STANDARD ABBREVIATIONS

@	AT
Ø	DIAMETER
AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
AC	ASPHALT CONCRETE
ACI	AMERICAN CONCRETE INSTITUTE
AFD	ANCHORAGE FIRE DEPARTMENT
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
APPROX	APPROXIMATE
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AWS	AMERICAN WELDING SOCIETY
AWWA	AMERICAN WATER WORKS ASSOCIATION
AWWU	ANCHORAGE WATER AND WASTEWATER UTILITY
BLDG	BUILDING
BM	BENCHMARK
BMP	BEST MANAGEMENT PRACTICES
BOT	BOTTOM
BRG	BEARING
C, ℄	CENTERLINE
CB	CATCHBASIN
CF	CUBIC FOOT(FEET)
CIP	CAST-IN-PLACE
CLE	CONTINGENCY LEVEL EARTHQUAKE
CMP	CORRUGATED METAL PIPE
CONC	CONCRETE
CONT	CONTINUED, CONTINUOUS
COPRI	COASTS, OCEANS, PORTS, AND RIVERS INSTITUTE
CP	CATHODIC PROTECTION
CPEP	CORRUGATED POLYETHYLENE PIPE
CTR	CENTER
CY	CUBIC YARDS
°F	DEGREES FAHRENHEIT
DC	DEAD LOAD – COMPONENTS AND ATTACHMENTS
DCPM	DESIGN AND CONSTRUCTION PRACTICES MANUAL
DE	DESIGN EARTHQUAKE
DIA	DIAMETER
DIM	DIMENSION
DSM	DEEP SOIL MIXING
DW	DEAD LOAD – WEARING SURFACE AND UTILITIES
DWG	DRAWING
E	EAST, EASTING
EA	EACH
EG	EXISTING GROUND
EL	ELEVATION
ELEV	ELEVATION
EOP	EDGE OF PAVEMENT
ESCP	EROSION AND SEDIMENT CONTROL PLAN
EW	EACH WAY
EX, EXST	EXISTING
FG	FINISH GRADE
FT	FOOT (FEET)
F	FLOWLINE
GA	GAUGE
GALV	GALVANIZED
GR	GRADE
HDG	HOT DIP GALVANIZED
HDPE	HIGH DENSITY POLYETHYLENE
HORIZ	HORIZONTAL
HSS	HOLLOW STRUCTURAL SECTION
HT	HEIGHT
HTL	HIGH TIDE LINE
ICCP	IMPRESSED CURRENT CORROSION PROTECTION
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
IM	IMPERIAL UNITS
IN	INCH (INCHES)
KG	KILOGRAM
KLF	KIPS PER LINEAR FOOT
KSI	KIPS PER SQUARE INCH
LB	POUND
LF	LINEAR FEET
LRFD	LOAD AND RESISTANCE FACTOR DESIGN
LT	LEFT
MAX	MAXIMUM
MCE	MAXIMUM CONSIDERED EARTHQUAKE
MFR	MANUFACTURER, MANUFACTURED
MHW	MEAN HIGH WATER
MIL	0.001 INCHES
MIN	MINIMUM
MLLW	MEAN LOWER LOW WATER
MOA	MUNICIPALITY OF ANCHORAGE
MOTEMS	MARINE OIL TERMINAL ENGINEERING AND MAINTENANCE STANDARDS
MPH	MILES PER HOUR
MS4	MUNICIPAL SEPARATE STORM SEWER SYSTEM
N/A	NOT APPLICABLE
NIC	NOT IN CONTRACT
NO.	NUMBER
NTS	NOT TO SCALE
N	NORTH, NORTHING
OC	ON CENTER
OD	OUTSIDE DIAMETER
OG	ORIGINAL GROUND
OLE	OPERATIONAL LEVEL EARTHQUAKE
OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
%	PERCENT
PCC	PORTLAND CEMENT CONCRETE
PCF	POUNDS PER CUBIC FOOT
PE	POLYETHYLENE
PERF	PERFORATED
PG	PROFILE GRADE
PI	POINT OF INTERSECTION
PIANC	WORLD ASSOCIATION FOR WATERBORNE TRANSPORT INFRASTRUCTURE
PL	PLATE
PLF	POUNDS PER LINEAR FOOT
POA	PORT OF ALASKA
POL	PETROLEUM, OIL, AND LUBRICANTS
PS	PRESTRESSED
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
QRH	QUICK RELEASE HOOK
R	RADIUS
REQD	REQUIRED
RO-RO	ROLL-ON ROLL-OFF
RO/RO	ROLL-ON ROLL-OFF
ROW, R/W	RIGHT OF WAY
RT	RIGHT
S	SOUTH
SC	SURVEY CONTROL MONUMENT
SCH	SCHEDULE
SDM	SEISMIC DESIGN MANUAL
SDR	STANDARD DIMENSION RATIO
SF	SQUARE FEET
SI	SYSTEM INTERNATIONAL (METRIC UNITS)
SQ	SQUARE
SST	STAINLESS STEEL
STA	STATION
STD	STANDARD
STL	STEEL
SWPPP	STORM WATER POLLUTION PREVENTION PLAN
T1	TERMINAL 1
T2	TERMINAL 2
TESC	TEMPORARY EROSION AND SEDIMENT CONTROL
TOPO	TOPOGRAPHY
TYP	TYPICAL
UFC	UNIFIED FACILITIES CRITERIA
UNO	UNLESS NOTED OTHERWISE
UPG	UNDERGROUND POWER
USACE	UNITED STATES ARMY CORPS OF ENGINEERS
USC	UNITED STATES CODE
USGS	UNITED STATES COAST AND GEODETIC SURVEY
V	VELOCITY
VERT	VERTICAL
W	WEST
W/	WITH
W/OUT	WITHOUT
WT	WEIGHT

CIVIL LEGENDS

GRADING

- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- EXISTING SURFACE ELEVATION
- EXISTING SURFACE SLOPE
- MAJOR CONTOUR
- MINOR CONTOUR
- SURFACE ELEVATION
- SURFACE SLOPE

SITE LAYOUT

- EXISTING ASPHALT PAVEMENT
- EXISTING CONCRETE
- EXISTING SHORE ARMOR
- ASPHALT PAVEMENT
- INFILL AREA
- SHORE ARMOR
- GRAVEL SURFACE
- CONCRETE PAD
- ASPHALT JOINT
- BOLLARD
- GUARDRAIL
- LAYOUT POINT

PAVEMENT MARKINGS

- SOLID LANE MARKING
- PRECAST CONCRETE WHEEL STOP
- DASHED LANE MARKING
- PAINTED YIELD MARKING
- NO ACCESS OR CRANE RAIL EXCLUSION AREA
- CROSS WALK MARKING
- ACCESSIBLE PARKING SPACE
- TRAFFIC SIGN

STORM

- STORM DRAIN PIPE
- STORM DRAIN OUTFALL
- STORM DRAIN MANHOLE
- STORM DRAIN CATCHBASIN

SANITARY

- SANITARY SEWER LINE
- SANITARY SEWER CLEANOUT

POTABLE WATER

- FIRE HYDRANT
- WATER LINE VALVE BOX
- CAPPED STUBOUT
- DRY STANDPIPE HOSE OUTLET STATION
- ALL SEASON SHORE TO SHIP WATER SERVICE ASSEMBLY
- 6-OUTLET FLUSH FIRE DEPARTMENT CONNECTION-FREE STAND
- WATER SERVICE LINE
- WATER MAIN

OTHER UTILITIES

- UNDERGROUND ELECTRICAL - MEDIUM VOLTAGE
- UNDERGROUND CONDUIT
- UNDERGROUND TELECOMMUNICATION
- OUTDOOR STREET LIGHT
- PETROLEUM PIPELINE

65% SUBMITTAL

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

REV	DATE	DESCRIPTION	BY	APVD

REVISIONS

GHD-WSP JV
1400 W. BENSON BLVD, SUITE 400
ANCHORAGE, ALASKA 99503
AK ENGINEERING LICENSE # 197742(GHD) - AECC236(WSP)
AK BUSINESS LICENSE # 2164152(GHD) - 1113511(WSP)

DSGN	DR	CHK	APVD
AEM	DJW	AWC	VHN

CONSULTANT

SEAL

CIVIL

ABBREVIATIONS AND LEGEND

PORT OF ALASKA

PORT OF ALASKA MODERNIZATION PROGRAM
CARGO TERMINAL 1 DESIGN
ANCHORAGE, ALASKA

HORIZ SCALE:
VERT SCALE:
DATE: SEPT 1, 2023
SHEET: OF
T1-C-001

PRELIMINARY. NOT FOR USE IN DEVELOPING CONSTRUCTION BIDS

GENERAL CIVIL NOTES

1. THE HORIZONTAL COORDINATE SYSTEM IS LOCATED WITHIN THE LOCAL COORDINATE SYSTEM, ANCHORAGE BOWL 2000 ADJUSTMENT AND THE VERTICAL DATUM FOR THE PROJECT MEAN LOWER LOW WATER (MLLW=0.00'). FOR THE PORT OF ALASKA MODERNIZATION PROGRAM SURVEY CONTROL DRAWING, REFERENCE ANCHORAGE RECORDING DISTRICT PLAT 2015-142.
2. EXISTING GROUND INFORMATION SHOWN IN PLANS REPRESENT DATA FROM MULTIPLE SOURCES. TOPOGRAPHY AT TIME OF CONSTRUCTION WITHIN THE PROJECT LIMITS MAY VARY FROM THAT SHOWN. SOURCES OF BATHYMETRY DATA (GROUND DATA BELOW 0.0' MLLW): SEPTEMBER 2014 USACE SURVEY. SOURCE OF UPLAND TOPOGRAPHY DATA (GROUND DATA ABOVE 0.0' MLLW): FIELD SURVEY CONDUCTED BY CRW ENGINEERING GROUP FROM JULY 12 THROUGH AUGUST 4, 2023.
3. CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO BEGINNING CONSTRUCTION. THE PERMITS SHALL BE KEPT AT THE JOB SITE.
4. CONTRACTOR SHALL RECORD SURVEY NOTES AND ALL DEVIATIONS (REDLINES OF AS-BUILT CHANGES) MADE DURING CONSTRUCTION ON A CLEAN SET OF CONSTRUCTION DRAWINGS. REDLINES SHALL INCLUDE HORIZONTAL AND VERTICAL LOCATIONS OF ALL UTILITIES ENCOUNTERED IN THE FIELD DURING CONSTRUCTION.
5. ALL DIMENSIONS AND ELEVATIONS ARE IN FEET UNLESS OTHERWISE NOTED.
6. CONSTRUCTION TO BE IN ACCORDANCE WITH ALL APPLICABLE REGULATORY REQUIREMENTS AND STANDARDS.
7. ALL CONSTRUCTION ACTIVITIES SHALL BE LIMITED TO AREAS SHOWN ON THE PLANS. WORK BEYOND THESE LIMITS SHALL BE AS DIRECTED BY THE ENGINEER.
8. THE CONTRACTOR SHALL RESTORE ALL AREAS DISTURBED TO A CONDITION EQUAL TO OR BETTER THAN BEFORE CONSTRUCTION TO THE ENGINEER'S APPROVAL.
9. THE CONTRACTOR IS RESPONSIBLE FOR DUST CONTROL. AT THE SITE, DUST SHALL BE PREVENTED THROUGH APPLICATION OF WATER TO EXPOSED DRY GROUND TO PREVENT DUST FROM BEING GENERATED AND BLOWN OFF SITE.

EXISTING UTILITY NOTES

1. LOCATIONS OF EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES SHOULD BE CONSIDERED APPROXIMATE AND NOT NECESSARILY COMPLETE. VERIFY ACCURACY OF ALL UTILITY LOCATIONS SHOWN, AND FURTHER DISCOVER OTHER UTILITIES NOT SHOWN WHICH MAY BE IMPACTED BY CONSTRUCTION. COORDINATE WITH THE PORT FOR UTILITY LOCATES. OBTAIN THE REQUIRED PERMITS THAT VERIFY THE TRUE AND CORRECT LOCATION PRIOR TO CONSTRUCTION SO AS TO AVOID DAMAGE OR DISTURBANCE. AVOID AND PROTECT ALL UTILITIES DURING CONSTRUCTION.
2. UNDERGROUND AND OVERHEAD ELECTRICAL AND TELECOMMUNICATION LINES (AND POLES) OCCUR WITHIN THE PROJECT AREA. ALL WORK IN CLOSE PROXIMITY TO EXISTING UNDERGROUND AND OVERHEAD LINES (AND POLES) SHALL COMPLY WITH APPLICABLE FEDERAL, STATE, AND LOCAL STATUTES, CODES, AND GUIDELINES, AND THE ELECTRICAL FACILITY CLEARANCE REQUIREMENTS OF THE GOVERNING UTILITY. HAND DIGGING IS REQUIRED WITHIN 2 FEET OF BURIED ELECTRICAL CABLE.

TEMPORARY EROSION & SEDIMENTATION CONTROL (TESC) NOTES

1. PROVIDE / SUBMIT A STORMWATER POLLUTION PREVENTION PLAN FOR REVIEW AND APPROVAL. CONSTRUCT, MAINTAIN, REPLACE, AND UPGRADE TESC BMP FACILITIES AS NECESSARY UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED.
2. THE CONTRACTOR SHALL CARRY OUT EROSION AND SEDIMENT CONTROL MEASURES IN ACCORDANCE WITH APPLICABLE PERMITS AND REGULATORY REQUIREMENTS, INCLUDING THE PORT OF ALASKA'S MS4 PERMIT (PERMIT NO. AKS-052426). ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED BY THE CONTRACTOR AND INSPECTED BY THE ENGINEER PRIOR TO THE BEGINNING OF EARTHWORKS.
3. THE CONTRACTOR SHALL INSPECT EROSION AND SEDIMENT CONTROL MEASURES ON A DAILY BASIS AND BEFORE AND AFTER HEAVY PRECIPITATION EVENTS AND REPAIR AS NECESSARY.MODIFY AND MAINTAIN AS REQUIRED. CONTRACTOR RESPONSIBLE FOR MANAGING/MAINTENANCE OF EROSION CONTROL.
4. ENSURE THE SYSTEM DISCHARGE COMPLIES WITH STORMWATER DISCHARGE REGULATIONS. ENGINEER RESPONSIBLE FOR REVIEW OF CONTRACTOR'S STORMWATER MANAGEMENT PLAN.CONTRACTOR RESPONSIBLE FOR ALL DISCHARGE TESTING AND VARIANCE REPORTING.

EXCAVATION, FILL, & BACKFILL NOTES

1. LOCATION OF EXCAVATION, FILL AND BACKFILL IS SHOWN ON THE DRAWINGS, CR AS DIRECTED BY THE ENGINEER.
2. CONTRACTOR SHALL REMOVE ORGANIC MATERIAL, MUCK, OR ANY OTHER UNSUITABLE MATERIAL FROM THE SUBGRADE TO A DEPTH AS SHOWN ON DESIGN DRAWINGS. CONTRACTOR SHALL NOT USE ORGANIC MATERIAL OR OTHER DELETERIOUS MATERIAL FOR BACKFILL, UNLESS DIRECTED BY THE ENGINEER.
3. CONTRACTOR MAY NOT PUMP OR OTHERWISE DIVERT WATER RESULTING FROM CONTRACTOR'S DEWATERING EFFORT DIRECTLY INTO EXISTING STORM DRAINS OR WATERBODIES UNLESS REQUIRED PERMITS ARE OBTAINED BY CONTRACTOR. UNDER NO CIRCUMSTANCES IS THE CONTRACTOR ALLOWED TO DIVERT WATER FROM THE EXCAVATION ONTO THE ROADWAYS. CONTRACTOR SHALL PROVIDE DISPOSAL SITE FOR EXCESS WATER AND IS RESPONSIBLE FOR SECURING ALL NECESSARY PERMITS AND APPROVALS. CONTRACTOR SHALL PROVIDE COPIES OF PERMITS AND APPROVALS TO THE PORT.
4. ANY BOREHOLE LOG INFORMATION SHOWN ON THESE DRAWINGS IS ABBREVIATED. SEE PORT OF ALASKA MODERNIZATION PROGRAM GEOTECHNICAL EXPLORATION PLAN (MOA/POA) AND ALL ASSOCIATED DOCUMENTS FOR COMPLETE BOREHOLE LOG INFORMATION.
5. ALL EXCAVATED MATERIALS SHALL BE DISPOSED OFFSITE UNLESS OTHERWISE NOTED. OFFSITE DISPOSAL TO BE AT AN APPROVED LOCATION IN ACCORDANCE WITH APPLICABLE REGULATORY REQUIREMENTS.
6. BACKFILLING MATERIAL MUST NOT CONTAIN SHARP OBJECTS, LARGE ROCKS, COMPACTED OR FROZEN EARTH, OR DELETERIOUS MATERIALS.

PAVING AND STRIPING NOTES

1. HOT-MIX ASPHALT PAVEMENT TO BE PROVIDED PER THE PROJECT'S ASPHALT PAVING SPECIFICATION.
2. CONTRACTOR SHALL RESTORE ALL EXISTING PAINTED TRAFFIC MARKINGS IMPACTED BY CONSTRUCTION.
3. STRIPING TO BE IN ACCORDANCE WITH THIS PROJECT'S PAVEMENT MARKING SPECIFICATION, DETAILS, AND DRAWINGS.

STORM DRAINAGE NOTES

1. GRADE SURFACE OF OVER-WATER PIER TO DIRECT STORMWATER RUNOFF TO DECK DRAINS AND SCUPPERS AS SHOWN ON THE PLANS. SLOPE TRESTLES DOWN FROM PIER TO UPLAND AREA. DISTURBED UPLAND AREAS SHALL BE GRADED TOWARD THE WATER BODY FROM EAST TO WEST MATCHING EXISTING DRAINAGE PATTERN.

POTABLE WATER AND DRY FIRE LINE NOTES

GENERAL

1. "BOP" IS DEFINED AS THE OUTSIDE BOTTOM OF PIPE. "INVERT" IS DEFINED AS THE INSIDE BOTTOM OF PIPE.
2. ALL NUTS, BOLTS AND WASHERS SHALL BE STAINLESS STEEL (TYPE 316).
3. AWWU, THE PORT, ANCHORAGE WATER AND WASTEWATER UTILITY, ANCHORAGE FIRE DEPARTMENT (AFD), AND EXISTING CUSTOMERS SHALL BE NOTIFIED A MINIMUM OF 72 HOURS IN ADVANCE OF WATER SERVICE INTERRUPTION. CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TEMPORARY WATER SERVICE TO THE EXISTING CUSTOMERS IF THE OUTAGE EXCEEDS 6 HOURS OR IF DEEMED NECESSARY BY THE ENGINEER. THE CONTRACTOR SHALL SUBMIT A TEMPORARY WATER SERVICE PLAN FOR REVIEW AND APPROVAL. ALL WATER MAINS AND SERVICES SHALL HAVE A MINIMUM OF 10 FEET OF BURY AT ALL POINTS UNLESS SPECIFIED OTHERWISE ON PLANS.
4. THE CONTRACTOR SHALL PROVIDE ALL SETUP AND TEAR DOWN REQUIRED TO FLUSH NEWLY INSTALLED WATER PIPE. CONTRACTOR SHALL COORDINATE WITH THE PORT FOR USE OF EXISTING FIRE HYDRANTS FOR FLUSH WATER. CONTRACTOR SHALL USE AN APPROVED BACKFLOW PREVENT AT HYDRANT CONNECTION. THE CONTRACTOR MUST REQUEST WATER AT LEAST 48 HOURS PRIOR TO FLUSHING. FLUSHING MUST TAKE PLACE PRIOR TO INSTALLATION OF WATER SERVICES. NEW PIPES THAT ARE TO BE LEFT DRY UPON CONCLUSION OF WORK NEED TO BE THOROUGHLY DRAINED AFTER FLUSHING TO PREVENT FREEZING OF RESIDUAL WATER.
5. THE CONTRACTOR SHALL PERFORM HYDROSTATIC TESTING OF ALL NEWLY INSTALLED PIPE SECTIONS. IF PERMANENT AIR VENTS ARE NOT LOCATED AT ALL HIGH POINTS AND DEAD ENDS, THE CONTRACTOR MUST INSTALL AND ABANDON CORPORATION STOPS AT SUCH POINTS.
6. ALL WATER MAIN STATIONING IS PIPE CENTERLINE STATIONING.

BURIED POTABLE WATER

1. ALL CONSTRUCTION SHALL BE INSTALLED AS SPECIFIED IN CONTRACT DOCUMENTS AND THE MOST CURRENT EDITION OF THE AWWU DESIGN AND CONSTRUCTION PRACTICES MANUAL (DCPM).
2. ALL WATER MAINS AND SERVICES SHALL HAVE A MINIMUM OF 10 FEET OF BURY AT ALL POINTS UNLESS SPECIFIED OTHERWISE ON PLANS.
3. MAINTAIN A MINIMUM OF TEN (10) FEET HORIZONTAL AND EIGHTEEN (18) INCHES VERTICAL SEPARATION BETWEEN WATER AND SANITARY OR STORM SEWER MAINS AND SERVICES.
4. MAINTAIN A MINIMUM OF 36-INCHES OF VERTICAL SEPARATION BETWEEN ANY STORM SEWER (STORM DRAIN OR FOOTING DRAIN) AND WATERLINE (MAINS OR SERVICES) OR SANITARY SEWER (MAINS OR SERVICES). IF 36-INCHES CANNOT BE MAINTAINED, PROVIDE A MINIMUM OF 4-INCH THICK (R-20) INSULATION.
5. WATER MAINS SHALL BE CL52 DUCTILE IRON PIPE WITH RESTRAINED JOINTS AS SHOWN IN THE PLANS, CONFORMING TO THE REQUIREMENTS OF AWWA C151.
6. ALL WATER/SEWER PIPE INSULATION SHALL BE RIGID BOARD, HIGH DENSITY EXTRUDED POLYSTYRENE MIN. 60 P.S.I., FOR UNDERGROUND INSTALLATIONS EQUIVALENT TO R-20 PER FOUR (4) INCH THICK INSULATION.
7. ALL TEES, FIRE HYDRANTS, AND DEAD ENDS SHALL HAVE RESTRAINED FITTINGS. ALL BENDS MUST BE CONSTRUCTED WITH FERRIC FITTINGS AND HAVE RESTRAINED JOINTS AND CONCRETE THRUST BLOCKS.
8. NO PIPE LENGTH LESS THAN 8 FEET SHALL BE INCORPORATED IN THE WATER SYSTEM EXCEPT FOR RESTRAINED FIRE HYDRANT AND VALVE LOCATIONS.
9. WATER MAINS MUST NOT BE ANGLED, BENT OR FLEXED AT BELL AND SPIGOT. ANY NECESSARY DEFLECTION IN PIPE ALIGNMENT SHALL BE ACHIEVED THROUGH THE USE OF FITTINGS AND DEFLECTION COUPLINGS.
10. ALL BEDDING AND BACKFILL SHALL BE COMPACTED TO MINIMUM OF 95% OF MAXIMUM DENSITY.
11. ADJUST HYDRANTS TO FINAL GRADE.

POTABLE WATER AND DRY FIRE LINE NOTES CONT.

EXPOSED POTABLE WATER

1. ALL EXPOSED POTABLE WATER MAIN SHALL BE INSULATED HIGH DENSITY POLYETHYLENE (HDPE) PIPE. A MINIMUM OF 3 INCHES OF URETHANE FOAM THICKNESS SHALL BE PROVIDED BETWEEN THE HDPE WATER PIPE AND AN ALUMINUM OUTER JACKET. THE ENTIRE LENGTH OF WATER PIPE SHALL BE CENTERED WITHIN INSULATED PIPE CROSS SECTION.
2. ALL EXPOSED ARCTIC INSULATED PIPE SHALL BE HEAT TRACED. ARCTIC PIPE SHALL INCLUDE TWO HEAT TRACE CHANNELS WITH SELF LIMITING HEAT TRACE.
3. ALUMINUM OUTER JACEKT SHALL BE CLASS 5052-H32 MARINE GRADE ALUMINUM METAL WITH 16-GAUGE (0.60-INCH) WALL THICKNESS WITH SPIRAL LOCKSEAM.
4. INSULATED PIPE SHALL BE MANUFACTURED OFF SITE AND SHIPPED TO THE PROJECT LOCATION. LENGTHS OF MANUFACTURED PIPE SEGMENTS SHALL BE MAXIMIZED TO THE EXTENT POSSIBLE TO MINIMIZE THE NUMBER OF JOINTS IN EACH INSTALLED PIPELINE.
5. ALL HDPE PIPELINES ASSEMBLIES SHALL BE SUCCESSFULLY HYDROSTATICALLY TESTED IN THE PRESENCE OF THE ENGINEER. CONTRACTOR SHALL SUBMIT A TESTING PLAN FOR ENGINEER'S REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. ALL TESTING SHALL BE DONE IN ACCORDANCE WITH RECOMMENDED STANDARDS OF THE PLASTIC PIPE INSTITUTE.
6. HDPE JOINTS SHALL BE BUTT FUSED TO THE MAXIMUM EXTENT POSSIBLE. ELECTRO-FUSION COUPLINGS MAY BE USED UPON SPECIFIC APPROVAL OF ENGINEER. ALL BUTT-FUSING AND ELECTRO-FUSING SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS IN THE PROPER AMBIENT ENVIRONMENT BY QUALIFIED, EXPERIENCED PERSONNEL.
7. ALL PIPING, HANGARS, SEISMIC BRACING, PIPE FITTINGS AND FLEXIBLE PIPING ASSEMBLIES ASSOCIATED WITH THE MANUAL DRY STANDPIPE SYSTEM SHALL BE HOT DIPPED GALVANIZED COATED (DESIGNED TO PROTECT AGAINST SALTWATER AND SALTWATER AIR EXPOSURES) AND DIALECTRIC UNIONS SHALL BE PROVIDED BETWEEN GALVANIZED PIPING AND BRASS HOSE OUTLETS/ HOSE VALVES.

MANUAL DRY STANDPIPE SYSTEM AND APPURTENANCES

1. FOR COORDINATION PURPOSES, REFER TO DRAWING T1-F-001 THROUGH T1-F-501 FOR FURTHER DETAILS OF NEW T1 MANUAL DRY STANDPIPE SYSTEM SCOPE OF WORK AND RELATED PROVISION OF NEW DRY BARREL FIRE HYDRANTS/INTERCONNECTIONS TO EXISTING AND NEW UNDERGROUND WATER DISTRIBUTION PIPING NETWORK AS PART OF THE OVERALL T1 PROJECT SCOPE OF WORK.
2. NEW WORK SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH CODES AND STANDARDS, AS ADOPTED BY THE STATE OF ALASKA AND ANCHORAGE TOWNSHIP, TO INCLUDE THE FOLLOWING:
   2.1. TITLE 23 - BUILDING CODES MUNICIPALITY OF ANCHORAGE (MOA), 2018 EDITION
   2.2. ANCHORAGE ADMINISTRATIVE CODE, 2018 EDITION
   2.3. INTERNATIONAL BUILDING CODE (IBC), 2018 EDITION WITH MOA AMENDMENTS
   2.4. INTERNATIONAL FIRE CODE (IFC), 2018 EDITION WITH MOA AMENDMENTS
   2.5. NFPA 13, STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS, 2019 EDITION
   2.6. NFPA 14, STANDARD FOR THE INSTALLATION OF STANDPIPE AND HOSE SYSTEMS, 2019 EDITION
   2.7. NFPA 24 - STANDARD FOR THE INSTALLATION OF PRIVATE FIRE SERVICE MAINS AND APPURTENANCES, 2019 EDITION
   2.8. NFPA 72 - NATIONAL FIRE ALARM AND SIGNALING CODE, 2019 EDITION, WITH MOA AMENDMENTS
   2.9. NFPA 307, STANDARD FOR THE CONSTRUCTION AND FIRE PROTECTION OF MARINE TERMINALS, PIERS AND WHARVES, 2016 EDITION
   2.10. NFPA 101 - THE LIFE SAFETY CODE.
3. ALL UNDERGROUND DRY BARREL FIRE HYDRANT PIPING, FITTINGS AND THRUST BLOCKING SHALL BE DESIGNED, INSTALLED, AND TESTED IN ACCORDANCE WITH NFPA 24 - STANDARD FOR THE INSTALLATION OF PRIVATE FIRE SERVICE MAINS AND THEIR APPURTENANCES.
4. ALL PIPING, HANGARS, SEISMIC BRACING, PIPE FITTINGS AND FLEXIBLE PIPING ASSEMBLIES ASSOCIATED WITH THE MANUAL DRY STANDPIPE SYSTEM SHALL BE HOT DIPPED GALVANIZED COATED (DESIGNED TO PROTECT AGAINST SALTWATER AND SALTWATER AIR EXPOSURES) AND DIALECTRIC UNIONS SHALL BE PROVIDED BETWEEN GALVANIZED PIPING AND BRASS HOSE OUTLETS/ HOSE VALVES.

65% SUBMITTAL

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

REV	DATE	DESCRIPTION	BY	APVD

REVISIONS

GHD-WSP JV
1400 W. BENSON BLVD, SUITE 400
ANCHORAGE, ALASKA 99503
AK ENGINEERING LICENSE # 197742(GHD) - AECC236(WSP)
AK BUSINESS LICENSE # 2164152(GHD) - 1113511(WSP)

DSGN	DR	CHK	APVD
AEM	DJW	AWC	VHN

CONSULTANT

SEAL

CIVIL

NOTES

PORT OF ALASKA

PORT OF ALASKA MODERNIZATION PROGRAM

CARGO TERMINAL 1 DESIGN

ANCHORAGE, ALASKA

HORIZ SCALE:	DATE: SEPT 1, 2023	T1-C-002
VERT SCALE:	SHEET: OF	

PRELIMINARY. NOT FOR USE IN DEVELOPING CONSTRUCTION BIDS

SCOPE OF WORK - POTABLE WATER

1. EXISTING POTABLE WATER MAIN SERVING PORT ADMIN BUILDING AND TERMINAL 1 WILL BE DEMOLISHED.
2. EXISTING POTABLE WATER MAIN SERVING TERMINAL 2 WILL REMAIN IN PLACE AND BE CAPPED.
3. CONNECT NEW 8-INCH DUCTILE IRON BURIED WATER MAIN TO EXISTING BURIED WATER MAIN AT LOCATION NORTH OF TRESTLE 1A AS SHOWN ON THE DRAWINGS
4. CONSTRUCT TWO NEW FIRE HYDRANTS TO SERVE FIRE DEPARTMENT CONNECTION AT TRESTLE 1A PER AWWU STANDARD DRAWINGS.
5. TRANSITION WATER MAIN FROM BURIED TO ABOVE GRADE AT TRESTLE 1A AS SHOWN ON DRAWINGS. INSTALL WATER UTILITY BOX WITH METER AND REDUCED PRESSURE ZONE ASSEMBLY.
6. EXTEND 8-INCH DIAMETER INSULATED HDPE PIPE ALONG TRESTLE AND WHARF AS SHOWN ON DRAWINGS. SUPPORT PIPE AS SHOWN ON STRUCTURAL DRAWINGS.
7. CONSTRUCT THREE SHORE TO SHIP WATER UTILITY BOXES WITH ELECTRICALLY ACTUATED VALVES AND VACUUM BREAKER ASSEMBLY AS SHOWN ON DRAWINGS.
8. EXTEND NEW 8-INCH DUCTILE IRON WATER MAIN FROM TIDEWATER ROAD TO NEW TERMINAL 1B. EXTEND WATER SERVICE FROM WATER MAIN TO NEW STEVEDORE BUILDING.
9. CONSTRUCT TWO NEW FIRE HYDRANTS TO SERVE FIRE DEPARTMENT CONNECTION AT TRESTLE 1B PER AWWU STANDARD DRAWINGS.
10. EXTEND 8-INCH DIAMETER BURIED DUCTILE IRON WATER MAIN SOUTH, THROUGH INFILL SECTION, TO ALLOW INSTALLATION OF NEW HYDRANT SERVING ELECTRICAL SUBSTATION.
11. ALL INSULATED HDPE PIPE AND PIPING WITHIN WATER UTILITY BOXES MUST HAVE ELECTRIC HEAT TRACE.

EXISTING FIRE HYDRANT FLOW TEST

EXISTING POA FIRE HYDRANT FLOW TEST RESULTS
RECORDED ON AUGUST 8, 2023

TEST 1:
TEST HYDRANT HY31030017
STATIC PRESSURE AT TEST HYDRANT (NO FLOW) = 100 PSI
RESIDUAL PRESSURE AT TEST HYDRANT WHILE FLOWING
FROM HY31030001 = 85 PSI
FLOW/PRESSURE AT HY31030001 = 2,000 GPM/91 PSI

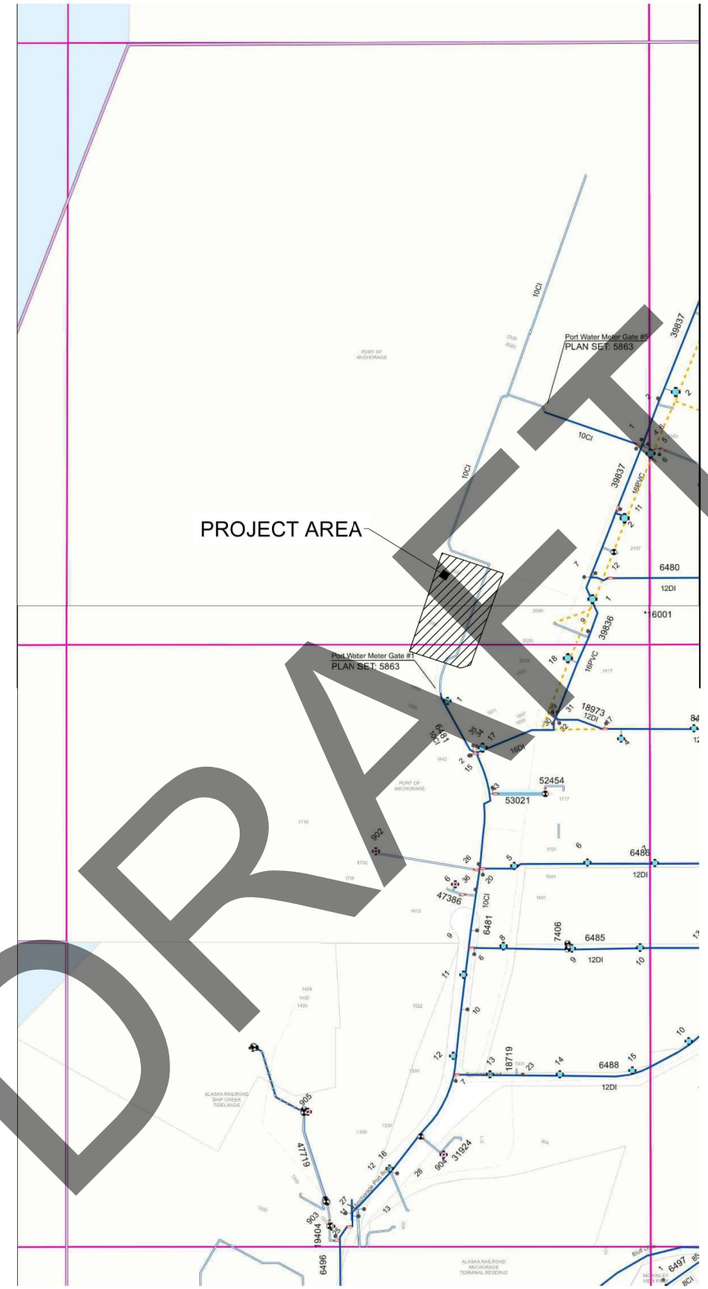
TEST 2:
TEST HYDRANT HY31030001
STATIC PRESSURE AT TEST HYDRANT (NO FLOW) = 95 PSI
RESIDUAL PRESSURE AT TEST HYDRANT WHILE FLOWING
FROM HY31030017 = 85 PSI
FLOW/PRESSURE AT HY31030017 = 1,920 GPM/80 PSI
STATIC PRESSURE AT HY31030018 = 100 PSI
RESIDUAL PRESSURE AT HY31030018 WHILE FLOWING
FROM HY31030017 = 95 PSI

PROPOSED FIRE HYDRANT MODELED FLOW RATES

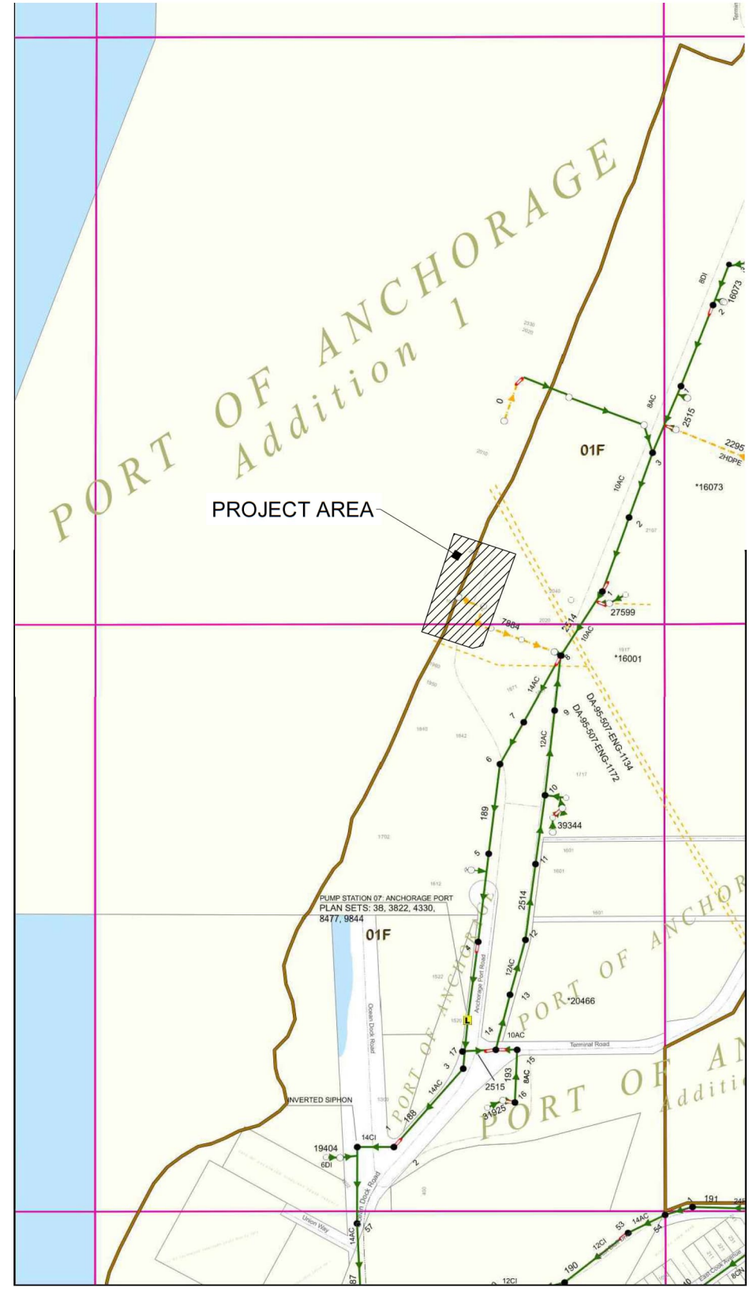
MODELED FLOW RATES PROVIDED BY AWWU

PROPOSED FIRE HYDRANT AT TRESTLE 1A:
STATIC PRESSURE AT TEST HYDRANT (NO FLOW) = 95 PSI
RESIDUAL PRESSURE AT 1,500 GPM = 84 PSI
AVAILABLE FLOW AT 20 PSI = 3,210 GPM

PROPOSED FIRE HYDRANT AT TRESTLE 1B:
STATIC PRESSURE AT TEST HYDRANT (NO FLOW) = 95 PSI
RESIDUAL PRESSURE AT 1,500 GPM = 85 PSI
AVAILABLE FLOW AT 20 PSI = 3,220 GPM



WATER KEY MAP - GRID SW0930 &1030
SCALE: NTS



SEWER KEY MAP - GRID SW0930 &1030
SCALE: NTS

65% SUBMITTAL

REV	DATE	DESCRIPTION	BY	APVD

REVISIONS

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

GHD-WSP JV
1400 W. BENSON BLVD, SUITE 400
ANCHORAGE, ALASKA 99503
AK ENGINEERING LICENSE # 197742(GHD) - AECC236(WSP) *AK BUSINESS LICENSE # 2164152(GHD) - 1113511(WSP)*

CRW ENGINEERING GROUP
3940 ARCTIC BLVD. SUITE 300
ANCHORAGE, ALASKA 99503
PHONE: (907) 562-3252
#AECL882-AK

DSGN	DR	CHK	APVD
JR	EH	ME	ME

CONSULTANT

##/##/##
SEAL

PORT of ALASKA

PORT OF ALASKA MODERNIZATION PROGRAM

CIVIL

POTABLE WATER CRITERIA

PORT OF ALASKA

PORT OF ALASKA MODERNIZATION PROGRAM
CARGO TERMINAL 1 DESIGN
ANCHORAGE, ALASKA

HORIZ SCALE: AS SHOWN
VERT SCALE: AS SHOWN
DATE: 11/14/23
SHEET: # OF #

T1-C-003

PRELIMINARY. NOT FOR USE IN DEVELOPING CONSTRUCTION BIDS

KNIK ARM

C T1-C-313 | B T1-C-312 | D T1-C-313 | A T1-C-312

FUTURE MOORING DOLPHIN AND CATWALK (BY OTHERS)

TERMINAL 1

PAVEMENT MARKINGS (REFER TO C-241 AND C-242)

LIMIT OF SLOPE ARMOR STONE TO MATCH EXISTING SLOPE ARMOR STONE (TBD)

TERMINAL 1 TRESTLE 1A

TERMINAL 1 TRESTLE 1B

LIMIT OF GRADING TOE OF SHORELINE PROTECTION

LIMIT OF SLOPE ARMOR

10.40' ARMOR STONE @ EL.-12.00'

EXTENT OF GROUND IMPROVEMENTS AT TRESTLE 1B

EXISTING TERMINAL 2 TRESTLE

LIMIT OF SLOPE ARMOR STONE TO MATCH EXISTING SLOPE ARMOR STONE (TBD)

EXTENT OF GROUND IMPROVEMENTS AT TRESTLE 1A

AREA TO REMAIN AS EXISTING

STORM OUTFALL

CREST OF SHORELINE PROTECTION

UPLAND EDGE OF ASPHALT PAVEMENT

GUARD RAIL (TYP)

COASTAL SHORE PROTECTION AREA

TRESTLE 1B ABUTMENT, PILE WALL, AND APPROACH SLAB

GUARD RAIL (TYP)

MH#1

TRESTLE 1A ABUTMENT, PILE WALL, AND APPROACH SLAB

MH#2

ELECTRICAL SHED

INFILL AREA

CB#1

CB#2

ANCHORAGE PORT ROAD

UPLAND AREA

UPLAND EDGE OF ASPHALT PAVEMENT

ADMIN. BUILDING

ELECTRICAL SUBSTATION

POA MAINTENANCE GARAGE

POA MAINTENANCE BUILDING

STEVEDORE BUILDING (BY OTHERS)

GULL ROAD

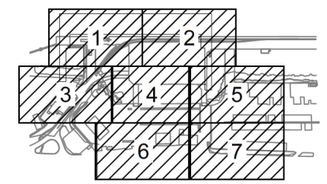
GULL ROAD

GENERAL CIVIL NOTES

1. REFER TO UTILITY DRAWINGS FOR WATER AND FIRE PROTECTION LAYOUT AND DETAILS.
2. REFER TO ELECTRICAL DRAWINGS FOR SUBSTATION AND POWER SUPPLY LAYOUT AND DETAILS.
3. FOR EXISTING CIVIL LEGEND, REFER TO DRAWING T1-V-002.
4. FOR PROPOSED CIVIL LEGEND, REFER TO DRAWING T1-C-001.
5. STEVEDORE BUILDING LOCATION AND FOOTPRINT TO BE DETERMINED.

