE LONGITUDINAL CHARPY V-NOTCH TESTS AS DESCRIBED IN THE SPECIAL PROVISIONS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ERECTION AIDS AND JOINT PREPARATIONS THAT INCLUDE, BUT ARE NOT LIMITED TO, ERECTION ANGLES, LIFT HOLES AND OTHER AIDS, WELDING PROCEDURES, REQUIRED ROOT OPENINGS, ROOT FACE DIMENSIONS, GROOVE ANGLES, BACKING BARS, COPES, SURFACE ROUGHNESS VALUES, AND UNEQUAL PARTS.

WELDING
ALL WELDING SHALL BE IN CONFORMANCE WITH AISC AND AWS STANDARDS, AND SHALL BE PERFORMED BY AWS CERTIFIED WELDERS, CERTIFIED FOR WELDS MADE. ONLY WELDS THAT ARE PREQUALIFIED, AS DEFINED BY AWS, OR QUALIFIED BY TESTING SHALL BE USED. SHOP DRAWINGS SHALL SHOW ALL WELDING WITH AWS A2.4 SYMBOLS. WELDS SHOWN ON THE DRAWINGS ARE MINIMUM SIZES. INCREASE WELD SIZE TO AWS MINIMUM SIZES BASED ON THICKNESS. MINIMUM WELD SIZE SHALL BE 3/16-INCH, UNLESS NOTED OTHERWISE. THE WELDS SHOWN ARE FOR THE FINAL CONNECTIONS. FIELD WELD SYMBOLS ARE SHOWN WHERE FIELD WELDS ARE REQUIRED BY THE STRUCTURAL DESIGN. WHERE FIELD WELD IS NOT INDICATED, THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING IF A WELD SHOULD BE SHOP OR FIELD-WELDED IN ORDER TO FACILITATE THE STRUCTURAL STEEL ERECTION.

ASTM A500 AND API 5L X52 PSL2 SHALL BE ADDED TO THOSE STANDARDS LISTED IN ARTICLE 12.4.1 OF AASHTO/AWS D1.5. FOR THE PURPOSES OF DETERMINING PREHEAT AND INTERPASS TEMPERATURES, THE VALUES FOR AASHTO M 270M/M270 OR ASTM A709 GR50 SHALL BE USED. WELDING DETAILS FOR CYCLICALLY LOADED TUBULAR MEMBERS SPECIFIED BY AASHTO/AWS D1.1 SHALL BE USED.

ALL WELDS REQUIRE QUALIFICATION USING AWS D1.1 ARTICLE 4.8. ALL WELDING SHALL BE DONE TO MINIMIZE DISTORTION. THE WELDING SEQUENCES AND PROCEDURES TO BE USED SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO THE START OF WELDING.

GALVANIZING
STRUCTURAL STEEL AND CONNECTIONS WHICH ARE EXPOSED TO WEATHER AND NOT TO BE PAINTED AS WELL AS PLATES AND OTHER STEEL ITEMS EMBEDDED IN CONCRETE SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION IN COMPLIANCE WITH ASTM A123 GR 100 OR ASTM A153 AS APPLICABLE.

ALL GALVANIZING AT FIELD WELDS AND WHERE THE ORIGINAL COATING IS DAMAGED SHALL BE REPAIRED ACCORDING TO ASTM A780, METHOD A1 USING ZINC WELD STICK.

COATINGS
CLEAN, PREPARE, AND SHOP PRIME STRUCTURAL STEEL MEMBERS IN ACCORDANCE WITH SSPC STANDARDS SP-10.

ALL STEEL INCLUDING GALVANIZED STEEL, SHALL BE COATED WITH THE FOLLOWING PAINT SYSTEM OR APPROVED EQUAL:
1ST COAT: 7 MILS OF CARBOGUARD 890
2ND COAT: 7 MILS OF CARBOGUARD 890
3RD COAT: 2 MILS OF CARBOTHANE 134 (COLOR PER OWNER)

EPOXY COATING SHALL EXTEND TO 10' BELOW THE MUDLINE.

UHMW

ALL ULTRA HIGH MOLECULAR WEIGHT (UHMW) POLYETHYLENE COMPONENTS SHALL BE MANUFACTURED FROM VIRGIN POLYETHYLENE MATERIAL, BE UV STABILIZED, AND SHALL BE PARTIALLY OR FULLY CROSSLINKED. UHMW COMPONENTS SHALL BE BLACK IN COLOR AND SUITABLE FOR MARINE ENVIRONMENTS UNLESS NOTED OTHERWISE.

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NO.	DATE	BY	REVISION

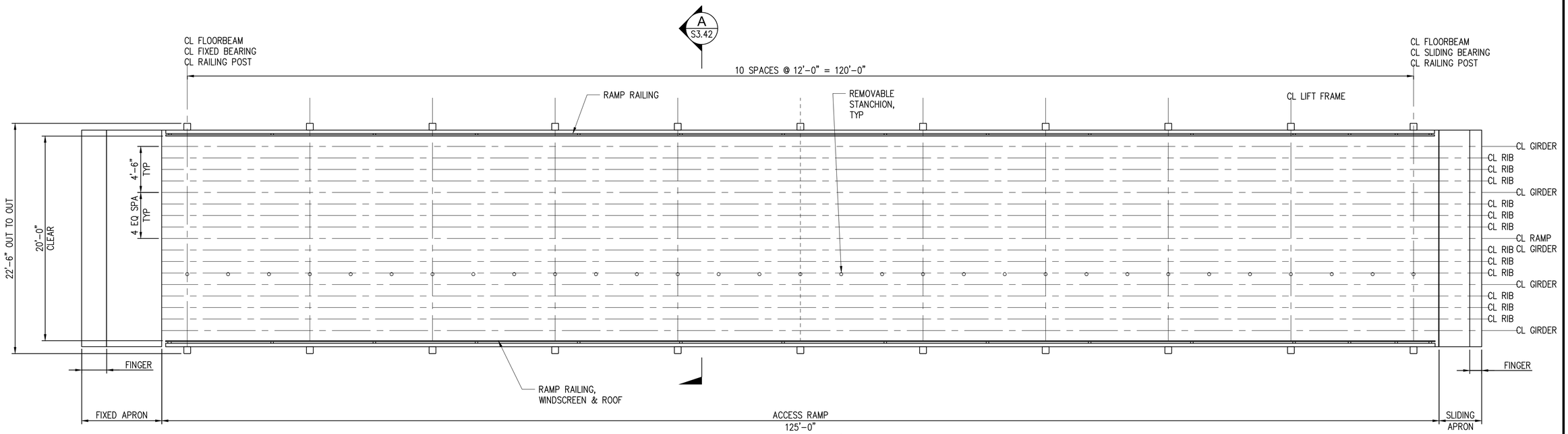
ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

CRUISE DOCK ACCESS RAMP
STRUCTURAL NOTES

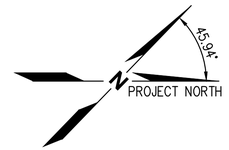
DRAWN: TP	PROJECT NO.: 2100135
DESIGN: AS	SCALE: AS SHOWN
CHECKED: AO	DATE: 01/27/2023
DRAWING NO.	S3.40
SHEET NO.	OF XX

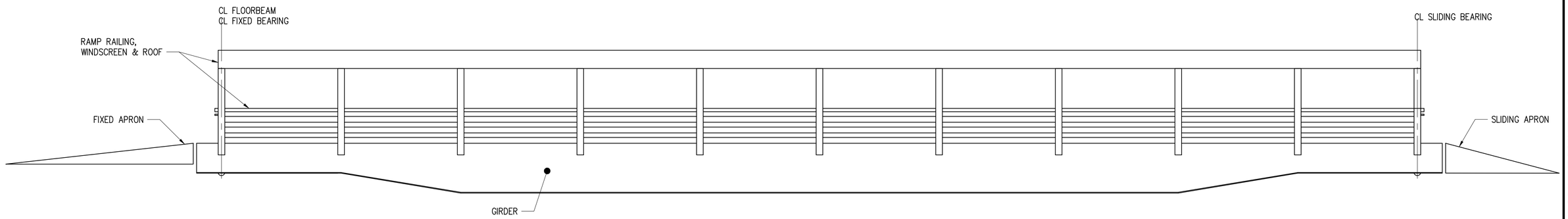
60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 26, 2023 - 12:48pm haoyis Layout: S3.40
V:\2100135 (Skagway Ore Peninsula Multi-Use Dock)\02_Design (v2019)\2100135_S3.40 Structural Notes.dwg



1 – **PLAN**
SCALE: 1:60
ROOF NOT SHOWN FOR CLARITY





A – **ELEVATION**
SCALE: 1:60

Plotted: Jan 26, 2023 – 8:14am tauniep Layout: S3.41
V:\2100135 (Skagway Ore Peninsula Multi-Use Dock)\02_Design (v2019)\2100135_S3.41 Cruise Dock Access Ramp Plan & Elevation.dwg

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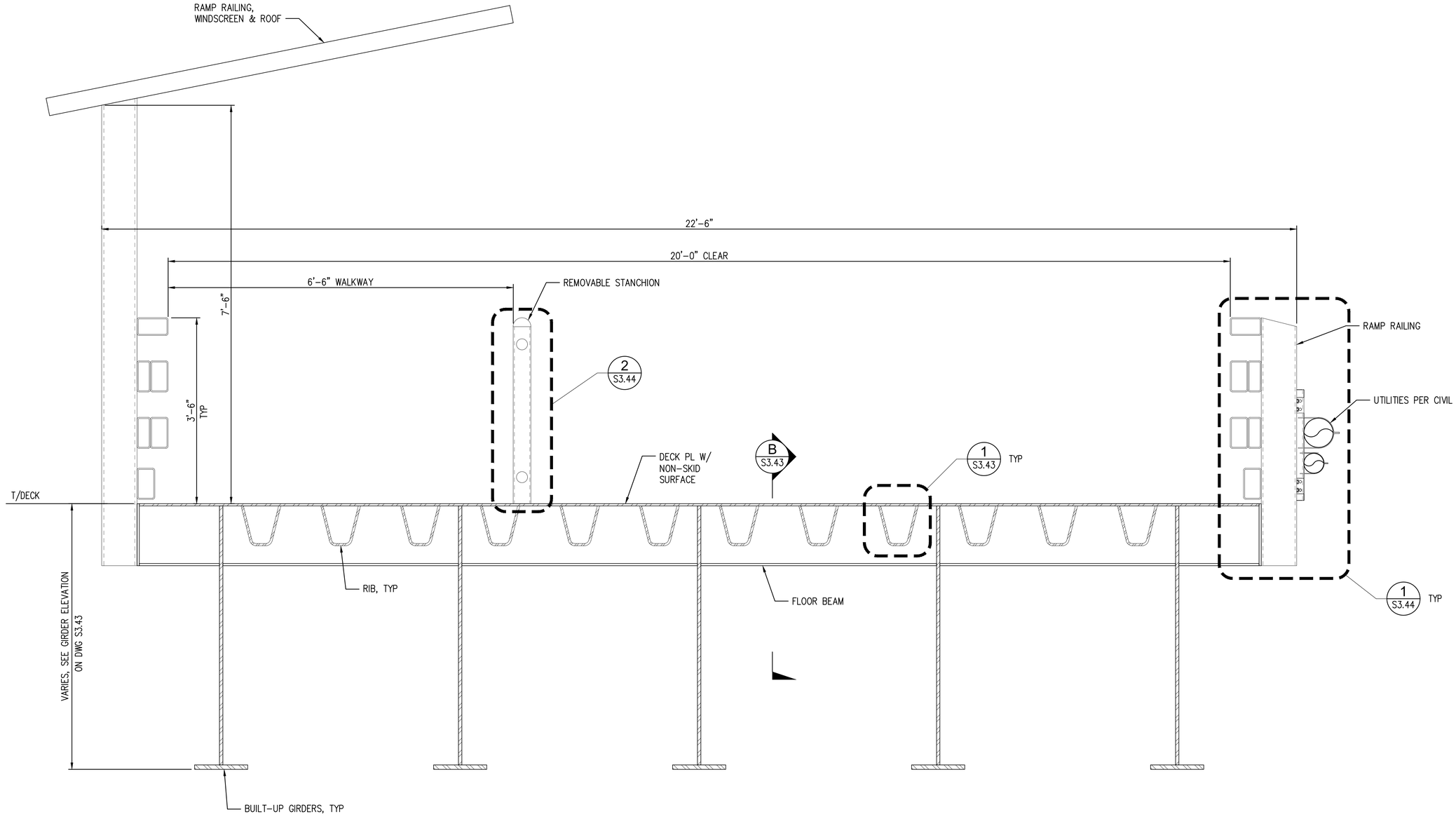
NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

CRUISE DOCK ACCESS RAMP
PLAN AND ELEVATION

DRAWN:	HS	PROJECT NO.:	2100135
DESIGN:	AS	SCALE:	AS SHOWN
CHECKED:	AO	DATE:	01/27/2023
DRAWING NO.		**S3.41**	
SHEET NO.		OF	XX



A S3.41 **SECTION**
SCALE: 1" = 1'-0"

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NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

CRUISE DOCK ACCESS RAMP
SECTION

DRAWN: HS	PROJECT NO.: 2100135
DESIGN: AS	SCALE: AS SHOWN
CHECKED: AO	DATE: 01/27/2023
DRAWING NO.	**S3.42**
SHEET NO.	OF XX

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 26, 2023 - 8:20am tauniep Layout: S3.42
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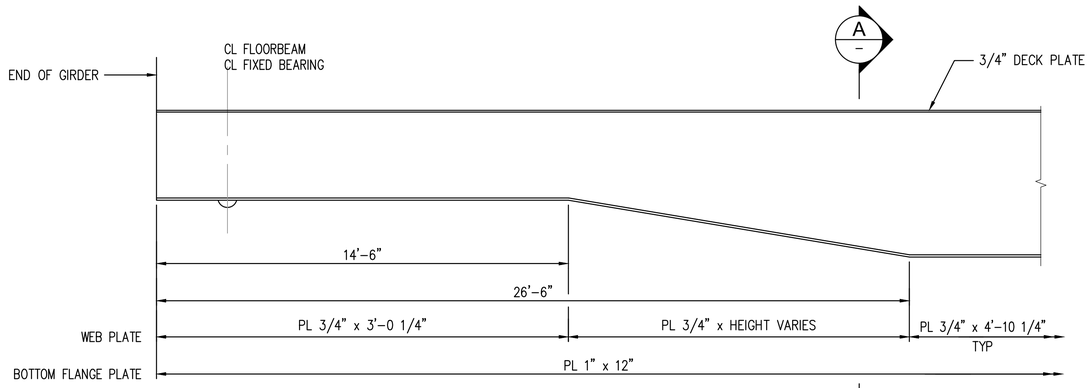
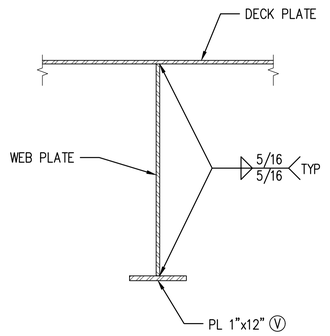


GIRDER PARTIAL ELEVATION

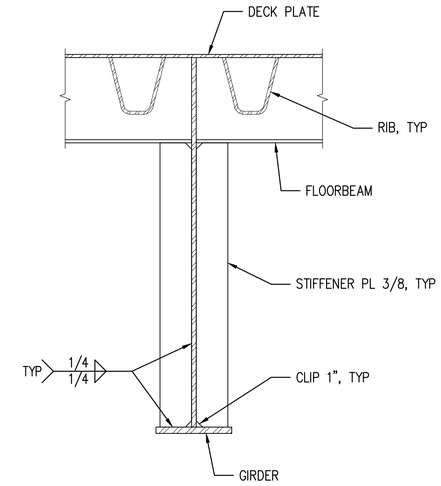
SCALE: 3/8" = 1'-0"

RAILING, FLOORBEAMS NOT SHOWN FOR CLARITY



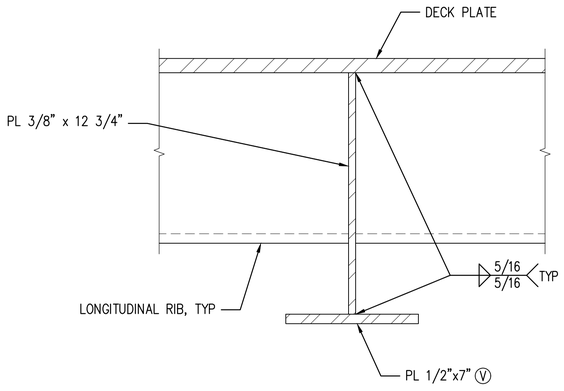
A – TYPICAL GIRDER SECTION

SCALE: 3/4" = 1'-0"



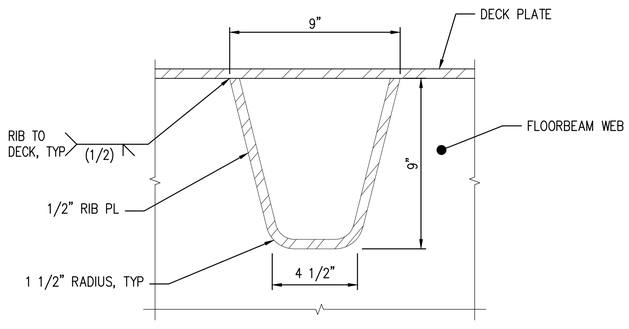
GIRDER SECTION AT FLOORBEAM

SCALE: 1" = 1'-0"



B / S3.42 FLOORBEAM TYPICAL SECTION

SCALE: 3" = 1'-0"



1 / S3.42 RIB TYPICAL DETAIL

SCALE: 3" = 1'-0"

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NO.	DATE	BY	REVISION

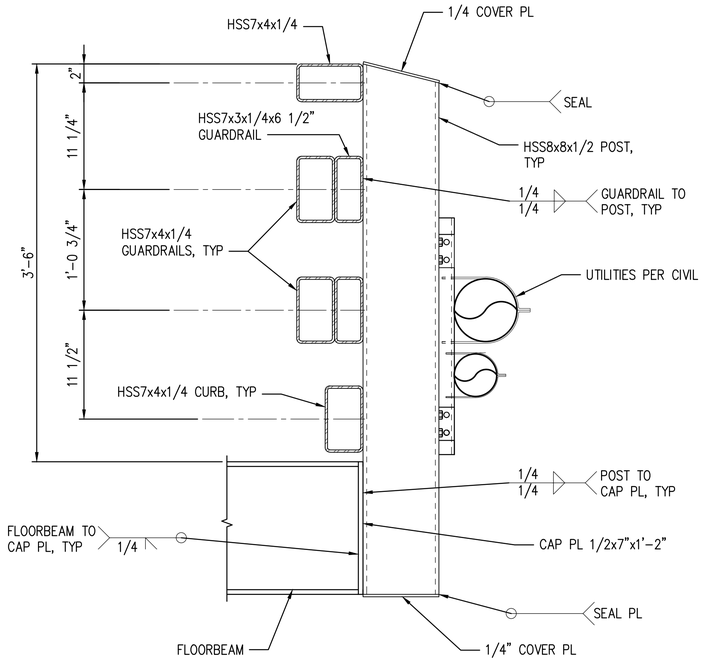
ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

CRUISE DOCK ACCESS RAMP
GIRDER AND FLOORBEAM

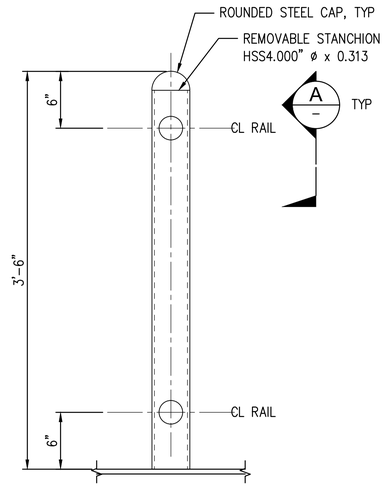
DRAWN: HS	PROJECT NO.: 2100135
DESIGN: AS	SCALE: AS SHOWN
CHECKED: AO	DATE: 01/27/2023
DRAWING NO.	S3.43
SHEET NO.	OF XX

60% DESIGN - NOT FOR CONSTRUCTION

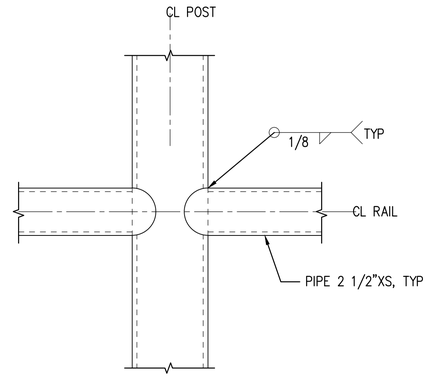
Plotted: Jan 26, 2023 - 8:30am tauniep Layout: S3.43
V:\2100135 (Skagway Ore Peninsula Multi-Use Dock)\02_Design (v2019)\2100135_S3.43 Cruise Dock Access Ramp Girder & Floorbeam.dwg



1 S3.42 **RAMP RAILING DETAIL**
SCALE: 1 1/2" = 1'-0"



2 S3.42 **REMOVABLE STANCHION DETAIL**
SCALE: 1 1/2" = 1'-0"



A – **VIEW**
SCALE: 3" = 1'-0"

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NO.	DATE	BY	REVISION

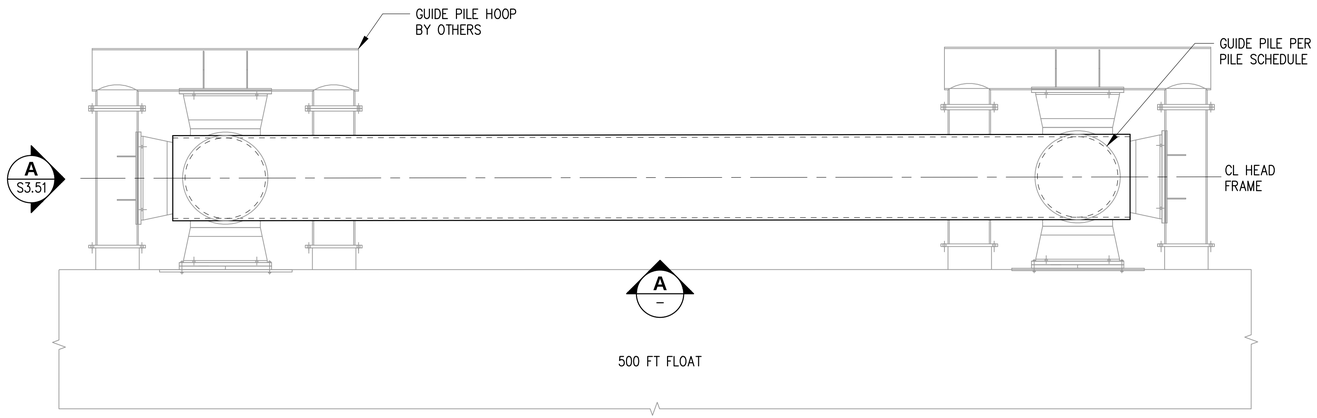
ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

CRUISE DOCK ACCESS RAMP
RAILING DETAILS

DRAWN: HS	PROJECT NO.: 2100135
DESIGN: AS	SCALE: AS SHOWN
CHECKED: AO	DATE: 01/27/2023
DRAWING NO.	**S3.44**
SHEET NO.	OF **XX**

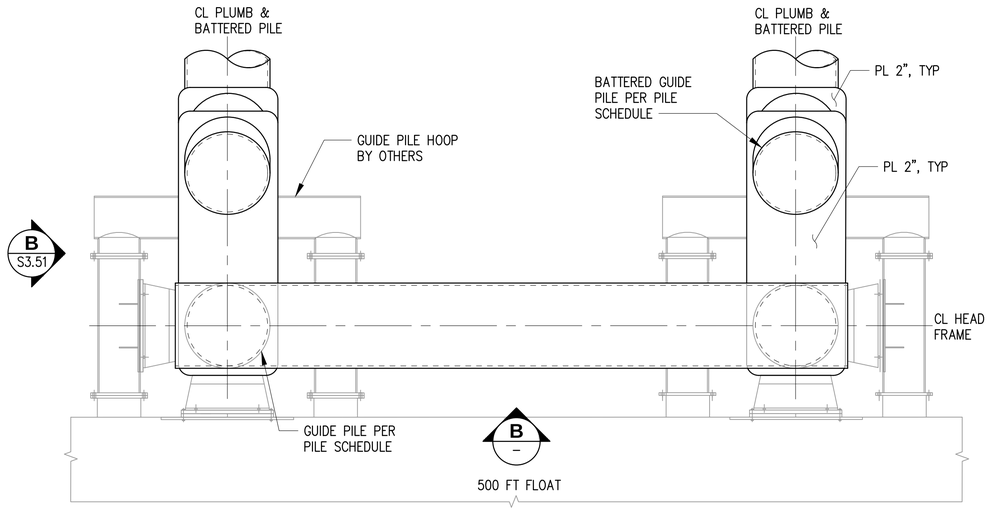
60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 26, 2023 – 8:44am tauniep Layout: S3.44
V:\2100135 (Skagway Ore Peninsula Multi-Use Dock)\02_Design (v2019)\2100135_S3.44 Cruise Dock Access Ramp Railing Details.dwg



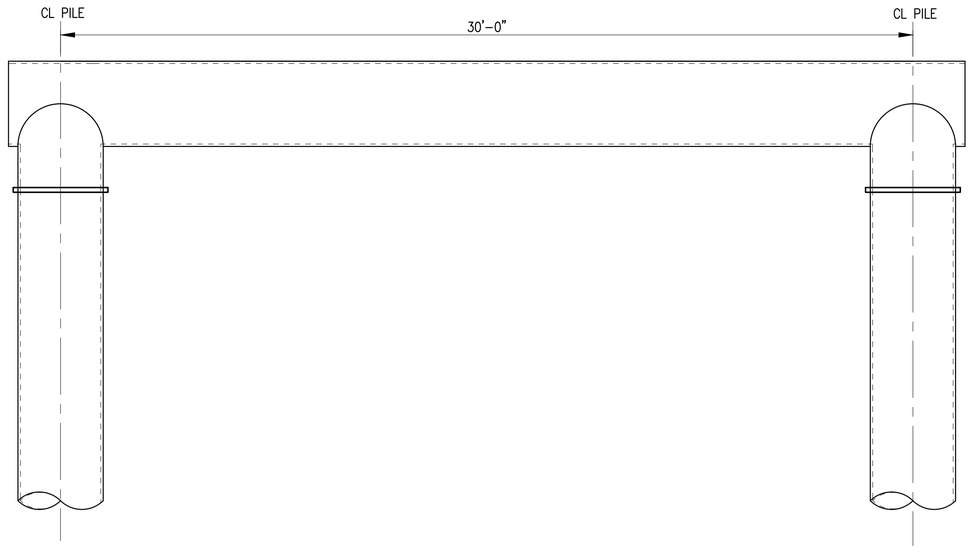
1 S2.02 GUIDE PILE FRAME 1 PLAN VIEW

SCALE: 3/8" = 1'–0"



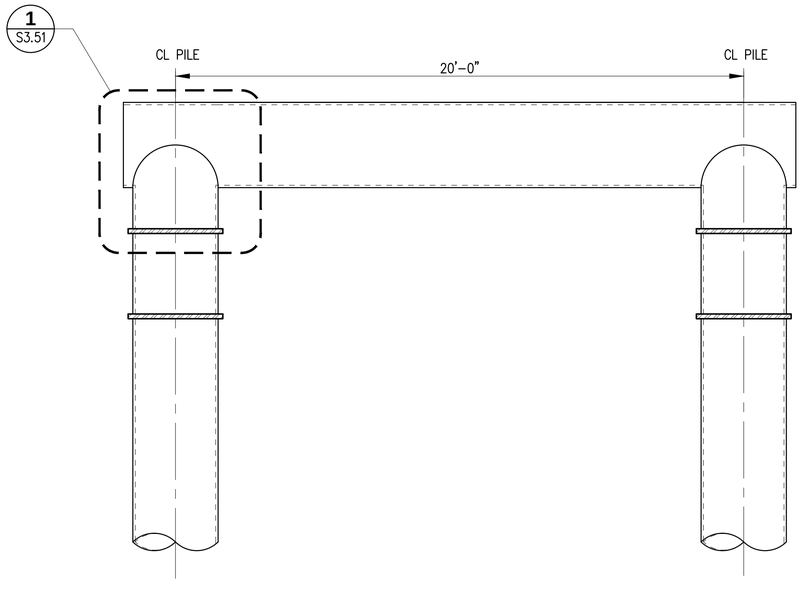
2 S2.02 GUIDE PILE FRAME 2 PLAN VIEW

SCALE: 3/8" = 1'–0"



A – GUIDE PILE FRAME 1

SCALE: 3/8" = 1'–0"



B – GUIDE PILE FRAME 2

SCALE: 3/8" = 1'–0"

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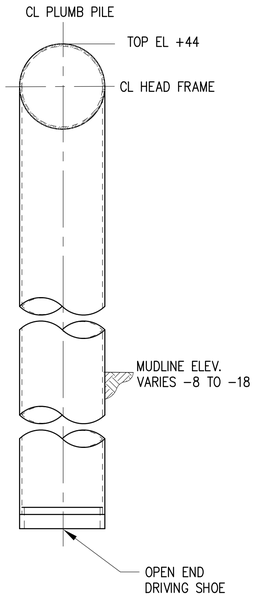
ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

CRUISE DOCK FLOAT GUIDE PILES
SECTIONS

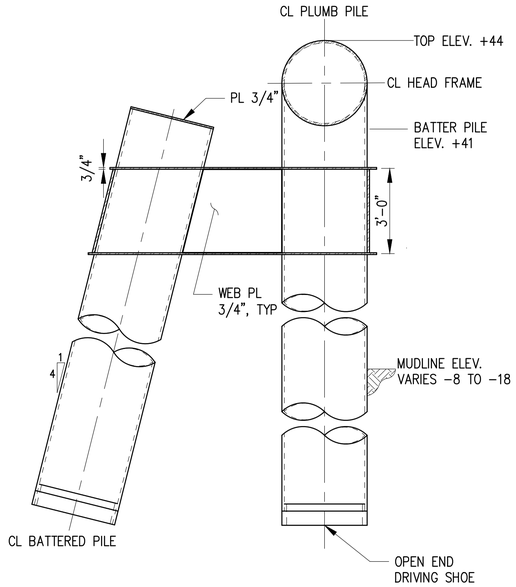
DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**S3.50**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

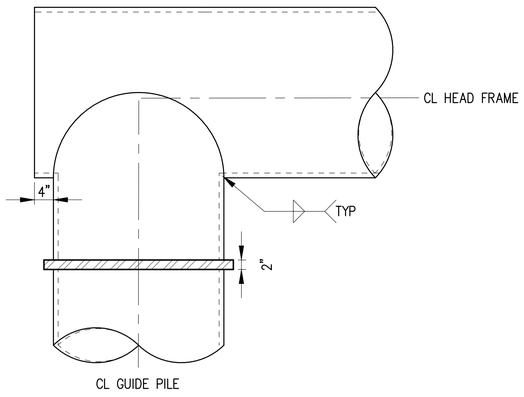
Plotted: Jan 27, 2023 – 10:49am dyu Layout: S3.50
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_S3.50–S3.51 Cruise Dock Float Guide Piles.dwg



A S3.50 **PLUMB PILE ELEVATION**
SCALE: 3/8" = 1'–0"



B S3.50 **PLUMB / BATTERED PILES ELEVATION**
SCALE: 3/8" = 1'–0"



1 S3.50 **PLUMB PILE / CROSSBEAM CONNECTION**
SCALE: 3/4" = 1'–0"

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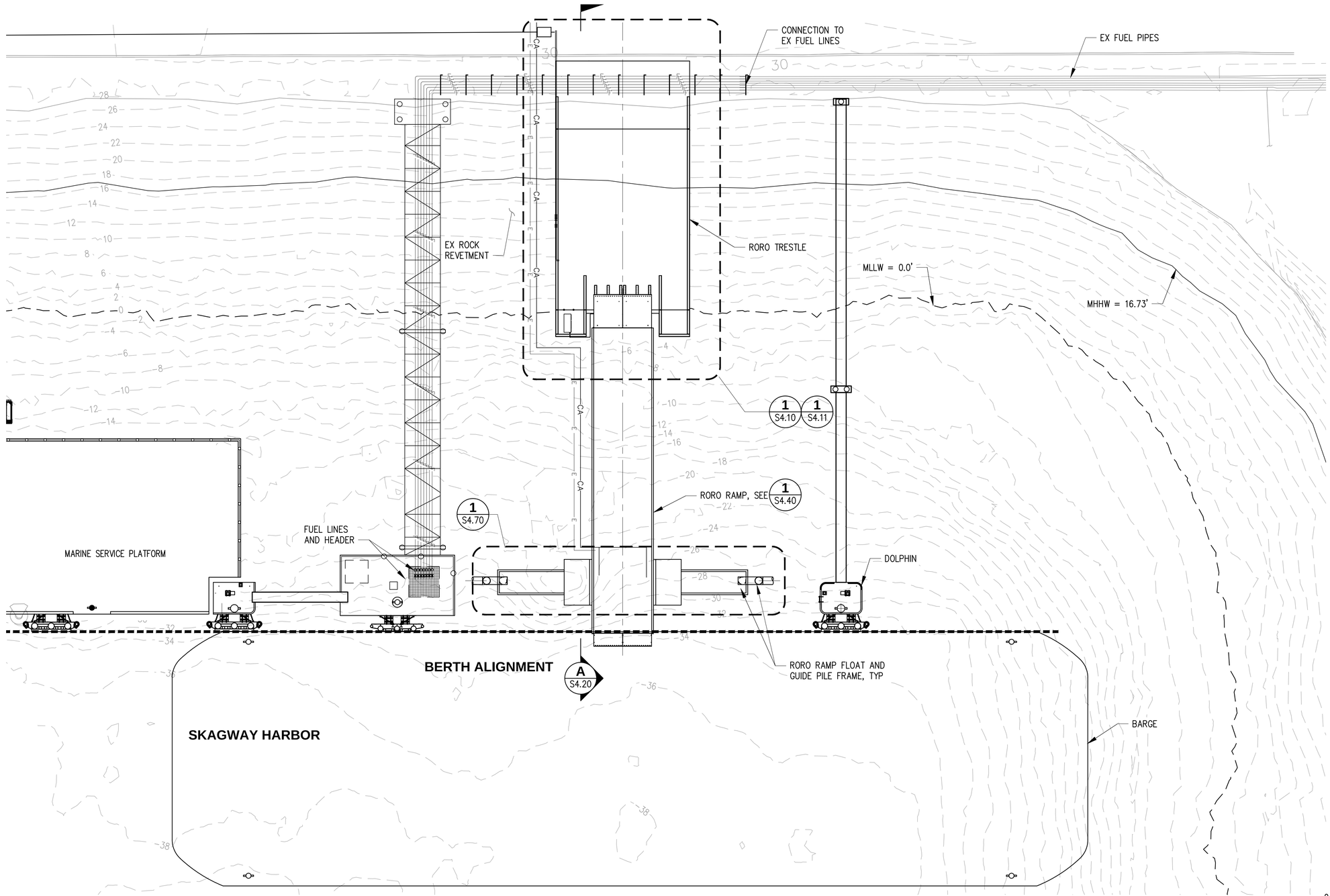
CRUISE DOCK FLOAT GUIDE PILES
SECTIONS

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**S3.51**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 – 10:49am dyu Layout: S3.51
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_S3.50-S3.51 Cruise Dock Float Guide Piles.dwg



1 / S2.05 RORO RAMP AND FUEL LINE ENLARGED PLAN

SCALE: 1" = 20'

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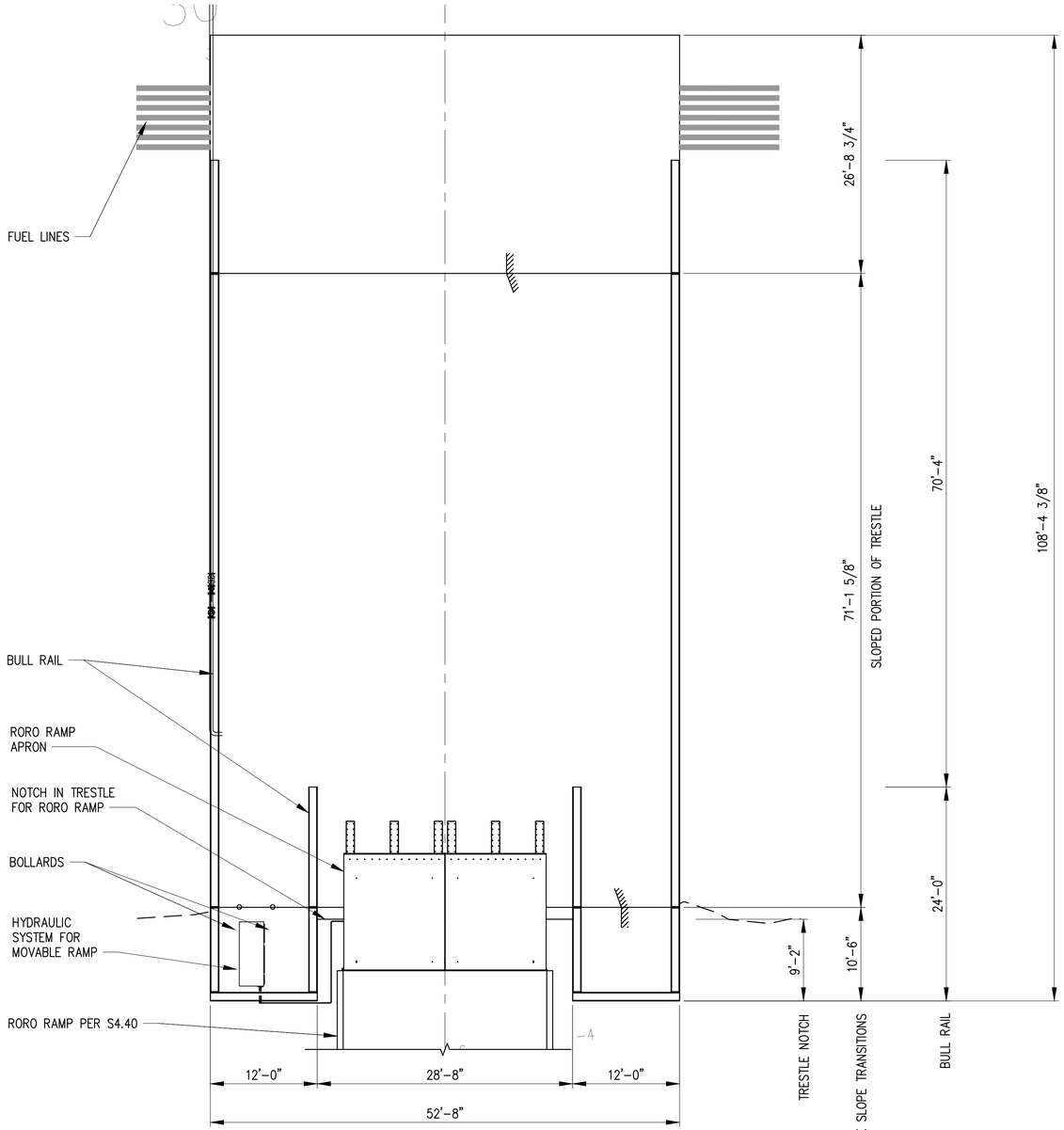
ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

RORO RAMP AND ACCESS TRESTLE PLANS

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**S4.00**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

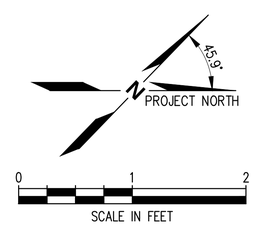
Plotted: Jan 27, 2023 - 10:49am dyu Layout: S4.00
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_S4.00 RoRo Ramp & Access Trestle Plan.dwg



NOTES

1. UTILITIES NOT SHOWN FOR CLARITY, SEE CIVIL

1 / S4.00 **SURFACE FEATURES PLAN**
SCALE: 1-1/2" = 1'-0"



60% DESIGN - NOT FOR CONSTRUCTION

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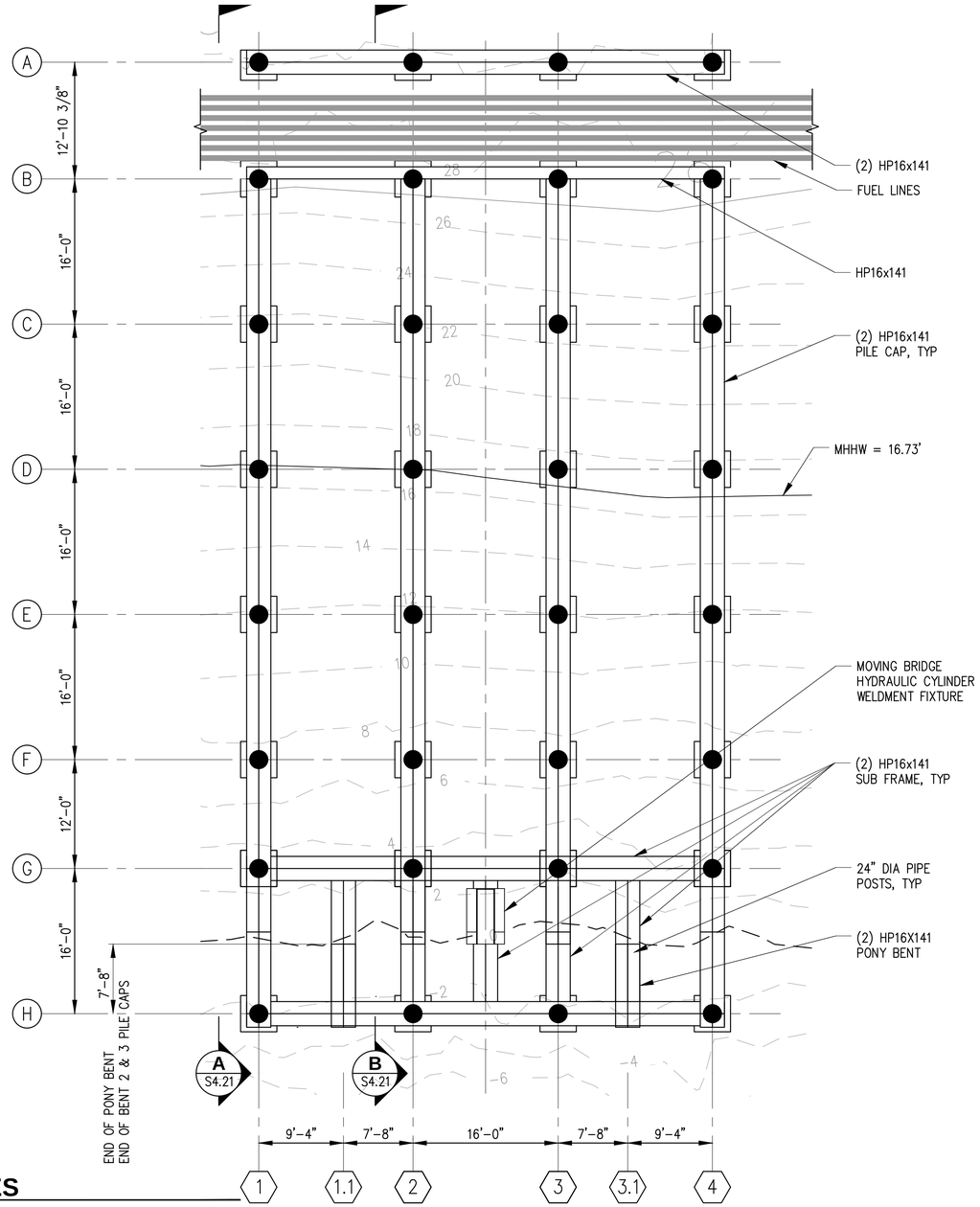
NO.	DATE	BY	REVISION

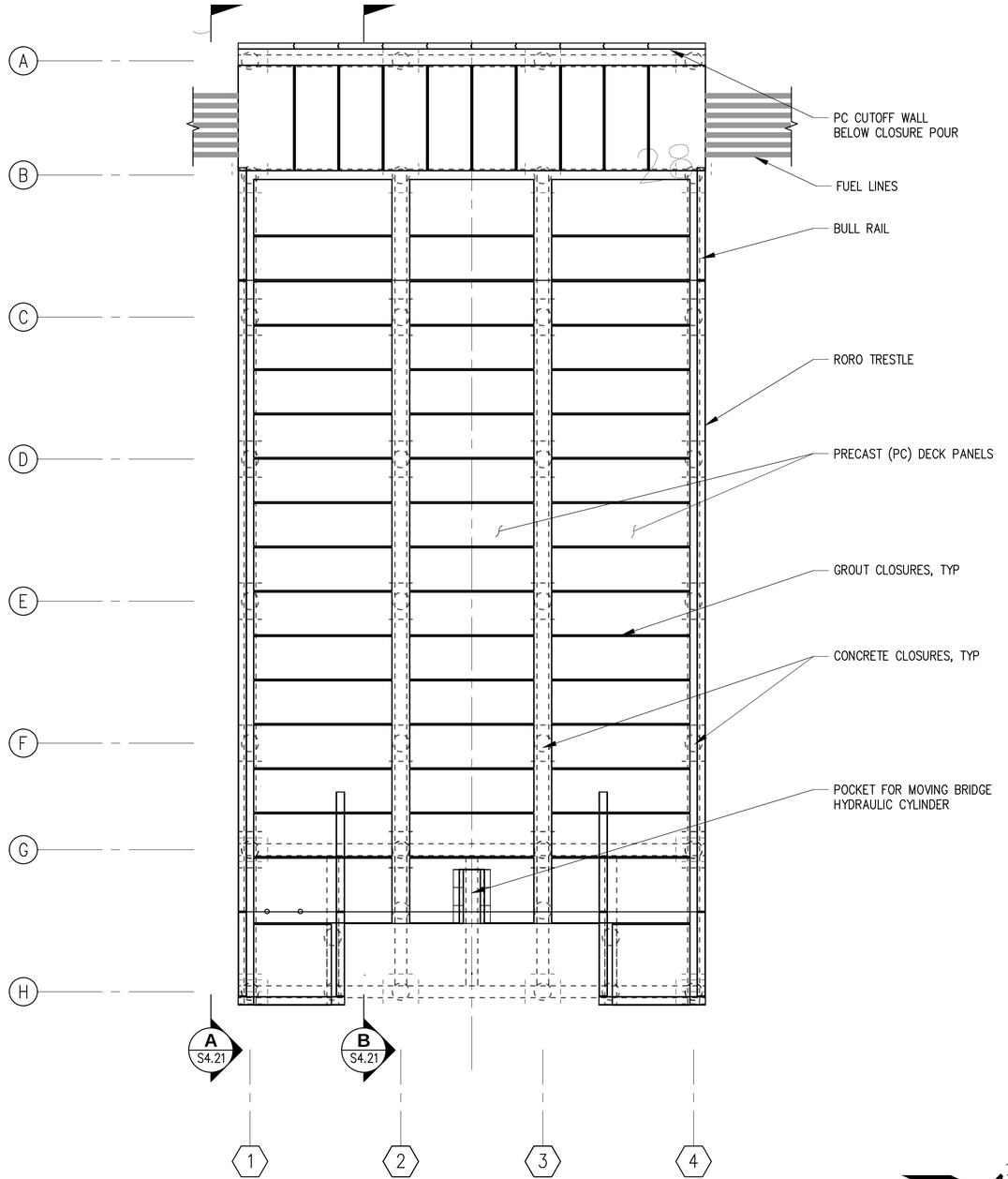
ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

RORO RAMP ACCESS TRESTLE
SURFACE FEATURES PLAN

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: DMR	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**S4.10**
SHEET NO.	OF

Plotted: Jan 27, 2023 - 10:49am dyu Layout: S4.10
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_S4.10 RoRo Ramp Access Trestle Surf Feat Plan.dwg





NOTES

1. UTILITIES NOT SHOWN FOR CLARITY, SEE CIVIL

LEGEND

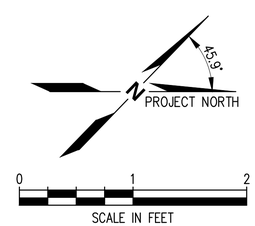
● STEEL PIPE PILE, SEE S4.30 FOR PILE SCHEDULE

1 S4.00 PILE AND PILE CAP PLAN

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

1 S4.00 TRESTLE DECK PLAN

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



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NO.	DATE	BY	REVISION

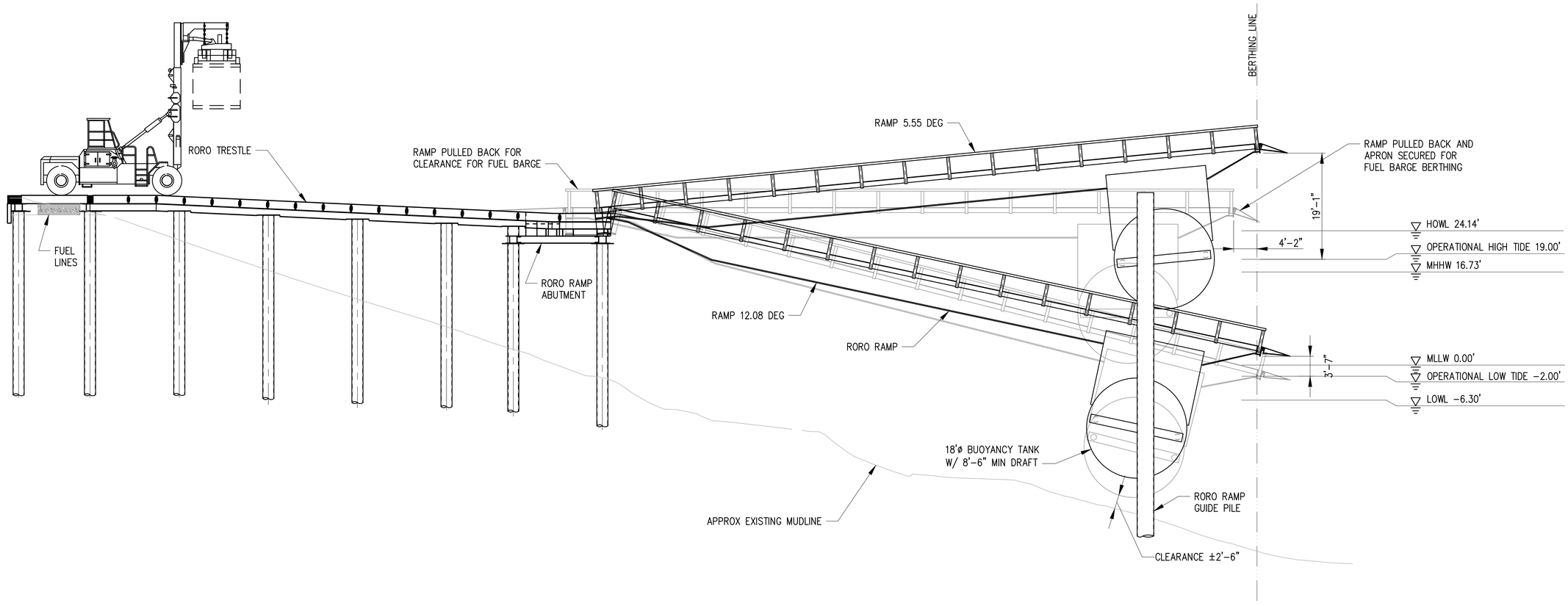
ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

RORO RAMP
PILE, PILE CAP AND DECK PLAN

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: DMR	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**S4.11**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 - 10:50am dyu Layout: S4.11
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_S4.11 RoRo Ramp Access Trestle Pile Plan.dwg



RORO RAMP NOTES

1. RORO RAMP PROVIDES ACCESS TO BARGES WITH DECK HEIGHTS RANGING FROM +1.7' MLLW TO +38' MLLW.
2. AT A TIDE OF 19.00' MLLW THE RAMP CAN BE RAISED TO APPROXIMATELY 38' MLLW.
3. DESIGN VEHICLES FOR THE RO-RO RAMP INCLUDE:
   A. SVETRUCK CONTAINER HANDLING FORKLIFT
   B. MANITWOC 4100W SERIES 2 CRANE TRAVEL (W/CAR BODY WEIGHTS REMOVED)
   C. HL-93 TRUCKS
4. RAMP ANGLES RANGE FROM +5.55 DEGREES TO -12.08 DEGREES. DURING OPERATIONS TIDES OF +19.00' TO -2.00' MLLW.
5. HYDRAULIC SLIDE SYSTEM AT ABUTMENT PROVIDES APPROXIMATELY 5' OF HORIZONTAL MOVEMENT TO PROVIDE CLEARANCE FOR FUEL BARGE BERTHING.

A RORO RAMP SECTION

A / S4.00

SCALE: 1" = 10'

0 5 10 15

SCALE IN FEET

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NO.	DATE	BY	REVISION

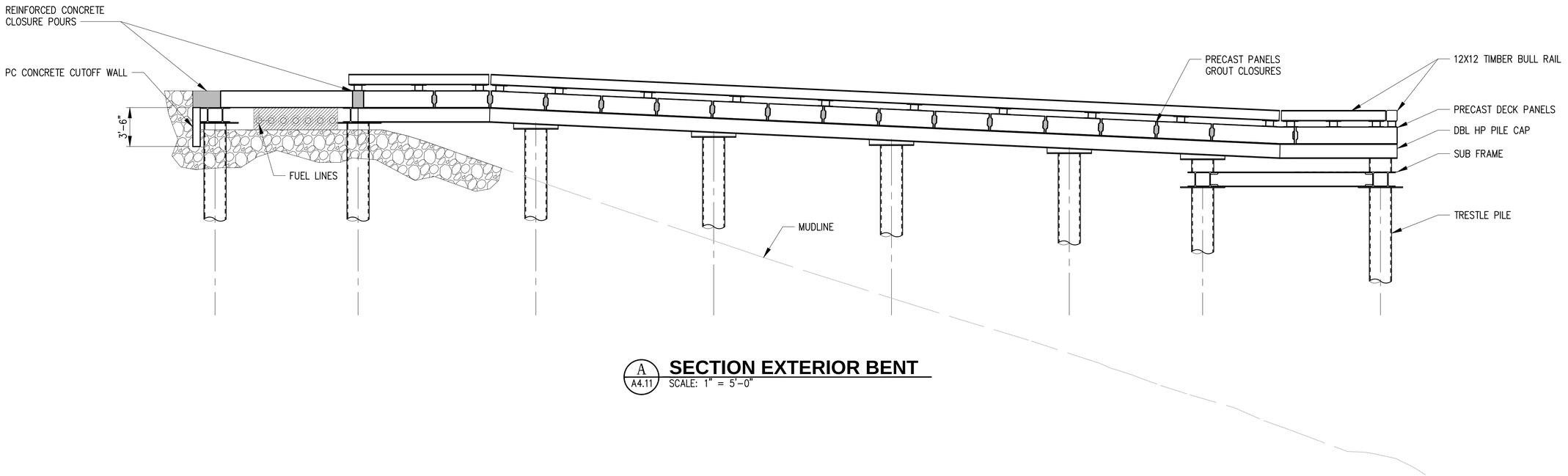
ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

RORO RAMP SECTION
RANGE OF MOTION

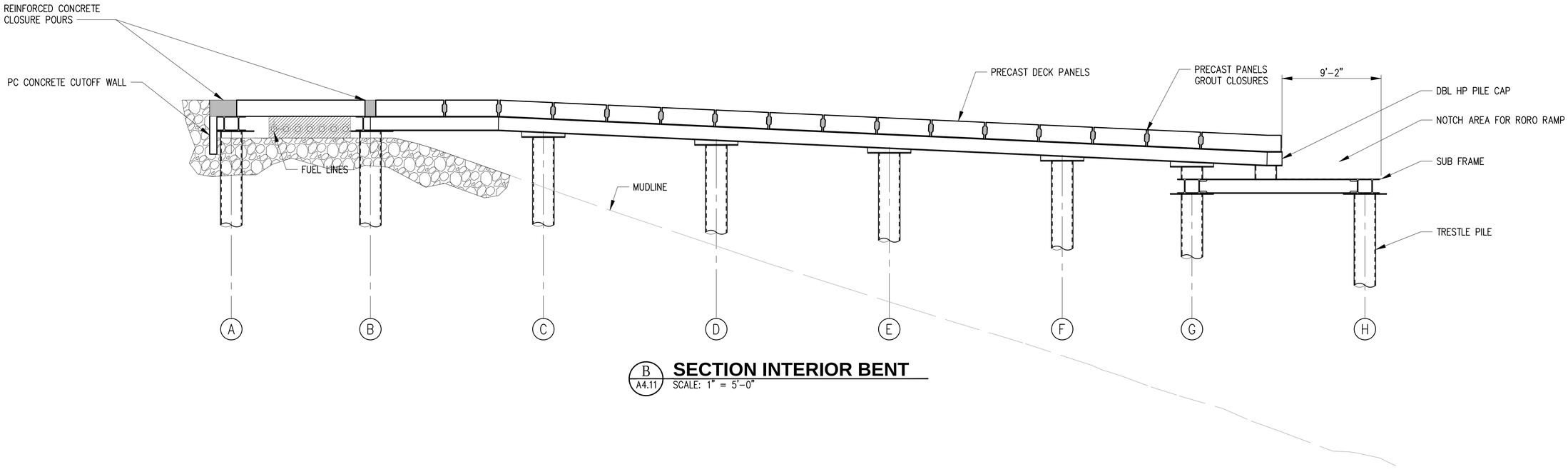
DRAWN: JH	PROJECT NO.: 2100135
DESIGN: DMR	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**S4.20**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 - 10:50am dyu Layout: S4.20
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_S4.20 RoRo Ramp & Access Trestle Range Of Motion.dwg



A / A4.11 **SECTION EXTERIOR BENT**
SCALE: 1" = 5'-0"



B / A4.11 **SECTION INTERIOR BENT**
SCALE: 1" = 5'-0"

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NO.	DATE	BY	REVISION

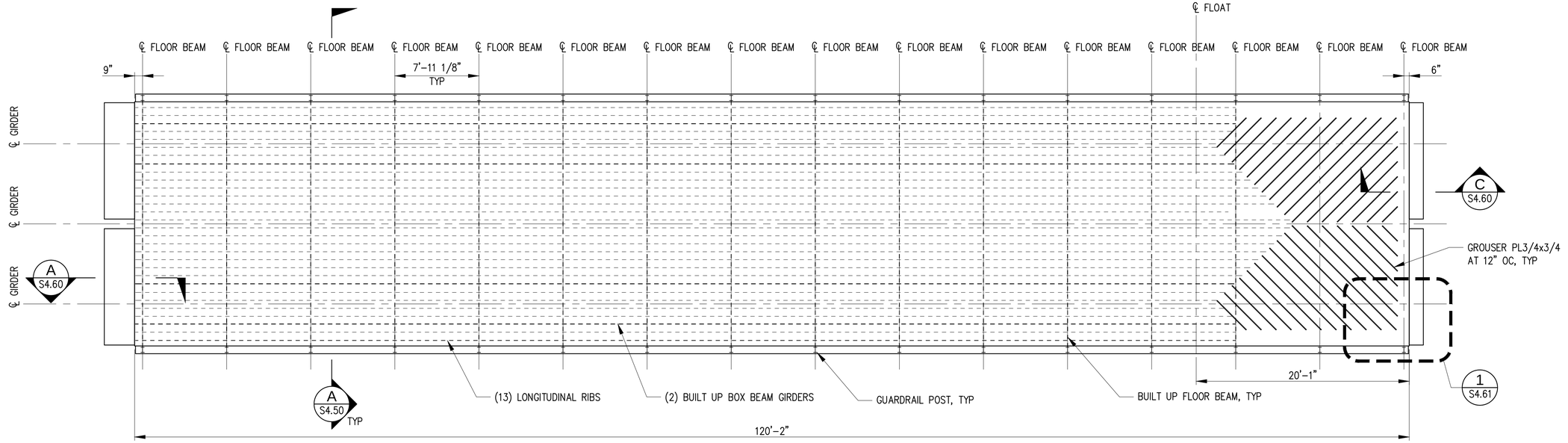
ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

RORO RAMP ACCESS TRESTLE
RORO TRESTLE ELEVATION

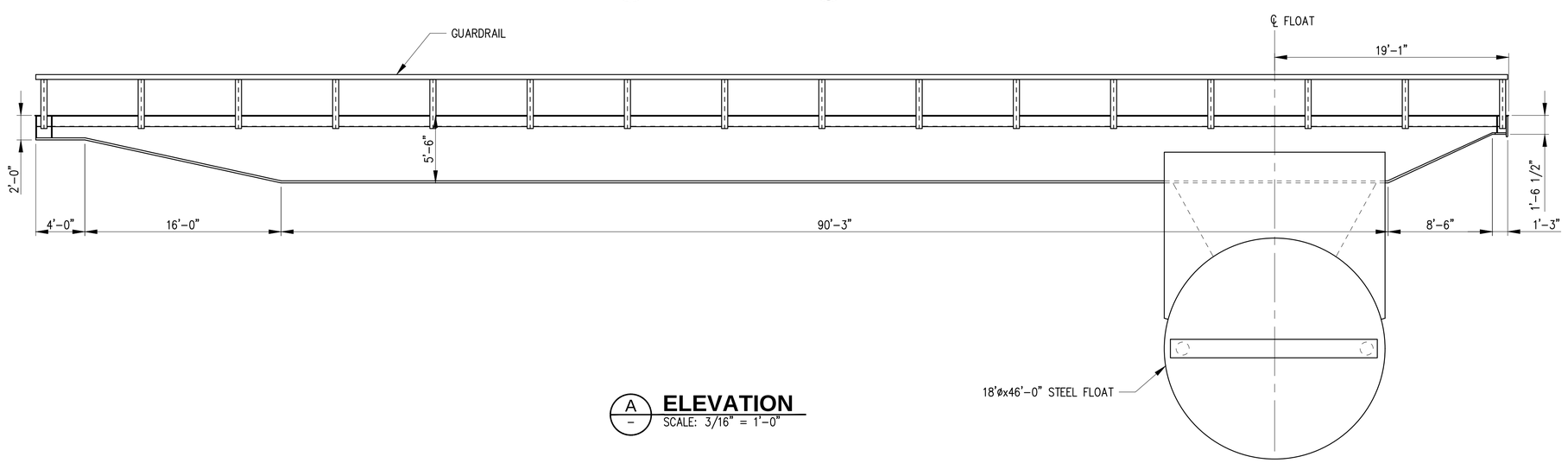
DRAWN: JH	PROJECT NO.: 2100135
DESIGN: DMR	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**S4.21**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 - 10:50am dyu Layout: S4.21
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_S4.21 RoRo Ramp Access Trestle Elevation.dwg



1 S4.00 **PLAN** SCALE: 3/16" = 1'-0"



A – **ELEVATION** SCALE: 3/16" = 1'-0"

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NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

RORO RAMP
PLAN AND ELEVATION

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: KCP	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**S4.40**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 - 10:50am dyu Layout: S4.40
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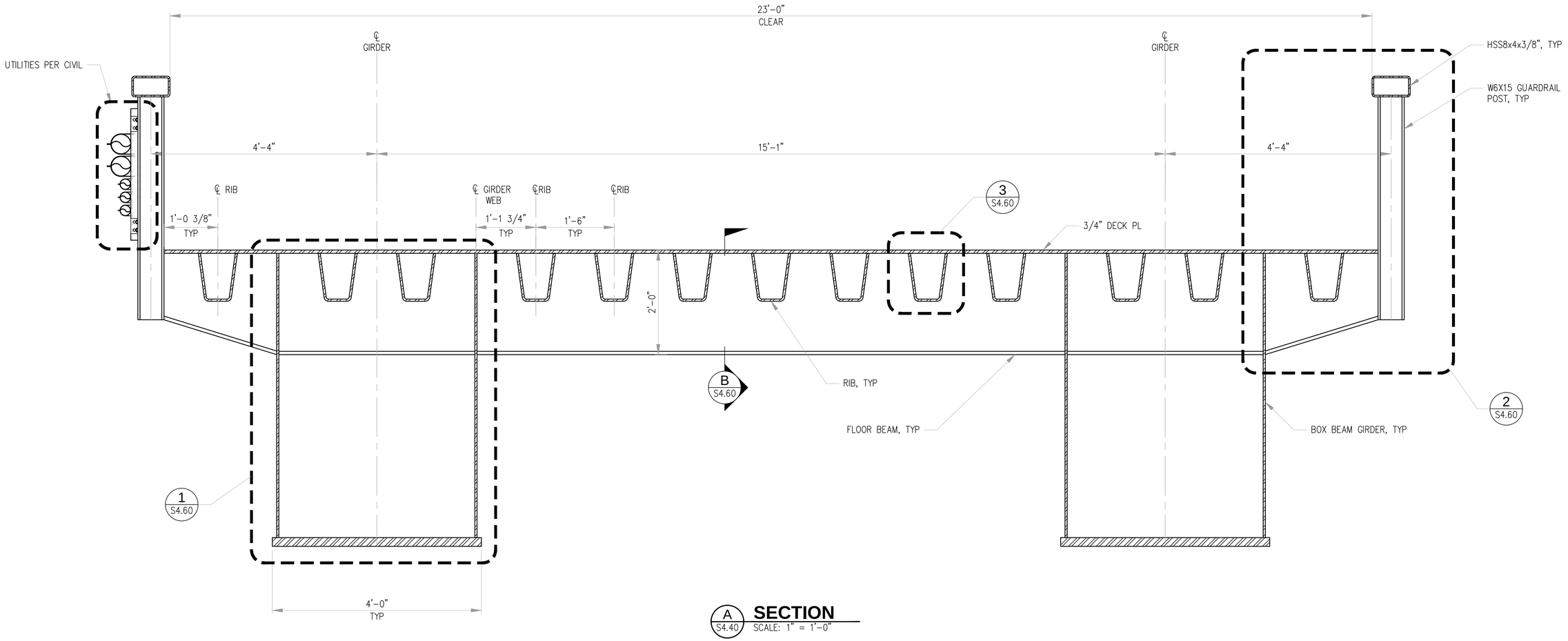

A S4.40 **SECTION**
SCALE: 1" = 1'-0"

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NO.	DATE	BY	REVISION

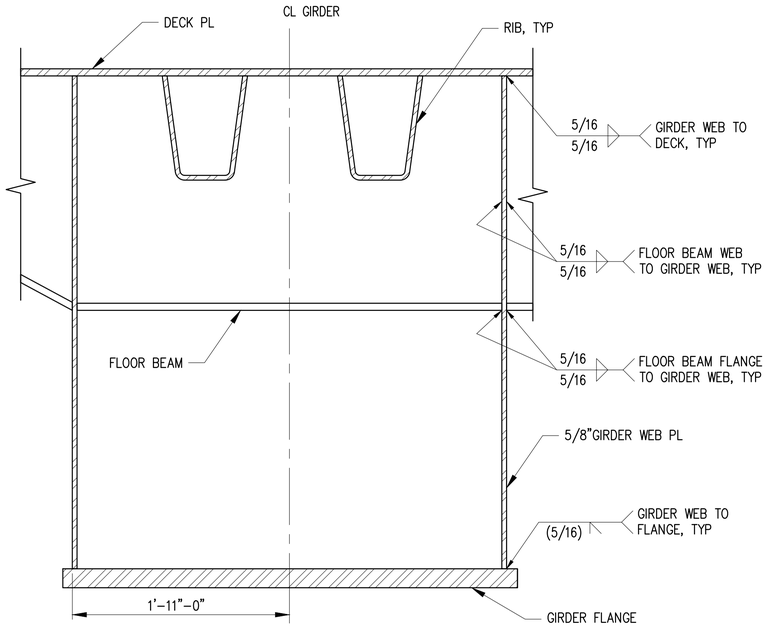
ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

RORO RAMP
SECTION

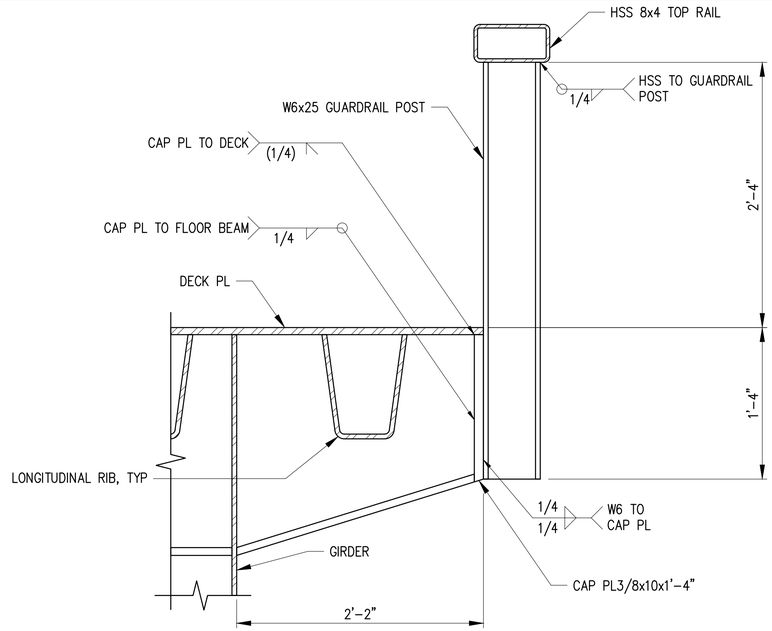
DRAWN: JH	PROJECT NO.: 2100135
DESIGN: KCP	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**S4.50**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

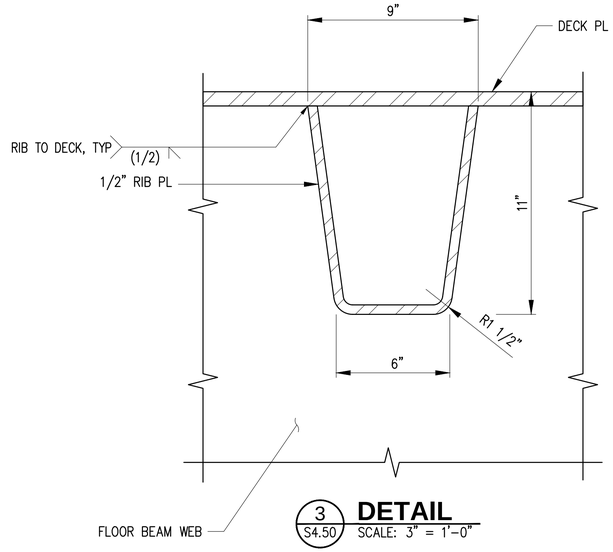
Plotted: Jan 27, 2023 - 10:50am dyu Layout: S4.50
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_S4.50 RoRo Ramp Section.dwg



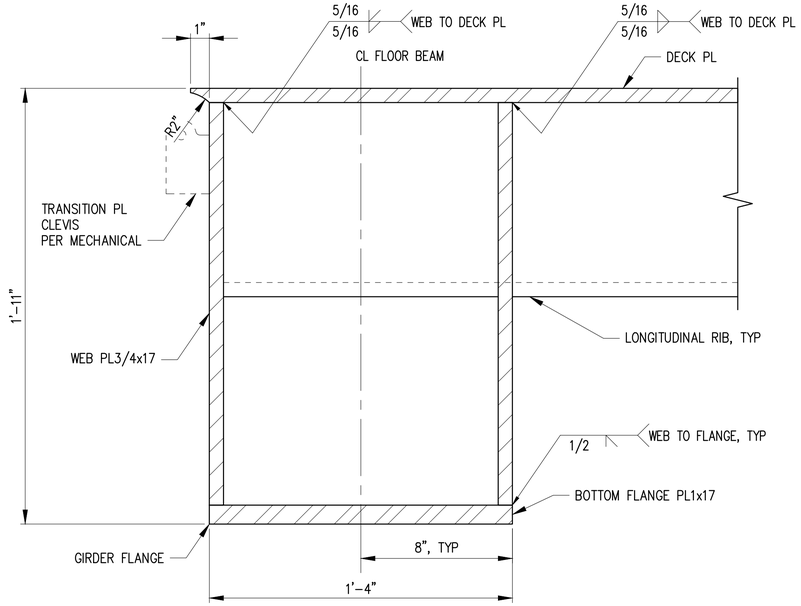
1 S4.50 **DETAIL**
SCALE: 1 1/2" = 1'-0"



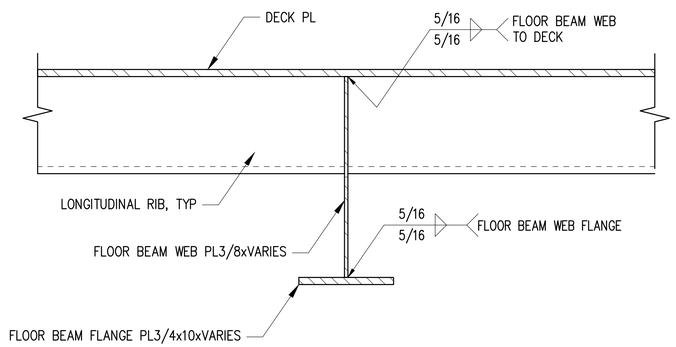
2 S4.50 **DETAIL**
SCALE: 1 1/2" = 1'-0"



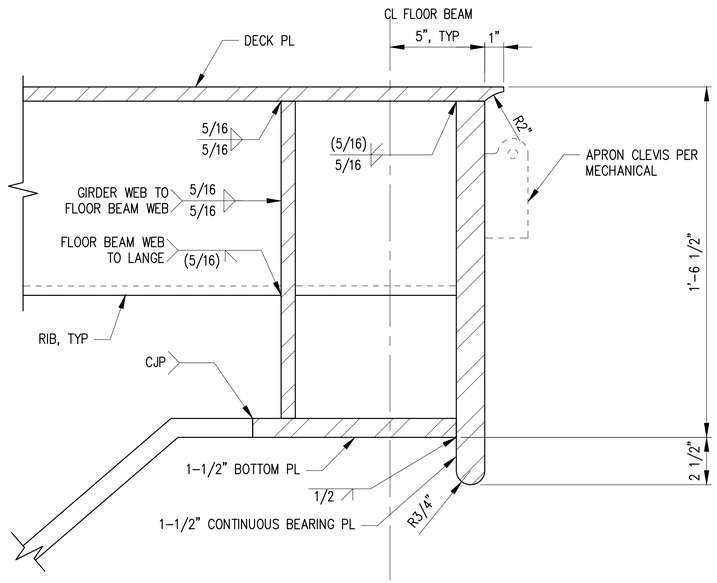
3 S4.50 **DETAIL**
SCALE: 3" = 1'-0"



A S4.40 **SECTION**
SCALE: 3" = 1'-0"



B S4.50 **SECTION**
SCALE: 1 1/2" = 1'-0"



C S4.40 **SECTION**
SCALE: 3" = 1'-0"

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NO.	DATE	BY	REVISION

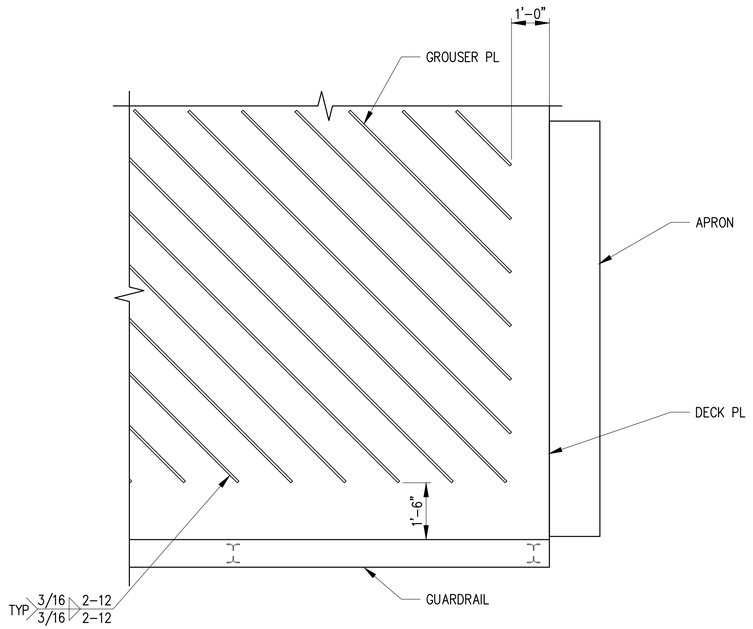
ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

RORO RAMP SECTIONS AND DETAILS

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: KCP	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**S4.60**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 - 10:50am dyu Layout: S4.60
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_S4.60 RoRo Ramp Details 1.dwg



1 S4.40 **DETAIL**
SCALE: 1/2" = 1'-0"

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NO.	DATE	BY	REVISION

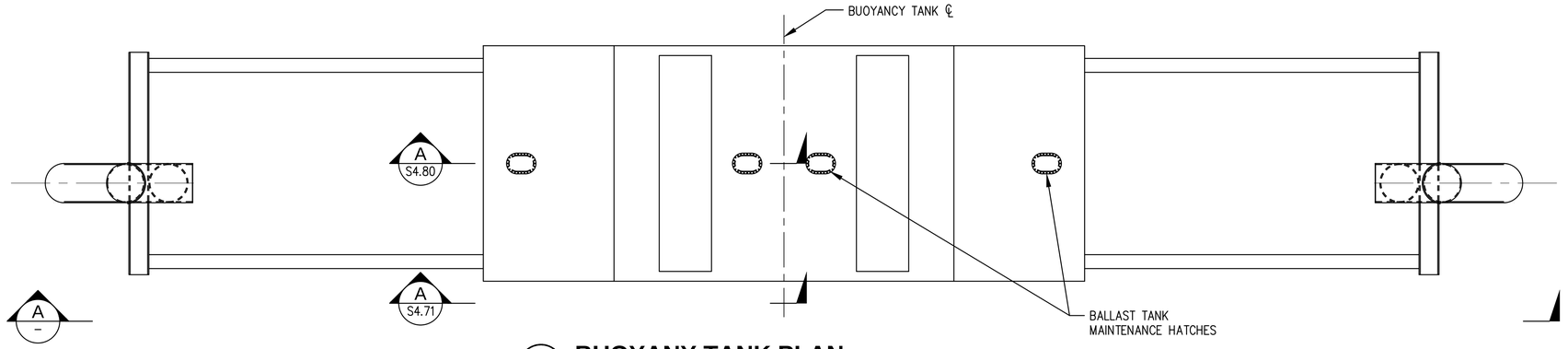
ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

RORO RAMP
SECTIONS

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: KCP	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**S4.61**
SHEET NO.	OF

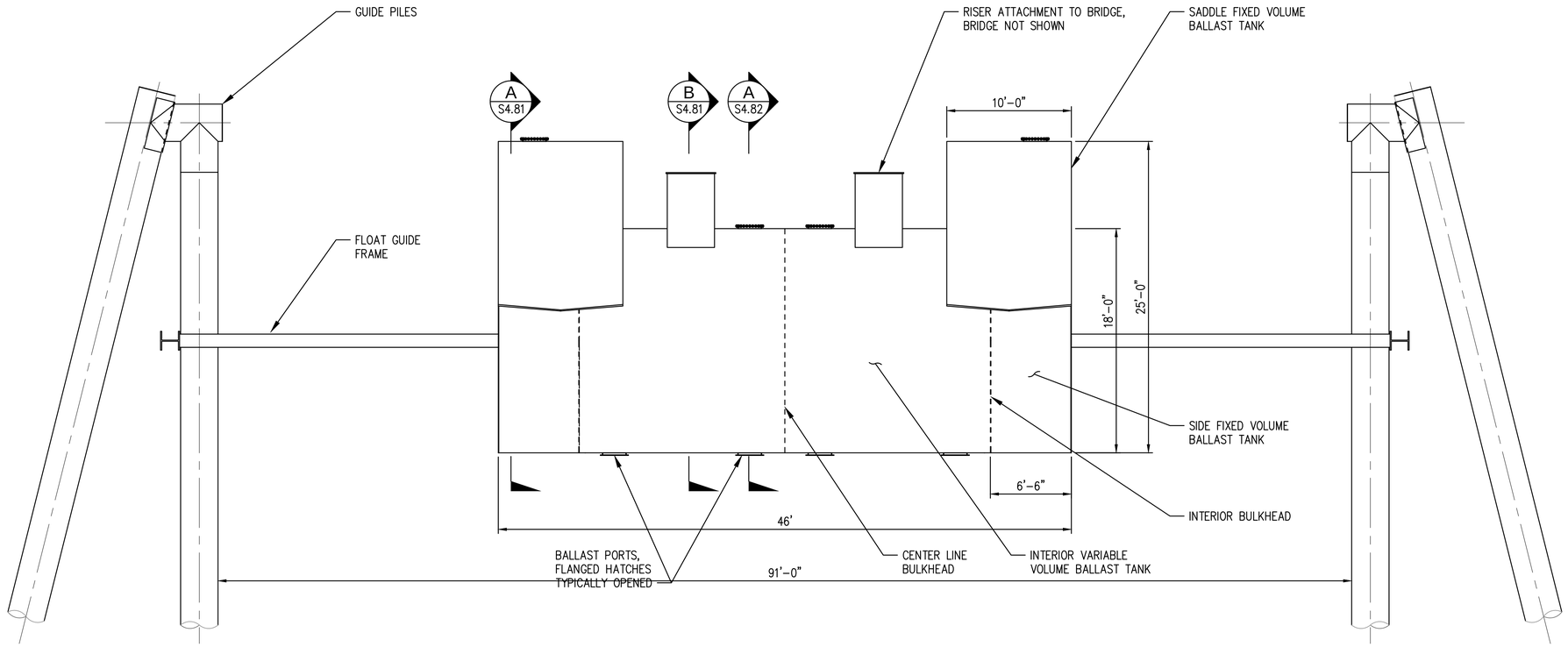
60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 - 10:50am dyu Layout: S4.61
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_S4.61 RoRo Ramp Float Details.dwg



1 / S4.00 BUOYANY TANK PLAN

SCALE: 3/16" = 1'–0"



A / – BUOYANY TANK ELEVATION

SCALE: 3/16" = 1'–0"

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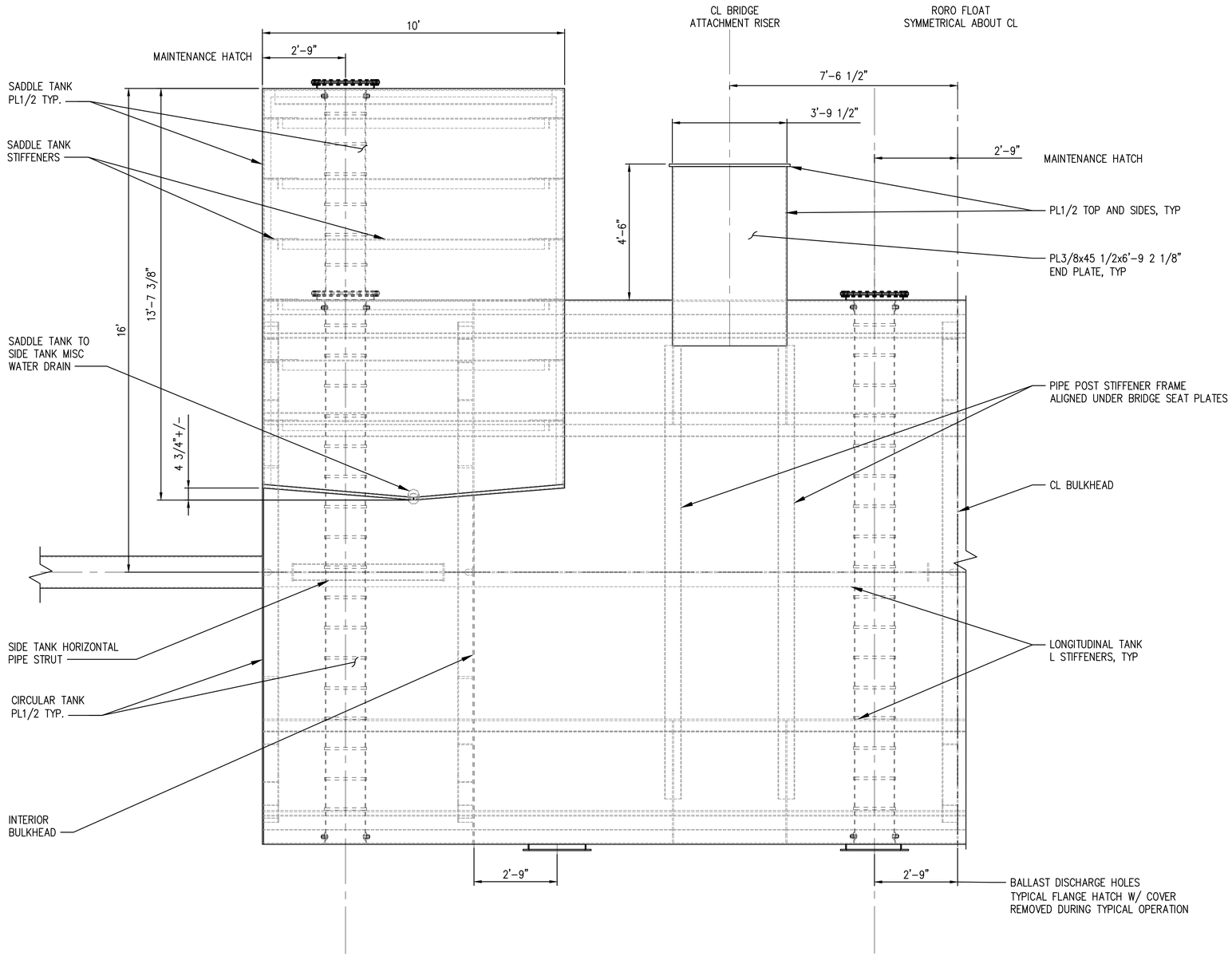
ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

RORO RAMP
FLOAT PLAN AND ELEVATION

DRAWN: BBB	PROJECT NO.: 2100135
DESIGN: DR	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**S4.70**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 – 10:50am dyu Layout: S4.70
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_S4.70 RoRo Ramp Float Plan & Elevation.dwg



A / S4.70 BUOYANCY TANK ELEVATION

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

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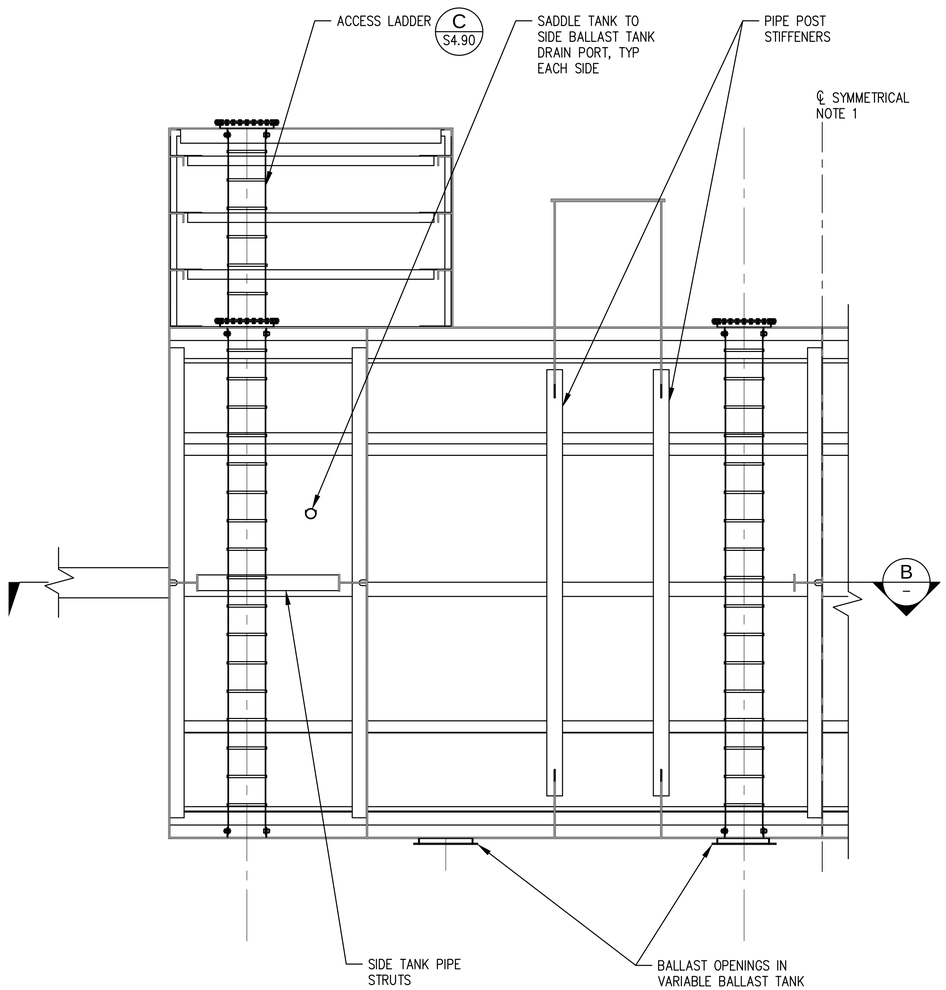
ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

RORO RAMP FLOAT ELEVATION

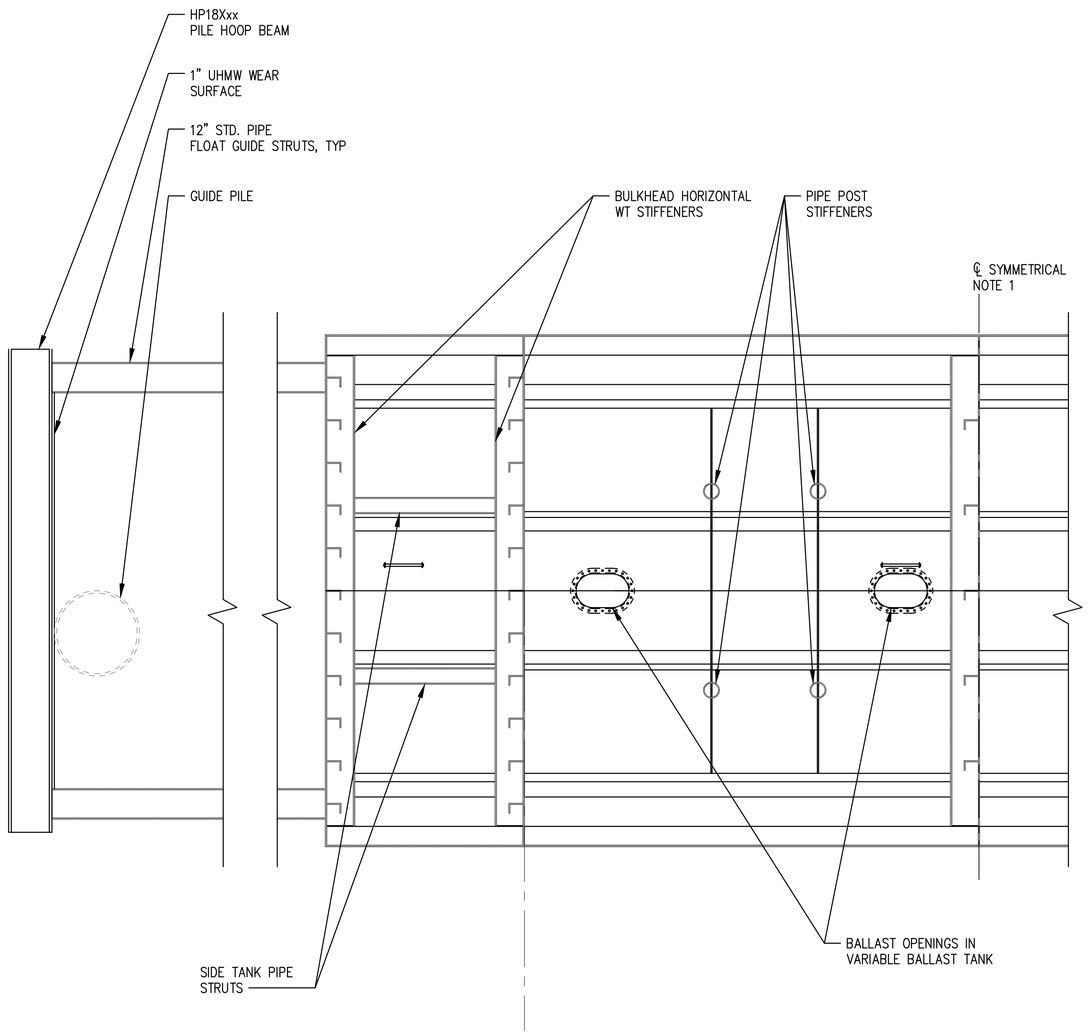
DRAWN:	BBB	PROJECT NO.:	2100135
DESIGN:	DR	SCALE:	AS SHOWN
CHECKED:	RR	DATE:	01/27/2023
DRAWING NO.		**S4.71**	
SHEET NO.		0F	

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 - 10:51am dyu Layout: S4.71
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_S4.71 RoRo Ramp Float Elevation.dwg



A S4.70 **BUOYANCY TANK SECTION ELEVATION**
SCALE: 3/8" = 1'-0"



B – **BUOYANCY TANK BOTTOM SECTION**
SCALE: 3/8" = 1'-0"

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 - 10:51am dyu Layout: S4.80
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_S4.80 RoRo Ramp Float Section.dwg

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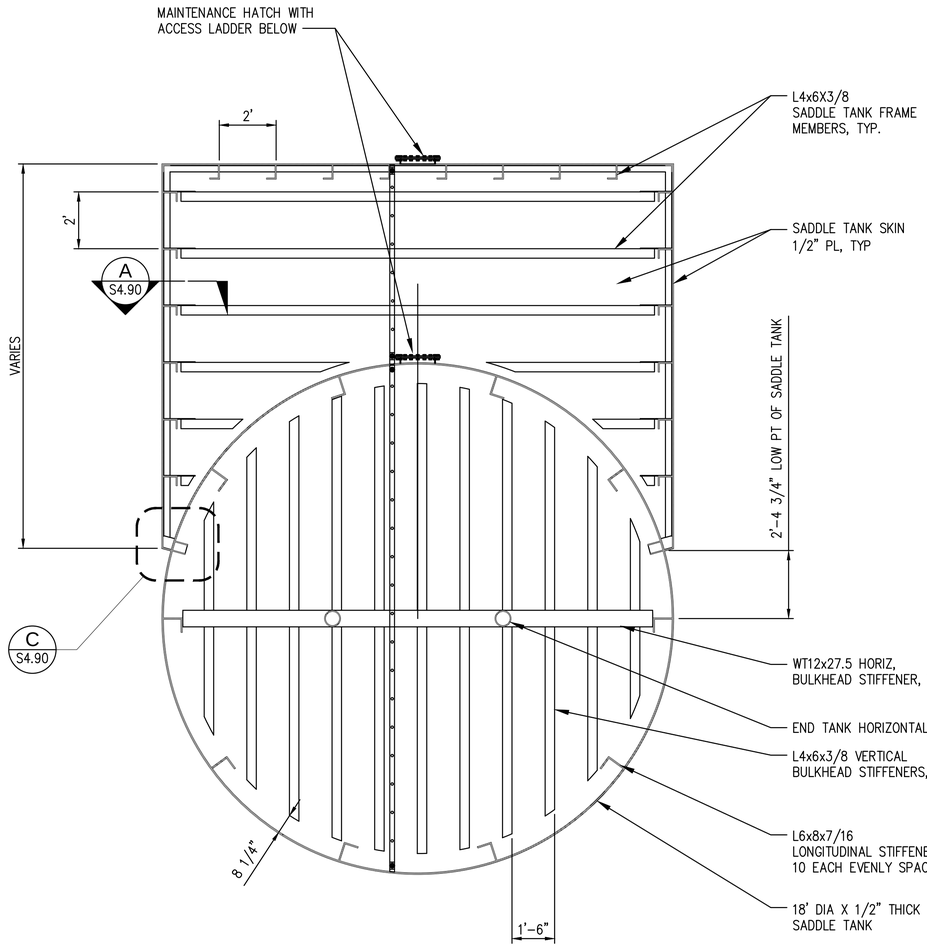
SKAGWAY, ALASKA

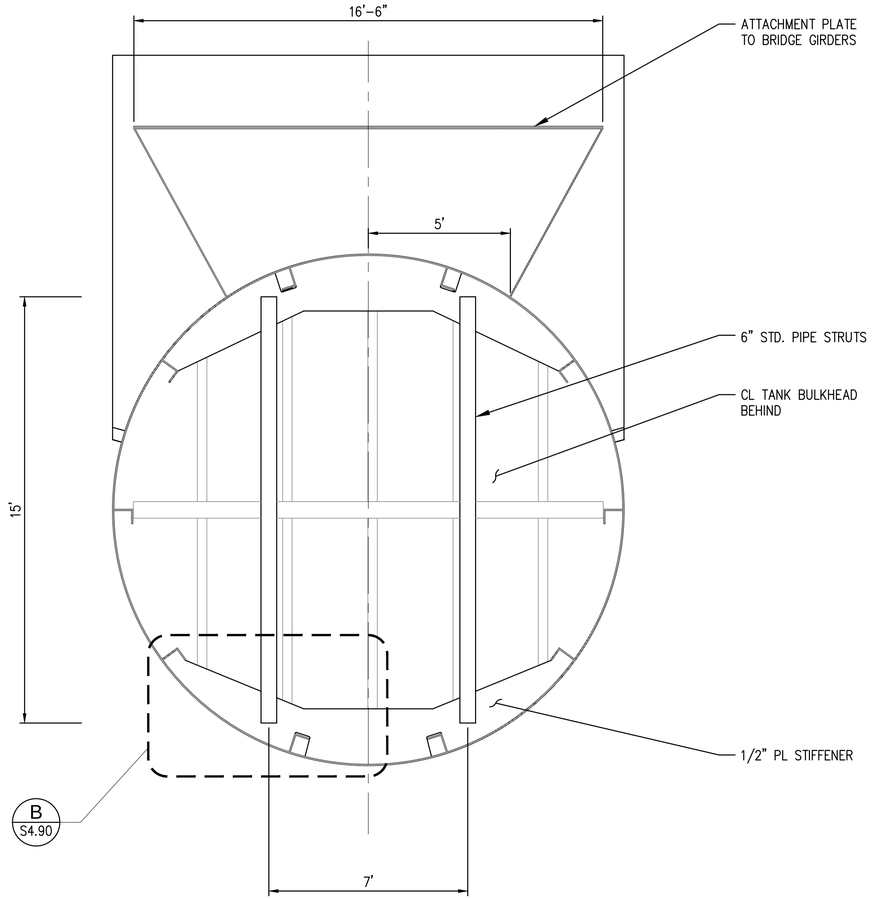
RORO RAMP FLOAT SECTION

DRAWN: BBB	PROJECT NO.: 2100135
DESIGN: RH	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**S4.80**
SHEET NO.	OF



