

ALASKA RAILROAD CORPORATION

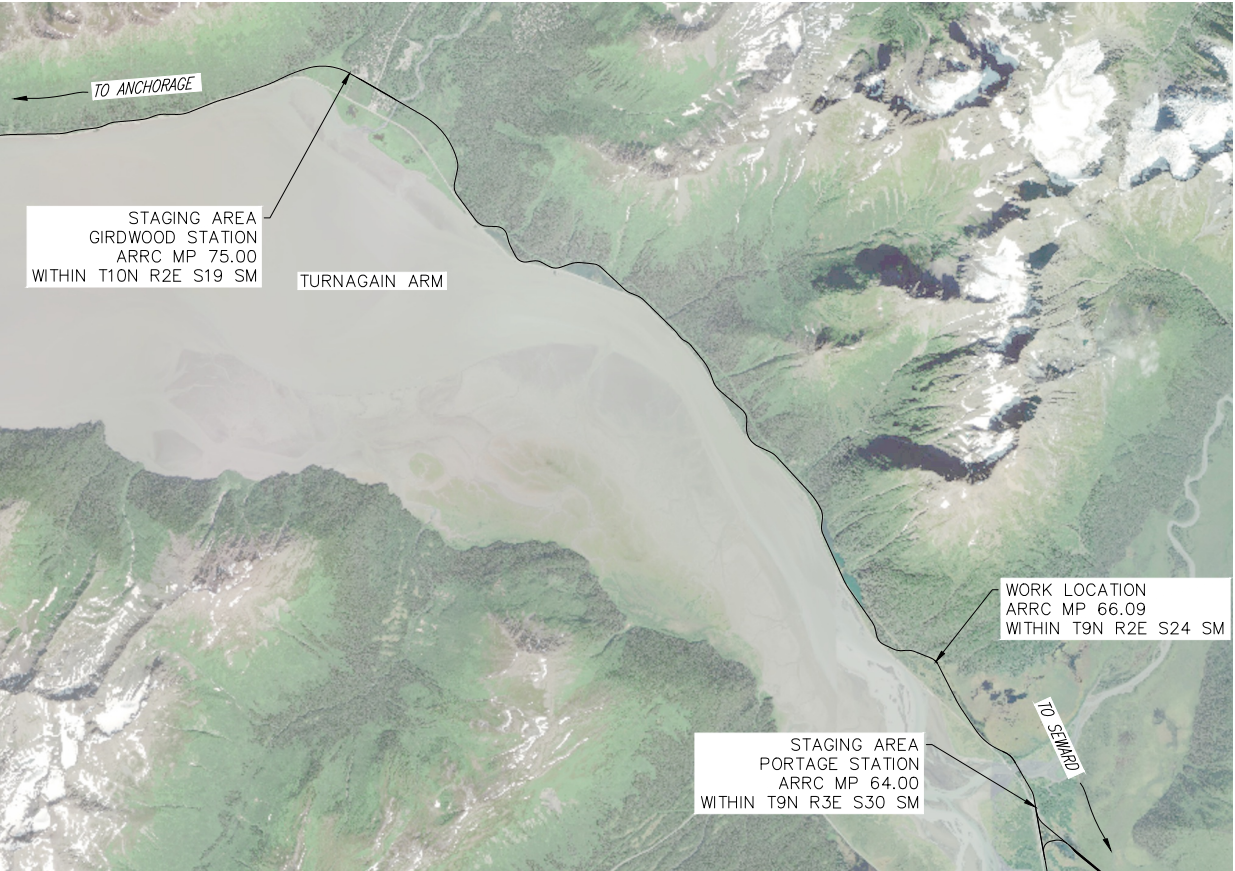
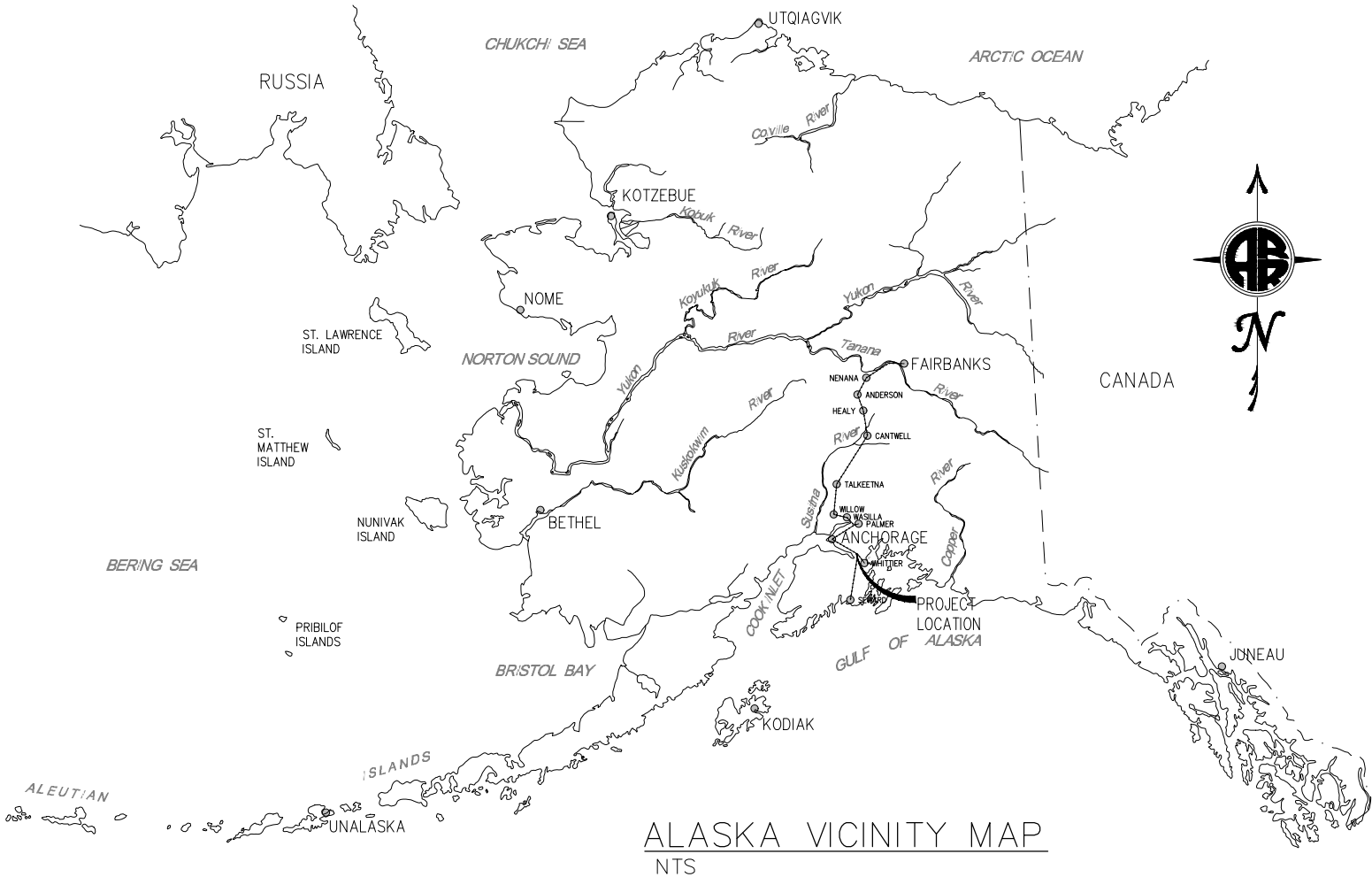
ENGINEERING SERVICES

