

DRAWING LOCATION: P:\ENGINEERING\BRIDGES\BR 158.7 COTTONWOOD CREEK\2022 BRIDGE REPLACEMENT PROGRAM\BR 158.7 CBD REPLACEMENT.DWG
 DATE: 5/22/2026 10:35 AM
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ALASKA RAILROAD CORPORATION

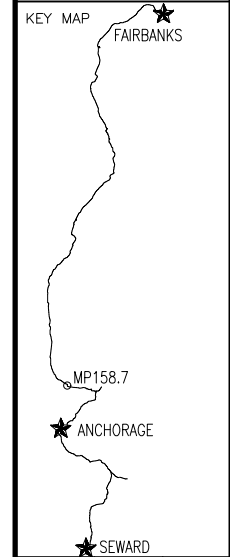
ENGINEERING SERVICES

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

BR158.7 REPLACEMENT CBD IFB PLAN SET MAY 2026

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ALASKA RAILROAD CORPORATION
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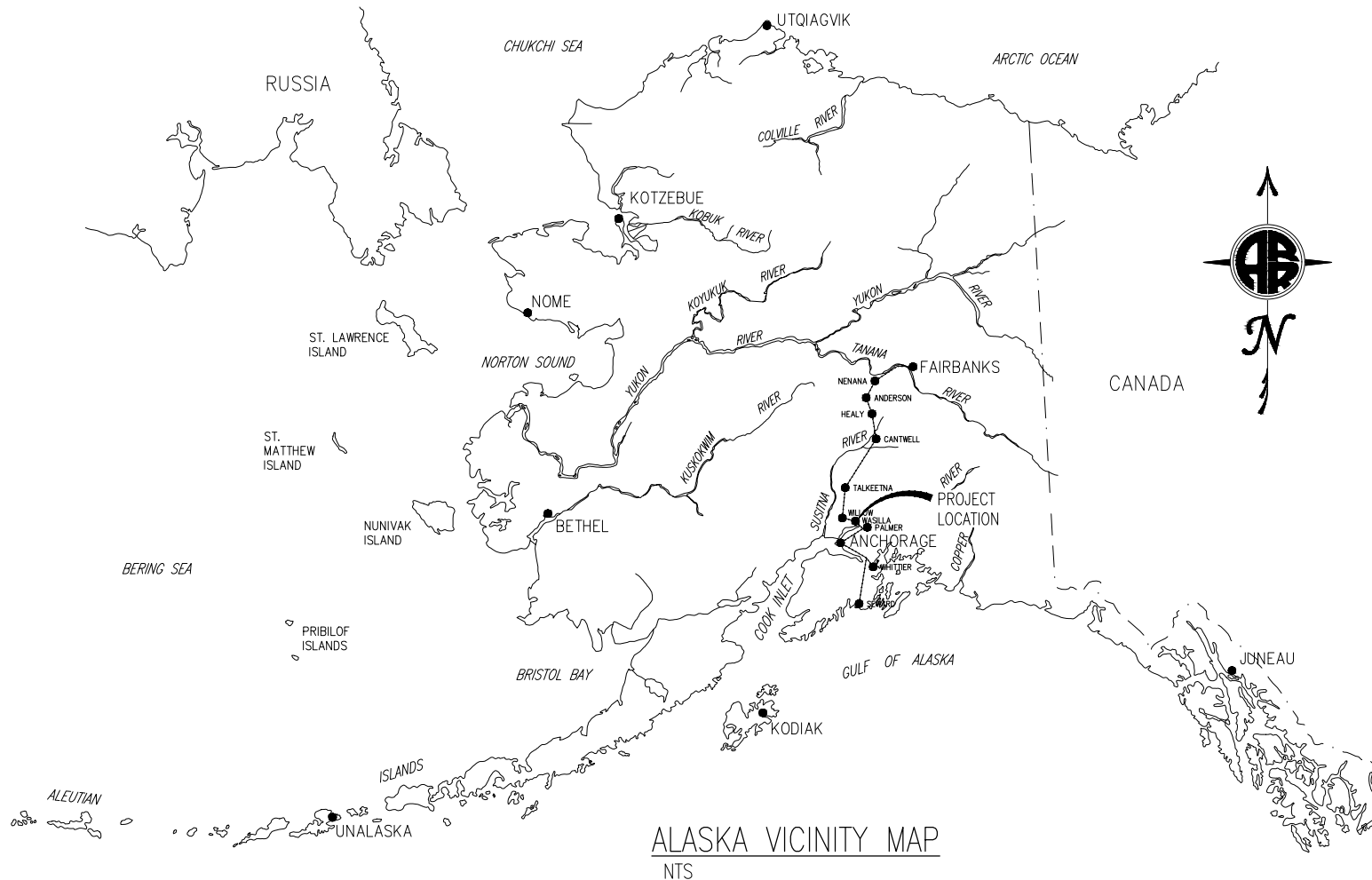


ENGINEERING DEPARTMENT
 P.O. BOX 107500
 ANCHORAGE, ALASKA 99510-7500

PROJECT: BR158.7 REPLACEMENT CBD
 SHEET TITLE: COVER

ALASKA RAILROAD

AFE NO. 12268
 YEAR 2026
 SHEET 01 of 12



VICINITY MAP

SHEET LIST TABLE	
SHEET NUMBER	SHEET TITLE
01	COVER
02	ABBREVIATIONS & LEGEND
03	ESTIMATE OF QUANTITIES
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05	SURVEY CONTROL
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09	PROPOSED SHEET PILE LAYOUT
10	TYPICAL BULKHEAD SECTION
11	PROPOSED PILE LAYOUT
12	PROPOSED DETAILS

ABBREVIATIONS

ALCAP	ALUMINUM CAP
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
BRG	BEARING
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
CSP	CORRUGATED STEEL PIPE
CWR	CONTINUOUSLY WELDED RAIL
D _c	DEGREE OF CURVATURE, CENTRAL CURVE
DIA	DIAMETER
(E)	EXISTING
E OR EXP	EXPANSION
E _a	SUPERELEVATION ACTUAL
ELEV. OR EL.	ELEVATION
E.O.P.	END OF PROJECT
E _u	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
IGR	INNER GUARD RAIL
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

ABBREVIATIONS (CONT.)

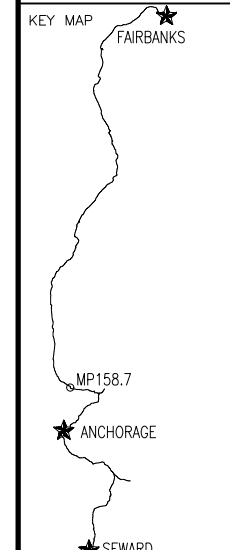
MK	MARK
MP	MILEPOST
(N)	NEW OR PROPOSED
O.C.	ON CENTER
OD	OPEN DECK
OHWM	ORDINARY HIGH WATER MEASURED
O-O	OUT-TO-OUT
P	PASSENGER
PC	POINT OF CURVATURE
PCF	POUNDS PER CUBIC FOOT
POB	POINT OF BEGINNING
POE	POINT OF END
PT	POINT OF TANGENT
PTFE	POLYTETRAFLUOROETHYLENE
PSI	POUNDS PER SQUARE INCH
PSF	POUNDS PER SQUARE FOOT
PVI	POINT OF VERTICAL INTERSECTION
R	RADIUS
RBBD	ROLLED BEAM BALLAST DECK
RBOD	ROLLED BEAM OPEN DECK
RR	RAILROAD
RT	CURVE RIGHT
R/W OR ROW	RIGHT OF WAY
SBM	STEEL BEAM
SC	POINT OF SPIRAL TO CURVE
SLV	SHORT LEG VERTICAL
SPA	SPACE OR SPACING
SPI	SPIRAL POINT OF INTERSECTION
SSC	STANDARD SPECIFICATIONS FOR CONSTRUCTION
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
YPC	YELLOW PLASTIC CAP
Δ _c	CENTRAL ANGLE OF CIRCULAR CURVE
ΔT	TOTAL ANGLE OF DIVERGENCE
Θ _s	ANGLE OF SPIRAL CURVE

LEGEND

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

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 ENGINEERING DEPARTMENT
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 PROJECT: BR158.7 REPLACEMENT CBD
 SHEET TITLE: ABBREVIATIONS & LEGEND