A S4.70 BUOYANCY TANK END BULKHEADS AND SADDLE TANK

SCALE: 3/8" = 1'-0"



B S4.70 BUOYANCY TANK RAMP SUPPORT FRAME

SCALE: 3/8" = 1'-0"

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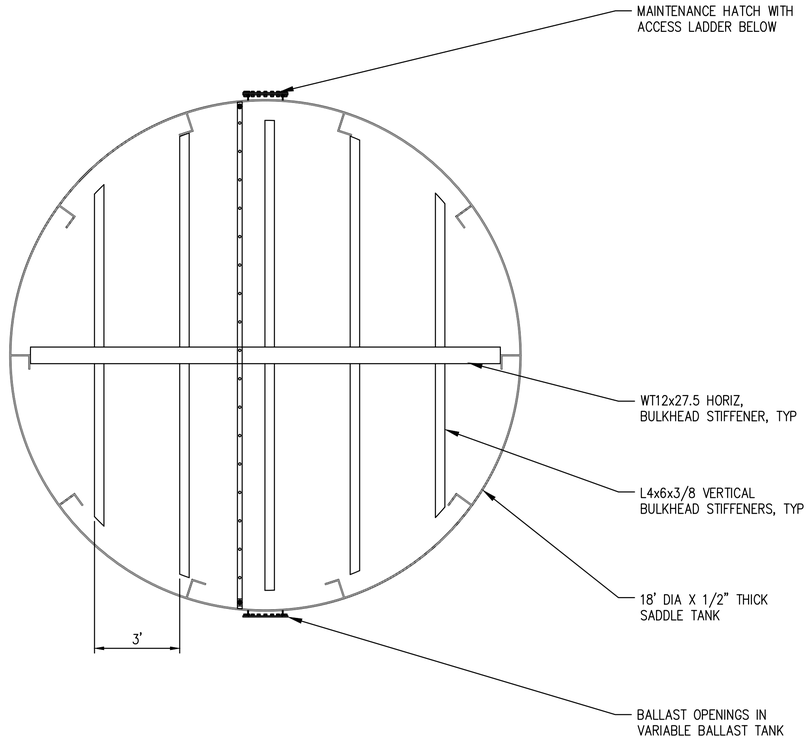
SKAGWAY, ALASKA

RORO RAMP FLOAT
SECTION

DRAWN: BBB	PROJECT NO.: 2100135
DESIGN: DH	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**S4.81**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 - 10:51am dyu Layout: S4.81
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_S4.81 RoRo Ramp Float Section.dwg



A / S4.70 **BUOYANCY TANK CENTER LINE BULKHEAD**
SCALE: 3/8" = 1'-0"

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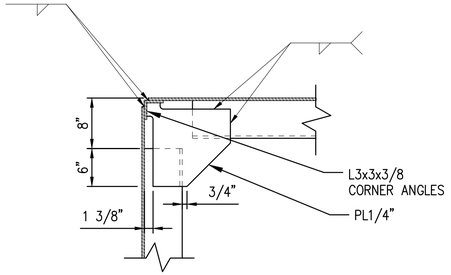
ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

RORO RAMP FLOAT SECTIONS

DRAWN: BBB	PROJECT NO.: 2100135
DESIGN: BBB	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**S4.82**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

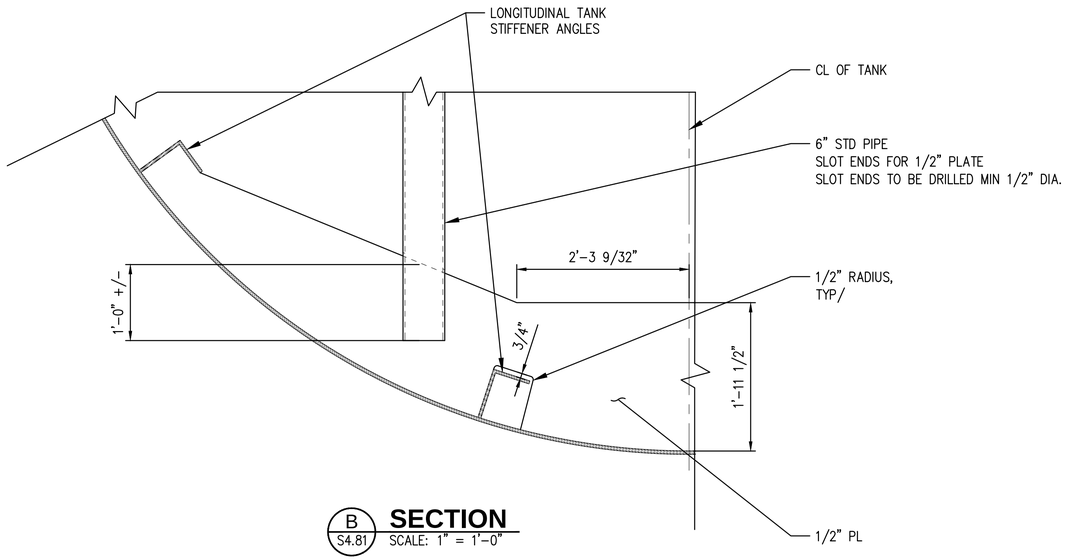
Plotted: Jan 27, 2023 - 10:51am dyu Layout: S4.82
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_S4.82 RoRo Ramp Float Section.dwg



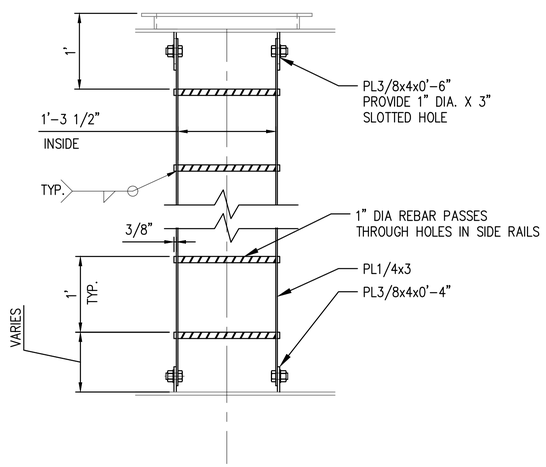
A S4.81 **SECTION**
SCALE: 1" = 1'-0"

DETAIL PENDING

C S4.81 **SADDLE TANK DRAIN**
SCALE: 1" = 1'-0"



B S4.81 **SECTION**
SCALE: 1" = 1'-0"



D S4.81 **ACCESS LADDER DETAILS**
SCALE: 1" = 1'-0"

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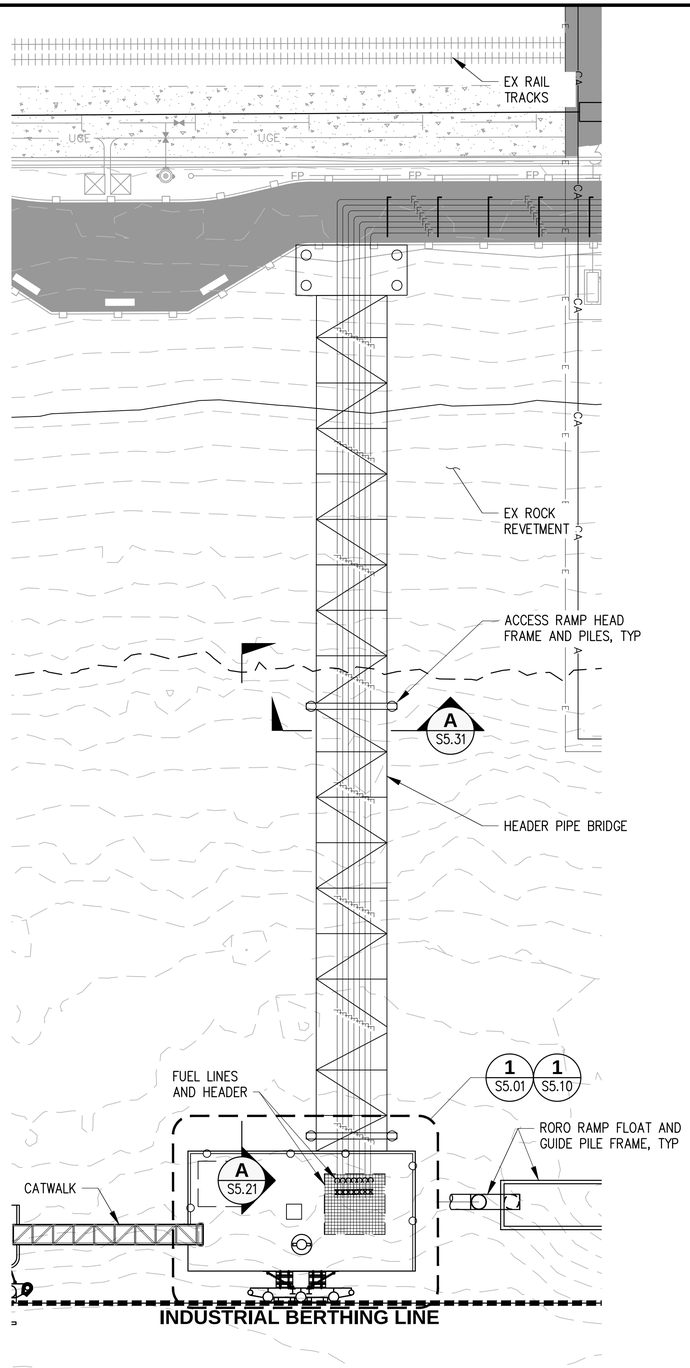
SKAGWAY, ALASKA

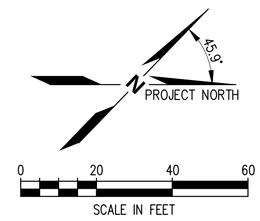
RORO RAMP FLOAT DETAILS

DRAWN: BBB	PROJECT NO.: 2100135
DESIGN: DH	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**S4.90**
SHEET NO.	OF

Plotted: Jan 27, 2023 - 10:51am dyu Layout: S4.90
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_S4.90 RoRo Ramp Float Details .dwg



1 S2.00 **FUEL LINE SITE PLAN**
SCALE: 1" = 15'



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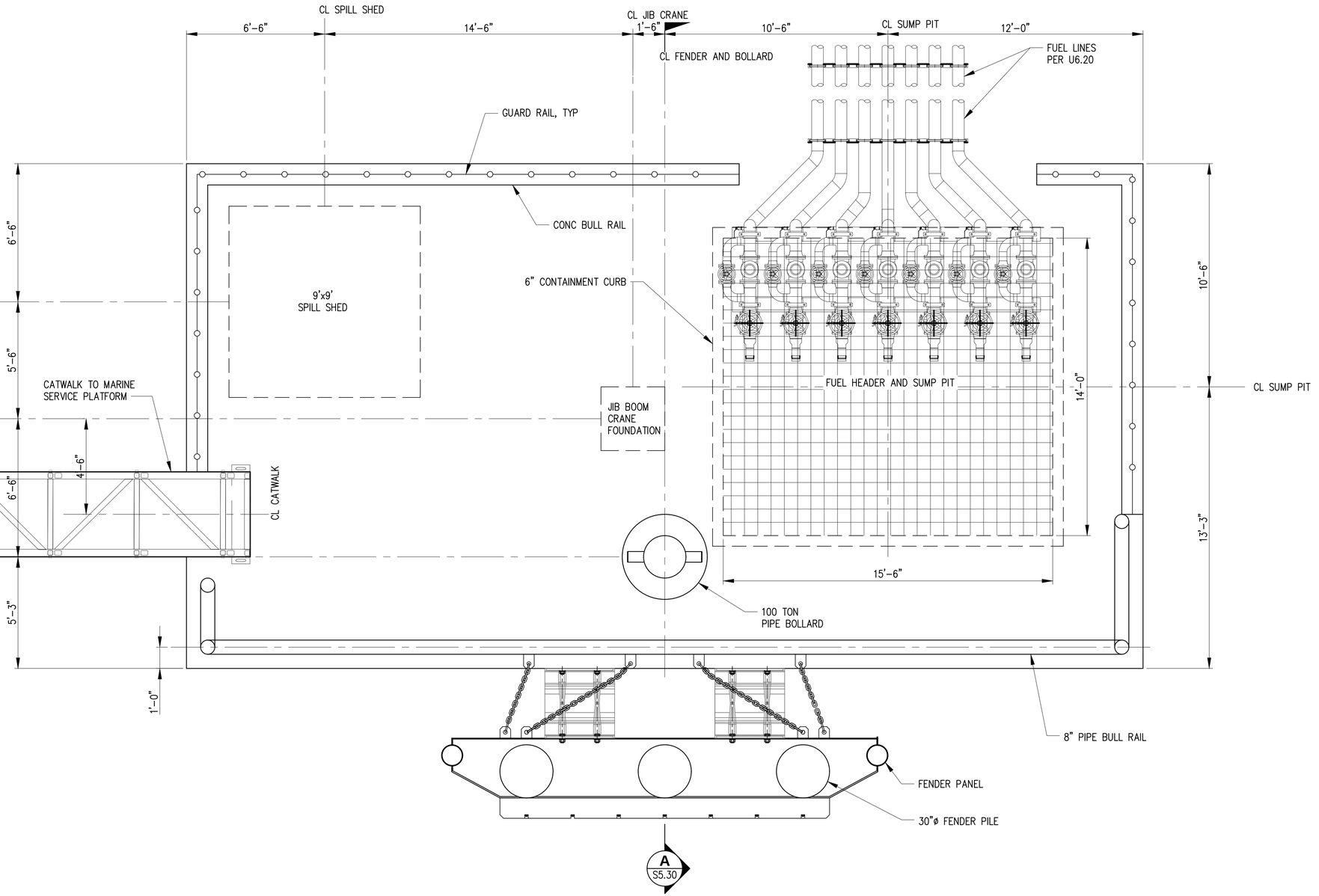
ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

FUEL HEADER SITE PLAN

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: JS	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**S5.00**
SHEET NO.	OF

Plotted: Jan 27, 2023 – 10:51am dyu Layout: S.500
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_S5.00 Fuel Header Site Plan.dwg



1 FUEL HEADER PLATFORM SURFACE FEATURES PLAN

1 / S5.01 SCALE: 3/8" = 1'-0"

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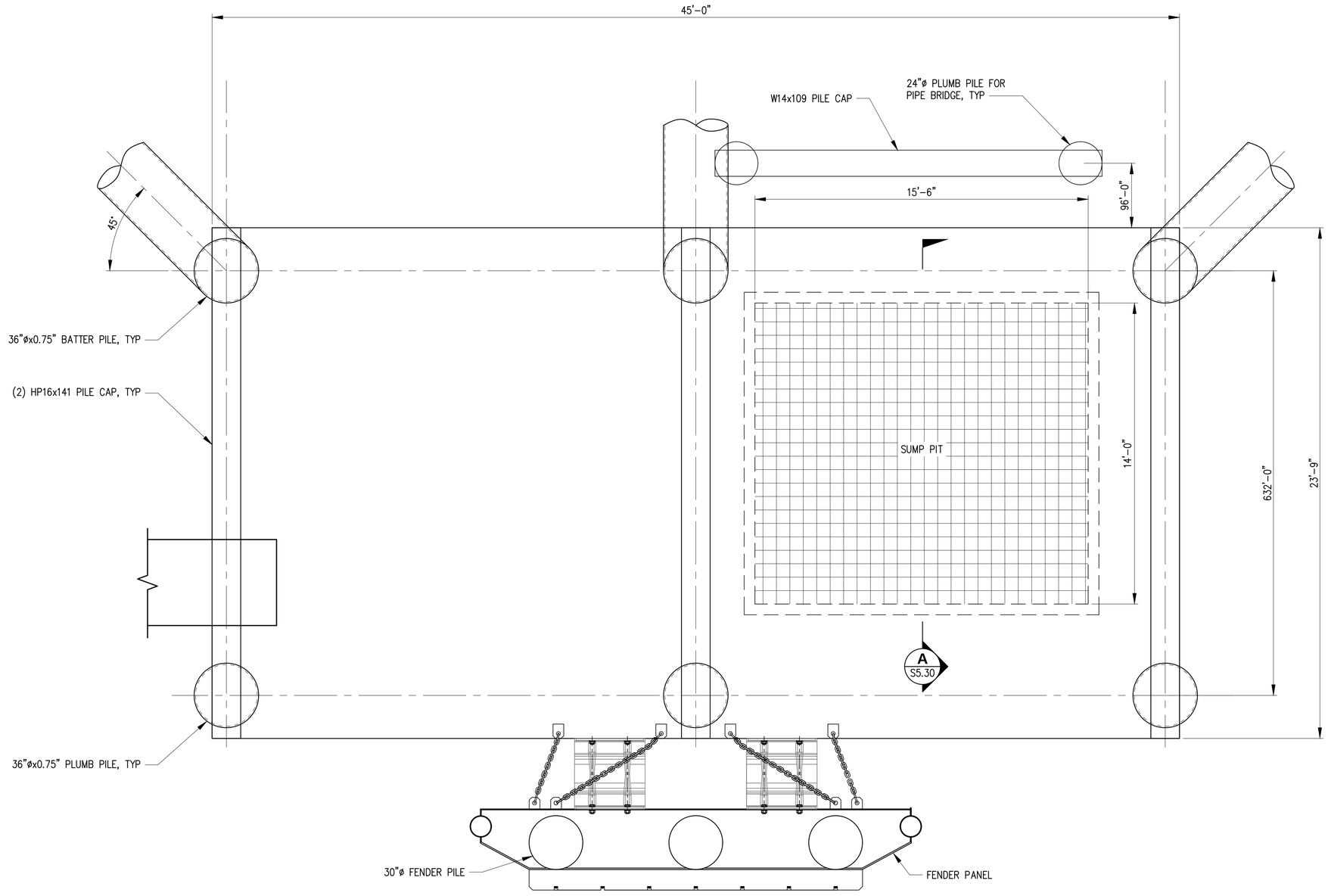
ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

FUEL HEADER PLATFORM SURFACE FEATURES PLAN

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: JS	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**S5.01**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 - 10:51am dyu Layout: S5.01
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_S5.01 Fuel Header Platform Surface Features Plan.dwg



1 FUEL HEADER PLATFORM PILE AND PILE CAP PLAN

SX.X SCALE: 3/8" = 1'-0"

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ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

FUEL HEADER PLATFORM
PILE AND PILE CAP PLAN

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: JS	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**S5.10**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 - 10:51am dyu Layout: S5.10
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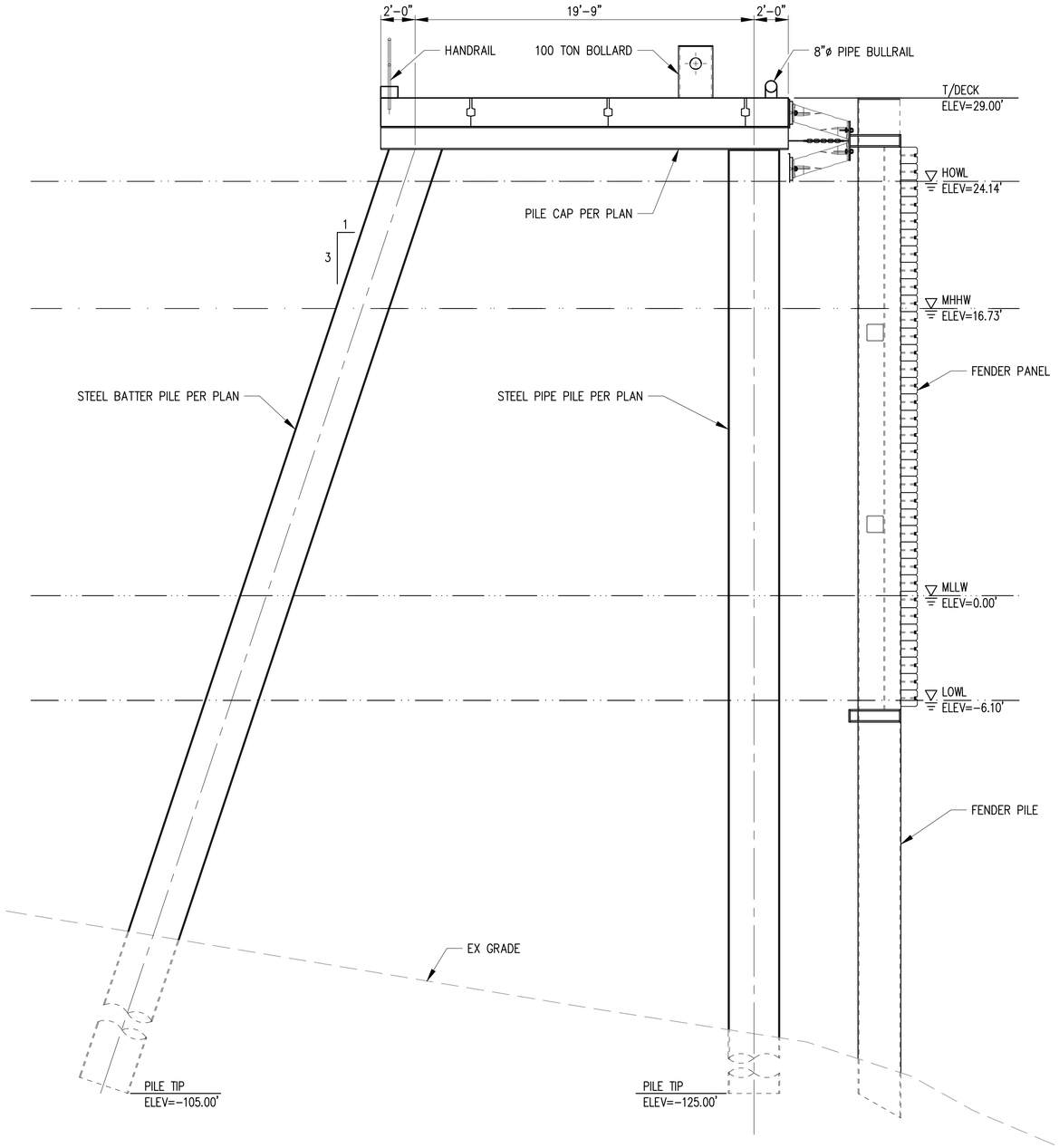

1 SX.X FUEL HEADER PLATFORM PILE AND PILE CAP PLAN

SCALE: 3/8" = 1'-0"

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ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

FUEL HEADER PLATFORM SECTION

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: JS	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**S5.20**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 - 10:51am dyu Layout: S5.20
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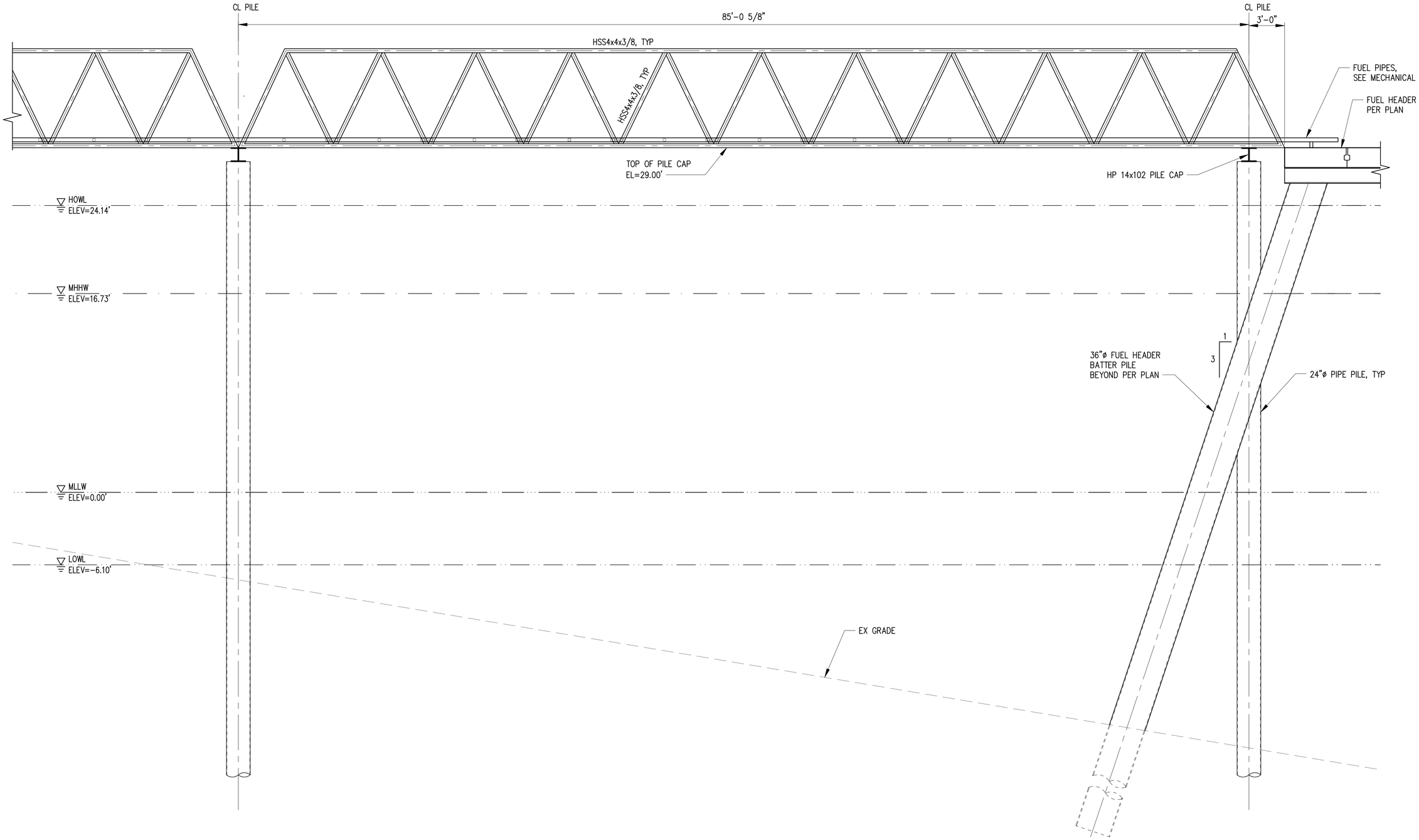

1 / S5.00 FUEL HEADER PLATFORM PIPE BRIDGE ELEVATION

SCALE: 1/4" = 1'-0"

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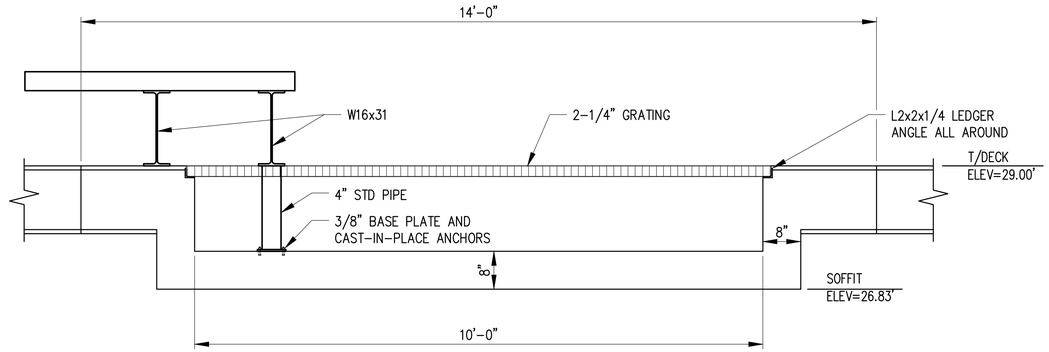
ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

FUEL HEADER PLATFORM BRIDGE ELEVATION

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**S5.21**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 - 10:51am dyu Layout: S5.21
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_S5.21 Fuel Header Platform Bridge Elevation.dwg



A
S5.00

CONTAINMENT PIT SECTION

SCALE: 3/4" = 1'–0"

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NO.	DATE	BY	REVISION

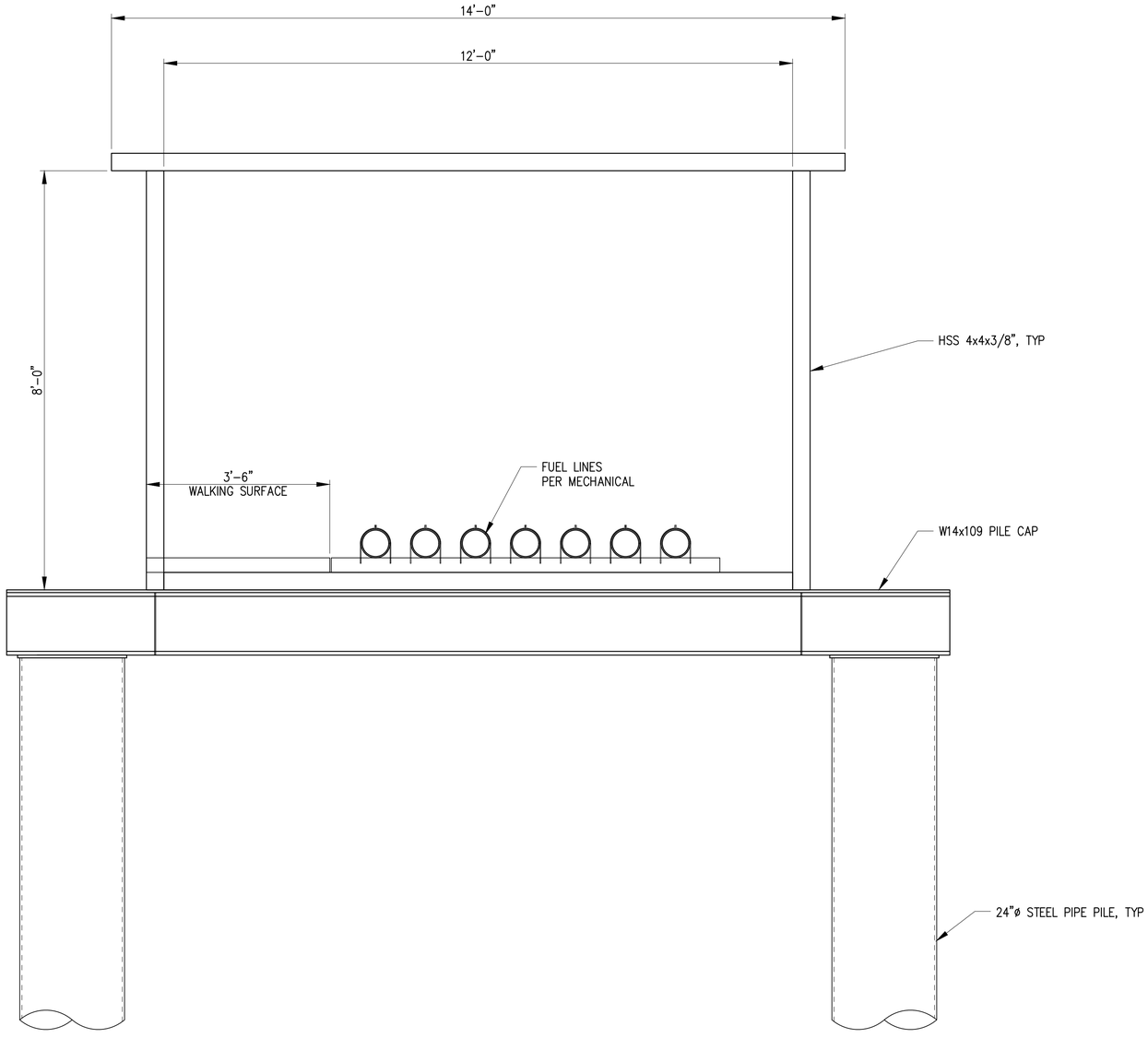
ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

FUEL HEADER PLATFORM DETAILS

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**S5.30**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 – 10:52am dyu Layout: S5.30
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_S5.30 Fuel Header Platform Details.dwg



A S5.00 **FUEL HEADER PLATFORM PIPE BRIDGE SECTION**
SCALE: 3/4" = 1'-0"

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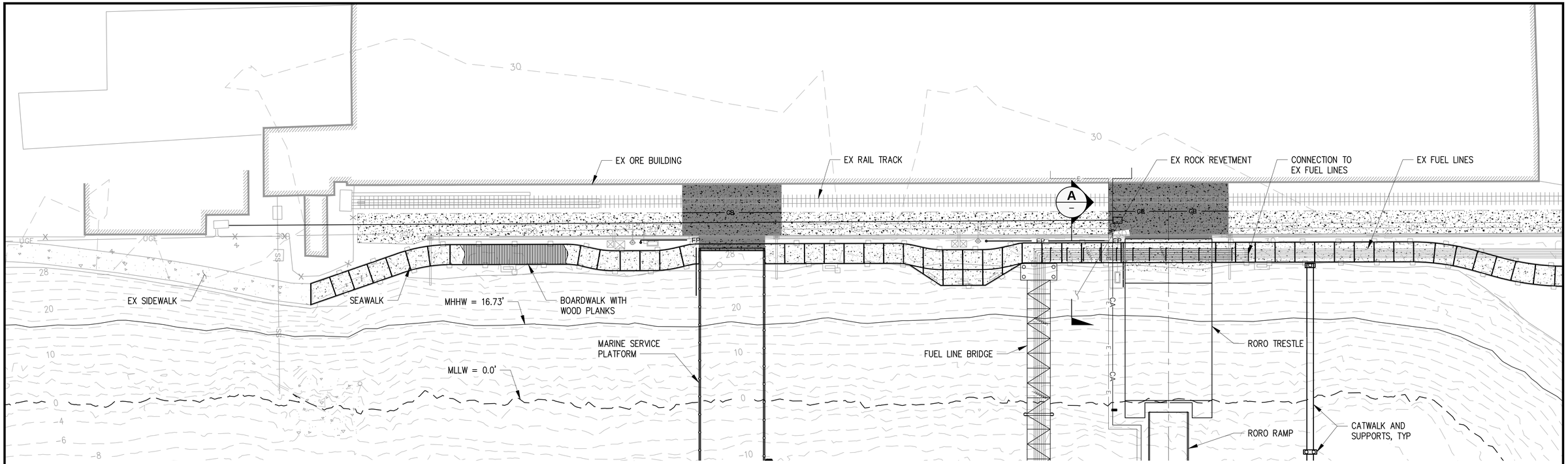
ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

FUEL HEADER PLATFORM
PIPE BRIDGE SECTION

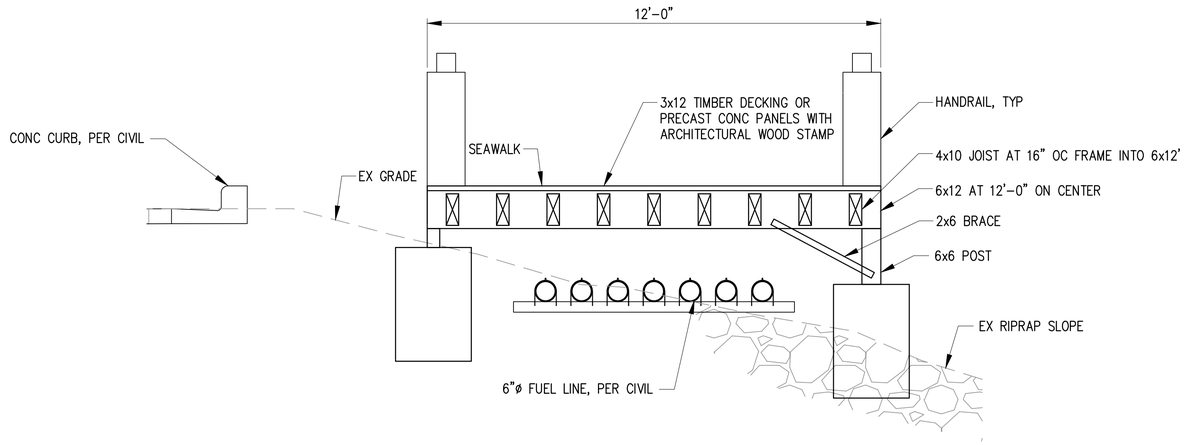
DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**S5.31**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

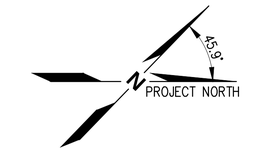
Plotted: Jan 27, 2023 - 10:52am dyu Layout: S5.31
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_S5.31 Fuel Header Platform Pipe Bridge Section.dwg



SEAWALK PLAN
SCALE: 1" = 30'



A SEAWALK TYPICAL SECTION
SCALE: 1" = 2'



60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 - 11:03am dyu Layout: S6.00
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_S6.00 Sea Walk Plan.dwg

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NO.	DATE	BY	REVISION

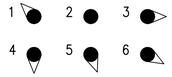
ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

ORE TERMINAL LARGE SHIP MOORING
SEAWALK PLAN AND SECTION

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**S6.00**
SHEET NO.	OF

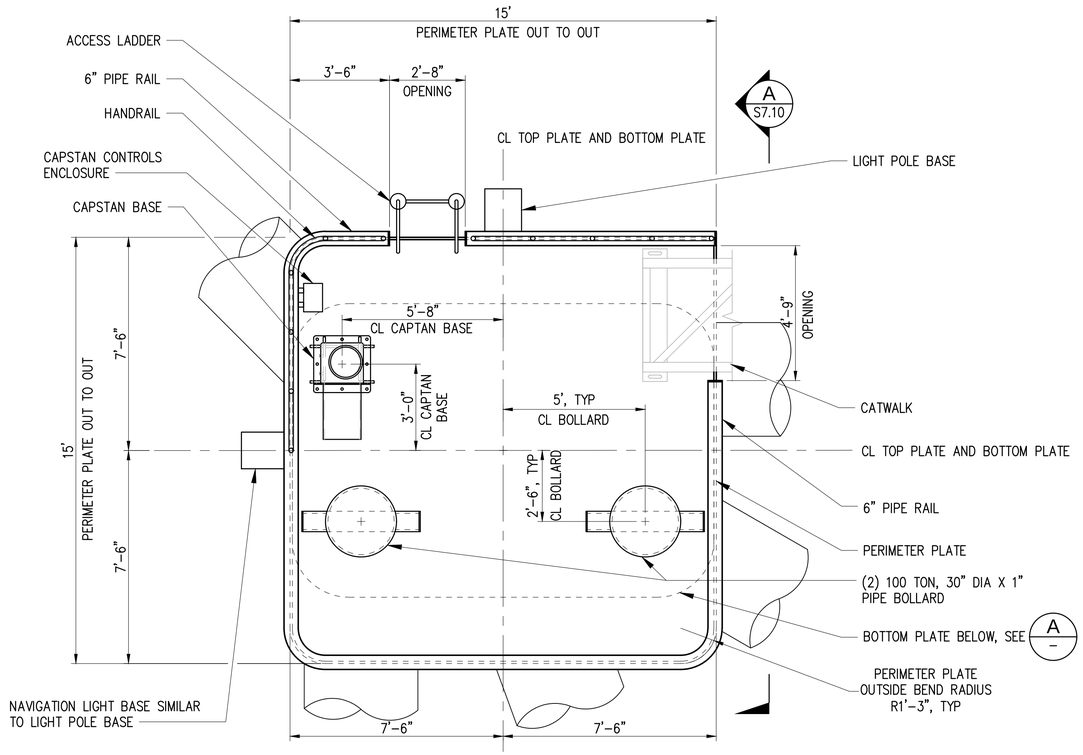
PILE SCHEDULE ID

DOLPHIN 1

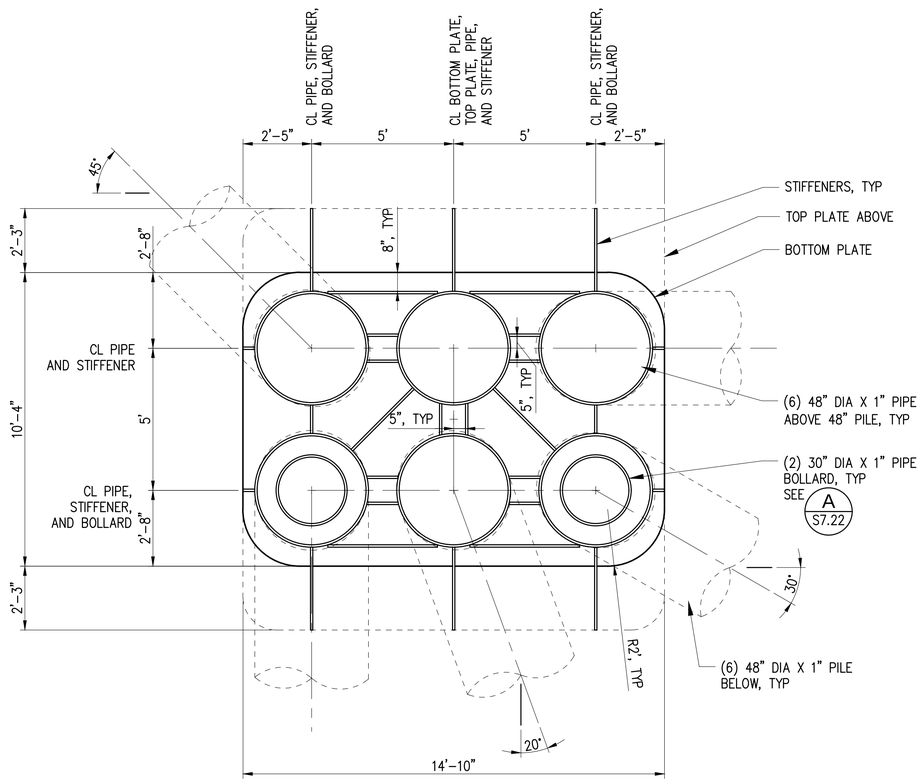


NOTES

1. ALL WELDS TO BOTTOM PLATE SHALL BE CJP.
2. ALL OTHER WELDS IN THE PILE CAP SHALL BE 3/8" FILLET ALL AROUND ONE SIDE OR 5/16" FILLET ALL AROUND BOTH SIDES.
3. ALL JOINTS SHALL BE WELDED CONTINUOUSLY.
4. ALL PLATES AND STIFFENERS ARE 1" THICK, UNO.
5. UTILITIES NOT SHOWN FOR CLARITY, SEE CIVIL.
6. FOR BOLLARD, PIPE RAIL, CATWALK CONNECTION, AND LIGHT POLE BASE DETAILS, SEE S7.22.
7. FOR CAPSTAN AND ACCESS LADDER DETAILS, SEE S7.24.



1 S2.01 **DOLPHIN 1 SURFACE FEATURES PLAN**
SCALE: 3/8" = 1'-0"



A – **BOTTOM PLATE DETAIL**
SCALE: 3/8" = 1'-0"

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ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

DOLPHIN 1
SURFACE FEATURES AND PILE PLAN

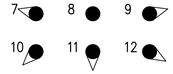
DRAWN: JH	PROJECT NO.: 2100135
DESIGN: DMR	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**S7.00**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 – 11:04am dyu Layout: S7.00
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_S7.00 Dolphin 1 Surface Features and Pile Plan.dwg

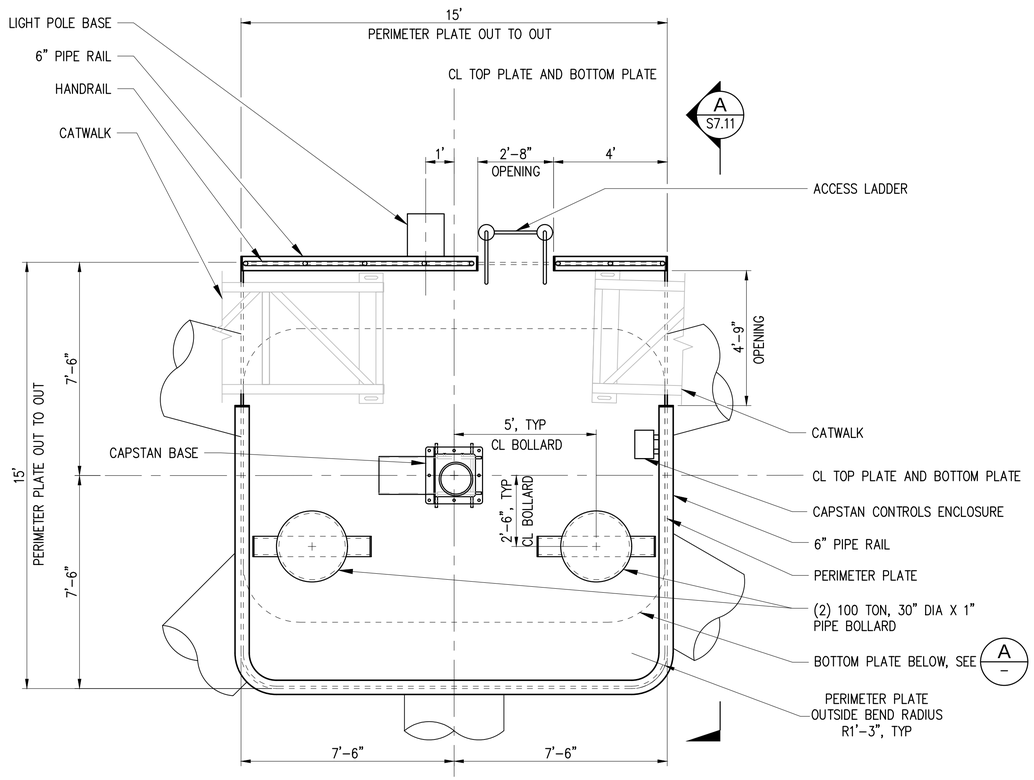
PILE SCHEDULE ID

DOLPHIN 2

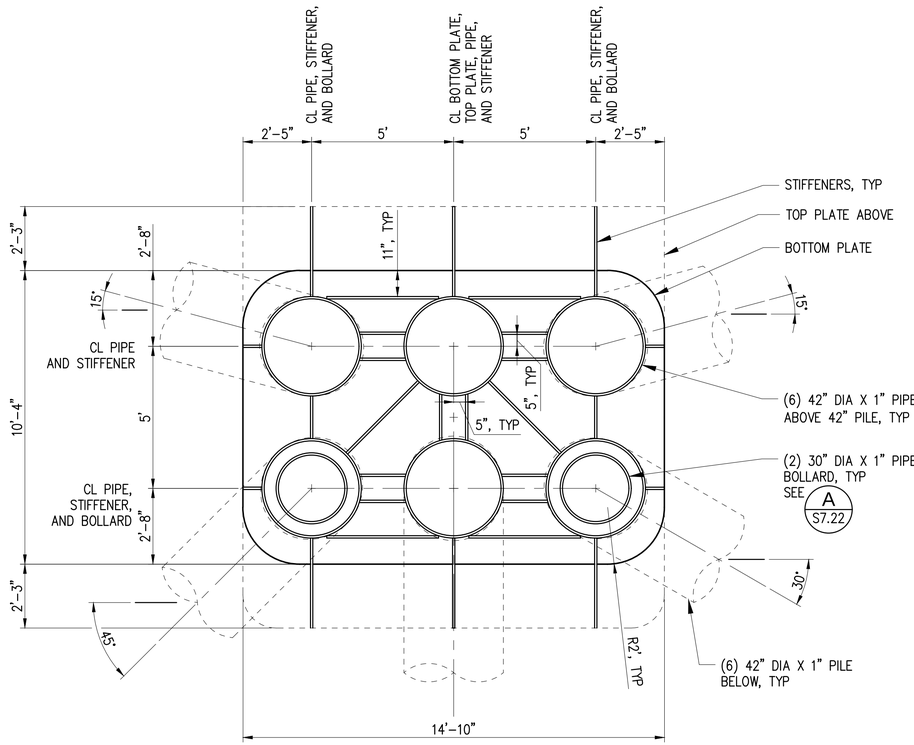


NOTES

1. ALL WELDS TO BOTTOM PLATE SHALL BE CJP.
2. ALL OTHER WELDS IN THE PILE CAP SHALL BE 3/8" FILLET ALL AROUND ONE SIDE OR 5/16" FILLET ALL AROUND BOTH SIDES.
3. ALL JOINTS SHALL BE WELDED CONTINUOUSLY.
4. ALL PLATES AND STIFFENERS ARE 1" THICK, UNO.
5. UTILITIES NOT SHOWN FOR CLARITY, SEE CIVIL.
6. FOR BOLLARD, PIPE RAIL, CATWALK CONNECTION, AND LIGHT POLE BASE DETAILS, SEE S7.22.
7. FOR CAPSTAN AND ACCESS LADDER DETAILS, SEE S7.24.



1 S2.01 **DOLPHIN 2 SURFACE FEATURES PLAN**
SCALE: 3/8" = 1'-0"



A – **BOTTOM PLATE DETAIL**
SCALE: 3/8" = 1'-0"

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NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

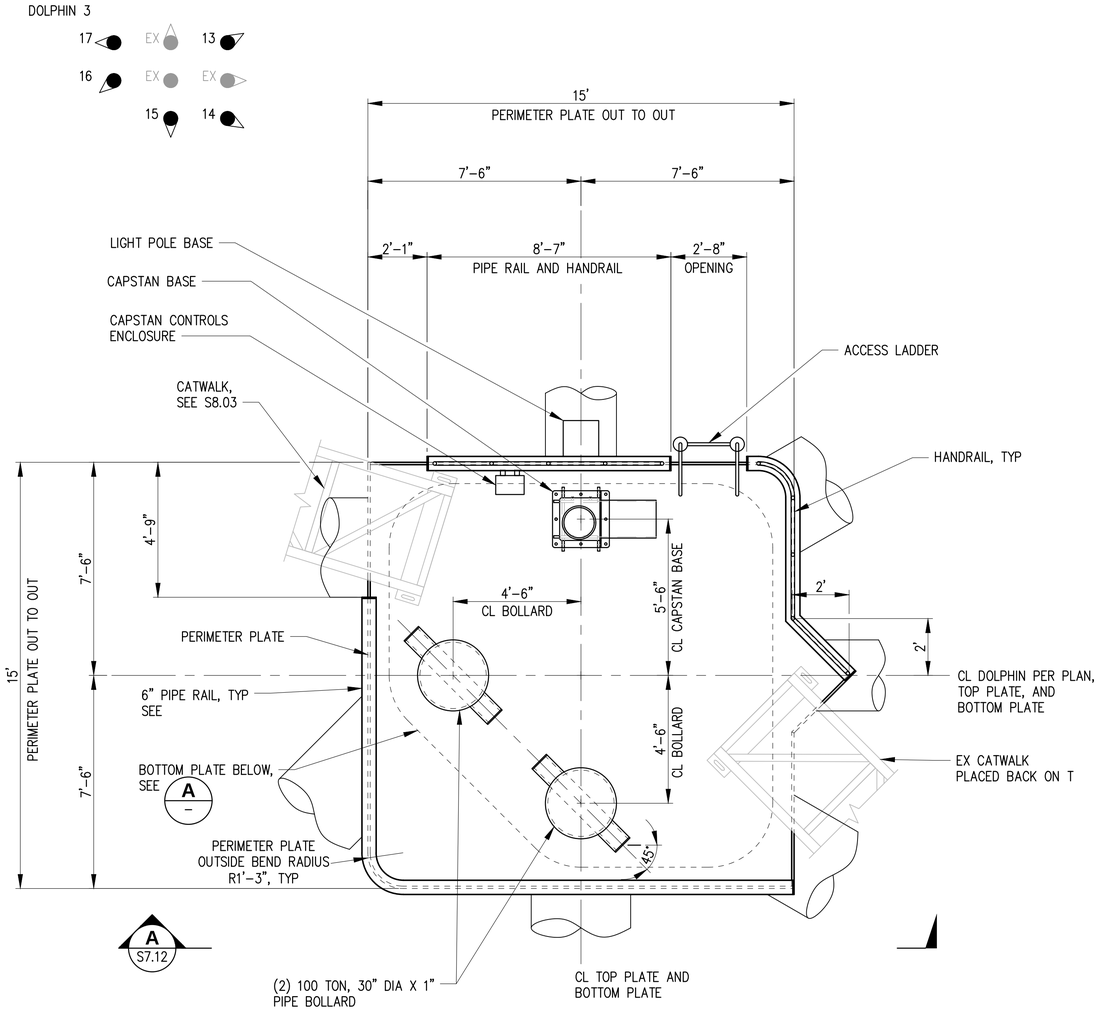
DOLPHIN 2
SURFACE FEATURES AND PILE PLAN

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: DMR	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**S7.01**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 – 11:05am dyu Layout: S7.01
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_S7.01 Dolphin 2 Surface Features and Pile Plan.dwg

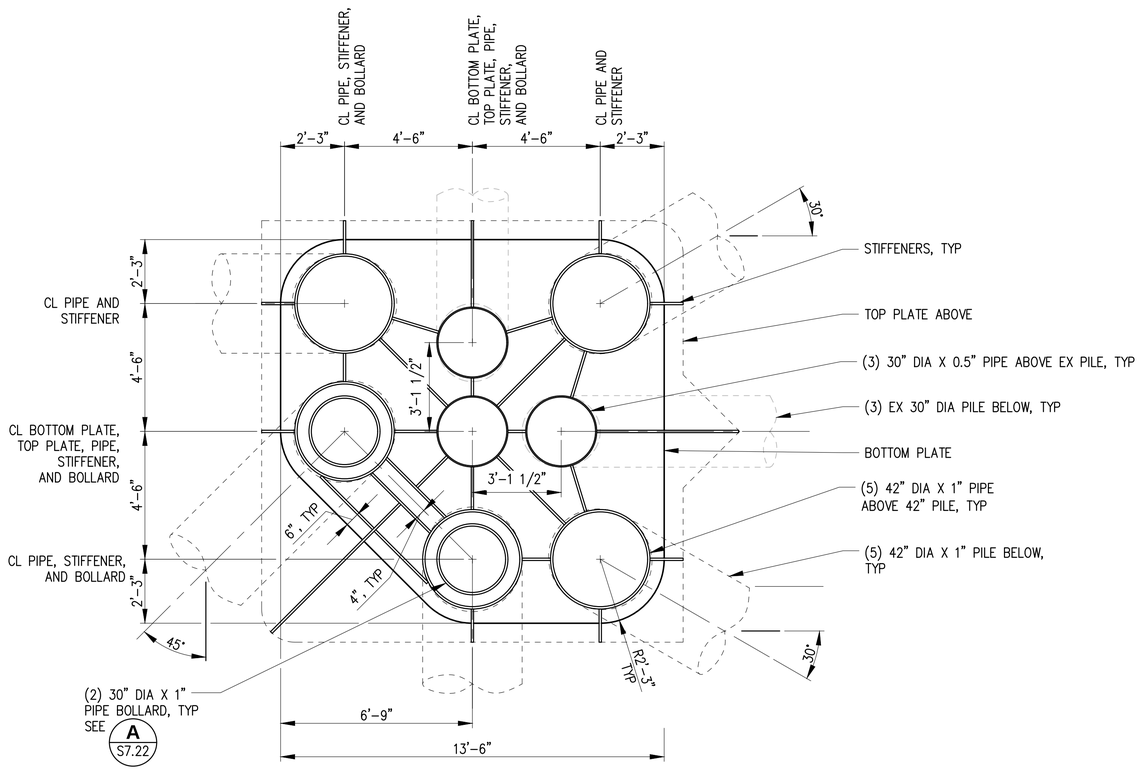
PILE SCHEDULE ID



1 S2.01 **DOLPHIN 3 SURFACE FEATURES PLAN**
SCALE: 3/8"=1'-0"

NOTES

1. ALL WELDS TO BOTTOM PLATE SHALL BE CJP.
2. ALL OTHER WELDS IN THE PILE CAP SHALL BE 3/8" FILLET ALL AROUND ONE SIDE OR 5/16" FILLET ALL AROUND BOTH SIDES.
3. ALL JOINTS SHALL BE WELDED CONTINUOUSLY.
4. ALL PLATES AND STIFFENERS ARE 1" THICK, UNO.
5. UTILITIES NOT SHOWN FOR CLARITY, SEE CIVIL.
6. FOR BOLLARD, PIPE RAIL, CATWALK CONNECTION, AND LIGHT POLE BASE DETAILS, SEE S7.22.
7. FOR CAPSTAN AND ACCESS LADDER DETAILS, SEE S7.24.



A – **BOTTOM PLATE DETAIL**
SCALE: 3/8"=1'-0"

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NO.	DATE	BY	REVISION

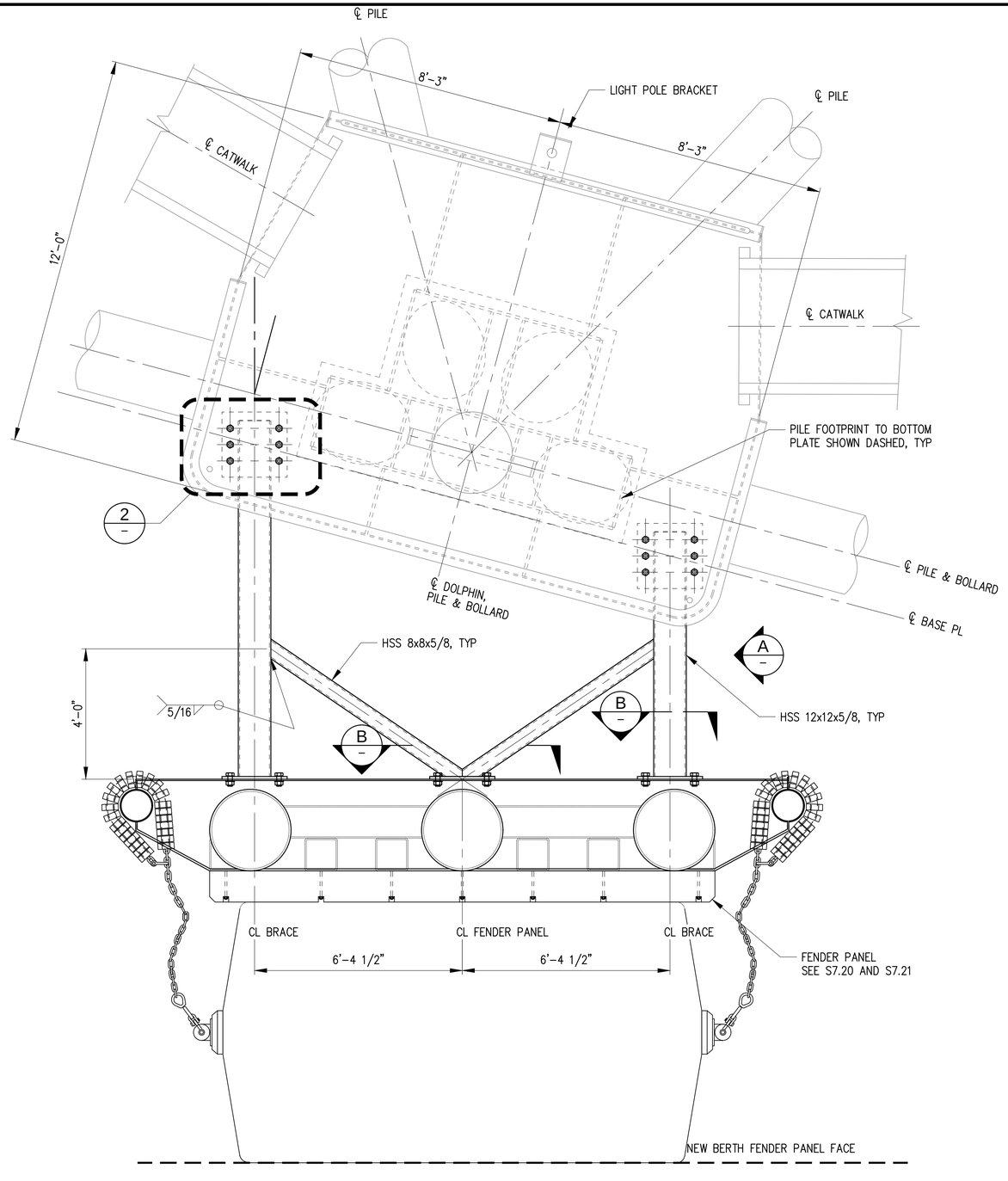
ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

DOLPHIN 3
SURFACE FEATURES AND PILE PLAN

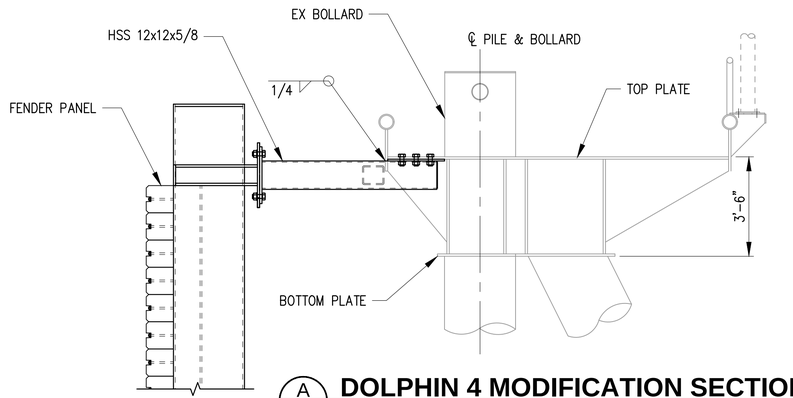
DRAWN: JH	PROJECT NO.: 2100135
DESIGN: KPT	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**S7.02**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

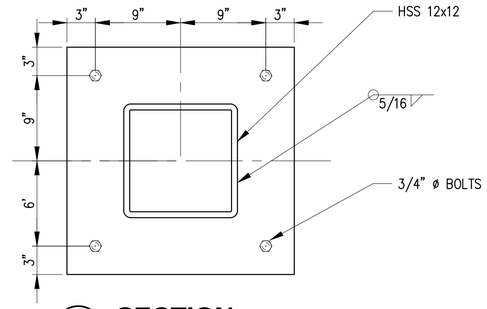
Plotted: Jan 27, 2023 – 10:52am dyu Layout: S7.02
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_S7.02 Dolphin 3 Surface Features and Pile Plan.dwg



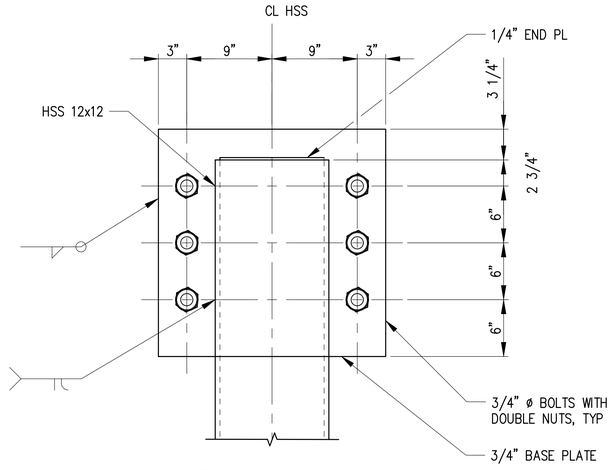
1 / S2.01 DOLPHIN 4 MODIFICATION PLAN
SCALE: 1/2" = 1'-0"



A / – DOLPHIN 4 MODIFICATION SECTION
SCALE: 3/8" = 1'-0"



B / – SECTION
SCALE: 1 1/2" = 1'-0"



2 / – DETAIL
SCALE: 1 1/2" = 1'-0"

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NO.	DATE	BY	REVISION

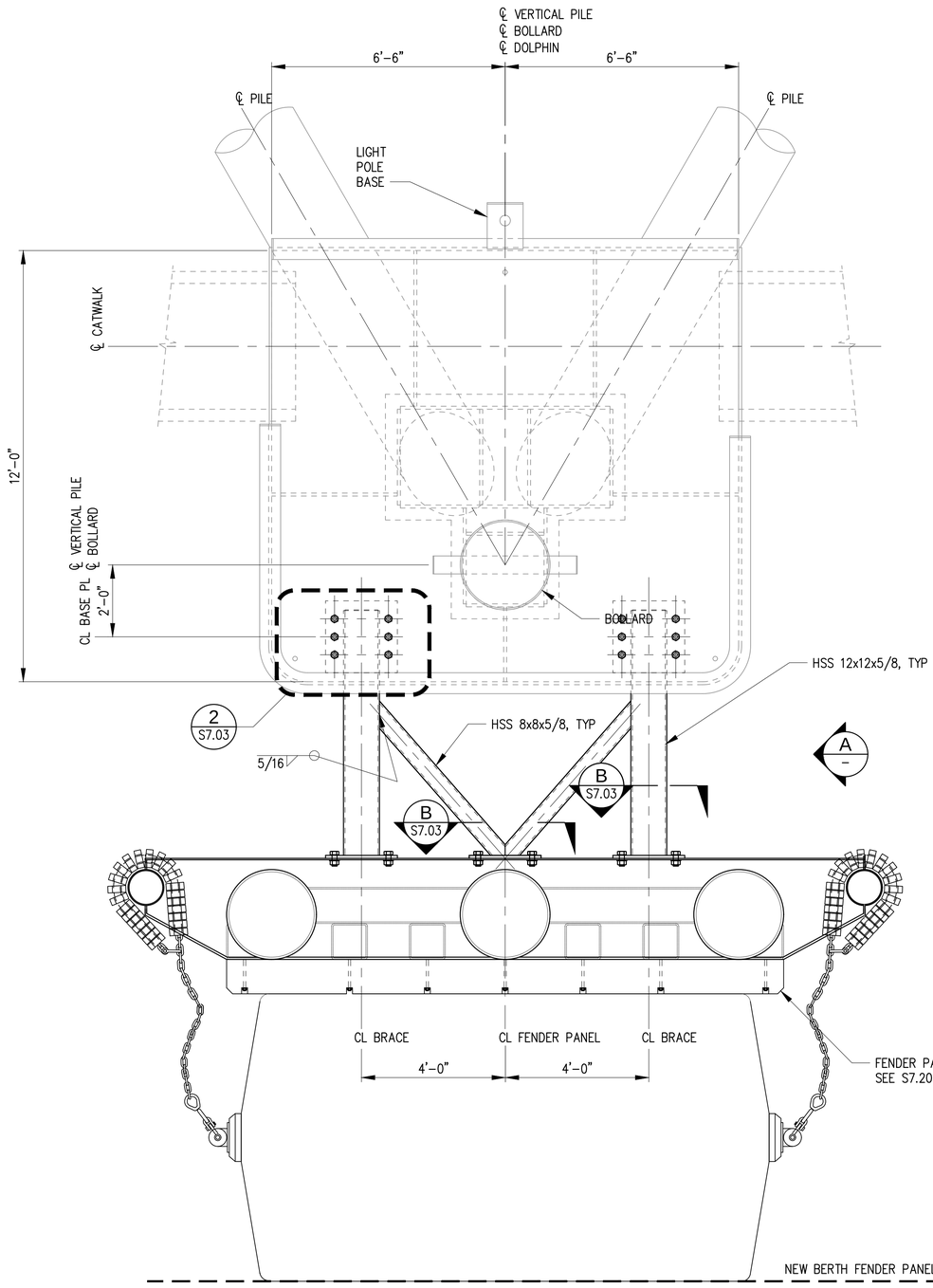
ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

DOLPHIN 4 MODIFICATIONS

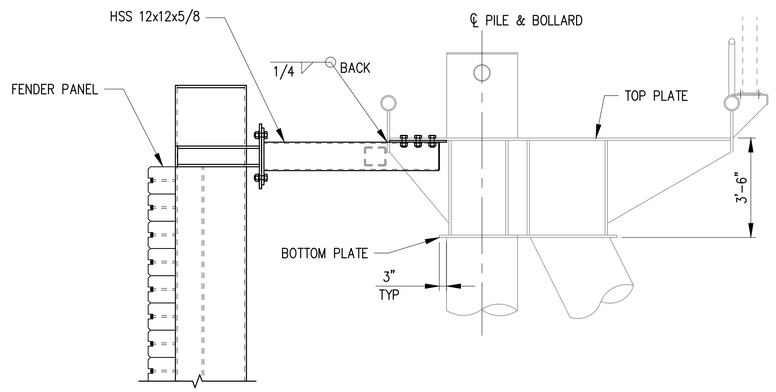
DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**S7.03**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 - 10:52am dyu Layout: S7.03
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_S7.03 Dolphin 4 Modifications.dwg



1 S2.01 **DOLPHIN 5 MODIFICATION PLAN**
SCALE: 1/2" = 1'-0"



A – **DOLPHIN 5 MODIFICATION SECTION**
SCALE: 3/8" = 1'-0"

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NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

DOLPHIN 5 MODIFICATIONS

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**S7.04**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 – 10:52am dyu Layout: S7.04
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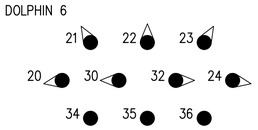
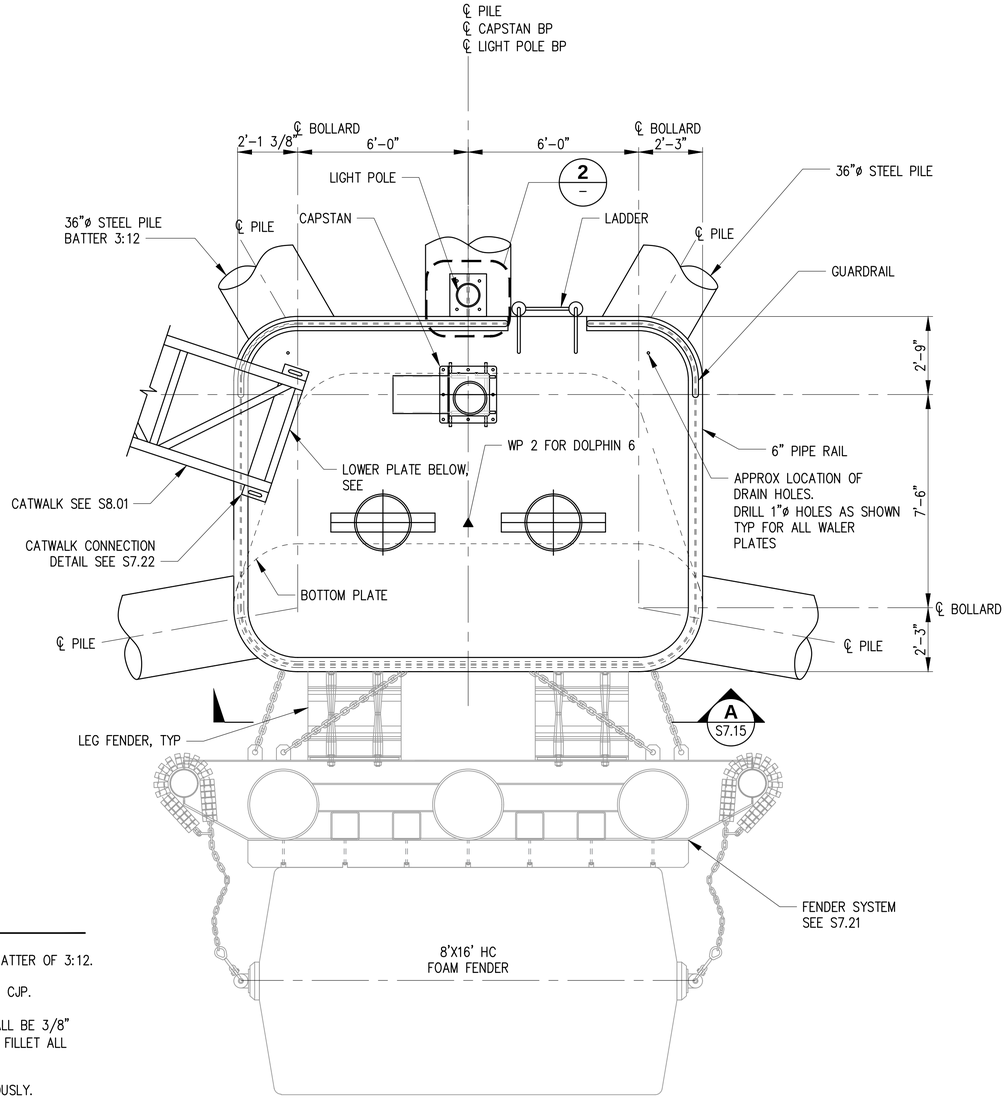
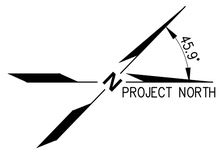
PILE SCHEDULE ID



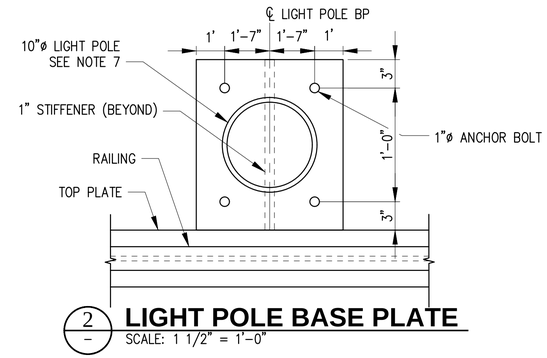




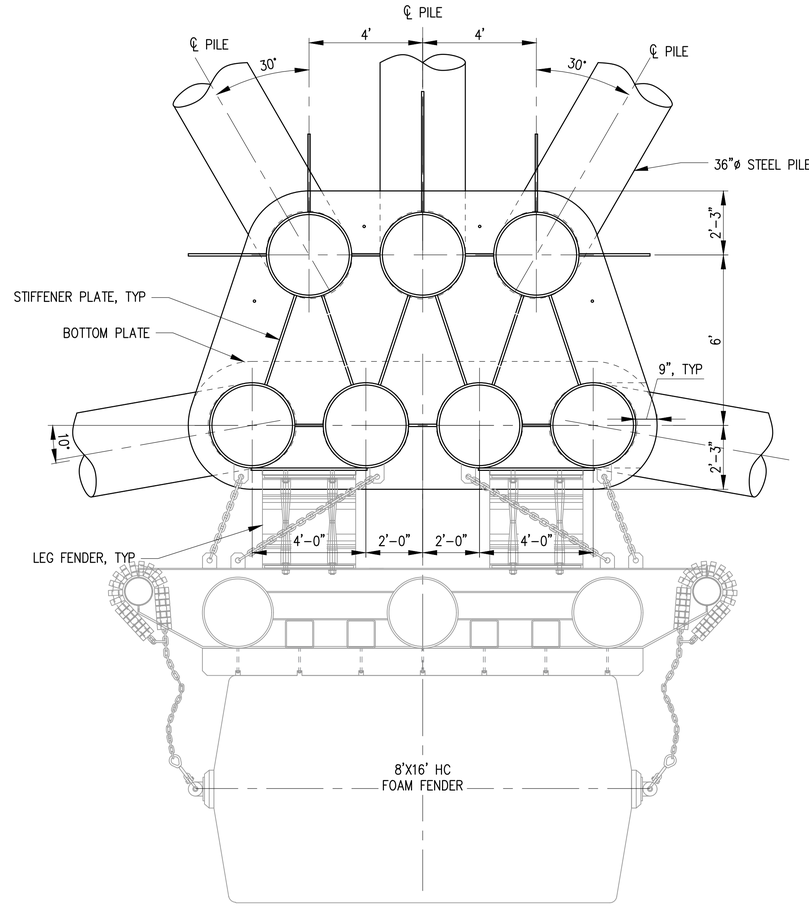
NOTES

1. ONLY PILE 21 SHALL BE DRIVEN W/ A BATTER OF 3:12.
2. ALL WELDS TO BOTTOM PLATE SHALL BE CJP.
3. ALL OTHER WELDS IN THE PILE CAP SHALL BE 3/8" FILLET ALL AROUND ONE SIDE OR 5/16" FILLET ALL AROUND BOTH SIDES.
4. ALL JOINTS SHALL BE WELDED CONTINUOUSLY.
5. ALL PLATES AND STIFFENERS ARE 1" THICK, U.N.O.
6. UTILITIES NOT SHOWN FOR CLARITY, SEE CIVIL.
7. LIGHT POLE BP AND ANCHORAGE DETAILS TO BE UPDATED IN ACCORDANCE WITH MANUFACTURER DETAILS.

1 / S2.03 **TYPICAL DOLPHIN PLAN**
SCALE: 3/8" = 1'-0"



2 / – **LIGHT POLE BASE PLATE**
SCALE: 1 1/2" = 1'-0"



A / – **BOTTOM PLATE DETAIL**
SCALE: 3/8" = 1'-0"

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NO.	DATE	BY	REVISION

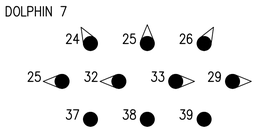
ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA
ORE TERMINAL LARGE SHIP MOORING
DOLPHIN 6 PLAN

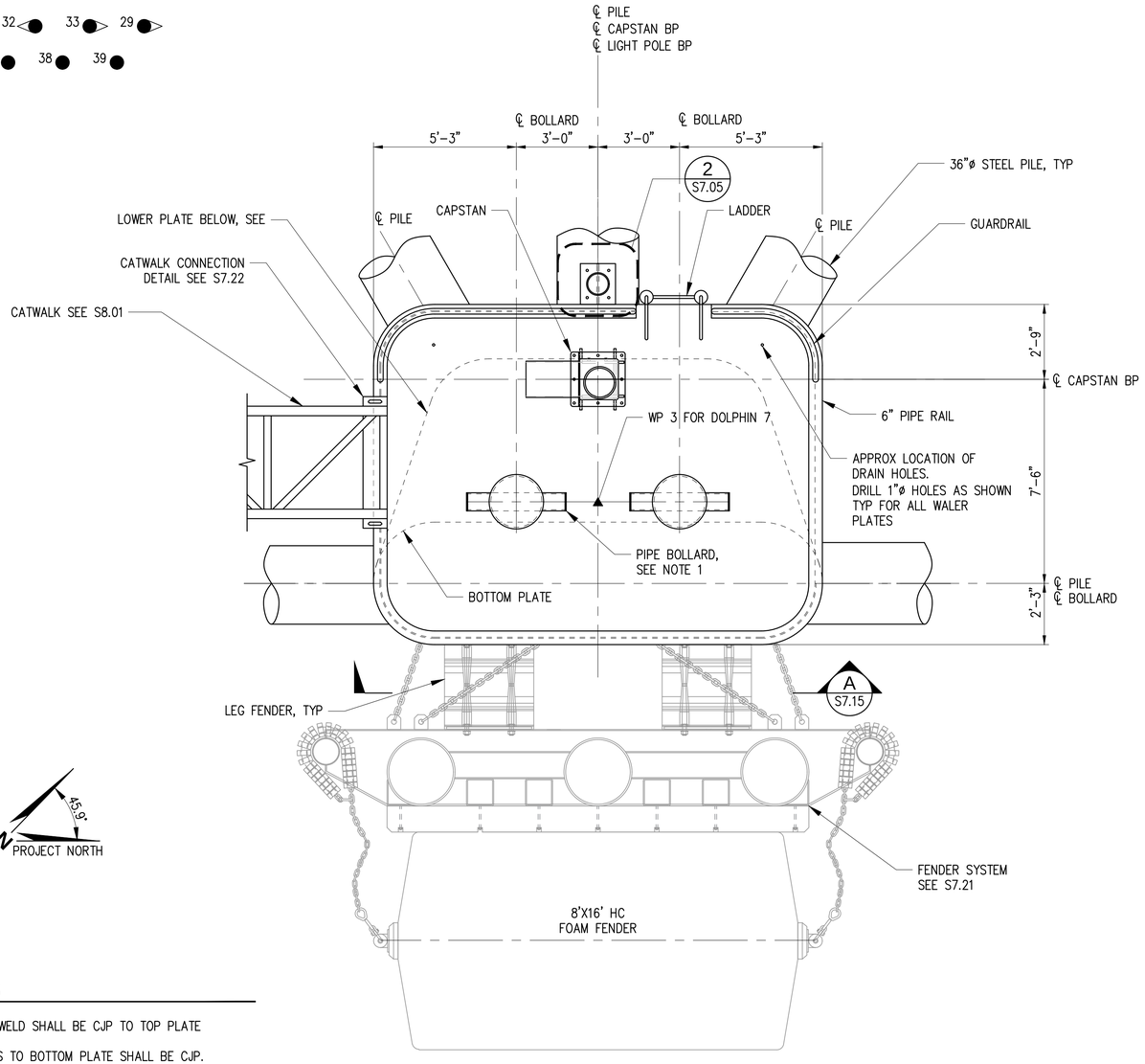
DRAWN:	JH	PROJECT NO.:	2100135
DESIGN:	ED	SCALE:	AS SHOWN
CHECKED:	RR	DATE:	01/27/2023
DRAWING NO.			**S7.05**
SHEET NO.			OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 – 10:52am dyu Layout: S7.05
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_S7.05 Dolphin 6 Plan.dwg

PILE SCHEDULE ID

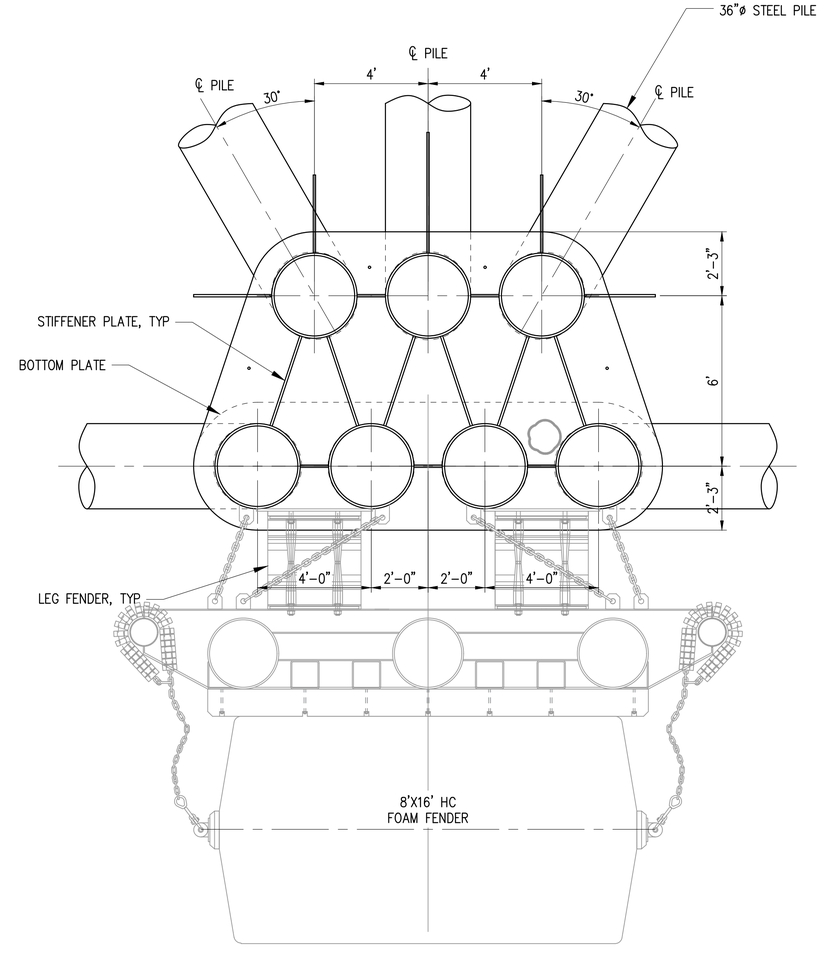




NOTES

1. BOLLARD WELD SHALL BE CJP TO TOP PLATE
2. ALL WELDS TO BOTTOM PLATE SHALL BE CJP.
3. ALL OTHER WELDS IN THE PILE CAP SHALL BE 3/8" FILLET ALL AROUND ONE SIDE OR 5/16" FILLET ALL AROUND BOTH SIDES.
4. ALL JOINTS SHALL BE WELDED CONTINUOUSLY.
5. ALL PLATES AND STIFFENERS ARE 1" THICK, U.N.O.
6. UTILITIES NOT SHOWN FOR CLARITY, SEE CIVIL.

1 / S2.03 **DOLPHIN 7 PLAN**
SCALE: 3/8" = 1'-0"



A / – **LOWER PLATE DETAIL**
SCALE: 3/8" = 1'-0"

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NO.	DATE	BY	REVISION

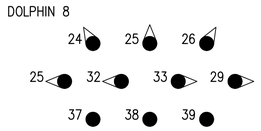
ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA
ORE TERMINAL LARGE SHIP MOORING
DOLPHIN 7 PLAN

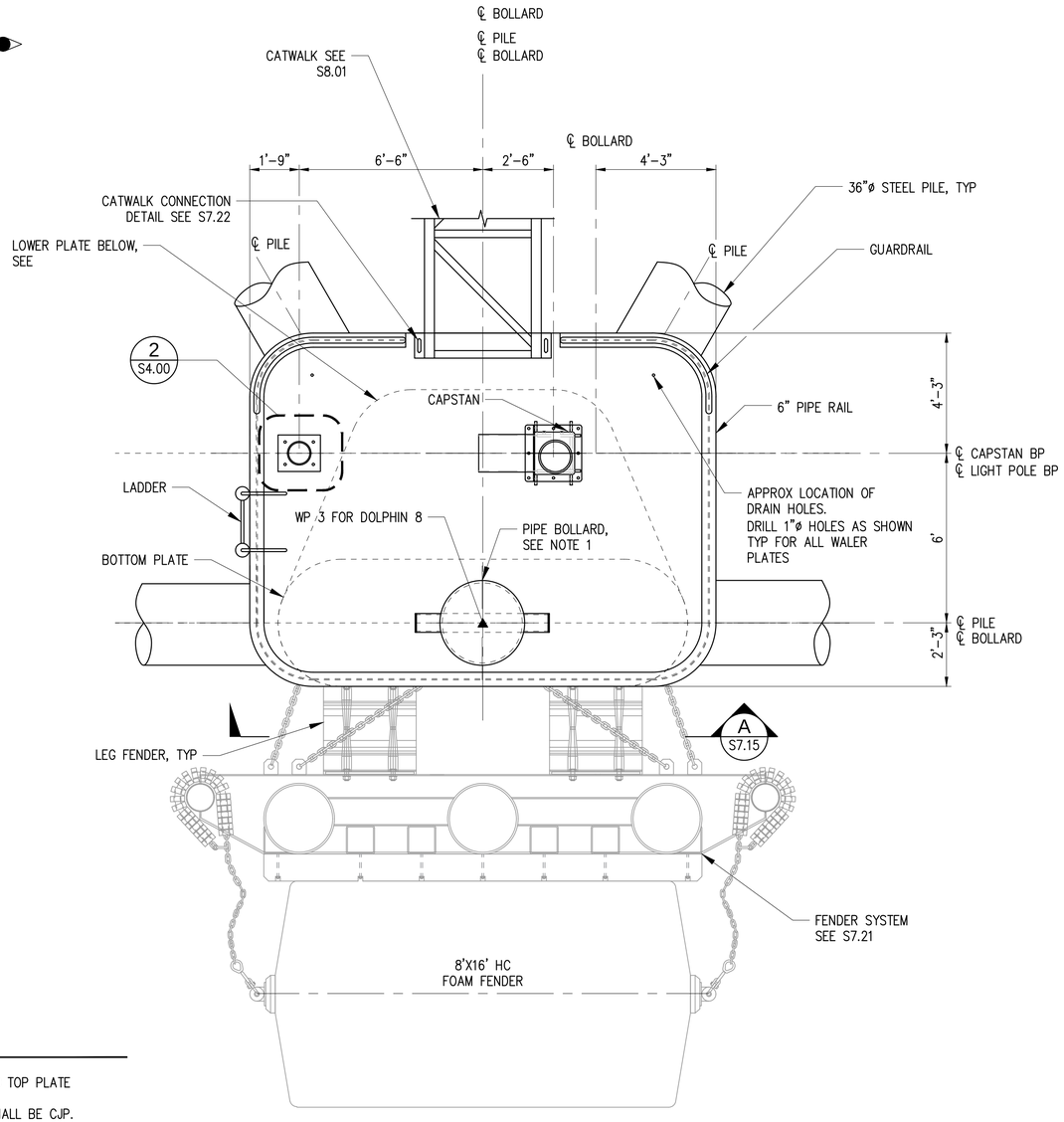
DRAWN: JH	PROJECT NO.: 2100135
DESIGN: AER	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**S7.06**
SHEET NO.	OF

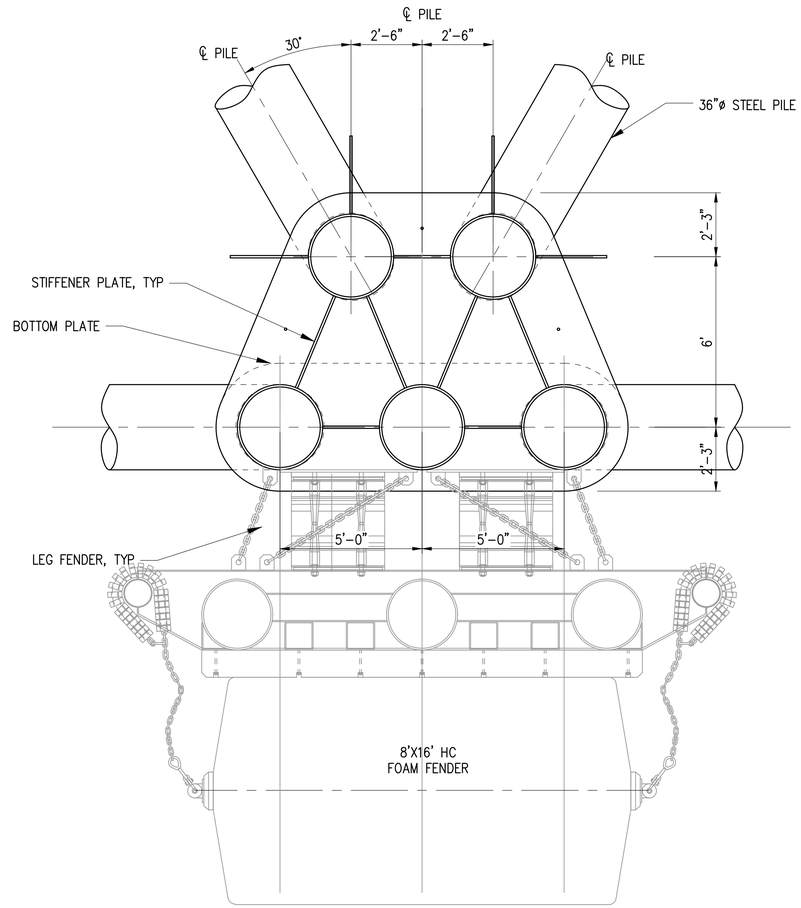
60% DESIGN - NOT FOR CONSTRUCTION

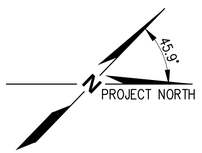
Plotted: Jan 27, 2023 - 10:53am dyu Layout: S7.06
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_S7.06 Dolphin 7 Plan.dwg

PILE SCHEDULE ID









NOTES

1. BOLLARD WELD SHALL BE CJP TO TOP PLATE
2. ALL WELDS TO BOTTOM PLATE SHALL BE CJP.
3. ALL OTHER WELDS IN THE PILE CAP SHALL BE 3/8" FILLET ALL AROUND ONE SIDE OR 5/16" FILLET ALL AROUND BOTH SIDES.
4. ALL JOINTS SHALL BE WELDED CONTINUOUSLY.
5. ALL PLATES AND STIFFENERS ARE 1" THICK, U.N.O.
6. UTILITIES NOT SHOWN FOR CLARITY, SEE CIVIL.

1 / S2.05 **DOLPHIN 8 PLAN**
SCALE: 3/8" = 1'–0"

A / – **LOWER PLATE DETAIL**
SCALE: 3/8" = 1'–0"

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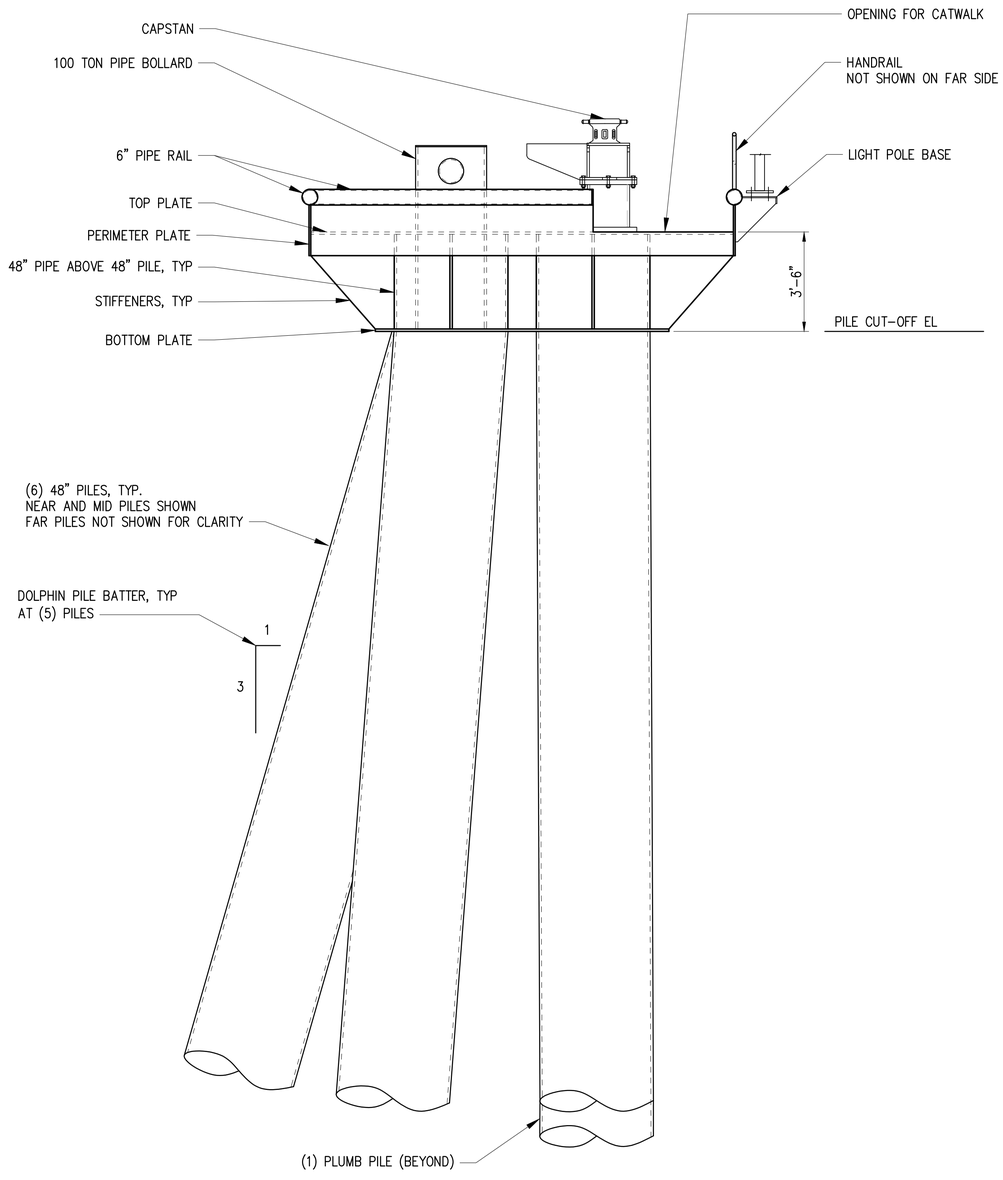
NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA
ORE TERMINAL LARGE SHIP MOORING
DOLPHIN 8 PLAN

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: AER	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**S7.07**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 – 10:53am dyu Layout: S7.07
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_S7.07 Dolphin 8 Plan.dwg



A S7.00 **ELEVATION**
SCALE: 3/8" = 1'-0"

NOTES

1. ALL WELDS TO BOTTOM PLATE SHALL BE CJP.
2. ALL OTHER WELDS IN THE PILE CAP SHALL BE 3/8" FILLET ALL AROUND ONE SIDE OR 5/16" FILLET ALL AROUND BOTH SIDES.
3. ALL JOINTS SHALL BE WELDED CONTINUOUSLY.
4. ALL PLATES AND STIFFENERS ARE 1" THICK, UNO.
5. UTILITIES NOT SHOWN FOR CLARITY, SEE CIVIL.

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 - 11:06am djy Layout: S7.10
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_S7.10 Dolphin 1 Elevation.dwg

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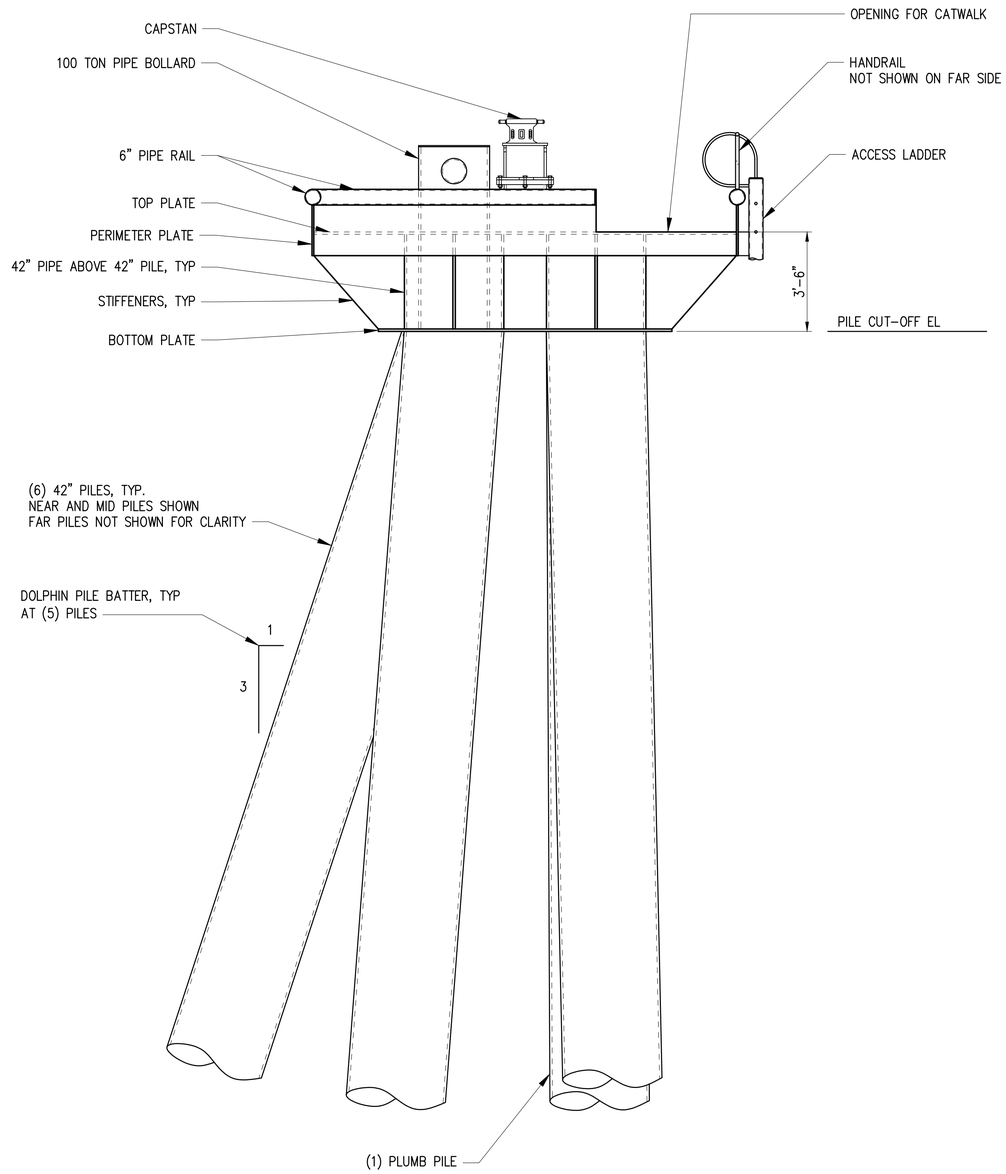
NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

DOLPHIN 1
ELEVATION

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: DMR	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**S7.10**
SHEET NO.	OF



A S7.01 **ELEVATION**
SCALE: 3/8" = 1'-0"

NOTES

1. ALL WELDS TO BOTTOM PLATE SHALL BE CJP.
2. ALL OTHER WELDS IN THE PILE CAP SHALL BE 3/8" FILLET ALL AROUND ONE SIDE OR 5/16" FILLET ALL AROUND BOTH SIDES.
3. ALL JOINTS SHALL BE WELDED CONTINUOUSLY.
4. ALL PLATES AND STIFFENERS ARE 1" THICK, UNO.
5. UTILITIES NOT SHOWN FOR CLARITY, SEE CIVIL.

