

DRAWING LOCATION: P:\ENGINEERING\BRIDGES\BR 063.0 PORTAGE CREEK TRESPASS PROTECTION\BR063.0_TRESPASSPROTECT_IFC.DWG
 PUBLISHED CTB: ARRC-DJS.CTB
 SCALE: AS NOTED
 TIME: 10:12 AM
 DATE: 4/16/2024

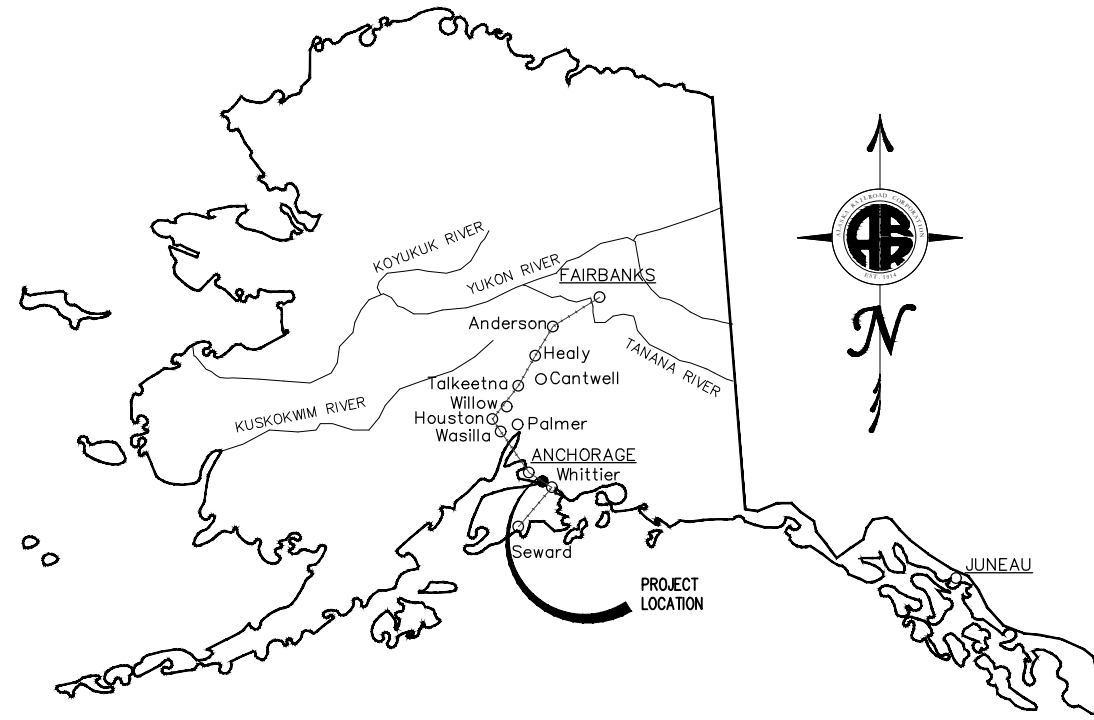
ALASKA RAILROAD CORPORATION

ENGINEERING SERVICES

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

BRIDGE 63.0 TRESPASS PROTECTION IFC

MARCH 2024



VICINITY MAP



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2	SPECIFICATIONS, BILL OF MATERIALS
3	BRIDGE LAYOUT, SCOPE OF WORK
4	BEAM INSTALLATION, PARTS DETAILED (1)
5	PARTS DETAILED (2)

DESIGNED BY:	DJS
CHECKED BY:	AKRR
DRAFTED BY:	DJS

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

KEY MAP

A/E FIRM

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

ALASKA RAILROAD

PROJECT: BRIDGE 63.0 TRESPASS PROTECTION (HEADACHE BEAM INSTALLATION)

SHEET TITLE: COVER SHEET

AFE NO.	12245
YEAR	2024
SHEET	1 OF 5

DRAWING LOCATION: P:\ENGINEERING\BRIDGES\BR 063.0 PORTAGE CREEK\TRESSPASS PROTECTION\BROB3.0_TRESSPASSPROTECT_LFC.DWG
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MATERIALS:

- A. STRUCTURAL STEEL
 - 1. HSS SHAPES ASTM A500, GRADE B, Fy=46ksi
 - 2. W-SHAPE ASTM A572, GRADE 50
 - 3. ANGLE ASTM A36
 - 4. PLATE ASTM A572, GRADE 50
 - 5. BOLTS ASTM F3125, GRADE A325
 - 6. NUTS ASTM A563
 - 7. WASHERS ASTM F436
 - 8. ANCHOR BOLTS ASTM F1554, GRADE 55

- B. WELD ELECTRODES: WELD ELECTRODES SHALL BE COMPATIBLE TO BASE METAL AND SHALL HAVE A MINIMUM TENSILE STRENGTH OF 70,000 PSI.
- C. GROUT: GROUT SHALL CONFORM TO ASTM C1107 WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 6000 PSI.
- D. EPOXY: ALL ANCHOR BOLTS TO BE SET WITH RED HEAD A7+ EPOXY OR APPROVED EQUAL.

COATINGS:

- A. ALL HARDWARE SHALL BE HOT-DIPPED GALVANIZED PER ASTM A123.
- B. ALL STEEL SURFACES SHALL BE CLEANED PER SSPC-SP 10, NEAR WHITE BLAST CLEANING TO A PROFILE DEPTH OF 1 TO 3 MILS. APPLY AN INORGANIC ZINC-RICH PRIMER MEETING SSPC PAINT SPECIFICATION NO. 30, AT A DRY FILM THICKNESS OF 2.0-4.0 MILS. NO TOP COAT REQUIRED.

SIGNS:

- A. LOW CLEARANCE SIGN TO BE REFLECTIVE ALUMINUM, SIZED TO FIT WITHIN THE VERTICAL DIMENSIONS OF THE HEADACHE BEAM AND FASTENED WITH BOLTS.

BOLT INSTALLATION:

- A. ALL BOLTS CONNECTING ANGLE BRACKET TO HEADACHE BEAM TO BE TIGHTENED USING TURN-OF-NUT METHOD.
- B. ALL BOLTS CONNECTING ANGLE BRACKET TO BOLSTER AND MASONRY PLATE TO BE SNUG TIGHT.
- C. TACK WELD ALL NUTS TO BOLT THREADS AFTER INSTALLATION.

BILL OF MATERIAL							
ITEM	MARK	SIZE	LENGTH	UNIT WEIGHT (LBS)	QTY	TOTAL WEIGHT (LBS)	NOTE
BOLSTER ASSEMBLY	bl			140.4	2	280.8	ZINC-RICH PRIMER
MASONRY PLATE ASSEMBLY	mp			79.0	2	158.0	ZINC-RICH PRIMER
ANGLE BRACKET	ab	L-4X4X0.500	0'-6"	6.4	8	51.2	ZINC-RICH PRIMER
SHIM	sh	PL-0.375X4"	0'-6"	2.6	8	20.8	ZINC-RICH PRIMER
HEADACHE BEAM ASSEMBLY	hb	W12X53	26'-0"	1467.8	2	2935.6	ZINC-RICH PRIMER
ANCHOR BOLT		1"Ø	1'-4"		4		A325, HDG
ANCHOR BOLT		1"Ø	1'-9"		4		A325, HDG
BOLT		1" Ø	6"		20		A325, HDG
BOLT		3/4" Ø	0'-2 1/2"		8		A325, HDG
BOLT		3/4" Ø	0'-2 3/4"		16		A325, HDG
NUT		1" Ø			2		HDG
NUT		3/4" Ø			10		HDG
WASHER		1" Ø			8		HDG
WASHER		3/4" Ø			48		HDG
SIGN					2		

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ALASKA RAILROAD

PROJECT: BRIDGE 63.0 TRESSPASS PROTECTION (HEADACHE BEAM INSTALLATION)