AFE NO.	12268
YEAR	2026
SHEET	02 of 12

BR158.7 REPLACEMENT CBD

PROJECT STATIONS: 13+28.87 TO 15+84.87

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TABLE OF PAY ITEMS			
PAY ITEM	ITEM DESCRIPTION	PAY UNIT	TOTAL QUANTITY
201.0003	CLEARING AND GRUBBING	AC	2.55
202.0023	REMOVAL OF EXISTING BRIDGE AND STRUCTURES	LS	1
203.0003	UNCLASSIFIED EXCAVATION	CY	337
203.0006.1	SELECTED MATERIAL, TYPE A	TON	101
203.0006.2	SELECTED MATERIAL, TYPE C	TON	23
203.2036	TEMPORARY ACCESS	LS	1
301.0005	AGGREGATE BASE (SUBBALLAST), GRADING C-1	TON	108
309.0001	RAILROAD BALLAST, TYPE 3	TON	160
501.0004.1	CLASS A CONCRETE, 12"Ø x 0.500't PILE	CY	6
501.0004.2	CLASS A CONCRETE, 12"Ø x 0.500't BOLLARD	CY	1
501.0004.3	CLASS A CONCRETE, 24"Ø x 0.500't PILE	CY	6
501.0007.1	INSTALL PRECAST CONCRETE MEMBER, 28' CBD SPAN	EA	2
501.0007.2	INSTALL PRECAST CONCRETE MEMBER, DOUBLE ROW PILE CAP	EA	3
503.0001.1	FURNISH REINFORCING STEEL, 12"Ø PILE CAGES	LS	1
503.0001.2	FURNISH REINFORCING STEEL, 24"Ø PILE CAGES	LS	1
504.0001.1	FURNISH STRUCTURAL STEEL, 28' CBD FALLOFF MATERIALS	EA	2
504.0001.2	FURNISH STRUCTURAL STEEL, WALKWAY WITH HANDRAIL ASSEMBLY	LS	1
504.0003.1	INSTALL STRUCTURAL STEEL, 28' CBD FALLOFF MATERIALS	EA	2
504.0003.2	INSTALL STRUCTURAL STEEL, WALKWAY WITH HANDRAIL ASSEMBLY	LS	1
505.0005.1	FURNISH STRUCTURAL STEEL PILES, 12"Ø x 0.500't PIPE	LF	760
505.0005.2	FURNISH STRUCTURAL STEEL PILES, 24"Ø x 0.500't PIPE	LF	240
505.0005.3	FURNISH PS-31 SHEET PILE (35 FT LENGTH, ASTM A572, GRADE 50)	EA	50
505.0005.4	FURNISH PS-31 90° T PILE (35 FT LENGTH, ASTM A572, GRADE 50)	EA	8
505.0005.5	FURNISH HP12x63 PS-31 SOLDIER PILE (40 FT LENGTH, ASTM A572, GRADE 50)	EA	4
505.0006.1	DRIVE STRUCTURAL STEEL PILES, 12"Ø PIPE	EA	12
505.0006.2	DRIVE STRUCTURAL STEEL PILES, 12"Ø PIPE BOLLARD	EA	2
505.0006.3	DRIVE STRUCTURAL STEEL PILES, 24"Ø PIPE	EA	3
505.0006.4	DRIVE STRUCTURAL STEEL PILES, HP12x63 PS-31 SOLDIER	EA	4
505.0010	STRUCTURAL STEEL SHEET PILES, PS-31 PILES	LS	1
505.2002.1	PILE PRE-BORE, 12"Ø PILES	EA	12
505.2002.2	PILE PRE-BORE, 24"Ø PILES	EA	3
505.2002.3	PILE PRE-BORE, HP12x63 PS-31 SOLDIER	EA	4
607.0003	CHAIN LINK FENCE	LF	304
611.0001	RIPRAP, CLASS II	CY	318
615.0001	STANDARD SIGN, BRIDGE SIGN - TYPE D	SF	2.25
618.0001	SEEDING	AC	2.55
631.0002	GEOTEXTILE, EROSION CONTROL, CLASS 1	SY	192
640.0001	MOBILIZATION AND DEMOBILIZATION	LS	1
641.0001	EROSION, SEDIMENT, AND POLLUTION CONTROL ADMINISTRATION	LS	1
641.0003	TEMPORARY EROSION, SEDIMENT, AND POLLUTION CONTROL	LS	1
642.0001	CONSTRUCTION SURVEYING	LS	1
643.0002	TRAFFIC MAINTENANCE	LS	1
643.0023	TRAFFIC PRICE ADJUSTMENT	CS	- - -
646.0001	CPM SCHEDULING	LS	1
647.0001	AS-BUILT DRAWINGS AND SPECIFICATIONS	LS	1
802.0001	TRACK WORK, 115# RE RAIL	TF	120
802.0005	TRACK TAMPING, SURFACING, AND FINAL DRESSING	TF	256
803.0001	TRACK REMOVAL	TF	120

TABLE OF ESTIMATING FACTORS	
ITEM DESCRIPTION	ESTIMATING FACTOR
TRACK BALLAST, TYPE 3	110 LB/FT ³
SELECTED MATERIAL	135 LB/FT ³
AGGREGATE BASE COURSE, GRADING C-1	144 LB/FT ³

SUMMARY OF ESTIMATED QUANTITIES PROVIDED BY ARRC		
DESCRIPTION	UNIT	QUANTITY
7"x9"x8'-6" TIE	EA	85
7"x9"x10'-0" TIE	EA	20
MISC. TRACK MATERIAL (TIE PLATES, ETC.)	CS	ALL REQ'D
NEW 115RE RAIL	TF	120
PRECAST CONCRETE CBD (HALF SPAN)	EA	4
PRECAST CONCRETE DOUBLE ROW PILE CAP	EA	3

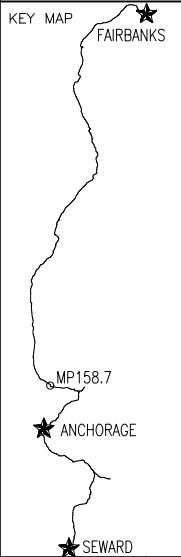
ITEMS FURNISHED BY ARRC:

- PRECAST CBD SPAN HALVES AND PILE CAPS SHALL BE FURNISHED BY ARRC. CONTRACTOR IS RESPONSIBLE FOR TRANSPORTING ALL PRECAST CONCRETE MEMBERS FROM THE ANCHORAGE WAREHOUSE TO THE SITE, ASSEMBLING, AND SETTING IN PLACE.

ADDITIVE ALTERNATE			
PAY ITEM	ITEM DESCRIPTION	PAY UNIT	TOTAL QUANTITY
614.0001	CONCRETE BARRIER	LF	128
617.0001	TEMPORARY RAILROAD CROSSING	LS	1

- 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.
- BALLAST REQUIRED FOR TAMPING AND SURFACING TO BE SUBSIDIARY TO TRACK WORK.

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ALASKA RAILROAD

PROJECT: BR158.7 REPLACEMENT CBD

SHEET TITLE: ESTIMATE OF QUANTITIES

AFE NO. 12268
 YEAR 2026
 SHEET 03 of 12

BR158.7 REPLACEMENT CBD

STEEL STRUCTURES MATERIAL SCHEDULE

DESIGNED BY:	BLG
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ESTIMATED STEEL FALLOFF MATERIAL SCHEDULE								
DESCRIPTION	MARK	SIZE	LENGTH	UNIT	PER SPAN	QUANTITY	WEIGHT PER SPAN	ESTIMATED WEIGHT
ABUTMENT TRANSITION PLATE, UNCOATED	DP-E	--	--	EA	2	2	2556	5112
INTERMEDIATE TRANSITION PLATE, UNCOATED	DP-I	--	--	EA	1	1	68	136
STEEL HSS FOR INTERMEDIATE TRANSITION PLATE	D/17	HSS2x2	5'-1"	EA		2		
STEEL T-20, UNCOATED	T-20	WT3x4.5	8'-5"	EA	3	6	120	240
STEEL HSS FOR STEPPED TEE	D/16	HSS2x2	4"		1	1		
DIAPHRAGM PLATE, GALVANIZED	SD-1	--	--	EA	3	6	258	516
DIAPHRAGM ANGLES, GALVANIZED	DA-1 / DA-2	--	--	PAIR	3	6	180	360
GIRDER STOPS, EXPANSION, GALVANIZED	GS-1	--	--	EA	2	4	124	248
GIRDER STOPS, FIXED, GALVANIZED	GS-2	--	--	EA	2	4	124	248
GIRDER BOLT ASTM F3125, GRADE A325, GALVANIZED	--	1" DIA.	2 1/2"	EA	8	16	48	96
CAP ANCHOR ROD ASTM F1554, GRADE 36, GALVANIZED	--	1 1/2" DIA	2'-0"	EA	2	4	124	248
TENSION BAR ASTM F1554, GRADE 36 w/ ASTM A563 NUTS, GALVANIZED	DN	1" DIA.	4'-0"	EA	12	24	132	264
TENSION BAR SQUARE PLATE GALVANIZED WASHER	--	3/8"	3" X 3"	EA	24	48	21	42
DIAPHRAGM PLATE BOLT ASTM F3125, GRADE A325 AND TWO F436 FLAT CIRCULAR WASHERS, GALVANIZED w/ HEAVY HEX ELASTIC LOCKNUT, ZINC PLATED OR GALVANIZED	--	7/8" DIA.	3"	EA	30	60	44	88
TOTAL ESTIMATED WEIGHT								7510