60% DESIGN - NOT FOR CONSTRUCTION

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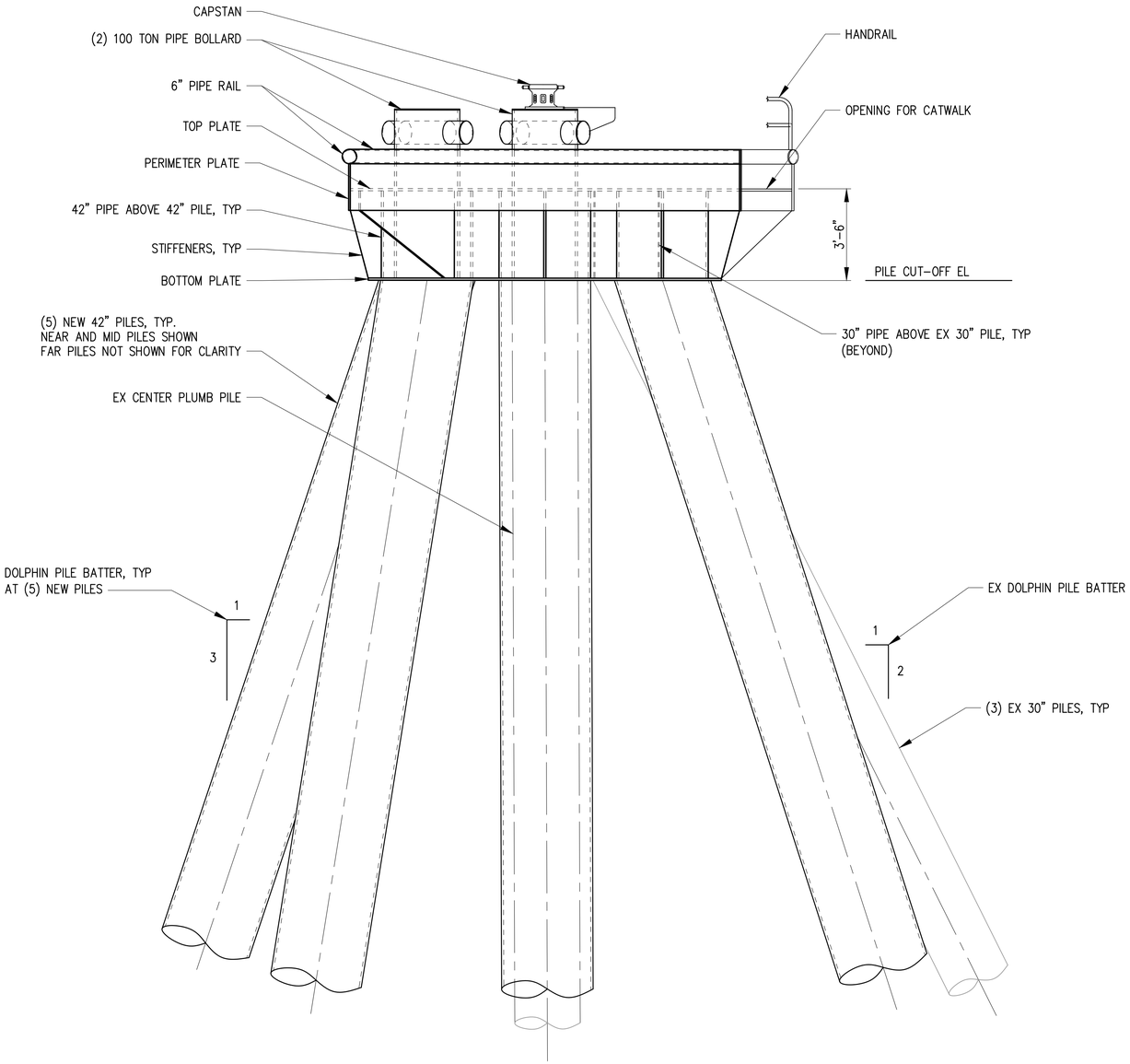
NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

DOLPHIN 2
ELEVATION

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: DMR	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**S7.11**
SHEET NO.	OF

Plotted: Jan 27, 2023 - 11:07am dyu Layout: S7.11
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_S7.11 Dolphin 2 Elevation.dwg



A S7.02 **ELEVATION**
SCALE: 3/8" = 1'-0"

NOTES

1. ALL WELDS TO BOTTOM PLATE SHALL BE CJP.
2. ALL OTHER WELDS IN THE PILE CAP SHALL BE 3/8" FILLET ALL AROUND ONE SIDE OR 5/16" FILLET ALL AROUND BOTH SIDES.
3. ALL JOINTS SHALL BE WELDED CONTINUOUSLY.
4. ALL PLATES AND STIFFENERS ARE 1" THICK, UNO.
5. UTILITIES NOT SHOWN FOR CLARITY, SEE CIVIL.

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 – 10:53am dyu Layout: S7.12
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_S7.12 Dolphin 3 Elevation.dwg

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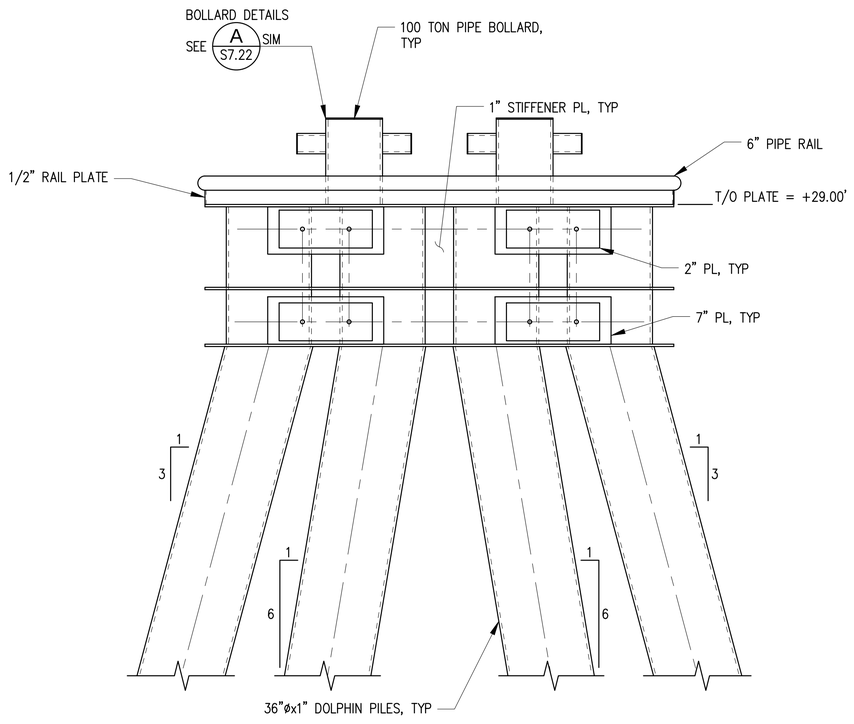
NO.	DATE	BY	REVISION

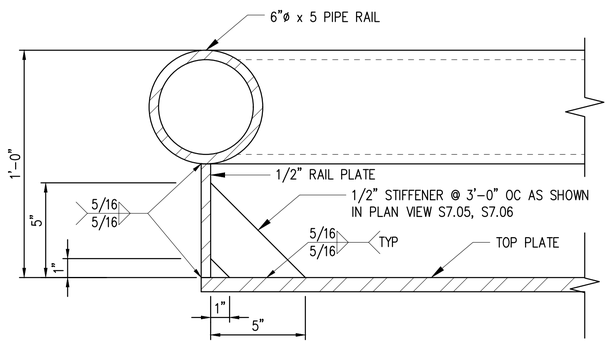
ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

DOLPHIN 3
ELEVATION

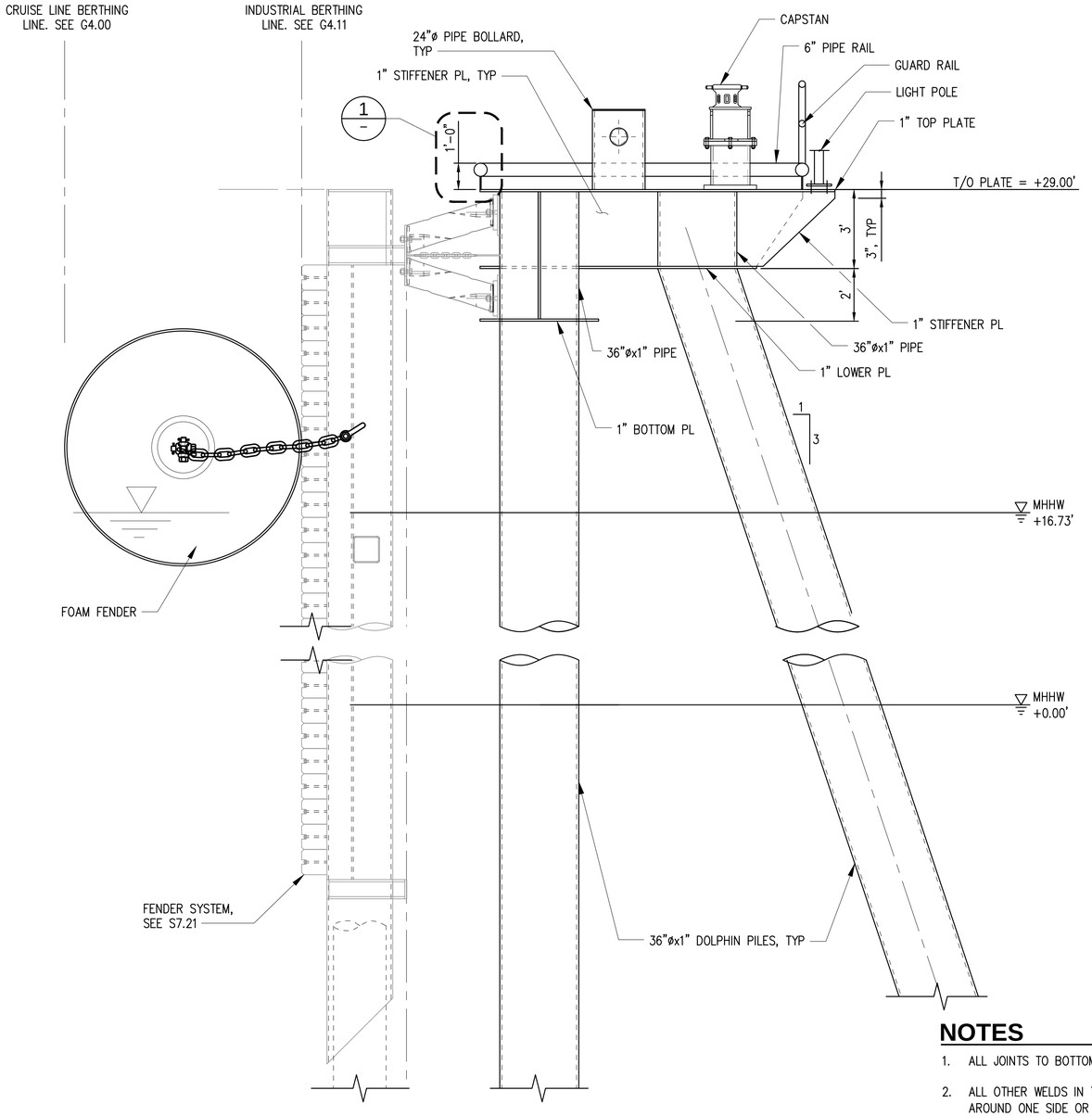
DRAWN: JH	PROJECT NO.: 2100135
DESIGN: KPT	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**S7.12**
SHEET NO.	OF



A S7.05 **SECTION**
SCALE: 3/8" = 1'-0"



1 – **DETAIL**
SCALE: 3"= 1'-0"



B S4.00 **SECTION**
SCALE: 3/8" = 1'-0"

NOTES

1. ALL JOINTS TO BOTTOM PLATE SHALL BE CJP.
2. ALL OTHER WELDS IN THE PILE CAP SHALL BE 3/8" FILLET ALL AROUND ONE SIDE OR 5/16" FILLET ALL AROUND BOTH SIDES.
3. ALL JOINTS SHALL BE WELDED CONTINUOUSLY.
4. ALL PLATES AND STIFFENERS ARE 1" THICK, UNO.
5. UTILITIES NOT SHOWN FOR CLARITY, SEE CIVIL.

60% DESIGN - NOT FOR CONSTRUCTION

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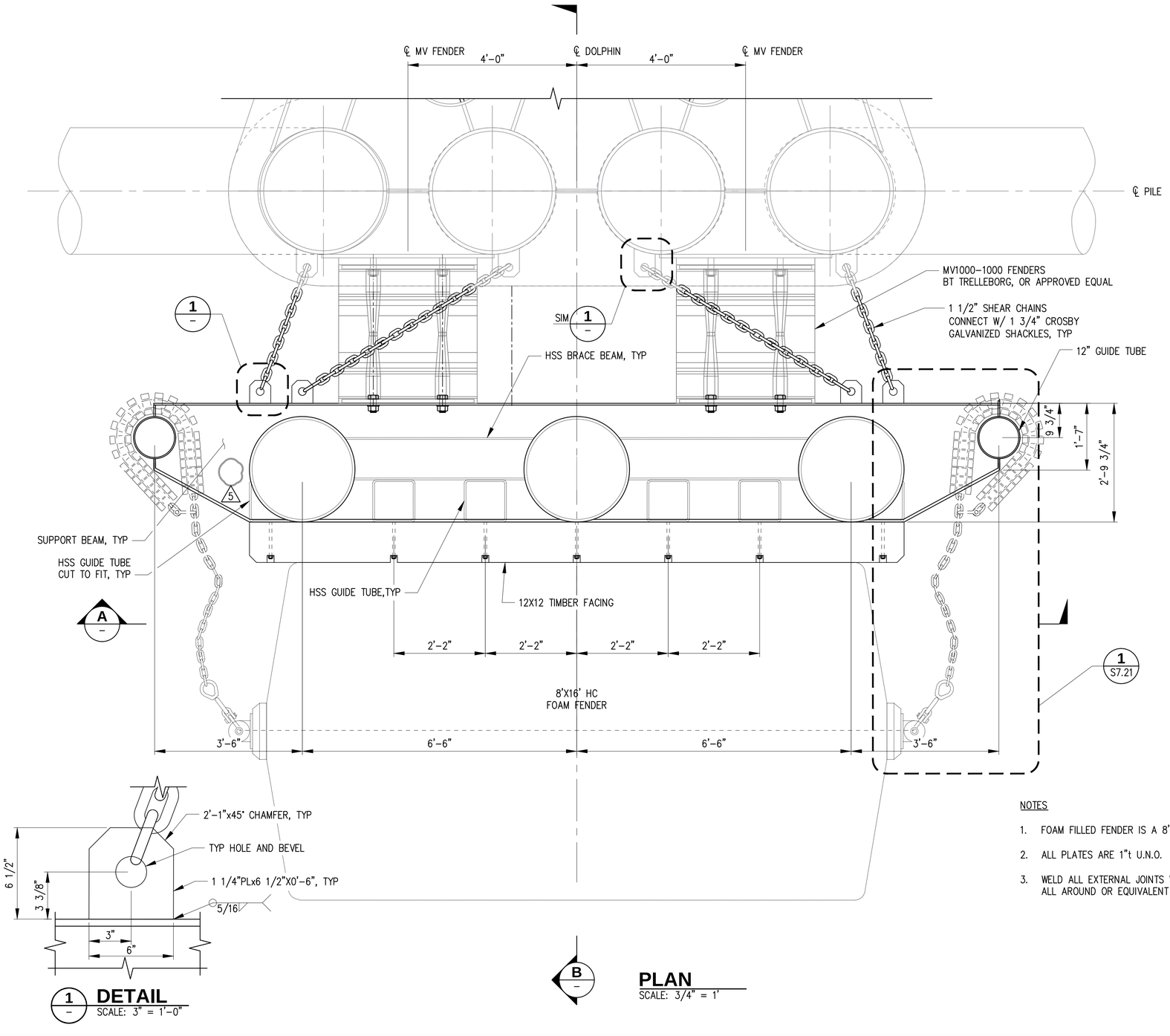
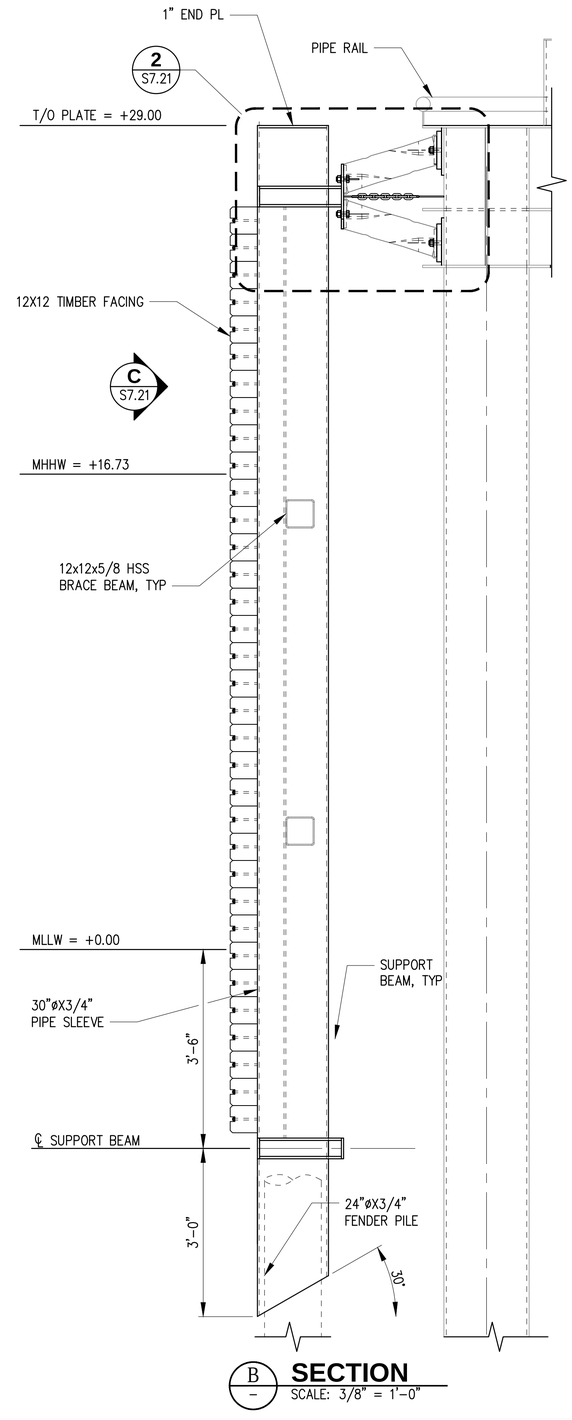
NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA
ORE TERMINAL LARGE SHIP MOORING
TYPICAL DOLPHIN SECTIONS

DRAWN:	JH	PROJECT NO.:	2100135
DESIGN:	AER	SCALE:	AS SHOWN
CHECKED:	RR	DATE:	01/27/2023
DRAWING NO.		**S7.15**	
SHEET NO.		OF	

Plotted: Jan 27, 2023 – 10:53am dyu Layout: S7.15
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_S7.15 Typical Dolphin Sections.dwg





1/– **DETAIL**
SCALE: 3" = 1'–0"

B/– **PLAN**
SCALE: 3/4" = 1'

B/– **SECTION**
SCALE: 3/8" = 1'–0"

NOTES

1. FOAM FILLED FENDER IS A 8'x16'.
2. ALL PLATES ARE 1"t U.N.O.
3. WELD ALL EXTERNAL JOINTS WITH 5/16" FILLET WELDS ALL AROUND OR EQUIVALENT BEVEL WELD U.N.O.

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NO.	DATE	BY	REVISION

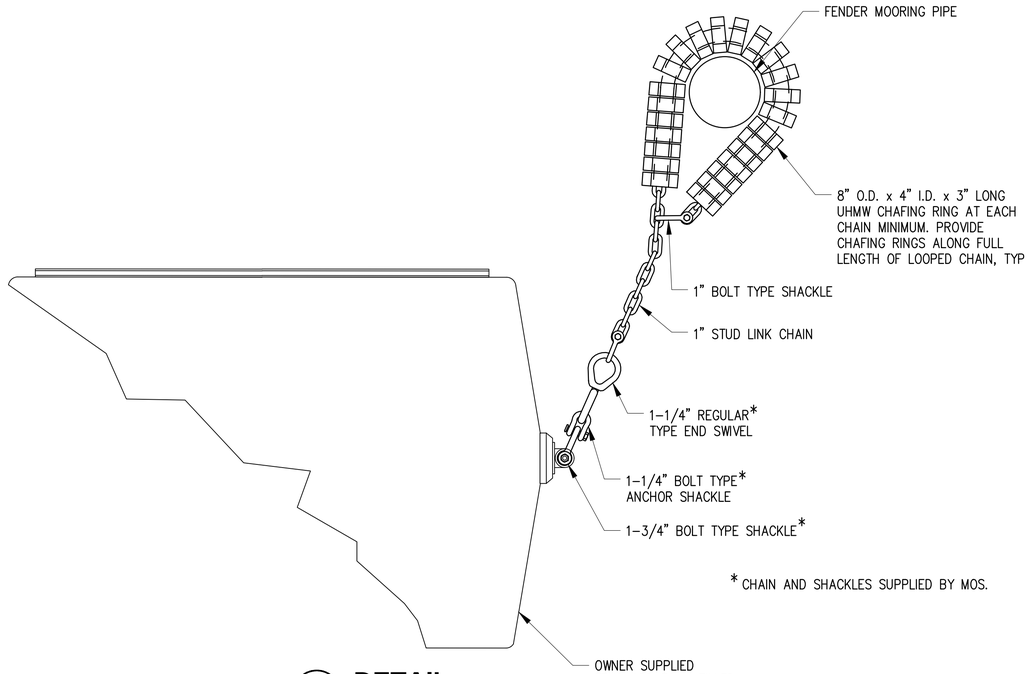
ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

ORE TERMINAL LARGE SHIP MOORING
TYPICAL FENDER PANEL DETAILS

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**S7.20**
SHEET NO.	OF

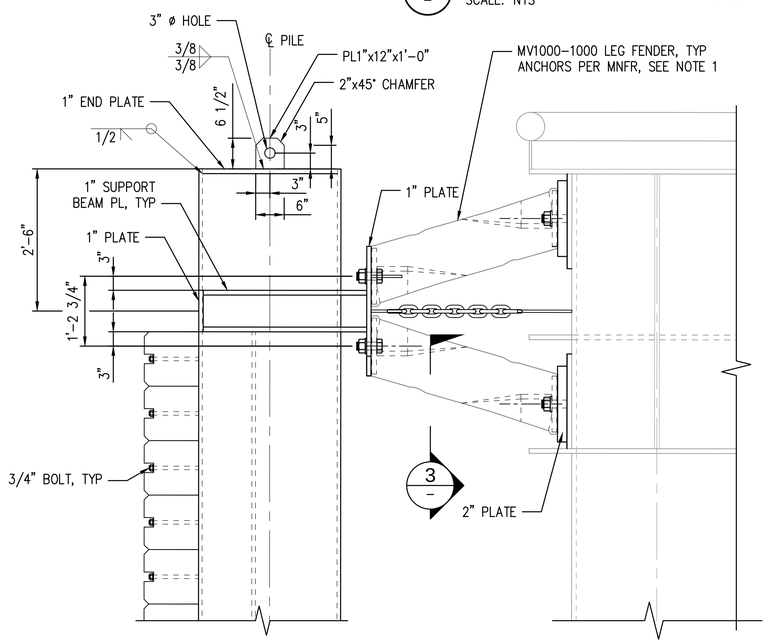
60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 – 10:53am dyu Layout: S7.20
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_S7.20 Typical Fender Panel Details.dwg



* CHAIN AND SHACKLES SUPPLIED BY MOS.

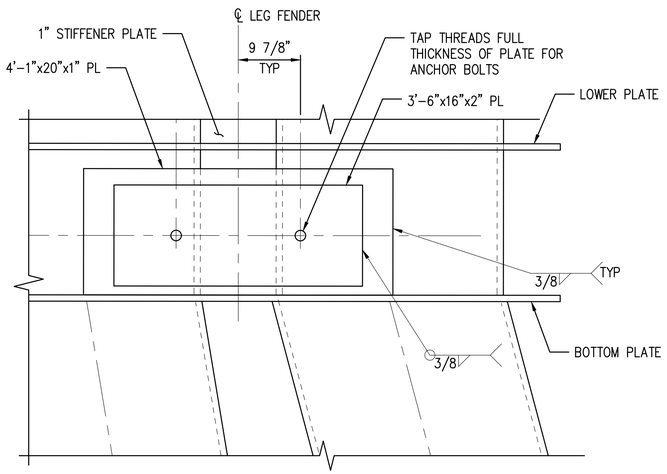
1 – **DETAIL**
SCALE: NTS



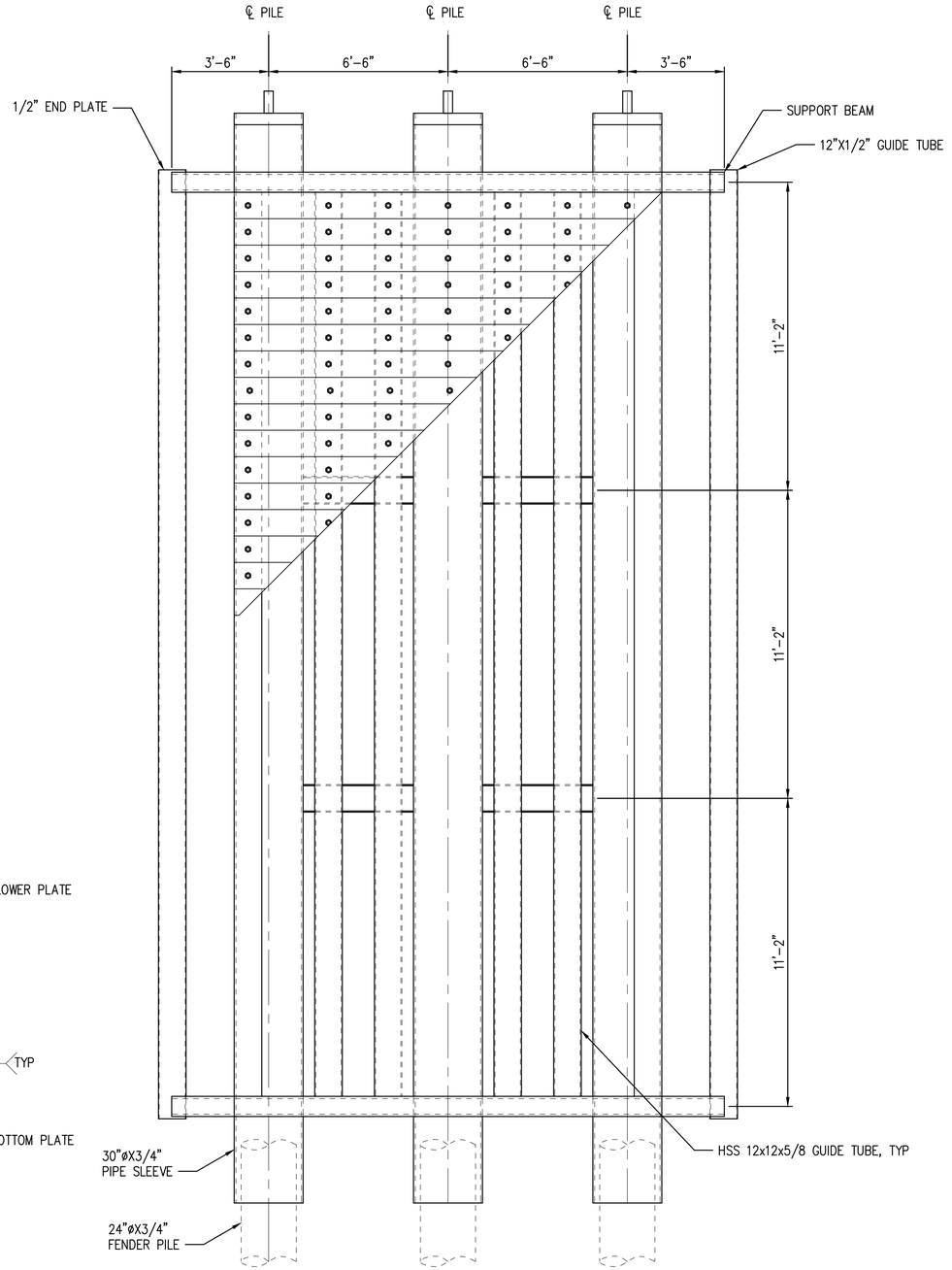
2 S7.20 **DETAIL**
SCALE: 3/4" = 1'-0"

NOTES

1. LEG FENDER LEAD TIME MAY REQUIRE A TEMPORARY CONTRACTOR DESIGNED RUBBER BLOCK OR SHIM BE PLACED UNTIL FENDERS CAN BE INSTALLED.
2. LEG FENDER ANCHORAGE SHALL BE PER MANUFACTURER.



3 – **DETAIL**
SCALE: 1" = 1'-0"



C S7.20 **SECTION**
SCALE: 3/8" = 1'-0"

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 – 10:53am dyu Layout: S7.21
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_S7.21 Typical Fender Panel Details.dwg

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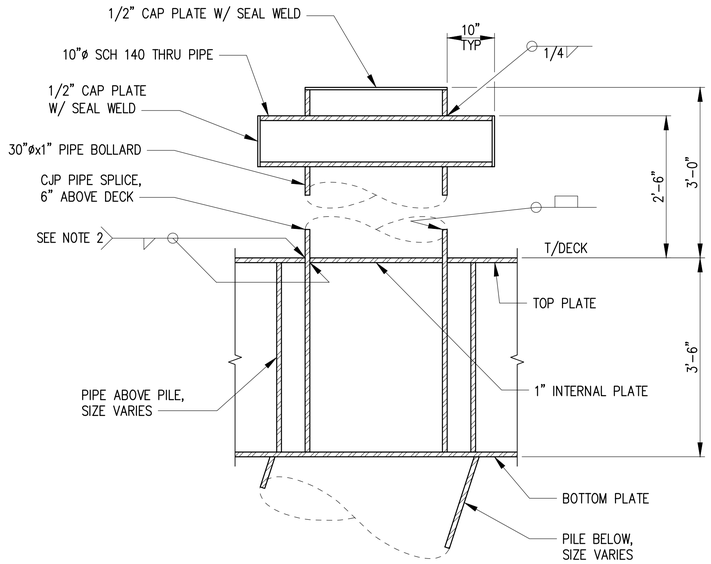
NO.	DATE	BY	REVISION

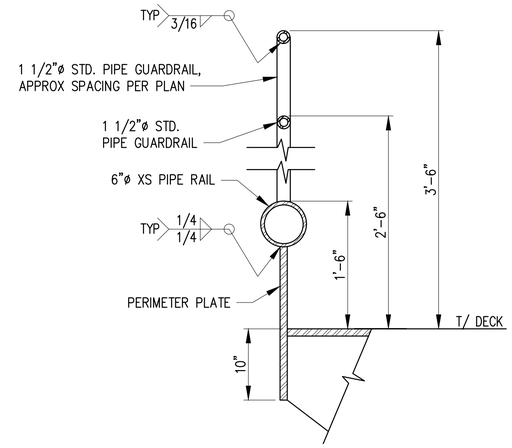
ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

ORE TERMINAL LARGE SHIP MOORING
TYPICAL FENDER PANEL DETAILS

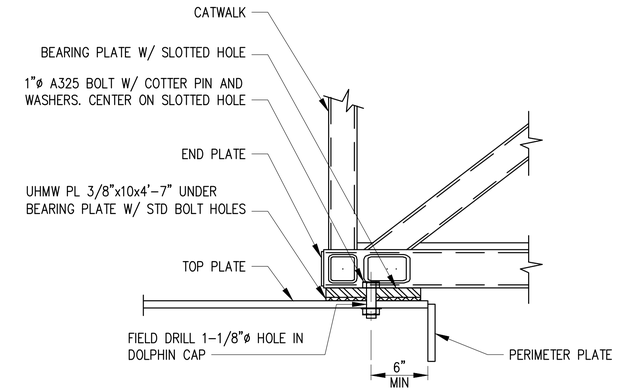
DRAWN: JH	PROJECT NO.: 2100135
DESIGN: AER	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**S7.21**
SHEET NO.	OF



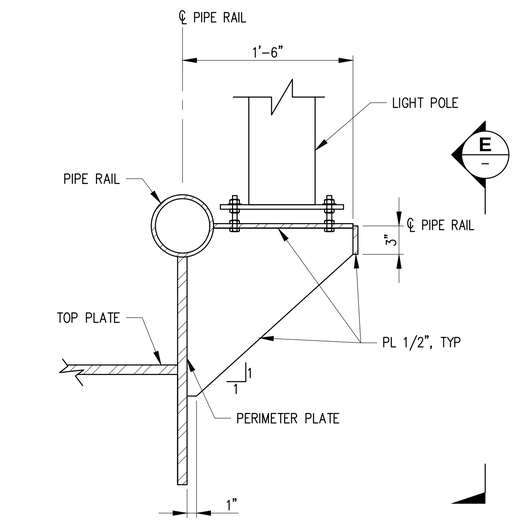
A S7.00 **BOLLARD DETAIL**
SCALE: 3/4" = 1'-0"
S7.01, S7.02



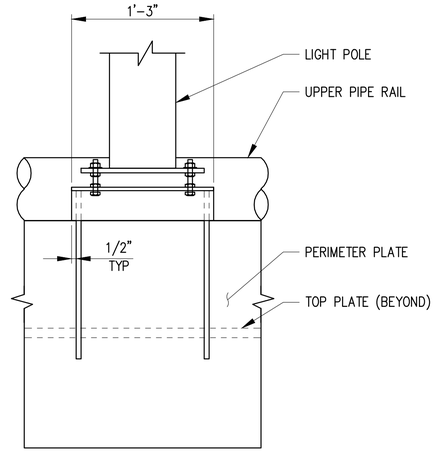
B S7.00 **PIPE RAIL DETAIL**
SCALE: 3" = 1'-0"
S7.01, S7.02



C S7.00 **CATWALK CONNECTION DETAIL**
SCALE: 3" = 1'-0"
S7.01, S7.02



D S7.00 **LIGHT POLE BASE DETAIL**
SCALE: 3" = 1'-0"
S7.01, S7.02



E – **DETAIL**
SCALE: 3" = 1'-0"

NOTES

1. ALL JOINTS TO BOTTOM PLATE SHALL BE CJP.
2. ALL OTHER WELDS IN THE PILE CAP SHALL BE 3/8" FILLET ALL AROUND ONE SIDE OR 5/16" FILLET ALL AROUND BOTH SIDES.
3. ALL JOINTS SHALL BE WELDED CONTINUOUSLY.
4. ALL PLATES AND STIFFENERS ARE 1" THICK, UNO.
5. UTILITIES NOT SHOWN FOR CLARITY, SEE CIVIL.
6. BOLLARDS FOR DOLPHINS K' AND L' SHOWN IN S4.02 SHALL BE 24"øx3/4" PIPE. BOLLARDS DO NOT EXTEND TO BOTTOM PLATE. BOLLARD JOINT SHALL BE CJT TO TOP PLATE

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NO.	DATE	BY	REVISION

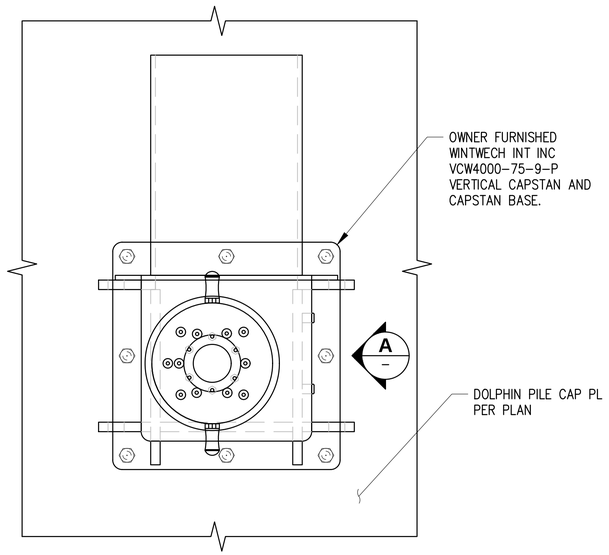
ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

DOLPHIN
TYPICAL DETAILS

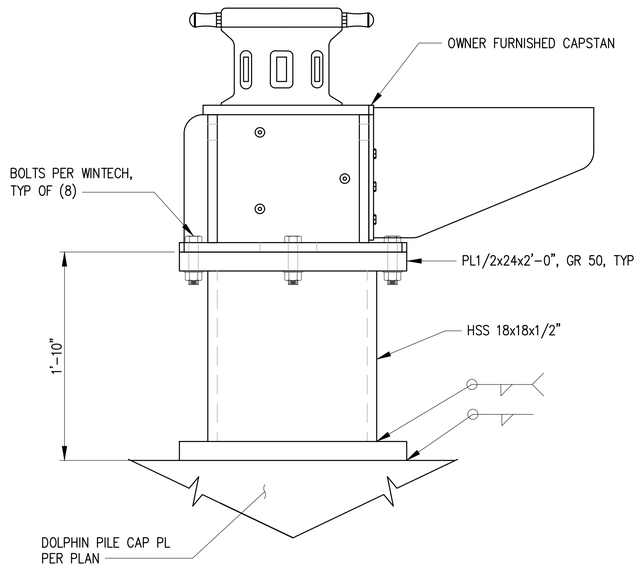
DRAWN: JH	PROJECT NO.: 2100135
DESIGN: KPT	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**S7.22**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

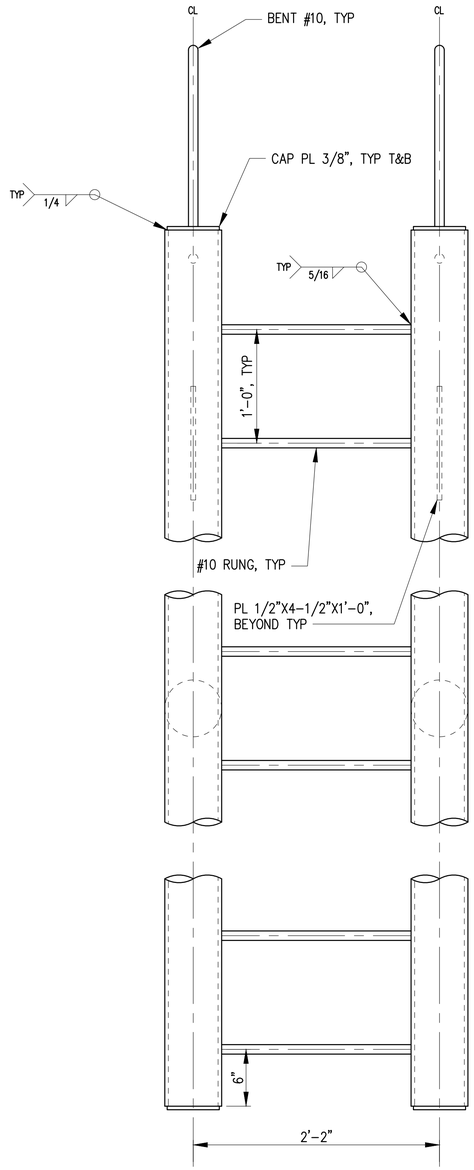
Plotted: Jan 27, 2023 - 10:53am dyu Layout: S7.22
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_S7.22 Dolphin Typical Details.dwg



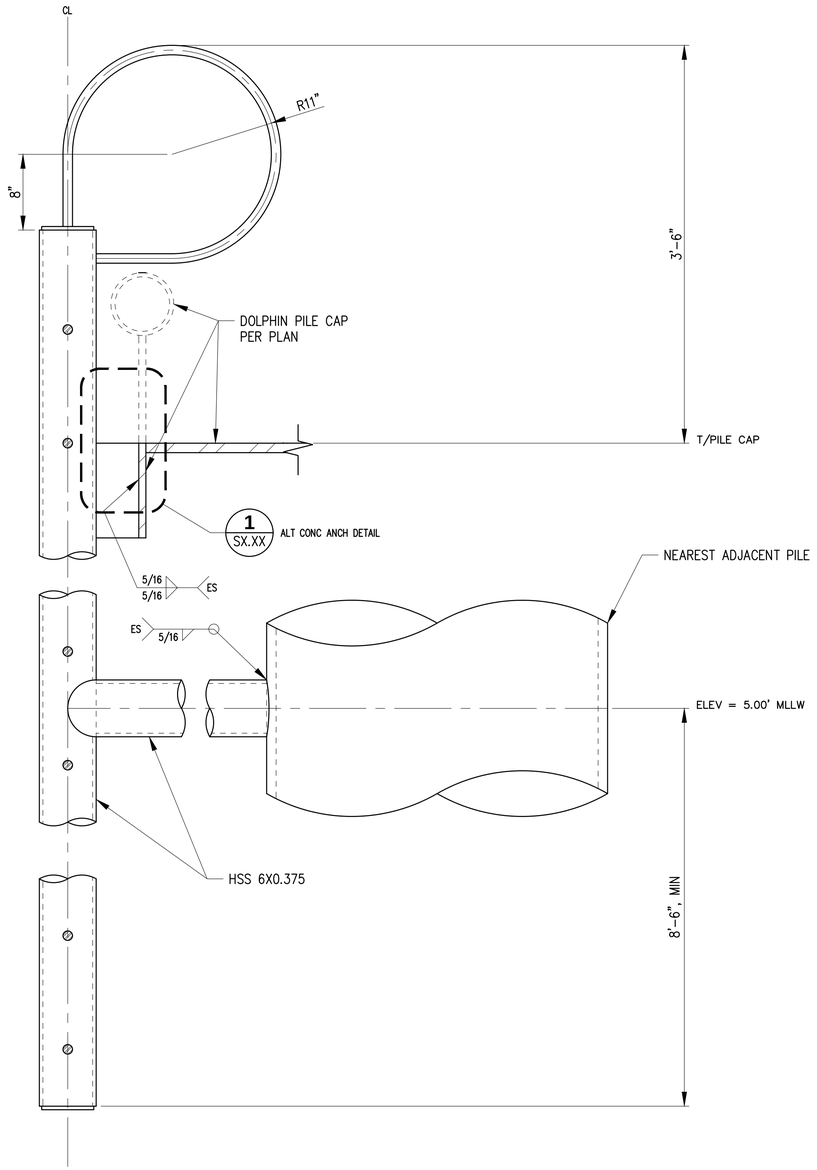
1 / S7.00 **CAPSTAN PLAN**
SCALE: NTS
S7.01, S7.02



A / – **CAPSTAN ELEV**
SCALE: NTS



B / S7.00 **LADDER ELEV**
SCALE: NTS
S7.01, S7.02



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NO.	DATE	BY	REVISION

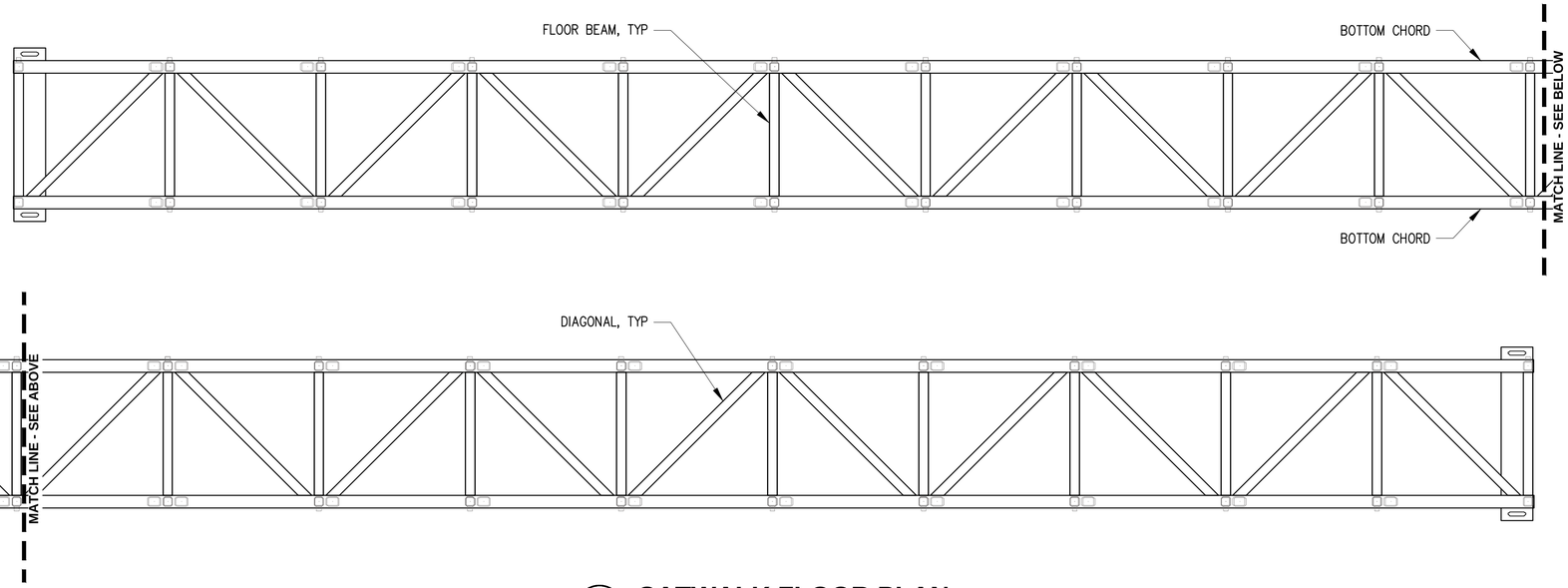
ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

DOLPHIN TYPICAL DETAILS

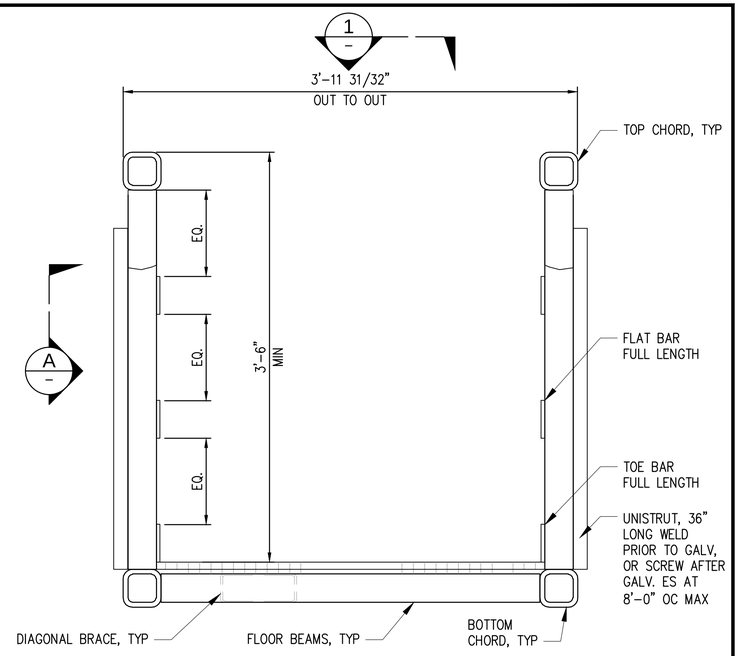
DRAWN: JH	PROJECT NO.: 2100135
DESIGN: JLF	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**S7.24**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

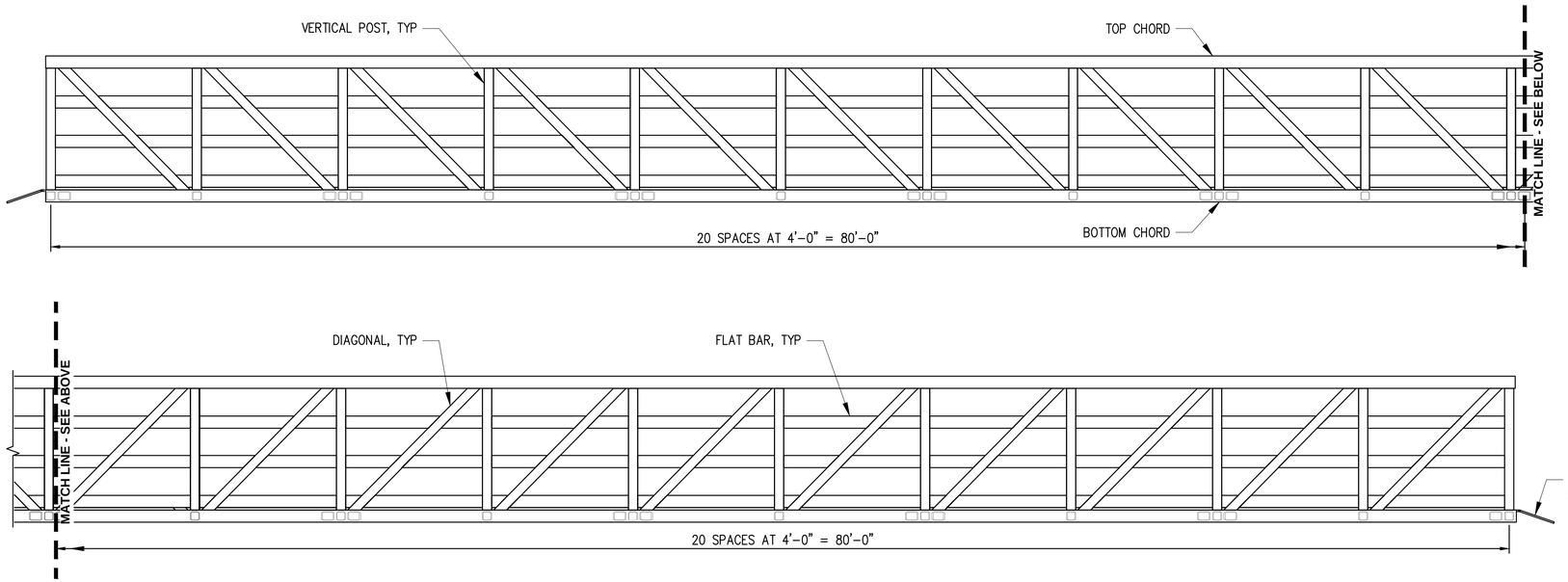
Plotted: Jan 27, 2023 – 10:53am dyu Layout: S7.24
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_S7.24 Dolphin Typical Details.dwg



1 — **CATWALK FLOOR PLAN**
SCALE: 1/2"=1'-0"



B — **CATWALK SECTION**
SCALE: 1-1/2"=1'-0"



A — **CATWALK ELEVATION**
SCALE: 1/2"=1'-0"

NOTES

1. THE CATWALKS ARE CONTRACTOR DESIGNED FOLLOWING IBC 2018 REQUIREMENTS. CATWALKS SHALL BE ALUMINUM. THE DESIGN, FABRICATION AND ERECTION OF THE CATWALK SHALL CONFORM TO THE OVERALL LAYOUT AND DIMENSIONS SHOWN ON THE DRAWINGS. CONTRACTOR SHALL VERIFY IN THE FIELD ALL DIMENSIONS AND ELEVATIONS.
2. SPANS, WIDTHS AND HEIGHTS SHALL BE AS INDICATED ON THE DRAWINGS. THE CATWALK SHALL BE CAMBERED TO ACCOUNT FOR THE CATWALK'S DEAD LOAD DEFLECTION.
3. SELF WEIGHT, UNIFORM LIVE LOADING OF 40 POUNDS PER SQUARE FOOT. MAXIMUM DEFLECTION UNDER THESE LOADS SHALL NOT EXCEED L/360. THE DECK AND STRUCTURAL COMPONENTS SHALL ALSO BE DESIGNED TO SUPPORT A CONCENTRATED LOAD OF 400 POUNDS ON A 1 FOOT BY 1 FOOT AREA.
4. DESIGN SHALL BE BASED ON WIND LOADS OF 130 MPH WITH EXPOSURE D IN ACCORDANCE WITH IBC 2018 REQUIREMENTS.
5. CATWALK MANUFACTURER SHALL PROVIDE TRANSITION RAMPS BETWEEN CATWALKS AND AT CATWALK ENDS.
6. THESE PLANS REPRESENT A POSSIBLE DESIGN LAYOUT. CONTRACTOR SHALL SUBMIT PLANS AND CALCULATIONS FOR CATWALKS STAMPED BY AN ALASKA STATE LICENSED ENGINEER.

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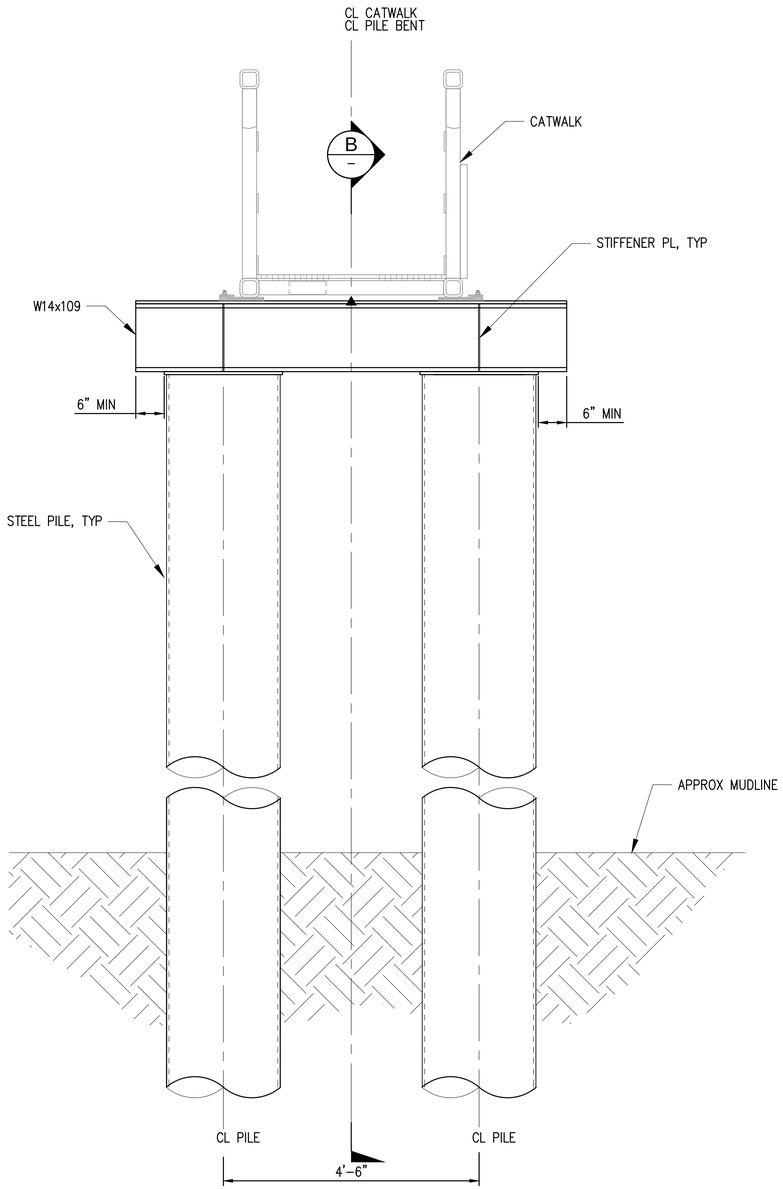
ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

CATWALK SECTIONS AND DETAILS

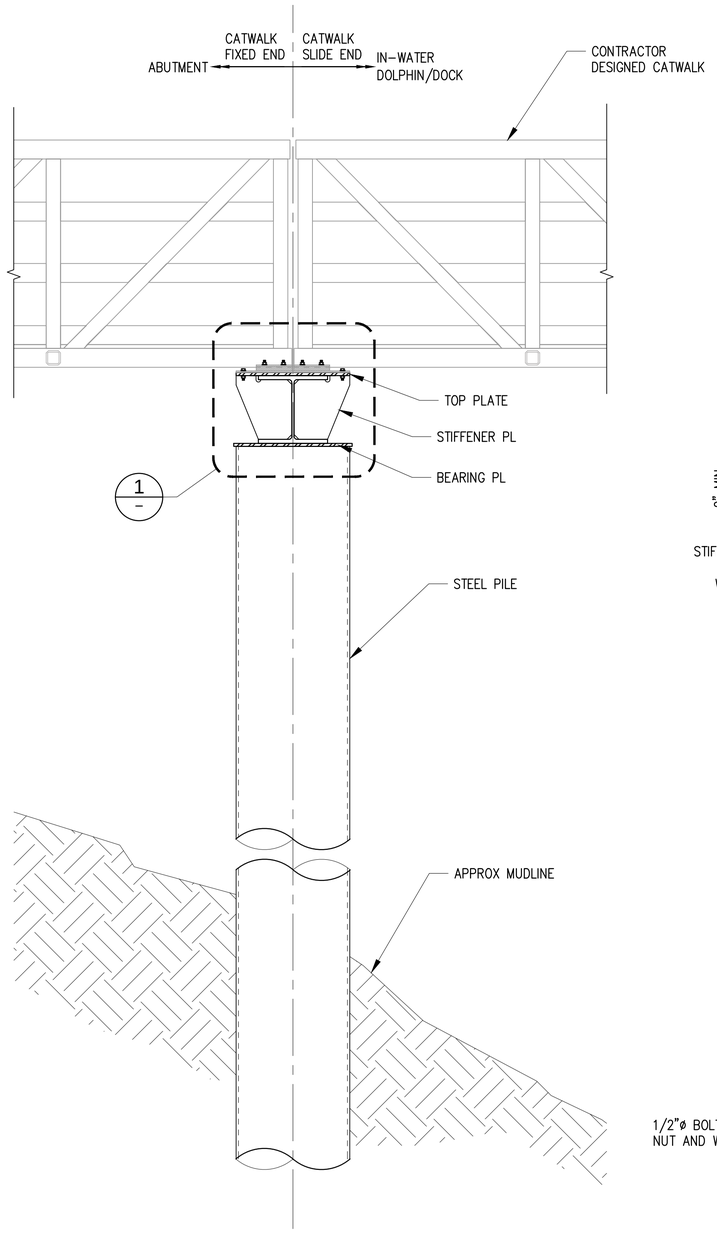
DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**S8.01**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

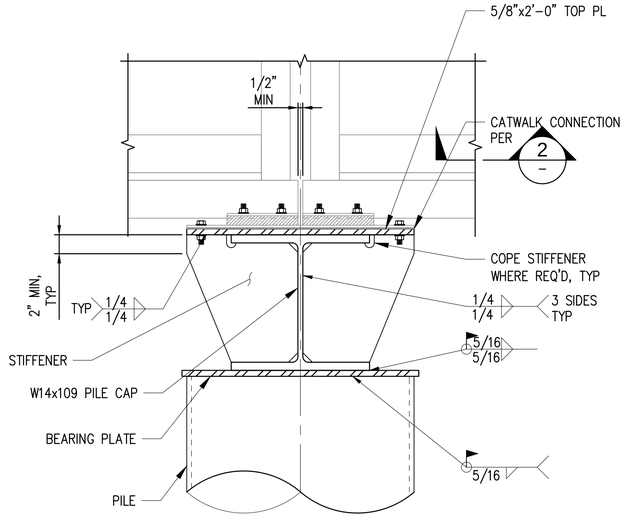
Plotted: Jan 27, 2023 - 10:53am dyu Layout: S8.01
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_S8.01-Catwalk Sections and Details.dwg



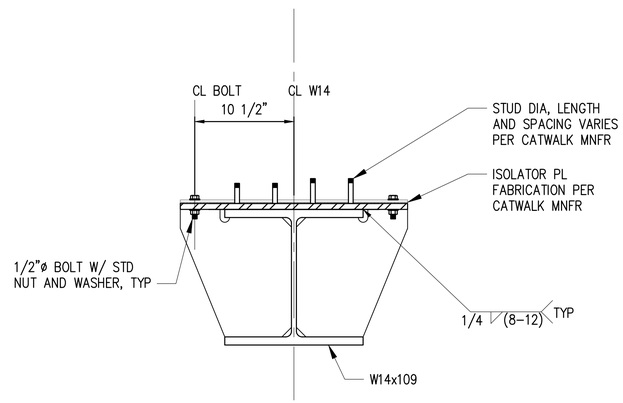
A CATWALK SUPPORT BENT
SCALE: 3/4" = 1'-0"



B CATWALK SUPPORT BENT SECTION
SCALE: 3/4" = 1'-0"



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



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

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NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

CATWALK SUPPORT SECTIONS AND DETAILS

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**S8.10**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 - 10:54am dyu Layout: S8.10-Catwalk Support Sections and Details
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_S8.10 Catwalk Support Sections and Details.dwg

PILE SCHEDULE

PILE	OD [in]	WALL THK [in]	f_y [ksi]	PILE CUT-OFF ELEV [ft - MLLW]	DESIGN PILE TIP ELEV [ft - MLLW]	COATED LENGTH [ft]	BATTER	REQ CAP TENSION [KIPS]	REQ CAP COMPRESSION [KIPS]	MAX ASSUMED OVERDRIVE LENGTH [ft]
DOLPHIN 1										
1	48.00	1.00	50.00	22.50	-201.50	209.00	N/A	114	223	25.00
2	48.00	1.00	50.00	22.50	-222.26	223.00	3:1	657	1175	45.00
3	48.00	1.00	50.00	22.50	-226.06	227.00	3:1	234	1048	45.00
4	48.00	1.00	50.00	22.50	-239.34	241.00	3:1	158	1399	45.00
5	48.00	1.00	50.00	22.50	-245.03	247.00	3:1	50	1153	45.00
6	48.00	1.00	50.00	22.50	-243.13	245.00	3:1	923	423	45.00
DOLPHIN 2										
7	42.00	1.00	50.00	22.50	-153.50	170.00	N/A	148	128	16.00
8	42.00	1.00	50.00	22.50	-178.62	183.00	3:1	980	760	39.00
9	42.00	1.00	50.00	22.50	-182.42	190.00	3:1	158	904	36.00
10	42.00	1.00	50.00	22.50	-218.47	216.00	3:1	-96	1437	48.00
11	42.00	1.00	50.00	22.50	-203.29	213.00	3:1	121	856	35.00
12	42.00	1.00	50.00	22.50	-207.08	212.00	3:1	1021	378	40.00
DOLPHIN 3										
13	30.00	0.63	50.00	22.50	-197.50	182.00	N/A	181	307	48.00
14	30.00	0.63	50.00	22.50	-174.27	185.00	2:1	795	289	45.00
15	30.00	0.63	50.00	22.50	-156.39	170.00	2:1	587	580	40.00
16	42.00	1.00	50.00	22.50	-134.03	151.00	3:1	341	151	24.00
17	42.00	1.00	50.00	22.50	-157.75	164.00	3:1	356	833	36.00
18	42.00	1.00	50.00	22.50	-167.24	176.00	3:1	0	782	34.00
19	42.00	1.00	50.00	22.50	-174.83	186.00	3:1	0	694	32.00
20	42.00	1.00	50.00	22.50	-171.98	185.00	3:1	235	590	30.00
CRUISE DOCK FLOAT GUIDE PILES										
21	36.00	1.00	50.00	41.50	-103.91	125.00	4:1	10	420	35.00
22	36.00	1.00	50.00	41.50	-103.91	125.00	4:1	-	400	35.00
23	36.00	1.00	50.00	41.50	-84.91	106.00	4:1	-	400	35.00
24	36.00	1.00	50.00	41.50	-84.91	106.00	4:1	20	420	35.00
25	36.00	1.00	50.00	42.50	-110.00	128.00	N/A	360	80	35.00
26	36.00	1.00	50.00	42.50	-110.00	128.00	N/A	340	70	35.00
27	36.00	1.00	50.00	42.50	-105.00	123.00	N/A	-	70	35.00
28	36.00	1.00	50.00	42.50	-102.00	120.00	N/A	-	70	35.00
29	36.00	1.00	50.00	42.50	-94.00	112.00	N/A	-	70	35.00
30	36.00	1.00	50.00	42.50	-94.00	112.00	N/A	-	70	35.00
31	36.00	1.00	50.00	42.50	-94.00	112.00	N/A	340	70	35.00
32	36.00	1.00	50.00	42.50	-95.00	113.00	N/A	350	100	35.00
33	24.00	0.50	50.00	25.00	-88.53	89.00	N/A			35.00
34	24.00	0.50	50.00	25.00	-88.53	89.00	N/A			35.00
CRUISE DOCK TRESTLE PILES										
36	24.00	0.75	50.00	24.83	-69.00	59.00	N/A	-	260	15.00
37	24.00	0.75	50.00	24.83	-69.00	59.00	N/A	-	260	15.00
38	24.00	0.75	50.00	24.83	-69.00	59.00	N/A	-	260	15.00
39	24.00	0.75	50.00	24.83	-69.00	59.00	N/A	-	260	15.00
40	24.00	0.75	50.00	24.83	-69.00	59.00	N/A	-	260	15.00
41	24.00	0.75	50.00	24.83	-69.00	59.00	N/A	-	260	15.00
42	24.00	0.75	50.00	24.83	-69.00	59.00	N/A	-	260	15.00
43	24.00	0.75	50.00	24.83	-69.00	59.00	N/A	-	260	15.00
44	24.00	0.75	50.00	24.83	-69.00	59.00	N/A	-	260	15.00
45	24.00	0.75	50.00	24.83	-69.00	59.00	N/A	-	260	15.00
46	24.00	0.75	50.00	24.83	-69.00	59.00	N/A	-	260	15.00
47	24.00	0.75	50.00	24.83	-69.00	59.00	N/A	-	260	15.00
48	24.00	0.75	50.00	21.67	-69.00	56.00	N/A	-	260	15.00
49	24.00	0.75	50.00	21.67	-69.00	56.00	N/A	-	260	15.00
50	24.00	0.75	50.00	21.67	-119.00	69.00	N/A	-	890	27.50
51	24.00	0.75	50.00	21.67	-119.00	69.00	N/A	-	890	27.50
DOLPHIN 6										
52	36.00	1.00	50.00	25.50		102.98	3:1			35.00
53	36.00	1.00	50.00	25.50		102.98	3:1			35.00
54	36.00	1.00	50.00	25.50		102.98	3:1			35.00
55	36.00	1.00	50.00	25.50		115.55	3:1			35.00
56	36.00	1.00	50.00	25.50		115.55	6:1			35.00
57	36.00	1.00	50.00	25.50		112.85	6:1			35.00
58	36.00	1.00	50.00	25.50		112.85	3:1			35.00
59	24.00	0.75	50.00	29.00		112.00	N/A			28.00
60	24.00	0.75	50.00	29.00		112.00	N/A			28.00
61	24.00	0.75	50.00	29.00		112.00	N/A			28.00
DOLPHIN 7										
62	36.00	1.00	50.00	25.50		102.98	3:1			35.00
63	36.00	1.00	50.00	25.50		102.98	3:1			35.00
64	36.00	1.00	50.00	25.50		102.98	3:1			35.00
65	36.00	1.00	50.00	25.50		115.55	3:1			35.00
66	36.00	1.00	50.00	25.50		115.55	3:1			35.00
67	36.00	1.00	50.00	25.50		112.85	6:1			35.00
68	36.00	1.00	50.00	25.50		112.85	6:1			35.00
69	24.00	0.75	50.00	29.00		112.00	N/A			28.00
70	24.00	0.75	50.00	29.00		112.00	N/A			28.00
71	24.00	0.75	50.00	29.00		112.00	N/A			28.00
MSP DOLPHIN S1										
72	36.00	1.00	50.00	25.50		95.48	3:1			27.50
73	36.00	1.00	50.00	25.50		95.48	3:1			27.50
74	36.00	1.00	50.00	25.50		108.05	3:1			27.50
75	36.00	1.00	50.00	25.50		104.43	N/A			27.50
76	36.00	1.00	50.00	25.50		108.05	3:1			27.50
77	24.00	0.75	50.00	29.00		112.00	N/A			28.00
78	24.00	0.75	50.00	29.00		112.00	N/A			28.00
79	24.00	0.75	50.00	29.00		112.00	N/A			28.00
MPS DOLPHIN N1										
80	36.00	1.00	50.00	25.50		95.48	3:1			27.50
81	36.00	1.00	50.00	25.50		95.48	3:1			27.50
82	36.00	1.00	50.00	25.50		108.05	3:1			27.50
83	36.00	1.00	50.00	25.50		104.43	N/A			27.50
84	36.00	1.00	50.00	25.50		108.05	3:1			27.50
85	24.00	0.75	50.00	29.00		112.00	N/A			28.00
86	24.00	0.75	50.00	29.00		112.00	N/A			28.00
87	24.00	0.75	50.00	29.00		112.00	N/A			28.00
DOLPHIN 8										
88	36.00	1.00	50.00	25.50		95.48	3:1			27.50
89	36.00	1.00	50.00	25.50		95.48	3:1			27.50
90	36.00	1.00	50.00	25.50		108.05	3:1			27.50
91	36.00	1.00	50.00	25.50		104.43	N/A			27.50
92	36.00	1.00	50.00	25.50		108.05	3:1			27.50
93	24.00	0.75	50.00	29.00		112.00	N/A			28.00
94	24.00	0.75	50.00	29.00		112.00	N/A			28.00
95	24.00	0.75	50.00	29.00		112.00	N/A			28.00
FUEL HEADER										
96	36.00	0.75	50.00	25.50	-125.00	121.00	N/A			40.00
97	36.00	0.75	50.00	25.50	-125.00	121.00	N/A			40.00
98	36.00	0.75	50.00	25.50	-125.00	121.00	N/A			40.00
99	36.00	0.75	50.00	25.50	-105.00	116.00	3:1			31.62
100	36.00	0.75	50.00	25.50	-105.00	116.00	3:1			31.62
101	36.00	0.75	50.00	25.50	-105.00	116.00	3:1			31.62
102	24.00	0.75	50.00	29.00	-101.00	112.00	N/A			28.00
103	24.00	0.75	50.00	29.00	-101.00	112.00	N/A			28.00
104	24.00	0.75	50.00	29.00	-101.00	112.00	N/A			28.00
CATWALK SUPPORTS										
105	24.00	0.50	50.00	27.00	-95.00	107.00	N/A	-	260	25.00
106	24.00	0.50	50.00	27.00	-95.00	107.00	N/A	-	260	25.00
107	24.00	0.50	50.00	27.00	-95.00	107.00	N/A	-	260	25.00
108	24.00	0.50	50.00	27.00	-95.00	107.00	N/A	-	260	25.00
109	24.00	0.50	50.00	27.00	-95.00	107.00	N/A	-	260	25.00
110	24.00	0.50	50.00	27.00	-95.00	107.00	N/A	-	260	25.00
111	24.00	0.50	50.00	27.00	-95.00	107.00	N/A	-	260	25.00
112	24.00	0.50	50.00	27.00	-95.00	107.00	N/A	-	260	25.00
113	24.00	0.50	50.00	27.00	-95.00	107.00	N/A	-	260	25.00
114	24.00	0.50	50.00	27.00	-95.00	107.00	N/A	-	260	25.00
115	24.00	0.50	50.00	27.00	-95.00	107.00	N/A	-	260	25.00
116	24.00	0.50	50.00	27.00	-95.00	107.00	N/A	-	260	25.00
117	24.00	0.50	50.00	27.00	-95.00	107.00	N/A	-	260	25.00
118	24.00	0.50	50.00	27.00	-95.00	107.00	N/A	-	260	25.00
RORO TRESTLE										
119	24.00	0.75	50.00	27.58	-93.00	32.00	N/A			21.00
120	24.00	0.75	50.00	27.58	-93.00	32.00	N/A			21.00
121	24.00	0.75	50.00	27.58	-93.00	32.00	N/A			21.00
122	24.00	0.75	50.00	27.58	-93.00	32.00	N/A			21.00
123	24.00	0.75	50.00	27.58	-93.00	32.00	N/A			21.00
124	24.00	0.75	50.00	27.58	-93.00	32.00	N/A			21.00
125	24.00	0.75	50.00	27.58	-93.00	32.00	N/A			21.00
126	24.00	0.75	50.00	27.58	-93.00	32.00	N/A			21.00
127	24.00	0.75	50.00	27.48	-93.00	37.00	N/A			21.00
128	24.00	0.75	50.00	27.48	-93.00	37.00	N/A			21.00
129	24.00	0.75	50.00	27.48	-93.00	37.00	N/A			21.00
130	24.00	0.75	50.00	27.48	-93.00	37.00	N/A			21.00
131	24.00	0.75	50.00	26.75	-93.00	41.00	N/A			21.00
132	24.00	0.75	50.00	26.75	-93.00	41.00	N/A			21.00
133	24.00	0.75	50.00	26.75	-93.00	41.00	N/A			21.00
134	24.00	0.75	50.00	26.75	-93.00	41.00	N/A			21.00
135	24.00	0.75	50.00	26.01	-93.00	46.00	N/A			21.00
136	24.00	0.75	50.00	26.01	-93.00	46.00	N/A			21.00
137	24.00	0.75	50.00	26.01	-93.00	46.00	N/A			21.00
138	24.00	0.75	50.00	26.01	-93.00	46.00	N/A			21.00
139	24.00	0.75	50.00	25.28	-93.00	50.00	N/A			21.00
140	24.00	0.75	50.00	25.28	-93.00	50.00	N/A			21.00
141	24.00	0.75	50.00	25.28	-93.00	50.00	N/A			21.00
142	24.00	0.75	50.00	25.28	-93.00	50.00	N/A			21.00
143	24.00	0.75	50.00	21.79	-128.00	59.00	N/A			30.00
144	24.00	0.75	50.00	21.79	-128.00	59.00	N/A			30.00
145	24.00	0.75	50.00	21.79	-128.00	59.00	N/A			30.00
146	24.00	0.75	50.00	21.79	-128.00	59.00	N/A			30.00
147	24.00	0.75	50.00	21.79	-128.00	65.00	N/A			30.00
148	24.00	0.75	50.00	21.79	-128.00	65.00	N/A			30.00
149	24.00	0.75	50.00	21.79	-128.00	65.00	N/A			30.00
150	24.00	0.75	50.00	21.79	-128.00	65.00	N/A			30.00
RORO RAMP GUIDE PILES										
151	36.00	1.00	50.00	31.00	-106.00	112.00	N/A			35.00
152	36.00	1.00	50.00	31.00	-106.00	112.00	N/A			35.00
153	36.00	1.00	50.00	32.50	-106.00	113.50	4:1			35.00
154	36.00	1.00	50.00	32.50	-106.00	113.50	4:1			35.00
DOLPHIN 4 FENDER PILES										
155	36.00	1.00	50.00	29.00	-162.00	166.00	N/A			35.00
156	36.00	1.00	50.00	29.00	-161.00	165.00	N/A			35.00
157	36.00	1.00	50.00	29.00	-160.00	164.00	N/A			35.00
DOLPHIN 5 FENDER PILES										
158	36.00	1.00	50.00	29.00	-136.00	140.00	N/A			35.00
159	36.00	1.00	50.00	29.00	-134.00	138.00	N/A			35.00
160	36.00	1.00	50.00	29.00	-132.00	136.00	N/A			35.00

NOTES

1. MOS HAS PRE-PROCURED PILES FOR ALL PILES TO BE INSTALLED PLUS:
   - 10 ADDITIONAL FEET PER PILE FOR CUTOFF/OVERDRIVE AND FIT-UP WITH DRIVING HAMMER
   - ADDITIONAL LENGTH FOR EACH PILE TO ACCOUNT FOR POSSIBLE OVERDRIVE LENGTH AS REQUIRED TO ACHIEVE REQUIRED CAPACITY. SEE NOTES BELOW.
2. CONTRACTOR SHALL INCLUDE PILE DRIVING TO DESIGN TIP PLUS 5 FEET IN BASE BID.
3. IT IS ESTIMATED THAT EMBEDDED LENGTH OF PILES INTO THE SOILS COULD REQUIRE ADDITIONAL LENGTH OF 25% TO 50% ADDED EMBEDDED LENGTH TO ACHIEVE REQUIRED CAPACITIES. PILES THAT ARE REQUIRED TO BE DRIVEN FURTHER AS DIRECTED BY THE ENGINEER SHALL BE PAYABLE PER LINEAR FOOT AS DESCRIBED IN THE PROJECT SPECIFICATIONS.
4. MOS SUPPLIED PILE LENGTHS ARE LISTED IN THE SPECIFICATIONS APPENDIX. THE CONTRACTOR SHALL SPLICE PILES TO THE DESIRED LENGTHS FOR DRIVING AND HANDLING. ADDITIONAL PILE SPLICING AS REQUIRED FOR OVER DRIVE ALLOWANCE IS INCIDENTAL TO THE FORCE ACCOUNT PILE DRIVING ITEMS.
5. PILES SHALL BE STORED, SHIPPED AND DELIVERED BY SUPPLIER. AT ALL TIMES PILES SHALL BE STORED WITH CRIBBING TO PREVENT TO DAMAGE COATINGS OR ROLLING OF THE PILES.
6. MOS SHALL INSPECT COATINGS AFTER DELIVERY. IF COATING DAMAGE IS FOUND, CONTRACTOR SHALL REPAIR AT NO ADDITIONAL COST TO MOS.
7. DEFINED REQUIRED TENSION AND COMPRESSION CAPACITIES ARE ULTIMATE VALUES AND ARE NOT FACTORED.
8. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS

60% DESIGN - NOT FOR CONSTRUCTION

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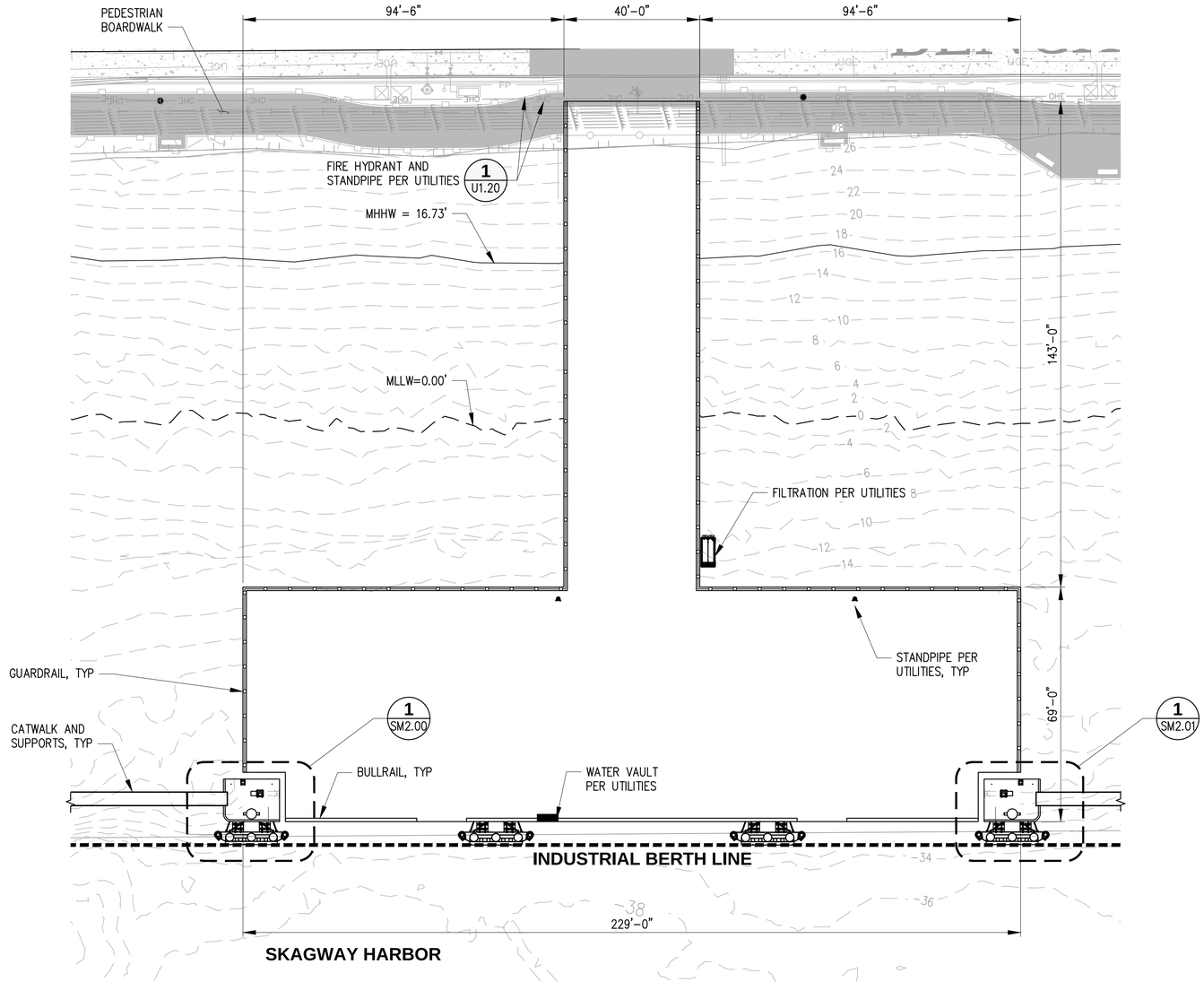
NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

GENERAL PILE SCHEDULE

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**S9.00**
SHEET NO.	OF

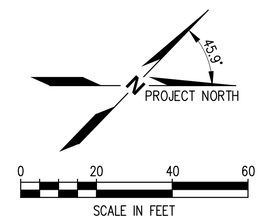
Plotted: Jan 27, 2023 - 1:38pm gmachuca Layout: S9.00
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_S9.00 General Pile Schedule.dwg



1 SURFACE FEATURES PLAN
1 / S2.00 SCALE: 1" = 20'

LEGEND

- STAND PIPE
- BOLLARD
- WATER VAULT
- LIGHT POLE
- CRANE POWER VAULT



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NO.	DATE	BY	REVISION

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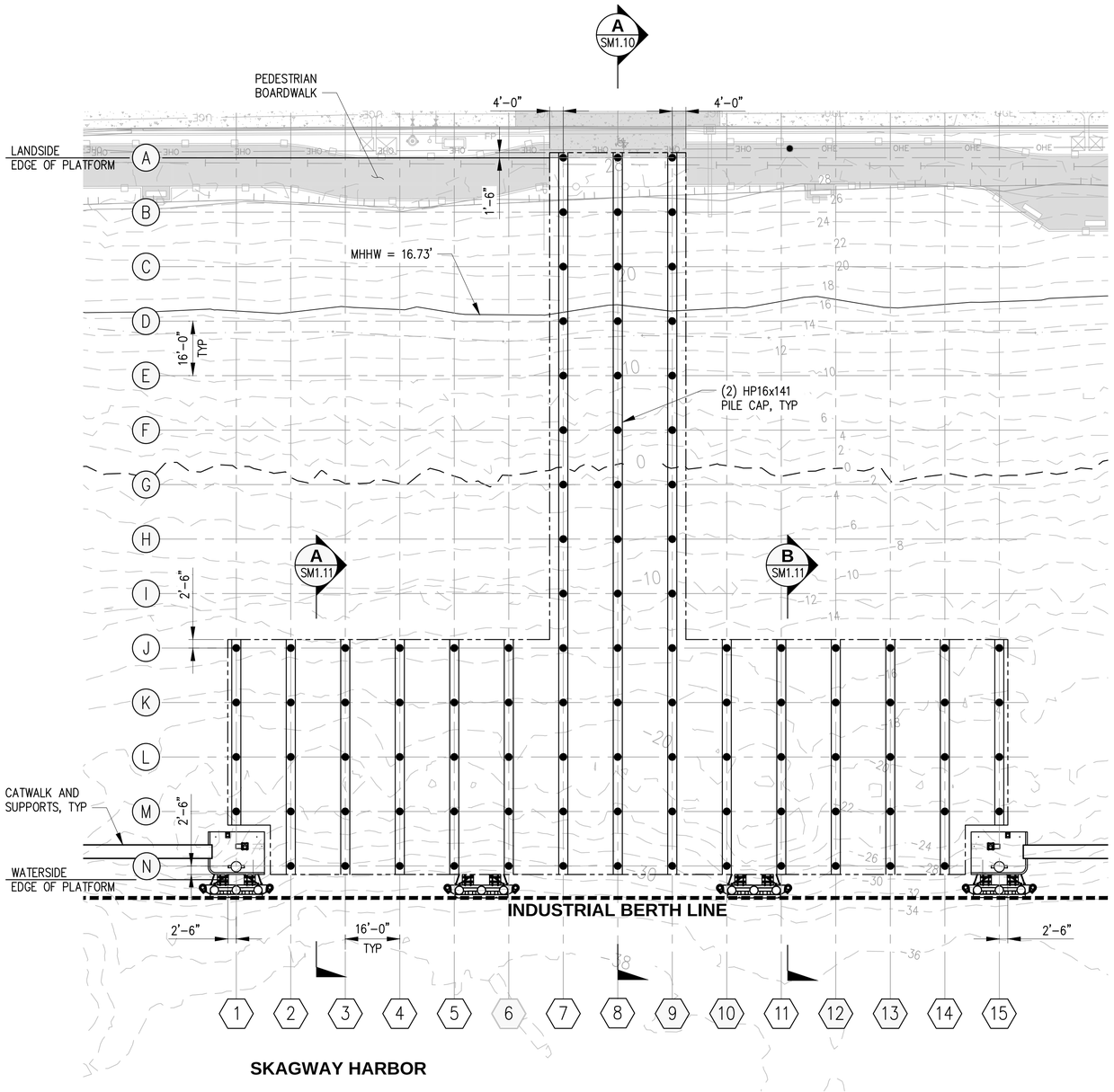
SKAGWAY, ALASKA

MARINE SERVICE PLATFORM
SURFACE FEATURE PLAN

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**SM1.00**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 - 11:11am dyu Layout: SM1.00
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_SM1.00 MSP Surface Feature Plan.dwg

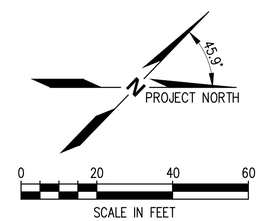


1 S2.00 PILE AND PILE CAP PLAN

SCALE: 1" = 20'

LEGEND:

- ● STEEL PIPE PILE, SEE SM1.40 FOR PILE SCHEDULE



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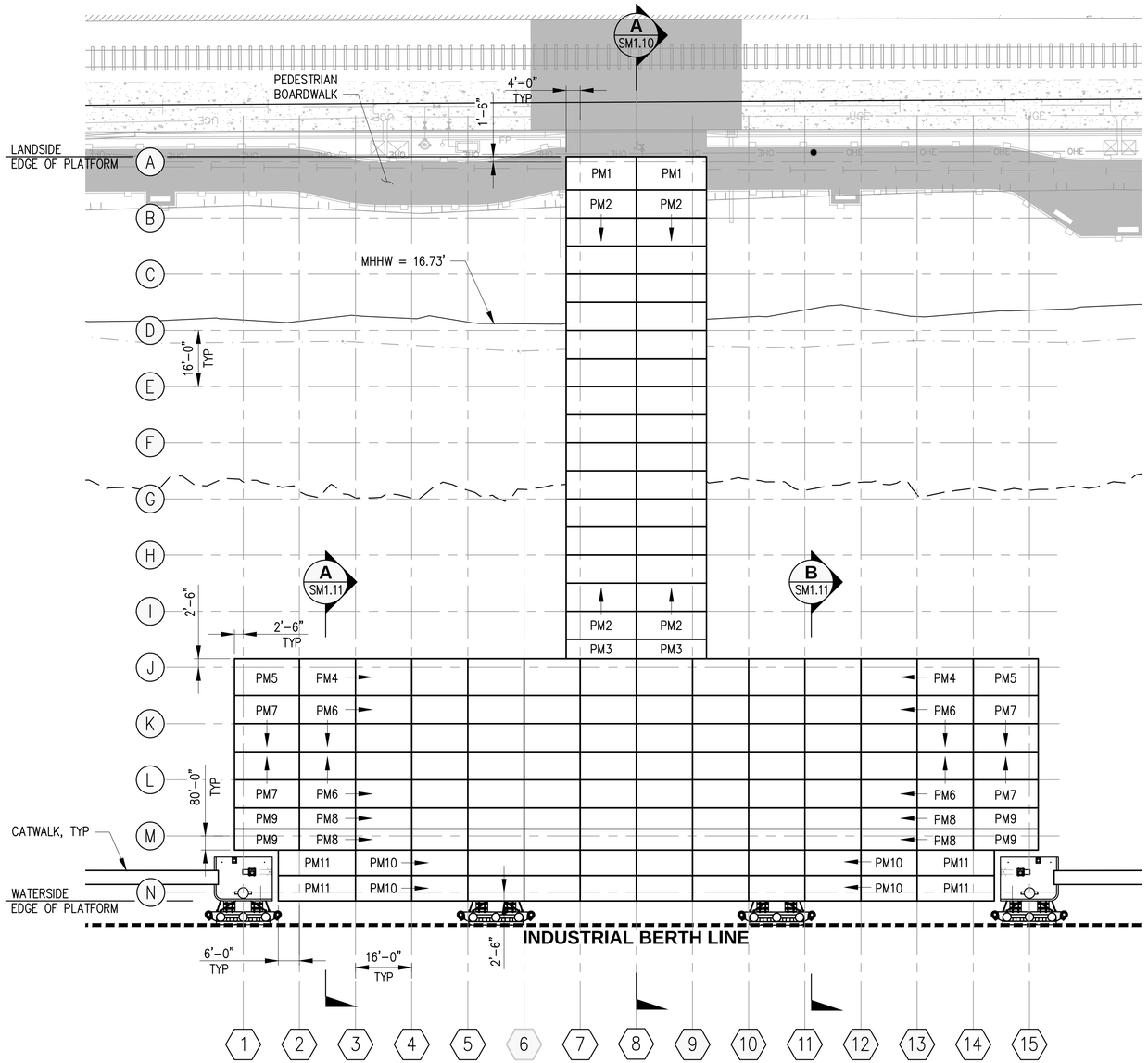
SKAGWAY, ALASKA

MARINE SERVICE PLATFORM
PILE AND PILE CAP PLAN

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**SM1.10**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 – 11:18am dyu Layout: SM1.10
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_SM1.10 MSP Pile & Pile Cap Plan.dwg



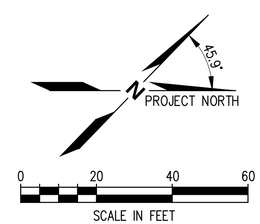
SKAGWAY HARBOR

1 S2.00 DECK PANEL PLAN

SCALE: 1" = 20'

LEGEND:

PMX	PRECAST DECK PANEL TYPE, SEE SMX.XX FOR DECK PANEL SCHEDULE



60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 – 11:11am dyu Layout: SM1.11
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_SM1.11 MSP Deck Panel Plan.dwg

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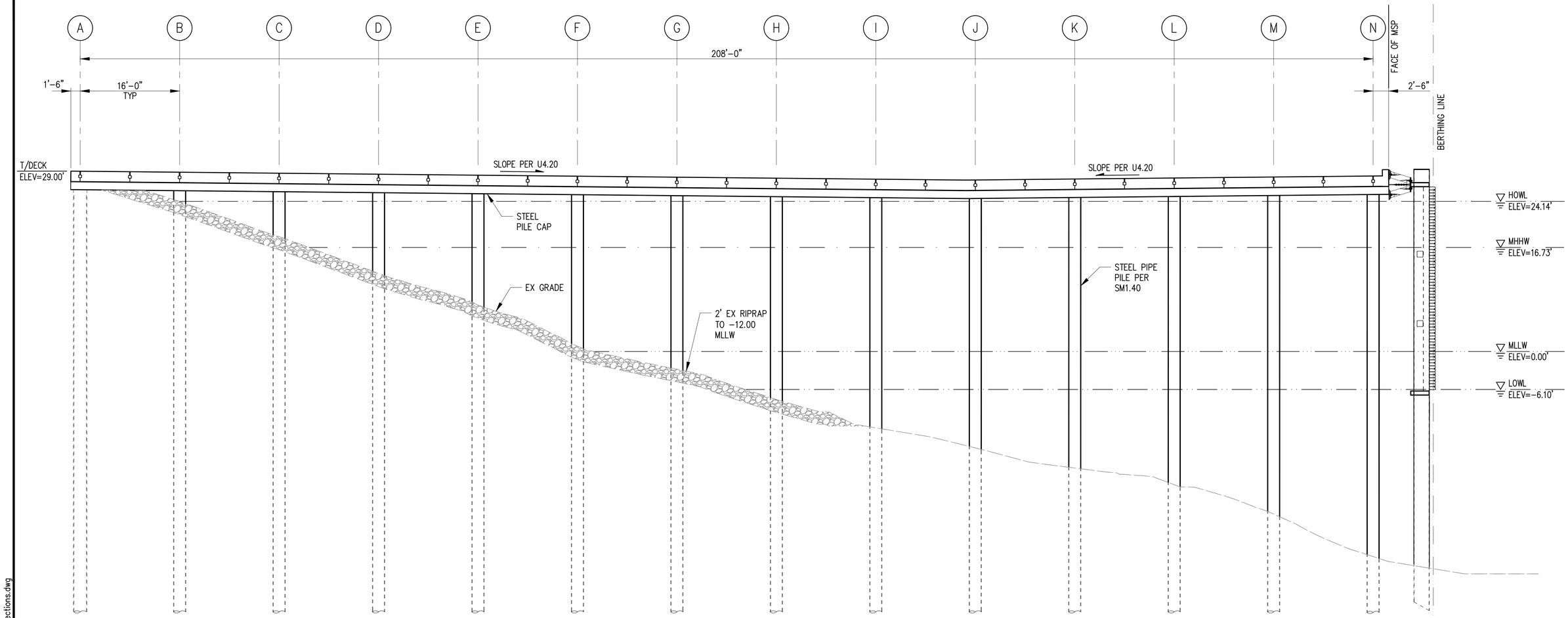
NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

MARINE SERVICE PLATFORM
DECK PANEL PLAN

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	SM1.11
SHEET NO.	OF



A / SM1.01 TYPICAL SECTION AT BENTS 7, 8, 9

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

0 1 2 4 6

SCALE IN FEET

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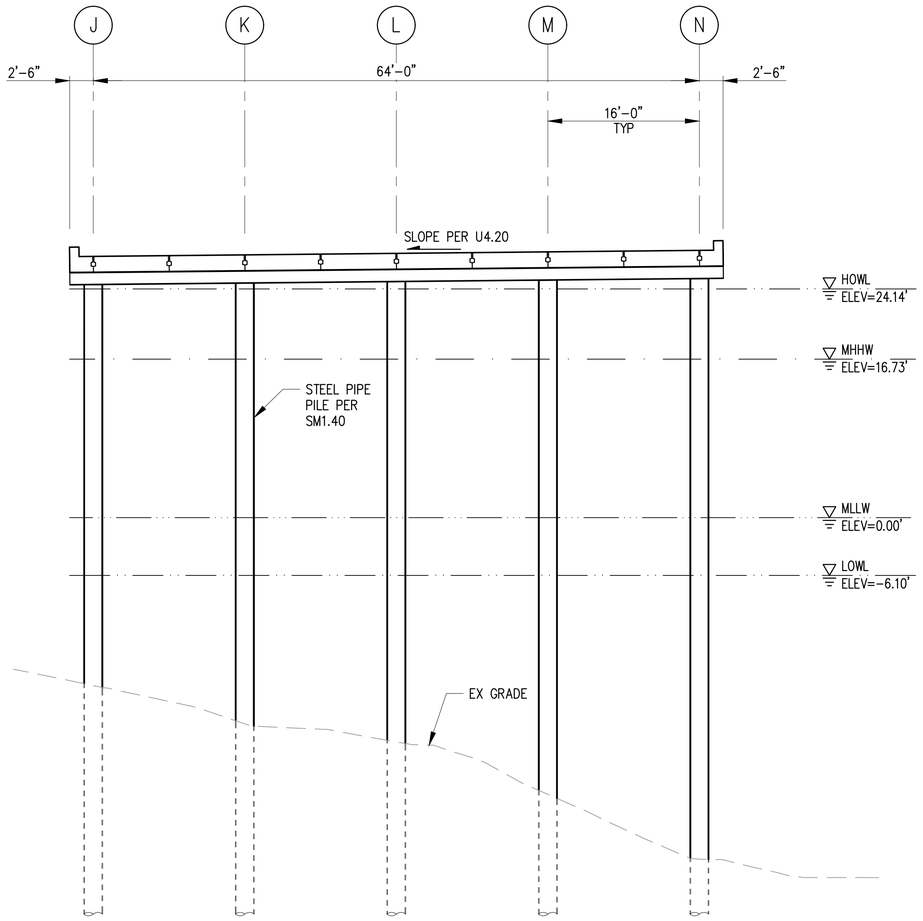
MARINE SERVICE PLATFORM
SECTION

