INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	VICINITY MAP/ SURVEY CONTROL SHEET
3	HORIZONTAL CONTROL SHEET
4	PROJECT CLEARANCE SUMMARY
5	ROADWAY SUMMARY
6	BRIDGE SUMMARY
7	PIPE CULVERT SUMMARY
8-9	TYPICAL SECTION SHEETS
10-16	ROADWAY PLAN AND PROFILE SHEETS
17-22	ACCESS ROAD PLAN AND PROFILE SHEETS
23	APPROACH DETAIL SHEET
24-25	DRAINAGE DETAIL SHEETS
26-27	SWPP PLAN
28-30	SIGNING & PVMT MARKING PLAN
31-34	TRAFFIC CONTROL PLAN
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1-30	BRIDGE PLANS (BRG. DWG. NO. 17761)
1-21	ITD STANDARD DRAWINGS

IDAHO
TRANSPORTATION DEPARTMENT

PLAN AND PROFILE OF PROPOSED
COVE RD BRIDGE, WASHINGTON CO
FEDERAL AID PROJECT NO. A019(129)
KEY NO. 19129
WASHINGTON COUNTY

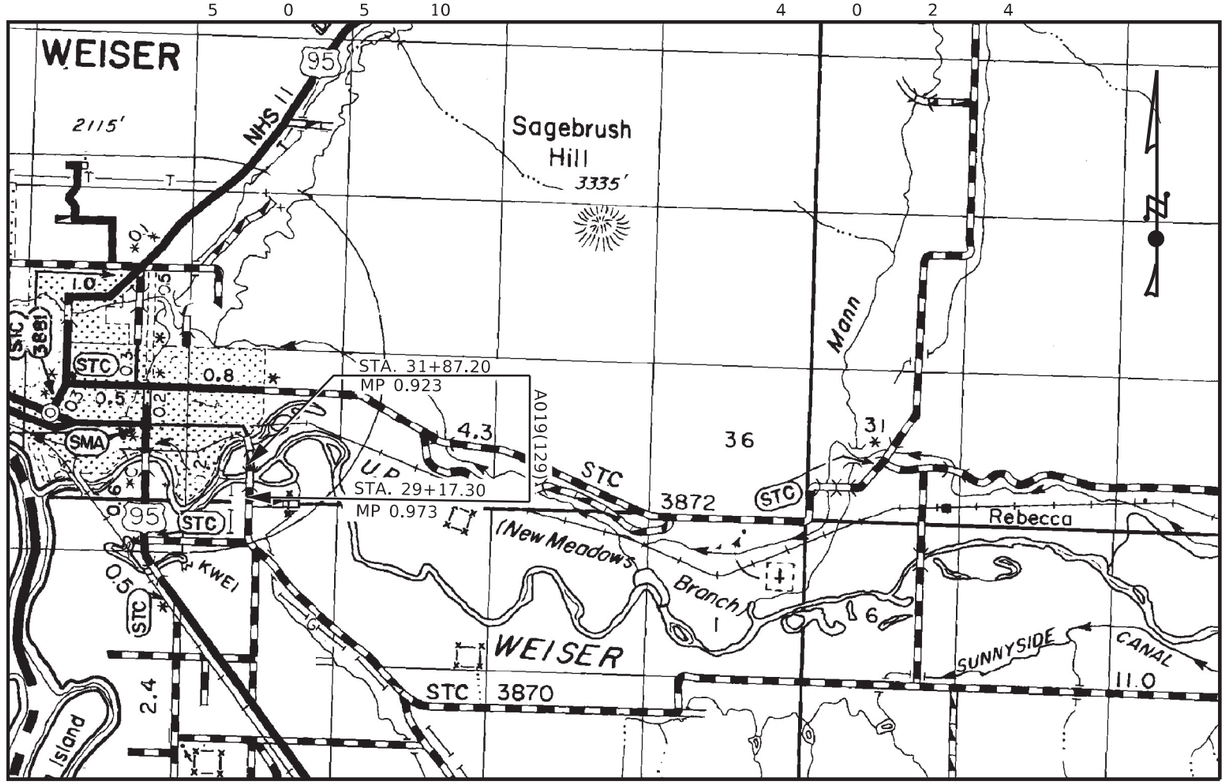
MARCH 2025

SCALES IN FEET

HORIZONTAL 20 0 20 40 FEET

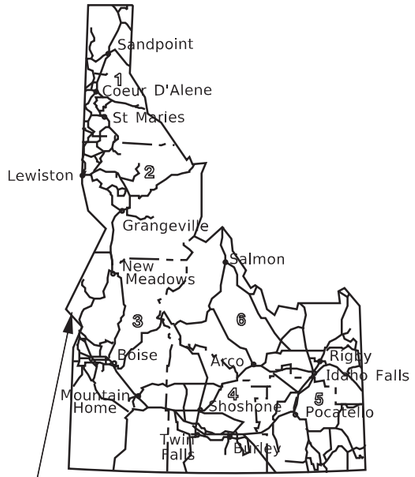
VERTICAL 5 0 5 10 FEET

FRONTAGE RDS VERTICAL 4 0 2 4 FEET



VICINITY MAP SCALE

1 ½ 0 1 2 MILES



A019(129)
STC-8217, COVE RD BRIDGE
WASHINGTON CO
M.P. 0.923 TO M.P. 0.973

COVE ROAD
DESIGN DESIGNATION

ADT 2025	634
ADT 2045	942
DHV 2025	63
DHV 2045	94
D	60/40%
V	35 MPH
TRUCKS:	
ADT 2025	63
ADT 2045	94
DHV 2025	7
DHV 2045	10

REVISIONS			
NO.	DATE	BY	DESCRIPTION

THE DIMENSIONS SHOWN ON THE PLANS SHALL BE ATTAINED WITHIN LIMITS OF PRECISION THAT GOOD CONSTRUCTION PRACTICES WILL PERMIT

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY

CADD FILE NAME
19129_TITL_001.SHT

DRAWING DATE:
MARCH 2025

WASHINGTON COUNTY

HDR / ARDURRA

PROJECT NO.
A019(129)

TITLE SHEET
COVE RD BRIDGE
WASHINGTON CO

ENGLISH

COUNTY WASHINGTON

KEY NUMBER 19129

SHEET 1 OF 37

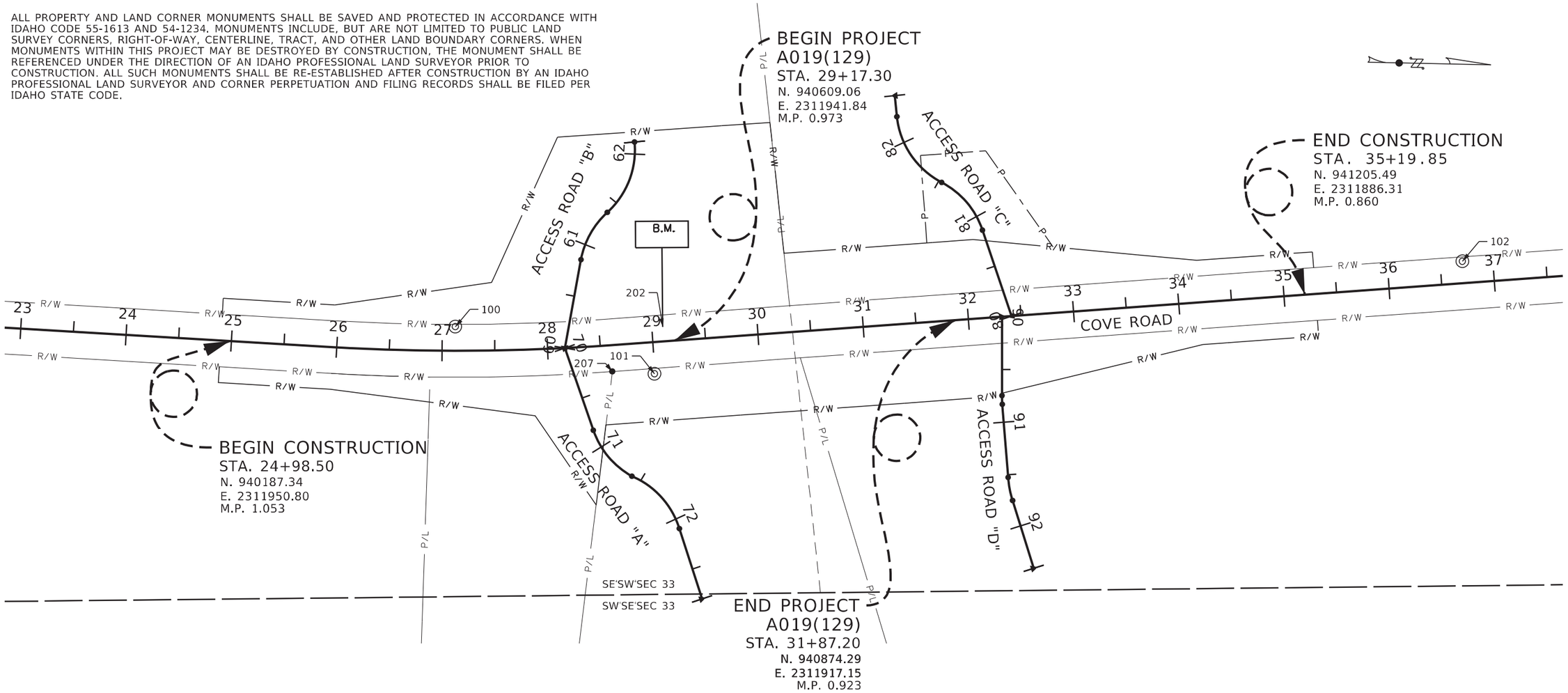
Approved for Advertising

Digitally signed by Mohsen Amirmojahedi
Date: 2025.05.08 08:28:22 -06'00'

PLOTTED: 3/27/2025 9:18:44 AM
FILENAME: pw://pwhdruswes01:HDR_US_West_01/Documents/ITD_Headquarters/ITD-Cove_Rd_Brdg_Replacement/6.0_CAD_BIM/6.2_Work_In_Progress/6.2.3_Roadway/20350_TITL_001

T.11N., R.5W., B.M.
SEC 33

ALL PROPERTY AND LAND CORNER MONUMENTS SHALL BE SAVED AND PROTECTED IN ACCORDANCE WITH IDAHO CODE 55-1613 AND 54-1234. MONUMENTS INCLUDE, BUT ARE NOT LIMITED TO PUBLIC LAND SURVEY CORNERS, RIGHT-OF-WAY, CENTERLINE, TRACT, AND OTHER LAND BOUNDARY CORNERS. WHEN MONUMENTS WITHIN THIS PROJECT MAY BE DESTROYED BY CONSTRUCTION, THE MONUMENT SHALL BE REFERENCED UNDER THE DIRECTION OF AN IDAHO PROFESSIONAL LAND SURVEYOR PRIOR TO CONSTRUCTION. ALL SUCH MONUMENTS SHALL BE RE-ESTABLISHED AFTER CONSTRUCTION BY AN IDAHO PROFESSIONAL LAND SURVEYOR AND CORNER PERPETUATION AND FILING RECORDS SHALL BE FILED PER IDAHO STATE CODE.



SURVEY CONTROL POINTS

POINT	STATION	OFFSET	NORTHING	EASTING	ELEVATION	DESCRIPTION
100	27+12.60	22.81' LT	940400.91	2311932.94	2111.20	SET 5/8" REBAR WITH RED T-O CONTROL CAP
207	28+59.75	25.01' RT	940550.55	2311972.40	2112.92	FOUND 1/2" REBAR
101	28+99.51	30.10' RT	940590.61	2311973.79	2116.35	SET 5/8" REBAR WITH RED T-O CONTROL CAP
202	29+10.57	13.74' LT	940597.57	2311929.12	2117.34	BENCH MARK
102	36+71.19	20.74' LT	941354.25	2311851.63	2110.16	SET 5/8" REBAR WITH RED T-O CONTROL CAP

FEET
50 0 100 200

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED M. HUFFMAN
DESIGN CHECKED M. MCDONALD
DETAILED M. HUFFMAN
DRAWING CHECKED S. FRISBIE

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
CADD FILE NAME 19129_SCRL_001.SHT
DRAWING DATE: MARCH 2025

WASHINGTON COUNTY
ARDURRA

PROJECT NO. A019(129)

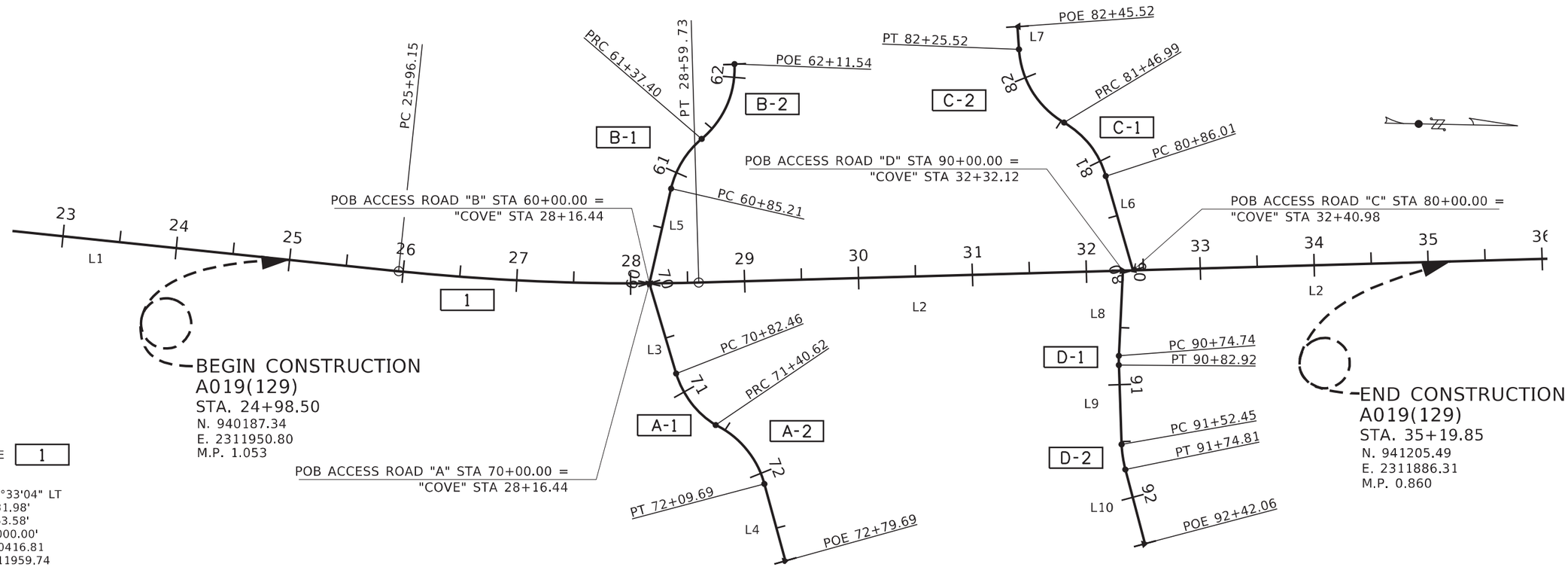
VICINITY MAP/SURVEY CONTROL
COVE RD BRIDGE
WASHINGTON CO

ENGLISH
COUNTY WASHINGTON
KEY NUMBER 19129
SHEET 2 OF 37

PROFESSIONAL LAND SURVEYOR REGISTERED 8961 3-27-25 STATE OF IDAHO STEVEN J. FRISBIE

pw:/pwhdrusweS0iHDR_US_West_0i/Documents/ITD_Headquarters/ITD-Cove_Rd_Brdg_Replacement/6.0_CAD_BIM/6.2_Work_In_Progress/6.2.3_Roadway/19129_SCRL_001 3/27/2025 9:17:11 AM

T.11N., R.5W., B.M.
SEC 33



CURVE 1

Δ= 07°33'04" LT
T= 131.98'
L= 263.58'
R= 2000.00'
P.I. N. 940416.81
E. 2311959.74

CURVE A-1

Δ= 41°39'20" LT
T= 30.43'
L= 58.16'
R= 80.00'
P.I. N. 940544.29
E. 2311959.74

CURVE A-2

Δ= 49°28'15" RT
T= 36.86'
L= 69.07'
R= 80.00'
P.I. N. 940605.35
E. 2312084.98

CURVE B-1

Δ= 37°22'28" RT
T= 27.06'
L= 52.19'
R= 80.00'
P.I. N. 940523.04
E. 2311840.23

CURVE B-2

Δ= 53°06'11" LT
T= 39.98'
L= 74.15'
R= 80.00'
P.I. N. 940571.73
E. 2311794.15

CURVE C-1

Δ= 43°40'12" LT
T= 32.05'
L= 60.98'
R= 80.00'
P.I. N. 940887.75
E. 2311801.11

CURVE C-2

Δ= 56°14'51" RT
T= 42.76'
L= 78.54'
R= 80.00'
P.I. N. 940820.79
E. 2311767.74

CURVE D-1

Δ= 04°41'12" LT
T= 4.09'
L= 8.18'
R= 100.00'
P.I. N. 940920.41
E. 2311991.81

CURVE D-2

Δ= 12°48'47" LT
T= 11.23'
L= 22.36'
R= 100.00'
P.I. N. 940928.84
E. 2312076.24

LINE TABLE

LINE NO.	BEARING	DISTANCE
L1	N2°13'54"E	1596.15'
L2	N5°19'09"W	1324.68'
L3	N69°41'52"E	82.46'
L4	N70°53'43"E	70.00'
L5	N80°47'41"W	85.21'
L6	S70°09'23"W	86.01'
L7	S82°44'02"W	20.00'
L8	N88°58'55"E	74.74'
L9	N84°17'43"E	69.53'
L10	N71°28'55"E	67.24'

NOTES:

1. THE MODIFIED COORDINATES SHOWN HEREON ARE BASED ON THE NAD 83 IDAHO STATE PLANE COORDINATE SYSTEM WEST ZONE 1103, U.S. SURVEY FEET. ALL COORDINATES SHOWN HAVE BEEN ADJUSTED FROM STATE PLANE GRID TO PROJECT/GROUND COORDINATES USING A COMBINED ADJUSTMENT FACTOR OF 1.00005066357 FROM 0,0,0. ALL BEARING SHOWN ARE GRID BEARING VALUES. ALL DISTANCES SHOWN ARE PROJECT/ GROUND DISTANCE VALUES.