UPLAND CIVIL LEGEND

- EXISTING ASPHALT PAVEMENT
- EXISTING CONCRETE
- EXISTING SHORE ARMOR
- ASPHALT PAVEMENT
- INFILL AREA
- SHORE ARMOR
- GRAVEL SURFACE
- CONCRETE PAD
- ASPHALT JOINT
- BOLLARD
- GUARDRAIL
- SOLID LANE MARKING
- PRECAST CONCRETE WHEEL STOP
- DASHED LANE MARKING
- PAINTED YIELD MARKING (YIELD)
- NO ACCESS/ CRANE RAIL EXCLUSION AREA
- CROSSWALK MARKING
- ACCESSIBLE PARKING SPACE
- TRAFFIC SIGN
- STORM DRAIN MANHOLE
- STORM DRAIN CATCH BASIN
- STORM DRAIN OUTFALL (SD)
- SANITARY SEWER CLEANOUT (C.O.)
- FIRE HYDRANT
- WATER LINE VALVE BOX
- PETROLEUM PIPELINE (P)
- CAPPED STUBOUT
- DRY STANDPIPE HOSE OUTLET STATION
- ALL SEASON SHORE TO SHIP WATER SERVICE ASSEMBLY (W)
- 6-OUTLET FLUSH FIRE DEPARTMENT CONNECTION-FREE STAND
- OUTDOOR STREET LIGHT



KEY PLAN

OVERALL SITE PLAN

SCALE: 1" = 50'

1" = 50' (50 0 50 100 scale feet)

65% SUBMITTAL

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

REV	DATE	DESCRIPTION	BY	APVD

REVISIONS

GHD-WSP JV
1400 W. BENSON BLVD, SUITE 400
ANCHORAGE, ALASKA 99503
AK ENGINEERING LICENSE # 197742(GHD) - AECC236(WSP)
AK BUSINESS LICENSE # 2164152(GHD) - 1113511(WSP)

DSGN	DR	CHK	APVD
AEM	DJW	AWC	VHN

CONSULTANT

SEAL

PORT of ALASKA

PORT OF ALASKA MODERNIZATION PROGRAM

CIVIL

OVERALL SITE PLAN

PORT OF ALASKA

PORT OF ALASKA MODERNIZATION PROGRAM

CARGO TERMINAL 1 DESIGN

ANCHORAGE, ALASKA

HORIZ SCALE: 1"=50'
VERT SCALE:
DATE: SEPT 1, 2023
SHEET: OF
T1-C-200

PRELIMINARY. NOT FOR USE IN DEVELOPING CONSTRUCTION BIDS

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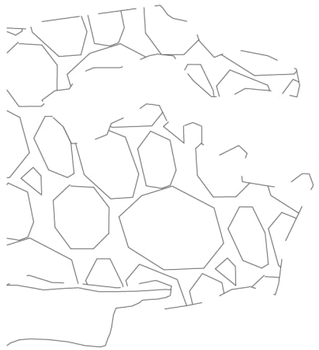
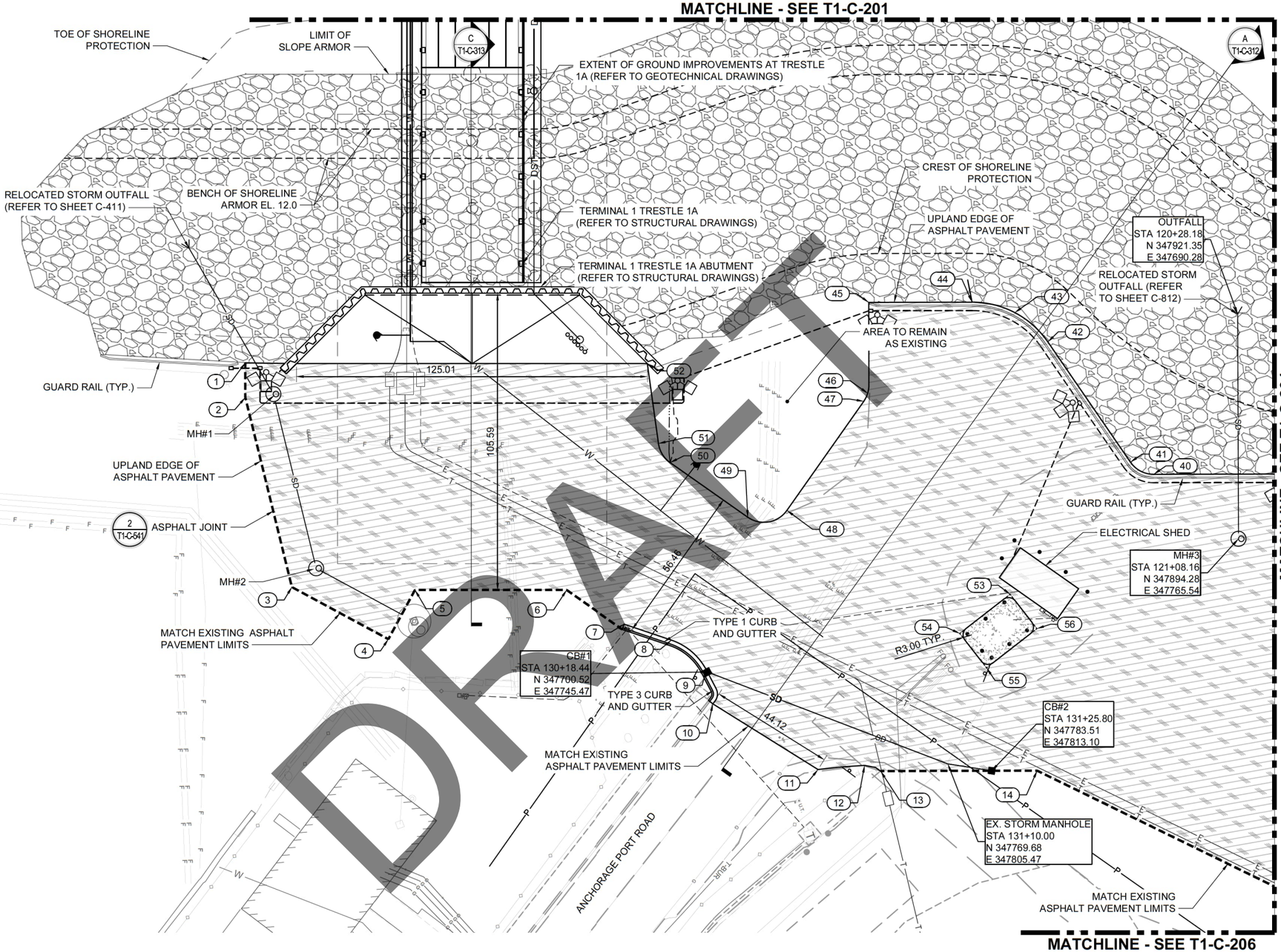


EDGE OF PAVEMENT LAYOUT			
POINT	NORTHING	EASTING	TOP OF ASPHALT ELEVATION
1	347583.447	347585.766	36.087
2	347579.244	347597.335	36.246
3	347571.730	347666.440	36.867
4	347597.643	347695.603	37.110
5	347612.528	347682.377	36.889
6	347663.250	347700.839	36.881
7	347678.452	347719.313	37.477
8	347692.359	347730.452	37.270
9	347700.413	347744.717	37.066
10	347698.446	347756.800	36.918
11	347725.620	347791.564	36.112
12	347741.690	347795.839	36.034
13	347746.349	347799.680	35.876
14	347798.713	347818.594	36.077
40	347873.760	347733.653	36.650
41	347867.474	347726.745	36.650
42	347854.510	347676.488	36.650
43	347846.991	347662.667	36.650
44	347834.018	347653.970	36.650
45	347799.434	347641.478	36.650
46	347788.030	347671.741	36.871
47	347785.747	347673.945	36.893
48	347746.756	347701.096	37.217
49	347732.836	347698.604	37.335
50	347713.561	347670.896	36.430
51	347711.964	347663.086	36.382
52	347717.967	347634.990	37.125
53	347811.170	347756.298	37.115
54	347789.553	347763.279	37.286
55	347794.323	347778.050	37.258
56	347815.940	347771.069	37.095



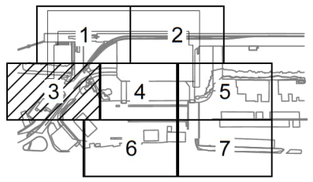
GENERAL CIVIL NOTES

1. REFER TO UTILITY DRAWINGS FOR WATER AND FIRE PROTECTION LAYOUT AND DETAILS.
2. REFER TO ELECTRICAL DRAWINGS FOR SUBSTATION AND POWER SUPPLY LAYOUT AND DETAILS.
3. FOR EXISTING CIVIL LEGEND, REFER TO DRAWING T1-V-002.
4. FOR PROPOSED CIVIL LEGEND, REFER TO DRAWING T1-C-001.

SITE LAYOUT LEGEND

- EXISTING ASPHALT PAVEMENT
- EXISTING CONCRETE
- EXISTING SHORE ARMOR
- ASPHALT PAVEMENT
- INFILL AREA
- SHORE ARMOR
- GRAVEL SURFACE
- CONCRETE PAD
- ASPHALT JOINT
- BOLLARD
- GUARDRAIL
- (2) LAYOUT POINT

MATCHLINE - SEE T1-C-204



KEY PLAN

LAYOUT PLAN - UPLAND

SCALE: 1" = 20'

1" = 20' (20 0 20 40 scale feet)

65% SUBMITTAL

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

REV	DATE	DESCRIPTION	BY	APVD

REVISIONS

GHD WSP
GHD-WSP JV
1400 W. BENSON BLVD, SUITE 400
ANCHORAGE, ALASKA 99503
AK ENGINEERING LICENSE # 197742(GHD) - AECC236(WSP)
AK BUSINESS LICENSE # 2164152(GHD) - 1113511(WSP)

DSGN	DR	CHK	APVD
AEM	DJW	AWC	VHN

CONSULTANT

SEAL

PORT of ALASKA

PORT OF ALASKA MODERNIZATION PROGRAM

CIVIL

LAYOUT PLAN
UPLAND (1 OF 5)

PORT OF ALASKA

PORT OF ALASKA MODERNIZATION PROGRAM
CARGO TERMINAL 1 DESIGN
ANCHORAGE, ALASKA

HORIZ SCALE: 1"=20'
VERT SCALE:
DATE: SEPT 1, 2023
SHEET: OF
T1-C-203

PRELIMINARY. NOT FOR USE IN DEVELOPING CONSTRUCTION BIDS

MATCHLINE - SEE T1-C-201

MATCHLINE - SEE T1-C-202

EDGE OF PAVEMENT LAYOUT			
POINT	NORTHING	EASTING	TOP OF ASPHALT ELEVATION
31	347944.528	347925.099	37.785
32	347949.929	347909.881	37.503

TOE OF SHORELINE PROTECTION

LIMIT OF SLOPE ARMOR

B
T1-C-312

BENCH OF SHORELINE ARMOR EL. 12.0

CREST OF SHORELINE PROTECTION

UPLAND EDGE OF ASPHALT PAVEMENT

GUARD RAIL (TYP.)

MATCHLINE - SEE T1-C-203

MATCHLINE - SEE T1-C-205

443.70

139.38

2
T1-C-541
ASPHALT JOINT

32

31

MATCH EXISTING ASPHALT PAVEMENT LIMITS

EX. CONCRETE INLAY

UPLAND EDGE OF ASPHALT PAVEMENT

MATCHLINE - SEE T1-C-206

DRAFT

LAYOUT PLAN - UPLAND

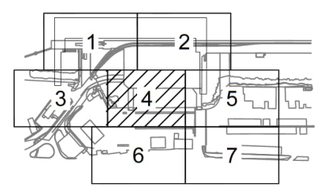
SCALE: 1" = 20'

GENERAL CIVIL NOTES

1. REFER TO UTILITY DRAWINGS FOR WATER AND FIRE PROTECTION LAYOUT AND DETAILS.
2. REFER TO ELECTRICAL DRAWINGS FOR SUBSTATION AND POWER SUPPLY LAYOUT AND DETAILS.
3. FOR EXISTING CIVIL LEGEND, REFER TO DRAWING T1-V-002.
4. FOR PROPOSED CIVIL LEGEND, REFER TO DRAWING T1-C-001.

SITE LAYOUT LEGEND

- EXISTING ASPHALT PAVEMENT
- EXISTING CONCRETE
- EXISTING SHORE ARMOR
- ASPHALT PAVEMENT
- INFILL AREA
- SHORE ARMOR
- GRAVEL SURFACE
- CONCRETE PAD
- ASPHALT JOINT
- BOLLARD
- GUARDRAIL
- (2) LAYOUT POINT



KEY PLAN

1" = 20' scale: 20 0 20 40 feet

65% SUBMITTAL

VERIFY SCALES
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0 1"
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REV	DATE	DESCRIPTION	BY	APVD

REVISIONS

GHD-WSP JV
1400 W. BENSON BLVD, SUITE 400
ANCHORAGE, ALASKA 99503
AK ENGINEERING LICENSE # 197742(GHD) - AECC236(WSP)
AK BUSINESS LICENSE # 2164152(GHD) - 1113511(WSP)

DSGN	DR	CHK	APVD
AEM	DJW	AWC	VHN

CONSULTANT

SEAL

PORT of ALASKA

PORT OF ALASKA MODERNIZATION PROGRAM

CIVIL

LAYOUT PLAN
UPLAND (2 OF 5)

PORT OF ALASKA

PORT OF ALASKA MODERNIZATION PROGRAM
CARGO TERMINAL 1 DESIGN
ANCHORAGE, ALASKA

HORIZ SCALE: 1"=20'
VERT SCALE:
DATE: SEPT 1, 2023
SHEET: OF

T1-C-204

PRELIMINARY. NOT FOR USE IN DEVELOPING CONSTRUCTION BIDS

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MATCHLINE - SEE T1-C-202

MATCHLINE - SEE T1-C-204

MATCHLINE - SEE T1-C-207

D T1-C-313

TERMINAL 1 TRESTLE 1B (REFER TO STRUCTURAL DRAWINGS)

LIMIT OF SLOPE ARMOR

TOE OF SHORELINE PROTECTION

EXISTING TERMINAL 2 TRESTLE

LIMIT OF SHORELINE PROTECTION

EXTENT OF GROUND IMPROVEMENTS AT TRESTLE 1B (REFER TO GEOTECHNICAL DRAWINGS)

BENCH OF SHORELINE ARMOR EL. 12.0

CREST OF SHORELINE PROTECTION

TERMINAL 1 TRESTLE 1B ABUTMENT (REFER TO STRUCTURAL DRAWINGS)

TIE ARMOR STONE INTO EXISTING ARMOR STONE

GUARD RAIL (TYP.)

GUARD RAIL (TYP.)

PETROLEUM PIPELINE (BY OTHERS)

ASPHALT JOINT

2 T1-C-541

MATCH TO EXISTING ASPHALT PAVEMENT LIMITS

UPLAND EDGE OF ASPHALT PAVEMENT

38 39 37 36 35 34 33

102.05 196.05 141.41

W E-BUR P DIST

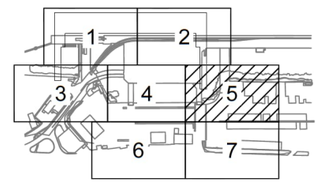
EDGE OF PAVEMENT LAYOUT			
POINT	NORTHING	EASTING	TOP OF ASPHALT ELEVATION
33	348433.369	348084.083	38.170
34	348482.932	348056.041	37.772
35	348498.849	348021.634	37.185
36	348488.773	347971.912	36.753
37	348478.505	347950.115	37.240
38	348360.095	347907.093	36.608
39	348359.322	347909.042	36.650

GENERAL CIVIL NOTES

1. REFER TO UTILITY DRAWINGS FOR WATER AND FIRE PROTECTION LAYOUT AND DETAILS.
2. REFER TO ELECTRICAL DRAWINGS FOR SUBSTATION AND POWER SUPPLY LAYOUT AND DETAILS.
3. FOR EXISTING CIVIL LEGEND, REFER TO DRAWING T1-V-002.
4. FOR PROPOSED CIVIL LEGEND, REFER TO DRAWING T1-C-001.

SITE LAYOUT LEGEND

- EXISTING ASPHALT PAVEMENT
- EXISTING CONCRETE
- EXISTING SHORE ARMOR
- ASPHALT PAVEMENT
- INFILL AREA
- SHORE ARMOR
- GRAVEL SURFACE
- CONCRETE PAD
- ASPHALT JOINT
- BOLLARD
- GUARDRAIL
- 2 LAYOUT POINT



KEY PLAN

1" = 20' scale: 20 0 20 40 feet

65% SUBMITTAL

LAYOUT PLAN - UPLAND

SCALE: 1" = 20'

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

REV	DATE	DESCRIPTION	BY	APVD

REVISIONS

GHD-WSP JV
1400 W. BENSON BLVD, SUITE 400
ANCHORAGE, ALASKA 99503
AK ENGINEERING LICENSE # 197742(GHD) - AECC236(WSP)
AK BUSINESS LICENSE # 2164152(GHD) - 1113511(WSP)

DSGN	DR	CHK	APVD
AEM	DJW	AWC	VHN

CONSULTANT

SEAL

CIVIL

LAYOUT PLAN
UPLAND (3 OF 5)

PORT OF ALASKA

PORT OF ALASKA MODERNIZATION PROGRAM
CARGO TERMINAL 1 DESIGN
ANCHORAGE, ALASKA

HORIZ SCALE: 1"=20'
VERT SCALE:
DATE: SEPT 1, 2023
SHEET: OF

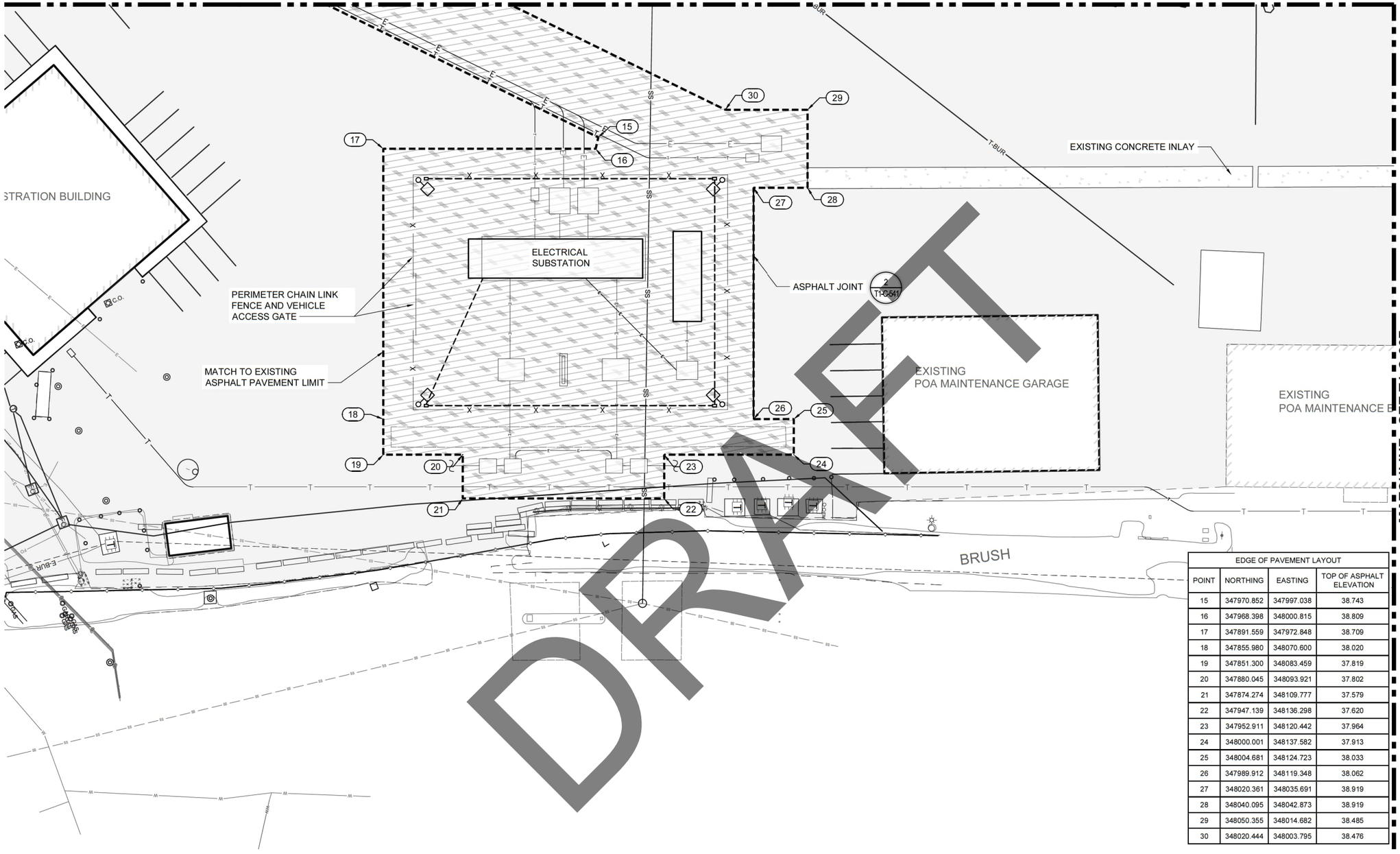
T1-C-205

PRELIMINARY. NOT FOR USE IN DEVELOPING CONSTRUCTION BIDS

MATCHLINE - SEE T1-C-203

MATCHLINE - SEE T1-C-204

MATCHLINE - SEE T1-C-207



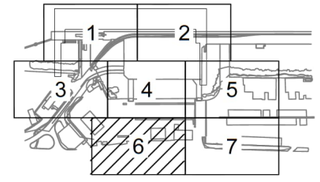
GENERAL CIVIL NOTES

1. REFER TO UTILITY DRAWINGS FOR WATER AND FIRE PROTECTION LAYOUT AND DETAILS.
2. REFER TO ELECTRICAL DRAWINGS FOR SUBSTATION AND POWER SUPPLY LAYOUT AND DETAILS.
3. FOR EXISTING CIVIL LEGEND, REFER TO DRAWING T1-V-002.
4. FOR PROPOSED CIVIL LEGEND, REFER TO DRAWING T1-C-001.

SITE LAYOUT LEGEND

- EXISTING ASPHALT PAVEMENT
- EXISTING CONCRETE
- EXISTING SHORE ARMOR
- ASPHALT PAVEMENT
- INFILL AREA
- SHORE ARMOR
- GRAVEL SURFACE
- CONCRETE PAD
- ASPHALT JOINT
- BOLLARD
- GUARDRAIL
- (2) LAYOUT POINT

EDGE OF PAVEMENT LAYOUT			
POINT	NORTHING	EASTING	TOP OF ASPHALT ELEVATION
15	347970.852	347997.038	38.743
16	347968.398	348000.815	38.809
17	347891.559	347972.848	38.709
18	347855.980	348070.600	38.020
19	347851.300	348083.459	37.819
20	347880.045	348093.921	37.802
21	347874.274	348109.777	37.579
22	347947.139	348136.298	37.620
23	347952.911	348120.442	37.964
24	348000.001	348137.582	37.913
25	348004.681	348124.723	38.033
26	347989.912	348119.348	38.062
27	348020.361	348035.691	38.919
28	348040.095	348042.873	38.919
29	348050.355	348014.682	38.485
30	348020.444	348003.795	38.476



KEY PLAN

LAYOUT PLAN - UPLAND

SCALE: 1" = 20'

1" = 20' scale: 20 0 20 40 feet

65% SUBMITTAL

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

REV	DATE	DESCRIPTION	BY	APVD

REVISIONS

GHD-WSP JV
1400 W. BENSON BLVD, SUITE 400
ANCHORAGE, ALASKA 99503
AK ENGINEERING LICENSE # 197742(GHD) - AECC236(WSP)
AK BUSINESS LICENSE # 2164152(GHD) - 1113511(WSP)

DSGN	DR	CHK	APVD
AEM	DJW	AWC	VHN

CONSULTANT

SEAL

CIVIL

LAYOUT PLAN
UPLAND (4 OF 5)

PORT OF ALASKA

PORT OF ALASKA MODERNIZATION PROGRAM
CARGO TERMINAL 1 DESIGN
ANCHORAGE, ALASKA

HORIZ SCALE: 1"=20'
VERT SCALE:
DATE: SEPT 1, 2023
SHEET: OF

T1-C-206

PRELIMINARY. NOT FOR USE IN DEVELOPING CONSTRUCTION BIDS

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MATCHLINE - SEE T1-C-205

MATCHLINE - SEE T1-C-206

PETROLEUM PIPELINE (BY OTHERS)

STEVEDORE BUILDING
(BY OTHERS)

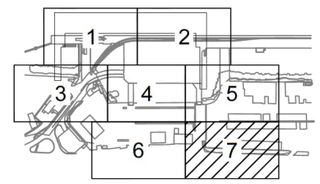
LAYOUT PLAN - UPLAND
SCALE: 1" = 20'

GENERAL CIVIL NOTES

1. REFER TO UTILITY DRAWINGS FOR WATER AND FIRE PROTECTION LAYOUT AND DETAILS.
2. REFER TO ELECTRICAL DRAWINGS FOR SUBSTATION AND POWER SUPPLY LAYOUT AND DETAILS.
3. FOR EXISTING CIVIL LEGEND, REFER TO DRAWING T1-V-002.
4. FOR PROPOSED CIVIL LEGEND, REFER TO DRAWING T1-C-001.
5. STEVEDORE BUILDING LOCATION AND FOOTPRINT TO BE DETERMINED.

SITE LAYOUT LEGEND

- EXISTING ASPHALT PAVEMENT
- EXISTING CONCRETE
- EXISTING SHORE ARMOR
- ASPHALT PAVEMENT
- INFILL AREA
- SHORE ARMOR
- GRAVEL SURFACE
- CONCRETE PAD
- ASPHALT JOINT
- BOLLARD
- GUARDRAIL
- (2) LAYOUT POINT



KEY PLAN

1" = 20' scale: 20 0 20 40 feet

65% SUBMITTAL

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

REV	DATE	DESCRIPTION	BY	APVD

REVISIONS

GHD-WSP JV
1400 W. BENSON BLVD, SUITE 400
ANCHORAGE, ALASKA 99503
AK ENGINEERING LICENSE # 197742(GHD) - AECC236(WSP)
AK BUSINESS LICENSE # 2164152(GHD) - 1113511(WSP)

DSGN	DR	CHK	APVD
AEM	DJW	AWC	VHN

CONSULTANT

SEAL

CIVIL

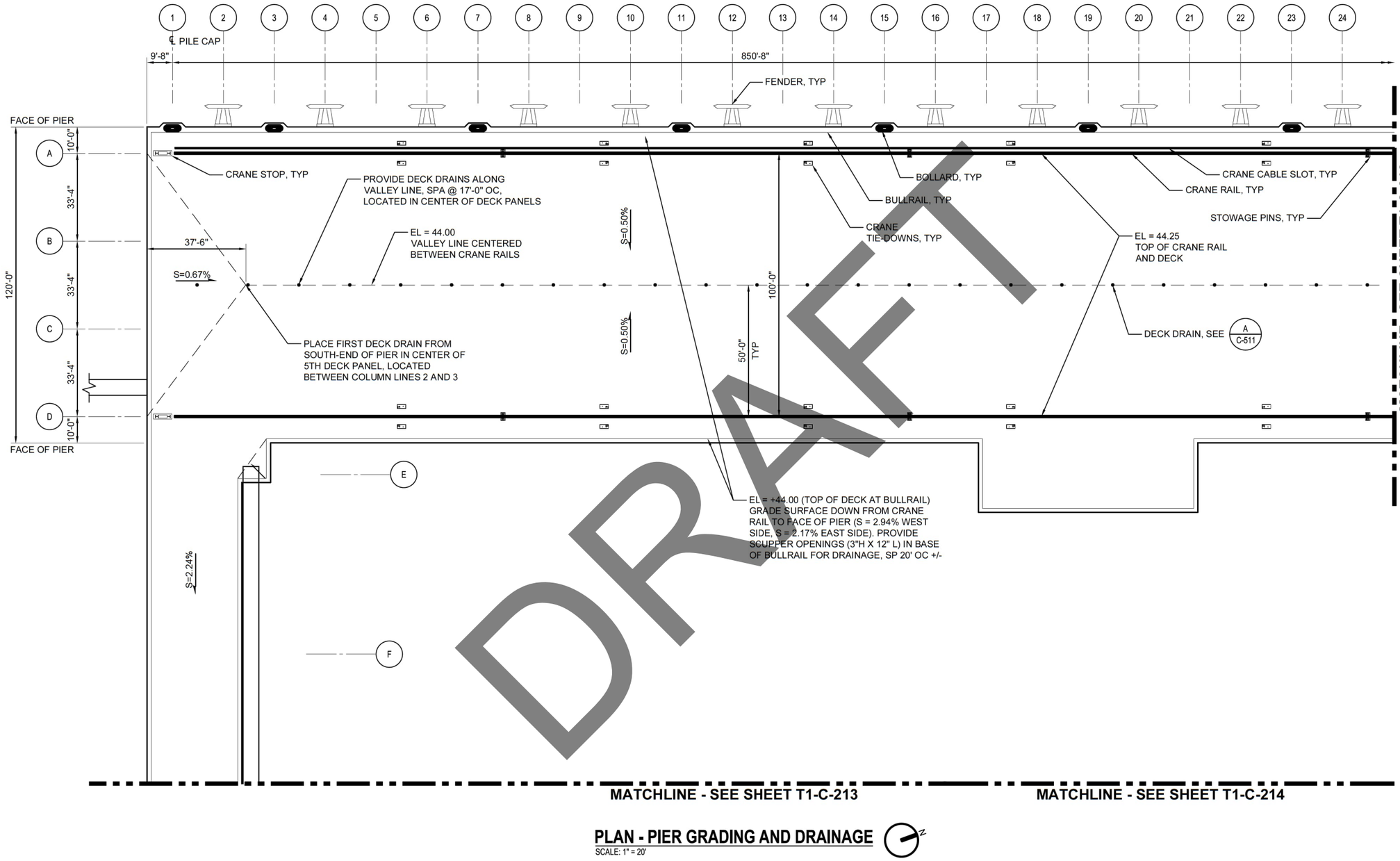
LAYOUT PLAN
UPLAND (5 OF 5)

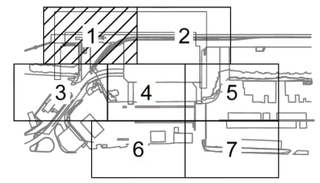
PORT OF ALASKA

PORT OF ALASKA MODERNIZATION PROGRAM
CARGO TERMINAL 1 DESIGN
ANCHORAGE, ALASKA

HORIZ SCALE: 1"=20'	DATE: SEPT 1, 2023	T1-C-207
VERT SCALE:	SHEET: OF	

PRELIMINARY. NOT FOR USE IN DEVELOPING CONSTRUCTION BIDS





KEY PLAN

1" = 20' scale: 20 0 20 40 feet

PLAN - PIER GRADING AND DRAINAGE

SCALE: 1" = 20'

65% SUBMITTAL

Last Saved by: USJV675558 on: Nov 14, 2023 1:13 PM File: C:\Users\USJV675558\WSP O365\POA Cargo T1 Replacement - Files\CADD\01_Coordination\Dwgs\06_T1-C-211.dwg

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

REV	DATE	DESCRIPTION	BY	APVD

REVISIONS

GHD WSP
GHD-WSP JV
1400 W. BENSON BLVD, SUITE 400
ANCHORAGE, ALASKA 99503
AK ENGINEERING LICENSE # 197742(GHD) - AECC236(WSP)
AK BUSINESS LICENSE # 2164152(GHD) - 1113511(WSP)

DSGN	DR	CHK	APVD
XXX	JDM	MM	JRG

CONSULTANT

STATE OF ALASKA 49th REGISTERED PROFESSIONAL ENGINEER 11/15/23
SEAL

PORT of ALASKA

PORT OF ALASKA MODERNIZATION PROGRAM

CIVIL

GRADING & DRAINAGE - WHARF (1 OF 2)

PORT OF ALASKA

PORT OF ALASKA MODERNIZATION PROGRAM

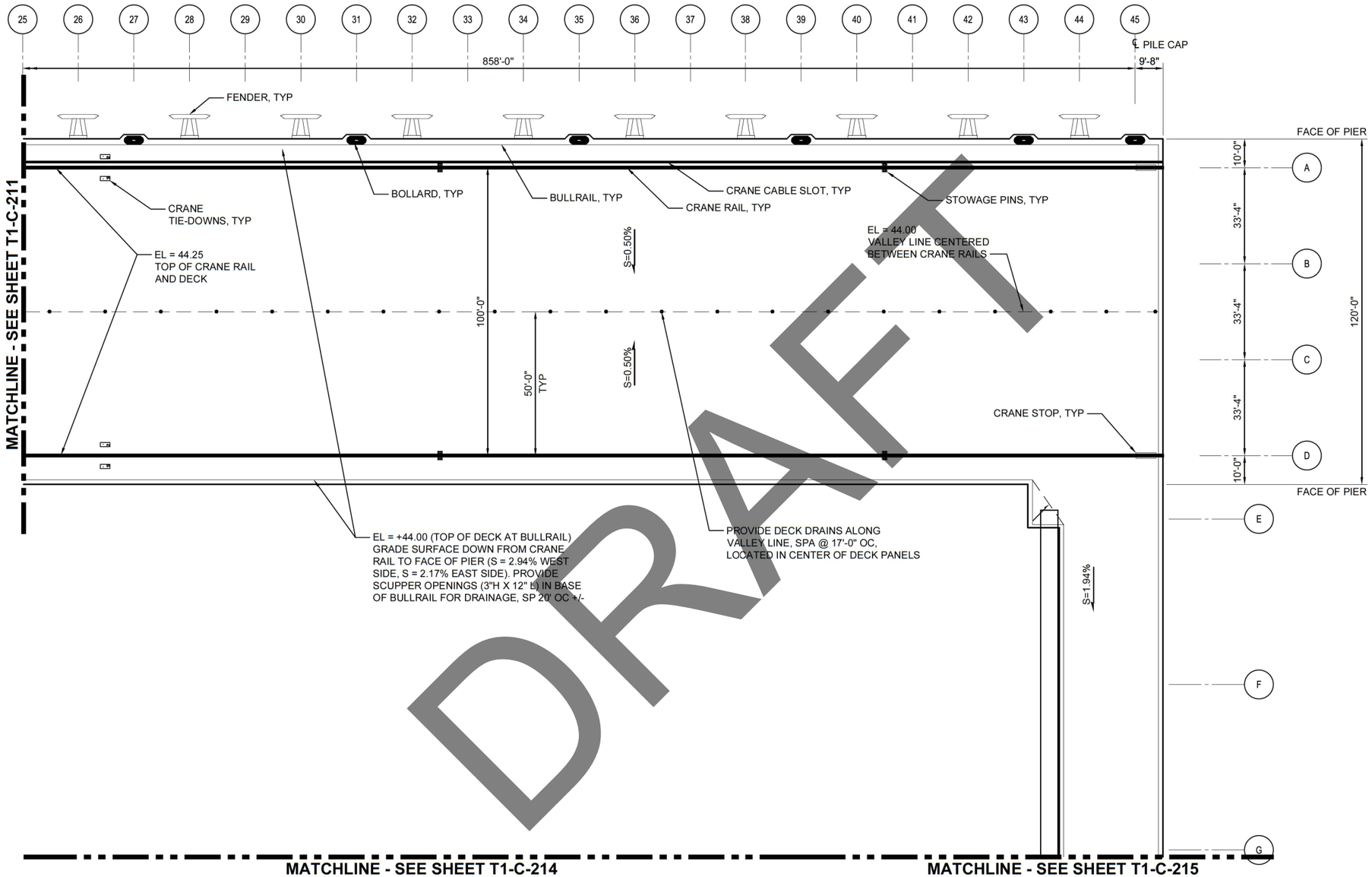
CARGO TERMINAL 1 DESIGN

ANCHORAGE, ALASKA

HORIZ SCALE: AS SHOWN
VERT SCALE: AS SHOWN
DATE: 11/17/23
SHEET: 59 OF 420

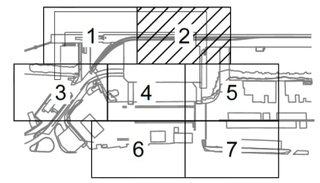
T1-C-211

PRELIMINARY. NOT FOR USE IN DEVELOPING CONSTRUCTION BIDS



PLAN - PIER GRADING AND DRAINAGE

SCALE: 1" = 20'



KEY PLAN

1" = 20' (20 0 20 40 scale feet)

65% SUBMITTAL

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

REV	DATE	DESCRIPTION	BY	APVD

REVISIONS

GHD WSP
GHD-WSP JV
1400 W. BENSON BLVD. SUITE 400
ANCHORAGE, ALASKA 99503
AK ENGINEERING LICENSE # 197742(GHD) - AECC236(WSP)
AK BUSINESS LICENSE # 2164152(GHD) - 1113511(WSP)

DSGN	DR	CHK	APVD
XXX	JDM	MM	JRG

CONSULTANT

STATE OF ALASKA 49th REGISTERED PROFESSIONAL ENGINEER 11/15/23
SEAL

PORT of ALASKA

PORT OF ALASKA MODERNIZATION PROGRAM

CIVIL

GRADING & DRAINAGE - WHARF (2 OF 2)

PORT OF ALASKA

PORT OF ALASKA MODERNIZATION PROGRAM

CARGO TERMINAL 1 DESIGN

ANCHORAGE, ALASKA

HORIZ SCALE: AS SHOWN
VERT SCALE: AS SHOWN
DATE: 11/17/23
SHEET: 60 OF 420

T1-C-212

PRELIMINARY. NOT FOR USE IN DEVELOPING CONSTRUCTION BIDS

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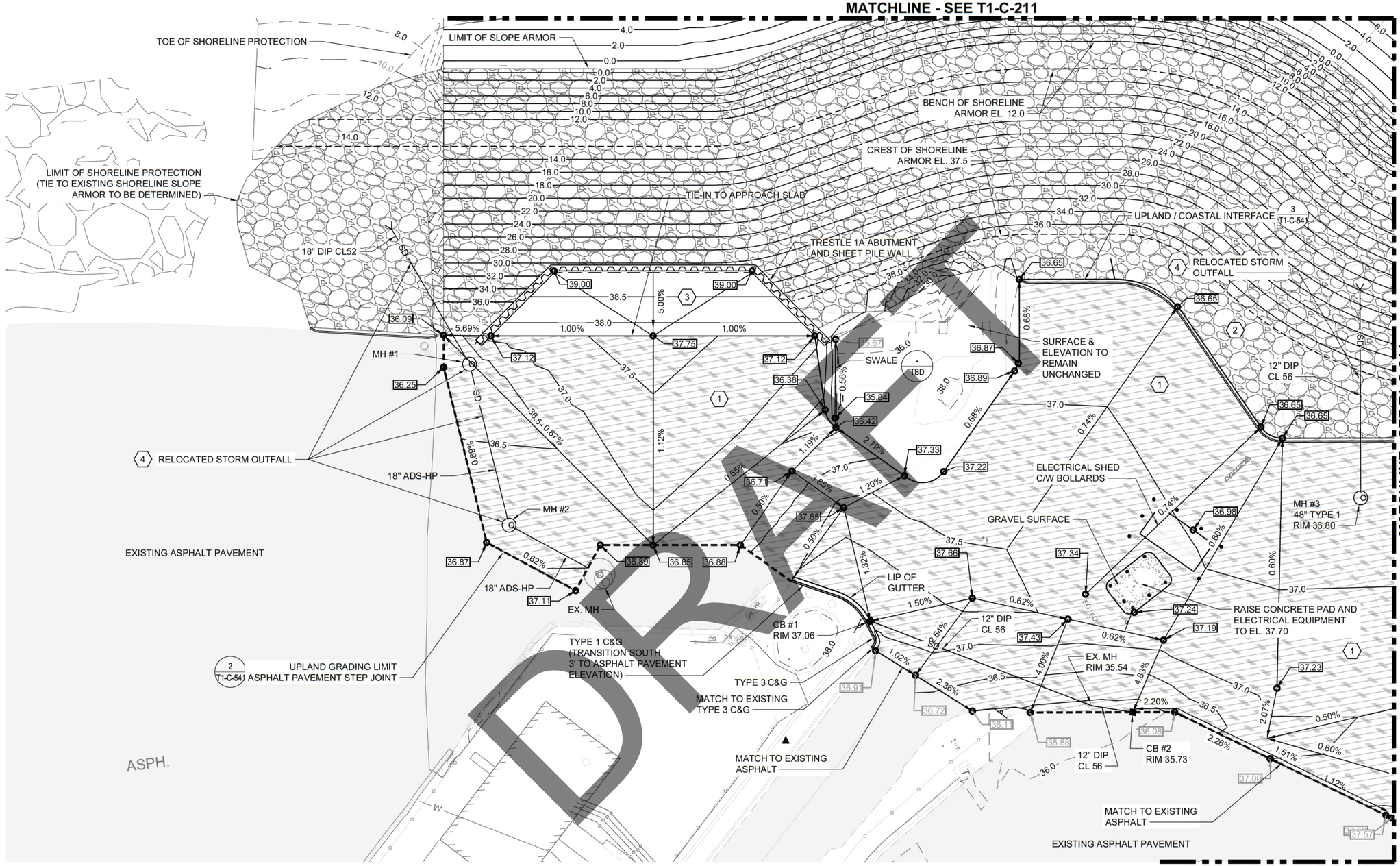