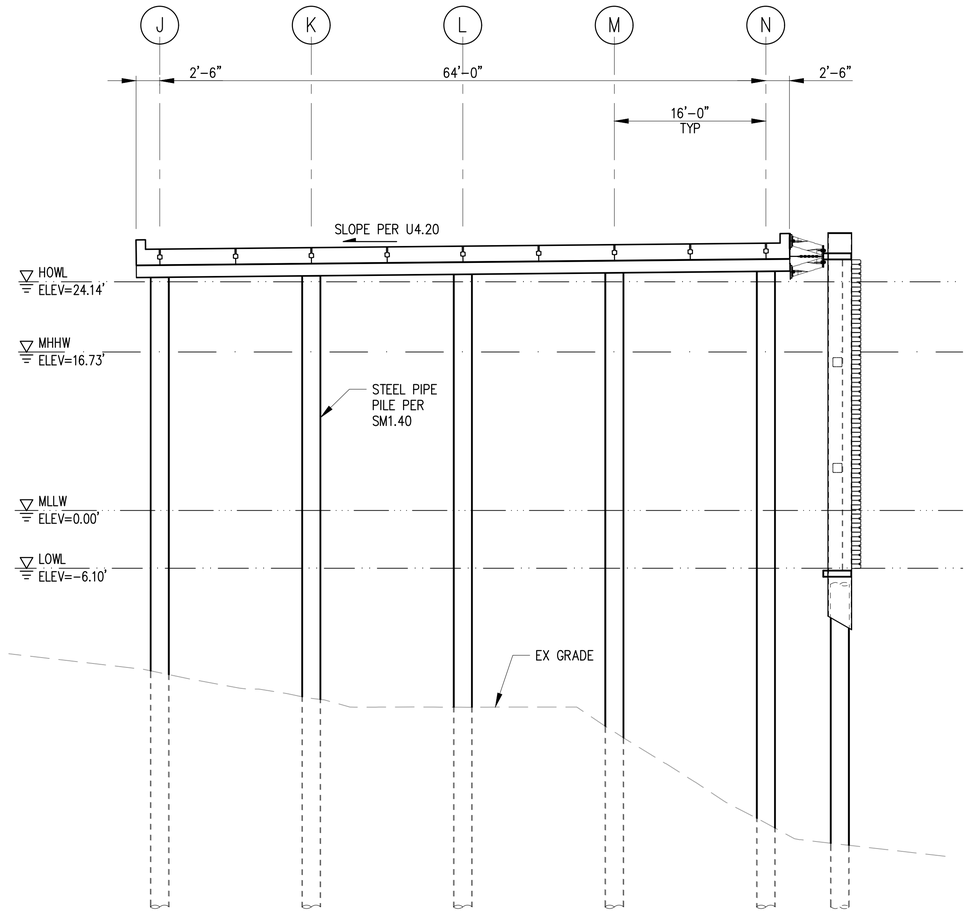
DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**SM1.20**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 - 11:12am dyu Layout: SM1.20
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_SM1.20 MSP Sections.dwg



A SM1.01 **TYPICAL SECTION AT BENTS 2-6 AND 10-14**
SCALE: 1-1/2"=1'-0"



B SM1.01 **SECTION AT FENDER - BENTS 5.5 AND 10.5**
SCALE: 1-1/2"=1'-0"

0 1 2 4 6
SCALE IN FEET

60% DESIGN - NOT FOR CONSTRUCTION

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NO.	DATE	BY	REVISION

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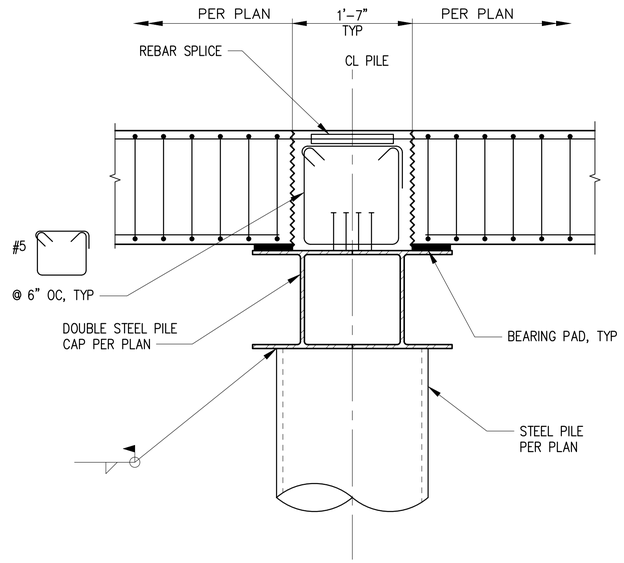
SKAGWAY, ALASKA

MARINE SERVICE PLATFORM
SECTIONS

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**SM1.21**
SHEET NO.	OF

Plotted: Jan 27, 2023 - 1:41pm gmachuca Layout: SM1.21
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_SM1.21 MSP Sections.dwg



A
–

TYPICAL PILE CAP SECTION

SCALE: 1"=1'-0"

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NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

MARINE SERVICE PLATFORM
DETAILS

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**SM1.30**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 - 11:12am dyu Layout: SM1.30
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_SM1.30 MSP Details.dwg

PILE SCHEDULE

PILE #	GRID	GRID	PILE TYPE	OD	WALL THICK	T/PILE	PILE TIP
M001	A	7	STEEL PIPE	24"	3/4"	25.99	-154.00
M002	A	8	STEEL PIPE	24"	3/4"	25.99	-154.00
M003	A	9	STEEL PIPE	24"	3/4"	25.99	-154.00
M004	B	7	STEEL PIPE	24"	3/4"	25.83	-154.00
M005	B	8	STEEL PIPE	24"	3/4"	25.83	-154.00
M006	B	9	STEEL PIPE	24"	3/4"	25.83	-154.00
M007	C	7	STEEL PIPE	24"	3/4"	25.67	-147.00
M008	C	8	STEEL PIPE	24"	3/4"	25.67	-147.00
M009	C	9	STEEL PIPE	24"	3/4"	25.67	-147.00
M010	D	7	STEEL PIPE	24"	3/4"	25.51	-142.00
M011	D	8	STEEL PIPE	24"	3/4"	25.51	-142.00
M012	D	9	STEEL PIPE	24"	3/4"	25.51	-142.00
M013	E	7	STEEL PIPE	24"	3/4"	25.34	-136.00
M014	E	8	STEEL PIPE	24"	3/4"	25.34	-136.00
M015	E	9	STEEL PIPE	24"	3/4"	25.34	-136.00
M016	F	7	STEEL PIPE	24"	3/4"	25.19	-131.00
M017	F	8	STEEL PIPE	24"	3/4"	25.19	-131.00
M018	F	9	STEEL PIPE	24"	3/4"	25.19	-131.00
M019	G	7	STEEL PIPE	24"	3/4"	25.02	-126.00
M020	G	8	STEEL PIPE	24"	3/4"	25.02	-126.00
M021	G	9	STEEL PIPE	24"	3/4"	25.02	-126.00
M022	H	7	STEEL PIPE	24"	3/4"	24.86	-120.00
M023	H	8	STEEL PIPE	24"	3/4"	24.86	-120.00
M024	H	9	STEEL PIPE	24"	3/4"	24.86	-120.00
M025	I	7	STEEL PIPE	24"	3/4"	24.71	-124.00
M026	I	8	STEEL PIPE	24"	3/4"	24.71	-124.00
M027	I	9	STEEL PIPE	24"	3/4"	24.71	-124.00
M028	J	1	STEEL PIPE	24"	3/4"	24.57	-129.00
M029	J	2	STEEL PIPE	24"	3/4"	24.57	-129.00
M030	J	3	STEEL PIPE	24"	3/4"	24.57	-129.00
M031	J	4	STEEL PIPE	24"	3/4"	24.57	-129.00
M032	J	5	STEEL PIPE	24"	3/4"	24.57	-129.00
M033	J	6	STEEL PIPE	24"	3/4"	24.57	-129.00
M034	J	7	STEEL PIPE	24"	3/4"	24.57	-129.00
M035	J	8	STEEL PIPE	24"	3/4"	24.57	-129.00
M036	J	9	STEEL PIPE	24"	3/4"	24.57	-129.00
M037	J	10	STEEL PIPE	24"	3/4"	24.57	-129.00
M038	J	11	STEEL PIPE	24"	3/4"	24.57	-129.00
M039	J	12	STEEL PIPE	24"	3/4"	24.57	-129.00
M040	J	13	STEEL PIPE	24"	3/4"	24.57	-129.00
M041	J	14	STEEL PIPE	24"	3/4"	24.57	-129.00
M042	J	15	STEEL PIPE	24"	3/4"	24.57	-129.00
M043	K	1	STEEL PIPE	24"	3/4"	24.74	-135.00
M044	K	2	STEEL PIPE	24"	3/4"	24.74	-135.00
M045	K	3	STEEL PIPE	24"	3/4"	24.74	-135.00
M046	K	4	STEEL PIPE	24"	3/4"	24.74	-135.00
M047	K	5	STEEL PIPE	24"	3/4"	24.74	-135.00
M048	K	6	STEEL PIPE	24"	3/4"	24.74	-135.00
M049	K	7	STEEL PIPE	24"	3/4"	24.74	-135.00
M050	K	8	STEEL PIPE	24"	3/4"	24.74	-135.00
M051	K	9	STEEL PIPE	24"	3/4"	24.74	-135.00
M052	K	10	STEEL PIPE	24"	3/4"	24.74	-135.00
M053	K	11	STEEL PIPE	24"	3/4"	24.74	-135.00

PILE SCHEDULE

PILE #	GRID	GRID	PILE TYPE	OD	WALL THICK	T/PILE	PILE TIP
M054	K	12	STEEL PIPE	24"	3/4"	24.74	-135.00
M055	K	13	STEEL PIPE	24"	3/4"	24.74	-135.00
M056	K	14	STEEL PIPE	24"	3/4"	24.74	-135.00
M057	K	15	STEEL PIPE	24"	3/4"	24.74	-135.00
M058	L	1	STEEL PIPE	24"	3/4"	24.90	-140.00
M059	L	2	STEEL PIPE	24"	3/4"	24.90	-140.00
M060	L	3	STEEL PIPE	24"	3/4"	24.90	-140.00
M061	L	4	STEEL PIPE	24"	3/4"	24.90	-140.00
M062	L	5	STEEL PIPE	24"	3/4"	24.90	-140.00
M063	L	6	STEEL PIPE	24"	3/4"	24.90	-140.00
M064	L	7	STEEL PIPE	24"	3/4"	24.90	-140.00
M065	L	8	STEEL PIPE	24"	3/4"	24.90	-140.00
M066	L	9	STEEL PIPE	24"	3/4"	24.90	-140.00
M067	L	10	STEEL PIPE	24"	3/4"	24.90	-140.00
M068	L	11	STEEL PIPE	24"	3/4"	24.90	-140.00
M069	L	12	STEEL PIPE	24"	3/4"	24.90	-140.00
M070	L	13	STEEL PIPE	24"	3/4"	24.90	-140.00
M071	L	14	STEEL PIPE	24"	3/4"	24.90	-140.00
M072	L	15	STEEL PIPE	24"	3/4"	24.90	-140.00
M073	M	1	STEEL PIPE	24"	3/4"	25.05	-145.00
M074	M	2	STEEL PIPE	24"	3/4"	25.05	-145.00
M075	M	3	STEEL PIPE	24"	3/4"	25.05	-145.00
M076	M	4	STEEL PIPE	24"	3/4"	25.05	-145.00
M077	M	5	STEEL PIPE	24"	3/4"	25.05	-145.00
M078	M	6	STEEL PIPE	24"	3/4"	25.05	-145.00
M079	M	7	STEEL PIPE	24"	3/4"	25.05	-145.00
M080	M	8	STEEL PIPE	24"	3/4"	25.05	-145.00
M081	M	9	STEEL PIPE	24"	3/4"	25.05	-145.00
M082	M	10	STEEL PIPE	24"	3/4"	25.05	-145.00
M083	M	11	STEEL PIPE	24"	3/4"	25.05	-145.00
M084	M	12	STEEL PIPE	24"	3/4"	25.05	-145.00
M085	M	13	STEEL PIPE	24"	3/4"	25.05	-145.00
M086	M	14	STEEL PIPE	24"	3/4"	25.05	-145.00
M087	M	15	STEEL PIPE	24"	3/4"	25.05	-145.00
M088	N	2	STEEL PIPE	24"	3/4"	25.22	-151.00
M089	N	3	STEEL PIPE	24"	3/4"	25.22	-151.00
M090	N	4	STEEL PIPE	24"	3/4"	25.22	-151.00
M091	N	5	STEEL PIPE	24"	3/4"	25.22	-151.00
M092	N	6	STEEL PIPE	24"	3/4"	25.22	-151.00
M093	N	7	STEEL PIPE	24"	3/4"	25.22	-151.00
M094	N	8	STEEL PIPE	24"	3/4"	25.22	-151.00
M095	N	9	STEEL PIPE	24"	3/4"	25.22	-151.00
M096	N	10	STEEL PIPE	24"	3/4"	25.22	-151.00
M097	N	11	STEEL PIPE	24"	3/4"	25.22	-151.00
M098	N	12	STEEL PIPE	24"	3/4"	25.22	-151.00
M099	N	13	STEEL PIPE	24"	3/4"	25.22	-151.00
M100	N	14	STEEL PIPE	24"	3/4"	25.22	-151.00
M101	FENDER PILE		STEEL PIPE	24"	3/4"	29.00	-101.00
M102	FENDER PILE		STEEL PIPE	24"	3/4"	29.00	-101.00
M103	FENDER PILE		STEEL PIPE	24"	3/4"	29.00	-101.00
M104	FENDER PILE		STEEL PIPE	24"	3/4"	29.00	-101.00
M105	FENDER PILE		STEEL PIPE	24"	3/4"	29.00	-101.00
M106	FENDER PILE		STEEL PIPE	24"	3/4"	29.00	-101.00

NOTES

1. MOS HAS PRE-PROCURED PILES FOR ALL PILES TO BE INSTALLED PLUS:
   - 10 ADDITIONAL FEET PER PILE FOR CUTOFF/OVERDRIVE AND FIT-UP WITH DRIVING HAMMER
   - ADDITIONAL LENGTH FOR EACH PILE TO ACCOUNT FOR POSSIBLE OVERDRIVE LENGTH AS REQUIRED TO ACHIEVE REQUIRED CAPACITY. SEE NOTES BELOW.
2. CONTRACTOR SHALL INCLUDE PILE DRIVING TO DESIGN TIP PLUS 5 FEET IN BASE BID.
3. IT IS ESTIMATED THAT EMBEDDED LENGTH OF PILES INTO THE SOILS COULD REQUIRE ADDITIONAL LENGTH OF 25% TO 50% ADDED EMBEDDED LENGTH TO ACHIEVE REQUIRED CAPACITIES. PILES THAT ARE REQUIRED TO BE DRIVEN FURTHER AS DIRECTED BY THE ENGINEER SHALL BE PAYABLE PER LINEAR FOOT AS DESCRIBED IN THE PROJECT SPECIFICATIONS.
4. MOS SUPPLIED PILE LENGTHS ARE LISTED IN THE SPECIFICATIONS APPENDIX. THE CONTRACTOR SHALL SPLICE PILES TO THE DESIRED LENGTHS FOR DRIVING AND HANDLING. ADDITIONAL PILE SPLICING AS REQUIRED FOR OVER DRIVE ALLOWANCE IS INCIDENTAL TO THE FORCE ACCOUNT PILE DRIVING ITEMS.
5. PILES SHALL BE STORED, SHIPPED AND DELIVERED BY SUPPLIER. AT ALL TIMES PILES SHALL BE STORED WITH CRIBBING TO PREVENT TO DAMAGE COATINGS OR ROLLING OF THE PILES.
6. MOS SHALL INSPECT COATINGS AFTER DELIVERY. IF COATING DAMAGE IS FOUND, CONTRACTOR SHALL REPAIR AT NO ADDITIONAL COST TO MOS.
7. DEFINED REQUIRED TENSION AND COMPRESSION CAPACITIES ARE ULTIMATE VALUES AND ARE NOT FACTORED.
8. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS

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NO.	DATE	BY	REVISION

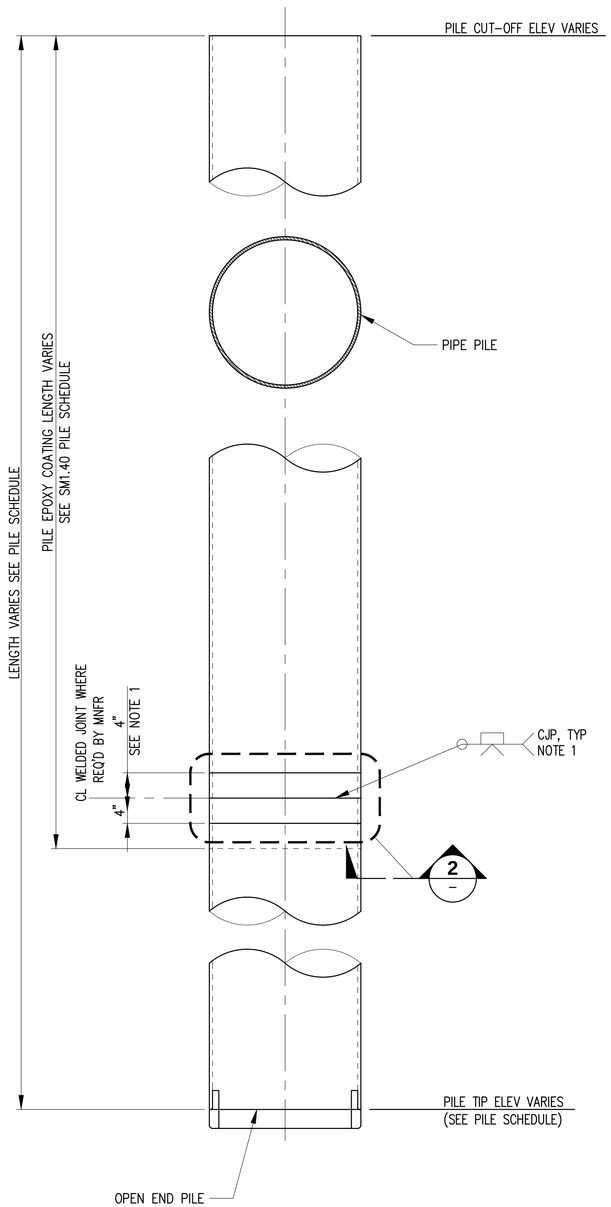
ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

MARINE SERVICE PLATFORM
PILE SCHEDULE

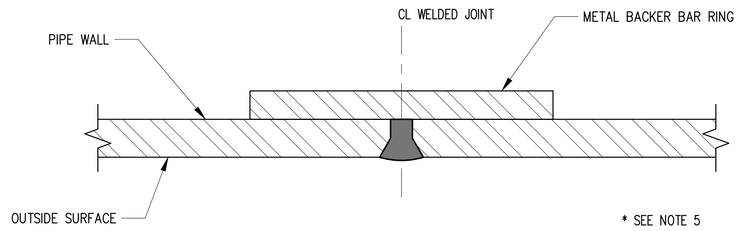
DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**SM1.40**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 - 11:12am dyu Layout: SM1.40
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_SM1.40 MSP Pile Schedule.dwg



1 — **STEEL PILE DETAIL**
SCALE: 1" = 1'–0"



2 — **ALTERNATE CJP TUBULAR BUTT JOINT**
SCALE: 1:1

NOTES

1. WELDING SHALL CONFORM TO "STRUCTURAL WELDING CODE – STEEL", AWS D1.1
2. HOLD BACK OR REMOVE EPOXY COATING FROM CENTERLINE WELDED JOINT ON INSIDE AND OUTSIDE OF PIPE BEFORE WELDING. AFTER JOINT IS WELDED, APPLY EPOXY COATINGS PER SPECIFICATIONS FOR REPAIR OF PILE GALVANIZED COATING.
3. MANUFACTURER MAY USE THE ALTERNATE CJP TUBULAR BUTT JOINT. SEE DETAIL 2 ON THIS SHEET. ALL CJP TUBULAR BUTT JOINTS SHALL HAVE A WPS QUALIFIED IN ACCORDANCE WITH AWS D1.1 SECTION 4.

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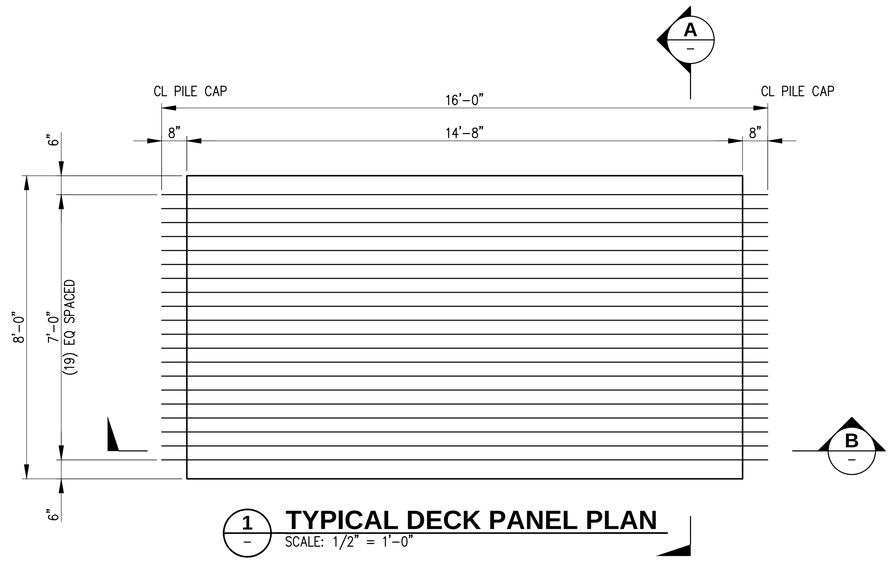
SKAGWAY, ALASKA

MARINE SERVICE PLATFORM
PILE SCHEDULE

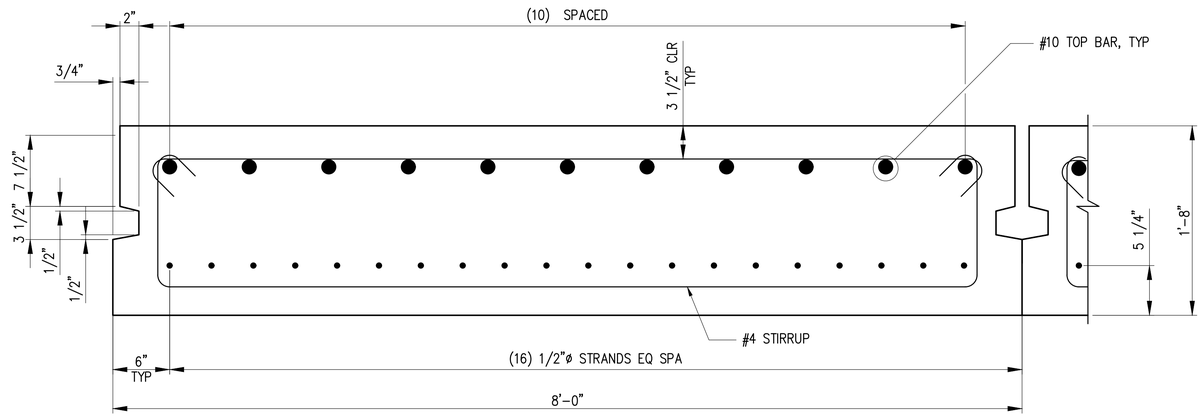
DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**SM1.41**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

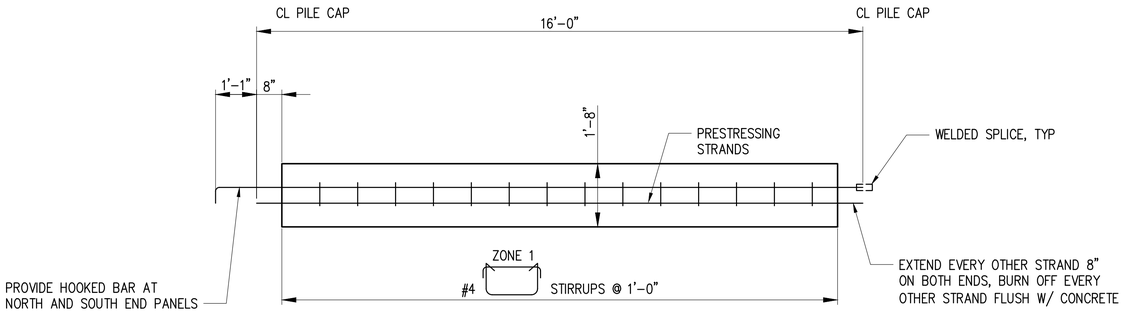
Plotted: Jan 27, 2023 – 11:12am dyu Layout: SM1.41
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_SM1.41 MSP Pile Schedule.dwg



1 — **TYPICAL DECK PANEL PLAN**
SCALE: 1/2" = 1'-0"



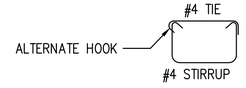
A — **TYPICAL DECK PANEL SECTION**
SCALE: 1 1/2" = 1'-0"



B — **TYPICAL DECK PANEL SECTION**
SCALE: 1/2" = 1'-0"

NOTES

1. FOR DECK PANEL SCHEDULE, SEE S8.1.
2. PROVIDE 135° HOOKS ON STIRRUPS AND TIES FOR ALL PANELS.



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NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

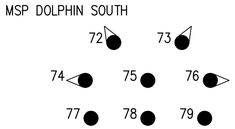
MARINE SERVICE PLATFORM DETAILS

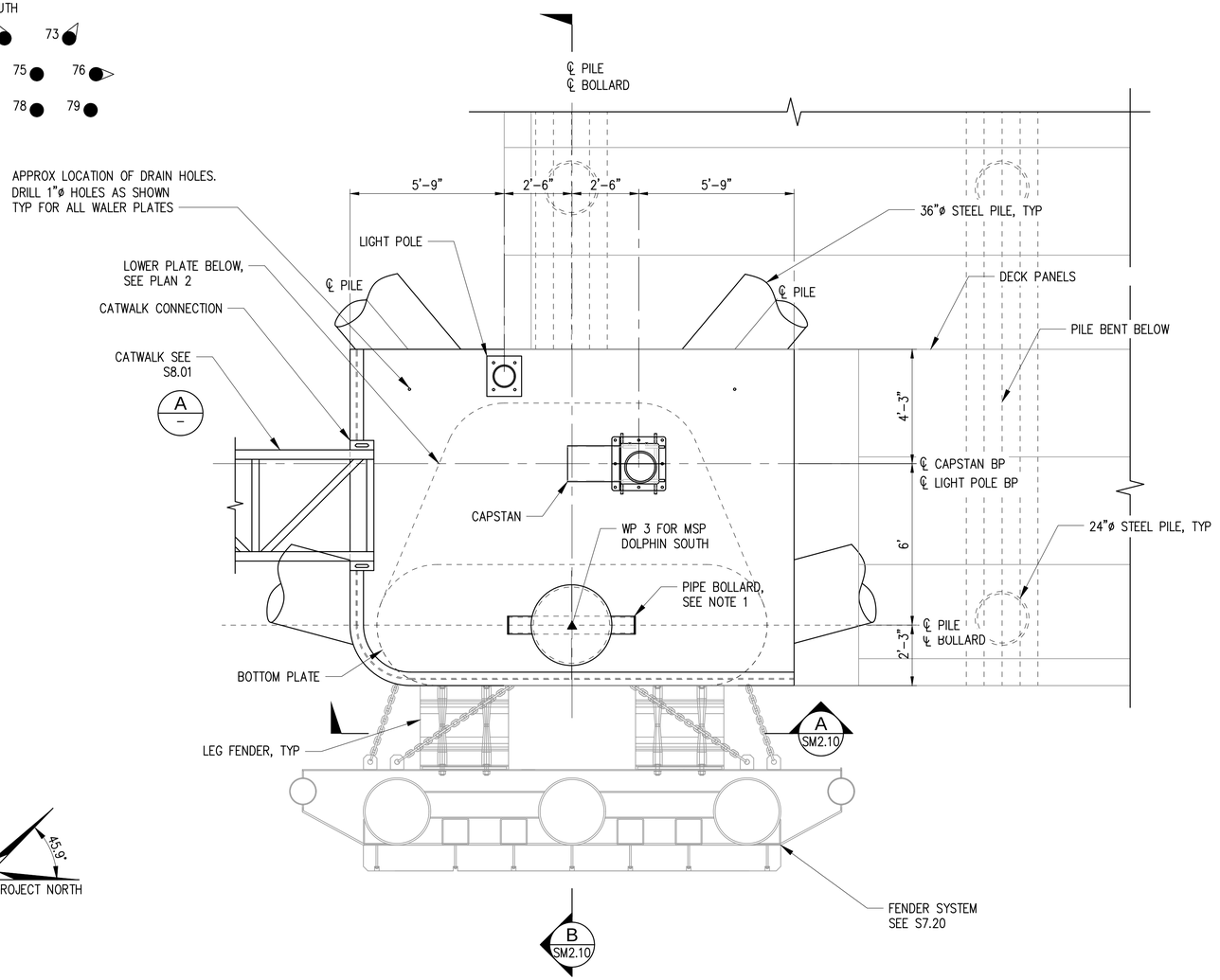
DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**SM1.51**
SHEET NO.	OF

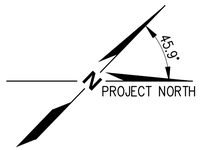
60% DESIGN - NOT FOR CONSTRUCTION

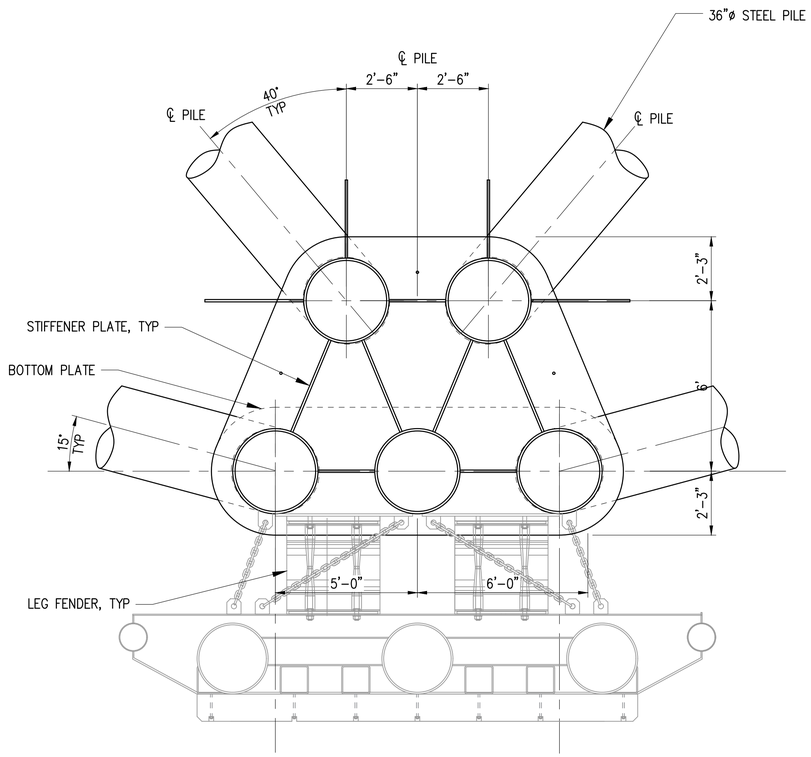
Plotted: Jan 27, 2023 - 11:12am dyu Layout: SM1.51
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_SM1.51 MSP Details.dwg

PILE SCHEDULE ID









NOTES

1. BOLLARD WELD SHALL BE CJP TO TOP PLATE
2. ALL WELDS TO BOTTOM PLATE SHALL BE CJP.
3. ALL OTHER WELDS IN THE PILE CAP SHALL BE 3/8" FILLET ALL AROUND ONE SIDE OR 5/16" FILLET ALL AROUND BOTH SIDES.
4. ALL JOINTS SHALL BE WELDED CONTINUOUSLY.
5. ALL PLATES AND STIFFENERS ARE 1" THICK, U.N.O.
6. UTILITIES NOT SHOWN FOR CLARITY, SEE CIVIL.

1 / SM1.00 **TYPICAL DOLPHIN PLAN**
SCALE: 3/8" = 1'-0"

2 / – **LOWER PLATE PLAN**
SCALE: 3/8" = 1'-0"

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ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

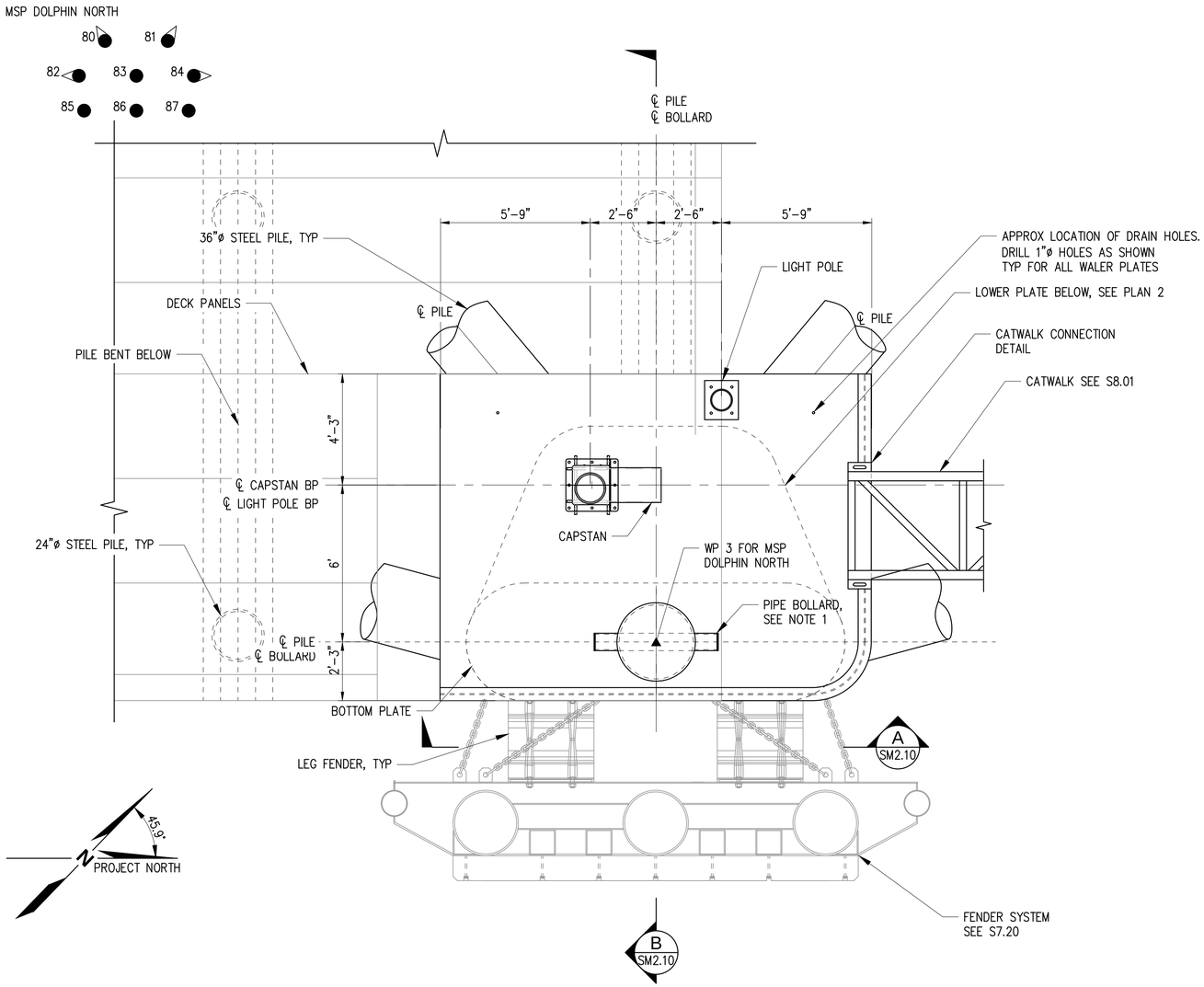
MARINE SERVICE PLATFORM
MSP DOLPHIN SOUTH PLAN

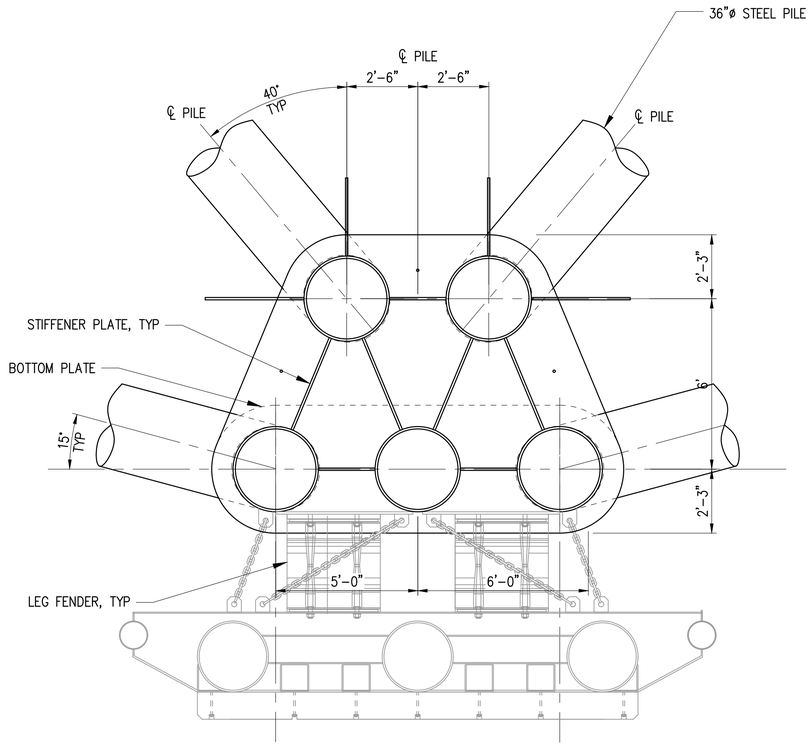
DRAWN: JH	PROJECT NO.: 2100135
DESIGN: AER	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**SM2.00**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 – 11:12am dyu Layout: SM2.00–Marine Service Platform Dolphin South Plan
M:\2021\2100135 Skagway Ore Peninsula Multi–use Dock\Drawings\Current\2100135_SM2.00 MSP Dolphin South Plan.dwg

PILE SCHEDULE ID





NOTES

1. BOLLARD WELD SHALL BE CJP TO TOP PLATE
2. ALL WELDS TO BOTTOM PLATE SHALL BE CJP.
3. ALL OTHER WELDS IN THE PILE CAP SHALL BE 3/8" FILLET ALL AROUND ONE SIDE OR 5/16" FILLET ALL AROUND BOTH SIDES.
4. ALL JOINTS SHALL BE WELDED CONTINUOUSLY.
5. ALL PLATES AND STIFFENERS ARE 1" THICK, U.N.O.
6. UTILITIES NOT SHOWN FOR CLARITY, SEE CIVIL.

1 / SM1.00 **TYPICAL DOLPHIN PLAN**
SCALE: 3/8" = 1'-0"

A / – **LOWER PLATE DETAIL**
SCALE: 3/8" = 1'-0"

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NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT
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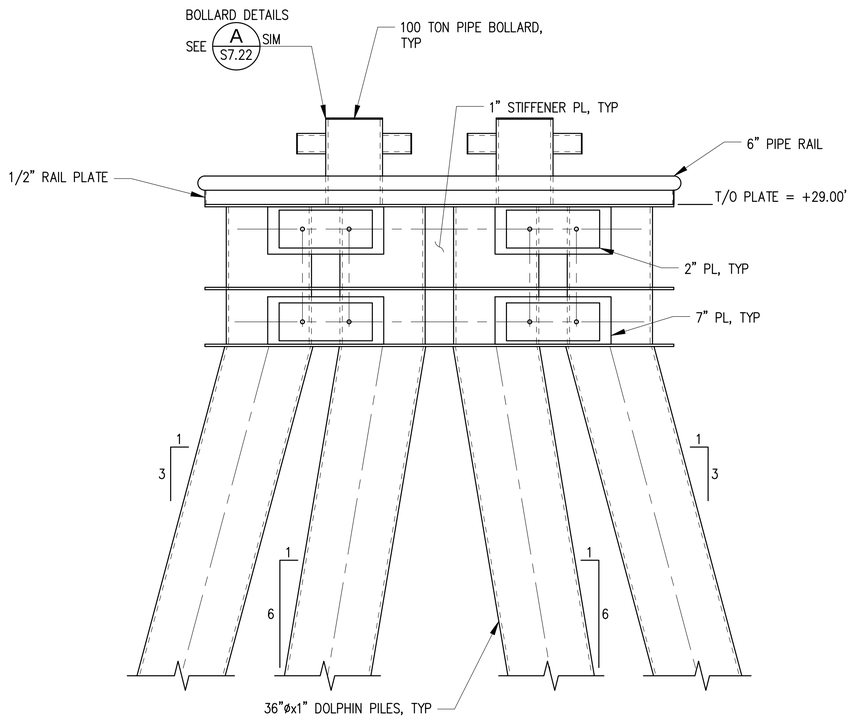
MARINE SERVICE PLATFORM
MSP DOLPHIN NORTH PLAN

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: AER	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	SM2.01
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

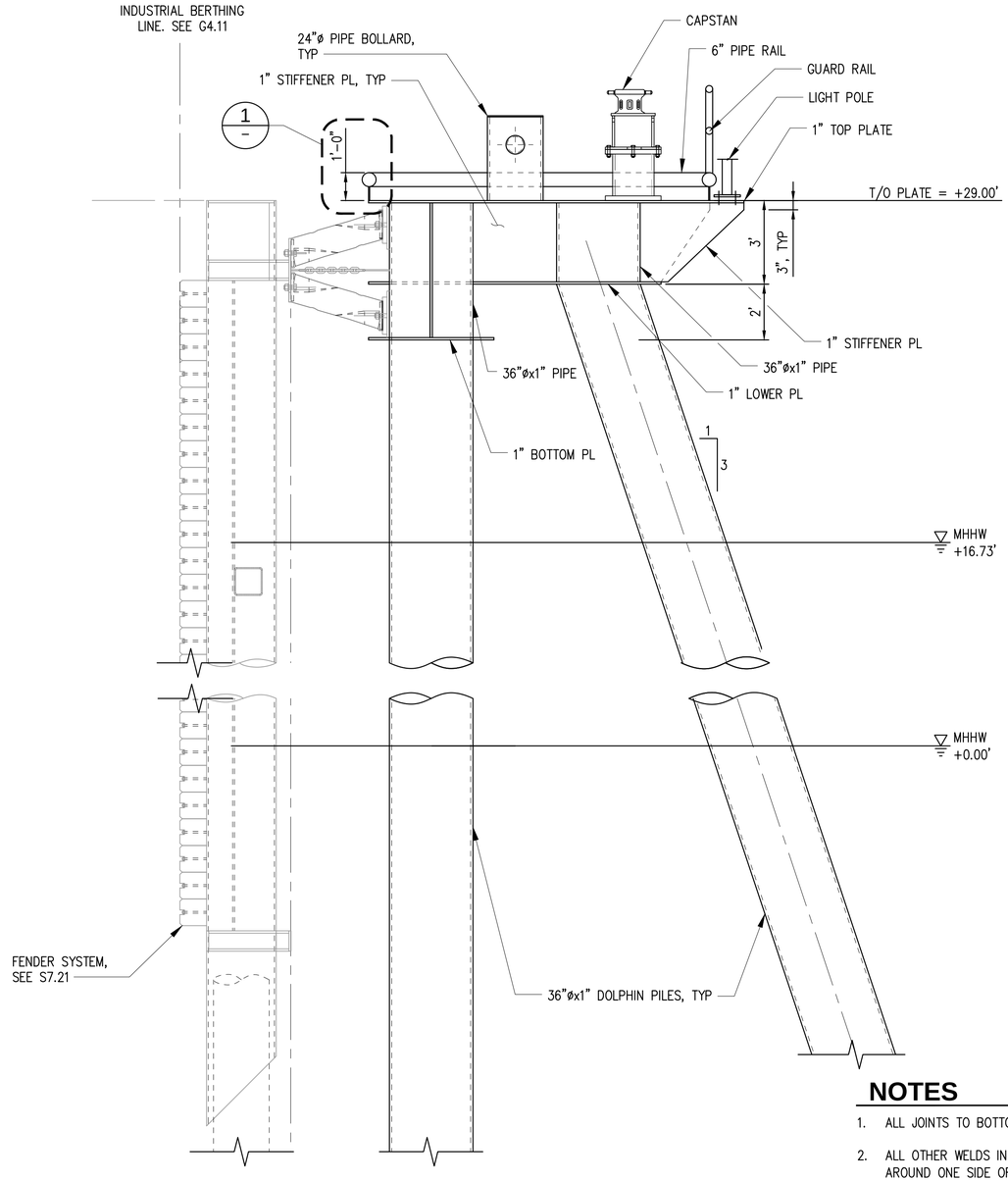
Plotted: Jan 27, 2023 - 11:12am dyu Layout: SM2.01-Marine Service Platform Dolphin North Plan
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_SM2.01 MSP Dolphin North Plan.dwg



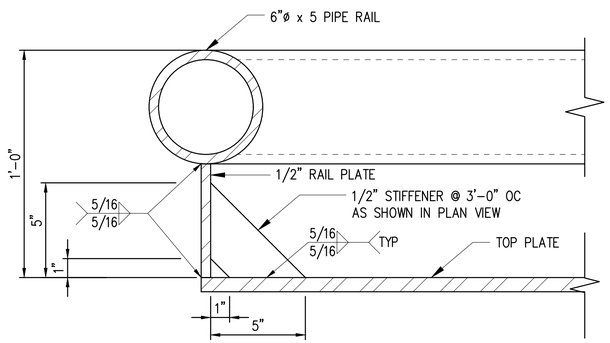
A SM2.00 **SECTION**
SCALE: 3/8" = 1'-0"

CRUISE LINE BERTHING LINE. SEE G4.00

INDUSTRIAL BERTHING LINE. SEE G4.11



B SM2.00,SM2.01 **SECTION**
SCALE: 3/8" = 1'-0"



1 – **DETAIL**
SCALE: 3"= 1'-0"

NOTES

1. ALL JOINTS TO BOTTOM PLATE SHALL BE CJP.
2. ALL OTHER WELDS IN THE PILE CAP SHALL BE 3/8" FILLET ALL AROUND ONE SIDE OR 5/16" FILLET ALL AROUND BOTH SIDES.
3. ALL JOINTS SHALL BE WELDED CONTINUOUSLY.
4. ALL PLATES AND STIFFENERS ARE 1" THICK, UNO.
5. UTILITIES NOT SHOWN FOR CLARITY, SEE CIVIL.

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 – 11:12am dyu Layout: SM2.10–Marine Service Platform Typical Dolphin Sections
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_SM2.10 Typical Dolphin Sections.dwg

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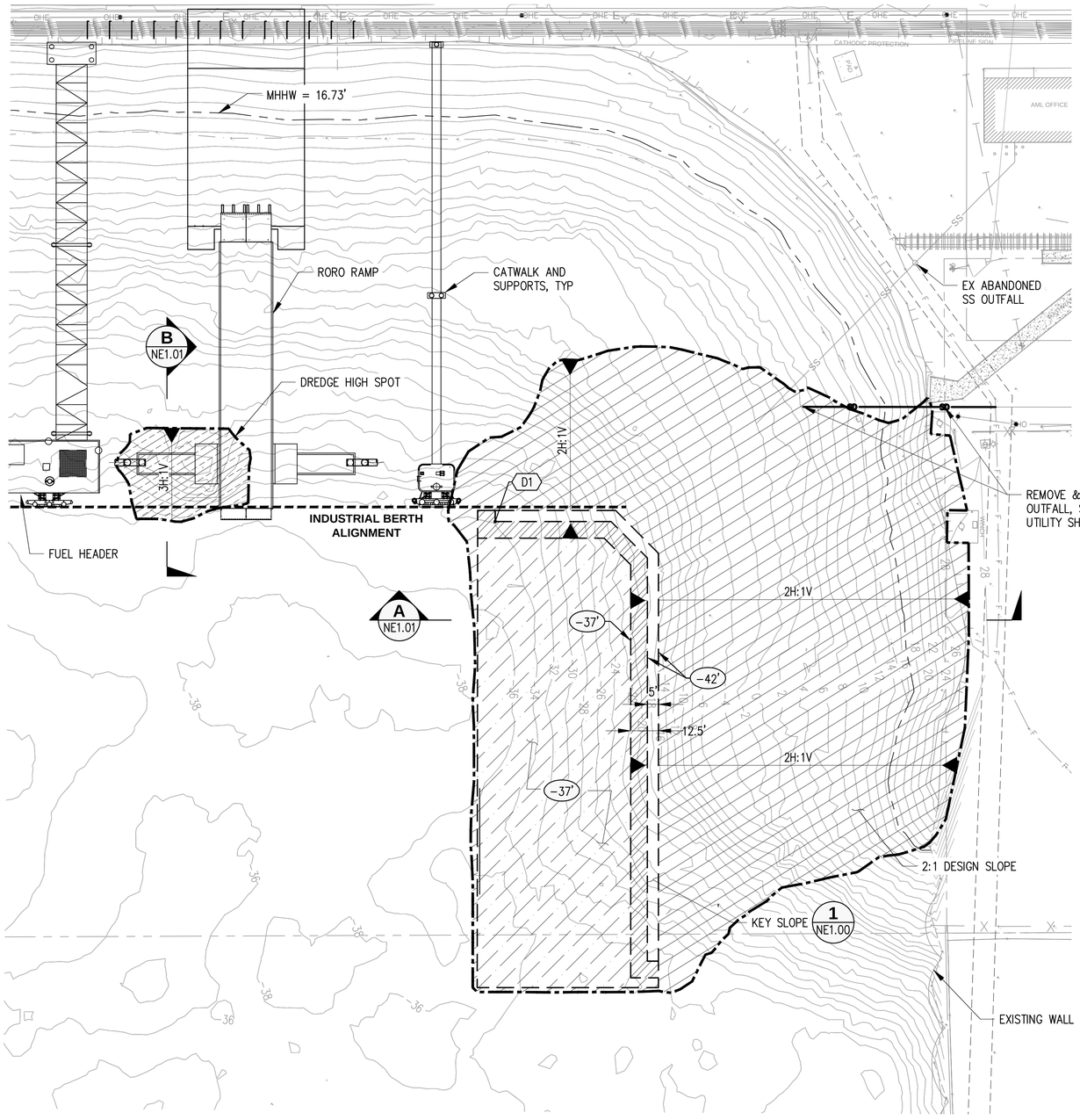
NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

MARINE SERVICE PLATFORM
TYPICAL DOLPHIN SECTIONS

DRAWN:	JH	PROJECT NO.:	2100135
DESIGN:	AER	SCALE:	AS SHOWN
CHECKED:	RR	DATE:	01/27/2023
DRAWING NO.		**SM2.10**	
SHEET NO.		OF	



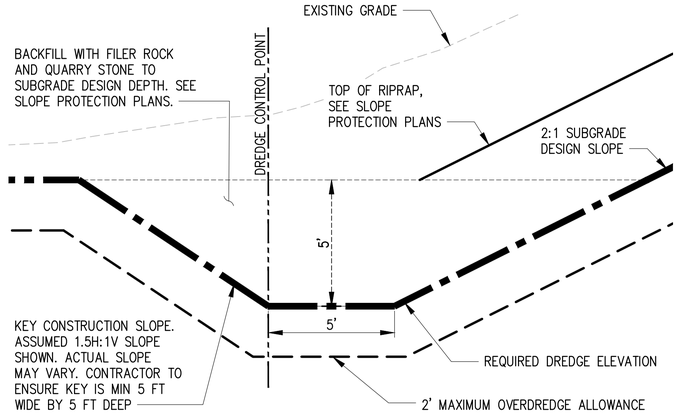
1 **NORTH BERTH EXTENSION DREDGE PLAN**
SCALE: 1" = 30'

HORIZONTAL CONTROL

POINT ID	ALIGNMENT	STATION	OFFSET
D1			
D2			
D3			
D4			
D5			
D6			
D7			
D8			

DREDGE NOTES

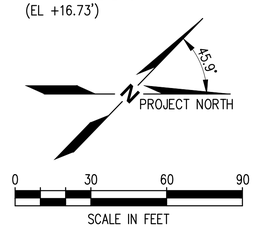
1. SEE SPECIFICATIONS FOR REQUIREMENTS ON SEQUENCING OF DREDGING, DEMO AND MATERIAL PLACEMENT WORK.
2. CONTRACTOR SHALL DREDGE ALL SEDIMENT AND RIPRAP INDICATED ON THIS PLAN AND SECTIONS. DREDGING SHALL NOT EXTEND BEYOND LIMITS SHOWN.
3. SEE SPECIFICATIONS FOR ADDITIONAL DREDGING AND DISPOSAL REQUIREMENTS.
4. ELEVATIONS SHOWN ARE IN MLLW DATUM.
5. SEE SHEET G4.00 FOR SURVEY AND ALIGNMENT LINE CONTROL
6. PROPOSED DREDGE AREAS WILL REQUIRE SEDIMENT SAMPLING TO DETERMINE LEVELS OF CONTAMINATION.
7. MAXIMUM OVERDREDGE ALLOWANCE OF 2'
8. SOUNDINGS ARE IN U.S. SURVEY FEET AND ARE MINUS UNLESS OTHERWISE INDICATED. BATHYMETRY WAS COLLECTED BY HUGHES & ASSOCIATES ON APRIL 6–7, 2022.
9. HORIZONTAL DATUM: ALASKA STATE PLANE, ZONE 1, NAD83, IN U.S. SURVEY FT



1 **TYPICAL KEY DREDGE DETAIL**
NE1.00 SCALE: NTS

LEGEND

- CONTRACTOR SECURE WORK AREA
- EXISTING BATHYMETRIC CONTOUR
- DREDGE AREA (–37 MLLW REQUIRED DREDGE ELEVATION)
- DREDGE SLOPE (2H:1V SLOPE)
- KEY DREDGE TEMPORARY SLOPE AREA (ASSUMED 1.5H:1V)
- HIGH SPOT DREDGE SLOPE (3H:1V)
- –42' REQUIRED DREDGE ELEVATION
- DX DREDGE CONTROL POINTS, SEE HORIZ CONTROL TABLE
- DREDGE SLOPE GRADE BREAK
- APPROXIMATE EXISTING MHHW (EL +16.73')



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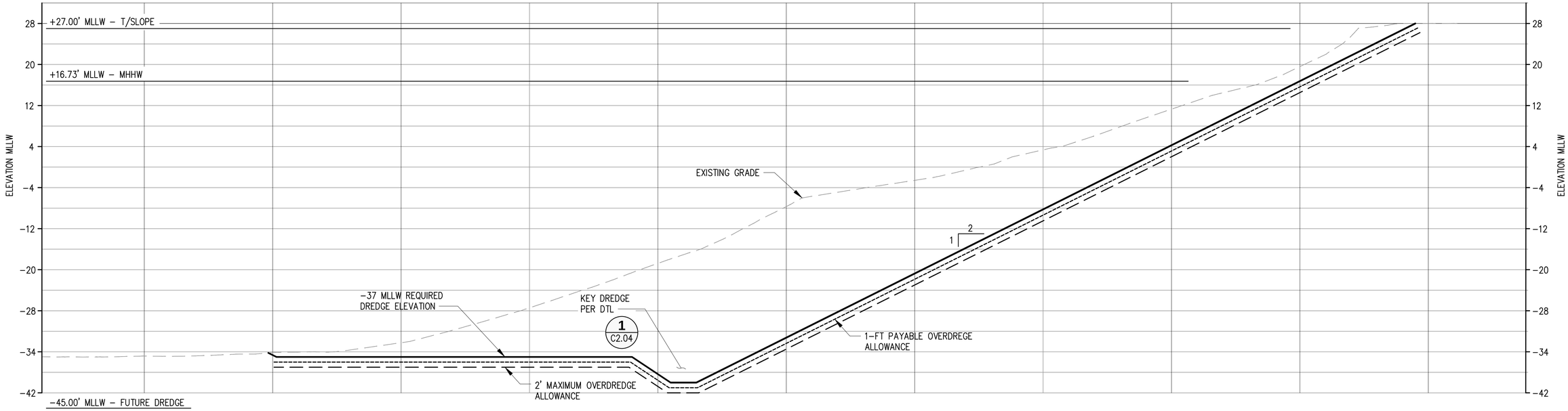
NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

NORTH BERTH EXTENSION DREDGE PLAN

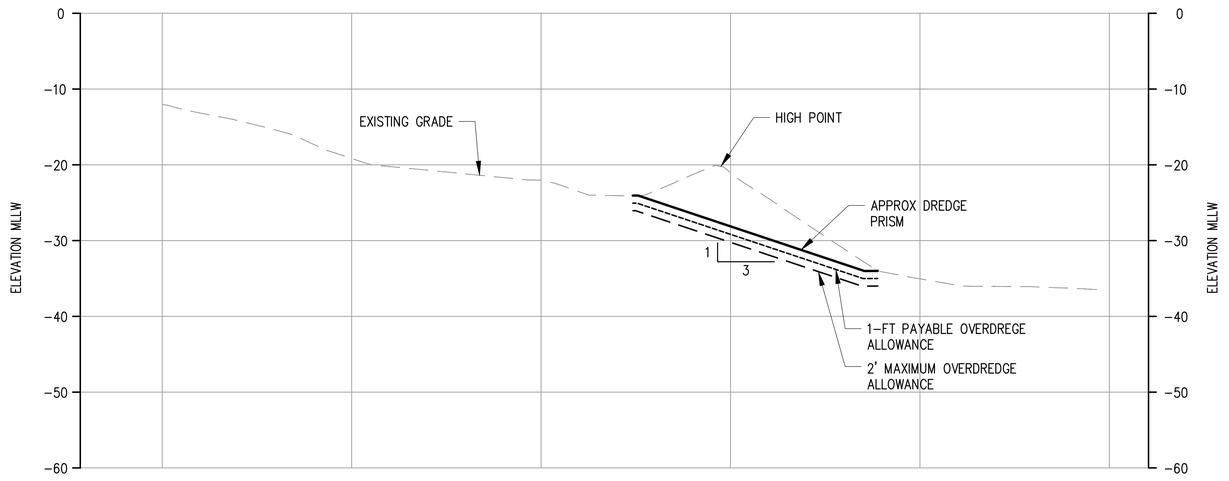
DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**NE1.00**
SHEET NO.	OF

Plotted: Jan 27, 2023 – 11:21am dyu Layout: NE1.00
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_NE1.00 North Berth Extension Dredge Plan.dwg



A NE1.00 NORTH BERTH EXTENSION DREDGE SECTION

SCALE: 1" = 10'



B NE1.00 HIGH POINT AT RORO RAMP DREDGE SECTION

SCALE: 1" = 10'

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SKAGWAY, ALASKA

NORTH BERTH EXTENSION
DREDGE SECTIONS AND DETAILS

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	**NE1.01**
SHEET NO.	OF

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Plotted: Jan 27, 2023 – 11:21am dyu Layout: NE1.01
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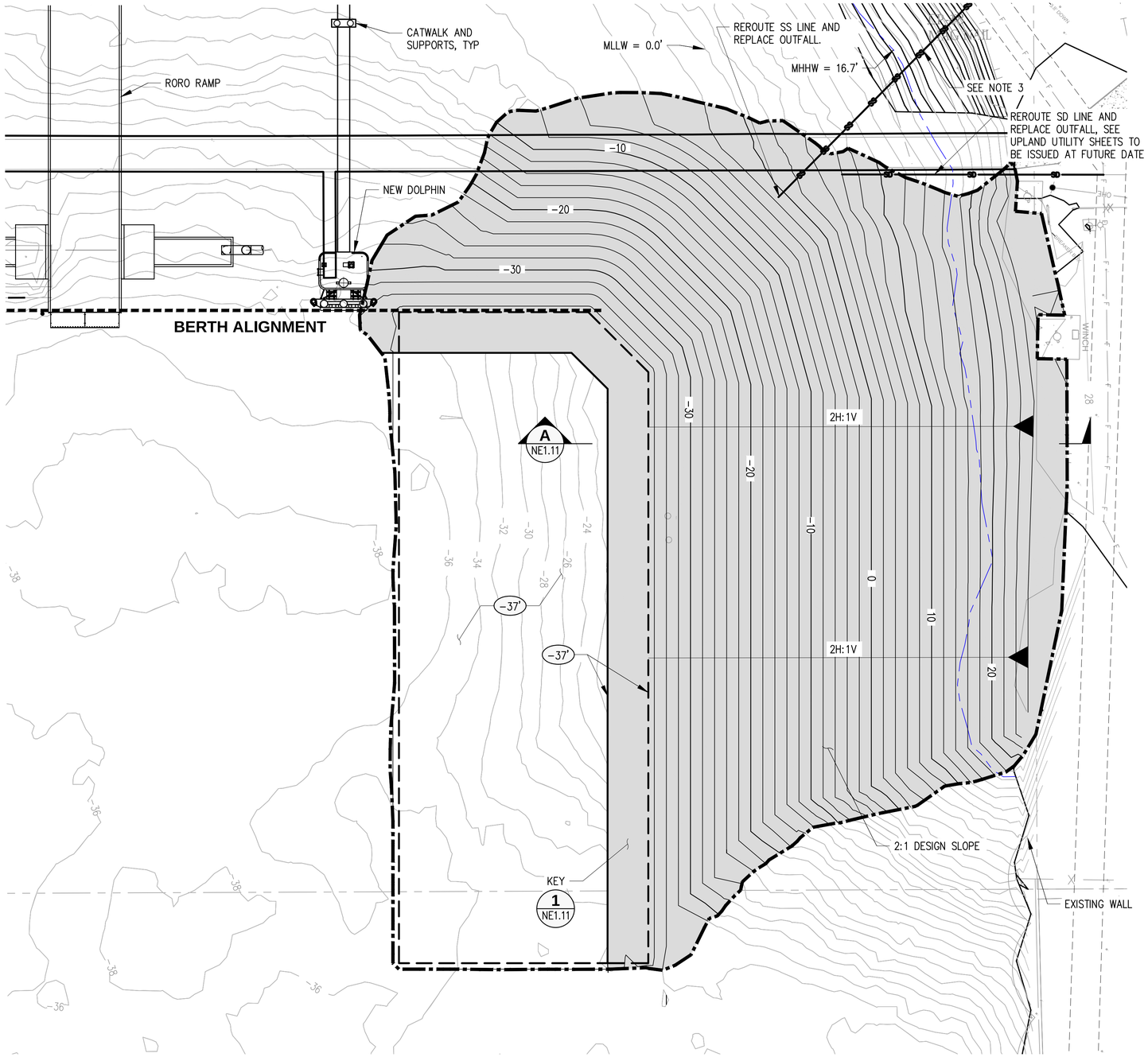

1 **NORTH BERTH EXTENSION SLOPE PROTECTION PLAN**
SCALE: 1" = 20'

NOTES

1. SEE SHEET NE1.11 FOR TYPICAL SLOPE PROTECTION MATERIALS AND THICKNESSES.
2. ELEVATIONS SHOWN ARE IN MLLW DATUM.
3. OUTFALL MAY REQUIRE RECONSTRUCTION OR REROUTE
4. SEE SHEET G4.01 FOR SURVEY AND ALIGNMENT LINE CONTROL.
5. GRADES SHOWN ARE FINISH GRADE CONTOURS.

LEGEND

- CONTRACTOR SECURE WORK AREA
- EXISTING CONTOUR
- EXTENTS OF DREDGE, SEE SHEET C2.01
- APPROXIMATE EXISTING MHHW (EL. +16.7')
- SX — SLOPE PROTECTION CONTROL POINT
- -10' — FINISH GRADE ELEVATION
- REVETMENT SLOPE
- RIPRAP SLOPE PROTECTION

HABITAT FILL AND SLOPE PROTECTION CONTROL POINTS

POINT ID	STATION	OFFSET
S10		
S11		
S12		
S13		
S14		
S15		
S16		

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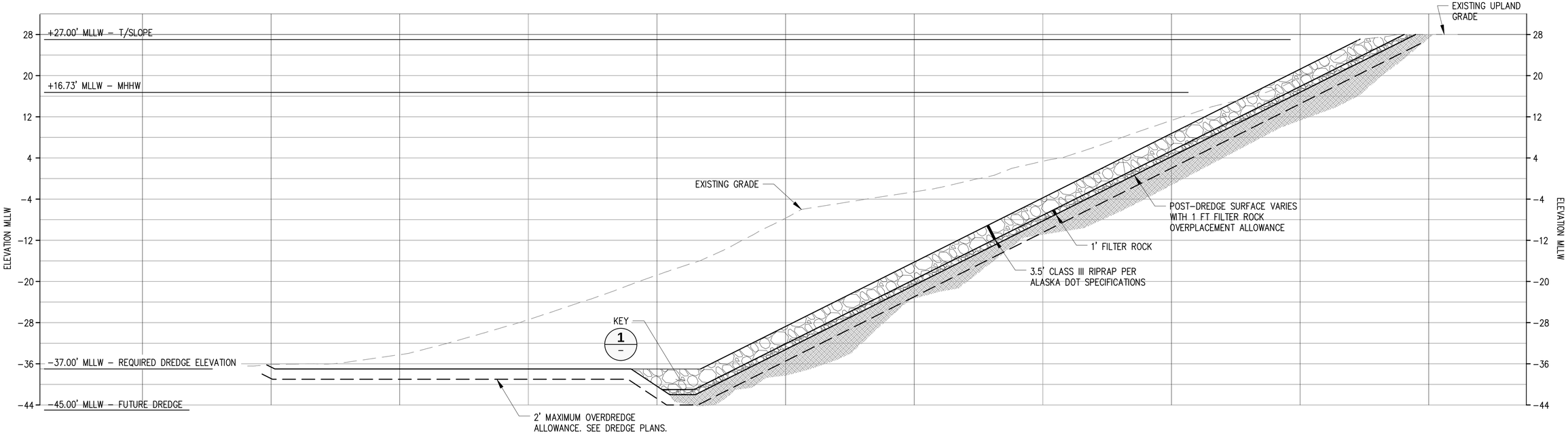
NORTH BERTH EXTENSION SLOPE PROTECTION PLAN

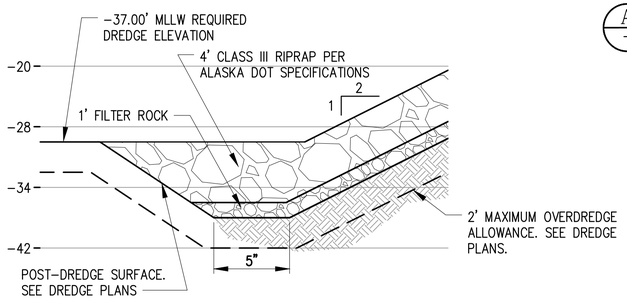
DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	NE1.10
SHEET NO.	OF

Plotted: Jan 27, 2023 – 11:22am dyu Layout: NE1.10
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_NE1.10 North Berth Extension Slope Protection Plan.dwg



A – NORTH BERTH EXTENSION SLOPE PROTECTION & BACKFILL SECTION

SCALE: 1" = 10'



1 – KEY BACKFILL DETAIL

SCALE: 1" = 5'

0 10 20 30

SCALE IN FEET

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SKAGWAY, ALASKA

NORTH BERTH EXTENSION
SLOPE PROTECTION SECTIONS AND DETAIL

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: ED	SCALE: AS SHOWN
CHECKED: RR	DATE: 01/27/2023
DRAWING NO.	NE1.11
SHEET NO.	OF

Plotted: Jan 27, 2023 – 11:22am dyu Layout: NE1.11
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_NE1.11 North Berth Extension Slope Protection Section & Details.dwg

GENERAL NOTES

1. UNLESS SPECIFIED OTHERWISE, ALL MATERIAL AND EQUIPMENT INCORPORATED INTO THIS PROJECT SHALL BE NEW. CHANGES TO MATERIALS, STRUCTURES, HYDRAULIC, OR ELECTRICAL DESIGN AS SHOWN ON THE DRAWINGS SHALL BE SUBMITTED BY THE SUPPLIER FOR EXPLICIT WRITTEN APPROVAL OF THE ENGINEER. ALL MATERIALS SHALL CONFORM TO GOOD WORKMANSHIP. ACCEPTABLE INDUSTRY STANDARDS AND MANUFACTURER RECOMMENDATIONS.
2. ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.
3. DRAWING SCALES ARE PROVIDED AS A CONVENIENCE ONLY. THESE SCALES MAY NOT BE ACCURATE AND SHOULD NOT BE USED TO SET CRITICAL DIMENSIONS. CONTRACTOR SHALL SEEK CLARIFICATION OF ANY CRITICAL DIMENSION NOT FOUND ON THE DRAWING.
4. GEOMETRIC TOLERANCE SHOWN PER ASME Y14.5 LATEST EDITION AND SPECIAL PROVISIONS.
5. THE LOCATION OF ALL UTILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
6. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES IN DIMENSIONS AND ELEVATIONS SHOWN ON THE PLANS PRIOR TO THE COMMENCEMENT OF WORK.
7. BREAK ALL SHARP CORNERS AND EDGES ON FABRICATED STRUCTURES.
8. ALL MACHINED SURFACES TO BE 125 MICROINCHES MAX ROUGHNESS UNO.
9. TOLERANCES LISTED ON THIS SHEET APPLY TO ALL MECHANICAL FEATURES UNLESS OTHERWISE NOTED ON THE DRAWINGS.
10. ADJUST SHOP DIMENSIONING AND TOLERANCES TO ACHIEVE LAYOUT DIMENSION INDICATED AND AVOID UNWORKABLE TOLERANCE STACKUPS.
11. UNLESS NOTED OTHERWISE, LAYOUT DIMENSIONAL TOLERANCES ARE AS FOLLOWS:

FRACTIONAL OR FT-IN MORE THAN 60"	±1/8"
FRACTIONAL OR FT-IN LESS THAN 60"	±1/16"
DECIMAL INCHES "X.X"	±0.06"
DECIMAL INCHES "X.XX"	±0.03"
DECIMAL INCHES "X.XXX"	±0.010"

12. UNLESS NOTED OTHERWISE. DIMENSIONS BETWEEN HOLES AND BETWEEN MACHINED SURFACES IN A SINGLE PART HAVE A TOLERANCE OF ±0.010, FLATNESS OF MACHINED SURFACES IS ±0.020". CLEARANCE HOLES FOR 3/8" BOLTS OR LARGER ARE 1/16" LARGER IN DIAMETER THAN THE BOLT. CLEARANCE HOLES FOR 1/4" BOLTS OR SMALLER ARE 1/32" LARGER IN DIAMETER THAN THE BOLT.
13. UNLESS NOTED OTHERWISE, TOLERANCE ON ANGULAR DIMENSIONS IS ±0.5 DEGREES. FEATURES OF PARTS AND ASSEMBLIES THAT ARE INDICATED AS PARALLEL OR PERPENDICULAR MUST BE PARALLEL OR PERPENDICULAR WITHIN THIS TOLERANCE.
14. UNLESS OTHERWISE NOTED, WELDMENTS AND OTHER METAL FABRICATIONS SHALL BE STEEL AND THE MATERIALS REQUIRED SHALL CONFORM WITH THE SECTION "STEEL – MECHANICAL STRUCTURES" ON THIS SHEET. STAINLESS STEEL FEATURES WILL BE SPECIFICALLY IDENTIFIED ON THE PLAN SHEET.
15. THE NOTES ON THIS SHEET SHALL APPLY TO ALL "M" DRAWING SHEETS..

DESIGN CODES

1. AASHTO LRFD MOVABLE HIGHWAY BRIDGE DESIGN SPECIFICATIONS, 2ND EDITION, WITH 2008, 2010, 2011, 2012, 2014, AND 2015 INTERIM REVISIONS.
2. ASME 831.5.
3. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS (AASHTO LRFD), 8TH EDITION 2017.
4. AASHTO LRFD GUIDE SPECIFICATIONS FOR DESIGN OF PEDESTRIAN BRIDGES, 2009, WITH 2015 INTERIM REVISION.

DESIGN LOADING

1. PEDESTRIAN LIVE LOAD IS 90 PSF
2. SEISMIC DESIGN:
   A. DESIGN LEVEL EARTHQUAKE: 7% EXCEEDENCE IN 75 YEAR (1000 YEAR RETURN PERIOD).
   B. OPERATIONAL CLASSIFICATION: OTHER (NOT CRITICAL OR ESSENTIAL)
   C. SITE CLASS D, SESMIC DESIGN CATEGORY D.
3. DEAD LOAD:
   A. STEEL 490 PSF

STEEL - MECHANICAL STRUCTURES

1. W-SECTIONS AND C-CHANNELS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 50, MIN REQ'D YIELD STRENGTH FY = 50 KSI.
2. PLATES, BARS, RODS AND ANGLES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 50 MIN REQ'D YIELD STRENGTH FY = 50 KSI UNO.
3. HOLLOW STRUCTURAL SECTIONS (HSS) SHALL CONFORM TO THE REQUIREMENTS OF ASTM A1085 (FY = 50 KSI).
4. UNLESS NOTED OTHERWISE, ALL MECHANICAL COMPONENTS (M-SHEETS) SHALL BE CARBON STEEL.
5. ALL MECHANICAL STEEL STRUCTURES SHALL BE FABRICATED IN ACCORDANCE WITH THE APPROVED SHOP DRAWINGS AND REFERENCE STANDARDS.
6. RADIUS ALL SHARP EDGES TO R1/16".
7. SUBMIT THE FOLLOWING FOR REVIEW:
   - SHOP DRAWINGS OF STEEL WELDMENTS INCLUDING WELDING AND FASTENER INFORMATION.
   - MACHINING DRAWINGS OF STEEL STRUCTURES SHOWING TOLERANCES AND FITS FOR ALL CRITICAL FEATURES.
   - ASSEMBLY DRAWINGS OF STEEL STRUCTURES SHOWING FIT AND ALIGNMENT OF ALL COMPONENTS.

WELDING - STEEL

1. ALL HOLLOW STRUCTURAL SECTIONS SHALL BE CAPPED AT THEIR ENDS WITH 1/4" INCH PLATES WITH SEAL WELD GROUND SMOOTH, UNLESS NOTED OTHERWISE.
2. ALL WELDING SHALL CONFORM TO AWS D1.1-2015 STRUCTURAL WELDING CODE AND SHALL BE PERFORMED BY AWS-CERTIFIED WELDERS.
3. WELD FILLER MATERIAL FOR HOLLOW STRUCTURAL SECTIONS SHALL CONFORM TO THE CVN REQUIREMENTS AWS D1.5 TABLE 12.1.
4. WELD STAINLESS STEEL SHALL CONFORM TO AWS D1.6 – STRUCTURAL WELDING CODE – STAINLESS STEEL (LATEST REVISIONS). USE ONLY WELDERS CURRENTLY CERTIFIED FOR THE WELDS AND POSITIONS USED.
5. WELD STAINLESS TO STAINLESS, OR STAINLESS TO CARBON OR ALLOY STEELS, WITH TYPE 316L LOW HYDROGEN ELECTRODES.
6. THE TESTING AGENCY SHALL SEND COPIES OF ALL TESTING AND INSPECTION REPORTS DIRECTLY TO THE FABRICATOR AND THE ENGINEER. ANY MATERIALS WHICH FAIL TO MEET THE PROJECT SPECIFICATIONS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
7. ALL WELDS SHALL BE 100% VISUALLY INSPECTED.
8. AT LEAST 30% OF EACH TYPE AND SIZE OF FILLET WELD AND PJP GROOVE WELD SHALL BE TESTED BY MAGNETIC PARTICLE TESTING (MT).

FASTENERS

1. ALL FASTENERS ON THE DRAWINGS IDENTIFIED AS BOLTS SHALL BE ASTM F3125. HARDEN WASHERS ARE REQUIRED UNDER BOTH THE BOLT HEAD AND THE NUT AND SHALL BE PER ASTM F436G TYPE 1. HEAVY HEX NUTS SHALL BE PER ASTM A563 GRADE DH LUBRICATED. ALL COMPONENTS SHALL BE HOT DIP GALVANIZED.
2. ALL HOT DIP GALVANIZED NUTS AND TAPPED HOLES USED WITH HOT DIP GALVANIZED ASTM F3125 BOLTS SHALL BE OVERSIZED IN ACCORDANCE WITH ASTM A563 STANDARD SPECIFICATION FOR CARBON AND ALLOY NUTS.
3. ALL FASTENERS IDENTIFIED ON THE DRAWINGS AS HEX HEAD CAP SCREWS (HHCS) SHALL BE FASTENAL HEX CAP SCREWS. SAE J429 GRADE 5 OR GRADE 9. "ECOGUARD 1000 HOUR CORROSION RESISTANT GRAY/SILVER OR APPROVED EQUAL UNLESS NOTED OTHERWISE. WHERE REQUIRED, PROVIDE FASTENAL HEX NUTS, GRADE 5 OR GRADE 9 ECOGUARD" 1000 HOUR CORROSION RESISTANT GRAY/SILVER OR APPROVED EQUAL. HARDENED WASHERS SHALL BE PROVIDED UNDER ALL CAP SCREW HEADS AND NUTS AND SHALL BE FASTENAL, SAE GRADE 8 ECOGUARD" 1000 HOUR CORROSION RESISTANT GRAY/SILVER OR APPROVED EQUAL. AVAILABILITY AND LEAD TIMES MAY VARY CONTRACTOR SHALL PLAN ACCORDINGLY TO FACILITATE CONSTRUCTION.
4. ALL FASTENERS IDENTIFIED ON THE DRAWINGS AS SOCKET HEAD CAP SCREWS (SHCS) SHALL BE FASTENAL SOCKET CAP SCREWS. ASTM A574 GRADE 9. ECOGUARD" 1000 HOUR CORROSION RESISTANT GRAY/SILVER OR APPROVED EQUAL. WHERE REQUIRED, PROVIDE FASTENAL HEX NUTS, GRADE 9. ECOGUARD" 1000 HOUR CORROSION RESISTANT GRAY/SILVER OR APPROVED EQUAL. HARDENED WASHERS SHALL BE PROVIDED UNDER ALL CAP SCREW HEADS AND NUTS AND SHALL BE FASTENAL. SAE GRADE 8, ECOGUARD" 1000 HOUR CORROSION RESISTANT GRAY/SILVER OR APPROVED EQUAL. AVAILABILITY AND LEAD TIMES MAY VARY. CONTRACTOR TO VERIFY ACCORDINGLY TO FACILITATE CONSTRUCTION.
5. ALL FASTENERS IDENTIFIED ON THE DRAWINGS AS STAINLESS STEEL (SS) HEX HEAD CAP SCREWS (HHCS) SHALL BE ASTM A593. ALLOY GROUP 1 (18-8 STAINLESS STEEL). CONDITION CW, WHERE REQUIRED, PROVIDE 18-8 STAINLESS STEEL HEX HUT PER ASTM F594, GROUP 1, CONDITION CW. FLAT WASHERS SHALL BE PROVIDED UNDER ALL SS CAP SCREW HEADS AND NUTS AND SHALL BE PER ASTM A380, 18-8 STAINLESS STEEL.
6. ALL FASTENERS IDENTIFIED ON THE DRAWINGS AS STAINLESS STEEL (SS) SOCKET HEAD CAP SCREWS (SHCS) SHALL BE ASTM A574. ALLOY GROUP 1 (18-8 STAINLESS STEEL). CONDITION CW. WHERE REQUIRED, PROVIDE 18-8 STAINLESS STEEL HEX NUT PER ASTM F594, GROUP 1, CONDITION CW. FLAT WASHERS SHALL BE PROVIDED UNDER ALL SS CAP SCREW HEADS AND NUTS AND SHALL BE PER ASTM A380, 18-8 STAINLESS STEEL.
7. INSTALL ALL NUTS, CAP SCREWS AND BOLTS LARGER THAN 7/8" USING LOCTITE "2047" THREAD LOCKER AND FOR SMALLER SIZES USE LOCTITE "263" THREAD LOCKER OR APPROVED EQUAL.
8. PRETENSION ALL MECHANICAL FASTENERS TO 75% OF THE FASTENERS PROOF LOAD USING A CALIBRATED TORQUE WRENCH. TAKE CARE TO NOT OVER TENSION FASTENERS AS THE THREAD LOCKING COMPOUND MAY REDUCE FRICTIONAL FORCES BETWEEN THE MATING THREADED COMPONENTS.
9. DO NOT REUSE FASTENERS AFTER THEY HAVE BEEN TENSIONED. WHERE FASTENERS MUST BE REMOVED TO FACILITATE TRANSPORT OF THE WORK TO THE SITE. UNCOATED ASTM F3125 OR SAE GRADE 8 FASTENERS ALONG WITH MATCHING WASHERS AND NUTS MAY BE USED TO SUPPORT SHOP FIT-UP AND TESTING OF THE SYSTEM. THESE FASTENERS SHOULD BE DISCARDED AFTER TESTING IS COMPLETE AND REPLACED WITH COMPONENTS MEETING THE REQUIREMENTS ABOVE.
10. ALL THREADED INSERTS SHALL BE SELF-LOCKING INSERTS COMPLYING WITH NASM 8846, MA1565 AND MIL-N-25027. INSERT MATERIAL SHALL BE NITRONIC 60 PER UNS 521800 AND SHALL BE COATED WITH A DRY FILM LUBRICANT PER AS 5272 (MIL-L 46010). PARENT MATERIAL SHALL BE PREPARED TO INSTALL THE INSERT AND THEN COATED WITH IRIDITE 14 (MIL-C-5541). INSERTS SHALL BE INSTALLED AS RECOMMENDED BY THE INSERT MANUFACTURER.
11. CONCRETE ANCHORS SHALL BE AS IDENTIFIED ON THE PLANS.

COATING

1. STEEL MECHANICAL STRUCTURES SHALL BE COATED IN ACCORDANCE WITH THE SPECIAL PROVISIONS.
2. STAINLESS STEEL COMPONENTS AND STAINLESS STEEL BEARING SURFACES SHALL NOT BE COATED OR HAVE ZINC APPLIED. WHERE STAINLESS STEEL COMPONENTS ARE WELDED TO CARBON STEEL STRUCTURES. THE COATING SYSTEMS SHALL WRAP FROM THE CARBON STEEL SURFACE OVER THE WELD AND PAST THE HEAT AFFECTED ZONE ON THE STAINLESS STEEL MATERIAL.

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SKAGWAY, ALASKA

MECHANICAL NOTES

DRAWN:	TRL	PROJECT NO.:	2100135
DESIGN:	ED	SCALE:	AS SHOWN
CHECKED:	RR	DATE:	01/27/2023
DRAWING NO.		**M1.00**	
SHEET NO.		**SHT**	OF

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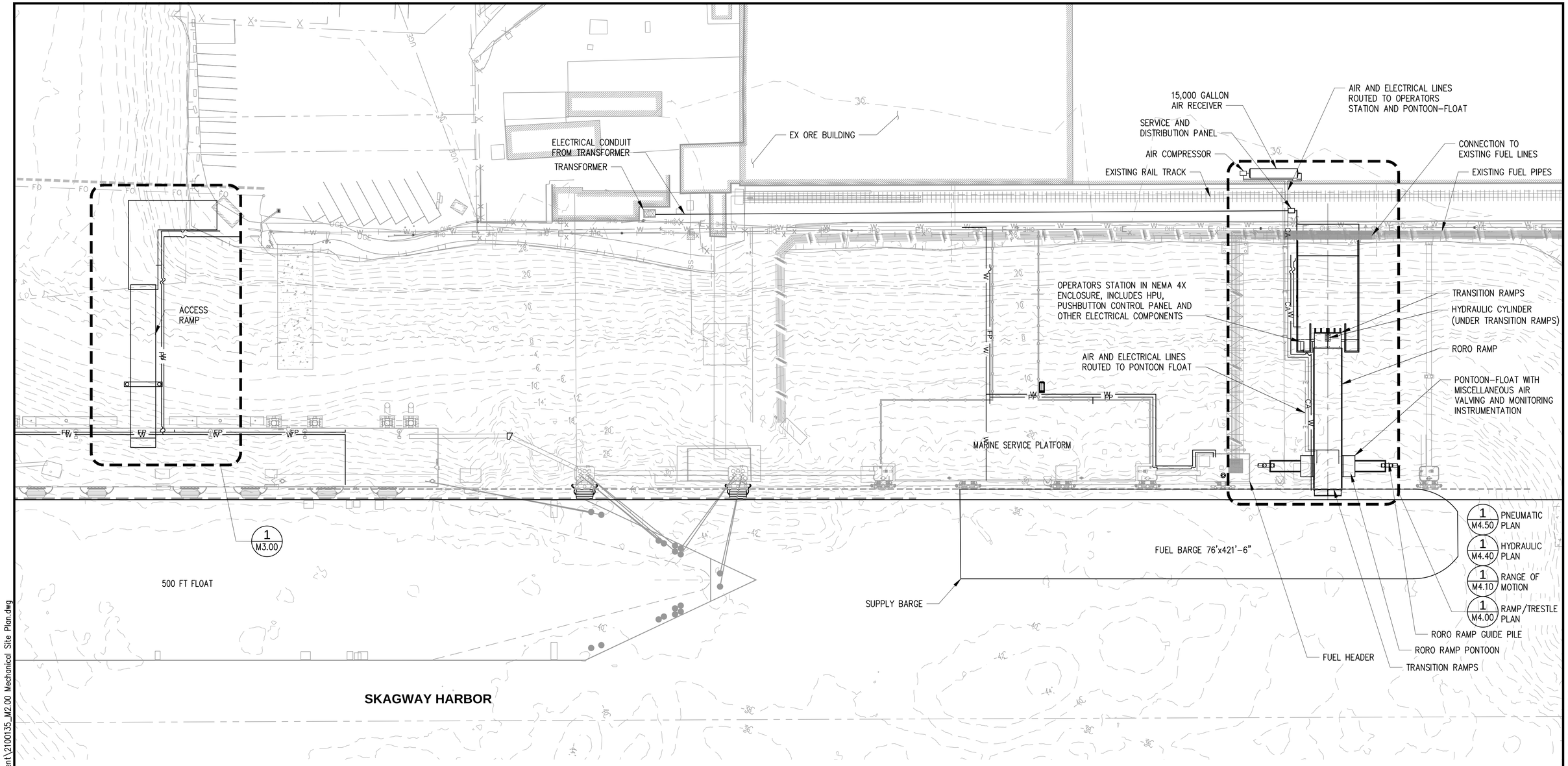
Plotted: Jan 27, 2023 - 2:28pm jfelton Layout: 2100135_M1.00 MECHANICAL NOTES
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_M1.00 Mechanical Notes.dwg



1 – MECHANICAL SITE PLAN

SCALE: 1" = 500'

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 – 9:42am jfelton Layout: M2.00
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_M2.00 Mechanical Site Plan.dwg

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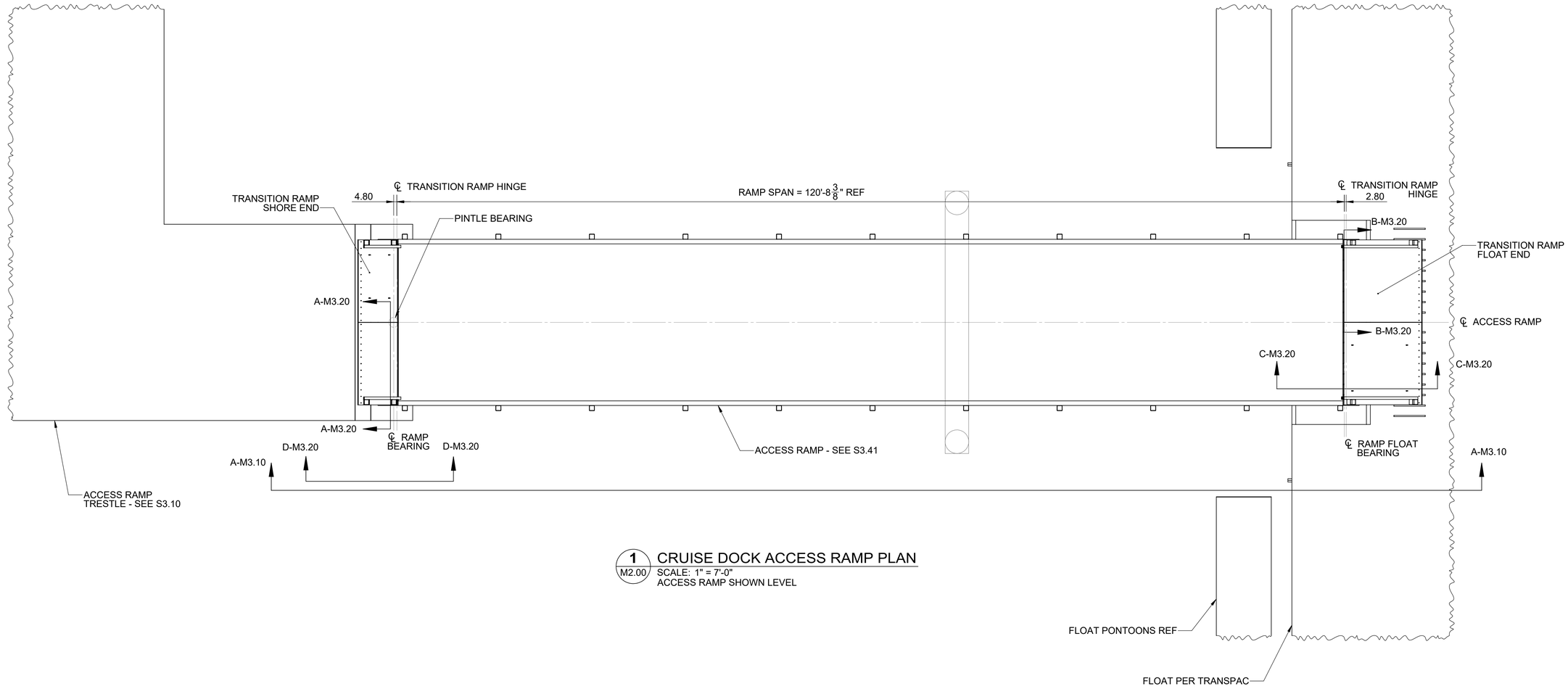
SKAGWAY, ALASKA

MECHANICAL SITE PLAN

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: JLF	SCALE: AS SHOWN
CHECKED: DWH	DATE: 01/27/2023
DRAWING NO.	**M2.00**
SHEET NO.	OF



1 / M2.00 CRUISE DOCK ACCESS RAMP PLAN

SCALE: 1" = 7'-0"

ACCESS RAMP SHOWN LEVEL

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ORE PENINSULA REDEVELOPMENT

SKAGWAY, ALASKA

CRUISE DOCK FLOAT AND ACCESS TRESTLE PLAN

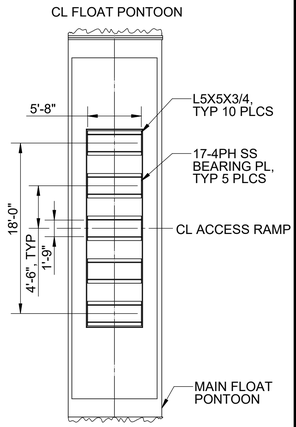
DRAWN:	BG	PROJECT NO.:	2100135
DESIGN:	BG	SCALE:	AS SHOWN
CHECKED:	JLF	DATE:	01/27/2023
DRAWING NO.		M3.00	
SHEET NO.		OF	

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Friday, January 27, 2023 10:40:12 AM bgregor Layout: M3.00
C:\Users\bgregor\KPFF, Inc\KPFF SPRC 2021 Projects - 1\2021\00135 Skagway Ore Peninsula Multi-Use Dock\2.15 Engineering\Access Ramp\Solidworks\BGM3.00 CRUISE DOCK FLOAT AND ACCESS TRESTLE PLAN

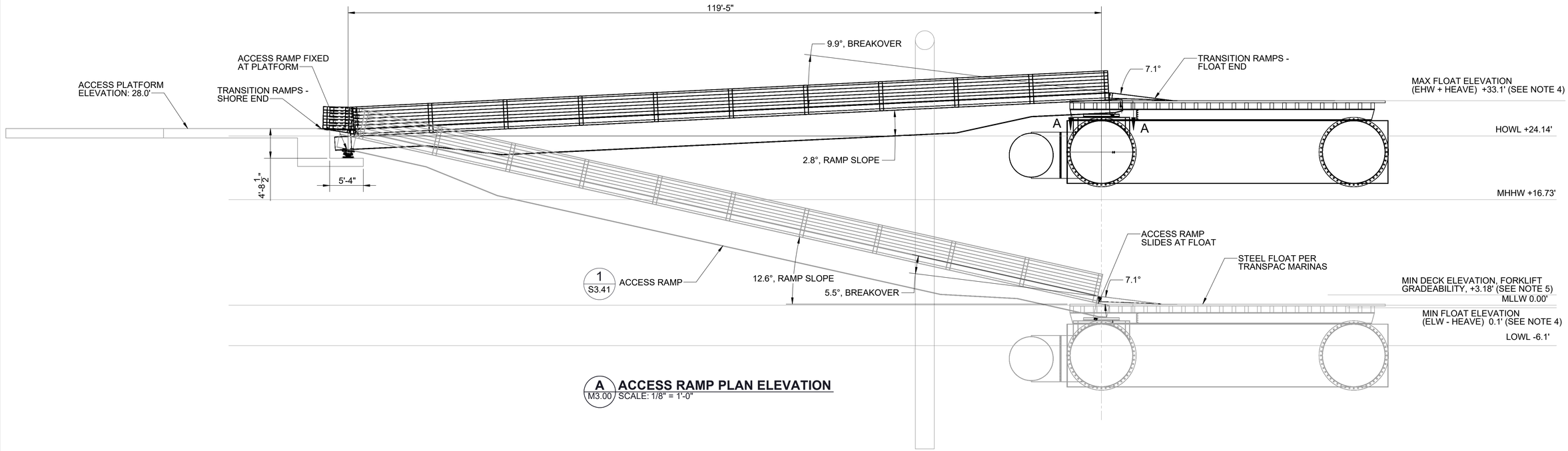
ACCESS RAMP NOTES:

1. ACCESS RAMP PROVIDES ACCESS TO FLOAT WITH DECK HEIGHTS RANGING FROM -0.4' MLLW TO +33.1' MLLW.
2. DESIGN VEHICLES FOR THE ACCESS RAMP INCLUDE:
   1. FAST ACT EMERGENCY VEHICLES, TYPE EV2
   2. HYSTER FORTIS 50 (S50FT) FORKLIFT OR EQUIVALENT.
   3. AASHTO H-10 TRUCK.
3. RAMP ANGLE RANGES FROM +2.8 DEGREES TO -12.6 DEGREES.
4. THE ALLOWED RANGES OF MOTION MEETING THE DESIGN VEHICLES REQUIRED BREAKOVER AND ACCESS ANGLES ARE THE EXTREME LOW WATER (ELW) AND EXTREME HIGH WATER (EHW) ELEVATIONS, BOTH INCLUDING A 1.6' HEAVE.
5. THE MINIMUM ALLOWED DECK ELEVATION FOR THE HYSTER FORTIS 50 FORKLIFT TO TRAVERSE THE RAMP WHEN IT IS CARRYING ITS RATED LOAD IS +1.6' MLLW.



