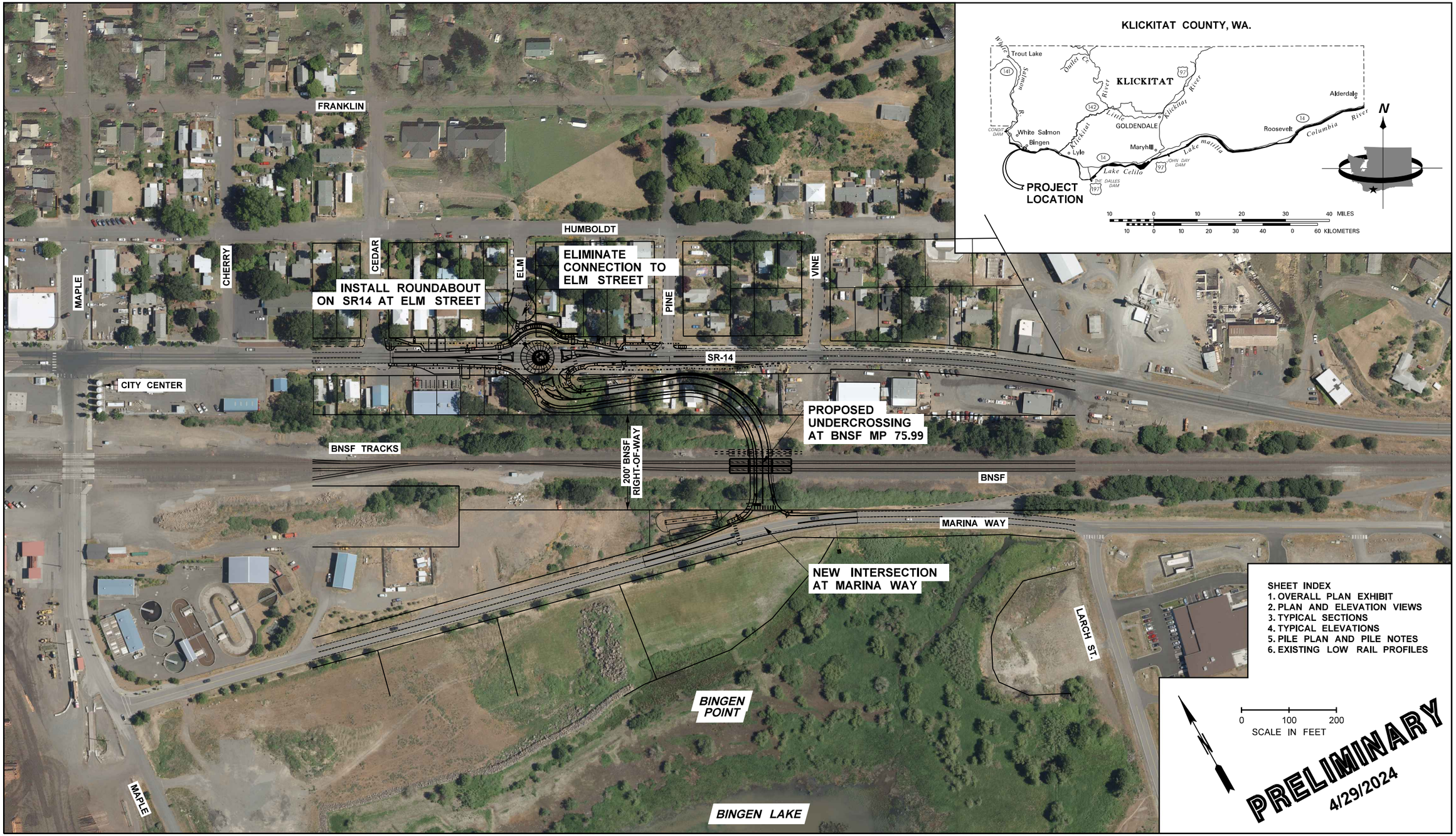


SHEET INDEX
1. OVERALL PLAN EXHIBIT
2. PLAN AND ELEVATION VIEWS
3. TYPICAL SECTIONS
4. TYPICAL ELEVATIONS
5. PILE PLAN AND PILE NOTES
6. EXISTING LOW RAIL PROFILES

0 100 200
SCALE IN FEET

PRELIMINARY
4/29/2024

FILE NAME	G:\444302\03 - Design\D01419B Port of Klickitat Access\CAD\XL5086_BP_EX_BNSF_Concept_Submittal.dgn				REGION NO.	STATE	FED.AID PROJ.NO.
TIME	12:00:33 PM				10	WASH	
DATE	4/29/2024				JOB NUMBER		
PLOTTED BY	lelkr						
DESIGNED BY	A. JAMES						
ENTERED BY	A. JAMES				CONTRACT NO.	LOCATION NO.	
CHECKED BY	K. LEI					XL5086	
PROJ. ENGR.	M. BRIGGS						
REGIONAL ADM.	C. FRANCIS	REVISION	DATE	BY			

P.E. STAMP BOX DATE

P.E. STAMP BOX DATE

Washington State Department of Transportation

SR14/E OF BINGEN
PORT OF KLICKITAT
ACCESS IMPROVEMENTS

UTC PETITION DRAWINGS

PLAN REF NO C01

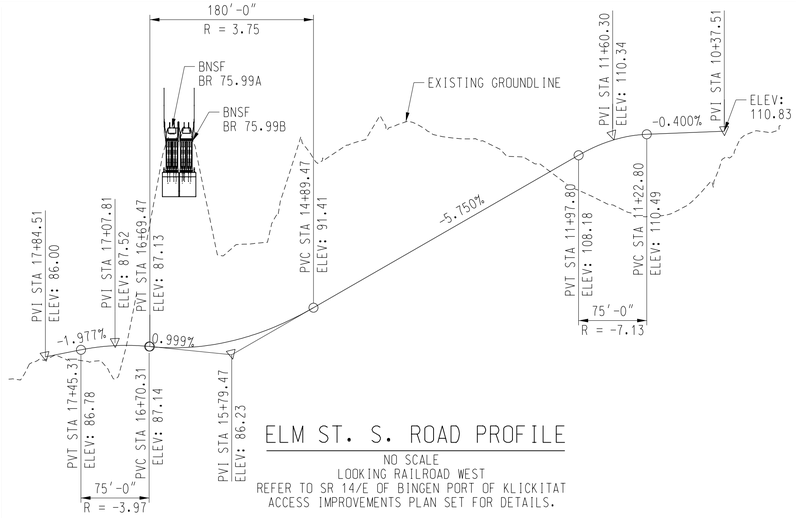
SHEET OF SHEETS

LIST OF DRAWINGS - BR. 75.99A, B

	PLAN NO.	TITLE
BNSF FORCES (THIS SET)	0047-0075.990-001	GENERAL NOTES AND INFORMATION (BNSF)
	0047-0075.990-002	GENERAL LAYOUT
	0047-0075.990-003	TYPICAL SECTION - DOUBLE BENT
	0047-0075.990-004	TYPICAL SECTION - ABUTMENT AND MISCELLANEOUS DETAILS
	0047-0075.990-005	FOUNDATION PLAN
	0047-0075.990-006	BORING LOGS
	0047-0075.990-007	SPECIAL PRECAST CONCRETE ABUTMENT CAP (SHEET 1 OF 2)
	0047-0075.990-008	SPECIAL PRECAST CONCRETE ABUTMENT CAP (SHEET 2 OF 2)
	0047-0075.990-009	SPECIAL PRECAST CONCRETE DOUBLE BENT CAP
	0047-0075.990-010	SPECIAL WINGWALL DETAILS
	0047-0075.990-011	42" DOUBLE CELL BOX BEAM DETAILS
	0047-0075.990-012	UNIT 1 STEEL BEAM SPAN
	0047-0075.990-013	UNIT 2 STEEL BEAM SPAN
	0047-0075.990-014	UNIT 3 STEEL BEAM SPAN
	0047-0075.990-015	UNIT 4 STEEL BEAM SPAN
	0047-0075.990-016	24" STEEL SLOPED CURB
	0047-0075.990-017	24" STEEL VERTICAL CURB
	0047-0075.990-018	UTILITY BRACKET INSTALLATION DETAILS
	0047-0075.990-019	WATERPROOFING LAYOUT AND DETAILS
	0047-0075.990-020	ABUTMENT TEMPORARY SHORING
	0047-0075.990-021	MISCELLANEOUS STEEL DETAILS (SHEET 1 OF 2)
	0047-0075.990-022	MISCELLANEOUS STEEL DETAILS (SHEET 2 OF 2)
	0047-0075.990-023	SACRIFICIAL BEAM DETAILS (SHEET 1 OF 2)
	0047-0075.990-024	SACRIFICIAL BEAM DETAILS (SHEET 2 OF 2)
	0047-0075.990-025	BILL OF MATERIAL
WSDOT CONTRACTOR	0047-0075.990-026	GENERAL NOTES AND INFORMATION (WSDOT)
	0047-0075.990-027	GENERAL LAYOUT
	0047-0075.990-028	TYPICAL SECTION - DOUBLE BENT
	0047-0075.990-029	BENT ENCASEMENT DETAILS - BENTS 2 AND 3

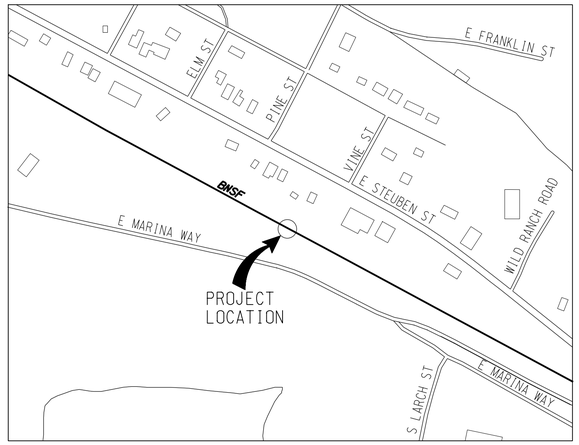
TABLE OF ELEVATIONS - BR. 75.99A & 75.99B

BRIDGE	LOCATION	TOP/TIE	TOP/CAP	PILE CUTOFF	T/T TO PILE CUTOFF
PROPOSED MAIN 1 BRIDGE 75.99B	ABUTMENT 1	110.53	105.44	103.44	7'-1 1/8"
	BENT 2	110.53	105.52	102.85	7'-8 1/8"
	BENT 3	110.54	105.64	102.97	7'-6 7/8"
	ABUTMENT 4	110.54	105.72	103.72	6'-9 7/8"
PROPOSED SIDING BRIDGE 75.99A	ABUTMENT 1	110.53	105.44	103.44	7'-1 1/8"
	BENT 2	110.53	105.52	102.85	7'-8 1/8"
	BENT 3	110.54	105.64	102.97	7'-6 7/8"
	ABUTMENT 4	110.54	105.72	103.72	6'-9 7/8"



ELM ST. S. ROAD PROFILE

NO SCALE
LOOKING RAILROAD WEST
REFER TO SR 14/E OF BINGEN PORT OF KLICKITAT ACCESS IMPROVEMENTS PLAN SET FOR DETAILS.



VICINITY MAP

NO SCALE
IN THE CITY OF BINGEN, WASHINGTON

STRUCTURAL AND MISCELLANEOUS STEEL:

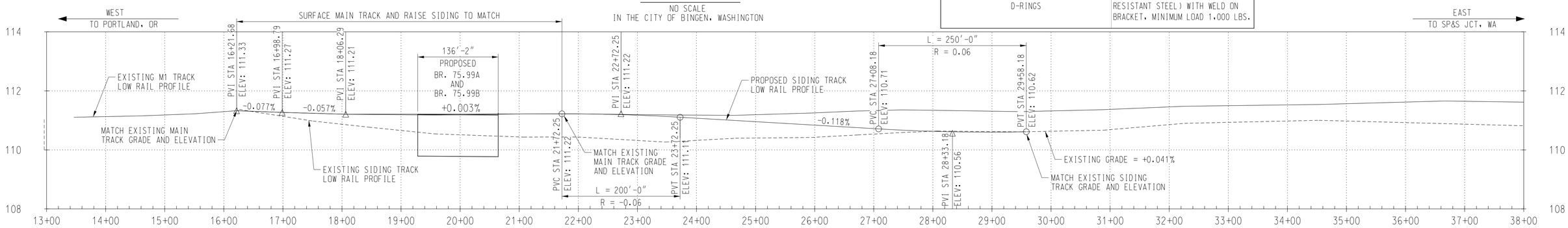
1. IN ACCORDANCE WITH CURRENT A.W.S. BRIDGE WELDING CODE D1.5 AND A.R.E.M.A. MANUAL CHAPTER 15 FOR RAILWAY ENGINEERING, ALL WELD METAL MUST BE EQUIVALENT TO THE BASE METAL IN STRENGTH, CORROSION RESISTANCE, AND WEATHERED APPEARANCE.
2. FABRICATION AND ARC WELDING OF STRUCTURAL STEEL AND HANDRAIL PANELS SHALL BE IN ACCORDANCE WITH CHAPTER 15, PART 3 OF THE CURRENT A.R.E.M.A. MANUAL FOR RAILWAY ENGINEERING; MIG WELDING SHALL BE USED ON HANDRAIL PANELS.
3. SHEAR CONNECTOR STUDS SHALL BE AUTOMATICALLY END WELDED WITH COMPLETE FUSION IN ACCORDANCE WITH SECTION 7 OF THE CURRENT A.W.S. STRUCTURAL WELDING CODE D1.1.
4. ALL STRUCTURAL STEEL DENOTED IN THE PLANS AS "IMPACT TESTING REQUIRED" (ITR) SHALL CONFORM TO A.S.T.M. A709, GRADE 50WT2 AND SHALL MEET IMPACT REQUIREMENTS FOR HIGH STRENGTH STRUCTURAL PER CHAPTER 15 OF THE A.R.E.M.A. MANUAL, DECK PLATES, DIAPHRAGMS AND OTHER SECONDARY MEMBERS SHALL BE EXEMPT FROM IMPACT TESTING REQUIREMENTS.
5. FABRICATION AND WORKMANSHIP SHALL CONFORM TO THE A.R.E.M.A. MANUAL CHAPTER 15 FOR RAILWAY ENGINEERING.
6. GALVANIZED ELEMENTS SHALL BE FREE OF FINS, ABRASIONS, ROUGH OR SHARP EDGES AND OTHER SURFACE DEFECTS.
7. ALL RE-ENTRANT CUTS TO BE FILLETED A MINIMUM 1" RADIUS, UNLESS OTHERWISE SHOWN.
8. ALL CORNER CLIPS TO BE 1" x 1", UNLESS OTHERWISE SHOWN.
9. ALL BOLTS SHALL BE TIGHTENED BY THE TURN-OF-NUT METHOD TO OBTAIN PROPER BOLT TENSION.
10. ADJACENT WALKWAY PANELS SHALL NOT LAND ON THE SAME SUPPORT EXCEPT AT THE END OF SPANS.
11. HANDRAIL PANELS ON WALKWAYS SHALL BE ERECTED PLUMB AND IN LINE.
12. PAINT EXPOSED PORTIONS OF PILE PLATES AND EXPOSED PORTIONS OF PILING BETWEEN BOTTOM OF CAP AND ONE FOOT BELOW GROUNDLINE PER BNSF STANDARD DRAWINGS.
13. UNLESS OTHERWISE NOTED WITHIN PLANS, ALL MATERIALS USED SHALL CONFORM TO TABLE BELOW:

ALL STRUCTURAL STEEL	A.S.T.M. A709 GRADE 50
ALL MISCELLANEOUS STEEL (STEEL CHANNELS, BARS, PLATES, ANGLES)	A.S.T.M. A36
FASTENERS	7/8" DIAMETER HEAVY HEX BOLTS A.S.T.M. F3125, GRADE A325, TYPE 3 (COMPONENTS OF CORRESPONDING GRADE)
WASHERS	7/8" (NOMINAL) A.S.T.M. F436-3
FASTENER HOLES	15/16" DIAMETER
ANCHOR BOLTS (FOR BEARINGS)	A.S.T.M. F1554, GRADE 105
BALLAST PAN PLATES	NON-WEATHERING STEEL A.S.T.M. A709, GRADE 50
STANDARD BLACK PIPES	A.S.T.M. A53 (UNCOATED)
SHEAR CONNECTORS (STUDS)	A.S.T.M. A108, GRADE 1020
GALVANIZED COMPONENTS (SPECIFIED WITHIN PLANS)	A.S.T.M. A123
D-RINGS	3" INNER DIAMETER (WEAR RESISTANT STEEL) WITH WELD ON BRACKET, MINIMUM LOAD 1,000 LBS.

GENERAL NOTES:

1. THE NEW STRUCTURES WILL BE DESIGNED IN ACCORDANCE WITH THE 2023 AMERICAN RAILWAY ENGINEERING AND MAINTENANCE OF WAY ASSOCIATION (A.R.E.M.A.) CHAPTER 8 - CONCRETE STRUCTURES AND FOUNDATIONS, CHAPTER 9 - SEISMIC DESIGN, AND CHAPTER 15 - STEEL STRUCTURES.
2. DESIGN LOADING : COOPER'S E80 WITH DIESEL IMPACT.
3. ALL MATERIAL AND WORK REQUIREMENTS SHOWN ON THESE DRAWINGS AND NOT OTHERWISE DETAILED SHALL BE ACCOMPLISHED AS SPECIFIED IN THE BNSF STANDARDS AND THE MOST CURRENT A.R.E.M.A. MANUAL FOR RAILWAY ENGINEERING. IN THE EVENT OF CONFLICTS BETWEEN THE SPECIFICATIONS, THE MOST RESTRICTIVE SHALL APPLY.
4. NEW CONSTRUCTION SHOWN IN HEAVY LINES. FUTURE CONSTRUCTION (BY OTHERS) SHOWN IN LIGHT LINES.
5. ELEVATIONS ARE BASED ON FIELD SURVEY PROVIDED BY WSDOT, DATED 6/25/2018.

   BENCHMARK CONTROL POINT #102:
   NORTHING: 467680.73
   EASTING: 1723475.30
   M.1 STA: 23+71.82
   OFFSET: 240.82' LEFT
   ELEV: 120.60
6. PER BNSF STATION MAP FOR BINGEN, WA. HISTORIC STATIONING IS NOTED TO INCREASE IN OPPOSITE DIRECTION OF INCREASING MILE POST. PER BNSF REQUEST, PROJECT STATIONING HAS BEEN CREATED AND SET TO INCREASE FROM WEST TO EAST TO MATCH INCREASING MILEPOST DIRECTION.
7. ALL UTILITIES AND BNSF UNDERGROUND CABLING (IF APPLICABLE) SHALL BE LOCATED AND PROTECTED FROM DAMAGE. UPON REQUEST, UNDERGROUND UTILITIES WILL BE LOCATED AND FLAGGED BY THE UTILITIES. EXCAVATION IN THE AREA OF UNDERGROUND UTILITIES SHALL NOT BEGIN UNTIL ALL SUCH UTILITIES HAVE BEEN LOCATED AND IDENTIFIED, AND THEN ONLY WITH EXTREME CARE TO AVOID ANY POSSIBILITY OF DAMAGE TO THE UTILITY FACILITY. CONSTRUCTION EFFORTS SHALL BE COORDINATED WITH ALL OTHER LOCAL UTILITY COMPANIES PERTINENT TO THE PROSECUTION OF THE WORK. BNSF SHALL NOTIFY LOCATORS (811) 48 HOURS PRIOR TO PLANNED WORK.
8. RIGHT-OF-WAY IS PARTIALLY FENCED ALONG THE REAR LOT LINES OF THE PRIVATE HOMES ALONG NORTH SIDE OF BNSF RIGHT-OF-WAY. OTHERWISE, RIGHT-OF-WAY IS MOSTLY UNFENCED.
9. STORM DRAINS AND PIPING WILL BE INSTALLED AS PART OF THE ROADWAY WORK. POWER MAY BE INSTALLED FOR STREET LIGHTING. OTHER UTILITIES MAY BE ADDED AS THE PROJECT PROGRESSES, SUBJECT TO BNSF APPROVAL.
10. AREAS DISTURBED BY CONSTRUCTION OPERATIONS SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN EXISTING.
11. BNSF TO INSTALL TEMPORARY SHORING AS NECESSARY FOR INSTALLATION OF BENT AND ABUTMENT CAPS.
12. BNSF STANDARD CONSTRUCTION SPECIFICATIONS SHALL BE USED FOR THIS PROJECT.



EXISTING AND PROPOSED LOW RAIL PROFILES

REFERENCES:

1. BNSF STANDARD BRIDGE & COMPONENT PLANS ISSUED MARCH 1, 2021.
2. GEOTECHNICAL REPORT - BINGEN POINT ACCESS - RAILROAD BRIDGE BY WSDOT DATED MARCH 22, 2019.

LAT: 45°42'43.00" N LONG: 121°27'38.70" W	DES: MCH
DOT # XXXXXX	DRAWN: AEP
CITY OF BINGEN, KLICKITAT COUNTY, WA.	CHECK: MJK
STREET NAME: ELM ST. S.	DATE: 3/2024
STATE CONTRACT NO.: XX-XXXX	PLAN: XXX
FED. AID. PROJECT NO.: XXXXX-XXXXX(XXX)	LINE SEG: 0047

BNSF RAILWAY
BRIDGE ENGINEERING KANSAS CITY, KS

APPROVED: _____
ASST. DIRECTOR STRUCTURES DESIGN

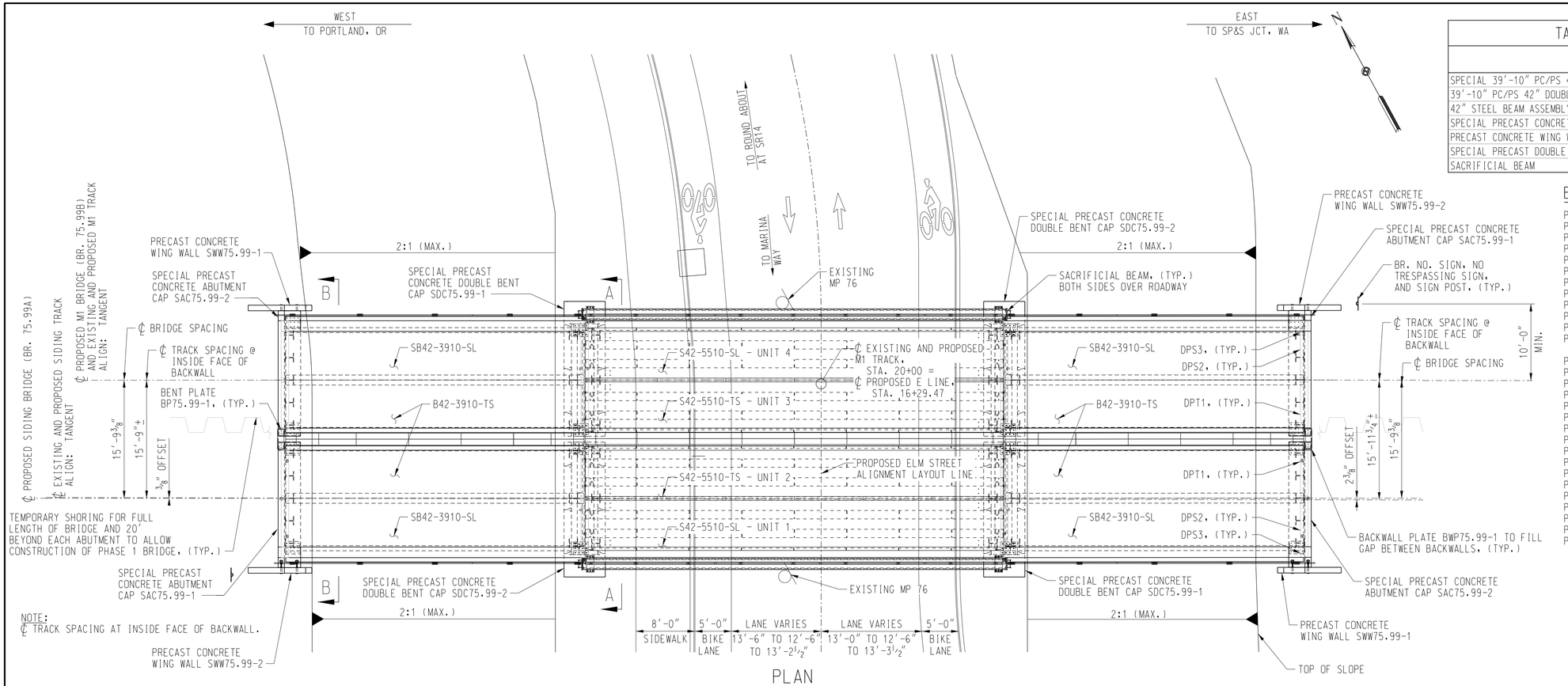
100% SUBMITTAL

PORTLAND, OR TO SP&S JCT., WA
BRIDGE NUMBER 75.99A, B
OVER FUTURE ELM ST. S.
GENERAL NOTES AND INFORMATION (BNSF)

PLAN NO: 0047-0075.990-001 | SHEET: 1 OF 29

File Location: SPLES

Date Printed: 3/3/2024 Time Printed: 12:49:41 PM

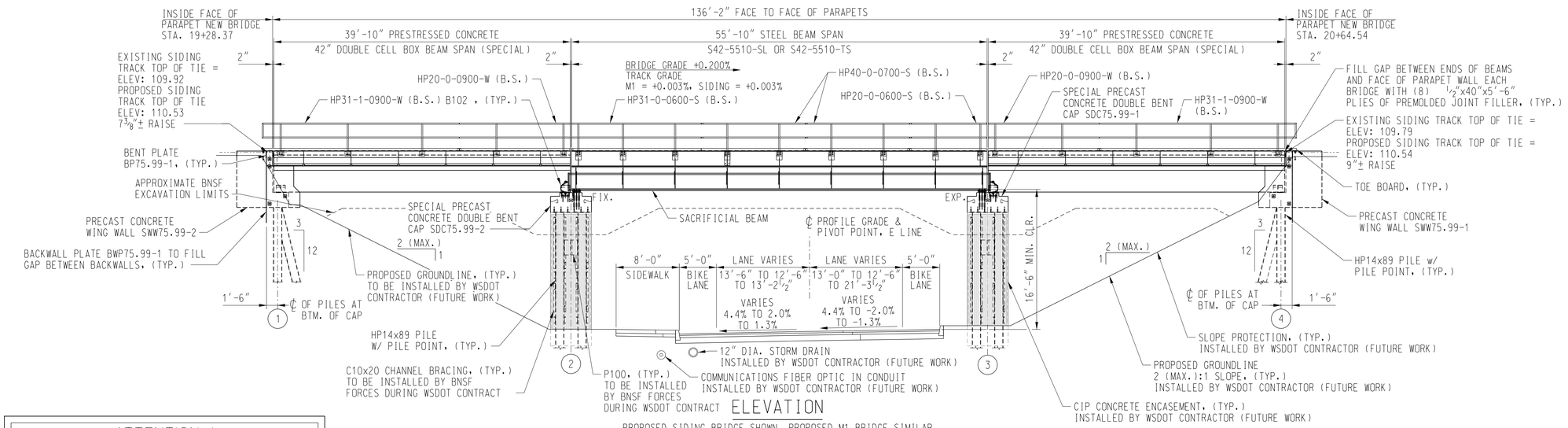


PLAN

TABLE OF EST. LIFTING WEIGHTS	
ITEM	ESTIMATED WEIGHT (LBS.)
SPECIAL 39'-10" PC/PS 42" DOUBLE BOX BEAM W/ SLOPED CURB	81,660
39'-10" PC/PS 42" DOUBLE BOX BEAM W/ VERTICAL CURB	78,870
42" STEEL BEAM ASSEMBLY W/ 1 SLOPED CURB AND 1 VERTICAL CURB	82,640
SPECIAL PRECAST CONCRETE ABUTMENT CAP MK. SAC75.99-1 AND -2	25,600
PRECAST CONCRETE WING WALL MK. SWW75.99-1 AND -2	6,350
SPECIAL PRECAST DOUBLE BENT CAP MK. SDC75.99-1 AND -2	36,735
SACRIFICIAL BEAM	21,550

BNSF 2021 STANDARD PLAN REFERENCES

PLAN NO. 0000-1000-02 GENERAL NOTES
PLAN NO. 0000-1000-03 GENERAL INFORMATION
PLAN NO. 0000-1000-04 SUBSTRUCTURE COMPONENTS
PLAN NO. 0000-1000-05 SUPERSTRUCTURE COMPONENTS
PLAN NO. 0000-1000-06 HANDRAIL COMPONENTS
PLAN NO. 0000-1000-07 TYPICAL ELEVATION
PLAN NO. 0000-1000-11 BEARING PAD LAYOUT DOUBLE CELL BOX BEAM
PLAN NO. 0000-1000-14 BEARING LAYOUT 30", 42", 48" STEEL BEAMS
PLAN NO. 0000-1000-21 TYPICAL SECTIONS DETAILS
PLAN NO. 0000-1121-05 WING WALL 42" BEAM DEPTH
PLAN NO. 0000-1213-01 42" DOUBLE CELL BOX BEAM
PLAN NO. 0000-1213-02 42" DOUBLE CELL BOX BEAM PRESTRESSING STRAND PATTERN
PLAN NO. 0000-1214-02 24" CONCRETE CURB
PLAN NO. 0000-1219-01 42" FRAMING PLAN
PLAN NO. 0000-1221-01 STEEL CURB
PLAN NO. 0000-1221-02 STEEL CURB DETAILS
PLAN NO. 0000-1221-03 STEEL BEAM DETAILS
PLAN NO. 0000-1221-04 STEEL BEARING DETAILS
PLAN NO. 0000-1222-01 HANDRAIL DETAILS
PLAN NO. 0000-1222-02 HANDRAIL DETAILS
PLAN NO. 0000-1222-03 HANDRAIL DETAILS
PLAN NO. 0000-1222-05 CURB AND WALK
PLAN NO. 0000-1910-01 LIFTING
PLAN NO. 0000-1910-02 PILE SPLICE AND WELDING
PLAN NO. 0000-1910-03 EMBED PLATES
PLAN NO. 0000-1910-04 DECK AND CURB PLATES
PLAN NO. 0000-1910-05 BRACKET DETAILS
PLAN NO. 0000-1910-07 REINFORCING LIST
PLAN NO. 0000-1910-08 REBAR BENDING DIAGRAM



ELEVATION

PROPOSED SIDING BRIDGE SHOWN, PROPOSED M1 BRIDGE SIMILAR.