CIVIL GRADING NOTES

1. BREAKLINES ARE CONSIDERED TO HAVE CONSTANT SLOPES BETWEEN ELEVATION POINTS.
2. FOR EXISTING CIVIL LEGEND, REFER TO DRAWING T1-V-002
3. FOR PROPOSED CIVIL LEGEND, REFER TO DRAWING T1-C-001

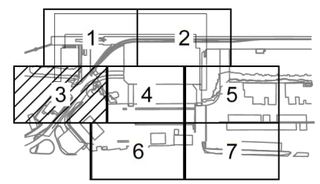
SHEET KEYNOTES

1. FOR UPLAND PAVEMENT DETAILS SEE DRAWING T1-C-541.
2. FOR COASTAL SHORE ARMOR, REFER TO DRAWINGS T1-C-251, T1-C-351 & T1-C-551
3. FOR STRUCTURAL ABUTMENT, APPROACH SLAB AND SHEET PILE, REFER TO DRAWINGS T1-S-718 & T1-S-719
4. FOR STORM SYSTEM DRAINAGE DETAILS, REFER TO DRAWINGS T1-C-811 & T1-C-812

GRADING LEGEND

- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- EXISTING SURFACE ELEVATION
- EXISTING SURFACE SLOPE
- MAJOR CONTOUR
- MINOR CONTOUR
- SURFACE ELEVATION
- SURFACE SLOPE
- STORM DRAIN PIPE
- STORM DRAIN OUTFALL
- STORM DRAIN MANHOLE
- STORM DRAIN CATCHBASIN
- ASPHALT PAVEMENT
- INFILL AREA
- SHORE ARMOR
- GRAVEL SURFACE
- CONCRETE PAD
- ASPHALT JOINT
- BOLLARD
- GUARDRAIL

MATCHLINE - SEE T1-C-214



KEY PLAN

1" = 20' scale

20 0 20 40 feet

65% SUBMITTAL

GRADING & DRAINAGE PLAN - UPLAND

SCALE: 1" = 20'

N

VERIFY SCALES
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0 1"
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REV	DATE	DESCRIPTION	BY	APVD

REVISIONS

GHD-WSP JV
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ANCHORAGE, ALASKA 99503
AK ENGINEERING LICENSE # 197742(GHD) - AECC236(WSP) *AK BUSINESS LICENSE # 2164152(GHD) - 1113511(WSP)*

DSGN	DR	CHK	APVD
AEM	DJW	AWC	VHN

CONSULTANT

SEAL

PORT of ALASKA

PORT OF ALASKA MODERNIZATION PROGRAM

CIVIL

GRADING & DRAINAGE
UPLAND (1 OF 5)

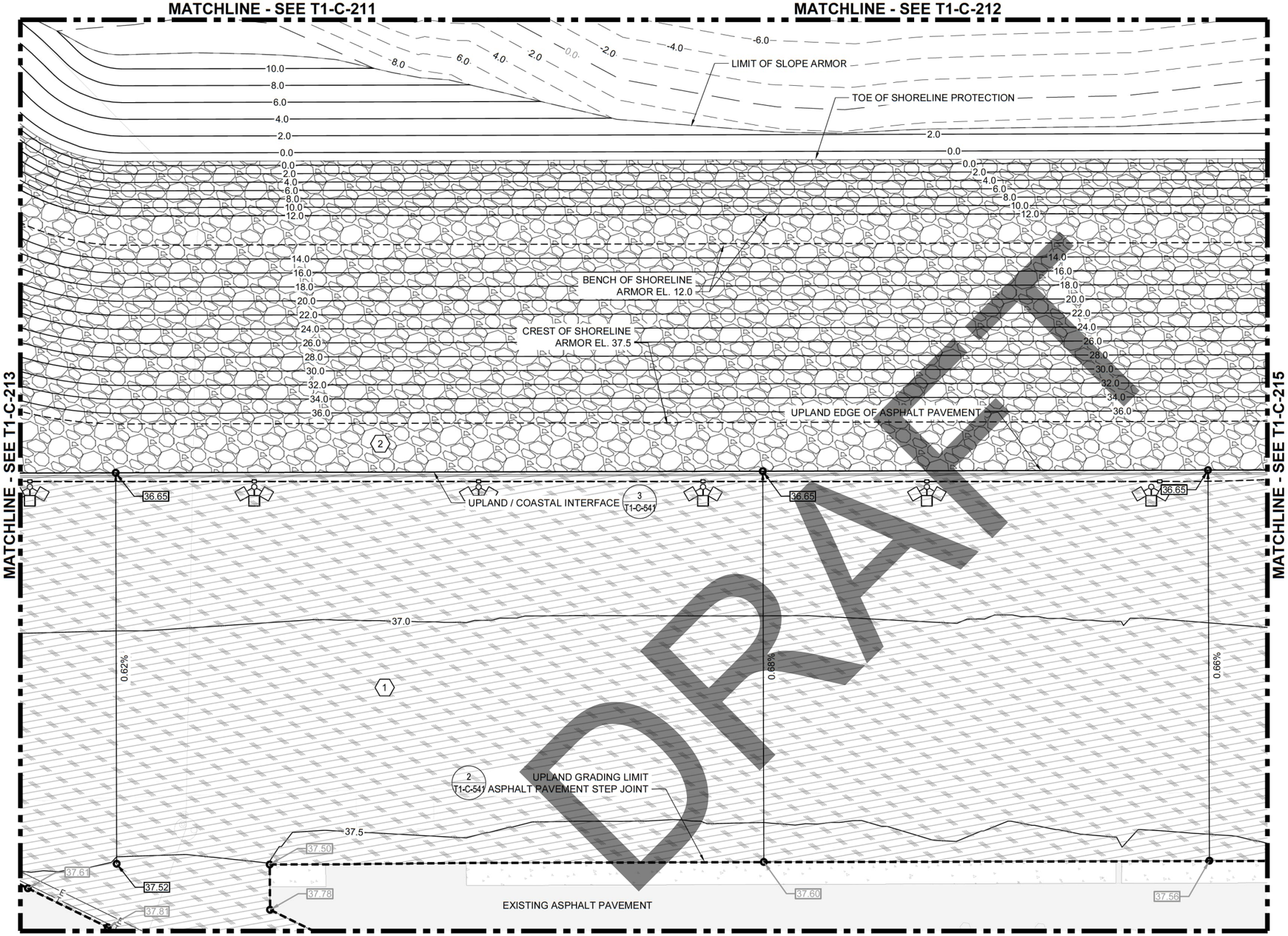
PORT OF ALASKA

PORT OF ALASKA MODERNIZATION PROGRAM
CARGO TERMINAL 1 DESIGN
ANCHORAGE, ALASKA

HORIZ SCALE: 1"=20'	DATE: SEPT. 1, 2023	T1-C-213
VERT SCALE:	SHEET: OF	

PRELIMINARY. NOT FOR USE IN DEVELOPING CONSTRUCTION BIDS

Last Saved by: Darmstrong2 on: Nov 14, 2023 1:14 PM File: C:\Users\darmstrong2\DC\ACCDocs\GHD Services Pty Ltd\12609997 - POA-Terminal Replacement\Project Files\01 WIP\Dwgs\06_T1-C-213.dwg



GRADING & DRAINAGE PLAN - UPLAND

SCALE: 1" = 20'

CIVIL GRADING NOTES

1. BREAKLINES ARE CONSIDERED TO HAVE CONSTANT SLOPES BETWEEN ELEVATION POINTS.
2. FOR EXISTING CIVIL LEGEND, REFER TO DRAWING T1-V-002
3. FOR PROPOSED CIVIL LEGEND, REFER TO DRAWING T1-C-001

SHEET KEYNOTES

1. FOR UPLAND PAVEMENT DETAILS SEE DRAWING T1-C-541.
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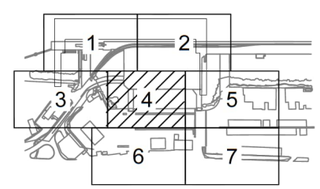
4. FOR STORM SYSTEM DRAINAGE DETAILS, REFER TO DRAWINGS T1-C-811 & T1-C-812

GRADING LEGEND

- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- EXISTING SURFACE ELEVATION
- EXISTING SURFACE SLOPE
- MAJOR CONTOUR
- MINOR CONTOUR
- SURFACE ELEVATION
- SURFACE SLOPE
- STORM DRAIN PIPE
- STORM DRAIN OUTFALL
- STORM DRAIN MANHOLE
- STORM DRAIN CATCHBASIN
- ASPHALT PAVEMENT
- INFILL AREA
- SHORE ARMOR
- GRAVEL SURFACE
- CONCRETE PAD
- ASPHALT JOINT
- BOLLARD
- GUARDRAIL



KEY PLAN

1" = 20' scale: 20 0 20 40 feet

65% SUBMITTAL

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REV	DATE	DESCRIPTION	BY	APVD

REVISIONS

GHD-WSP JV
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ANCHORAGE, ALASKA 99503
AK ENGINEERING LICENSE # 197742(GHD) - AECC236(WSP)
AK BUSINESS LICENSE # 2164152(GHD) - 1113511(WSP)

DSGN	DR	CHK	APVD
AEM	DJW	AWC	VHN

CONSULTANT

SEAL

CIVIL

GRADING & DRAINAGE
UPLAND (2 OF 5)

PORT OF ALASKA

PORT OF ALASKA MODERNIZATION PROGRAM
CARGO TERMINAL 1 DESIGN
ANCHORAGE, ALASKA

HORIZ SCALE: 1"=20'
VERT SCALE:
DATE: SEPT 1, 2023
SHEET: OF

T1-C-214

PRELIMINARY. NOT FOR USE IN DEVELOPING CONSTRUCTION BIDS

MATCHLINE - SEE T1-C-212

MATCHLINE - SEE T1-C-214

TOE OF SHORELINE PROTECTION

LIMIT OF SLOPE ARMOR

BENCH OF SHORELINE ARMOR EL. 12.0

TRESTLE 1B ABUTMENT AND SHEET PILE WALL

TIE-IN TO APPROACH SLAB

CREST OF SHORELINE ARMOR EL. 37.5

LIMIT OF SHORELINE PROTECTION (TIE TO EXISTING SHORELINE SLOPE ARMOR TO BE DETERMINED)

GUARD RAIL (TYP.)

GUARD RAIL (TYP.)

UPLAND / COASTAL INTERFACE 3 T1-C-541

UPLAND GRADING LIMIT 2 ASPHALT PAVEMENT STEP JOINT T1-C-541

UPLAND GRADING LIMIT 2 T1-C-541 ASPHALT PAVEMENT STEP JOINT

EXISTING ASPHALT PAVEMENT

EXISTING ASPHALT PAVEMENT

MATCHLINE - SEE T1-C-217

GRADING & DRAINAGE PLAN - UPLAND

SCALE: 1" = 20'

CIVIL GRADING NOTES

1. BREAKLINES ARE CONSIDERED TO HAVE CONSTANT SLOPES BETWEEN ELEVATION POINTS.
2. FOR EXISTING CIVIL LEGEND, REFER TO DRAWING T1-V-002
3. FOR PROPOSED CIVIL LEGEND, REFER TO DRAWING T1-C-001

SHEET KEYNOTES

1. FOR UPLAND PAVEMENT DETAILS SEE DRAWING T1-C-541.
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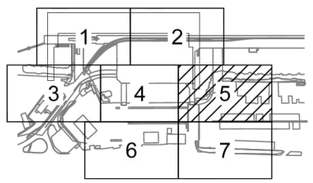
3. FOR STRUCTURAL ABUTMENT, APPROACH SLAB AND SHEET PILE, REFER TO DRAWINGS T1-S-718 & T1-S-719
4. FOR STORM SYSTEM DRAINAGE DETAILS, REFER TO DRAWINGS T1-C-811 & T1-C-812

GRADING LEGEND

- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- EXISTING SURFACE ELEVATION
- EXISTING SURFACE SLOPE
- MAJOR CONTOUR
- MINOR CONTOUR
- SURFACE ELEVATION
- SURFACE SLOPE
- STORM DRAIN PIPE
- STORM DRAIN OUTFALL
- STORM DRAIN MANHOLE
- STORM DRAIN CATCHBASIN
- ASPHALT PAVEMENT
- INFILL AREA
- SHORE ARMOR
- GRAVEL SURFACE
- CONCRETE PAD
- ASPHALT JOINT
- BOLLARD
- GUARDRAIL



KEY PLAN

1" = 20' scale 20 0 20 40 feet

65% SUBMITTAL

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REV	DATE	DESCRIPTION	BY	APVD

REVISIONS

GHD-WSP JV
1400 W. BENSON BLVD, SUITE 400
ANCHORAGE, ALASKA 99503
AK ENGINEERING LICENSE # 197742(GHD) - AECC236(WSP)
AK BUSINESS LICENSE # 2164152(GHD) - 1113511(WSP)

DSGN	DR	CHK	APVD
AEM	DJW	AWC	VHN

CONSULTANT

SEAL

CIVIL

GRADING & DRAINAGE
UPLAND (3 OF 5)

PORT OF ALASKA

PORT OF ALASKA MODERNIZATION PROGRAM
CARGO TERMINAL 1 DESIGN
ANCHORAGE, ALASKA

HORIZ SCALE: 1"=20'
VERT SCALE:
DATE: SEPT 1, 2023
SHEET: OF

T1-C-215

MATCHLINE - SEE T1-C-213

MATCHLINE - SEE T1-C-214

MATCHLINE - SEE T1-C-217

EXISTING ASPHALT PAVEMENT

UPLAND GRADING LIMIT
ASPHALT PAVEMENT STEP JOINT
2 / T1-C-541

ELECTRICAL SUBSTATION
FFE=39.75

1.07%
0.70%
1.86%
1.75%

38.71 38.74 38.47 38.49 38.81 38.92 38.92 39.25 39.25 39.25 39.25 38.06 37.80 37.96 37.91 37.82 37.62 37.58

EXISTING
POA MAINTENANCE GARAGE

EXISTING
POA MAINTENANCE B

BRUSH

STRATION BUILDING

C.O.

GAS

CIVIL GRADING NOTES

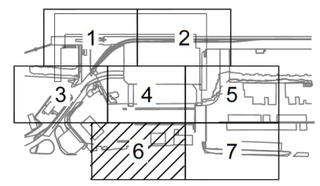
1. BREAKLINES ARE CONSIDERED TO HAVE CONSTANT SLOPES BETWEEN ELEVATION POINTS.
2. FOR EXISTING CIVIL LEGEND, REFER TO DRAWING T1-V-002
3. FOR PROPOSED CIVIL LEGEND, REFER TO DRAWING T1-C-001

SHEET KEYNOTES

1. FOR UPLAND PAVEMENT DETAILS SEE DRAWING T1-C-541.
2. FOR COASTAL SHORE ARMOR, REFER TO DRAWINGS T1-C-251, T1-C-351 & T1-C-551
3. FOR STRUCTURAL ABUTMENT, APPROACH SLAB AND SHEET PILE, REFER TO DRAWINGS T1-S-718 & T1-S-719
4. FOR STORM SYSTEM DRAINAGE DETAILS, REFER TO DRAWINGS T1-C-811 & T1-C-812

GRADING LEGEND

- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- EXISTING SURFACE ELEVATION
- EXISTING SURFACE SLOPE
- MAJOR CONTOUR
- MINOR CONTOUR
- SURFACE ELEVATION
- SURFACE SLOPE
- STORM DRAIN PIPE
- STORM DRAIN OUTFALL
- STORM DRAIN MANHOLE
- STORM DRAIN CATCHBASIN
- ASPHALT PAVEMENT
- INFILL AREA
- SHORE ARMOR
- GRAVEL SURFACE
- CONCRETE PAD
- ASPHALT JOINT
- BOLLARD
- GUARDRAIL



KEY PLAN

1" = 20' scale: 20 0 20 40 feet

65% SUBMITTAL

GRADING & DRAINAGE PLAN - UPLAND

SCALE: 1" = 20'

VERIFY SCALES
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0 1"
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REV	DATE	DESCRIPTION	BY	APVD

REVISIONS

GHD-WSP JV
1400 W. BENSON BLVD, SUITE 400
ANCHORAGE, ALASKA 99503
AK ENGINEERING LICENSE # 197742(GHD) - AECC236(WSP)
AK BUSINESS LICENSE # 2164152(GHD) - 1113511(WSP)

DSGN	DR	CHK	APVD
AEM	DJW	AWC	VHN

CONSULTANT

SEAL

CIVIL

GRADING & DRAINAGE
UPLAND (4 OF 5)

PORT OF ALASKA

PORT OF ALASKA MODERNIZATION PROGRAM
CARGO TERMINAL 1 DESIGN
ANCHORAGE, ALASKA

HORIZ SCALE: 1"=20'
VERT SCALE:
DATE: SEPT 1, 2023
SHEET: OF

T1-C-216

PRELIMINARY. NOT FOR USE IN DEVELOPING CONSTRUCTION BIDS

MATCHLINE - SEE T1-C-215

MATCHLINE - SEE T1-C-216

38.0

38.5

38.5

STEVEDORE BUILDING
(BY OTHERS)
(GRADING TBD)

UILDING

CIVIL GRADING NOTES

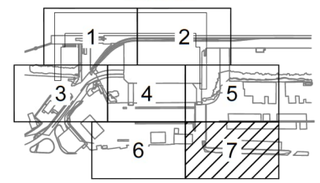
1. BREAKLINES ARE CONSIDERED TO HAVE CONSTANT SLOPES BETWEEN ELEVATION POINTS.
2. FOR EXISTING CIVIL LEGEND, REFER TO DRAWING T1-V-002
3. FOR PROPOSED CIVIL LEGEND, REFER TO DRAWING T1-C-001
4. STEVEDORE BUILDING LOCATION AND FOOTPRINT TO BE DETERMINED.

SHEET KEYNOTES

1. FOR UPLAND PAVEMENT DETAILS SEE DRAWING T1-C-541.
2. FOR COASTAL SHORE ARMOR, REFER TO DRAWINGS T1-C-251, T1-C-351 & T1-C-551
3. FOR STRUCTURAL ABUTMENT, APPROACH SLAB AND SHEET PILE, REFER TO DRAWINGS T1-S-718 & T1-S-719
4. FOR STORM SYSTEM DRAINAGE DETAILS, REFER TO DRAWINGS T1-C-811 & T1-C-812

GRADING LEGEND

- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- EXISTING SURFACE ELEVATION
- EXISTING SURFACE SLOPE
- MAJOR CONTOUR
- MINOR CONTOUR
- SURFACE ELEVATION
- SURFACE SLOPE
- STORM DRAIN PIPE
- STORM DRAIN OUTFALL
- STORM DRAIN MANHOLE
- STORM DRAIN CATCHBASIN
- ASPHALT PAVEMENT
- INFILL AREA
- SHORE ARMOR
- GRAVEL SURFACE
- CONCRETE PAD
- ASPHALT JOINT
- BOLLARD
- GUARDRAIL



KEY PLAN

1" = 20' scale: 20 0 20 40 feet

65% SUBMITTAL

GRADING & DRAINAGE PLAN - UPLAND

SCALE: 1" = 20'

N

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

REV	DATE	DESCRIPTION	BY	APVD

REVISIONS

GHD-WSP JV
1400 W. BENSON BLVD, SUITE 400
ANCHORAGE, ALASKA 99503
AK ENGINEERING LICENSE # 197742(GHD) - AECC236(WSP)
AK BUSINESS LICENSE # 2164152(GHD) - 1113511(WSP)

DSGN	DR	CHK	APVD
AEM	DJW	AWC	VHN

CONSULTANT

SEAL

CIVIL

GRADING & DRAINAGE
UPLAND (5 OF 5)

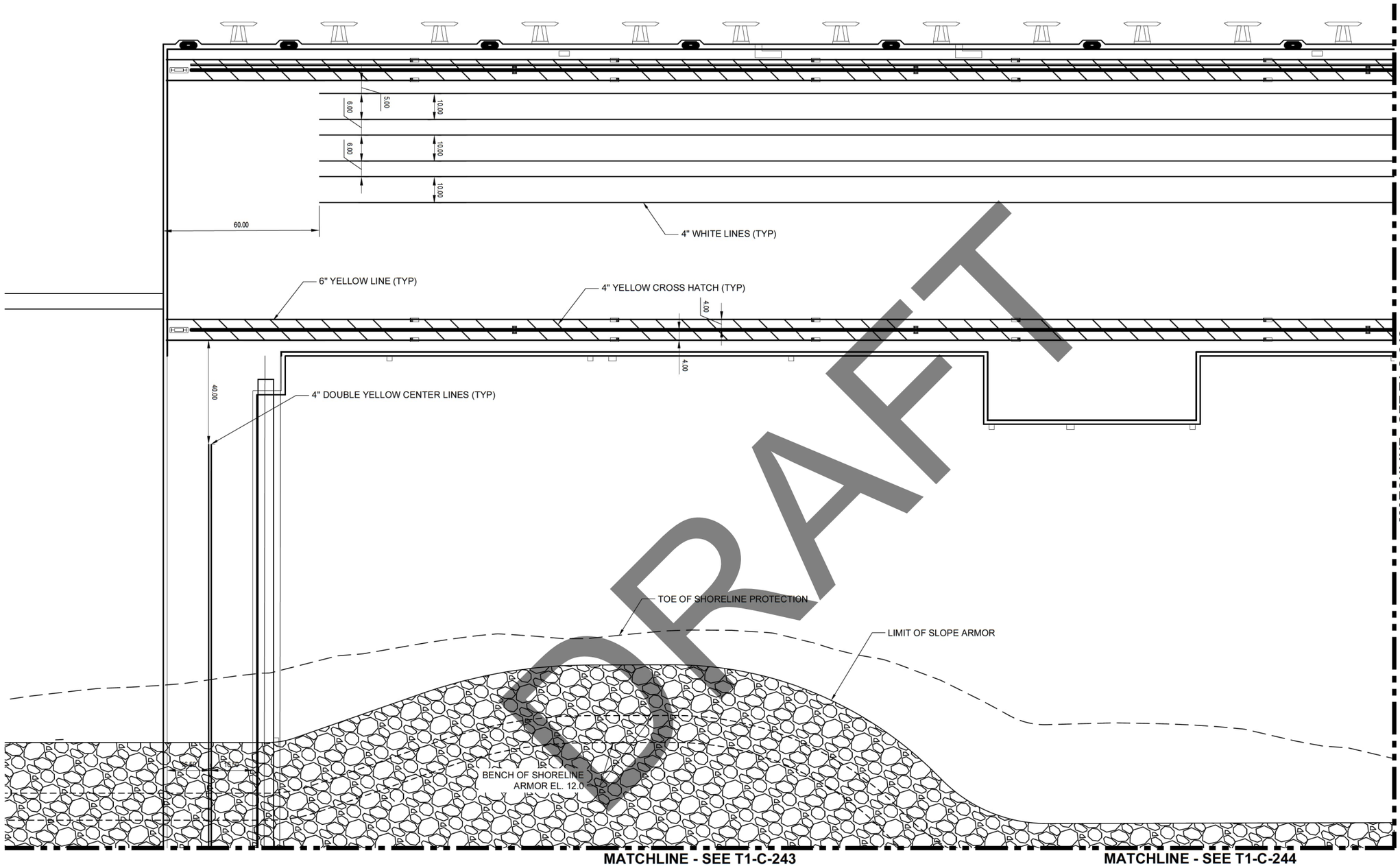
PORT OF ALASKA

PORT OF ALASKA MODERNIZATION PROGRAM
CARGO TERMINAL 1 DESIGN
ANCHORAGE, ALASKA

HORIZ SCALE: 1"=20'
VERT SCALE:
DATE: SEPT 1, 2023
SHEET: OF

T1-C-217

PRELIMINARY. NOT FOR USE IN DEVELOPING CONSTRUCTION BIDS

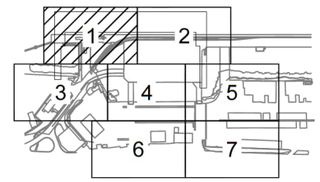


GENERAL NOTES

REFER TO U.S. DEPARTMENT OF TRANSPORTATION MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUCTD) FOR PAVEMENT MARKINGS.

PAVEMENT MARKINGS LEGEND

- SOLID LANE MARKING
- PRECAST CONCRETE WHEEL STOP
- DASHED LANE MARKING
- PAINTED YIELD MARKING (YIELD)
- NO ACCESS OR CRANE RAIL EXCLUSION AREA
- CROSS WALK MARKING
- ACCESSIBLE PARKING SPACE
- TRAFFIC SIGN



KEY PLAN

STRIPING PLAN - WHARF

SCALE: 1" = 20'

1" = 20' (20 0 20 40 scale feet)

65% SUBMITTAL

VERIFY SCALES
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0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

REV	DATE	DESCRIPTION	BY	APVD

REVISIONS

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AK ENGINEERING LICENSE # 197742(GHD) - AECC236(WSP)
AK BUSINESS LICENSE # 2164152(GHD) - 1113511(WSP)

DSGN	DR	CHK	APVD
AEM	DJW	AWC	VHN

CONSULTANT

SEAL

CIVIL

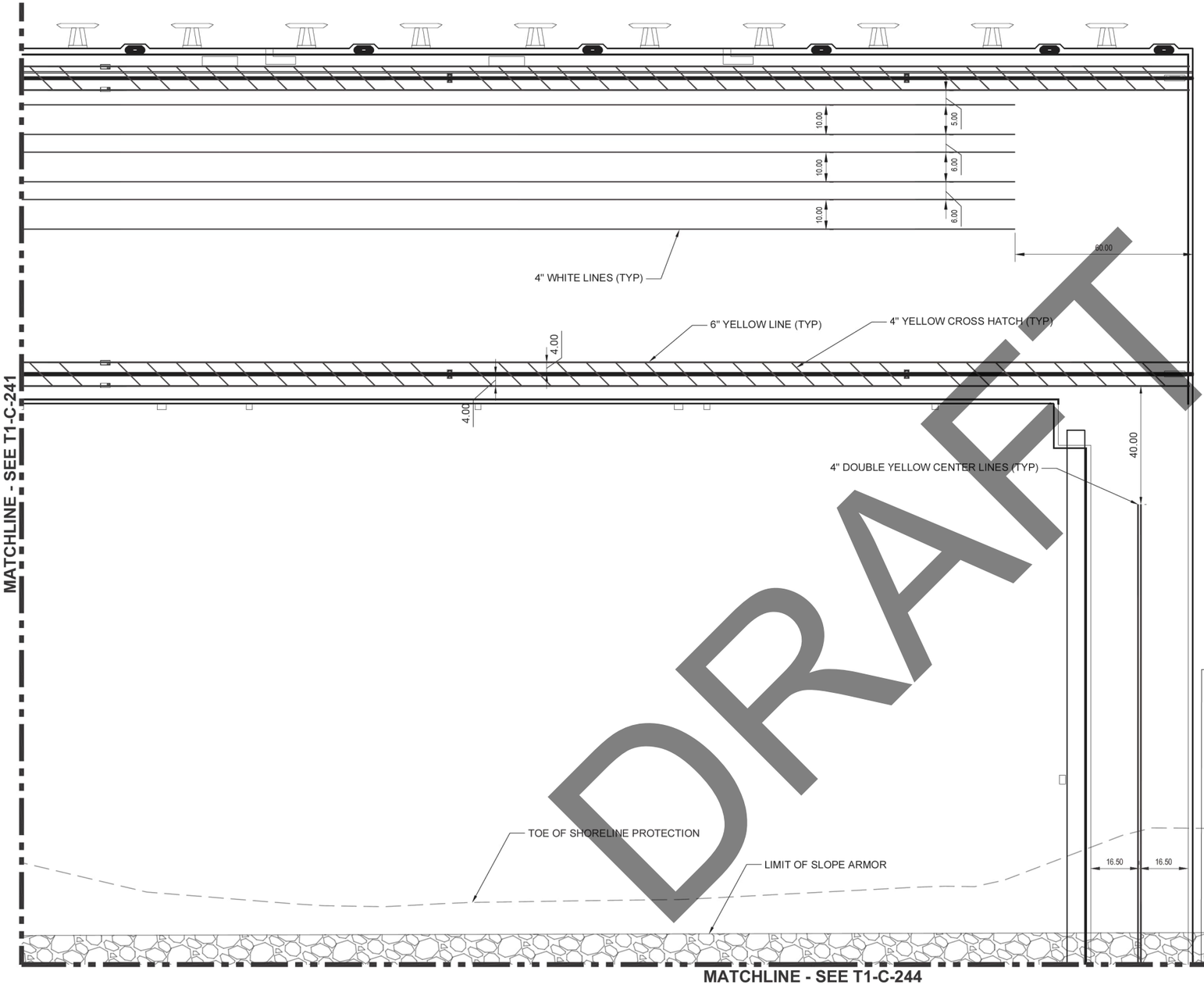
STRIPING PLAN
WHARF (1 OF 2)

PORT OF ALASKA

PORT OF ALASKA MODERNIZATION PROGRAM
CARGO TERMINAL 1 DESIGN
ANCHORAGE, ALASKA

HORIZ SCALE: 1"=20'	DATE: SEPT 1, 2023	T1-C-241
VERT SCALE:	SHEET: OF	

PRELIMINARY. NOT FOR USE IN DEVELOPING CONSTRUCTION BIDS



GENERAL NOTES

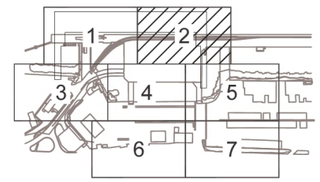
REFER TO U.S. DEPARTMENT OF TRANSPORTATION MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUCTD) FOR PAVEMENT MARKINGS.

PAVEMENT MARKINGS LEGEND

- SOLID LANE MARKING
- PRECAST CONCRETE WHEEL STOP
- DASHED LANE MARKING
- YIELD — PAINTED YIELD MARKING
- NO ACCESS OR CRANE RAIL EXCLUSION AREA
- CROSS WALK MARKING
- ACCESSIBLE PARKING SPACE
- TRAFFIC SIGN

STRIPING PLAN - WHARF

SCALE: 1" = 20'



KEY PLAN

1" = 20' scale: 20 0 20 40 feet

65% SUBMITTAL

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

REV	DATE	DESCRIPTION	BY	APVD

REVISIONS

GHD WSP

GHD-WSP JV
1400 W. BENSON BLVD, SUITE 400
ANCHORAGE, ALASKA 99503
AK ENGINEERING LICENSE # 197742(GHD) - AECC236(WSP)
AK BUSINESS LICENSE # 2164152(GHD) - 1113511(WSP)

DSGN	DR	CHK	APVD
AEM	DJW	AWC	VHN

CONSULTANT

SEAL

PORT of ALASKA

PORT OF ALASKA MODERNIZATION PROGRAM

CIVIL

STRIPING PLAN
WHARF (2 OF 2)

PORT OF ALASKA

PORT OF ALASKA MODERNIZATION PROGRAM
CARGO TERMINAL 1 DESIGN
ANCHORAGE, ALASKA

HORIZ SCALE: 1"=20'
VERT SCALE:
DATE: SEPT 1, 2023
SHEET: OF

T1-C-242

PRELIMINARY. NOT FOR USE IN DEVELOPING CONSTRUCTION BIDS

MATCHLINE - SEE T1-C-241

TOE OF SHORELINE PROTECTION

LIMIT OF SLOPE ARMOR

BENCH OF SHORELINE ARMOR EL. 12.0

16.50 16.50

TERMINAL 1 TRESTLE 1A AND ABUTMENT (REFER TO STRUCTURAL DRAWINGS)

CREST OF SHORELINE PROTECTION

6 PARKING SPOTS C/W WHEEL STOPS

24" WHITE STOP BAR

4" DOUBLE YELLOW CENTER LINES (TYP)

RA-1

STOP

SD

6" YELLOW SOLID DOUBLE CENTERLINE

RA-2

EXISTING ASPHALT PAVEMENT

RA-1

4" DOUBLE YELLOW CENTER LINES (TYP)

6" SOLID WHITE LANE MARKING

13.17

EXISTING ASPHALT PAVEMENT

MATCHLINE - SEE T1-C-244

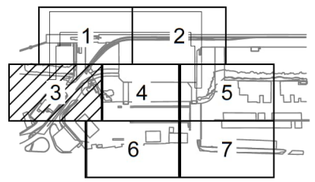
MATCHLINE - SEE T1-C-246

GENERAL NOTES

REFER TO U.S. DEPARTMENT OF TRANSPORTATION MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUCTD) FOR PAVEMENT MARKINGS.

PAVEMENT MARKINGS LEGEND

- SOLID LANE MARKING
- PRECAST CONCRETE WHEEL STOP
- DASHED LANE MARKING
- PAINTED YIELD MARKING (YIELD)
- NO ACCESS OR CRANE RAIL EXCLUSION AREA
- CROSS WALK MARKING
- ACCESSIBLE PARKING SPACE
- TRAFFIC SIGN



KEY PLAN

1" = 20' scale: 20 0 20 40 feet

65% SUBMITTAL

PAVING, STRIPING & SIGNAGE PLAN - UPLAND

SCALE: 1" = 20'

VERIFY SCALES

BAR IS ONE INCH ON ORIGINAL DRAWING

0 1"

IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

REV	DATE	DESCRIPTION	BY	APVD

REVISIONS

GHD-WSP JV
1400 W. BENSON BLVD, SUITE 400
ANCHORAGE, ALASKA 99503
AK ENGINEERING LICENSE # 197742(GHD) - AECC236(WSP)
AK BUSINESS LICENSE # 2164152(GHD) - 1113511(WSP)

DSGN	DR	CHK	APVD
AEM	DJW	AWC	VHN

CONSULTANT

SEAL

CIVIL

PAVING, STRIPING & SIGNAGE PLAN UPLAND (1 OF 5)

PORT OF ALASKA

PORT OF ALASKA MODERNIZATION PROGRAM

CARGO TERMINAL 1 DESIGN

ANCHORAGE, ALASKA

HORIZ SCALE: 1"=20'
VERT SCALE:

DATE: SEPT 1, 2023
SHEET: OF

T1-C-243

PRELIMINARY. NOT FOR USE IN DEVELOPING CONSTRUCTION BIDS

MATCHLINE - SEE T1-C-241

MATCHLINE - SEE T1-C-242

MATCHLINE - SEE T1-C-243

MATCHLINE - SEE T1-C-245

LIMIT OF SLOPE ARMOR

TOE OF SHORELINE PROTECTION

BENCH OF SHORELINE ARMOR EL. 12.0

CREST OF SHORE PROTECTION

UPLAND EDGE OF ASPHALT PAVEMENT

GUARD RAIL (TYP.)

6" SOLID WHITE LANE MARKING

4" DOUBLE YELLOW CENTER LINES (TYP)

11.16

11.84

EXISTING CONCRETE INLAY

UPLAND EDGE OF ASPHALT PAVEMENT

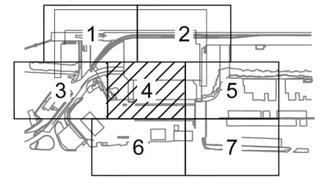
MATCHLINE - SEE T1-C-246

GENERAL NOTES

REFER TO U.S. DEPARTMENT OF TRANSPORTATION MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUCTD) FOR PAVEMENT MARKINGS.

PAVEMENT MARKINGS LEGEND

- SOLID LANE MARKING
- PRECAST CONCRETE WHEEL STOP
- DASHED LANE MARKING
- PAINTED YIELD MARKING (YIELD)
- NO ACCESS OR CRANE RAIL EXCLUSION AREA
- CROSS WALK MARKING
- ACCESSIBLE PARKING SPACE
- TRAFFIC SIGN



KEY PLAN

1" = 20' scale: 20 0 20 40 feet

65% SUBMITTAL

PAVING, STRIPING & SIGNAGE PLAN - UPLAND

SCALE: 1" = 20'

VERIFY SCALES

BAR IS ONE INCH ON ORIGINAL DRAWING

0 1"

IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

REV	DATE	DESCRIPTION	BY	APVD

REVISIONS

GHD-WSP JV
1400 W. BENSON BLVD, SUITE 400
ANCHORAGE, ALASKA 99503
AK ENGINEERING LICENSE # 197742(GHD) - AECC236(WSP)
AK BUSINESS LICENSE # 2164152(GHD) - 1113511(WSP)

DSGN	DR	CHK	APVD
AEM	DJW	AWC	VHN

CONSULTANT

SEAL

PORT of ALASKA

PORT OF ALASKA MODERNIZATION PROGRAM

CIVIL

PAVING, STRIPING, & SIGNAGE PLAN
UPLAND (2 OF 5)

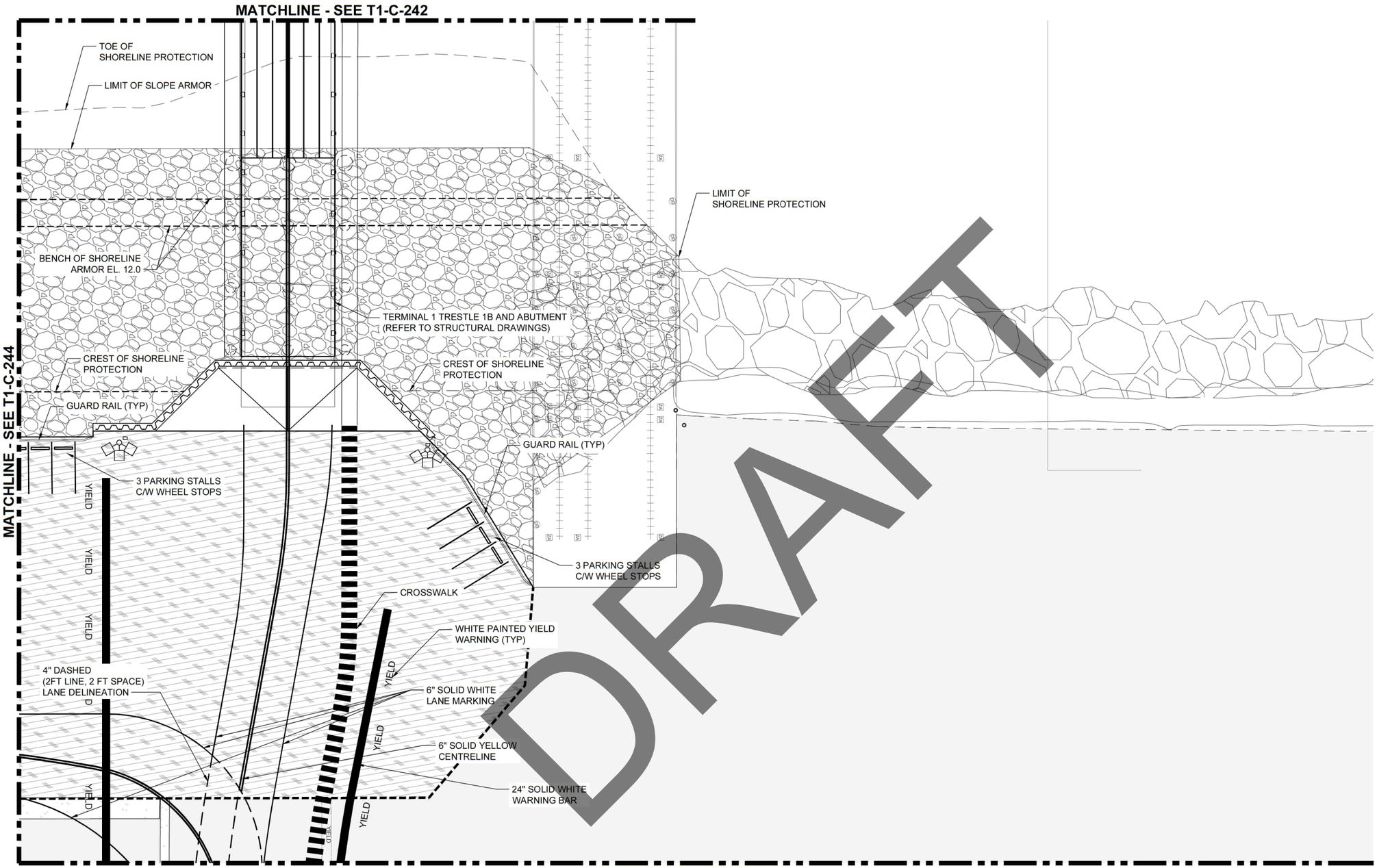
PORT OF ALASKA

PORT OF ALASKA MODERNIZATION PROGRAM
CARGO TERMINAL 1 DESIGN
ANCHORAGE, ALASKA

HORIZ SCALE: 1"=20'
VERT SCALE:
DATE: SEPT 1, 2023
SHEET: OF

T1-C-244

PRELIMINARY. NOT FOR USE IN DEVELOPING CONSTRUCTION BIDS



PAVING, STRIPING & SIGNAGE PLAN - UPLAND

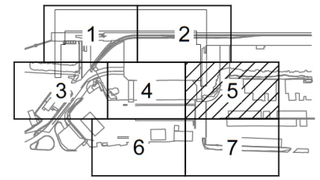
SCALE: 1" = 20'

GENERAL NOTES

REFER TO U.S. DEPARTMENT OF TRANSPORTATION MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUCTD) FOR PAVEMENT MARKINGS.