1. BOLT QUANTITIES ARE ESTIMATED REQUIRED QUANTITY, AND DO NOT INCLUDE CONTINGENCY FOR LOST OR DAMAGED MATERIALS.

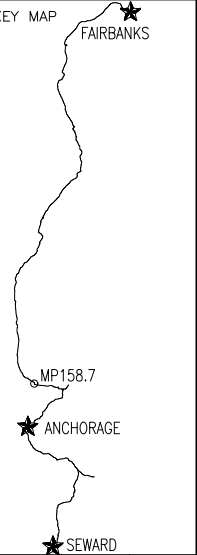
ESTIMATED WALKWAY AND HANDRAIL ASSEMBLY MATERIAL SCHEDULE								
DESCRIPTION	MARK	SIZE	LENGTH	UNIT	PER SPAN	QUANTITY	WEIGHT PER SPAN	ESTIMATED WEIGHT
WALKWAY BRACKET, ASTM A36, GALVANIZED	WB-2	--	--	EA	4	8	496	992
WALKWAY BRACKET TO CBD CURB BOLT ASTM F3125, GRADE A325 GALVANIZED w/ ONE F436 WASHER AND ONE BEVELED WASHER PW-1, AND HEAVY HEX ELASTIC LOCKNUT, ZINC PLATED OR GALVANIZED	--	3/4" DIA.	9"	EA	4	8	6	12
BEVELED PLATE WASHER, GALVANIZED	PW-1	2" X 2"	--	EA	4	8	4	8
HANDRAIL PANEL	HP	--	--	EA	1	2	370	740
HANDRAIL POST TO WALKWAY BRACKET BOLT ASTM F3125, GRADE A325 AND F436 FLAT CIRCULAR WASHER, GALVANIZED w/HEAVY HEX ELASTIC LOCKNUT, ZINC PLATED OR GALVANIZED	--	7/8" DIA.	2"	EA	16	32	12	24
HANDRAIL ABUTMENT END	E/20	--	--	EA	1	2	28	56
HANDRAIL INTERMEDIATE END	F/20	--	--	EA	1	2	19	38
HANDRAIL PANEL TO HANDRAIL END BOLT ASTM F3125, GRADE A325 AND TWO F436 FLAT CIRCULAR WASHERS, GALVANIZED w/ ELASTIC LOCKNUT, ZINC PLATED OR GALVANIZED	--	3/4"	5-1/2"	EA	4	8	1	2
3' X 20' 38W2 STEEL GRATE DECKING, GALVANIZED	--	3'	20'	SQ. FT.	VARIES*	VARIES	1200	2400
CARRIAGE BOLTS, WASHER, AND GRIP STRUT DIAMOND WASHER, ALL GALVANIZED w/ ELASTIC LOCKNUT, ZINC PLATED OR GALVANIZED	--	5/16" DIA.	5-1/2"	EA	48	96	9	18
CONDUIT BRACKET, ASTM A36, GALVANIZED	CB-1	--	--	EA	4	8	28	56
CONDUIT BRACKET TO HANDRAIL POST BOLT ASTM F3125, GRADE A325, GALVANIZED w/ HEAVY HEX ELASTIC LOCKNUT, ZINC PLATED OR GALVANIZED	--	3/4" DIA.	3-1/2"	EA	4	8	4	8
CONDUIT BRACKET RETAINER BOLT ASTM F3125, GRADE A325, GALVANIZED w/ ELASTIC LOCKNUT, ZINC PLATED OR GALVANIZED	--	3/8" DIA.	2"	EA	4	8	1	2
TOTAL ESTIMATED WEIGHT								4356

1. BOLT QUANTITIES ARE ESTIMATED REQUIRED QUANTITY, AND DO NOT INCLUDE CONTINGENCY FOR LOST OR DAMAGED MATERIALS.

CBD STANDARD DRAWINGS:

- SHEET 10, DETAIL D. NO PLATE PLUG ASSEMBLIES OR 16" PILES PLANNED IN PROJECT.
- SHEET 13, NO PILE BRACING REQUIRED IN PROJECT.
- CONTRACTOR TO VERIFY LOCATION OF ANCHOR ROD HOLES IN PRECAST CONCRETE PILE CAPS MATCH PLANNED LOCATION OF ANCHOR RODS. NEW HOLES MAY NEED TO BE CORED IN PRECAST CONCRETE CAPS TO ACCEPT ANCHOR RODS.

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ALASKA RAILROAD

PROJECT: BR158.7 REPLACEMENT CBD

SHEET TITLE: STEEL STRUCTURES MATERIAL SCHEDULE

AFE NO. 12268

YEAR 2026

SHEET 04 of 12

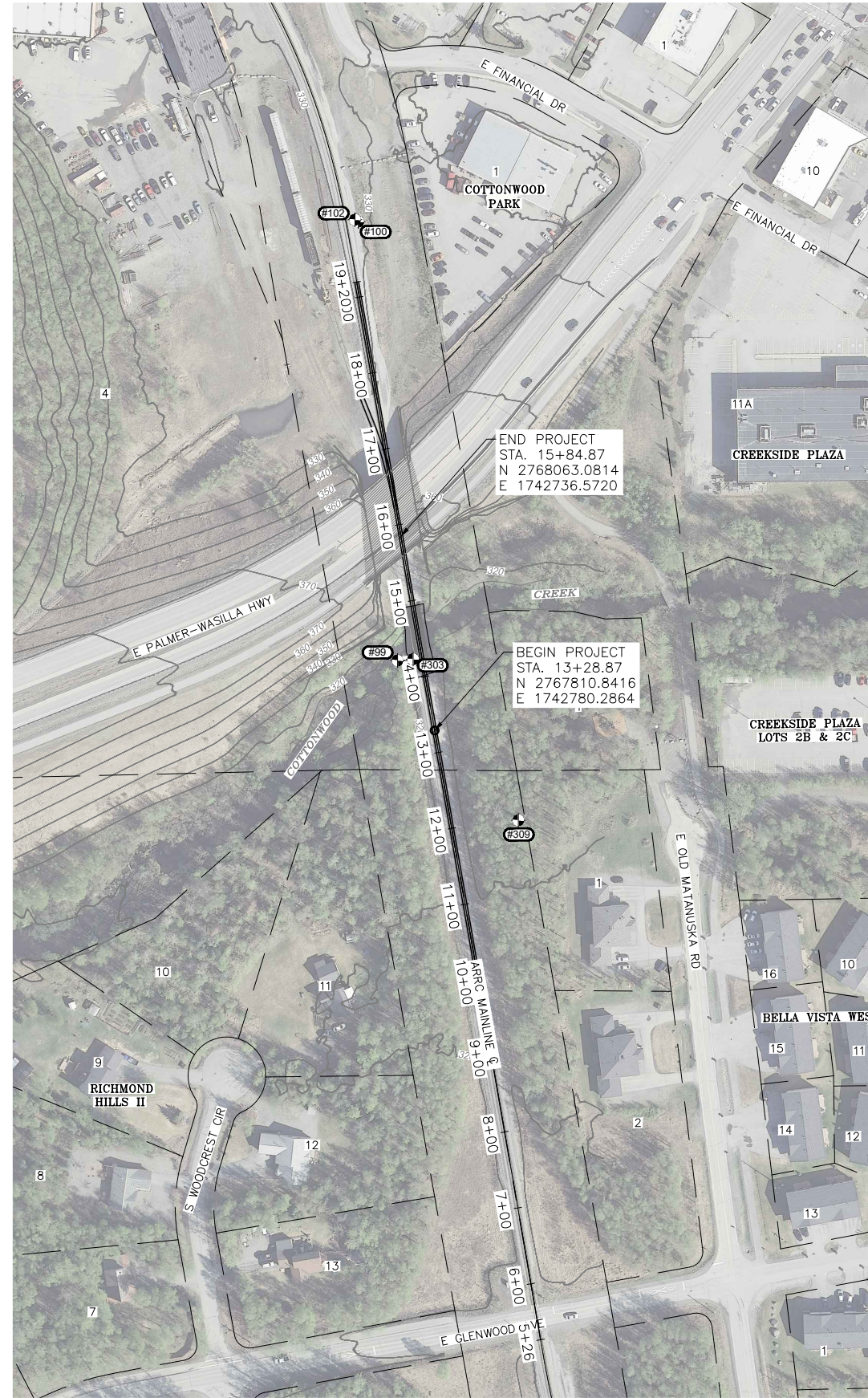
NOTES

- 1) HORIZONTAL DATUM AND VERTICAL DATUM IS ALASKA STATE PLANE COORDINATE SYSTEM ZONE 4, NAD83(2011), GEOID12B ORTHOMETRIC HEIGHTS PER OPUS PROCESSING OF CONTROL POINT #100.
- 2) CONTOURS PER 2019 M.S.B. LIDAR DATA.
- 3) IMAGERY PER APRIL 2022 APN UAV AND 2019 M.S.B. DATA.