NOTE:

FINAL CONDITION SHOWN WITH FULL ROADWAY EXCAVATION FOR REFERENCE. BNSF FORCES WILL CONSTRUCT THE BRIDGES PER APPROXIMATE BNSF EXCAVATION LIMITS IN ORDER TO INSTALL THE PRECAST CONCRETE ABUTMENT/BENT CAPS AND SPANS. WSDOT CONTRACTOR (FUTURE WORK) WILL COMPLETE FINAL EXCAVATION FOR THE ROADWAY AND INSTALL CONCRETE ENCASEMENT ON BENTS.

BNSF WILL INSTALL CHANNEL CROSS BRACING AND P100 STRUTS ONCE WSDOT'S CONTRACTOR HAS EXCAVATED THE ROADWAY OPENING BUT BEFORE THE ENCASEMENT IS POURED.

ATTENTION !

INFORMATION SHOWN ON THESE PLANS CONCERNING TYPE AND LOCATION OF UNDERGROUND OR ABOVE GROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE.

THE SUPERVISOR OF STRUCTURES OR THE FOREMAN IN CHARGE WILL VERIFY THE LOCATION OF UNDERGROUND AND OVERHEAD UTILITIES BEFORE BEGINNING CONSTRUCTION AND PER THE BNSF ENGINEERING INSTRUCTIONS CHAPTER 26.

HDR

LAT: 45°42'43.00" N LONG: 121°27'38.70" W	DES: MCH
DOT # XXXXXXX	DRAWN: AEP
CITY OF BINGEN, KLICKITAT COUNTY, WA.	CHECK: MJK
STREET NAME: ELM ST. S.	DATE: 3/2024
STATE CONTRACT NO.: XX-XXXX	PLAN: XXX
FED. AID. PROJECT NO.: XXXXX-XXXXX(XXX)	LINE SEG: 0047

BNSF RAILWAY
BRIDGE ENGINEERING KANSAS CITY, KS

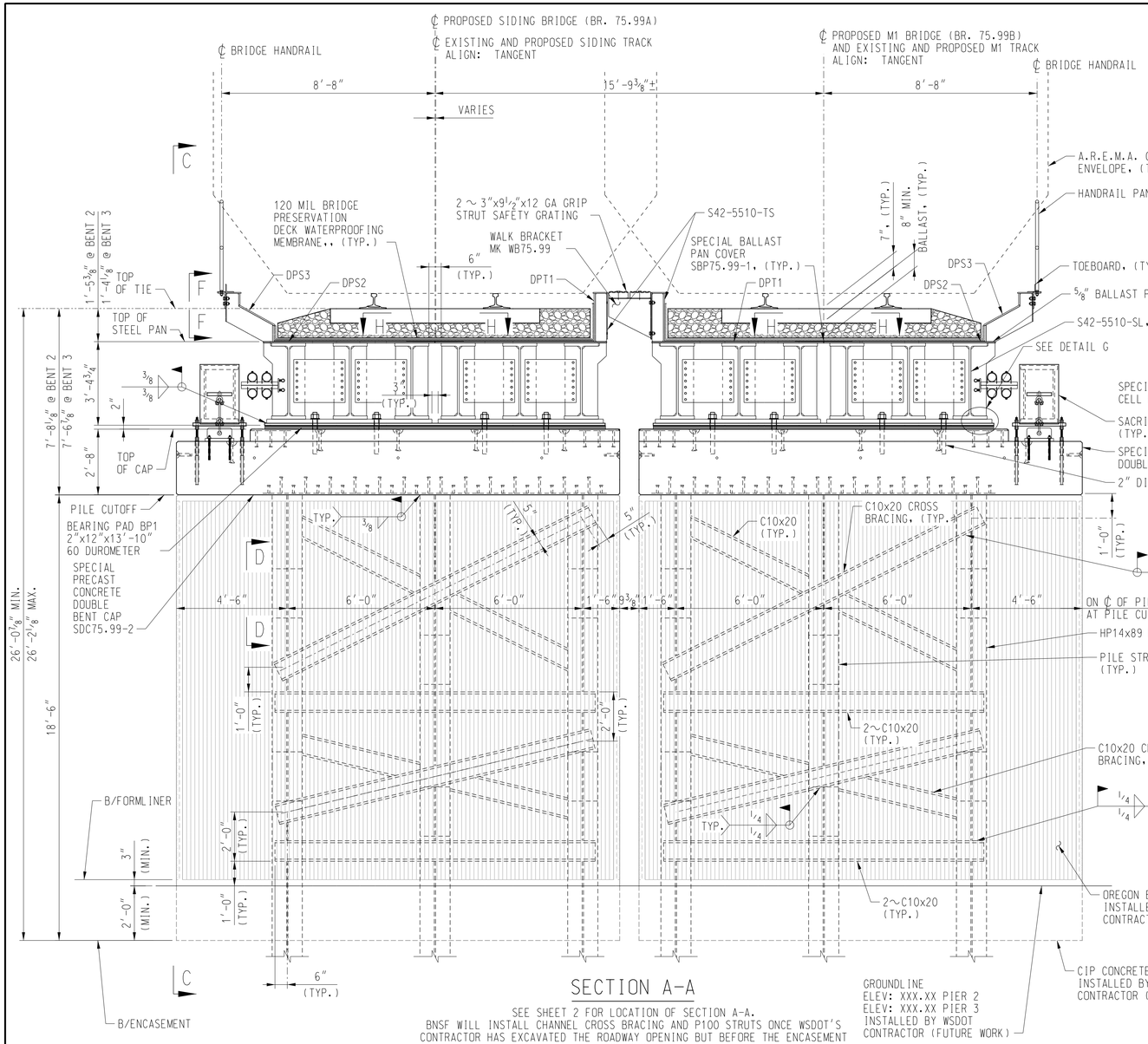
APPROVED:
ASST. DIRECTOR STRUCTURES DESIGN

100% SUBMITTAL

PORTLAND, OR TO SP&S JCT., WA
BRIDGE NUMBER 75.99A, B
OVER FUTURE ELM ST. S.
GENERAL LAYOUT

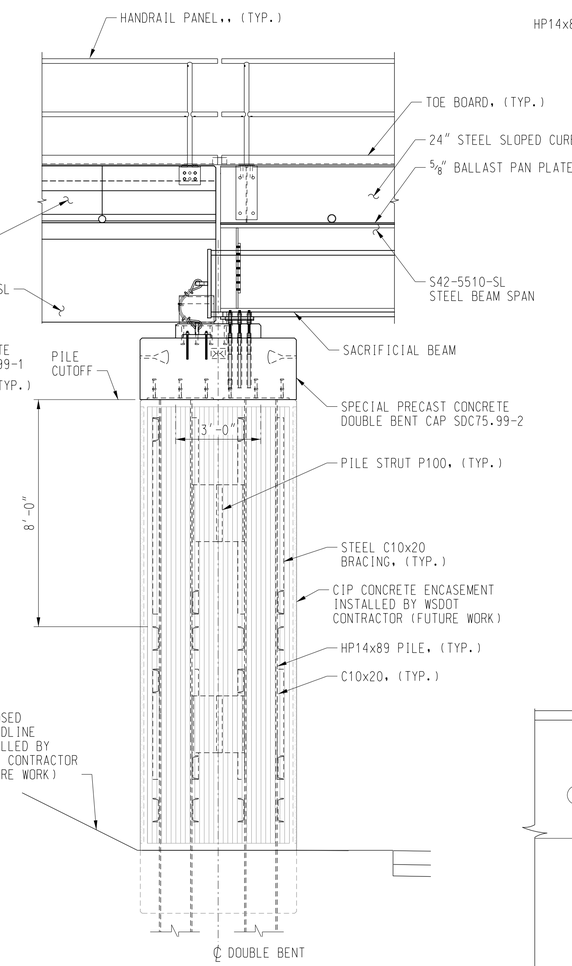
PLAN NO: 0047-0075.990-002 SHEET: 2 OF 29

File Location: SPLELS
Date Printed: 3/3/2024 Time Printed: 6:53:06 PM



SECTION A-A

SEE SHEET 2 FOR LOCATION OF SECTION A-A.
BNSF WILL INSTALL CHANNEL CROSS BRACING AND P100 STRUTS ONCE WSDOT'S CONTRACTOR HAS EXCAVATED THE ROADWAY OPENING BUT BEFORE THE ENCASEMENT IS POURED.

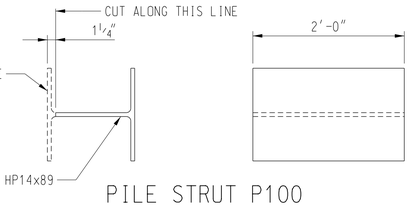


VIEW C-C

SEE THIS SHEET FOR LOCATION OF VIEW C-C.

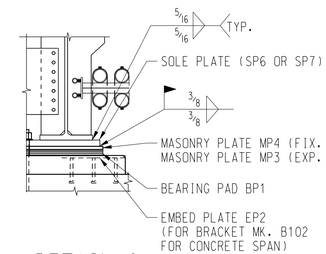
SUPERSTRUCTURE AND SUBSTRUCTURE DETAILS FOR PROPOSED MAIN 1 TRACK BRIDGE ARE SIMILAR TO SIDING TRACK BRIDGE UNLESS NOTED OTHERWISE.

BNSF WILL INSTALL CHANNEL CROSS BRACING AND P100 STRUTS ONCE WSDOT'S CONTRACTOR HAS EXCAVATED THE ROADWAY OPENING BUT BEFORE THE ENCASEMENT IS POURED.



PILE STRUT P100

WEIGHT = 113 LBS.

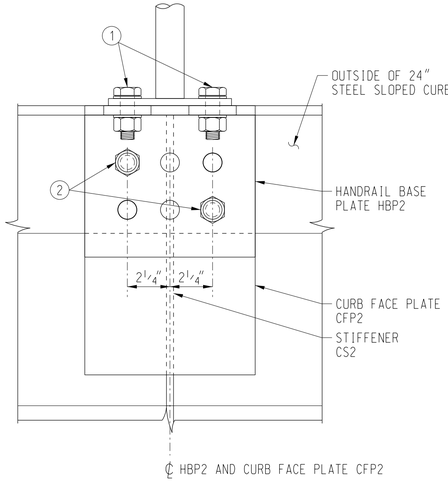


DETAIL G

SEE THIS SHEET FOR LOCATION OF DETAIL G.

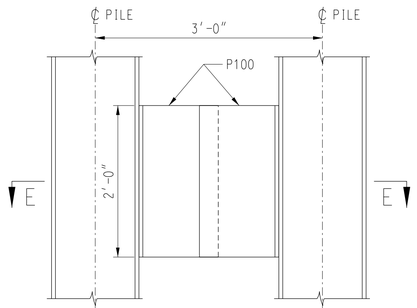
① FASTEN HANDRAIL PANEL TO BRACKET WITH:
2~3/4″ DIA. x 2 1/4″ BOLTS
4~WASHERS (13/16″ I.D. x 1 7/16″ O.D.)
2~LOCK NUTS, CENTER LOCKING, ZINC PLATED (TYP.)

② FASTEN WALK BRACKET TO CURB FACE WITH:
2~7/8″ DIA. x 2″ BOLTS
2~WASHERS (15/16″ I.D. x 1 3/4″ O.D.)
2~LOCK NUTS, CENTER LOCKING, ZINC PLATED (TYP.)



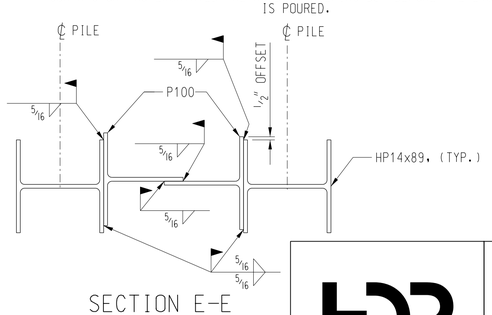
VIEW F-F

SEE THIS SHEET FOR LOCATION OF VIEW F-F.



VIEW D-D

SEE THIS SHEET FOR LOCATION OF VIEW D-D.
CROSS BRACING OR ENCASEMENT NOT SHOWN.



SECTION E-E

SEE THIS SHEET FOR LOCATION OF SECTION E-E.
CROSS BRACING OR ENCASEMENT NOT SHOWN.

LAT: 45°42′43.00″ N LONG: 121°27′38.70″ W	DES: MCH
DOT # XXXXXXX	DRAWN: AEP
CITY OF BINGEN, KLICKITAT COUNTY, WA.	CHECK: MJK
STREET NAME: ELM ST. S.	DATE: 3/2024
STATE CONTRACT NO.: XX-XXXX	PLAN: XXX
FED. AID. PROJECT NO.: XXXXX-XXXXX(XXX)	LINE SEG: 0047

BNSF RAILWAY
BRIDGE ENGINEERING KANSAS CITY, KS

APPROVED:
ASST. DIRECTOR STRUCTURES DESIGN

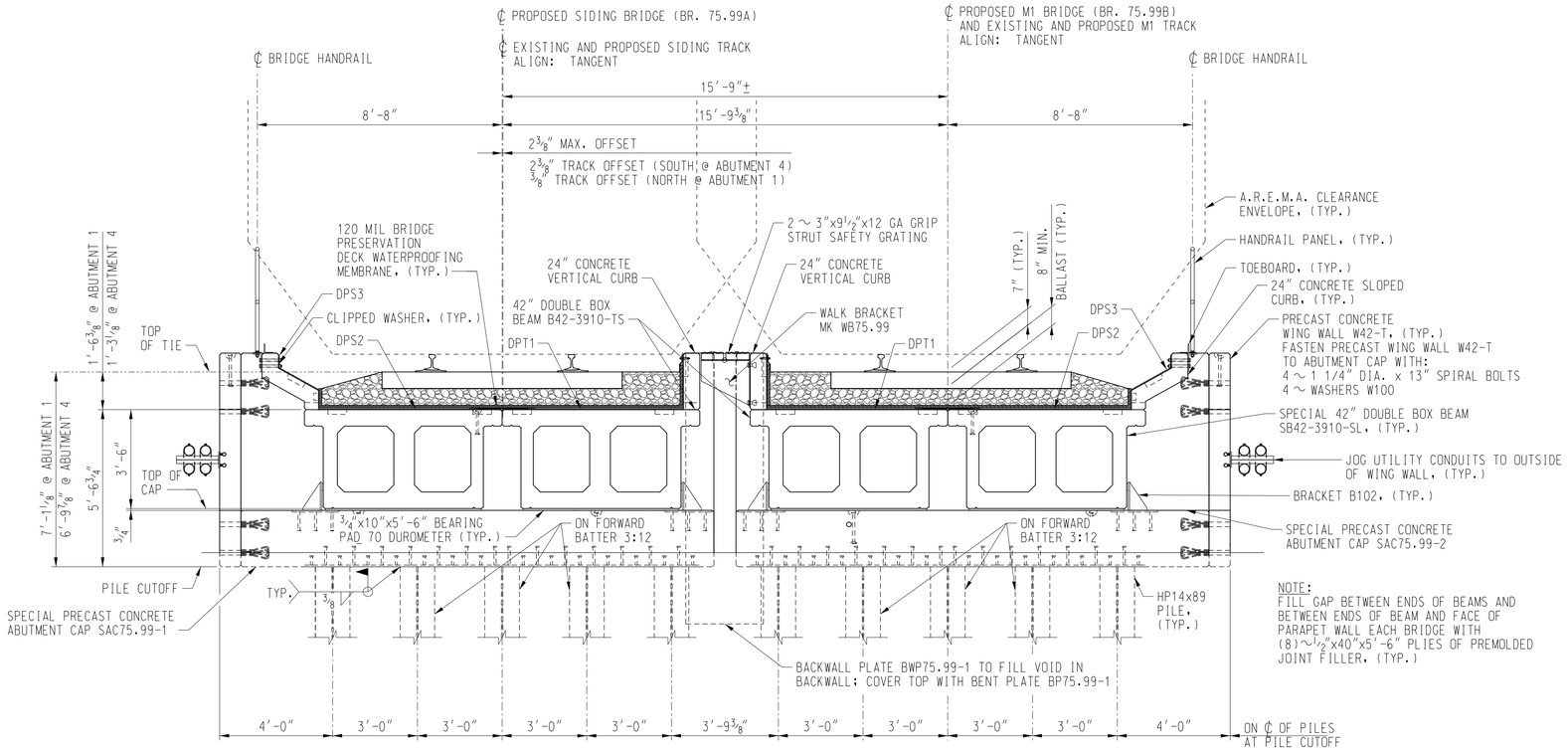
100% SUBMITTAL

PORTLAND, OR TO SP&S JCT., WA
BRIDGE NUMBER 75.99A, B
OVER FUTURE ELM ST. S.
TYPICAL SECTION - DOUBLE BENT

PLAN NO: 0047-0075.990-003 SHEET: 3 OF 29

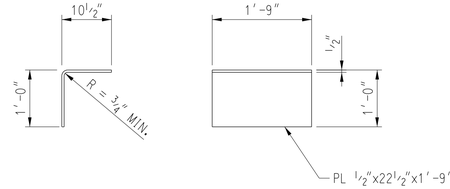
File Location: SPLES

Date Printed: 3/3/2024 Time Printed: 4:43:57 PM



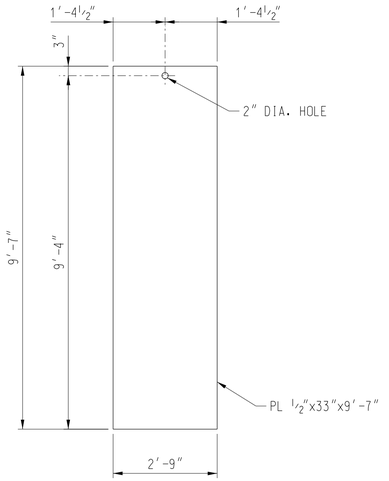
SECTION B-B

SEE SHEET 2 FOR LOCATION OF SECTION B-B.



BENT PLATE BP75.99-1

WEIGHT = 67 LBS.



BACKWALL PLATE BWP75.99-1

WEIGHT = 538 LBS.

HDR	LAT: 45°42′43.00″ N LONG: 121°27′38.70″ W	DES: MCH	BNSF RAILWAY — BRIDGE ENGINEERING KANSAS CITY, KS
	DOT # XXXXXXX	DRAWN: AEP	
	CITY OF BINGEN, KLICKITAT COUNTY, WA.	CHECK: MJK	
	STREET NAME: ELM ST. S.	DATE: 3/2024	
	STATE CONTRACT NO.: XX-XXXX	PLAN: XXX	APPROVED:
	FED. AID. PROJECT NO.: XXXXX-XXXXX(XXX)	LINE SEG: 0047	ASST. DIRECTOR STRUCTURES DESIGN

100% SUBMITTAL

PORTLAND, OR TO SP&S JCT., WA

BRIDGE NUMBER 75.99A, B

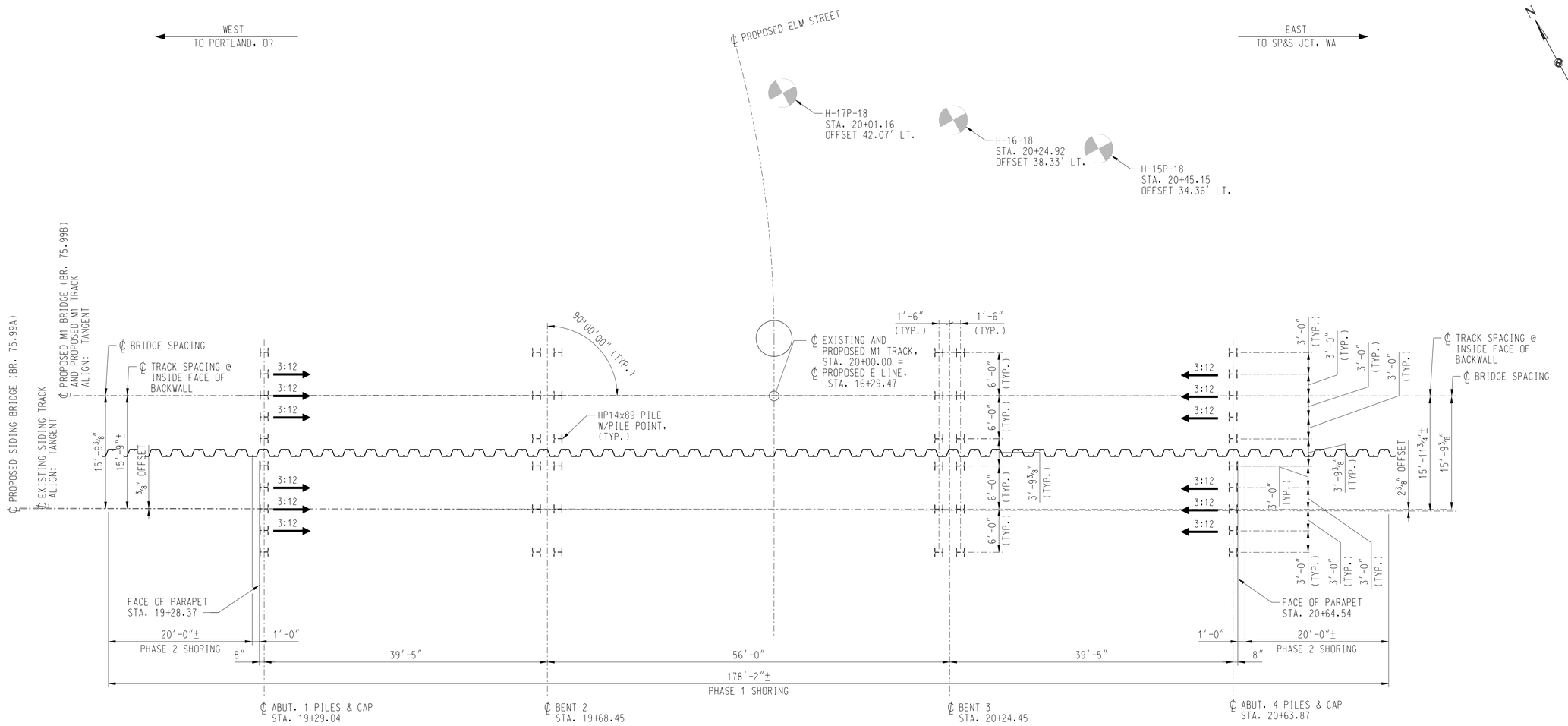
OVER FUTURE ELM ST. S.

TYPICAL SECTION - ABUTMENT AND MISCELLANEOUS DETAILS

PLAN NO: 0047-0075.990-004 | SHEET: 4 OF 29

File Location: SPLESS

Date Printed: 3/3/2024 Time Printed: 4:45:52 PM



FOUNDATION PLAN

REFERENCES:

BNSF STANDARD PLAN NO. 0000-1910-02 FOR PILE SPLICE AND WELDING.
GEOTECHNICAL ENGINEERING EVALUATION REPORT FOR BINGEN POINT ACCESS-RAILROAD BRIDGE BY WSDOT GEOTECHNICAL OFFICE DATED MAY 22, 2019.

PILE NOTES:

1. BRIDGE BEARING PILES SHALL BE DRIVEN TO REFUSAL, IF POSSIBLE, OR TO A MINIMUM ULTIMATE RESISTANCE AS FOLLOWS (FS = 2.0 PER AREMA 8-4.2.3(b):
   BENT PILE: 260 TON (MIN.)
   ABUTMENT PILE: 170 TON (MIN.)

   ESTIMATED PILE LENGTH BELOW CUTOFF:
   BENT PILE: 71'
   ABUTMENT PILE: 72'

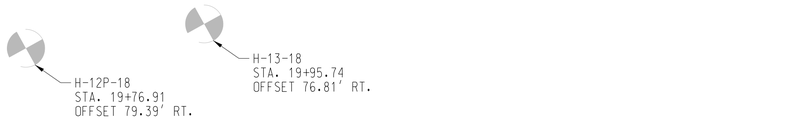
   MINIMUM PILE PENETRATION BELOW GROUNDLINE:
   BENT PILE: 25'
   ABUTMENT PILE: 25'

2. BRIDGE BEARING PILES ARE TO BE DRIVEN WITH REINFORCING TIPS (PILE POINTS). HARD DRIVING CONDITIONS ARE EXPECTED AND PRE-DRILLING MAY BE NECESSARY. REFER TO THE PROJECT GEOTECHNICAL REPORT FOR FURTHER INFORMATION.

3. PILE SPACING SHOWN ARE AT PILE CUTOFF ELEVATIONS.

4. SYMBOL X:12 DENOTES DIRECTION AND AMOUNT OF PILE BATTER.

5. WINGWALL PILES SHALL BE INSTALLED TO THEIR FULL 30'-0". WINGWALL PILES DO NOT NEED PILE POINTS AND DO NOT REQUIRE AN ULTIMATE BEARING RESISTANCE.