SHEET TITLE: SPECIFICATIONS AND BILL OF MATERIALS

AFE NO. 12245
 YEAR 2024
 SHEET 2 OF 5

DRAWING LOCATION: P:\ENGINEERING\BRIDGES\BR 063.0 PORTAGE CREEK TRESSPASS PROTECTION\BR063.0_TRESSPASSPROTECT_IFC.DWG
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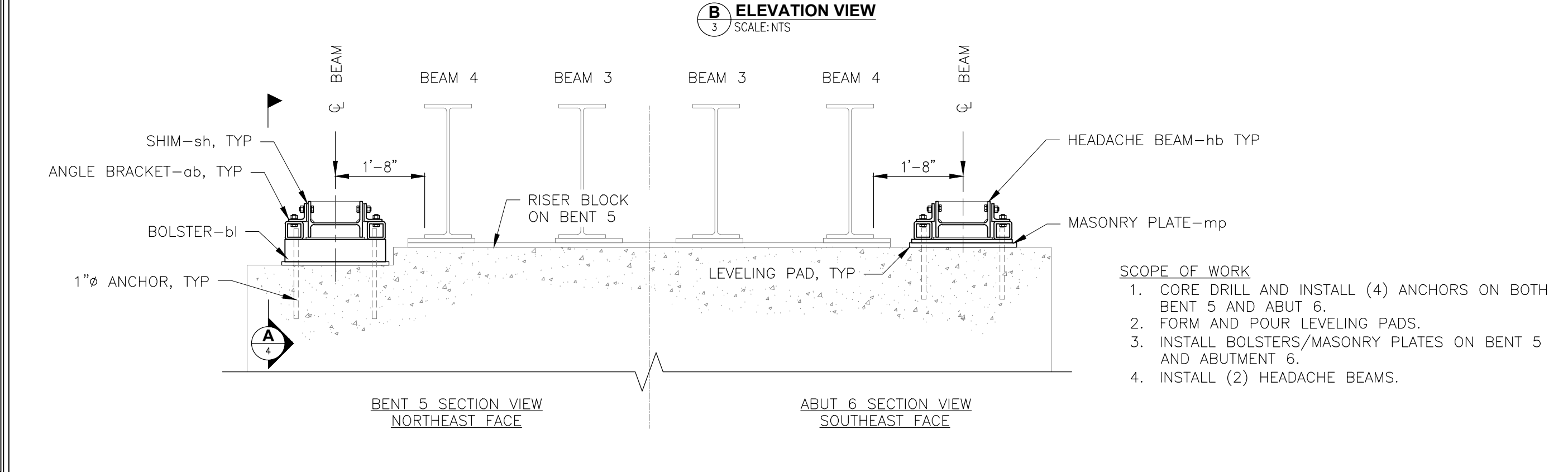
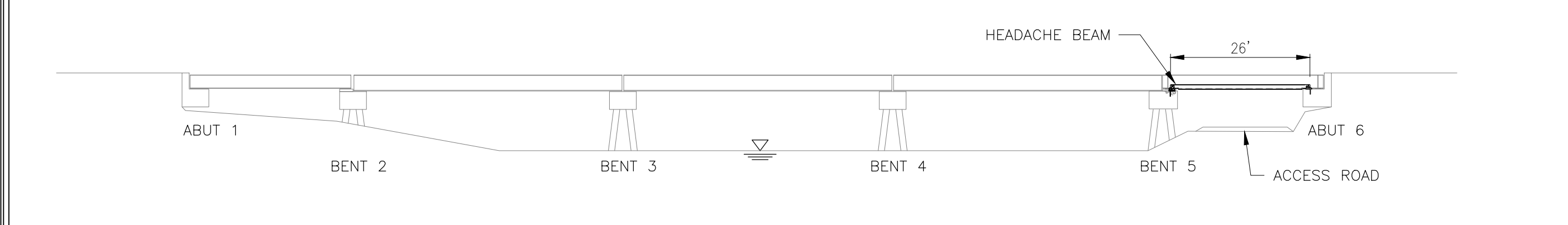
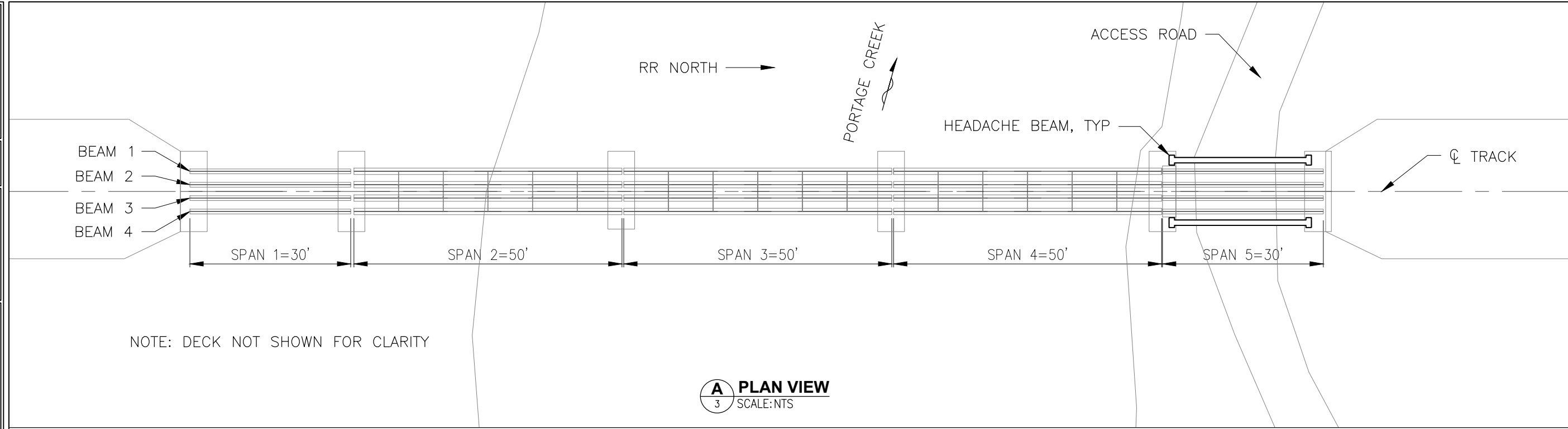
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ALASKA RAILROAD