LEGEND

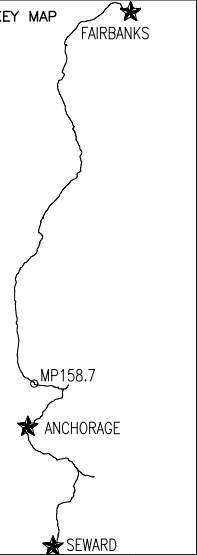
- CONTROL POINT, SEE POINT TABLE
- PROPERTY LINES PER MAT-SU BOROUGH G.I.S.
- CONTOURS PER MAT-SU BOROUGH LIDAR, SEE NOTE 2.

CONTROL POINTS				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
99	2767969.38	1742732.21	328.33	SET REBAR W/ YPC
100	2768539.02	1742681.24	330.48	SET REBAR W/ YPC
102	2768541.57	1742676.96	330.55	SET MAG-SPIKE
303	2767971.04	1742752.41	328.59	FND PK IN CL TRACKS
309	2767761.88	1742889.15	317.46	FOUND BRASS CAP



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PROJECT: BR158.7 REPLACEMENT CBD

SHEET TITLE: SURVEY CONTROL

AFE NO.	----
YEAR	2026
SHEET	04 of 09

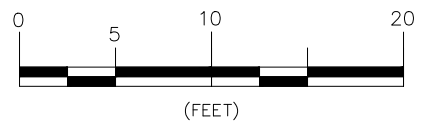
**PRELIMINARY
 NOT FOR CONSTRUCTION**

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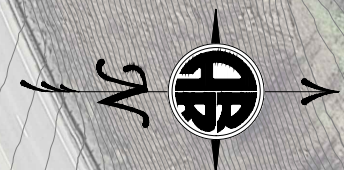
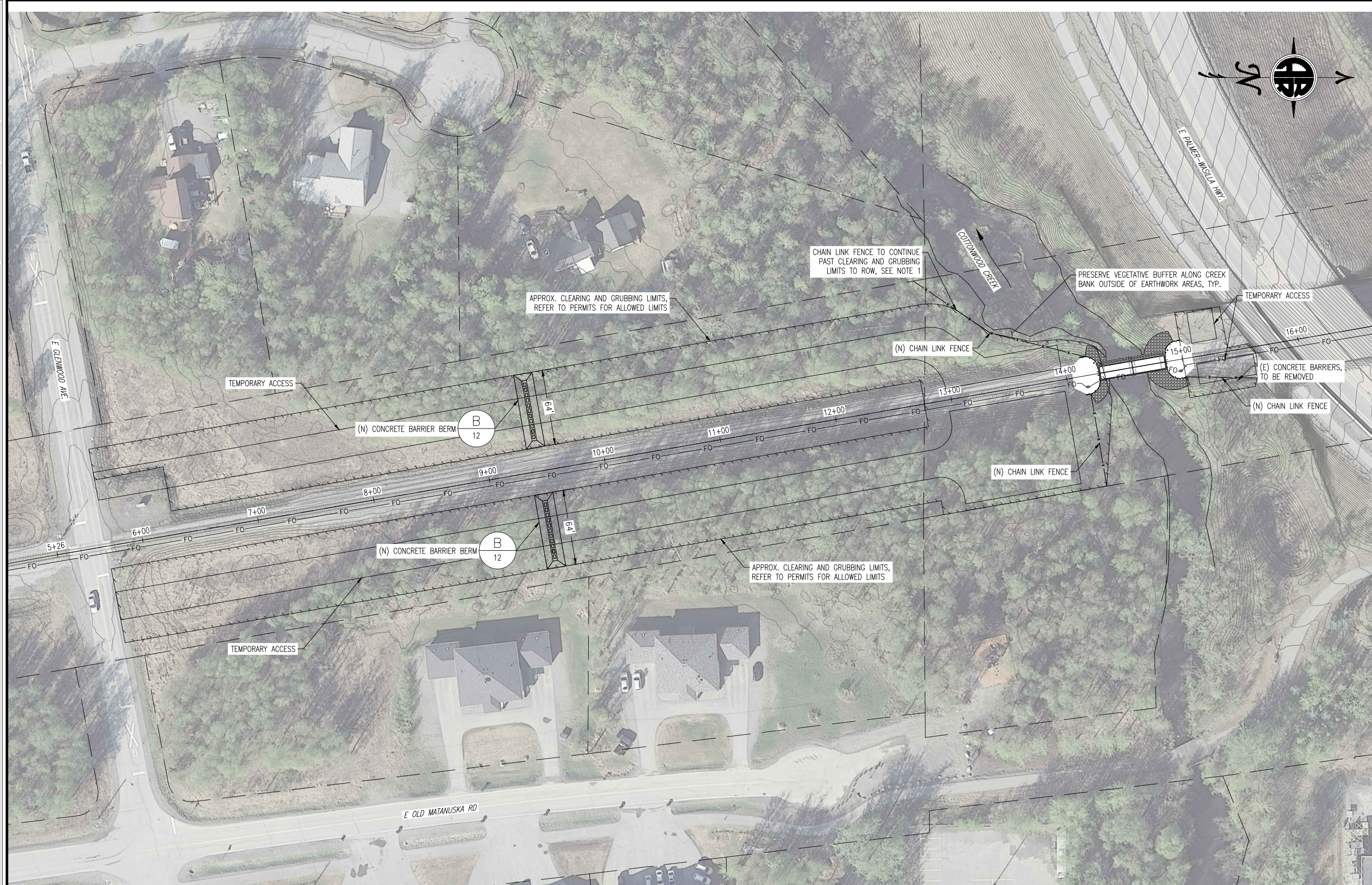
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KEY MAP:	
ENGINEERING DEPARTMENT	P.O. BOX 107500 ANCHORAGE, ALASKA 99510-7500
PROJECT:	BR158.7 REPLACEMENT CBD
SHEET TITLE:	EXISTING PLAN
AFE NO.	12268
YEAR	2026
SHEET	06 OF 12

A
EXISTING BRIDGE DEMO PLAN
 SCALE: 1" = 5' (FULL SIZE)



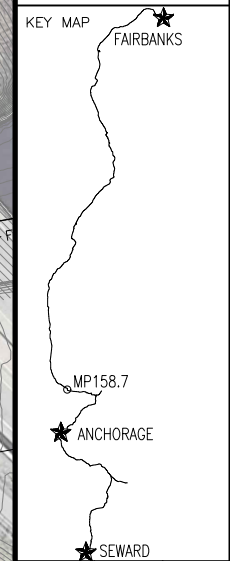
- NOTES:**
1. CONTRACTOR RESPONSIBLE TO REMOVE ALL TIMBER STRUCTURES AND PILES FROM SITE AND DISPOSE OF AT AN APPROVED LOCATION.
 2. EXISTING BRIDGE AND PILING TO BE REMOVED IN ACCORDANCE WITH 202-3.03.

DRAWING LOCATION: P:\ENGINEERING\BRIDGES\BR 158.7 COTTONWOOD CREEK\2022 BRIDGE REPLACEMENT PROGRAM\BR 158.7 CBD REPLACEMENT.DWG
 DATE: 5/22/2026 10:36 AM
 TIME: AS NOTED
 SCALE: AS NOTED
 PUBLISHED CTB: ARRC_CTIB_2023.CTIB



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 CHECKED BY: BAO
 DRAFTED BY: BLG