LAT: 45°42'43.00" N LONG: 121°27'38.70" W	DES: MCH
DOT # XXXXXXX	DRAWN: AEP
CITY OF BINGEN, KLICKITAT COUNTY, WA.	CHECK: MJK
STREET NAME: ELM ST. S.	DATE: 3/2024
STATE CONTRACT NO.: XX-XXXX	PLAN: XXX
FED. AID. PROJECT NO.: XXXXX-XXXXX(XXX)	LINE SEG: 0047

BNSF RAILWAY
BRIDGE ENGINEERING KANSAS CITY, KS

APPROVED:
ASST. DIRECTOR STRUCTURES DESIGN

100% SUBMITTAL

PORTLAND, OR TO SP&S JCT., WA
BRIDGE NUMBER 75.99A, B
OVER FUTURE ELM ST. S.
FOUNDATION PLAN

PLAN NO: 0047-0075.990-005 SHEET: 5 OF 29

File Location: SPILES

Date Printed: 3/3/2024 Time Printed: 4:48:40 PM

℄ BORING =
42.07' OFFSET LEFT OF ℄ TRACK
STA. 20+01.16

DEPTH/FT	ELEV/FT	Blows /6"	DESCRIPTION OF MATERIAL
0	95	9 8 6 (14)	SILTY SAND
5	90	6 6 5 (11)	SILTY, CLAYEY SAND WITH GRAVEL
		6 9 12 (21)	SILTY SAND WITH GRAVEL
10	85	7 7 9 (16)	POORLY GRADED SAND
		14 23 28 (51)	POORLY GRADED SAND WITH SILT AND GRAVEL
15	80	11 18 16 (34)	WELL GRADED SAND WITH GRAVEL
		9 14 22 (36)	POORLY GRADED GRAVEL WITH SILT AND SAND
20	75	12 17 21 (38)	POORLY GRADED GRAVEL WITH SILT AND SAND
25	70	13 17 15 (32)	POORLY GRADED GRAVEL WITH SILT AND SAND
30	65	11 16 18 (34)	POORLY GRADED GRAVEL WITH SILT AND SAND
		11 13 13 (26)	WELL GRADED GRAVEL WITH SAND
35	60	12 12 14 (26)	WELL GRADED GRAVEL WITH SAND
40	55	13 21 19 (40)	WELL GRADED GRAVEL WITH SAND
45	50	27 41 44 (85)	POORLY GRADED GRAVEL WITH SILT AND SAND
50	45	22 12 13 (25)	WELL GRADED GRAVEL WITH SAND
55	40	50/1" (REF)	BEDROCK AT 59 FEET STARTED CORED FROM 61 FEET TO 81 FEET.
60	35		BASALT, DARK GRAY, FINE GRAINED
65			

BORING H-17P-18

℄ BORING =
42.07' OFFSET LEFT OF ℄ TRACK
STA. 20+01.16 (CONTINUED)

DEPTH/FT	ELEV/FT	Blows /6"	DESCRIPTION OF MATERIAL
65	30	RQD 72% FP 1	BASALT, DARK GRAY, FINE GRAINED
70	25	RQD 12%	BASALT, DARK GRAY, FINE GRAINED
75	20	RQD 8%	BASALT, DARK GRAY, FINE GRAINED
80	15		END OF TEST HOLE BORING AT 81 FT BELOW GROUND ELEVATION.
85	10		
90	5		
95			

BORING H-17P-18 (CONTINUED)

℄ BORING =
79.39' OFFSET RIGHT OF ℄ TRACK
STA. 19+76.91

DEPTH/FT	ELEV/FT	Blows /6"	DESCRIPTION OF MATERIAL
0	80	3 4 4 (7)	SILTY SAND
5	75	10 18 16 (34)	WELL GRADED GRAVEL WITH SAND
		7 20 19 (39)	WELL GRADED GRAVEL WITH SAND
10	70	8 15 21 (36)	POORLY GRADED GRAVEL WITH SILT AND SAND
15	65	20 8 10 (18)	POORLY GRADED GRAVEL WITH SILT AND SAND
20	60	9 13 14 (27)	POORLY GRADED GRAVEL WITH SILT AND SAND
25	55	12 16 24 (40)	POORLY GRADED GRAVEL WITH SILT AND SAND
30	50	8 11 11 (22)	WELL GRADED GRAVEL WITH SILT AND SAND
35	45	16 26 24 (50)	WELL GRADED GRAVEL WITH SILT AND SAND
40	40	50/3" (REF)	NO RECOVERY
45	35	50/2" (REF)	WELL GRADED GRAVEL WITH SAND
50	30	50/0" (REF)	WELL GRADED GRAVEL
55	25	RQD 0%	BASALT, DARK GRAY, FINE GRAINED
60	20	RQD 0%	BASALT, DARK GRAY, FINE GRAINED

BORING H-12P-18

℄ BORING =
79.39' OFFSET RIGHT OF ℄ TRACK
STA. 19+76.91 (CONTINUED)

DEPTH/FT	ELEV/FT	Blows /6"	DESCRIPTION OF MATERIAL
65	15	RQD 0%	BASALT, DARK GRAY, FINE GRAINED
70	10	RQD 0%	BASALT, DARK GRAY, FINE GRAINED
75	5		END OF TEST HOLE BORING AT 75 FT BELOW GROUND ELEVATION.
80	0		
85	-5		
90	-10		
95			

BORING H-12P-18 (CONTINUED)

LAT: 45°42'43.00" N LONG: 121°27'38.70" W		DES: MCH	100% SUBMITTAL
DOT # XXXXXXX		DRAWN: AEP	PORTLAND, OR TO SP&S JCT., WA
CITY OF BINGEN, KLICKITAT COUNTY, WA.		CHECK: MJK	BRIDGE NUMBER 75.99A, B
STREET NAME: ELM ST. S.		DATE: 3/2024	OVER FUTURE ELM ST. S.
STATE CONTRACT NO.: XX-XXXX		PLAN: XXX	BORING LOGS
FED. AID. PROJECT NO.: XXXXX-XXXXX(XXX)		LINE SEG: 0047	PLAN NO: 0047-0075.990-006 / SHEET: 6 OF 29

BNSF RAILWAY
BRIDGE ENGINEERING KANSAS CITY, KS
APPROVED:
ASST. DIRECTOR STRUCTURES DESIGN

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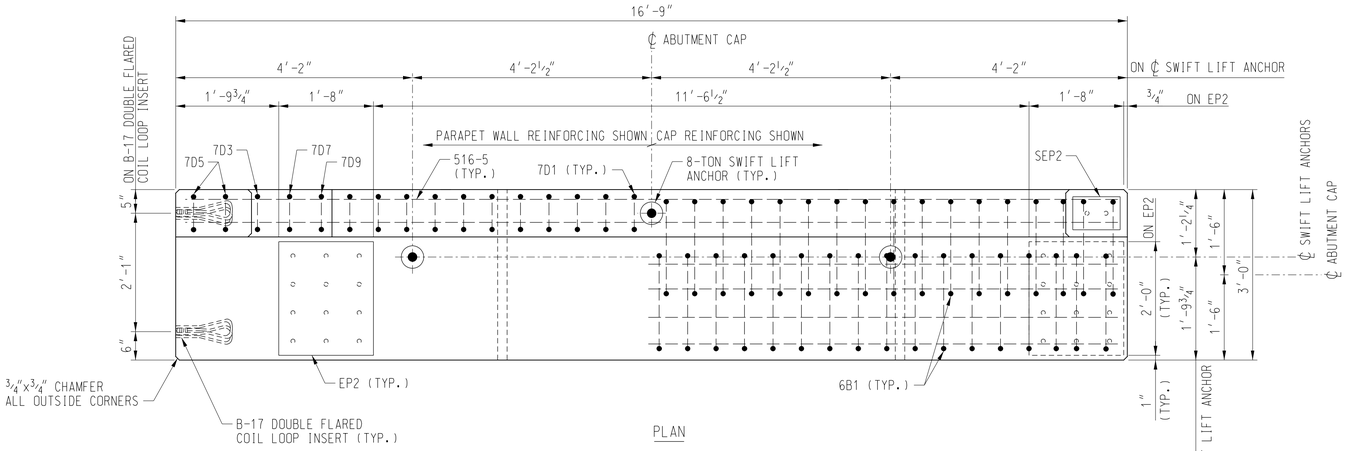
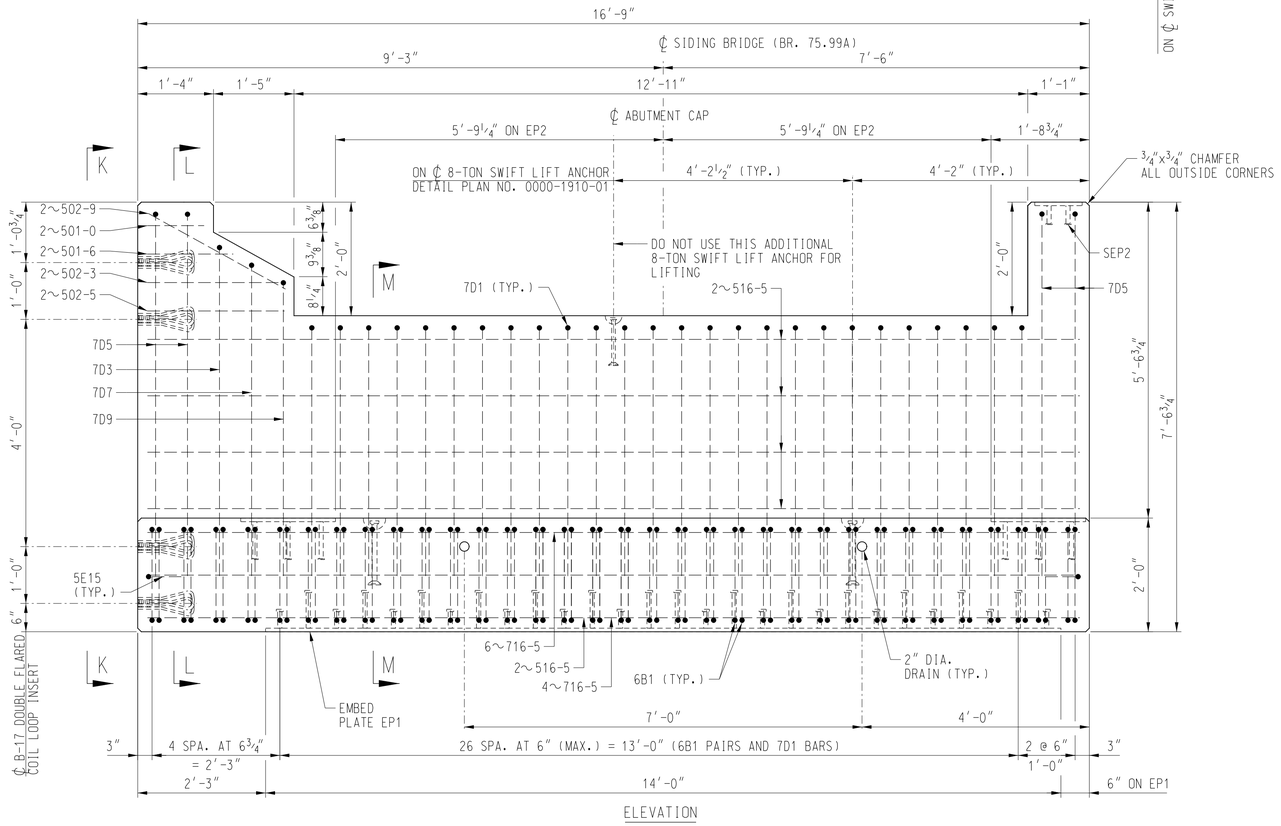


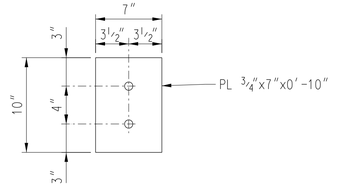
PLAN

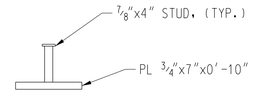


ELEVATION

SPECIAL PRECAST CONCRETE ABUTMENT CAP SAC75.99-1 AND SAC75.99-2

2~REQUIRED SAC75.99-1 (AS SHOWN)
2~REQUIRED SAC75.99-2 OPPOSITE HAND
ESTIMATED WEIGHT = 25,600 LBS. EACH
VOLUME OF CONCRETE 6.3 CU YDS. EACH





SPECIAL EMBED PLATE SEP2

WEIGHT = 18 LBS.

SPECIAL PRECAST CONCRETE NOTES:

GENERAL: ALL MATERIAL AND WORKMANSHIP SHALL BE AS PER THE CURRENT BNSF STANDARD SPECIFICATIONS.

COIL LOOP INSERTS ARE TO BE DOUBLE FLARED TYPE B-17 1¼″ DIA. x 12″ AS MANUFACTURED BY DAYTON-SUPERIOR AND HAVE A SAFE WORKING LOAD OF 13,500 LBS. WITH A 4 TO 1 SAFETY FACTOR. THE INSERTS ARE TO BE COMPLETELY RECESSED WITH 1¼″ DIA. x 13″ SPIRAL BOLTS ATTACHED FOR SHIPMENT.

CONCRETE: THE ULTIMATE COMPRESSIVE STRENGTH OF CONCRETE SHALL BE NOT LESS THAN 4500 p.s.i. IN 28 DAYS. CONCRETE MEMBERS SHALL NOT BE REMOVED FROM THE CASTING BED BEFORE THE CONCRETE REACHES A STRENGTH OF 2500 p.s.i.

ALL EXPOSED EDGES OF CONCRETE MEMBERS SHALL BE CHAMFERED ¾″ INCH.

REINFORCEMENT: MILD STEEL REINFORCEMENT SHALL MEET THE REQUIREMENTS OF THE CURRENT A.S.T.M. DESIGNATION: A615 OR A706, GRADE 60.

FABRICATION OF REINFORCEMENT SHALL BE IN ACCORDANCE WITH CHAPTER 7 OF THE CURRENT C.R.S.I. MANUAL OF STANDARD PRACTICE.

STEEL REINFORCEMENT MAY BE MOVED SLIGHTLY SO AS TO MISS EP1, EP2 OR OTHER EMBEDDED ITEMS.

MINIMUM CONCRETE COVER ON REINFORCEMENT SHALL BE TWO (2) INCHES.

REFERENCE:

SEE SHEET 8 FOR VIEW K-K, SECTION L-L AND SECTION M-M.

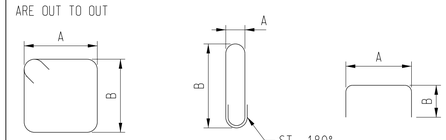
BNSF 2021 STANDARD PLAN REFERENCES:

0000-1910-01 LIFTING
0000-1910-03 EMBED PLATES

LIST OF REINFORCING BARS (ABUTMENT CAP SAC75.99-1 AND SAC75.99-2)

QTY.	MARK	SIZE	TYPE	A	B	LENGTH
66	6B1	#6	B	1′-8″	1′-8″	8′-0″
26	7D1	#7	D	0′-6″	4′-9″	11′-8″
1	7D3	#7	D	0′-6″	6′-2″	14′-6″
4	7D5	#7	D	0′-6″	6′-9″	15′-8″
1	7D7	#7	D	0′-6″	5′-10″	13′-10″
1	7D9	#7	D	0′-6″	5′-6″	13′-2″
2	5E15	#5	E	2′-6 1/2″	0′-9″	4′-1″
2	501-0	#5	STR.	-	-	1′-0″
2	501-6	#5	STR.	-	-	1′-6″
2	502-3	#5	STR.	-	-	2′-3″
2	502-5	#5	STR.	-	-	2′-5″
2	502-9	#5	STR.	-	-	2′-9″
10	516-5	#5	STR.	-	-	16′-5″
10	716-5	#7	STR.	-	-	16′-5″

BENDING DETAILS
ALL DIMENSIONS ARE OUT TO OUT



LIST OF MATERIAL (EACH CAP)

QTY.	UNIT	DESCRIPTION
1	EA.	EP1 (SEE DETAIL, PLAN NO. 0000-1910-03)
1	EA.	SEP2 (SEE DETAIL, THIS SHEET)
2	EA.	EP2 (SEE DETAIL, PLAN NO. 0000-1910-03)
4	EA.	COIL LOOP INSERT W/ BOLT, B17
3	EA.	8 TON SWIFT LIFT ANCHOR
4	EA.	NEOPRENE PAD (PLAN NO. 0000-1120-03)

100% SUBMITTAL

LAT: 45°42′43.00″ N LONG: 121°27′38.70″ W	DES: MCH
DOT # XXXXXXX	DRAWN: AEP
CITY OF BINGEN, KLICKITAT COUNTY, WA.	CHECK: MJK
STREET NAME: ELM ST. S.	DATE: 3/2024
STATE CONTRACT NO.: XX-XXXX	PLAN: XXX
FED. AID. PROJECT NO.: XXXXX-XXXXX(XXX)	LINE SEG: 0047

BNSF RAILWAY
BRIDGE ENGINEERING KANSAS CITY, KS

APPROVED:
ASST. DIRECTOR STRUCTURES DESIGN

PORTLAND, OR TO SP&S JCT., WA
BRIDGE NUMBER 75.99A, B
OVER FUTURE ELM ST. S.
SPECIAL PRECAST CONCRETE ABUTMENT CAP (SHEET 1 OF 2)

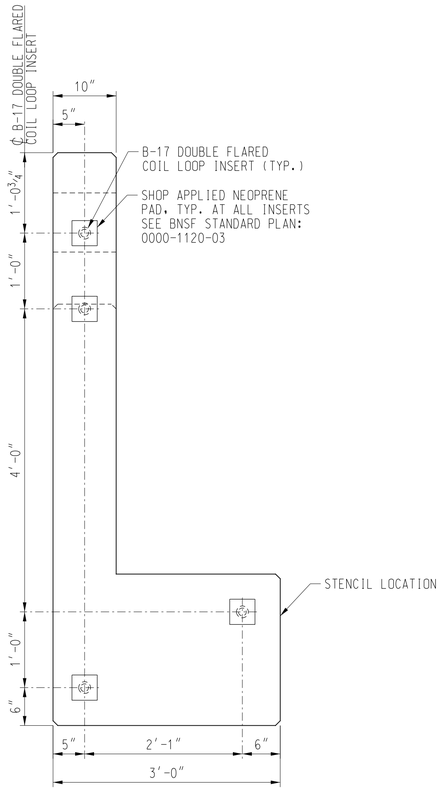
PLAN NO: 0047-0075.990-007 SHEET: 7 OF 29

File Location: SPLANS

Date Printed: 3/4/2024 Time Printed: 3:48:15 PM

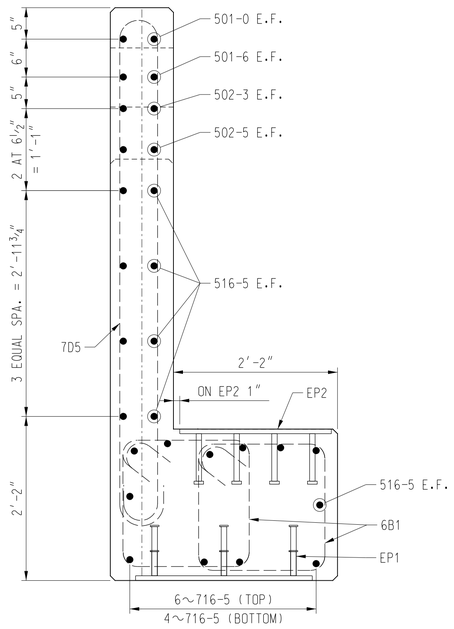
REFERENCE:

SEE SHEET 7 FOR LOCATION OF VIEW K-K, SECTION L-L, AND SECTION M-M.



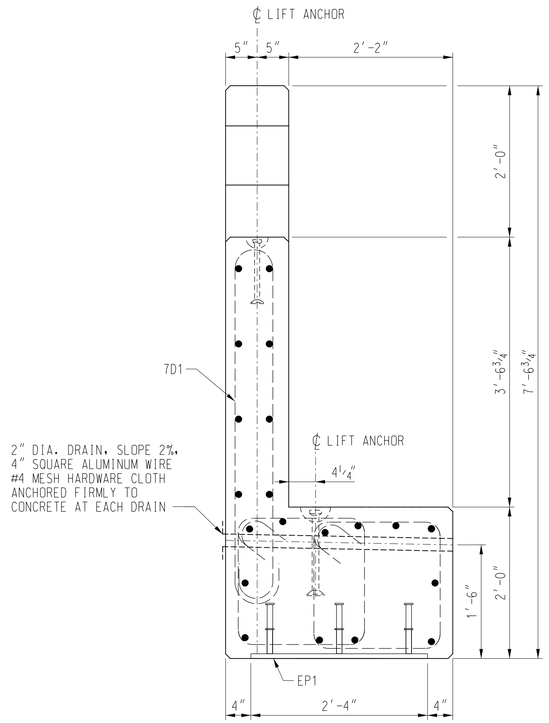
VIEW K-K

SEE SHEET 7 FOR VIEW K-K.



SECTION L-L

SEE SHEET 7 FOR SECTION L-L.



SECTION M-M

SEE SHEET 7 FOR SECTION M-M.

100% SUBMITTAL

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DOT # XXXXXXX	DRAWN: AEP
CITY OF BINGEN, KLICKITAT COUNTY, WA.	CHECK: MJK
STREET NAME: ELM ST. S.	DATE: 3/2024
STATE CONTRACT NO.: XX-XXXX	PLAN: XXX
FED. AID. PROJECT NO.: XXXXX-XXXXX(XXX)	LINE SEG: 0047

BNSF RAILWAY
BRIDGE ENGINEERING KANSAS CITY, KS

APPROVED:
ASST. DIRECTOR STRUCTURES DESIGN

PORTLAND, OR TO SP&S JCT., WA
BRIDGE NUMBER 75.99A, B
OVER FUTURE ELM ST. S.
SPECIAL PRECAST CONCRETE ABUTMENT CAP (SHEET 2 OF 2)

PLAN NO: 0047-0075.990-008 SHEET: 8 OF 29

File Location: SPLES

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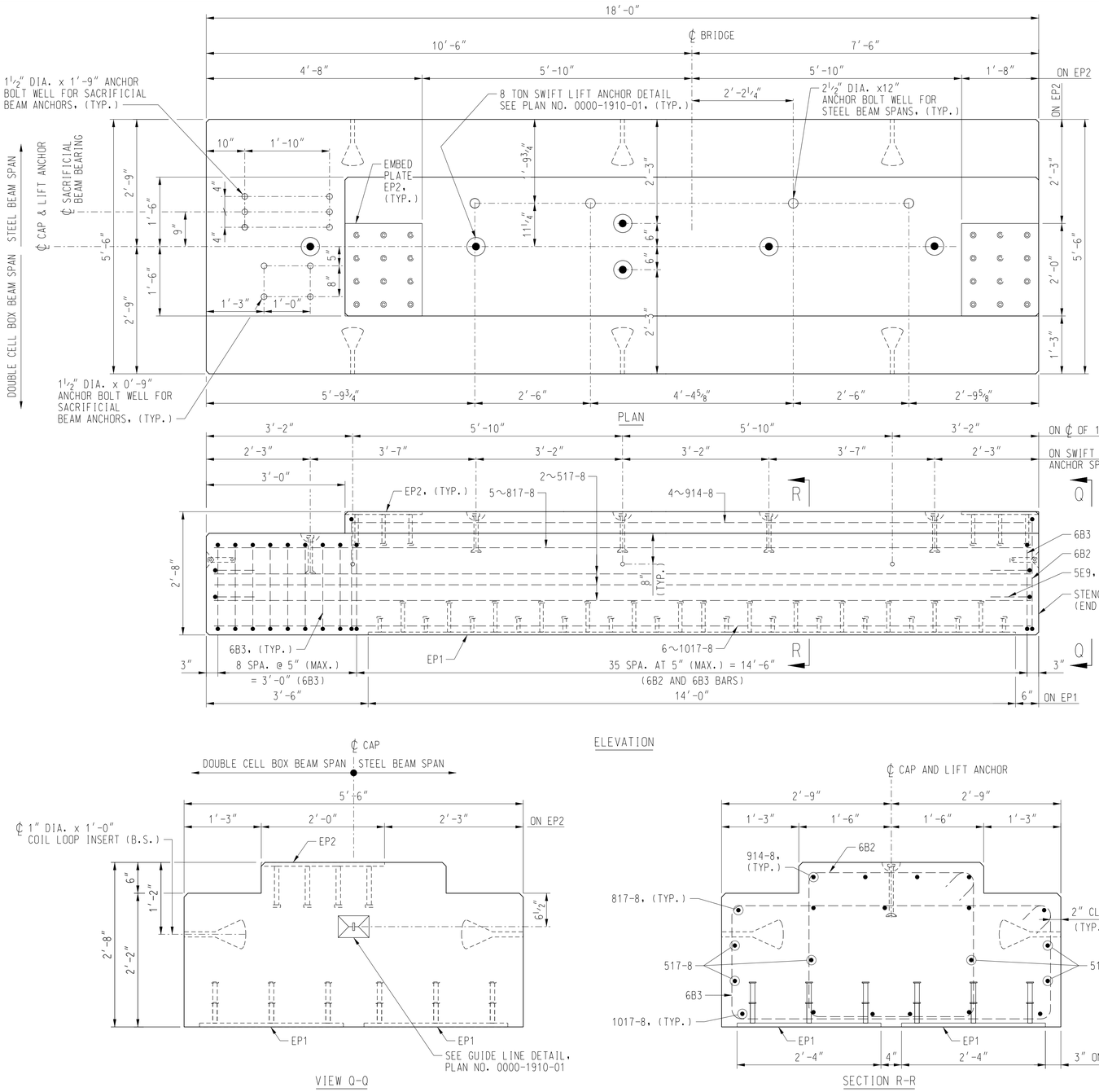


REFERENCE:

SEE SHEET 7 FOR SPECIAL PRECAST CONCRETE NOTES.