P.O. BOX 107500, ANCHORAGE, ALASKA 99510-7500

MP 66.09 CULVERT REPLACEMENT

ISSUED FOR CONSTRUCTION

APRIL 2025



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DESIGNED BY: EDW

CHECKED BY: BAO

DRAFTED BY: EDW

ALASKA RAILROAD CORPORATION
PO BOX 107500, ANCHORAGE, AK
99510-7500
327 W SHIP CREEK AVE
ANCHORAGE, AK 99501
(907) 265-2300

KEY MAP
FAIRBANKS
ANCHORAGE
MP66.09
SEWARD

ENGINEERING DEPARTMENT
P.O. BOX 107500
ANCHORAGE, ALASKA 99510-7500

PROJECT:
MP 66.09 CULVERT REPLACEMENT

SHEET TITLE:
COVER SHEET

AFE NO. 11360

YEAR 2025

SHEET 01 OF 07

ABBREVIATIONS

AKDOT & PF	ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
APPROX.	APPROXIMATE
AREMA	AMERICAN RAILWAY ENGINEERING AND MAINTENANCE OF WAY ASSOCIATION
ARRC	ALASKA RAILROAD CORPORATION
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AWS	AMERICAN WELDING SOCIETY
BD	BALLAST DECK
BMP	BEST MANAGEMENT PRACTICE
B.O.P.	BEGINNING OF PROJECT
BR	BRIDGE
BVCE	BEGIN VERTICAL CURVE ELEVATION
BVCS	BEGIN VERTICAL CURVE STATION
℄	CENTERLINE
C-C	CENTER-TO-CENTER
CC	CIRCULAR CURVE
CMP	CORRUGATED METAL PIPE
C.P.	CONTROL POINT
CRSI	CONCRETE REINFORCING STEEL INSTITUTE
CS	POINT OF CURVE TO SPIRAL
Dc	DEGREE OF CURVATURE, CENTRAL CURVE
DIA	DIAMETER
(E)	EXISTING
E OR EXP	EXPANSION
Ea	SUPERELEVATION ACTUAL
ELEV. OR EL.	ELEVATION
E.O.P.	END OF PROJECT
Eu	SUPERELEVATION UNBALANCED
EVCE	END VERTICAL CURVE ELEVATION
EVCS	END VERTICAL CURVE STATION
F OR FIX	FIXED OR FREIGHT
FG	FINISHED GRADE
GALV.	GALVANIZED
GR	GRADE
HORIZ.	HORIZONTAL
H.S.	HIGH STRENGTH
INV.	INVERT
K	"K" VALUE
LC	LENGTH OF CENTRAL CURVE
LF	LINEAR FEET
LS	LENGTH OF SPIRAL CURVE OR LUMP SUM
LT	CURVE LEFT
LVC	LENGTH OF VERTICAL CURVE
MIN.	MINIMUM
MISC.	MISCELLANEOUS
MK	MARK
MP	MILEPOST
(N)	NEW OR PROPOSED
N.I.C.	NOT IN CONTRACT
OD	OPEN DECK

ABBREVIATIONS (CONT.)

OHWM	ORDINARY HIGH WATER MEASURED
O-O	OUT-TO-OUT
P	PASSENGER
PC	POINT OF CURVATURE
PCF	POUNDS PER CUBIC FOOT
POB	POINT OF BEGINNING
POE	POINT OF END
PT	POINT OF TANGENT
PTFE	POLYTETRAFLUOROETHYLENE
PSI	POUNDS PER SQUARE INCH
PSF	POUNDS PER SQUARE FOOT
PVI	POINT OF VERTICAL INTERSECTION
R	RADIUS
RBBD	ROLLED BEAM BALLAST DECK
RR	RAILROAD
RT	CURVE RIGHT
R/W OR ROW	RIGHT OF WAY
SBM	STEEL BEAM
SC	POINT OF SPIRAL TO CURVE
SPA	SPACE OR SPACING
SPI	SPIRAL POINT OF INTERSECTION
SSHC	STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION
SSP	SMOOTH STEEL PIPE
SSPC	STEEL STRUCTURES PAINTING COUNCIL
ST	POINT OF SPIRAL TO TANGENT
STA.	STATION
T	TANGENT LENGTH
T/XXX	TOP OF XXX (T/TIE, T/CAP, ETC.)
TOR	TOP OF RAIL
TPI	TOTAL HORIZONTAL CURVE POINT OF INTERSECTION
TPT	TIMBER PILE TRESTLE
TS	POINT OF TANGENT TO SPIRAL
TT	THROUGH TRUSS
TYP.	TYPICAL
V	VELOCITY
VERT.	VERTICAL
Δc	CENTRAL ANGLE OF CIRCULAR CURVE
ΔT	TOTAL ANGLE OF DIVERGENCE
Θs	ANGLE OF SPIRAL CURVE