FEET
50 0 100 200

PROFESSIONAL ENGINEER LICENSED 19600 3/27/25 STATE OF IDAHO MICHELLE V. MCDONALD

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED M. MCDONALD
DESIGN CHECKED B. MARTIN
DETAILED M. MCDONALD
DRAWING CHECKED B. MARTIN

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
CADD FILE NAME 19129_HCRL_001.SHT
DRAWING DATE: MARCH 2025

WASHINGTON COUNTY
ARDURRA

PROJECT NO. A019(129)
HORIZONTAL CONTROL COVE RD BRIDGE WASHINGTON CO

ENGLISH
COUNTY WASHINGTON
KEY NUMBER 19129
SHEET 3 OF 37

pw:/pwhdrusweS0iHDR_US_West_0i/Documents/ITD_Headquarters/ITD-Cove_Rd_Brdg_Replacement/6.0_CAD_BIM/6.2_Work_In_Progress/6.2.3_Roadway/19129_HCRL_001 3/27/2025 9:18:55 AM

CLEARANCES

	* CLEARED UNDER PROJECT NO.	* APPROVAL DATE
PROJECT STANDARDS		
CHARTER APPROVAL ☐ AASHTO ☐ 3R ☐ 1R ■ STATE	A019(129)	5/15/2018
☐ PM ☐ OTHER		
DESIGN EXCEPTIONS:	N/A	
PUBLIC HEARING WAIVER	A019(129)	10/21/2021
PUBLIC HEARING DATE (Latest hearing date held or scheduled for opportunity)		
DESIGN APPROVAL	A019(129)	11/12/2021
RECLAMATION PLAN APPROVAL NO(S)	N/A	
AIRPORT	N/A	
Land Survey Monument Search and Documentation (I.C.55-1613)	A019(129)	2/1/2018
R/W CERTIFICATE: Issued by ■ HQ ☐ DISTRICT	A019(129)	4/15/2025
TRIBAL LANDS: ☐ AGREEMENT REQUIRED ☐ SPECIAL PROVISIONS FOR CONTRACT PROPOSAL	N/A	
BRIDGE PS & E	A019(129)	3/28/2025
ENVIRONMENTAL DECISION: TYPE ■ CAT-EX ☐ FONSI ☐ ROD	A019(129)	10/1/2021
ENVIRONMENTAL RE-EVALUATION	A019(129)	2/13/2025

PERMITS

			* EXPIRATION DATE
IDAHO DEPARTMENT OF WATER RESOURCES PERMIT NO(S) S67-20290	A019(129)	1/5/2024	1/31/2027
US ARMY CORPS OF ENGINEERS 404 PERMIT NO(S) NWW-2023-00377	A019(129)	2/16/2023	3/14/2026
OTHER	N/A		

DEQ SECTION 401 WATER QUALITY CERTIFICATION ■ YES ☐ NO

NPDES GENERAL PERMIT/SWPPP REQUIRED ■ YES ☐ NO

POLLUTION PREVENTION PLAN REQUIRED ☐ YES ■ NO

AGREEMENTS (List Appropriate Name)

LOCAL: CITY	N/A		
COUNTY	N/A		
HIGHWAY DISTRICT	N/A		
ROAD CLOSURE AND MAINTENANCE	N/A		
STATE/LOCAL CONSTRUCTION WASHINGTON CO	A019(129)	3/07/2025	

IRRIGATION DISTRICT(S): Crossing Agreement Required ☐ YES ■ NO
(Signatures Required on either Structure Drawing or Bridge Sheet)

UTILITIES: List all Utilities shown on plans

		RETAIN & PROTECT	* APPROVAL DATES: UTILITY HEARING WAIVER	* APPROVAL DATES: AGREEMENT	* AGREEMENT NO.
Co.	IDAHO POWER	☐	3/7/2023	6/1/2023	WASHINGTON CO
Co.	SYRINGA NETWORKS	☐	3/7/2023		N/A
Co.	MIDVALE TELEPHONE COMPANY, INC (MTE)	☐	2/16/2023		N/A
Co.	INTERMOUNTAIN GAS COMPANY (INT GAS)	☐	10/18/2023		N/A
Co.		☐			
Co.		☐			
Co.		☐			

RAILROAD List all Railroads encroached upon

	* AGREEMENT FOR	* AGREEMENT: EFFECTIVE DATE	* AGREEMENT: NO.
Co.	N/A		
Co.	N/A		

NOTES

1. BASE AGGREGATE QUANTITIES INCLUDE SHOULDERS, APPROACHES, GUARDRAIL AND TERMINAL ENDS.

ESTIMATING BASIS

PAVING:

1. PG 64-28 ASPHALT CEMENT FOR SUPERPAVE HMA SP-2 AT 5.5% BY WEIGHT OF MIXTURE WITH 0.5% ANTI-STRIP ADDITIVE BY WEIGHT OF ASPHALT CONTENT.
2. USE CSS-1 DILUTED EMULSIFIED ASPHALT FOR TACK COAT AT 0.08 GAL/SY BETWEEN LIFTS OF HMA.

AGGREGATE:

1. 1/2" AGGREGATE FOR SUPERPAVE HMA SP-2 AT 143 PCF INCLUDING ASPHALT AND ADDITIVES.
2. 3/4" AGGREGATE FOR UNTREATED BASE (TYPE B) AT 135 PCF, INCLUDING 7% MOISTURE.
3. GRANULAR SUBBASE AT 130 PCF, INCLUDING 4% MOISTURE.
4. GRANULAR BORROW AT 125 PCF, INCLUDING 6% MOISTURE. USED FOR EMBANKMENT CONSTRUCTION, BACKFILL AROUND CULVERTS, AND UTILITIES.
5. BASE AND AGGREGATE QUANTITIES HAVE BEEN INCREASED TO CONSTRUCT SHOULDERS, APPROACHES, GUARDRAIL, AND GUARDRAIL TERMINAL ENDS.

GEOTEXTILE:

1. SUBGRADE SEPARATION GEOTEXTILE, TYPE III.

DUST ABATEMENT:

1. WATER ESTIMATED AT 100 MG WITH APPLICATION OF 0.5 GAL/SF TO ALL SOIL AREAS DISTURBED BY EARTHWORK ACTIVITIES.

SMOOTHNESS:

1. SURFACE SMOOTHNESS IN ACCORDANCE WITH STRAIGHT-EDGE REQUIREMENTS.

* ENTER "N/A" WHEN NOT APPLICABLE

** LPA PROJECTS - DATE ENTERED BY ROADWAY DESIGN WHEN PROJECT SENT TO PS&E.

PROFESSIONAL ENGINEER LICENSED 19600 STATE OF IDAHO MICHELLE V. MCDONALD 3/27/25

REVISIONS NO.	DATE	BY	DESCRIPTION

DESIGNED M. MCDONALD	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY	WASHINGTON COUNTY	PROJECT NO. A019(129)
DESIGN CHECKED B. MARTIN			
DETAILED M. HUFFMAN	CADD FILE NAME 19129_prsum 02.sht		
DRAWING CHECKED B. MARTIN	DRAWING DATE: MARCH 2025	ARDURRA	

PROJECT CLEARANCE SUMMARY

COVE RD BRIDGE
WASHINGTON CO

ENGLISH

COUNTY WASHINGTON

KEY NUMBER 19129

SHEET 4 OF 37

SHEET NUMBER				10	12	13	15	26	27	28	29	30	31-34		
STATION - STATION				24+98.50 28+00	28+00 32+40	28+00 32+40	32+40 35+19.85	24+98.50 30+00	30+00 35+19.85	24+98.50 28+00	28+00 32+40	32+40 39+00	PROJECT WIDE		
ITEM NO.	ITEM	UNIT	TOTAL	301.50	440.00		279.85	501.50	519.85	301.50	440	660	TTC PLAN		
107-019A	SURVEY MONUMENT PRESERVATION	CA	4,000												
201-005A	CLEARING & GRUBBING	ACRE	1.92					1.10	0.82						
202-005A	SELECTIVE REMOVAL OF TREES INCLUDING STUMPS	EACH	12		12										
203-005A	REMOVAL OF OBSTRUCTIONS	LS	1												
203-006A	REMOVAL OF SIGN	EACH	6							1	4	1			
203-075A	REMOVAL OF FENCE	FT	405	48	123		234								
205-005A	EXCAVATION	CY	2,090												
205-045A	GRANULAR BORROW	TON	15,403												
205-060A	WATER FOR DUST ABATEMENT	MG	100												
212-011A	FIBER WATTLE	FT	2,401					1366	1035						
212-020A	SILT FENCE	FT	718					470	248						
212-105A	WATER AND POLLUTION	CA	20,000												
301-005A	GRANULAR SUBBASE	TON	2,789												
303-022A	3/4" AGGREGATE TYPE B FOR BASE	TON	1,293												
401-020A	CSS-1 DILUTED EMULSIPHIED ASPHALT FOR TACK COAT	GAL	250												
405-245A	APPROACH (PAVED)	EACH	6	1	4		1								
405-245B	APPROACH (GRAVEL)	EACH	7	1	4		2								
405-425A	SUPERPAVE HMA PAVEMENT INCLUDING ASPHALT & ADDITIVES CLASS SP-2	TON	657												
602-035A	18" PIPE CULVERT	FT	94.0	44.0			50.0								
602-065A	36" PIPE CULVERT	FT	379.5	229.5			150.0								
608-035A	18" APRON FOR PIPE	EACH	4	2			2								
608-210A	METAL SAFETY APRON (CROSS DRAINAGE)	EACH	5	3			2								
609-025A	MINOR STRUCTURES (36" TWIN PIPE HEADWALL)	EACH	1				1								
609-025B	MINOR STRUCTURES (36" THREE PIPE HEADWALL)	EACH	1	1											
610-010A	FENCE TYPE 1 A	FT	308	114	194										
610-025A	FENCE TYPE 3 A	FT	223		10		213								
610-101A	GATE TYPE 1 A	EACH	2	1	1										
610-150A	GATE TYPE 2	EACH	1		1										
612-007A	SHORT RADIUS W-BEAM GUARDRAIL SYSTEM	EACH	4		4										
612-110A	GUARDRAIL ANCHOR	EACH	4		4										
612-120C	TRANSITION, SRGS	EACH	4		4										
615-260A	CURB TYPE 5 (ASPHALT)	FT	46			46									
624-005A	LOOSE RIPRAP (CLASS I)	CY	113.9	52.0		33.4	28.5								
626-010A	TEMPORARY TRAFFIC CONTROL SIGNS	SF	332										332		
626-040A	BARRICADE TYPE 3	EACH	8										8		
626-050A	DRUMS	EACH	12										12		
626-100A	MISCELLANEOUS TEMPORARY TRAFFIC CONTROL ITEMS	CA	20,000												
626-105A	TEMPORARY TRAFFIC CONTROL MAINTENANCE	HR	400										400		
626-120A	FLAGGER CONTROL	HR	100										100		
626-135A	WEIGHTED BASE TUBULAR MARKERS	EACH	40										40		
640-010A	RIPRAP/EROSION CONTROL GEOTEXTILE	SY	375.7	171.5		108.2	96.0								
640-015A	SUBGRADE SEPARATION GEOTEXTILE	SY	3,340												
650-005A	TIME-LAPSE CAMERA	EACH	1	1											
650-010A	TIME-LAPSE CAMERA SERVICE	MO	3												
675-005A	SURVEY	LS	1												
675-010A	DIRECTED SURVEYING	CA	15,000												
677-005A	RECORD DRAWINGS	LS	1												
S900-50A	CONTINGENCY AMOUNT - MISC WORK	CA	10,000												
S904-05E	SP TURBIDITY MONITORING	LS	1												
S913-05A	SP FILTER SAND	CY	160												
Z629-05A	MOBILIZATION	LS	1												

REVISIONS

NO	DATE	BY	DESCRIPTION

DESIGNED M. MCDONALD
DESIGN CHECKED B. MARTIN
DETAILED M. MCDONALD
DRAWING CHECKED B. MARTIN

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
CADD FILE NAME 19129_rsum_001.sht
DRAWING DATE: MARCH 2025

WASHINGTON COUNTY
ARDURRA

PROJECT NO. A019(129)

ROADWAY SUMMARY
COVE RD BRIDGE
WASHINGTON CO

ENGLISH
COUNTY WASHINGTON
KEY NUMBER 19129
SHEET 5 OF 37

PROFESSIONAL ENGINEER LICENSED 19600 3/27/25 STATE OF IDAHO MICHELLE V. MCDONALD

SHEET NUMBER									
STATION - STATION				BRG. DWG. NO. 17761					
ITEM NO.	ITEM	UNIT	TOTAL	COVE RD. OVER WEISER RIVER					
203-010A	ASBESTOS REMOVAL AND DISPOSAL	CA	10000	10000					
203-020A	REMOVAL OF BRIDGE - FULL, MULTI-SPAN TRUSS BRIDGE	EACH	1	1					
205-005A	EXCAVATION	CY	999	999					
205-040A	GRANULAR BORROW	CY	798	798					
210-005A	STRUCTURE EXCAVATION SCHEDULE NO. 1	CY	531	531					
210-015A	COMPACTING BACKFILL	CY	798	798					
502-140A	CONCRETE CLASS 40-A SCHEDULE NO. 1	CY	211.8	211.8					
502-310A	CONCRETE CLASS 40 AF SCHEDULE NO. 2	CY	392.7	392.7					
502-345A	SEAL CONCRETE	CY	134.4	134.4					
502-380A	PRESTRESSED WF GIRDER - 58"	FT	1302.5	1302.5					
502-435A	APPROACH SLAB	SY	180	180					
503-010A	METAL REINFORCEMENT SCHEDULE NO. 1	LB	55720	55720					
503-015A	METAL REINFORCEMENT SCHEDULE NO. 2	LB	27262	27262					
503-020A	EPOXY COATED METAL REINFORCEMENT	LB	40653	40653					
504-050A	3-TUBE CURB MOUNT RAIL	FT	604.5	604.5					
505-045A	PROVIDE & DRIVE STEEL H PILE (14 X 117)	FT	1089	1089					
505-197A	PROVIDE & DRIVE TEST PILE (HP-14 x 117)	FT	149	149					
505-205C	PROVIDE & INSTALL PILE SHOES OR TIPS	EACH	24	24					
505-215A	SPLICE STEEL PILE BEFORE DRIVING	EACH	3	3					
507-005A	ELASTOMERIC BEARINGS PLAIN (1" x 12" x 36")	EA	20	20					
521-005A	DYNAMIC PILE TESTING	EA	2	2					
521-010A	CAPWAP ANALYSIS	EA	2	2					
560-005A	DEWATERING FOUNDATION	LS	1	1					
566-010A	COMPRESSION EXPANSION JOINT (3" JEENE)	FT	75.5	75.5					
576-005A	(GFRP) REINFORCEMENT	FT	410	410					
586-005A	UTILITY CONDUIT	LS	1	1					
624-005B	LOOSE RIPRAP (CLASS V)	CY	999	999					
640-010A	RIPRAP/EROSION CONT GEOTEXTILE	SY	1113	1113					
S900-50B	CONTINGENCY AMOUNT LEAD BASED PAINT REMOVAL AND DISPOSAL	CA	10000	10000					

REVISIONS

NO.	DATE	BY	DESCRIPTION

DESIGNED W. MEYER
DESIGN CHECKED C. BOWEN
DETAILED W. MEYER
DRAWING CHECKED C. BOWEN

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
CADD FILE NAME
DRAWING DATE: MARCH 2025

WASHINGTON COUNTY

FDR

PROJECT NO.
A019(129)

BRIDGE SUMMARY
COVE RD BRIDGE
WASHINGTON CO

ENGLISH
COUNTY WASHINGTON
KEY NUMBER 19129

PROFESSIONAL ENGINEER LICENSED 3/28/2025 20046 STATE OF IDAHO WESLEY A. MEYER

STATION	PIPE CULVERT (LENGTH IN FEET) PIPE SIZE (INCHES) 18"	36"				PLASTIC PIPE: RIBBED POLYETHYLENE (PE) X	CORRUGATED POLYETHYLENE (PE) X	RIBBED POLYVINYL CHLORIDE (PVC) X	METAL PIPE: STEEL PIPE GALVANIZED STEEL X	ALUMINIZED STEEL X	1/2" CORRUGATION DEPTH GAGE	2" CORRUGATION LENGTH	COATED X	ANNULAR CORR. X	HELICAL CORR. X	ALUMINUM PIPE 1/2" CORRUGATION DEPTH THICK. (")	2" CORRUGATION LENGTH	COATED X	ANNULAR CORR. X	HELICAL CORR. X	CONCRETE PIPE: REINFORCED CLASS II-V	IRRIGATION OR DRAINAGE X	TYPE OF BEDDING 1,2,3	RUBBER GASKET JOINTS REQUIRED X	FILL HEIGHT FT.	STR. EXC. C.Y.	COMP. BKFILL C.Y.	MINOR STRUCTURES: DRAWING NUMBER	STRUCTURE EA.	CONCRETE C.Y.	METAL REINF. LBS.	TIMBER MFBM	GRATES EA.	APRONS EA.	INLETS TYPE____	CATCH BASINS TYPE____	REMARKS (INDICATE ELONGATION) (WHEN REQUIRED)
26+94.00 RT TO 27+37.00 RT	44								X	X	14			X	X	0.105			X	X					3.2	17	28							2			
27+67.07 RT TO 27+77.68 LT		76.5							X	X	14			X	X	0.105			X	X					6.1	77	85							1			
27+71.95 RT TO 27+82.74 LT		76.5							X	X	14			X	X	0.105			X	X					6.3	77	85							1			
27+76.82 RT TO 27+87.80 LT		76.5							X	X	14			X	X	0.105			X	X					6.5	77	85							1			
32+67.50 LT TO 32+82.15 RT		75							X	X	14			X	X	0.105			X	X					5.8	91	108							1			
32+72.40 LT TO 32+87.00 RT		75							X	X	14			X	X	0.105			X	X					5.6	91	108							1			
33+90.00 RT TO 34+40.00 RT	50								X	X	14			X	X	0.105			X	X					1.4	27	23							2			
															1					1																	
SHEET TOTAL	94	379.5																								457	522							9			
PROJ. TOTAL	94	379.5																																9			