BNSF 2021 STANDARD PLAN REFERENCES:

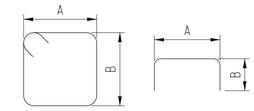
0000-1110-02 DOUBLE BENT CAP

LIST OF REINFORCING BARS (EACH CAP)

QTY.	MARK	SIZE	TYPE	A	B	LENGTH
36	6B2	6	B	2′-8″	2′-4″	11′-4″
44	6B3	6	B	5′-2″	1′-10″	15′-4″
4	5E9	5	E	5′-0 3/4″	0′-10″	6′-9″
4	914-8	9	STR.	-	-	14′-8″
6	517-8	5	STR.	-	-	17′-8″
5	817-8	8	STR.	-	-	17′-8″
6	1017-8	10	STR.	-	-	17′-8″

BENDING DETAILS

ALL DIMENSIONS ARE OUT TO OUT



LIST OF MATERIAL (EACH CAP)

QTY.	UNIT	DESCRIPTION
2	EA.	EP1 (SEE DETAIL, PLAN NO. 0000-1910-03)
2	EA.	EP2 (SEE DETAIL, PLAN NO. 0000-1910-03)
6	EA.	8-TON SWIFT LIFT ANCHOR
2	EA.	8″ 4 TON 5-BAR ANCHOR
4	EA.	1″ DIA. X 1′-0″ COIL LOOP INSERT

SPECIAL PRECAST CONCRETE DOUBLE BENT CAP SDC75.99-1

2 ~ REQUIRED SDC75.99-1 (AS SHOWN)
2 ~ REQUIRED SDC75.99-2 (OPPOSITE HAND)
ESTIMATED WEIGHT = 36,735 LBS. EACH
VOLUME OF CONCRETE = 8.8 CU YDS. EACH

HDR

LAT: 45°42′43.00″ N LONG: 121°27′38.70″ W	DES: MCH
DOT # XXXXXX	DRAWN: AEP
CITY OF BINGEN, KLICKITAT COUNTY, WA.	CHECK: MJK
STREET NAME: ELM ST. S.	DATE: 3/2024
STATE CONTRACT NO.: XX-XXXX	PLAN: XXX
FED. AID. PROJECT NO.: XXXXX-XXXXX(XXX)	LINE SEG: 0047

BNSF RAILWAY
BRIDGE ENGINEERING KANSAS CITY, KS

APPROVED:

ASST. DIRECTOR STRUCTURES DESIGN

100% SUBMITTAL

PORTLAND, OR TO SP&S JCT., WA
BRIDGE NUMBER 75.99A, B
OVER FUTURE ELM ST. S.
SPECIAL PRECAST CONCRETE DOUBLE BENT CAP

PLAN NO: 0047-0075.990-009 SHEET: 9 OF 29

File Location: SPLELS

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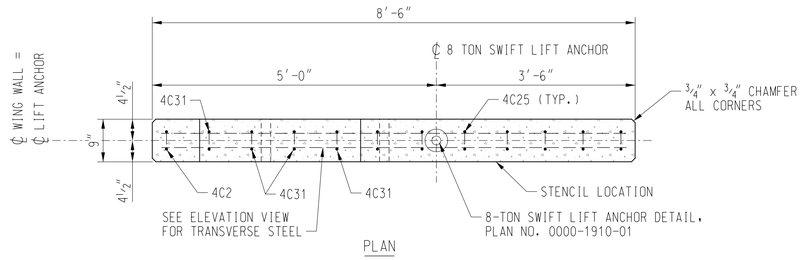
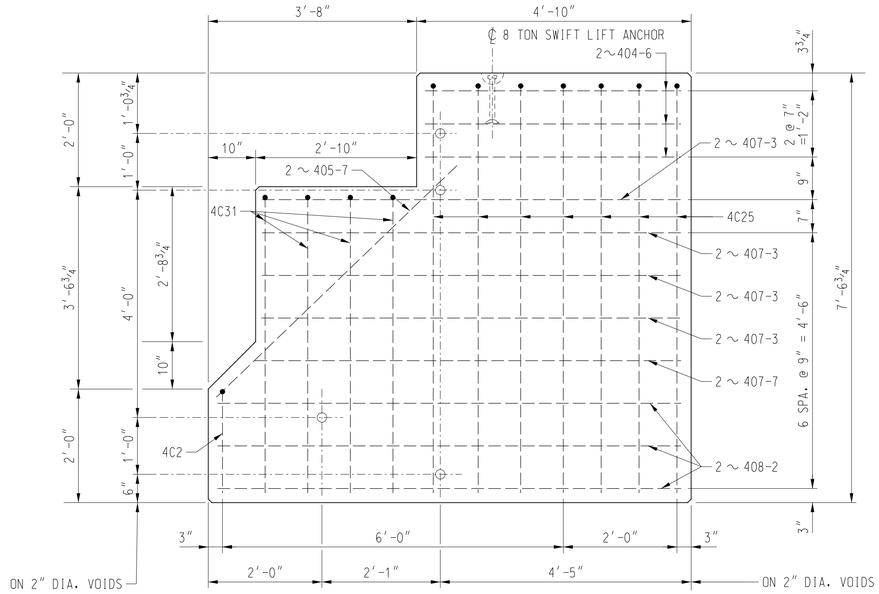


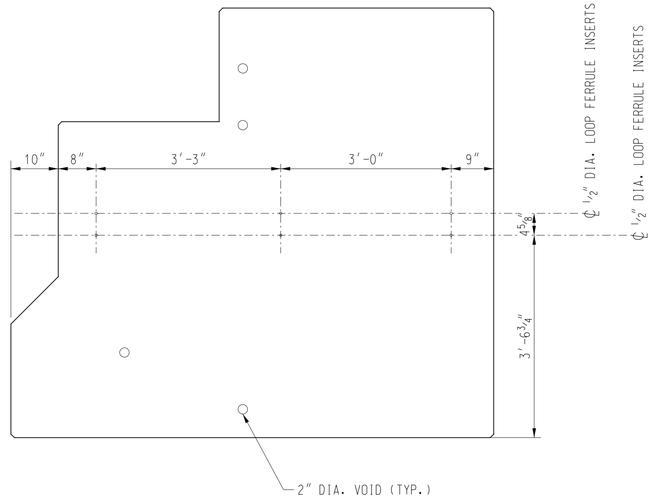
PLAN



ELEVATION

SPECIAL PRECAST CONCRETE WING WALL SWW75.99-1

SWW75.99-1 SHOWN, SWW75.99-2 OPPOSITE HAND
2 ∼ SWW75.99-1 REQUIRED
2 ∼ SWW75.99-2 REQUIRED
ESTIMATED WEIGHT = 6,350 LBS.
ESTIMATED VOLUME = 1.6 CU. YD. EA.
SEE WING WALL ELEVATION FOR LOCATION OF INSERTS FOR UTILITY BRACKETS.



WING WALL ELEVATION - INSERTS FOR UTILITY BRACKETS

SWW75.99-1 SHOWN, SWW75.99-2 OPPOSITE HAND
PLACE INSERTS ON OUTSIDE/EXPOSED FACE OF WING WALL

ESTIMATED LIFTING WEIGHT

COMPONENT NAME	WEIGHT (LBS.)
SWW75.99-1	6,350
SWW75.99-2	6,350

LIST OF MATERIAL

SWW75.99-1	SWW75.99-2	UNIT	DESCRIPTION
1	1	EA.	8-TON SWIFT LIFT ANCHOR
6	6	EA.	LOOP FERRULE INSERT TYPE F42, ½″ DIA. x 2 ¾″ GALV. W/ BOLT AND WASHER

PRECAST CONCRETE WING WALL NOTES

PRECAST CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,500 psi AT 28 DAYS AS PER THE CURRENT BNSF STANDARD SPECIFICATION FOR PRECAST CONCRETE PRODUCTS.

ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED ¾″ UNLESS OTHERWISE SHOWN OR NOTED.

CONCRETE SHALL BE VIBRATED INTERNALLY DURING PLACEMENT TO PROVIDE THOROUGH CONSOLIDATION AND COMPACTION. CARE SHALL BE TAKEN TO AVOID DISPLACEMENT OF EMBEDDED ITEMS.

ALL REINFORCING STEEL SHALL HAVE A MINIMUM 2″ CONCRETE COVER UNLESS OTHERWISE SHOWN OR NOTED.

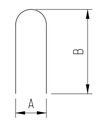
ALL BAR BENDING AND STANDARD HOOK DIMENSIONS SHALL BE IN ACCORDANCE WITH "MANUAL OF STANDARD PRACTICE" AS PUBLISHED BY THE CONCRETE REINFORCING STEEL INSTITUTE UNLESS OTHERWISE SHOWN OR NOTED.

DESIGN LOADING - COOPERS E-80 WITH DIESEL IMPACT PER THE CURRENT AREMA MANUAL.

LIST OF REINFORCING BARS (EACH WING WALL)

QTY.	MARK	SIZE	TYPE	A	B	LENGTH
6	404-6	#4	STR	-	-	4′-6″
2	405-7	#4	STR	-	-	5′-7″
8	407-3	#4	STR	-	-	7′-3″
2	407-7	#4	STR	-	-	7′-7″
6	408-2	#4	STR	-	-	8′-2″
1	4C2	#4	C	5″	1′-9″	3′-11″
7	4C25	#4	C	5″	7′-2 ¾″	14′-10″
4	4C31	#4	C	5″	5′-2 ¾″	10′-10″

BENDING DETAILS
ALL DIMENSIONS ARE OUT TO OUT



BAR C

UTILITY BRACKET INSERT NOTES:

1. FOR UTILITY BRACKET CONNECTIONS, LOOP FERRULE INSERTS ARE TO BE TYPE F42, ½″ DIA. x 2 ¾″ GALV., AS MANUFACTURED BY DAYTON-SUPERIOR AND HAVE A SAFE WORKING LOAD OF 2,000 LBS. WITH A 3:1 SAFETY FACTOR. THE INSERTS ARE TO BE COMPLETELY RECESSED WITH ½″ DIA. GALV. BOLTS AND WASHERS ATTACHED FOR SHIPMENT.
2. REFER TO SHEET 18 FOR UTILITY BRACKET DETAILS AND ATTACHMENT.

100% SUBMITTAL

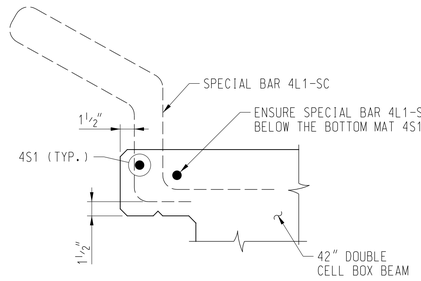
LAT: 45°42′43.00″ N LONG: 121°27′38.70″ W	DES: PJG
DOT # XXXXXXX	DRAWN: GJT
CITY OF BINGEN, KLICKITAT COUNTY, WA.	CHECK: MJK
STREET NAME: ELM ST. S.	DATE: 3/2024
STATE CONTRACT NO.: XX-XXXX	PLAN: XXX
FED. AID. PROJECT NO.: XXXXX-XXXXX(XXX)	LINE SEG: 0047

BNSF RAILWAY
BRIDGE ENGINEERING KANSAS CITY, KS
APPROVED:
ASST. DIRECTOR STRUCTURES DESIGN

PORTLAND, OR TO SP&S JCT., WA
BRIDGE NUMBER 75.99A, B
OVER FUTURE ELM ST. S.
SPECIAL WINGWALL DETAILS

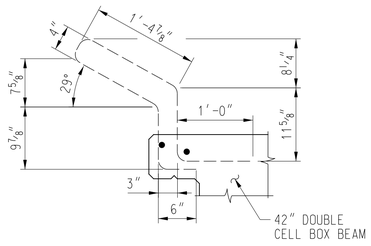
PLAN NO: 0047-0075.990-010 SHEET: 10 OF 29

File Location: SPLES
Date Printed: 3/3/2024 Time Printed: 6:01:11 PM



CURB BAR PLACEMENT DETAIL

FOR SLOPED CURBS ON 42" DOUBLE CELL BOX BEAMS



SPECIAL BAR 4L1-SC

#4 BAR, BENT
ASTM A1035 GRADE 100

CURB SPACING TABLE			
BEAM LENGTH	"C"	"D"	NO. CURB SEGMENTS
39'-10"	5'-0"	5 EQ. SEGMENTS	7

NOTE:
IN ORDER TO OFFSET CURB JOINT BY 1'-0" MINIMUM FROM HANDRAIL POST LOCATIONS, SLIGHT ADJUSTMENTS HAVE BEEN MADE FROM BNSF STANDARD PLAN NO. 0000-1214-02 FOR CURB LENGTHS AND/OR NO CURB SEGMENTS.

HANDRAIL POST SPACING TABLE		
BEAM LENGTH	"A"	"B"
39'-10"	9'-0"	2 @ 10'-0"

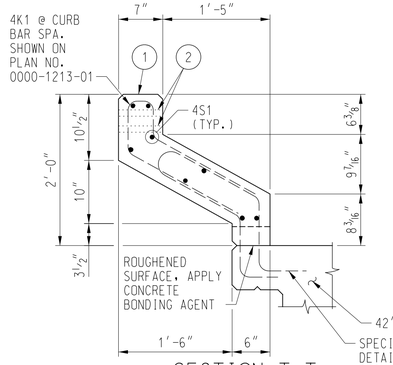
NOTE:
THESE DIMENSIONS MATCH BNSF STANDARD PLAN NO. 0000-1000-06 FOR HANDRAIL POST SPACING FOR EACH BEAM LENGTH.

BNSF 2021 STANDARD PLAN REFERENCES:

PLAN NO. 0000-1213-01 42" DOUBLE CELL BOX BEAM
PLAN NO. 0000-1213-02 42" DOUBLE CELL BOX BEAM, PRESTRESSING STRAND PATTERN
PLAN NO. 0000-1214-02 24" CONCRETE CURB
PLAN NO. 0000-1000-06 HANDRAIL COMPONENTS

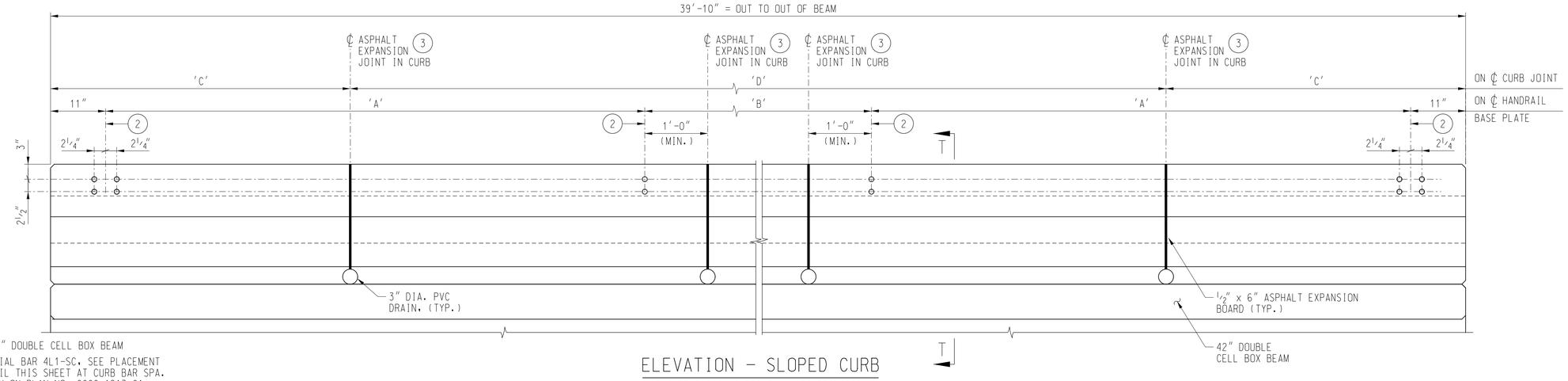
SLOPED CURB NOTES:

1. 3"x6" I.D. PLATE IS TO BE EMBEDDED FLUSH IN TOP OF CURB AND CENTERED 6" FROM END OF CURB. PLATE SHALL CONTAIN THE FOLLOWING INFORMATION IN ½" LETTERING: ITEM NAME, LENGTH, DATE MANUFACTURED AND NAME OF MANUFACTURER.
2. ℄ 1" DIAMETER HOLES FOR HANDRAIL POST.
3. PREFORMED ½" ASPHALT EXPANSION BOARD SHALL BE PLACED TO DIVIDE CURB INTO EQUAL SEGMENTS. SEAL TOP AND SIDES OF CURB AT ASPHALT EXPANSION BOARD WITH APPROVED JOINT SEALANT.



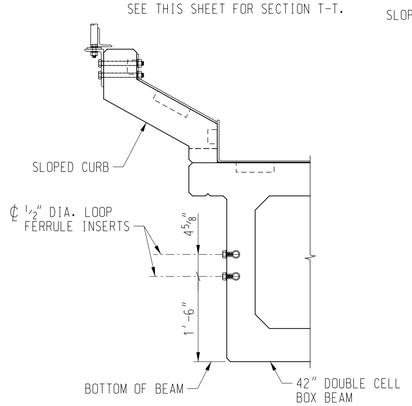
SECTION T-T

SEE THIS SHEET FOR SECTION T-T.



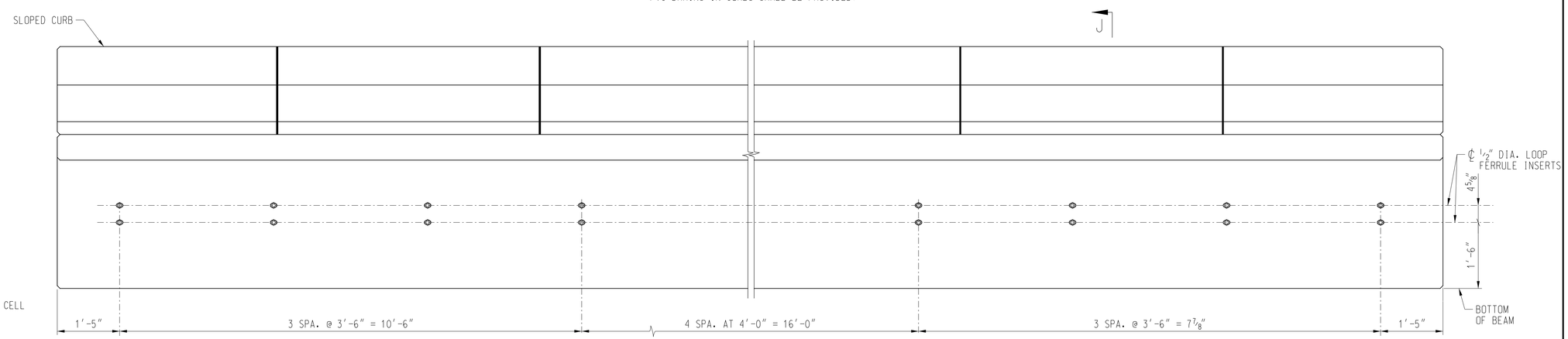
ELEVATION - SLOPED CURB

PVC DRAINS IN CURBS SHALL BE PROVIDED.



SECTION J-J

SEE THIS SHEET FOR SECTION J-J.



BEAM ELEVATION - INSERTS FOR UTILITY BRACKETS

BEAM SB42-3910-SL ONLY (COUNT OF 4)

UTILITY BRACKET INSERT NOTES:

1. FOR UTILITY BRACKET CONNECTIONS, LOOP FERRULE INSERTS ARE TO BE TYPE F42, ½" DIA. x 2¾" GALV., AS MANUFACTURED BY DAYTON-SUPERIOR AND HAVE A SAFE WORKING LOAD OF 2,000 LBS. WITH A 3:1 SAFETY FACTOR THE INSERTS ARE TO BE COMPLETELY RECESSED WITH ½" DIA. GALV. BOLTS AND WASHERS ATTACHED FOR SHIPMENT.
2. REFER TO SHEET 18 FOR UTILITY BRACKET DETAILS AND ATTACHEMENT.

HDR

LAT: 45°42'43.00" N LONG: 121°27'38.70" W		DES: MCH	
DOT # XXXXXXX		DRAWN: AEP	
CITY OF BINGEN, KLICKITAT COUNTY, WA.		CHECK: MJK	
STREET NAME: ELM ST. S.		DATE: 3/2024	
STATE CONTRACT NO.: XX-XXXX		PLAN: XXX	
FED. AID. PROJECT NO.: XXXXX-XXXXX(XXX)		LINE SEG: 0047	

BNSF RAILWAY
BRIDGE ENGINEERING KANSAS CITY, KS

APPROVED: _____
ASST. DIRECTOR STRUCTURES DESIGN

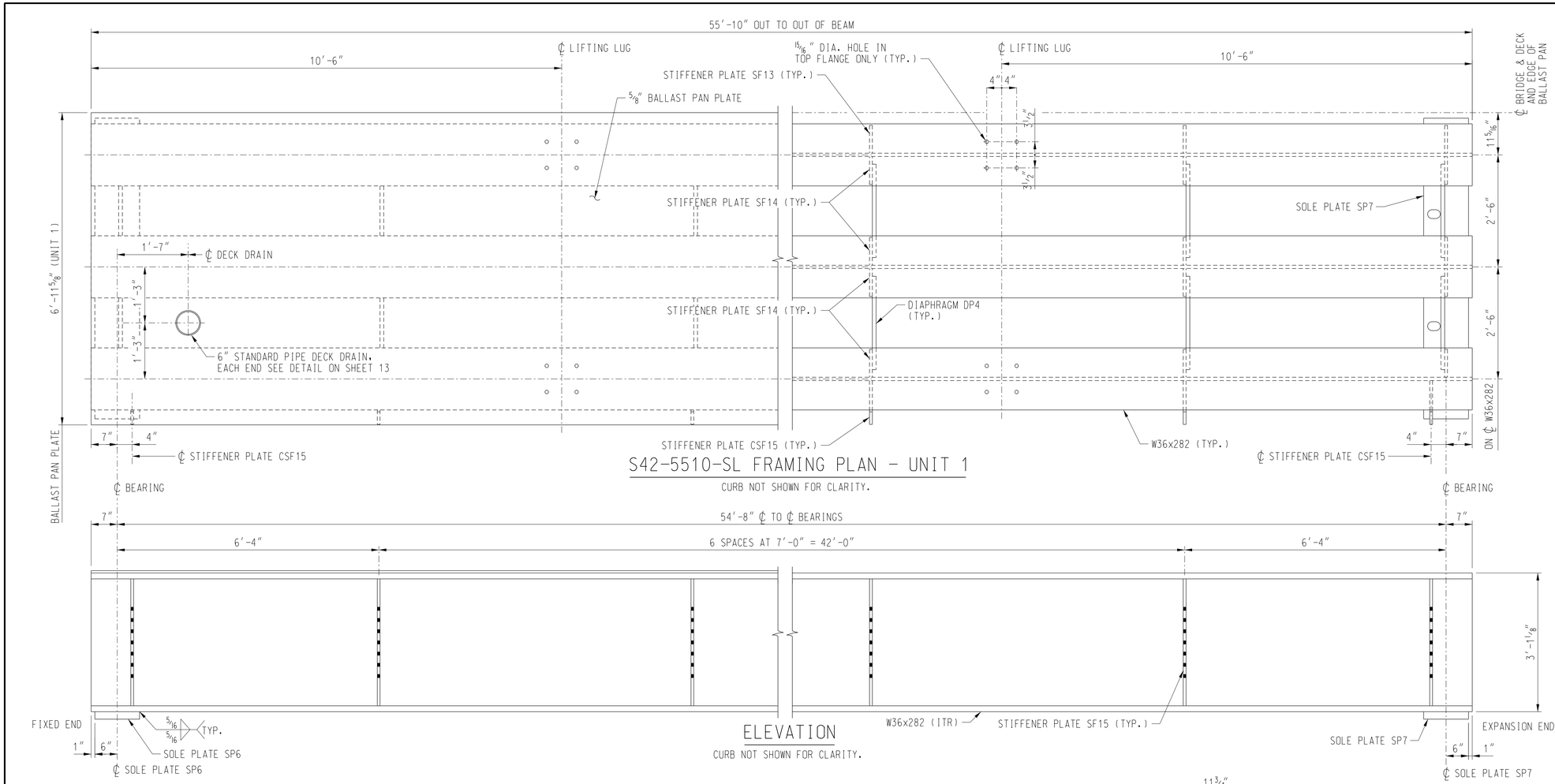
100% SUBMITTAL

PORTLAND, OR TO SP&S JCT., WA
BRIDGE NUMBER 75.99A, B
OVER FUTURE ELM ST. S.
42" DOUBLE CELL BOX BEAM DETAILS

PLAN NO: 0047-0075.990-011 | SHEET: 11 OF 29

File Location: SPLICS

Date Printed: 3/3/2024 Time Printed: 6:07:53 PM

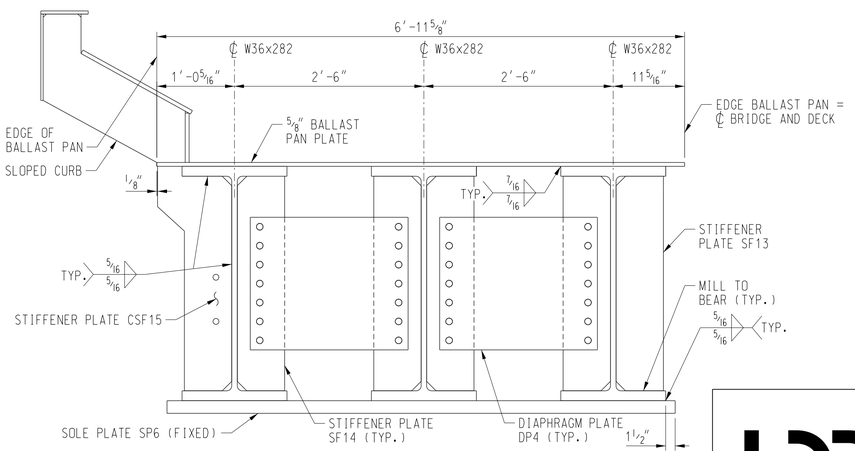


S42-5510-SL FRAMING PLAN – UNIT 1

CURB NOT SHOWN FOR CLARITY.

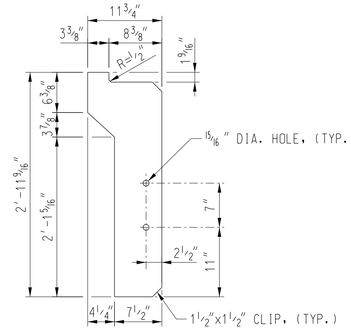
ELEVATION

CURB NOT SHOWN FOR CLARITY.



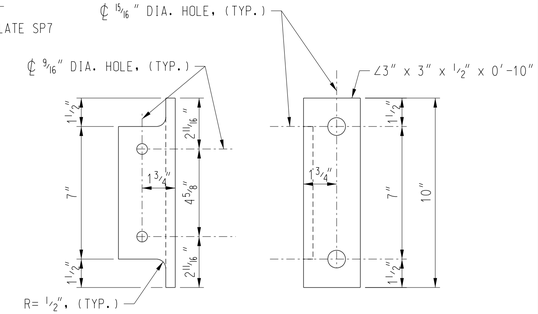
CROSS SECTION – UNIT 1

2 ~ REQ'D UNIT 1



STIFFENER CSF15

PLATE 3/4"x11 3/4"x2'-11 9/16"



BRACKET B75.99-1

ANGLE 3" x 3" x 1/2" x 0'-10"

EST. LIFTING WEIGHT

BEAM NAME	WEIGHT/(PLF)
UNIT 1 (w/SLOPED CURB)	1,400

DESIGN DEAD LOADS

LOAD CASE	42" BEAM LOADS/(LBS./FT. OF TRACK)
TRACK, FASTENERS, ETC.	200
BALLAST	3,850
CURB, WALK & HANDRAIL	215
BEAMS	2,585

SPAN IS DESIGNED FOR COOPER'S E80 LIVE LOAD AND DIESEL IMPACT PER CHAPTER 15 OF THE A.R.E.M.A. MANUAL FOR RAILWAY ENGINEERING.

NOTES:

1. FOR STEEL NOTES SEE STRUCTURAL AND MISCELLANEOUS STEEL NOTES ON SHEET 1.
2. FOR STIFFENERS AND DIAPHRAGMS DETAILS SEE BNSF STANDARD PLAN NO. 0000-1221-03.
3. FOR 24" STEEL SLOPE CURB DETAILS SEE SHEET 16.
4. FOR MASONRY PLATES, SOLE PLATES AND BEARING PAD DETAILS SEE BNSF STANDARD PLAN NO. 0000-1221-04.
5. FOR LIFTING LUG DETAILS SEE BNSF STANDARD PLAN NO. 0000-1910-01.
6. SHOP ASSEMBLE BEAM SPANS PRIOR TO SHIPPING.