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



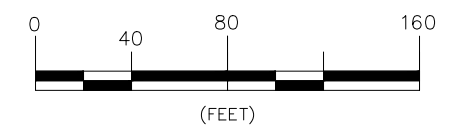
ENGINEERING DEPARTMENT
 P.O. BOX 107500
 ANCHORAGE, ALASKA 99510-7500

PROJECT: BR158.7 REPLACEMENT CBD
 SHEET TITLE: PROJECT SITE

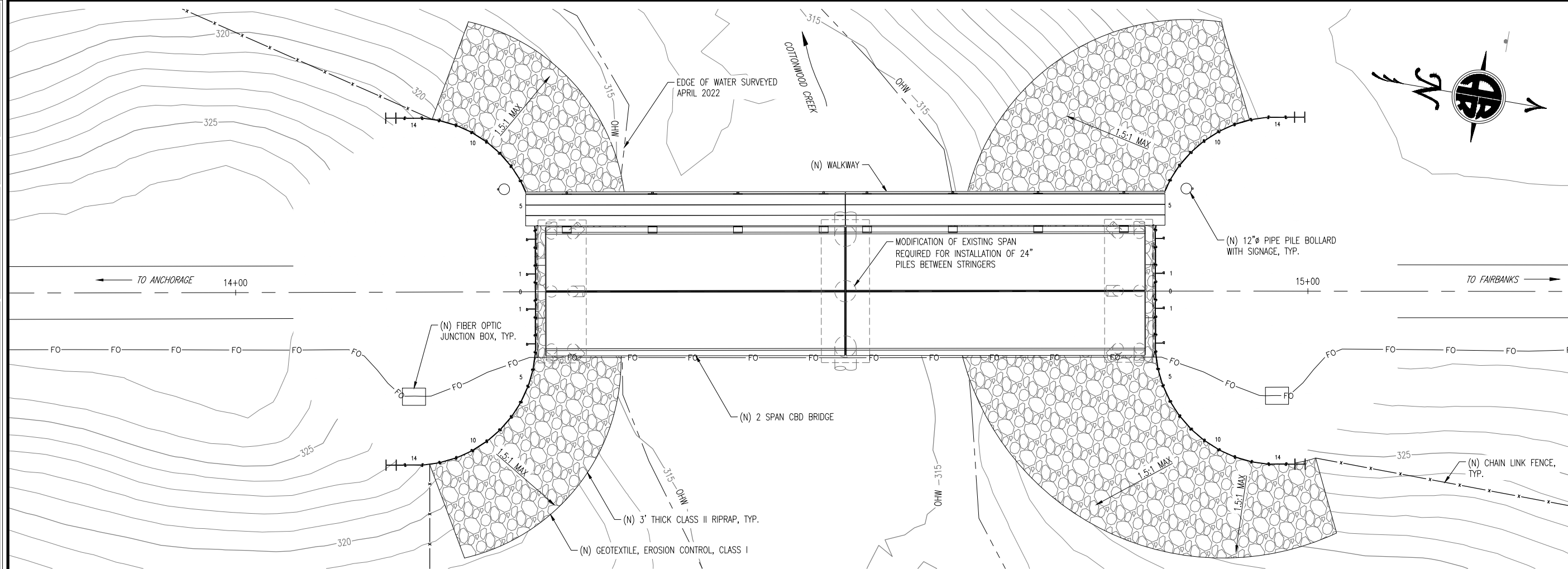
AFE NO. 12268
 YEAR 2026
 SHEET 07 OF 12

NOTES:
 1. FENCE TO EXTEND TO ROW, APPROXIMATE LOCATION SHOWN. CONSULT CONTRACT MANAGER OR ENGINEER TO ESTABLISH ACTUAL ALIGNMENT IN THE FIELD FOR FENCE BEYOND CLEARING AND GRUBBING LIMITS.

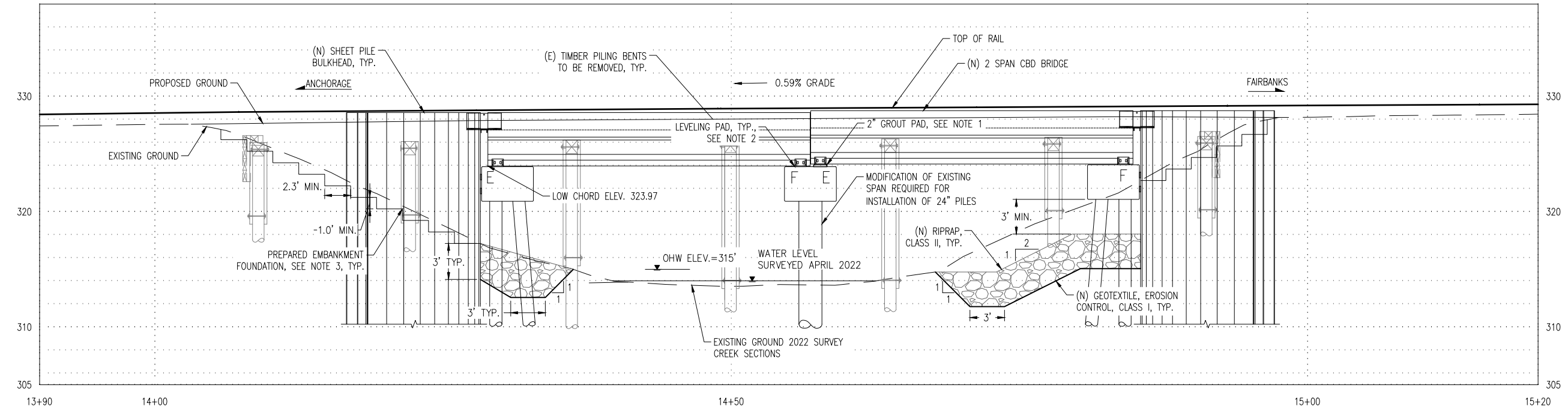
A
 07 **PROPOSED PROJECT SITE**
 SCALE: 1" = 40' (FULL SIZE)



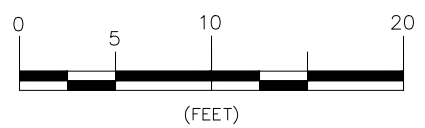
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A PROPOSED BRIDGE PLAN
 08 SCALE: 1" = 5' (FULL SIZE)



B PROPOSED BRIDGE PROFILE
 08 SCALE: 1" = 5' (FULL SIZE)

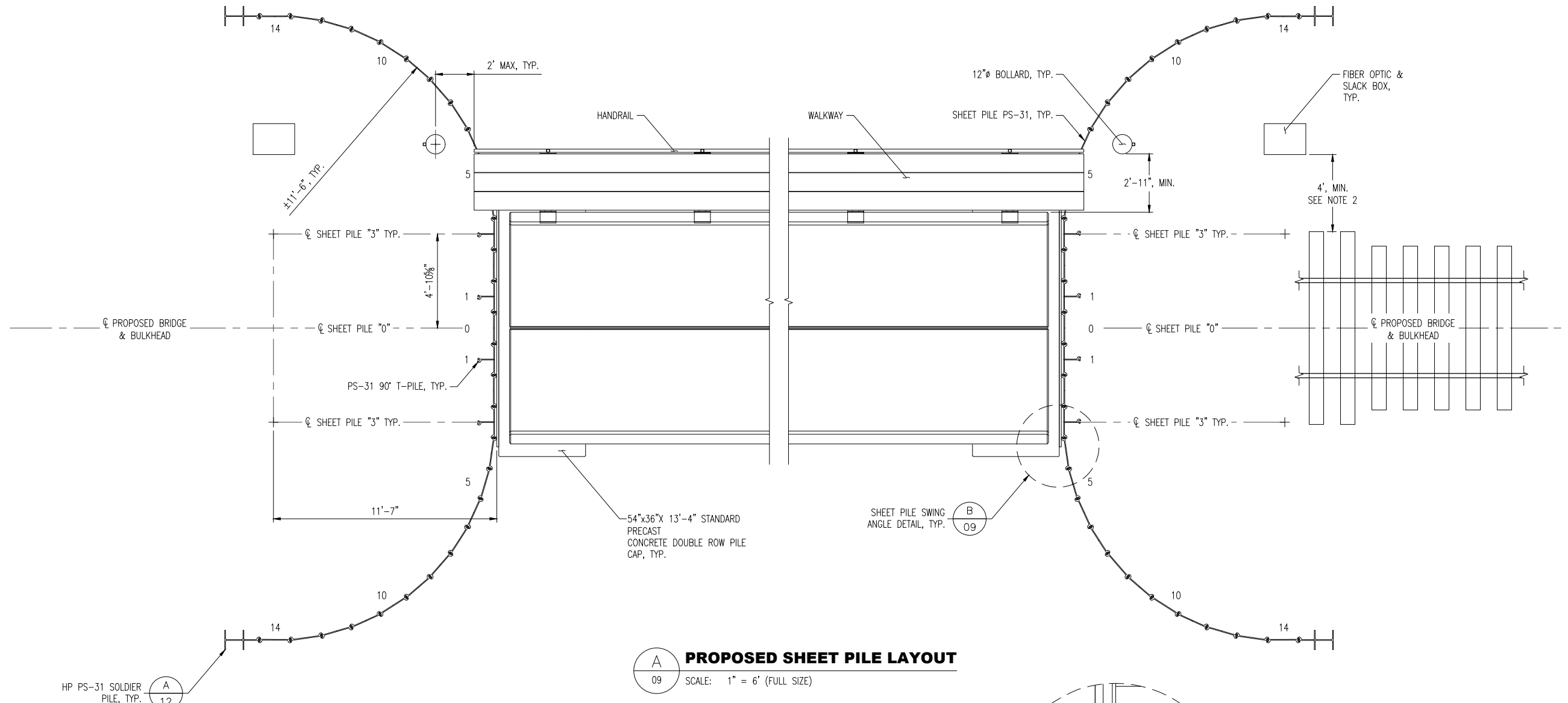


- NOTES:**
- CUT-OFF ELEV. OF BENT #3 TO BE SET ABOVE BENTS #1 AND #2 PER PILE LAYOUT SHEET 07. GROUT PADS TO BE BUILT UP BELOW BEARING PADS AND ANCHORS ON UPHILL SIDE OF INTERMEDIATE PILE CAP AS SHOWN IN THE CBD STANDARD DRAWINGS.
 - A SKIM COAT OR LESS THAN 1/2" OF SELF LEVELING GROUT OR EPOXY SHALL BE PLACED UNDER EACH BEARING PAD TO ACCOUNT FOR VARIANCE IN PRECAST CBD AND PILE CAP SURFACES AND ENSURE MAXIMUM BEARING CONTACT.
 - BENCH EXISTING SLOPES STEEPER THAN 4H:1V IN ACCORDANCE WITH SUBSECTION 203-3.03.
 - SHEET PILE SHALL BE DRIVEN TO AN EMBEDMENT LENGTH OF DOUBLE THE STICKUP AMOUNT.