NOTE: EXCAVATION AND BACKFILL FOR PIPE INSTALLATION IS INCIDENTAL PER ITD STANDARD SPECIFICATIONS

REVISIONS			
NO.	DATE	BY	DESCRIPTION
1	6/2025	MM	HELICAL CORRUGATION

DESIGNED	M. HUFFMAN
DESIGN CHECKED	M. MCDONALD
DETAILED	M. HUFFMAN
DRAWING CHECKED	B. MARTIN

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY

CADD FILE NAME 19129_csum_001.SHT

DRAWING DATE: JUNE 2025

WASHINGTON COUNTY

ARDURRA

PROJECT NO. A019(129)

PIPE CULVERT SUMMARY

COVE RD BRIDGE
WASHINGTON CO

ENGLISH

COUNTY WASHINGTON

KEY NUMBER 19129

SHEET 7 OF 37

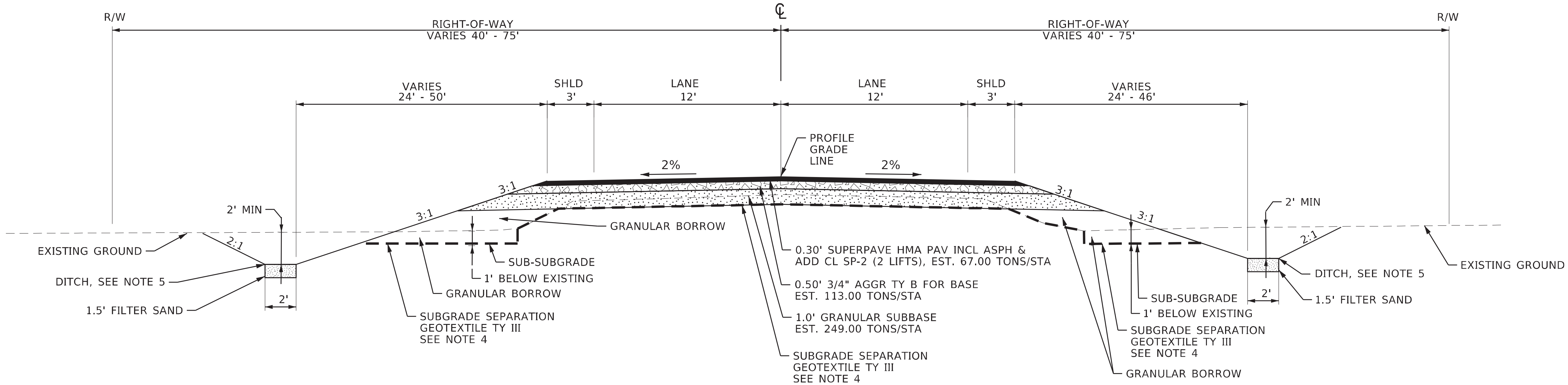
PROFESSIONAL ENGINEER LICENSED 19600 6/9/2025 STATE OF IDAHO MICHELLE V. MCDONALD

NOTES:

1. TRANSITION FROM TYPICAL SECTION 1 TO TYPICAL SECTION 2 BETWEEN STA. 27+95.26 AND STA. 28+66.03. SEE ACCESS ROAD PLAN SHEETS FOR ADDITIONAL PAVEMENT AND GUARDRAIL EXTENTS.
2. REFER TO BRIDGE PLANS FOR TYPICAL SECTION BETWEEN STATIONS 28+77.53 AND 31+79.78.
3. TRANSITION FROM TYPICAL SECTION 2 TO TYPICAL SECTION 1 BETWEEN STA. 31+91.28 AND STA. 32+60.32. SEE ACCESS ROAD PLAN SHEETS FOR ADDITIONAL PAVEMENT AND GUARDRAIL EXTENTS.
4. PLACE SUBGRADE SEPARATION GEOTEXTILE BETWEEN NATIVE SUBGRADE AND GRANULAR BORROW OR GRANULAR SUBBASE.
5. SEE ROADWAY PLAN AND PROFILE SHEETS FOR DITCH LOCATION AND GRADING INFORMATION. EXCAVATE 2' INTO FREE DRAINAGE MATERIAL AS DETERMINED BY THE ENGINEER. BACKFILL WITH FILTER SAND.

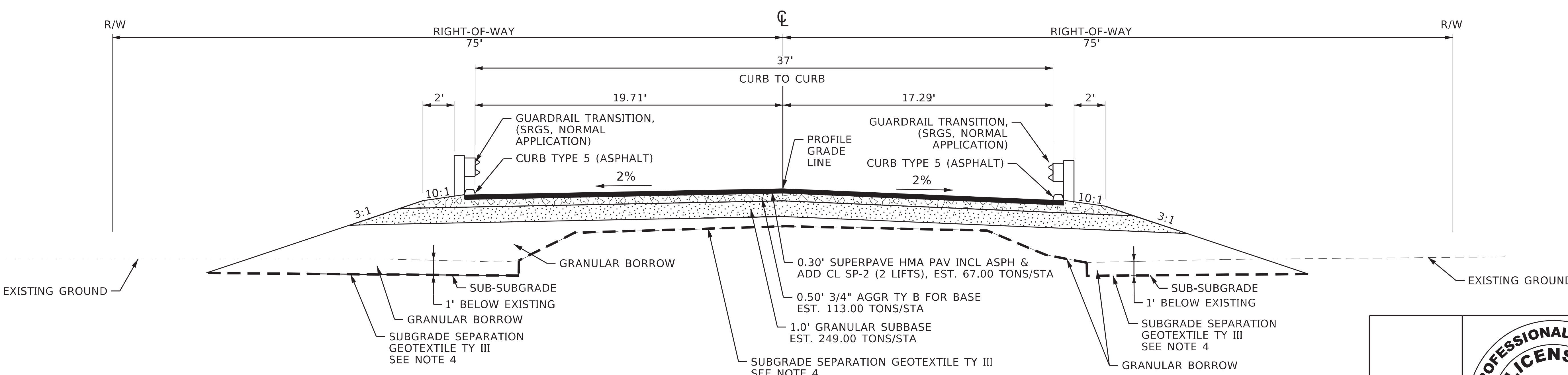
COVE ROAD TYPICAL SECTION 1

STA. 24+98.50 TO STA. 27+95.26
STA. 32+60.32 TO STA. 35+19.85



COVE ROAD TYPICAL SECTION 2

STA. 28+66.03 TO STA. 28+77.53
STA. 31+79.78 TO STA. 31+91.28



REVISIONS			
NO	DATE	BY	DESCRIPTION

DESIGNED	M. MCDONALD
DESIGN CHECKED	B. MARTIN
DETAILED	M. MCDONALD
DRAWING CHECKED	B. MARTIN

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY

CADD FILE NAME 19129_typi.sht

DRAWING DATE: MARCH 2025

WASHINGTON COUNTY

ARDURRA

PROJECT NO. A019(129)

TYPICAL SECTIONS

COVE RD BRIDGE
WASHINGTON CO

ENGLISH

COUNTY WASHINGTON

KEY NUMBER 19129

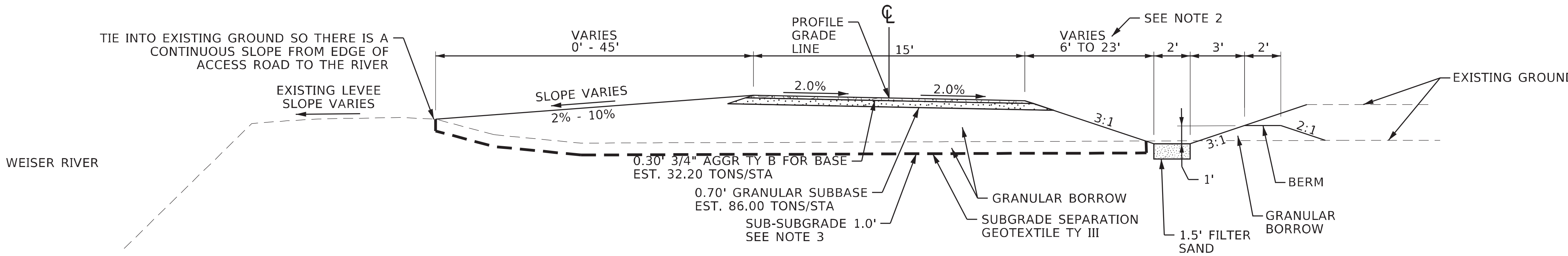
SHEET 8 OF 37

PROFESSIONAL ENGINEER LICENSED 19600 3/27/25 STATE OF IDAHO MICHELLE V. MCDONALD

pw://pwhdrusweOIHDR.US.West_01/Documents/ITD_Headquarters/ITD-Cove.Rd.Brdg.Replacement/6.0.CAD.BIM/6.2.Work.in.Progress/6.2.3.Roadway/19129_typi_001.MH 3/27/2025 9:20:44 AM

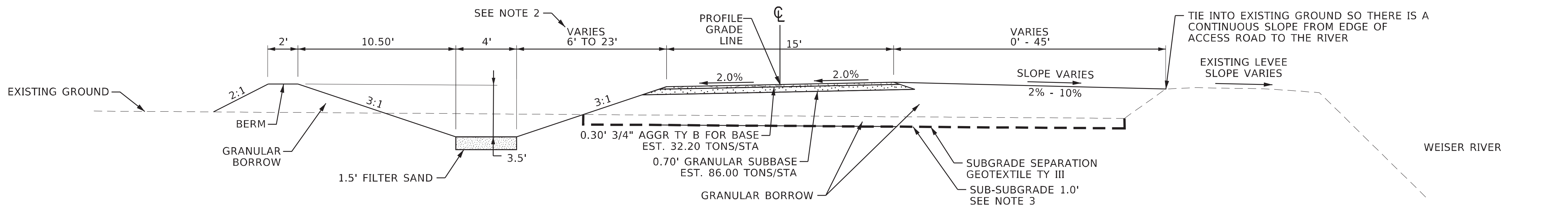
ACCESS ROAD "A"

STA. 70+71.80 TO STA. 72+09.69



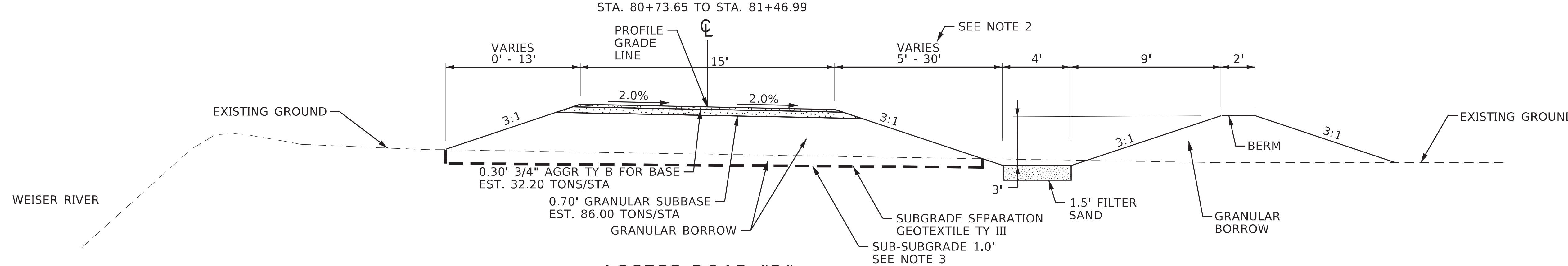
ACCESS ROAD "B"

STA. 60+73.00 TO STA. 62+11.54



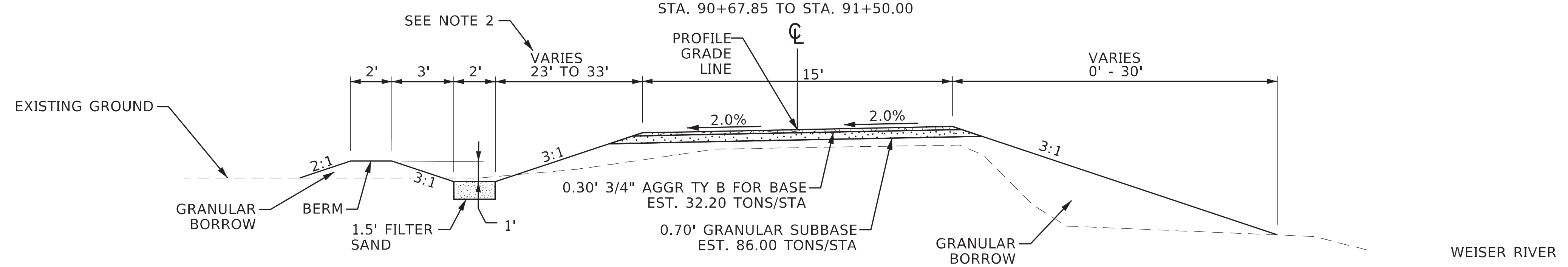
ACCESS ROAD "C"

STA. 80+73.65 TO STA. 81+46.99



ACCESS ROAD "D"

STA. 90+67.85 TO STA. 91+50.00



NOTES:

1. SEE APPROACH DETAIL SHEET FOR PAVED APPROACH TYPICAL SECTION.
2. SEE ACCESS ROAD DETAIL SHEETS FOR DITCH BOTTOM AND GUARDRAIL LOCATION INFORMATION.
3. SUB-SUBGRADE 1 FOOT WITHIN NEW EMBANKMENT AREAS TO REMOVE SOFT SILT, CLAY AND TOPSOIL EXPECTED.
4. PLACE SUBGRADE SEPARATION GEOTEXTILE BETWEEN NATIVE SUBGRADE AND GRANULAR BORROW / GRANULAR SUBBASE.

REVISIONS			
NO	DATE	BY	DESCRIPTION

DESIGNED M. MCDONALD
DESIGN CHECKED B. MARTIN
DETAILED M. MCDONALD
DRAWING CHECKED B. MARTIN

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
CADD FILE NAME 19129_typi_002.dgn.sht
DRAWING DATE: MARCH 2025

WASHINGTON COUNTY

ARDURRA

PROJECT NO. A019(129)

TYPICAL SECTIONS
COVE RD BRIDGE WASHINGTON CO

ENGLISH
COUNTY WASHINGTON
KEY NUMBER 19129
SHEET 9 OF 37

PROFESSIONAL ENGINEER LICENSED 19600 3/27/25 STATE OF IDAHO MICHELLE V. MCDONALD

T.11N., R.5W., B.M.
SEC 33

BEGIN CONSTRUCTION
A019(129)
STA. 24+98.50
N. 940187.34
E. 2311950.80
M.P. 1.053

BEGIN TAPER
MATCH EXISTING EDGE OF PAVEMENT
STA. 24+98.50, 8.83' LT

DITCH BOTTOM
STA. 25+05.12, 26.70' LT

DITCH BOTTOM
STA. 25+50.00, 30.70' LT

DITCH BOTTOM
STA. 26+00.00, 32.70' LT

DITCH BOTTOM
STA. 26+50.00, 36.30' LT

END TAPER
STA. 25+48.50
15.00' LT

DITCH BOTTOM
STA. 27+00.00, 41.30' LT

DITCH BOTTOM
STA. 27+50.00, 47.50' LT

SEE DRAINAGE DETAIL SHEET

624-005A
640-010A
608-210A

PC 25+96.15

SAWCUT AND MATCH
EXISTING PAVEMENT

203-005A POSTS

COVE ROAD

602-065A

MATCH LINE STA. 28+00

BEGIN TAPER
MATCH EXISTING EDGE OF PAVEMENT
STA. 24+98.50, 10.32' RT

DITCH BOTTOM
STA. 25+10.00, 28.00' RT

BUSHES 203-005A

END TAPER
STA. 25+48.50, 15.00' RT

DITCH BOTTOM
STA. 25+10.00, 28.00' RT

BUSH 203-005A

DITCH BOTTOM
STA. 26+00.00
29.50' RT

DITCH BOTTOM
STA. 26+50.00, 32.30' RT

608-035A
610-010A
405-245A
602-035A
610-101A
405-245B
608-035A
610-010A

609-025B
203-075A
624-005A
640-010A

CURVE 1

Δ= 07°33'04" LT
T= 131.98'
L= 263.58'
R= 2000.00'
P.I. N. 940416.81
E. 2311959.74

NOTES:

1. DITCH BOTTOM STATION AND OFFSET AT CENTER OF 2' FLAT BOTTOM DITCH. SEE PROFILE SHEET FOR ELEVATION INFORMATION.

203-005A REMOVAL OF OBSTRUCTIONS
1 LS

203-075A REMOVAL OF FENCE
48 FT STA. 27+51.98, 24.15' RT TO STA. 28+00.00, 27.18' RT

405-245A APPROACH (PAVED)
1 EACH STA. 27+15.97, 34.00' RT

405-245B APPROACH (GRAVEL)
1 EACH STA. 27+15.53, 70.00' RT

602-035A 18" PIPE CULVERT
44 FT STA. 26+94.00, 35.90' RT TO STA. 27+37.00, 40.50' RT

602-065A 36" PIPE CULVERT
76.5 FT STA. 27+67.07, 34.35' RT TO STA. 27+77.68, 41.41' LT
76.5 FT STA. 27+71.95, 34.95' RT TO STA. 27+82.74, 40.70' LT
76.5 FT STA. 27+76.82, 35.55' RT TO STA. 27+87.80, 39.95' LT

608-035A 18" APRON FOR PIPE
1 EACH STA. 26+94.00, 35.90' RT
1 EACH STA. 27+37.00, 40.50' RT

608-210A METAL SAFETY APRON (CROSS DRAINAGE)
1 EACH STA. 27+77.68, 41.41' LT
1 EACH STA. 27+82.74, 40.70' LT
1 EACH STA. 27+87.80, 39.95' LT

609-025B MINOR STRUCTURES (36" THREE PIPE HEADWALL)
1 EACH STA. 27+71.95, 34.95' RT

610-010A FENCE TYPE 1 A
21 FT STA. 26+88.60, 48.80' RT TO STA. 27+08.50, 51.30' RT
93 FT STA. 27+23.10, 53.20' RT TO STA. 28+00.00, 86.00' RT

610-101A GATE TYPE 1 A
1 EACH STA. 27+15.80, 52.20' RT

624-005A LOOSE RIPRAP (CLASS I)
47 CY STA. 27+80.20, 48.85' LT TO STA. 28+00.00, 127.50' LT
5 CY STA. 27+62.63, 48.75' RT TO STA. 27+79.13, 51.30' RT