LAT: 45°42'43.00" N LONG: 121°27'38.70" W	DES: MCH
DOT # XXXXXXX	DRAWN: AEP
CITY OF BINGEN, KLICKITAT COUNTY, WA.	CHECK: MJK
STREET NAME: ELM ST. S.	DATE: 3/2024
STATE CONTRACT NO.: XX-XXXX	PLAN: XXX
FED. AID. PROJECT NO.: XXXXX-XXXXX(XXX)	LINE SEG: 0047

BNSF RAILWAY
BRIDGE ENGINEERING KANSAS CITY, KS

APPROVED:

ASST. DIRECTOR STRUCTURES DESIGN

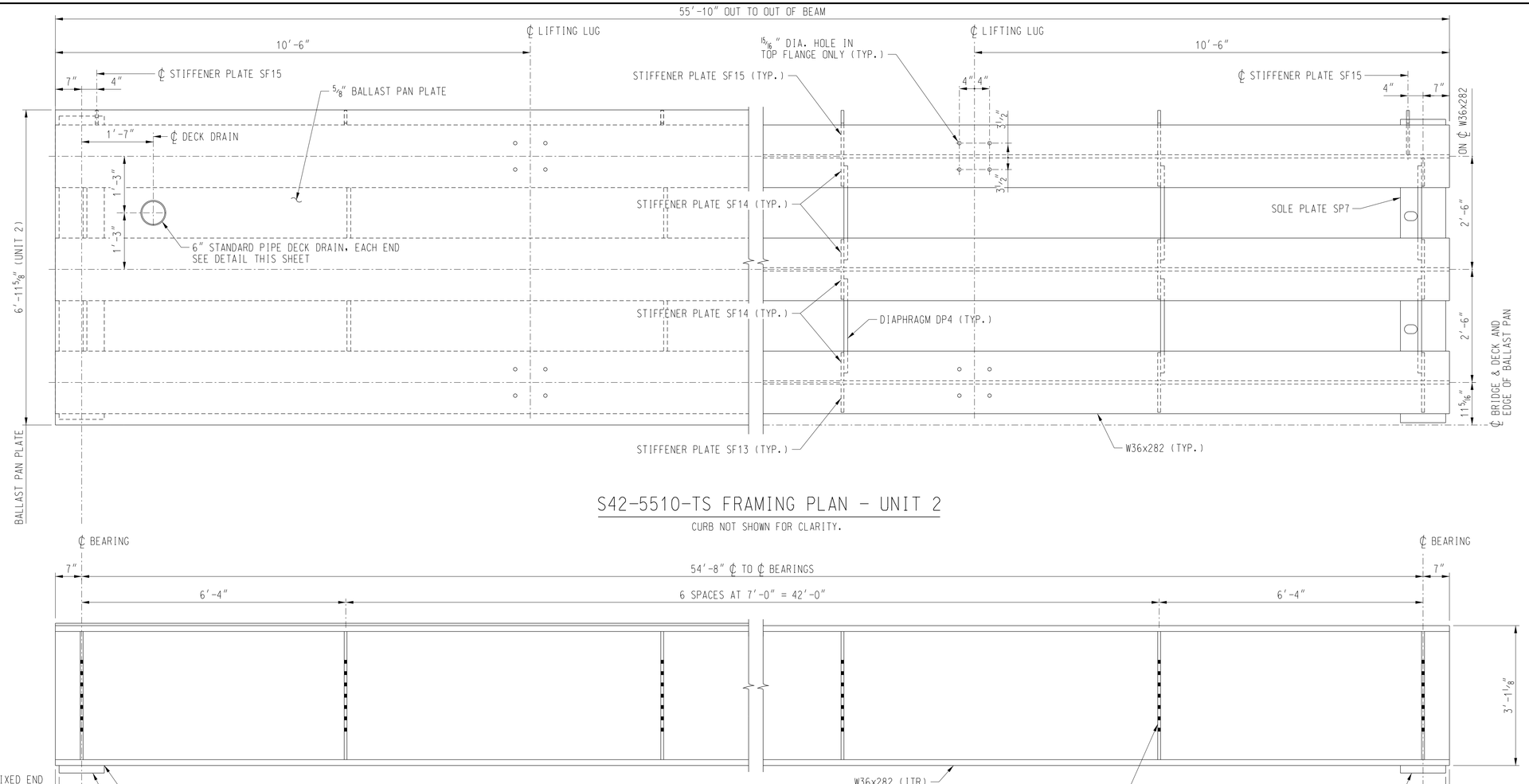
100% SUBMITTAL

PORTLAND, OR TO SP&S JCT., WA
BRIDGE NUMBER 75.99A, B
OVER FUTURE ELM ST. S.
UNIT 1 STEEL BEAM SPAN

PLAN NO: 0047-0075.990-012 SHEET: 12 OF 29

File Location: SPLANS

Date Printed: 3/3/2024 Time Printed: 6:09:31 PM

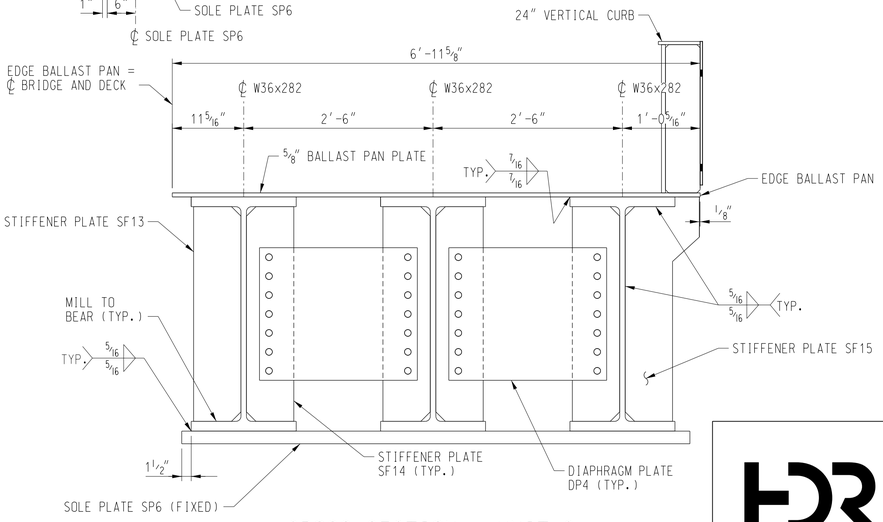


S42-5510-TS FRAMING PLAN - UNIT 2

CURB NOT SHOWN FOR CLARITY.

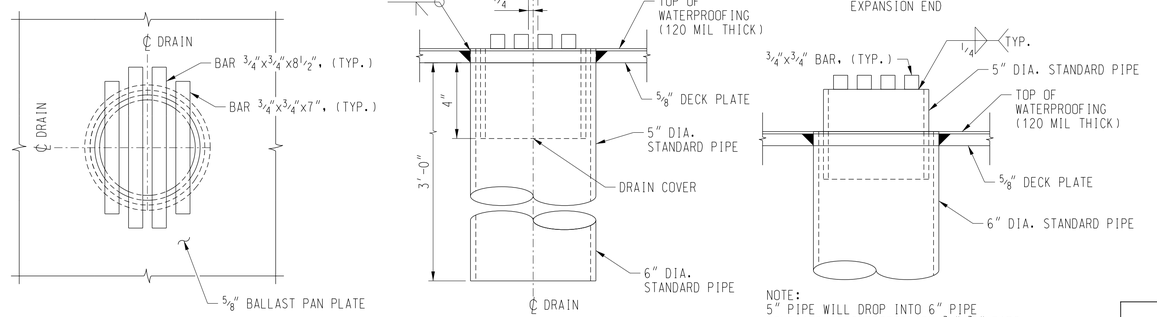
ELEVATION

CURB NOT SHOWN FOR CLARITY.



CROSS SECTION - UNIT 2

1 ~ REQ'D UNIT 2



DECK DRAIN DETAILS

EST. LIFTING WEIGHT

BEAM NAME	WEIGHT/(PLF)
UNIT 2 (w/VERTICAL CURB)	1,375

DESIGN DEAD LOADS

LOAD CASE	42" BEAM LOADS/(LBS./FT. OF TRACK)
TRACK, FASTENERS, ETC.	200
BALLAST	3,850
CURB, WALK & HANDRAIL	215
BEAMS	2,585

SPAN IS DESIGNED FOR COOPER'S E80 LIVE LOAD AND DIESEL IMPACT PER CHAPTER 15 OF THE A.R.E.M.A. MANUAL FOR RAILWAY ENGINEERING.

NOTES:

1. FOR STEEL NOTES SEE STRUCTURAL AND MISCELLANEOUS STEEL NOTES ON SHEET 1.
2. FOR STIFFENERS AND DIAPHRAGMS DETAILS SEE BNSF STANDARD PLAN NO. 0000-1221-03.
3. FOR 24" STEEL VERTICAL CURB DETAILS SEE SHEET 17.
4. FOR MASONRY PLATES, SOLE PLATES AND BEARING PAD DETAILS SEE BNSF STANDARD PLAN NO. 0000-1221-04.
5. FOR LIFTING LUG DETAILS SEE BNSF STANDARD PLAN NO. 0000-1910-01.
6. SHOP ASSEMBLE BEAM SPANS PRIOR TO SHIPPING.

HDR

LAT: 45°42'43.00" N LONG: 121°27'38.70" W	DES: MCH
DOT # XXXXXXX	DRAWN: AEP
CITY OF BINGEN, KLICKITAT COUNTY, WA.	CHECK: MJK
STREET NAME: ELM ST. S.	DATE: 3/2024
STATE CONTRACT NO.: XX-XXXX	PLAN: XXX
FED. AID. PROJECT NO.: XXXXX-XXXXX(XXX)	LINE SEG: 0047

BNSF RAILWAY
BRIDGE ENGINEERING KANSAS CITY, KS

APPROVED: _____
ASST. DIRECTOR STRUCTURES DESIGN

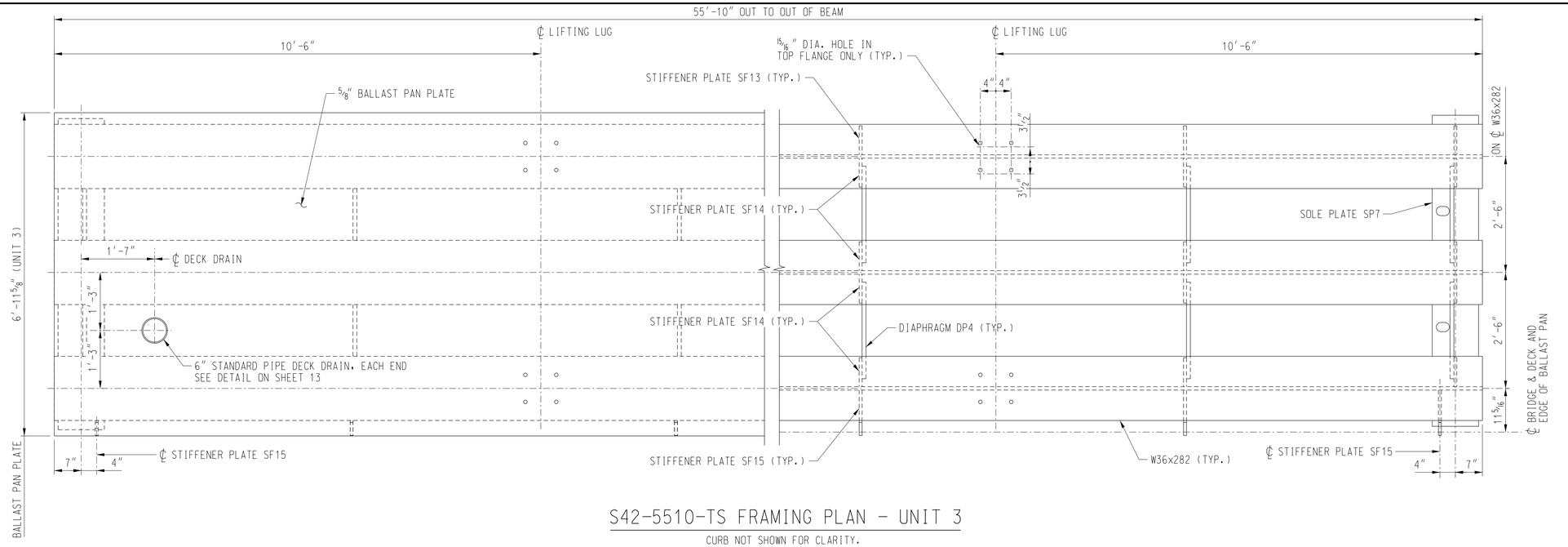
100% SUBMITTAL

PORTLAND, OR TO SP&S JCT., WA
BRIDGE NUMBER 75.99A, B
OVER FUTURE ELM ST. S.
UNIT 2 STEEL BEAM SPAN

PLAN NO: 0047-0075.990-013 SHEET: 13 OF 29

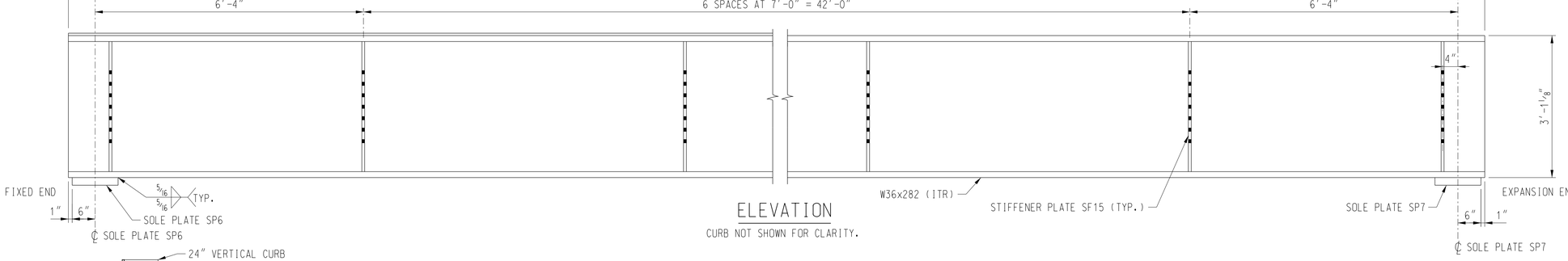
File Location: SPLELS

Date Printed: 3/3/2024 Time Printed: 6:11:34 PM



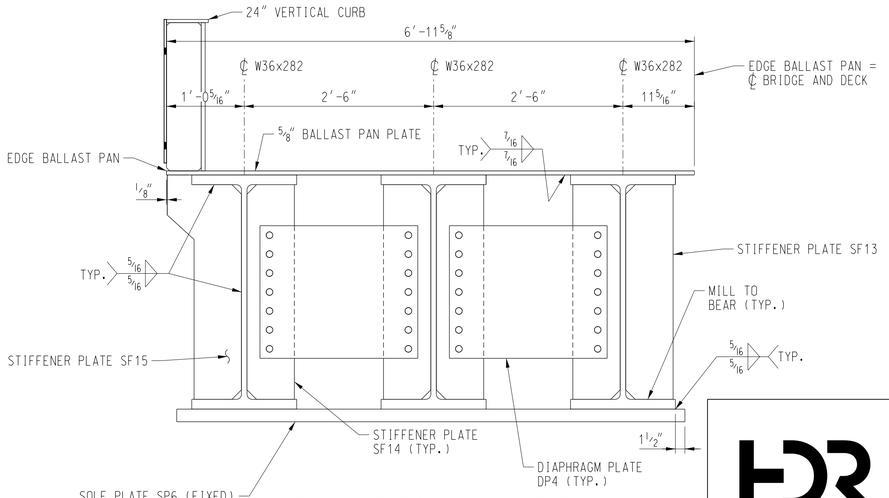
S42-5510-TS FRAMING PLAN - UNIT 3

CURB NOT SHOWN FOR CLARITY.



ELEVATION

CURB NOT SHOWN FOR CLARITY.



CROSS SECTION - UNIT 3

1 ~ REQ'D UNIT 3

EST. LIFTING WEIGHT

BEAM NAME	WEIGHT/(PLF)
UNIT 3 (w/VERTICAL CURB)	1,375

DESIGN DEAD LOADS

LOAD CASE	42" BEAM LOADS/(LBS./FT. OF TRACK)
TRACK, FASTENERS, ETC.	200
BALLAST	3,850
CURB, WALK & HANDRAIL	215
BEAMS	2,585

SPAN IS DESIGNED FOR COOPER'S E80 LIVE LOAD AND DIESEL IMPACT PER CHAPTER 15 OF THE A.R.E.M.A. MANUAL FOR RAILWAY ENGINEERING.

NOTES:

1. FOR STEEL NOTES SEE STRUCTURAL AND MISCELLANEOUS STEEL NOTES ON SHEET 1.
2. FOR STIFFENERS AND DIAPHRAGMS DETAILS SEE BNSF STANDARD PLAN NO. 0000-1221-03.
3. FOR 24" STEEL VERTICAL CURB DETAILS SEE SHEET 17.
4. FOR MASONRY PLATES, SOLE PLATES AND BEARING PAD DETAILS SEE BNSF STANDARD PLAN NO. 0000-1221-04.
5. FOR LIFTING LUG DETAILS SEE BNSF STANDARD PLAN NO. 0000-1910-01.
6. SHOP ASSEMBLE BEAM SPANS PRIOR TO SHIPPING.

HDR

LAT: 45°42'43.00" N LONG: 121°27'38.70" W	DES: MCH
DOT # XXXXXXX	DRAWN: AEP
CITY OF BINGEN, KLICKITAT COUNTY, WA.	CHECK: MJK
STREET NAME: ELM ST. S.	DATE: 3/2024
STATE CONTRACT NO.: XX-XXXX	PLAN: XXX
FED. AID. PROJECT NO.: XXXXX-XXXXX(XXX)	LINE SEG: 0047

BNSF RAILWAY

BRIDGE ENGINEERING KANSAS CITY, KS

APPROVED: _____

ASST. DIRECTOR STRUCTURES DESIGN

100% SUBMITTAL

PORTLAND, OR TO SP&S JCT., WA

BRIDGE NUMBER 75.99A, B

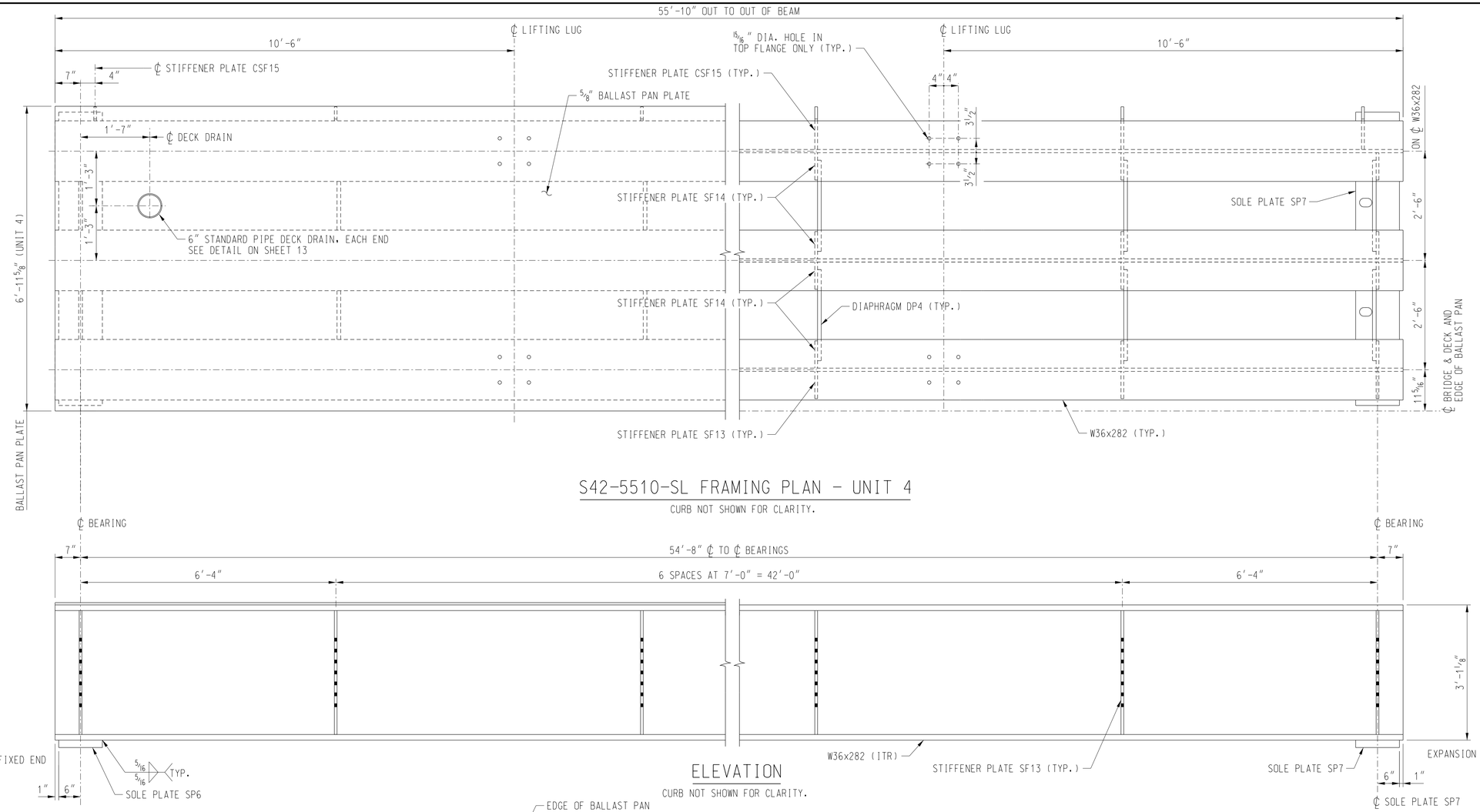
OVER FUTURE ELM ST. S.

UNIT 3 STEEL BEAM SPAN

PLAN NO: 0047-0075.990-014 SHEET: 14 OF 29

File Location: SPLELS

Date Printed: 3/3/2024 Time Printed: 6:13:06 PM

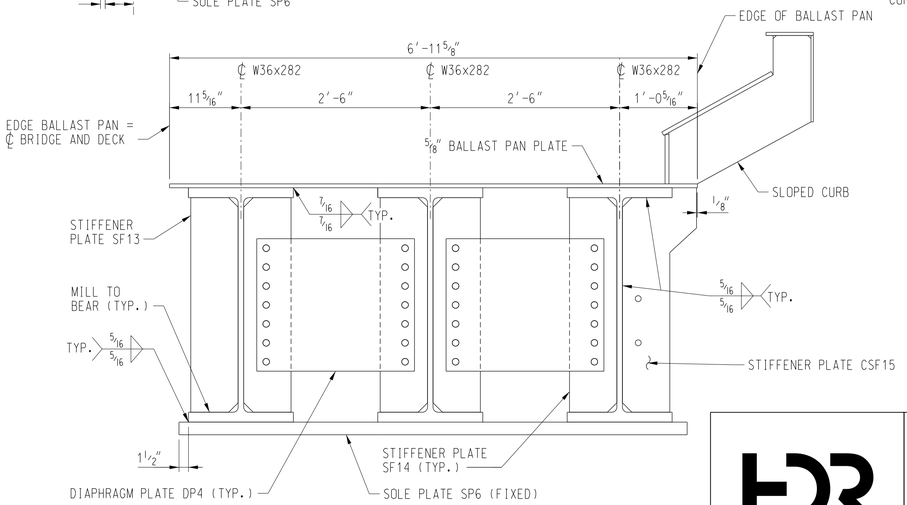


S42-5510-SL FRAMING PLAN - UNIT 4

CURB NOT SHOWN FOR CLARITY.

ELEVATION

CURB NOT SHOWN FOR CLARITY.



CROSS SECTION - UNIT 4

1 ~ REQ'D UNIT 4

EST. LIFTING WEIGHT

BEAM NAME	WEIGHT/(PLF)
UNIT 4 (w/SLOPED CURB)	1,400

DESIGN DEAD LOADS

LOAD CASE	42" BEAM LOADS/(LBS./FT. OF TRACK)
TRACK, FASTENERS, ETC.	200
BALLAST	3,850
CURB, WALK & HANDRAIL	215
BEAMS	2,585

SPAN IS DESIGNED FOR COOPER'S E80 LIVE LOAD AND DIESEL IMPACT PER CHAPTER 15 OF THE A.R.E.M.A. MANUAL FOR RAILWAY ENGINEERING.

NOTES:

1. FOR STEEL NOTES SEE STRUCTURAL AND MISCELLANEOUS STEEL NOTES ON SHEET 1.
2. FOR STIFFENERS AND DIAPHRAGMS DETAILS SEE BNSF STANDARD PLAN NO. 0000-1221-03.
3. FOR 24" STEEL SLOPE CURB DETAILS SEE SHEET 16.
4. FOR MASONRY PLATES, SOLE PLATES AND BEARING PAD DETAILS SEE BNSF STANDARD PLAN NO. 0000-1221-04.
5. FOR LIFTING LUG DETAILS SEE BNSF STANDARD PLAN NO. 0000-1910-01.
6. SHOP ASSEMBLE BEAM SPANS PRIOR TO SHIPPING.

HDR

LAT: 45°42'43.00" N LONG: 121°27'38.70" W	DES: MCH
DOT # XXXXXXX	DRAWN: AEP
CITY OF BINGEN, KLICKITAT COUNTY, WA.	CHECK: MJK
STREET NAME: ELM ST. S.	DATE: 3/2024
STATE CONTRACT NO.: XX-XXXX	PLAN: XXX
FED. AID. PROJECT NO.: XXXXX-XXXXX(XXX)	LINE SEG: 0047

BNSF RAILWAY

BRIDGE ENGINEERING KANSAS CITY, KS

APPROVED: _____

ASST. DIRECTOR STRUCTURES DESIGN

100% SUBMITTAL

PORTLAND, OR TO SP&S JCT., WA

BRIDGE NUMBER 75.99A, B

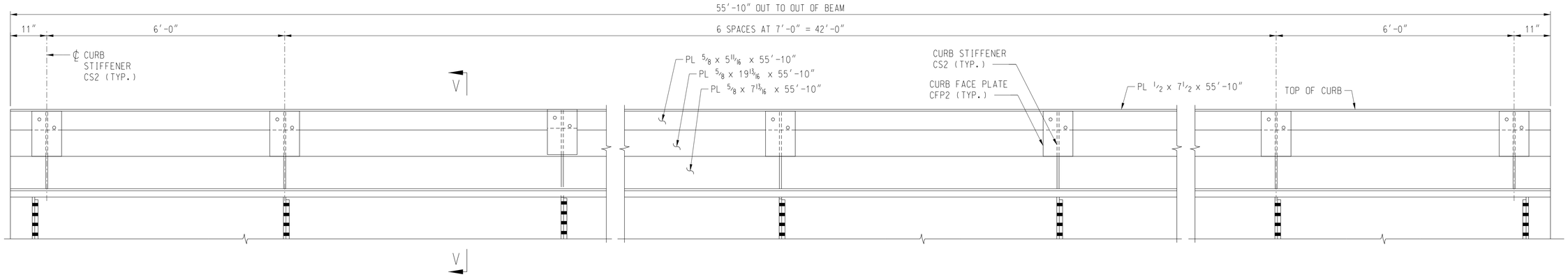
OVER FUTURE ELM ST. S.

UNIT 4 STEEL BEAM SPAN

PLAN NO: 0047-0075.990-015 SHEET: 15 OF 29

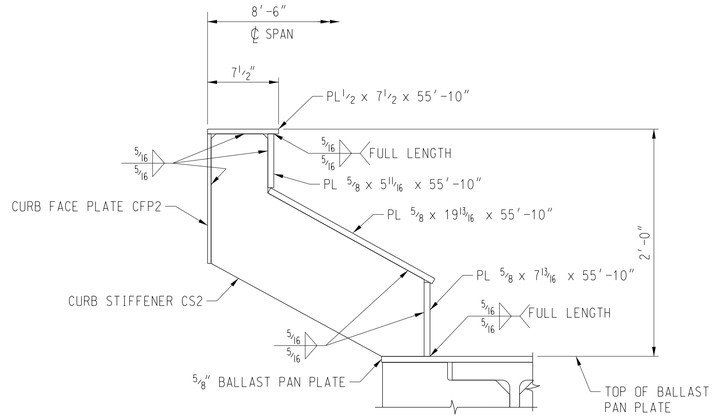
File Location: SPLES

Date Printed: 3/3/2024 Time Printed: 6:15:31 PM



ELEVATION - 24" STEEL SLOPED CURB

STEEL PIPE DRAINS THROUGH THE BASE OF THE CURB SHALL NOT BE PROVIDED.



SECTION V-V

SEE THIS SHEET FOR SECTION V-V.