LEGEND

GENERAL	
LETTER SERIES	
SHEET NUMBER	
SECTION DESIGNATION	
EXISTING	
PROPOSED	
SIGN	
PVI	
RIGHT OF WAY	
GROUNDLINE	
TRACK ℄	
ROADWAY ℄	
CHAIN LINK FENCE	
FILL LIMITS	
EXCAVATION LIMITS	
STRUCTURE	
EXISTING STRUCTURE TO BE REMOVED	
UTILITIES	
EXISTING	
PROPOSED	
POWER POLE	
ELECTRICAL PEDISTAL	
GUY ANCHOR	
FIBER OPTIC VAULT	
OVERHEAD POWER	
FIBER OPTIC LINE	
TOPOGRAPHY	
EXISTING	
PROPOSED	
MAJOR CONTOUR	
MINOR CONTOUR	

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KEY MAP

ENGINEERING DEPARTMENT
P.O. BOX 107500
ANCHORAGE, ALASKA 99510-7500

PROJECT: MP 66.09 CULVERT REPLACEMENT

SHEET TITLE: ABBREVIATIONS AND LEGEND

AFE NO. 11360

YEAR 2025

SHEET 02 OF 07

MP 66.09 CULVERT REPLACEMENT

PROJECT STATIONS: 10+00 TO 12+00

TABLE OF PAY ITEMS			
PAY ITEM	ITEM DESCRIPTION	PAY UNIT	TOTAL QUANTITY
201.0009.1	CLEARING AND GRUBBING	LS	1
202.0018.1	REMOVAL OF CULVERT PIPE	LS	1
203.0003.1	UNCLASSIFIED EXCAVATION **	CY	1330
203.0006.1	SELECTED MATERIAL, TYPE A **	TON	660
203.0006.2	SELECTED MATERIAL, TYPE C **	TON	880
301.0001.1	AGGREGATE BASE COURSE, GRADING C-1 (SUB-BALLAST) **	TON	140
309.0001.1	BALLAST, TYPE 3 **	TON	170
505.0005.1	FURNISH SSP CULVERT, 108"ø X 1.000"t	LF	74
603.0017.1	INSTALL SSP CULVERT, 108"ø X 1.000"t	LF	74
630.0001.1	GEOTEXTILE, SEPARATION, CLASS 3 **	SY	340
634.0001.1	GEOGRID, REINFORCEMENT, CLASS 1 **	SY	380
640.0001.1	MOBILIZATION AND DEMOBILIZATION	LS	1
642.0001.1	CONSTRUCTION SURVEYING	LS	1
643.0002.1	TRAFFIC MAINTENANCE	LS	1
646.0001.1	CPM SCHEDULING	LS	1
647.0001.1	AS-BUILT DRAWINGS AND SPECIFICATIONS	LS	1
802.0003.1	TRACK WORK, 115RE RAIL	LS	1
802.0005.1	TRACK TAMPING, SURFACING, AND FINAL DRESSING	TF	200
803.0002.1	TRACK REMOVAL	LS	1

* NOTE: PAY ITEM QUANTITIES ARE APPROXIMATE. CONTRACTOR IS RESPONSIBLE FOR THEIR OWN QUANTITY TAKE-OFFS USING THE INFORMATION WITHIN THE CONTRACT DOCUMENTS TO VERIFY THE QUANTITIES LISTED HEREON.

** APPROXIMATE QUANTITIES BASED ON EXCAVATION LIMITS SHOWN ON THE PLANS. THE CONTRACTOR MAY ELECT TO SUBMIT A VALUE ENGINEERING CHANGE PROPOSAL (VECP) IN ACCORDANCE WITH SUBSECTION 104-1.06 SHOULD THEIR MEANS AND METHODS RESULT IN A REDUCTION IN THE EXCAVATION LIMITS THAT REDUCE PAY ITEM QUANTITIES.

TABLE OF ESTIMATING FACTORS		
ITEM NO.	ITEM DESCRIPTION	ESTIMATING FACTOR
203.0006	SELECTED MATERIAL	135 LB/FT ³
207.0001	BALLAST, TYPE 3	140 LB/FT ³
301.0002	AGGREGATE BASE COURSE , GRADING C-1	144 LB/FT ³

SUMMARY OF ESTIMATED QUANTITIES PROVIDED BY ARRC		
DESCRIPTION	UNIT	QUANTITY
TIMBER TRACK TIES 7"x9"x8'-6"	EA	30
MISC. TRACK MATERIAL (TIE PLATES, ETC.)	CS	ALL REQ'D