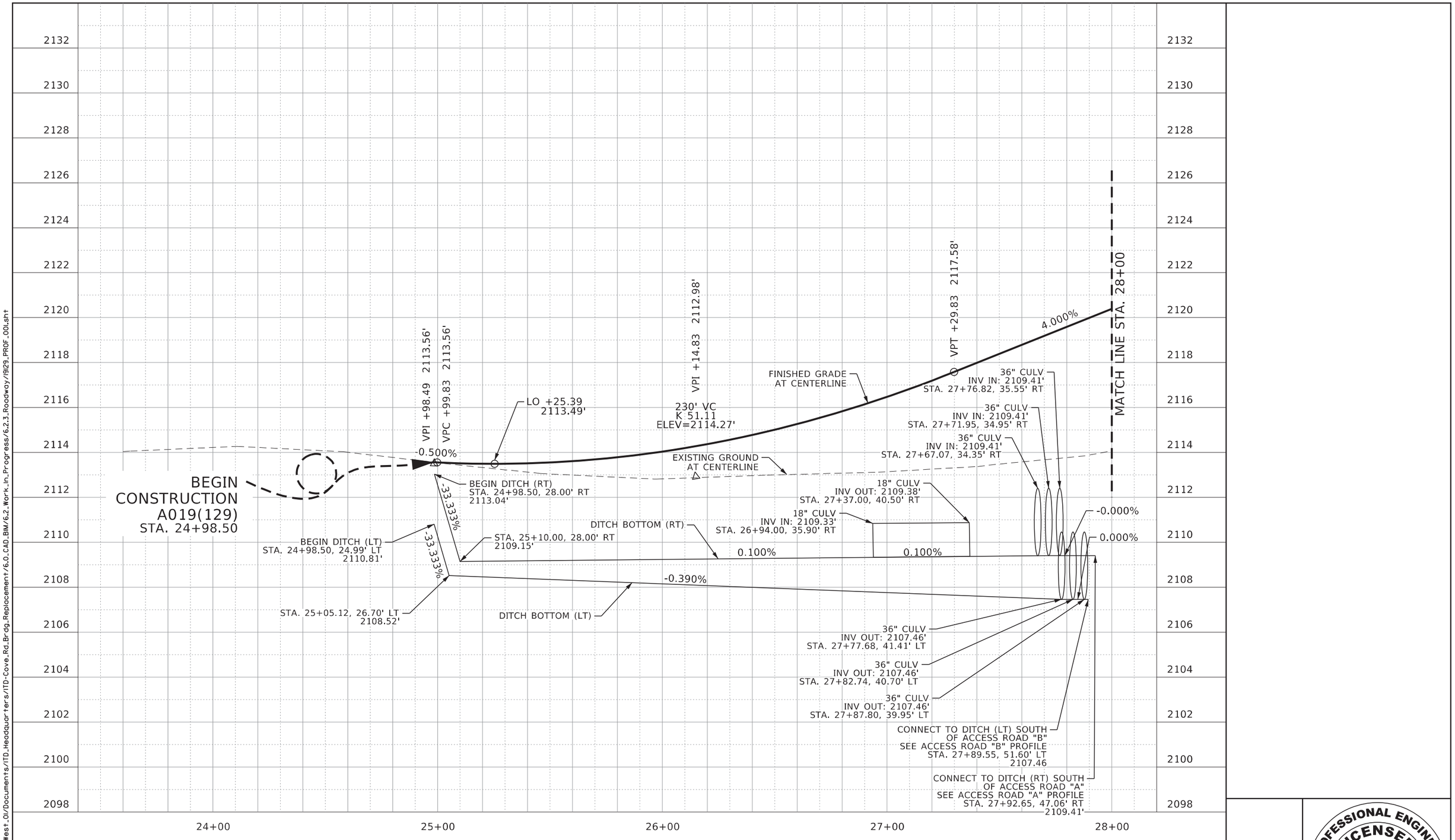
640-010A RIPRAP/EROSION CONTROL GEOTEXTILE
155.5 SY STA. 27+80.20, 48.85' LT TO STA. 28+00.00, 127.50' LT
16.0 SY STA. 27+60.78, 48.50' RT TO STA. 27+79.13, 51.30' RT

650-005A TIME-LAPSE CAMERA
1 EACH

PROFESSIONAL ENGINEER LICENSED 19600 STATE OF IDAHO MICHELLE V. MCDONALD 3/27/25

REVISIONS				DESIGNED	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY	WASHINGTON COUNTY	PROJECT NO.	ROADWAY PLAN	ENGLISH
NO.	DATE	BY	DESCRIPTION	M. MCDONALD			A019(129)	COVE RD BRIDGE WASHINGTON CO	COUNTY WASHINGTON
				DESIGN CHECKED B. MARTIN					KEY NUMBER 19129
				DETAILED M. HUFFMAN	CADD FILE NAME 19129_PLAN_001.sht			STA. 24+98.50 TO STA. 28+00	
				DRAWING CHECKED B. MARTIN	DRAWING DATE: MARCH 2025	ARDURRA			SHEET 10 OF 37

pw:/pwhdruswes01HDR_US_West_01/Documents/ITD_Headquarters/ITD-Cove_Rd_Brdg_Replacement/6.0_CAD_BIM/6.2_Work_In_Progress/6.2.3_Roadway/19129_PLAN_001.sht 3/27/2025 9:21:54 AM



REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED	M. MCDONALD
DESIGN CHECKED	B. MARTIN
DETAILED	M. HUFFMAN
DRAWING CHECKED	B. MARTIN

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY

CADD FILE NAME	19129_PROF_001.sht
DRAWING DATE:	MARCH 2025

WASHINGTON COUNTY

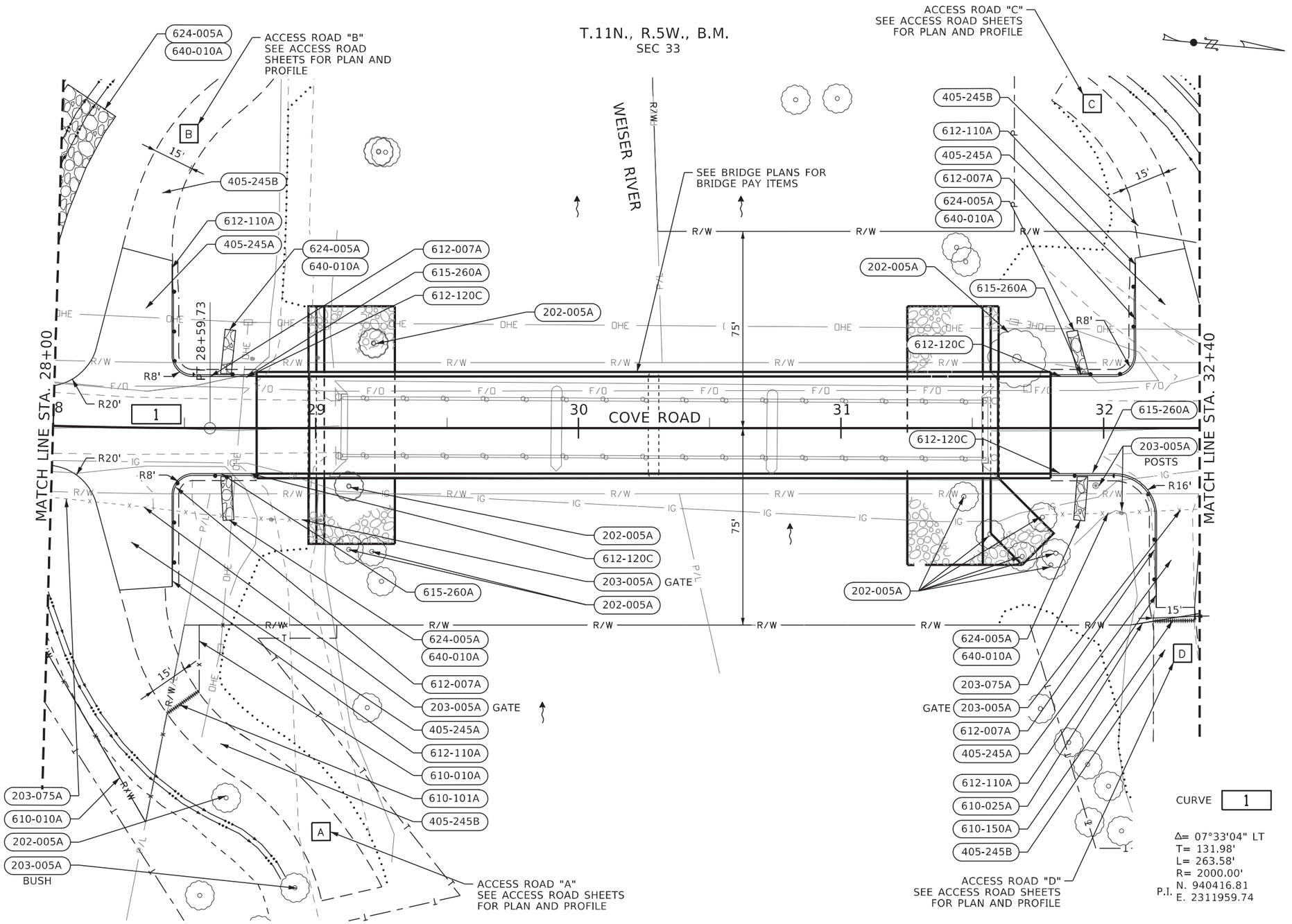
ARDURRA

PROJECT NO.	ROADWAY PROFILE
A019(129)	COVE RD BRIDGE WASHINGTON CO STA. 24+98.50 TO STA. 28+00

ENGLISH

COUNTY	WASHINGTON
KEY NUMBER	19129
SHEET	11 OF 37

PROFESSIONAL ENGINEER
LICENSED
19600
3/27/25
STATE OF IDAHO
MICHELLE V. MCDONALD



202-005A SELECTIVE REMOVAL OF TREES INCLUDING STUMPS

1	EACH	STA. 28+65.87, 140.78' RT
1	EACH	STA. 29+12.56, 46.19' RT
1	EACH	STA. 29+12.58, 21.87' RT
1	EACH	STA. 29+21.37, 46.92' RT
1	EACH	STA. 29+22.01, 32.27' LT
1	EACH	STA. 31+46.78, 26.02' RT
1	EACH	STA. 31+56.65, 40.31' RT
1	EACH	STA. 31+66.97, 26.61' LT
1	EACH	STA. 31+69.01, 48.83' RT
1	EACH	STA. 31+76.70, 33.88' RT
1	EACH	STA. 31+79.92, 52.02' RT
1	EACH	STA. 31+81.83, 47.63' RT

203-005A REMOVAL OF OBSTRUCTIONS

1	LS

203-075A REMOVAL OF FENCE

84	FT	STA. 28+00.00, 27.18' RT TO STA. 28+83.15, 34.69' RT
39	FT	STA. 31+77.57, 32.96' RT TO STA. 32+16.85, 31.73' RT

405-245A APPROACH (PAVED)

1	EACH	STA. 28+35.26, 70.70' LT
1	EACH	STA. 28+37.04, 68.68' RT
1	EACH	STA. 32+21.16, 70.93' LT
1	EACH	STA. 32+26.91, 67.65' RT

405-245B APPROACH (GRAVEL)

1	EACH	STA. 28+44.87, 102.41' LT
1	EACH	STA. 28+52.16, 107.50' RT
1	EACH	STA. 32+15.63, 94.18' LT
1	EACH	STA. 32+27.78, 97.09' RT

610-010A FENCE TYPE 1 A

118	FT	STA. 28+00.00, 86.00' RT TO STA. 28+44.20, 108.70' RT
76	FT	STA. 28+55.80, 100.00' RT TO STA. 29+06.10, 75.00' RT

610-025A FENCE TYPE 3 A

10	FT	STA. 32+11.30, 74.80' RT TO STA. 32+19.20, 73.50' RT

610-101A GATE TYPE 1 A

1	EACH STA. 28+50.70, 103.90' RT

610-150A GATE TYPE 2

1	EACH STA. 32+27.80, 73.30' RT

612-007A SHORT RADIUS W-BEAM GUARDRAIL SYSTEM (SRGS)

1	EACH STA. 28+50.00 RT
1	EACH STA. 28+50.00 LT
1	EACH STA. 32+10.00 RT
1	EACH STA. 32+10.00 LT

612-110A GUARDRAIL ANCHOR

1	EACH STA. 28+45.00 RT
1	EACH STA. 28+45.00 LT
1	EACH STA. 32+20.00 RT
1	EACH STA. 32+10.00 LT

612-120C TRANSITION, SRGS

1	EACH STA. 28+70.00 RT
1	EACH STA. 28+70.00 LT
1	EACH STA. 31+90.00 RT
1	EACH STA. 31+90.00 LT

PROFESSIONAL ENGINEER LICENSED 19600 STATE OF IDAHO MICHELLE V. MCDONALD 3/27/25

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED	M. MCDONALD
DESIGN CHECKED	B. MARTIN
DETAILED	M. HUFFMAN
DRAWING CHECKED	B. MARTIN

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY

CADD FILE NAME 19129_PLAN_002.sht

DRAWING DATE: MARCH 2025

WASHINGTON COUNTY

ARDURRA

PROJECT NO. A019(129)

ROADWAY PLAN

COVE RD BRIDGE
WASHINGTON CO

STA. 28+00 TO STA. 32+40

ENGLISH

COUNTY WASHINGTON

KEY NUMBER 19129

SHEET 12 OF 37

615-260A CURB TYPE 5 (ASPHALT)

11.5 FT	STA. 28+66.03, 19.71' LT TO STA. 28+77.53, 19.71' LT
11.5 FT	STA. 28+66.03, 17.29' RT TO STA. 28+77.53, 17.29' RT
11.5 FT	STA. 31+79.78, 19.71' LT TO STA. 31+91.27, 19.71' LT
11.5 FT	STA. 31+79.78, 17.29' RT TO STA. 31+91.27, 17.29' RT

624-005A LOOSE RIPRAP (CLASS I)

23.0 CY	STA. 28+01.85, 130.15' LT TO STA. 28+21.55, 118.40' LT
2.6 CY	STA. 28+65.80, 18.00' RT TO STA. 28+66.80, 35.00' RT
2.6 CY	STA. 28+65.85, 20.40' LT TO STA. 28+67.40, 37.50' LT
2.6 CY	STA. 31+87.90, 37.00' LT TO STA. 31+92.20, 20.40' LT
2.6 CY	STA. 31+90.70, 35.00' RT TO STA. 31+91.90, 18.00' RT

640-010A RIPRAP/EROSION CONTROL GEOTEXTILE

77.0 SY	STA. 28+01.85, 130.15' LT TO STA. 28+21.55, 118.40' LT
7.8 SY	STA. 28+65.80, 18.00' RT TO STA. 28+66.80, 35.00' RT
7.8 SY	STA. 28+65.85, 20.40' LT TO STA. 28+67.40, 37.50' LT
7.8 SY	STA. 31+87.90, 37.00' LT TO STA. 31+92.20, 20.40' LT
7.8 SY	STA. 31+90.70, 35.00' RT TO STA. 31+91.90, 18.00' RT

REVISIONS

NO.	DATE	BY	DESCRIPTION

DESIGNED	M. MCDONALD
DESIGN CHECKED	B. MARTIN
DETAILED	M. HUFFMAN
DRAWING CHECKED	B. MARTIN

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY

CADD FILE NAME 19129_PLAN_002.1.sht

DRAWING DATE: MARCH 2025

WASHINGTON COUNTY

ARDURRA

PROJECT NO. A019(129)

ROADWAY PLAN

COVE RD BRIDGE
WASHINGTON CO

STA. 28+00 TO STA. 32+40

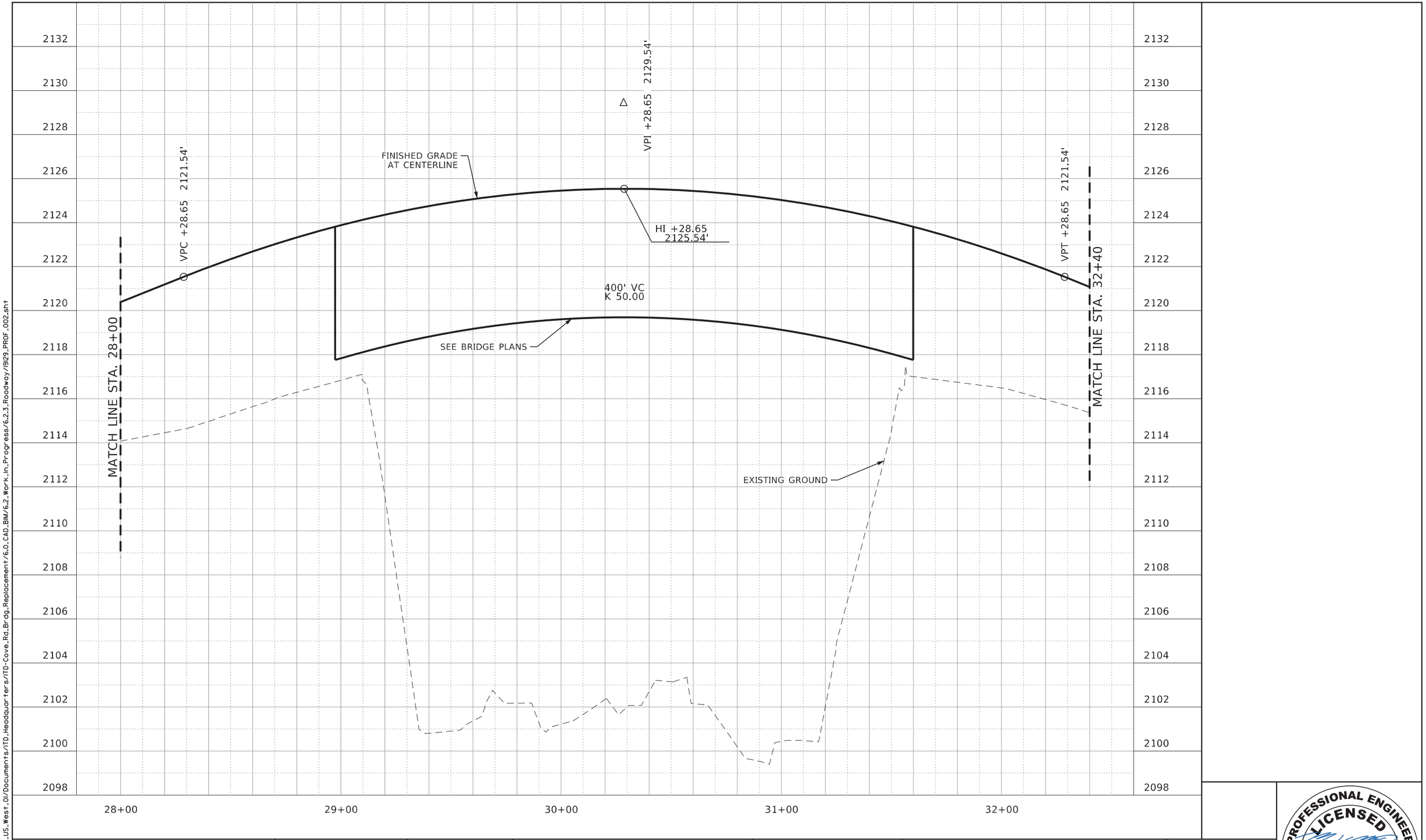
ENGLISH

COUNTY WASHINGTON

KEY NUMBER 19129

SHEET 13 OF 37

PROFESSIONAL ENGINEER LICENSED 19600 STATE OF IDAHO MICHELLE V. MCDONALD 3/27/25



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REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED M. MCDONALD	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY	WASHINGTON COUNTY
DESIGN CHECKED B. MARTIN		
DETAILED M. HUFFMAN	CADD FILE NAME 19129_PROF_002.sht	ARDURRA
DRAWING CHECKED B. MARTIN	DRAWING DATE: MARCH 2025	