NOTES:

1. FOR STEEL NOTES SEE STRUCTURAL AND MISCELLANOUES STEEL NOTES ON SHEET 1.

LAT: 45°42'43.00" N LONG: 121°27'38.70" W	DES: MCH	BNSF RAILWAY
DOT # XXXXXXX	DRAWN: AEP	BRIDGE ENGINEERING KANSAS CITY, KS
CITY OF BINGEN, KLICKITAT COUNTY, WA.	CHECK: MJK	APPROVED:
STREET NAME: ELM ST. S.	DATE: 3/2024	ASST. DIRECTOR STRUCTURES DESIGN
STATE CONTRACT NO.: XX-XXXX	PLAN: XXX	
FED. AID. PROJECT NO.: XXXXX-XXXXX(XXX)	LINE SEG: 0047	

100% SUBMITTAL

PORTLAND, OR TO SP&S JCT., WA

BRIDGE NUMBER 75.99A, B

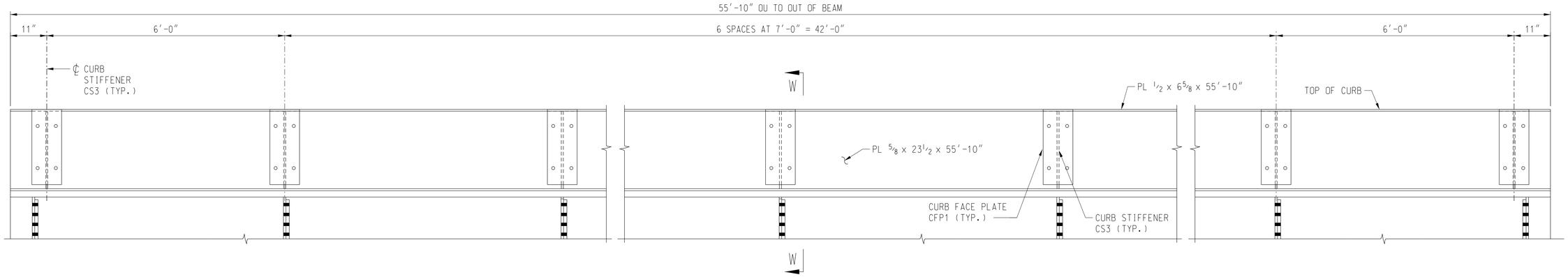
OVER FUTURE ELM ST. S.

24" STEEL SLOPED CURB

PLAN NO: 0047-0075.990-016 | SHEET: 16 OF 29

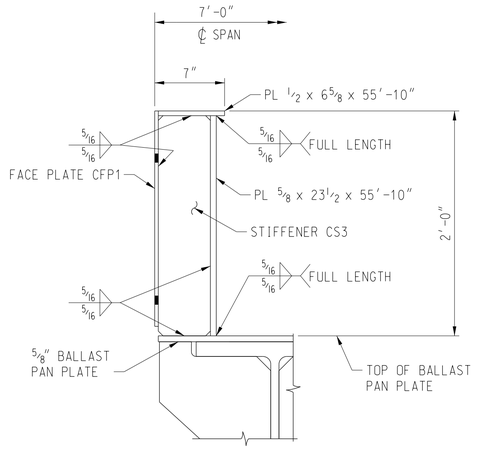
File Location: SHEET

Date Printed: 3/3/2024 Time Printed: 6:17:51 PM



ELEVATION - 24″ VERTICAL CURB

STEEL PIPE DRAINS THROUGH THE BASE OF THE CURB SHALL NOT BE PROVIDED.



SECTION W-W

SEE THIS SHEET FOR SECTION W-W.

NOTES:

1. FOR STEEL NOTES SEE STRUCTURAL AND MISCELLANOUES STEEL NOTES ON SHEET 1.

NOTES:

1. FOR STEEL NOTES SEE STRUCTURAL AND MISCELLANOUES STEEL NOTES ON SHEET 1.

100% SUBMITTAL

LAT: 45°42′43.00″ N LONG: 121°27′38.70″ W	DES: MCH
DOT # XXXXXXX	DRAWN: AEP
CITY OF BINGEN, KLICKITAT COUNTY, WA.	CHECK: MJK
STREET NAME: ELM ST. S.	DATE: 3/2024
STATE CONTRACT NO.: XX-XXXX	PLAN: XXX
FED. AID. PROJECT NO.: XXXXX-XXXXX(XXX)	LINE SEG: 0047

BNSF RAILWAY

BRIDGE ENGINEERING KANSAS CITY, KS

APPROVED:

ASST. DIRECTOR STRUCTURES DESIGN

PORTLAND, OR TO SP&S JCT., WA

BRIDGE NUMBER 75.99A, B

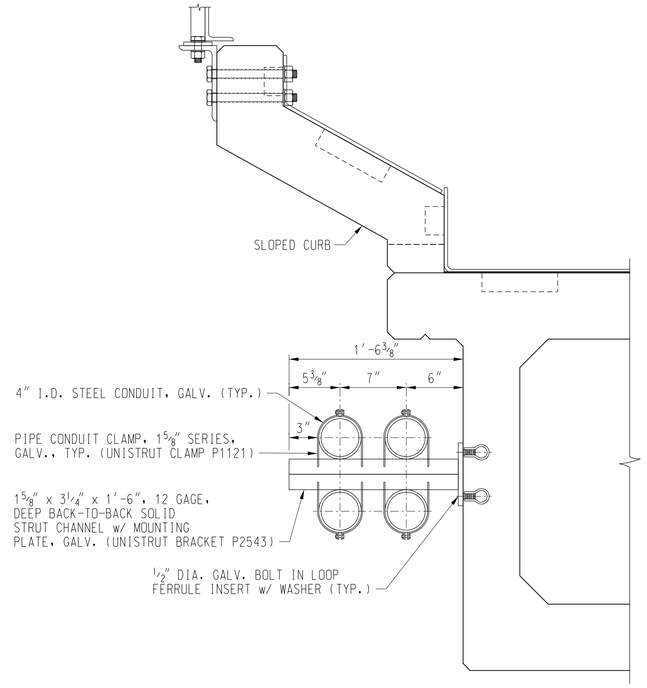
OVER FUTURE ELM ST. S.

24″ STEEL VERTICAL CURB

PLAN NO: 0047-0075.990-017 SHEET: 17 OF 29

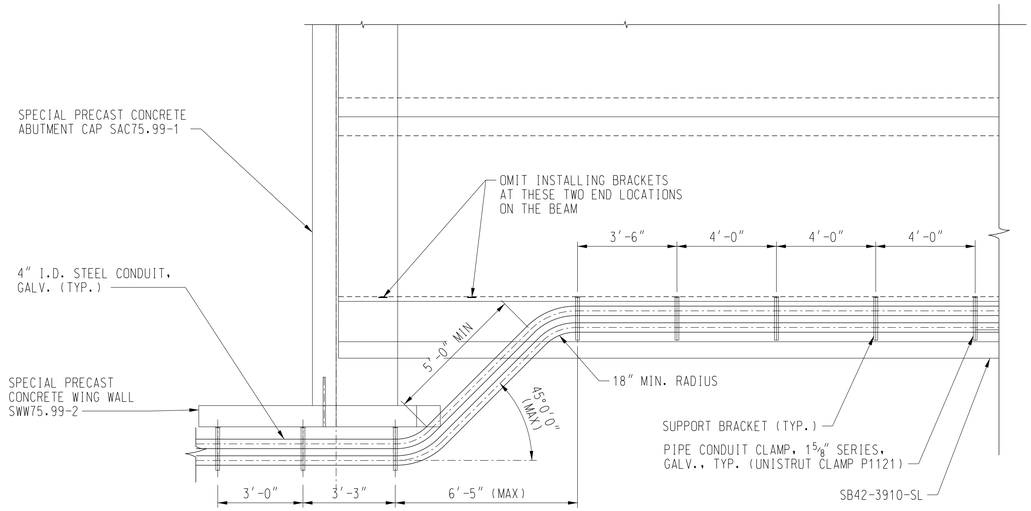
File Location: SHEETS

Date Printed: 3/3/2024 Time Printed: 6:20:21 PM



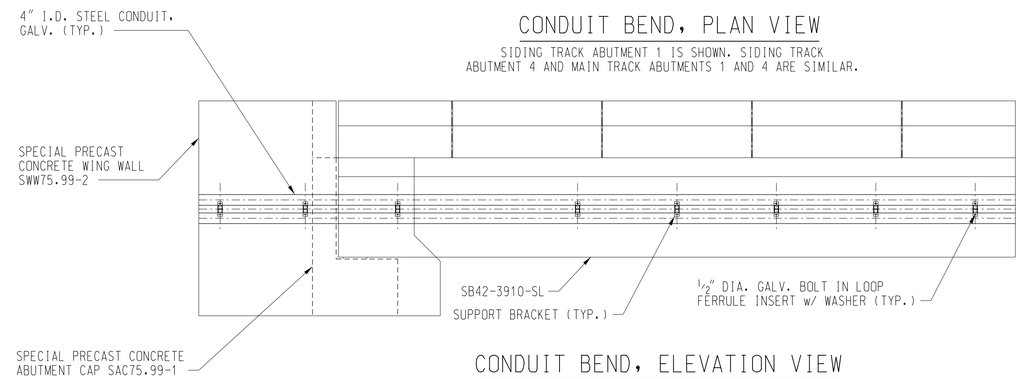
UTILITY BRACKET DETAIL

CONNECTION TO CONCRETE BEAM SHOWN.
CONNECTION TO WING WALL SIMILAR.
CONNETION TO STEEL BEAM IS BELOW.



CONDUIT BEND, PLAN VIEW

SIDING TRACK ABUTMENT 1 IS SHOWN. SIDING TRACK
ABUTMENT 4 AND MAIN TRACK ABUTMENTS 1 AND 4 ARE SIMILAR.

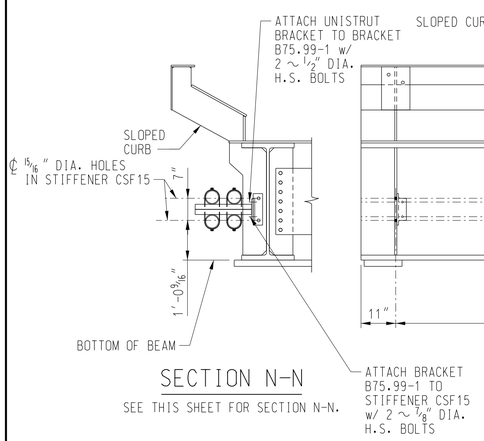


CONDUIT BEND, ELEVATION VIEW

SIDING TRACK ABUTMENT 1 SHOWN. SIDING TRACK ABUTMENT 4
AND MAIN TRACK ABUTMENTS 1 AND 4 ARE SIMILAR.

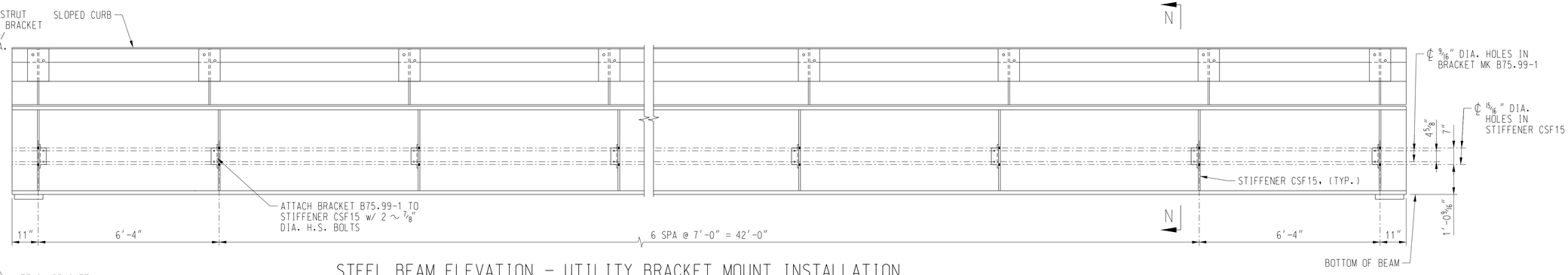
UTILITY SUPPORT NOTES:

1. UTILITY BRACKETS SHALL BE A UNISTRUT PRODUCT OR APPROVED EQUAL. MATERIAL FOR THE UTILITY BRACKETS SHALL MEET ASTM A1011 SS GR. 33.
2. UTILITY BRACKETS SHALL BE HOT-DIP GALVANIZED PER ASTM A123.
3. PIPE CLAMPS AND ASSOCIATED HARDWARE SHALL MEET MATERIAL AND FINISH REQUIREMENTS AS RECOMMENDED BY THE MANUFACTURER FOR COMPATIBILITY WITH THE UTILITY BRACKET MATERIAL AND FINISH.
4. FOR UTILITY BRACKET CONNECTIONS ON CONCRETE SPANS, LOOP FERRULE INSERTS ARE TO BE TYPE F42, 1/2" DIA. x 2 3/4", GALV., AS MANUFACTURED BY DAYTON-SUPERIOR AND HAVE A SAFE WORKING LOAD OF 2,000 LBS. WITH A 3:1 SAFETY FACTOR. THE INSERTS ARE TO BE COMPLETELY RECESSED WITH 1/2" DIA. GALV. BOLTS AND WASHERS ATTACHED FOR SHIPMENT.
5. UTILITY CONDUIT DETAILS, SUCH AS EXPANSION FITTINGS, JOINTS, ETC. SHALL MEET BNSF TELECOM REQUIREMENTS. UTILITY CONDUIT SHALL RUN THE FULL LENGTH OF BRIDGE, AND BENT TO THE OUTSIDE OF THE WING WALLS.
6. ONE CONDUIT SHALL HAVE A MAXCELL EDGE DETECTABLE 3" INNERDUCT. THE OTHER THREE CONDUITS SHALL HAVE PULL CORDS.
7. THE HANDHOLE AT EACH END OF THE BRIDGE SHALL HAVE A METAL TAG STATING: "BRIDGE 75.99 UTILITY SUPPORT SYSTEM DESIGNED FOR 4 ~ 4" STEEL CONDUITS WITH AGGREGATE CONDUIT FILL LOAD OF 80 LBS. PER FOOT." THE METAL TAGS SHALL BE BRASS OR ALUMINUM WITH STAMPED 1/8" TALL LETTERS, WITH SELF-ADHESIVE BACKING AND SIZED TO FIT THE REQUIRED TEXT. TAGS SHALL BE MOUNTED TO THE INSIDE OF THE HANDHOLE LID.
8. REQUIREMENTS FOR BENDING CONDUIT:
   MAX. CONDUIT BEND ANGLE: 45 DEGREES
   MIN. CONDUIT BEND RADIUS: 18 INCHES
   MIN. STRAIGHT RUN BETWEEN TWO CONDUIT BENDS: 60 INCHES
9. UTILITY BRACKET INSERT SPACINGS ARE SHOWN ON THE DETAIL BELOW FOR STEEL SPANS AND ON SHEET 11 FOR THE CONCRETE SPANS.



SECTION N-N

SEE THIS SHEET FOR SECTION N-N.



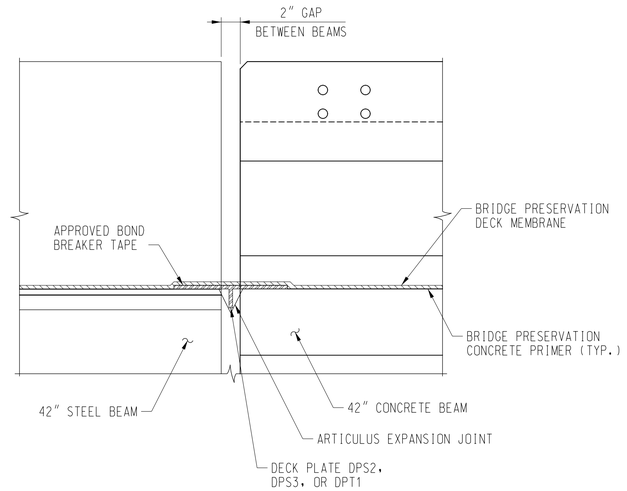
STEEL BEAM ELEVATION - UTILITY BRACKET MOUNT INSTALLATION

STEEL BEAM S42-5510-SL - UNIT 1 SHOWN;
STEEL BEAM S42-5510-SL - UNIT 4 IS SIMILAR.

LAT: 45°42'43.00" N LONG: 121°27'38.70" W	DES: MCH	BNSF RAILWAY	100% SUBMITTAL
DOT # XXXXXXX	DRAWN: AEP	BRIDGE ENGINEERING KANSAS CITY, KS	PORTLAND, OR TO SP&S JCT., WA
CITY OF BINGEN, KLICKITAT COUNTY, WA.	CHECK: MJK	APPROVED:	BRIDGE NUMBER 75.99A, B
STREET NAME: ELM ST. S.	DATE: 3/2024		OVER FUTURE ELM ST. S.
STATE CONTRACT NO.: XX-XXXX	PLAN: XXX	ASST. DIRECTOR STRUCTURES DESIGN	UTILITY BRACKET INSTALLATION DETAILS
FED. AID. PROJECT NO.: XXXXX-XXXXX(XXX)	LINE SEG: 0047	PLAN NO: 0047-0075.990-018	SHEET: 18 OF 29

File Location: SPLICES

Date Printed: 3/3/2024 Time Printed: 6:21:43 PM



SECTION X-X

SEE THIS SHEET FOR SECTION X-X.
TYPICAL JOINT DETAIL SHOWN FOR INFORMATION ONLY. WATERPROOFING INSTALLER SHALL DETERMINE FINAL DETAILS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

WATERPROOFING NOTES:

1. WATERPROOFING SYSTEM SHALL BE 120 MIL ACRYLIC-BASED, COLD SPRAY APPLIED SEAMLESS ELASTOMERIC WATERPROOFING MEMBRANE. ALL RELEVANT REQUIREMENTS OUTLINED UNDER AREMA CHAPTER 8, PART 29 SHALL BE FOLLOWED.

2. SPRAY-APPLIED ELASTOMER WATERPROOFING MEMBRANE SHALL BE FURNISHED BY BRIDGE PRESERVATION L.L.C., OR APPROVED EQUAL. PREPARE SURFACES AND APPLY IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS:

   CONTACT:
   BRIDGE PRESERVATION L.L.C.
   CUSTOMER AND SALES SUPPORT
   (913) 321-9000
   info@bridgepreservation.com

3. PRIMER SHALL BE APPLIED TO DECK AND CURB FACE, 1'-4" MINIMUM ON EACH SIDE.

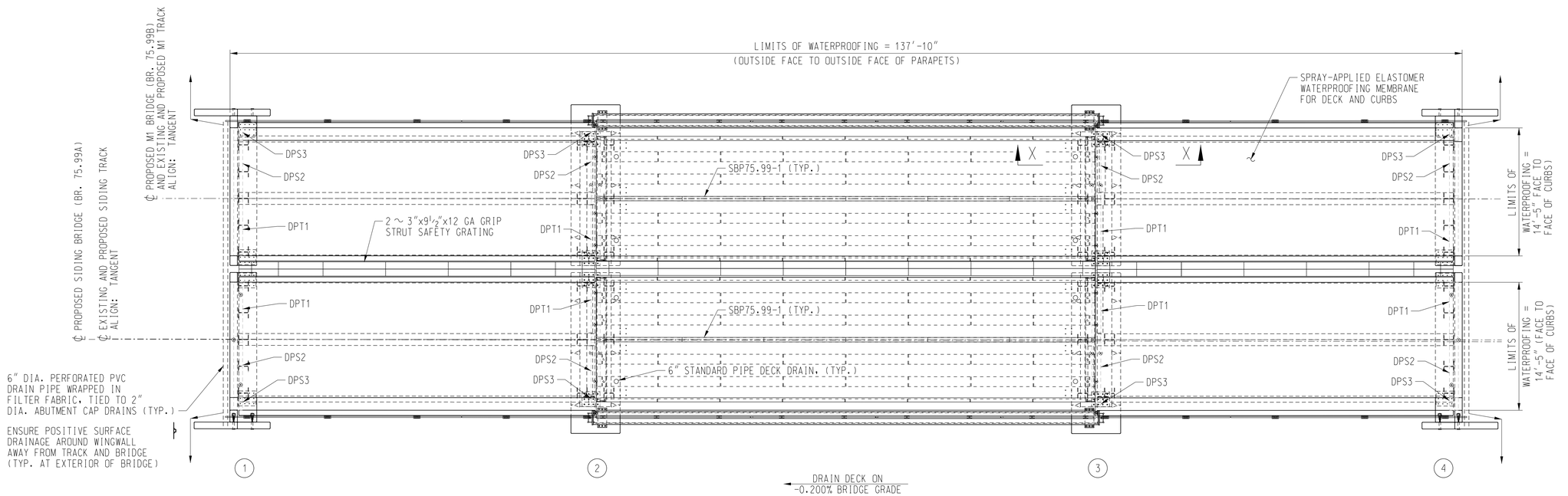
4. FABRICATOR SHALL SUBMIT DETAILED APPLICATION PROCEDURES, MATERIAL, SPECIFICATIONS AND SHOP DRAWINGS FOR THE WATERPROOFING SYSTEM. WATERPROOFING SYSTEM MUST BE APPROVED PRIOR TO INSTALLATION.

5. WATERPROOFING INSTALLATION SHALL BE OBSERVED AND APPROVED BY A QUALIFIED REPRESENTATIVE OF THE MANUFACTURER.

6. IN-PLACE JOINT LEAK TESTING SHALL BE PERFORMED PRIOR TO PLACEMENT OF BALLAST. THE WATERPROOFING MANUFACTURER SHALL SUBMIT A JOINT LEAK TESTING PROGRAM THAT SHALL ALLOW FOR A MINIMUM PERIOD 30 MINUTES. THE JOINT WILL BE CONSIDERED WATERTIGHT IF THERE ARE NO LEAKS THROUGH THE JOINT AFTER THIS 30-MINUTE PERIOD.

DRAINAGE NOTES:

1. FILTER FABRIC SHALL CONFORM TO CLASS A GEOTEXTILE PER AREMA CHAPTER 1 SECTION 10.2, INCLUDING THE REQUIREMENTS OF TABLE 1-10-7 AND TABLE 1-10-8.



WATERPROOFING AND DRAINAGE PLAN

BRIDGES 75.99A AND 79.99B

LAT: 45°42'43.00" N LONG: 121°27'38.70" W	DES: MCH	BNSF RAILWAY	100% SUBMITTAL
DOT # XXXXXXX	DRAWN: AEP	BRIDGE ENGINEERING KANSAS CITY, KS	PORTLAND, OR TO SP&S JCT., WA
CITY OF BINGEN, KLICKITAT COUNTY, WA.	CHECK: MJK		BRIDGE NUMBER 75.99A, B
STREET NAME: ELM ST. S.	DATE: 3/2024	APPROVED:	OVER FUTURE ELM ST. S.
STATE CONTRACT NO.: XX-XXXX	PLAN: XXX	ASST. DIRECTOR STRUCTURES DESIGN	WATERPROOFING LAYOUT AND DETAILS
FED. AID. PROJECT NO.: XXXXX-XXXXX(XXX)	LINE SEG: 0047		PLAN NO: 0047-0075.990-019 SHEET: 19 OF 29

File Location: SFILES

Date Printed: 3/3/2024 Time Printed: 6:23:07 PM

TEMPORARY SHORING GENERAL NOTES:

1. ALL WORK REQUIREMENTS SHOWN ON THESE DRAWINGS AND NOT OTHERWISE DETAILED SHALL BE ACCOMPLISHED AS SPECIFIED IN BNSF RAILWAY (BNSF) SPECIFICATIONS AND THE AMERICAN RAILWAY ENGINEERING AND MAINTENANCE-OF-WAY ASSOCIATION (A.R.E.M.A) MANUAL FOR RAILWAY ENGINEERING. IN THE EVENT OF CONFLICTS BETWEEN SPECIFICATIONS, THE MORE RESTRICTIVE SHALL APPLY.

2. CONTACT THE BNSF CALL BEFORE YOU DIG NUMBER 90 DAYS (NOT LESS THAN 60 DAYS) PRIOR TO PROPOSED CONSTRUCTION START DATE. PRIOR TO CONSTRUCTION, CONFIRM THAT ALL NECESSARY RELOCATIONS HAVE BEEN COMPLETED. THE CBYD NUMBER IS 1-800-533-2891.

DESIGN NOTES:

1. THE PROPOSED TEMPORARY SHORING HAS BEEN DESIGNED IN ACCORDANCE WITH THE A.R.E.M.A. MANUAL FOR RAILWAY ENGINEERING, CHAPTER 15, STEEL STRUCTURES, AS MODIFIED BY THE CALTRANS TRENCHING AND SHORING MANUAL. EXISTING GROUND PROPERTIES: UNIT WEIGHT OF MOIST SOIL = < 125 pcf, INTERNAL FRICTION ANGLE > 34 DEGREES.

2. THE SHORING HAS BEEN DESIGNED FOR COOPER E80 LIVE LOAD WITH FILL TO THE PROPOSED BASE OF RAIL.

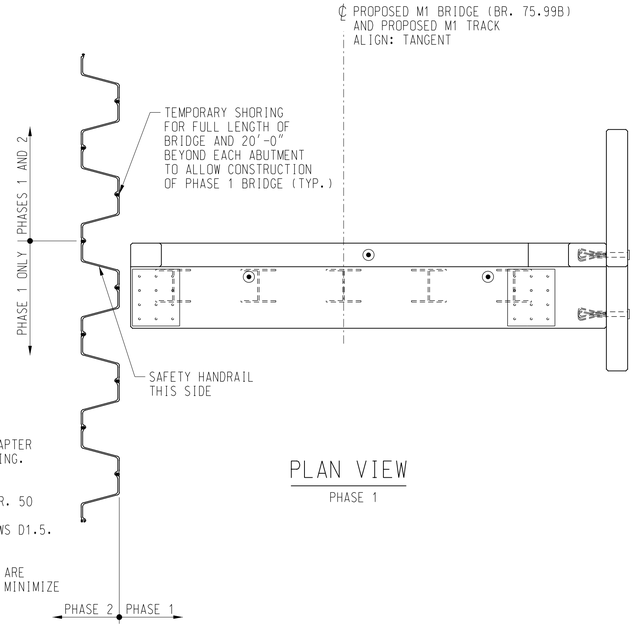
STRUCTURAL STEEL NOTES:

1. MATERIALS, FABRICATION AND ERECTION SHALL BE IN ACCORDANCE WITH CHAPTER 15- STEEL STRUCTURES OF THE A.R.E.M.A. MANUAL FOR RAILWAY ENGINEERING.

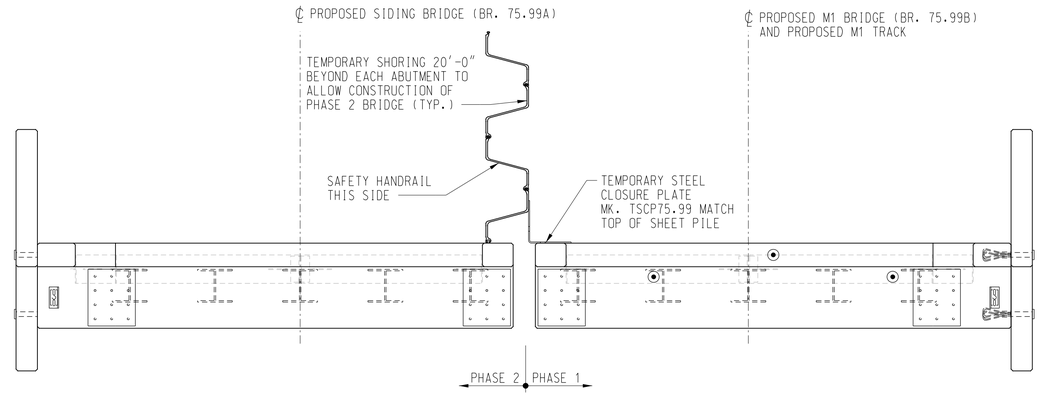
2. MATERIAL SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:
SHEET PILE: SKZ 38 (Sx = 62.3 in³/ft; Ix = 561 in⁴/ft) ASTM A572 GR. 50

3. ALL WELDING SHALL BE IN ACCORDANCE WITH THE BRIDGE WELDING CODE, AWS D1.5. WELDING TO BE ALLOWED ONLY AS SHOWN ON THE DRAWINGS.