1. ITEMS AND WORK QUANTITIES PROVIDED BY ARRC MAY BE CONTRACTOR PROVIDED, SEE CONTRACT DOCUMENTS.

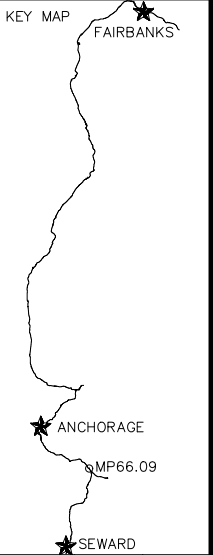
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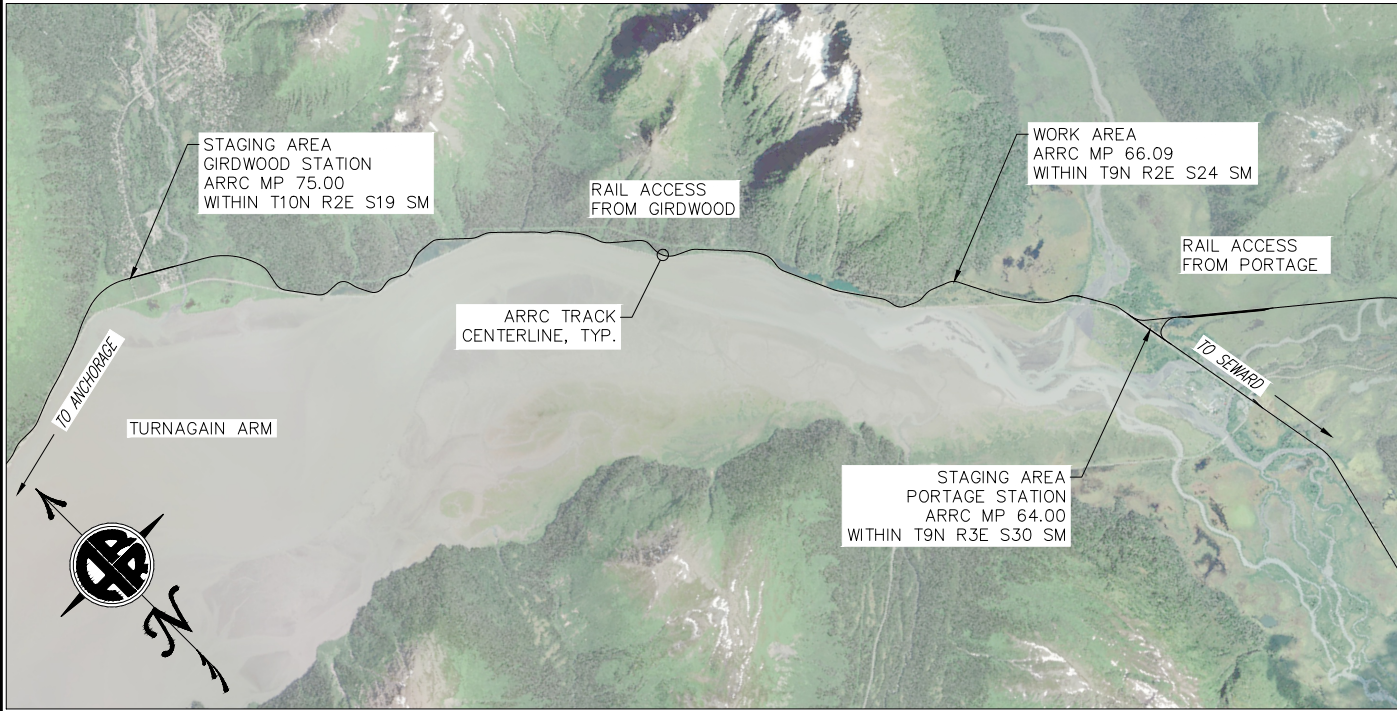
PROJECT: MP 66.09 CULVERT REPLACEMENT