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

REFERENCE TRANSPAC MARINAS FLOAT FABRICATION DRAWINGS FOR BEARING PLATE DETAILS



A M3.00 ACCESS RAMP PLAN ELEVATION
SCALE: 1/8" = 1'-0"

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Plotted: Friday, January 27, 2023 1:42:05 PM jfelton Layout: M3.10
C:\Users\dgilbert\KPFF, Inc\KPFF SPRC 2021 Projects - 2.15 Engineering\Access Ramp\Solidworks\BG\M3.10 CRUISE DOCK FLOAT AND ACCESS TRESTLE - RANGE OF MOTION

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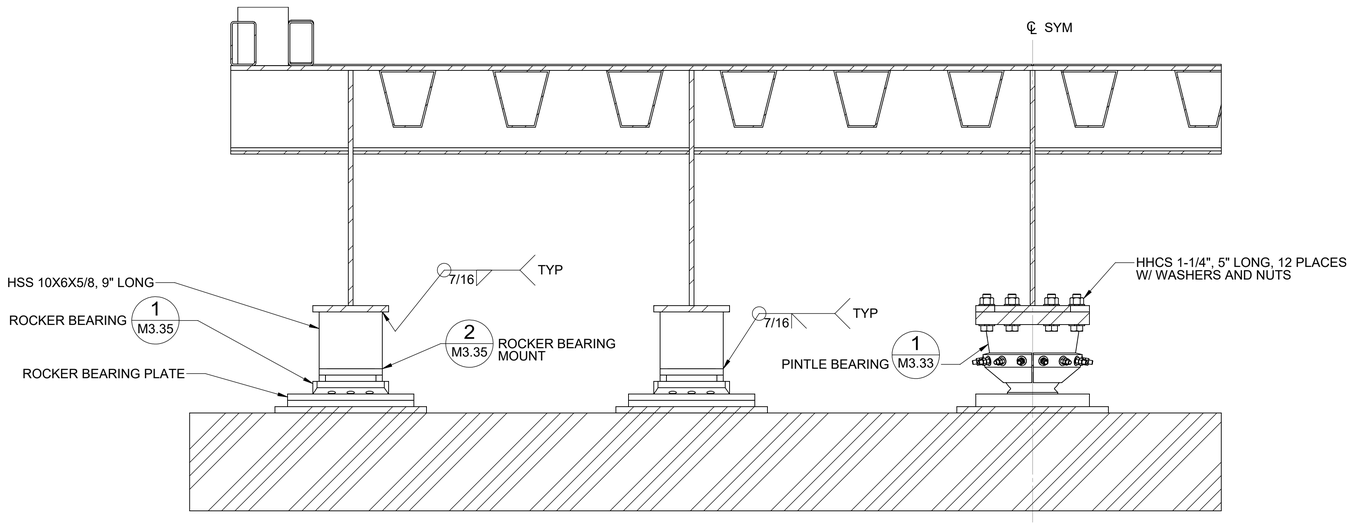
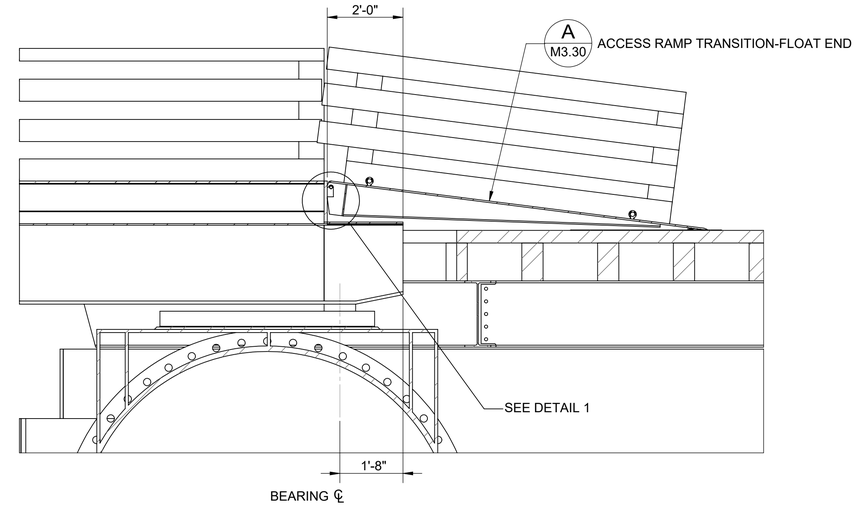
CRUISE DOCK FLOAT AND ACCESS TRESTLE - RANGE OF MOTION

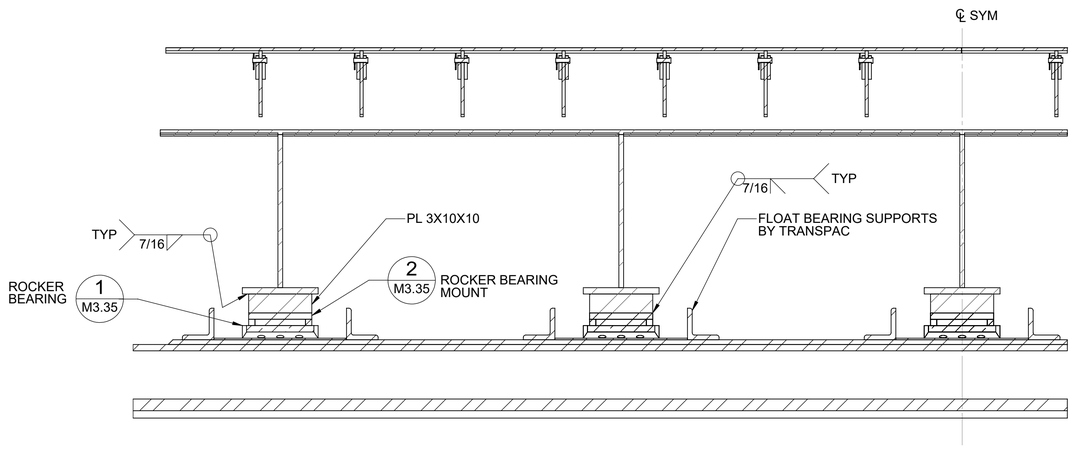
DRAWN: BG	PROJECT NO.:2100135
DESIGN: BG	SCALE: AS SHOWN
CHECKED: JLF	DATE: 01/27/2023
DRAWING NO.	M3.10
SHEET NO.	OF



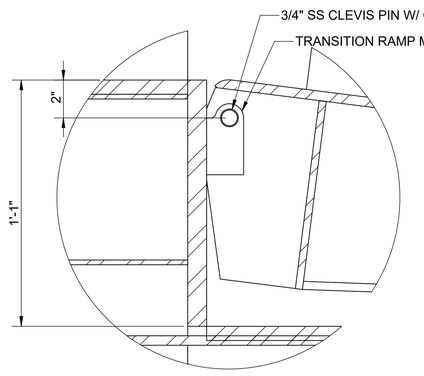
A SECTION
M3.00 SCALE: 1" = 1'-0"



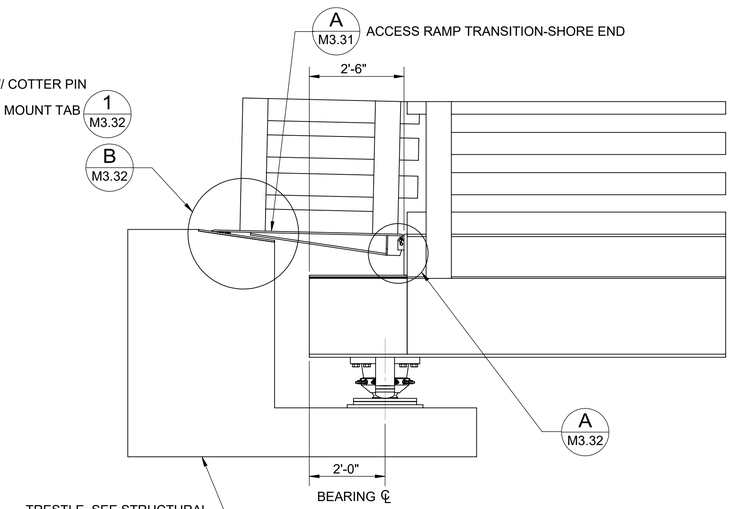
C SECTION
M3.00 SCALE: 1/2" = 1'-0"



B SECTION
M3.00 SCALE: 1" = 1'-0"



1 DETAIL
- SCALE: 3" = 1'-0"



D SECTION
M3.00 SCALE: 1/2" = 1'-0"

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Friday, January 27, 2023 9:10:44 AM bgregor Layout: Sheet1
C:\Users\bgregor\KPFF, Inc\KPFF SPRC 2021 Projects - 100\2100135 Skagway Ore Peninsula Multi-Use Dock\2.15 Engineering\Access Ramp\Solidworks\BG\M3.20 CRUISE DOCK ACCESS RAMP AND TRESTLE SECTIONS

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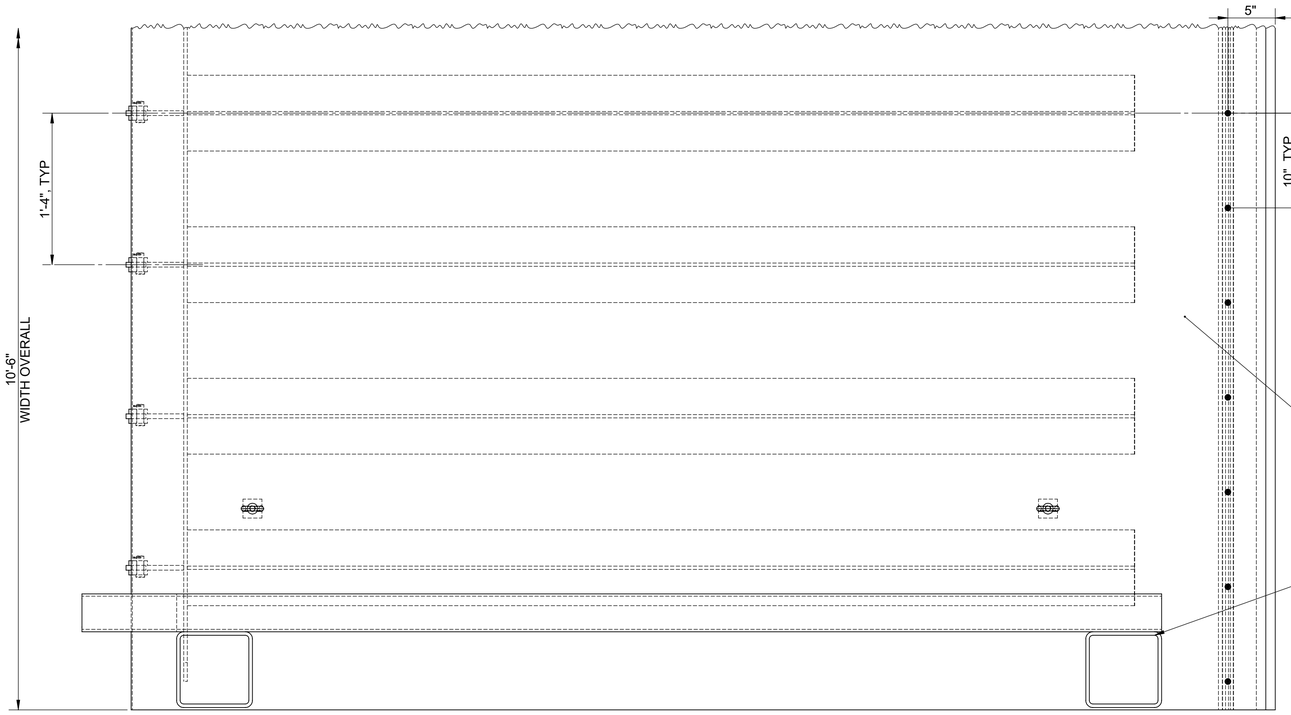
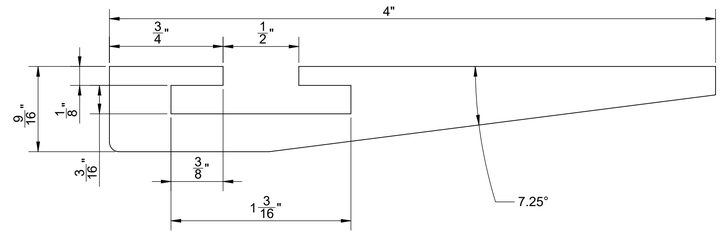
ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

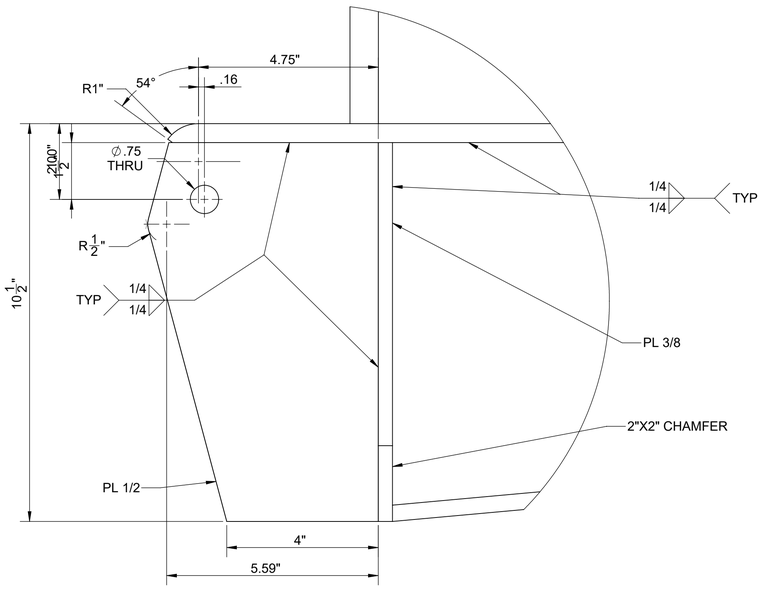
CRUISE DOCK ACCESS RAMP AND TRESTLE SECTIONS

DRAWN:	BG	PROJECT NO.:	2100135
DESIGN:	BG	SCALE:	AS SHOWN
CHECKED:	JLF	DATE:	01/27/2023
DRAWING NO.			M3.20
SHEET NO.		OF	

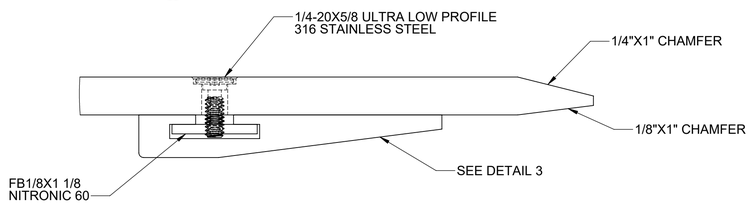




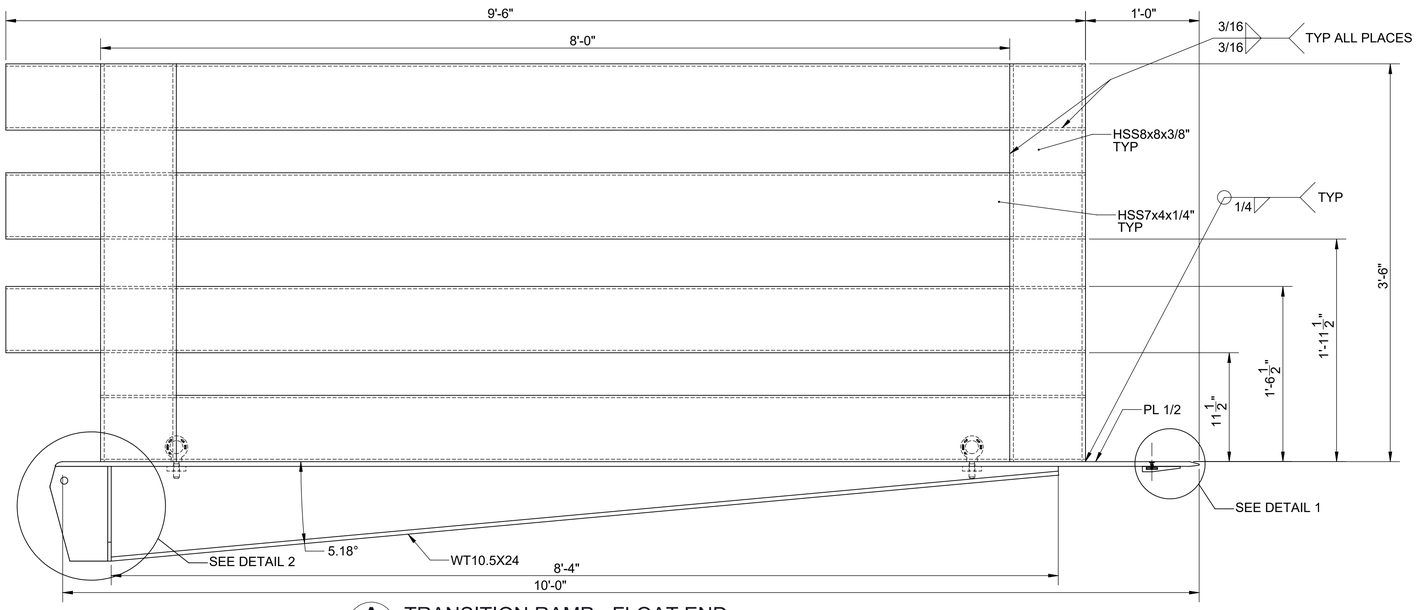
3 - ORKOT PAD - FLOAT END
SCALE: 2'-0" = 1'-0"



2 - DETAIL
SCALE: 6" = 1'-0"



1 - DETAIL
SCALE: 1'-0" = 1'-0"



A / M3.20 - TRANSITION RAMP - FLOAT END
SCALE: 1-1/2" = 1'-0"
RIGHT HAND SHOWN, LEFT HAND OPPOSITE

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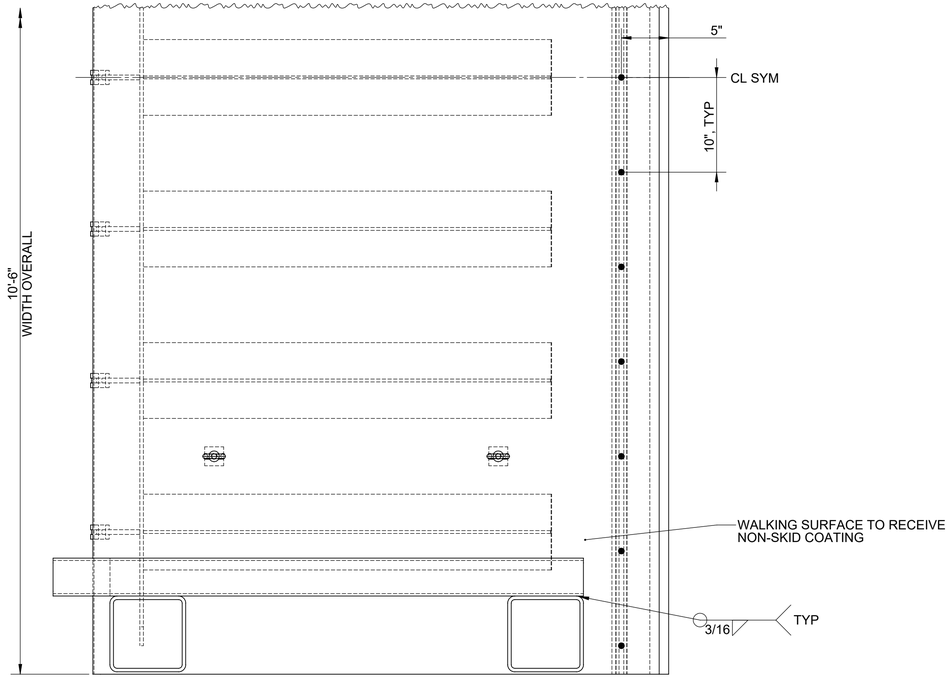
SKAGWAY, ALASKA

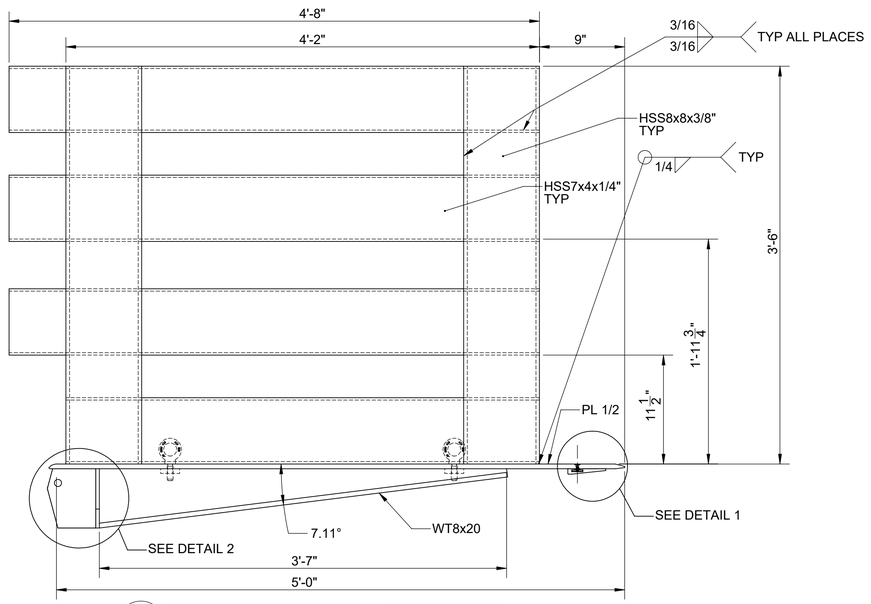
CRUISE DOCK ACCESS RAMP AND TRESTLE DETAILS

DRAWN: BG	PROJECT NO.: 2100135
DESIGN: BG	SCALE: AS SHOWN
CHECKED: JLF	DATE: 01/27/2023
DRAWING NO.	M3.30
SHEET NO.	OF

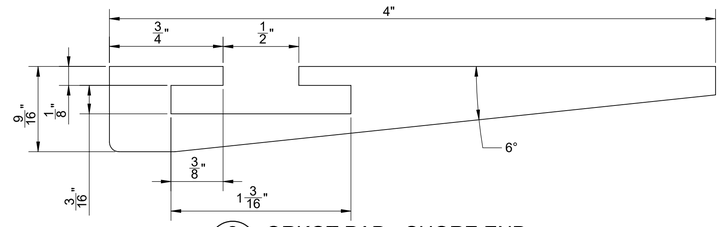
60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Friday, January 27, 2023 9:15AM bgregor Layout: M3.30
C:\Users\bgregor\KPFF, Inc\KPFF SPRC 2021 Projects - 100\2100135 Skagway Ore Peninsula Multi-Use Dock\2.15 Engineering\Access Ramp\Solidworks\BGIM3.30 CRUISE DOCK ACCESS RAMP AND TRESTLE DETAILS

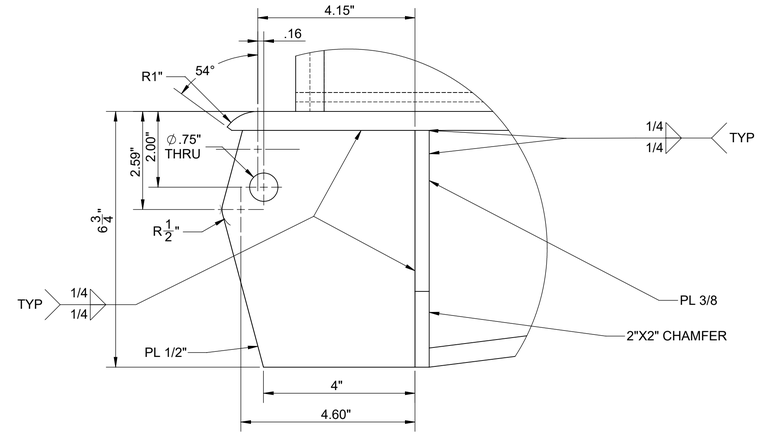




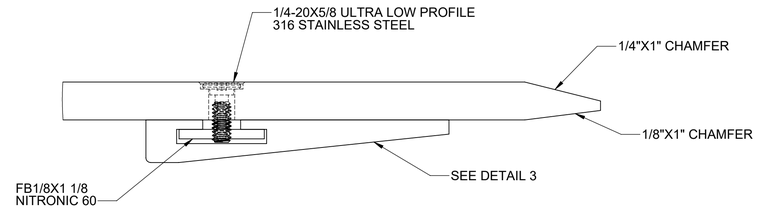
A M3.20 TRANSITION RAMP - SHORE END
SCALE: 1-1/2" = 1'-0"



3 - ORKOT PAD - SHORE END
SCALE: 2'-0" = 1'-0"



2 - DETAIL
SCALE: 6" = 1'-0"



1 - DETAIL
SCALE: 1'-0" = 1'-0"

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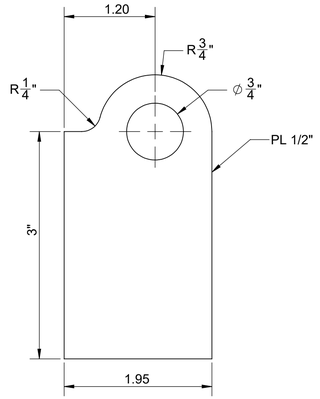
SKAGWAY, ALASKA

CRUISE DOCK ACCESS RAMP AND TRESTLE DETAILS

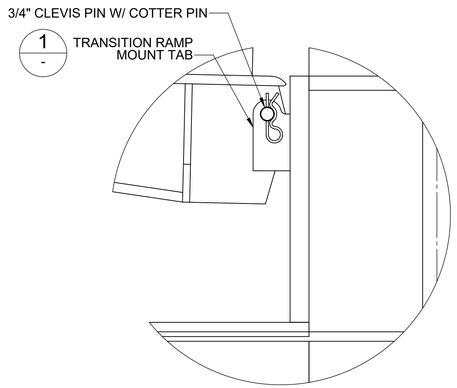
DRAWN:	BG	PROJECT NO.:	2100135
DESIGN:	BG	SCALE:	AS SHOWN
CHECKED:	JLF	DATE:	01/27/2023
DRAWING NO.			M3.31
SHEET NO.		OF	

60% DESIGN - NOT FOR CONSTRUCTION

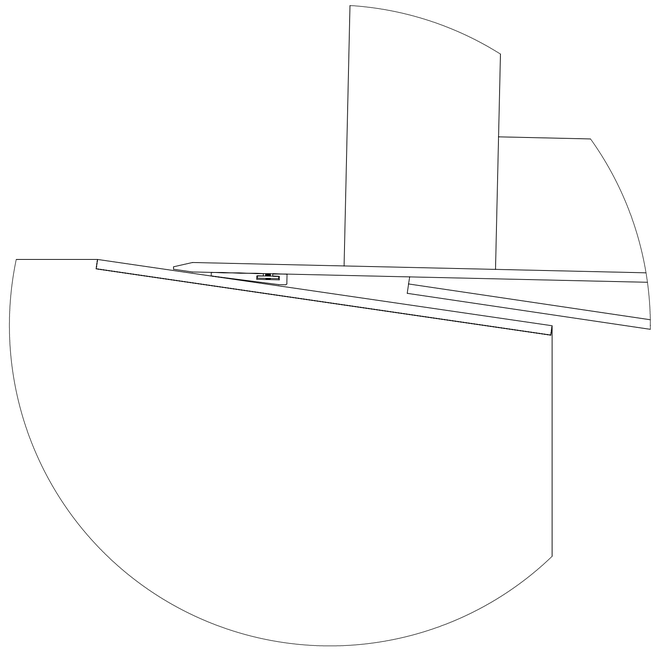
Plotted: Friday, January 27, 9:33:36 PM bgregor Layout: M3.31
C:\Users\bgregor\KPFF, Inc\KPFF SPRC 2021 Projects - 1009210135 Skagway Ore Peninsula Multi-Use Dock\2.15 Engineering\Access Ramp\Solidworks\BGIM3.31 CRUISE DOCK ACCESS RAMP AND TRESTLE DETAILS



1 / - **1** / M3.20 **MOUNT TAB**
SCALE: 3" = 1'-0"



A / M3.20 **DETAIL**
SCALE: 3" = 1'-0"



B / M3.20 **DETAIL**
SCALE: 3" = 1'-0"

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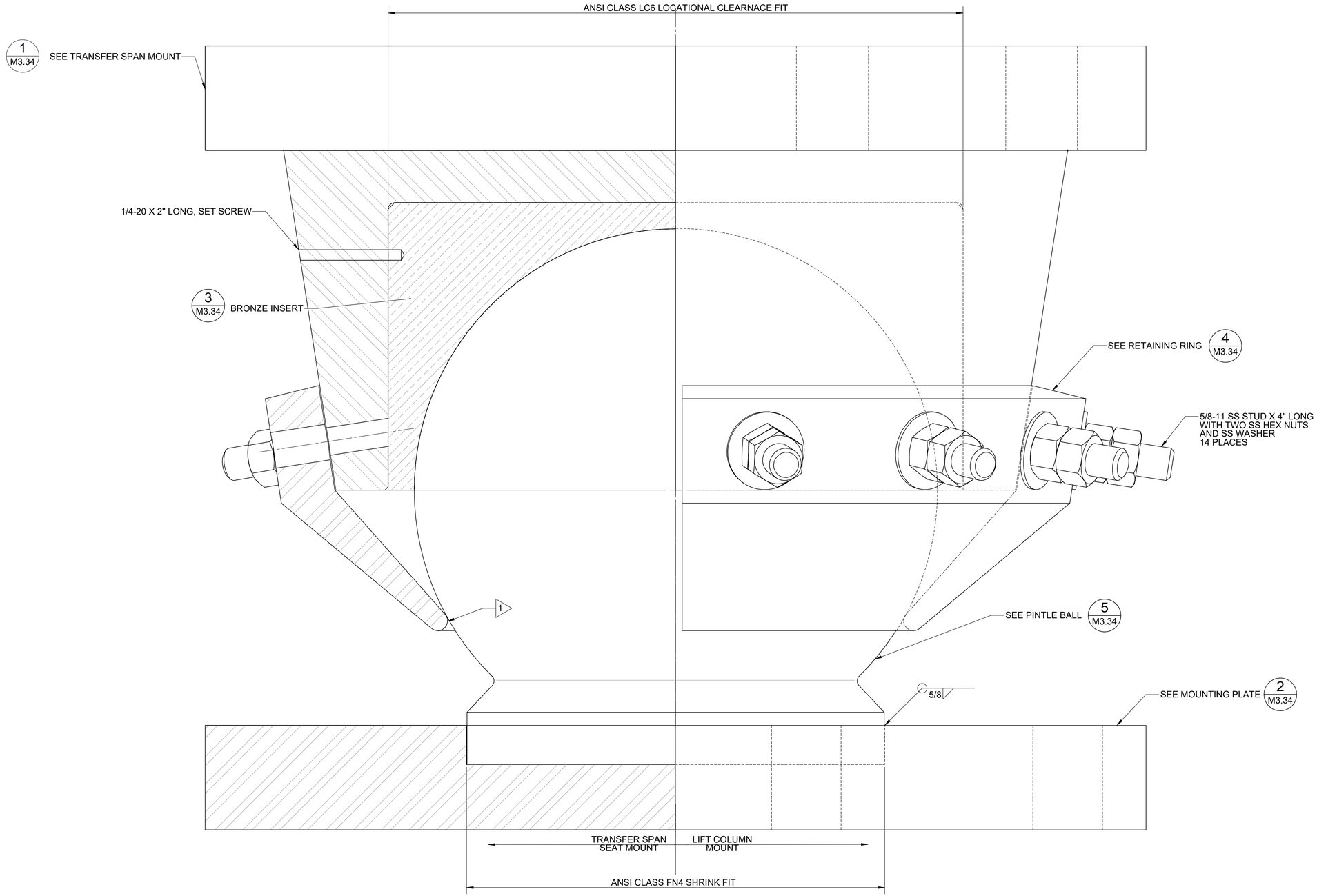
CRUISE DOCK ACCESS RAMP AND TRESTLE DETAILS

DRAWN: BG	PROJECT NO.: 2100135
DESIGN: BG	SCALE: AS SHOWN
CHECKED: JLF	DATE: 01/27/2023
DRAWING NO.	M3.32
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION



1 M3.20 PINTLE BEARING SCALE: 1:1

1 VERIFY 0.03" - 0.05" CLEARANCE AT FINAL ASSEMBLY

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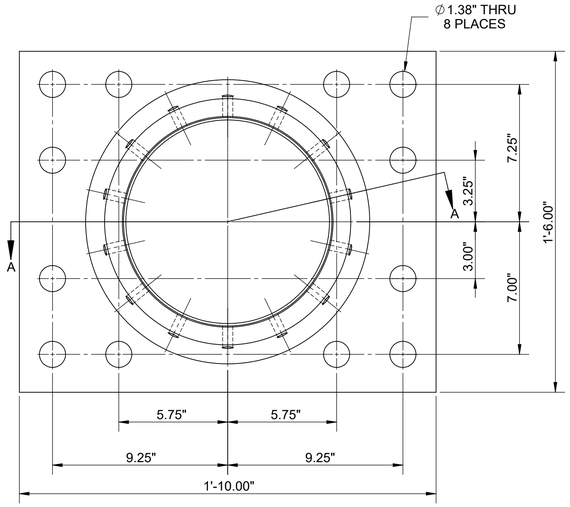
CRUISE DOCK ACCESS RAMP AND TRESTLE DETAILS

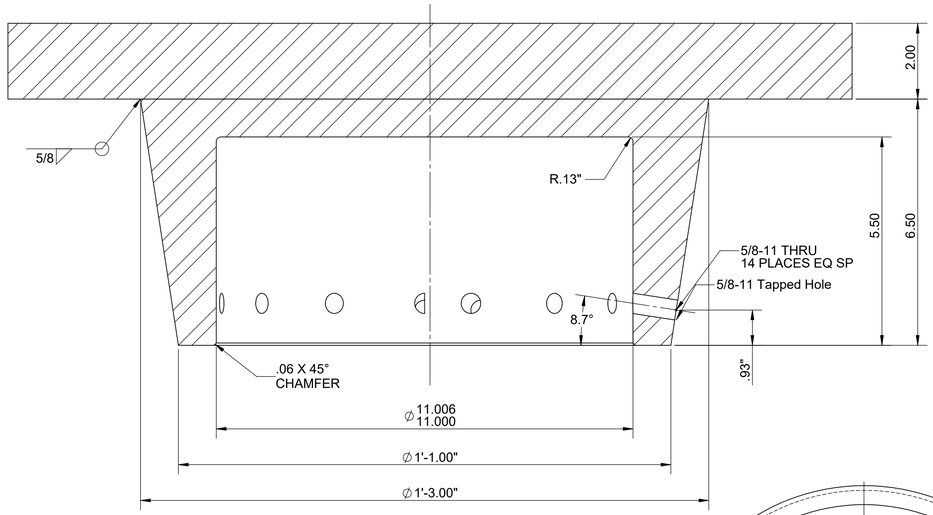
DRAWN:	BG	PROJECT NO.:	2100135
DESIGN:	BG	SCALE:	AS SHOWN
CHECKED:	JLF	DATE:	01/27/2023
DRAWING NO.		M3.33	
SHEET NO.		OF	

60% DESIGN - NOT FOR CONSTRUCTION

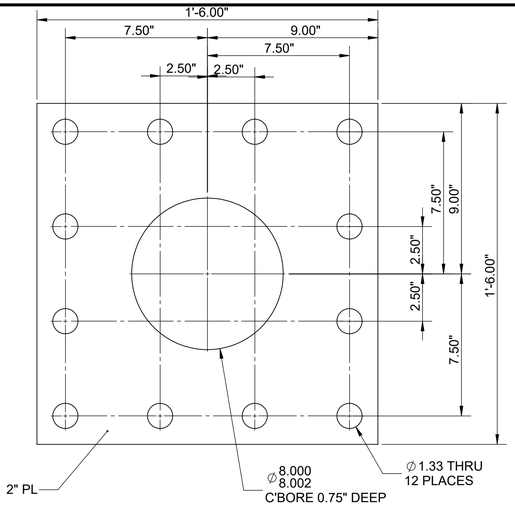
Plotted: Friday January 27, 2023 2:25PM bgregor Layout: M3.33
C:\Users\bgregor\KPFF, Inc\KPFF SPRC 2021 Projects - 100\2100135 Skagway Ore Peninsula Multi-Use Dock\2.15 Engineering\Access Ramp\Solidworks\BG\M3.33 CRUISE DOCK ACCESS RAMP AND TRESTLE DETAILS



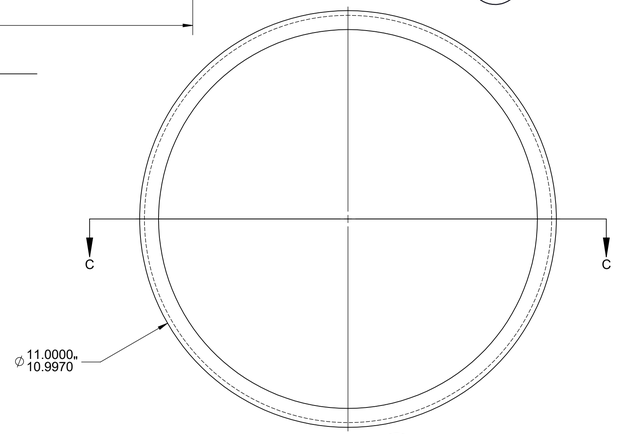
1 TRANSFER SPAN MOUNT
M3.33 SCALE: 3" = 1'-0"



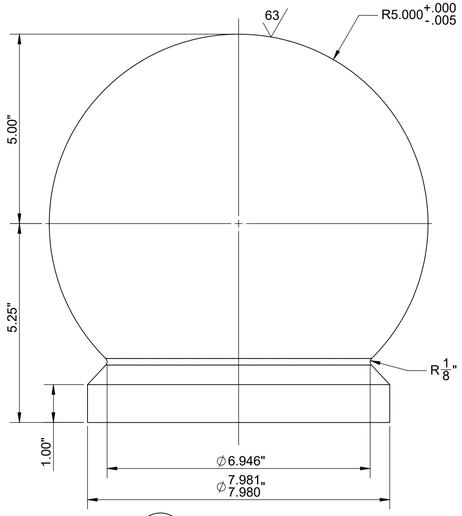
A SECTION
- SCALE: 6" = 1'-0"



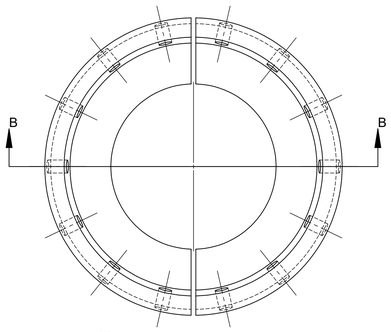
2 MOUNTING PLATE DETAIL
M3.33 SCALE: 3" = 1'-0"



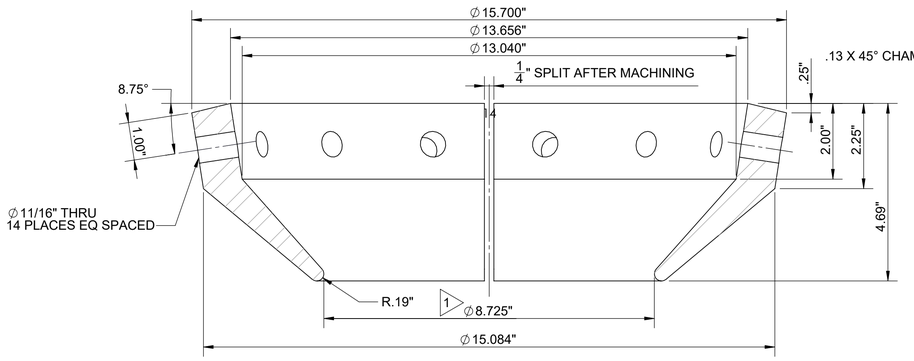
3 BRONZE INSERT
M3.33 SCALE: 6" = 1'-0"



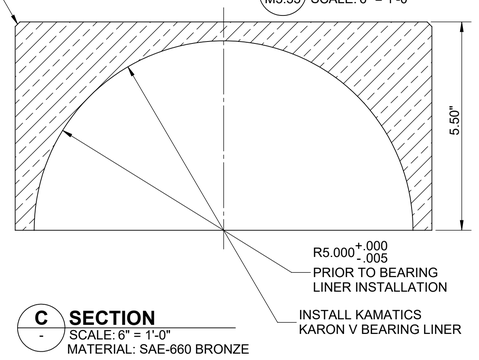
5 PINTLE BALL
M3.33 SCALE: 6" = 1'-0"
316L STAINLESS STEEL



4 RETAINING RING
M3.33 SCALE: 6" = 1'-0"



B SECTION
- SCALE: 6" = 1'-0"
MATERIAL: TYPE 316L STAINLESS



C SECTION
- SCALE: 6" = 1'-0"
MATERIAL: SAE-660 BRONZE

UNLESS OTHERWISE SPECIFIED:
MACHINED DIMENSIONS ARE IN INCH TOLERANCES:
X ± .060
XX ± .030
XXX ± .010
FRACTIONAL ± 1/16"
ANGLES ± .25 DEG
SURFACE FINISH = (MACHINED SURFACES) 125

1 VERIFY 0.03" - 0.05" CLEARANCE AT FINAL ASSEMBLY

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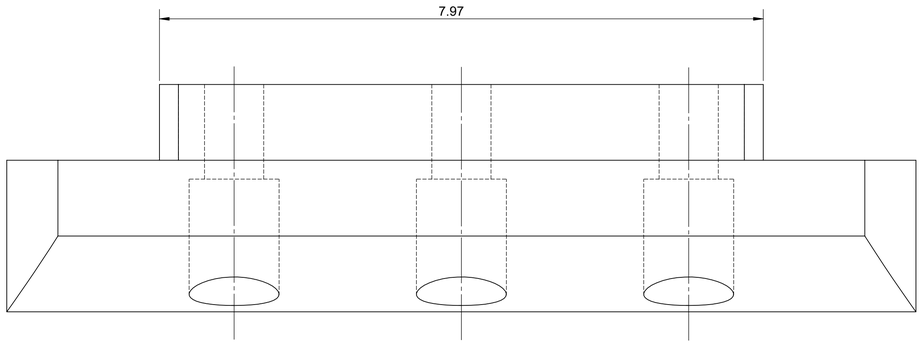
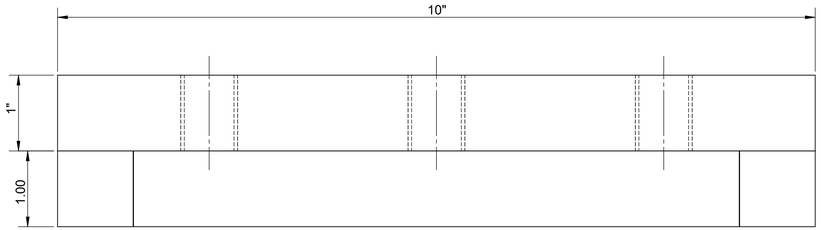
ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

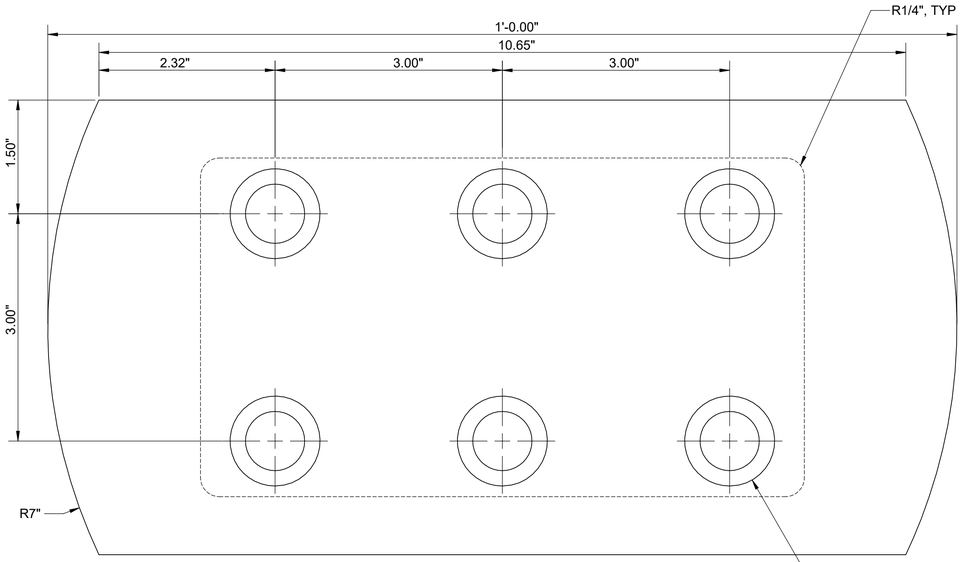
CRUISE DOCK ACCESS RAMP AND TRESTLE DETAILS

DRAWN:	BG	PROJECT NO.:	2100135
DESIGN:	BG	SCALE:	AS SHOWN
CHECKED:	JLF	DATE:	1/27/2023
DRAWING NO.			M3.34
SHEET NO.			OF

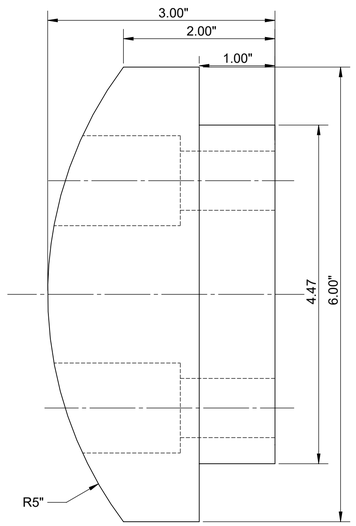
Plotted: Friday, January 27, 2023 2:20pm bgregor Layout: M3.34
C:\Users\bgregor\KPFF, Inc\KPFF SPRC 2021 Projects - 1\2092100135 Skagway Ore Peninsula Multi-Use Dock\2.15 Engineering\Access Ramp\Solidworks\BG\M3.34 CRUISE DOCK

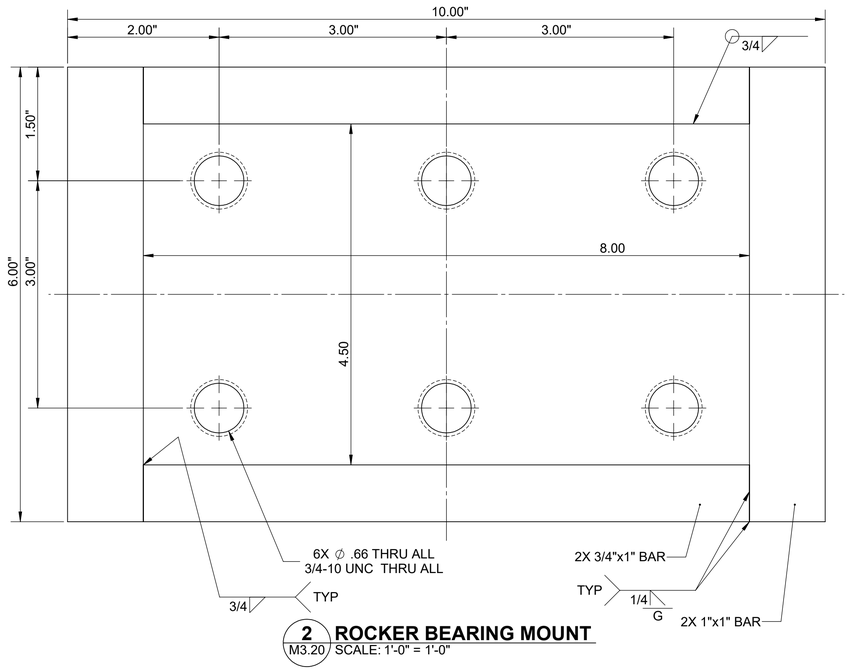






1 ROCKER BEARING
M3.20 SCALE: 1'-0" = 1'-0"
MATERIAL: MATERION TOUGHMET 2 CX90 - COPPER-NICKEL-TIN ALLOY





2 ROCKER BEARING MOUNT
M3.20 SCALE: 1'-0" = 1'-0"

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SKAGWAY, ALASKA

CRUISE DOCK ACCESS RAMP AND TRESTLE DETAILS

DRAWN:	BG	PROJECT NO.:	2100135
DESIGN:	BG	SCALE:	AS SHOWN
CHECKED:	JLF	DATE:	01/27/2023
DRAWING NO.			M3.35
SHEET NO.		OF	

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Plotted: Friday, January 27th, 12:25pm bgregor Layout: M3.35
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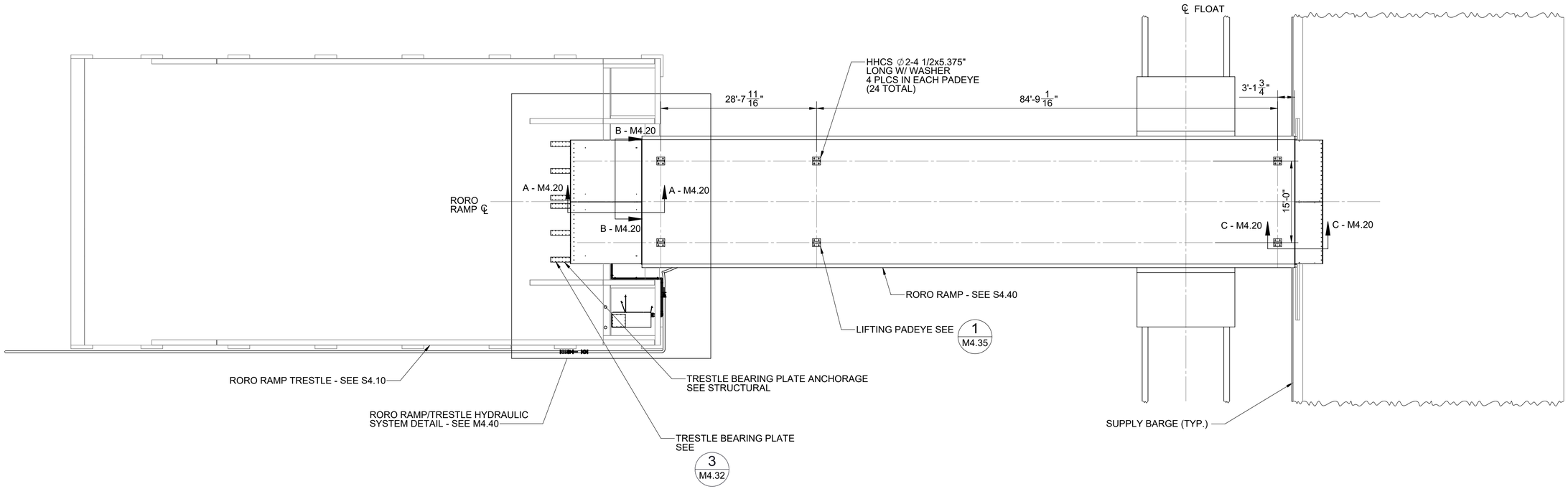

1 M2.00 RORO RAMP AND TRESTLE PLAN

SCALE: 1" = 10'-0"
ROTATED 90° CCW

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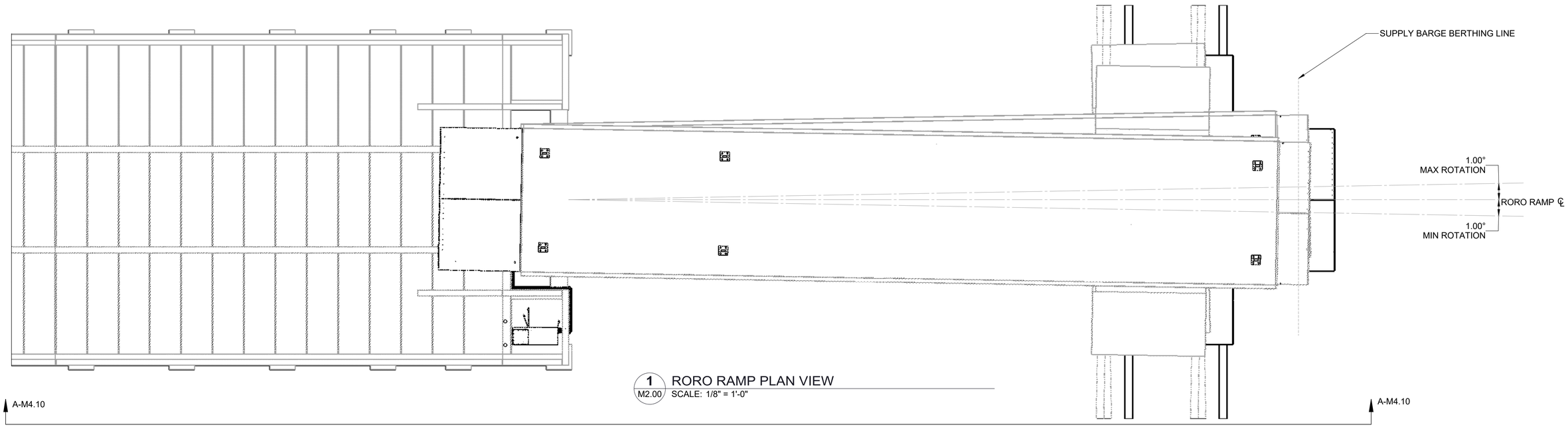
RORO RAMP AND ACCESS TRESTLE PLAN

DRAWN:	BBB	PROJECT NO.:	2100135
DESIGN:	MK	SCALE:	AS SHOWN
CHECKED:	JLF	DATE:	01/27/2023
DRAWING NO.		M4.00	
SHEET NO.		OF	

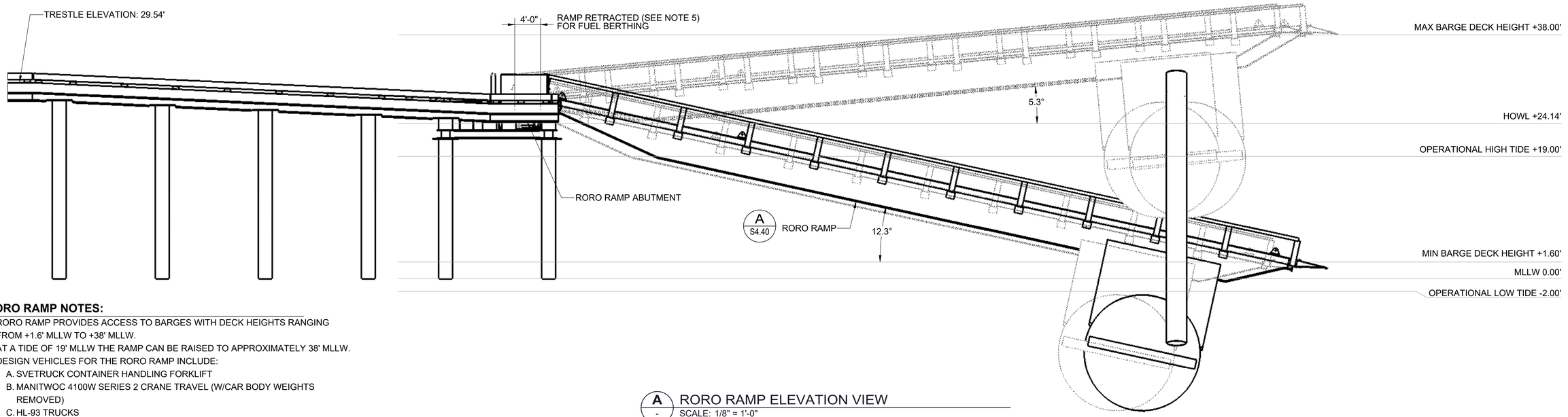
Plotted: Friday, January 27, 2023 10:19:15 AM mkushnaroff Layout: M4.00
C:\Users\mkushnaroff\KPFF, Inc\KPFF SPRC 2021 Projects - 1\2092100135 Skagway Ore Peninsula Multi-Use Dock\2. I5 Engineering\RORO Ramp\Drawings\M4.00 RORO RAMP AND TRESTLE PLAN



1 M2.00 RORO RAMP PLAN VIEW
SCALE: 1/8" = 1'-0"

A-M4.10

A-M4.10



A - RORO RAMP ELEVATION VIEW
SCALE: 1/8" = 1'-0"

RORO RAMP NOTES:

1. RORO RAMP PROVIDES ACCESS TO BARGES WITH DECK HEIGHTS RANGING FROM +1.6' MLLW TO +38' MLLW.
2. AT A TIDE OF 19' MLLW THE RAMP CAN BE RAISED TO APPROXIMATELY 38' MLLW.
3. DESIGN VEHICLES FOR THE RORO RAMP INCLUDE:
   A. SVETRUCK CONTAINER HANDLING FORKLIFT
   B. MANITWOC 4100W SERIES 2 CRANE TRAVEL (W/CAR BODY WEIGHTS REMOVED)
   C. HL-93 TRUCKS
4. RAMP ANGLES RANGE FROM +5.2 DEGREES TO -12.4 DEGREES. DURING OPERATIONAL TIDES OF +19.00' TO +1.6' MLLW.
5. HYDRAULIC RETRACT SYSTEM AT ABUTMENT PROVIDES APPROXIMATELY 4' OF HORIZONTAL MOVEMENT TO PROVIDE CLEARANCE FOR FUEL BARGE BERTHING.

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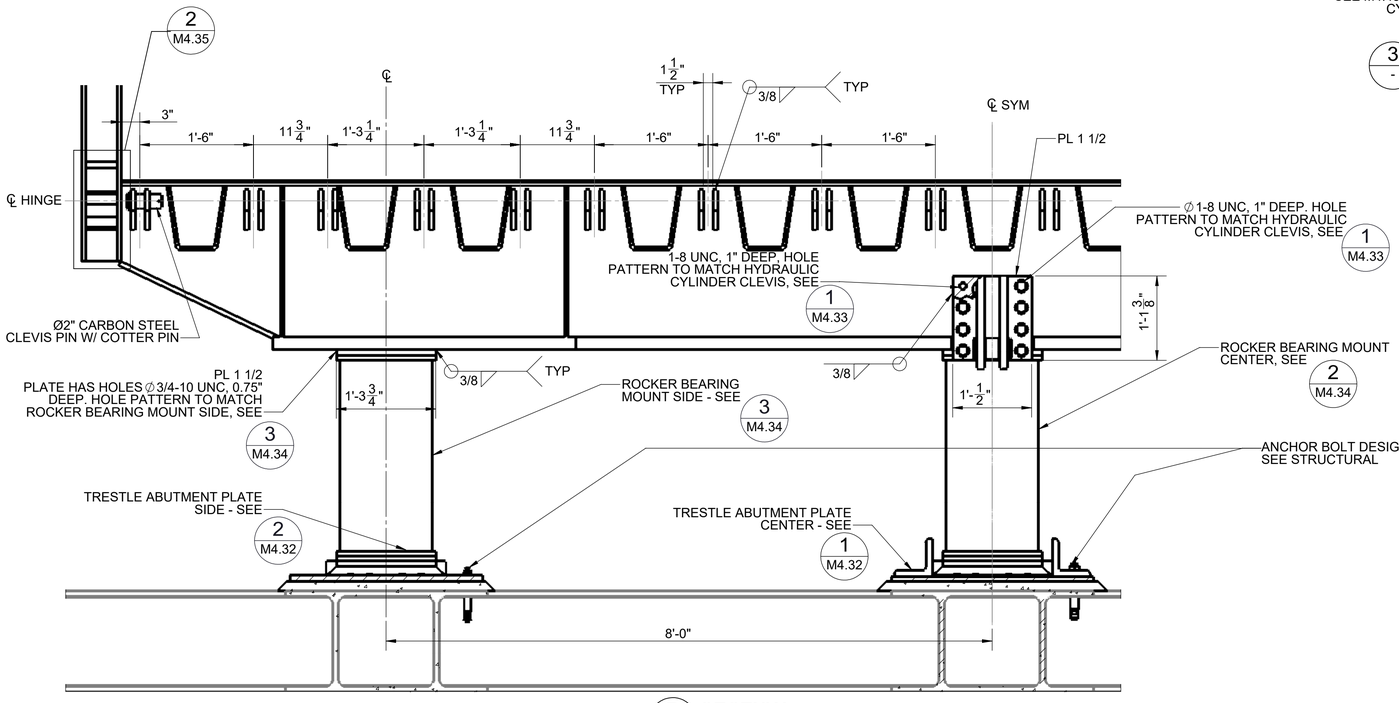
RORO RAMP AND ACCESS TRESTLE RANGE OF MOTION

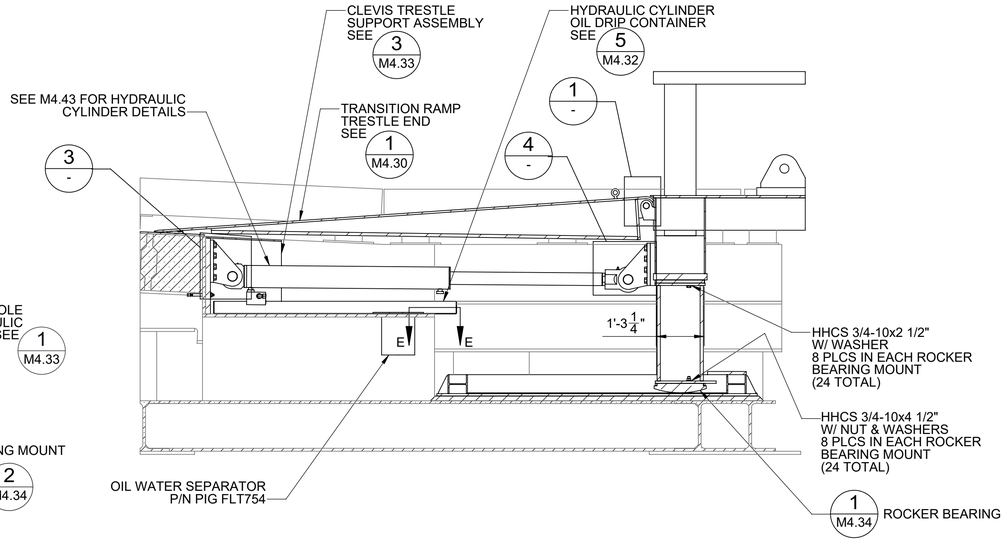
DRAWN:	MK	PROJECT NO.:	2100135
DESIGN:	MK	SCALE:	AS SHOWN
CHECKED:	JLF	DATE:	01/27/2023
DRAWING NO.		M4.10	
SHEET NO.		OF	

60% DESIGN - NOT FOR CONSTRUCTION

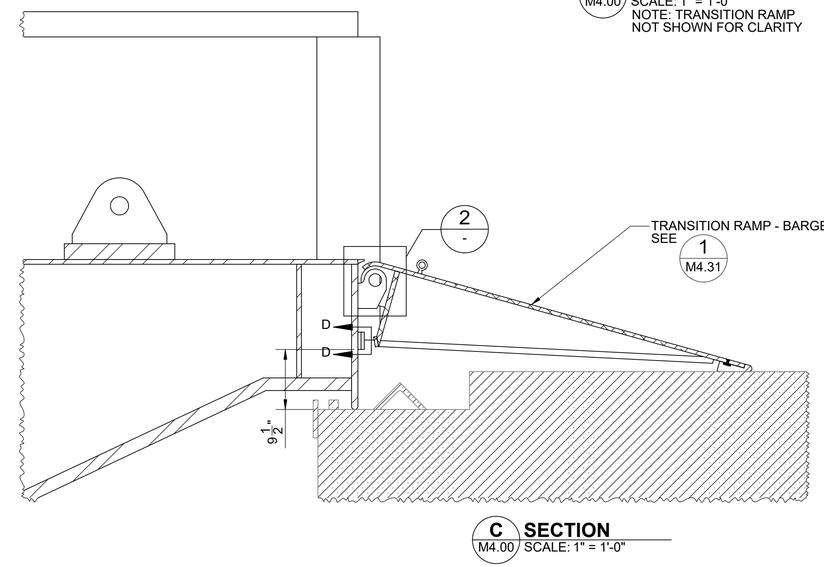
Plotted: Friday, January 27, 2023 12:24:49 PM mkushnaroff Layout: M4.10
C:\Users\dgilbert\KPFF, Inc\KPFF SPRC 2021 Projects - 2.15 Engineering\RORO Ramp\Drawings\M4.10 RORO Ramp and Access Trestle Range of Motion



B SECTION
M4.00 SCALE: 1" = 1'-0"
NOTE: TRANSITION RAMP NOT SHOWN FOR CLARITY



A SECTION
M4.00 SCALE: 1/2" = 1'-0"



C SECTION
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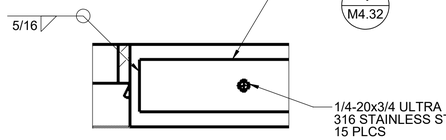
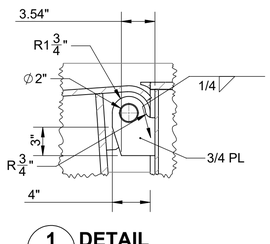
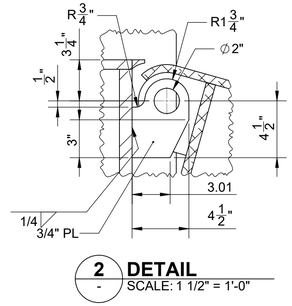


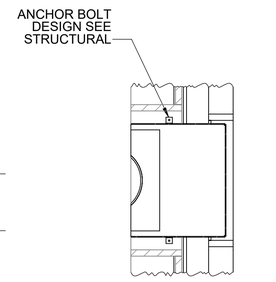
D SECTION
- SCALE: 3" = 1'-0"



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



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



E SECTION
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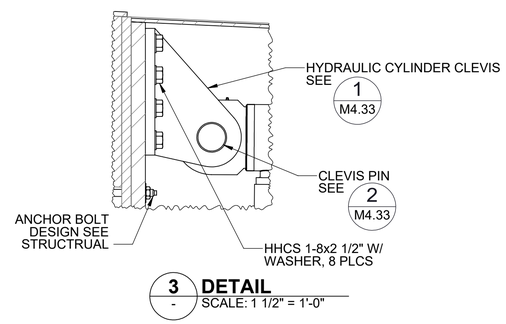

3 DETAIL
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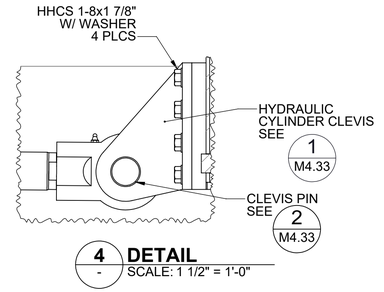

4 DETAIL
- SCALE: 1 1/2" = 1'-0"

NO.	DATE	BY	REVISION

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Seattle, Washington 98101
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ORE PENNINSULA REDEVELOPMENT
SKAGWAY, ALASKA

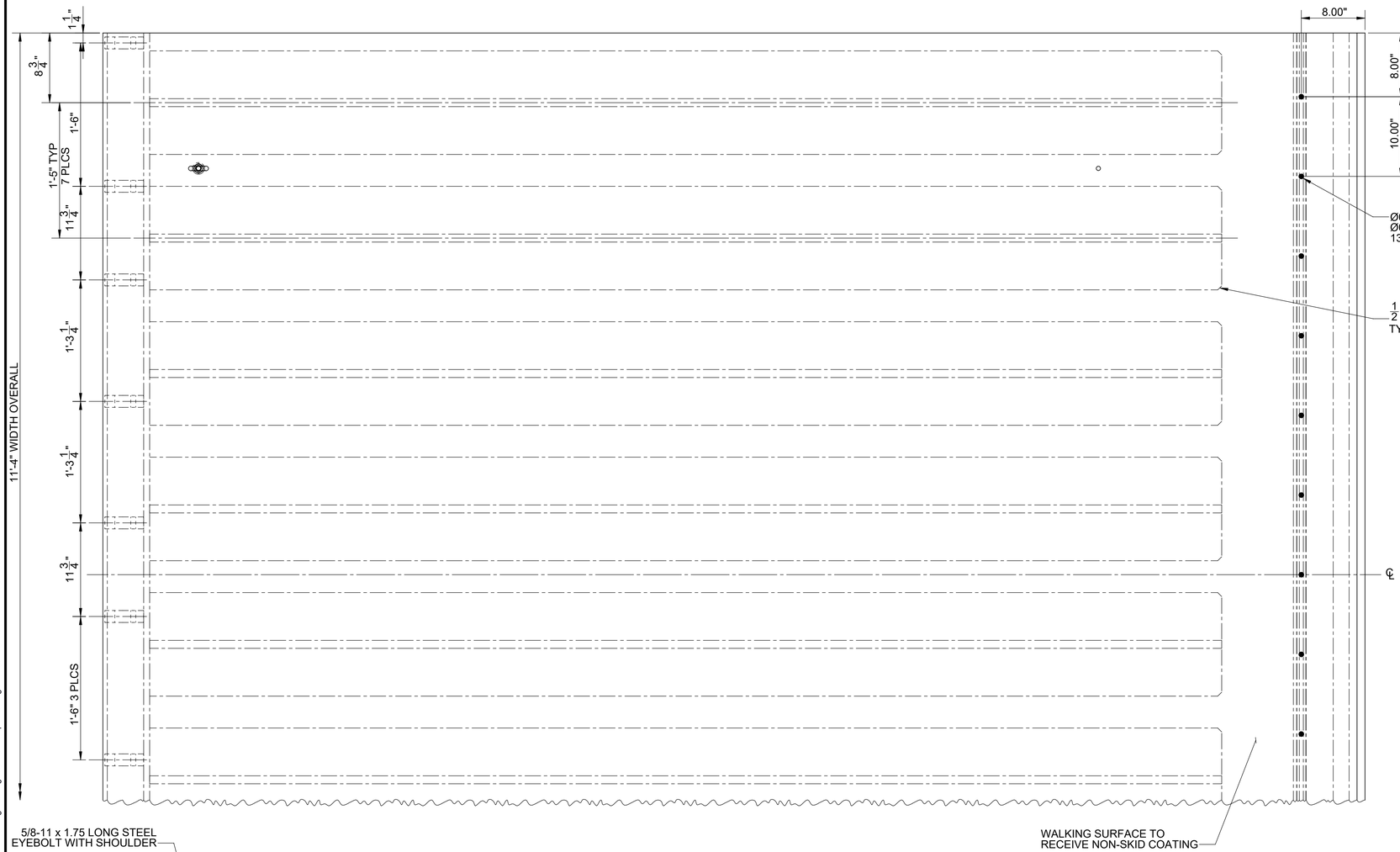
RORO RAMP AND ACCESS TRESTLE SECTIONS AND DETAILS

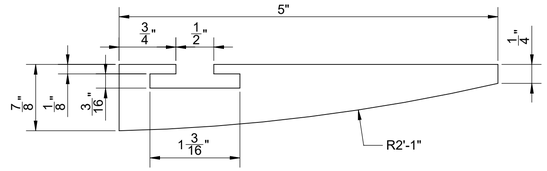
DRAWN:	BBB	PROJECT NO.:	2100135
DESIGN:	MK	SCALE:	AS SHOWN
CHECKED:	JLF	DATE:	01/27/2023

DRAWING NO. M4.20
SHEET NO. OF

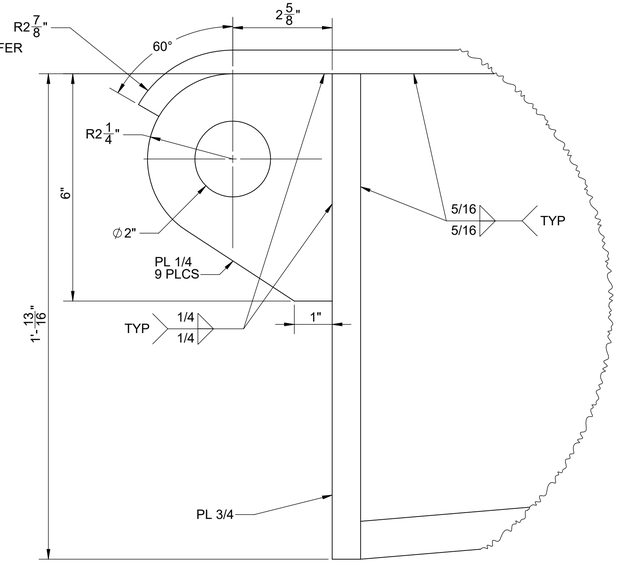
60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Friday, January 27, 2023 9:46:48 AM mkushnaroff Layout: M4.20
C:\Users\mkushnaroff\KPFF, Inc\KPFF SPRC 2021 Projects - 1\2092100135 Skagway Ore Peninsula Multi-Use Dock\2.15 Engineering\RORO Ramp\Drawings\M4.20 RORO RAMP AND ACCESS TRESTLE - SECTIONS

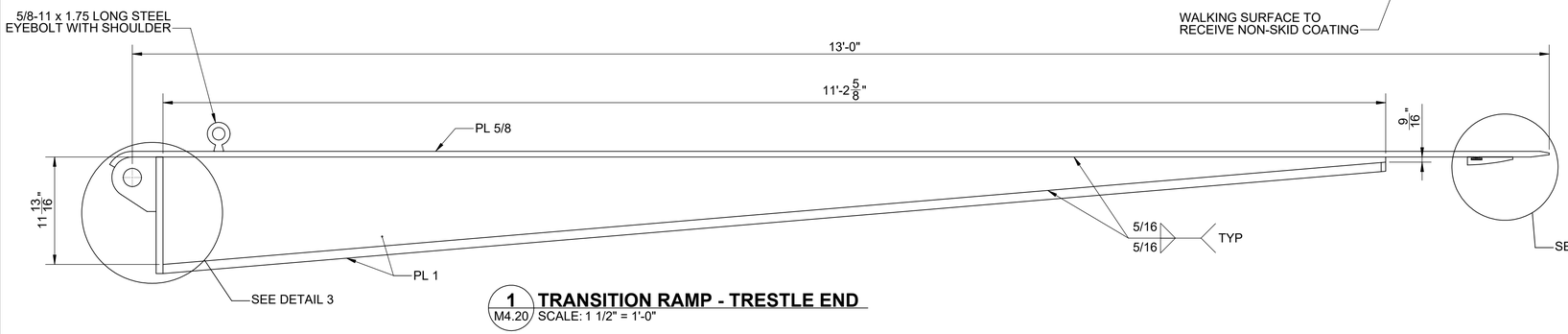




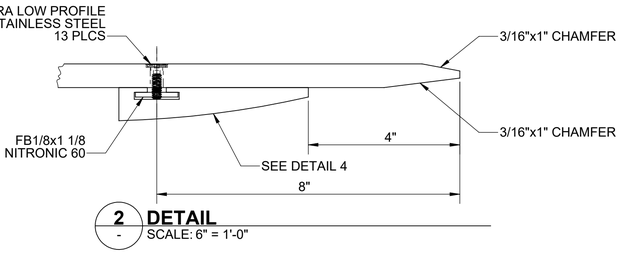
4 ORKOT PAD - TRESTLE END
SCALE: 1'-0" = 1'-0"



3 DETAIL
SCALE: 6" = 1'-0"



1 TRANSITION RAMP - TRESTLE END
M4.20 SCALE: 1 1/2" = 1'-0"



2 DETAIL
SCALE: 6" = 1'-0"

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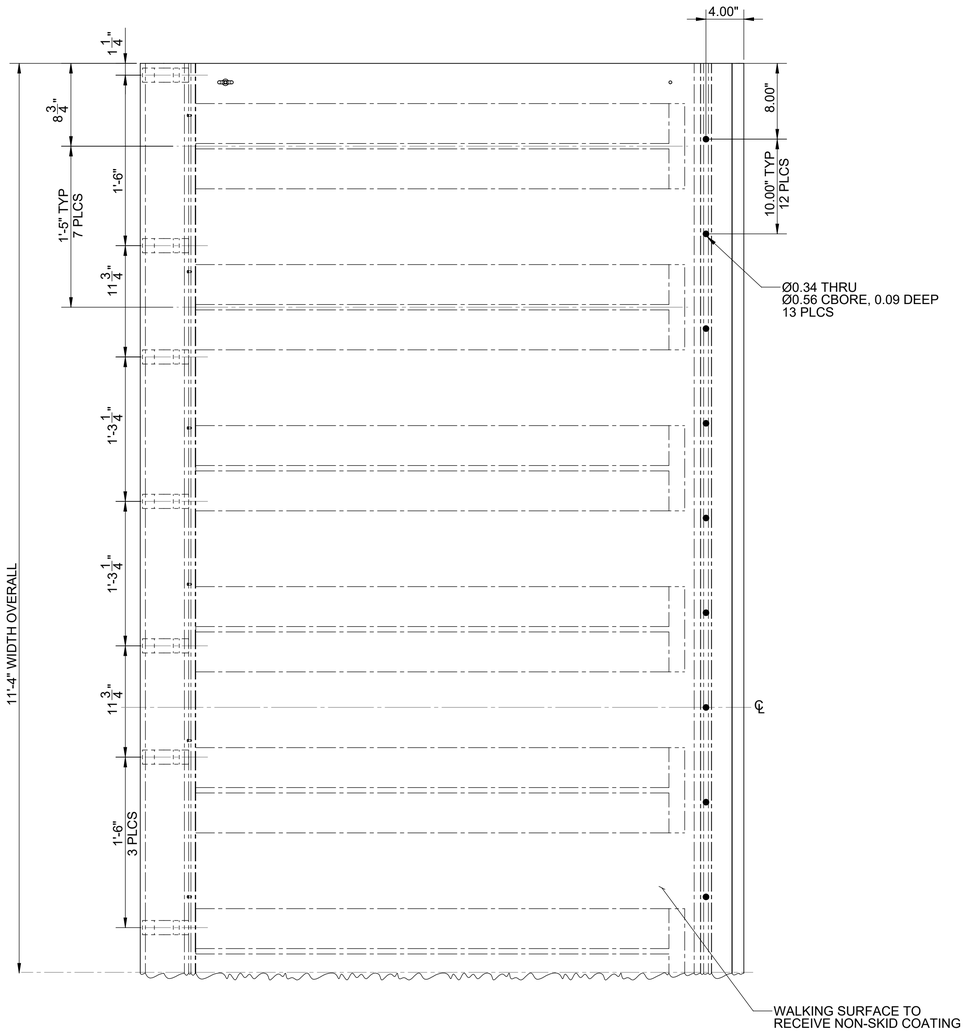
ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

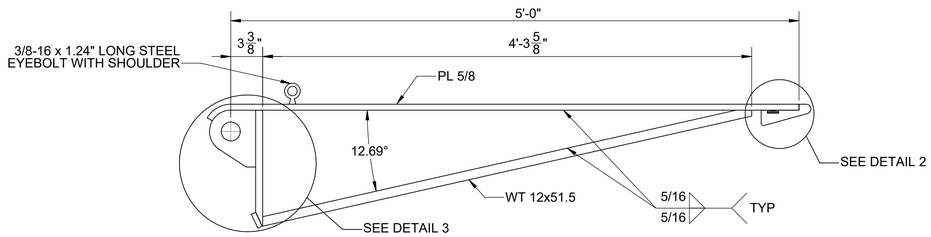
RORO RAMP AND ACCESS TRESTLE DETAILS

DRAWN:	MK	PROJECT NO.:	2100135
DESIGN:	MK	SCALE:	AS SHOWN
CHECKED:	JLF	DATE:	01/27/2023
DRAWING NO.			M4.30
SHEET NO.			OF

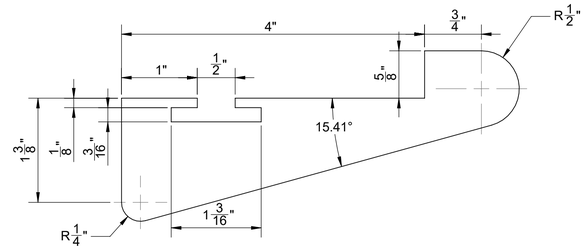
60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Friday, January 27, 2023 9:43:32 AM mkushnaroff Layout: M4.30
C:\Users\mkushnaroff\KPFF, Inc\KPFF SPRC 2021 Projects - 100\92100135 Skagway Ore Peninsula Multi-Use Dock\2.15 Engineering\RORO Ramp\Drawings\M4.30 RORO RAMP AND ACCESS TRESTLE - DETAILS

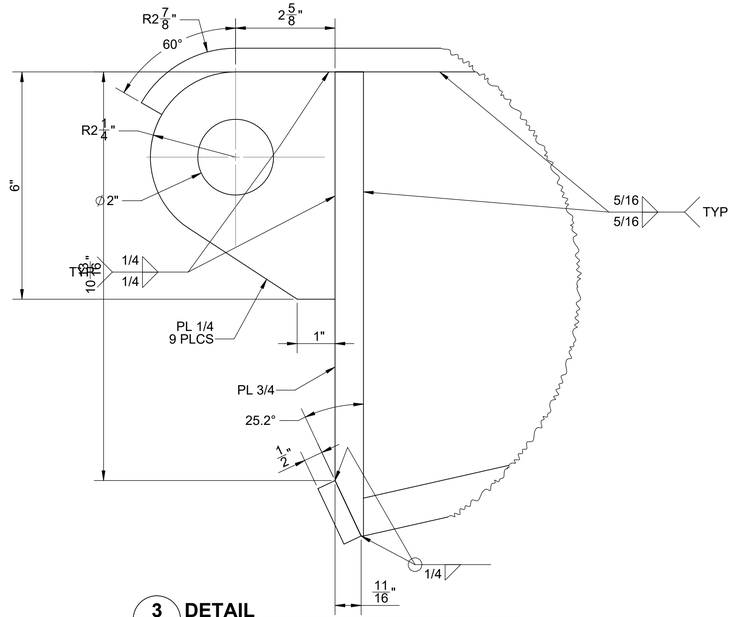




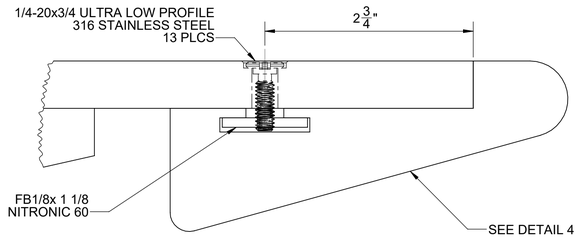
1 / M4.20 — TRANSITION RAMP - BARGE END
SCALE: 1 1/2" = 1'-0"
QTY 2
MATERIAL: ASTM A572 GR 50



4 / - — ORKOT PAD - BARGE END
SCALE: 1-0" = 1'-0"



3 / - — DETAIL
SCALE: 6" = 1'-0"



2 / - — DETAIL
SCALE: 1'-0" = 1'-0"

60% DESIGN - NOT FOR CONSTRUCTION

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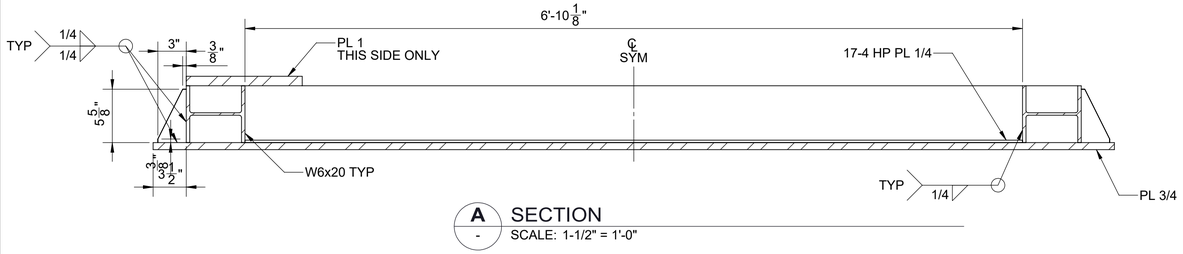
ORE PENNINSULA REDEVELOPMENT
SKAGWAY, ALASKA

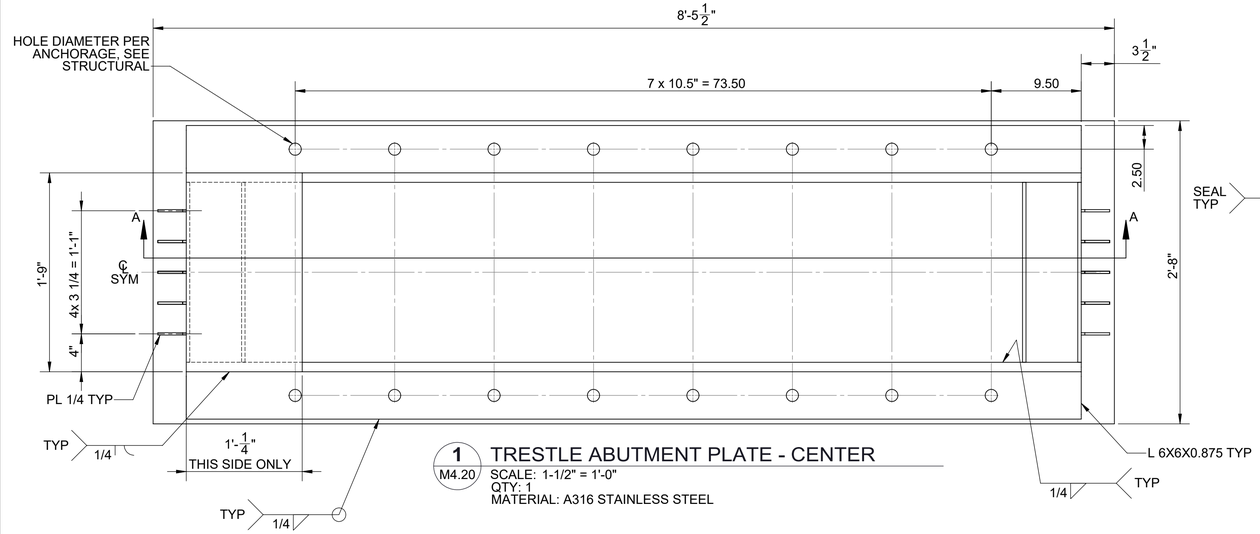
RORO RAMP AND ACCESS TRESTLE DETAILS

DRAWN:	MK	PROJECT NO.:	2100135
DESIGN:	MK	SCALE:	AS SHOWN
CHECKED:	JLF	DATE:	01/27/2023
DRAWING NO.			M4.31
SHEET NO.			OF

Plotted: Friday, January 27, 2023 9:41:40 AM mkushnaroff Layout: M4.31
C:\Users\mkushnaroff\KPFF, Inc\KPFF SPRC 2021 Projects - 100\2100135 Skagway Ore Peninsula Multi-Use Dock\2.15 Engineering\RORO Ramp\Drawings\M4.31 RORO RAMP AND ACCESS TRESTLE DETAILS

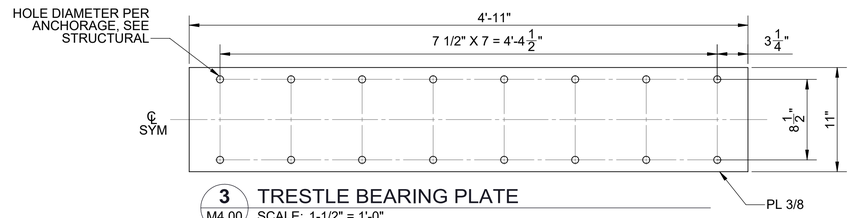


A SECTION
SCALE: 1-1/2" = 1'-0"

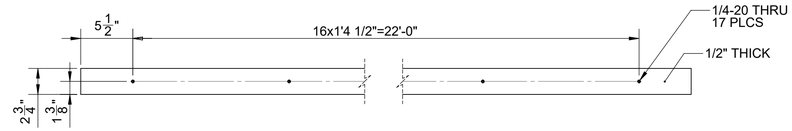


1 M4.20 TRESTLE ABUTMENT PLATE - CENTER
SCALE: 1-1/2" = 1'-0"
QTY: 1
MATERIAL: A316 STAINLESS STEEL

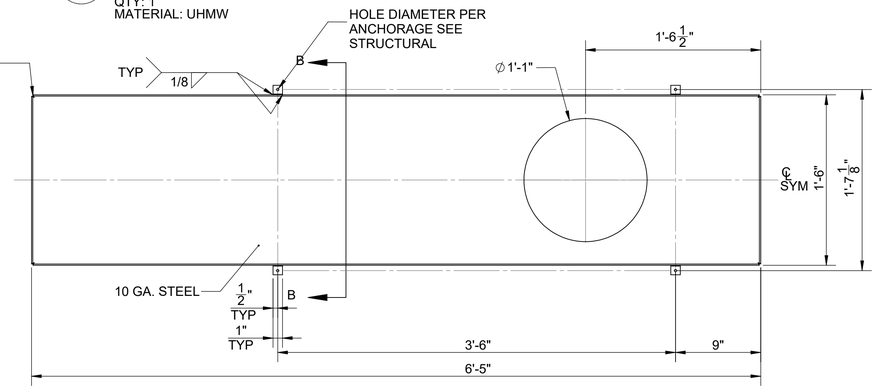
2 M4.20 TRESTLE ABUTMENT PLATE - SIDE
SCALE: 1-1/2" = 1'-0"
QTY: 2
MATERIAL: 17-4 PH STAINLESS STEEL



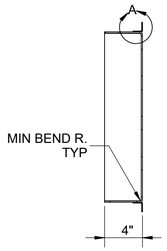
3 M4.00 TRESTLE BEARING PLATE
SCALE: 1-1/2" = 1'-0"
QTY: 6
MATERIAL: 17-4 PH STAINLESS STEEL



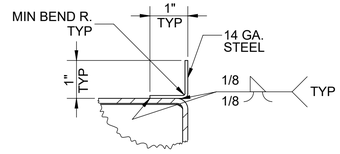
4 M4.20 TRANSITION RAMP STOP PAD
SCALE: 1-1/2" = 1'-0"
QTY: 1
MATERIAL: UHMW



5 M4.20 OIL DRIP CONTAINER
SCALE: 1-1/2" = 1'-0"



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



A DETAIL
SCALE: 6" = 1'-0"

60% DESIGN - NOT FOR CONSTRUCTION

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NO.	DATE	BY	REVISION

ORE PENNINSULA REDEVELOPMENT
SKAGWAY, ALASKA

RORO RAMP AND ACCESS TRESTLE DETAILS

DRAWN:	MK	PROJECT NO.:	2100135
DESIGN:	MK	SCALE:	AS SHOWN
CHECKED:	JLF	DATE:	01/27/2023
DRAWING NO.		M4.32	
SHEET NO.		OF	

Plotted: Friday, January 27, 2023 9:49:45 AM mkushnaroff Layout: M4.32
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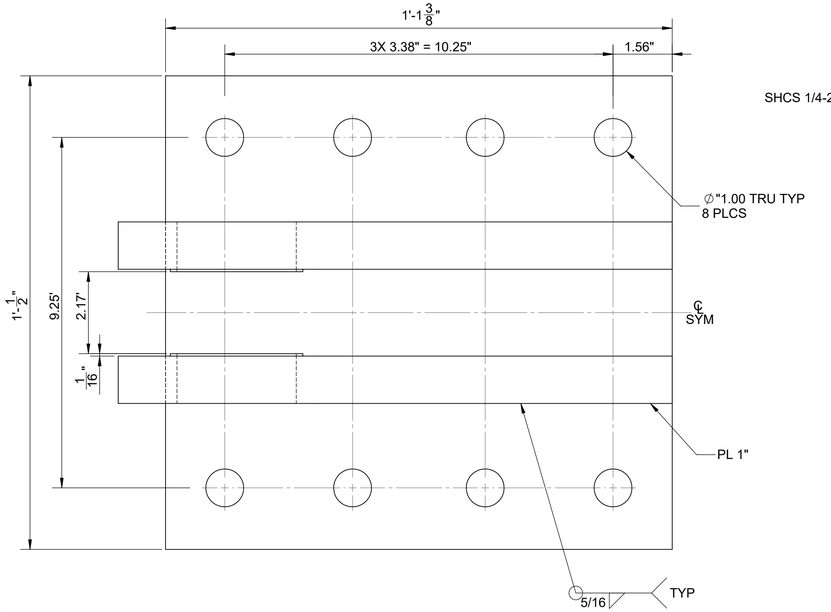
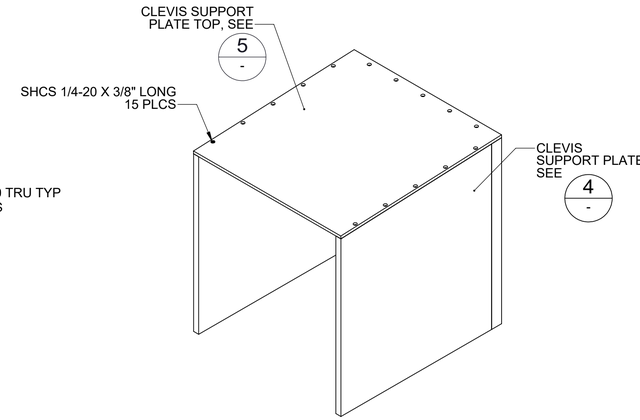
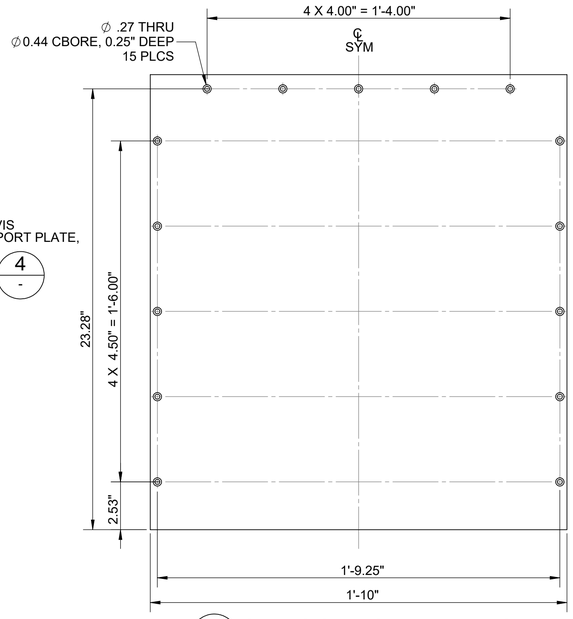
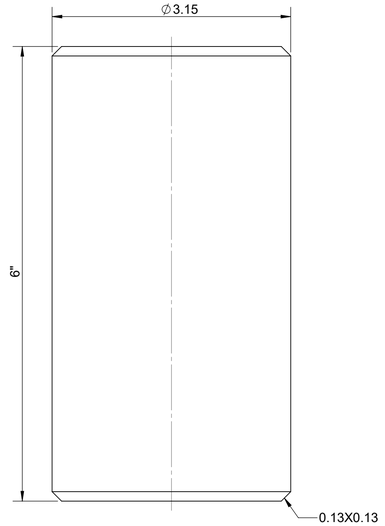




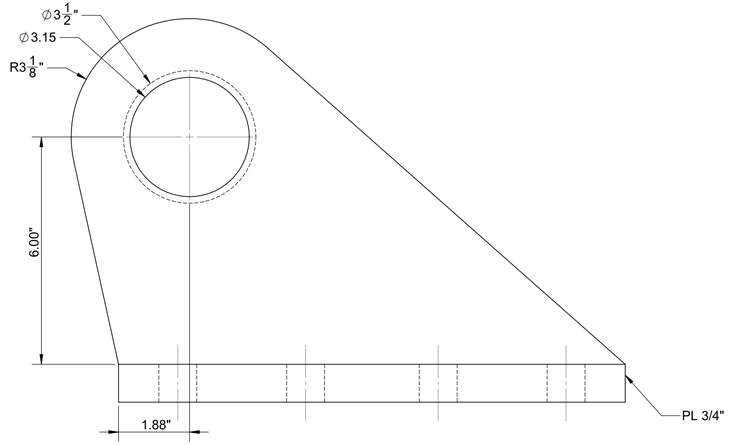
3 / M4.20 CLEVIS SUPPORT ASSEMBLY
SCALE: 1 1/2" = 1'-0"



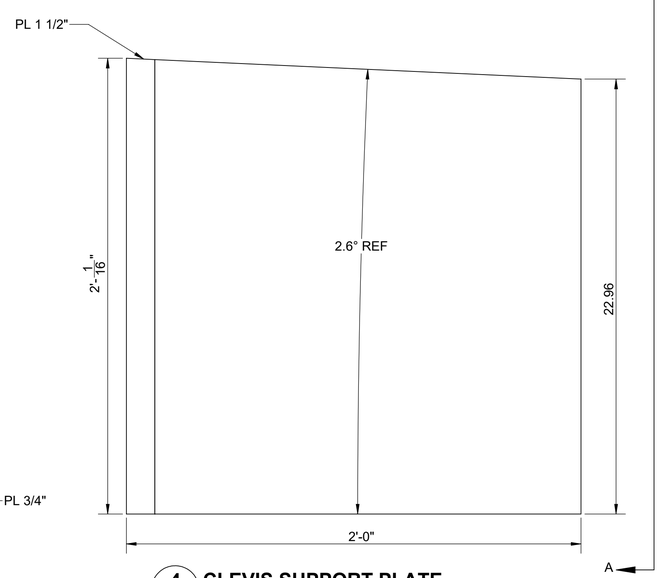
5 / - CLEVIS SUPPORT PLATE TOP
SCALE: 3" = 1'-0"
QTY: 1
MATERIAL: A316 STAINLESS STEEL



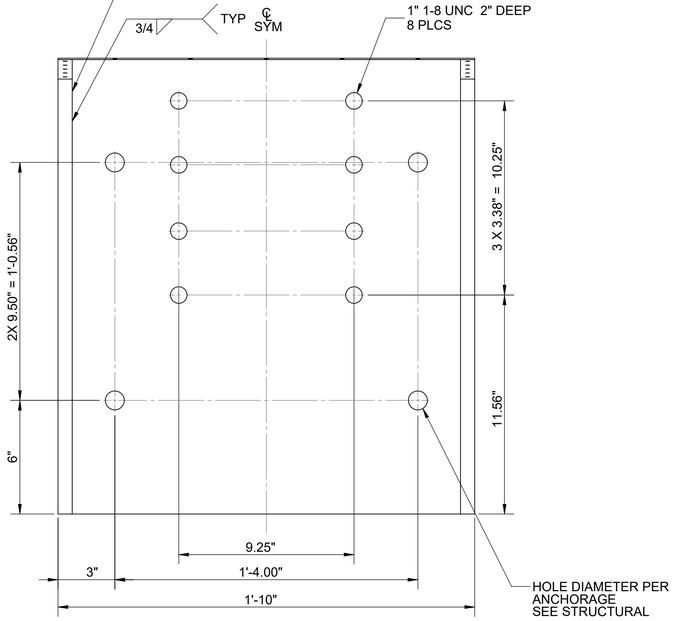
2 / M4.20 CLEVIS PIN
SCALE: 1'-0" = 1'-0"
QTY: 2
MATERIAL: A316 STAINLESS STEEL



1 / M4.20 HYDRAULIC CYLINDER CLEVIS
SCALE: 6" = 1'-0"
QTY:2
MATERIAL: A316 STAINLESS STEEL



4 / - CLEVIS SUPPORT PLATE
SCALE: 6" = 1'-0"
QTY: 1
MATERIAL: A316 STAINLESS STEEL



A / - VIEW
SCALE: 3" = 1'-0"

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NO.	DATE	BY	REVISION

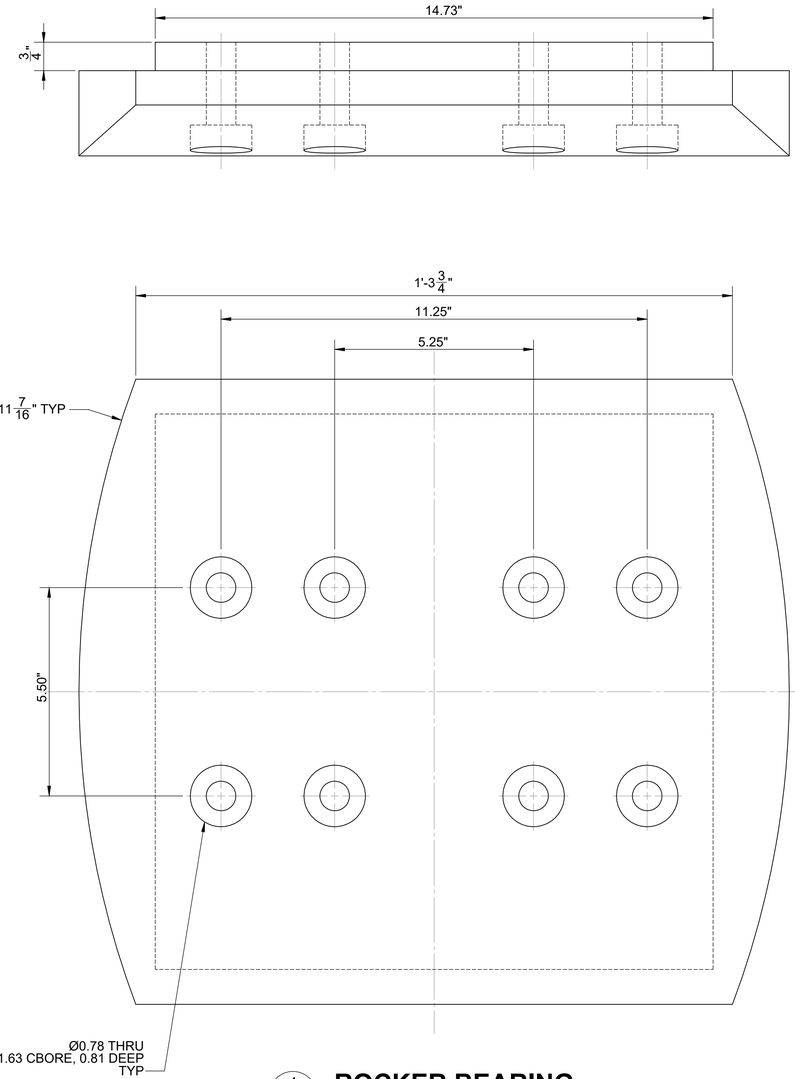
ORE PENNINSULA REDEVELOPMENT
SKAGWAY, ALASKA

RORO RAMP AND ACCESS TRESTLE DETAILS

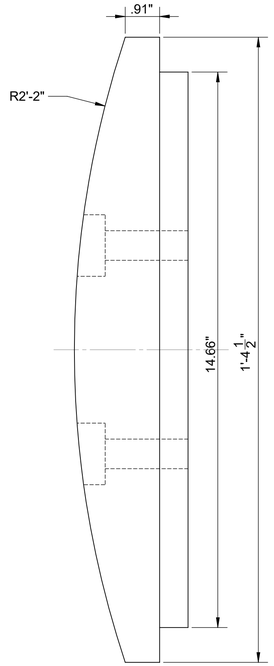
DRAWN:	MK	PROJECT NO.:	2100135
DESIGN:	MK	SCALE:	AS SHOWN
CHECKED:	JLF	DATE:	01/27/2023
DRAWING NO.			M4.33
SHEET NO.		OF	