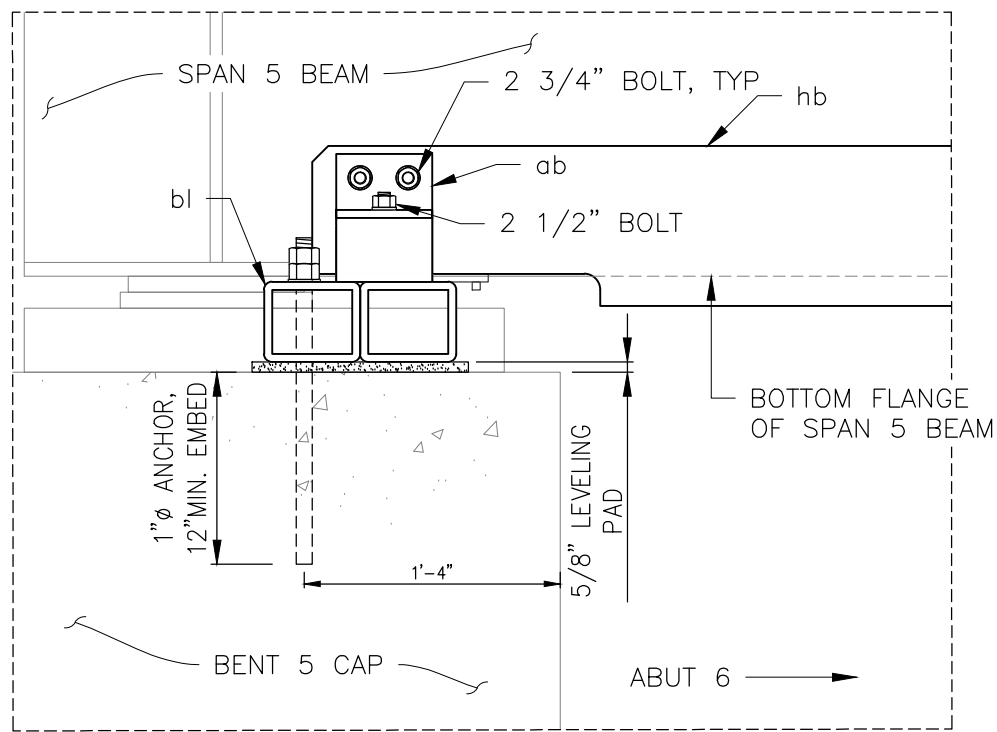
PROJECT: BRIDGE 63.0 TRESSPASS PROTECTION (HEADACHE BEAM INSTALLATION)