PROJECT NO.	ROADWAY PROFILE
A019(129)	COVE RD BRIDGE WASHINGTON CO STA. 28+00 TO STA. 32+40

ENGLISH

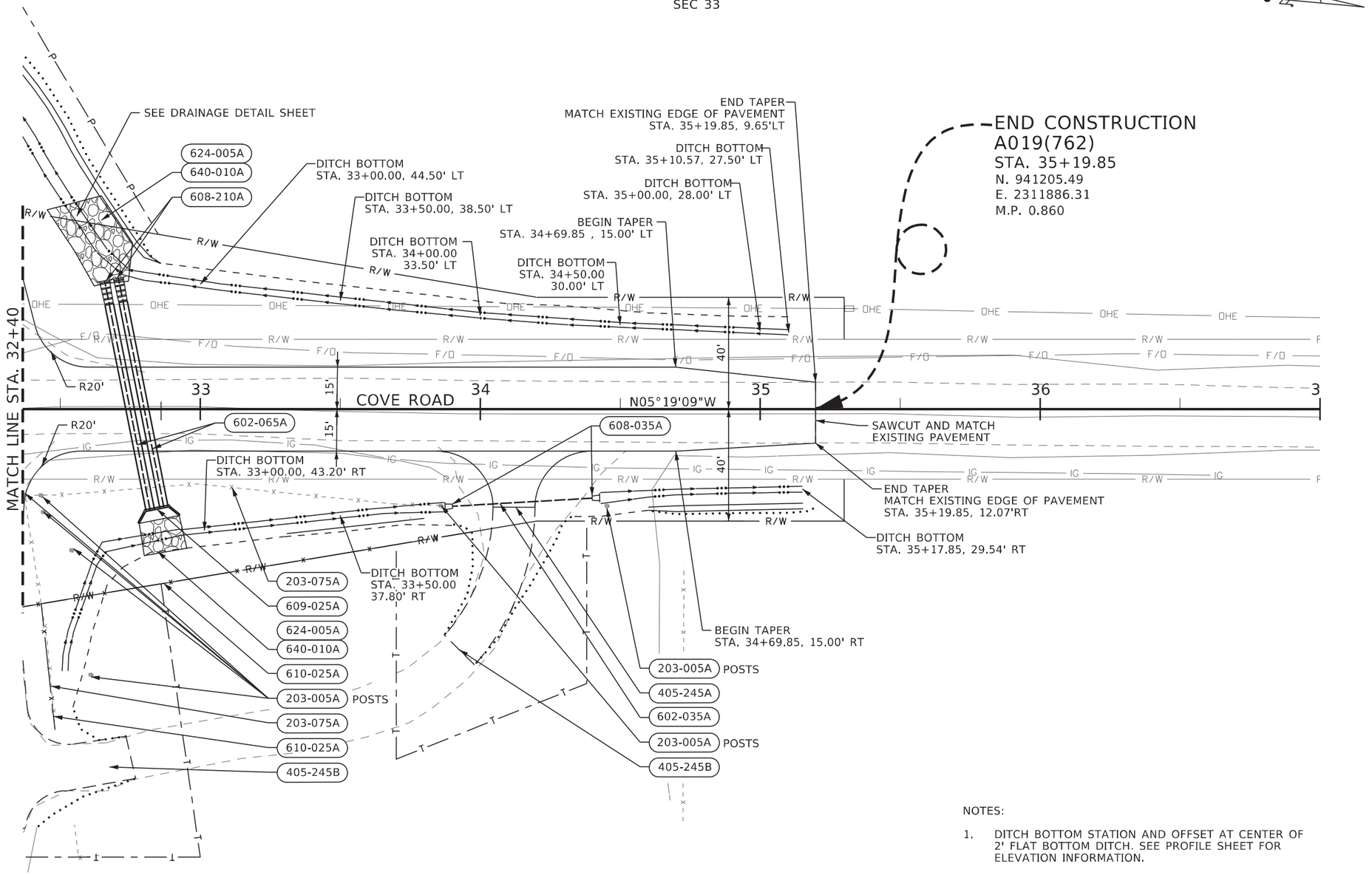
COUNTY WASHINGTON

KEY NUMBER 19129

SHEET 14 OF 37

PROFESSIONAL ENGINEER LICENSED 19600 STATE OF IDAHO MICHELLE V. MCDONALD 3/27/25

T.11N., R.5W., B.M.
SEC 33



NOTES:

1. DITCH BOTTOM STATION AND OFFSET AT CENTER OF 2' FLAT BOTTOM DITCH. SEE PROFILE SHEET FOR ELEVATION INFORMATION.

203-005A	REMOVAL OF OBSTRUCTIONS	
1	LS	
203-075A	REMOVAL OF FENCE	
84	FT	STA. 32+37.11, 30.81' RT TO STA. 32+48.13, 114.49' RT
150	FT	STA. 32+37.11, 30.81' RT TO STA. 33+86.03, 34.43' RT
405-245A	APPROACH (PAVED)	
1	EACH	STA. 32+12.24, 35.02' RT
405-245B	APPROACH (GRAVEL)	
1	EACH	STA. 32+67.54, 127.78' RT
1	EACH	STA. 33+92.51, 85.90' RT
602-035A	18" PIPE CULVERT	
50	FT	STA. 33+90.00, 34.70' RT TO STA. 34+40.00, 31.70' RT
602-065A	36" PIPE CULVERT	
75	FT	STA. 32+67.50, 37.50' LT TO STA. 32+82.15, 36.15' RT
75	FT	STA. 32+72.40, 38.40' LT TO STA. 32+87.00, 35.20' RT
608-035A	18" APRON FOR PIPE	
1	EACH	STA. 33+90.00, 34.70' RT
1	EACH	STA. 34+40.00, 31.70' RT
608-210A	METAL SAFETY APRON (CROSS DRAINAGE)	
1	EACH	STA. 32+67.50, 37.50' LT
1	EACH	STA. 32+72.40, 38.40' LT
609-025A	MINOR STRUCTURES (36" TWIN PIPE HEADWALL)	
1	EACH	STA. 32+84.60, 35.70' RT
610-025A	FENCE TYPE 3 A	
167	FT	STA. 32+34.60, 73.20' RT TO STA. 33+96.70, 43.90' RT
46	FT	STA. 32+43.20, 69.50' RT TO STA. 32+48.10, 114.50' RT
624-005A	LOOSE RIPRAP (CLASS I)	
6.5	CY	STA. 32+78.20, 40.50' RT TO STA. 32+92.50, 37.90' RT
22	CY	STA. 32+45.30, 71.30' LT TO STA. 32+64.55, 76.25' LT
640-010A	RIPRAP/EROSION CONTROL GEOTEXTILE	
20.0	SY	STA. 32+78.20, 40.50' RT TO STA. 32+92.50, 37.90' RT
76.0	SY	STA. 32+45.30, 71.30' LT TO STA. 32+64.55, 76.25' LT

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED	M. MCDONALD	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
DESIGN CHECKED	B. MARTIN	
DETAILED	M. HUFFMAN	CADD FILE NAME 19129_PLAN_003.sht
DRAWING CHECKED	B. MARTIN	DRAWING DATE: MARCH 2025

WASHINGTON COUNTY

ARDURRA

PROJECT NO.	ROADWAY PLAN
A019(129)	COVE RD BRIDGE WASHINGTON CO STA. 32+40 TO STA. 35+19.85

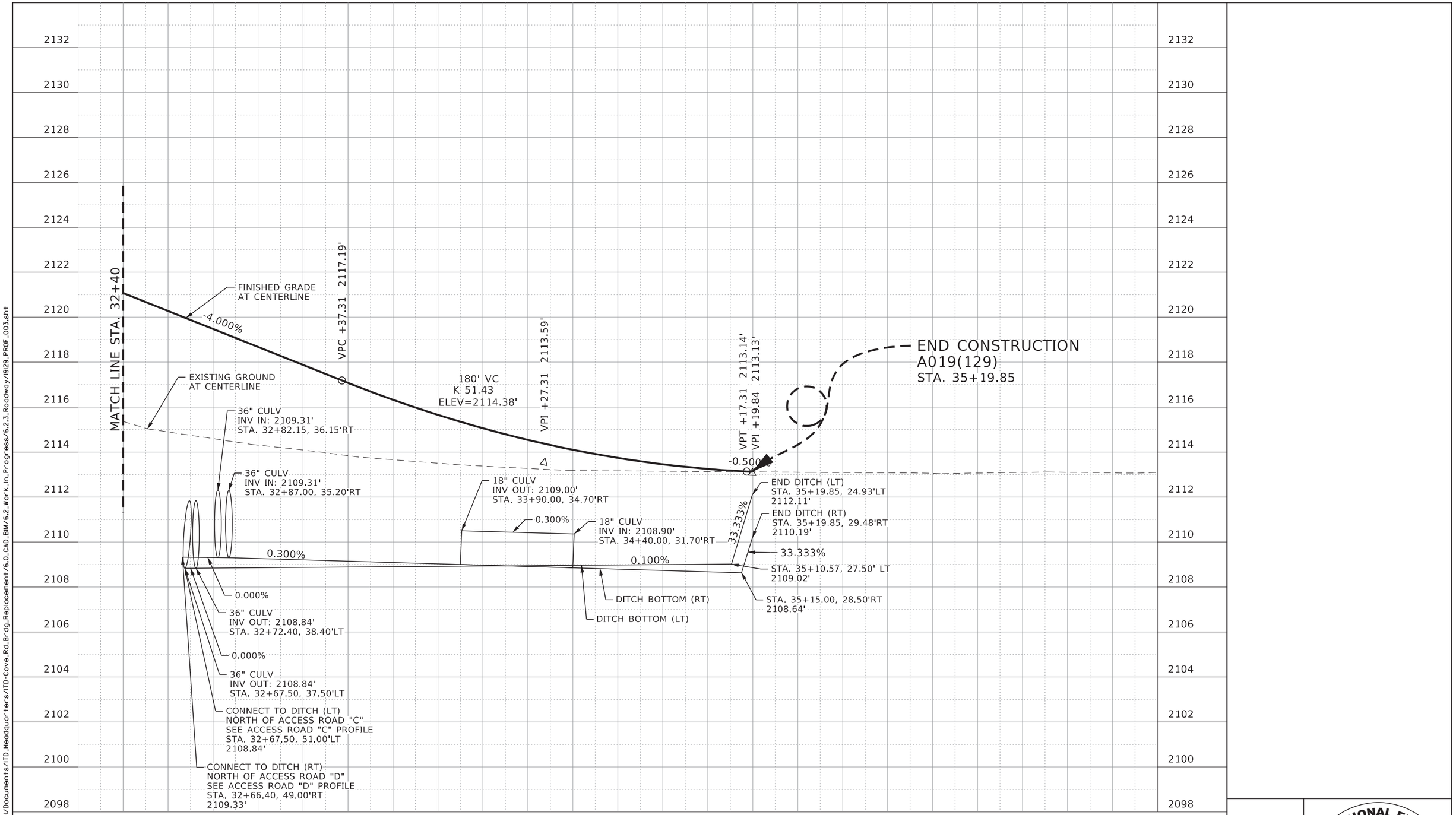
ENGLISH

COUNTY WASHINGTON

KEY NUMBER 19129

SHEET 15 OF 37

PROFESSIONAL ENGINEER LICENSED 19600 STATE OF IDAHO MICHELLE V. MCDONALD 3/27/25



REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED	M. MCDONALD
DESIGN CHECKED	B. MARTIN
DETAILED	M. HUFFMAN
DRAWING CHECKED	B. MARTIN

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY

CADD FILE NAME: 19129_PROF_003.sht

DRAWING DATE: MARCH 2025

WASHINGTON COUNTY

ARDURRA

PROJECT NO.: A019(129)

ROADWAY PROFILE

COVE RD BRIDGE
WASHINGTON CO

STA. 32+40 TO STA. 35+19.85

ENGLISH

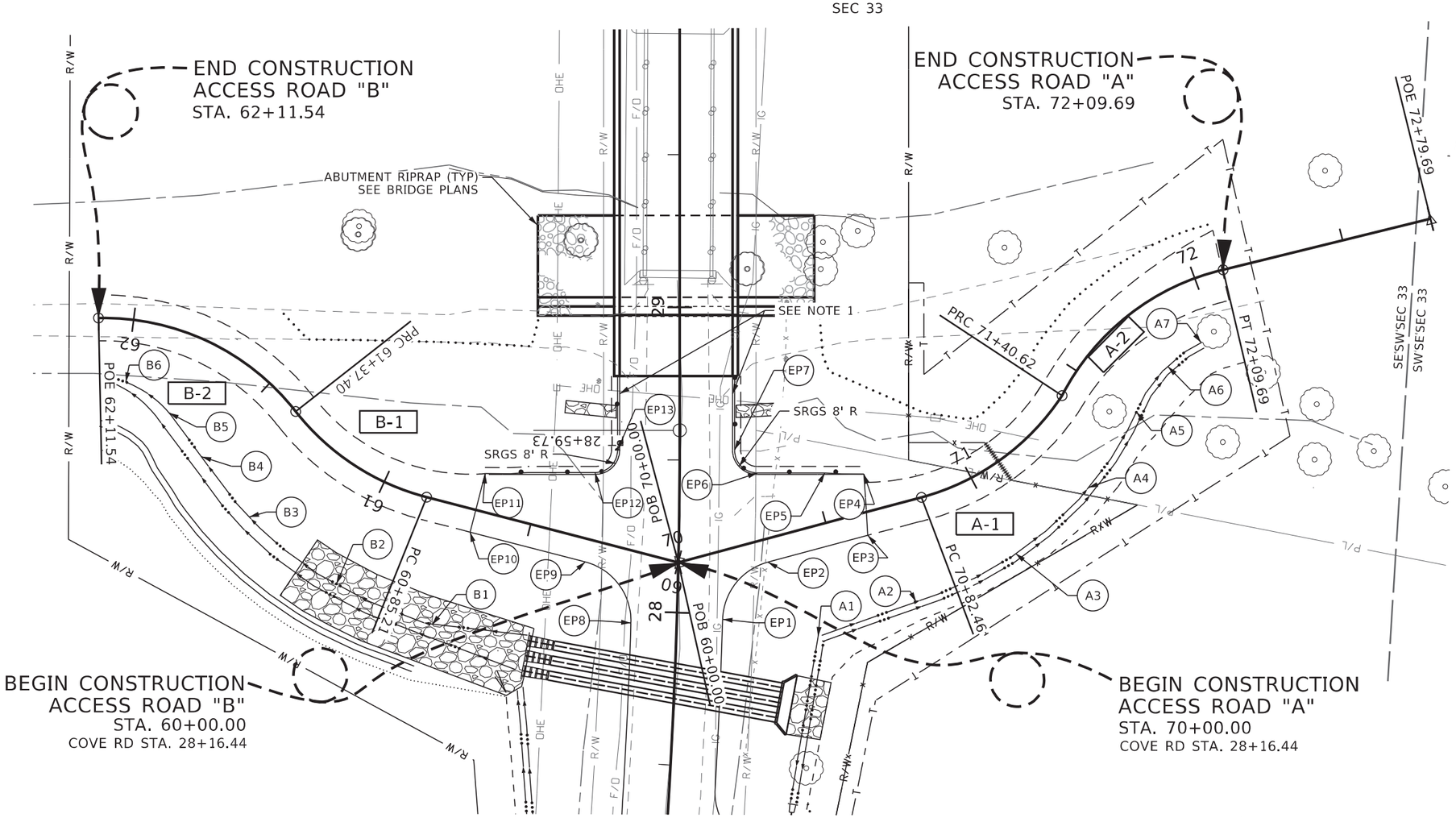
COUNTY: WASHINGTON

KEY NUMBER: 19129

SHEET 16 OF 37

PROFESSIONAL ENGINEER LICENSED 19600 STATE OF IDAHO MICHELLE V. MCDONALD 3/27/25

T.11N., R.5W., B.M.
SEC 33



CURVE A-1

Δ= 41°39'20" LT
T= 30.43'
L= 58.16'
R= 80.00'
P.I. N. 940544.29
P.I. E. 2311959.74

CURVE A-2

Δ= 49°28'15" RT
T= 36.86'
L= 69.07'
R= 80.00'
P.I. N. 940605.35
P.I. E. 2312084.98

CURVE B-1

Δ= 37°22'28" RT
T= 27.06'
L= 52.19'
R= 80.00'
P.I. N. 940523.04
P.I. E. 2311840.23

CURVE B-2

Δ= 53°06'11" LT
T= 39.98'
L= 74.15'
R= 80.00'
P.I. N. 940571.73
P.I. E. 2311794.15

BEGIN CONSTRUCTION
ACCESS ROAD "B"
STA. 60+00.00
COVE RD STA. 28+16.44

BEGIN CONSTRUCTION
ACCESS ROAD "A"
STA. 70+00.00
COVE RD STA. 28+16.44

NOTES:

1. INSTALL SHORT RADIUS W-BEAM GUARDRAIL SYSTEM PER ITD STANDARD DRAWING 612-3. SEE TYPICAL SECTIONS FOR GUARDRAIL OFFSET

DITCH BOTTOM			
POINT NUMBER	STATION	OFFSET	ELEVATION
A1	70+38.24	35.50' RT	2109.41
A2	70+71.80	33.30' RT	2109.38
A3	71+00.00	29.10' RT	2109.35
A4	71+25.00	25.85' RT	2109.31
A5	71+50.00	23.30' RT	2109.28
A6	71+75.00	21.15' RT	2109.26
A7	71+92.85	20.25' RT	2109.25
B1	60+73.00	40.00' LT	2107.43
B2	61+00.00	37.50' LT	2107.40
B3	61+25.00	35.00' LT	2107.36
B4	61+50.00	33.00' LT	2107.34
B5	61+75.00	27.00' LT	2107.32
B6	62+04.00	20.00' LT	2107.30

EDGE OF PAVEMENT			
POINT NUMBER	STATION	OFFSET	ELEVATION
EP1	27+98.28	15.00' RT	2120.02
EP2	70+28.36	7.50' RT	2120.10
EP3	70+62.30	7.50' RT	2118.43
EP4	70+66.30	12.00' LT	2118.60
EP5	70+53.90	16.00' LT	2119.75
EP6	28+45.96	25.54' RT	2121.63
EP7	28+53.20	17.97' RT	2122.10
EP8	27+96.12	15.00' LT	2119.94
EP9	60+29.57	7.50' LT	2120.10
EP10	60+68.55	7.50' LT	2118.61
EP11	60+68.55	12.30 RT	2119.00
EP12	60+33.77	21.60' RT	2121.35
EP13	28+53.20	20.35' LT	2122.05

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED M. MCDONALD
DESIGN CHECKED B. MARTIN
DETAILED M. HUFFMAN
DRAWING CHECKED B. MARTIN

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
CADD FILE NAME 19129_PLAN_004.sht
DRAWING DATE: MARCH 2025

WASHINGTON COUNTY

ARDURRA

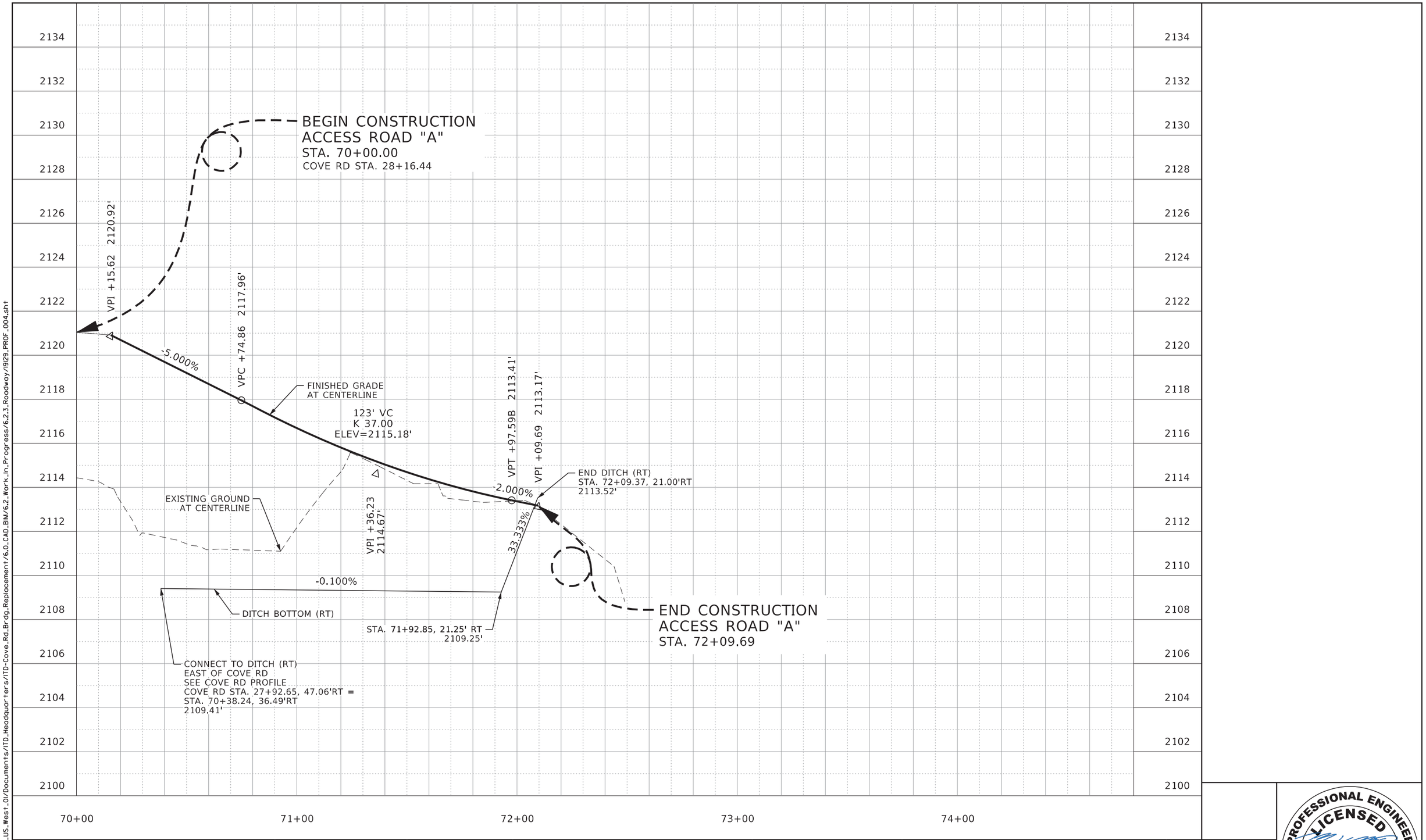
PROJECT NO.
A019(129)

ACCESS ROAD PLAN
COVE RD BRIDGE
WASHINGTON CO
ACCESS ROAD "A" & "B"

ENGLISH
COUNTY WASHINGTON
KEY NUMBER 19129
SHEET 17 OF 37

PROFESSIONAL ENGINEER LICENSED 19600 STATE OF IDAHO MICHELLE V. MCDONALD 2/27/25

pw://pwhdrusweS01:HDR_US_West_01/Documents/ITD_Headquarters/ITD-Cove_Rd_Brdg_Replacement/6.0_CAD_BIM/6.2_Work_In_Progress/6.2.3_Roadway/19129_PLAN_004.sht 2/27/2025 9:23:20 AM



REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED	M. MCDONALD
DESIGN CHECKED	B. MARTIN
DETAILED	M. HUFFMAN
DRAWING CHECKED	B. MARTIN

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY

CADD FILE NAME: 19129_PROF_004.sht

DRAWING DATE: MARCH 2025

WASHINGTON COUNTY

ARDURRA

PROJECT NO.: A019(129)

ACCESS ROAD "A" PROFILE

COVE RD BRIDGE
WASHINGTON CO

STA. 70+00 TO STA. 72+09.69

ENGLISH

COUNTY: WASHINGTON

KEY NUMBER: 19129

SHEET 18 OF 37

PROFESSIONAL ENGINEER LICENSED 19600 STATE OF IDAHO MICHELLE V. MCDONALD 3/27/25

2134 2132 2130 2128 2126 2124 2122 2120 2118 2116 2114 2112 2110 2108 2106 2104 2102 2100

60+00 61+00 62+00 63+00 64+00

BEGIN CONSTRUCTION
ACCESS ROAD "B"
STA. 60+00.00
COVE RD STA. 28+16.44

VPI +15.42 2120.89'

VPC +85.27 2118.10'

-4.000%

FINISHED GRADE
AT CENTERLINE

100' VC
K 37.00
ELEV=2116.37'

VPT +85.27B 2115.32'

VPI +11.54 2115.09'

-0.877%

END CONSTRUCTION
ACCESS ROAD "B"
STA. 62+11.54

VPI +35.27
2116.03'

EXISTING GROUND
AT CENTERLINE

33.333%

END DITCH (LT)
STA. 62+11.54, 20.00'LT
2109.42'

-0.100%

STA. 62+04.00, 20.50'LT
2107.30

CONNECT TO DITCH (LT)
WEST OF COVE RD
SEE COVE RD PROFILE
COVE RD STA 27+89.55, 51.60'LT=
STA. 60+44.37, 37.39'LT
2107.46

DITCH
BOTTOM (LT)

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED M. MCDONALD
DESIGN CHECKED B. MARTIN
DETAILED M. HUFFMAN
DRAWING CHECKED B. MARTIN

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
CADD FILE NAME 19129_PROF_004b.sht
DRAWING DATE: MARCH 2025

WASHINGTON COUNTY

ARDURRA

PROJECT NO. A019(129)

ACCESS ROAD "B" PROFILE

COVE RD BRIDGE
WASHINGTON CO

STA. 60+00 TO STA. 62+11.54

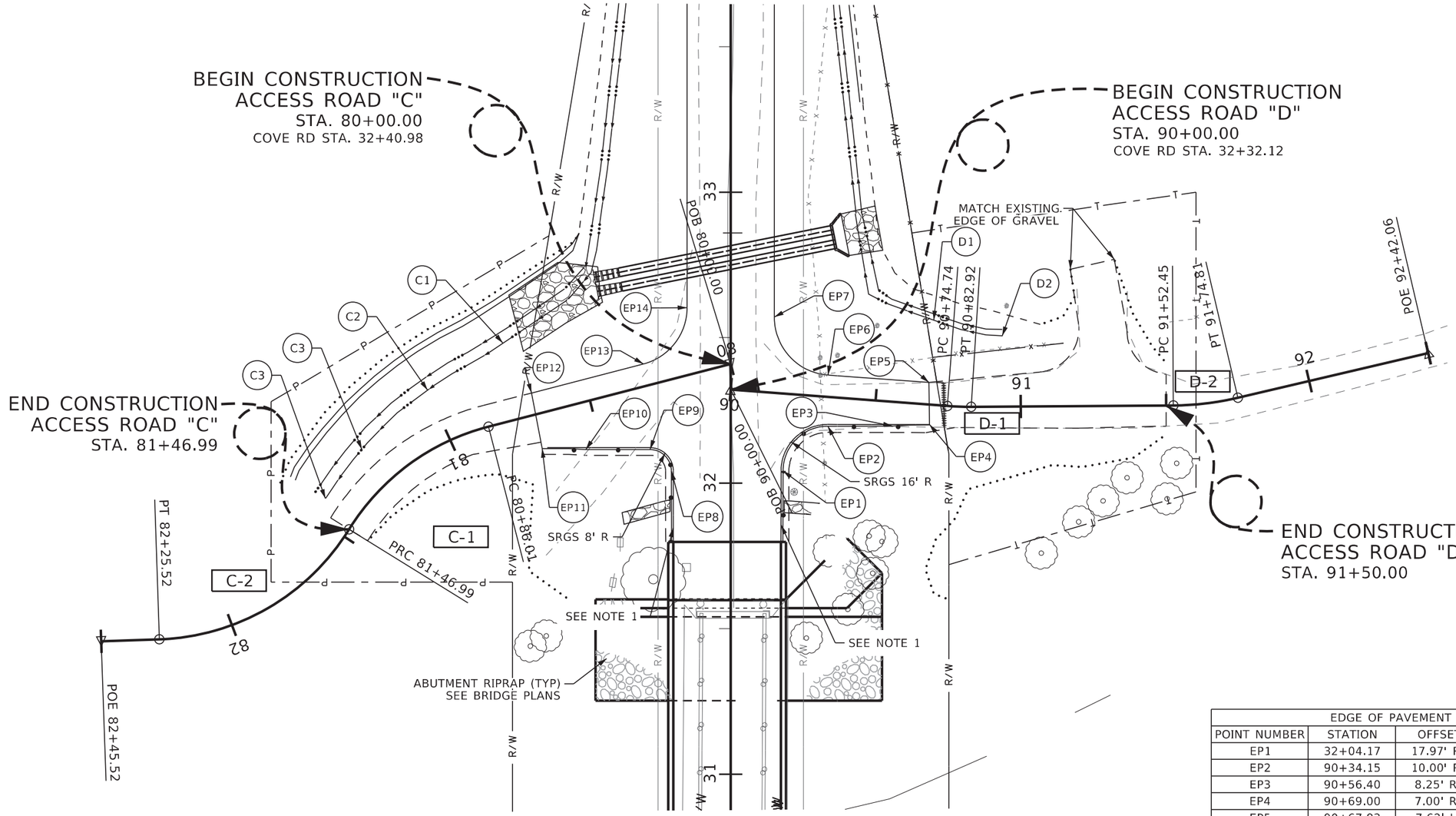
ENGLISH

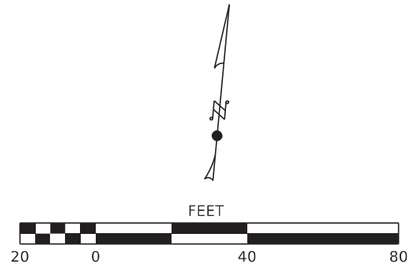
COUNTY WASHINGTON
KEY NUMBER 19129
SHEET 19 OF 37

PROFESSIONAL ENGINEER LICENSED 19600 STATE OF IDAHO MICHELLE V. MCDONALD 3/27/25

pw://pwhdrusweso1:HDR_US_West_01/Documents/ITD_Headquarters/ITD-Cove_Rd_Brdg_Replacement/6.0_CAD_BIM/6.2_Work_in_Progress/6.2.3_Roadway/19129_PROF_004b

T.11N., R.5W., B.M.
SEC 33





CURVE C-1
Δ= 43°40'12" Lt.
T= 32.05'
L= 60.97'
R= 80.00'
S= N/A
RL= N/A
Z= N/A
P.I. N. 940887.75
E. 2311801.11

CURVE C-2
Δ= 56°14'51" RT
T= 42.76'
L= 78.54'
R= 80.00'
S= N/A
RL= N/A
Z= N/A
P.I. N. 940820.79
E. 2311767.74

CURVE D-1
Δ= 04°41'12" LT
T= 4.09'
L= 8.18'
R= 100.00'
S= N/A
RL= N/A
Z= N/A
P.I. N. 940920.41
E. 2311991.81

CURVE D-2
Δ= 12°48'47" LT
T= 11.23'
L= 22.36'
R= 100.00'
S= N/A
RL= N/A
Z= N/A
P.I. N. 940928.84
E. 2312076.24

DITCH BOTTOM			
POINT NUMBER	STATION	OFFSET	ELEVATION
C1	80+73.65	26.50' RT	2108.87
C2	81+00.00	19.00' RT	2108.90
C3	81+25.00	14.30' RT	2108.93
C4	81+42.87	12.50' RT	2108.95
D1	90+67.85	29.25' LT	2109.55
D2	90+93.86	24.35' LT	2109.79

EDGE OF PAVEMENT			
POINT NUMBER	STATION	OFFSET	ELEVATION
EP1	32+04.17	17.97' RT	2122.10
EP2	90+34.15	10.00' RT	2120.10
EP3	90+56.40	8.25' RT	2118.10
EP4	90+69.00	7.00' RT	2116.96
EP5	90+67.83	7.62' LT	2116.74
EP6	90+33.00	7.50' LT	2119.51
EP7	32+57.07	15.00' RT	2120.11
EP8	32+04.20	20.37' LT	2122.05
EP9	80+34.25	21.50' LT	2121.10
EP10	80+55.60	15.97' LT	2118.10
EP11	80+70.00	11.85' LT	2115.98
EP12	80+68.80	7.50' RT	2115.72
EP13	80+29.00	7.50' RT	2119.65
EP14	32+60.32	15.00' LT	2119.97

NOTES:

1. INSTALL SHORT RADIUS W-BEAM GUARDRAIL SYSTEM PER ITD STANDARD DRAWING 612-3. SEE TYPICAL SECTIONS FOR GUARDRAIL OFFSET

REVISIONS

NO.	DATE	BY	DESCRIPTION

DESIGNED M. MCDONALD
DESIGN CHECKED B. MARTIN
DETAILED M. HUFFMAN
DRAWING CHECKED B. MARTIN

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
CADD FILE NAME 19129_PLAN_005.dgn
DRAWING DATE: MARCH 2025

WASHINGTON COUNTY

ARDURRA

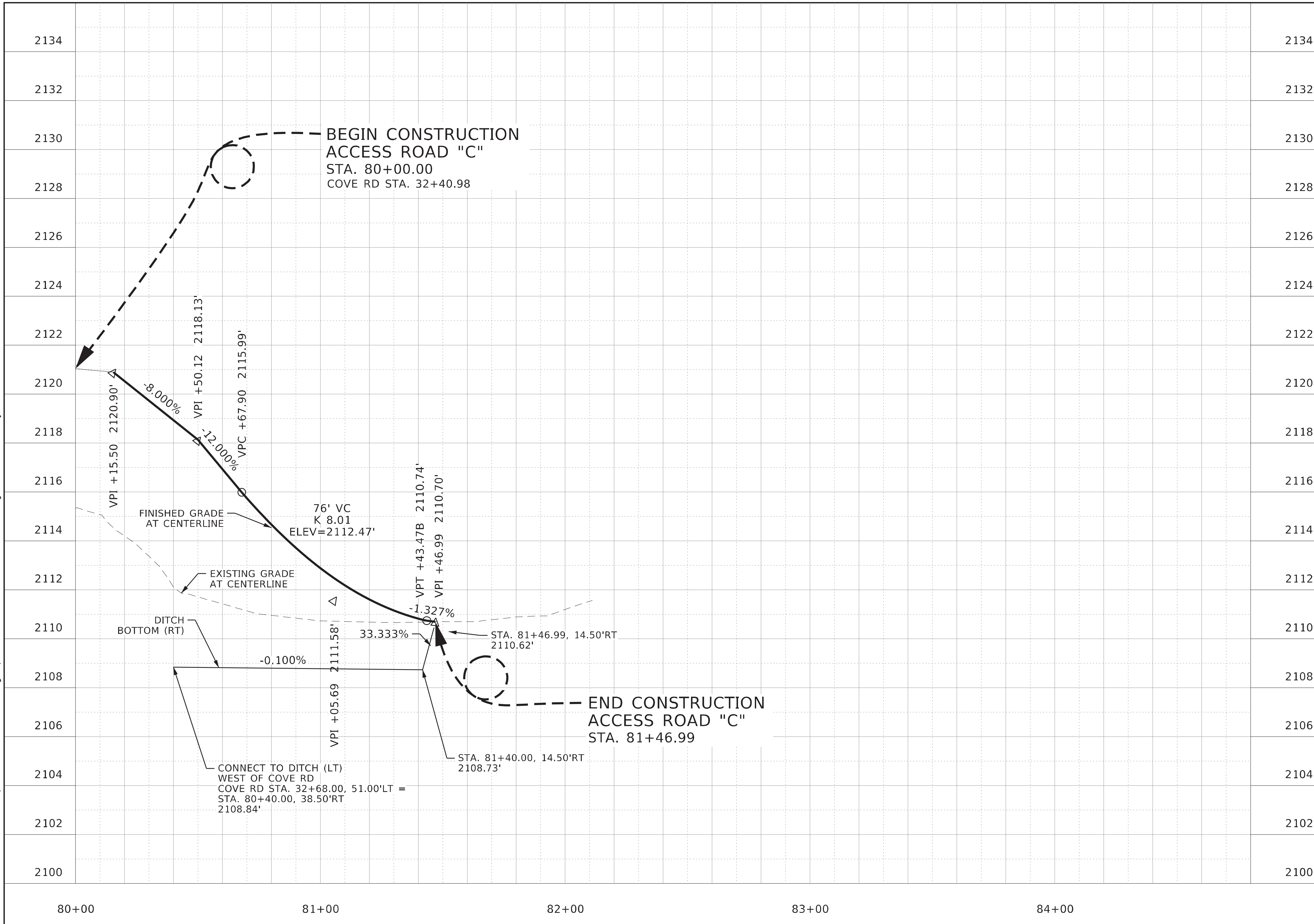
PROJECT NO. A019(129)