PAVEMENT MARKINGS LEGEND

- SOLID LANE MARKING
- PRECAST CONCRETE WHEEL STOP
- DASHED LANE MARKING
- PAINTED YIELD MARKING (YIELD)
- NO ACCESS OR CRANE RAIL EXCLUSION AREA
- CROSS WALK MARKING
- ACCESSIBLE PARKING SPACE
- TRAFFIC SIGN



KEY PLAN

1" = 20' scale: 20 0 20 40 feet

65% SUBMITTAL

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

REV	DATE	DESCRIPTION	BY	APVD

REVISIONS

GHD-WSP JV
1400 W. BENSON BLVD, SUITE 400
ANCHORAGE, ALASKA 99503
AK ENGINEERING LICENSE # 197742(GHD) - AECC236(WSP)
AK BUSINESS LICENSE # 2164152(GHD) - 1113511(WSP)

DSGN	DR	CHK	APVD
AEM	DJW	AWC	VHN

CONSULTANT

SEAL

CIVIL

PAVING, STRIPING & SIGNAGE PLAN
UPLAND (3 OF 5)

PORT OF ALASKA

PORT OF ALASKA MODERNIZATION PROGRAM
CARGO TERMINAL 1 DESIGN
ANCHORAGE, ALASKA

HORIZ SCALE: 1"=20'
VERT SCALE:
DATE: SEPT 1, 2023
SHEET: OF

T1-C-245

PRELIMINARY. NOT FOR USE IN DEVELOPING CONSTRUCTION BIDS

Last Saved by: Darmstrong2 on: Nov 13, 2023 3:50 PM File: C:\Users\darmstrong2\DC\ACCDocs\GHD Services Pty Ltd\12609997 - POA-Terminal Replacement\Project Files\01 WIP\Dwgs\06_T1-C-245.dwg

MATCHLINE - SEE T1-C-243

MATCHLINE - SEE T1-C-244

MATCHLINE - SEE T1-C-247

STRATION BUILDING

ELECTRICAL SUBSTATION

EXISTING CONCRETE INLAY

EXISTING
POA MAINTENANCE GARAGE

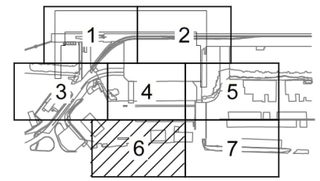
EXISTING
POA MAINTENANCE B

GENERAL NOTES

1. REFER TO U.S. DEPARTMENT OF TRANSPORTATION MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUCTD) FOR PAVEMENT MARKINGS.
2. THERE IS NO STRIPING ON THIS SHEET.

PAVEMENT MARKINGS LEGEND

- SOLID LANE MARKING
- PRECAST CONCRETE WHEEL STOP
- DASHED LANE MARKING
- PAINTED YIELD MARKING (YIELD)
- NO ACCESS OR CRANE RAIL EXCLUSION AREA
- CROSS WALK MARKING
- ACCESSIBLE PARKING SPACE
- TRAFFIC SIGN



KEY PLAN

PAVING, STRIPING & SIGNAGE PLAN - UPLAND

SCALE: 1" = 20'

1" = 20' scale 20 0 20 40 feet

65% SUBMITTAL

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

REV	DATE	DESCRIPTION	BY	APVD

REVISIONS

GHD-WSP JV
1400 W. BENSON BLVD, SUITE 400
ANCHORAGE, ALASKA 99503
AK ENGINEERING LICENSE # 197742(GHD) - AECC236(WSP)
AK BUSINESS LICENSE # 2164152(GHD) - 1113511(WSP)

DSGN	DR	CHK	APVD
AEM	DJW	AWC	VHN

CONSULTANT

SEAL

CIVIL

PAVING, STRIPING & SIGNAGE PLAN
UPLAND (4 OF 5)

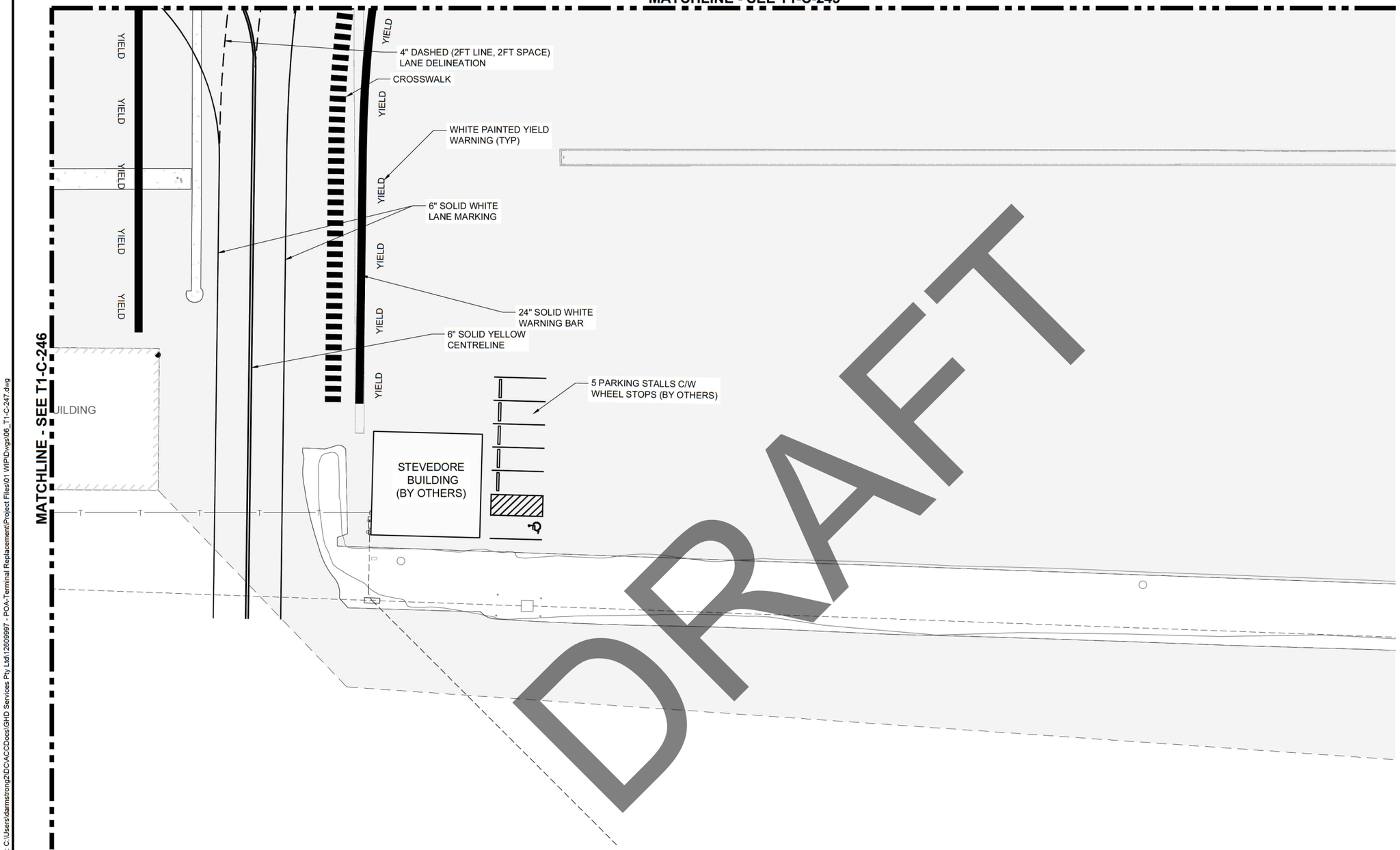
PORT OF ALASKA

PORT OF ALASKA MODERNIZATION PROGRAM
CARGO TERMINAL 1 DESIGN
ANCHORAGE, ALASKA

HORIZ SCALE: 1"=20'
VERT SCALE:
DATE: SEPT 1, 2023
SHEET: OF

T1-C-246

PRELIMINARY. NOT FOR USE IN DEVELOPING CONSTRUCTION BIDS



GENERAL NOTES

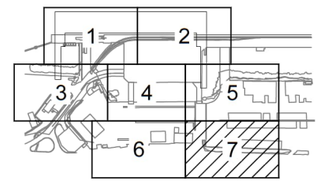
1. REFER TO U.S. DEPARTMENT OF TRANSPORTATION MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUCTD) FOR PAVEMENT MARKINGS.
2. STEVEDORE BUILDING LOCATION AND FOOTPRINT TO BE DETERMINED.

PAVEMENT MARKINGS LEGEND

- SOLID LANE MARKING
- PRECAST CONCRETE WHEEL STOP
- DASHED LANE MARKING
- PAINTED YIELD MARKING (YIELD)
- NO ACCESS OR CRANE RAIL EXCLUSION AREA
- CROSS WALK MARKING
- ACCESSIBLE PARKING SPACE
- TRAFFIC SIGN

PAVING, STRIPING & SIGNAGE PLAN - UPLAND

SCALE: 1" = 20'



KEY PLAN

1" = 20' scale: 20 0 20 40 feet

65% SUBMITTAL

REV	DATE	DESCRIPTION	BY	APVD

REVISIONS

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

GHD-WSP JV
1400 W. BENSON BLVD, SUITE 400
ANCHORAGE, ALASKA 99503
AK ENGINEERING LICENSE # 197742(GHD) - AECC236(WSP)
AK BUSINESS LICENSE # 2164152(GHD) - 1113511(WSP)

DSGN	DR	CHK	APVD
AEM	DJW	AWC	VHN

CONSULTANT

SEAL

PORT of ALASKA

PORT OF ALASKA MODERNIZATION PROGRAM

CIVIL

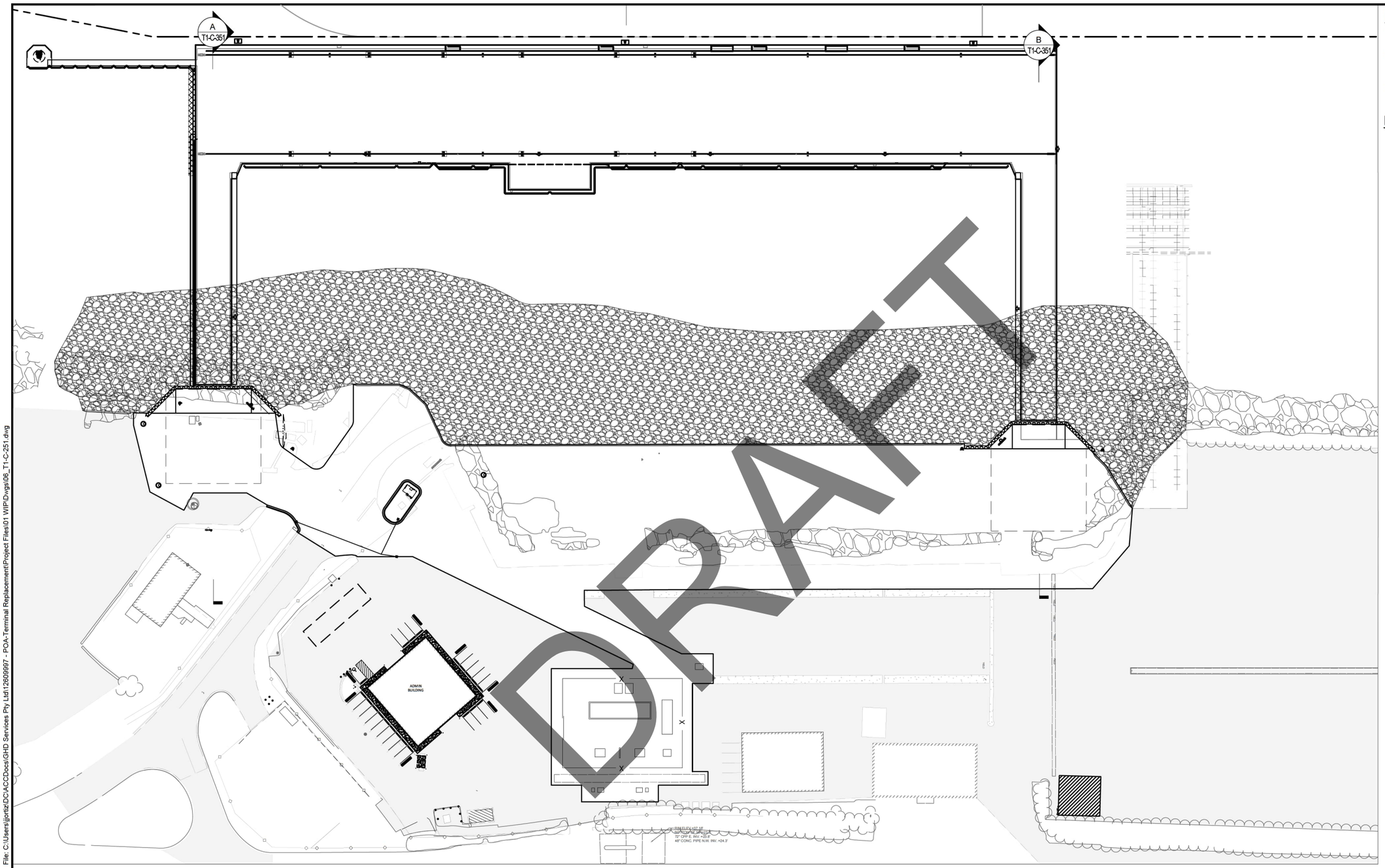
PAVING, STRIPING & SIGNAGE PLAN
UPLAND (5 OF 5)

PORT OF ALASKA

PORT OF ALASKA MODERNIZATION PROGRAM
CARGO TERMINAL 1 DESIGN
ANCHORAGE, ALASKA

HORIZ SCALE: 1"=20'
VERT SCALE:
DATE: OCT. 6, 2023
SHEET: OF
T1-C-247

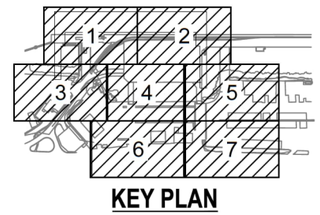
PRELIMINARY. NOT FOR USE IN DEVELOPING CONSTRUCTION BIDS



GENERAL CIVIL NOTES

1. COORDINATE SITE WORKS WITH DEMOLITION DRAWINGS
2. REFER TO UTILITY DRAWING FOR WATER AND FIRE PROTECTION LAYOUT AND DETAILS.
3. REFER TO ELECTRICAL DRAWINGS FOR SUBSTATION AND POWER SUPPLY LAYOUT AND DETAILS.

LEGEND



KEY PLAN

SHORELINE PROTECTION PLAN

SCALE: 1" = 50'

1" = 50' 50 0 50 100 scale feet

65% SUBMITTAL

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

REV	DATE	DESCRIPTION	BY	APVD

REVISIONS

CONSULTANT: wsp | GHD

DSGN	DR	CHK	APVD
	DW		

SEAL

PORT of ALASKA

PORT OF ALASKA MODERNIZATION PROGRAM

CIVIL

SHORELINE PROTECTION PLAN

PORT OF ALASKA

PORT OF ALASKA MODERNIZATION PROGRAM

CARGO TERMINAL 1 DESIGN

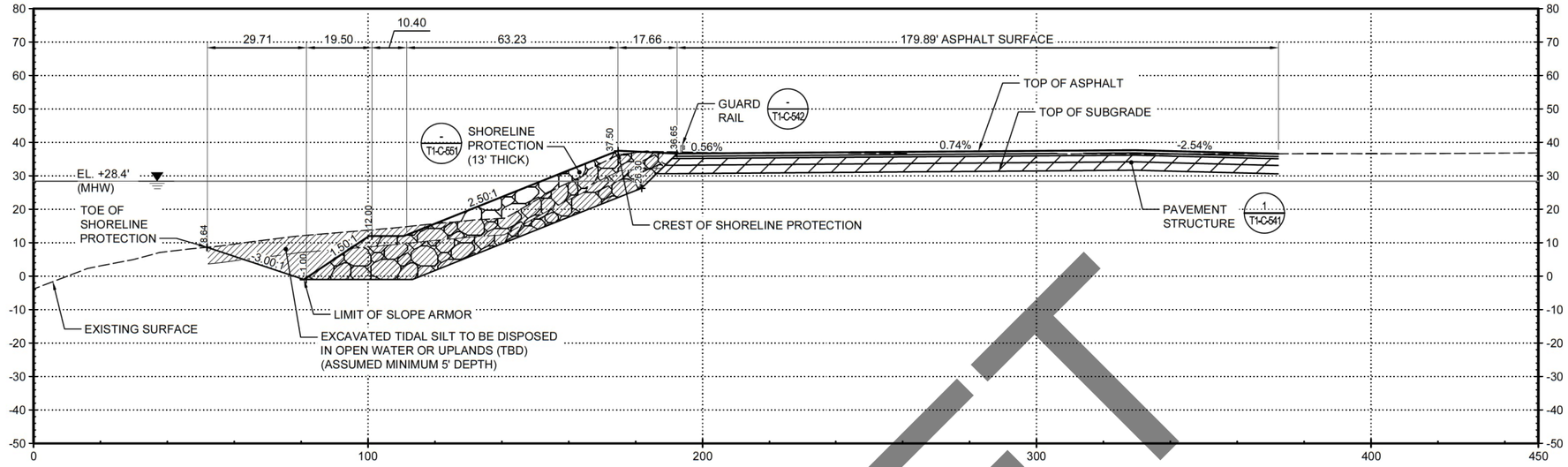
ANCHORAGE, ALASKA

HORIZ SCALE: 1"=50'	DATE: SEPT 1, 2023	T1-C-251
VERT SCALE:	SHEET: OF	

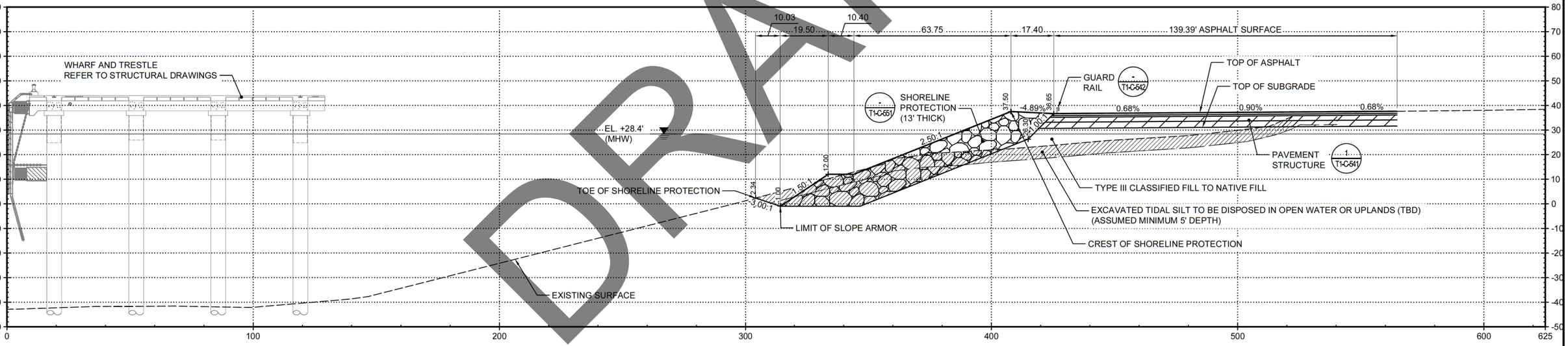
PRELIMINARY. NOT FOR USE IN DEVELOPING CONSTRUCTION BIDS

GENERAL CIVIL NOTES

1. UNSUITABLE MATERIAL (ORGANICS OR SILT) WITHIN THE AREA OF THE SHORELINE INFILL ARE TO BE EXCAVATED, REMOVED, AND DISPOSED.



A UPLAND AND ROAD SECTION
SCALE: 1" = 20' T1-C-200,T1-C-203



B UPLAND EXPANSION SECTION
SCALE: 1" = 20' T1-C-200,T1-C-204

1" = 20' scale 20 0 20 40 feet

65% SUBMITTAL

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

REV	DATE	DESCRIPTION	BY	APVD

REVISIONS

GHD-WSP JV
1400 W. BENSON BLVD, SUITE 400
ANCHORAGE, ALASKA 99503
AK ENGINEERING LICENSE # 197742(GHD) - AECC236(WSP)
AK BUSINESS LICENSE # 2164152(GHD) - 1113511(WSP)

DSGN	DR	CHK	APVD
AEM	DJW	AWC	VHN

CONSULTANT

SEAL

CIVIL

SECTIONS - UPLAND
(1 OF 2)

PORT OF ALASKA

PORT OF ALASKA MODERNIZATION PROGRAM
CARGO TERMINAL 1 DESIGN
ANCHORAGE, ALASKA

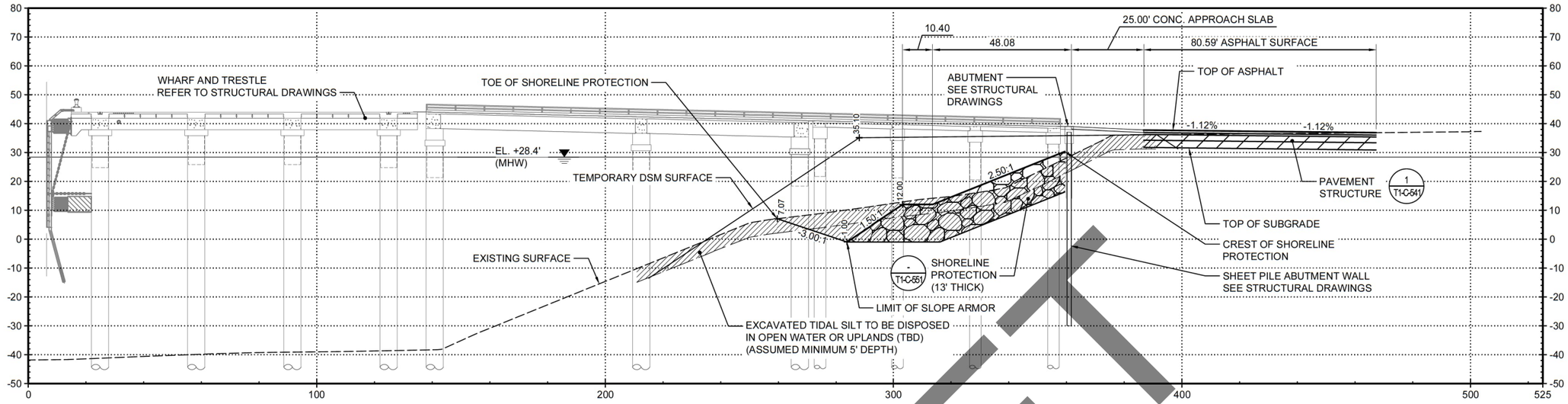
HORIZ SCALE: 1"=20'
VERT SCALE: 1"=20'
DATE: SEPT 1, 2023
SHEET: OF

T1-C-312

PRELIMINARY. NOT FOR USE IN DEVELOPING CONSTRUCTION BIDS

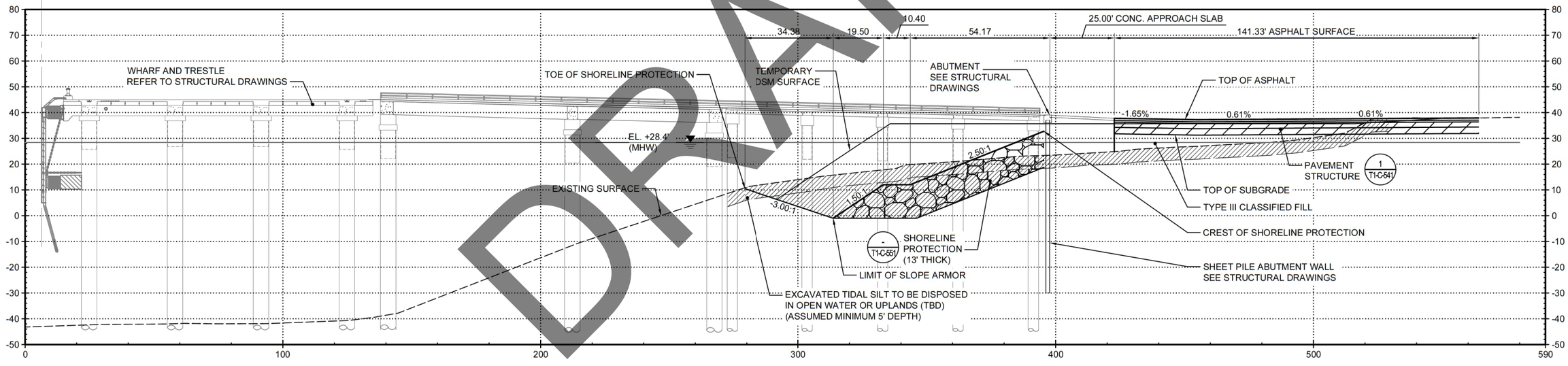
GENERAL CIVIL NOTES

1. UNSUITABLE MATERIAL (ORGANICS OR SILT) WITHIN THE AREA OF THE SHORELINE INFILL ARE TO BE EXCAVATED, REMOVED, AND DISPOSED.



C TRESTLE 1A SECTION

SCALE: 1" = 20' T1-C-200, T1-C-203



D TRESTLE 1B SECTION

SCALE: 1" = 20' T1-C-200, T1-C-205

1" = 20' scale 20 0 20 40 feet

65% SUBMITTAL

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

REV	DATE	DESCRIPTION	BY	APVD

REVISIONS

GHD-WSP JV
1400 W. BENSON BLVD, SUITE 400
ANCHORAGE, ALASKA 99503
AK ENGINEERING LICENSE # 197742(GHD) - AECC236(WSP)
AK BUSINESS LICENSE # 2164152(GHD) - 1113511(WSP)

DSGN	DR	CHK	APVD
AEM	DJW	AWC	VHN

CONSULTANT

SEAL

PORT of ALASKA

PORT OF ALASKA MODERNIZATION PROGRAM

CIVIL

SECTIONS - UPLAND (2 OF 2)

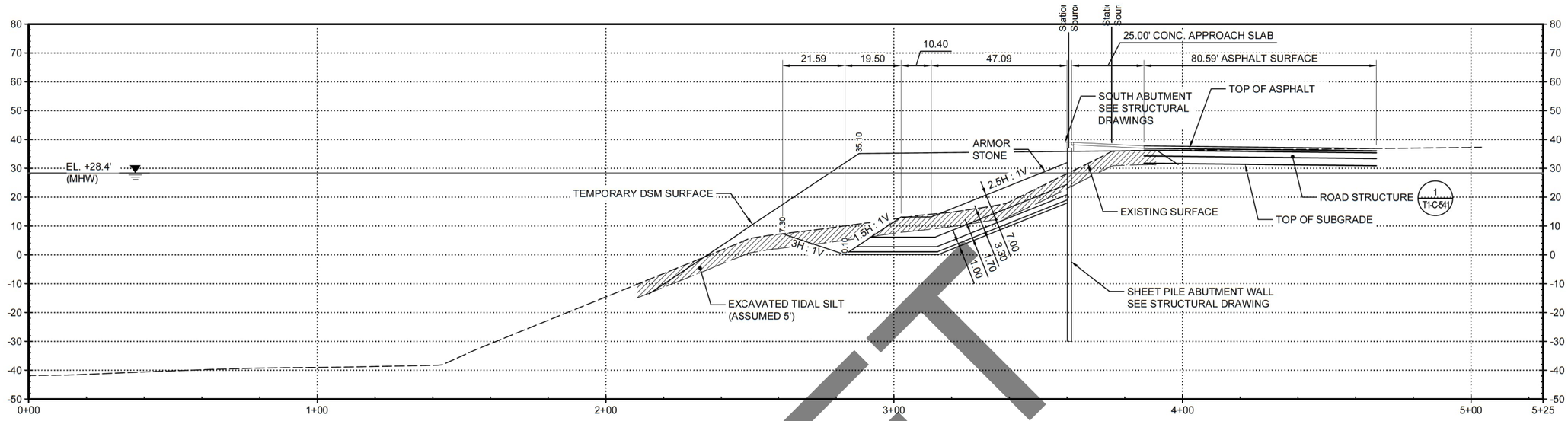
PORT OF ALASKA

PORT OF ALASKA MODERNIZATION PROGRAM
CARGO TERMINAL 1 DESIGN
ANCHORAGE, ALASKA

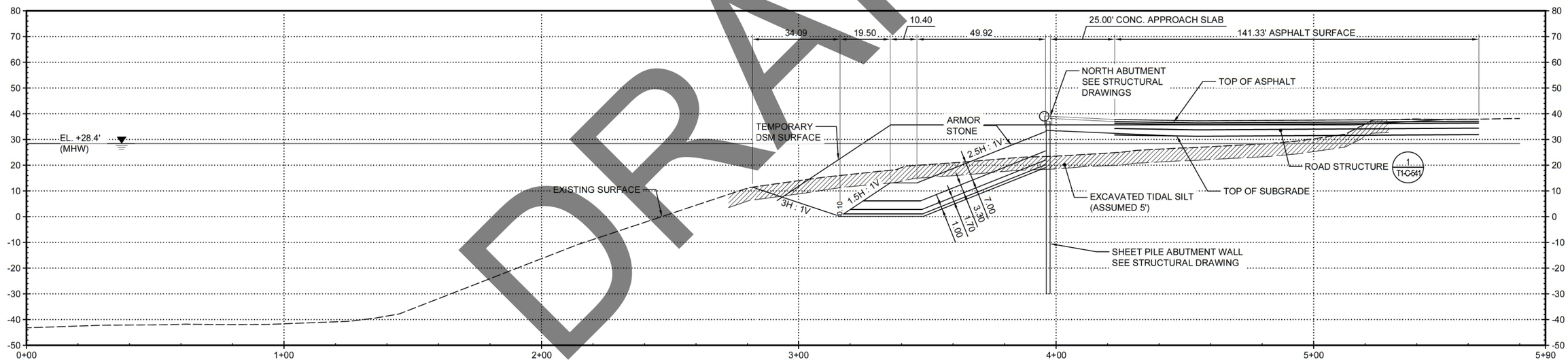
HORIZ SCALE: 1"=20'
VERT SCALE: 1"=20'
DATE: OCT 5, 2023
SHEET: OF

T1-C-313

PRELIMINARY. NOT FOR USE IN DEVELOPING CONSTRUCTION BIDS



A SHORELINE PROTECTION SECTION
SCALE: 1" = 20' T1-C-200



B SHORELINE PROTECTION SECTION
SCALE: 1" = 20' T1-C-200

1" = 20' 20 0 20 40 scale feet

65% SUBMITTAL

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

REV	DATE	DESCRIPTION	BY	APVD

REVISIONS

GHD-WSP JV
1400 W. BENSON BLVD, SUITE 400
ANCHORAGE, ALASKA 99503
AK ENGINEERING LICENSE # 197742(GHD) - AECC236(WSP)
AK BUSINESS LICENSE # 2164152(GHD) - 1113511(WSP)

DSGN	DR	CHK	APVD
AWC	DW	JPL	VN

CONSULTANT

SEAL

CIVIL

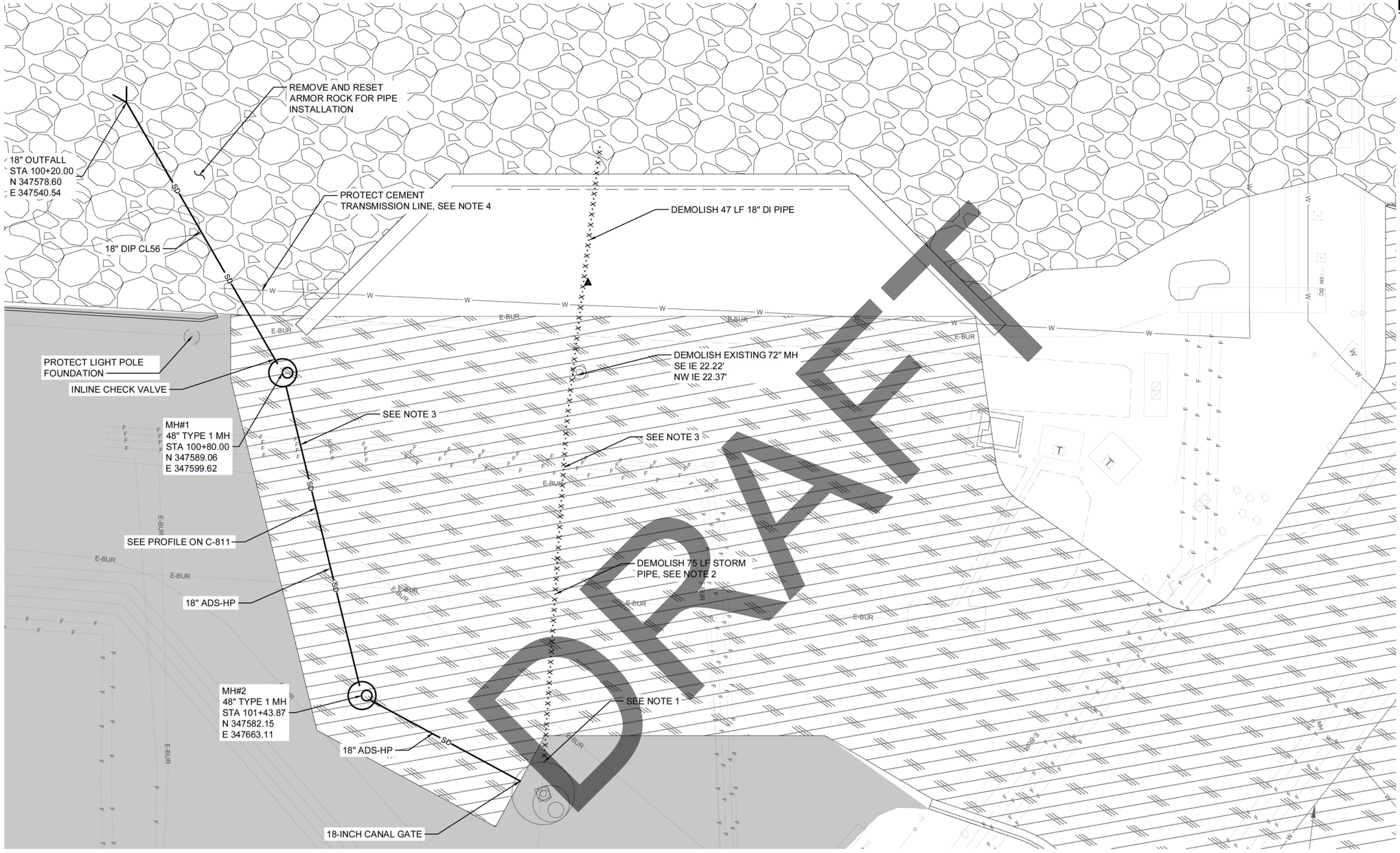
SHORELINE PROTECTION SECTION

PORT OF ALASKA

PORT OF ALASKA MODERNIZATION PROGRAM
CARGO TERMINAL 1 DESIGN
ANCHORAGE, ALASKA

HORIZ SCALE: 1"=20'	DATE: OCT 5, 2023	T1-C-351
VERT SCALE: 1"=20'	SHEET: OF	

PRELIMINARY. NOT FOR USE IN DEVELOPING CONSTRUCTION BIDS



NOTES:

1. REMOVE EXISTING SLIP-LINED 30" CMP AND 18" HDPE PIPE FROM EXISTING MANHOLE. EXISTING MANHOLE PENETRATION MUST BE SEALED AND WATERPROOFED. SEE MANHOLE DETAILS ON C-515.
2. EXISTING PIPE IS A 30" CMP SLIP-LINED WITH A 18" HDPE PIPE WITH THE ANNULAR SPACE FILLED WITH GROUT.
3. (4) 12" FUELS APPROXIMATELY 3.5' FROM SURFACE, MUST BE PROTECTED AND SUPPORTED DURING EXCAVATION FOR REMOVAL AND PLACEMENT OF PIPE AND STRUCTURES.
4. PROVIDE SHORING FOR THE CEMENT LINE AS NECESSARY.

A PLAN - STORMWATER RELOCATION
SCALE: 1" = 10' 1" = 10'
10 0 10 20 scale feet
T1-C-213

65% SUBMITTAL

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

REV	DATE	DESCRIPTION	BY	APVD

REVISIONS

GHD WSP
QHD-WSP JV
1400 W. BENSON BLVD, SUITE 400
ANCHORAGE, ALASKA 99503
AK ENGINEERING LICENSE # 197742(GHD) - AECC236(WSP)
AK BUSINESS LICENSE # 2164152(GHD) - 1113511(WSP)

DSGN	DR	CHK	APVD
XXX	JDM	MM	JRG

CONSULTANT

STATE OF ALASKA 49th REGISTERED PROFESSIONAL ENGINEER 11/15/23
SEAL

PORT of ALASKA

PORT OF ALASKA MODERNIZATION PROGRAM

CIVIL

ENLARGED PLAN - DRAINAGE

PORT OF ALASKA
PORT OF ALASKA MODERNIZATION PROGRAM
CARGO TERMINAL 1 DESIGN
ANCHORAGE, ALASKA

HORIZ SCALE: AS SHOWN
VERT SCALE: AS SHOWN
DATE: 11/17/23
SHEET: 81 OF 420

T1-C-411

PRELIMINARY. NOT FOR USE IN DEVELOPING CONSTRUCTION BIDS

Last Saved by: USJV675558 on: Nov 14, 2023 1:14 PM File: C:\Users\USJV675558\WSP O365\POA Cargo T1 Replacement - Files\CADD\01_Coordination\Dwgs\06_T1-C-411.dwg

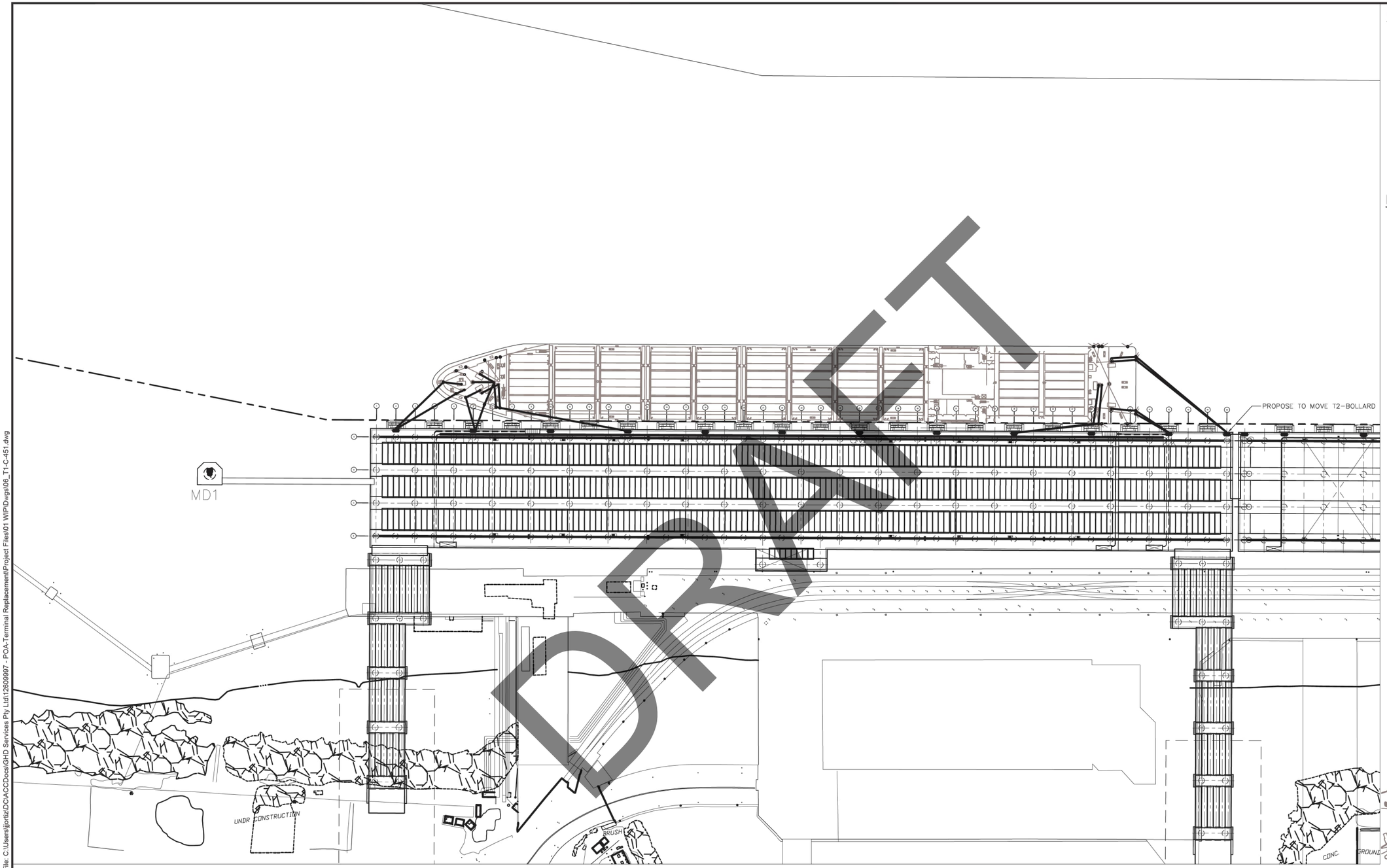
GENERAL CIVIL NOTES

1. WINCHES AND FAIRLEAD LOCATIONS WERE DERIVED FROM SHIP DRAWINGS OF THE MATSON ANCHORAGE.
2. COORDINATE SITE WORKS WITH DEMOLITION DRAWINGS.
3. REFER TO UTILITY DRAWING FOR WATER AND FIRE PROTECTION LAYOUT AND DETAILS.
4. REFER TO ELECTRICAL DRAWINGS FOR SUBSTATION AND POWER SUPPLY LAYOUT AND DETAILS.
5. REFER TO EXISTING LEGEND AND ABBREVIATIONS ON SHEET T1-V-002.
6. REFER TO PROPOSED LEGEND AND ABBRIVATIONS ON SHEET T1-C-001.