SHEET TITLE: BRIDGE LAYOUT, SCOPE OF WORK

AFE NO. 12245
 YEAR 2024
 SHEET 3 OF 5



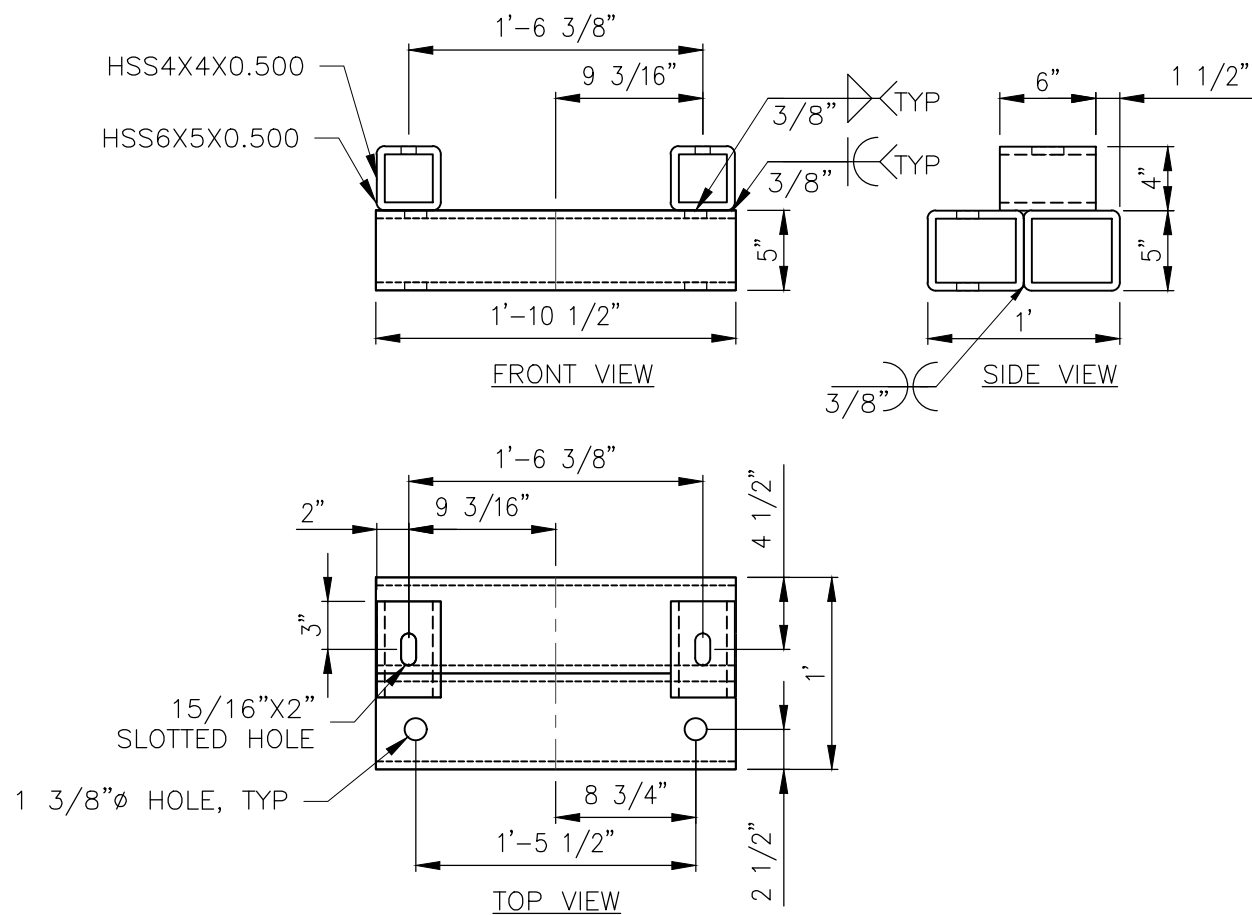
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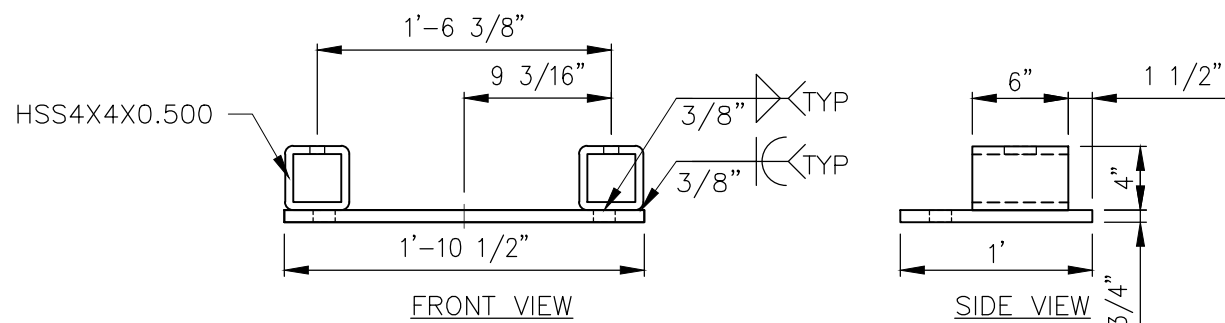
A (1) BEAM INSTALLATION
 SCALE: 1"=1'-0"