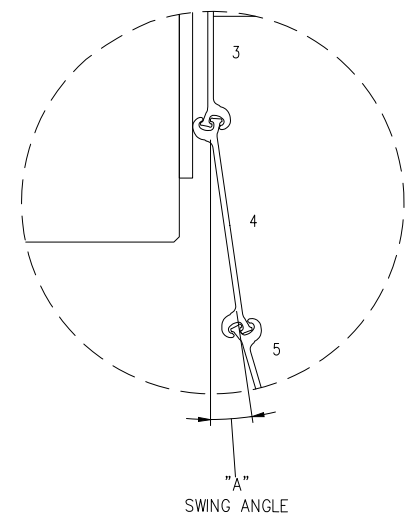
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ALASKA RAILROAD CORPORATION PO BOX 107500, ANCHORAGE, AK 99510-7500 327 W SHIP CREEK AVE ANCHORAGE, AK 99501 (907) 265-2300	
KEY MAP:	
PROJECT:	BR158.7 REPLACEMENT CBD
SHEET TITLE:	PROPOSED PLAN AND PROFILE
AFE NO.	12268
YEAR	2026
SHEET	08 of 12

DRAWING LOCATION: P:\ENGINEERING\BRIDGES\BR 158.7 COTTONWOOD CREEK\2022 BRIDGE REPLACEMENT PROGRAM\BR 158.7 CBD REPLACEMENT.DWG
 DATE: 5/22/2026 10:36 AM
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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, SEWARD, MP158.7	
ENGINEERING DEPARTMENT P.O. BOX 107500 ANCHORAGE, ALASKA 99510-7500	PROJECT: BR158.7 REPLACEMENT CBD SHEET TITLE: PROPOSED SHEET PILE LAYOUT
AFE NO.	12268
YEAR	2026
SHEET	09 of 12



A PROPOSED SHEET PILE LAYOUT
 SCALE: 1" = 6' (FULL SIZE)

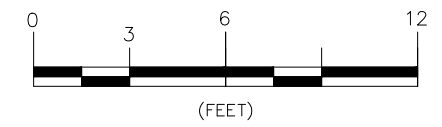


B SHEET PILE SWING ANGLE
 SCALE: 1" = 6' (FULL SIZE)

SHEET PILE SWING ANGLE TABLE

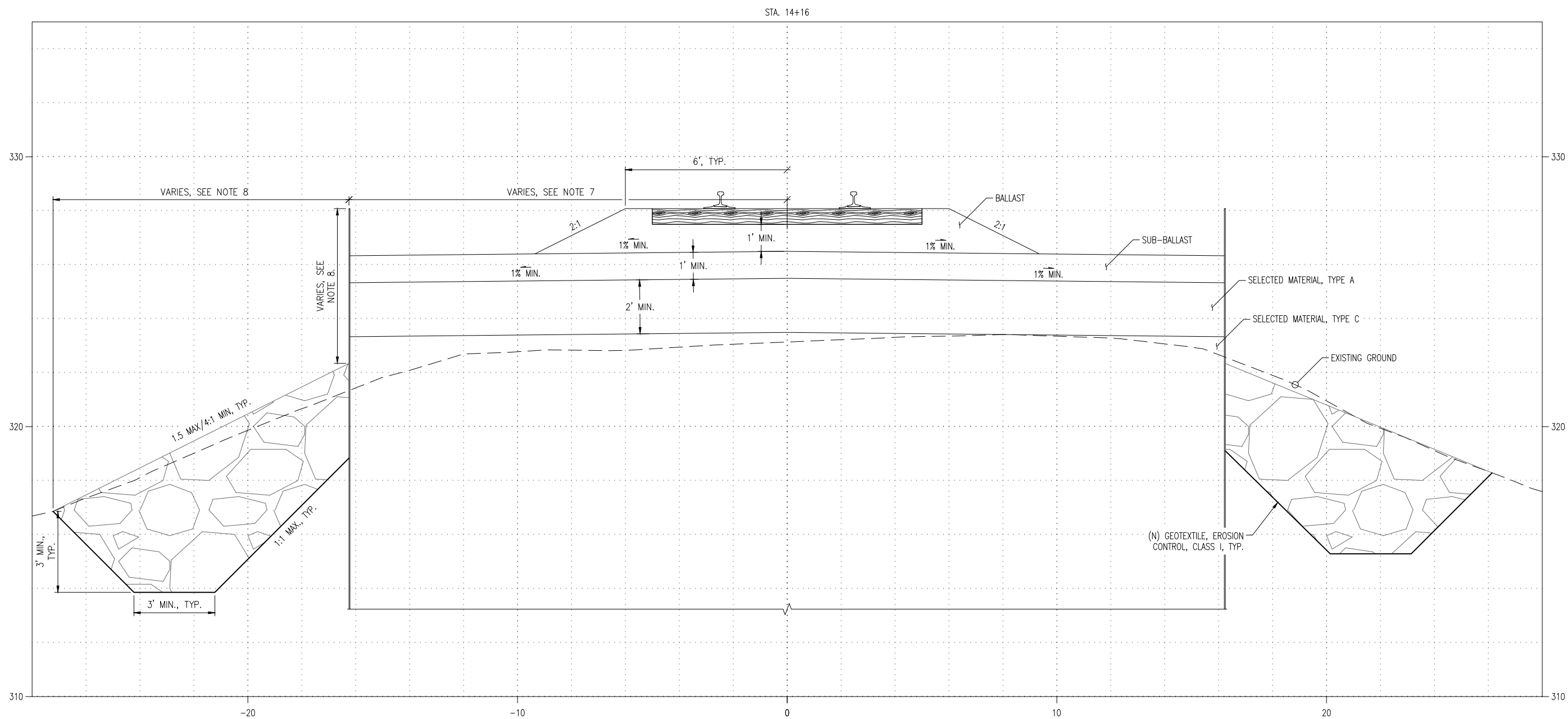
BENT #1		BENT #3	
SHEET PILES	ANGLE "A"	SHEET PILES	ANGLE "A"
0 - 3	0.0°	0 - 3	0.0°
4 - 24	8.2°	4 - 24	8.2°

- NOTES:
1. DECK PLATES DP-E AND T-20 NOT SHOWN FOR CLARITY.
 2. UTILITY SLACK BOX TO BE INSTALLED BY OTHERS (UTILITY) WITH 4 FEET MINIMUM DISTANCE FROM END OF TIE AND MINIMUM DEPTH OF 2 FEET.
 3. TIES ON SPANS TO BE 8.5' TIES. FIRST 10 TIES OFF EITHER SIDE OF BRIDGE TO BE 10' TIES BEFORE RESUMING 8.5' TIES, TYPICAL SPACING.
 4. INSTALL WALKWAY ASSEMBLY ON DOWNSTREAM SIDE OF BRIDGE. CONDUIT BRACKETS, WHEN REQUIRED, MAY BE MOUNTED TO THE WALKWAY OR CURB.
 5. SHEET PILES "1" AND "3" SHALL BE PS-31 90° T-PILES, TYPICAL.



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 SCALE: AS NOTED
 PUBLISHED: CTB
 ARR: CTB_2023.CTB



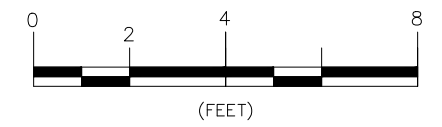
A TYPICAL BULKHEAD SECTION
 10 SCALE: 1" = 2' (FULL SIZE)

- GENERAL:**
1. OLD BALLAST AND SUB-BALLAST TO BE SCARIFIED AND MIXED INTO THE NEW EMBANKMENT MATERIALS; THEN GRADED, SHAPED, AND COMPACTED.
 2. EXCAVATE MATERIAL ADJACENT TO RIPRAP TO ESTABLISH POSITIVE DRAINAGE AWAY FROM THE RIPRAP AND ANY OTHER STRUCTURES; AND SUCH THAT PONDING DOES NOT OCCUR BELOW OR ADJACENT TO ANY PLACED MATERIALS OR STRUCTURES.
 3. BALLAST DEPTH SHALL BE, AT A MINIMUM, 12" BELOW THE TIE, AS MEASURED AT THE LOW RAIL.
 4. TEN (10) TEN FOOT TIES SHALL BE PLACED AT BOTH APPROACHES WITHIN THE BULKHEADS.
 5. EXCAVATION (NATIVE MATERIAL) MAY BE USED FOR THE ROADBED EMBANKMENT IF IT MEETS REQUIREMENTS FOR SELECTED MATERIAL, TYPE A.
 6. EXCAVATION (NATIVE MATERIAL) MAY BE USED FOR THE SUB-ROADBED EMBANKMENT IF IT MEETS THE REQUIREMENTS FOR SELECTED MATERIAL, TYPE C.
 7. EMBANKMENT WIDTH VARIES WITHIN THE BULKHEAD AND IS BASED ON THE INSIDE TO INSIDE DIMENSIONS OF THE PS-31 SHEET PILES.
 8. ALL MATERIALS WITHIN THE BULKHEAD TO BE SHAPED AND COMPACTED IN ACCORDANCE WITH SUBSECTION 301-3.03.
 9. DIMENSIONS VARY AS THE RIPRAP APRON SLOPES BOTH PARALLEL AND PERPENDICULAR TO THE CENTERLINE OF THE TRACK.
 10. WHEN RIPRAP IS PLACED ADJACENT TO THE TRACK PRISM, TIE INTO EXISTING EMBANKMENT LINES AND GRADES UP TO AN ELEVATION NOT EXCEEDING THE TOP OF SUB-BALLAST ELEVATION.