LEGEND

FENDERS

BOLLARDS



DRAFT

MOORING ARRANGEMENT TERMINAL 1 - MATSON ANCHORAGE
SCALE: 1" = 50'

1" = 50' 50 0 50 100 scale feet

KEY PLAN

65% SUBMITTAL

Last Saved by: JJortiz on: Nov 8, 2023 5:16 PM File: C:\Users\jjortiz\DC\ACCDocs\GHD Services Pty Ltd\12609997 - POA-Terminal Replacement\Project Files\01 WIP\Dwgs\06_T1-C-451.dwg

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

REV	DATE	DESCRIPTION	BY	APVD

REVISIONS

GHD-WSP JV
1400 W. BENSON BLVD, SUITE 400
ANCHORAGE, ALASKA 99503
AK ENGINEERING LICENSE # 197742(GHD) - AECC236(WSP)
AK BUSINESS LICENSE # 2164152(GHD) - 1113511(WSP)

DSGN	DR	CHK	APVD
AWC	JJO		

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STATE OF ALASKA 49th REGISTERED PROFESSIONAL ENGINEER 11/10/23

SEAL

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CIVIL

MOORING ARRANGEMENT TERMINAL 1 - MATSON ANCHORAGE

PORT OF ALASKA

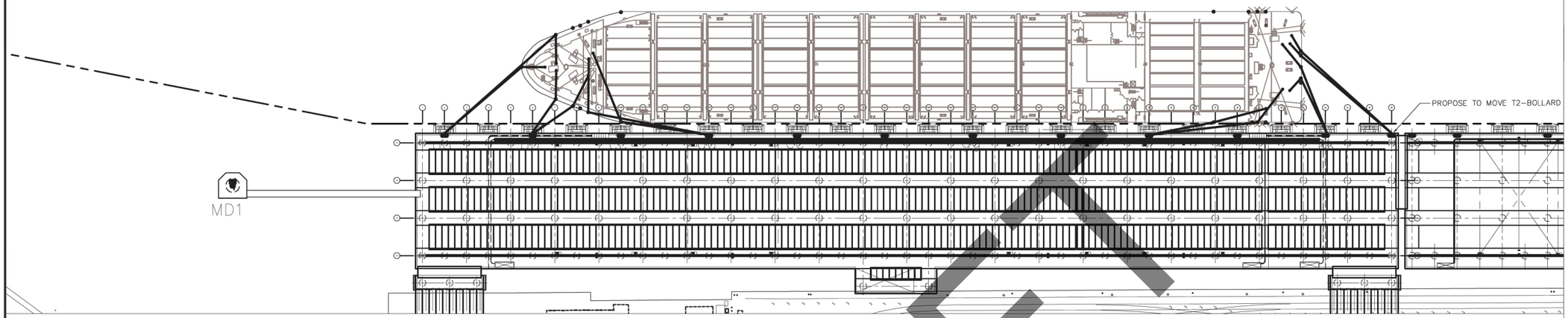
PORT OF ALASKA MODERNIZATION PROGRAM

CARGO TERMINAL 1 DESIGN

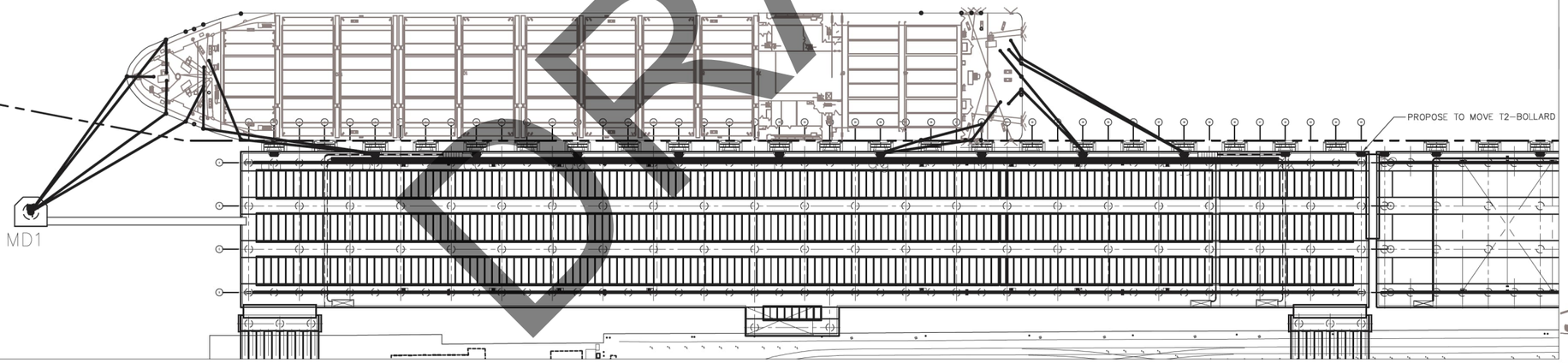
ANCHORAGE, ALASKA

HORIZ SCALE: 1"=50'	DATE: SEPT. 1, 2023	T1-C-451
VERT SCALE:	SHEET: OF	

PRELIMINARY. NOT FOR USE IN DEVELOPING CONSTRUCTION BIDS



NO MOORING DOLPHIN
SCALE: 1" = 50'



WITH MOORING DOLPHIN
SCALE: 1" = 50'

MOORING ARRANGEMENT TERMINAL 1 - MASON MAUNALEI
SCALE: 1" = 50'

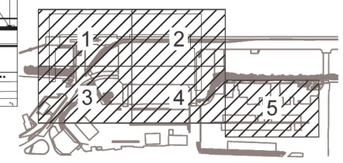
GENERAL CIVIL NOTES

1. WINCHES AND FAIRLEAD LOCATIONS WERE DERIVED FROM SHIP DRAWINGS OF THE MATSON ANCHORAGE.
2. COORDINATE SITE WORKS WITH DEMOLITION DRAWINGS.
3. REFER TO UTILITY DRAWING FOR WATER AND FIRE PROTECTION LAYOUT AND DETAILS.
4. REFER TO ELECTRICAL DRAWINGS FOR SUBSTATION AND POWER SUPPLY LAYOUT AND DETAILS.
5. REFER TO EXISTING LEGEND AND ABBREVIATIONS ON SHEET T1-V-002.
6. REFER TO PROPOSED LEGEND AND ABBRIVATIONS ON SHEET T1-C-001.

LEGEND

FENDERS

BOLLARDS



KEY PLAN

1" = 50' scale: 50 0 50 100 feet

65% SUBMITTAL

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VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

REV	DATE	DESCRIPTION	BY	APVD

REVISIONS

GHD-WSP JV
1400 W. BENSON BLVD, SUITE 400
ANCHORAGE, ALASKA 99503
AK ENGINEERING LICENSE # 197742(GHD) - AECC236(WSP)
AK BUSINESS LICENSE # 2164152(GHD) - 1113511(WSP)

DSGN	DR	CHK	APVD
AWC	JJO		

CONSULTANT

STATE OF ALASKA 49th REGISTERED PROFESSIONAL ENGINEER 11/10/23
SEAL

PORT of ALASKA

PORT OF ALASKA MODERNIZATION PROGRAM

CIVIL

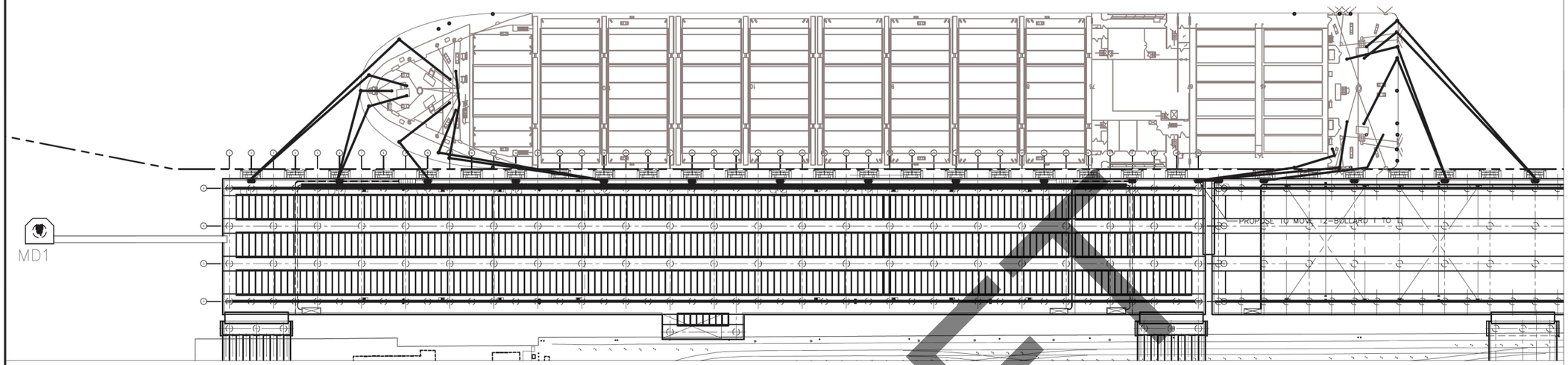
MOORING ARRANGEMENT TERMINAL 1 - MASON MAUNALEI

PORT OF ALASKA

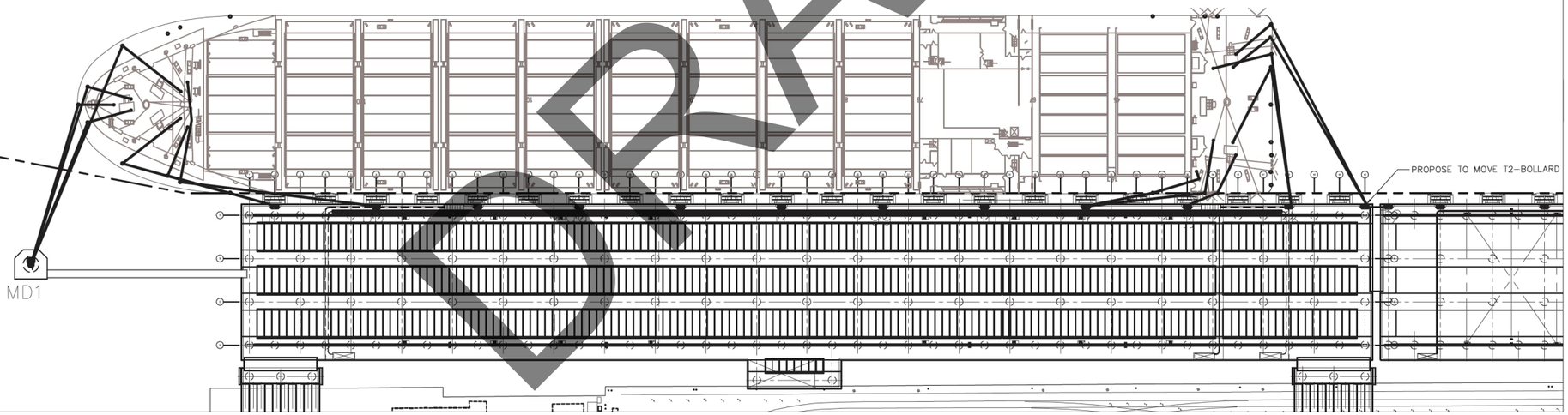
PORT OF ALASKA MODERNIZATION PROGRAM
CARGO TERMINAL 1 DESIGN
ANCHORAGE, ALASKA

HORIZ SCALE: 1"=50'	DATE: SEPT. 1, 2023	T1-C-452
VERT SCALE:	SHEET: OF	

PRELIMINARY. NOT FOR USE IN DEVELOPING CONSTRUCTION BIDS



NO MOORING DOLPHIN
SCALE: 1" = 50'



WITH MOORING DOLPHIN
SCALE: 1" = 50'

MOORING ARRANGEMENT TERMINAL 1 - PROJECTED MATSON SHIP
SCALE: 1" = 50'

GENERAL CIVIL NOTES

1. WINCHES AND FAIRLEAD LOCATIONS WERE DERIVED FROM SHIP DRAWINGS OF THE MATSON ANCHORAGE.
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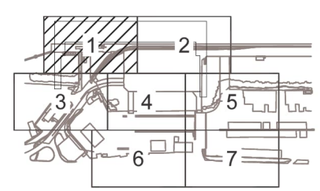
4. REFER TO ELECTRICAL DRAWINGS FOR SUBSTATION AND POWER SUPPLY LAYOUT AND DETAILS.
5. REFER TO EXISTING LEGEND AND ABBREVIATIONS ON SHEET T1-V-002.
6. REFER TO PROPOSED LEGEND AND ABBRIVATIONS ON SHEET T1-C-001.

LEGEND

FENDERS

BOLLARDS



KEY PLAN

1" = 50' scale: 50 0 50 100 feet

65% SUBMITTAL

REV	DATE	DESCRIPTION	BY	APVD

REVISIONS

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

GHD-WSP JV
1400 W. BENSON BLVD, SUITE 400
ANCHORAGE, ALASKA 99503
AK ENGINEERING LICENSE # 197742(GHD) - AECC236(WSP)
AK BUSINESS LICENSE # 2164152(GHD) - 1113511(WSP)

DSGN	DR	CHK	APVD
AWC	JJO		

CONSULTANT

STATE OF ALASKA 49th REGISTERED PROFESSIONAL ENGINEER
11/10/23
SEAL

PORT of ALASKA

PORT OF ALASKA MODERNIZATION PROGRAM

CIVIL

MOORING ARRANGEMENT TERMINAL 1 - PROJECTED MATSON SHIP

PORT OF ALASKA

PORT OF ALASKA MODERNIZATION PROGRAM

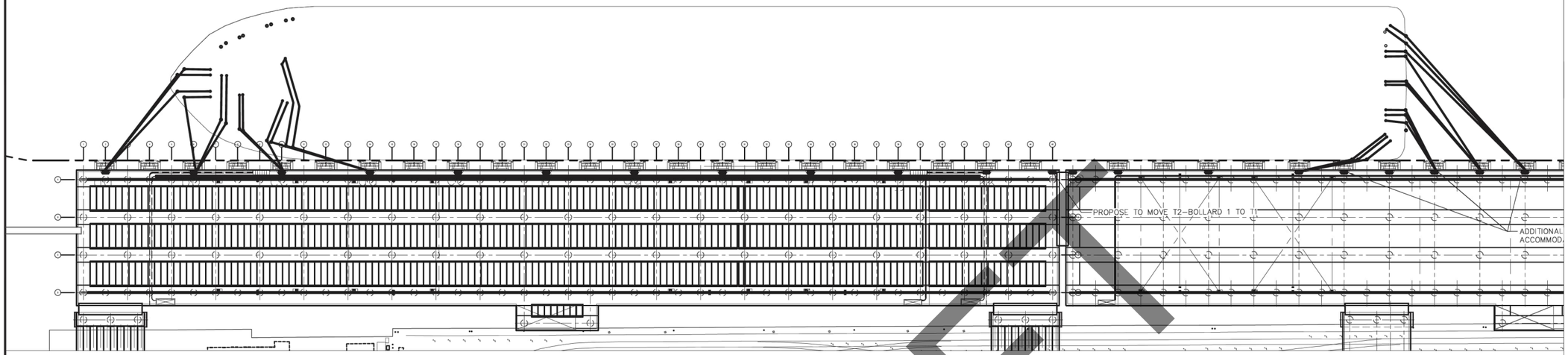
CARGO TERMINAL 1 DESIGN

ANCHORAGE, ALASKA

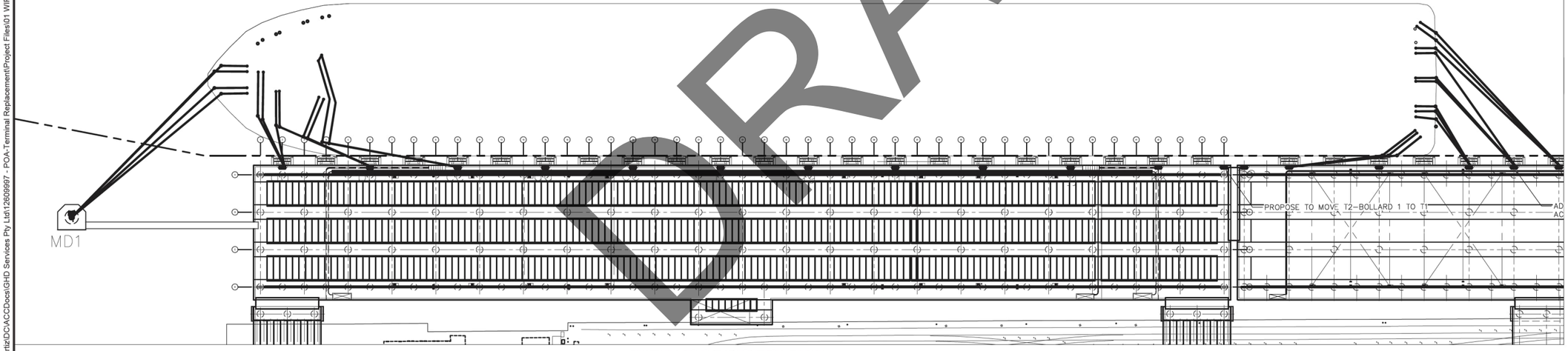
HORIZ SCALE: 1"=50'
VERT SCALE:
DATE: SEPT. 1, 2023
SHEET: OF

T1-C-453

Last Saved by: Jjoritz on: Nov 8, 2023 5:17 PM File: C:\Users\jjoritz\DC\ACCDocs\GHD Services Pty Ltd\12609997 - POA-Terminal Replacement\Project Files\01 WIP\Dwgs\06_T1-C-453.dwg



NO MOORING DOLPHIN
SCALE: 1" = 50'



WITH MOORING DOLPHIN
SCALE: 1" = 50'

MOORING ARRANGEMENT TERMINAL 1 - NORWEGIAN ENCORE
SCALE: 1" = 50'

GENERAL CIVIL NOTES

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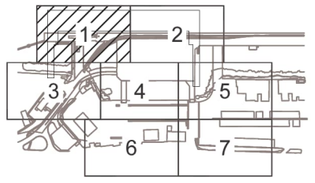
5. REFER TO EXISTING LEGEND AND ABBREVIATIONS ON SHEET T1-V-002.
6. REFER TO PROPOSED LEGEND AND ABBRIVATIONS ON SHEET T1-C-001.

LEGEND

FENDERS

BOLLARDS



KEY PLAN

65% SUBMITTAL

1" = 50'
50 0 50 100
scale feet

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

REV	DATE	DESCRIPTION	BY	APVD

REVISIONS

GHD-WSP JV
1400 W. BENSON BLVD, SUITE 400
ANCHORAGE, ALASKA 99503
AK ENGINEERING LICENSE # 197742(GHD) - AECC236(WSP)
AK BUSINESS LICENSE # 2164152(GHD) - 1113511(WSP)

DSGN	DR	CHK	APVD
AWC	JJO		

CONSULTANT

STATE OF ALASKA 49th REGISTERED PROFESSIONAL ENGINEER 11/10/23
SEAL

PORT of ALASKA

PORT OF ALASKA MODERNIZATION PROGRAM

CIVIL

MOORING ARRANGEMENT TERMINAL 1 - NORWEGIAN ENCORE

PORT OF ALASKA

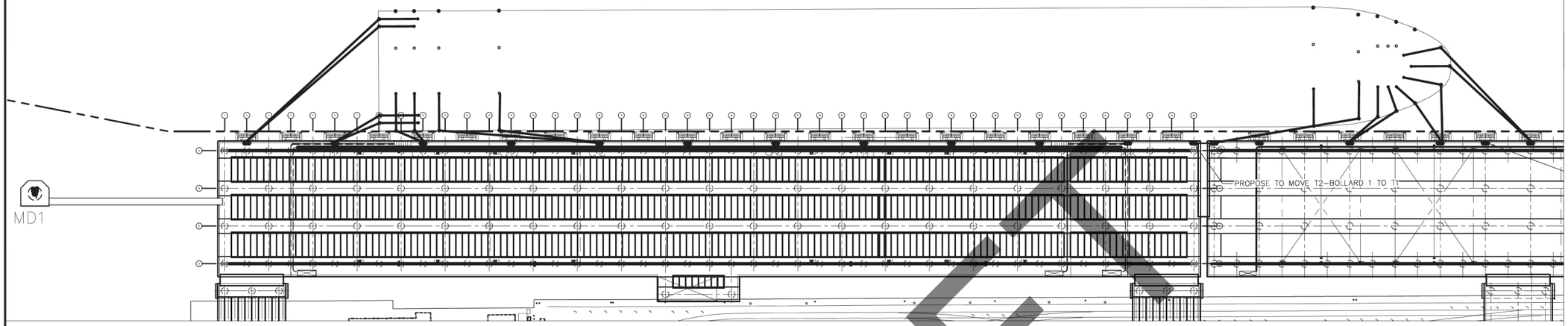
PORT OF ALASKA MODERNIZATION PROGRAM

CARGO TERMINAL 1 DESIGN

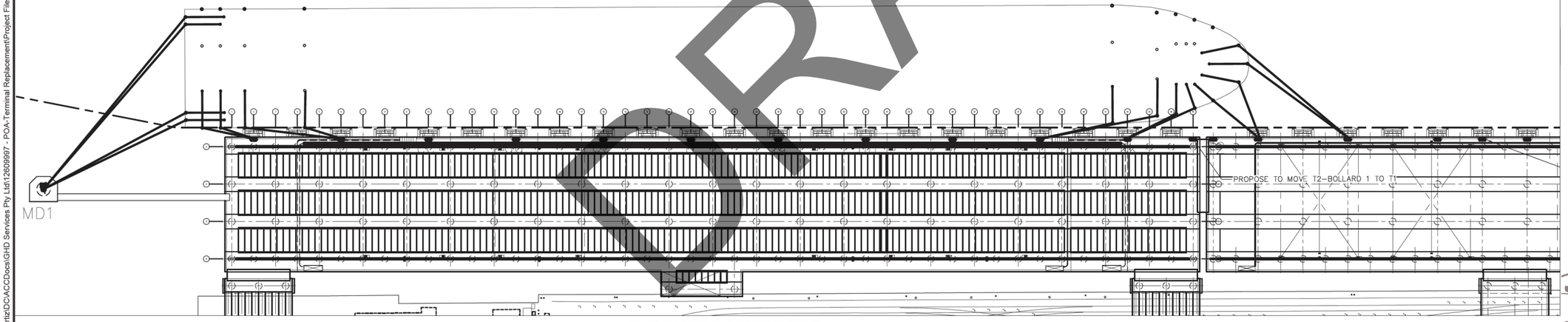
ANCHORAGE, ALASKA

HORIZ SCALE: 1"=50'	DATE: SEPT. 1, 2023	T1-C-454
VERT SCALE:	SHEET: OF	

PRELIMINARY. NOT FOR USE IN DEVELOPING CONSTRUCTION BIDS



NO MOORING DOLPHIN
SCALE: 1" = 50'



WITH MOORING DOLPHIN
SCALE: 1" = 50'

GENERAL CIVIL NOTES

1. WINCHES AND FAIRLEAD LOCATIONS WERE DERIVED FROM SHIP DRAWINGS OF THE MATSON ANCHORAGE.
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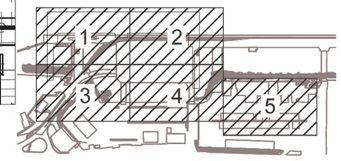
4. REFER TO ELECTRICAL DRAWINGS FOR SUBSTATION AND POWER SUPPLY LAYOUT AND DETAILS.
5. REFER TO EXISTING LEGEND AND ABBREVIATIONS ON SHEET T1-V-002.
6. REFER TO PROPOSED LEGEND AND ABBRIVATIONS ON SHEET T1-C-001.

LEGEND

FENDERS

BOLLARDS



KEY PLAN

MOORING ARRANGEMENT TERMINAL 1 - USNS BOB HOPE
SCALE: 1" = 50'

1" = 50' scale — 50 0 50 100 feet

65% SUBMITTAL

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

REV	DATE	DESCRIPTION	BY	APVD

REVISIONS

GHD-WSP JV
1400 W. BENSON BLVD, SUITE 400
ANCHORAGE, ALASKA 99503
AK ENGINEERING LICENSE # 197742(GHD) - AECC236(WSP)
AK BUSINESS LICENSE # 2164152(GHD) - 1113511(WSP)

DSGN	DR	CHK	APVD
AWC	JJO		

CONSULTANT

STATE OF ALASKA 49th REGISTERED PROFESSIONAL ENGINEER 11/10/23
SEAL

PORT of ALASKA

PORT OF ALASKA MODERNIZATION PROGRAM

CIVIL

MOORING ARRANGEMENT TERMINAL 1 - USNS BOB HOPE

PORT OF ALASKA

PORT OF ALASKA MODERNIZATION PROGRAM
CARGO TERMINAL 1 DESIGN
ANCHORAGE, ALASKA

HORIZ SCALE: 1"=50'
VERT SCALE:
DATE: SEPT. 1, 2023
SHEET: OF

T1-C-455

PRELIMINARY. NOT FOR USE IN DEVELOPING CONSTRUCTION BIDS

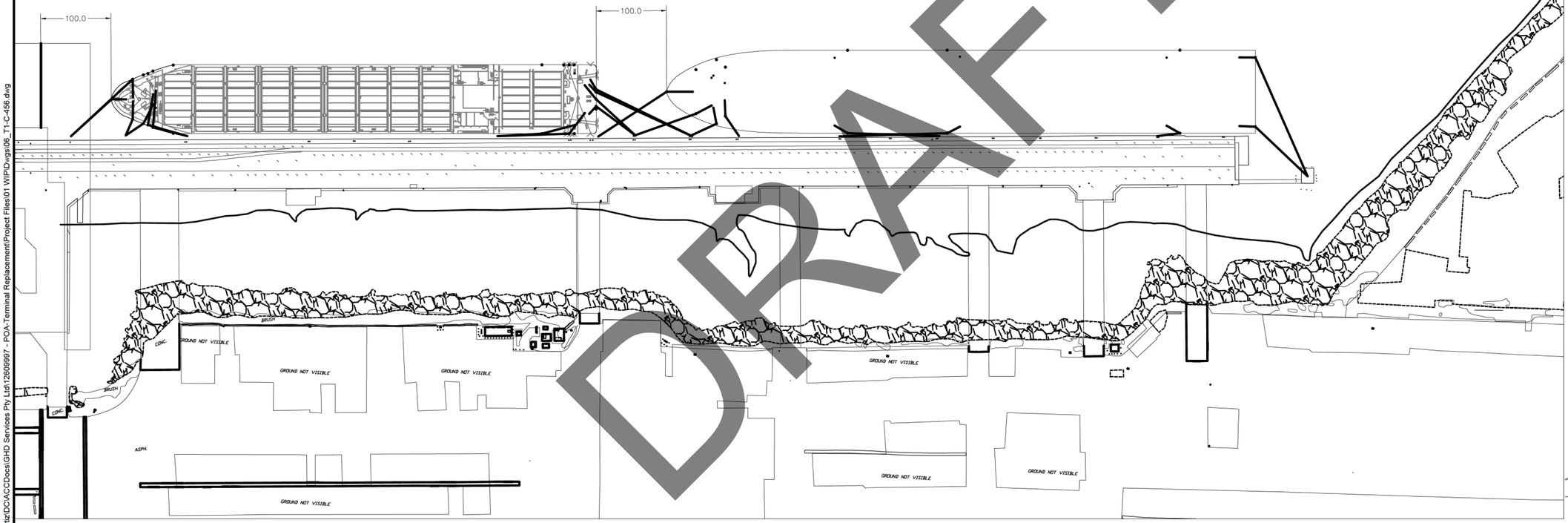
GENERAL CIVIL NOTES

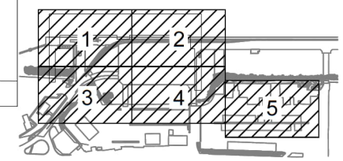
1. WINCHES AND FAIRLEAD LOCATIONS WERE DERIVED FROM SHIP DRAWINGS OF THE MATSON ANCHORAGE.
2. COORDINATE SITE WORKS WITH DEMOLITION DRAWINGS.
3. REFER TO UTILITY DRAWING FOR WATER AND FIRE PROTECTION LAYOUT AND DETAILS.
4. REFER TO ELECTRICAL DRAWINGS FOR SUBSTATION AND POWER SUPPLY LAYOUT AND DETAILS.
5. REFER TO EXISTING LEGEND AND ABBREVIATIONS ON SHEET T1-V-002.
6. REFER TO PROPOSED LEGEND AND ABBRIVATIONS ON SHEET T1-C-001.

LEGEND

FENDERS

BOLLARDS





KEY PLAN

MOORING ARRANGEMENT TEMPORARY CONSTRUCTION T1 - MATSON MAUNALEI AND TOTE MIDNIGHT SUN

SCALE: 1" = 80'

N

1" = 80' 80 0 80 160 scale feet

65% SUBMITTAL

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VERIFY SCALES

BAR IS ONE INCH ON ORIGINAL DRAWING

0 1"

IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

REV	DATE	DESCRIPTION	BY	APVD

REVISIONS

GHD-WSP JV
1400 W. BENSON BLVD, SUITE 400
ANCHORAGE, ALASKA 99503
AK ENGINEERING LICENSE # 197742(GHD) - AECC236(WSP)
AK BUSINESS LICENSE # 2164152(GHD) - 1113511(WSP)

DSGN	DR	CHK	APVD
AWC	JJO		

CONSULTANT

STATE OF ALASKA 49th REGISTERED PROFESSIONAL ENGINEER 11/10/23

SEAL

CIVIL

MOORING ARRANGEMENT TEMPORARY CONSTRUCTION T1 - MATSON MAUNALEI AND TOTE MIDNIGHT SUN

PORT OF ALASKA

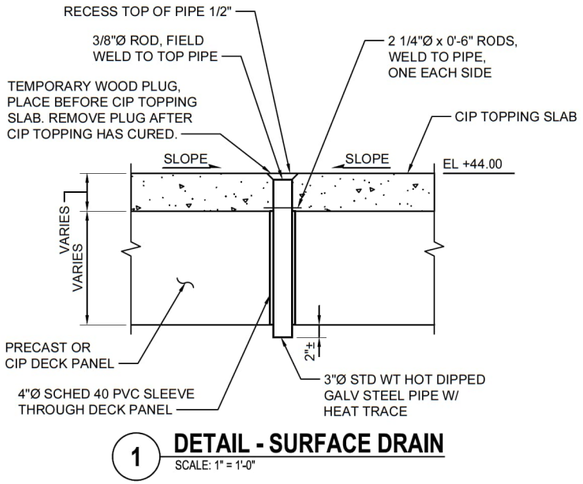
PORT OF ALASKA MODERNIZATION PROGRAM

CARGO TERMINAL 1 DESIGN

ANCHORAGE, ALASKA

HORIZ SCALE: 1"=80'	DATE: SEPT. 1, 2023	T1-C-456
VERT SCALE:	SHEET: OF	

PRELIMINARY. NOT FOR USE IN DEVELOPING CONSTRUCTION BIDS



1 DETAIL - SURFACE DRAIN

SCALE: 1" = 1'-0"

65% SUBMITTAL

VERIFY SCALES

BAR IS ONE INCH ON ORIGINAL DRAWING

0 1"

IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

REV	DATE	DESCRIPTION	BY	APVD

REVISIONS

GHD-WSP JV
1400 W. BENSON BLVD, SUITE 400
ANCHORAGE, ALASKA 99503
AK ENGINEERING LICENSE # 197742(GHD) - AECC236(WSP)
AK BUSINESS LICENSE # 2164152(GHD) - 1113511(WSP)

DSGN	DR	CHK	APVD
XXX	JDM	MM	JRG

CONSULTANT

STATE OF ALASKA 49th REGISTERED PROFESSIONAL ENGINEER 11/15/23

SEAL

PORT of ALASKA

PORT OF ALASKA MODERNIZATION PROGRAM

CIVIL

DETAILS - WHARF GRADING & DRAINAGE (1 OF 1)

PORT OF ALASKA

PORT OF ALASKA MODERNIZATION PROGRAM

CARGO TERMINAL 1 DESIGN

ANCHORAGE, ALASKA

HORIZ SCALE: AS SHOWN
VERT SCALE: AS SHOWN

DATE: 11/17/23
SHEET: 82 OF 420

T1-C-511

PRELIMINARY. NOT FOR USE IN DEVELOPING CONSTRUCTION BIDS

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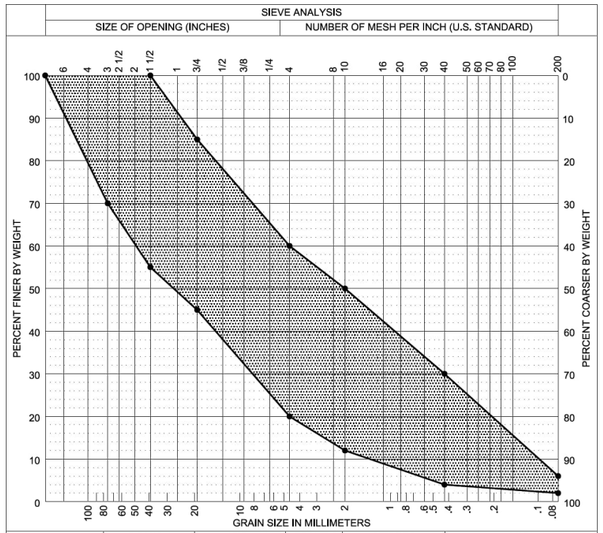
GRADING LIMITS

U.S. STANDARD SIEVE	CUMULATIVE % PASSING BY WEIGHT
8"	100
3"	70-100
1-1/2"	55-100
3/4"	45-85
#4	20-60
#10	12-50
#40	4-30
#200	*2-6

* IN ADDITION TO THE GRADING LIMITS LISTED ABOVE, THE FRACTION OF MATERIAL PASSING THE #200 SIEVE SHALL NOT BE GREATER THAN 15% OF THAT FRACTION PASSING THE #4 SIEVE.



MUNICIPALITY OF ANCHORAGE

SCALE: NTS

APPROVED:

REVISED: 11/14

TYPE II CLASSIFIED FILL AND BACKFILL

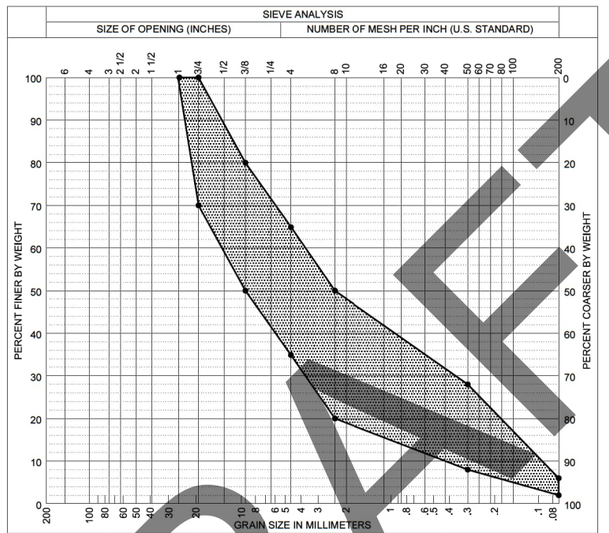
SECTION # 20.21

DETAIL # 20–14

GRADING LIMITS

U.S. STANDARD SIEVE	CUMULATIVE % PASSING BY WEIGHT
1"	100
3/4"	70-100
3/8"	50-80
#4	35-65
#8	20-50
#50	8-28
#200	*2-6

* IN ADDITION TO THE GRADING LIMITS LISTED ABOVE, THE FRACTION OF MATERIAL PASSING THE #200 SIEVE SHALL NOT BE GREATER THAN 75% OF THAT FRACTION PASSING THE #50 SIEVE.



MUNICIPALITY OF ANCHORAGE

SCALE: NTS

APPROVED:

REVISED: 10/08

LEVELING COURSE

SECTION # 20.22

DETAIL # 20–18

GENERAL NOTES

1. STANDARD DETAILS SHOWN ON THIS SHEET ARE SOURCED FROM THE MUNICIPALITY OF ANCHORAGE STANDARD DETAILS RETRIEVED OCTOBER 2023.

TO BE DEVELOPED

1 SWALE DETAIL
SCALE: N.T.S. T1-C-XXX

65% SUBMITTAL

REVISION: 11/14 FIXED NOTE - 15% PASSING

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VERIFY SCALES
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1400 W. BENSON BLVD, SUITE 400
ANCHORAGE, ALASKA 99503
AK ENGINEERING LICENSE # 197742(GHD) - AECC236(WSP)
AK BUSINESS LICENSE # 2164152(GHD) - 1113511(WSP)

DSGN	DR	CHK	APVD
AEM	DJW	AWC	VHN

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DETAILS
UPLAND DRAINAGE & GRADING

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CARGO TERMINAL 1 DESIGN
ANCHORAGE, ALASKA

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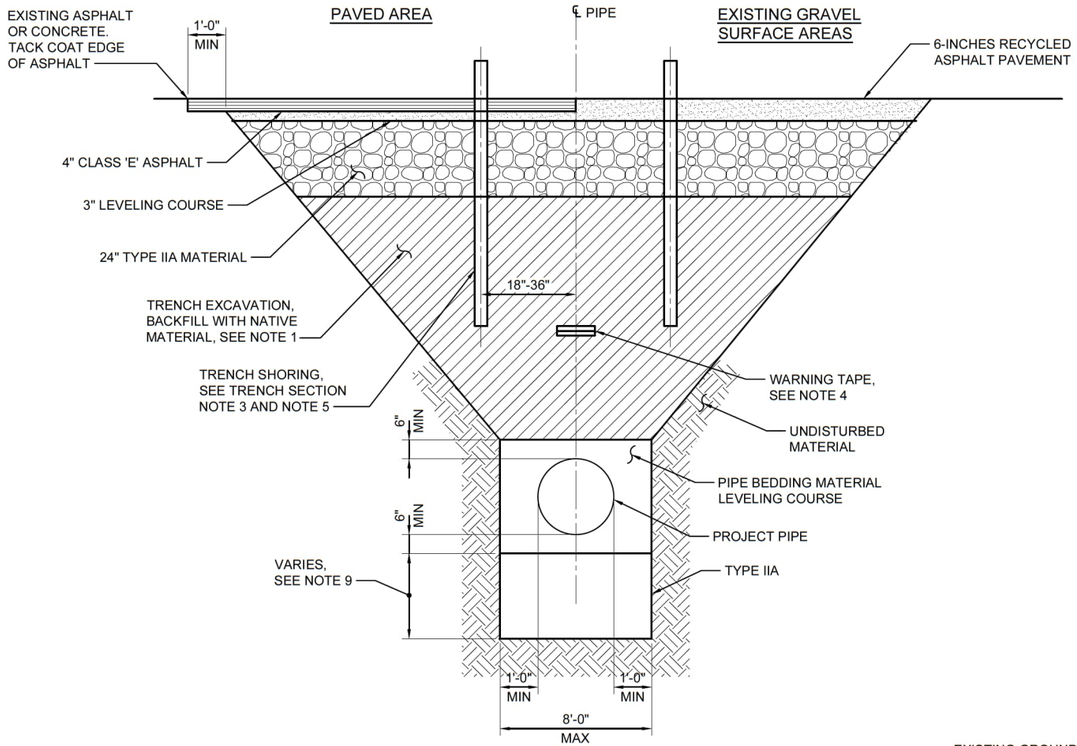
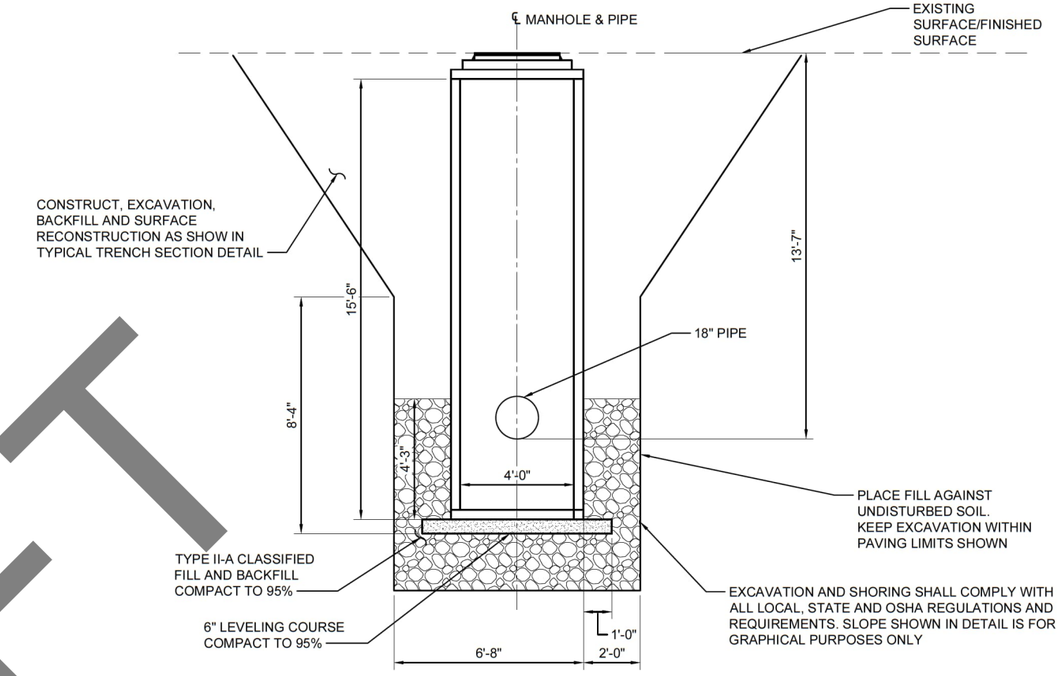


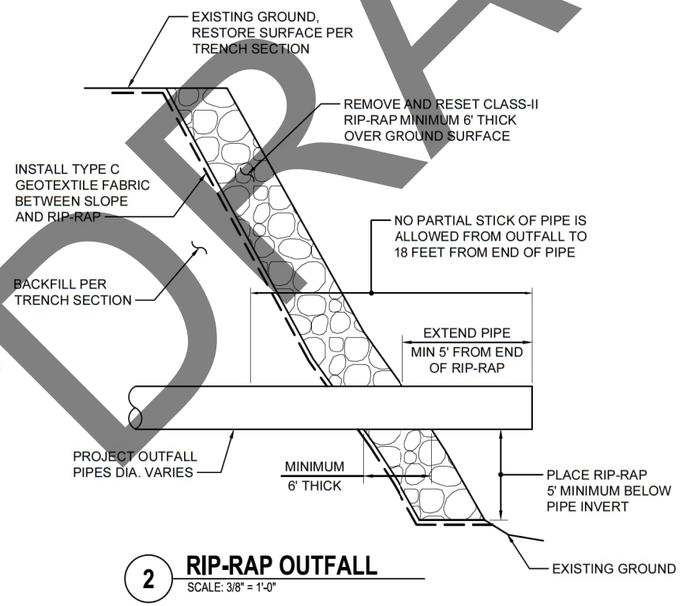
1 TRENCH DETAIL

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



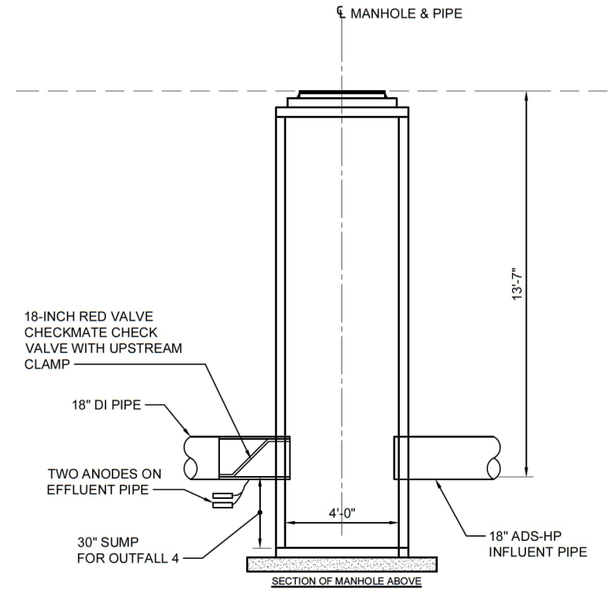
TRENCH SECTION NOTES

1. TRENCH BACKFILL SHALL BE EXISTING NATIVE MATERIAL MEETING TYPE III SPECIFICATION OR IMPORTED TYPE II-A CLASSIFIED FILL AND BACKFILL, TRENCH BACKFILL SHALL BE COMPACTED TO MIN. 95% OF MAX DENSITY. REUSING MATERIAL IS CONSIDERED INCIDENTAL TO CONTRACT. CONTRACTOR MAY NEED TO HAUL AND STORE EXISTING MATERIAL AT SOIL STOCKPILE AREA.
2. PIPE BEDDING SHALL BE LEVELING COURSE MATERIAL COMPACTED TO MIN 95% OF MAX DENSITY.
3. THE CONTRACTOR SHALL COMPLY WITH OSHA SAFETY STANDARDS BASED ON SOIL CHARACTERISTICS AND MASS SECTION 10.06 ARTICLE 6.8 - SAFETY.
4. DETECTABLE WARNING TAPE SHALL BE LOCATED BETWEEN 18" AND 36" ABOVE TOP OF PIPE.
5. CONTRACTOR SHALL UTILIZE A PORTABLE STEEL SHIELD (MINIMUM 8' HEIGHT) DURING CONSTRUCTION ACTIVITIES FOR THE INSTALLATION OF ALL PROPOSED PIPE AND STRUCTURES.
6. THE CONTRACTOR SHALL MAINTAIN EXISTING DRAINAGE PATTERNS THROUGHOUT THE PROJECT AREA OR AS DIRECTED BY THE ENGINEER IN THE FIELD. THE WORK SHALL BE INCIDENTAL TO THE CONTRACT.
7. THE CONTRACTOR SHALL ADJUST ALL EXISTING MANHOLES, CATCH BASIN, CLEAN-OUTS, AND VALVE BOXES TO FINISH GRADE PRIOR TO PAVING
8. CONTRACTOR SHALL RESTORE ALL LANDSCAPING AN SURFACE IMPROVEMENTS TO ORIGINAL CONDITION IN KIND WITH NEW MATERIALS.
9. FOUNDATION BACKFILL SHALL BE PLACED IN AREAS WHERE EXISTING SOILS DO NOT PROVIDE SUITABLE SUPPORT OF BEDDING MATERIAL AS DIRECTED BY THE ENGINEER. DEPTH MAY VARY
10. SUITABLE CONTAMINATED SOIL MEETING THE REQUIREMENTS OF EXISTING NATIVE MATERIAL DEFINED IN NOTE 1 WILL BE ALLOWED TO BE REUSED AS TRENCH BACKFILL. UNSUITABLE CONTAMINATED SOIL SHALL BE HANDLED AND DISPOSED OF AS SPECIFIED IN THE SPECIFICATIONS.