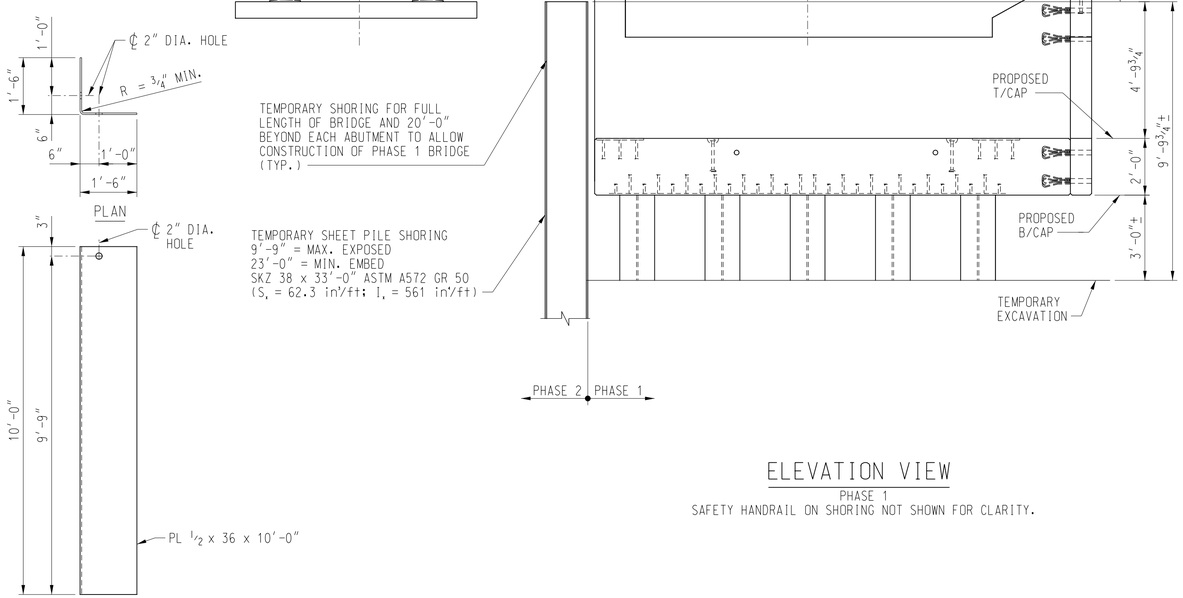
4. WELDED JOINTS ARE TO BE AWS PREQUALIFIED. ALTERNATE JOINT DETAILS ARE SUBJECT TO APPROVAL BY THE ENGINEER. ALL WELDING SHALL BE DONE TO MINIMIZE DISTORTION.



PLAN VIEW
PHASE 1



PLAN VIEW
PHASE 2

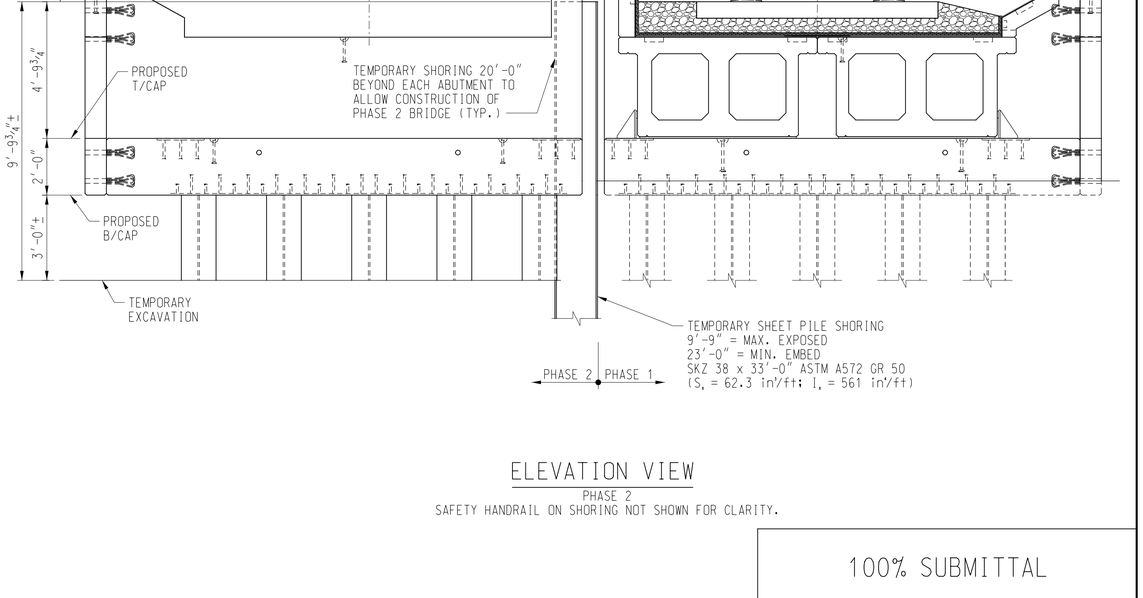


ELEVATION

TEMPORARY STEEL CLOSURE PLATE TSCP75.99

2 ~ REQUIRED - MK. TSCP75.99
ESTIMATED WEIGHT = 613 LBS. EACH

ELEVATION VIEW
PHASE 1
SAFETY HANDRAIL ON SHORING NOT SHOWN FOR CLARITY.



ELEVATION VIEW
PHASE 2
SAFETY HANDRAIL ON SHORING NOT SHOWN FOR CLARITY.

100% SUBMITTAL

LAT: 45°42'43.00" N LONG: 121°27'38.70" W	DES: MCH
DOT # XXXXXXX	DRAWN: AEP
CITY OF BINGEN, KLICKITAT COUNTY, WA.	CHECK: MJK
STREET NAME: ELM ST. S.	DATE: 3/2024
STATE CONTRACT NO.: XX-XXXX	PLAN: XXX
FED. AID. PROJECT NO.: XXXXX-XXXXX(XXX)	LINE SEG: 0047

BNSF RAILWAY
BRIDGE ENGINEERING KANSAS CITY, KS

APPROVED: _____
ASST. DIRECTOR STRUCTURES DESIGN

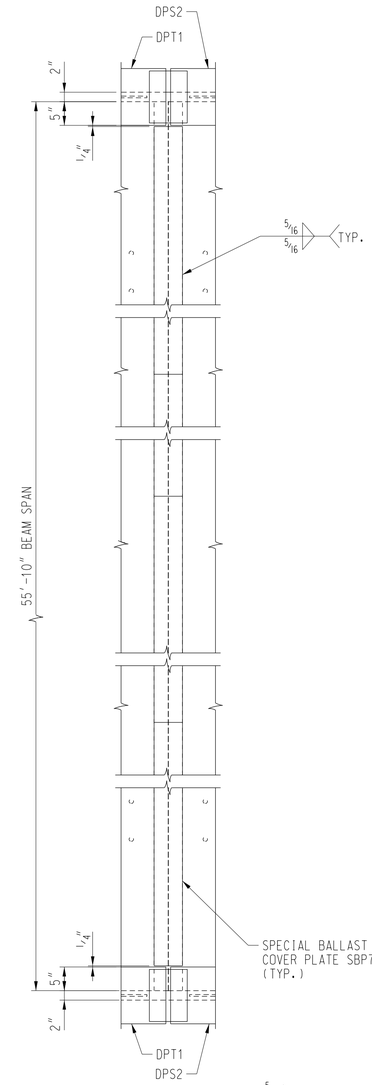
PORTLAND, OR TO SP&S JCT., WA
BRIDGE NUMBER 75.99A, B
OVER FUTURE ELM ST. S.
ABUTMENT TEMPORARY SHORING

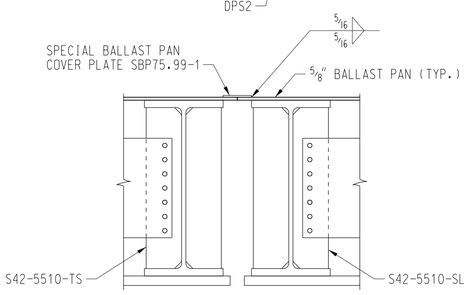
PLAN NO: 0047-0075.990-020 SHEET: 20 OF 29

File Location: SPLELS
Date Printed: 3/3/2024 Time Printed: 6:24:32 PM

STEEL NOTES:

1. FABRICATION AND WORKMANSHIP SHALL CONFORM TO CURRENT A.R.E.M.A. MANUAL FOR RAILWAY ENGINEERING, CHAPTER 15 (STEEL STRUCTURES), AND BNSF STANDARD SPECIFICATIONS.
2. STEEL SHALL MEET THE REQUIREMENTS OF ASTM A572 GR. 50, UNLESS OTHERWISE NOTED. DEBURR ALL EDGES.
3. STEEL COMPONENTS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A123.

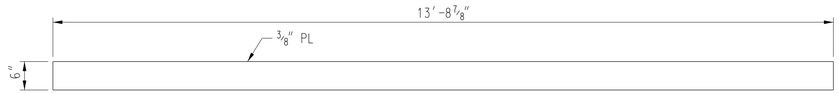




ELEVATION

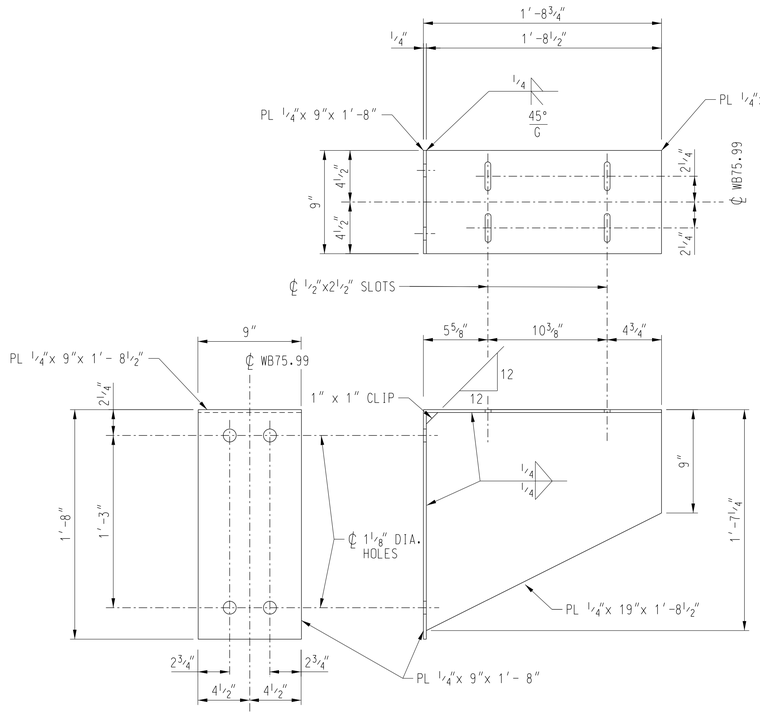
VIEW H-H

SEE SHEET 3 FOR LOCATION OF VIEW H-H.



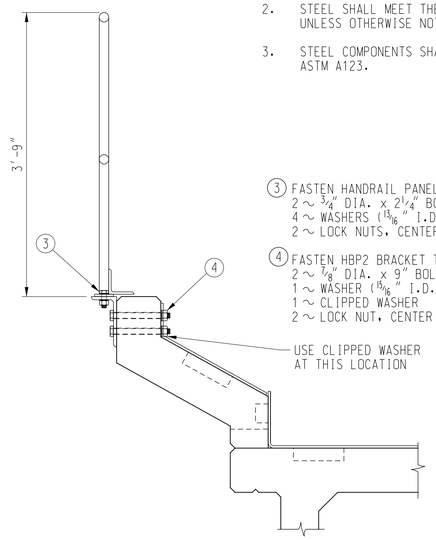
SPECIAL BALLAST PAN COVER PLATE SBP75.99-1

8 ~ REQUIRED - MK. SBP75.99
EST. WT. = 105.2 LBS. EACH



WALK BRACKET WB75.99

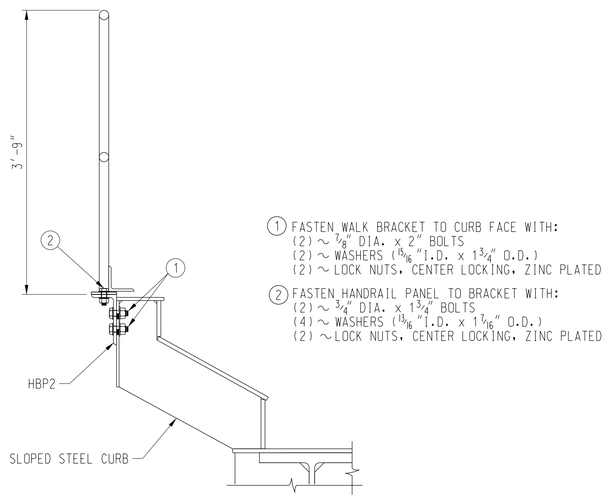
GALVANIZE AFTER FABRICATION
WEIGHT = 46 LBS.



(3) FASTEN HANDRAIL PANEL TO BRACKET WITH:
2 ~ 3/4" DIA. x 2 1/4" BOLTS
4 ~ WASHERS (13/16" I.D. x 1 7/16" O.D.)
2 ~ LOCK NUTS, CENTER LOCKING, ZINC PLATED

(4) FASTEN HBP2 BRACKET TO CURB WITH:
2 ~ 7/8" DIA. x 9" BOLT
1 ~ WASHER (15/16" I.D. x 2 1/4" O.D.)
1 ~ CLIPPED WASHER
2 ~ LOCK NUT, CENTER LOCKING, ZINC PLATED

TYPICAL CONCRETE SLOPED CURB AND HANDRAIL SECTION



(1) FASTEN WALK BRACKET TO CURB FACE WITH:
(2) ~ 7/8" DIA. x 2" BOLTS
(2) ~ WASHERS (15/16" I.D. x 1 3/4" O.D.)
(2) ~ LOCK NUTS, CENTER LOCKING, ZINC PLATED

(2) FASTEN HANDRAIL PANEL TO BRACKET WITH:
(2) ~ 3/4" DIA. x 1 3/4" BOLTS
(4) ~ WASHERS (13/16" I.D. x 1 7/16" O.D.)
(2) ~ LOCK NUTS, CENTER LOCKING, ZINC PLATED

TYPICAL STEEL SLOPED CURB AND HANDRAIL SECTION

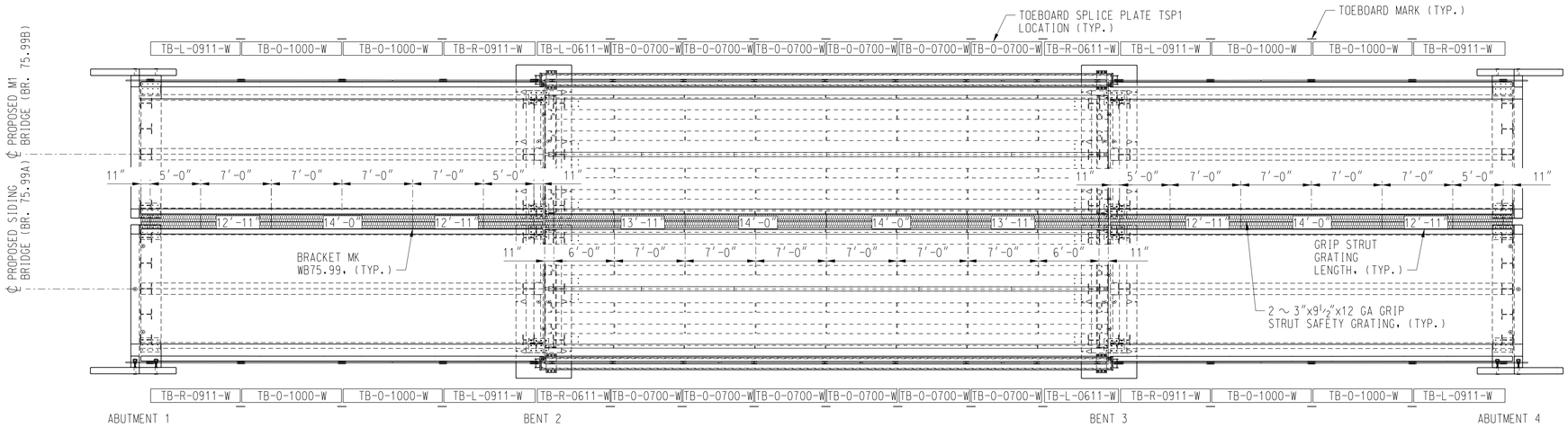
LAT: 45°42'43.00" N LONG: 121°27'38.70" W	DES: MCH	BNSF RAILWAY	100% SUBMITTAL
DOT # XXXXXXX	DRAWN: AEP	BRIDGE ENGINEERING KANSAS CITY, KS	PORTLAND, OR TO SP&S JCT., WA
CITY OF BINGEN, KLICKITAT COUNTY, WA.	CHECK: MJK		BRIDGE NUMBER 75.99A, B
STREET NAME: ELM ST. S.	DATE: 3/2024		OVER FUTURE ELM ST. S.
STATE CONTRACT NO.: XX-XXXX	PLAN: XXX	APPROVED:	MISCELLANEOUS STEEL DETAILS (SHEET 1 OF 2)
FED. AID. PROJECT NO.: XXXXX-XXXXX(XXX)	LINE SEG: 0047	ASST. DIRECTOR STRUCTURES DESIGN	PLAN NO: 0047-0075.990-021 / SHEET: 21 OF 29

File Location: SPLELS

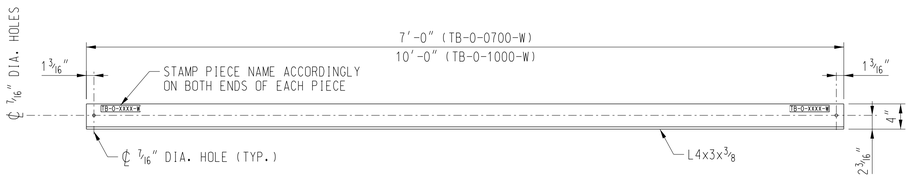
Date Printed: 3/3/2024 Time Printed: 6:28:30 PM

REFERENCE;

REFER TO PREVIOUS SHEET FOR STEEL NOTES.

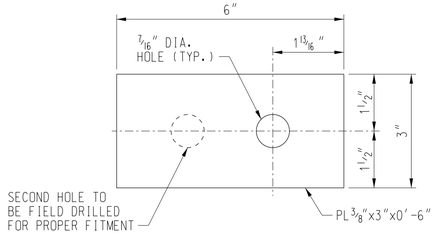


TOEBOARD AND GRIP STRUT LAYOUT



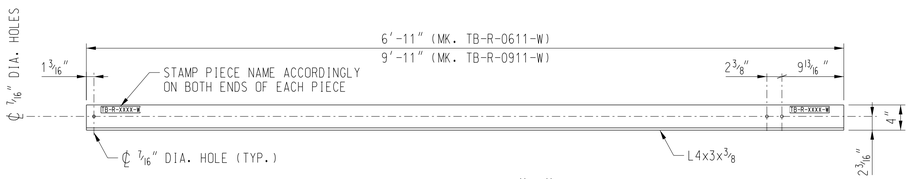
TOEBOARD TB-0-0700-W OR TB-0-1000-W

GALVANIZE AFTER FABRICATION
12~ TB-0-0700-W REQUIRED
8 ~ TB-0-1000-W REQUIRED



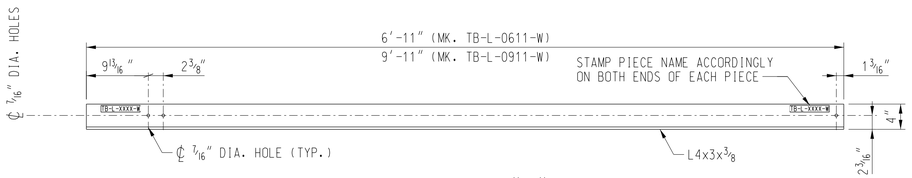
TOEBOARD SPLICE PLATE TSP1

WEIGHT = 2 LBS.
GALVANIZE AFTER FABRICATION
20~TSP1 REQUIRED



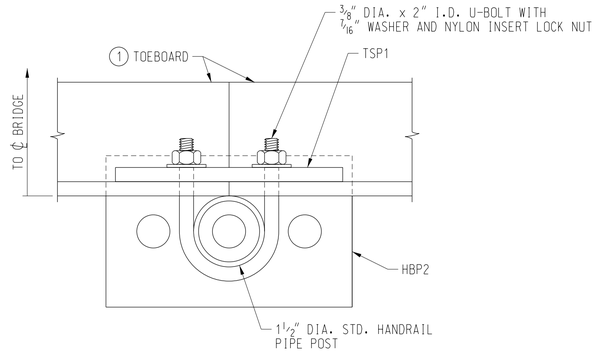
TOEBOARD - RIGHT "R" PIECES

GALVANIZE AFTER FABRICATION
2~TB-R-0611-W REQUIRED
4~TB-R-0911-W REQUIRED



TOEBOARD - LEFT "L" PIECES

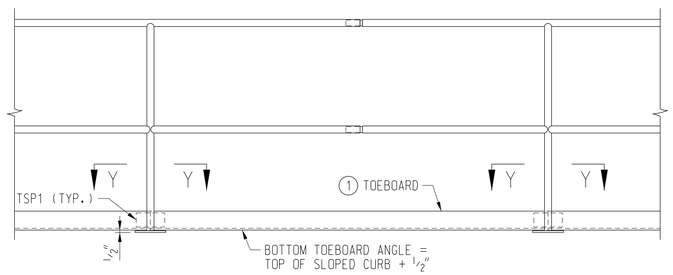
GALVANIZE AFTER FABRICATION
2~TB-L-0611-W REQUIRED
4~TB-L-0911-W REQUIRED



1 4" LEG TO BE VERTICAL WHEN INSTALLED.

SECTION Y-Y

SEE THIS SHEET FOR SECTION Y-Y.



WALKWAY OVER ROADWAY/WALKING PATH

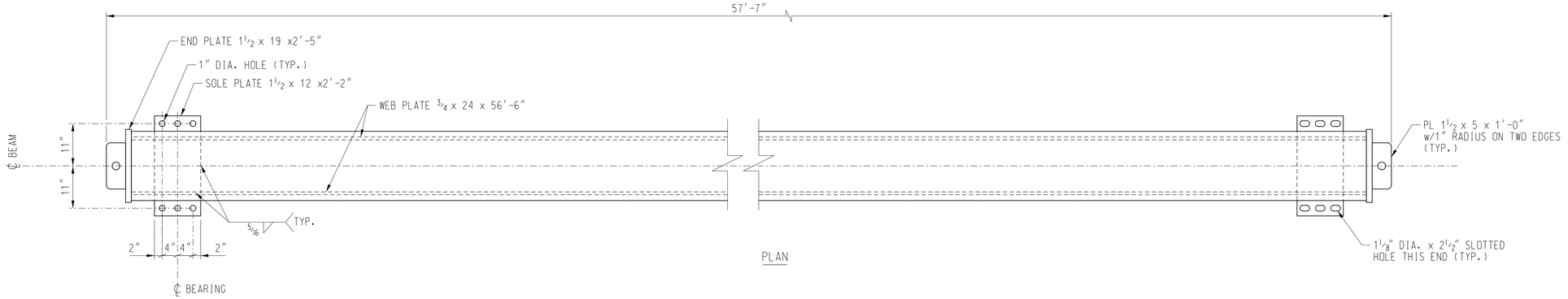
LAT: 45°42'43.00" N LONG: 121°27'38.70" W	DES: MCH	BNSF RAILWAY	100% SUBMITTAL
DOT # XXXXXX	DRAWN: AEP	BRIDGE ENGINEERING KANSAS CITY, KS	PORTLAND, OR TO SP&S JCT., WA
CITY OF BINGEN, KLICKITAT COUNTY, WA.	CHECK: MJK	APPROVED:	BRIDGE NUMBER 75.99A, B
STREET NAME: ELM ST. S.	DATE: 3/2024		OVER FUTURE ELM ST. S.
STATE CONTRACT NO.: XX-XXXX	PLAN: XXX	ASST. DIRECTOR STRUCTURES DESIGN	MISCELLANEOUS STEEL DETALS (SHEET 2 OF 2)
FED. AID. PROJECT NO.: XXXXX-XXXXX(XXX)	LINE SEG: 0047		PLAN NO: 0047-0075.990-022 SHEET: 22 OF 29

File Location: SPLICES

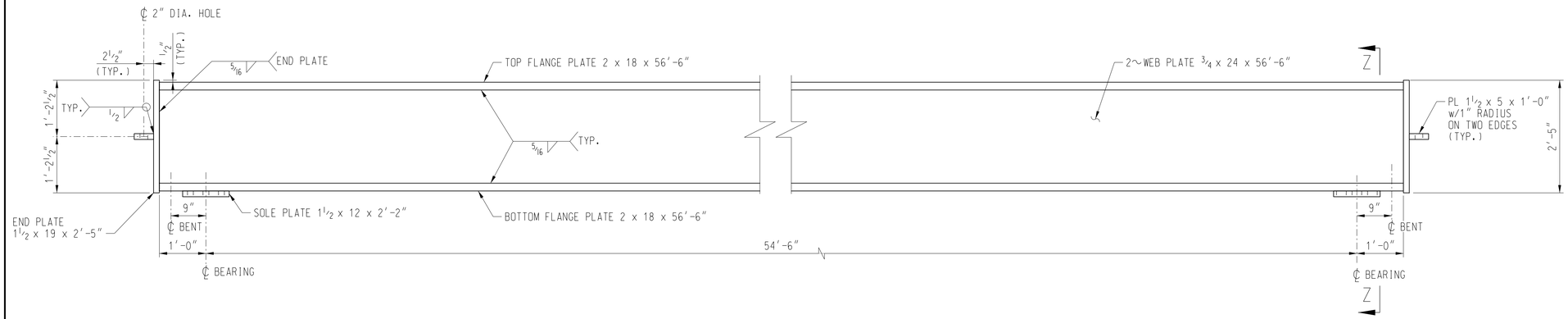
Date Printed: 3/3/2024 Time Printed: 6:33:27 PM

REFERENCE:

0047-0075.990-001 STRUCTURAL AND MISCELLANEOUS NOTES



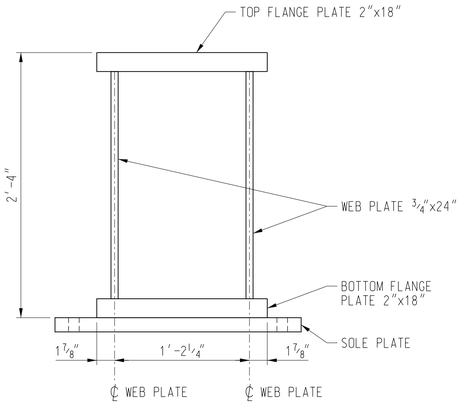
PLAN



ELEVATION

SACRIFICIAL BEAM

2 ~ REQUIRED
ASTM A709 GR. 50W
LIFT WEIGHT = 21,550 LBS.



SECTION Z-Z

SEE THIS SHEET FOR SECTION Z-Z.

SACRIFICIAL BEAM NOTES:

SACRIFICIAL BEAM DESIGN LOADING:

SACRIFICIAL BEAM DESIGNED FOR 50 kip LATERAL LOAD WITH INTENDED FAILURE TO OCCUR WITH DUCTILE PLASTIC DEFORMATION OF ANCHOR ROD MK AR-2 BETWEEN SOLE PLATE AND TOP OF BENT.

CARE SHALL BE TAKEN TO VERIFY CORRECT GRADE OF ANCHOR RODS ARE USED DURING INITIAL INSTALLATION OF ANCHOR RODS AND DURING REPLACEMENT OF ANCHOR RODS IN THE EVENT OF IMPACT RELATED DAMAGE.