NOTE:

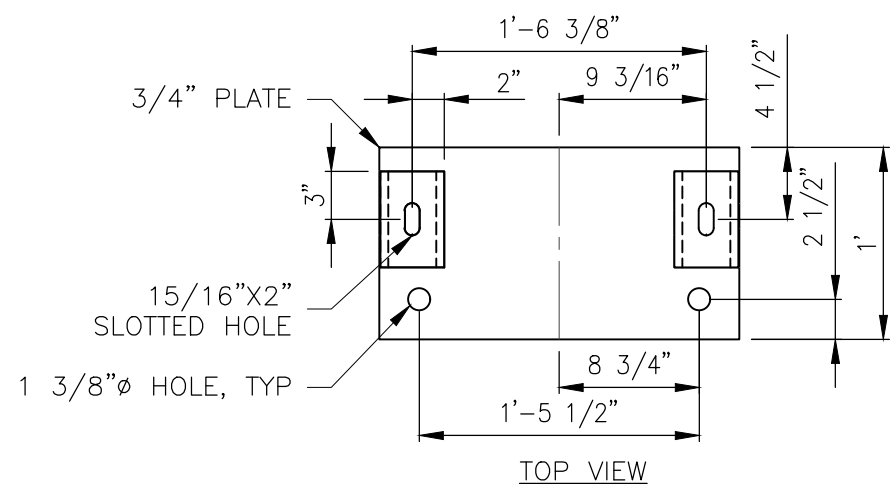
1. HEADACHE BEAM BOTTOM FLANGE TO BE BETWEEN 1 3/4" AND 2" BELOW BOTTOM FLANGE OF SPAN 5.
2. ABUT 6 INSTALLATION TO BE SIMILAR WITH MASONRY PLATE.



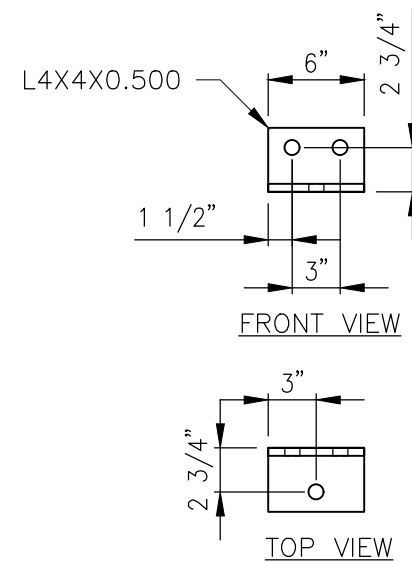
B (2) BOLSTERS - bi
 SCALE: 1"=1'-0"