2 RIP-RAP OUTFALL

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



3 MH#1 OUTFALL DETAIL

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

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XXX	JDM	MM	JRG

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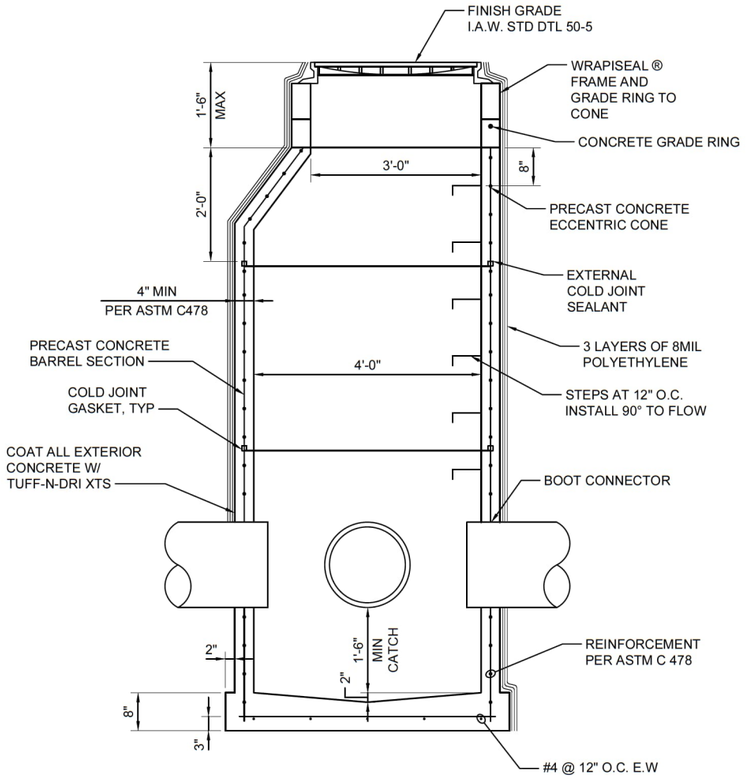
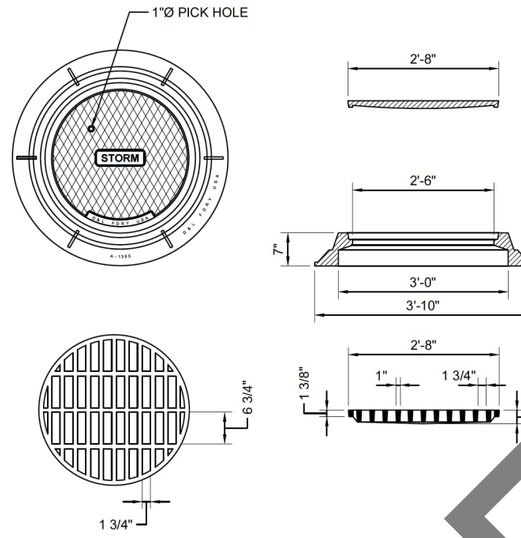
T1-C-514



1 **TYPE I STORM DRAIN MH DETAIL**
SCALE: 3/4" = 1'-0"



2 **32" LID, INTAKE LID AND FRAME**
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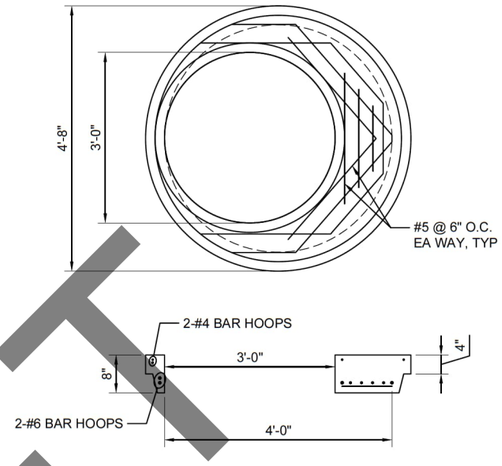
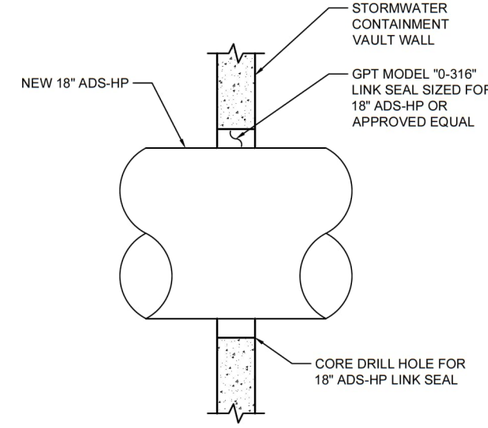


3 **48" TO 36" FLAT LID**
SCALE: 3/4" = 1'-0"



4 **LINK SEAL DETAIL**
SCALE: 1 1/2" = 1'-0"

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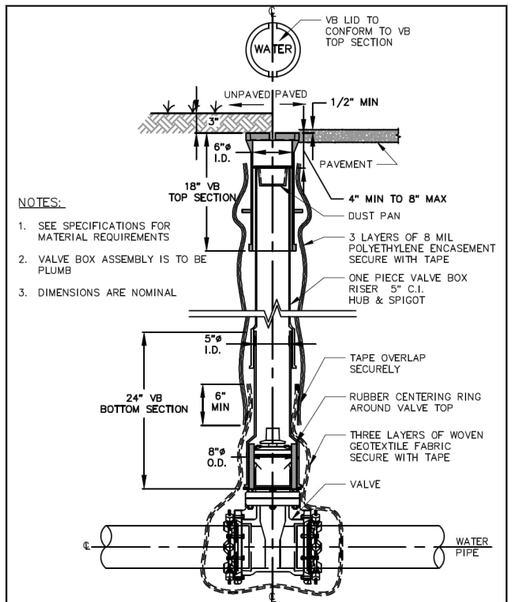
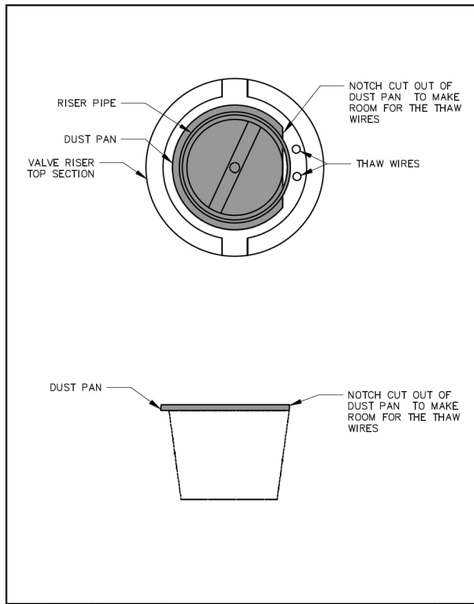


SCALE: NTS | APPROVED: | REVISED: 1/2015

TYPICAL VALVE BOX (VB)

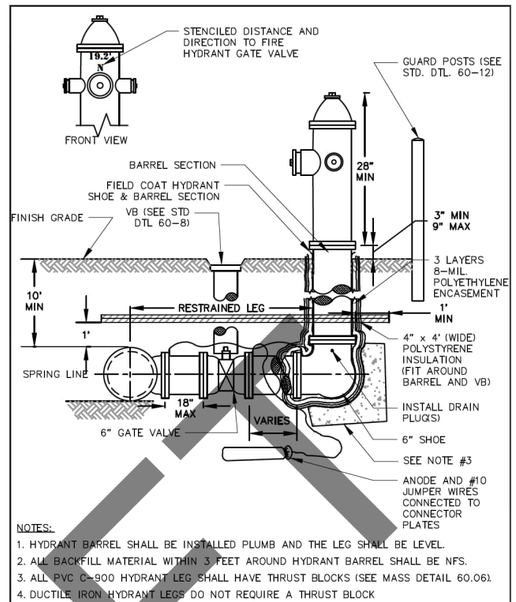
SECTION # 60.03 | DETAIL # 60–08



SCALE: NTS | APPROVED: | REVISED: 1/2015

DUST PAN WITH THAW WIRES

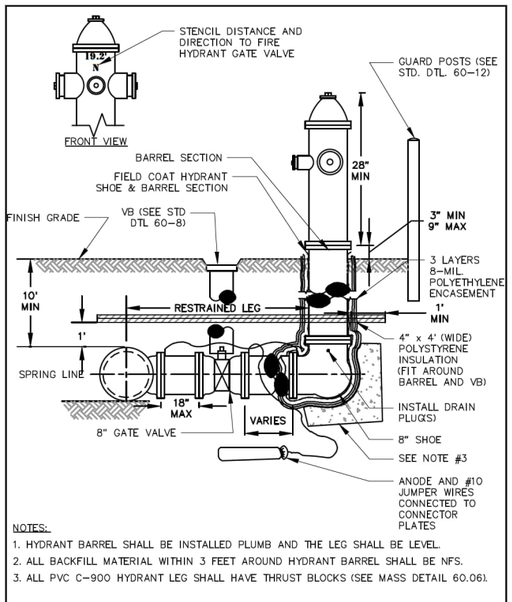
SECTION # 60.03 | DETAIL # 60–09



SCALE: NTS | APPROVED: | REVISED: 1/2015

SINGLE PUMPER "L" BASE FIRE HYDRANT ASSEMBLY

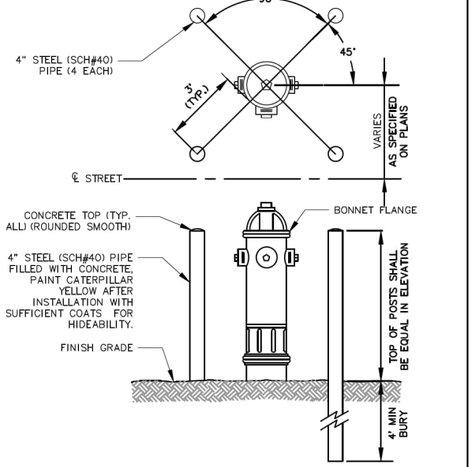
SECTION # 60.04 | DETAIL # 60–10



SCALE: NTS | APPROVED: | REVISED: 1/2015

DOUBLE PUMPER "L" BASE FIRE HYDRANT ASSEMBLY

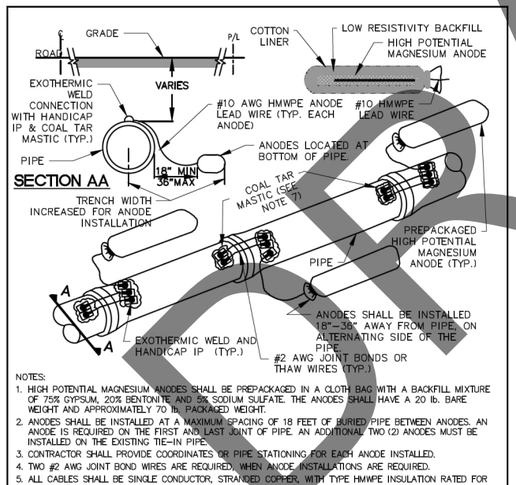
SECTION # 60.04 | DETAIL # 60–11



SCALE: NTS | APPROVED: | REVISED: 1/2015

FIRE HYDRANT GUARD POSTS

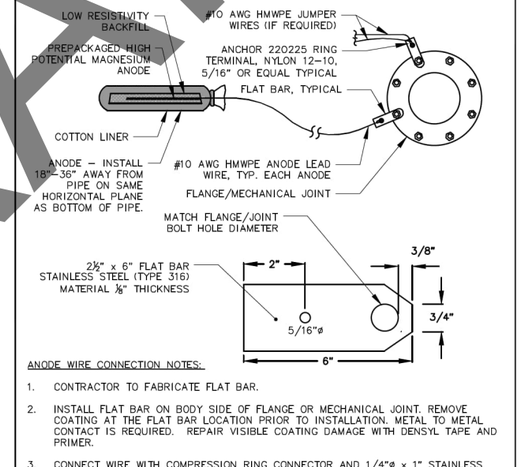
SECTION # 60.04 | DETAIL # 60–12



SCALE: NTS | APPROVED: | REVISED: 1/2015

ANODE DETAIL

SECTION # 60.06 | DETAIL # 60–20



SCALE: NTS | APPROVED: | REVISED: 1/2015

ANODE WIRE CONNECTION

SECTION # 60.06 | DETAIL # 60–21

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ANCHORAGE, ALASKA

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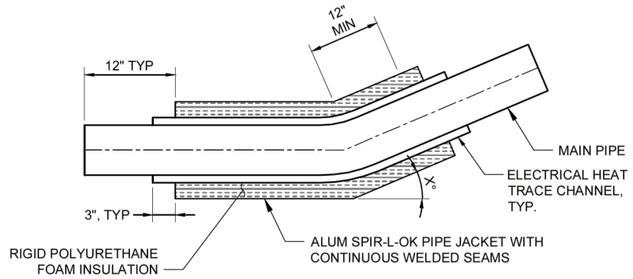
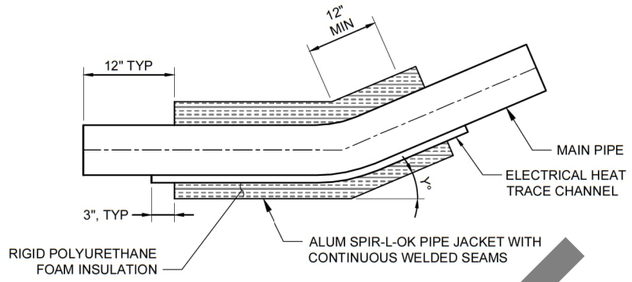
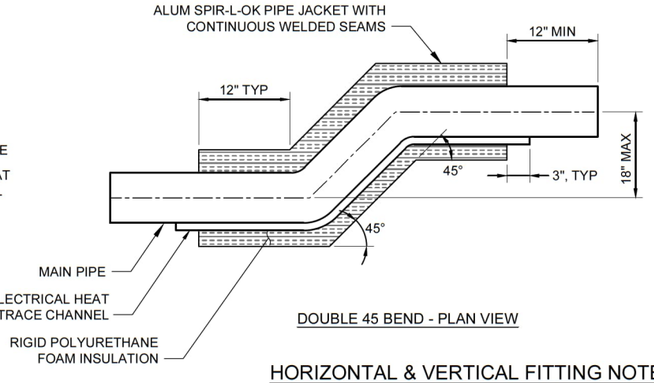


HORIZONTAL FITTING - PLAN VIEW



VERTICAL FITTING - SIDE VIEW



DOUBLE 45 BEND - PLAN VIEW

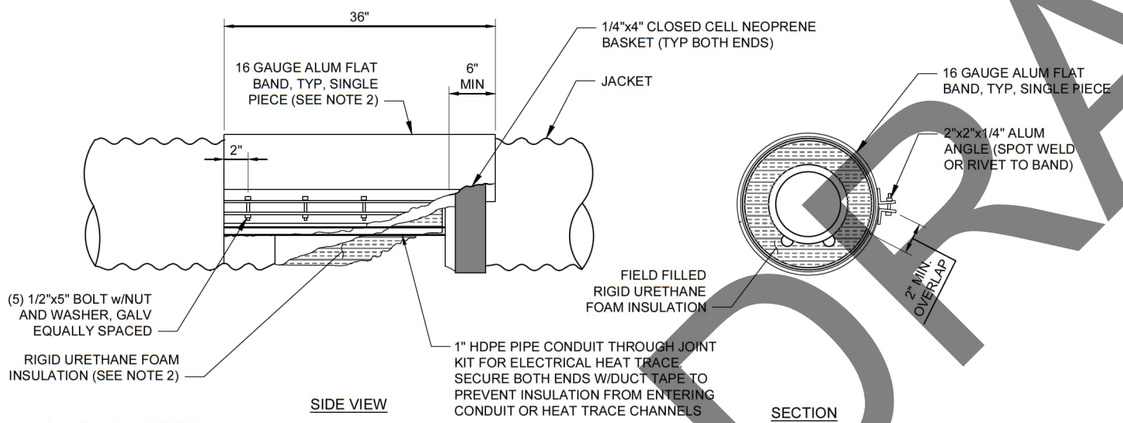
TABLE A	
PIPE SIZE	ELBOW RADII
8-INCH	24.5"

HORIZONTAL & VERTICAL FITTING NOTES:

1. ALL PIPE FITTINGS SHALL BE FABRICATED WITH LONG SWEEP ELBOWS, RADII PER TABLE A. STANDARD MOLDED ELBOW FITTINGS ARE ALLOWED FOR SEWER AND WATER MAIN FITTINGS. INTERNAL FUSION BEADS SHALL BE REMOVED FOR ALL GLYCOL CARRIER PIPE AND SERVICE LINE FITTINGS.

1 TYPICAL HORIZONTAL & VERTICAL FITTINGS

SCALE:



SIDE VIEW

SECTION

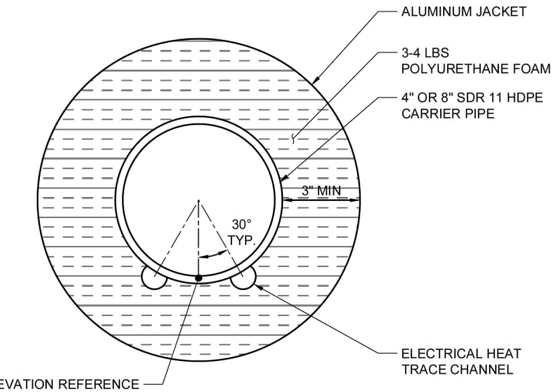
JOINT KIT NOTES:

1. JOINT KIT INSULATION SHALL BE PROVIDED IN TWO-PART LIQUID FORM SUCH THAT IT CAN BE COMBINED AND POURED IN THE FIELD. POUR-FOAMING SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS IN THE PROPER AMBIENT CONDITIONS BY QUALIFIED, EXPERIENCED PERSONNEL.

2. HEAT SHRINK SLEEVE (CANUSA WRAP OR APPROVED EQUAL) MAY BE USED IN LIEU OF ALUMINUM BAND WHERE ARCTIC PIPE IS WITHIN CASING. INSTALL PER MANUFACTURER INSTRUCTIONS.

2 TYPICAL INSULATED JOINT KIT

SCALE:



PIPE NOTES:

1. TO ENSURE WATER TIGHTNESS, ALL HDPE PIPELINES ASSEMBLIES SHALL BE SUCCESSFULLY HYDROSTATICALLY TESTED IN THE PRESENCE OF THE ENGINEER. CONTRACTOR SHALL SUBMIT A TESTING PLAN FOR ENGINEER'S REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. PRESSURIZED TESTING SHALL BE CONDUCTED PER SPECIAL PROVISIONS.

2. ALL BUTT-FUSING SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS IN THE PROPER AMBIENT ENVIRONMENT BY QUALIFIED, EXPERIENCED PERSONNEL.

3 8x15-INCH WATER MAIN SECTION

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PORT OF ALASKA

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ANCHORAGE, ALASKA

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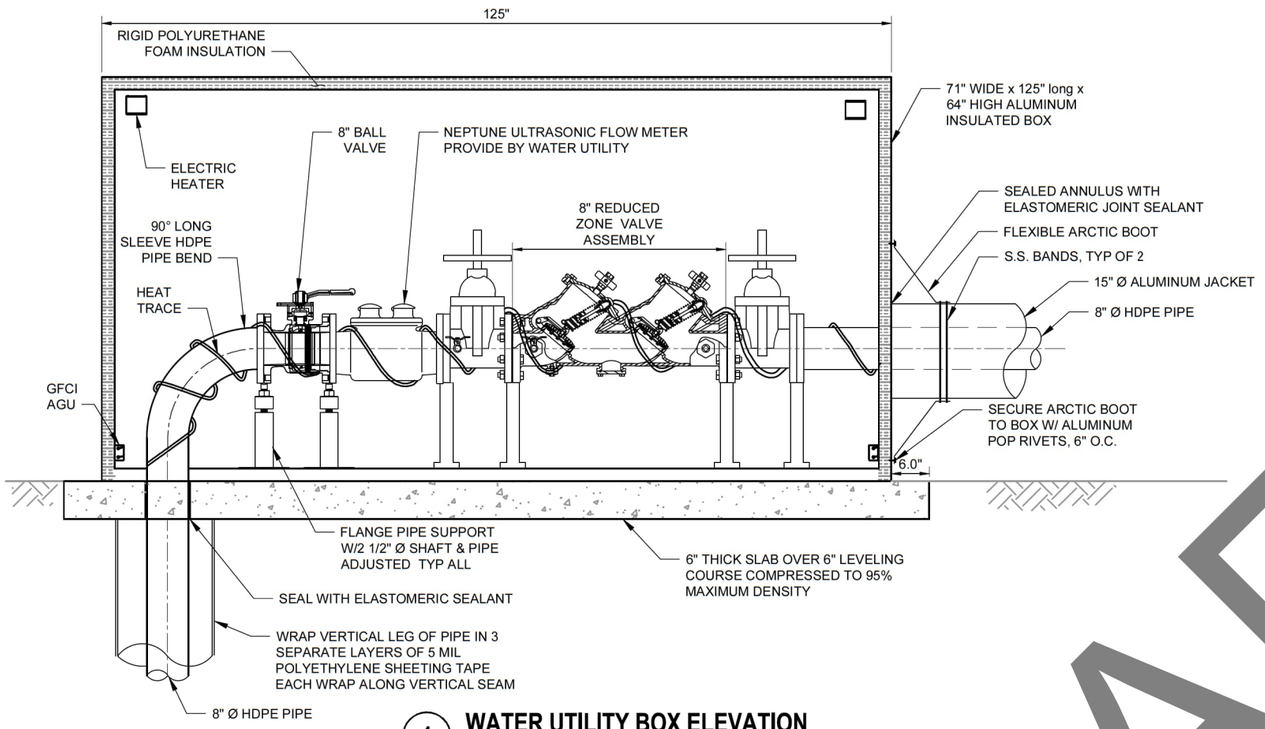

1 WATER UTILITY BOX ELEVATION
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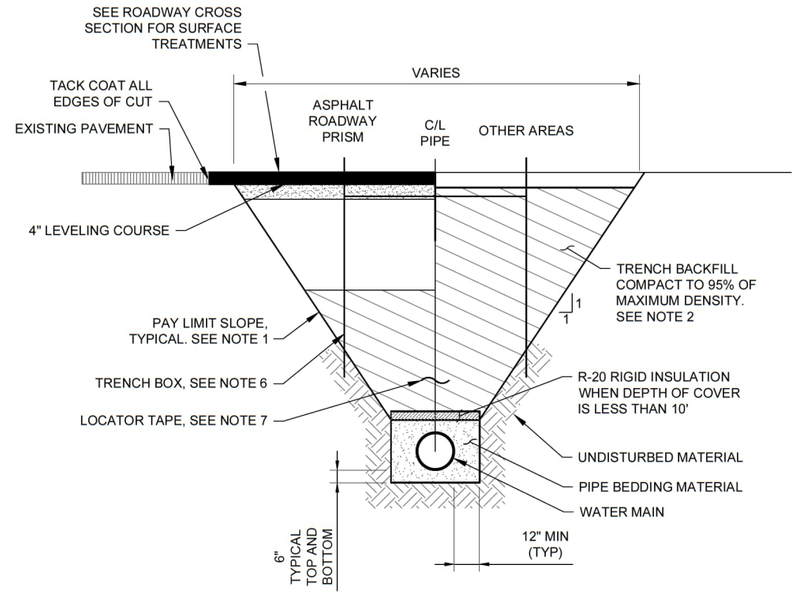

2 TYPICAL UTILITY TRENCH SECTION
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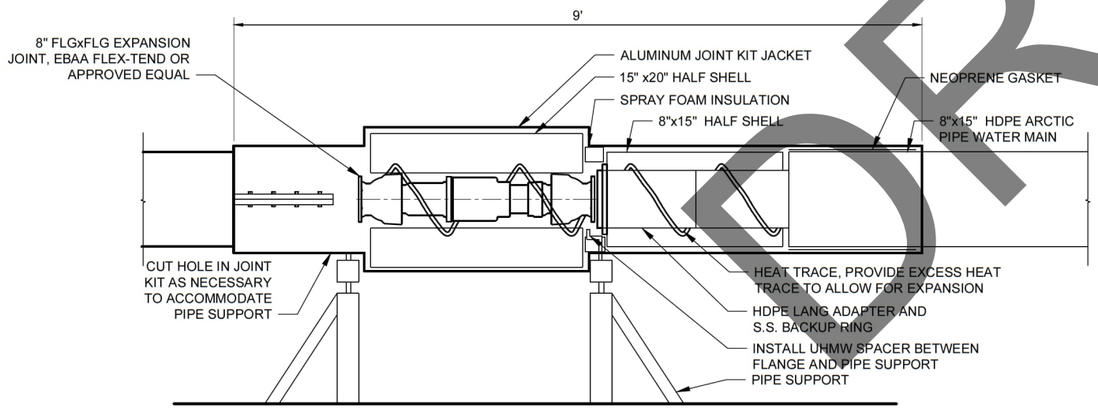
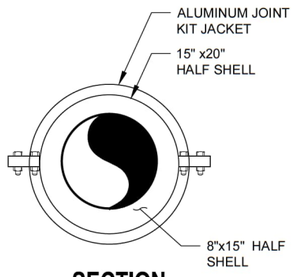


3 FLEXIBLE EXPANSION JOINT DETAIL
SCALE:



SECTION

TRENCH SECTION NOTES:

1. TRENCH EXCAVATION AND SHORING SHALL COMPLY WITH ALL LOCAL, STATE AND OSHA REGULATIONS AND REQUIREMENTS. INDICATED SLOPE IS FOR PAY QUANTITY DETERMINATIONS ONLY. CONTRACTOR SHALL SHORE EXCAVATIONS AS NECESSARY TO KEEP EXCAVATIONS WITHIN EXISTING RIGHT-OF-WAY AND EASEMENTS AND TO PROTECT EXISTING UTILITIES AND STRUCTURES
2. TRENCH BACKFILL BELOW STRUCTURAL SECTION (PAVED AREAS) OR BELOW TOPSOIL (UNPAVED AREAS) IS SUBSIDIARY TO PIPE PAY ITEM.
3. REMOVE AND PROPERLY DISPOSE OF ALL ORGANIC MATERIALS IN ACCORDANCE WITH MASS SECTION 20.13.
4. TRENCH BOX SHALL BE UTILIZED TO MINIMIZE TRENCH WIDTH, REDUCE IMPACTS TO ADJACENT PROPERTIES AND TO REMAIN WITHIN EXISTING ROW OR EASEMENTS.
5. INSTALL DETECTABLE LOCATOR TAPE AT LEAST 18 INCHES BUT NO MORE THAN 36 INCHES ABOVE THE CROWN OF THE PIPE.

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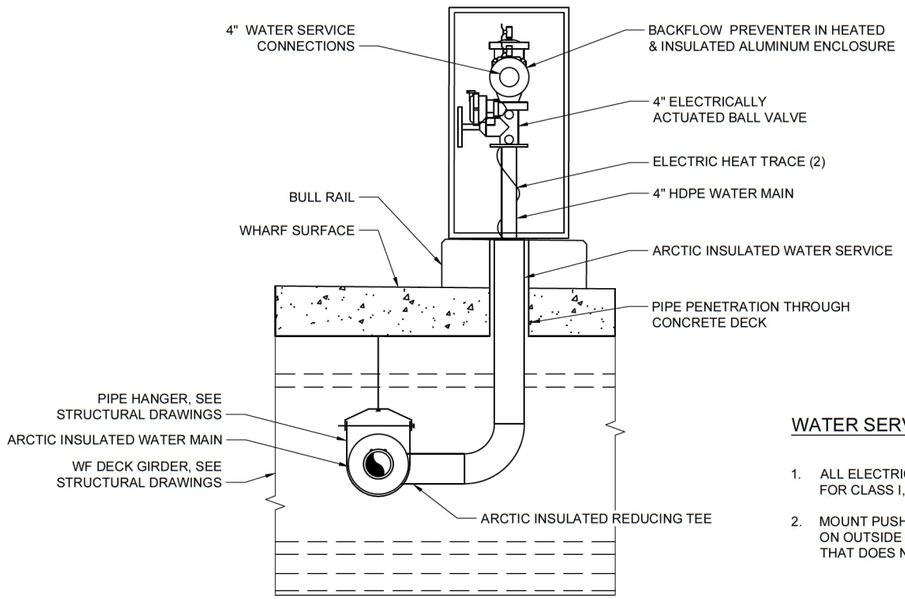
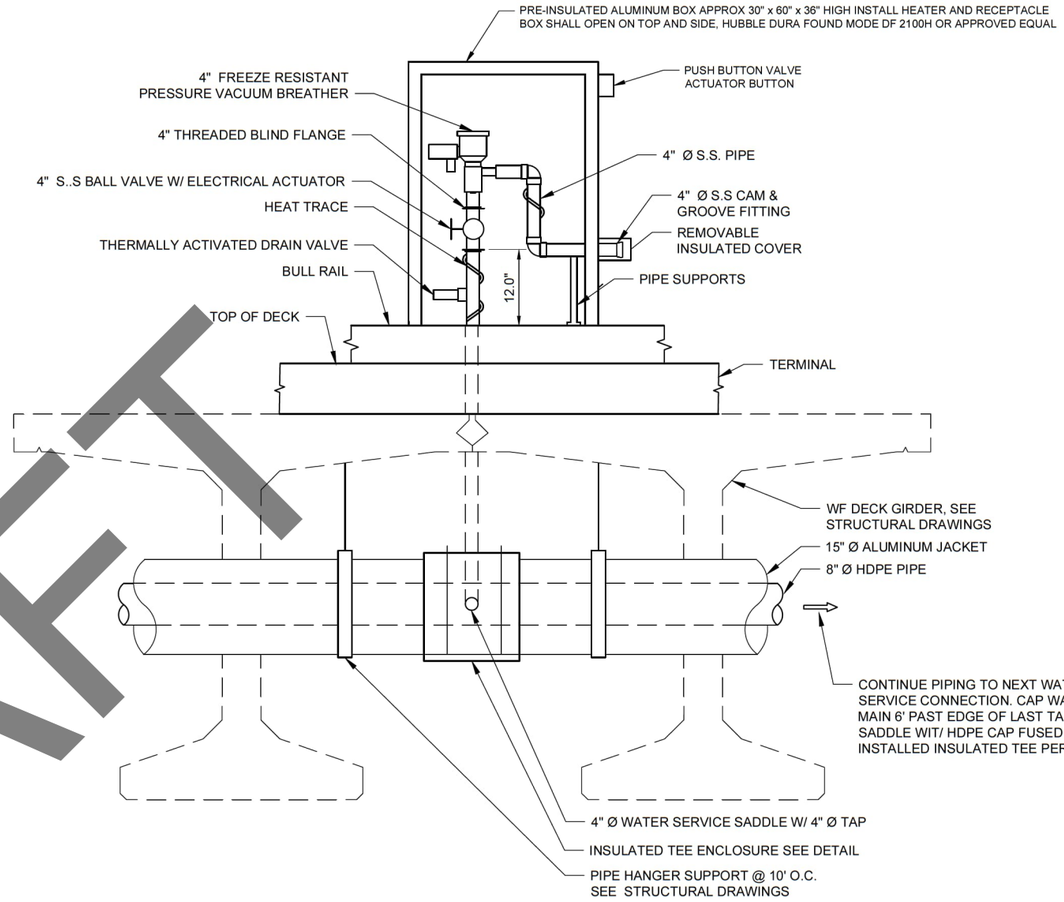


1 ALL-SEASON SHORE TO SHIP WATER SERVICE ASSEMBLY SECTION

SCALE:

WATER SERVICE ASSEMBLY NOTES:

1. ALL ELECTRICAL COMPONENTS SHALL BE SUITABLE FOR CLASS I, DI V2 ENVIRONMENT.
2. MOUNT PUSH BUTTON VALVE ACTUATOR OPERATOR ON OUTSIDE OF BOX AS SHOWN AND IN LOCATION THAT DOES NOT INTERFERE W/ OPENING BOX



2 ALL - SEASON SHORE TO SHIP WATER SERVICE ASSEMBLY SECTION

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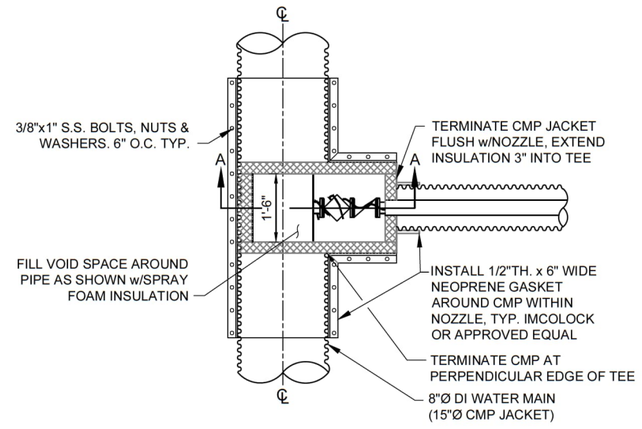

3 WATER SERVICE CONNECTION TEE

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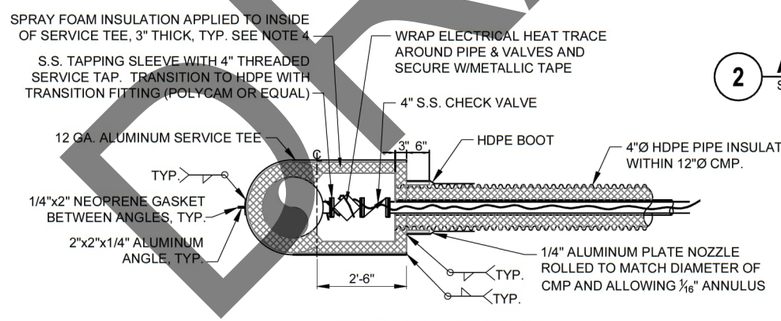

SERVICE TEE SECTION A-A

WATER SERVICE CONNECTION NOTES:

1. SUPPORT SERVICE PIPE UP TO MATCH WATER MAIN ELEVATION. DO NOT ROTATE SERVICE TEE.
2. SERVICE TEE INTENDED TO SPLIT INTO TOP & BOTTOM HALF & BOLT TOGETHER AROUND EDGE THROUGH ANGLE.
3. SERVICE TEE TO BE CONSTRUCTED WEATHER PROOF.
4. ALL INSULATION EXPOSED TO AIR CAVITY WITHIN SERVICE TEE SHALL BE COATED w/POLYSHIELD POLYUREA ELASTOMER 100 MILS, TYP.