SHEET TITLE: ESTIMATE OF QUANTITIES

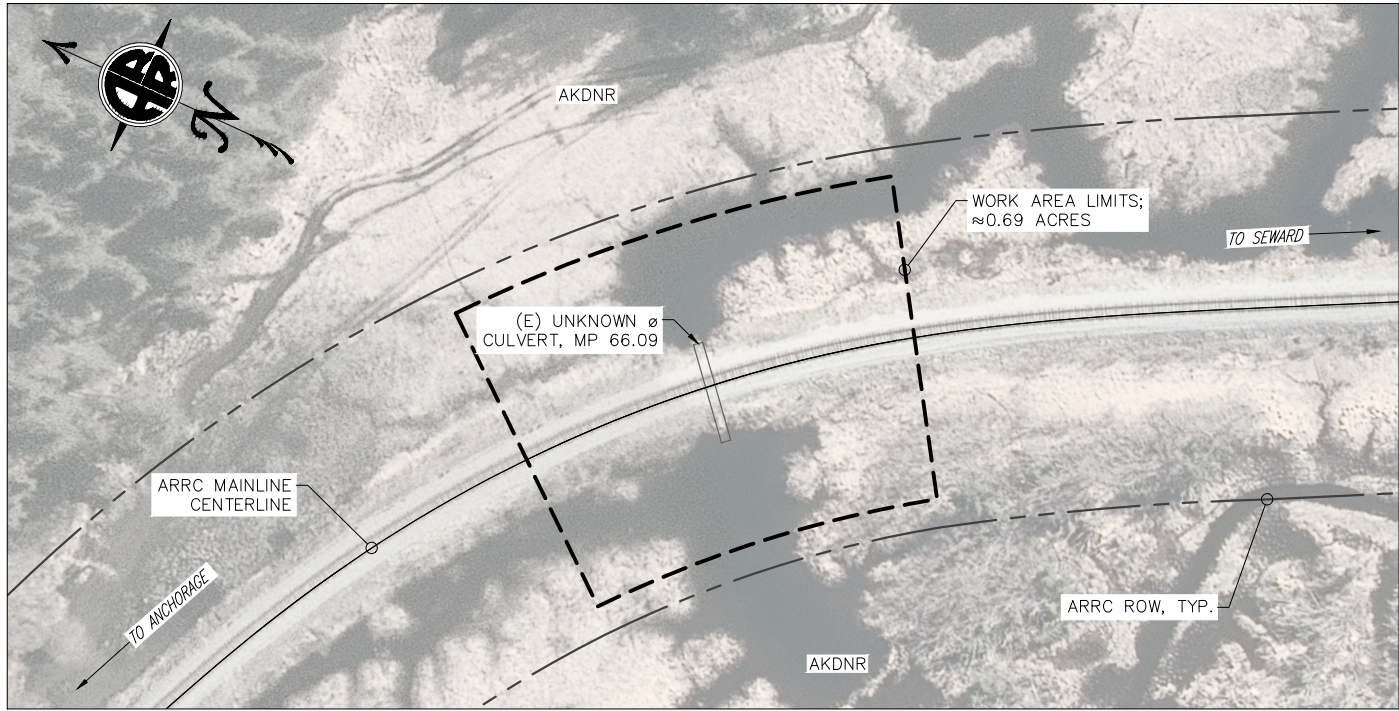
AFE NO. 11360

YEAR 2025

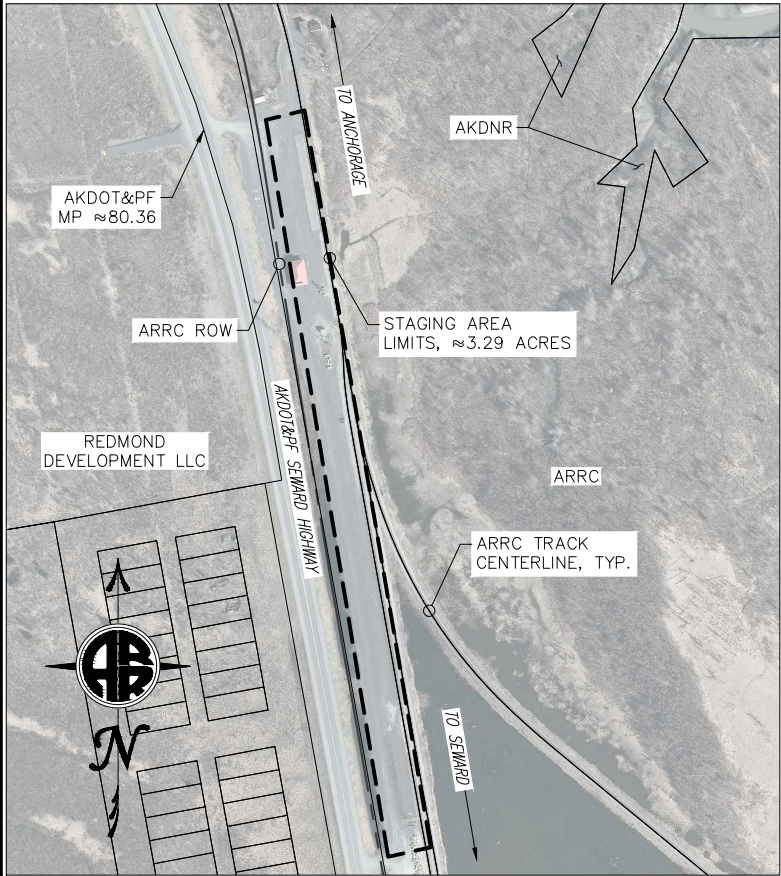
SHEET 03 OF 07



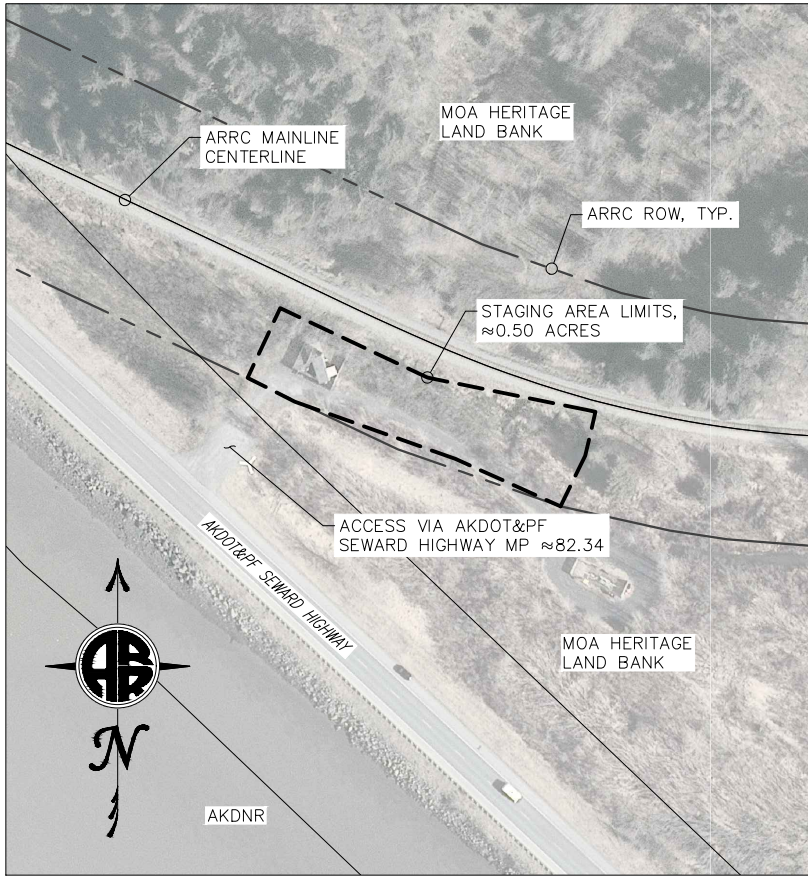