ACCESS ROAD PLAN
COVE RD BRIDGE
WASHINGTON CO
ACCESS ROAD "C" & "D"

ENGLISH
COUNTY WASHINGTON
KEY NUMBER 19129
SHEET 20 OF 37

PROFESSIONAL ENGINEER LICENSED 19600 STATE OF IDAHO MICHELLE V. MCDONALD 3/27/25

pw:/pwhdrusweS0iHDR_US_West_01/Documents/ITD_Headquarters/ITD-Cove_Rd_Brdg_Replacement/6.0_CAD_BIM/6.2_Work_in_Progress/6.2.3_Roadway/19129_PLAN_005 3/27/2025 9:23:37 AM



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REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED M. MCDONALD
DESIGN CHECKED B. MARTIN
DETAILED M. HUFFMAN
DRAWING CHECKED B. MARTIN

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
CADD FILE NAME 19129_PROF_005c.sht
DRAWING DATE: MARCH 2025

WASHINGTON COUNTY

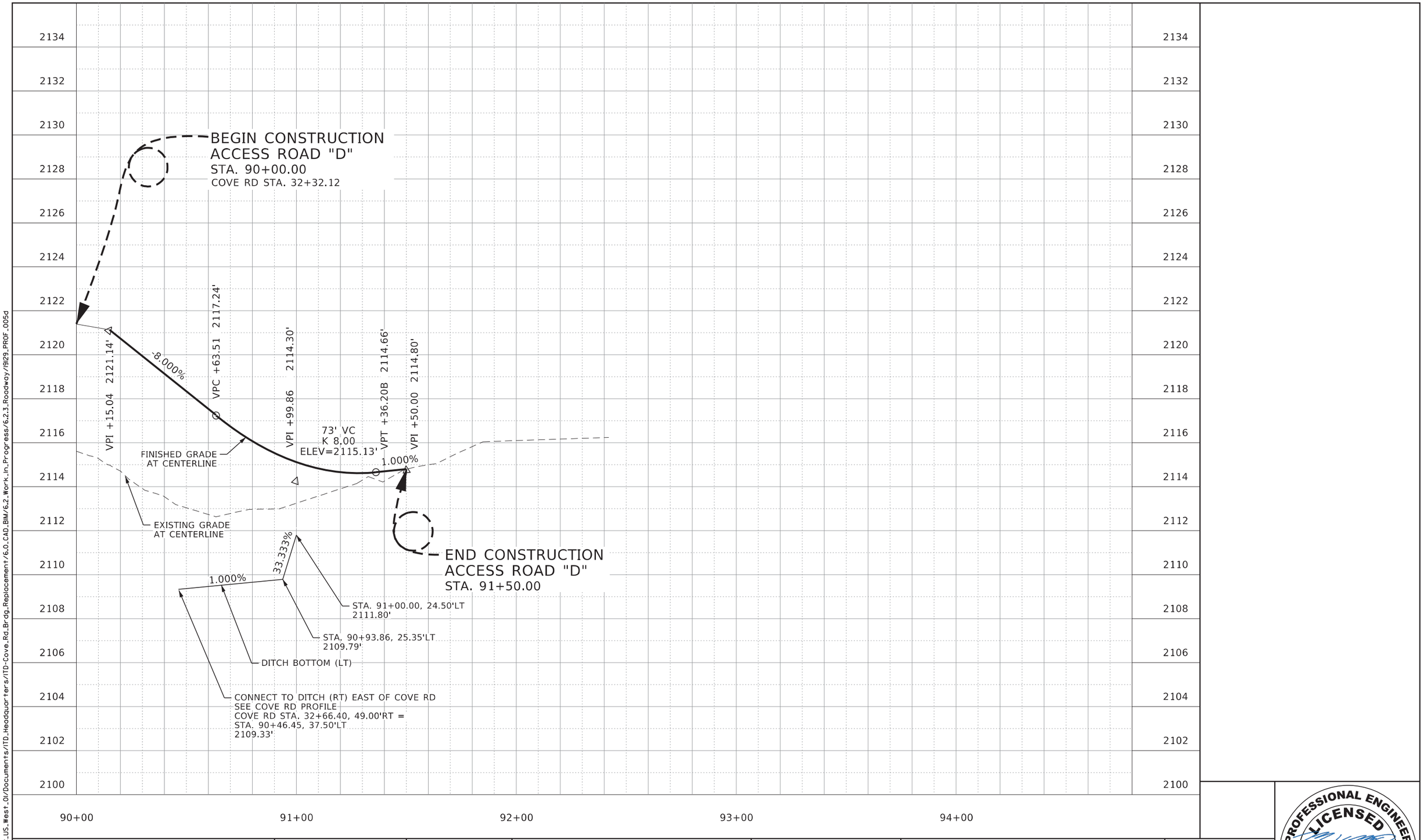
ARDURRA

PROJECT NO. A019(129)

ACCESS ROAD "C" PROFILE
COVE RD BRIDGE
WASHINGTON CO
STA. 80+00 TO STA. 81+46.99

ENGLISH
COUNTY WASHINGTON
KEY NUMBER 19129
SHEET 21 OF 37

PROFESSIONAL ENGINEER LICENSED 19600 3/27/25 STATE OF IDAHO MICHELLE V. MCDONALD



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REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED	M. MCDONALD
DESIGN CHECKED	B. MARTIN
DETAILED	M. HUFFMAN
DRAWING CHECKED	B. MARTIN

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY

CADD FILE NAME	19129_PROF_005d.sht
DRAWING DATE:	MARCH 2025

WASHINGTON COUNTY

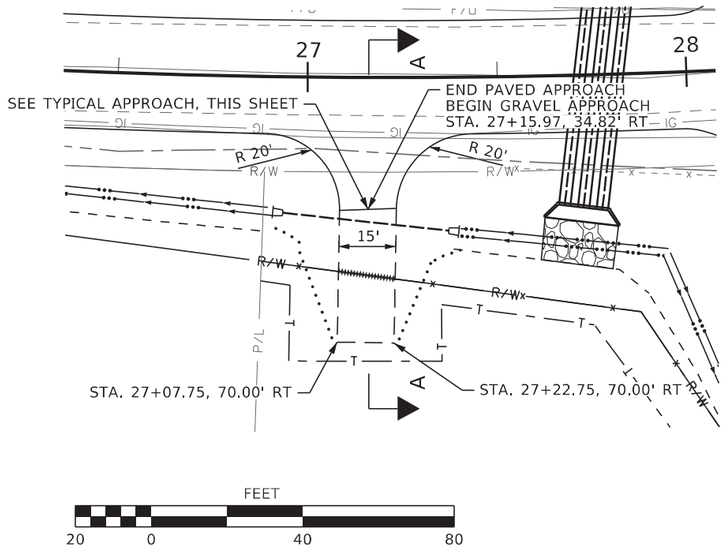
ARDURRA

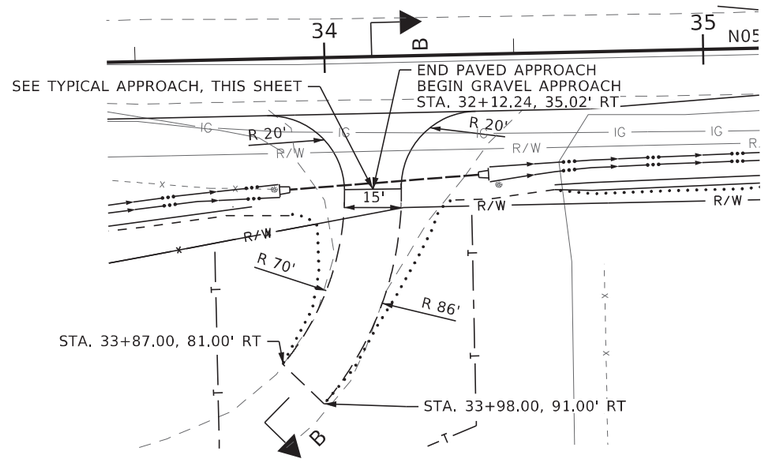
PROJECT NO.	ACCESS ROAD "D" PROFILE
A019(129)	COVE RD BRIDGE WASHINGTON CO STA. 90+00 TO STA. 91+50.00

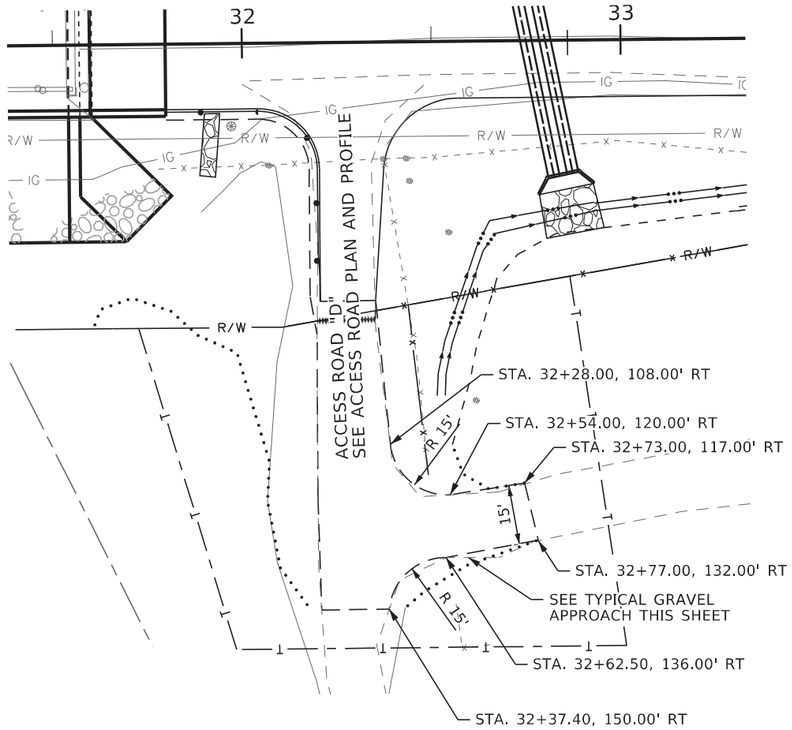
ENGLISH

COUNTY	WASHINGTON
KEY NUMBER	19129
SHEET	22 OF 37

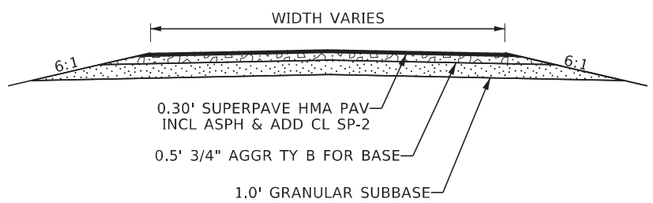
PROFESSIONAL ENGINEER
LICENSED
19600
3/27/25
STATE OF IDAHO
MICHELLE V. MCDONALD



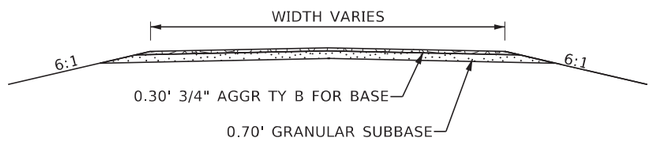


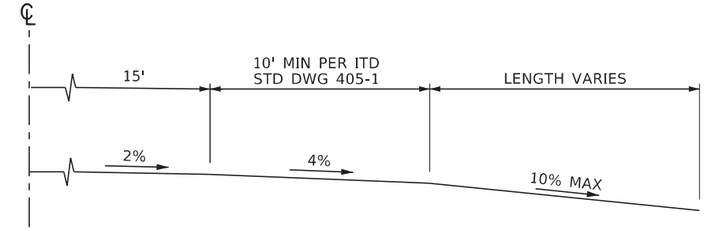


TYPICAL APPROACH (PAVED)

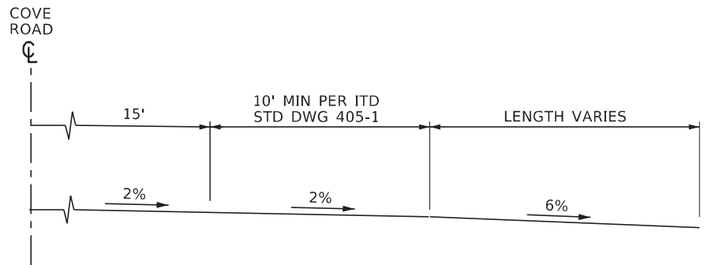


TYPICAL APPROACH (GRAVEL)





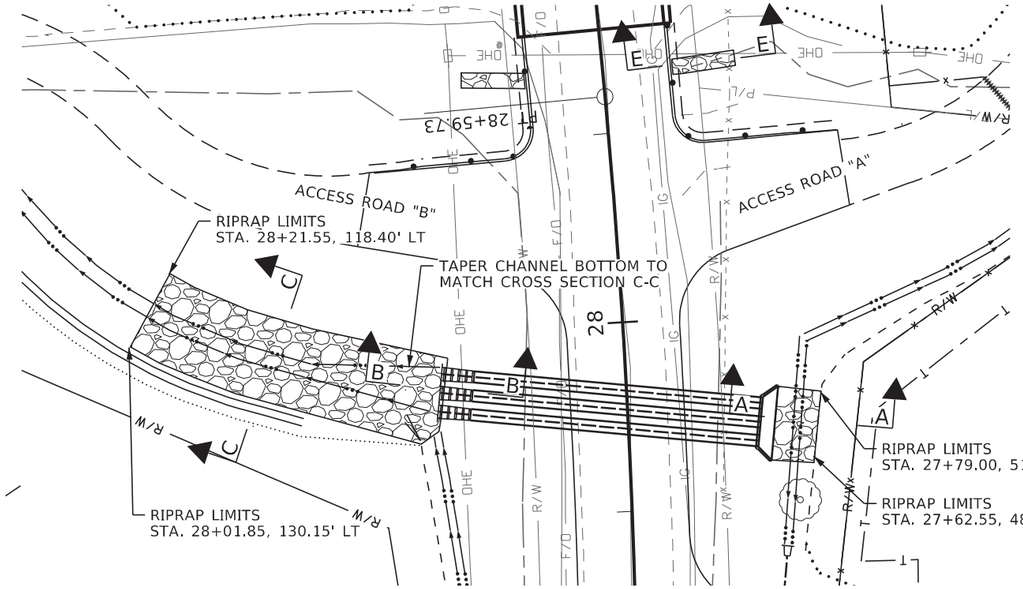
SECTION A-A

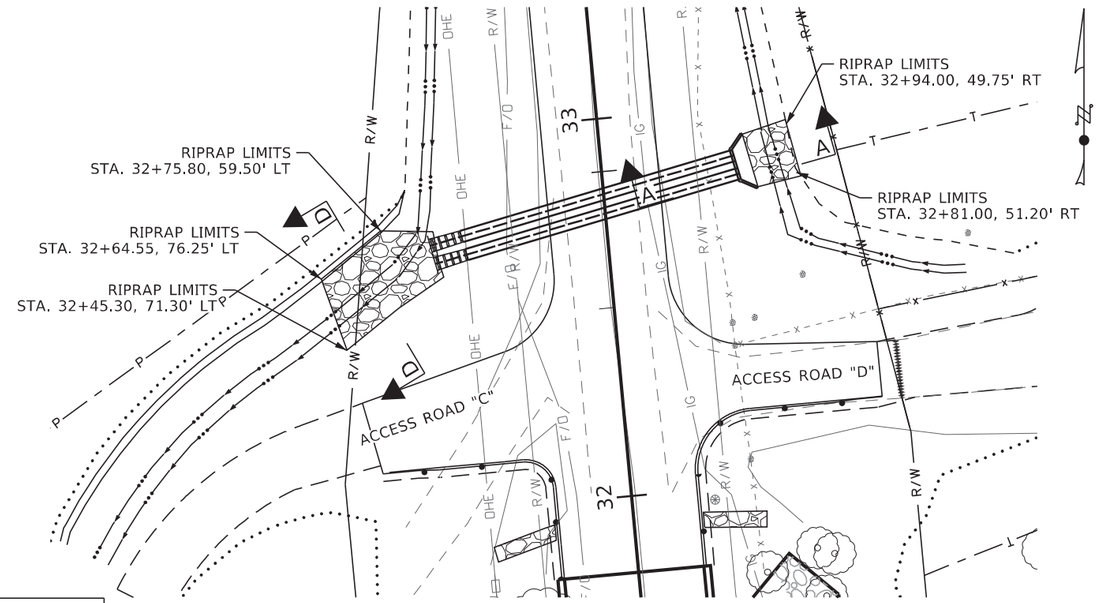


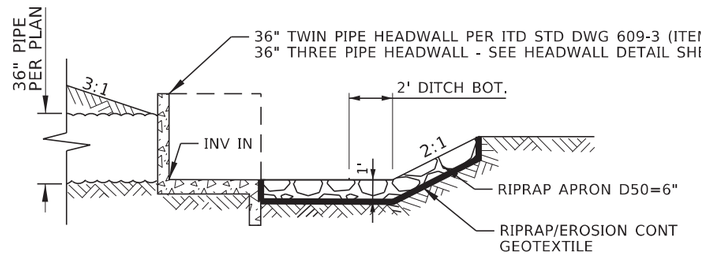
SECTION B-B

REVISIONS				DESIGNED	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY	WASHINGTON COUNTY	PROJECT NO.	APPROACH DETAIL SHEET	ENGLISH
NO.	DATE	BY	DESCRIPTION	M. MCDONALD			A019(129)	COVE RD BRIDGE WASHINGTON CO	COUNTY WASHINGTON
				DESIGN CHECKED B. MARTIN					KEY NUMBER 19129
				DETAILED M. MCDONALD	CADD FILE NAME 19129_rdet_002.DGN				SHEET 23 OF 37
				DRAWING CHECKED B. MARTIN	DRAWING DATE: MARCH 2025	ARDURRA			