- MATERIALS:**
- ROADBED EMBANKMENT: SELECTED MATERIAL, TYPE A IN ACCORDANCE WITH SUBSECTION 703-2.07.
 - 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.
 - RIPRAP: CLASS II/III IN ACCORDANCE WITH SUBSECTION 611-2.01.3.

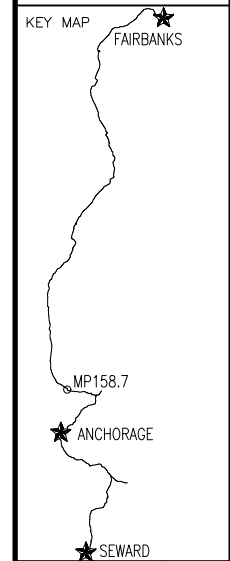
UTILITIES:

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.



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 CHECKED BY: BAO
 DRAFTED BY: BLG

ALASKA RAILROAD CORPORATION
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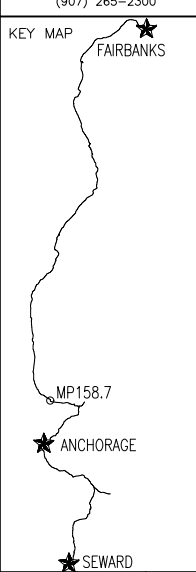


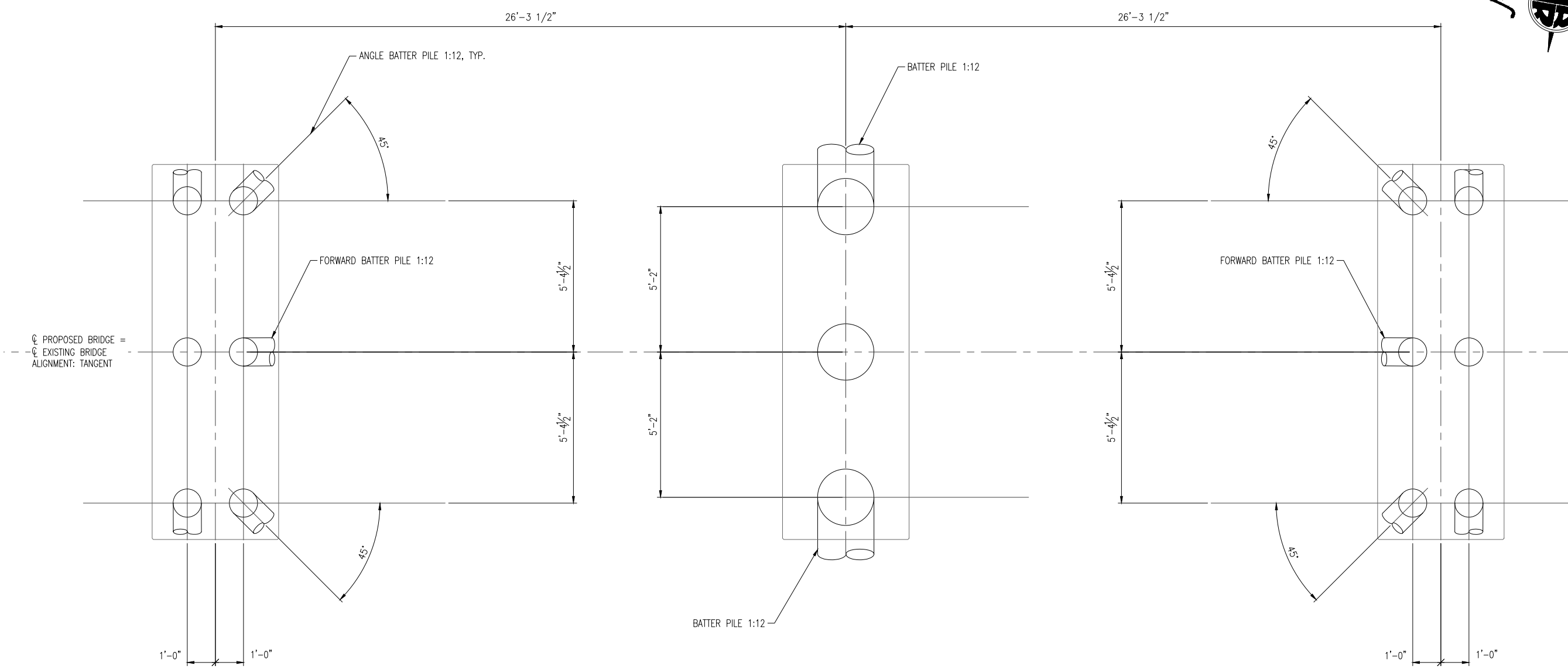
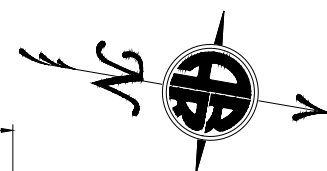
ENGINEERING DEPARTMENT
 P.O. BOX 107500
 ANCHORAGE, ALASKA 99510-7500

PROJECT: BR158.7 REPLACEMENT CBD
 SHEET TITLE: TYPICAL BULKHEAD SECTION

AFE NO. 12268
 YEAR 2026
 SHEET 10 OF 12

DRAWING LOCATION: P:\ENGINEERING\BRIDGES\BR 158.7 COTTONWOOD CREEK\2022 BRIDGE REPLACEMENT PROGRAM\BR 158.7 CBD REPLACEMENT.DWG
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KEY MAP: 	
ALASKA RAILROAD ENGINEERING DEPARTMENT P.O. BOX 107500 ANCHORAGE, ALASKA 99510-7500	
PROJECT:	BR158.7 REPLACEMENT CBD
SHEET TITLE:	PROPOSED PILE LAYOUT
AFE NO.	12268
YEAR	2026
SHEET	11 OF 12



☉ BENT #1
 ABUTMENT DOUBLE ROW PILE CAP
 (6) 12" x 0.500" DIA. STEEL PIPE PILES
 STA. 14+30.59
 CUT-OFF ELEV. 320.92
 MINIMUM TIP ELEV. 282
 ESTIMATED TIP ELEV. 274

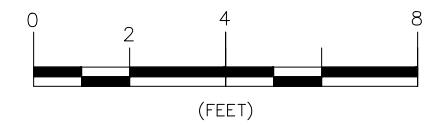
☉ BENT #2
 INTERMEDIATE DOUBLE ROW PILE CAP
 (3) 24" x 0.500" DIA. STEEL PIPE PILES
 STA. 14+56.87
 CUT-OFF ELEV. 320.92
 MINIMUM TIP ELEV. 263
 ESTIMATED TIP ELEV. 255

☉ BENT #3
 ABUTMENT DOUBLE ROW PILE CAP
 (6) 12" x 0.500" DIA. STEEL PIPE PILES
 STA. 14+83.16
 CUT-OFF ELEV. 321.07
 MINIMUM TIP ELEV. 282
 ESTIMATED TIP ELEV. 274

A
PROPOSED PIPE PILE LAYOUT
 SCALE: 1" = 2' (FULL SIZE)

NOTES:

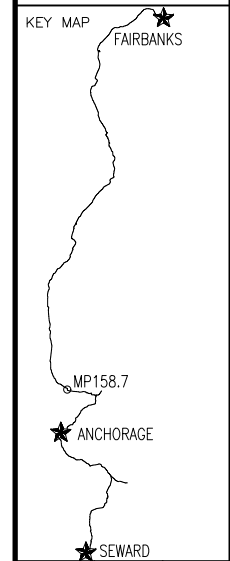
1. WHEN REQUIRED; FORWARD BATTER PILE AND 45° ANGLE BATTER PILES MAY BE INSTALLED AT ALTERNATE ANGLES WITH ENGINEERING APPROVAL.
2. CUTOFF ELEV. OF BENT #3 TO BE SET ABOVE BENTS #1 AND #2. GROUT PADS TO BE BUILT UP BELOW BEARING PADS AND ANCHORS ON UPHILL SIDE OF INTERMEDIATE PILE CAP AS SHOWN IN THE CBD STANDARD DRAWINGS.
3. A SKIM COAT OR LESS THAN 1/2" OF SELF LEVELING GROUT OR EPOXY SHALL BE PLACED UNDER EACH BEARING PAD TO ACCOUNT FOR VARIANCE IN PRECAST CBD AND PILE CAP SURFACES AND ENSURE MAXIMUM BEARING CONTACT.
4. PIPE PILES SHALL BE DRIVEN TO THE MINIMUM TIP ELEV. AND DRIVING RESISTANCE IN ACCORDANCE WITH THE SPECIAL PROVISIONS SECTION 505.
5. PIPE PILES SHALL BE FILLED WITH REINFORCED CONCRETE IN ACCORDANCE WITH THE CBD STANDARD DRAWINGS.