A SITE LOCATION
04 NTS



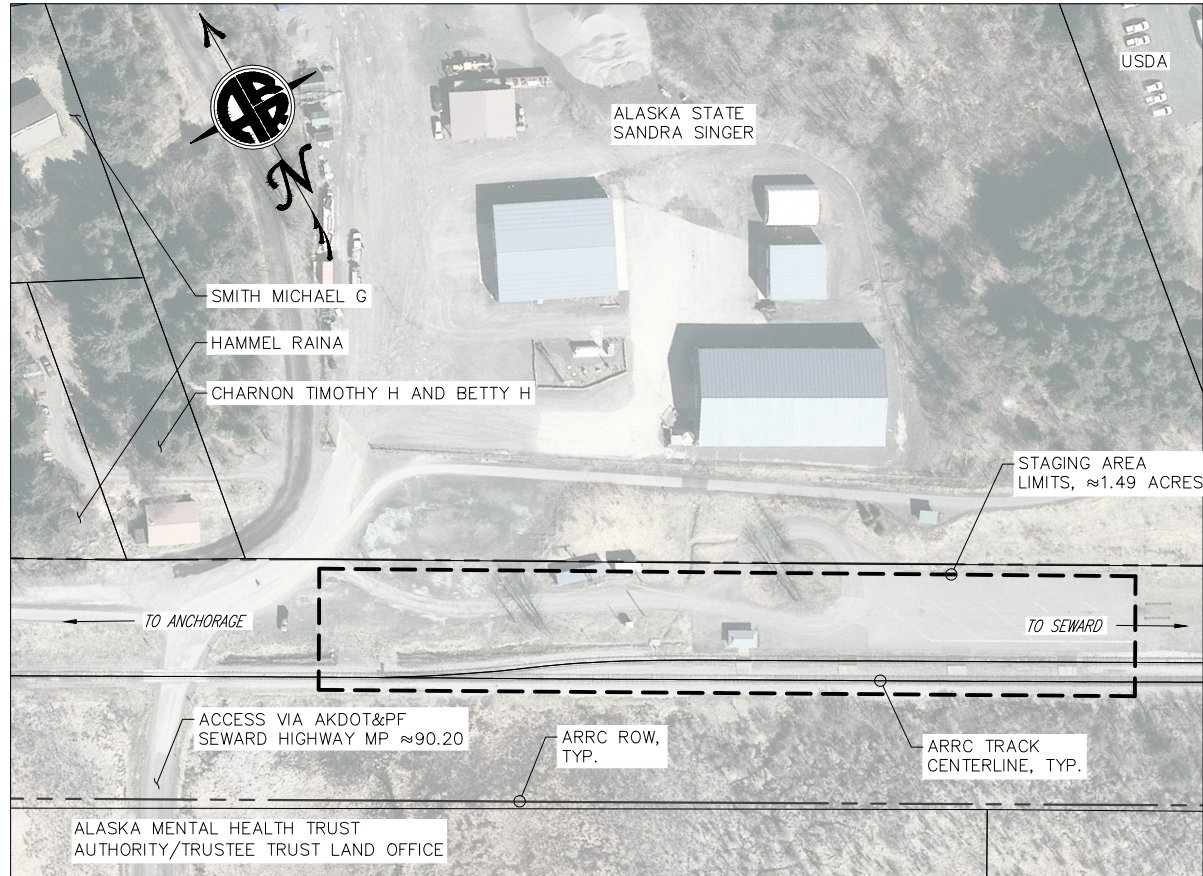
B MP 66.09 - WORK AREA LIMITS
04 NTS



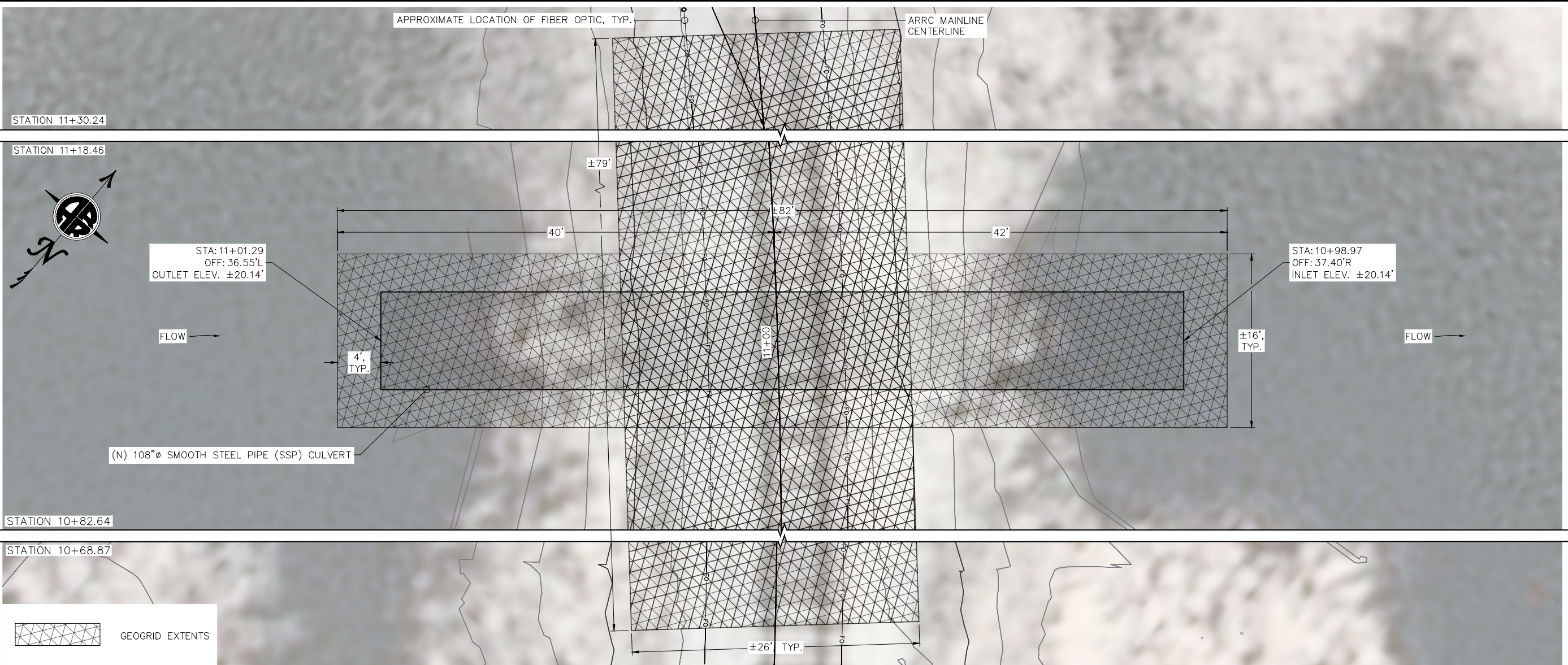
C MP 64.00 - PORTAGE STAGING AREA
04 NTS