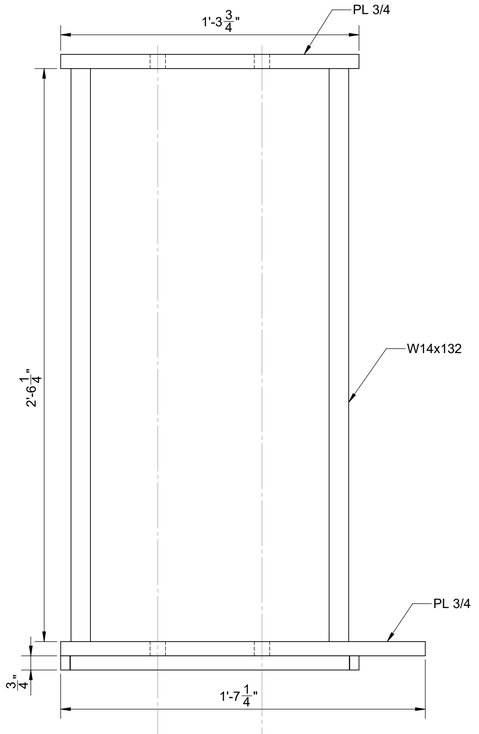
60% DESIGN - NOT FOR CONSTRUCTION

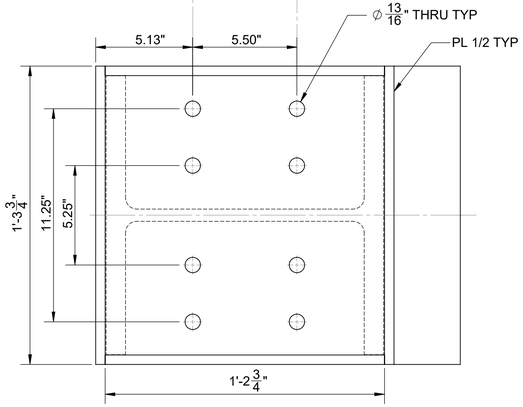
Plotted: Friday, January 27, 2023 10:12:20 AM mkushnaroff Layout: M4.33
C:\Users\mkushnaroff\KPFF, Inc\KPFF SPRC 2021 Projects - 100\2100135 Skagway Ore Peninsula Multi-Use Dock\2. I5 Engineering\RORO Ramp\Drawings\M4.33 RORO RAMP AND ACCESS TRESTLE - DETAILS



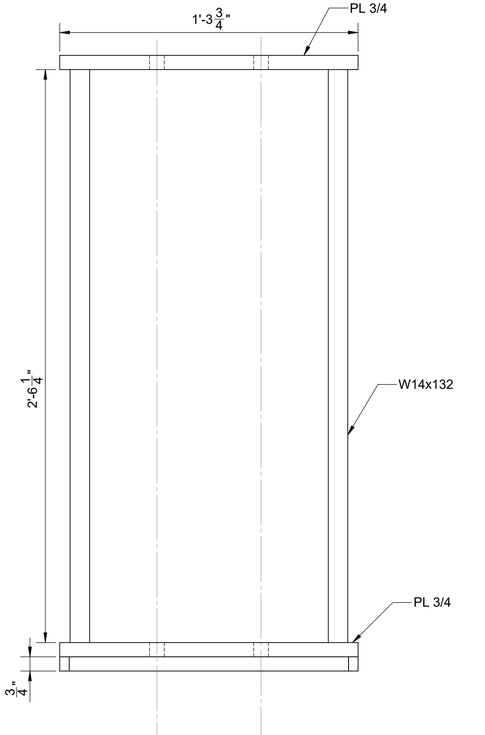
1 M4.20 **ROCKER BEARING**
SCALE 6" = 1'
MATERIAL: MATERION TOUGHMET 2 CX90 - COPPER-NICKEL-TIN ALLOY

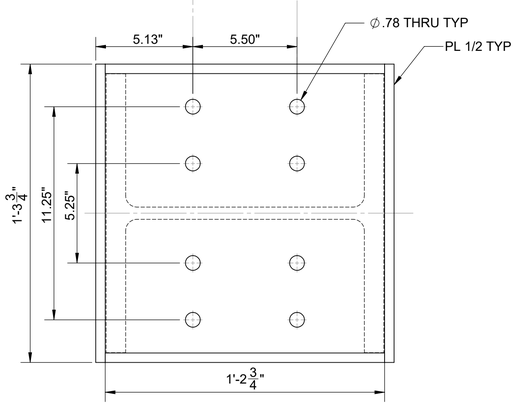






2 M4.20 **ROCKER BEARING MOUNT - CENTER**
SCALE 3" = 1'
TYPICAL HOLE PATTERN EACH END OF ROCKER BEARING MOUNT





3 M4.20 **ROCKER BEARING MOUNT - SIDE**
SCALE 3" = 1'
TYPICAL HOLE PATTERN EACH END OF ROCKER BEARING MOUNT

60% DESIGN - NOT FOR CONSTRUCTION

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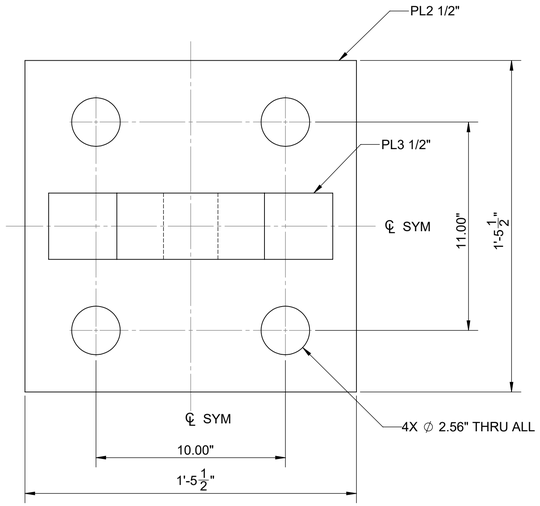
NO.	DATE	BY	REVISION

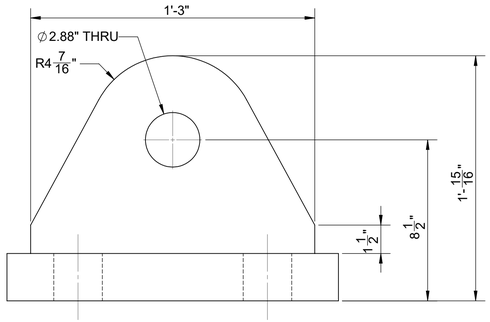
ORE PENNINSULA REDEVELOPMENT
SKAGWAY, ALASKA

RORO RAMP AND ACCESS TRESTLE DETAILS

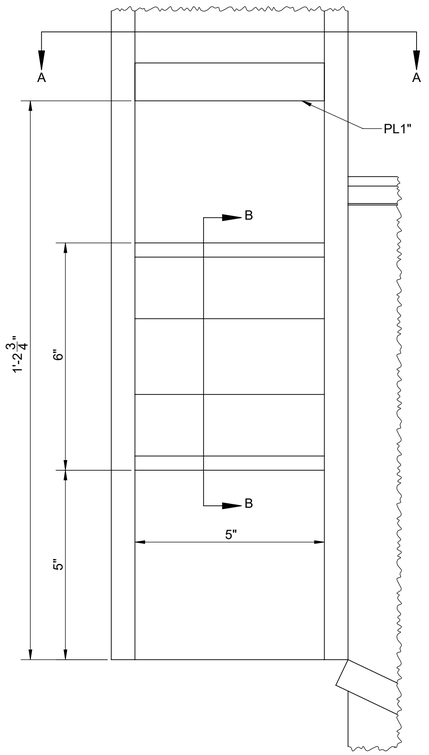
DRAWN:	MK	PROJECT NO.:	2100135
DESIGN:	MK	SCALE:	AS SHOWN
CHECKED:	JLF	DATE:	01/27/2023
DRAWING NO.			M4.34
SHEET NO.		OF	

Plotted: Friday, January 27, 2023 10:14:18 AM mkushnaroff Layout: M4.34
C:\Users\mkushnaroff\KPFF. Incl\KPFF SPRC 2021 Projects - 100\92100135 Skagway Ore Peninsula Multi-Use Dock\2.15 Engineering\RORO Ramp\Drawings\M4.34 RORO Ramp and Access Trestle - Details

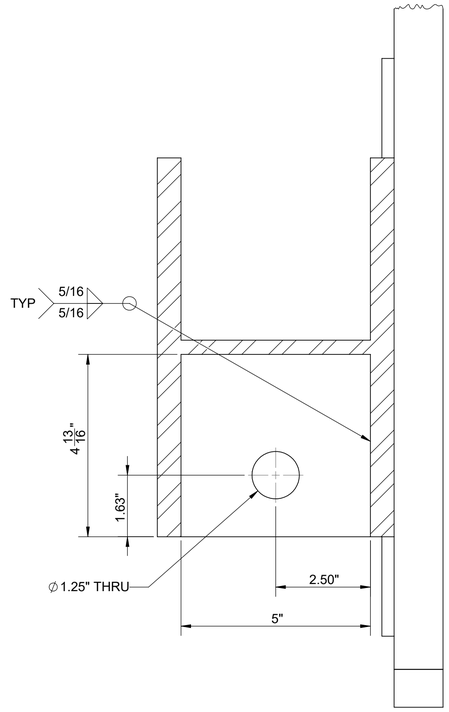




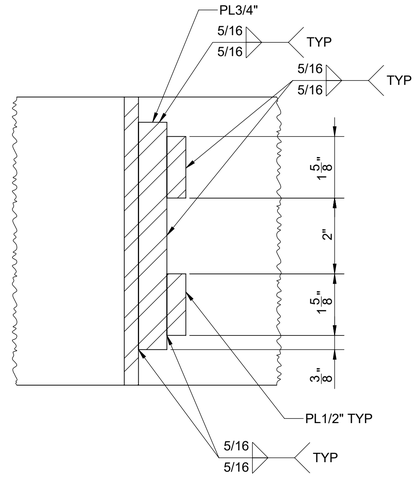
1 LIFTING PADEYE M4.00
SCALE: 3" = 1'-0"
QTY: 6
MATERIAL: ASTM A572 GR50



2 DETAIL M4.20
SCALE: 6" = 1'-0"



A SECTION -
SCALE: 6" = 1'-0"



B SECTION -
SCALE: 6" = 1'-0"

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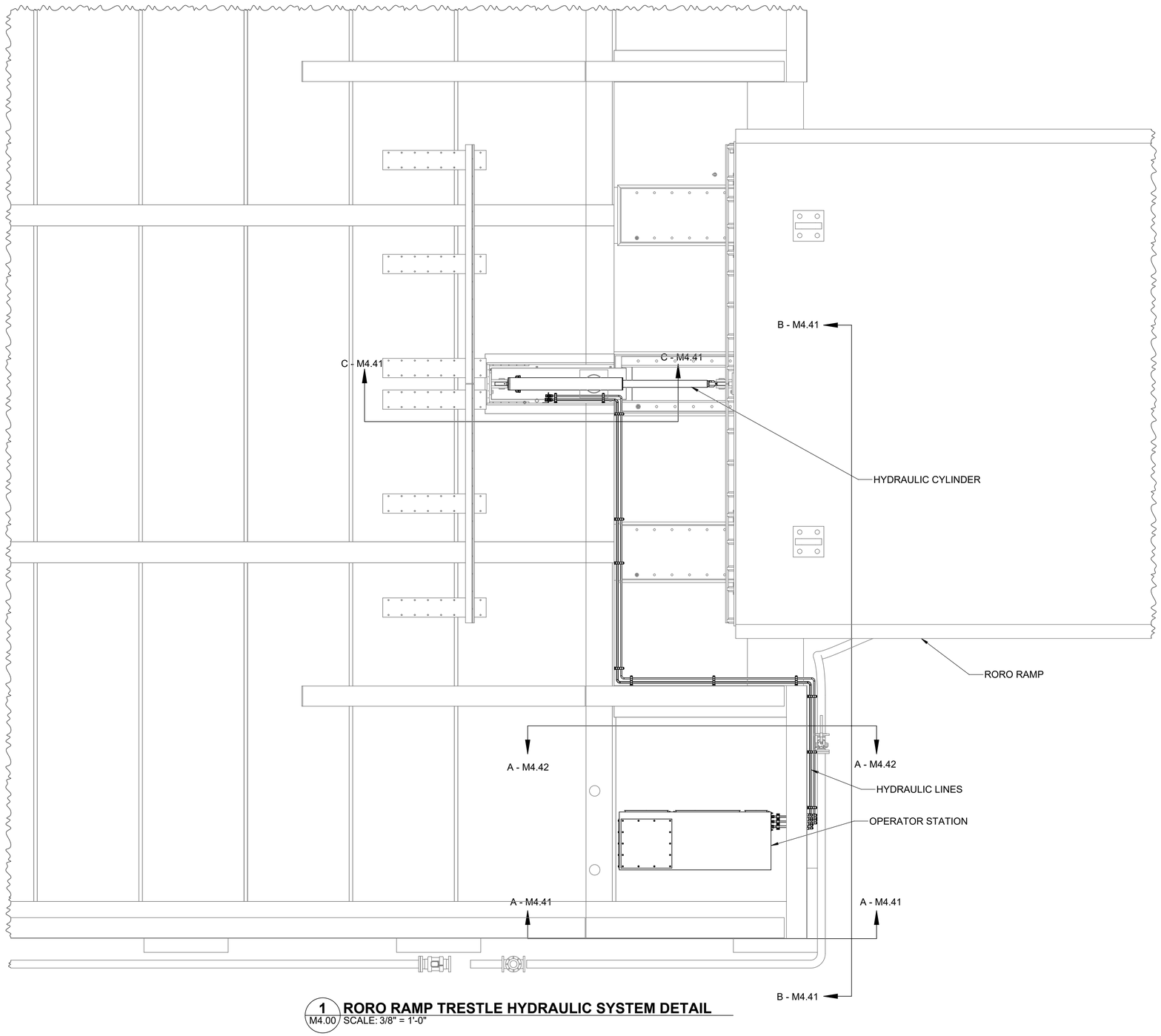
ORE PENNINSULA REDEVELOPMENT
SKAGWAY, ALASKA

RORO RAMP AND ACCESS TRESTLE DETAILS

DRAWN:	MK	PROJECT NO.:	2100135
DESIGN:	MK	SCALE:	AS SHOWN
CHECKED:	JLF	DATE:	01/27/2023
DRAWING NO.		M4.35	
SHEET NO.		OF	

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Friday, January 27, 2023 10:15:52 AM mkushnaroff Layout: M4.35
C:\Users\mkushnaroff\KPFF, Inc\KPFF SPRC 2021 Projects - 1009210\0135 Skagway Ore Peninsula Multi-Use Dock\2.15 Engineering\RORO Ramp\Drawings\M4.35 RORO RAMP AND ACCESS TRESTLE DETAILS - 6



1 M4.00 **RORO RAMP TRESTLE HYDRAULIC SYSTEM DETAIL**
SCALE: 3/8" = 1'-0"

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RORO RAMP AND ACCESS TRESTLE HYDRAULIC SYSTEM DETAIL

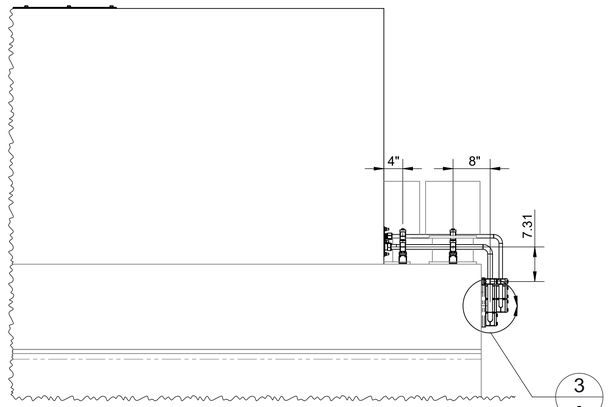
DRAWN:	BBB	PROJECT NO.:	2100135
DESIGN:	PL	SCALE:	AS SHOWN
CHECKED:	JLF	DATE:	1/27/2023

DRAWING NO. M4.40

SHEET NO. OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Friday, January 27, 2023 12:03:52 PM pileske Layout: M4.40
C:\Users\pileske\KPFF SPRC 2021 Projects - Documents\100921\00135 Skagway Ore Peninsula Multi-Use Dock\2.15 Engineering\RORO Ramp\Drawings\M4.40 RORO RAMP TRESTLE HYDRAULIC PLAN



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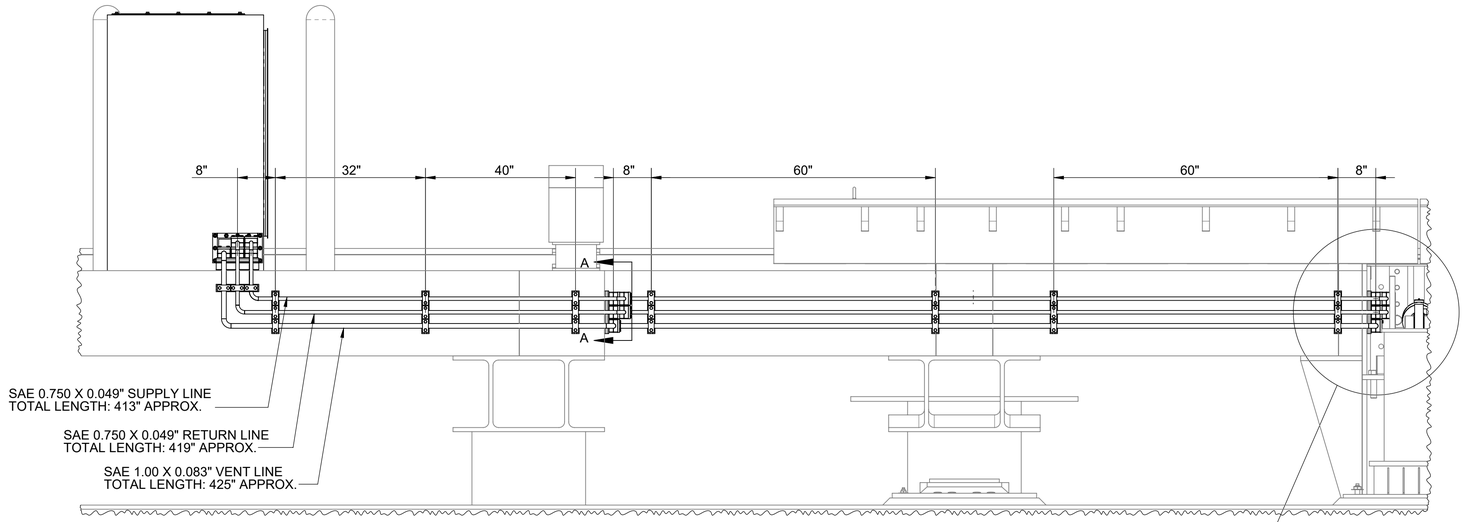
M4.40 SCALE: 3/4" = 1'-0"



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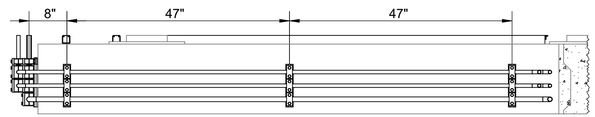

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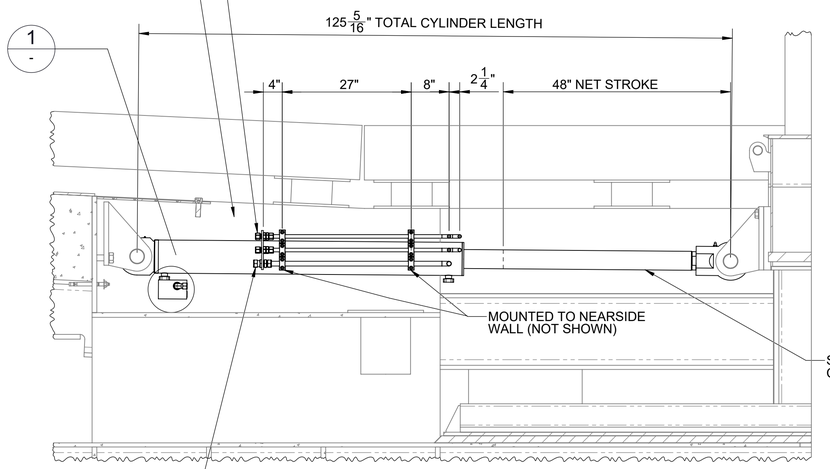
- SCALE: 3/4" = 1'-0"



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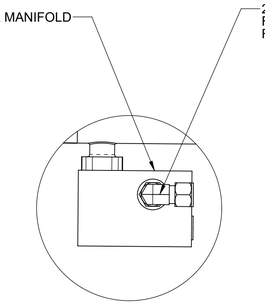

1 DETAIL
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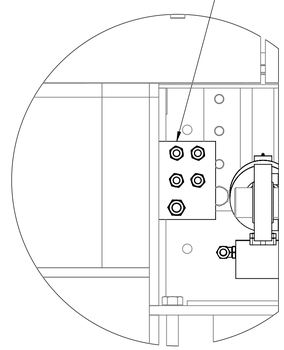
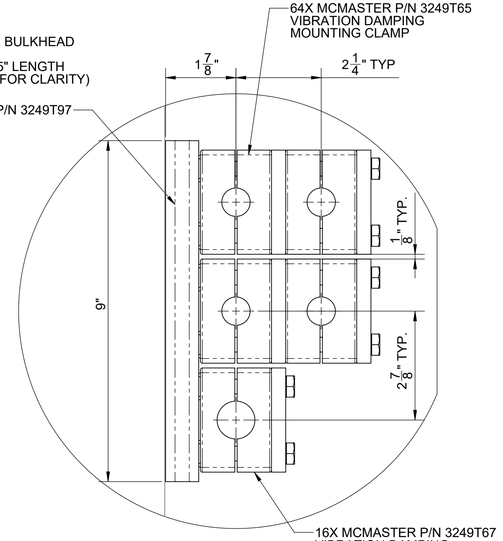


2 DETAIL
- SCALE: 1 1/2" = 1'-0"



3 DETAIL
- SCALE: 6" = 1'-0"

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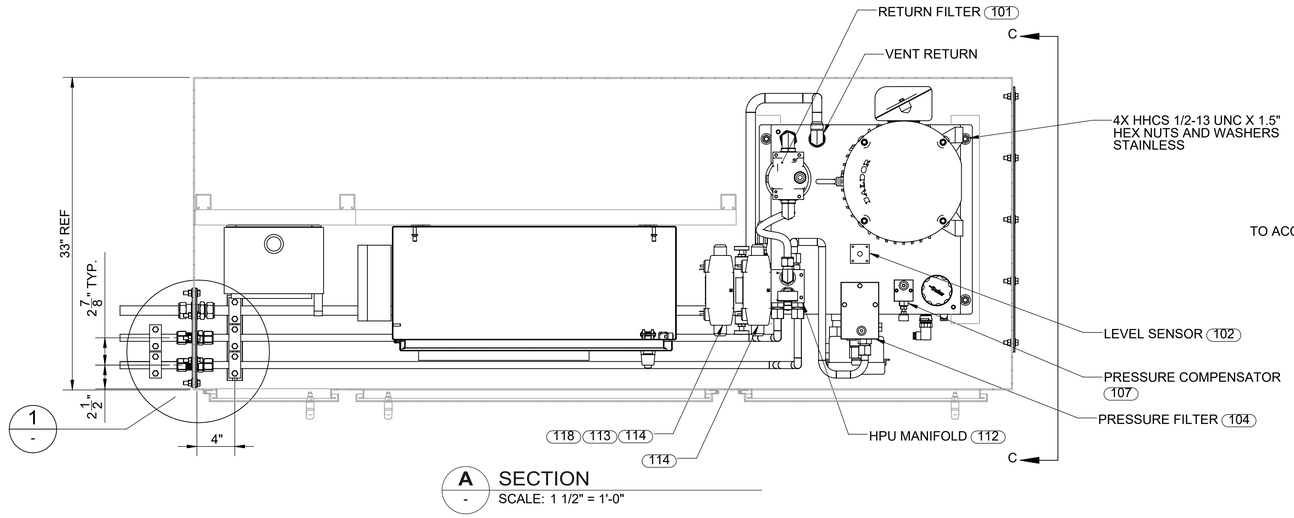
NO.	DATE	BY	REVISION

ORE PENINSULA DEVELOPMENT
SKAGWAY, ALASKA

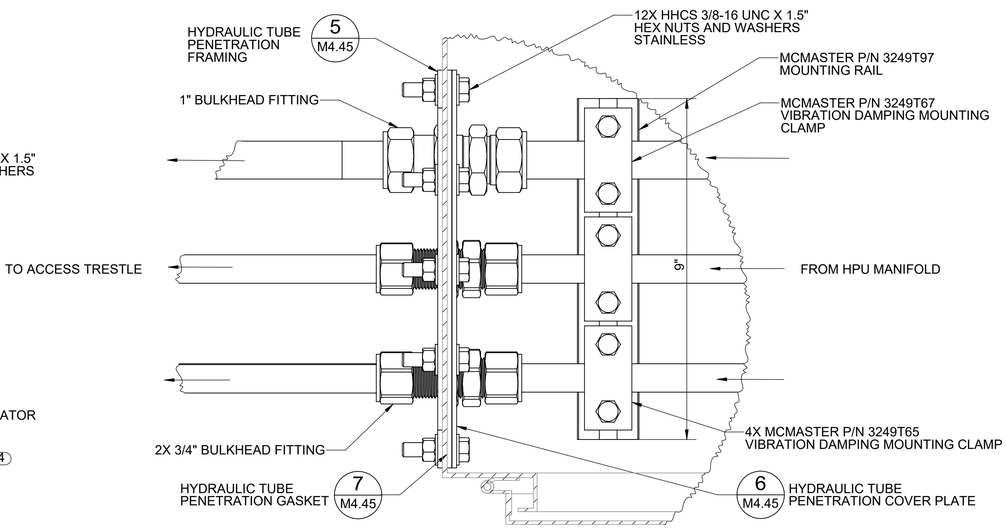
RORO RAMP AND ACCESS TRESTLE HYDRAULIC DETAILS

DRAWN:	BBB	PROJECT NO.:	2100135
DESIGN:	PL	SCALE:	AS SHOWN
CHECKED:	JLF	DATE:	1/27/2023
DRAWING NO.			M4.41
SHEET NO.			OF

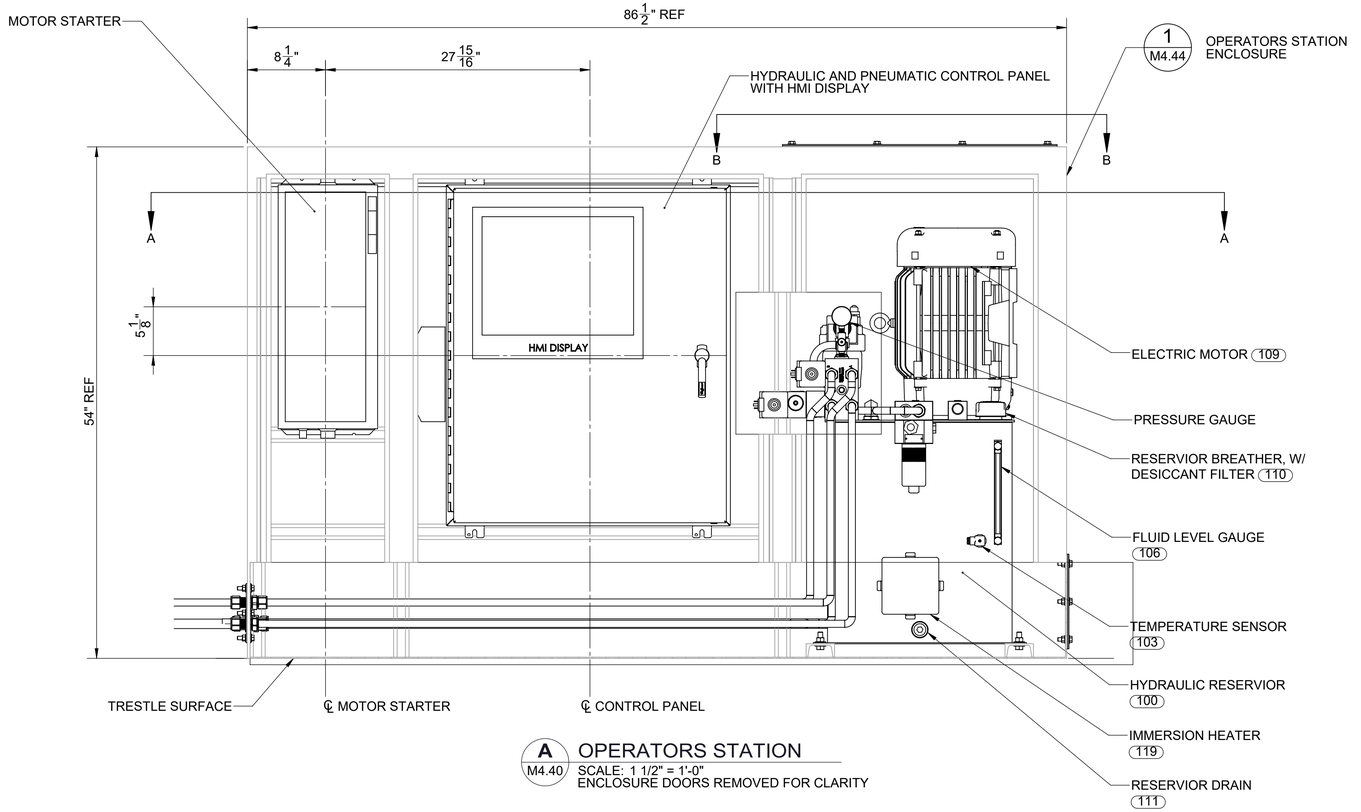
Plotted: Friday, January 27, 2023 9:06:31 AM pllieske Layout: M4.41
C:\Users\pllieske\KPFF, Inc\KPFF SPRC 2021 Projects - Documents\100921\00135 Skagway Ore Peninsula Multi-Use Dock\2.15 Engineering\RORO Ramp\Drawings\M4.41 RORO RAMP ACCES TRESTLE HYDRAULIC DETAILS



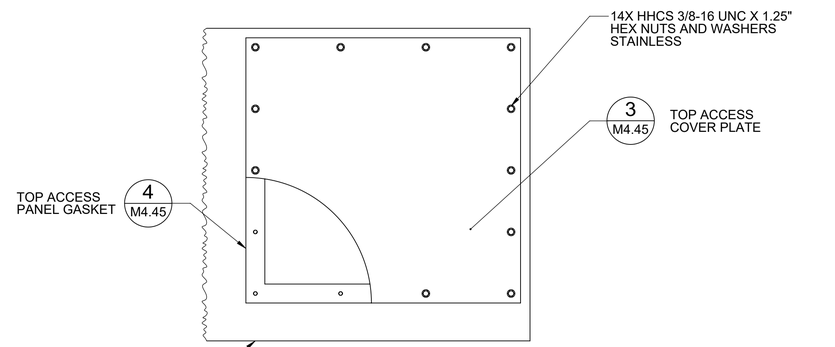
A - SECTION
SCALE: 1 1/2" = 1'-0"



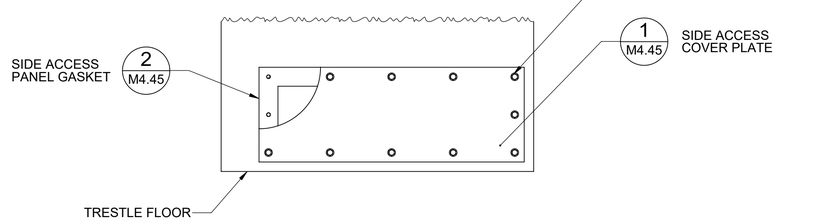
1 - HYDRAULIC TUBE PENETRATION DETAIL
SCALE: 6" = 1'-0"



A M4.40 - OPERATORS STATION
SCALE: 1 1/2" = 1'-0"
ENCLOSURE DOORS REMOVED FOR CLARITY



B - TOP ACCESS PANEL
SCALE: 6" = 1'-0"



C - SIDE ACCESS PANEL
SCALE: 6" = 1'-0"
VIEW ROTATED 90° CW

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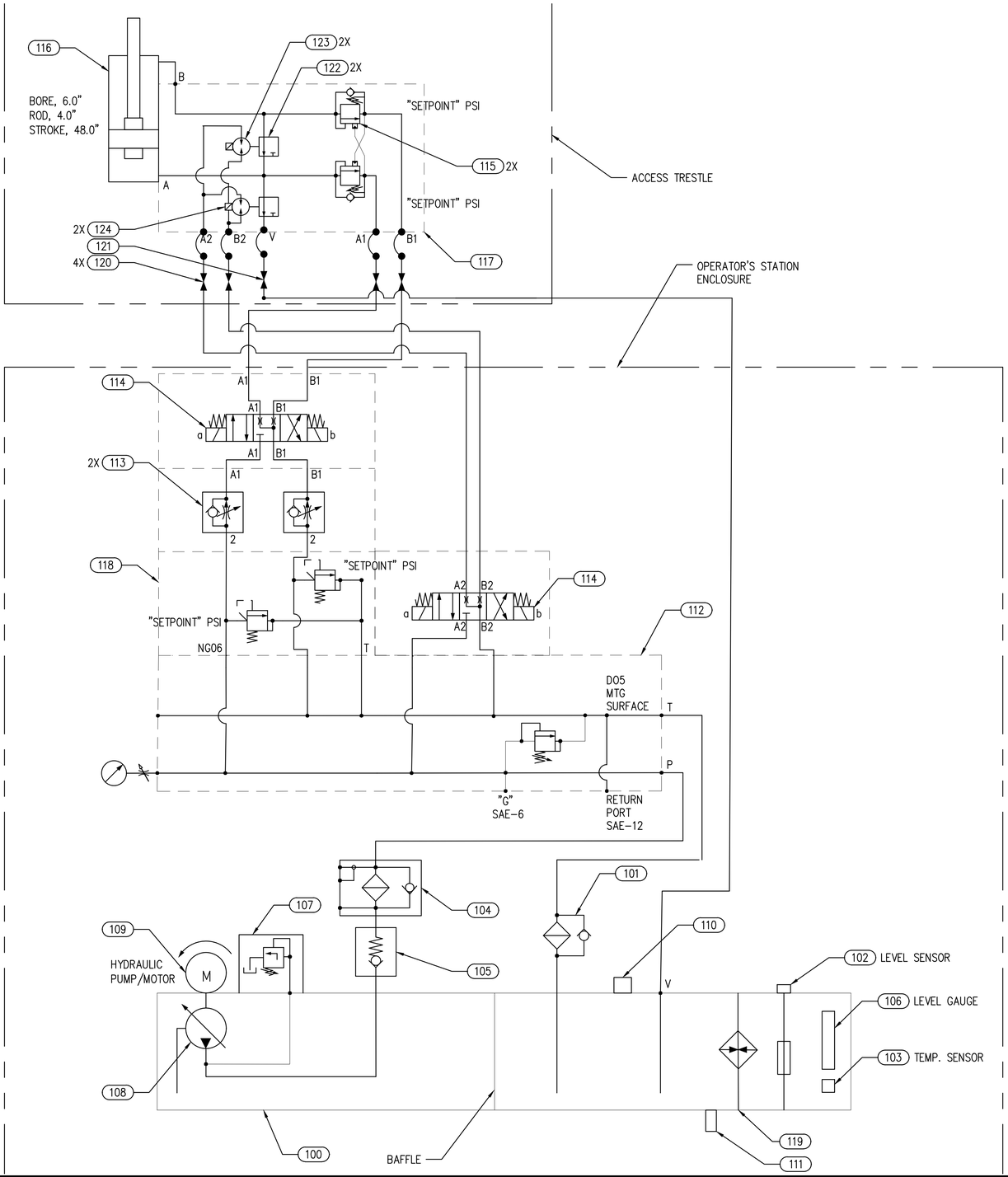
SKAGWAY, ALASKA

RORO RAMP AND ACCESS TRESTLE HYDRAULIC DETAILS

DRAWN:	BBB	PROJECT NO.:	2100135
DESIGN:	PL	SCALE:	AS SHOWN
CHECKED:	JLF	DATE:	1/27/2023
DRAWING NO.			M4.42
SHEET NO.		OF	

Plotted: Friday, January 27, 2023 12:38:38 PM pilieske Layout: M4.42
C:\Users\pilieske\KPFF, Inc\KPFF SPRC 2021 Projects - Documents\100921001\35 Skagway Ore Peninsula Multi-Use Dock\2.15 Engineering\RORO Ramp\Drawings\M4.42 RORO RAMP



POS	QTY	DESCRIPTION	SPECIFICATION	EXAMPLE PRODUCT	CONTROL COMPONENT ID	POWER REQUIREMENT (KW)
100	1	HYDRAULIC RESERVIOR	30 GAL, SINGLE-WALL CONSTRUCTION, STAINLESS	PARKER V3, V-PAK HPU, V3A7PS5G2HKNR2		
101	1	RETURN FILTER	MICROGLASS II ELEMENT, VISUAL 25 PSI (1.72 BAR) INDICATOR 3 PSI (0.21 BAR) DIFF. @ 7 GPM (26.5 LPM)	PARKER 40CN110B		
102	1	LEVEL SENSOR	STAINLESS STEEL, OUTPUT SIGNAL 4-20 MA, WITH ELEC JUNCTION BOX	GEMS MODEL XT 800		
103	1	TEMPERATURE SENSOR	TEMP RANGE 0-100 DEGREES CELSUIS, 4-20MA OUTPUT SIGNAL, G 1/4 CONNECTION EN 175301-803 ELECTRICAL PLUG	DANFOSS MBT 5560 0000005010110		
104	1	PRESSURE FILTER	MICROGLASS II ELEMENT, VIS. IND. - 50 PSI (3.49 BAR), BYPASS - 4PSI (0.27 BAR) DIFF. @ 7 GPM (56.8 LPM)	PARKER 15P110QBPSKX1 + INDICATOR 929081		
105	1	IN-LINE CHECK VALVE	5 PSI (0.34 BAR) CRACKING PRESSURE 25 PSI (1.72 BAR) DIFF. @ 15 GPM (56.8 LPM)	PARKER "DT" AND "C" SERIES		
106	1	FLUID LEVEL GAUGE		INCLUDED W/ PARKER HPU		
107	1	PRESSURE COMPENSATOR	SINGLE PRESSURE REMOTE COMPENSATOR	INCLUDED W/ PARKER HPU		
108	1	AXIAL PISTON VARIABLE PUMP	7.8 GPM MAX @ 1800 RPM, 3600 NOMINAL PRESSURE	INCLUDED W/ PARKER HPU		
109	1	ELECTRIC MOTOR	15.0 HP, TEFC, 254TC, 1725 RPM, 208-230/460V, 60 HZ, 3PH	INCLUDED W/ PARKER HPU		
110	1	RESERVIOR BREATHER, W/ DESICCANT FILTER		INCLUDED W/ PARKER HPU		
111	1	RESERVIOR DRAIN	SAE-12 (PLUGGED)	INCLUDED W/ PARKER HPU		
112	1	HPU MANIFOLD	D05 SINGLE STATION SUBPLATE WITH SAFETY RELIEF VALVE	INCLUDED W/ PARKER HPU		
113	2	FLOW CONTROL VALVE	PRESSURE COMPENSATED FLOW CONTROL VALVE WITH REVERSE FLOW CHECK. 12 GPM CAPACITY.	PARKER FM3DDKN		
114	2	DIRECTIONAL SOLENOID OPERATED CONTROL VALVE	SOLENOID OPERATED ON/OFF, SOFT SHIFT DIRECTIONAL VALVE, D05 MOUNTING, 15 GPM NOMINAL FLOW	PARKER D3W4CNYK		
115	2	COUNTER BALANCE VALVE NON VENTED	CARTRIDGE TYPE, 7.5 GPM, 3:1 PILOT RATIO, MAX. PRESSURE 4000 PSI, FUNCTIONAL SETTING RANGE 400-1500 PSI W/25 PSI CRACKING PRESSURE, T-2A CAVITY	SUN CBDA-LIN/AP		
116	1	HYDRAULIC CYLINDER	PARKER SERIES RDH HEAVY DUTY HYDRAULIC ROUNDLINE CYLINDERS	PARKER 6.00SMBRDHBPS27YM 57.000		
117	1	MANIFOLD, EXT/RETRACT	PER DWG H.XX			
118	1	SANDWICH PLATE VALVE	PILOT OPERATED STEEL SANDWICH PRESSURE RELIEF VALVE	REXROTH ZDB6VC3-4X/200		
119	1	IMMERSION TANK HEATER	1 KWM 120/240V, 1 PH, 30-110 DEG F THERMOSTAT, NEMA 4X	BGS79J6-W1		
120	4	SHUT OFF VALVE	BALL VALVE, 3/4" SAE ORB CONNECTION, W/ LOCKABLE LEVEL IN OPEN POSITION, SS	DMIC BVH0750S2611AB		
121	1	VENT SHUT OFF VALVE	BALL VALVE, 1" SAE ORB CONNECTION, W/ LOCKABLE LEVEL IN OPEN POSITION, SS	DMIC BVH1000S2611AB		
122	2	FLOAT MODE BALL VALVE	2-WAY INTERMANIFOLD VALVE, SAE-12 PORT CONNECTION, W/ ACTUATOR MOUNT, SS	DMIC SV2C07502611CA7Z		
123	2	HYDRAULIC ACTUATOR	HYDRAULIC CONTROL BALL VALVE ACTUATOR	DMIC AC-HAE		
124	2	ROTARY LIMIT SWITCH		INCLUDED W/ DMIC SV2C		

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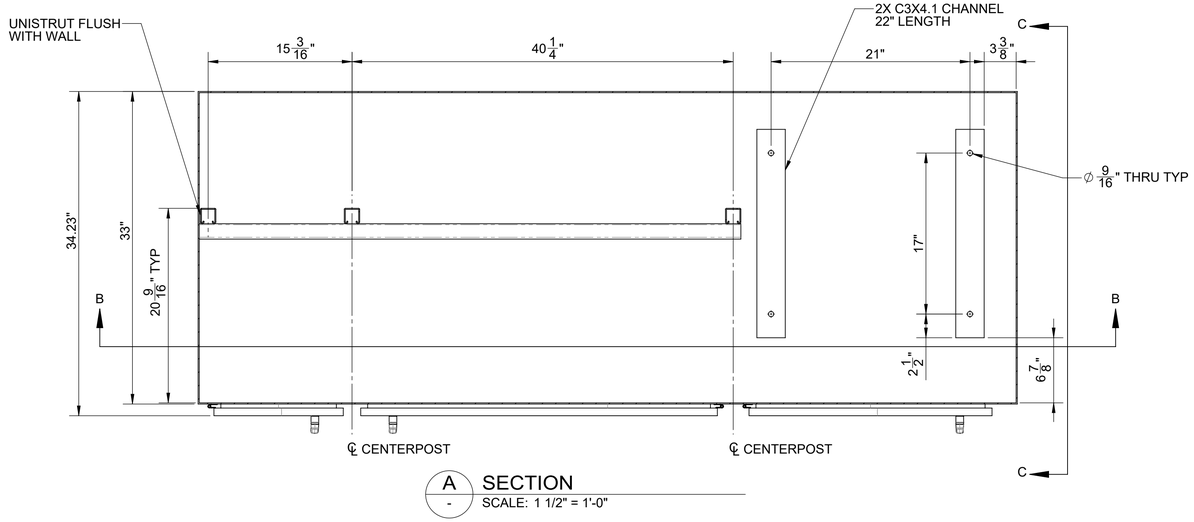
SKAGWAY, ALASKA

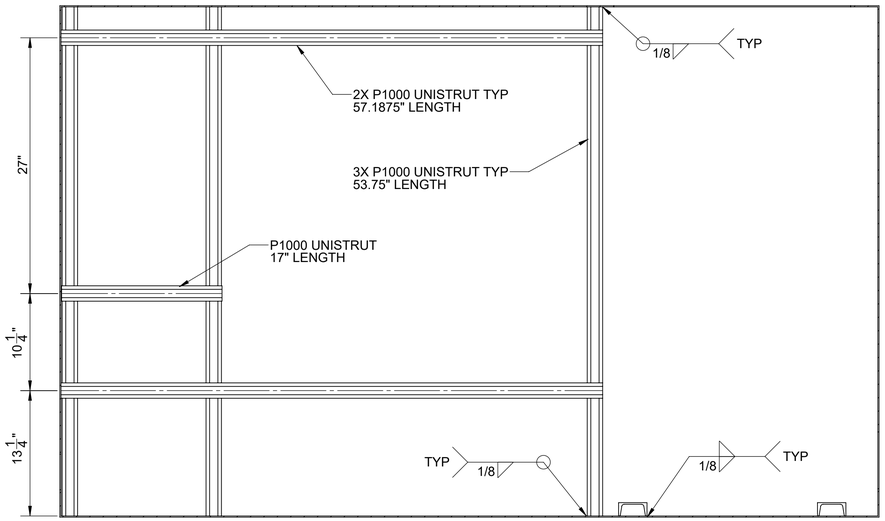
RORO RAMP AND ACCESS TRESTLE
HYDRAULIC BOM AND SCHEMATIC

DRAWN:	BBB	PROJECT NO.:	2100135
DESIGN:	PL	SCALE:	AS SHOWN
CHECKED:	RR	DATE:	01/27/2023
DRAWING NO.		**M4.43**	
SHEET NO.		OF	

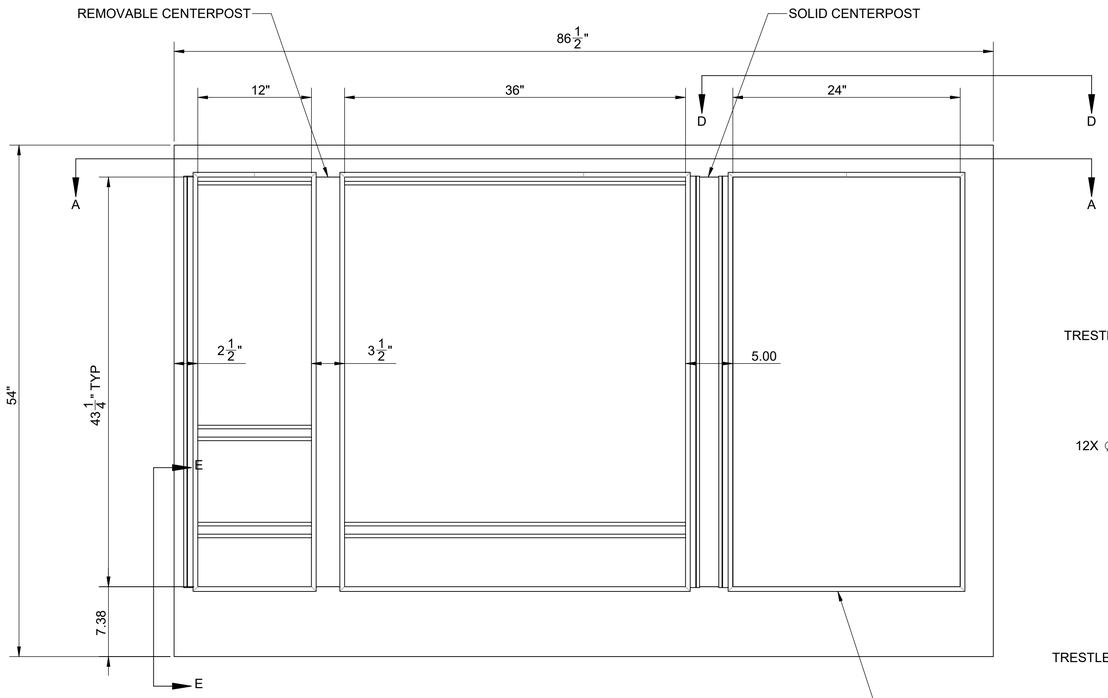
60% DESIGN - NOT FOR CONSTRUCTION



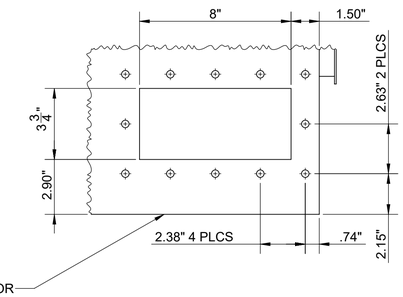
A SECTION
SCALE: 1 1/2" = 1'-0"



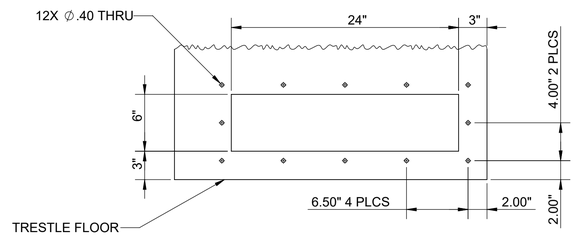
B SECTION
SCALE: 1 1/2" = 1'-0"



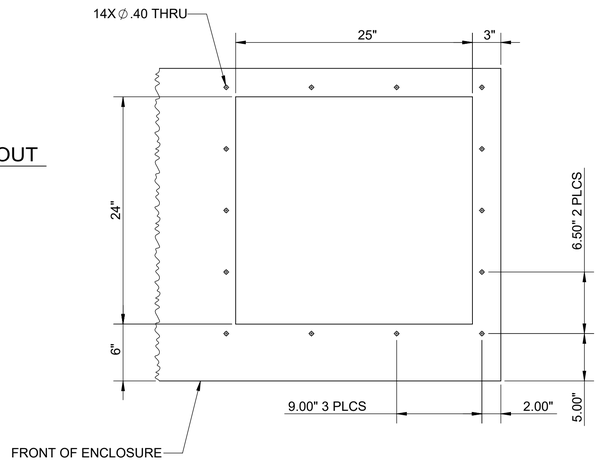
1 / M4.42 OPERATORS STATION ENCLOSURE
SCALE: 1 1/2" = 1'-0"
MATERIAL: 316 STAINLESS STEEL
12 GAUGE THK.



E HYDRAULIC TUBE PENETRATION CUT-OUT
SCALE: 3" = 1'-0"



C SIDE ACCESS PANEL CUT-OUT
SCALE: 1 1/2" = 1'-0"
VIEW ROTATED 90° CW



D TOP ACCES PANEL CUT-OUT
SCALE: 1 1/2" = 1'-0"

60% DESIGN - NOT FOR CONSTRUCTION

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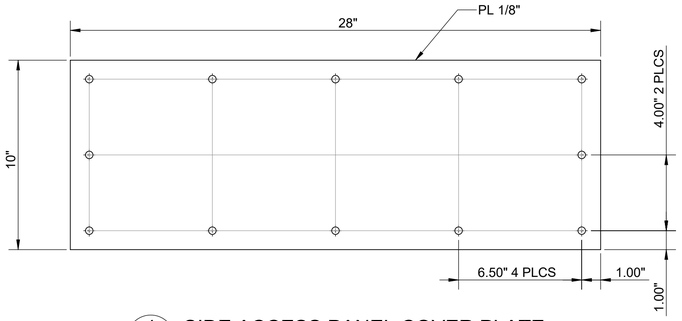
SKAGWAY, ALASKA

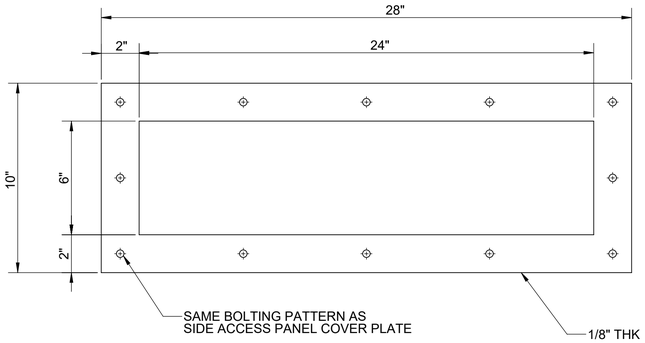
RORO RAMP AND ACCESS TRESTLE HYDRAULIC DETAILS

DRAWN: BBB	PROJECT NO.:2100135
DESIGN: PL	SCALE: AS SHOWN
CHECKED: JLF	DATE: 1/27/2023
DRAWING NO.	M4.44
SHEET NO.	OF

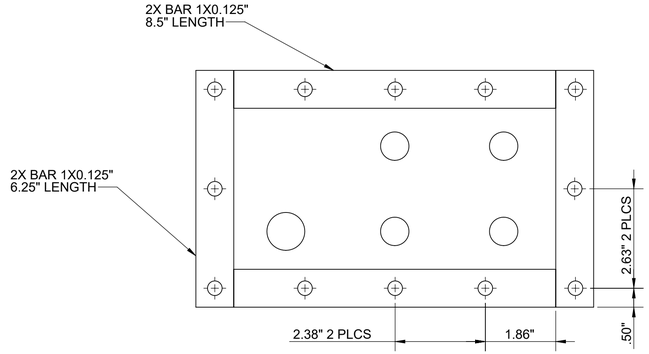
Plotted: Friday, January 27, 2023 12:25:24 PM pleske Layout: M4.44
C:\Users\pleske\KPFF, Inc\KPFF SPRC 2021 Projects - Documents\2100135 Skagway Ore Peninsula Multi-Use Dock\2.15 Engineering\RORO Ramp\Drawings\M4.44 RORO RAMP ACCESS TRESTLE HYDRAULIC DETAILS



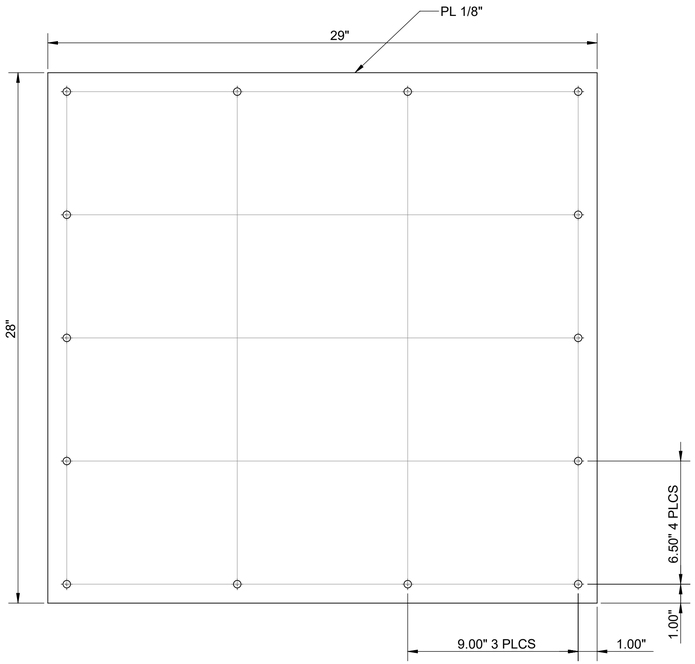
1 M4.42 SIDE ACCESS PANEL COVER PLATE
SCALE: 1:4



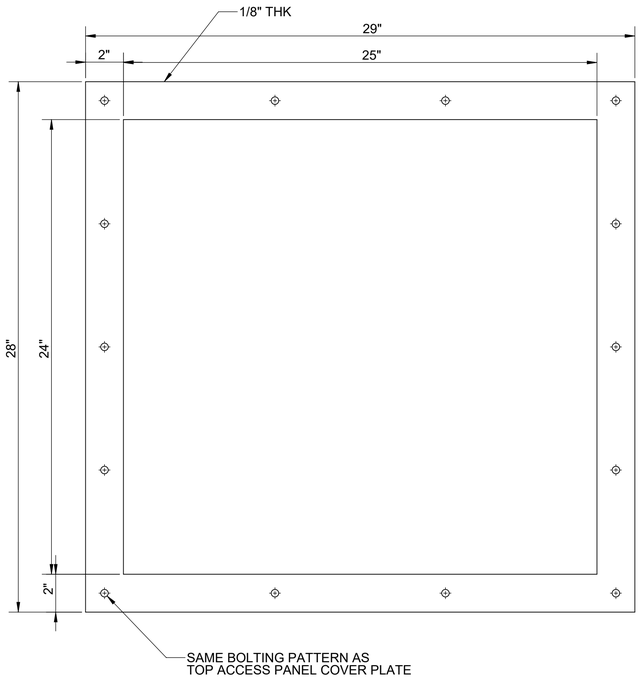
2 M4.42 SIDE ACCESS PANEL GASKET
SCALE: 1:4



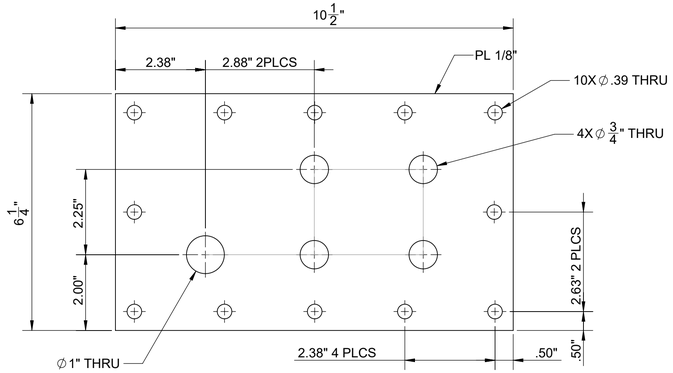
5 M4.42 HYDRAULIC TUBE PENETRATION FRAMING
SCALE: 1:2



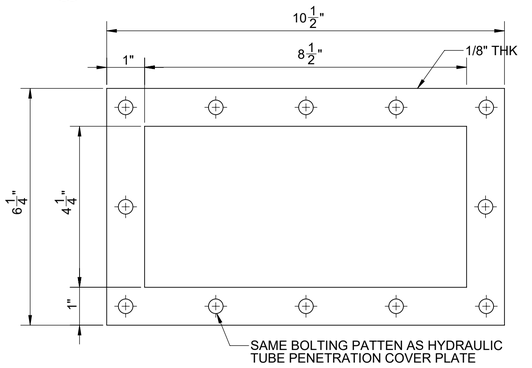
3 M4.42 TOP ACCESS PANEL COVER PLATE
SCALE: 1:4



4 M4.42 TOP ACCESS PANEL GASKET
SCALE: 1:4



6 M4.42 HYDRAULIC TUBE PENETRATION COVER PLATE
SCALE: 1:2



7 M4.42 HYDRAULIC TUBE PENETRATION GASKET
SCALE: 1:2

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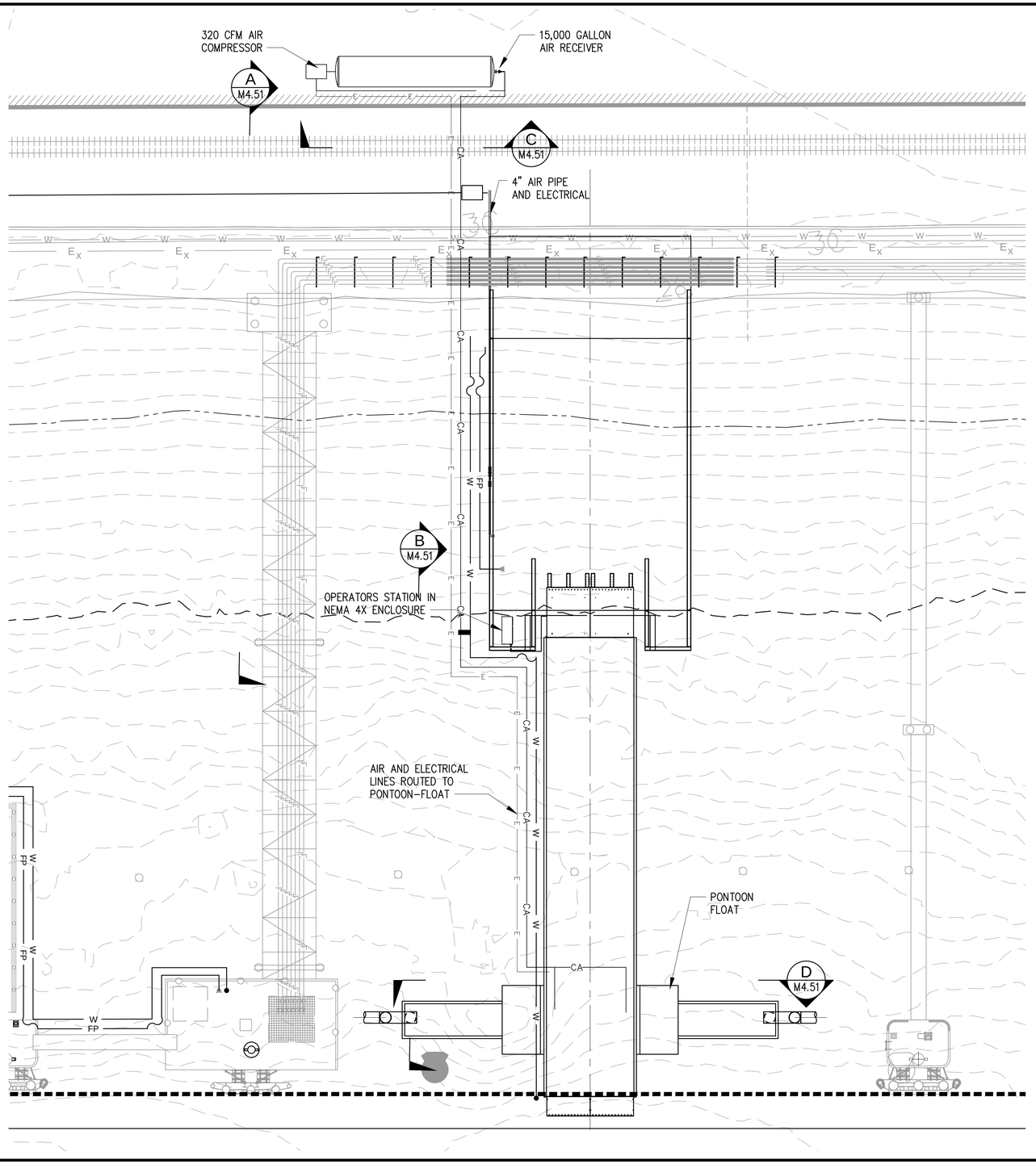
SKAGWAY, ALASKA

RORO RAMP AND ACCESS TRESTLE HYDRAULIC DETAILS

DRAWN:	BBB	PROJECT NO.:	2100135
DESIGN:	PL	SCALE:	AS SHOWN
CHECKED:	JLF	DATE:	1/27/2023
DRAWING NO.			M4.45
SHEET NO.		OF	

60% DESIGN - NOT FOR CONSTRUCTION



NOTES

- FP — DRYFIRE UTILITY
- W — WATER UTILITY
- CA — COMPRESSED AIR
- E — E — ELECTRICAL CONDUIT

1 / M2.00 **PNEUMATIC PLAN**
SCALE: 1/16" = 1'-0"

45.9° PROJECT NORTH

60% DESIGN - NOT FOR CONSTRUCTION

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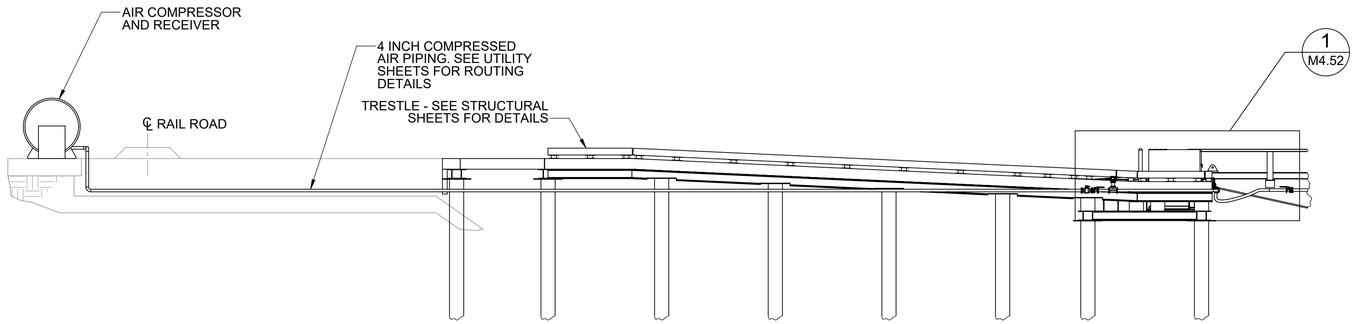
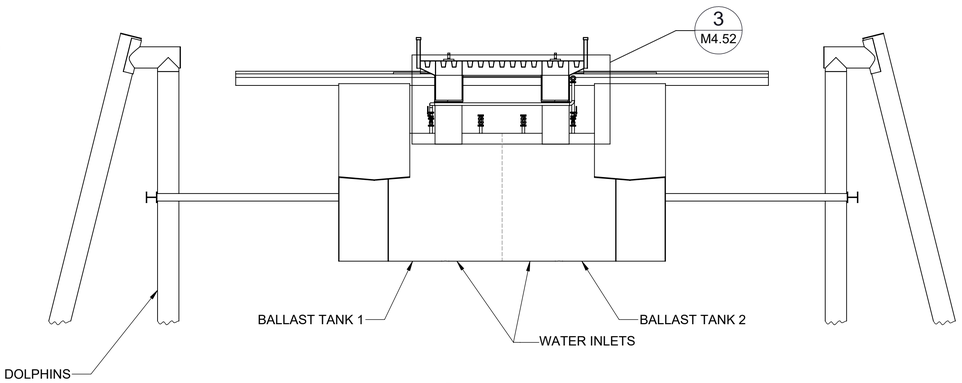
RORO RAMP PONTOON FLOAT PNEUMATIC PLAN

DRAWN: BBB	PROJECT NO.: 2100135
DESIGN: BG	SCALE: AS SHOWN
CHECKED: JLF	DATE: 01/27/2023
DRAWING NO.	**M4.50**
SHEET NO.	OF

Plotted: Jan 27, 2023 - 2:26pm jfelton Layout: M4.50
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_M4.50 RORO RAMP PONTOON FLOAT & PNEUMATIC PLAN.dwg



A SECTION
M4.50 SCALE: 3/32" = 1'-0"



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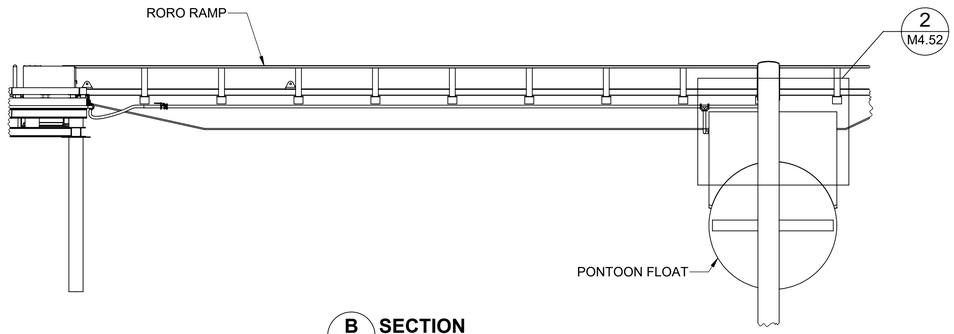

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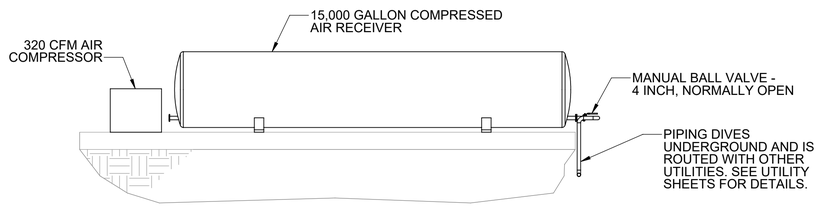

C SECTION
M4.50 SCALE: 1/8" = 1'-0"

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NO.	DATE	BY	REVISION

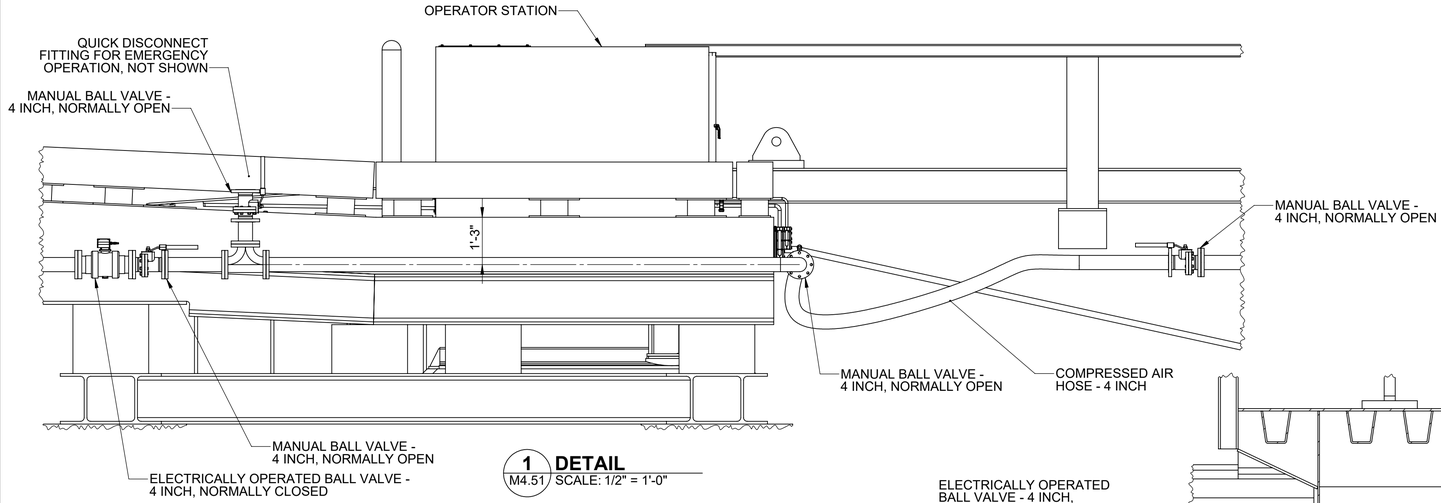
ORE PENNINSULA REDEVELOPMENT
SKAGWAY, ALASKA

RORO RAMP PONTOON FLOAT PNEUMATIC SECTIONS

DRAWN:	BBB	PROJECT NO.:	2100135
DESIGN:	BG	SCALE:	AS SHOWN
CHECKED:	JLF	DATE:	01/27/2023
DRAWING NO.		M4.51	
SHEET NO.		OF	

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Friday, January 27, 2023 1:05:27 PM bgregor Layout: M4.51
C:\Users\bgregor\KPFF, Inc\KPFF SPRC 2021 Projects - 100\2100135 Skagway Ore Peninsula Multi-Use Dock\2.15 Engineering\RORO Ramp\Drawings\M4.51 - M4.52 RORO RAMP PONTOON FLOAT PNEUMATIC SECTIONS



1 DETAIL
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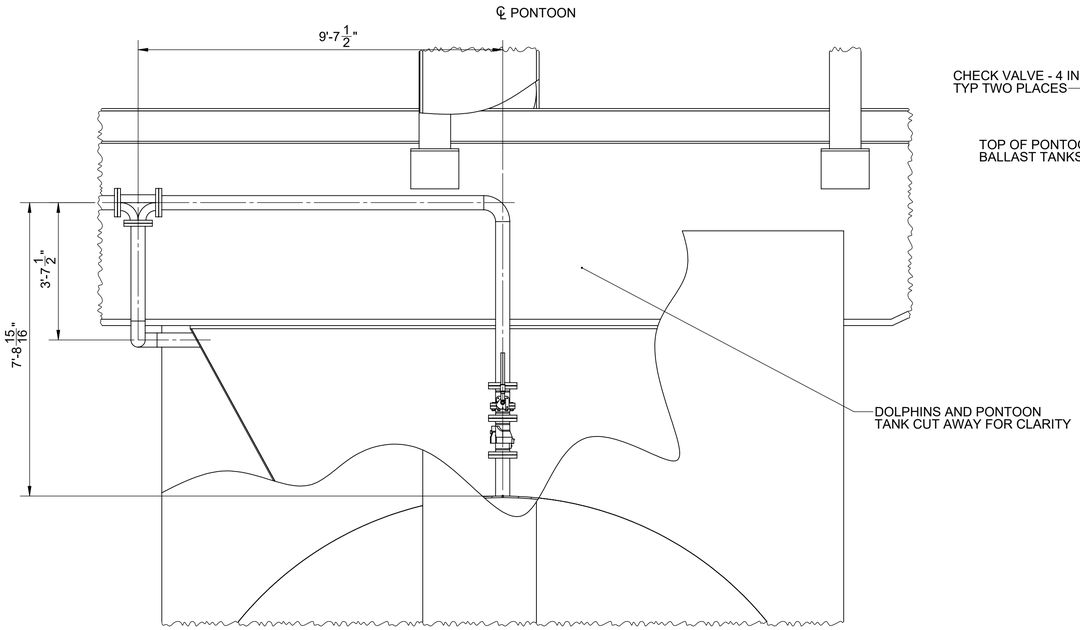
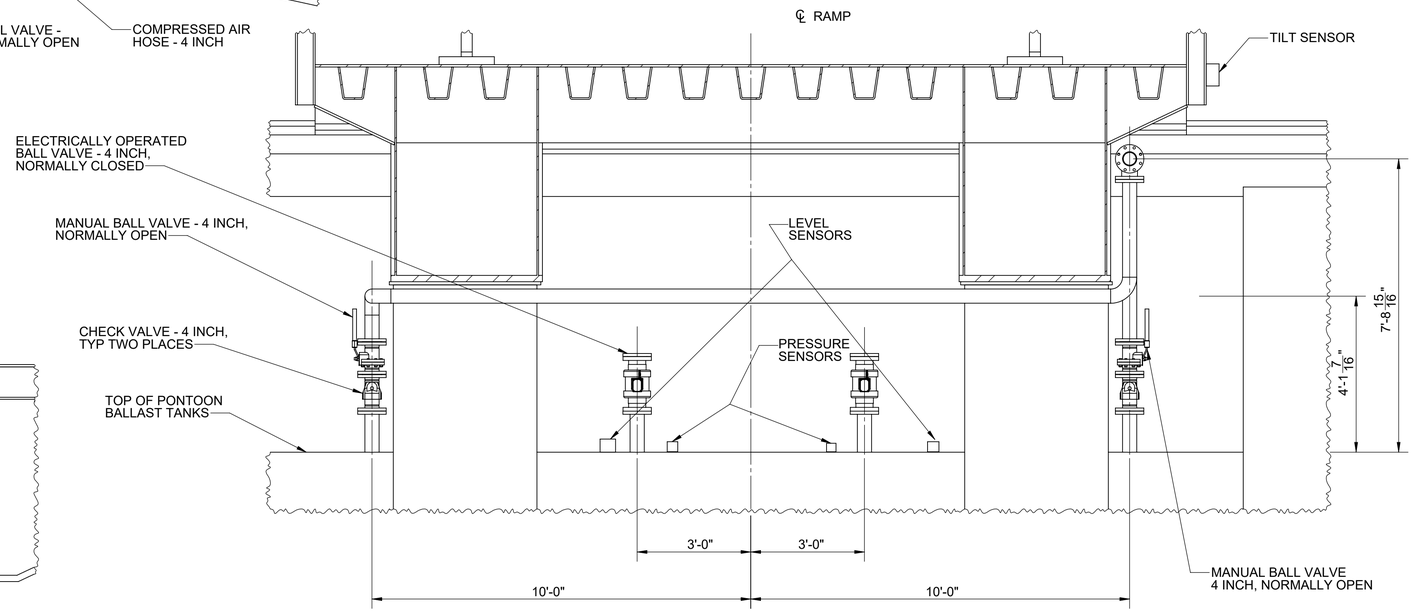


2 DETAIL
M4.51 SCALE: 1/2" = 1'-0"



3 DETAIL
M4.51 SCALE: 1/2" = 1'-0"

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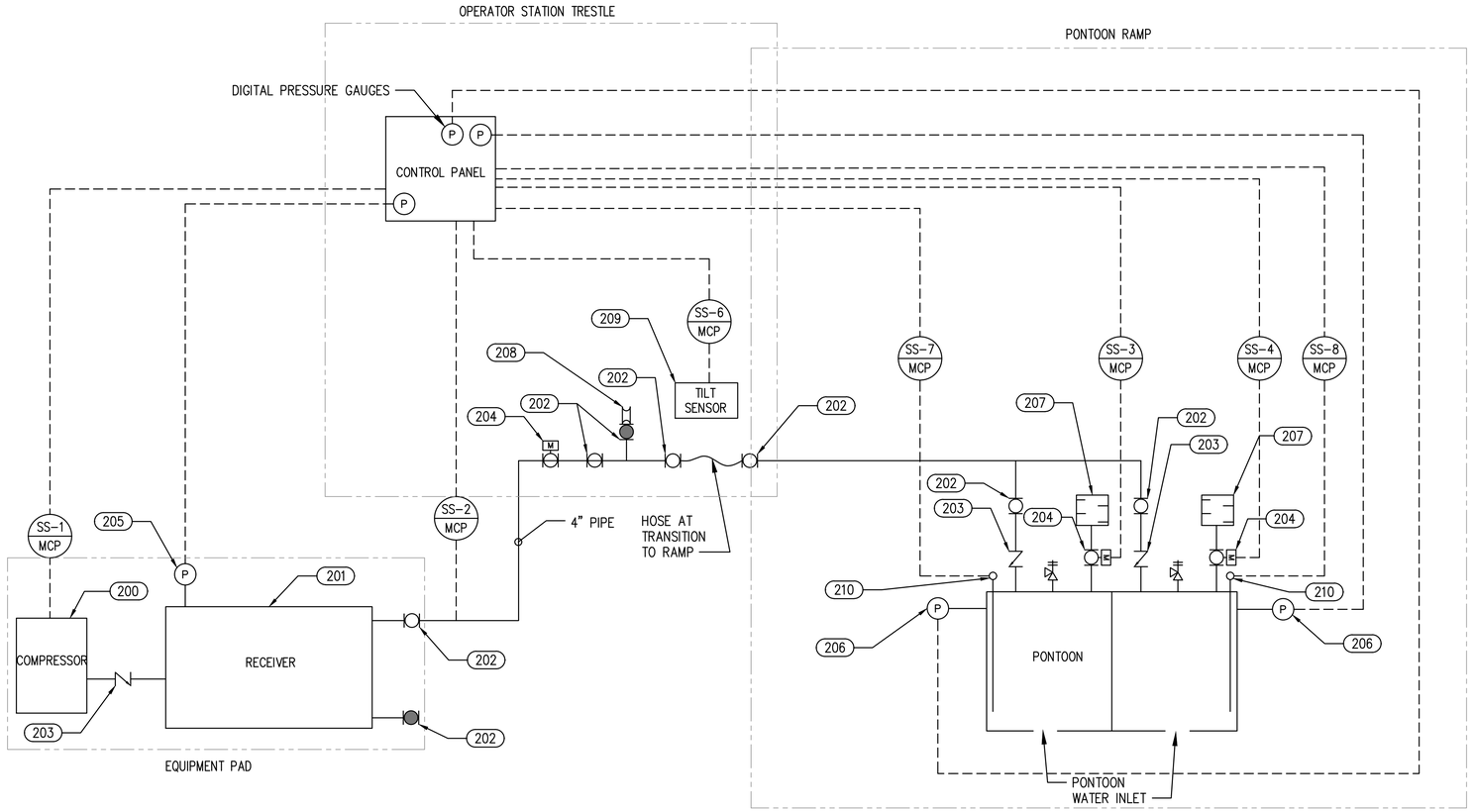
RORO RAMP PONTOON FLOAT PNEUMATIC DETAILS

DRAWN:	BBB	PROJECT NO.:	2100135
DESIGN:	BG	SCALE:	AS SHOWN
CHECKED:	JLF	DATE:	01/27/2023
DRAWING NO.			M4.52
SHEET NO.		OF	

Plotted: Friday, January 27, 2023 9:59:28 AM bgregor Layout: M4.52
C:\Users\bgregor\KPFF, Inc\KPFF SPRC 2021 Projects - 100\2100135 Skagway Ore Peninsula Multi-Use Dock\2.15 Engineering\RORO Ramp\Drawings\M4.51 - M4.52 RORO RAMP PONTOON FLOAT PNEUMATIC SECTIONS



1 PNEUMATIC P&ID
SCALE: NTS

BOM

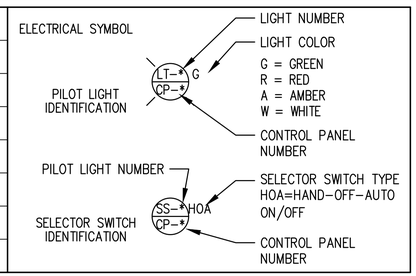
POS	QTY	DESCRIPTION	SPECIFICATION	EXAMPLE PRODUCT	CONTROL COMPONENT ID	ELECTRICAL REQUIREMENT
200	1	AIR COMPRESSOR	320 CFM@116 PSI, 75HP	QUINCY QGS MODEL#8158051279		460V, 3 PHASE @85A
201	1	AIR RECEIVER	15,000 GALLON	AA TANKS #15000ARH150		
202	8	BALL VALVE	MANUAL OPERATED, 4"	VICTAULIC BALL VALVE, SERIES 726		
203	3	CHECK VALVE	4",	VICTAULIC CHECK VALVE, SERIES 716		
204	3	BALL VALVE	ELECTRICAL OPERATED, 4"	HAYWARD TBH SERIES W/ ACTUATOR MOUNT, AND HANBAY ELECTRIC ACTUATOR MDX SERIES		24-24VDC @ 3A
205	1	PRESSURE TRANSDUCER	0-200 PSI RANGE	OMEGA SUBMERSIBLE PRESSURE TRANSMITTER # PX633A5-150GI		0-10VDC SUPPLY, 4-20mA SIGNAL
206	2	PRESSURE TRANSDUCER	0-15 PSI RANGE	OMEGA SUBMERSIBLE PRESSURE TRANSMITTER # PX633A5-015GI		0-10VDC SUPPLY, 4-20mA SIGNAL
207	2	SILENCER	4"			
208	1	QUICK DISCONNECT FITTING	4"			
209	1	TILT SENSOR	0-90 DEG RANGE	BAUMER GIM500-R		8-36 VDC SUPPLY, 4-20mA SIGNAL
210	2	WATER LEVEL SENSOR	0-20 FT RANGE	YSI #WL-705		4-20mA SIGNAL

NOTES

1. THE INDICATED ARE SOLENOID OPERATED BALL VALVES OPERATED BY THE RAISE AND LOWER FUNCTIONS AT THE CONTROL PANEL.
2. THESE CONTROL VALVES WILL BE LOCATED AT THE RAMP.
3. TILT SENSOR TO ENSURE LEFT/RIGHT RAMP BALANCE AS A WAY TO SENSE IF THERE IS A LEAK IN ONE OF THE OUTER FLOATS.
4. WATER LEVEL SENSORS IN EACH SIDE OF PONTOON TO ENSURE APPROXIMATELY EQUAL LEVELS IN BOTH SIDES.
5. RECEIVER 15,000 GALLONS. SIZED TO COMPLETELY PURGE PONTOON IN ONE MOVE.
6. COMPRESSOR 320 CFM @ 116 PSI. SIZED TO FILL RECEIVER FROM EMPTY IN 45 MINUTES.
7. TILT SENSOR SETS OFF ALARM OUTSIDE OF -TBD- RANGE.
8. ALARM TRIGGERS WHEN WATER LEVEL SENSORS ARE MORE THAN -TBD- APART.
9. PRESSURE RELIEF VALVES SET TO -TBD-.

LEGEND

	AIR DIAPHRAGM CONTROL VALVE		REDUCER	- - - - -	ELECTRICAL CONTROLS
	AIR FILTER/REGULATOR/GAUGE		CHECK VALVE WITH STRAINER		
	PRESSURE RELIEF VALVE	P	PRESSURE GAUGE		
	BALL VALVE	M	BALL VALVE, 3-WAY, ELECTRIC		
	BALL VALVE (NORMALLY CLOSED)	M	BALL VALVE, 2-WAY, ELECTRIC		
	CHECK VALVE		ALARM HORN		
	FLEXIBLE HOSE QUICK DISCONNECT	I	INTERLOCK		
	UNION		AIR PIPING		



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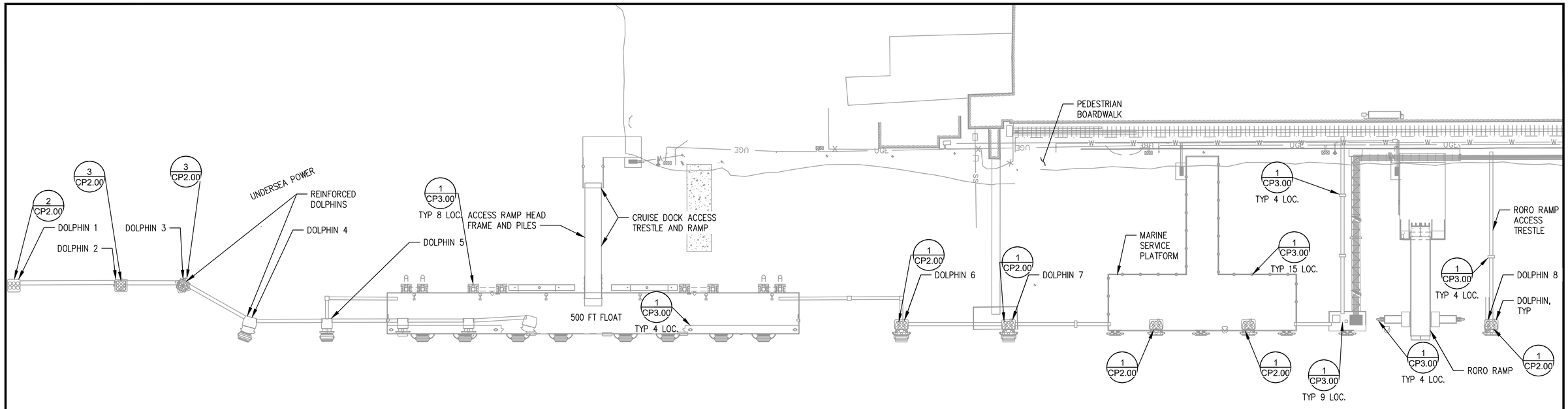
ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

RORO RAMP PONTOON FLOAT
PNEUMATIC BOM AND SCHEMATIC

DRAWN: JH	PROJECT NO.: 2100135
DESIGN: BG	SCALE: AS SHOWN
CHECKED: JLF	DATE: 01/27/2023
DRAWING NO.	M4.53
SHEET NO.	OF

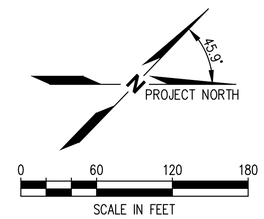
60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 - 2:55pm jfelton Layout: M4.53
M:\2021\2100135 Skagway Ore Peninsula Multi-use Dock\Drawings\Current\2100135_M4.53 Pneumatic P & ID.dwg



1 CATHODIC PROTECTION SYSTEM SITE PLAN

SCALE: 1" = 60'



60% DESIGN - NOT FOR CONSTRUCTION

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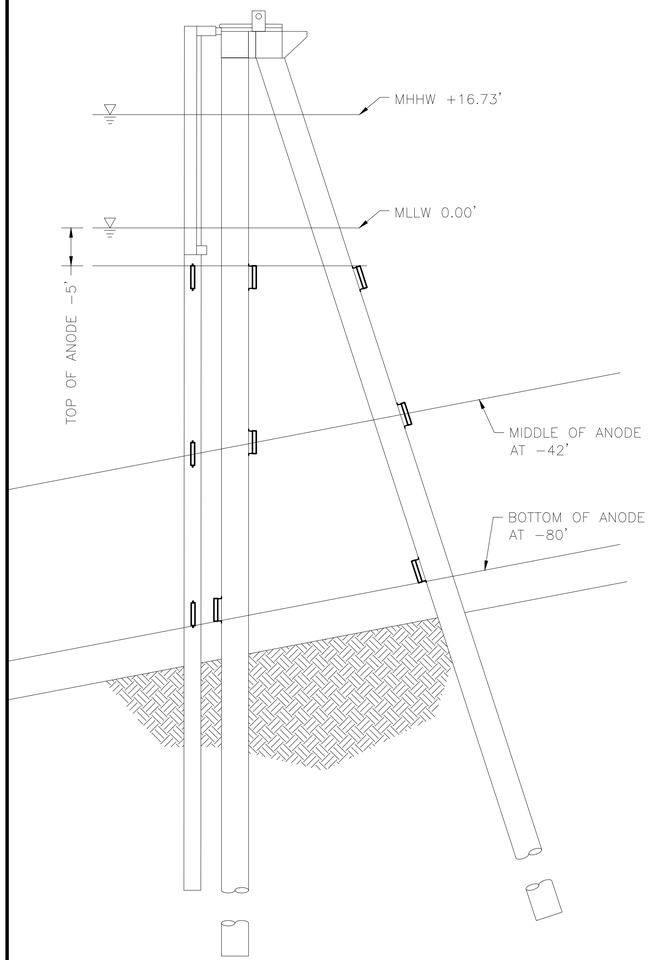
CATHODIC PROTECTION SYSTEM SITE PLAN

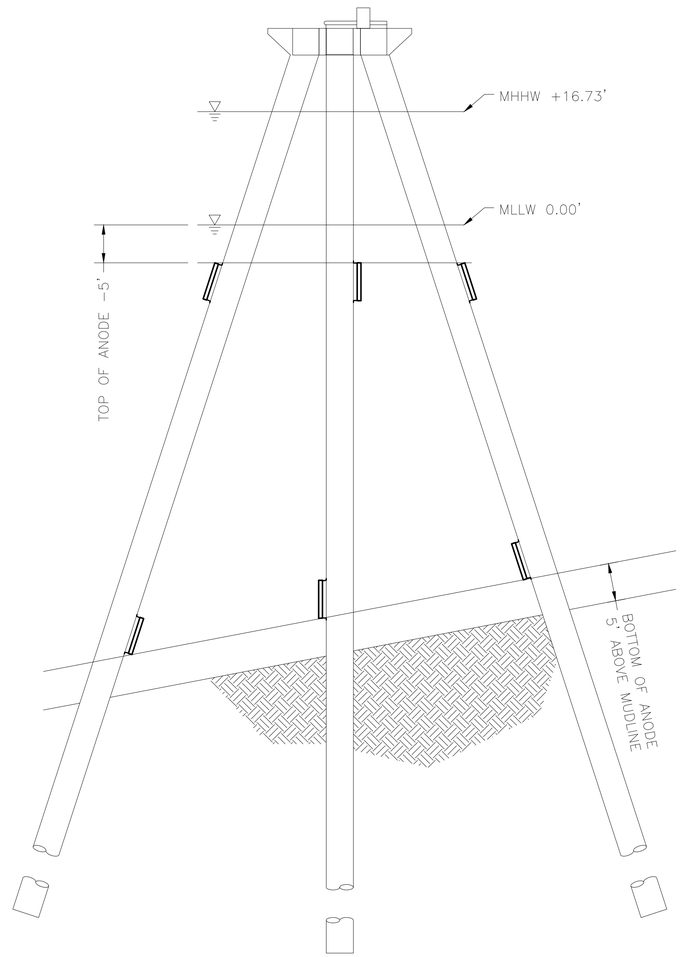
DRAWN: RH	PROJECT NO.: 2100135
DESIGN: JE	SCALE: AS SHOWN
CHECKED: ES	DATE: 01/27/2023
DRAWING NO.	**CP1.00**
SHEET NO.	OF



1 CP4.00

7"X7"X4' ALUMINUM ANODES
2 ANODES PER PILE – 20 ANODES PER DOLPHIN (100 TOTAL)

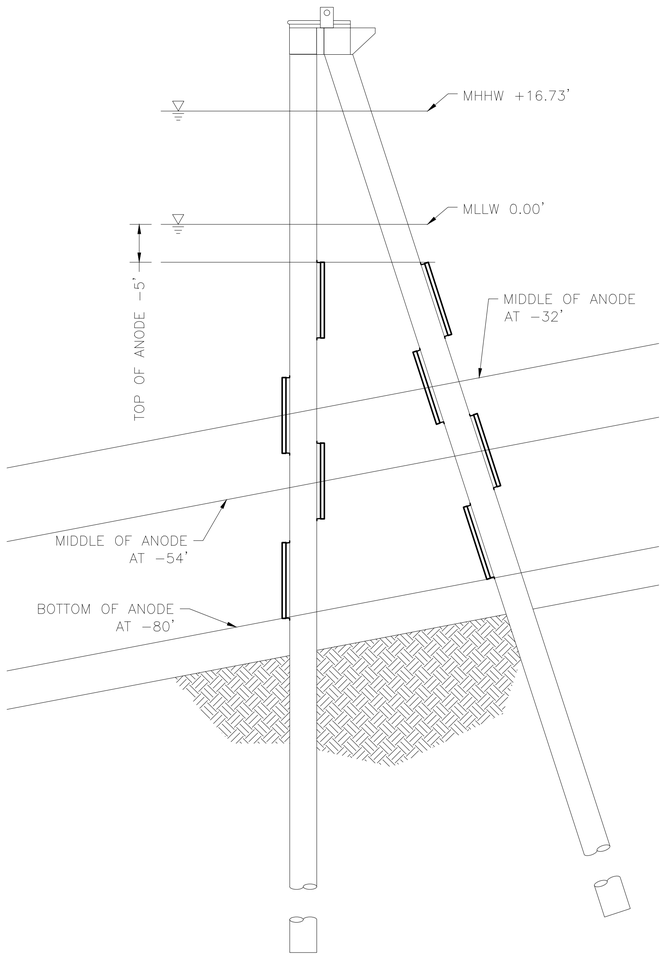
1 CP1.00 TYPICAL ELEVATION
NOT TO SCALE



2 CP4.00

6"X6"X5' ALUMINUM ANODES
3 ANODES PER PILE – 18 ANODES PER DOLPHIN (18 TOTAL)

2 CP1.00 TYPICAL ELEVATION
NOT TO SCALE



3 CP4.00

5"X5"X10' ALUMINUM ANODES
4 ANODES PER PILE – 36 ANODES ON DOLPHIN 2
32 ANODES ON DOLPHIN 3
(68 TOTAL)

3 CP1.00 TYPICAL ELEVATION
NOT TO SCALE

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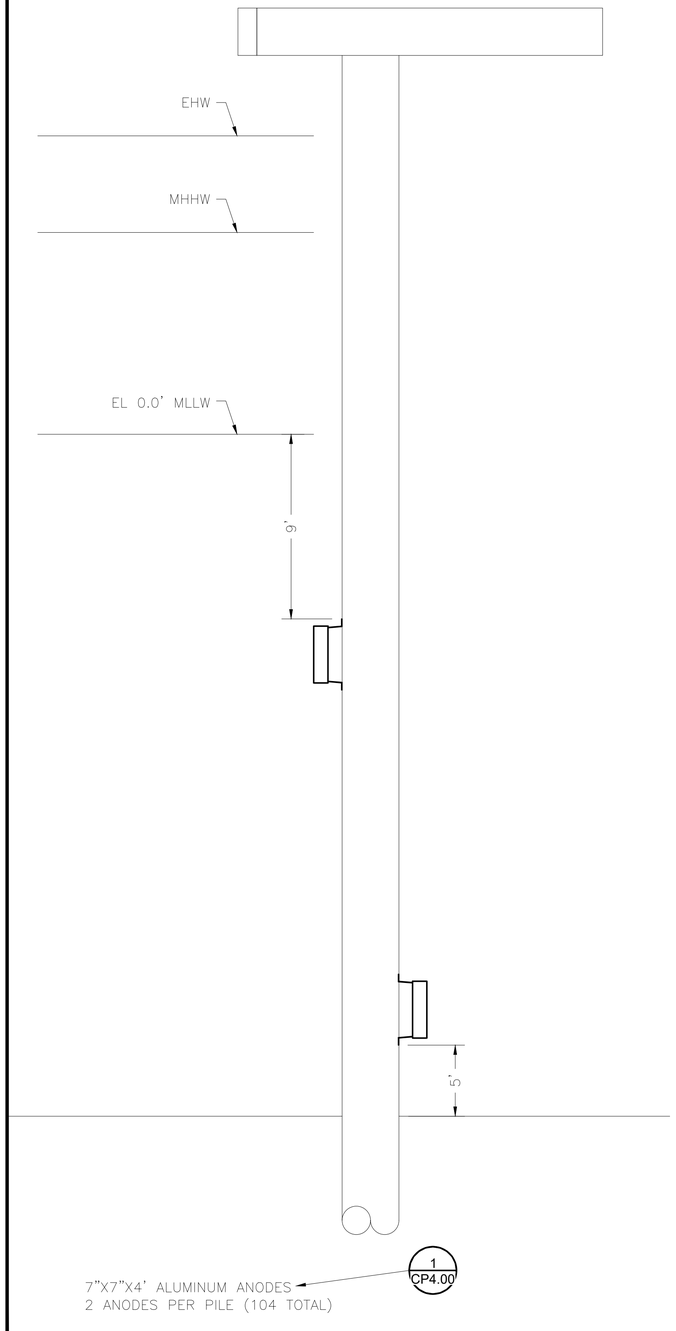
ORE PENINSULA MULTIUSE DOCK
SKAGWAY, ALASKA

GALVANIC CATHODIC PROTECTION SYSTEM DETAILS

DRAWN: RH	PROJECT NO.: 2100135
DESIGN: JE	SCALE: AS SHOWN
CHECKED: ES	DATE: 01/27/2023
DRAWING NO.	**CP2.00**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION



1 CP1.00 NEW COATED PILES
NOT TO SCALE

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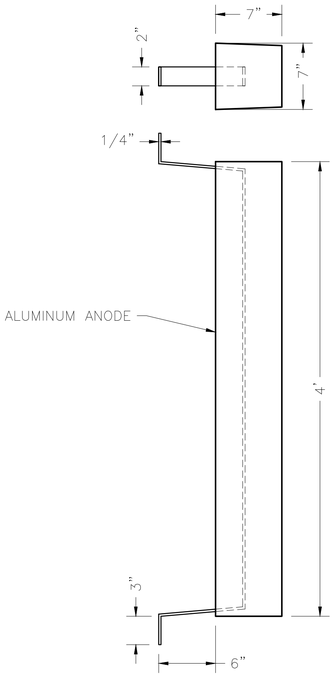
ORE PENINSULA MULTIUSE DOCK
SKAGWAY, ALASKA

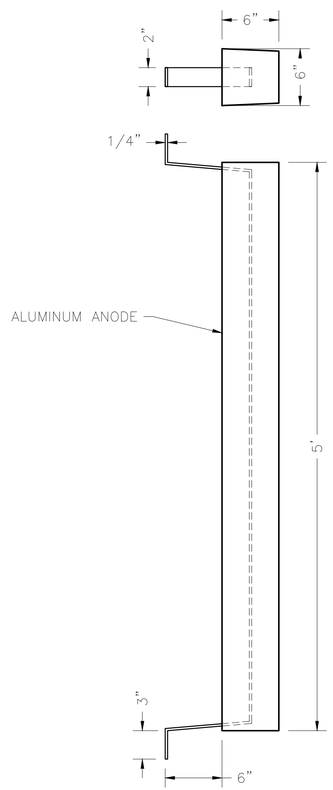
GALVANIC CATHODIC PROTECTION SYSTEM DETAILS

DRAWN: RH	PROJECT NO.: 2100135
DESIGN: JE	SCALE: AS SHOWN
CHECKED: ES	DATE: 01/27/2023
DRAWING NO.	CP3.00
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION



1 CP2.00 CP3.00 TYPE 'A' ANODE
NOT TO SCALE



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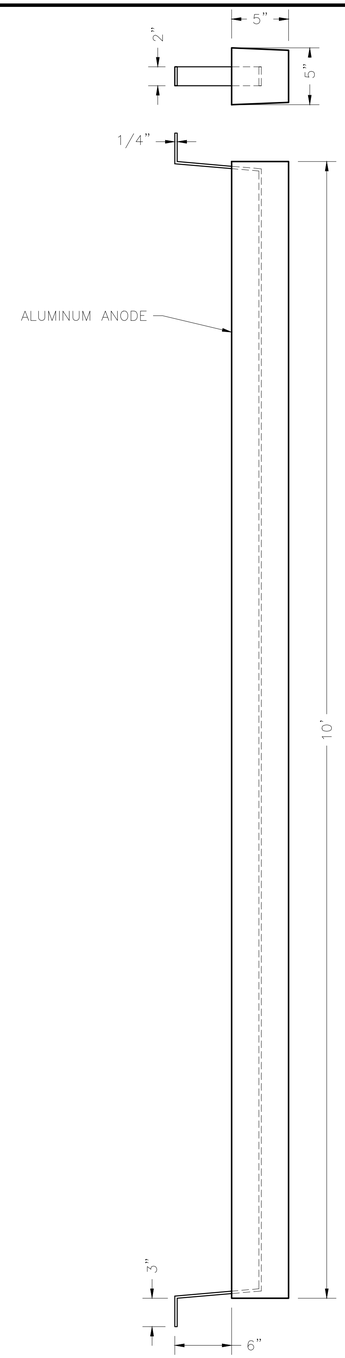
NOT TO SCALE



3 CP2.00 TYPE 'C' ANODE
NOT TO SCALE

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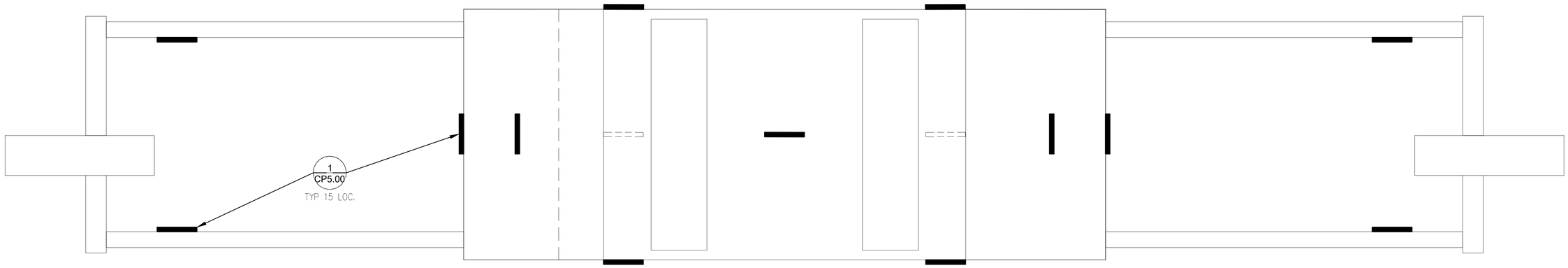
ORE PENINSULA MULTIUSE DOCK
SKAGWAY, ALASKA

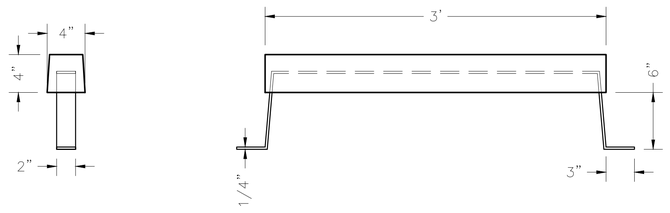
GALVANIC CATHODIC PROTECTION SYSTEM DETAILS

DRAWN: RH	PROJECT NO.: 2100135
DESIGN: JE	SCALE: AS SHOWN
CHECKED: ES	DATE: 01/27/2023
DRAWING NO.	CP4.00
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

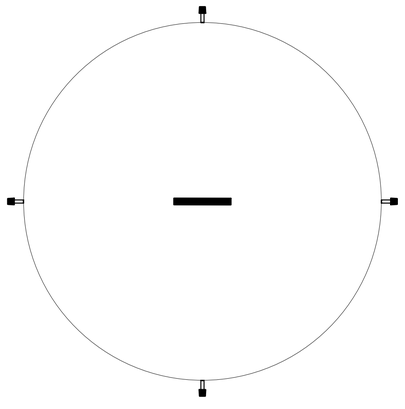


RORO RAMP FLOAT - EXTERNAL CP SYSTEM LAYOUT



4"x4"x3' ALUMINUM ANODES
EXTERNAL CP SYSTEM – 15 ANODES TOTAL

1
CP5.00 TYPE 'D' ANODE



BUOYANCY TANK - TYPICAL ELEVATION

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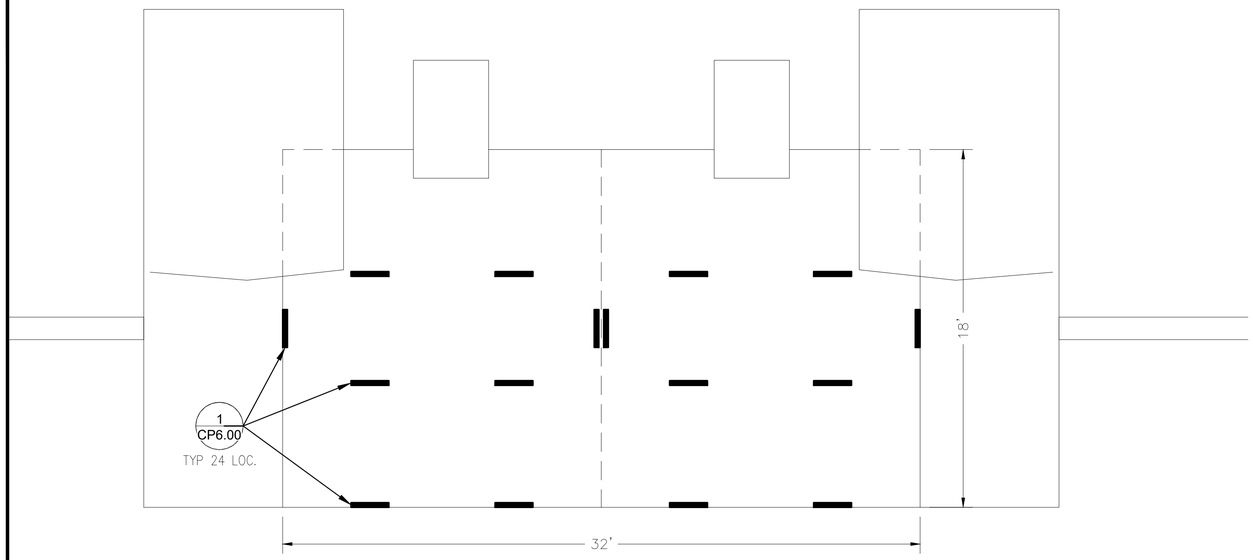
ORE PENINSULA MULTIUSE DOCK
SKAGWAY, ALASKA

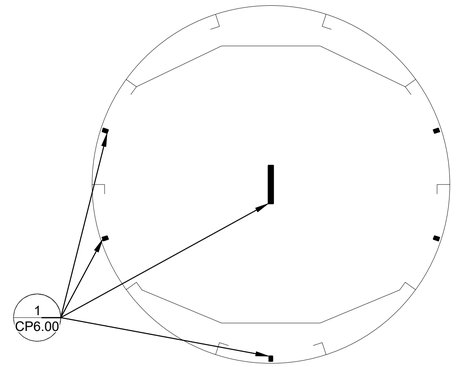
RORO RAMP
EXTERNAL CATHODIC PROTECTION SYSTEM

DRAWN: RH	PROJECT NO.: 2100135
DESIGN: JE	SCALE: AS SHOWN
CHECKED: ES	DATE: 01/27/2023
DRAWING NO.	**CP5.00**
SHEET NO.	OF

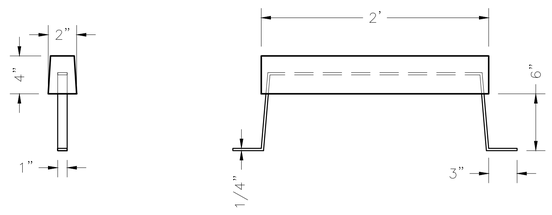
60% DESIGN - NOT FOR CONSTRUCTION



BUOYANCY TANK - INTERNAL CP SYSTEM LAYOUT



BUOYANCY TANK - TYPICAL SECTION



2"x4"x2' ALUMINUM ANODES
INTERNAL CP SYSTEM – 24 ANODES TOTAL

1
CP6.00 TYPE 'E' ANODE

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NO.	DATE	BY	REVISION

ORE PENINSULA MULTIUSE DOCK
SKAGWAY, ALASKA

RORO RAMP
INTERNAL CATHODIC PROTECTION SYSTEM

DRAWN: RH	PROJECT NO.: 2100135
DESIGN: JE	SCALE: AS SHOWN
CHECKED: ES	DATE: 01/27/2023
DRAWING NO.	**CP6.00**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

LEGEND

ABBREVIATIONS:

AFG	ABOVE FINISHED GRADE
C.O.	CONDUIT ONLY
EMT	ELECTRICAL METALLIC TUBING
GFI	GROUND FAULT INTERRUPTED
GFR	GROUND FAULT RELAY
HDG	HOT-DIPPED GALVANIZED
HR	HOME RUN
OC	ON CENTER
OHE	OVERHEAD ELECTRICAL
PE	PHOTOELECTRIC CELL
PVC	POLYVINYL CHLORIDE CONDUIT
RSC	RIGID STEEL CONDUIT
SS	STAINLESS STEEL
UGE	UNDERGROUND ELECTRICAL
UON	UNLESS OTHERWISE NOTED
WP	WEATHERPROOF
XFMR	TRANSFORMER

SHEET NOTE SYMBOLS:

(D)	DEMOLISH
(E)	EXISTING TO REMAIN
(N)	NEW
(R)	RELOCATE EXISTING
X/X	DETAIL/SHEET CALLOUT
X/X	SECTION/SHEET CALLOUT

POWER:

J	JUNCTION BOX
C	CONDULET
	MOTOR CONNECTION
	DISCONNECT

SERVICE EQUIPMENT:

T	TRANSFORMER
	PANELBOARD
	MAIN DISTRIBUTION PANEL
	UTILITY POLE

LIGHTING:

	EXTERIOR FLOODLIGHT
	EXTERIOR WALL MOUNTED LUMINAIRE
	EXTERIOR POLE MOUNTED LUMINAIRE

LIGHTING CONTROLS:

LC	LIGHTING CONTACTOR
PE	PHOTOELECTRIC CELL

CONDUIT & CONDUCTORS:

	CONDUIT UNDERGROUND
	FLEXIBLE CONDUIT
	FIBERGLASS CONDUIT

GENERAL ELECTRICAL NOTES

1. COMPLY WITH NFPA 70, NATIONAL ELECTRICAL CODE 2020 EDITION; NECA 1, STANDARD FOR GOOD WORKMANSHIP IN ELECTRICAL CONSTRUCTION.
2. ELECTRICAL COMPONENTS, DEVICES, ASSEMBLIES, AND ACCESSORIES ARE REQUIRED TO BE LISTED AND LABELED AS DEFINED IN NFPA 70, ARTICLE 100, BY A TESTING AGENCY ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION, AND MARKED FOR INTENDED USE.
3. DRAWINGS SHOW THE GENERAL LOCATIONS OF THE ELECTRICAL FEATURES ONLY, UNLESS OTHERWISE INDICATED. MAKE MINOR RELOCATIONS AS REQUIRED FOR PROJECT CONDITIONS WHEN NECESSARY TO PRESENT SYMMETRICAL APPEARANCE OR TO AVOID INTERFERENCE WITH OTHER INSTALLATIONS.
4. NEUTRAL CONDUCTORS SHALL NOT BE SHARED BETWEEN BRANCH CIRCUITS, UNLESS OTHERWISE INDICATED.
5. PROVIDE INSULATED EQUIPMENT GROUNDING CONDUCTORS WITH ALL FEEDERS AND BRANCH CIRCUITS. TERMINATE EACH END ON SUITABLE LUG, BUS OR BUSHING. SIZE EQUIPMENT GROUNDING CONDUCTORS IN ACCORDANCE WITH NEC, UNLESS OTHERWISE INDICATED, BUT NOT SMALLER THAN NO. 12 AWG.
6. MINIMUM CONDUCTOR SIZE FOR BRANCH CIRCUITS: NO. 12 AWG.
   - USE NO. 10 AWG MINIMUM FOR 15 OR 20 AMPERE, 120 VOLT BRANCH CIRCUITS LONGER THAN 65 FEET, BUT NOT GREATER THAN 100 FEET.
   - USE NO. 8 AWG MINIMUM FOR 15 OR 20 AMPERE, 120 VOLT BRANCH CIRCUITS LONGER THAN 100 FEET UNLESS OTHERWISE INDICATED.
   - USE NO. 10 AWG MINIMUM FOR 15 OR 20 AMPERE, 277 VOLT BRANCH CIRCUITS LONGER THAN 150 FEET UNLESS OTHERWISE INDICATED.
7. OUTLET AND DEVICE BOXES FOR USE WITH EXPOSED RACEWAY SYSTEMS SHALL BE THREADED HUB, CAST METAL TYPE.