C (2) MASONRY PLATE - mp
 SCALE: 1"=1'-0"



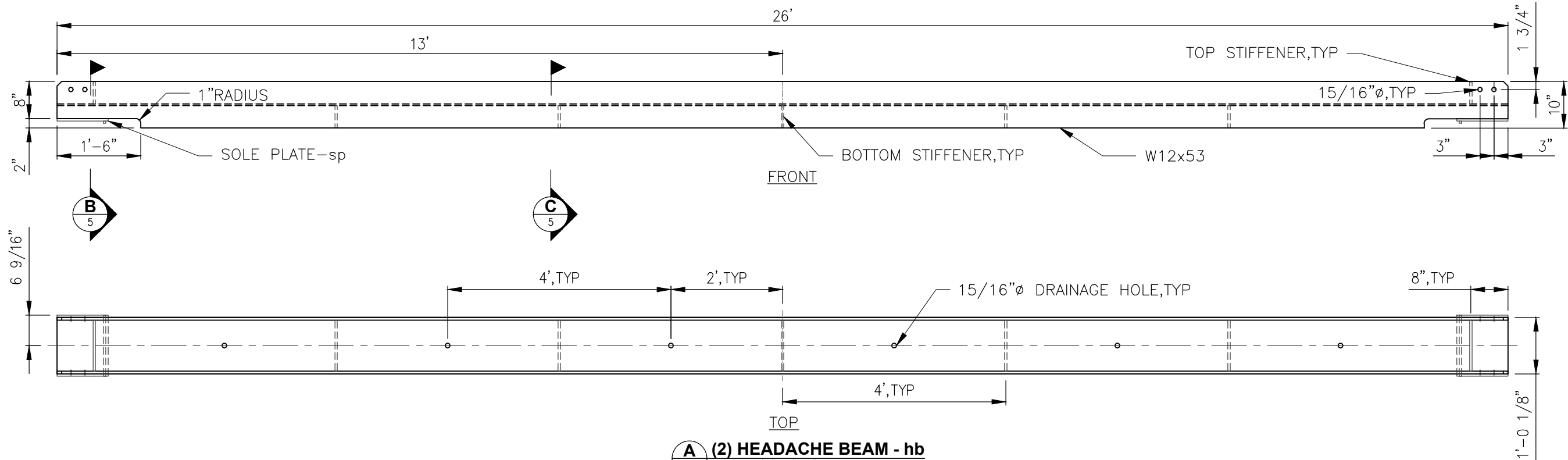
D (8) ANGLE BRACKET - ab
 SCALE: 1"=1'-0"



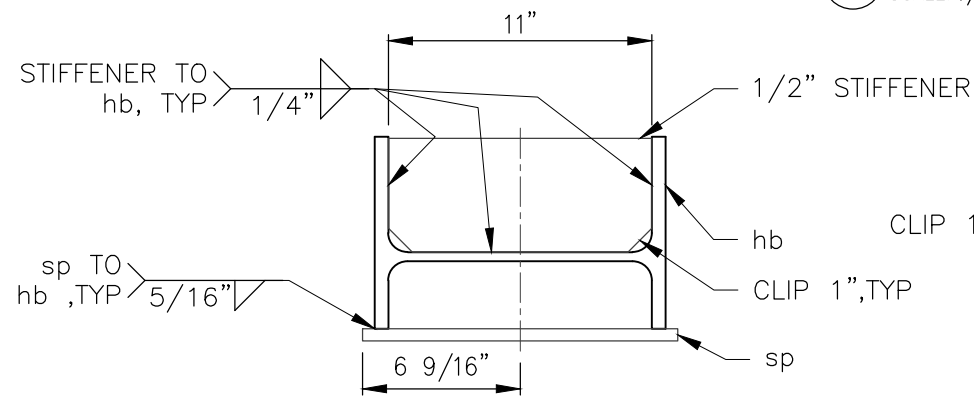
E (8) SHIM - sh
 SCALE: 1"=1'-0"