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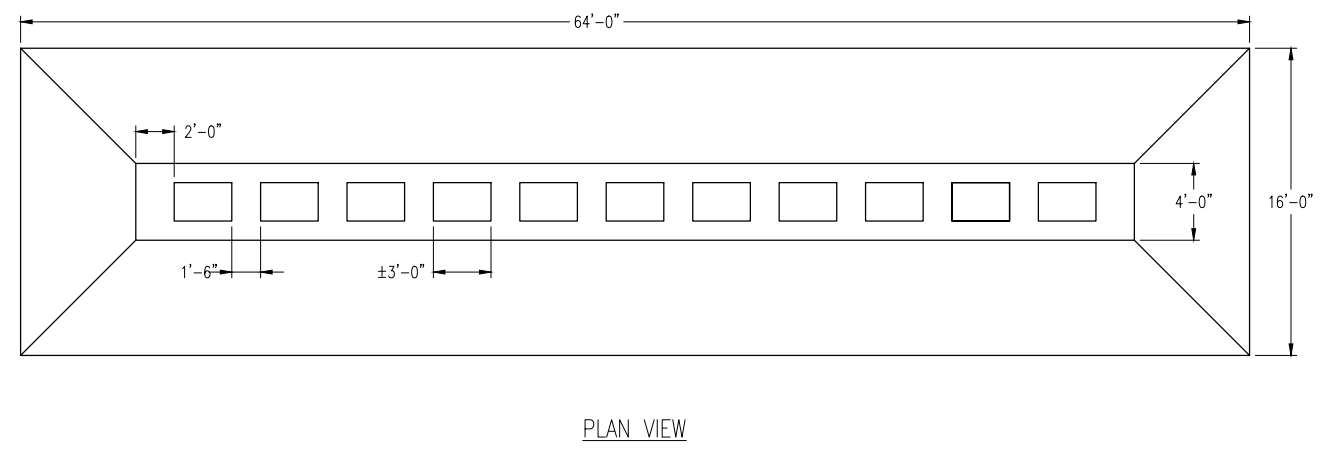
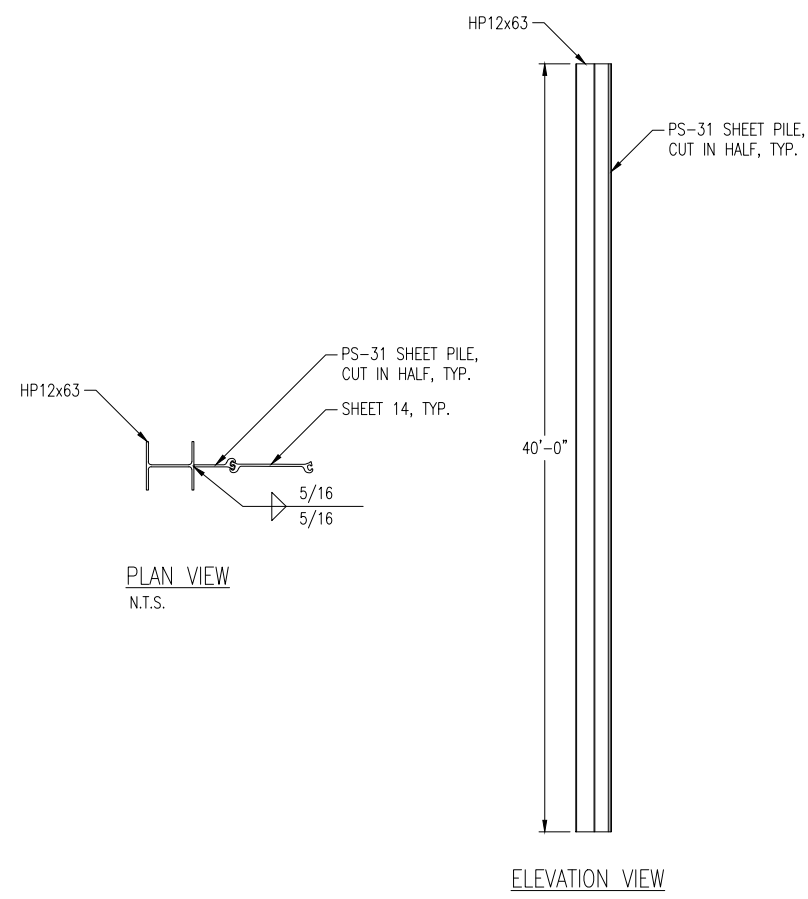
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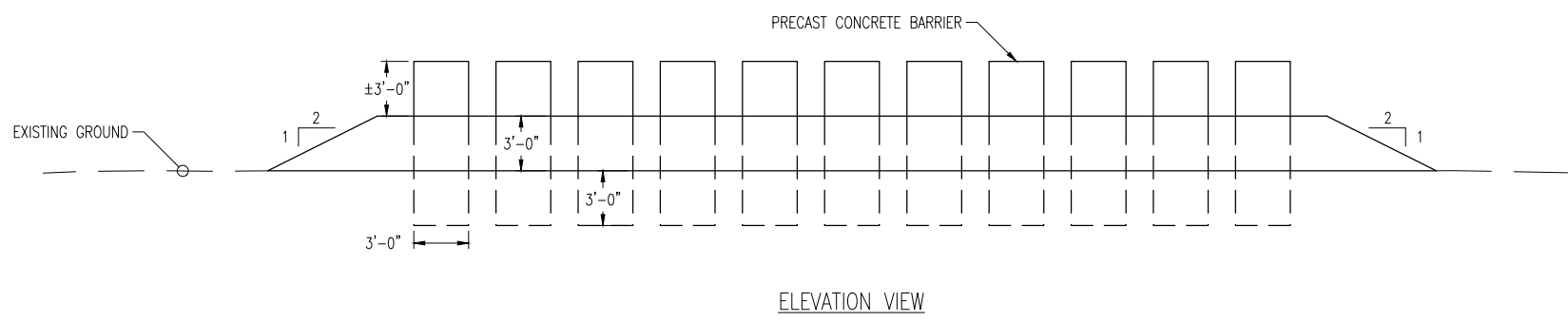
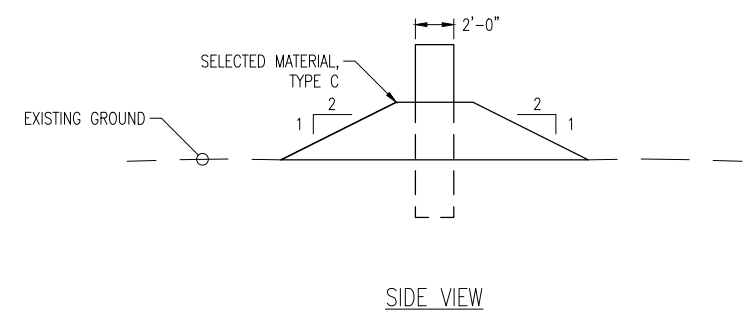


ALASKA RAILROAD
 ENGINEERING DEPARTMENT
 P.O. BOX 107500
 ANCHORAGE, ALASKA 99510-7500
 PROJECT: BR158.7 REPLACEMENT CBD
 SHEET TITLE: PROPOSED DETAILS

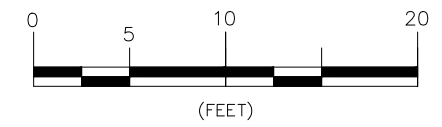
AFE NO.	12268
YEAR	2026
SHEET	12 OF 12



A
 12
PROPOSED HP PS-31 SOLDIER PILE
 SCALE: 1" = 5' (FULL SIZE)



B
 12
PROPOSED CONCRETE BARRIER BERM
 SCALE: 1" = 5' (FULL SIZE)



NOTES:

- HP SOLDIER PILE TO BE FABRICATED BY CUTTING 40' PS-31 SHEET PILE IN HALF AND WELDING TO HP12x63. HP SOLDIER PILE TO BE DRIVEN WITH COMPLETE INTERLOCK INTO SHEET 14. MATCH TOP OF DRIVEN HP WITH TOP OF SHEET PILE.