MATERIALS:

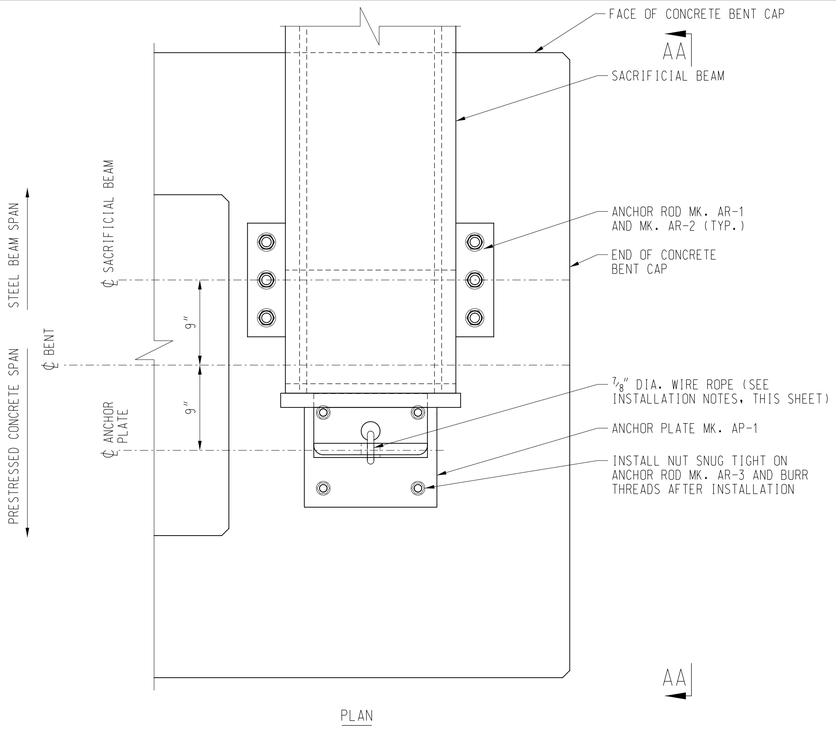
ASTM A588 OR A709 GR 50W STRUCTURAL STEEL.

100% SUBMITTAL

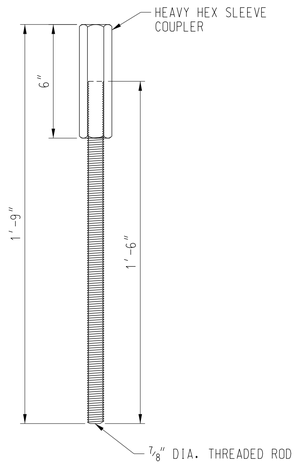
LAT: 45°42′43.00″ N LONG: 121°27′38.70″ W	DES: MCH	BRIDGE ENGINEERING KANSAS CITY, KS	PORTLAND, OR TO SP&S JCT., WA
DOT # XXXXXXX	DRAWN: AEP		BRIDGE NUMBER 75.99A, B
CITY OF BINGEN, KLICKITAT COUNTY, WA.	CHECK: MCH		OVER FUTURE ELM ST. S.
STREET NAME: ELM ST. S.	DATE: 3/2024	APPROVED:	SACRIFICIAL BEAM DETAILS (SHEET 1 OF 2)
STATE CONTRACT NO.: XX-XXXX	PLAN: XXX		
FED. AID. PROJECT NO.: XXXXX-XXXXX(XXX)	LINE SEG: 0047	ASST. DIRECTOR STRUCTURES DESIGN	PLAN NO: 0047-0075.990-023 / SHEET: 23 OF 29

File Location: SPLELS

Date Printed: 3/3/2024 Time Printed: 6:36:38 PM

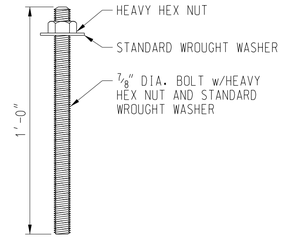


PLAN



ANCHOR ROD MK. AR-1

24 ~ REQUIRED
ASTM F1554, GR. 105 GALVANIZED
INCLUDED IN BEARING ASSEMBLY.



ANCHOR ROD MK. AR-3

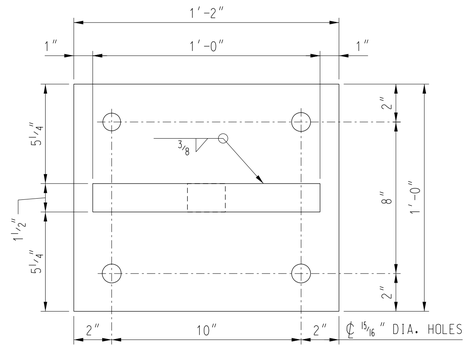
16 ~ REQUIRED
HILTI HAS-R 316 STAINLESS STEEL THREADED ROD
INCLUDED IN BEARING ASSEMBLY.

SACRIFICIAL BEAM INSTALLATION NOTES:

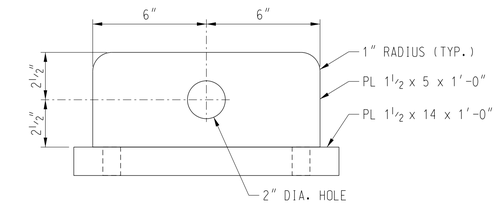
1. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING MINIMUM VERTICAL CLEARANCE FROM LOW CHORD TO ROADWAY AT PROPOSED BRIDGE AND SETTING VERTICAL CLEARANCE AT SACRIFICIAL BEAM LOCATIONS 1 5/8" LESS THAN THE MINIMUM VERTICAL CLEARANCE AT BRIDGE.
2. SACRIFICIAL BEAMS SHALL BE SET LEVEL USING LEVELING NUTS AS NECESSARY.
3. PLACE EPOXY GROUT INTO ANCHOR ROD HOLES AND INSERT ANCHOR RODS. IMMOBILIZED ANCHOR RODS UNTIL EPOXY GROUT REACHES STRENGTH.

WIRE ROPE INSTALLATION INSTRUCTIONS FOR SACRIFICIAL BEAMS:

1. THREAD WIRE ROPE THROUGH PL 1 1/2 x 5 x 1'-0" ON SACRIFICIAL BEAM AND CLIP. TIGHTEN THE CLIP.
2. STRETCH WIRE ROPE AND THREAD THROUGH HOLE IN ANCHOR PLATE AND CLIP. LEAVE CLIP LOOSE.
3. PULL UP ON ROPE BETWEEN CONNECTION POINTS AND REMOVE ALL SAG TO 4-6 INCHES. TIGHTEN CLIP AT ANCHOR PLATE.
4. LAP END OF WIRE ROPE FROM EACH CONNECTION POINT A MINIMUM OF 6". INSTALL CLIP IN MIDDLE LAP AND TIGHTEN CLIP (3 CABLES TOTAL IN MIDDLE CLIP).
5. WIRE ROPE SHALL BE GALVANIZED 7/8" DIAMETER 6x19 XIP FIBER CORE WIRE ROPE WITH MINIMUM BREAKING FORCE 35.4 TONS.



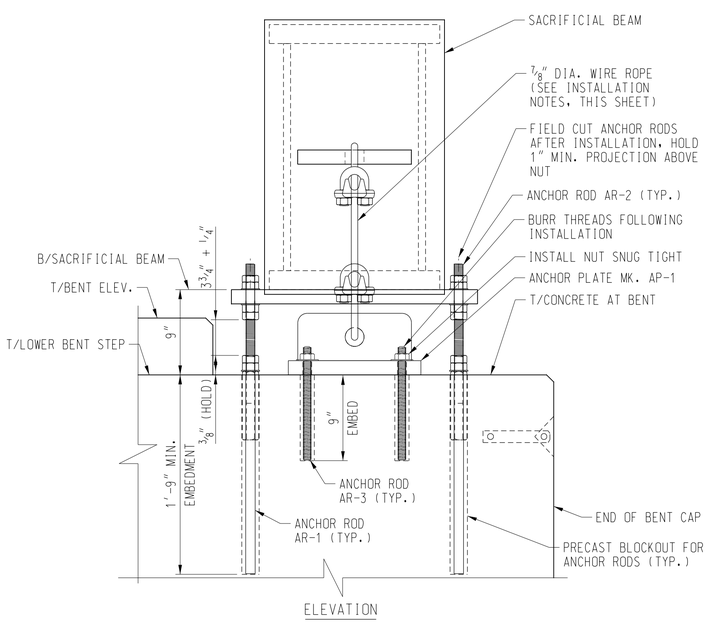
PLAN



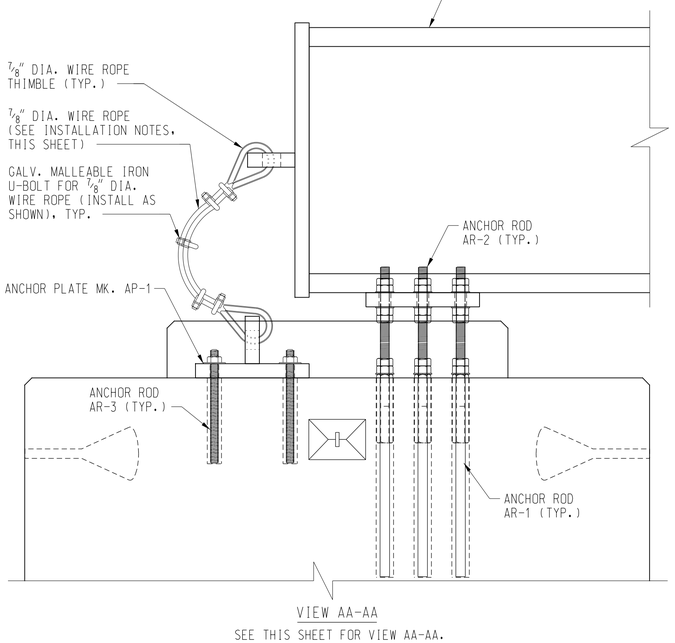
ELEVATION

ANCHOR PLATE MK. AP-1

4 REQUIRED
ASTM A709 GR. 50
GALVANIZE AFTER FABRICATION
WEIGHT = 97 LBS.
INCLUDED IN STRUCTURAL STEEL.

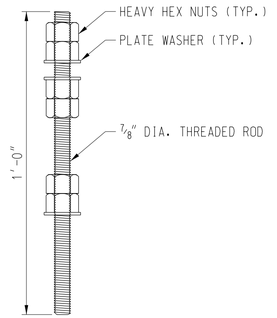


ELEVATION



VIEW AA-AA

SEE THIS SHEET FOR VIEW AA-AA.



ANCHOR ROD MK. AR-2

24 ~ REQUIRED
ASTM F1554, GR. 105 GALVANIZED
INCLUDED IN BEARING ASSEMBLY.

SACRIFICIAL BEAM INSTALLATION DETAIL

LAT: 45°42'43.00" N LONG: 121°27'38.70" W	DES: MCH
DOT # XXXXXXX	DRAWN: AEP
CITY OF BINGEN, KLICKITAT COUNTY, WA.	CHECK: MCH
STREET NAME: ELM ST. S.	DATE: 3/2024
STATE CONTRACT NO.: XX-XXXX	PLAN: XXX
FED. AID. PROJECT NO.: XXXXX-XXXXX(XXX)	LINE SEG: 0047

BNSF RAILWAY
BRIDGE ENGINEERING KANSAS CITY, KS

APPROVED: _____
ASST. DIRECTOR STRUCTURES DESIGN

100% SUBMITTAL

PORTLAND, OR TO SP&S JCT., WA
BRIDGE NUMBER 75.99A, B
OVER FUTURE ELM ST. S.
SACRIFICIAL BEAM DETAILS
(SHEET 2 OF 2)

PLAN NO: 0047-0075.990-024 SHEET: 24 OF 29

File Location: SPLELS
Date Printed: 3/3/2024 Time Printed: 6:37:57 PM

BILL OF MATERIAL - BRIDGE 75.99A, B

ITEM	QUAN.	UNIT	DESCRIPTION	MARK	SIZE	LENGTH	REMARKS
1	352,440	LBS.	STEEL BEARING PILE (66 PIECES)		HP14x89	60'-0"	ASTM A572 GR. 50
2	44	EA.	PILE POINT	HB-77600-B			
3	44	EA.	PREFABRICATED OR REINFORCED PLATE PILE SPLICE				PER STD. PLAN 0000-1910-02
4	25,600	LBS.	STEEL CHANNEL BRACING (64 PCS.)		C10x20	20'-0"	ASTM A572 GR. 50
5	24	EA.	STEEL PILE STRUT	P100		2'-0"	ASTM A572 GR. 50, FABRICATED FROM HP14x89
6							
7	2	EA.	SPECIAL PRECAST CONC. ABUTMENT CAP	SAC75.99-1			PER DETAILS ON PLAN 0047-0075.990-007 & 008
8	2	EA.	SPECIAL PRECAST CONC. ABUTMENT CAP	SAC75.99-2			PER DETAILS ON PLAN 0047-0075.990-007 & 008
9	2	EA.	SPECIAL PRECAST WING WALL	SWW75.99-1	9"x7'-6 3/4"	8'-6"	PER DETAILS ON PLAN 0047-0075.990-010
10	2	EA.	SPECIAL PRECAST WING WALL	SWW75.99-2	9"x7'-6 3/4"	8'-6"	PER DETAILS ON PLAN 0047-0075.990-010
11	2	EA.	SPECIAL PRECAST CONC. DOUBLE BENT CAP	SDC75.99-1			PER DETAILS ON PLAN 0047-0075.990-009
12	2	EA.	SPECIAL PRECAST CONC. DOUBLE BENT CAP	SDC75.99-2			PER DETAILS ON PLAN 0047-0075.990-009
13	4	EA.	P/S CONC. DBL. BOX BEAM w/ 24" VERTICAL CURB AND CURB DRAINS	B42-3910-TS	42" x 84"	39'-10"	PER STD. PLAN 0000-1213-01 & 02 AND AS MODIFIED ON PLAN 0047-0075.990-011
14	4	EA.	MODIFIED P/S CONC. DBL. BOX BEAM w/ SLOPED CURB AND CURB DRAINS	SB42-3910-SL	42" x 84"	39'-10"	
15							
16	8	EA.	DECK PLATE, GALV.	DPT1			PER STD. PLAN 0000-1910-04
17	8	EA.	DECK PLATE, GALV.	DPS2			PER STD. PLAN 0000-1910-04
18	8	EA.	DECK PLATE, GALV.	DPS3			PER STD. PLAN 0000-1910-04
19							
20	16	EA.	RETAINER BRACKET, GALV.	B102			PER STD. PLAN 0000-1910-05
21	16	EA.	WASHER, SQUARE, GALV.	W100	3/4" x 4"	0'-4"	PER STD. PLAN 0000-1910-05
22							
23	2	EA.	HANDRAIL PANEL, ASTM A53, GALV.	HP20-0-0600-S	1 1/2" DIA.	10'-4 1/4"	PER STD. PLAN 0000-1222-02
24	2	EA.	HANDRAIL PANEL, ASTM A53, GALV.	HP31-0-0600-S	1 1/2" DIA.	17'-4 1/4"	PER STD. PLAN 0000-1222-03
25	4	EA.	HANDRAIL PANEL, ASTM A53, GALV.	HP40-0-0700-S	1 1/2" DIA.	13'-11 1/2"	PER STD. PLAN 0000-1222-01
26	4	EA.	HANDRAIL PANEL, ASTM A53, GALV.	HP20-0-0900-W	1 1/2" DIA.	14'-10 1/4"	PER STD. PLAN 0000-1222-02
27	4	EA.	HANDRAIL PANEL, ASTM A53, GALV.	HP31-1-0900-W	1 1/2" DIA.	26'-5 3/4"	PER STD. PLAN 0000-1222-03
28							
29	38	EA.	HANDRAIL BASE PLATE, ASTM A36, GALV.	HBP2			PER STD. PLAN 0000-1222-05
30	76	EA.	BOLT, A307, GALV.		3/4" DIA.	2 1/4"	HANDRAIL PANEL TO HBP2
31	40	EA.	BOLT, A307, GALV.		7/8" DIA.	9"	HBP2 TO SLOPED CONCRETE CURB
32	36	EA.	BOLT, A307, GALV.		7/8" DIA.	2"	HBP2 TO SLOPED STEEL CURB
33	76	EA.	NUT, CTR. LOCKING, ZINC PLATED		3/4"		HANDRAIL PANEL TO HBP2
34	76	EA.	NUT, CTR. LOCKING, ZINC PLATED		7/8"		HBP2 TO SLOPED CURB
35	36	EA.	WASHER, FLAT, ROUND, GALV.		15/16" I.D. x 1 3/4" O.D.		HBP2 TO SLOPED STEEL CURB
36	152	EA.	WASHER, FLAT, ROUND, GALV.		13/16" I.D. x 1 7/16" O.D.		HANDRAIL PANEL TO HBP2
37	20	EA.	WASHER, FLAT, ROUND, GALV.		15/16" I.D. x 2 1/4" O.D.		HBP2 TO SLOPED CONCRETE CURB
38	20	EA.	CLIPPED WASHER, GALV.				PER STD. PLAN 0000-1222-05
39							
40	2	EA.	TOEBOARD, ASTM A572 GR. 50, GALV.	TB-R-0611-W	L4x3x3/8"	6'-11"	PER DETAILS ON PLAN 0047-0075.990-022
41	2	EA.	TOEBOARD, ASTM A572 GR. 50, GALV.	TB-L-0611-W	L4x3x3/8"	6'-11"	PER DETAILS ON PLAN 0047-0075.990-022
42	12	EA.	TOEBOARD, ASTM A572 GR. 50, GALV.	TB-0-0700-W	L4x3x3/8"	7'-0"	PER DETAILS ON PLAN 0047-0075.990-022
43	4	EA.	TOEBOARD, ASTM A572 GR. 50, GALV.	TB-R-0911-W	L4x3x3/8"	9'-11"	PER DETAILS ON PLAN 0047-0075.990-022
44	4	EA.	TOEBOARD, ASTM A572 GR. 50, GALV.	TB-L-0911-W	L4x3x3/8"	9'-11"	PER DETAILS ON PLAN 0047-0075.990-022
45	8	EA.	TOEBOARD, ASTM A572 GR. 50, GALV.	TB-0-1000-W	L4x3x3/8"	10'-0"	PER DETAILS ON PLAN 0047-0075.990-022
46							
47	26	EA.	TOEBOARD SPLICE PLATE, ASTM A572 GR. 50, GALV.	TSP1	3/8" x 3"	0'-6"	FOR TOEBOARD SPLICES AT HANDRAIL POSTS, PER DETAILS ON PLAN 0047-0075.990-022
48	38	EA.	U-BOLT, A307, GALV.		3/8" DIA. X 2" I.D.		THRU TOEBOARD SPLICE PLATE AND TOEBOARD AT HANDRAIL POSTS
49	76	EA.	NUT, CTR. LOCKING, ZINC PLATED		3/8"		FOR U-BOLT
50	76	EA.	WASHER, FLAT ROUND, GALV.		7/16" I.D. x 1 1/16" O.D.		FOR U-BOLT
51							
52	1	EA.	STEEL BEAM ASSEMBLY w/SLOPED CURB	S42-5510-SL-UNIT 1	W36x282	55'-10"	PER DETAILS ON PLAN 0047-0075.990-012 & -016
53	1	EA.	STEEL BEAM ASSEMBLY w/VERTICAL CURB	S42-5510-TS-UNIT 2	W36x282	55'-10"	PER DETAILS ON PLAN 0047-0075.990-013 & -017
54	1	EA.	STEEL BEAM ASSEMBLY w/VERTICAL CURB	S42-5510-TS-UNIT 3	W36x282	55'-10"	PER DETAILS ON PLAN 0047-0075.990-014 & -017
55	1	EA.	STEEL BEAM ASSEMBLY w/SLOPED CURB	S42-5510-SL-UNIT 4	W36x282	55'-10"	PER DETAILS ON PLAN 0047-0075.990-015 & -016
56							
57	2	EA.	BACKWALL PLATE	BWP75.99-1	1/2" x 33"	9'-7"	PER DETAIL ON 0047-0075.990-004
58	2	EA.	BENT PLATE	BP75.99-1	1/2" x 22 1/2"	1'-9"	PER DETAIL ON 0047-0075.990-004
59							
60	8	EA.	SPECIAL BALLAST PAN COVER PLATE, ASTM A572 GR. 50	SBP75.99-1			PER DETAIL ON PLAN 0047-0075.99-021
61	2	EA.	MASONRY PLATE	MP3 (EXP.)	1"x14"	13'-10"	PER STD. PLAN 0000-1221-04
62	2	EA.	MASONRY PLATE	MP4 (FIX.)	1"x14"	13'-10"	PER STD. PLAN 0000-1221-04
63	4	EA.	PAD, LAMINATED, STEEL REINFORCED, NEOPRENE 60 DUROMETER	BP1	2"x12"	13'-10"	PER STD. PLAN 0000-1221-04
64	16	EA.	ANCHOR BOLT	AB1	2" DIA.	1'-9"	PER STD. PLAN 0000-1221-04
65	32	EA.	PREMOLDED JOINT FILLER, ASPHALT IMPREGNATED		1/2" x 40"	5'-6"	BETWEEN ENDS OF BEAMS AND ABUTMENT WALLS
66	80	L.F.	PVC PERFORATED DRAIN PIPE w/FILTER FABRIC WRAP		6" DIA.		SCHEDULE 80, FIELD CUT AS NECESSARY REFER TO PLAN 0047-0075.990-019 FOR FILTER FABRIC REQUIREMENTS
67							
68	16	EA.	PAD, URETHANE DUROMETER 70		3/4"x10"	5'-6"	

BILL OF MATERIAL - BRIDGE 75.99A, B (CONTINUED)

ITEM	QUAN.	UNIT	DESCRIPTION	MARK	SIZE	LENGTH	REMARKS
69	2	EA.	SACRIFICIAL BEAM, ASTM A709 GR. 50W				PER DETAILS ON PLAN 0047-0075.99-023 & -024
70							
71	4	EA.	ANCHOR PLATE, ASTM A709 GR. 50, GALV.	AP-1			PER DETAILS ON PLAN 0047-0075.99-024
72	24	EA.	ANCHOR ROD w/ COUPLER, ASTM F1554, GR 105, GALV.	AR-1	7/8" DIA.	1'-6"	PER DETAILS ON PLAN 0047-0075.990-024
73	24	EA.	ANCHOR ROD w/ 6 HEAVY HEX NUTS, ASTM F1554, GR 105, GALV.	AR-2	7/8" DIA.	1'-0"	PER DETAILS ON PLAN 0047-0075.990-024
74	16	EA.	ANCHOR ROD w/ WASHER AND NUT (HILTI HAS-R 316)	AR-3	7/8" DIA.	1'-0"	PER DETAILS ON PLAN 0047-0075.990-024
75	8	EA.	WIRE ROPE THIMBLE		7/8" DIA.		FOR SACRIFICIAL BEAM SAFETY CABLE
76	20	EA.	GALV. MALLEABLE IRON U-BOLT		7/8" DIA.		FOR SACRIFICIAL BEAM SAFETY CABLE
77	20	L.F.	6x19 XIP FIBER CORE WIRE ROPE, GALV.		7/8" DIA.		FOR SACRIFICIAL BEAM SAFETY CABLE; SEE PLAN 0047-0075.990-024 FOR WIRE ROPE TYPE
78							
79	36	EA.	BOLT, A307		7/8" DIA.	2 1/2"	TO FASTEN BRACKET B75.99-1 TO STEEL BEAMS
80	18	EA.	UTILITY SUPPORT BRACKET, ASTM A709 GR. 50	B75.99-1			TO ATTACH UNISTRUT BRACKET TO STEEL SPANS
81	62	EA.	UTILITY SUPPORT BRACKET, GALV., UNISTRUT PRODUCT	P2543			PER DETAILS ON PLAN 0047-0075.990-018
82	248	EA.	UTILITY CONDUIT CLAMP, GALV., UNISTRUT PRODUCT	P1121			PER DETAILS ON PLAN 0047-0075.990-018
83	1,248	L.F.	STEEL CONDUIT, ASTM A53 GR. B, GALV. SCH. 40		4" I.D.		USE THREADED COUPLERS AND EXPANSION JOINTS AS REQUIRED BY BNSF TELECOM REQUIREMENTS
84							
85	23	EA.	WALK BRACKET, GALV.	WB75.99			FOR INTERIOR WALKWAY PER DETAIL ON PLAN 0047-0075.99-021
86	36	EA.	BOLT, A307, GALV.		7/8" DIA.	2"	BRACKET WB75.99 TO STEEL VERTICAL CURB
87	36	EA.	WASHER, FLAT, ROUND, GALV.		15/16" I.D. x 1 3/4" O.D.		BRACKET WB75.99 TO STEEL VERTICAL CURB
88	36	EA.	NUT, CTR. LOCKING, ZINC PLATED		7/8"		BRACKET WB75.99 TO STEEL VERTICAL CURB
89							
90	20	EA.	GRIP STRUT SAFETY GRATING, 12 GA		3"x9 1/2"	14'-0"	FURNISH IN FOLLOWING LENGTHS: 8 @ 12'-11", 4 @ 13'-11"; 8 @ 14'-0"
91	60	EA.	CARRIAGE BOLT		5/16" DIA.	4 1/2"	TO FASTEN GRIP STRUT TO BRACKET
92	60	EA.	ANCHORING CLIPS	12262			TO FASTEN GRIP STRUT TO BRACKET
93	60	EA.	WASHER		3/8" I.D. x 7/8" O.D.		TO FASTEN GRIP STRUT TO BRACKET
94	60	EA.	LOCK NUT, SELF LOCKING NYLON INSERT		5/16" DIA.		TO FASTEN GRIP STRUT TO BRACKET
95							
96	205,475	LBS.	TEMPORARY SHEET PILE SHORING (70 PCS.)		SKC 38	33'-0"	ASTM A572, GR. 50
97	2	EA.	TEMPORARY STEEL CLOSURE PLATE	TSCP75.99	1/2 x 36	10'-0"	PER DETAIL ON PLAN 0047-0075.99-20
98	2	EA.	BRIDGE NUMBER SIGN	75.99			PER STD. PLAN 3103.01.04 (TRACK STD.)
99	4	EA.	SIGN POST			6'-0"	PER STD. PLAN 3001.01.09 (TRACK STD.)
100	2	EA.	NO TRESPASSING SIGN		18"x24"		PER STD. PLAN 3070-01.05 (TRACK STD.)
101							

NOTES:
SUPERVISOR STRUCTURES TO FURNISH HARDWARE FOR SIGNS AS REQUIRED, ORGANIC ZINC RICH BRIDGE PAINT, EPOXY AND GROUT FOR BEARING PADS, CONTROLLED DENSITY FILL BACKFILL AT ABUTMENTS, AND PETROLATUM COATING FOR PILE PLATES AND TOPS OF PILES AT ABUTMENTS. QUANTITIES DO NOT CONTAIN EXTRA OR ROUNDED UP VALUES.

100% SUBMITTAL

LAT: 45°42'43.00" N LONG: 121°27'38.70" W	DES: MCH	BNSF RAILWAY	PORTLAND, OR TO SP&S JCT., WA
DOT # XXXXXXX	DRAWN: AEP	BRIDGE ENGINEERING KANSAS CITY, KS	BRIDGE NUMBER 75.99A, B
CITY OF BINGEN, KLICKITAT COUNTY, WA.	CHECK: MJK		OVER FUTURE ELM ST. S.
STREET NAME: ELM ST. S.	DATE: 3/2024	APPROVED:	BILL OF MATERIAL
STATE CONTRACT NO.: XX-XXXX	PLAN: XXX	ASST. DIRECTOR STRUCTURES DESIGN	PLAN NO: 0047-0075.990-025 SHEET: 25 OF 29
FED. AID. PROJECT NO.: XXXXX-XXXXX(XXX)	LINE SEG: 0047		

File Location: $FILE$

Date Printed: 3/3/2024 Time Printed: 6:43:59 PM