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 - 5:00pm Arlo.Storey Layout: E0.00
N:\Projects\H252 - KPFF\07 Skagway Multi-use Dock\E\Phase 1\E0.00.dwg

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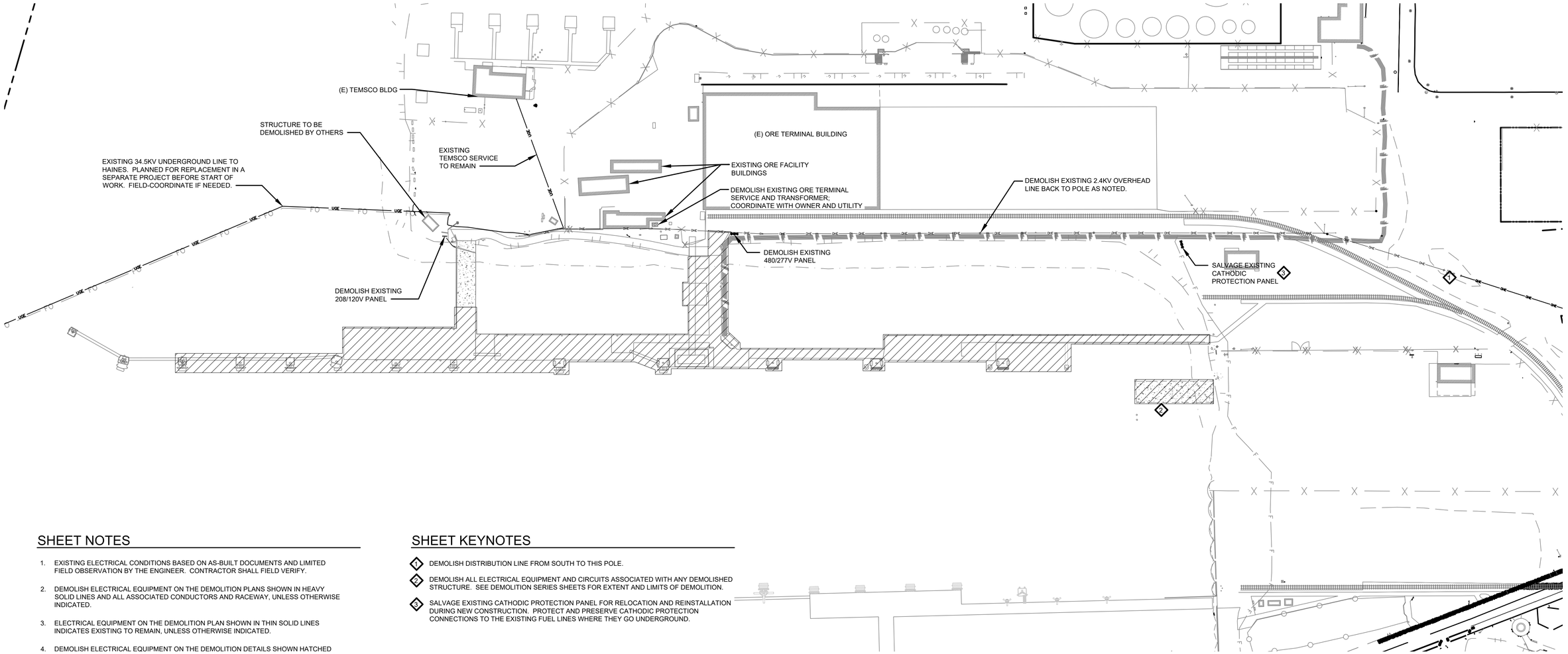
RESPEC
Juneau, AK
9109 Mendenhall Mall Rd. Ste. 4
Juneau, AK 99801
Phone: 907.780.6060
Fax: 907.586.3771
AECC163270

NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

LEGEND AND ABBREVIATIONS

DRAWN: AS	PROJECT NO.: 2100135
DESIGN: BCH,AS,MW	SCALE: N/A
CHECKED: BCH,MW	DATE: 01/27/2023
DRAWING NO.	**E0.00**
SHEET NO.	OF



SHEET NOTES

1. EXISTING ELECTRICAL CONDITIONS BASED ON AS-BUILT DOCUMENTS AND LIMITED FIELD OBSERVATION BY THE ENGINEER. CONTRACTOR SHALL FIELD VERIFY.
2. DEMOLISH ELECTRICAL EQUIPMENT ON THE DEMOLITION PLANS SHOWN IN HEAVY SOLID LINES AND ALL ASSOCIATED CONDUCTORS AND RACEWAY, UNLESS OTHERWISE INDICATED.
3. ELECTRICAL EQUIPMENT ON THE DEMOLITION PLAN SHOWN IN THIN SOLID LINES INDICATES EXISTING TO REMAIN, UNLESS OTHERWISE INDICATED.
4. DEMOLISH ELECTRICAL EQUIPMENT ON THE DEMOLITION DETAILS SHOWN HATCHED AND ALL ASSOCIATED CONDUCTORS AND RACEWAY, UNLESS OTHERWISE INDICATED.
5. RECONNECT AND LABEL EXISTING BRANCH CIRCUITS NOT BEING DEMOLISHED WHICH PASS THROUGH, OR CONNECT INTO, THE PROJECT AREA.
6. RACEWAY MAY BE REUSED IN PLACE IF NOT RENDERED UNUSABLE DUE TO OTHER DEMOLITION AND COMPLIES WITH CONTRACT DOCUMENTS. REUSED RACEWAY SHALL BE IN LIKE-NEW, OR REPAIRED TO LIKE-NEW CONDITION BEFORE INSTALLING CONDUCTORS.
7. SALVAGE SHALL MEAN REMOVE WITHOUT DAMAGE DURING DEMOLITION AND REUSE DURING NEW CONSTRUCTION.
8. ELECTRICAL EQUIPMENT REMOVED AND DEEMED UNUSABLE BY THE OWNER SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND BE PROPERLY DISPOSED OF. EQUIPMENT DEEMED USABLE BY THE OWNER SHALL BE DELIVERED WITHOUT DAMAGE TO A LOCATION DESIGNATED BY THE OWNER, UNLESS OTHERWISE INDICATED.

SHEET KEYNOTES

1. DEMOLISH DISTRIBUTION LINE FROM SOUTH TO THIS POLE.
2. DEMOLISH ALL ELECTRICAL EQUIPMENT AND CIRCUITS ASSOCIATED WITH ANY DEMOLISHED STRUCTURE. SEE DEMOLITION SERIES SHEETS FOR EXTENT AND LIMITS OF DEMOLITION.
3. SALVAGE EXISTING CATHODIC PROTECTION PANEL FOR RELOCATION AND REINSTALLATION DURING NEW CONSTRUCTION. PROTECT AND PRESERVE CATHODIC PROTECTION CONNECTIONS TO THE EXISTING FUEL LINES WHERE THEY GO UNDERGROUND.

1 ELECTRICAL SITE PLAN
SCALE 0' 40' 80' 160'

60% DESIGN - NOT FOR CONSTRUCTION

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1601 5th Avenue, Suite 1300
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Fax: 907.586.3771
AECC163270

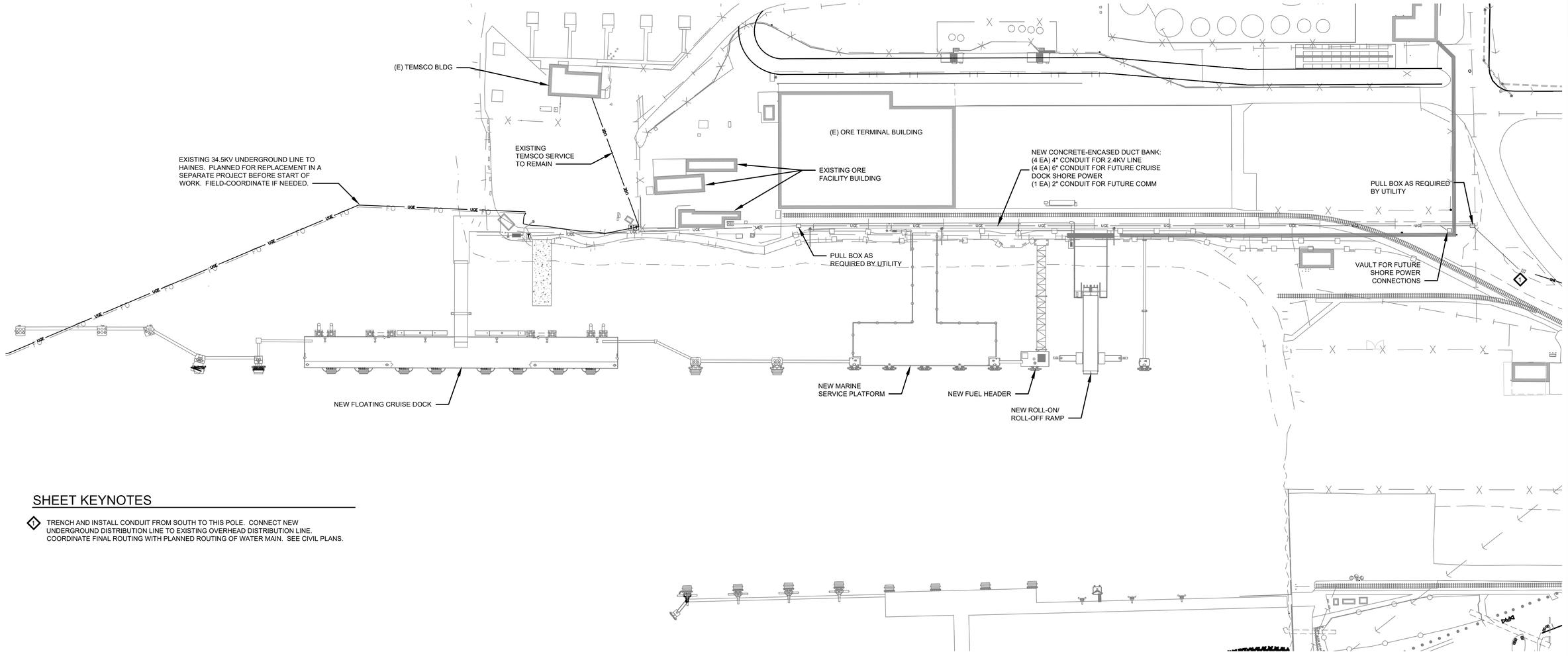
NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

ELECTRICAL SITE PLAN - EXISTING

DRAWN: REJ, JLC	PROJECT NO.: 2100135
DESIGN: BCH,AS,MW	SCALE: AS SHOWN
CHECKED: BCH,AS	DATE: 01/27/2023
DRAWING NO.	**E1.00**
SHEET NO.	

Plotted: Jan 27, 2023 – 5:00pm Arlo.Storey Layout: E1.00
N:\Projects\P252 – KPFF\07 Skagway Multi-use Dock\E\Phase 1\E1.00.dwg



SHEET KEYNOTES

1. TRENCH AND INSTALL CONDUIT FROM SOUTH TO THIS POLE. CONNECT NEW UNDERGROUND DISTRIBUTION LINE TO EXISTING OVERHEAD DISTRIBUTION LINE. COORDINATE FINAL ROUTING WITH PLANNED ROUTING OF WATER MAIN. SEE CIVIL PLANS.

1 OVERALL ELECTRICAL SITE PLAN

SCALE 0' 40' 80' 160'

60% DESIGN - NOT FOR CONSTRUCTION

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NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

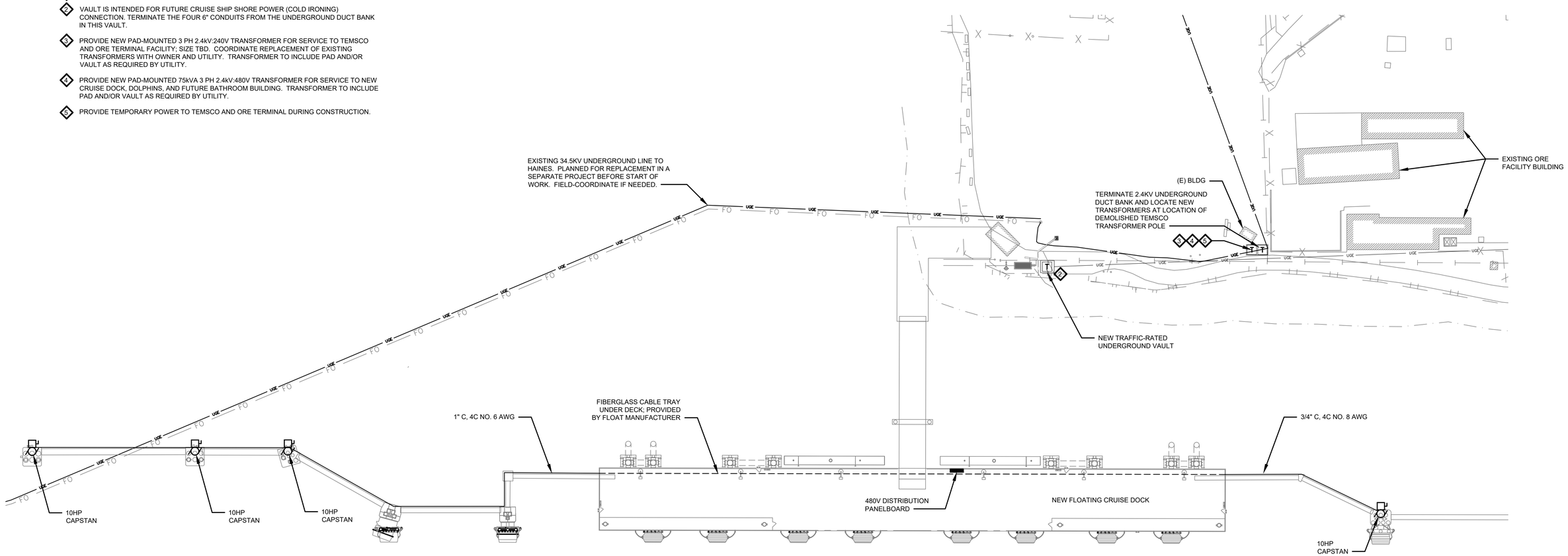
OVERALL ELECTRICAL SITE PLAN

DRAWN: REJ, JLC	PROJECT NO.: 2100135
DESIGN: BCH,AS,MW	SCALE: AS SHOWN
CHECKED: BCH,AS	DATE: 01/27/2023
DRAWING NO.	**E2.00**
SHEET NO.	

Plotted: Jan 27, 2023 – 5:00pm Arlo.Storey Layout: E2.00
N:\Projects\H252 – KPFF\07 Skagway Multi-use Dock\E\Phase 1\E2.00.dwg

SHEET KEYNOTES

1. PROVIDE 480V, 3PH POWER FOR POWERED CAPSTANS.
2. VAULT IS INTENDED FOR FUTURE CRUISE SHIP SHORE POWER (COLD IRONING) CONNECTION. TERMINATE THE FOUR 6" CONDUITS FROM THE UNDERGROUND DUCT BANK IN THIS VAULT.
3. PROVIDE NEW PAD-MOUNTED 3 PH 2.4kV:240V TRANSFORMER FOR SERVICE TO TEMSCO AND ORE TERMINAL FACILITY; SIZE TBD. COORDINATE REPLACEMENT OF EXISTING TRANSFORMERS WITH OWNER AND UTILITY. TRANSFORMER TO INCLUDE PAD AND/OR VAULT AS REQUIRED BY UTILITY.
4. PROVIDE NEW PAD-MOUNTED 75kVA 3 PH 2.4kV:480V TRANSFORMER FOR SERVICE TO NEW CRUISE DOCK, DOLPHINS, AND FUTURE BATHROOM BUILDING. TRANSFORMER TO INCLUDE PAD AND/OR VAULT AS REQUIRED BY UTILITY.
5. PROVIDE TEMPORARY POWER TO TEMSCO AND ORE TERMINAL DURING CONSTRUCTION.



1 CRUISE DOCK ELECTRICAL PLAN

SCALE 0' 20' 40' 80'

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NO.	DATE	BY	REVISION

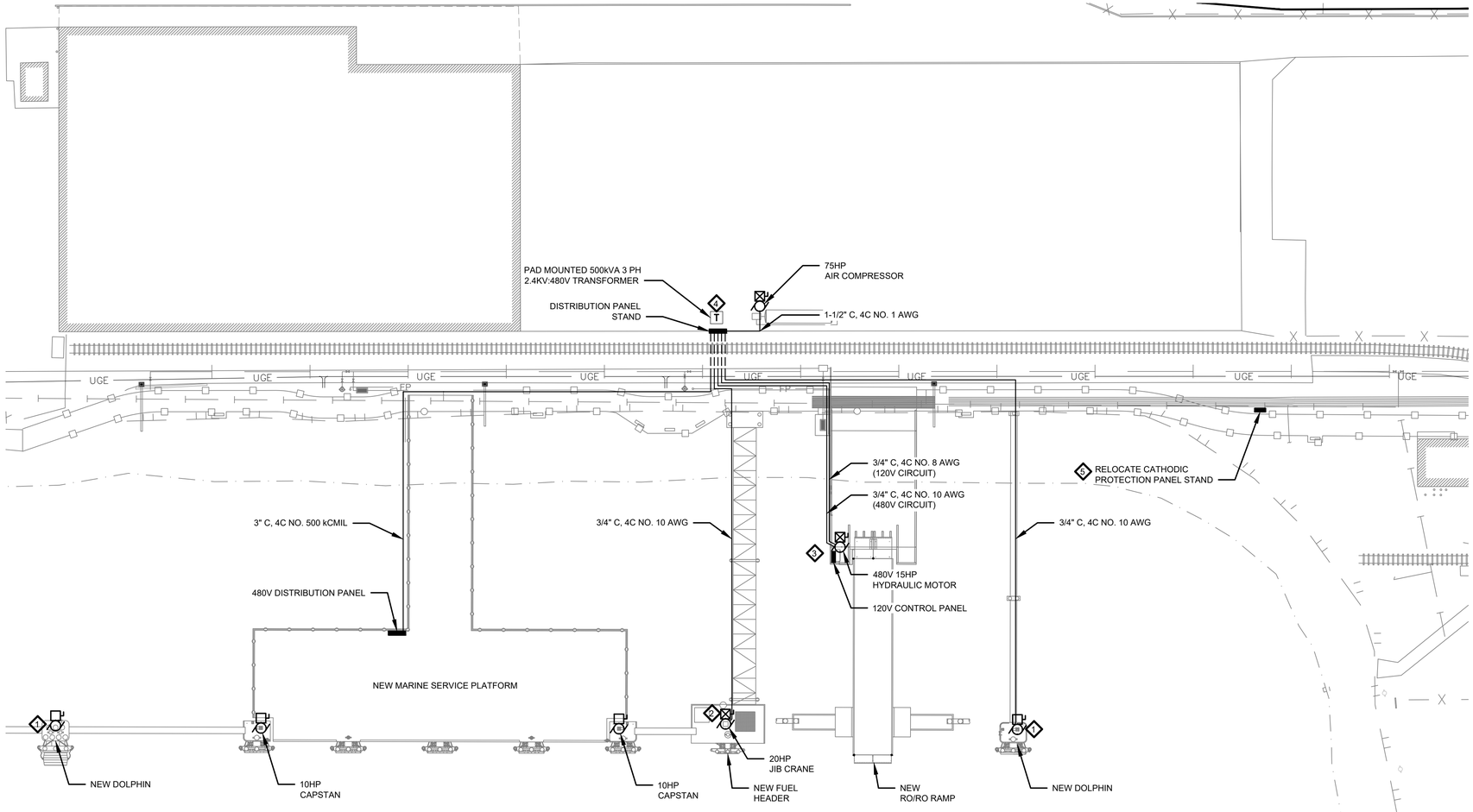
ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

CRUISE DOCK ELECTRICAL PLAN

DRAWN: REJ, JLC	PROJECT NO.: 2100135
DESIGN: BCH,AS,MW	SCALE: AS SHOWN
CHECKED: BCH,AS	DATE: 01/27/2023
DRAWING NO.	**E2.10**
SHEET NO.	

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 – 5:01pm Arlo.Storey Layout: E2.10
N:\Projects\Y252 – (KPFF)\07 Skagway Multi-use Dock\E\Phase 1\E2.10.dwg



SHEET KEYNOTES

1. PROVIDE 480V, 3PH POWER FOR POWERED CAPSTANS.
2. PROVIDE POWER TO FUEL HEADER EQUIPMENT AS NEEDED. EQUIPMENT TO BE DETERMINED.
3. HYDRAULIC SYSTEM ON RO/RO RAMP INCLUDES 120V SWITCHING & VALVES. PROVIDE BOTH 480V & 120V CIRCUITS TO OPERATOR STATION.
4. TRANSFORMER TO INCLUDE PAD AND/OR VAULT AS REQUIRED BY UTILITY.
5. MAINTAIN EXISTING CATHODIC PROTECTION ON THE FUEL LINES. RELOCATE AND REINSTALL SALVAGED 120V CATHODIC PROTECTION PANEL TO THE NORTH SIDE OF THE NEW PATHWAY, AS CLOSE AS POSSIBLE TO THE POINT WHERE THE FUEL LINES TRANSITION FROM UNDERGROUND TO ABOVEGROUND.

1 ENLARGED PLAN

SCALE 0' 20' 40' 80'

60% DESIGN - NOT FOR CONSTRUCTION

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NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

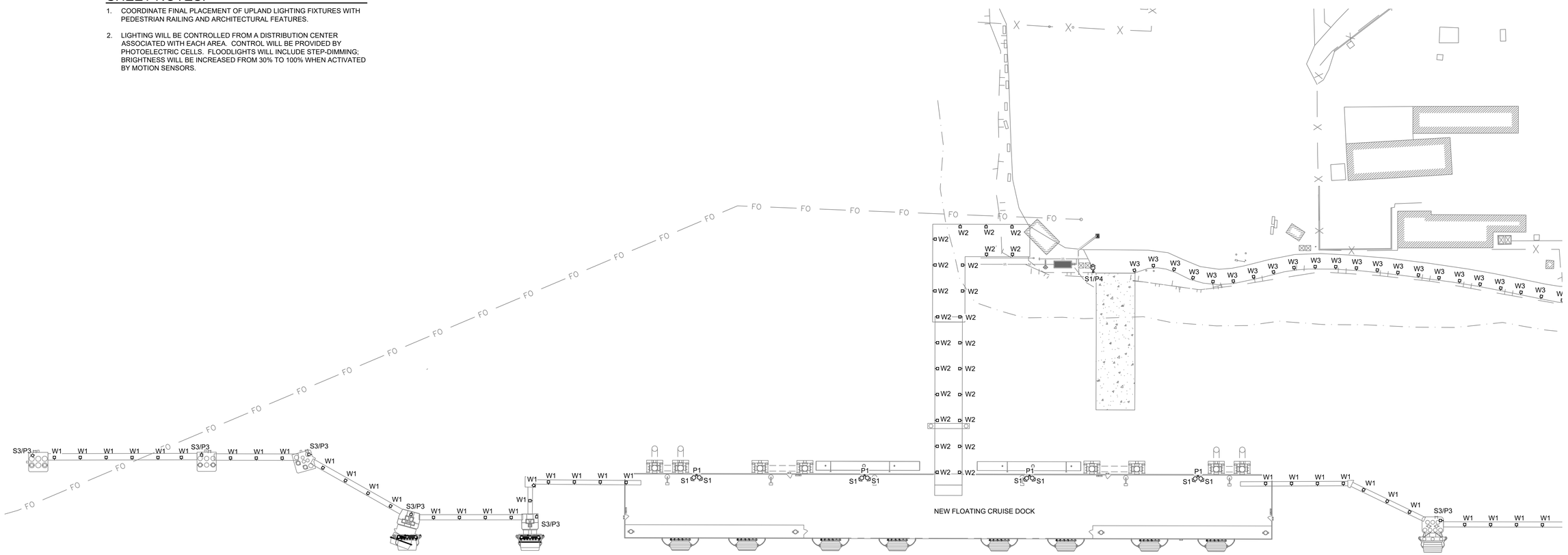
MARINE SERVICE PLATFORM, FUEL HEADER & RO/RO RAMP PLAN

DRAWN:	REJ, JLC	PROJECT NO.:	2100135
DESIGN:	BCH,AS,MS	SCALE:	AS SHOWN
CHECKED:	BCH,AS	DATE:	01/27/2023
DRAWING NO.			**E2.20**
SHEET NO.			

Plotted: Jan 27, 2023 - 5:01pm Arlo.Storey Layout: E2.20
N:\Projects\#252 - KPFF\07 Skagway Multi-use Dock\E\Phase 1\E2.20.dwg

SHEET NOTES:

1. COORDINATE FINAL PLACEMENT OF UPLAND LIGHTING FIXTURES WITH PEDESTRIAN RAILING AND ARCHITECTURAL FEATURES.
2. LIGHTING WILL BE CONTROLLED FROM A DISTRIBUTION CENTER ASSOCIATED WITH EACH AREA. CONTROL WILL BE PROVIDED BY PHOTOELECTRIC CELLS. FLOODLIGHTS WILL INCLUDE STEP-DIMMING; BRIGHTNESS WILL BE INCREASED FROM 30% TO 100% WHEN ACTIVATED BY MOTION SENSORS.



1 CRUISE DOCK LIGHTING PLAN

SCALE 0' 20' 40' 80'

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AECC163270

NO.	DATE	BY	REVISION

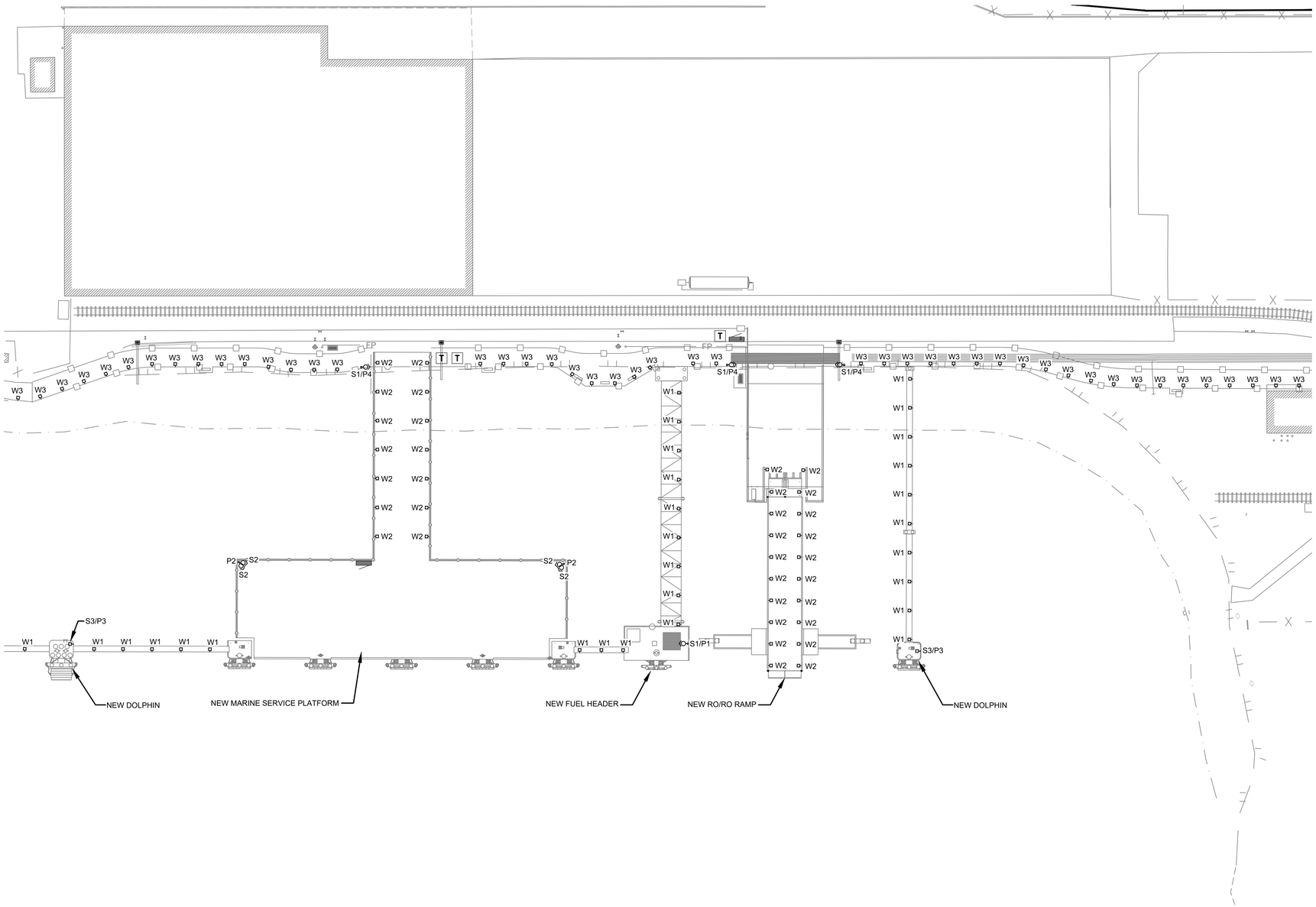
ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

CRUISE DOCK LIGHTING PLAN

DRAWN: PEL, AJS	PROJECT NO.: 2100135
DESIGN: BCH,AS,MW	SCALE: AS SHOWN
CHECKED: BCH,AS	DATE: 01/27/2023
DRAWING NO.	**E3.10**
SHEET NO.	

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 – 5:01pm Arlo.Storey Layout: E3.10
N:\Projects\Y252 – (KPFF)\07 Skagway Multi-use Dock\E\Phase 1\E3.10.dwg



SHEET NOTES:

1. COORDINATE FINAL PLACEMENT OF UPLAND LIGHTING FIXTURES WITH PEDESTRIAN RAILING AND ARCHITECTURAL FEATURES.
2. LIGHTING WILL BE CONTROLLED FROM A DISTRIBUTION CENTER ASSOCIATED WITH EACH AREA. CONTROL WILL BE PROVIDED BY PHOTOELECTRIC CELLS. FLOODLIGHTS WILL INCLUDE STEP-DIMMING; BRIGHTNESS WILL BE INCREASED FROM 30% TO 100% WHEN ACTIVATED BY MOTION SENSORS.

1 MARINE SERVICE PLATFORM, FUEL HEADER, AND RO/RO RAMP PLAN – LIGHTING

SCALE 0' 20' 40' 80'

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NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

MARINE SERVICE PLATFORM, FUEL HEADER & RO/RO RAMP PLAN - LTG

DRAWN:	PEL, AJS	PROJECT NO.:	2100135
DESIGN:	BCH,AS,MS	SCALE:	AS SHOWN
CHECKED:	BCH,AS	DATE:	01/27/2023
DRAWING NO.			**E3.20**
SHEET NO.			

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 - 5:01pm Arlo.Storey Layout: E3.20
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LUMINAIRE SCHEDULE

TYPE	LOAD	DESCRIPTION	MANUFACTURER	MODEL NUMBER	MOUNTING TYPE	DRIVER	REMARKS
S1	201W	POLE MOUNTED SMALL FLOOD, A360 DIE CAST ALUMINUM HOUSING, BOROSILICATE PRISMATIC GLASS, 6x5 WIDE FLOOD RECTANGLE DISTRIBUTION, IP66 RATED, INTEGRAL ELECTRONIC DRIVER, 120-277V, 27,200 LUMENS, 4000K, CRI 70, TENON SLIPFITTER - KNUCKLE, FULL VISOR, ____ FINISH	HOLOPHANE	PSLED P6 40K MVOLT 65 KM xxxx PSLEDFVxxxx	POLE P1 & POLE P4	120-277V	
S2	265W	POLE MOUNTED MEDIUM FLOOD, A360 DIE CAST ALUMINUM HOUSING, BOROSILICATE PRISMATIC GLASS, 3x3 SPOT DISTRIBUTION, IP66 RATED, INTEGRAL ELECTRONIC DRIVER, 120-277V, 38,000 LUMENS, 4000K, CRI 70, TENON SLIPFITTER - KNUCKLE, FULL VISOR, ____ FINISH	HOLOPHANE	PMLED P1 40K MVOLT 33 KM XXXX PSLEDFVXXXX	POLE P2	120-277V	
S3	13W	POLE MOUNTED AREA LIGHT, CAST ALUMINUM HOUSING, MARINE GRADE CAST ALUMINUM WALL MOUNT BRACKET, IP66 RATED, INTEGRAL ELECTRONIC DRIVER, 120-240V, 1000 LUMENS	PHOENIX	CLW 13LED 120-240 NB	POLE P3	120-240V	
W1	20W	RAIL AND POST MOUNTED VAPOR TIGHT MARINE ENVIRONMENT LED WITH A360 ALUMINUM HOUSING, BOROSILICATE GLASS GLOBE, A360 ALUMINUM GUARD, INTEGRAL ELECTRONIC DRIVER, 120-277V, 1769 LUMENS	AZZ	AVP 20L2-U-HF-G-W-35 VGL100HRFRSTD 59030AMPG	MOUNT TO CATWALK RAILING	120-277V	
W2	9W	RAIL MOUNTED LED, CAST ALUMINUM HOUSING, DIFFUSED POLYCARBONATE LENS, IP66 RATED, INTEGRAL ELECTRONIC DRIVER, 120-277V, 1100 LUMENS	PHOENIX	WF-10LED-DP-CD	MOUNT TO RAILINGS WHERE SHOWN.	120-277V	
W3	17W	RAIL POST MOUNTED STEP LIGHT, DIE-CAST ALUMINUM BODY, ANODIZED ALUMINUM DIFFUSER, IP65 RATED, INTEGRAL ELECTRONIC DRIVER, 120-277V, 310 LUMENS, 4000K, CRI 90, ALUMINUM GRAY FINISH	SISTEMALUX	S6070N	MOUNT TO RAILING POST, TYPICAL	120-277V	
P1	--	30 FT HINGED CARBON STEEL POLE, INTERNAL WINCH, AND BULLHORN ADAPTER	MILLERBERND	AHT-H-086-B-300-PT (4 EA) BR28 BULLHORN ADAPTER (1 EA) BR38 BULLHORN ADAPTER	--	--	
P2	--	50 FT HINGED CARBON STEEL POLE, INTERNAL WINCH, AND BULLHORN ADAPTER	MILLERBERND	AHT-H-122-DB-500-PT (2 EA) BR28 BULLHORN ADAPTER	--	--	
P3	--	12 FT SQUARE STEEL POLE	VALMONT	DS330-400Q120-D1-GV-GV-FBC-AB	--	--	
P4	--	20 FT SQUARE STEEL POLE	VALMONT	DS330-400Q200-D1-GV-GV-FBC-AB	--	--	

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AECC163270

NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

LUMINAIRE SCHEDULE & DETAILS

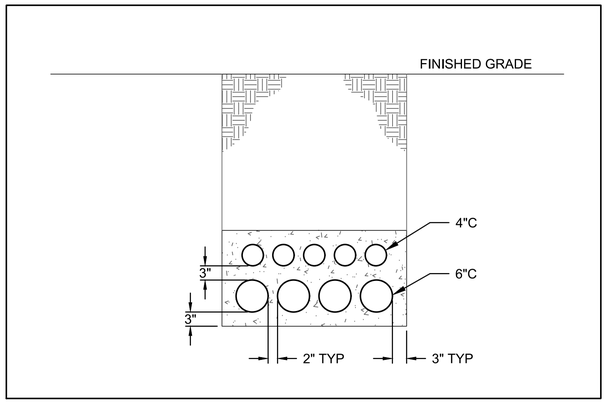
DRAWN: PEL	PROJECT NO.: 2100135
DESIGN: BCH,AS,MW	SCALE: NO SCALE
CHECKED: BCH,AS	DATE: 01/27/2023
DRAWING NO.	**E3.30**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 - 5:01pm Arlo.Storey Layout: E3.30
N:\Projects\H252 - KPFF\07 Skagway Multi-use Dock\E\Phase 1\E3.30.dwg

SHEET KEYNOTES

1. SEE CIVIL PLANS FOR MORE INFORMATION ABOUT PLACEMENT OF ELECTRICAL DUCTBANK RELATIVE TO OTHER BURIED FEATURES IN UPLANDS.



1 TYPICAL DUCTBANK SECTION

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NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

ELECTRICAL DETAILS

DRAWN: JLC	PROJECT NO.: 2100135
DESIGN: BCH,AS,MW	SCALE: NOT TO SCALE
CHECKED: BCH,AS	DATE: 01/27/2023
DRAWING NO.	**E4.00**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 - 5:02pm Arlo.Storey Layout: E4.00
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THIS SHEET
INTENTIONALLY LEFT
BLANK

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NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

ELECTRICAL DETAILS

DRAWN: JLC	PROJECT NO.: 2100135
DESIGN: BCH,AS,MW	SCALE: NOT TO SCALE
CHECKED: BCH,AS	DATE: 01/27/2023
DRAWING NO.	**E4.01**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

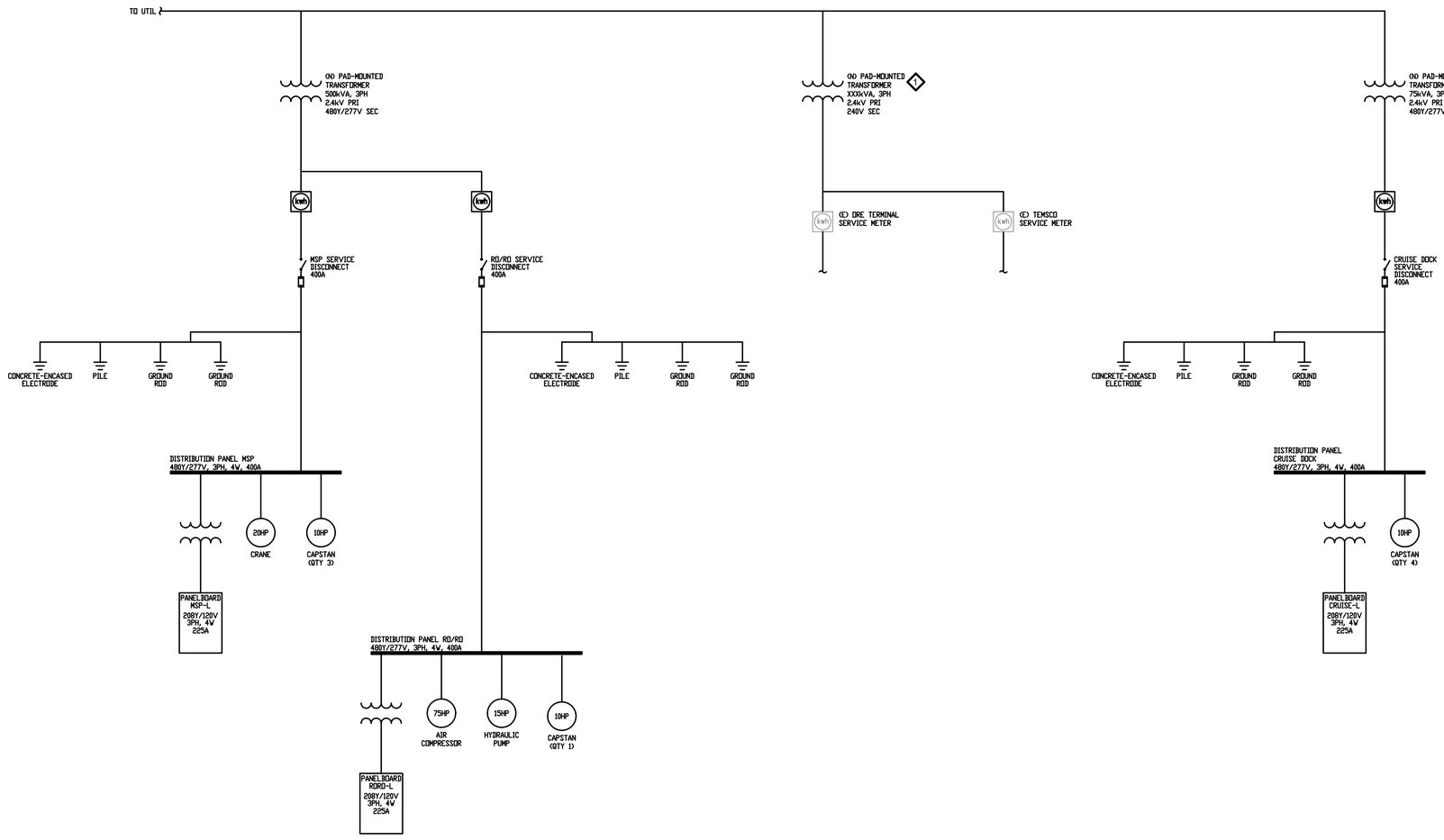
Plotted: Jan 27, 2023 – 5:02pm Arlo.Storey Layout: E4.01
N:\Projects\H252 – KPFF\07 Skagway Multi-use Dock\E\Phase 1\E4.01.dwg

SHEET NOTES

1. SEE DRAWINGS "PANEL SCHEDULES" FOR FEATURES AND OTHER OVERCURRENT PROTECTIVE DEVICES NOT INDICATED ON ELECTRICAL ONE-LINE DIAGRAM.

SHEET KEYNOTES

1 SIZE TO BE DETERMINED BY UTILITY.



60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 27, 2023 – 5:02pm Arlo.Storey Layout: E5.00
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AECC163270

NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

ONE-LINE DIAGRAM

DRAWN: JLC	PROJECT NO.: 2100135
DESIGN: BCH,AS,MW	SCALE: NO SCALE
CHECKED: BCH,AS	DATE: 01/27/2023
DRAWING NO.	**E5.00**
SHEET NO.	OF

DISTRIBUTION PANELBOARD CRUISE DOCK-H

VOLTAGE: 480Y/277V, 3PH, 4W
BUS AMPS: 400
MAIN: MCB
SPECIFICATION TYPE: DPB
MIN AIC RATING: 35,000
ENCLOSURE: NEMA 3R
MOUNTING: SURFACE
LOCATION:

CKT	AMPS	FRAME	POLES	TRIP	FEATURES	LOAD DESCRIPTION	NOTE	CONNECTED VA PH A	PH B	PH C	LOAD
1	45		3	MTM		XFMR TO 208V PANEL		5000	5000	5000	9
2	25		3	MTM		DOLPHIN 1 CAPSTAN, 10 HP		3878	3878	3878	4
3	25		3	MTM		DOLPHIN 2 CAPSTAN, 10 HP		3878	3878	3878	3
4	25		3	MTM		DOLPHIN 3 CAPSTAN, 10 HP		3878	3878	3878	3
5	25		3	MTM		DOLPHIN 8 CAPSTAN, 10 HP		3878	3878	3878	3
6											
7	20		1	MTM		LTG - CRUISE DOCK		3500			1
8	20		1	MTM		LTG - CATWALK/DOLPHIN			3500		1
9	20		1	MTM		LTG - RAMP				3500	1
10	20		1	MTM		LTG - UPLAND PED		3500			1
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											

LOAD SUMMARY AND CODE DEFINITIONS		CONNECTED KVA PH A	PH B	PH C	TOTAL	DEMAND FACTOR	NEC DEMAND	NOTES:
1	LIGHTING =	7.0	3.5	3.5	14.0	125%	17.5	
2	RECEPTACLES =					10K+50%		
3	MOTORS =	11.6	11.6	11.6	34.9	100%	34.9	
4	LARGEST MOTOR =	3.9	3.9	3.9	11.6	125%	14.5	
5	MISC. NON-CONTINUOUS =					100%		
6	MISC. CONTINUOUS =					125%		
7	NON-COINCIDENTAL =					0%		
8	SPARE =					100%		
9	OTHER =	5.0	5.0	5.0	15.0	100%	15.0	
TOTAL KVA (PHASE)		27.5	24.0	24.0	75.5		81.9	
TOTAL AMPERES		99.3	86.6	86.6	90.9		98.6	

DISTRIBUTION PANELBOARD RORO-H

VOLTAGE: 480Y/277V, 3PH, 4W
BUS AMPS: 400
MAIN: MCB
SPECIFICATION TYPE: DPB
MIN AIC RATING: 35,000
ENCLOSURE: NEMA 3R
MOUNTING: SURFACE
LOCATION:

CKT	AMPS	FRAME	POLES	TRIP	FEATURES	LOAD DESCRIPTION	NOTE	CONNECTED VA PH A	PH B	PH C	LOAD
1	45		3	MTM		XFMR TO 208V PANEL		5000	5000	5000	9
2	125		3	MTM		COMPRESSOR, 75 HP		26592	26952	26592	4
3	40		3	MTM		RO/RO PUMP, 15 HP		5817	5817	5817	3
4	25		3	MTM		DOLPHIN 8 CAPSTAN, 10 HP		3878	3878	3878	3
5											
6	20		1	MTM		LTG - RAMP		3500			1
7	20		1	MTM		LTG - PLATFORM			3500		1
8	20		1	MTM		LTG - CATWALK/DOLPHIN				3500	1
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											

LOAD SUMMARY AND CODE DEFINITIONS		CONNECTED KVA PH A	PH B	PH C	TOTAL	DEMAND FACTOR	NEC DEMAND	NOTES:
1	LIGHTING =	3.5	3.5	3.5	10.5	125%	13.1	
2	RECEPTACLES =					10K+50%		
3	MOTORS =	9.7	9.7	9.7	29.1	100%	29.1	
4	LARGEST MOTOR =	26.6	27.0	26.6	80.1	125%	100.2	
5	MISC. NON-CONTINUOUS =					100%		
6	MISC. CONTINUOUS =					125%		
7	NON-COINCIDENTAL =					0%		
8	SPARE =					100%		
9	OTHER =	5.0	5.0	5.0	15.0	100%	15.0	
TOTAL KVA (PHASE)		44.8	45.1	44.8	134.7		157.4	
TOTAL AMPERES		161.6	162.9	161.6	162.0		189.3	

DISTRIBUTION PANELBOARD MSP-H

VOLTAGE: 480Y/277V, 3PH, 4W
BUS AMPS: 400
MAIN: MCB
SPECIFICATION TYPE: DPB
MIN AIC RATING: 35,000
ENCLOSURE: NEMA 3R
MOUNTING: SURFACE
LOCATION:

CKT	AMPS	FRAME	POLES	TRIP	FEATURES	LOAD DESCRIPTION	NOTE	CONNECTED VA PH A	PH B	PH C	LOAD
1	45		3	MTM		XFMR TO 208V PANEL		5000	5000	5000	9
2	60		3	MTM		FUEL HEADER CRANE, 20 HP		7479	7479	7479	4
3	25		3	MTM		DOLPHIN 6 CAPSTAN, 10 HP		3878	3878	3878	3
4	25		3	MTM		MSP CAPSTAN S, 10 HP		3878	3878	3878	3
5	25		3	MTM		MSP CAPSTAN N, 10 HP		3878	3878	3878	3
6											
7	20		1	MTM		LTG - MSP		3500			1
8	20		1	MTM		LTG - CATWALK/DOLPHIN			3500		1
9	20		1	MTM		LTG - RAMP				3500	1
10	20		1	MTM		LTG - UPLAND INDUSTRIAL		3500			1
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											

LOAD SUMMARY AND CODE DEFINITIONS		CONNECTED KVA PH A	PH B	PH C	TOTAL	DEMAND FACTOR	NEC DEMAND	NOTES:
1	LIGHTING =	7.0	3.5	3.5	14.0	125%	17.5	
2	RECEPTACLES =					10K+50%		
3	MOTORS =	11.6	11.6	11.6	34.9	100%	34.9	
4	LARGEST MOTOR =	7.5	7.5	7.5	22.4	125%	28.0	
5	MISC. NON-CONTINUOUS =					100%		
6	MISC. CONTINUOUS =					125%		
7	NON-COINCIDENTAL =					0%		
8	SPARE =					100%		
9	OTHER =	5.0	5.0	5.0	15.0	100%	15.0	
TOTAL KVA (PHASE)		31.1	27.6	27.6	86.3		95.4	
TOTAL AMPERES		112.3	99.6	99.6	103.8		114.8	

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NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

PANEL SCHEDULES

DRAWN: JLC	PROJECT NO.: 2100135
DESIGN: BCH,AS,MW	SCALE: N/A
CHECKED: BCH,AS	DATE: 01/27/2023
DRAWING NO.	**E5.10**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

PANELBOARD CRUISE DOCK-L

VOLTAGE: 208Y/120V, 3PH, 4W
BUS AMPS: 225
MAIN: MLO
SPECIFICATION TYPE: BPB
MIN AIC RATING: 10,000
CIRCUITS: 42
ENCLOSURE: NEMA 1
MOUNTING: SURFACE
LOCATION: ELECTRIC ROOM

LOAD	LOAD DESCRIPTION	NOTE	VA	AMP	P	CKT	PHASE	CKT	P	AMP	VA	NOTE	LOAD DESCRIPTION	LOAD
6	HEAT TAPE		1000	20	1	1	A	2	1	20	720		RCPT	2
6	HEAT TAPE		1000	20	1	3	B	4	1	20	720		RCPT	2
6	HEAT TAPE		1000	20	1	5	C	6	1	20	720		RCPT	2
6	HEAT TAPE		1000	20	1	7	A	8	1	20	720		RCPT	2
				20	1	9	B	10	1	20				
				20	1	11	C	12	1	20				
				20	1	13	A	14	1	20				
				20	1	15	B	16	1	20				
				20	1	17	C	18	1	20				
				20	1	19	A	20	1	20				
				20	1	21	B	22	1	20				
					1	23	C	24	1					
					1	25	A	26	1					
					1	27	B	28	1					
					1	29	C	30	1					
					1	31	A	32	1					
					1	33	B	34	1					
					1	35	C	36	1					
					1	37	A	38	1					
					1	39	B	40	1					
					1	41	C	42	1					

LOAD SUMMARY AND CODE DEFINITIONS		CONNECTED KVA PH A	PH B	PH C	TOTAL	DEMAND FACTOR	NEC DEMAND
1	LIGHTING =					125%	
2	RECEPTACLES =	1.4	0.7	0.7	2.9	10K+50%	2.9
3	MOTORS =					100%	
4	LARGEST MOTOR =					125%	
5	MISC. NON-CONTINUOUS =					100%	
6	MISC. CONTINUOUS =	2.0	1.0	1.0	4.0	125%	5.0
7	NON-COINCIDENTAL =					0%	
8	SPARE =					100%	
9	OTHER =					100%	
TOTAL KVA (PHASE)		3.4	1.7	1.7	6.9		7.9
TOTAL AMPERES		28.6	14.3	14.3	19.1		21.9

NOTES:
1. GFCI BREAKER (5mA).
2. GFPE BREAKER (30mA).

PANELBOARD RORO-L

VOLTAGE: 208Y/120V, 3PH, 4W
BUS AMPS: 225
MAIN: MLO
SPECIFICATION TYPE: BPB
MIN AIC RATING: 10,000
CIRCUITS: 42
ENCLOSURE: NEMA 1
MOUNTING: SURFACE
LOCATION: ELECTRIC ROOM

LOAD	LOAD DESCRIPTION	NOTE	VA	AMP	P	CKT	PHASE	CKT	P	AMP	VA	NOTE	LOAD DESCRIPTION	LOAD
6	HEAT TAPE		1000	20	1	1	A	2	1	20	720		RCPT	2
6	HEAT TAPE		1000	20	1	3	B	4	1	20	720		RCPT	2
6	HEAT TAPE		1000	20	1	5	C	6	1	20	720		RCPT	2
6	HEAT TAPE		1000	20	1	7	A	8	1	20	720		RCPT	2
9	HYDRAULIC CONTROLS		1000	20	1	9	B	10	1	20				
6	CATHODIC PROTECTION		1000	20	1	11	C	12	1	20				
				20	1	13	A	14	1	20				
				20	1	15	B	16	1	20				
				20	1	17	C	18	1	20				
				20	1	19	A	20	1	20				
				20	1	21	B	22	1	20				
					1	23	C	24	1					
					1	25	A	26	1					
					1	27	B	28	1					
					1	29	C	30	1					
					1	31	A	32	1					
					1	33	B	34	1					
					1	35	C	36	1					
					1	37	A	38	1					
					1	39	B	40	1					
					1	41	C	42	1					

LOAD SUMMARY AND CODE DEFINITIONS		CONNECTED KVA PH A	PH B	PH C	TOTAL	DEMAND FACTOR	NEC DEMAND
1	LIGHTING =					125%	
2	RECEPTACLES =	1.4	0.7	0.7	2.9	10K+50%	2.9
3	MOTORS =					100%	
4	LARGEST MOTOR =					125%	
5	MISC. NON-CONTINUOUS =					100%	
6	MISC. CONTINUOUS =	2.0	1.0	2.0	5.0	125%	6.3
7	NON-COINCIDENTAL =					0%	
8	SPARE =					100%	
9	OTHER =		1.0		1.0	100%	1.0
TOTAL KVA (PHASE)		3.4	2.7	2.7	8.9		10.1
TOTAL AMPERES		28.6	22.6	22.6	24.6		28.1

NOTES:
1. GFCI BREAKER (5mA).
2. GFPE BREAKER (30mA).

PANELBOARD MSP-L

VOLTAGE: 208Y/120V, 3PH, 4W
BUS AMPS: 225
MAIN: MLO
SPECIFICATION TYPE: BPB
MIN AIC RATING: 10,000
CIRCUITS: 42
ENCLOSURE: NEMA 1
MOUNTING: SURFACE
LOCATION: ELECTRIC ROOM

LOAD	LOAD DESCRIPTION	NOTE	VA	AMP	P	CKT	PHASE	CKT	P	AMP	VA	NOTE	LOAD DESCRIPTION	LOAD
6	HEAT TAPE		1000	20	1	1	A	2	1	20	720		RCPT	2
6	HEAT TAPE		1000	20	1	3	B	4	1	20	720		RCPT	2
6	HEAT TAPE		1000	20	1	5	C	6	1	20	720		RCPT	2
6	HEAT TAPE		1000	20	1	7	A	8	1	20	720		RCPT	2
				20	1	9	B	10	1	20				
				20	1	11	C	12	1	20				
				20	1	13	A	14	1	20				
				20	1	15	B	16	1	20				
				20	1	17	C	18	1	20				
				20	1	19	A	20	1	20				
				20	1	21	B	22	1	20				
					1	23	C	24	1					
					1	25	A	26	1					
					1	27	B	28	1					
					1	29	C	30	1					
					1	31	A	32	1					
					1	33	B	34	1					
					1	35	C	36	1					
					1	37	A	38	1					
					1	39	B	40	1					
					1	41	C	42	1					

LOAD SUMMARY AND CODE DEFINITIONS		CONNECTED KVA PH A	PH B	PH C	TOTAL	DEMAND FACTOR	NEC DEMAND
1	LIGHTING =					125%	
2	RECEPTACLES =	1.4	0.7	0.7	2.9	10K+50%	2.9
3	MOTORS =					100%	
4	LARGEST MOTOR =					125%	
5	MISC. NON-CONTINUOUS =					100%	
6	MISC. CONTINUOUS =	2.0	1.0	1.0	4.0	125%	5.0
7	NON-COINCIDENTAL =					0%	
8	SPARE =					100%	
9	OTHER =					100%	
TOTAL KVA (PHASE)		3.4	1.7	1.7	6.9		7.9
TOTAL AMPERES		28.6	14.3	14.3	19.1		21.9

NOTES:
1. GFCI BREAKER (5mA).
2. GFPE BREAKER (30mA).

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NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

PANEL SCHEDULES

DRAWN: JLC	PROJECT NO.: 2100135
DESIGN: BCH,AS,MW	SCALE: N/A
CHECKED: BCH,AS	DATE: 01/27/2023
DRAWING NO.	**E5.11**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

GENERAL — ELECTRICAL SYSTEMS

MATERIALS AND INSTALLATION, INCLUDING ELECTRICAL WIRING, CONTACT CONDUCTORS, CONTROLS, OVERCURRENT PROTECTION, AND GROUNDING SHALL MEET THE REQUIREMENTS OF NFPA 70 AND APPLICABLE UL AND NEMA STANDARDS AND SPECIFIC REQUIREMENTS. ALL ELECTRICAL COMPONENTS AND ALL RELATED EQUIPMENT SHALL BE UL LISTED.

POWER SUPPLY

1. ELECTRICAL POWER FOR EQUIPMENT MOTORS USED FOR MOVEMENT OF THE RORO RAMP SYSTEM SHALL BE SUPPLIED FROM A NOMINAL 480 VOLT, 3 PHASE, 60HZ ALTERNATING CURRENT (AC) POWER DISTRIBUTION SYSTEM AT THE SERVICE AND DISTRIBUTION PANEL SHOWN ON THE SITE PLAN DRAWING.

2. ELECTRICAL POWER FOR THE CONTROL PANEL AND HEATER WITHIN THE RORO RAMP OPERATORS STATION SHALL BE 120VOLTS AC, SINGLE PHASE, SUPPLIED FROM A PANELBOARD WITHIN THE SERVICE AND DISTRIBUTION PANEL.

CONTROL PANEL

THE RORO RAMP CONTROL PANEL SHALL BE UL CERTIFIED, COMPLY WITH NEMA ICS 6, AND SHALL BE A NEMA 4X RATED STAINLESS STEEL ENCLOSURE. POWER CIRCUITS SHALL BE WIRED AND ROUTED IN A SEPARATE LOCATION FROM CONTROL CIRCUITS. PROVIDE A PANEL LIGHT AND PANEL HEATING AND COOLING AS PART OF AN OVERALL PANEL SYSTEM.

PANEL INTERIOR LIGHT
PROVDIE CONTROL PANEL WITH LED LIGHTING. THE LIGHT SHALL BE DOOR-SWITCH OPERATED.

PANEL HEATING AND COOLING
CONTROL CABINET SHALL BE EQUIPPED WITH A THERMOSTAT-CONTROLLED HEATING AND COOLING SYSTEM TO KEEP THE CONTENTS OF THE CONTROL PANEL AT A SUFFICIENT OPERATING TEMPERATURE.

MOTOR STARTER

THE MOTOR STARTER FOR THE 15HP HYDRAULIC PUMP SHALL BE A FULL VOLTAGE NON-REVERSING NEMA SIZE 2, 45A, 3 PHASE, 120 VAC COIL WITH NEMA 4X ENCLOSURE. THE STARTER SHALL HAVE A MAXIMUM VOLTAGE RATING OF 600V, 3 POLES, HAVE A DISCONNECT TYPE OF CIRCUIT BREAKER AND HAVE AN EXTERNAL RESET.

CONDUIT AND RACEWAYS

1. CONDUIT RUNS ROUTED ALONG THE RORO RAMP AND TRESTLE SHALL BE UL 6, GALVANIZED STEEL, THREADED TYPE, COATED WITH A POLYVINYL CHLORIDE (PVC) SHEATH BONDED TO THE GALVANIZED EXTERIOR SURFACE, NOMINAL 40 MILS THICK, CONFORMING TO NEMA RN 1, TYPE A 40, EXCEPT THAT HARDNESS SHALL BE NOMINAL 85 SHORE A DUROMETER, DIELECTRIC STRENGTH SHALL BE A MINIMUM 400 VOLTS PER MIL AT 60 HZ, TENSILE STRENGTH SHALL BE A MINIMUM OF 1000 HOURS IN AN ATLAS WEATHEROMETER.

2. LIQUIDTIGHT FLEXIBLE METALLIC CONDUIT SHALL BE USED FOR FINAL CONNECTIONS TO DEVICES, THE LENGTH OF FLEXIBLE METALLIC CONDUIT SHALL NOT EXCEED 36 INCHES. LIQUIDTIGHT FLEXIBLE METALLIC CONDUIT SHALL BE PROVIDED WITH A PROTECTIVE JACKET OF PVC EXTRUDED OVER A FLEXIBLE INTERLOCKED GALVANIZED STEEL CORE PROTECT WIRING AGAINST MOISTURE, OIL, CHEMICALS, AND CORROSIVE FUMES. IT SHALL ACCEPT STANDARD CONNECTORS WITH GROUNDING BUSHINGS TO PROVIDE POSITIVE GROUND CONTINUITY.

3. CONDUITS INSTALLED UNDERGROUND IN DUCT BANK SHALL BE SCHEDULE 40 PVC CONFORMING TO NEMA TC 2, NEMA TC 3, AND UL 651. DEPTHS TO THE TOP OF CONDUITS IN DUCT BANK SHALL BE NOT LESS THAN 24 INCHES BELOW FINISHED GRADE EXCEPT WERE CONCRETE ENCASEMENT IS REQUIRED FOR CONDUITS INSTALLED UNDER RAILROAD TRACKS. DEPTHS TO THE TOP OF THE CONCRETE ENVELOPE FOR CONDUITS IN CONCRETE ENCASED DUCT BANK UNDER RAILROAD TRACKS SHALL BE NOT LESS THAN 50 INCHES BELOW THE TOP OF THE RAILS.

CONDUCTORS

1. ALL CONDUCTORS USED SHALL BE UL LISTED AND RATED FOR USE IN CONDUIT

2. WIRE FOR USE IN WET, DAMP OR DRY LOCATIONS SHALL BE SINGLE-CONDUCTOR, STRANDED COPPER, 600 VOLT, HEAT- AND MOISTURE-RESISTANT, TYPE XHHW WITH A MAXIMUM TEMPERATURE RATING OF 75 DEGREES C, OR CROSSLINKED POLYETHYLENE INSULATION WITH A MAXIMUM TEMPERATURE RATING OF 90 DEGREES C.

3. INSTRUMENTATION CABLE FOR ANALOG SIGNALS SHALL BE TWISTED SHIELDED PAIR (TSP) NO. 16 AWG WITH OVERALL FOIL SHIELD RATED FOR 600 VOLTS. CABLE SHALL BE CONSTRUCTED WITH FLAME-RETARDANT CROSS-LINKED POLYETHYLENE WITH A MAXIMUM RATED TEMPERATURE OF 90 DEGREES C.

4. DATA COMMUNICATIONS CABLE FOR USE IN ETHERNET CIRCUITS SHALL BE FOUR TWIST PAIR NO. 24AWG CAT6 CABLE. CABLE SHALL BE UL LISTED AND CONSTRUCTED WITH FLAME-RETARDANT CROSS-LINKED POLYETHYLENE (XLPE) AND AN OUTER JACKET WITH A MAXIMUM RATED TEMPERATURE OF 75 DEGREES C.

5. TO ACCOMMODATE MOVEMENT OF THE RORO RAMP, PROVIDE CONTINUOUSLY FLEXIBLE CABLES DESIGNED TO WITHSTAND REPETITIVE OR CONSTANT MOTION FOR CONDUCTORS TO BE INSTALLED FROM THE RORO TRESTLE TO THE RAMP. CONDUCTORS SHALL BE STRANDED COPPER WITH TPE INSULATION. CONDUCTOR MATERIAL SHALL CONSIST OF UL RECOGNIZED TYPE APPLIANCE WIRING MATERIAL (AWM). CABLE CONSTRUCTION AND INSTALLATION SHALL CONFORM TO THE REQUIREMENTS OF NFPA 79. CABLES USED FOR POWER AND CONTROL SHALL HAVE A GREEN GROUND WIRE. INSTRUMENTATION SIGNAL CABLES SHALL HAVE TWISTED PAIR STRANDING.

CONTROL SYSTEM

CONTROL DEVICES

PROVIDE ALL CONTROL DEVICES AS SHOWN ON THE DRAWINGS. ALL CONTROL DEVICES TO BE MINIMUM NEMA 4X RATED. ALL CONTROL SWITCHES TO BE RATED FOR 120VAC USED WITH A MINIMUM OF 1 FORM C (1NO-1NC) CONTACT. ALL DISCRETE SOLENOID VALVES TO BE RATED FOR 24VDC. ALL INSTRUMENTATION EQUIPMENT, INCLUDING PROPORTIONAL SOLENOID VALVES, SHALL EITHER ACCEPT OR PROVIDE AN ISOLATED 4-20 MA VDC SIGNAL.

HMI DISPLAY/OPERATOR INTERFACE

PROVIDE A HUMAN MACHINE INTERFACE (HMI) DISPLAY TO ACT AS THE OPERATOR INTERFACE. THE HMI DISPLAY SHALL BE A COLOR TFT LCD TOUCHSCREEN DISPLAY, MINIMUM 15 INCHES IN SIZE, POWERED FROM A 24VDC CIRCUIT. THE HMI DISPLAY SHALL HAVE A MINIMUM OF 512 MB RAM MEMORY. THE HMI DISPLAY SHALL HAVE A MINIMUM OF TWO PORTS, ONE USB PORT AND ONE ETHERNET PORT. PROVIDE ALL ADDITIONAL HARDWARE AS NECESSARY.

PROGRAMMABLE LOGIC CONTROLLER (PLC) SYSTEM

THE SYSTEM SHALL INCLUDE RACK(S), CENTRAL PROCESSING UNIT (CPU), INPUT/OUTPUT (I/O) MODULES, POWER SUPPLIES, PROGRAMMING SOFTWARE, AND ASSOCIATED ITEMS TO PROVIDE COMPLETE AND FUNCTIONAL CONTROL SYSTEM FOR THE RORO RAMP SYSTEM.

1. CENTRAL PROCESSING UNIT (CPU): THE CPU MODULE SHALL BE SELF CONTAINED MICROPROCESSOR BASED UNIT THAT PROVIDES THE TIME OF DAY, SCANNING, APPLICATION (LADDER RUN LOGIC) PROGRAM EXECUTION, STORAGE OF APPLICATION PROGRAMS, STORAGE OF NUMERICAL VALUES RELATED TO THE APPLICATION PROCESS AND LOGIC, I/O BUS TRAFFIC CONTROL, PERIPHERAL COMMUNICATIONS AND SELF DIAGNOSTICS. THE CPU MODULES SHALL BE EQUIPPED WITH A MINIMUM OF 8196K OF USER MEMORY. THE CPU MODULE SHALL ALLOW PROGRAMMING OF THE PLC TO BE DONE LOCALLY THROUGH THE USE OF A LAPTOP COMPUTER. THE CPU SHALL UTILIZE THE MANUFACTURER'S STANDARD NON-VOLATILE MEMORY FOR THE OPERATING SYSTEM. THE CPU SHALL HAVE ELECTRONICALLY ERASABLE, PROGRAMMABLE, READ ONLY MEMORY (EEPROM) FOR STORAGE OF USER PROGRAMS AND THROUGH THE USE OF A LAPTOP COMPUTER. THE CPU MEMORY CAPACITY SHALL BE BASED ON THE SYSTEM'S CONTROL REQUIREMENTS. THE MEMORY CAPACITY SHALL BE SIZED SUCH THAT, WHEN THE SYSTEM IS COMPLETELY PROGRAMMED AND FUNCTIONAL, NO MORE THAN 50 PERCENT OF THE MEMORY ALLOCATED FOR THESE PURPOSES IS USED.

2. INPUT/OUTPUT (I/O) MODULES:

   a. GENERAL: MODULES SHALL BE SELF CONTAINED MICROPROCESSOR BASED UNITS THAT PROVIDE AN INTERFACE TO FIELD DEVICES. THE MODULES SHALL BE LOCATED IN THE SAME MOUNTING RACK AS THE OTHER PLC COMPONENTS. EACH MODULE SHALL CONTAIN VISUAL INDICATION TO DISPLAY THE ON-OFF STATUS OF INDIVIDUAL INPUTS OR OUTPUTS.

   b. INPUT/OUTPUT CHARACTERISTICS: EACH CONTROLLER SHALL ALLOW FOR ANALOG INPUT, ANALOG OUTPUT, DISCRETE INPUT AND DISCRETE OUTPUT. THE SYSTEM CAPACITY SHALL INCLUDE A MINIMUM OF 20 PERCENT SPARE INPUT AND OUTPUT POINTS (NO LESS THAN TWO POINTS) FOR EACH POINT TYPE PROVIDED. DURING NORMAL OPERATION, A MALFUNCTION IN ANY INPUT/OUTPUT CHANNEL SHALL AFFECT THE OPERATION OF THAT CHANNEL ONLY AND SHALL NOT AFFECT THE OPERATION OF THE CPU OR ANY OTHER CHANNEL.

   c. DISCRETE I/O MODULES: DISCRETE INPUT MODULES SHALL BE 24VDC AND HAVE INDIVIDUALLY ISOLATED INPUTS. DISCRETE OUTPUT MODULES SHALL BE 120VAC, INDIVIDUALLY ISOLATED, DIGITAL CONTACT OUTPUT MODULES. MODULES SHALL HAVE A MINIMUM OF 8 INPUTS OR OUTPUTS PER MODULE.

   d. ANALOG I/O MODULES: EACH CHANNEL SHALL BE INDEPENDENTLY CONFIGURABLE FOR CURRENT (4-20MA) OR VOLTAGE (0-5/10VDC). MODULE SHALL HAVE A MINIMUM OF 4 INPUTS OR 4 ISOLATED OUTPUTS.

3. REMOVABLE TERMINAL BLOCKS (RTB'S); RTB'S SHALL HAVE SCREW-CLAMP WIRE CONNECTIONS.

4. POWER SUPPLY MODULE: ONE OR MORE POWER SUPPLY MODULES SHALL BE PROVIDED AS NECESSARY TO POWER OTHER MODULES INSTALLED IN THE SAME CABINET. POWER SUPPLY MODULES SHALL MOUNT WHERE NECESSARY. POWER SUPPLY MODULES SHALL BE PROVIDED WITH AN INDICATING LIGHT WHICH SHALL BE LIT WHEN THE MODULE IS OPERATING PROPERLY.

5. DATA COMMUNICATIONS NETWORK SWITCH: PROVIDE AN ETHERNET SWITCH FOR DATA COMMUNICATIONS. THE SWITCH SHALL BE DIN RAIL MOUNTED AND POWERED BY 24VDC. THE SWITCH SHALL BE ABLE TO ACCEPT RJ45-TYPE AND ISC-TYPE ETHERNET CABLE INPUTS.

6. INCIDENTAL MATERIALS AND EQUIPMENT: PROVIDE ALL INCIDENTAL MATERIALS AND EQUIPMENT REQUIRED FOR A COMPLETE FUNCTION AND SUCCESSFULLY OPERATING PLC SYSTEM. THE ITEMS INCLUDE BUT ARE NOT LIMITED TO:

   a. POWER SUPPLIES
   b. WIREWAYS
   c. TERMINALS, INCLUDING END BLOCKS AND END ANCHORS
   d. RELAYS
   e. DIN RAIL
   f. INTERCONNECTING DEVICES
   g. WIRING
   h. FUSES
   i. CIRCUIT BREAKERS
   j. OTHER ITEMS AND APPURTENANCES ORDINARILY FURNISHED AS PART OF A COMPLETE SYSTEM, INCLUDING DUPLEX RECEPTACLES.
   k. PLC AND OPERATOR INTERFACE PROGRAMMING SOFTWARE.

PROGRAMMABLE LOGIC CONTROLLER SYSTEM (CONTINUED)

ONE FULLY LICENSED SET OF ALL REQUIRED PROGRAMMING, TESTING, AND MONITORING SOFTWARE FOR THE PLC AND OPERATOR INTERFACE SHALL BE PROVIDED, ALONG WITH ANY CABLES OR APPURTENANCES NECESSARY TO CONNECT, PROGRAM, AND MONITOR, THE PLC AND OPERATOR INTERFACES FROM A LAPTOP RUNNING THE PROGRAMMING SOFTWARE. THIS SHALL INCLUDE ANY AND ALL SOFTWARE REQUIRED TO PROGRAM THE SYSTEM TO FUNCTION AS DESCRIBED, INCLUDING THE COMMUNICATIONS PACKAGES NEEDED. THIS SOFTWARE SHALL BE FULLY LICENSED TO THE OWNER AND SHALL BE PROVIDES TO THE OWNER NO LATER THAN 30 DAYS AFTER PROJECT COMPLETION.

AUDIBLE ALARM

A PANEL MOUNTED WARNING HORM SHALL BE ACTIVATED TO WARN PERSONNEL OF AN ALARM ON THE RORO RAMP TILT SENSOR.

TERMINALS

1. TERMINAL BLOCKS. TERMINAL BLOCKS FOR THE CONTROL CIRCUIT SHALL BE OF THE MODULAR DIN RAIL TYPE, NEMA RATED, MINIMUM 22A AT 600VAC. TERMINALS SHALL BE TUBULAR SCREW TYPE AND MUST BE ABLE TO ACCEPT AT LEAST ONE #10 AWG WIRE. FEED-THOUGH TERMINALS SHALL BE PROVIDED WITH ISOLATION KNIFE DISCONNECT SWITCH. NOT LESS THAN 20 PERCENT SPARE TERMINALS SHALL BE PROVIDED ON EACH BLOCK OR GROUP OF BLOCKS. THE MINIMUM NUMBER OF SPARE TERMINALS SHALL BE FOUR.

2. MARKING STRIPS. MARKING STRIPS OF WHITE OR OTHER LIGHT-COLORED PLASTIC, FASTENED BY SCREWS TO EACH TERMINAL BLOCK, SHALL BE PROVIDED FOR WIRE DESIGNATIONS. WIRE NUMBERS SHALL BE SHOWN FOR EACH CONNECTED TERMINAL ON THE MARKING STRIPS WITH PERMANENT MARKING FLUID, THE MARKING STRIPS SHALL BE REVERSIBLE TO PERMIT MARKING ON BOTH SIDES.

3. TERMINAL AND WIRE DESIGNATIONS. EACH DEVICE TO WHICH A CONNECTION IS MADE SHALL BE ASSIGNED A DEVICE DESIGNATION IN CONFORMANCE WITH NEMA ICS 1 AND EACH DEVICE TERMINAL TO WHICH A CONNECTION IS MADE SHALL BE MARKED WITH A DISTINCT TERMINAL MARKING CORRESPONDING TO THE WIRE DESIGNATION USED ON THE SCHEMATIC AND CONNECTION DIAGRAMS. SPECIAL ATTENTION SHALL BE GIVEN TO WIRING AND TERMINAL ARRANGEMENT ON THE TERMINAL BLOCKS TO PERMIT EACH EXTERNAL INDIVIDUAL CONDUCTOR ENTERING TO BE TERMINATED ON ADJACENT TERMINAL POINTS. PRINTS OF DRAWINGS SUBMITTED FOR APPROVAL WILL BE SO MARKED AND RETURNED TO THE CONTACTOR FOR ADDITION OF THE DESIGNATIONS TO THE TERMINAL STRIPS AND TRACINGS, ALONG WITH ANY REARRANGEMENT OF POINTS REQUIRED. THE WIRING DIAGRAM OR CONNECTION DIAGRAM SHALL BE IN A FORM SHOWING THE PHYSICAL ARRANGEMENT OF THE CONTROLS SHOWING INTERCONNECTING WIRING BY LINE OR INDICATING INTERCONNECTING WIRING ONLY BY TERMINAL DESIGNATION AND ADDRESS SYSTEM. TUBE TYPE MARKERS SHALL BE SIZED TO SNUGLY FIT THE WIRE BEING MARKED. MARKERS SHALL CONTAIN LEGIBLE IDENTIFICATIONS AND SHALL BE DURABLE AND RESISTANT TO CHANGE DUE TO AGE OR CONTACT WITH INSULATING MATERIALS.

ALARM DIALER

PROVIDE A CELLULAR ALARM DIALER CAPABLE OF TRANSMITTING SMS TEXT MESSAGES AND E-MAIL MESSAGES TO REMOTE USERS IN THE EVENT OF A CRITICAL RAMP TILT ALARM. DIALER SHALL BE POWERED BY 24VDC AND SHALL ACCEPT BE PROVIDED WITH I/O TO ACCEPT ALARM OUTPUTS FROMTHE PLC. THE DIALER SHALL BE PRE-CONFIGURED BY THE CONTRACTOR TO CONTACT DESIGNATED PERSONNEL AS COORDINATED WITH THE FACILITY OWNER. ALARM DIALER SHALL HAVE A WEB-BASED REMOTE MONITORING SYSTEM THAT SHALL BE USED FOR MONITORING OF THE ALARM DIALER ONLY.

JUNCTION AND PULL BOXES

1. PROVIDE NEMA 4X PULL BOXES AS NECESSARY. BOXES SHALL BE FITTED WITH GASKETED, WATERTIGHT HUBS. BOXES SHALL BE PROVIDED WITH A HINGED DOOR.

2. PROVIDE PRE-CAST CONCRETE HANDHOLES FOR UNDERGROUND INSTALLATIONS. HANDHOLE COVER AND BOX SHALL BE RATED FOR AASHTO H20 TRAFFIC LOADING. BOX SHALL BE PROVIDED WITH STAINLESS STEEL BOLTS AND INSERTS.

3. PROVIDE BARRIERS IN BOXES CONTAINING 600V AND 300V CONDUCTORS FOR SEPARATION.

4. MARK AND IDENTIFY ALL TERMINALS AND WIRES ENTERING AND LEAVING THE BOXES WITH THE APPROPRIATE WIRE NUMBERS.

5. MARK AND IDENTIFY ALL CABLES ENTERING AND LEAVING THE BOXES.

6. ENSURE THAT ACCESS TO BOXES IS NOT OBSTRUCTED BY DUCTS, PIPES, AND OTHER MECHANICAL SYSTEMS.

GROUNDING

ALL EQUIPMENT SHALL HAVE PROVISIONS FOR GROUNDING. A SEPARATE GROUND WIRE SHALL BE RUN IN ALL CONDUITS

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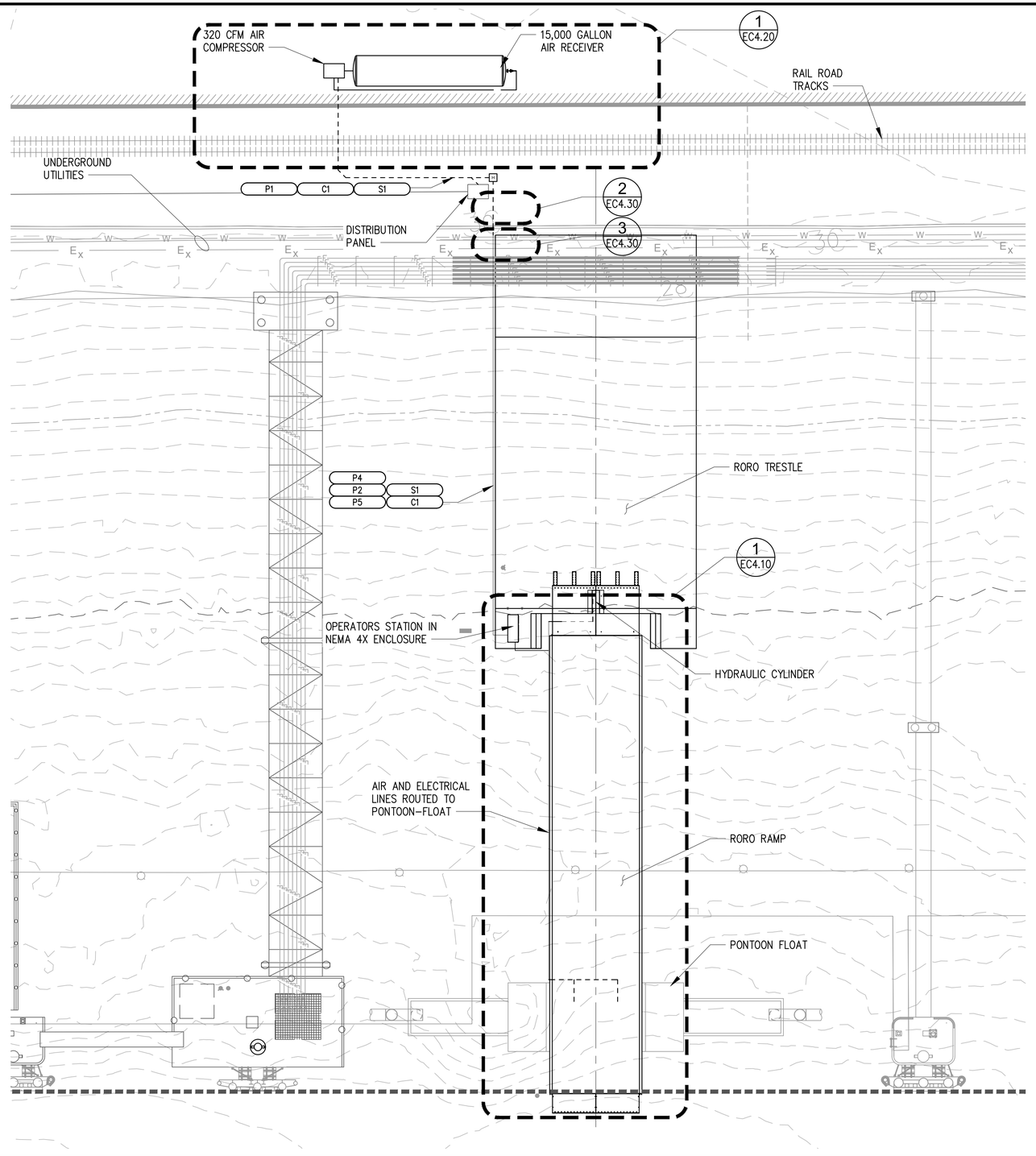
ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

RORO RAMP
ELECTRICAL AND CONTROLS NOTES

DRAWN:	VK	PROJECT NO.:	2100135
DESIGN:	AR	SCALE:	AS SHOWN
CHECKED:	AJB	DATE:	01/27/2023
DRAWING NO.		EC1.00	
SHEET NO.		OF	

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 26, 2023 - 8:51am ALMA.REANTASO Layout: EC1.00
L:\2022\22-10_WTR_KPFF Skagway RORO\04 - CADD\Plan Sets\03_Sheets\2100135_EC1.00_RORO RAMP ELECTRICAL AND CONTROL NOTES.dwg

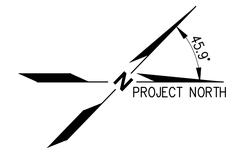


NOTES

1. REFER TO DETAILS ON DRAWING U3.10 FOR MOUNTING OF CONDUIT TO RORO TRESTLE AND RAMP.
2. DEPTH OF CONDUITS IN DUCT BANK MAY NEED TO BE ADJUSTED BASED ON INTERSECTING UTILITY LINE DEPTHS. CONTRACTOR TO VERIFY.