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KEY MAP	
A/E FIRM	
ENGINEERING DEPARTMENT	P.O. BOX 107500 ANCHORAGE, ALASKA 99510-7500
PROJECT: BRIDGE 63.0 TRESSPASS PROTECTION (HEADACHE BEAM INSTALLATION)	
SHEET TITLE: BEAM INSTALLATION, PARTS DETAIL (1)	
AFE NO.	12245
YEAR	2024
SHEET	4 OF 5

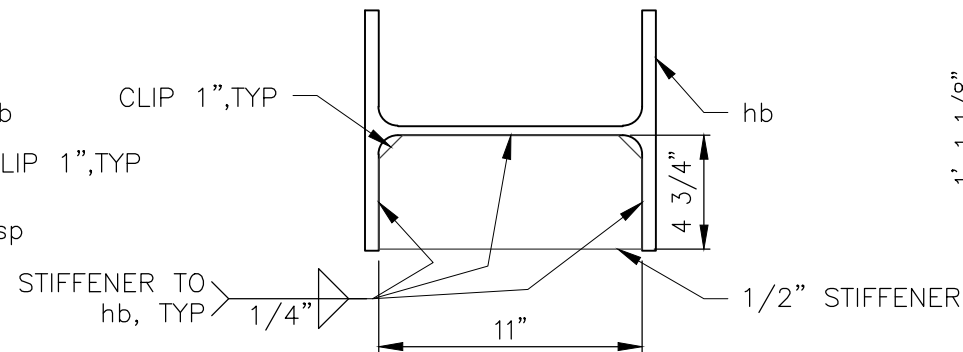
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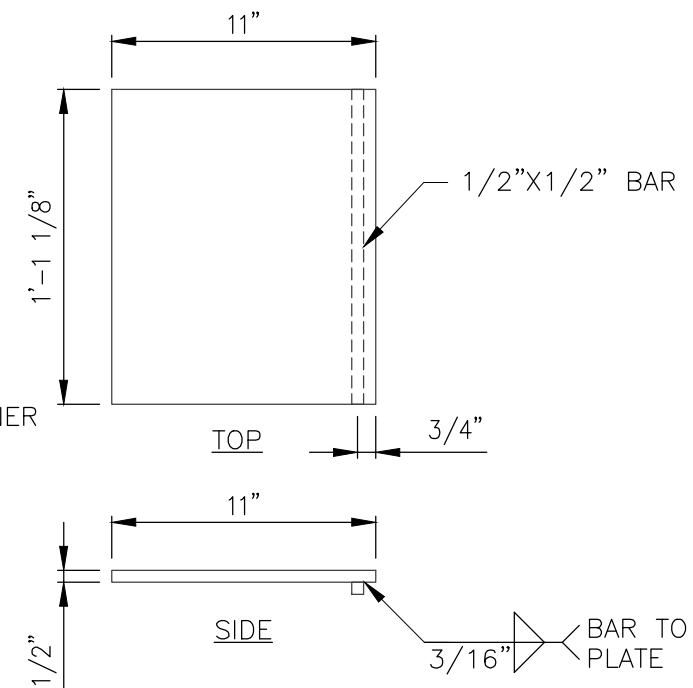
(A) (2) HEADACHE BEAM - hb
 5 SCALE: 1/2"=1'-0"



(B) SECTION VIEW
 5 SCALE: 1 1/2"=1'-0"



(C) SECTION VIEW
 5 SCALE: 1 1/2"=1'-0"



(D) (4) SOLE PLATE - sp
 5 SCALE: 1 1/2"=1'-0"



(E) SIGN
 5 SCALE: 1 1/2"=1'-0"

- NOTE:
1. INSTALL ALUMINUM REFLECTIVE SIGNS SIMILAR TO WHAT IS SHOWN ABOVE ON OUTWARD FACING SIDES OF BEAMS.
 2. SECURE SIGNS WITH (4) 3/8"Ø BOLTS.

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ENGINEERING DEPARTMENT P.O. BOX 107500 ANCHORAGE, ALASKA 99510-7500	PROJECT: BRIDGE 63.0 TRESSPASS PROTECTION (HEADACHE BEAM INSTALLATION) SHEET TITLE: PARTS DETAIL (2)
AFE NO.	12245
YEAR	2024
SHEET	5 OF 5