65% SUBMITTAL

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

REV	DATE	DESCRIPTION	BY	APVD

REVISIONS

GHD-WSP JV
1400 W. BENSON BLVD, SUITE 400
ANCHORAGE, ALASKA 99503
AK ENGINEERING LICENSE # 197742(GHD) - AECC236(WSP)
AK BUSINESS LICENSE # 2164152(GHD) - 1113511(WSP)

CRW ENGINEERING GROUP
3940 ARCTIC BLVD. SUITE 300
ANCHORAGE, ALASKA 99503
PHONE: (907) 562-3252
#AECL882-AK

DSGN	DR	CHK	APVD
EH	EH	ME	ME

CONSULTANT

SEAL ######

CIVIL

POTABLE WATER DETILS

PORT OF ALASKA

PORT OF ALASKA MODERNIZATION PROGRAM
CARGO TERMINAL 1 DESIGN
ANCHORAGE, ALASKA

HORIZ SCALE: AS SHOWN | DATE: 11/14/23
VERT SCALE: AS SHOWN | SHEET: # OF #

T1-C-534

PRELIMINARY. NOT FOR USE IN DEVELOPING CONSTRUCTION BIDS

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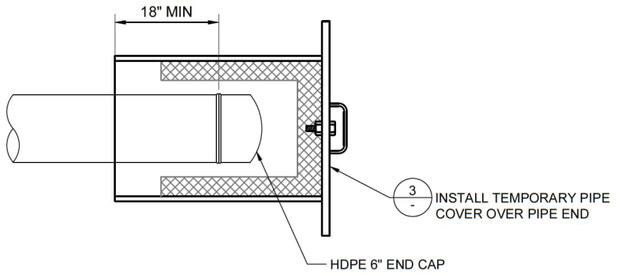
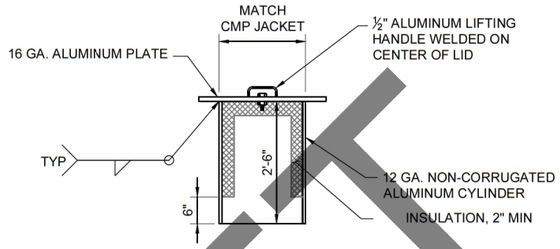


1 WATER MAIN END CAP
SCALE:



2 PIPE COVER
SCALE:

65% SUBMITTAL

REV	DATE	DESCRIPTION	BY	APVD

REVISIONS

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
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GHD-WSP JV
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ANCHORAGE, ALASKA 99503
AK ENGINEERING LICENSE # 19774Z(GHD) - AECC236(WSP)
AK BUSINESS LICENSE # 2164152(GHD) - 111351(WSP)

CRW ENGINEERING GROUP
3940 ARCTIC BLVD. SUITE 300
ANCHORAGE, ALASKA 99503
PHONE: (907) 562-3252
#AECL862-AK

DSGN	DR	CHK	APVD
JJV	JL	GDN	GDN

CONSULTANT

SEAL ##/##/##

PORT of ALASKA

PORT of ALASKA MODERNIZATION PROGRAM

CIVIL

POTABLE WATER DETAILS

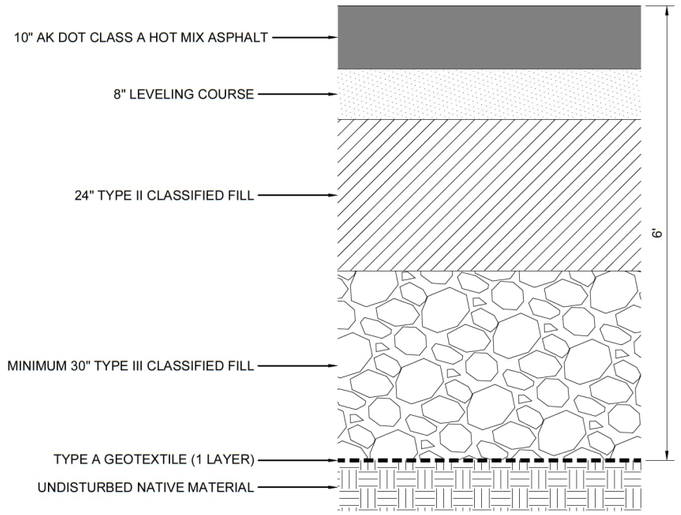
PORT OF ALASKA

PORT OF ALASKA MODERNIZATION PROGRAM
CARGO TERMINAL 1 DESIGN
ANCHORAGE, ALASKA

HORIZ SCALE: AS SHOWN
VERT SCALE: AS SHOWN
DATE: 11/14/23
SHEET: # OF #

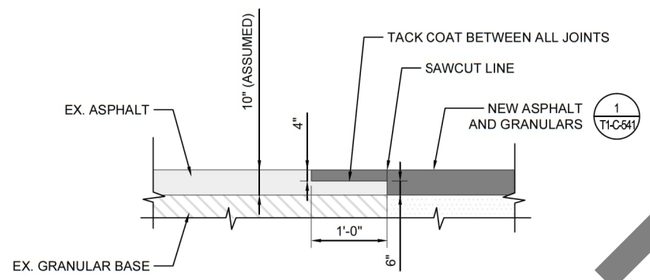
T1-C-535

PRELIMINARY. NOT FOR USE IN DEVELOPING CONSTRUCTION BIDS



1 TYPICAL PAVEMENT DETAIL

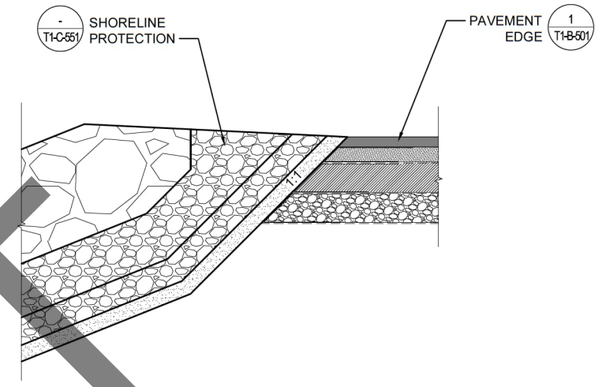
SCALE: N.T.S. T1-C-312, T1-C-313



NOTE: CONTRACTOR TO VERIFY EXISTING ASPHALT THICKNESS.

2 ASPHALT PAVEMENT STEP JOINT DETAIL

SCALE: N.T.S. T1-C-203



3 COASTAL/ GEOTECHNICAL INTERFACE DETAIL

SCALE: N.T.S. T1-C-213, T1-C-214, T1-C-215

TO BE DEVELOPED

4 CURB TRANSITION DETAIL

SCALE: N.T.S. T1-C-XXX

65% SUBMITTAL

VERIFY SCALES
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0 1"
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REV	DATE	DESCRIPTION	BY	APVD

REVISIONS

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ANCHORAGE, ALASKA 99503
AK ENGINEERING LICENSE # 197742(GHD) - AECC236(WSP)
AK BUSINESS LICENSE # 2164152(GHD) - 1113511(WSP)

DSGN	DR	CHK	APVD
AEM	DJW	AWC	VHN

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PORT of ALASKA

PORT OF ALASKA MODERNIZATION PROGRAM

CIVIL

DETAILS PAVING STRIPING & SIGNAGE
(1 OF 3)

PORT OF ALASKA

PORT OF ALASKA MODERNIZATION PROGRAM
CARGO TERMINAL 1 DESIGN
ANCHORAGE, ALASKA

HORIZ SCALE:
VERT SCALE:
DATE: OCT 10, 2023
SHEET: OF
T1-C-541

PRELIMINARY. NOT FOR USE IN DEVELOPING CONSTRUCTION BIDS

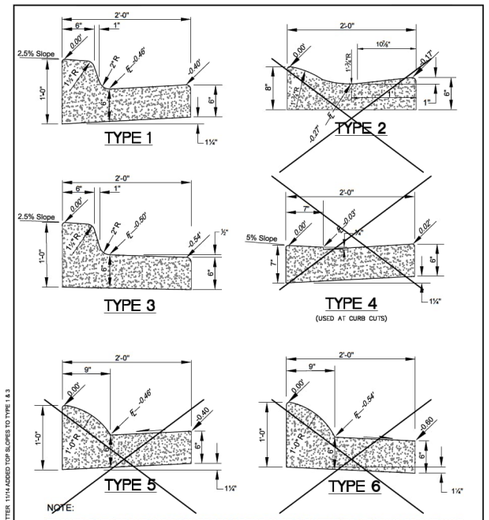
GENERAL NOTES

1. STANDARD DETAILS SHOWN ON THIS SHEET ARE SOURCED FROM THE MUNICIPALITY OF ANCHORAGE STANDARD DETAILS RETRIEVED OCTOBER 2023.

GENERAL NOTES:

1. ALL ONLYS, ARROWS, CROSSWALKS, STOP BARS AND OTHER MARKINGS SHALL BE AS INDICATED IN THE DRAWINGS AND SPECIFICATIONS.
2. DUAL–TURN LANE, TURN POCKET REVERSAL AND CENTERLINE DOUBLE LINES SHALL BE TWO 4" YELLOW LINES SEPARATED BY A 4" SPACE.
3. REGULAR LANE LINES SHALL BE A WHITE 4" WIDE LINE. SKIP LINE SPACING SHALL BE A 10' LINE AND A 30' SPACE.
4. MEDIAN NOSE AND THE TOP AND FACE OF CURB OF ALL MEDIAN ISLAND NOSING SHALL BE YELLOW A MINIMUM OF 5' BACK FROM THE FLOWLINE.
5. "W" IS THE WIDTH OF THE LANE MEASURED FROM CENTER LANE LINE TO CENTER LANE LINE OR FROM CENTER LANE LINE TO EDGE OF PAVEMENT.
6. "L" IS TAPER LENGTH. "L" IS DETERMINED BY TAKING THE SPEED LIMIT (M.P.H.) TIMES THE OFFSET WIDTH IN FEET OR AS INDICATED ON DRAWINGS. MINIMUM "L" IS 100'.
7. "D" IS THE LANE REVERSAL DISTANCE. A RATIO OF 8:1 FOR THE ENTRANCE TAPER IS DESIRABLE WITH A MINIMUM RATIO OF 3:1.
8. "S" IS THE SHY DISTANCE MEASURED FROM THE FACE OF CURB TO THE CENTER OF THE OUTSIDE YELLOW LINE. "S" IS 18" OR AS SHOWN ON THE DRAWINGS.
9. THESE NOTES APPLY TO STANDARD DETAILS 70–8 THROUGH 70–15.

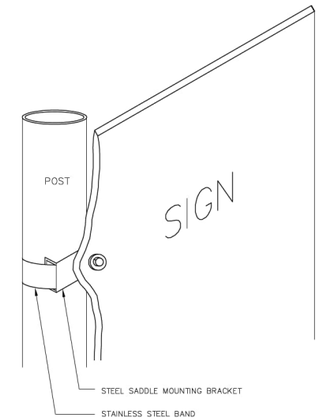
MUNICIPALITY OF ANCHORAGE | SCALE: NTS | APPROVED: | REVISED: 10/08 | **STRIPING NOTES** | SECTION # 70.10 | DETAIL # 70–7



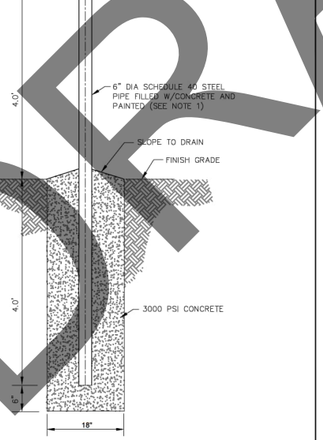
REVISION: 12/09 FIXED TYPE 2 CURB & GUTTER 11/14 ADDED TOP SLOPES TO TYPES 1 & 3

NOTE:
TROWEL BOTH FRONT AND BACK EDGES OF THE CURB & GUTTER TO A RADIUS OF ONE-HALF (1/2) INCH.

MUNICIPALITY OF ANCHORAGE | SCALE: NTS | APPROVED: | REVISED: 11/14 | **CURB AND GUTTER CROSS SECTIONS** | SECTION # 30.02 | DETAIL # 30–1

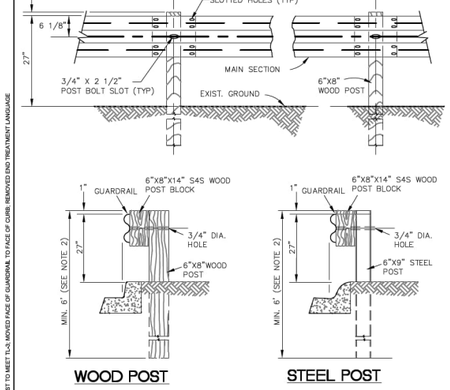


MUNICIPALITY OF ANCHORAGE | SCALE: NTS | APPROVED: | REVISED: 10/08 | **SIGN ON ROUND POST** | SECTION # 70.11 | DETAIL # 70–29



NOTES:
1. POSTS SHALL BE PRIMED AND RECEIVE TWO COATS MINIMUM OF DARK GREEN POWDER COAT PAINT I.A.W. MANUFACTURER'S RECOMMENDATIONS. TOPCOAT WITH TWO COATS YELLOW CARBOLINE 139 UNLESS GUARD POST COVER OR SLEEVE IS INSTALLED.

MUNICIPALITY OF ANCHORAGE | SCALE: NTS | APPROVED: | REVISED: 10/08 | **STEEL BOLLARD** | SECTION # 70.13 | DETAIL # 70–36



REVISION: 2/10 WOOD BLOCK INSTEAD OF STEEL ON STEEL POST TO MEET TL-4, MOVED FACE OF GUARDRAIL TO FACE OF CURB, REMOVED END TREATMENT LANDAUAGE

NOTES:
1. PROVIDE GUARD RAIL OF TYPE AND GAUGE SPECIFIED IN THE CONTRACT DOCUMENTS.
2. WHEN INFORMATION IS NOT INCLUDED IN THE CONTRACT DOCUMENTS, SEE ADOT&PF STANDARD DRAWING G–10 FOR GUARDRAIL POST LENGTHS CORRESPONDING TO COMBINATIONS OF SLOPE AND BEHIND–POST EMBANKMENT WIDTHS.
3. END TREATMENTS SHALL BE CONSTRUCTED AS SHOWN ON DRAWINGS.

MUNICIPALITY OF ANCHORAGE | SCALE: NTS | APPROVED: | REVISED: 2/10 | **GUARD RAIL DETAIL** | SECTION # 70.15 | DETAIL # 70–39

65% SUBMITTAL

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

REV	DATE	DESCRIPTION	BY	APVD

REVISIONS

GHD-WSP JV
1400 W. BENSON BLVD, SUITE 400
ANCHORAGE, ALASKA 99503
AK ENGINEERING LICENSE # 197742(GHD) - AECC236(WSP)
AK BUSINESS LICENSE # 2164152(GHD) - 1113511(WSP)

DSGN	DR	CHK	APVD
AEM	DJW	AWC	VHN

CONSULTANT

SEAL

CIVIL

DETAILS
PAVING STRIPING & SIGNAGE
(2 OF 3)

PORT OF ALASKA

PORT OF ALASKA MODERNIZATION PROGRAM
CARGO TERMINAL 1 DESIGN
ANCHORAGE, ALASKA

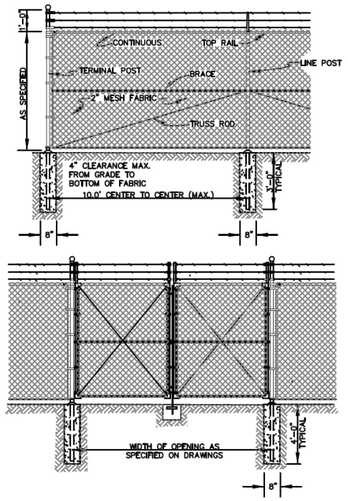
HORIZ SCALE:
VERT SCALE:
DATE: OCT 10, 2023
SHEET: OF

T1-C-542

PRELIMINARY. NOT FOR USE IN DEVELOPING CONSTRUCTION BIDS

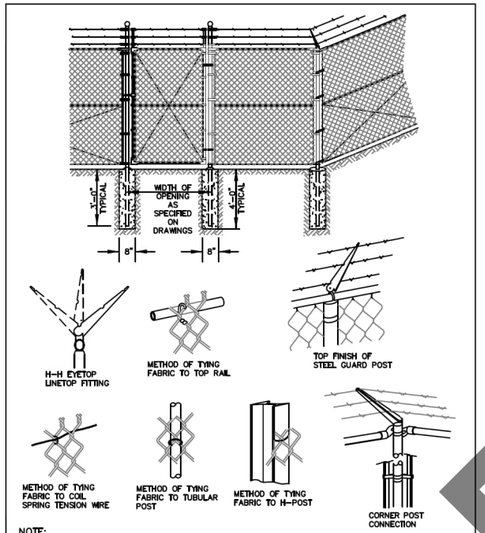
GENERAL NOTES

1. STANDARD DETAILS SHOWN ON THIS SHEET ARE SOURCED FROM THE MUNICIPALITY OF ANCHORAGE STANDARD DETAILS RETRIEVED OCTOBER 2023.



NOTES:
1. GAUGE OF FABRIC AS SPECIFIED ON DRAWINGS.
2. SIZE OF TUBULAR STEEL FOR GATE FRAMES IS SPECIFIED IN SECTION 70.18 – CHAIN LINK FENCES.

MUNICIPALITY OF ANCHORAGE	SCALE: NTS	FENCE DETAILS	SECTION # 70.18
	APPROVED:		DETAIL # 70–41
	REVISED: 10/08		



NOTE:
1. SIZE OF TUBULAR STEEL FOR GATES IS SPECIFIED IN SECTION 70.18 – CHAIN LINK FENCES.

MUNICIPALITY OF ANCHORAGE	SCALE: NTS	FENCE DETAILS	SECTION # 70.18
	APPROVED:		DETAIL # 70–42
	REVISED: 10/08		

65% SUBMITTAL

VERIFY SCALES
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0 1"
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REV	DATE	DESCRIPTION	BY	APVD

REVISIONS

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ANCHORAGE, ALASKA 99503
AK ENGINEERING LICENSE # 197742(GHD) - AECC236(WSP)
AK BUSINESS LICENSE # 2164152(GHD) - 111311(WSP)

DSGN	DR	CHK	APVD
AEM	DJW	AWC	VHN

CONSULTANT

SEAL

PORT of ALASKA MODERNIZATION PROGRAM

CIVIL

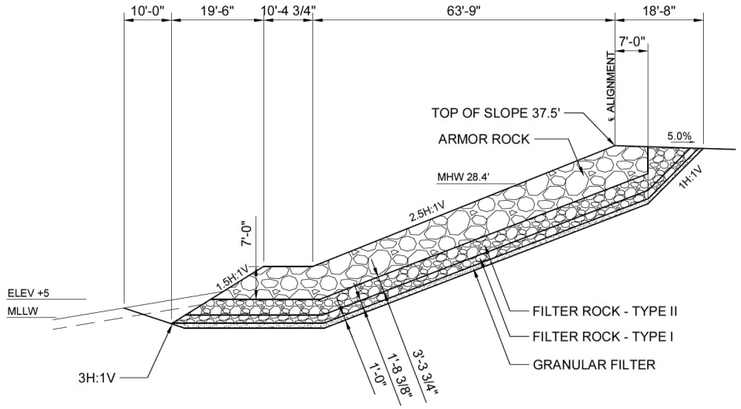
DETAILS
PAVING STRIPING & SIGNAGE
(3 OF 3)

PORT OF ALASKA

PORT OF ALASKA MODERNIZATION PROGRAM
CARGO TERMINAL 1 DESIGN
ANCHORAGE, ALASKA

HORIZ SCALE:	DATE: OCT 10, 2023	T1-C-543
VERT SCALE:	SHEET: OF	

PRELIMINARY. NOT FOR USE IN DEVELOPING CONSTRUCTION BIDS



SHORELINE PROTECTION DETAILS

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

65% SUBMITTAL

VERIFY SCALES

BAR IS ONE INCH ON ORIGINAL DRAWING

0 1"

IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

REV	DATE	DESCRIPTION	BY	APVD

REVISIONS

CONSULTANT: wsp / GHD

DSGN	DR	CHK	APVD

SEAL: 5/1/23

PORT of ALASKA

PORT OF ALASKA MODERNIZATION PROGRAM

CIVIL

DETAILS
SHORELINE PROTECTION DETAILS

PORT OF ALASKA

PORT OF ALASKA MODERNIZATION PROGRAM

CARGO TERMINAL 1 DESIGN

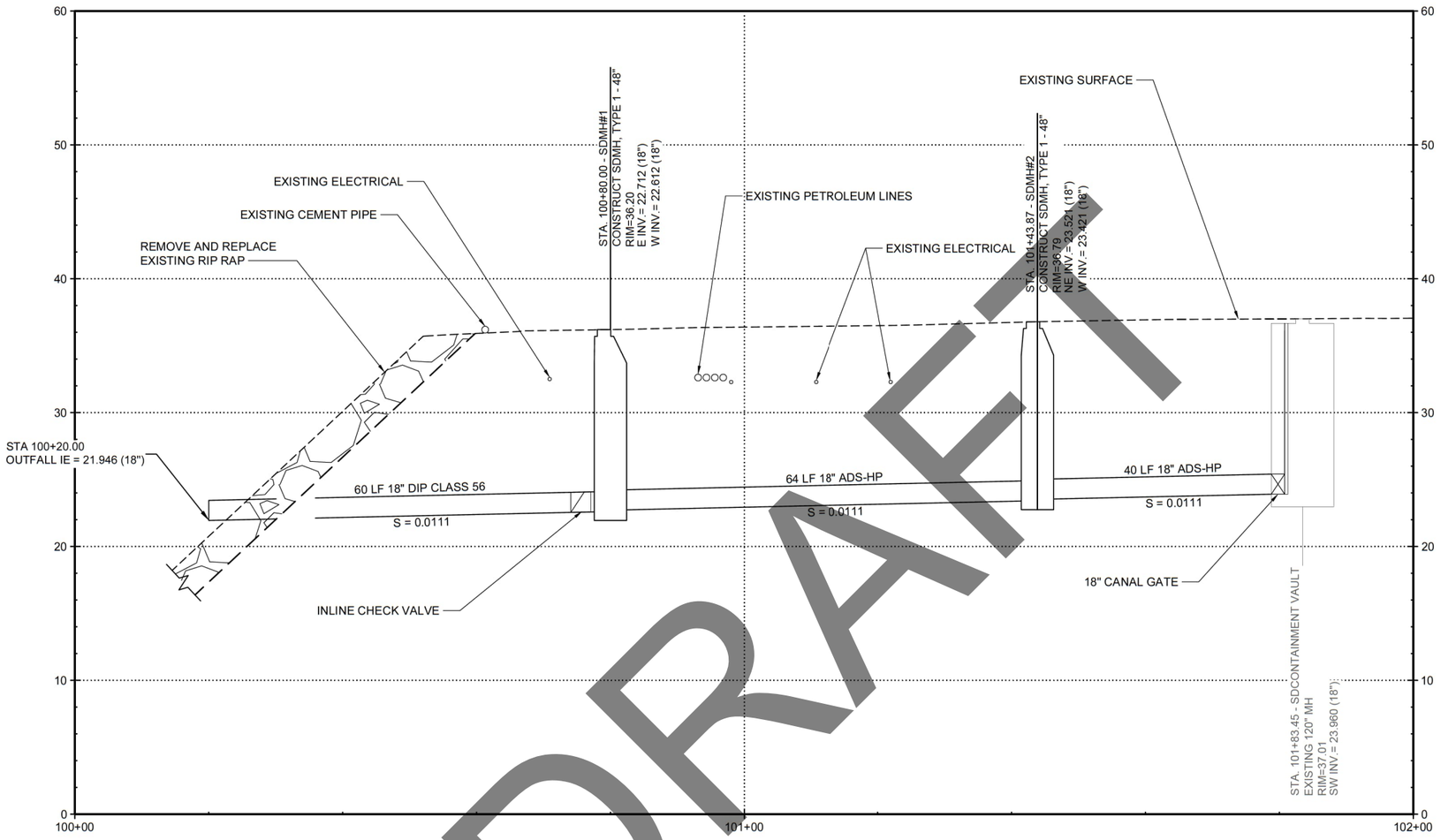
ANCHORAGE, ALASKA

HORIZ SCALE:
VERT SCALE:

DATE: 10/10/23
SHEET: OF

T1-C-551

PRELIMINARY. NOT FOR USE IN DEVELOPING CONSTRUCTION BIDS



A PROFILE - SOUTH STORM DRAIN RELOCATION

SCALE: HORIZ: 1" = 10' VERT: 1" = 5' C-411

1" = 10' 10 0 10 20 scale feet

1" = 5' 5 0 5 10 scale feet

65% SUBMITTAL

VERIFY SCALES
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0 1"
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REV	DATE	DESCRIPTION	BY	APVD

REVISIONS

GHD-WSP JV
1400 W. BENSON BLVD, SUITE 400
ANCHORAGE, ALASKA 99503
AK ENGINEERING LICENSE # 197742(GHD) - AECC236(WSP)
AK BUSINESS LICENSE # 2164152(GHD) - 1113511(WSP)

DSGN	DR	CHK	APVD
XXX	JDM	MM	JRG

CONSULTANT

STATE OF ALASKA 49th REGISTERED PROFESSIONAL ENGINEER 11/15/23
SEAL

CIVIL

DRAINAGE PROFILES (1 OF 2)

PORT OF ALASKA

PORT OF ALASKA MODERNIZATION PROGRAM
CARGO TERMINAL 1 DESIGN
ANCHORAGE, ALASKA

HORIZ SCALE: AS SHOWN
VERT SCALE: AS SHOWN
DATE: 11/17/23
SHEET: 95 OF 420

T1-C-811

PRELIMINARY. NOT FOR USE IN DEVELOPING CONSTRUCTION BIDS

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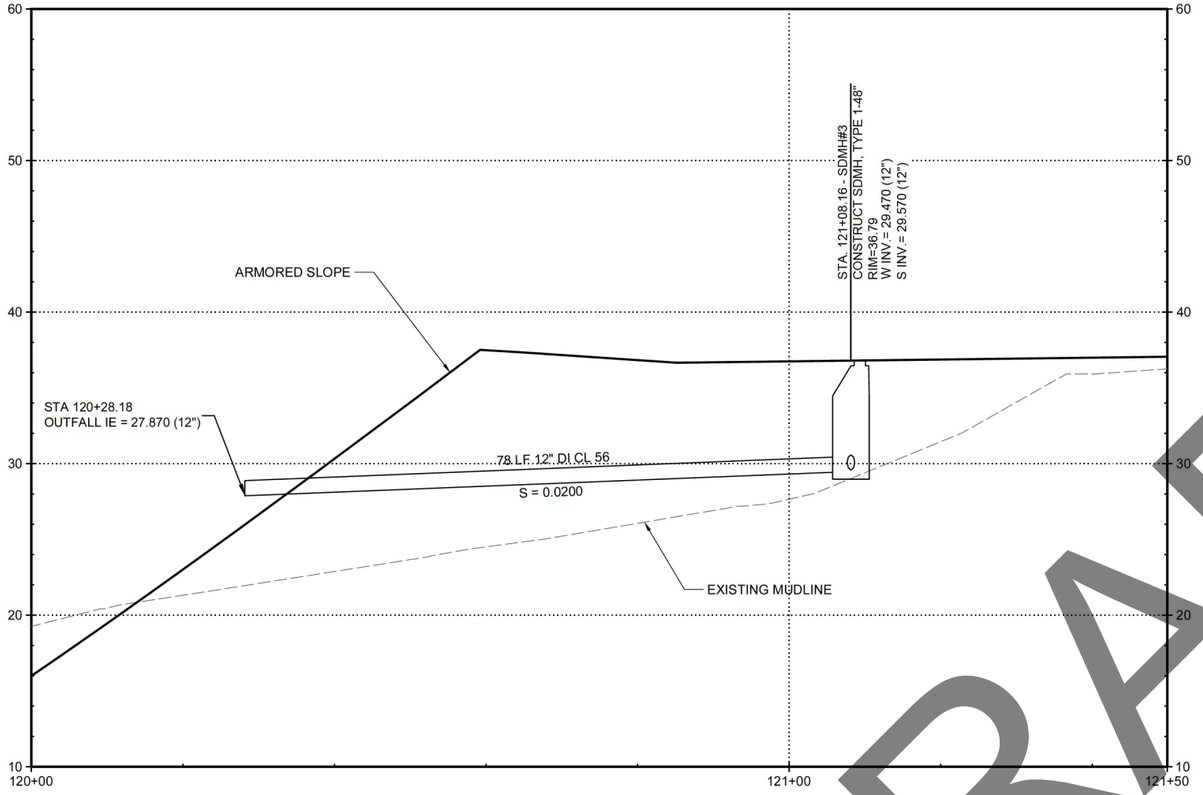
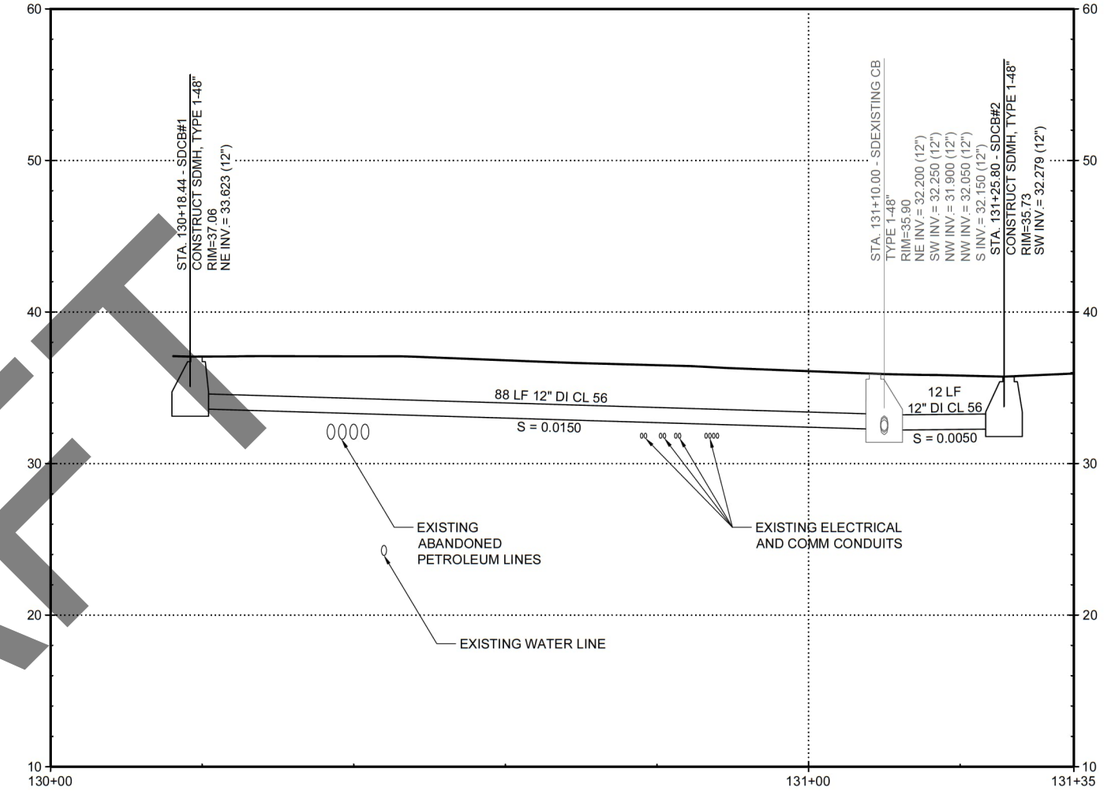


A **PROFILE - SD-2**
SCALE: HORIZ: 1" = 10' VERT: 1" = 5' C-213



B **PROFILE - SD-3**
SCALE: HORIZ: 1" = 10' VERT: 1" = 5' C-213

1" = 10' 10 0 10 20 scale feet

1" = 5' 5 0 5 10 scale feet

65% SUBMITTAL

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VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
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REV	DATE	DESCRIPTION	BY	APVD

REVISIONS

GHD-WSP JV
1400 W. BENSON BLVD, SUITE 400
ANCHORAGE, ALASKA 99503
AK ENGINEERING LICENSE # 197742(GHD) - AECC236(WSP) AK BUSINESS LICENSE # 2164152(GHD) - 1113511(WSP)

DSGN	DR	CHK	APVD
XXX	JDM	MM	JRG

CONSULTANT

STATE OF ALASKA 49th REGISTERED PROFESSIONAL ENGINEER 11/15/23
SEAL

CIVIL

DRAINAGE PROFILES (1 OF 2)

PORT OF ALASKA

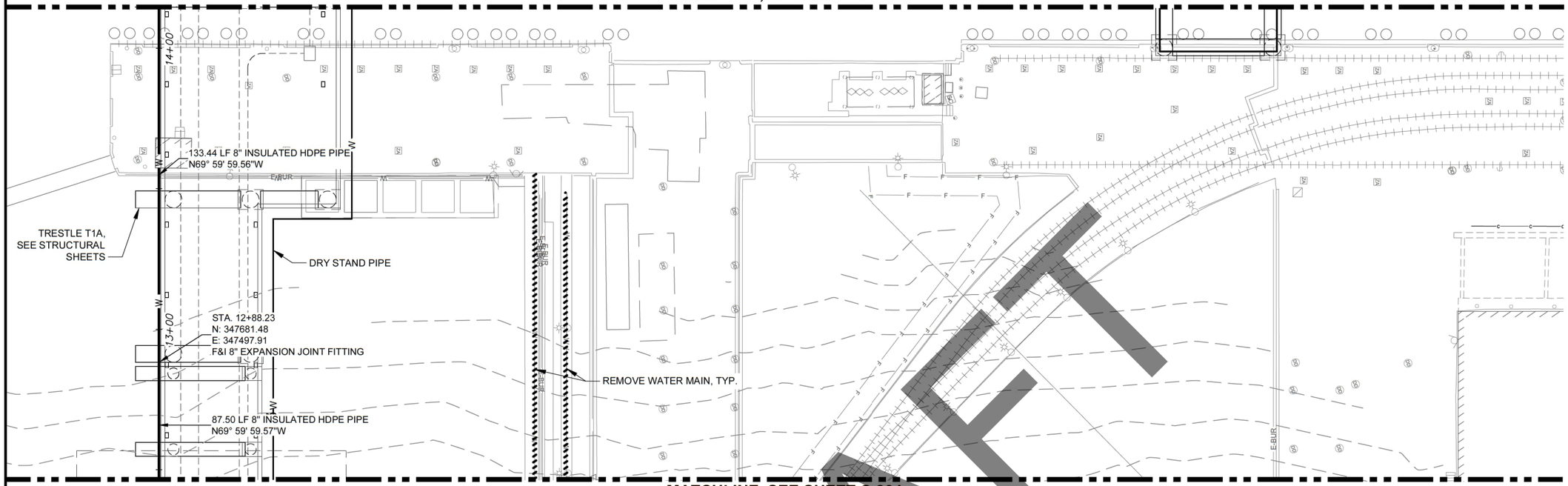
PORT OF ALASKA MODERNIZATION PROGRAM
CARGO TERMINAL 1 DESIGN
ANCHORAGE, ALASKA

HORIZ SCALE: AS SHOWN
VERT SCALE: AS SHOWN
DATE: 11/17/23
SHEET: 96 OF 420

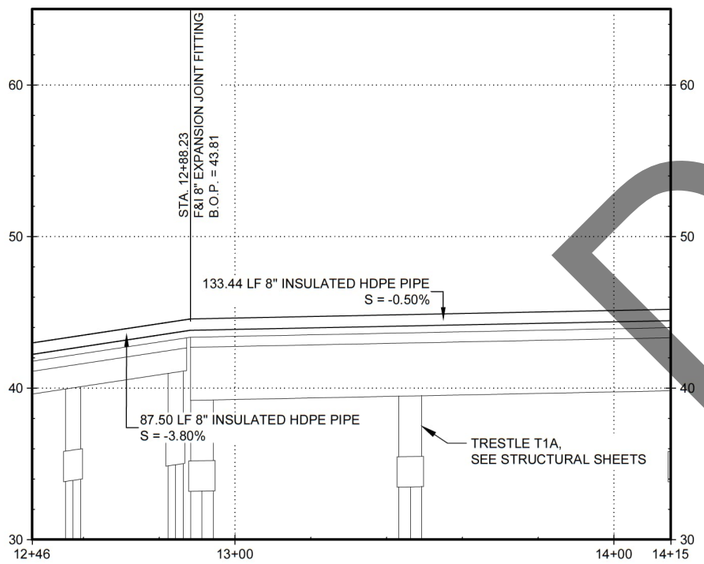
T1-C-812

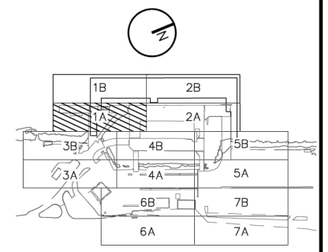
PRELIMINARY. NOT FOR USE IN DEVELOPING CONSTRUCTION BIDS

MATCHLINE, SEE SHEET C-832



MATCHLINE, SEE SHEET C-834





KEY PLAN

1" = 20' scale: 20 0 20 40 feet

65% SUBMITTAL

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VERIFY SCALES
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REV	DATE	DESCRIPTION	BY	APVD

REVISIONS

GHD-WSP JV
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ANCHORAGE, ALASKA 99503
AK ENGINEERING LICENSE # 197742(GHD) - AECC236(WSP)
AK BUSINESS LICENSE # 2164152(GHD) - 1113511(WSP)

CRW ENGINEERING GROUP
3940 ARCTIC BLVD. SUITE 300
ANCHORAGE, ALASKA 99503
PHONE: (907) 562-3252
#AECL882-AK

DSGN	DR	CHK	APVD
CC	CC	ME	ME

CONSULTANT

##/##/##
SEAL

PORT of ALASKA

PORT OF ALASKA MODERNIZATION PROGRAM

CIVIL

UTILITIES - WHARF WATER PLAN & PROFILE

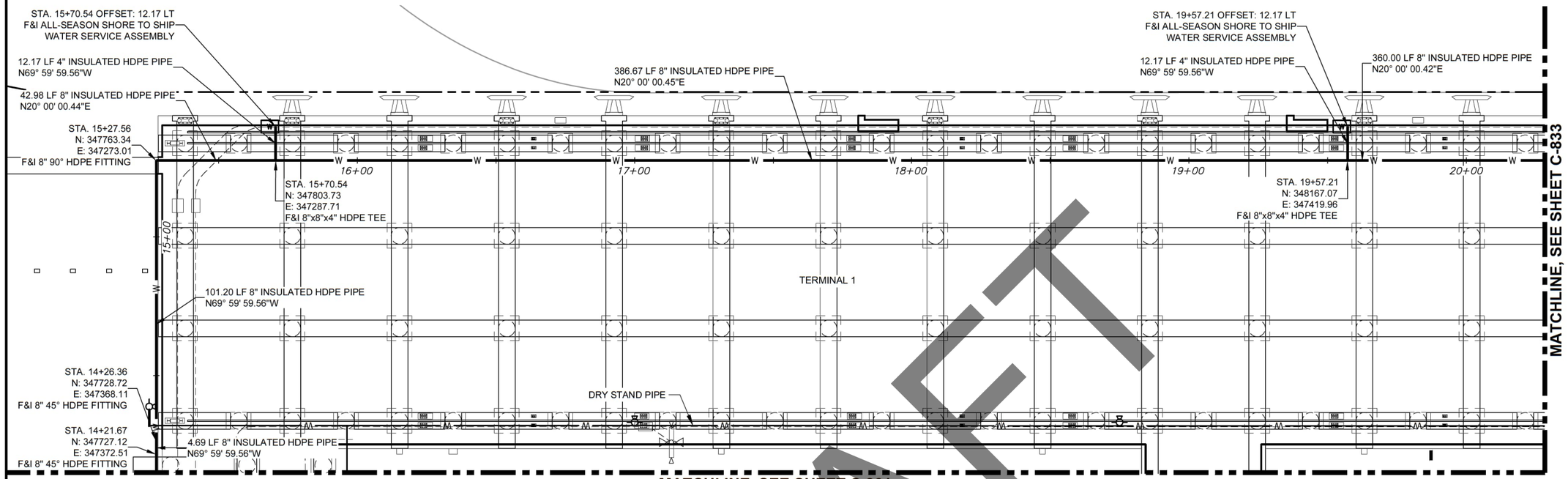
PORT OF ALASKA

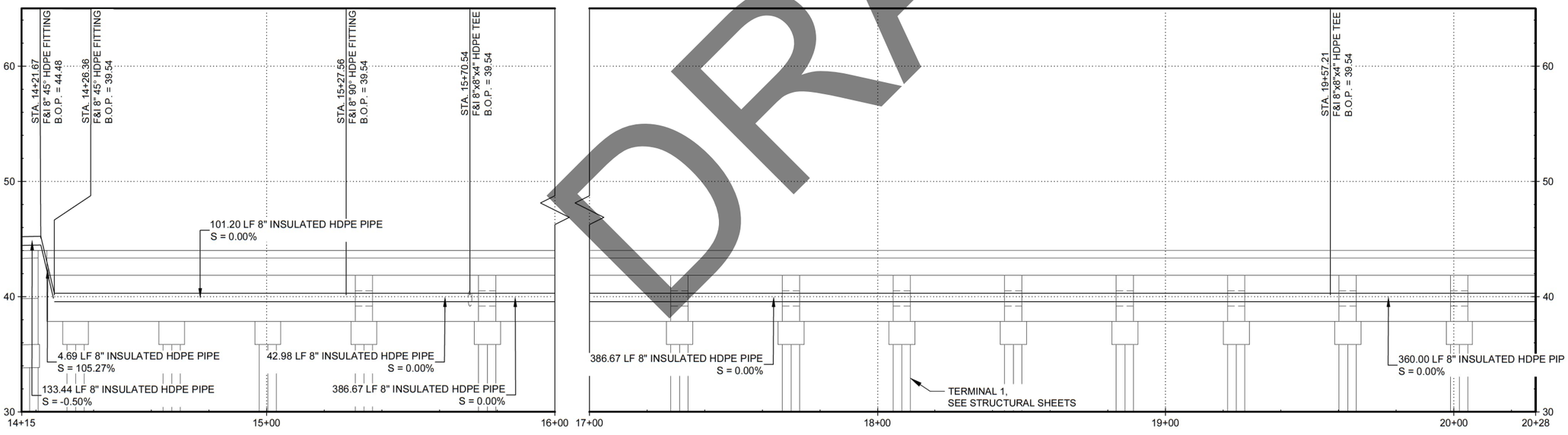
PORT OF ALASKA MODERNIZATION PROGRAM
CARGO TERMINAL 1 DESIGN
ANCHORAGE, ALASKA

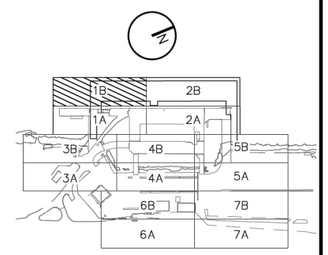
HORIZ SCALE: AS SHOWN
VERT SCALE: AS SHOWN
DATE: 11/14/23
SHEET: # OF #

T1-C-831

PRELIMINARY. NOT FOR USE IN DEVELOPING CONSTRUCTION BIDS







KEY PLAN

1" = 20' scale: 20 0 20 40 feet

65% SUBMITTAL

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VERIFY SCALES
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IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

REV	DATE	DESCRIPTION	BY	APVD

REVISIONS

GHD-WSP JV
1400 W. BENSON BLVD, SUITE 400
ANCHORAGE, ALASKA 99503
AK ENGINEERING LICENSE # 197742(GHD) - AECC236(WSP)
AK BUSINESS LICENSE # 2164152(GHD) - 1113511(WSP)