LEGEND

- BURIEID CONDUITS
- EXPOSED CONDUITS
- XX — RACEWAY/CONDUCTOR CALLOUT
- H — ELECTRICAL HANDHOLE



1 – ELECTRICAL AND CONTROLS OVERALL SITE PLAN

SCALE: 1/16" = 1'-0"

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 26, 2023 - 8:38am vlad.kroshko Layout: EC2.00
L:\2022\22-10_WTR_KPFF Skagway RORO\04 - CADD\Plan Sets\03_Sheets\2100135_EC2.00_ RORO RAMP PONTOON ELECTRICAL AND CONTROLS OVERALL SITE PLAN.dwg

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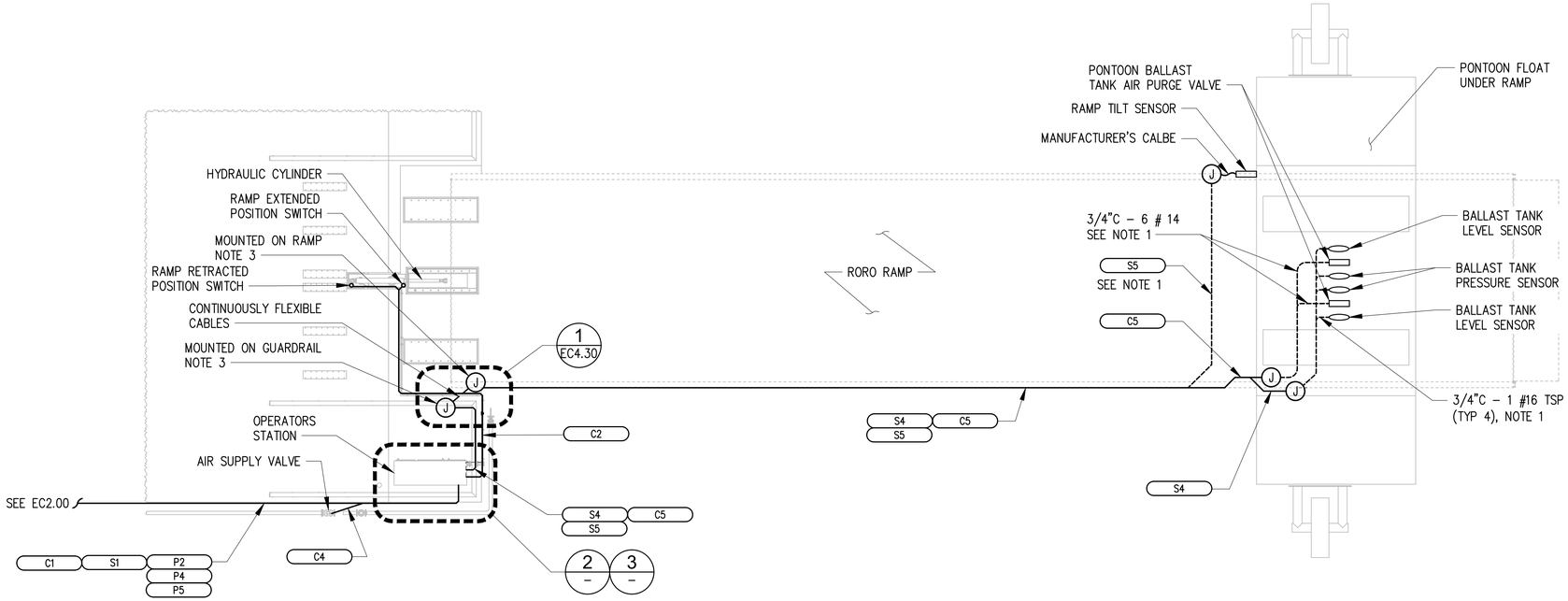
ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

RORO RAMP
ELECTRCAL AND CONTROLS OVERALL SITE PLAN

DRAWN: PC	PROJECT NO.: 2100135
DESIGN: AR	SCALE: AS SHOWN
CHECKED: AJB	DATE: 01/27/2023
DRAWING NO.	EC2.00
SHEET NO.	OF



1 HYDRAULIC CYLINDER AND PONTOON ELECTRICAL AND CONTROLS PLAN

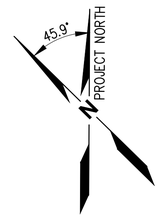
EC2.00 SCALE: 1/8" = 1'–0"

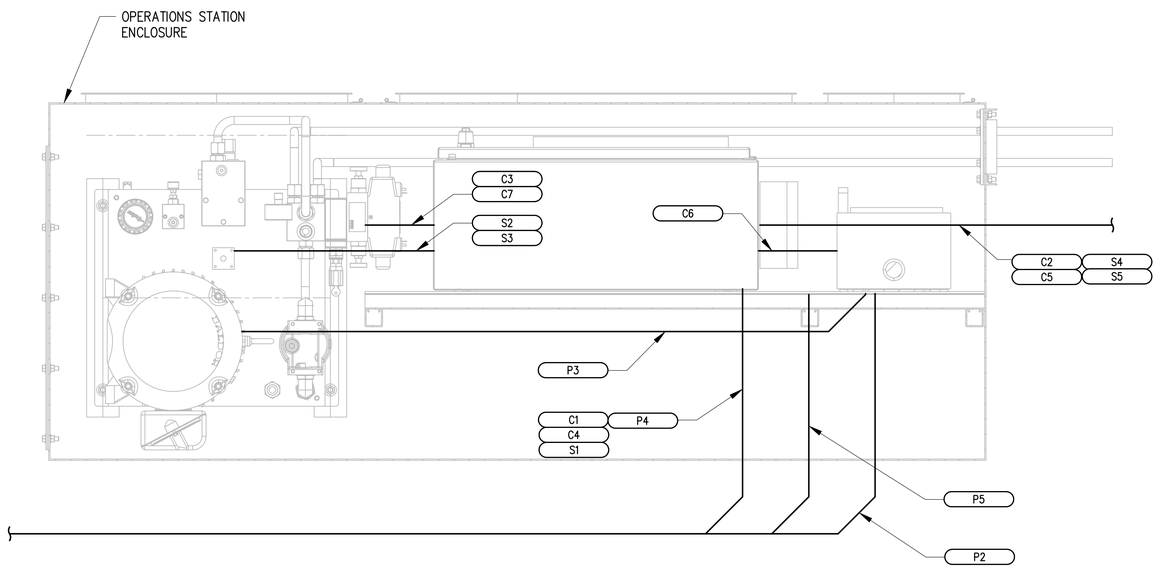
NOTES

1. CONDUITS ROUTED EXPOSED UNDER RAMP.
2. ENCLOSURE AND DOORS NOT SHOWN FOR CLARITY.
3. PROVIDE SEPARATE JUNCTION BOXES FOR 600V POWER AND CONTROL CONDUCTORS AND 300V ANALOG INSTRUMENTATION CONDUCTORS.

LEGEND

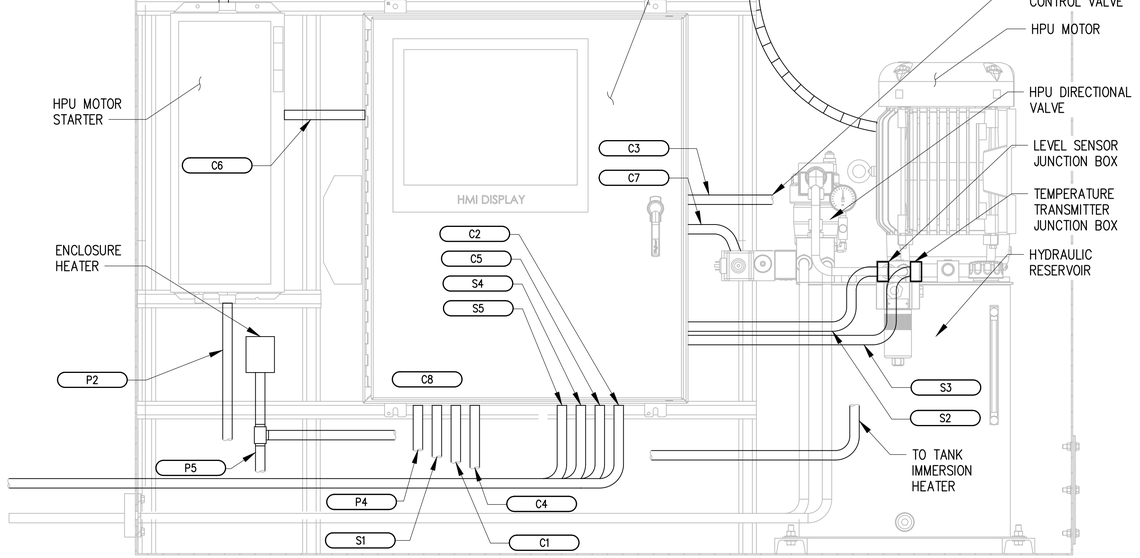
- EXPOSED CONDUITS
- XX RACEWAY/CONDUCTOR CALLOUT
- (J) JUNCTION BOX





2 OPERATORS STATION PLAN

– SCALE: NTS



3 OPERATORS STATION FRONT VIEW INTERIOR LAYOUT

– SCALE: NTS

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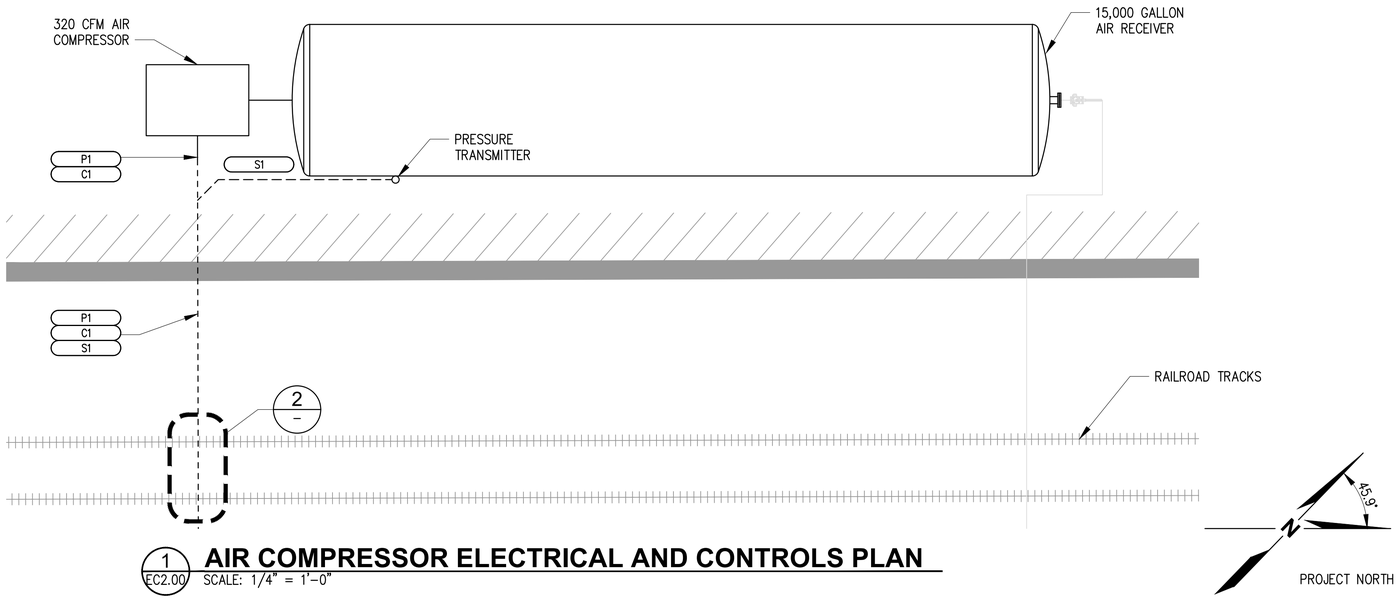
SKAGWAY, ALASKA

RORO RAMP
HYDRAULIC CYLINDER AND PONTOON ELECTRICAL AND CONTROLS PLAN

DRAWN: PC	PROJECT NO.: 2100135
DESIGN: AR	SCALE: AS SHOWN
CHECKED: AJB	DATE: 01/27/2023
DRAWING NO.	EC4.10
SHEET NO.	OF

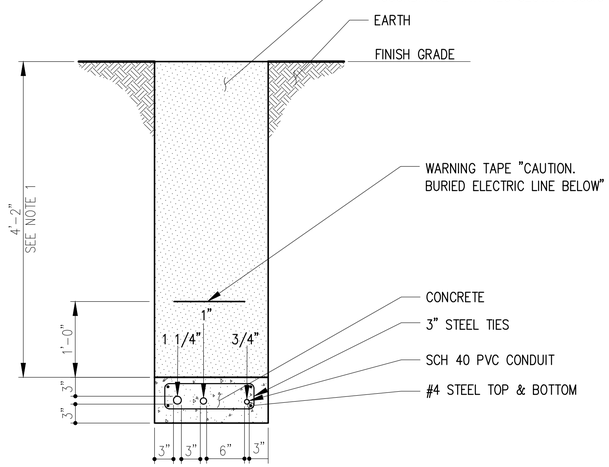
60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 25, 2023 – 11:20am vlad.kroshko Layout: EC4.10
L:\2022\22-10_WTR_KPFF Skagway RORO\04 – CADD\Plan Sets\03_Sheets\2100135_EC4.10_RORO RAMP HYDRAULIC CYLINDER AND PONTOON ELECTRICAL AND CONTROLS PLAN.dwg



1 AIR COMPRESSOR ELECTRICAL AND CONTROLS PLAN

EC2.00 SCALE: 1" = 1'-0"



DUCK BANK CONDUIT SCHEDULE
P1 C1 S1

2 CONCRETE ENCASED DUCT BANK DETAIL

EC2.00 SCALE: 1" = 1'-0"

NOTES

1. DUCT BANK TO SLOPE DOWNWARD AT START AND END POINTS TO MEET DEPTH UNDER RAILROAD TRACK REQUIREMENTS. MINIMUM DEPTH SHOWN IS FROM THE TOP OF THE RAILS.

LEGEND

- XX — RACEWAY/CONDUCTOR CALLOUT
- – – – – BURIED CONDUITS
- ——— EXPOSED CONDUITS

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 24, 2023 – 11:49am BRANDON.HADLEY Layout: EC4.20
L:\2022\22-10_WTR_KPFF Skagway RORO\04 – CADD\Plan Sets\03_Sheets\2100135_EC4.20_ RORO RAMP AIR COMPRESSOR ELECTRICAL AND CONTROLS PLAN.dwg

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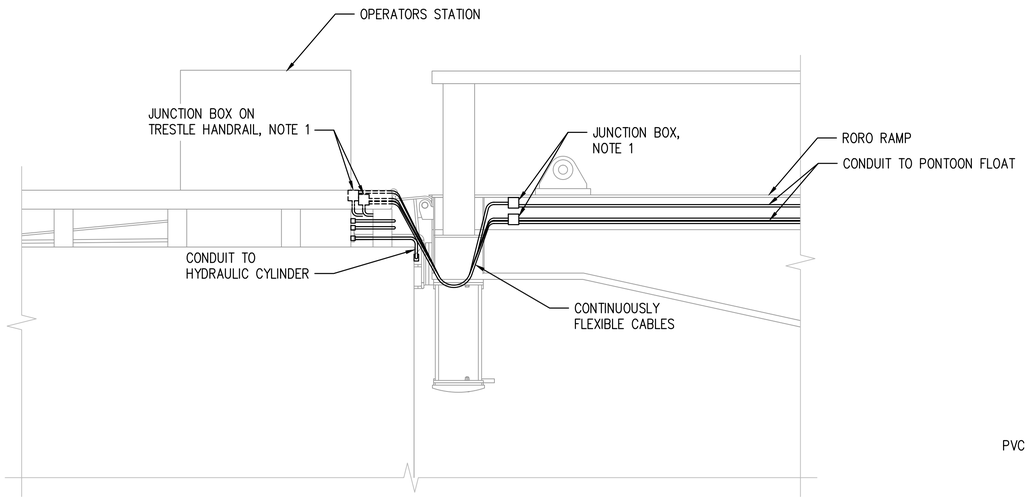
SKAGWAY, ALASKA

RORO RAMP
AIR COMPRESSOR ELECTRICAL AND CONTROLS PLAN

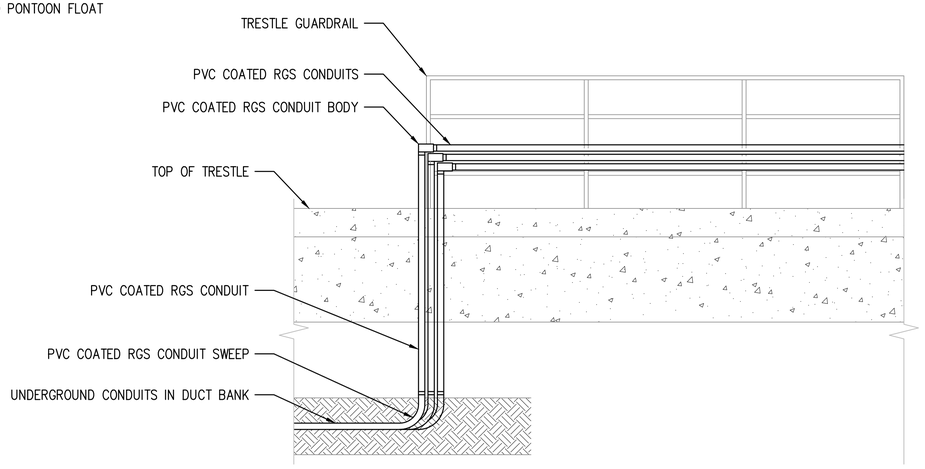
DRAWN: PC	PROJECT NO.: 2100135
DESIGN: AR	SCALE: AS SHOWN
CHECKED: AJB	DATE: 01/27/2023
DRAWING NO.	EC4.20
SHEET NO.	OF

NOTES

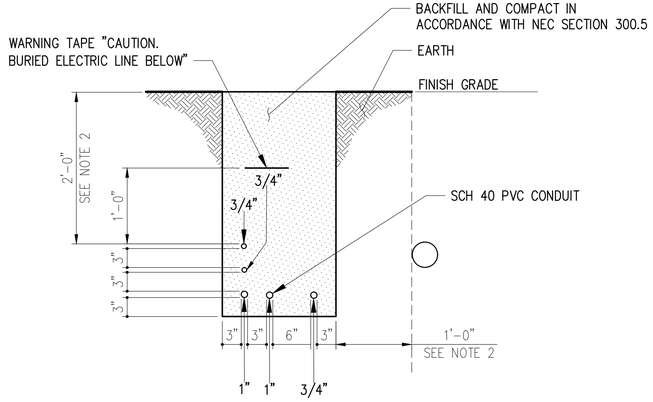
1. PROVIDE SEPARATE JUNCTION BOXES FOR 600V POWER AND CONTROL CONDUCTORS AND 300V ANALOG INSTRUMENTATION CONDUCTORS.
2. PROVIDE A MINIMUM 12" SEPARATION BETWEEN DUCT BANK AND BURIED AIR PIPING.



1 FLEXIBLE CABLE INSTALLATION AT RAMP
EC4.10 SCALE: 1/2" = 1'-0"



3 CONDUIT TRANSITION AT RORO TRESTLE
EC2.00 SCALE: NTS



DUCK BANK CONDUIT SCHEDULE			
P4			
P2			
P5	C1	S1	

2 DIRECT BURIED DUCT BANK DETAIL
EC2.00 SCALE: 1" = 1'-0"

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RORO RAMP ELECTRICAL DETAILS

DRAWN:	PC	PROJECT NO.:	2100135
DESIGN:	AR	SCALE:	AS SHOWN
CHECKED:	AJB	DATE:	01/27/2023
DRAWING NO.			EC4.30
SHEET NO.			OF

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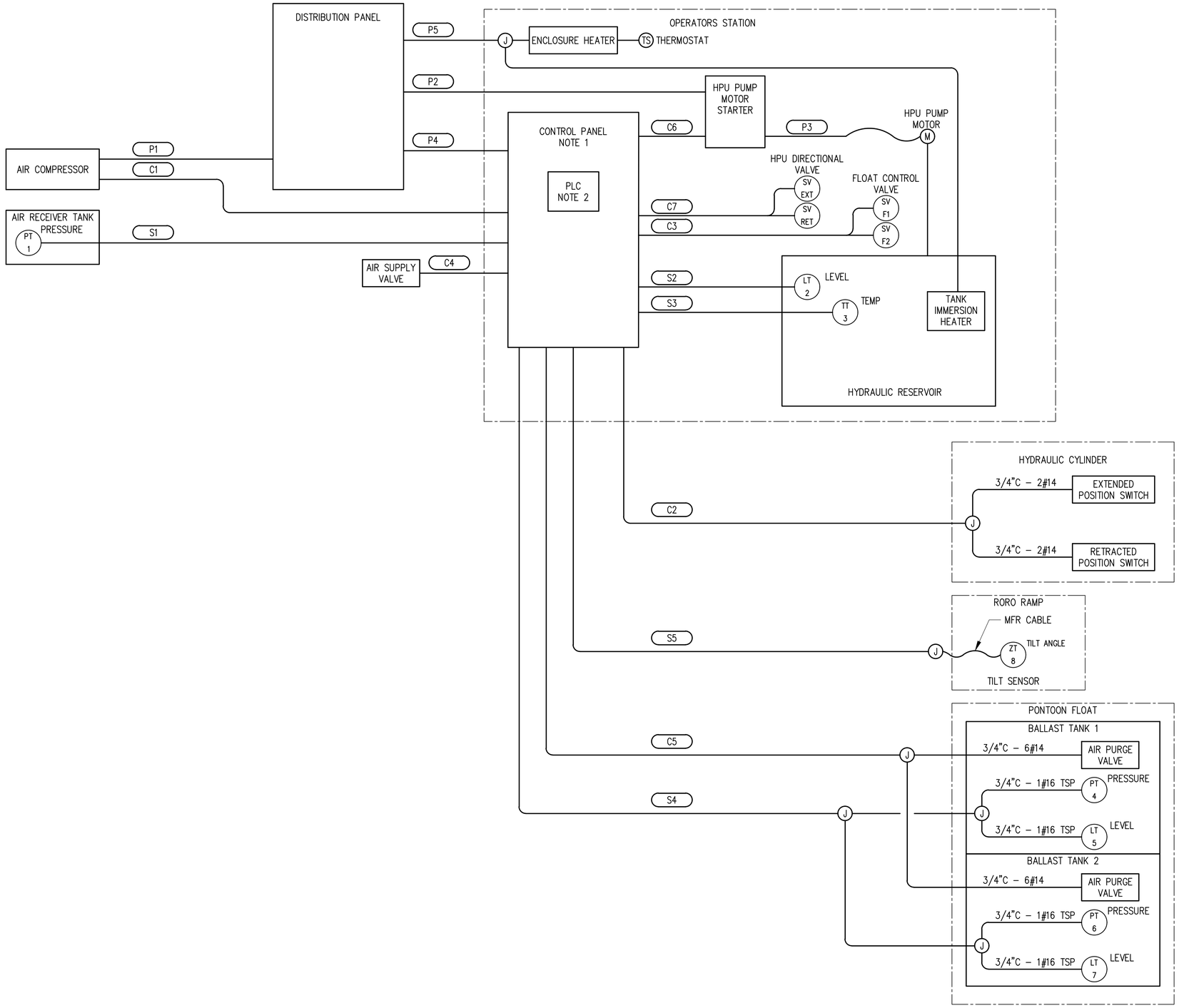
Plotted: Jan 24, 2023 - 12:24pm vlad.kroshko Layout: EC4.30
L:\2022\22-10_WTR_KPFF Skagway RORO\04 - CADD\Plan Sets\03_Sheets\2100135_EC4.30_RORO RAMP ELECTRICAL AND CONTROLS DETAILS.dwg



NOTES

1. SEE DRAWING EC5.01 FOR CONTROL PANEL LAYOUT. SEE DRAWINGS EC5.03 THRU EC5.06 FOR PANEL WIRING DIAGRAMS.
2. SEE DRAWING EC5.02 FOR PLC BLOCK DIAGRAM.

LEGEND

- XX / # — INSTRUMENT TRANSMITTER
- SV / XX — SOLENOID CONTROL VALVE
- X# — CIRCUIT ID SEE SCHEDULE ON EC7.01
- J — JUNCTION BOX

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RORO RAMP CONTROL SYSTEM BLOCK DIAGRAM

DRAWN:	VK	PROJECT NO.:	2100135
DESIGN:	AR	SCALE:	AS SHOWN
CHECKED:	AJB	DATE:	01/27/2023
DRAWING NO.		**EC5.00**	
SHEET NO.		OF	

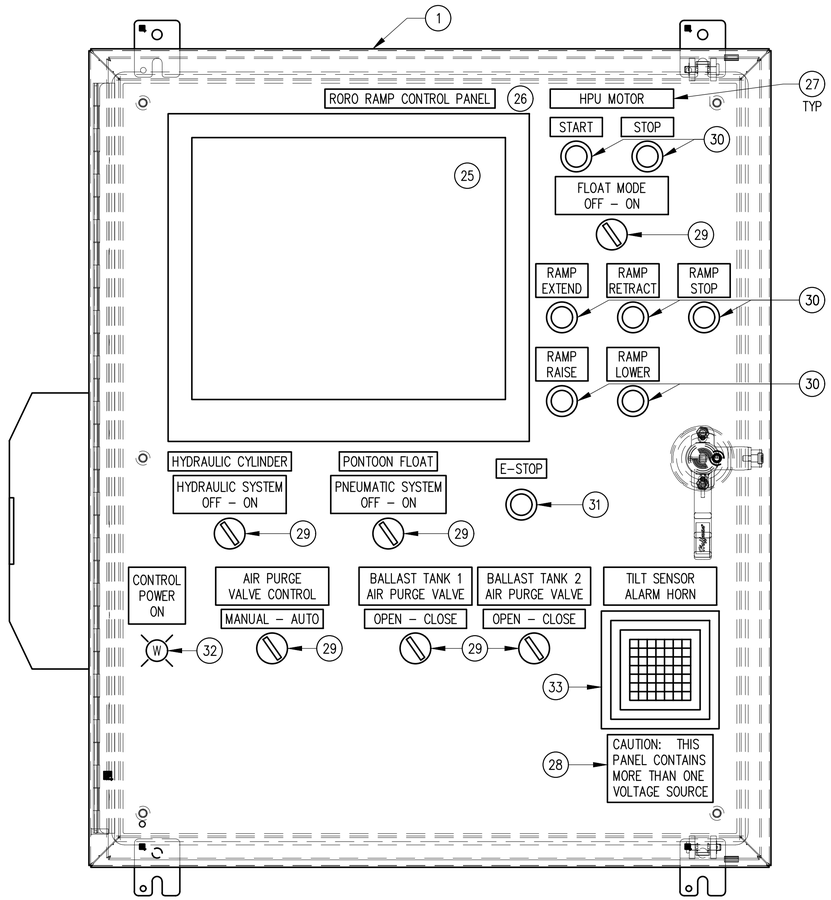
Plotted: Jan 25, 2023 - 6:51am ALMA.REANTASO Layout: EC5.00
L:\2022\22-10_WTR_KPFF Skagway RORO\04 - CADD\Plan Sets\03_Sheets\2100135_EC5.00_RORO RAMP CONTROL SYSTEM BLOCK DIAGRAM.dwg

NOTES

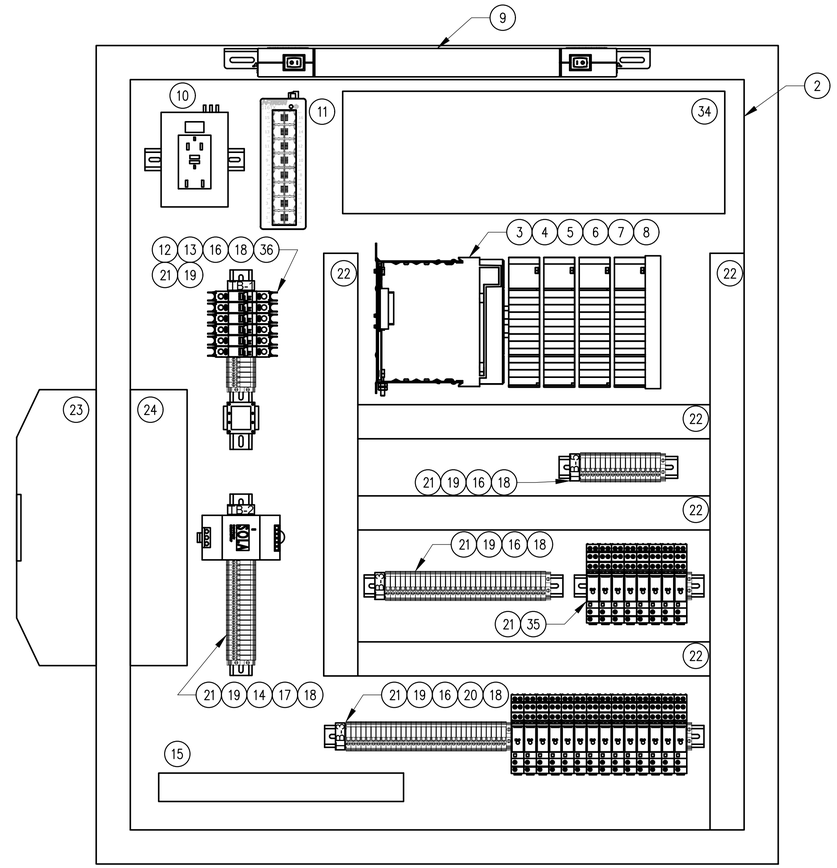
1. SEE DRAWING EC5.02 FOR PANEL MATERIALS LIST.

LEGEND

(##) MATERIAL ITEM ID



1 – **CONTROL PANEL EXTERIOR LAYOUT**
SCALE: NTS



2 – **CONTROL PANEL INTERIOR LAYOUT**
SCALE: NTS

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RORO RAMP CONTROL PANEL LAYOUT

DRAWN: VK	PROJECT NO.: 2100135
DESIGN: AR	SCALE: AS SHOWN
CHECKED: AJB	DATE: 01/27/2023
DRAWING NO.	**EC5.01**
SHEET NO.	OF

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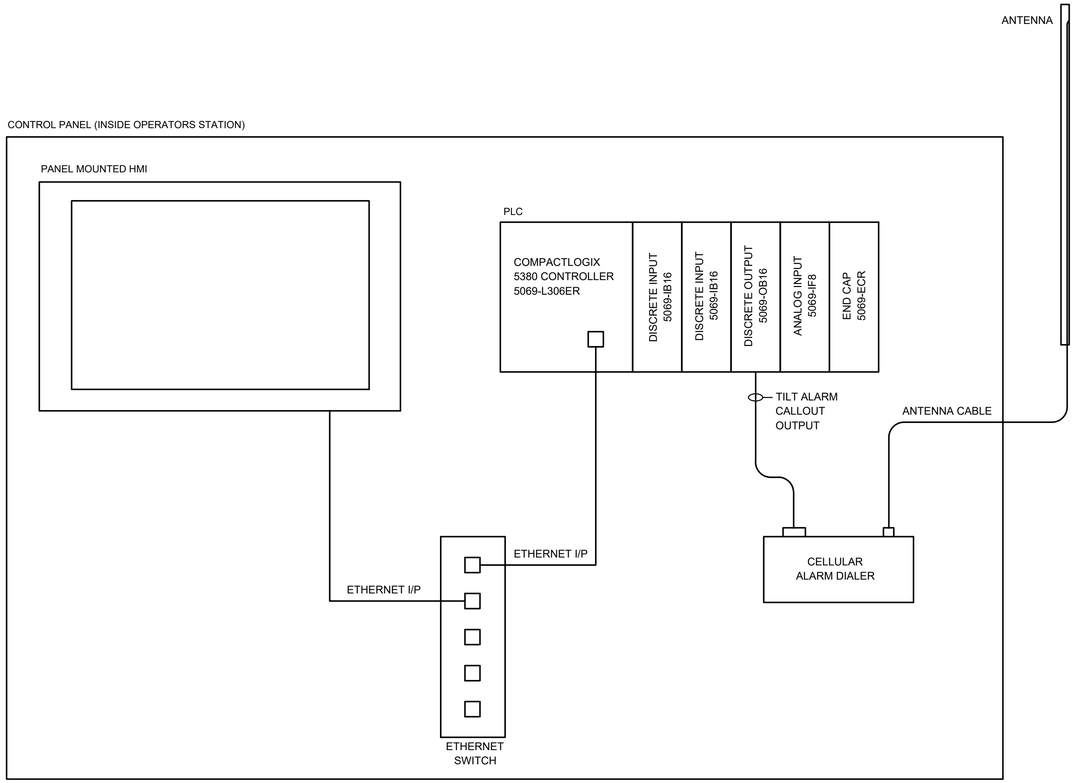
Plotted: Jan 24, 2023 – 11:47am ALMA.REANTASO Layout: EC5.01
L:\2022\22-10_WTR_KPFF Skagway RORO\04 – CADD\Plan Sets\03_Sheets\2100135_EC5.01_RORO RAMP CONTROL PANEL LAYOUT.dwg



1 – **PLC BLOCK DIAGRAM**
SCALE: NTS

GENERAL NOTES

1. MANUFACTUER AND MODEL NUMBERS LISTED ARE BASIS OF DESIGN.
2. SEE DRAWING EC5.01 FOR PANEL LAYOUTS.

RORO RAMP CONTROL PANEL MATERIALS LIST

ITEM	QTY	DESCRIPTION	MANUFACTURER	PART NO.	COMMENTS
1	1	ENCLOSURE, 36"H x 30"W x 12"D, NEMA 4X, CONTINUOUS HINGE WITH 3 POINT LATCH	NVENT HOFFMAN	A36H3012SSLP3PT	
2	1	BACKPANEL, 33"H x 27"W	NVENT HOFFMAN	A36P30	
3	1	COMPACTLOGIX 5380 PLC CONTROLLER	ALLEN-BRADLEY	5069-L306-ER	
4	1	POWER SUPPLY TERMINAL KIT	ALLEN-BRADLEY	5069-RTB64	
5	2	16 POINT, 24VDC DISCRETE INPUT MODULE	ALLEN-BRADLEY	5069-IB16	MODULE TO BE SUPPLIED WITH TERMINAL BLOCK
6	1	8 POINT. 24VDC DISCRETE OUTPUT MODULE	ALLEN-BRADLEY	5069-OB8	MODULE TO BE SUPPLIED WITH TERMINAL BLOCK
7	1	16 CHANNEL ANALOG INPUT MODULE	ALLEN-BRADLEY	5069-IF8	MODULE TO BE SUPPLIED WITH TERMINAL BLOCK
8	1	PLC END CAP	ALLEN-BRADLEY	5069-ECR	
9	1	PANEL LIGHT	NVENT HOFFMAN	LEDA1S35	PROVIDE WITH DOOR SWITCH
10	1	RECEPTACLE, 15A, GFI, DUPLEX, DIN-RAIL MOUNT	ALLEN-BRADLEY	1492-REC15G	
11	1	ETHERNET SWITCH, 5-PORT UNMANAGED	RED LION/N-TRON	105TX	
12	1	20A/1-POLE CIRCUIT BREAKER	ALLEN-BRADLEY	1489-M1C200	
13	5	5A/1-POLE CIRCUIT BREAKER	ALLEN-BRADLEY	1489-M1C050	
14	1	24VDC POWER SUPPLY	SOLA	SDN 2.5-24-100P	
15	1	GROUND BAR	ILSCO	D167-8	
16	A/R	TERMINAL BLOCKS - FEED THROUGH	WEIDMULLER	1143070000	
17	A/R	TERMINAL BLOCKS - FUSED	WEIDMULLER	1162920000	
18	A/R	TERMINAL BLOCKS - END STOP	WEIDMULLER	1061200000	
19	A/R	TERMINAL MARKER	OPEN		
20	A/R	24VDC TERMINAL BLOCK RELAY	ALLEN-BRADLEY	700-HLT1Z24	
21	A/R	35 MM DIN RAIL	WEIDMULLER	7915060000	
22	A/R	2" X 3" WIREWAY WITH COVER	PANDUIT	F2X3LG6	
23	1	THERMOELECTRIC ENCLOSURE COOLER, 60W,24VDC WITH STAINLESS STEEL SHROUD	NVENT HOFFMAN	TE090624011	FOR HEATING AND COOLING
24	1	THERMOSTAT CONTROLLER, 24VDC	NVENT HOFFMAN	TEC24VCNTLRN	
25	1	RUGGED,PANEL MOUNTED OPERATOR INTERFACE TERMINAL (HMI), 19" TOUCHSCREEN, COLOR LED DISPLAY	MOXA	MD-219Z-HB	PROVIDE WITH PANEL MOUNTING KIT
26	A/R	NAMEPLATE, ENGRAVED PLASTIC BLACK LETTERING ON WHITE BACKGROUND	OPEN		
27	A/R	NAMEPLATE, ENGRAVED PLASTIC WHITE LETTERING ON BLACK BACKGROUND	OPEN		
28	A/R	NAMEPLATE, ENGRAVED PLASTIC WHITE LETTERING ON RED BACKGROUND	OPEN		
29	6	SELECTOR SWITCH, 30mm, 1 N.O.-1 N.C., 2-POSITION	ALLEN-BRADLEY	800H-HR2A	
30	7	PUSHBUTTON BLACK, 30mm, 1 N.O.-1 N.C., MOMENTARY CONTACT	ALLEN-BRADLEY	800H-R2A	
31	1	EMERGENCY STOP PUSHBUTTON, RED MUSHROOM HEAD, TWIST RELEASE	ALLEN-BRADLEY	800HC-TFRXT6A5S	
32	1	PILOT LIGHT, 30MM, WHITE, PUSH TO TEST, 12-130V AC/DC, LED, TYPE 4/4X/13	ALLEN-BRADLEY	800H-QRTH2W	
33	1	PANEL MOUNT ALARM HORN	FEDERAL SIGNAL	350-120-30	PROVIDE WITH GASKETED PANEL MOUNTING KIT
34	1	CELLULAR ALARM DIALER, 24VDC, MODEM; BUILT-IN BATTERY AND ON-BOARD DIGITAL INPUTS; ALARM CALLOUT VIA EMAIL OR SMS TEXT MESSAGING	SCADA LINK	SAT110	CONTRACTOR TO COORDINATE WITH OWNER TO ESTABLISH ACCESS AND CELLULAR SERVICE FOR ALARM CALLOUT

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ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

RORO RAMP CONTROL PANEL MATERIALS LIST AND PLC BLOCK DIAGRAM

DRAWN: VK	PROJECT NO.: 2100135
DESIGN: AR	SCALE: AS SHOWN
CHECKED: AJB	DATE: 01/27/2023
DRAWING NO.	**EC5.02**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 24, 2023 – 11:55am ALMA.REANTASO Layout: EC5.02
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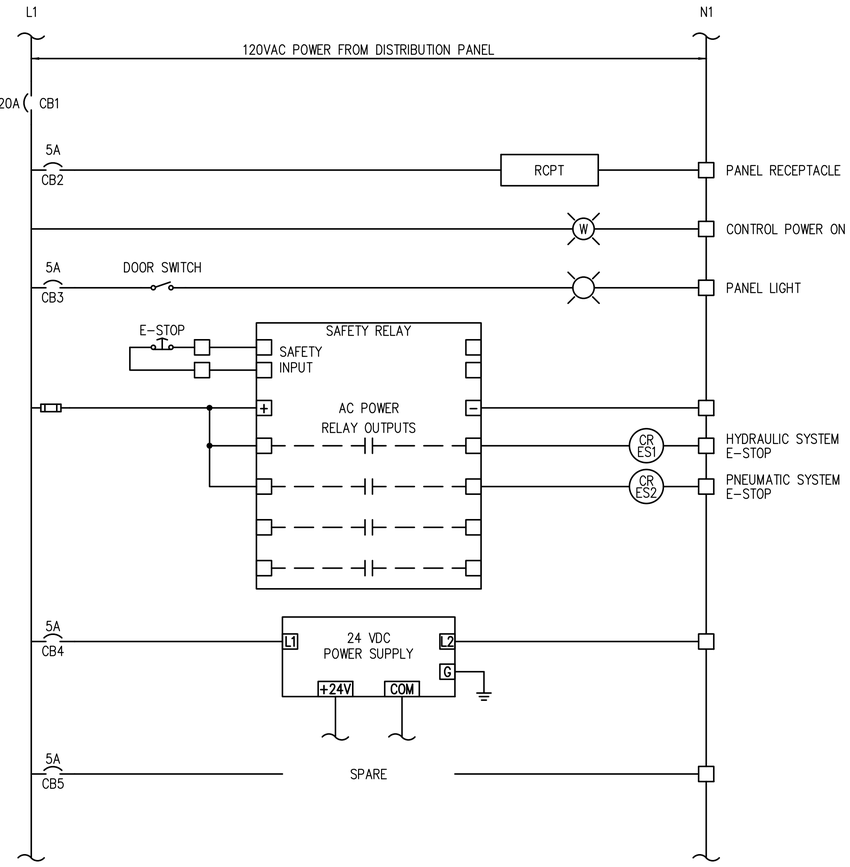
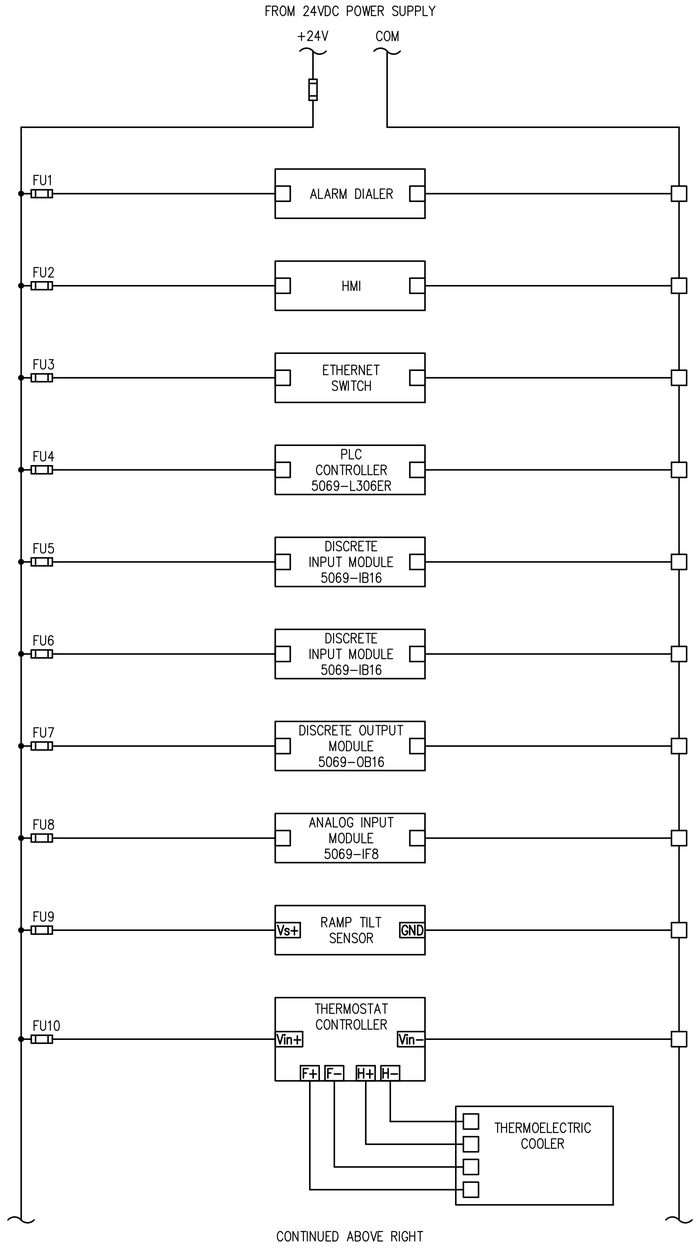


1 – **CONTROL PANEL AC POWER WIRING SCHEMATIC**
SCALE: NTS



2 – **CONTROL PANEL DC POWER WIRING SCHEMATIC**
SCALE: NTS

GENERAL NOTES

1. CONTRACTOR SHALL DESIGN CONTROL PANEL WITH ALL COMPONENTS TO PROVIDE A COMPLETE AND FULLY FUNCTIONAL CONTROL SYSTEM TO MEET REQUIREMENTS AS SHOWN ON THE DRAWINGS, THE LAYOUTS, SCHEMATICS, AND CONTROL FUNCTIONS IN THE DRAWINGS AND THE CONTROL FUNCTIONS DESCRIBED IN THE SPECIFICATIONS SHALL BE USED TO PROVIDE A FULL COMPLEMENT OF INPUTS AND OUTPUTS FOR A COMPLETE PLC CONTROL SYSTEM.
2. SUBMIT DRAWINGS, INCLUDING PANEL LAYOUT DRAWINGS, WIRING DIAGRAMS, AND SCHEMATICS, AND BILL OF MATERIALS FOR APPROVAL.

LEGEND

- CIRCUIT BREAKER
- FUSE
- G — INDICATING LIGHT
- CR — CONTROL RELAY
- NORMALLY OPEN CONTACT
- MAINTAINED NORMALLY CLOSED PUSHBUTTON SWITCH
- GROUND
- TERMINAL IN CONTROL PANEL

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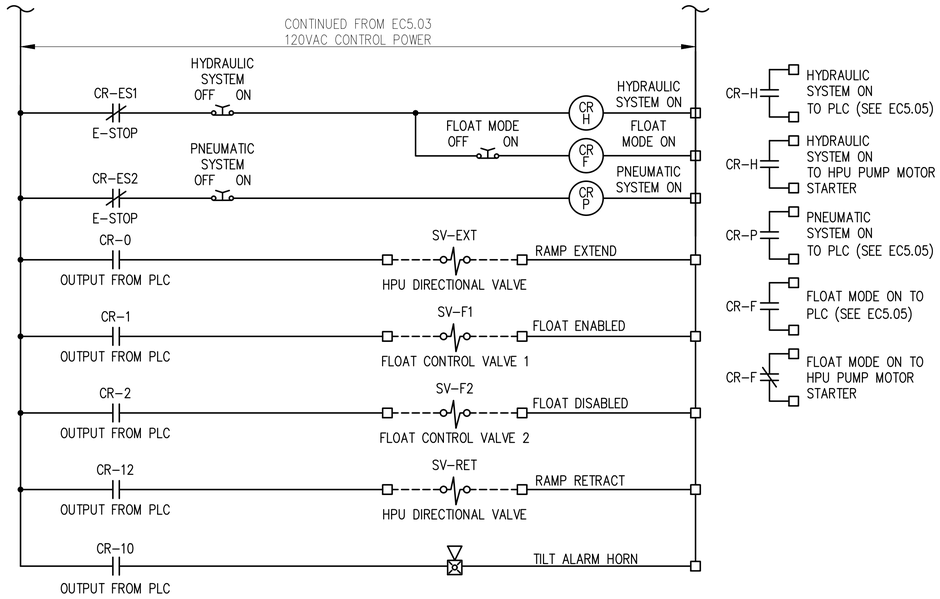
ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

RORO RAMP CONTROL PANEL
POWER WIRING DIAGRAM

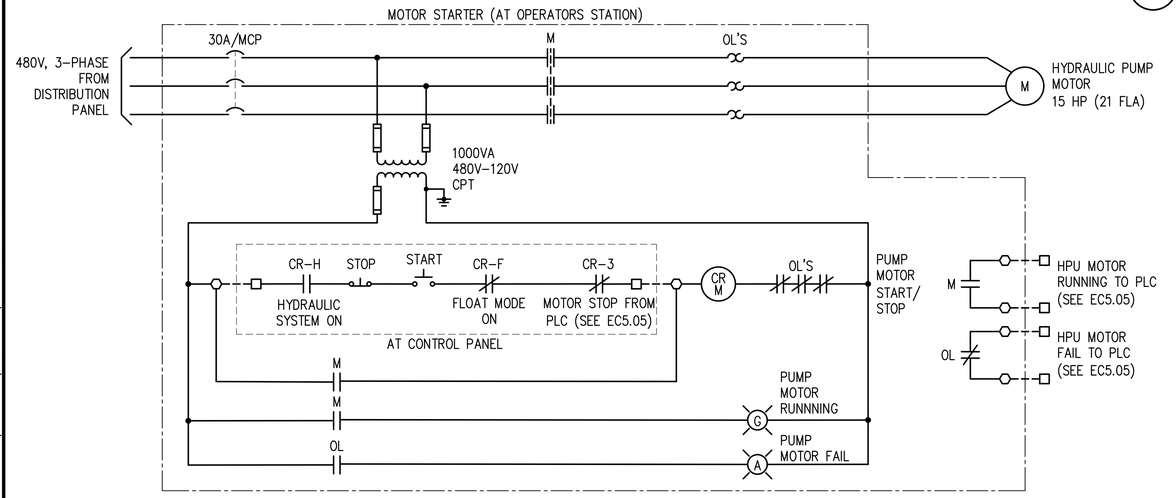
DRAWN: VK	PROJECT NO.: 2100135
DESIGN: AR	SCALE: AS SHOWN
CHECKED: AJB	DATE: 01/27/2023
DRAWING NO.	**EC5.03**
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

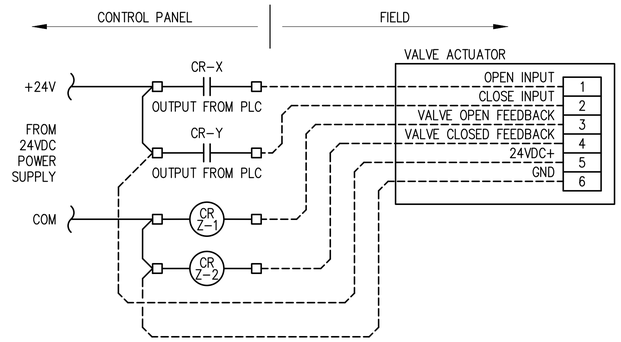
Plotted: Jan 24, 2023 – 12:44pm vlad.kroshko Layout: EC5.03
L:\2022\22-10_WTR_KPFF Skagway RORO\04 – CADD\Plan Sets\03_Sheets\2100135_EC5.03_RORO RAMP CONTROL PANEL POWER WIRING DIAGRAM.dwg



1 CONTROL PANEL CONTROL WIRING DIAGRAM
SCALE: NTS



2 HPU HYDRAULIC PUMP MOTOR CONTROL SCHEMATIC
SCALE: NTS



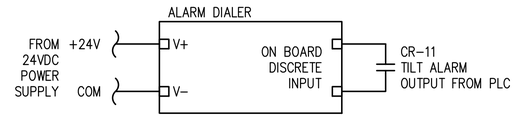
VALVE ACTUATOR NOTES:

1. WIRING IS TYPICAL PNEUMATIC SYSTEM VALVES FOR AIR SUPPLY AND BALLAST TANK AIR PURGE.
2. WIRING IS FOR BASIS OF DESIGN ACTUATOR MANUFACTURER. REVISE WIRING AS NEEDED FOR ACTUATOR SUPPLIED.
3. SEE I/O WIRING DIAGRAMS ON EC5.05 FOR CONNECTIONS TO PLC.
4. RELAY AND CONTACT ASSIGNMENTS:
   AIR SUPPLY VALVE:
   X = 4
   Y = 5
   Z = A

   BALLAST TANK 1 AIR PURGE:
   X = 6
   Y = 7
   Z = T1

   BALLAST TANK 2 AIR PURGE:
   X = 8
   Y = 9
   Z = T2

3 PNEUMATIC SYSTEM VALVE ACTUATOR WIRING DIAGRAM
SCALE: NTS



4 TILT ALARM CALLOUT WIRING DIAGRAM
SCALE: NTS

GENERAL NOTE

1. SEE PLC DISCRETE OUTPUT WIRING DIAGRAM ON EC5.05 FOR RELAY OUTPUT ASSIGNMENTS.

LEGEND

- INDICATING LIGHT
- CONTROL RELAY
- NORMALLY OPEN CONTACT
- NORMALLY CLOSED CONTACT
- TERMINAL IN CONTROL PANEL
- SOLENOID COIL
- FIELD WIRING
- FIELD TERMINAL
- 2-POSITION SELECTOR SWITCH
- MOTOR CONTROL RELAY
- TERMINAL IN MOTOR STARTER
- 3-POLE MOTOR CIRCUIT PROTECTOR
- (MOMENTARY) NORMALLY OPEN PUSHBUTTON
- (MOMENTARY) NORMALLY CLOSED PUSHBUTTON
- OVERLOAD HEATER
- MOTOR STARTING CONTACT
- CONTROL POWER TRANSFORMER

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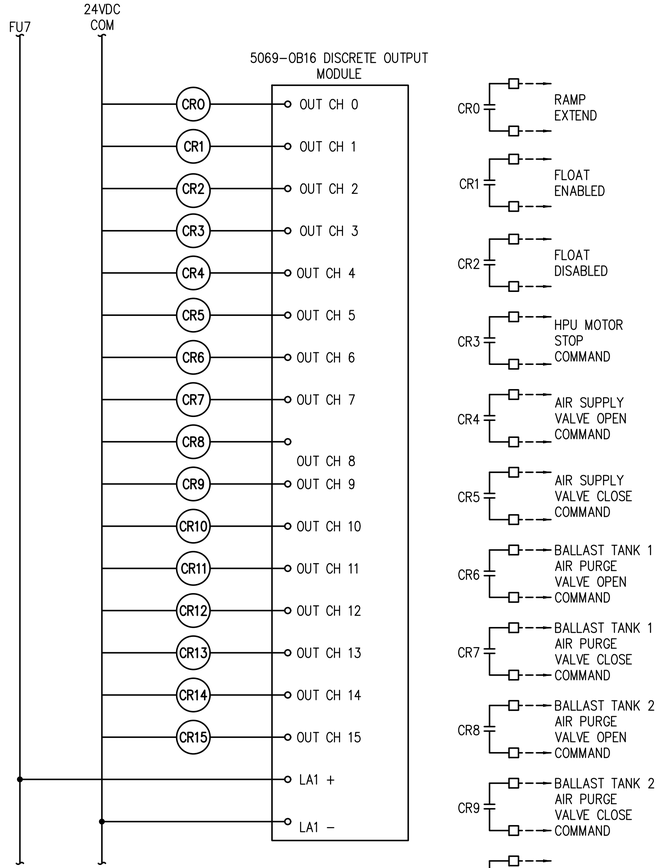
ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

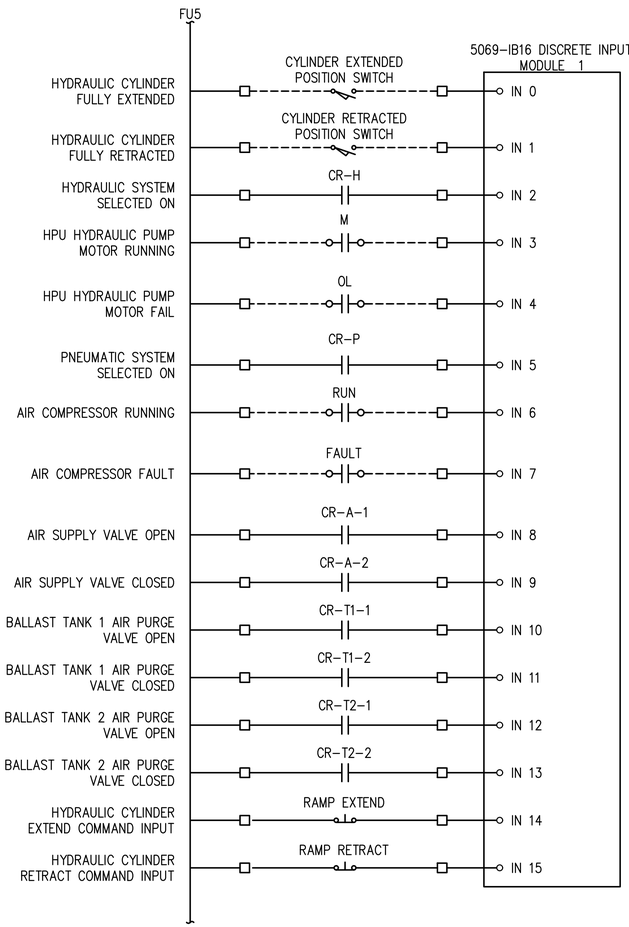
RORO RAMP CONTROL PANEL CONTROL WIRING DIAGRAMS AND HPU MOTOR CONTROL SCHEMATIC

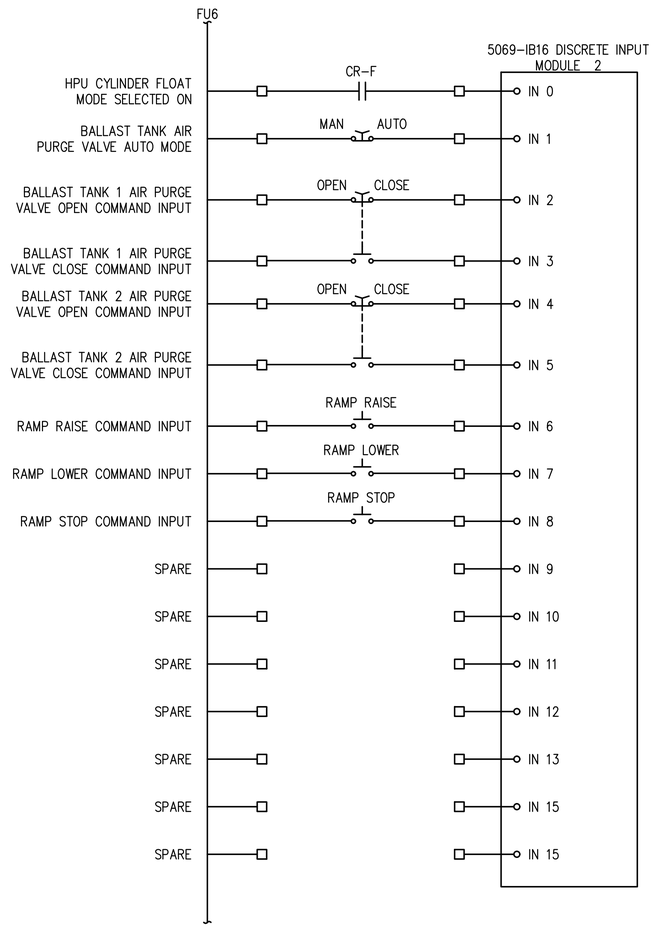
DRAWN: VK	PROJECT NO.: 2100135
DESIGN: AR	SCALE: AS SHOWN
CHECKED: AJB	DATE: 01/27/2023
DRAWING NO.	EC5.04
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 24, 2023 - 6:36pm ALMA.REANTASO Layout: EC5.04
L:\2022\22-10_WTR_KPFF Skagway RORO\04 - CADD\Plan Sets\03_Sheets\2100135_EC5.04_RORO RAMP CONTROL PANEL CONTROL WIRING DIAGRAMS AND HPU MOTOR CONTROL SCHEMATIC.dwg







LEGEND

- NORMALLY OPEN CONTACT
- NORMALLY CLOSED CONTACT
- LIMIT SWITCH, NORMALLY OPEN
- CR — CONTROL RELAY
- TERMINAL IN CONTROL PANEL
- FIELD WIRING
- FIELD TERMINAL
- 2-POSITION SELECTOR SWITCH
- (MOMENTARY) NORMALLY OPEN PUSHBUTTON
- (MOMENTARY) NORMALLY CLOSED PUSHBUTTON

1 – **PLC DISCRETE OUTPUT WIRING DIAGRAM**
SCALE: NTS

2 – **PLC DISCRETE INPUT WIRING DIAGRAM 1**
SCALE: NTS

3 – **PLC DISCRETE INPUT WIRING DIAGRAM 2**
SCALE: NTS

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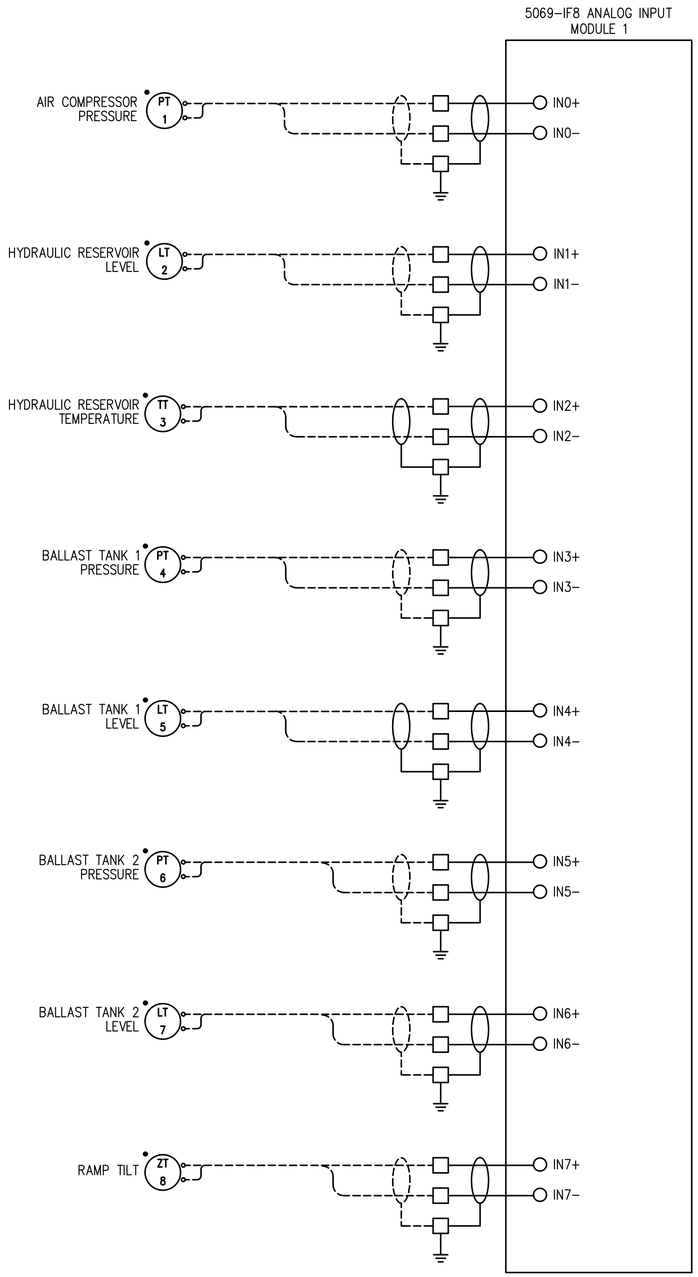
SKAGWAY, ALASKA

RORO RAMP CONTROL PANEL
DISCRETE INPUT/OUTPUT WIRING DIAGRAMS

DRAWN:	VK	PROJECT NO.:	2100135
DESIGN:	AR	SCALE:	AS SHOWN
CHECKED:	AJB	DATE:	01/27/2023
DRAWING NO.		**EC5.05**	
SHEET NO.		OF	

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 24, 2023 – 1:31pm ALMA.REANTASO Layout: EC5.05
L:\2022\22-10_WTR_KPFF Skagway RORO\04 – CADD\Plan Sets\03_Sheets\2100135_EC5.05_RORO RAMP CONTROL PANEL DISCRETE INPUTOUTPUT WIRING DIAGRAMS.dwg

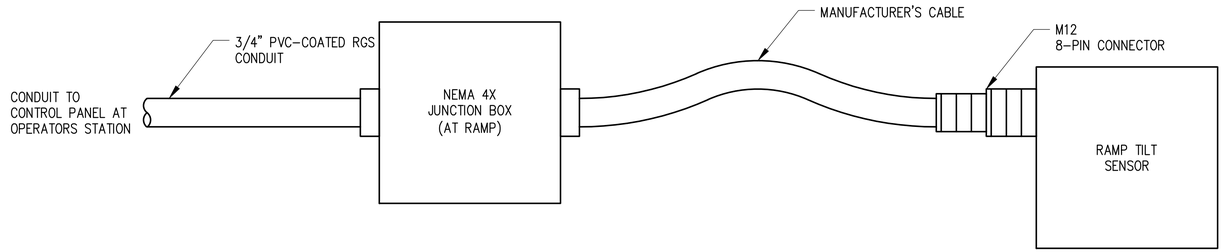


1 PLC ANALOG INPUT WIRING DIAGRAM

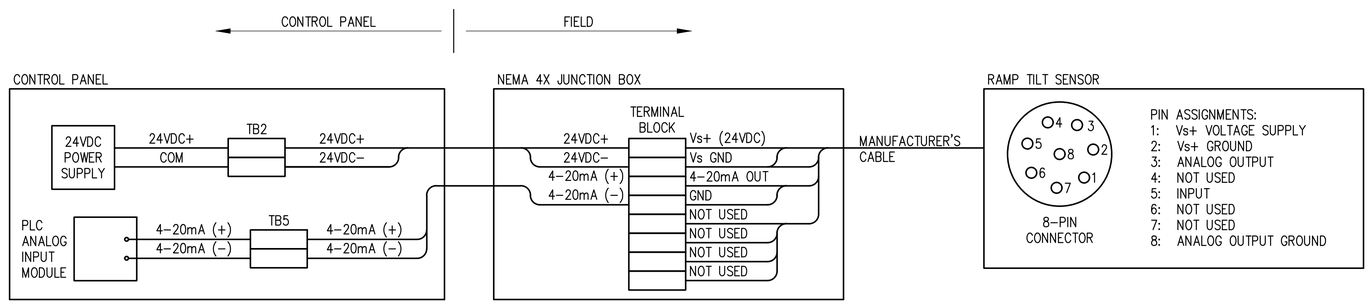
SCALE: NTS

LEGEND

- DEVICE LOCATED IN FIELD
- LOCAL WIRING
- FIELD WIRING
- FIELD TERMINAL
- TERMINAL IN CONTROL PANEL



WIRING DETAIL



WIRING DIAGRAM

2 DETAIL - TILT SENSOR WIRING

SCALE: NTS

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RORO RAMP CONTROL PANEL
ANALOG INPUT WIRING DIAGRAM

DRAWN: VK	PROJECT NO.: 2100135
DESIGN: AR	SCALE: AS SHOWN
CHECKED: AJB	DATE: 01/27/2023
DRAWING NO.	EC5.06
SHEET NO.	OF

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 24, 2023 – 11:58am ALMA.REANTASO Layout: EC5.06
L:\2022\22-10_WTR_KPFF Skagway RORO\04 – CADD\Plan Sets\03_Sheets\2100135_EC5.06_RORO RAMP CONTROL PANEL ANALOG INPUT WIRING DIAGRAM.dwg

RORO RAMP CONTROL SYSTEM DESCRIPTION

GENERAL

OPERATION OF THE RORO RAMP HYDRAULIC AND PNEUMATIC SYSTEMS WILL BE THROUGH A CONTROL PANEL LOCATED IN THE OPERATORS STATION. SELECTOR SWITCHES AND PUSHBUTTONS ON THE CONTROL PANEL WILL BE USED TO OPERATE EQUIPMENT RELATED TO THE HYDRAULIC SYSTEM TO EXTEND AND RETRACT THE RORO RAMP AND THE PNEUMATIC SYSTEM TO RAISE AND LOWER THE RAMP.

THE CONTROL PANEL WILL HAVE AN OPERATOR INTERFACE TERMINAL IN THE FORM OF A TOUCH SCREEN HUMAN MACHINE INTERFACE (HMI) PANEL THAT WILL BE USED TO DISPLAY SYSTEM PARAMETERS. THE HMI WILL BE CONNECTED TO A PROGRAMMABLE LOGIC CONTROLLER (PLC) VIA ETHERNET COMMUNICATIONS. THE PLC WILL BE USED FOR EXECUTING CONTROL FUNCTIONS. THE PLC WILL ACCEPT FIELD INPUTS FOR EQUIPMENT STATUS AND TO DISPLAY STATUS ON THE HMI. THE PLC WILL ACCEPT 4–20MA SIGNALS FROM FIELD INSTRUMENTS FOR CONTINUOUS MONITORING OF PARAMETERS SUCH AS LEVEL AND PRESSURE ON THE HMI AND IT WILL PROVIDE ALARMS BASED ON ALARM SETPOINT INPUTS AT THE HMI. SELECTOR SWITCH AND PUSHBUTTON CONTROLS WILL BE INPUTS TO THE PLC TO ENABLE CONTROL FUNCTIONS. THE PLC WILL PROVIDE CONTROL OUTPUTS TO OPERATE COMPONENTS THAT ARE USED BY THE HYDRAULIC AND PNEUMATIC SYSTEMS TO CONTROL MOVEMENT OF THE RORO RAMP.

THE HYDRAULIC SYSTEM AND PNEUMATIC SYSTEM OFF–ON SELECTOR SWITCHES ARE WIRED TO PLC INPUTS TO INDICATE TO THE PLC THAT THE SELECTED SYSTEM IS READY TO EXECUTE CONTROL FUNCTIONS AND COMMANDS. THE SELECTOR SWITCHES ARE INTERLOCKED WITH AN EMERGENCY STOP (E–STOP) PUSHBUTTON MOUNTED ON THE CONTROL PANEL. THE E–STOP (HARD–WIRED INTERLOCK) WILL STOP THE CONTROL SYSTEM FROM EXECUTING FUNCTIONS AND ANY EQUIPMENT FROM OPERATING UNTIL THE E–STOP IS RESET.

AN INDICATING LIGHT ON THE CONTROL PANEL WILL STAY ON TO INDICATE AC POWER IS AVAILABLE TO THE PANEL. WHEN THE RAMP REACHES A TILT ALARM SETPOINT, AN ALARM HORN MOUNTED ON THE FRONT OF THE PANEL WILL SOUND. AN ALARM DIALER WILL SEND SMS TEXT MESSAGE AND E–MAIL TO ALERT AN OPERATOR OF A RAMP TILT ALARM. THE ALARM DIALER WILL BE PRECONFIGURED TO SELECT PERSONNEL TO SEND ALERTS TO AND ADJUSTMENTS WILL BE MADE THROUGH THE ALARM DIALER'S WEB–BASED SYSTEM SEPARATE FROM THE RAMP CONTROL PANEL. THE RORO RAMP CONTROL SYSTEM WILL NOT BE PROVIDED WITH REMOTE CONTROL CAPABILITIES OR OTHER REMOTE MONITORING FUNCTIONS.

THE PLC AND HMI WILL BE PROGRAMMED AND CONFIGURED AS DESCRIBED HEREIN FOR A COMPLETELY AND FULLY FUNCTIONAL CONTROL SYSTEM FOR THE RORO RAMP.

HYDRAULIC SYSTEM (RAMP EXTEND/RETRACT)
SCHEMATIC DRAWING REFERENCE M4.43.

HYDRAULIC SYSTEM CONTROLS ENABLE: THE PLC WILL ENABLE THE HYDRAULIC SYSTEM CONTROLS WHEN THE HYDRAULIC SYSTEM OFF–ON SELECTOR SWITCH IS IN THE ON POSITION.

HYDRAULIC RESERVOIR: THE PLC WILL CONTINUOUSLY MONITOR LEVEL AND TEMPERATURE AT THE HYDRAULIC RESERVOIR IF THE HYDRAULIC SYSTEM OFF–ON SWITCH IS IN ANY POSITION. LEVEL AND TEMPERATURE TRANSMITTERS ON THE RESERVOIR PROVIDE 4–20MA ANALOG INPUT SIGNALS TO THE PLC.
THE HMI WILL DISPLAY ALARMS BASED ON THE LEVEL AND TEMPERATURE MEASUREMENTS. ALARM SETPOINTS WILL BE ADJUSTABLE AT THE HMI.
INITIAL SETPOINTS.

LOW OIL LEVEL.
LOW–LOW OIL LEVEL.
LOW OIL TEMPERATURE.
HIGH OIL TEMPERATURE.
HIGH–HIGH TEMPERATURE.

HYDRAULIC POWER UNIT (HPU) PUMP MOTOR:

1. THE HPU MOTOR STARTER WILL BE LOCATED IN THE OPERATORS STATION. START AND STOP PUSHBUTTONS ON THE CONTROL PANEL WILL BE HARD–WIRED TO THE MOTOR STARTER FOR MANUAL PUMP OPERATION. THE START AND STOP PUSHBUTTONS ARE ENABLED WHEN THE HYDRAULIC SYSTEM SELECTOR SWITCH IS IN THE ON POSITION (HARD–WIRED). THE PLC WILL CONTINUOUSLY MONITOR PUMP RUN AND FAULT STATUS IF THE HYDRAULIC SYSTEM OFF–ON SWITCH IS IN ANY POSITION.
2. THE PUMP WILL STOP UNDER ONE OF THE FOLLOWING CONDITIONS:
   – HYDRAULIC RESERVOIR LOW–LOW OIL LEVEL (COMMON PLC PUMP STOP COMMAND OUTPUT).
   – HYDRAULIC RESERVOIR HIGH–HIGH OIL TEMPERATURE (COMMON PLC PUMP STOP COMMAND OUTPUT).
   – HYDRAULIC RESERVOIR LOW OIL TEMPERATURE (COMMON PLC PUMP STOP COMMAND OUTPUT).
   – E–STOP PUSHBUTTON IS PRESSED (HARD–WIRED).
   – FLOAT MODE IS ON (HARD–WIRED).

RAMP EXTEND AND RETRACT:

1. THE RAMP EXTEND, RAMP RETRACT, AND RAMP STOP PUSHBUTTONS ARE WIRED TO DISCRETE INPUTS AT THE PLC. THE PLC WILL ACCEPT RAMP EXTEND AND RAMP RETRACT COMMANDS WHEN THE HYDRAULIC SYSTEM SELECTOR SWITCH IS IN THE ON POSITION.
2. POSITION SWITCHES WIRED TO PLC DISCRETE INPUTS ARE USED TO MONITOR THE FULLY EXTENDED AND FULLY RETRACTED POSITIONS OF THE RAMP.
3. THE PLC WILL EXECUTE RAMP EXTEND OR RAMP RETRACT FUNCTIONS UNDER THE FOLLOWING CONDITIONS:
   – HPU PUMP MOTOR IS RUNNING AND NOT FAILED.
   – NO LOW–LOW OIL LEVEL, HIGH–HIGH OIL TEMPERATURE, OR LOW OIL TEMPERATURE ALARMS ARE DETECTED ON THE HYDRAULIC RESERVOIR
   – FLOAT MODE IS ON.
4. WHEN THE RAMP IS CALLED TO EXTEND, THE PLC WILL MOVE THE HPU DIRECTIONAL SOLENOID VALVE TO EXTEND THE RAMP. THE RAMP WILL CONTINUE TO EXTEND UNTIL THE RAMP STOP PUSHBUTTON IS PRESSED OR THE RAMP IS FULLY EXTENDED. THE PLC WILL NOT MOVE THE HPU DIRECTIONAL SOLENOID VALVE TO EXTEND IF THE RAMP IS ALREADY IN THE FULLY EXTENDED POSITION.
5. WHEN THE RAMP IS CALLED TO RETRACT, THE PLC WILL MOVE THE HPU DIRECTIONAL SOLENOID VALVE TO RETRACT THE RAMP. THE RAMP WILL CONTINUE TO RETRACT UNTIL THE RAMP STOP PUSHBUTTON IS PRESSED OR THE RAMP IS FULLY RETRACTED. THE PLC WILL NOT MOVE THE HPU DIRECTIONAL SOLENOID VALVE TO RETRACT IF THE RAMP IS ALREADY IN THE FULLY RETRACTED POSITION.

FLOAT MODE:

1. THE PLC WILL ACCEPT FLOAT MODE ON SELECTION AS DISCRETE INPUT. WHEN THE FLOAT MODE SELECTOR SWITCH IS IN THE ON POSITION, THE PLC WILL OPEN THE FLOAT CONTROL VALVES ON THE HYDRAULIC CYLINDER.
2. THE HPU PUMP MOTOR WILL STOP WHEN FLOAT MODE IS ON (HARD–WIRED AT THE PUMP MOTOR STARTER).
3. THE PLC WILL NOT ACCEPT RAMP EXTEND OR RAMP RETRACT COMMANDS WHEN FLOAT MODE IS ON.
4. WHEN THE FLOAT MODE SELECTOR SWITCH IS IN THE OFF POSITION, THE PLC WILL CLOSE THE FLOAT CONTROL VALVES ON THE HYDRAULIC CYLINDER. AN OPERATOR MUST MANUALLY RESTART THE HPU PUMP MOTOR IF IT IS NOT RUNNING.
5. THE PLC WILL ACCEPT RAMP EXTEND OR RAMP RETRACT COMMANDS WHEN FLOAT MODE IS OFF, THE HPU PUMP IS RUNNING, AND NO ALARMS ARE DETECTED AS DESCRIBED ABOVE.

   HYDRAULIC SYSTEM CONTROLS DISABLE: THE PLC WILL DISABLE THE HYDRAULIC SYSTEM CONTROLS WHEN THE HYDRAULIC SYSTEM OFF–ON SELECTOR SWITCH IS IN THE OFF POSITION. THE HPU PUMP MOTOR WILL STOP (HARD–WIRED). THE PLC WILL NOT ACCEPT RAMP EXTEND, RAMP RETRACT, AND FLOAT MODE COMMAND INPUTS.

HYDRAULIC SYSTEM HMI DISPLAY:

THE HMI WILL HAVE A HYDRAULIC CYLINDER SCREEN(S) TO DISPLAY THE FOLLOWING:
– HPU MOTOR RUNNING
– HPU MOTOR FAIL
– HYDRAULIC CYLINDER FULLY EXTENDED POSITION
– HYDRAULIC CYLINDER FULLY RETRACTED POSITION
– HYDRAULIC RESERVOIR OIL LEVEL
– HYDRAULIC RESERVOIR OIL TEMPERATURE
– HYDRAULIC RESERVOIR LOW OIL AND LOW–LOW OIL LEVEL ALARMS
– HYDRAULIC RESERVOIR HIGH, HIGH–HIGH AND LOW OIL TEMPERATURE ALARMS
– FLOAT MODE ON
– HYDRAULIC CONTROLS ENABLED

PNEUMATIC SYSTEM (RAISE/LOWER)
SCHEMATIC DRAWING REFERENCE M4.53

PNEUMATIC SYSTEM CONTROLS ENABLE: THE PLC WILL ENABLE THE PNEUMATIC SYSTEM CONTROLS WHEN THE PNEUMATIC SYSTEM OFF–ON SELECTOR SWITCH IS IN THE ON POSITION.

AIR COMPRESSOR AND RECEIVER: THE PLC WILL CONTINUOUSLY MONITOR AIR COMPRESSOR RUN AND FAULT STATUS AND AIR RECEIVER TANK PRESSURE WHEN THE PNEUMATIC SYSTEM OFF–ON SWITCH IS IN ANY POSITION. A PRESSURE TRANSMITTER ON THE RESERVOIR WILL PROVIDE A 4–20MA ANALOG INPUT SIGNAL TO THE PLC. THE PLC WILL ACCEPT COMPRESSOR STATUS OUTPUTS FROM THE COMPRESSOR CONTROL SYSTEM AS DISCRETE INPUTS.

AIR SUPPLY VALVE: THE PLC WILL CONTINUOUSLY MONITOR VALVE OPEN AND VALVE CLOSED POSITIONS THROUGH DISCRETE INPUTS AT THE PLC. THE PLC WILL SEND DISCRETE OUTPUT COMMANDS TO OPEN AND CLOSE THE VALVE WHEN THE RAMP IS CALLED TO RAISE.

PONTOON FLOAT BALLAST TANK 1 AND TANK 2:

1. THE PLC WILL CONTINUOUSLY MONITOR PRESSURE AND WATER LEVEL AT EACH BALLAST TANK WHEN THE PNEUMATIC SYSTEM OFF–ON SWITCH IS IN ANY POSITION. A PRESSURE AND LEVEL TRANSMITTERS ON THE TANKS WILL PROVIDE 4–20MA ANALOG INPUT SIGNALS TO THE PLC.
2. THE PLC WILL CONTINOUSLY MONITOR VALVE OPEN AND VALVE CLOSED STATUSES FOR EACH BALLAST TANK AIR PURGE VALVE THROUGH DISCRETE INPUTS AT THE PLC. THE PLC WILL SEND DISCRETE OUTPUT COMMANDS TO OPEN AND CLOSE THE VALVES WHEN THE RAMP IS CALLED TO RAISE OR LOWER.

RAMP TILT SENSOR:

1. THE PLC WILL CONTINUOUSLY MONITOR RAMP TILT ANGLE WHEN THE PNEUMATIC SYSTEM OFF–ON SWITCH IS IN ANY POSITION. A TILT SENSOR ON THE RAMP WILL PROVIDE A 4–20MA ANALOG INPUT SIGNAL TO THE PLC.
2. THE RAMP TILT MEASUREMENTS WILL BE USED TO CONTROL RAMP RAISE AND RAMP LOWER LIMITS. DESIRED RAMP TILT SETPOINTS FOR RAISED POSITION, LOWERED POSITION, AND RAMP TILT ALARM WILL BE ADJUSTABLE AT THE HMI.
3. THE PLC WILL ANNUNCIATE A TILT ALARM WHEN AN ALARM SETPOINT IS REACHED AND SEND DISCRETE OUTPUTS TO ACTIVATE AN ALARM AND TO COMMAND THE ALARM DIALER TO SEND A REMOTE TILT ALARM ALERT.

RAMP RAISE AND LOWER:

1. THE RAMP RAISE, RAMP LOWER, AND RAMP STOP PUSHBUTTONS ARE WIRED TO DISCRETE INPUTS AT THE PLC. THE PLC WILL ACCEPT RAMP RAISE AND RAMP LOWER COMMANDS WHEN THE PNEUMATIC SYSTEM SELECTOR SWITCH IS IN THE ON POSITION.
2. WHEN THE RAMP IS CALLED TO RAISE, THE PLC WILL CLOSE ANY OPEN BALLAST TANK AIR PURGE VALVES AND OPEN THE AIR SUPPLY VALVE TO RAISE THE RAMP. THE RAMP WILL RAISE TO THE DESIRED RAISE SETPOINT. WHEN THE RAISED SETPOINT IS REACHED, THE PLC WILL CLOSE THE AIR SUPPLY VALVE.
3. WHEN THE RAMP IS CALLED TO LOWER, THE PLC WILL OPEN THE BALLAST TANK AIR PURGE VALVES TO LOWER THE RAMP. THE RAMP WILL LOWER TO THE DESIRED LOWERED SETPOINT. WHEN THE LOWERED SETPOINT IS REACHED, THE PLC WILL CLOSE THE BALLAST TANK AIR PURGE VALVES.

BALLAST TANK LEVELLING:

1. UNDER NORMAL CONDITIONS, THE BALLAST TANK AIR PURGE VALVES ARE AUTOMATICALLY CONTROLLED AND EQUAL TANK PRESSURE AND WATER LEVELS FOR THE TWO TANKS ARE MAINTAINED. IF TANK PRESSURE AND LEVEL MEASUREMENTS ARE NOT EQUAL, THE PLC WILL ANNUNCIATE AN ALARM. THE AIR PURGE VALVES CAN BE MANUALLY OPERATED THROUGH THE AIR PURGE VALVE OPEN–CLOSE SELECTOR SWITCHES ON THE CONTROL PANEL TO LOWER THE RAMP AND SET THE BALLAST TANKS AT EQUAL LEVELS.
2. THE AIR PURGE CONTROL MANUAL–AUTO SELECTOR SWITCH AND THE BALLAST TANK AIR PURGE VALVE OPEN–CLOSE SWITCHES ARE WIRED TO DISCRETE INPUTS AT THE PLC. UNDER NORMAL OPERATIONS, THE MANUAL–AUTO SELECTOR SWITCH IS IN THE AUTO POSITION. THE PLC WILL ACCEPT AIR PURGE VALVE OPEN AND CLOSE COMMANDS WHEN THE MANUAL–AUTO SELECTOR SWITCH IS IN THE MANUAL POSITION.
3. WHEN AN AIR PURGE VALVE IS CALLED TO OPEN, THE PLC WILL OPEN THE VALVE. THE OPERATOR WILL MONITOR RAMP TILT AND BALLAST TANK PRESSURE AND WATER LEVELS THROUGH THE HMI. THE OPERATOR WILL SELECT THE VALVE TO CLOSE AND THE PLC WILL CLOSE THE VALVE WHEN THE DESIRED TILT SETPOINT.

(SEE EC6.02 FOR CONTINUATION)

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NO.	DATE	BY	REVISION

ORE PENINSULA REDEVELOPMENT
SKAGWAY, ALASKA

RORO RAMP CONTROL SYSTEM DESCRIPTION

DRAWN: VK	PROJECT NO.: 2100135
DESIGN: AR	SCALE: AS SHOWN
CHECKED: AJB	DATE: 01/27/2023
DRAWING NO. EC6.01	
SHEET NO. OF	

60% DESIGN - NOT FOR CONSTRUCTION

Plotted: Jan 25, 2023 – 10:21am ALMA.REANTASO Layout: EC6.01
L:\2022\22-10_WTR_KPFF Skagway RORO\04 – CADD\Plan Sets\03_Sheets\2100135_EC6.01_RORO RAMP CONTROL SYSTEM DESCRIPTION.dwg

RORO RAMP CONTROL SYSTEM DESCRIPTION

(CONTINUED FROM EC6.01)

PNEUMATIC SYSTEM CONTROLS DISABLE:

THE PLC WILL DISABLE THE PNEUMATIC SYSTEM CONTROLS WHEN THE PNEUMATIC SYSTEM OFF-ON SELECTOR SWITCH IS IN THE OFF POSITION. THE PLC WILL NOT ACCEPT RAMP RAISE AND RAMP LOWER COMMAND INPUTS.

PNEUMATIC SYSTEM HMI DISPLAY:

THE HMI WILL HAVE A PNEUMATIC SYSTEM PONTOON FLOAT SCREEN(S) TO DISPLAY THE FOLLOWING:

-AIR COMPRESSOR RUNNING.
-AIR COMPRESSOR FAULT.
-AIR RECEIVER TANK PRESSURE.
-AIR SUPPLY VALVE FULLY OPEN AND FULLY CLOSED.
-BALLAST TANK 1 PRESSURE.
-BALLAST TANK 1 WATER LEVEL.
-BALLAST TANK 1 AIR PURGE VALVE FULLY OPEN AND FULLY CLOSED.
-BALLAST TANK 2 PRESSURE.
-BALLAST TANK 2 WATER LEVEL.
-BALLAST TANK 2 AIR PURGE VALVE FULLY OPEN AND FULLY CLOSED.
-BALLAST TANK LEVELLING REQUIRED.
-RAMP TILT.
-RAMP TILT ALARM.
-PNEUMATIC CONTROLS ENABLED.

RORO RAMP SEQUENCE OF OPERATIONS

CONTROL OF RAMP MOVEMENT IS DONE THROUGH THE SELECTOR SWITCHES AND PUSHBUTTONS ON THE RORO RAMP CONTROL PANEL LOCATED IN THE OPERATORS STATION. SEE EC5.01 FOR THE LAYOUT OF DOOR-MOUNTED COMPONENTS ON THE CONTROL PANEL. THE TOUCHSCREEN HMI AT THE CONTROL PANEL IS USED FOR DISPLAY OF INSTRUMENT MEASURMENTS AND EQUIPMENT STATUS AND FOR ADJUSTMENT OF SETPOINTS FOR AUTOMATIC CONTROL, INTERLOCKS AND ALARMS.

HYDRAULIC SYSTEM -RAMP EXTEND AND RETRACT
THE HYDRAULIC SYSTEM CONTROLS THE HPU PUMP AND HYDRAULIC CYLINDER TO EXTEND AND RETRACT THE RORO RAMP.

TO INIATE HYDRAULIC SYSTEM CONTROLS TO EXTEND AND RETRACT THE RAMP:

1. TURN HYDRAULIC SYSTEM OFF-ON SELECTOR SWITCH TO ON POSITION.

2. START HPU PUMP MOTOR.
   WHEN HPU PUMP MOTOR IS RUNNING, FLOAT MODE IS OFF, AND THERE ARE NO ALARMS ON THE HYDRAULIC RESERVOIR, HYDRAULIC CYLINDER CAN BE MOVED USING THE HPU DIRECTIONAL SOLENOID VALVE TO EXTEND OR RETRACT THE RAMP.

TO EXTEND THE RAMP:

1. PRESS RAMP EXTEND PUSHBUTTON.
2. THE HPU DIRECTIONAL VALVE WILL AUTOMATICALLY MOVE THE HYDRAULIC CYLINDER TO EXTEND THE RAMP.
3. OPERATOR WILL VISUALLY MONITOR RAMP EXTEND MOVEMENT.
4. PRESS STOP RAMP WHEN RAMP REACHES DESIRED POSITION.
5. RAMP WILL STOP AUTOMATICALLY WHEN THE RAMP IS FULLY EXTENDED.
6. RAMP EXTEND PUSHBUTTON WILL NOT FUNCTION IF THE RAMP IS IN THE FULLY EXTENDED POSITION, HPU MOTOR IS NOT RUNNING, FLOAT MODE IS ON, OR THERE ARE ALARMS ON THE HYDRAULIC RESERVOIR.

TO RETRACT THE RAMP:

1. PRESS RAMP RETRACT PUSHBUTTON.
2. THE HPU DIRECTIONAL VALVE WILL AUTOMATICALLY MOVE THE HYDRAULIC CYLINDER TO RETRACT THE RAMP.
3. OPERATOR WILL VISUALLY MONITOR RAMP RETRACT MOVEMENT.
4. PRESS STOP RAMP WHEN RAMP REACHES DESIRED POSITION.
5. RAMP WILL STOP AUTOMATICALLY WHEN THE RAMP IS FULLY RETRACTED.
6. RAMP RETRACT PUSHBUTTON WILL NOT FUNCTION IF THE RAMP IS IN THE FULLY RETRACTED POSITION, HPU MOTOR IS NOT RUNNING, FLOAT MODE IS ON, OR THERE ARE ALARMS ON THE HYDRAULIC RESERVOIR.

FLOAT MODE:

FLOAT MODE IS USED WHEN THE RAMP IS DEPLOYED ON TO THE BARGE FACILITATE CYLINDER MOVEMENT WHILE THE BARGE IS MOORED.

TO ACTIVATE FLOAT MODE:

1. RAMP SHOULD BE STOPPED AND DEPLOYED ON TO A BARGE.
2. STOP HPU PUMP MOTOR.
3. TURN FLOAT MODE OFF-ON SELECTOR SWITCH TO ON POSITION.
4. HPU PUMP MOTOR WILL AUTOMATICALLY STOP IF LEFT ON BEFORE FLOAT MODE SWITCH IS IN THE ON POSITION.

TO DISABLE FLOAT MODE:

1. TURN FLOAT MODE OFF-ON SELECTOR SWITCH TO THE OFF POSITION.
2. PRESS START PUSHBUTTON TO START HPU PUMP MOTOR TO INITIATE RAMP EXTEND AND RETRACT MOVEMENT AFTER FLOAT MODE.
   DISABLE HYDRAULIC SYSTEM CONTROLS WHEN THE RAMP IS NOT IN USE.

TO DISABLE HYDRAULIC SYSTEM CONTROLS:

1. CONFIRM RAMP IS NOT IN MOVEMENT.
2. PRESS STOP PUSHBUTTON TO STOP HPU PUMP MOTOR.
3. TURN HYDRAULIC SYSTEM OFF-ON SWITCH TO THE OFF POSITION.

PNEUMATIC SYSTEM - RAMP RAISE AND LOWER.

THE PNEUMATIC SYSTEM CONTROLS AIR SUPPLY VALVE TO THE PONTOON FLOAT AND THE AIR PURGE VALVES ON THE TWO BALLAST TANKS ON THE PONTOON FLOAT TO RAISE AND LOWER THE RAMP. AIR SUPPLY TO THE PONTOON FLOAT IS FROM A REMOTE MOUNTED AIR COMPRESSOR SYSTEM THAT IS AUTOMATICALLY CONTROLLED BY THE ON-BOARD COMPRESSOR CONTROL SYSTEM. THE RORO RAMP CONTROL SYSTEM MONITORS THE COMPRESSOR RUN AND FAULT STATUS AND THE AIR RECEIVER PRESSURE, BUT IT DOES NOT SEND SIGNALS TO START AND STOP THE COMPRESSOR.

TO INIATE PNEUMATIC SYSTEM CONTROLS TO RAISE AND LOWER THE RAMP:

1. TURN HYDRAULIC SYSTEM OFF-ON SELECTOR SWITCH TO ON POSITION
2. TURN AIR PURGE VALVE CONTROL MAN-AUTO SWITCH TO AUTO POSITION TO ALLOW FOR AUTOMATIC OPERATION OF THE BALLAST TANK AIR PURGE VALVES.
3. ADJUST TILT ANGLE SETPOINTS AT THE HMI FOR DESIRED RAMP LOWERED AND RAISED POSITIONS AND ALARMS.
4. RAMP RAISE AND LOWER CONTROL FUNCTIONS CAN BE INITIATED IF THERE IS NO FAULT AT THE COMPRESSOR AND THERE ARE NO ALARMS ON THE RAMP TILT ANGLE, THE BALLAST TANK LEVEL AND PRESSURE, AND THE AIR RECEIVER PRESSURE.

TO RAISE THE RAMP:

1. PRESS RAMP RAISE PUSHBUTTON.
2. THE AIR SUPPLY VALVE WILL AUTOMATICALLY OPEN AND THE BALLAST TANK AIR PURGE VALVES WILL AUTOMATICALLY CLOSE TO FILL THE PONTOON TO RAISE THE RAMP.
3. THE AIR SUPPLY VALVE WILL CLOSE AUTOMATICALLY AND THE RAMP WILL STOP WHEN THE RAMP REACHES THE DESIRED RAISED POSITION.

TO LOWER THE RAMP:

1. PRESS RAMP LOWER PUSHBUTTON.
2. THE BALLAST TANK AIR PURGE VALVES WILL AUTOMATICALLY OPEN TO RELEASE. PRESSURE FROM THE PONTOON TO LOWER THE RAMP.
3. THE BALLAST TANK AIR PURGE VALVES WILL CLOSE AUTOMATICALLY AND THE RAMP WILL STOP WHEN THE RAMP REACHES THE DESIRED LOWERED POSITION.

BALLAST TANK LEVELING.

UNDER NORMAL CONDITIONS, THE BALLAST TANK AIR PURGE VALVES ARE AUTOMATICALLY CONTROLLED AND EQUAL TANK PRESSURE AND WATER LEVELS FOR THE TWO TANKS ARE MAINTAINED. IF TANK PRESSURE AND LEVEL MEASUREMENTS ARE NOT EQUAL, THE AIR PURGE VALVES CAN BE MANUALLY OPERATED TO LOWER THE RAMP AND SET THE BALLAST TANKS AT EQUAL LEVELS.

TO INITIATE MANUAL OPERATION OF THE BALLAST TANK AIR PURGE VALVES:

1. MONITOR BALLAST TANK WATER LEVEL AND PRESSURES FOR UNEQUAL VALUES.
2. TURN AIR PURGE VALVE CONTROL MAN-AUTO SWITCH TO MANUAL POSITION TO ENABLE AIR PURGE TANK OPEN-CLOSE SELECTOR SWITCHES.
3. USE SELECTOR SWITCH TO OPEN THE AIR PURGE VALVE FOR THE BALLAST TANK TO LOWER AND MONITOR PRESSURE, LEVEL, AND RAMP TILT.
4. CLOSE AIR PURGE VALVES WHEN DESIRED RAMP TILT IS REACHED.
5. TURN AIR PURGE VALVE CONTROL MAN-AUTO SWITCH TO AUTO POSITION TO DISABLE AIR PURGE TANK OPEN-CLOSE SELECTOR SWITCHES AND RETURN TO AUTOMATIC VALVE CONTROL FOR RAMP RAISE AND RAMP LOWER FUNCTIONS.

DISABLE PNEUMATIC SYSTEM CONTROLS WHEN THE RAMP IS NOT IN USE.

TO DISABLE PNEUMATIC SYSTEM CONTROLS:

1. CONFIRM RAMP IS NOT IN MOVEMENT AND BALLAST TANK PARAMETERS ARE EQUAL
2. TURN PNEUMATIC SYSTEM OFF-ON SWITCH TO THE OFF POSITION.

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SKAGWAY, ALASKA

RORO RAMP CONTROL SYSTEM DESCRIPTION AND SEQUENCE OF OPERATIONS

DRAWN: VK	PROJECT NO.: 2100135
DESIGN: AR	SCALE: AS SHOWN
CHECKED: AJB	DATE: 01/27/2023
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Plotted: Jan 26, 2023 - 8:53am ALMA.REANTASO Layout: EC6.02
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CONDUIT AND WIRE SCHEDULE

CIRCUIT ID	SOURCE	DESTINATION	CONDUCTORS	CONDUIT	VOLTAGE	APPROX. LENGTH OF CIRCUIT (FT)	REMARKS
P1	DISTRIBUTION PANEL	75HP AIR COMPRESSOR	3#1 AWG, 1#6G	1-1/4" PVC-SCHEDULE 40	480V	90	
P2	DISTRIBUTION PANEL	15 HP PUMP MOTOR STARTER - OPERATORS STATION	3#10 AWG, 1#10G	3/4" PVC-SCHEDULE 40	480V	180	PVC-40 UNDERGROUND, TRANSITION TO PVC COATED RGS ABOVE GRADE AT TRESTLE TO OPERATORS STATION
P3	15 HP PUMP MOTOR STARTER- OPERATORS STATION	HYDRAULIC PUMP MOTOR - OPERATORS STATION	3#10 AWG, 1#10G	3/4" PVC COATED RGS	480V	15	
P4	DISTRIBUTION PANEL	CONTROL PANEL - OPERATORS STATION	2#12AWG, 1#12G	3/4" PVC-SCHEDULE 40	120V	180	PVC-40 UNDERGROUND, TRANSITION TO PVC COATED RGS ABOVE GRADE AT TRESTLE TO OPERATORS STATION
P5	DISTRIBUTION PANEL	OPERATORS STATION ENCLOSURE HEATER HYDRAULIC CYLINDER IMMERSION HEATER - OPERATORS STATION	4#12 AWG, 1#12G	1" PVC-SCHEDULE 40	120V	180	PVC-40 UNDERGROUND, TRANSITION TO PVC COATED RGS ABOVE GRADE AT TRESTLE TO OPERATORS STATION
C1	CONTROL PANEL - OPERATORS STATION	AIR COMPRESSOR	4#14 AWG, 1#14G	1" PVC-SCHEDULE 40	120V	265	PVC-40 UNDERGROUND, TRANSITION TO PVC COATED RGS ABOVE GRADE AT TRESTLE TO OPERATORS STATION
C2	CONTROL PANEL - OPERATORS STATION	HYDRAULIC CYLINDER POSITION SWITCHES	4#14 AWG, 1#14G	3/4" PVC COATED RGS	120V	50	
C3	CONTROL PANEL - OPERATORS STATION	HPU FLOAT CONTROL VALVES - OPERATORS STATION	4#14 AWG, 1#14G	3/4" PVC COATED RGS	120V	15	
C4	CONTROL PANEL - OPERATORS STATION	AIR SUPPLY VALVE	6#14 AWG, 1#14G	3/4" PVC COATED RGS	24VDC	30	
C5	CONTROL PANEL - OPERATORS STATION	PONTOON FLOAT BALLAST TANK AIR PURGE VALVES	12#14 AWG, 1#14G	3/4" PVC COATED RGS	24VDC	175	PROVIDE CONTINUOUSLY FLEXIBLE CABLE WHERE SHOWN FROM RORO TRESTLE TO RAMP TO ACCOMMODATE RAMP MOVEMENT
C6	CONTROL PANEL - OPERATORS STATION	15 HP PUMP MOTOR STARTER- OPERATORS STATION	10#14 AWG, 1#14G	3/4" PVC COATED RGS	120V	15	
C7	CONTROL PANEL - OPERATORS STATION	HPU DIRECTIONAL VALVE - OPERATORS STATION	4#14 AWG, 1#14G	3/4" PVC COATED RGS	120V	15	
S1	CONTROL PANEL - OPERATORS STATION	AIR RECEIVER PRESSURE TRANSMITTER	1 #16 AWG TSP	3/4" PVC COATED RGS	300V	280	PVC-40 UNDERGROUND, TRANSITION TO PVC COATED RGS ABOVE GRADE AT TRESTLE TO OPERATORS STATION
S2	CONTROL PANEL - OPERATORS STATION	HYDRAULIC RESERVOIR LEVEL SENSOR - OPERATORS STATION	1 #16 AWG TSP	3/4" PVC COATED RGS	300V	15	
S3	CONTROL PANEL - OPERATORS STATION	HYDRAULIC RESERVOIR TEMPERATURE SENSOR - OPERATORS STATION	1 #16 AWG TSP	3/4" PVC COATED RGS	300V	15	
S4	CONTROL PANEL - OPERATORS STATION	PONTOON FLOAT BALLAST TANK PRESSURE AND LEVEL TRANSMITTERS	4 #16 AWG TSP	1-1/2" PVC COATED RGS	300V	175	PROVIDE CONTINUOUSLY FLEXIBLE CABLE WHERE SHOWN FROM RORO TRESTLE TO RAMP TO ACCOMMODATE RAMP MOVEMENT
S5	CONTROL PANEL - OPERATORS STATION	RAMP TILT SENSOR	2 #16 AWG TSP	3/4" PVC COATED RGS	300V	175	PROVIDE CONTINUOUSLY FLEXIBLE CABLE WHERE SHOWN FROM RORO TRESTLE TO RAMP TO ACCOMMODATE RAMP MOVEMENT

Plotted: Jan 25, 2023 - 10:15am ALMA.REANTASO Layout: EC7.01
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