D MP 66.51 - STAGING AREA
04 NTS

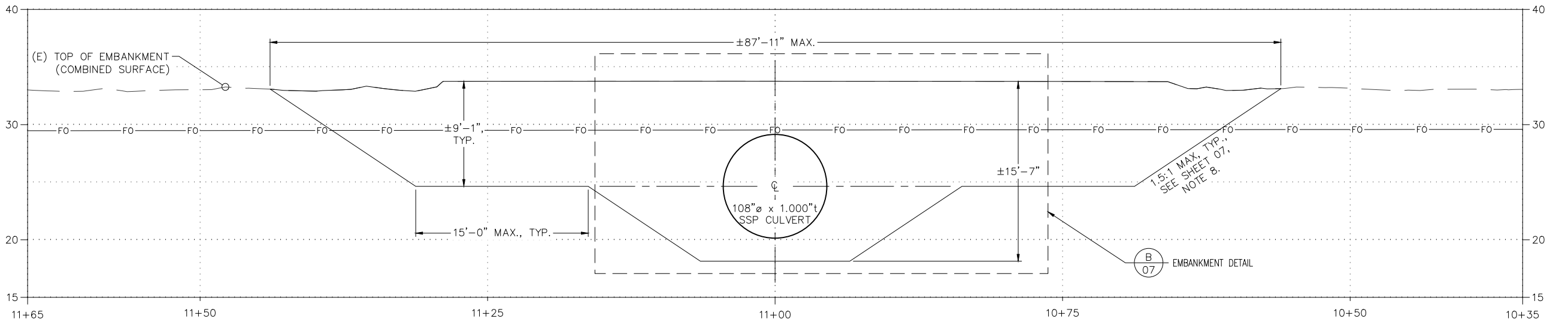


E MP 75.00 - GIRDWOOD STAGING AREA
04 NTS

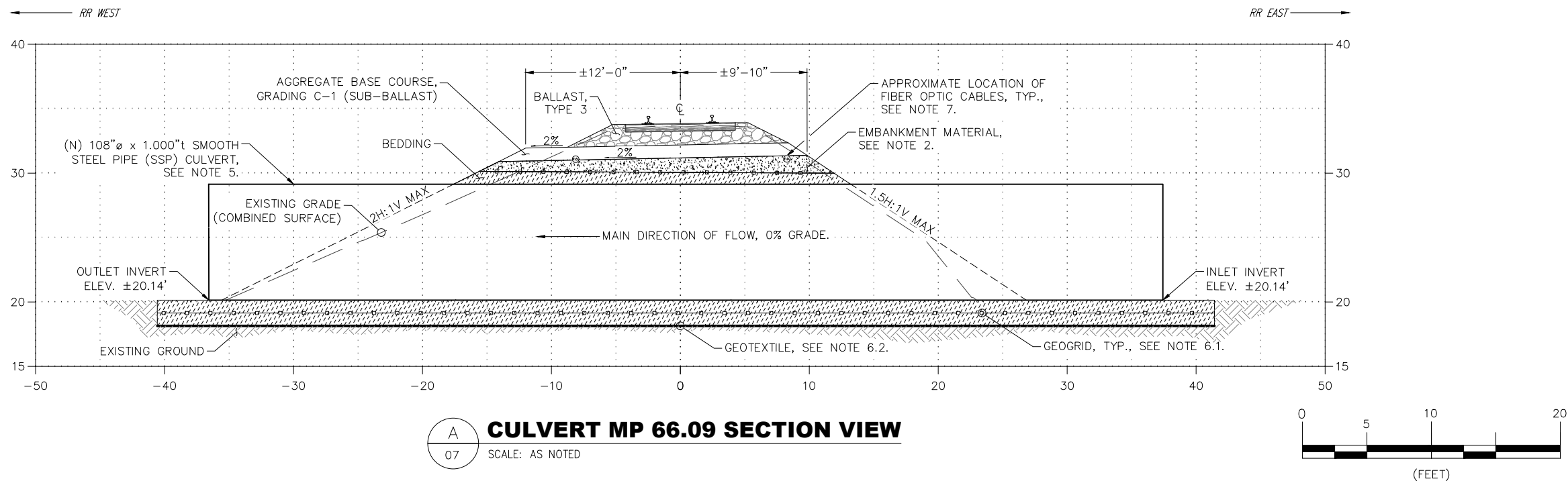


- NOTES:
- CONTRACTOR TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO BEGINNING EXCAVATION.
 - RAIL NOT SHOWN FOR CLARITY.

CULVERT MP 66.09 PROPOSED PLAN
SCALE: AS NOTED



CULVERT MP 66.09 EXCAVATION PROFILE
SCALE: AS NOTED



CULVERT MP 66.09 SECTION VIEW
SCALE: AS NOTED

MATERIAL NOTES:

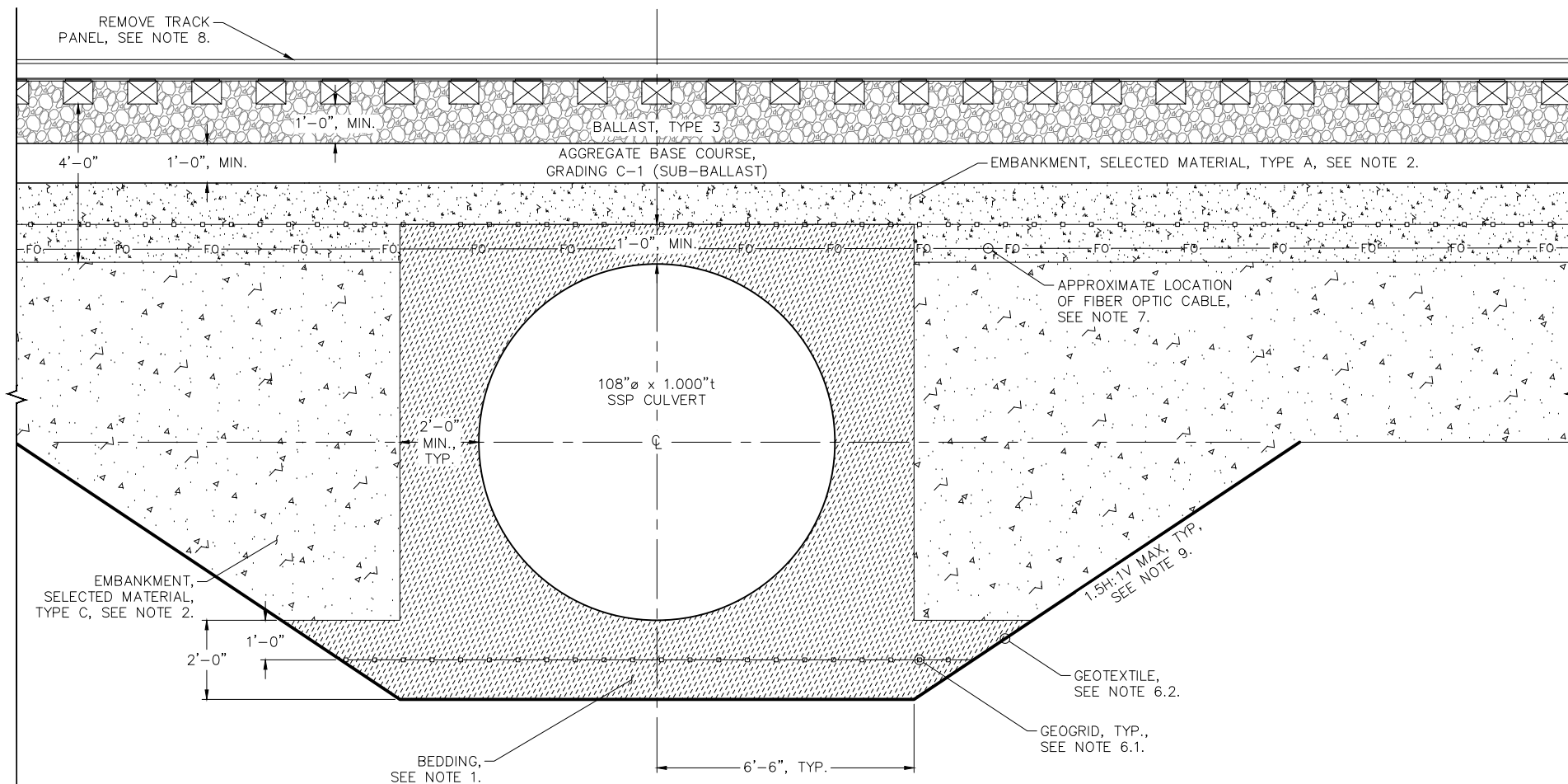
- BEDDING: SELECTED MATERIAL, TYPE A IN ACCORDANCE WITH SUBSECTION 703-2.07.
- EMBANKMENT: SELECTED MATERIAL IN ACCORDANCE WITH SUBSECTION 703-2.07, FOR THE TYPE SPECIFIED BELOW (BASED ON ITS LOCATION RELATIVE TO THE BOTTOM OF THE TIE):
 - 2.0' TO -4.0': TYPE A.
 - 4.0' AND DEEPER: TYPE C.
- ALL EXCAVATED MATERIALS ARE TO BE CONSIDERED UNCLASSIFIED MATERIAL UNTIL CLASSIFIED.
- UNCLASSIFIED EXCAVATION (NATIVE MATERIAL) MAY BE USED IN THE EMBANKMENT WHEN ITS MEETS THE REQUIREMENTS OF SUBSECTION 703-2.07 FOR THE TYPE SPECIFIED.
- SUB-BALLAST: AGGREGATE BASE COURSE, GRADING C-1 IN ACCORDANCE WITH SUBSECTION 703-2.03.
- BALLAST: TYPE 3 IN ACCORDANCE WITH SUBSECTION 703-2.17.
- SSP CULVERT IN ACCORDANCE WITH SUBSECTION 715.
- GEOSYNTHETICS:
 - GEOGRID: REINFORCEMENT, CLASS 1 IN ACCORDANCE WITH SUBSECTION 729-2.04.
 - GEOTEXTILE: SEPERATAION, CLASS 3 IN ACCORDANCE WITH SUBSECTION 729-2.01.

CONSTRUCTION NOTES:

- CONTRACTOR TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO BEGINNING EXCAVATION.
 - FIBER OPTIC UTILITIES ASSUMED TO BE ON BOTH SIDES OF THE RAIL.
- RAIL:
 - REMOVAL:
 - PROTECT EXISTING BALLAST OUTSIDE EXCAVATION LIMITS FROM CONTAMINATION WITH OTHER AGGREGATE OR SOIL.
 - WHEN ESTABLISHED RAIL JOINTS ARE NOT WITHIN THE PROJECT LIMITS, COORDINATE WITH ARRC MOW FORCES, IN ACCORDANCE WITH SUBSECTION 107-1.08, TO DETERMINE THE LOCATION OF CUTS.
 - CUT RAIL IN ACCORDANCE WITH SUBSECTION 802-3.05.3 AND JOINT IN ACCORDANCE WITH SUBSECTION 802-3.05.4.
 - REPLACEMENT:
 - REINSTALL THE REMOVED TRACK PANEL IN ACCORDANCE WITH SECTION 802.
 - REPLACE EVERY THIRD TIE PRIOR TO COMPLETING FINAL SURFACING IN ACCORDANCE WITH SECTION 802.
 - WHEN RAIL JOINTS WERE INSTALLED ON CONTINUOUSLY WELDED RAIL, WELD THE JOINTS IN ACCORDANCE WITH SECTION 804.
- SLOPES STEEPER THAN 4:1, WHEN MEASURED AT RIGHT ANGLES TO THE RAILWAY, ARE TO BE BENCHED IN ACCORDANCE WITH SUBSECTION 203-3.03.
- WIRE OR TIMBER STRUTTING, OR ANY OTHER TYPE OF DUNNAGE: MAY BE USED TO FACILITATE THE INSTALLATION OF PIPE CULVERTS BUT WILL REQUIRE APPROVAL FROM ENGINEERING SERVICES PRIOR TO IMPLEMENTATION. IF APPROVED, MATERIALS WILL BE REMOVED IMMEDIATELY AFTER INSTALLATION OF THE PIPE CULVERT AND PRIOR TO COMMENCING BACKFILL OPERATIONS.

UTILITIES:

VERIFY ALL UNDERGROUND UTILITIES PRIOR TO DIGGING.
LOCATE CALL CENTER OF ALASKA (811):
- ANCHORAGE1.907.278.3121
- STATEWIDE1.800.478.3121
CALL CENTER WILL NOTIFY SUBSCRIBED UTILITIES ONLY,
OTHER UTILITIES NEED TO BE CONTACTED INDIVIDUALLY.



CULVERT MP 66.09 EMBANKMENT DETAIL PROFILE VIEW
SCALE: AS NOTED