CRW ENGINEERING GROUP
3940 ARCTIC BLVD. SUITE 300
ANCHORAGE, ALASKA 99503
PHONE: (907) 562-3252
#AECL882-AK

DSGN	DR	CHK	APVD
CC	CC	ME	ME

CONSULTANT

SEAL ##/##/##

PORT of ALASKA

PORT OF ALASKA MODERNIZATION PROGRAM

CIVIL

UTILITIES - WHARF WATER PLAN & PROFILE

PORT OF ALASKA

PORT OF ALASKA MODERNIZATION PROGRAM

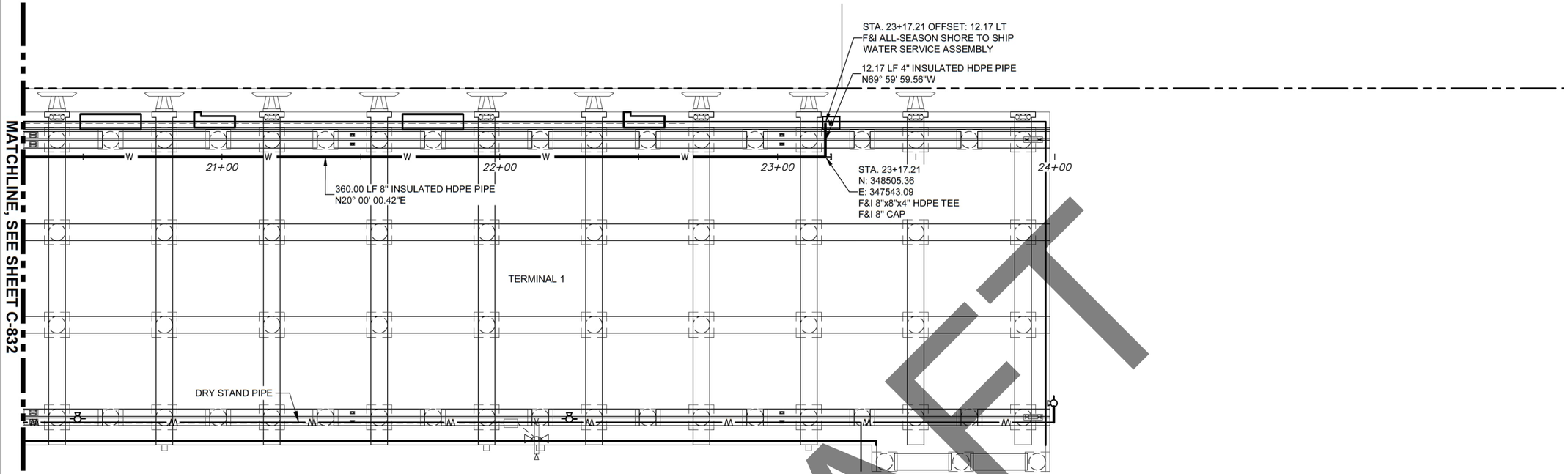
CARGO TERMINAL 1 DESIGN

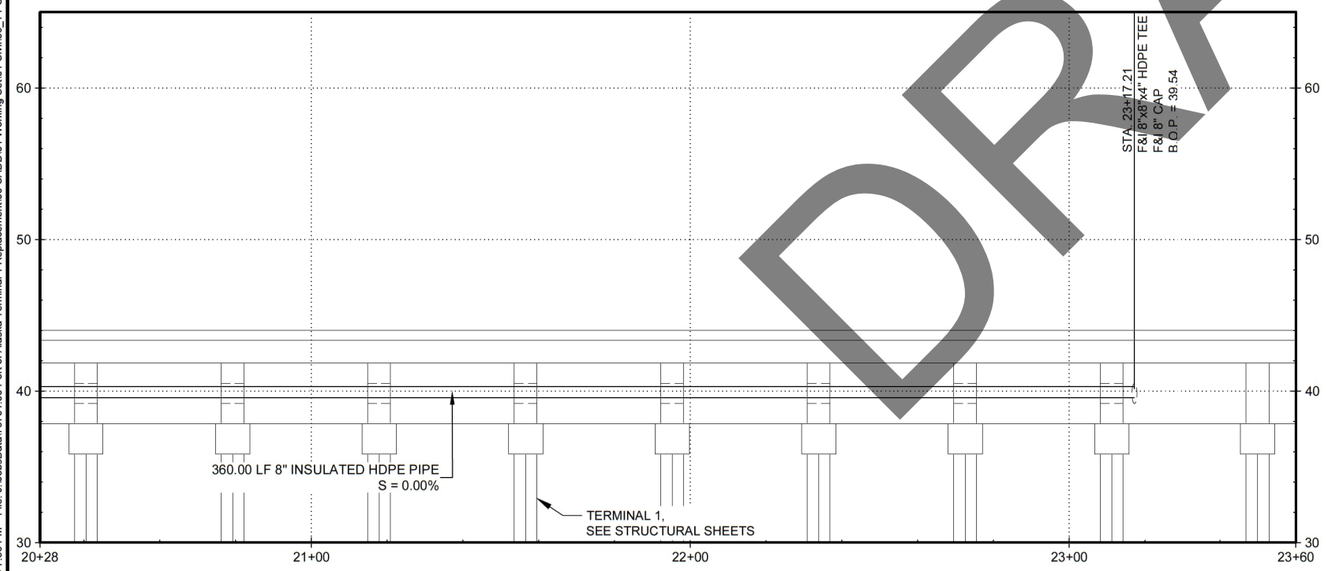
ANCHORAGE, ALASKA

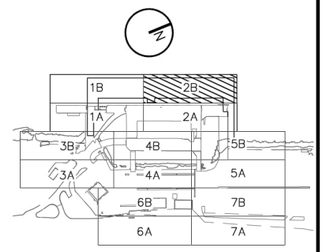
HORIZ SCALE: AS SHOWN
VERT SCALE: AS SHOWN
DATE: 11/14/23
SHEET: # OF #

T1-C-832

PRELIMINARY. NOT FOR USE IN DEVELOPING CONSTRUCTION BIDS







KEY PLAN

1" = 20' scale: 20 0 20 40 feet

65% SUBMITTAL

Last Saved by: EHanks on: Nov 14, 2023 7:36 PM File: J:\Jobs\Data\78701.00 Port of Alaska Terminal 1 Replacement\00 CADD\01 Working Set\01 Civil\06_T1-C-N4.dwg

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

REV	DATE	DESCRIPTION	BY	APVD

REVISIONS

GHD-WSP JV
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AK BUSINESS LICENSE # 2164152(GHD) - 1113511(WSP)

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#AECL882-AK

DSGN	DR	CHK	APVD
CC	CC	ME	ME

CONSULTANT

SEAL ##/##/##

PORT of ALASKA

PORT OF ALASKA MODERNIZATION PROGRAM

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UTILITIES - WHARF WATER PLAN & PROFILE

PORT OF ALASKA

PORT OF ALASKA MODERNIZATION PROGRAM
CARGO TERMINAL 1 DESIGN
ANCHORAGE, ALASKA

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SHEET: # OF #

T1-C-833

PRELIMINARY. NOT FOR USE IN DEVELOPING CONSTRUCTION BIDS

MATCHLINE, SEE SHEET C-831

STA. 12+00.73
N: 347651.55
E: 347580.13
F&I 8" EXPANSION JOINT FITTING

STA. 11+91.53
N: 347648.41
E: 347588.77
WATER UTILITY BOX (OUTLET)

STA. 11+82.78
N: 347645.41
E: 347597.00
F&I 8" 90° DI FITTING
F&I DI TO HDPE TRANSITION FITTING

STA. 11+81.28 OFFSET: 15.28 LT
FIRE HYDRANT (SINGLE PUMPER)

STA. 11+81.28
N: 347644.90
E: 347598.41
F&I FIRE HYDRANT ASSEMBLY
(SINGLE PUMPER)

STA. 11+79.78
N: 347644.39
E: 347599.81
F&I 8" 90° DI FITTING

8.55 LF 8" DIP CL-52
S20° 00' 00.43"W

STA. 11+71.23
N: 347652.42
E: 347602.74
F&I 8" 45° DI FITTING

DRY STAND PIPE

TRESTLE T1A.
SEE STRUCTURAL SHEETS

87.50 LF 8" INSULATED HDPE PIPE
N69° 59' 59.57"W

STA. 11+82.78
N: 347645.45
E: 347596.90
F&I 8" 90° HDPE FITTING,
WATER UTILITY BOX (INLET)

98.00 LF 8" DIP CL-52
S57° 54' 28.15"W

STA. 10+73.23 OFFSET: 20.95 RT
FIRE HYDRANT (SINGLE PUMPER)

STA. 10+73.23
N: 347704.49
E: 347685.77
F&I FIRE HYDRANT ASSEMBLY
(SINGLE PUMPER)

73.23 LF 8" DIP CL-52
S57° 54' 28.15"W

STA. 10+00.00
N: 347743.39
E: 347747.81
LOCATE AND CONNECT TO
10" CI WATER MAIN
F&I 10"x10"x8" DI TEE
F&I 8" GV & VB

EXISTING 10" CI WATER MAIN

REMOVE WATER MAIN, TYP.

REMOVE FIRE HYDRANT

CAP EXISTING MAIN 3 FEET DOWNSTREAM OF EXISTING SERVICE CONNECTION.

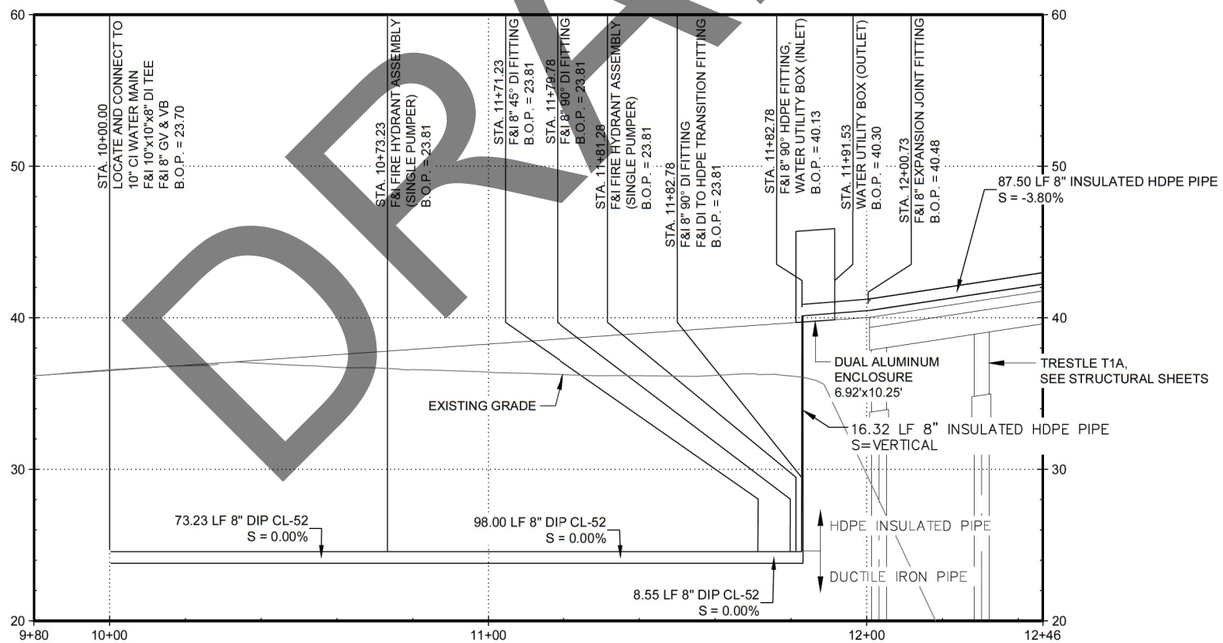
12+00

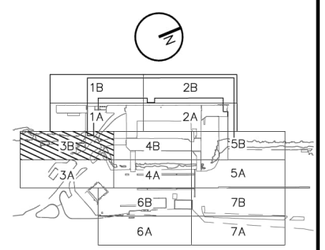
11+00

10+00

E-BUR

E-BNR





KEY PLAN

1" = 20' scale 20 0 20 40 feet

65% SUBMITTAL

DRAFT

REV	DATE	DESCRIPTION	BY	APVD

REVISIONS

VERIFY SCALES
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0 1"
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GHD-WSP JV
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AK BUSINESS LICENSE # 2164152(GHD) - 1113511(WSP)

CRW ENGINEERING GROUP
3940 ARCTIC BLVD, SUITE 300
ANCHORAGE, ALASKA 99503
PHONE: (907) 562-3252
#AECL882-AK

DSGN	DR	CHK	APVD
CC	CC	ME	ME

CONSULTANT

##/##/##
SEAL

PORT of ALASKA

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CIVIL

UTILITIES - WHARF WATER PLAN & PROFILE

PORT OF ALASKA

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CARGO TERMINAL 1 DESIGN
ANCHORAGE, ALASKA

HORIZ SCALE: AS SHOWN
VERT SCALE: AS SHOWN
DATE: 11/14/23
SHEET: # OF #

T1-C-834

PRELIMINARY. NOT FOR USE IN DEVELOPING CONSTRUCTION BIDS

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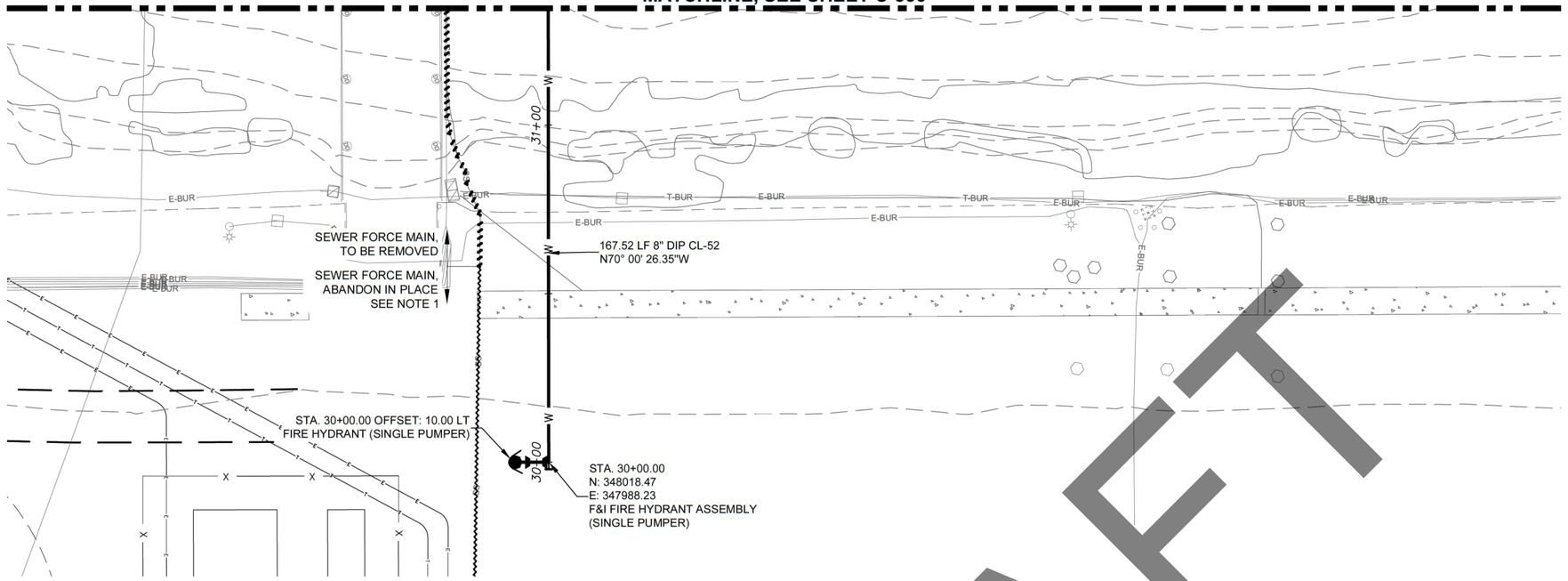
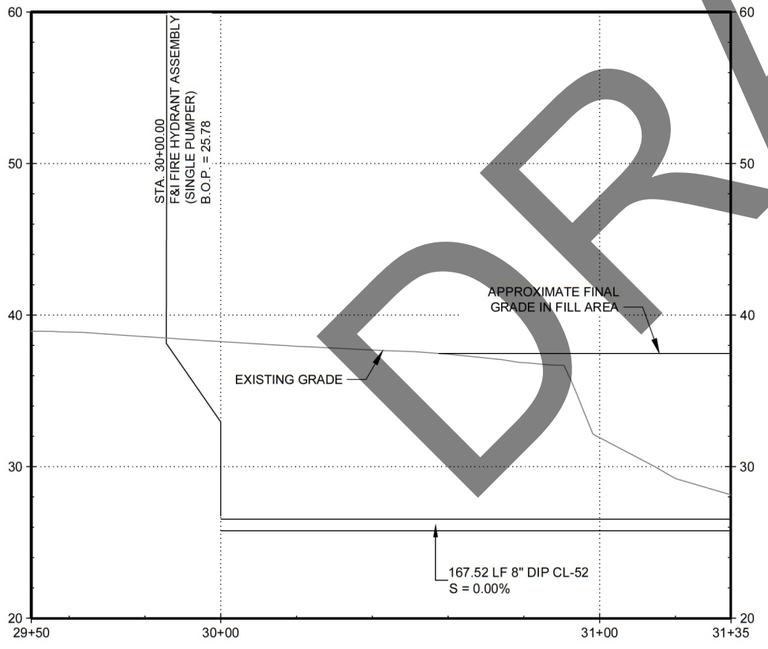
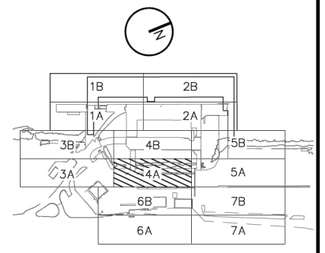
MATCHLINE, SEE SHEET C-836





NOTES:

1. ABOVE GRADE SANITARY SEWER FORCE MAIN SHALL BE REMOVED, WHILE THE BELOW GRADE SEWER FORCE MAIN SHALL BE ABANDON-IN-PLACE IN IT ENTIRETY OR UNTIL THE NEXT SERVICE LINE CONNECTION.



KEY PLAN

1" = 20' 20 0 20 40 scale feet

65% SUBMITTAL

Last Saved by: EHanks on: Nov 14, 2023 7:36 PM File: J:\Jobs\Data\78701.00 Port of Alaska Terminal 1 Replacement\00 CADD\01 Working Set\01 Civil\06_T1-C-N4.dwg

VERIFY SCALES
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0 1"
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REV	DATE	DESCRIPTION	BY	APVD

REVISIONS

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AK BUSINESS LICENSE # 2164152(GHD) - 1113511(WSP)

CRW ENGINEERING GROUP
3940 ARCTIC BLVD. SUITE 300
ANCHORAGE, ALASKA 99503
PHONE: (907) 562-3252
#AECL882-AK

DSGN	DR	CHK	APVD
CC	CC	ME	ME

CONSULTANT

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PORT of ALASKA

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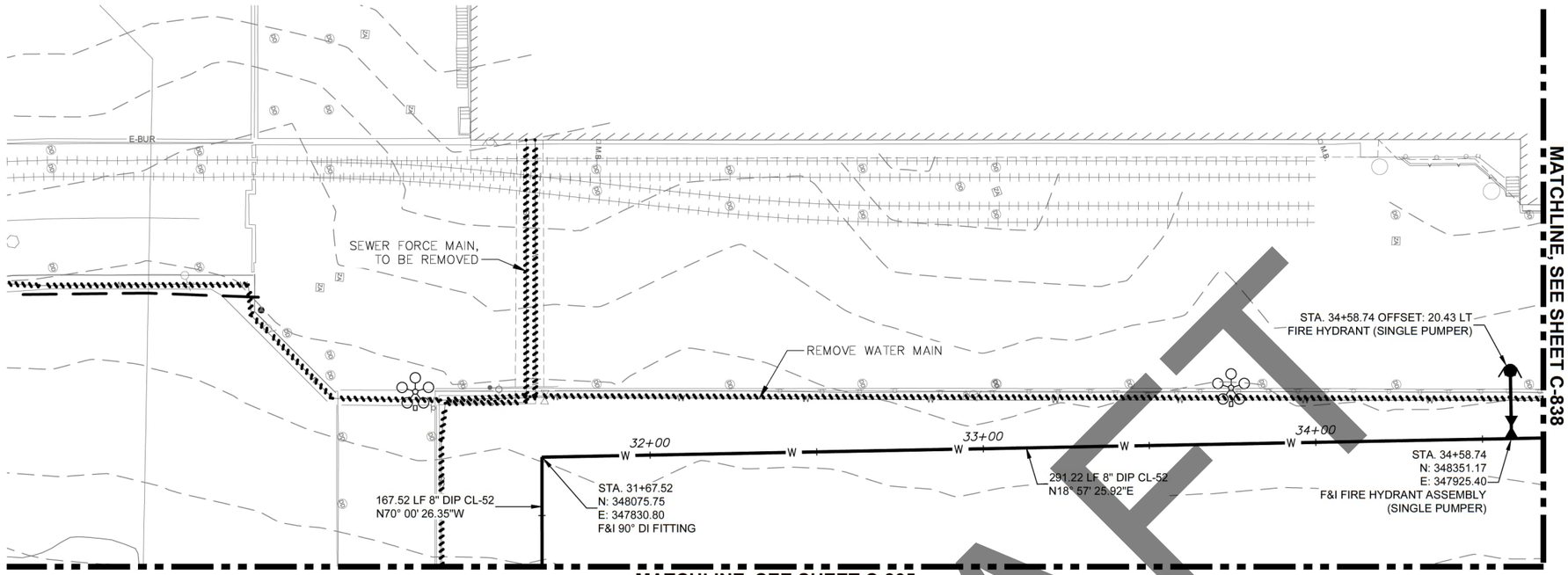
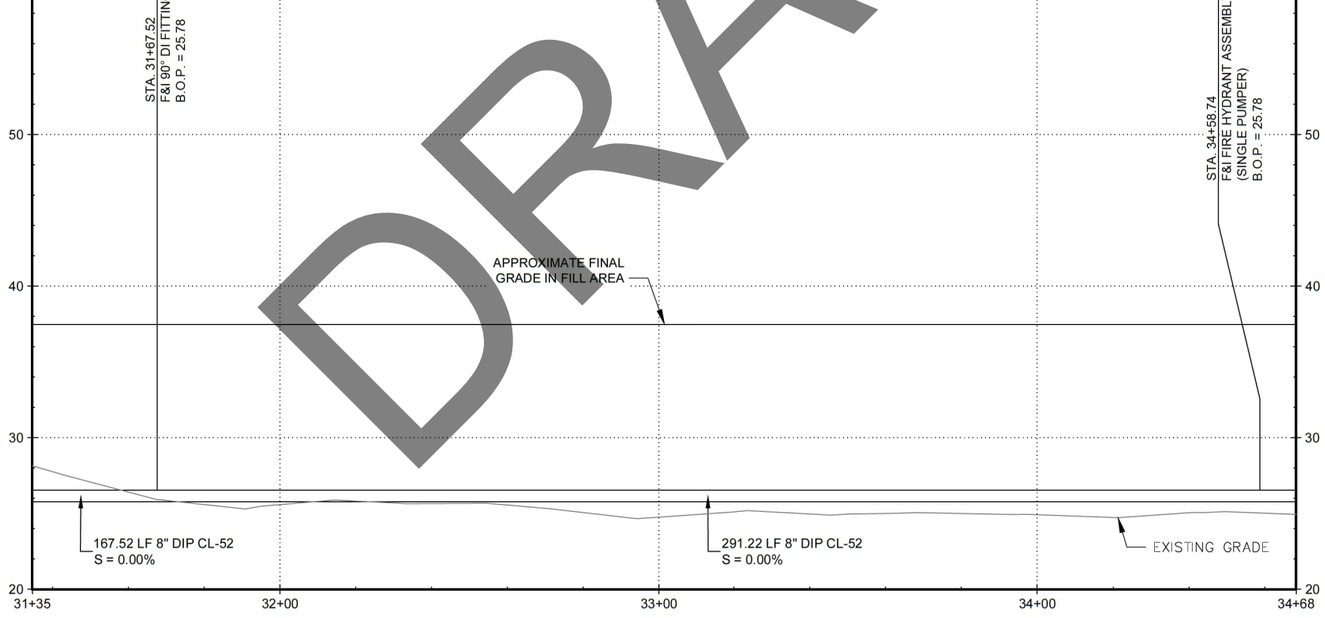
CARGO TERMINAL 1 DESIGN
ANCHORAGE, ALASKA

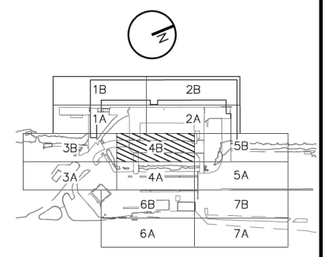
HORIZ SCALE: AS SHOWN
VERT SCALE: AS SHOWN
DATE: 11/14/23
SHEET: # OF #

T1-C-835

PRELIMINARY. NOT FOR USE IN DEVELOPING CONSTRUCTION BIDS







KEY PLAN

1" = 20' scale: 20 0 20 40 feet

65% SUBMITTAL

VERIFY SCALES
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DSGN	DR	CHK	APVD
CC	CC	ME	ME

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ANCHORAGE, ALASKA

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DATE: 11/14/23
SHEET: # OF #

T1-C-836

PRELIMINARY. NOT FOR USE IN DEVELOPING CONSTRUCTION BIDS

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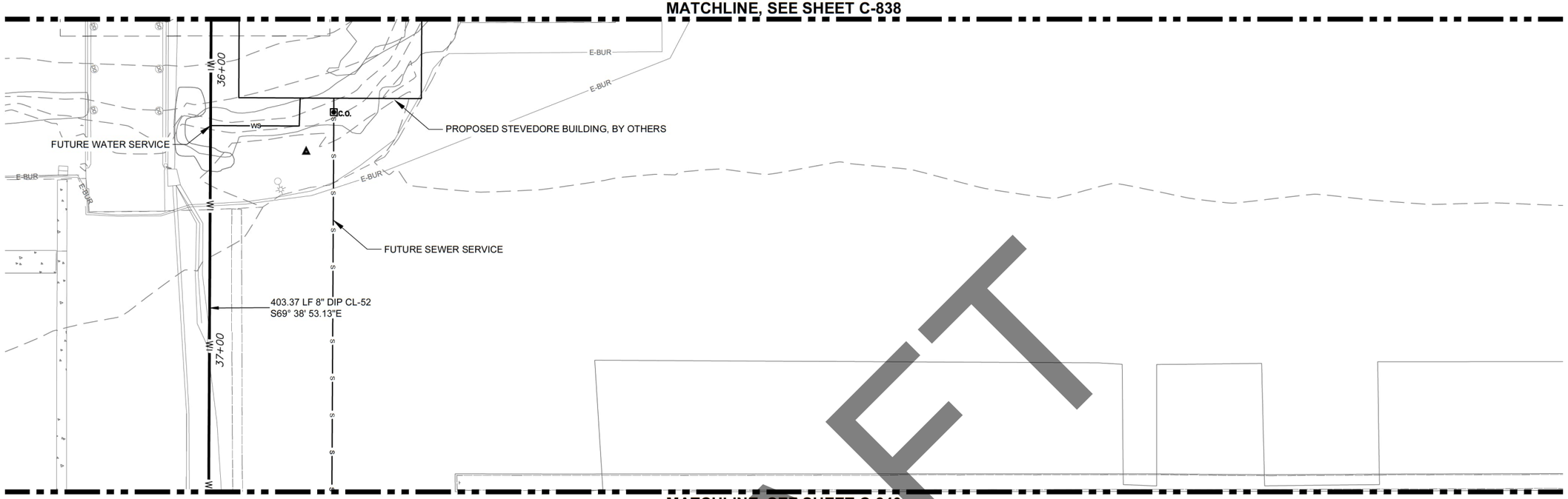
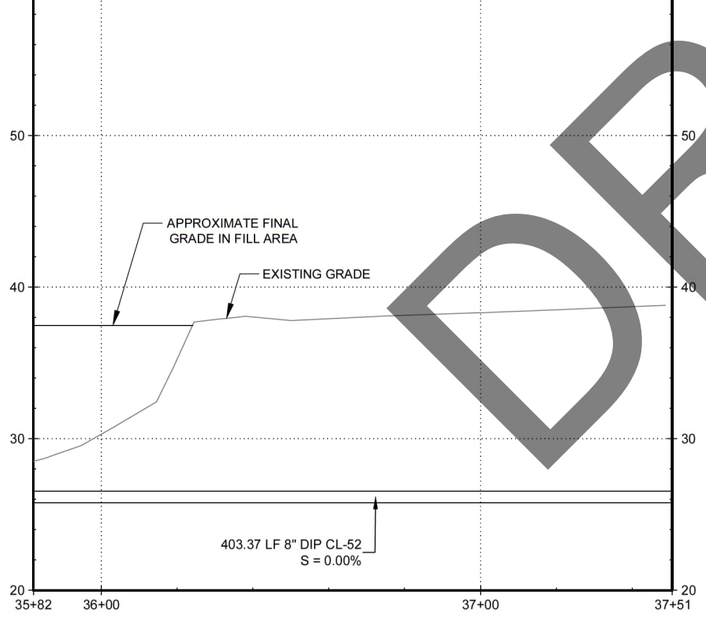
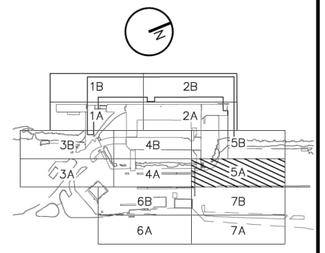
MATCHLINE, SEE SHEET C-838



MATCHLINE, SEE SHEET C-840





KEY PLAN

1" = 20' scale 20 0 20 40 feet

65% SUBMITTAL

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REV	DATE	DESCRIPTION	BY	APVD

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CC	CC	ME	ME

CONSULTANT

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CARGO TERMINAL 1 DESIGN
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T1-C-837

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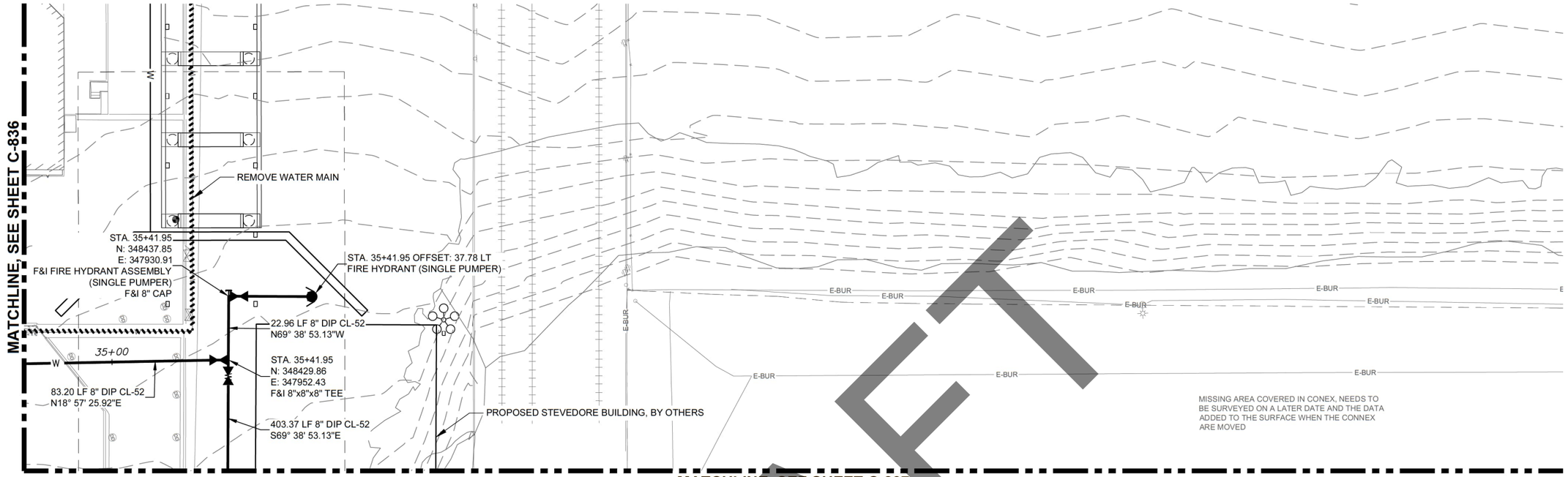

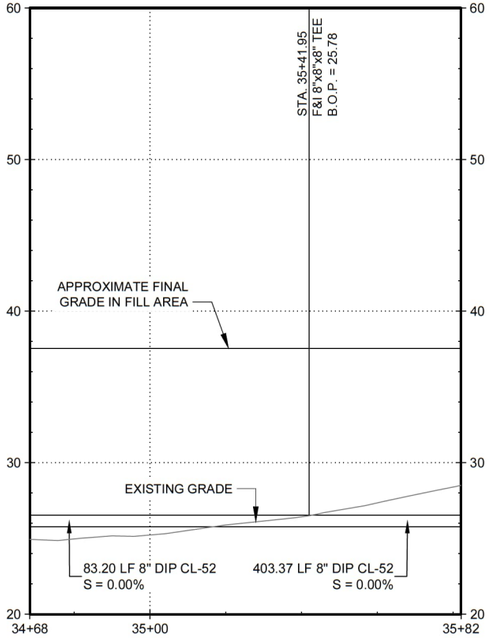

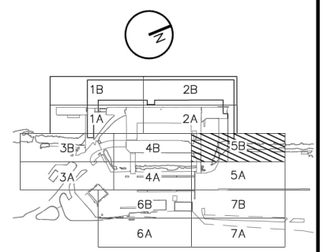

KEY PLAN

1" = 20' scale: 20 0 20 40 feet

65% SUBMITTAL

Last Saved by: Medge on: Nov 14, 2023 8:59 PM File: J:\Jobs\Data\78701.00 Port of Alaska Terminal 1 Replacement\00 CADD\01 Working Set\01 Civil\06_T1-C-N4.dwg

VERIFY SCALES
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REV	DATE	DESCRIPTION	BY	APVD

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CRW ENGINEERING GROUP
3940 ARCTIC BLVD. SUITE 300
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DSGN	DR	CHK	APVD
CC	CC	ME	ME

CONSULTANT

SEAL ##/##/##

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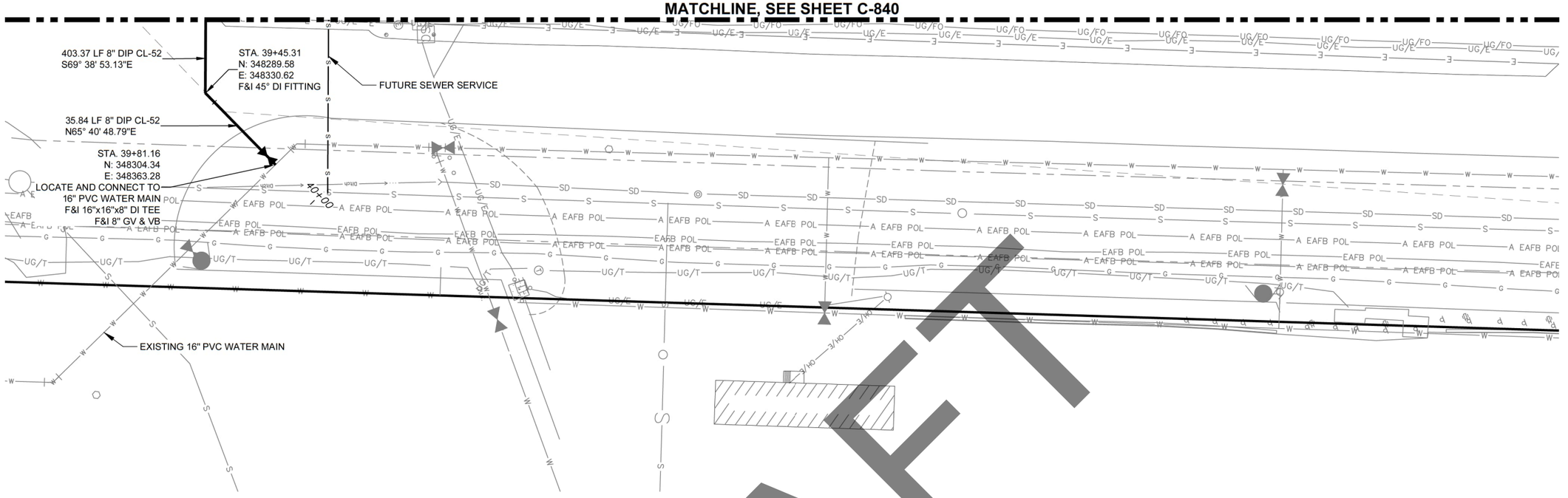
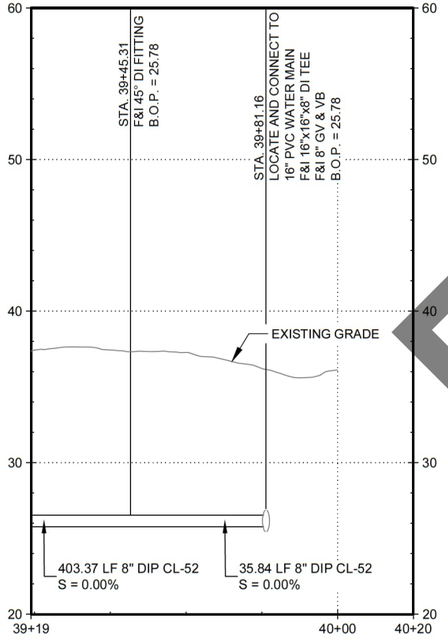
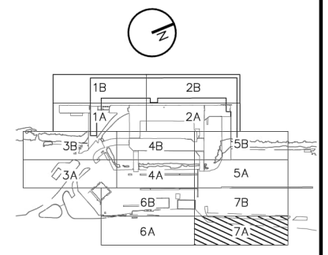
T1-C-838

PRELIMINARY. NOT FOR USE IN DEVELOPING CONSTRUCTION BIDS

MATCHLINE, SEE SHEET C-840







KEY PLAN

1" = 20' scale: 20 0 20 40 feet

65% SUBMITTAL

Last Saved by: Medge on: Nov 14, 2023 8:59 PM File: J:\Jobs\Data\78701.00 Port of Alaska Terminal 1 Replacement\00 CADD\01 Working Set\01 Civil\06_T1-C-N4.dwg

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DSGN	DR	CHK	APVD
CC	CC	ME	ME

CONSULTANT

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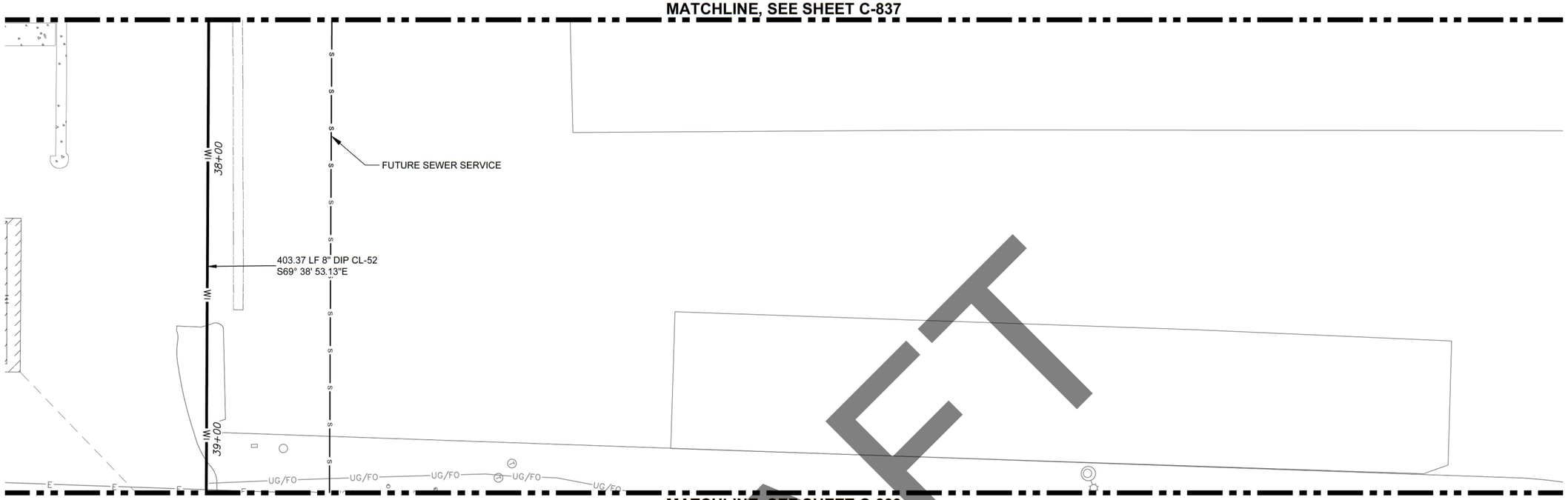
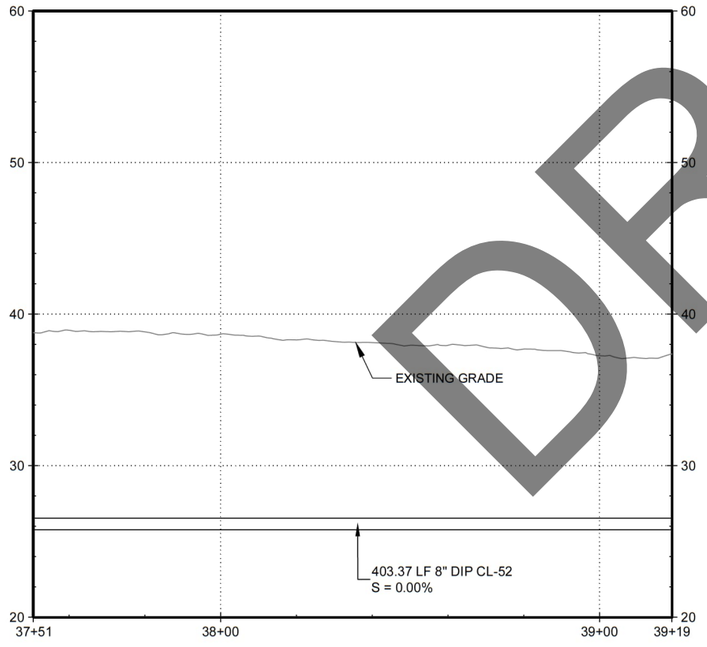
T1-C-839

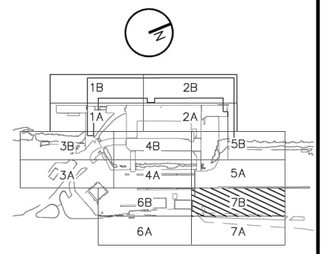
PRELIMINARY. NOT FOR USE IN DEVELOPING CONSTRUCTION BIDS

MATCHLINE, SEE SHEET C-837



MATCHLINE, SEE SHEET C-839





KEY PLAN

1" = 20' scale: 20 0 20 40 feet

65% SUBMITTAL

VERIFY SCALES
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CC	CC	ME	ME

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T1-C-840

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