PROFESSIONAL ENGINEER LICENSED 19600 STATE OF IDAHO MICHELLE V. MCDONALD 3/27/25

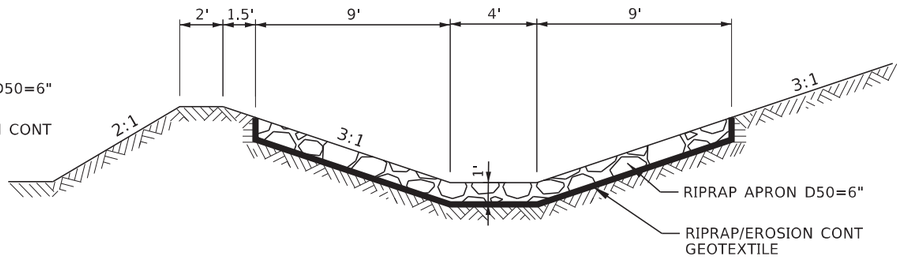




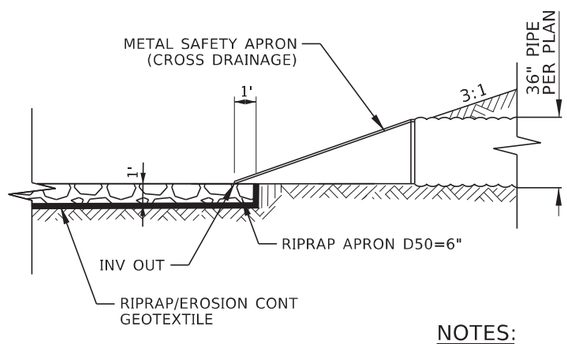


SECTION A-A
NOT TO SCALE

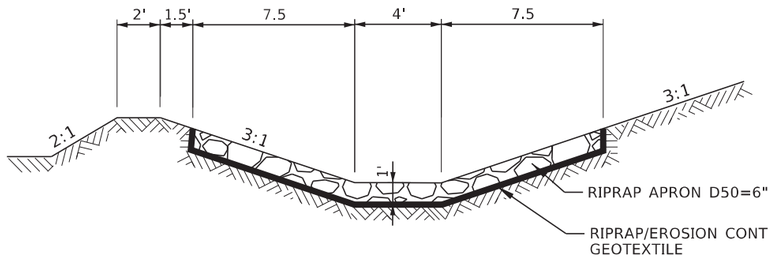
FEET
20 0 40 80



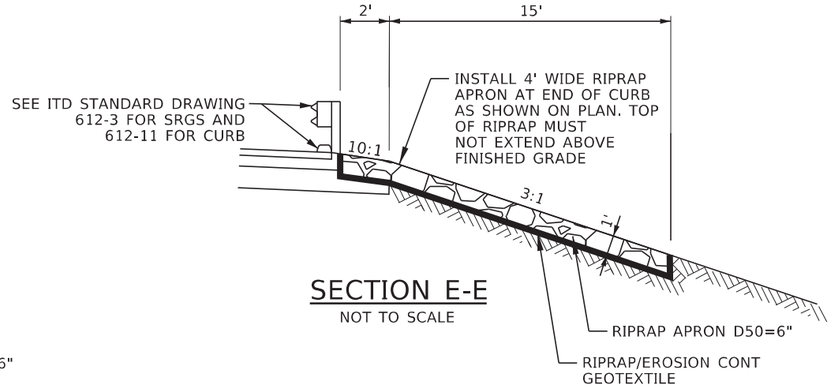
SECTION C-C
NOT TO SCALE



SECTION B-B
NOT TO SCALE



SECTION D-D
NOT TO SCALE



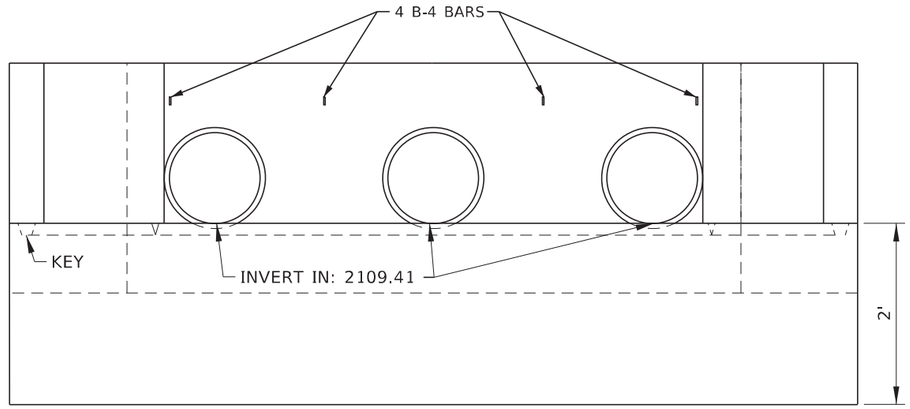
SECTION E-E
NOT TO SCALE

NOTES:

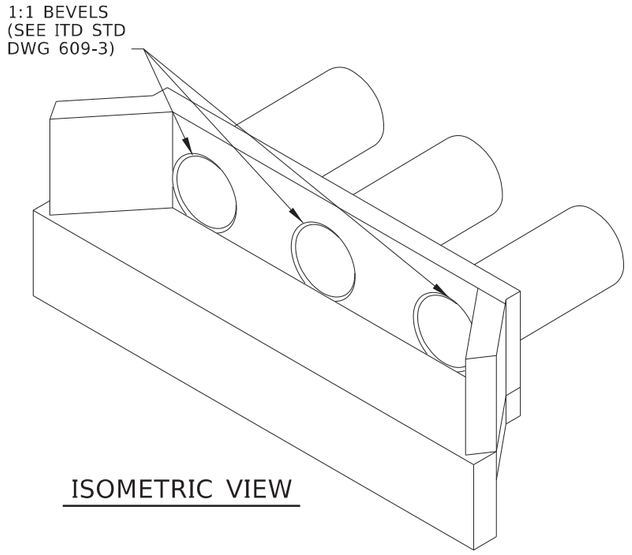
1. REFER TO ITD STANDARD DRAWING 608-3 FOR MORE DETAILS.

REVISIONS				DESIGNED	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY	WASHINGTON COUNTY	PROJECT NO.	DRAINAGE DETAIL SHEET	ENGLISH
NO.	DATE	BY	DESCRIPTION	M. MCDONALD			A019(129)	COVE RD BRIDGE WASHINGTON CO	COUNTY WASHINGTON
				DESIGN CHECKED B. MARTIN					KEY NUMBER 19129
				DETAILED M. MCDONALD	CADD FILE NAME 19129_ddetl_001.DGN				SHEET 24 OF 37
				DRAWING CHECKED B. MARTIN	DRAWING DATE: MARCH 2025	ARDURRA			

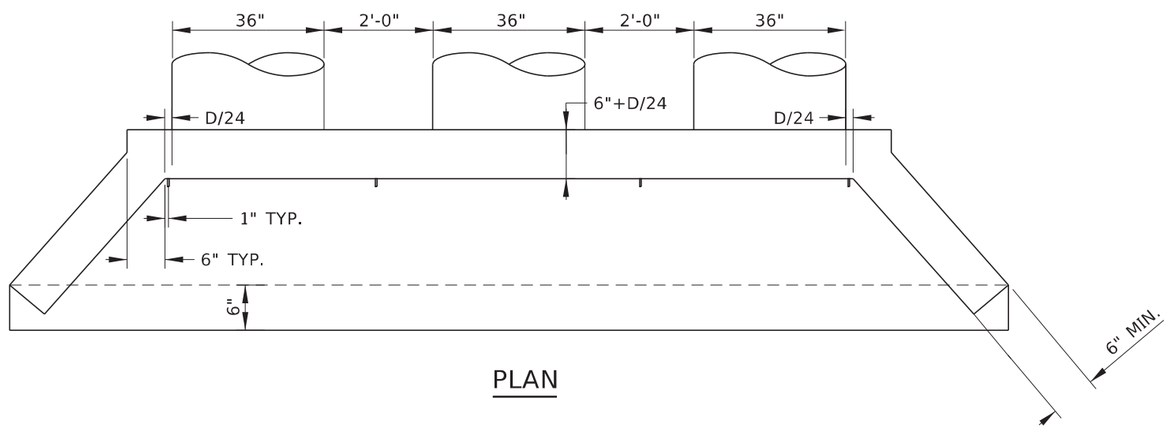
PROFESSIONAL ENGINEER LICENSED 19600 3/27/25 STATE OF IDAHO MICHELLE V. MCDONALD



ELEVATION



ISOMETRIC VIEW



PLAN

NOTES:

1. CONTRACTOR MUST DESIGN AND SUBMIT SHOP DRAWINGS STAMPED BY A PROFESSIONAL ENGINEER FOR HEADWALL FOR REVIEW AND APPROVAL BY ENGINEER OF RECORD AND LHTAC PRIOR TO CONSTRUCTION.
2. ALL EXCAVATION, STRUCTURAL BACKFILL, LABOR, MATERIALS, AND ALL OTHER NECESSARY ITEMS NEEDED TO CONSTRUCT THIS STRUCTURE ARE INCIDENTAL TO ITEM 609-025B.
3. SEE ITD STANDARD DRAWING 609-3 FOR MORE INFORMATION.

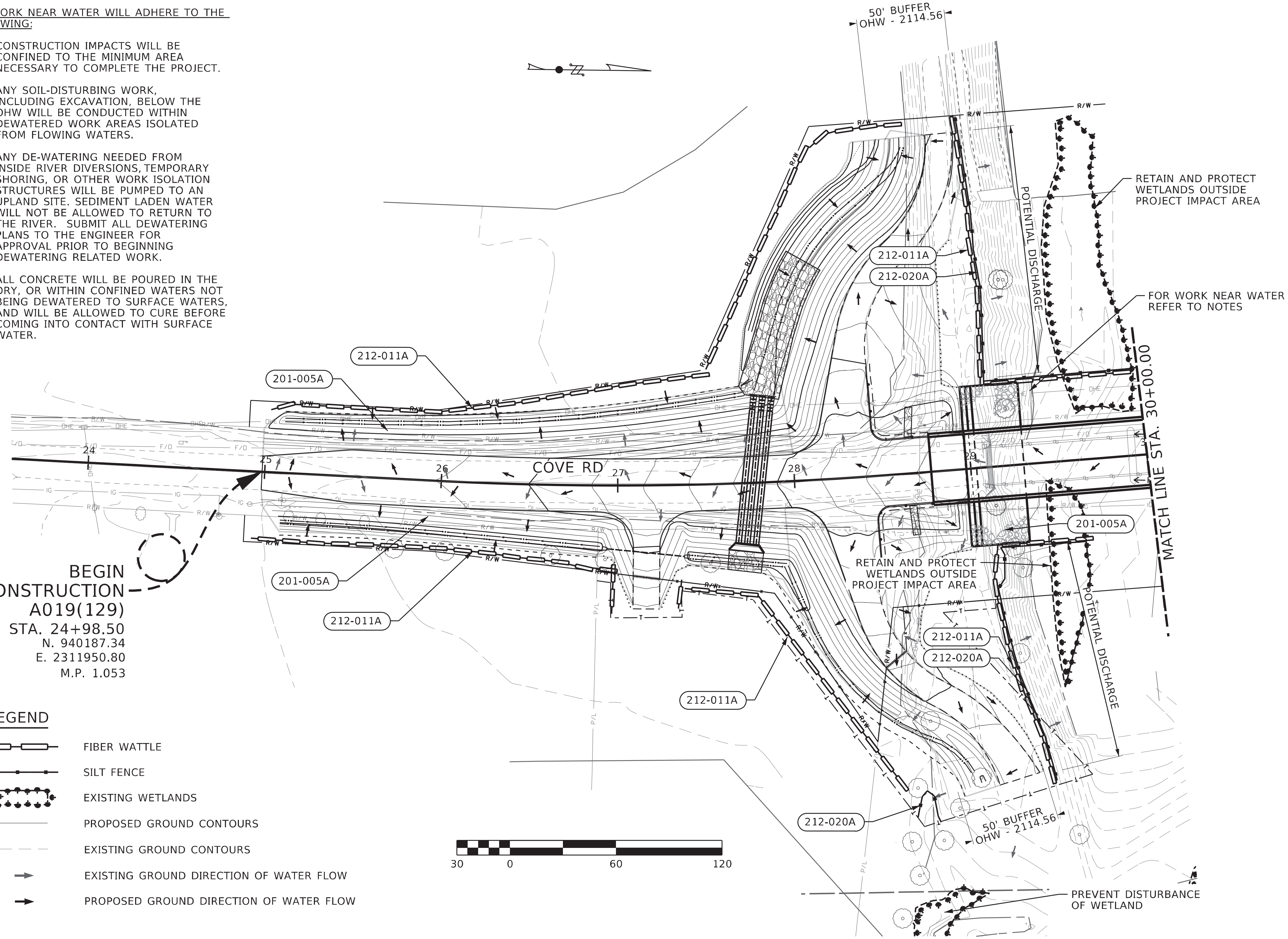
REVISIONS				DESIGNED	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY	WASHINGTON COUNTY	PROJECT NO.	DRAINAGE DETAIL SHEET	ENGLISH
NO.	DATE	BY	DESCRIPTION	M. MCDONALD			A019(129)	COVE RD BRIDGE WASHINGTON CO	COUNTY WASHINGTON
				DESIGN CHECKED B. MARTIN					KEY NUMBER 19129
				DETAILED M. MCDONALD	CADD FILE NAME 19129_ddetl_002.DGN	ARDURRA			SHEET 25 OF 37
				DRAWING CHECKED B. MARTIN	DRAWING DATE: MARCH 2025				

PROFESSIONAL ENGINEER LICENSED 19600 3/27/25 STATE OF IDAHO MICHELLE V. MCDONALD

pw:/pwhdr-uswest0ihDR.US_West_01/Documents/ITD_Headquarters/ITD-Cove_Rd_Brdg_Replacement/6.0_CAD_BIM/6.2_Work_in_Progress/6.2.3_Roadway/19129_ddetl_002 3/27/2025 9:24:18 AM

ALL WORK NEAR WATER WILL ADHERE TO THE FOLLOWING:

1. CONSTRUCTION IMPACTS WILL BE CONFINED TO THE MINIMUM AREA NECESSARY TO COMPLETE THE PROJECT.
2. ANY SOIL-DISTURBING WORK, INCLUDING EXCAVATION, BELOW THE OHW WILL BE CONDUCTED WITHIN DEWATERED WORK AREAS ISOLATED FROM FLOWING WATERS.
3. ANY DE-WATERING NEEDED FROM INSIDE RIVER DIVERSIONS, TEMPORARY SHORING, OR OTHER WORK ISOLATION STRUCTURES WILL BE PUMPED TO AN UPLAND SITE. SEDIMENT LADEN WATER WILL NOT BE ALLOWED TO RETURN TO THE RIVER. SUBMIT ALL DEWATERING PLANS TO THE ENGINEER FOR APPROVAL PRIOR TO BEGINNING DEWATERING RELATED WORK.
4. ALL CONCRETE WILL BE POURED IN THE DRY, OR WITHIN CONFINED WATERS NOT BEING DEWATERED TO SURFACE WATERS, AND WILL BE ALLOWED TO CURE BEFORE COMING INTO CONTACT WITH SURFACE WATER.



LEGEND

- FIBER WATTLE
- SILT FENCE
- EXISTING WETLANDS
- PROPOSED GROUND CONTOURS
- EXISTING GROUND CONTOURS
- EXISTING GROUND DIRECTION OF WATER FLOW
- PROPOSED GROUND DIRECTION OF WATER FLOW

201-005A CLEARING & GRUBBING

0.50	ACRE	STA. 24+94.00, 12.00' RT TO STA. 29+07.00, 187.00' RT
0.55	ACRE	STA. 24+96.00, 22.00' LT TO STA. 28+82.00, 196.00' LT
0.05	ACRE	STA. 29+18.00, 48.00' RT STA. 29+26.00, 50.00' LT

212-011A FIBER WATTLE

230	FT	STA. 24+94.00, 38.00' RT TO STA. 26+97.00, 73.00' RT
452	FT	STA. 25+02.00, 35.00' LT TO STA. 28+80.00, 196.00' LT
254	FT	STA. 27+33.00, 70.00' RT TO STA. 28+50.00, 186.00' RT
240	FT	STA. 29+05.00, 200.00' LT TO STA. 30+00.00, 50.00' LT
190	FT	STA. 29+30.00, 180.00' RT TO STA. 29+65.00, 45.00' RT

212-020A SILT FENCE

40	FT	STA. 28+55.00, 195.00' RT TO STA. 28+67.00, 195.00' RT
240	FT	STA. 29+05.00, 200.00' LT TO STA. 30+00.00, 50.00' LT
190	FT	STA. 29+30.00, 180.00' RT TO STA. 29+65.00, 45.00' RT

REVISIONS			
NO	DATE	BY	DESCRIPTION

DESIGNED: M. HUFFMAN
DESIGN CHECKED: M. MCDONALD
DETAILED: M. HUFFMAN
DRAWING CHECKED: B. MARTIN

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
CADD FILE NAME: 19129_swpp_001_2.0.sht
DRAWING DATE: MARCH 2025

WASHINGTON COUNTY
ARDURRA

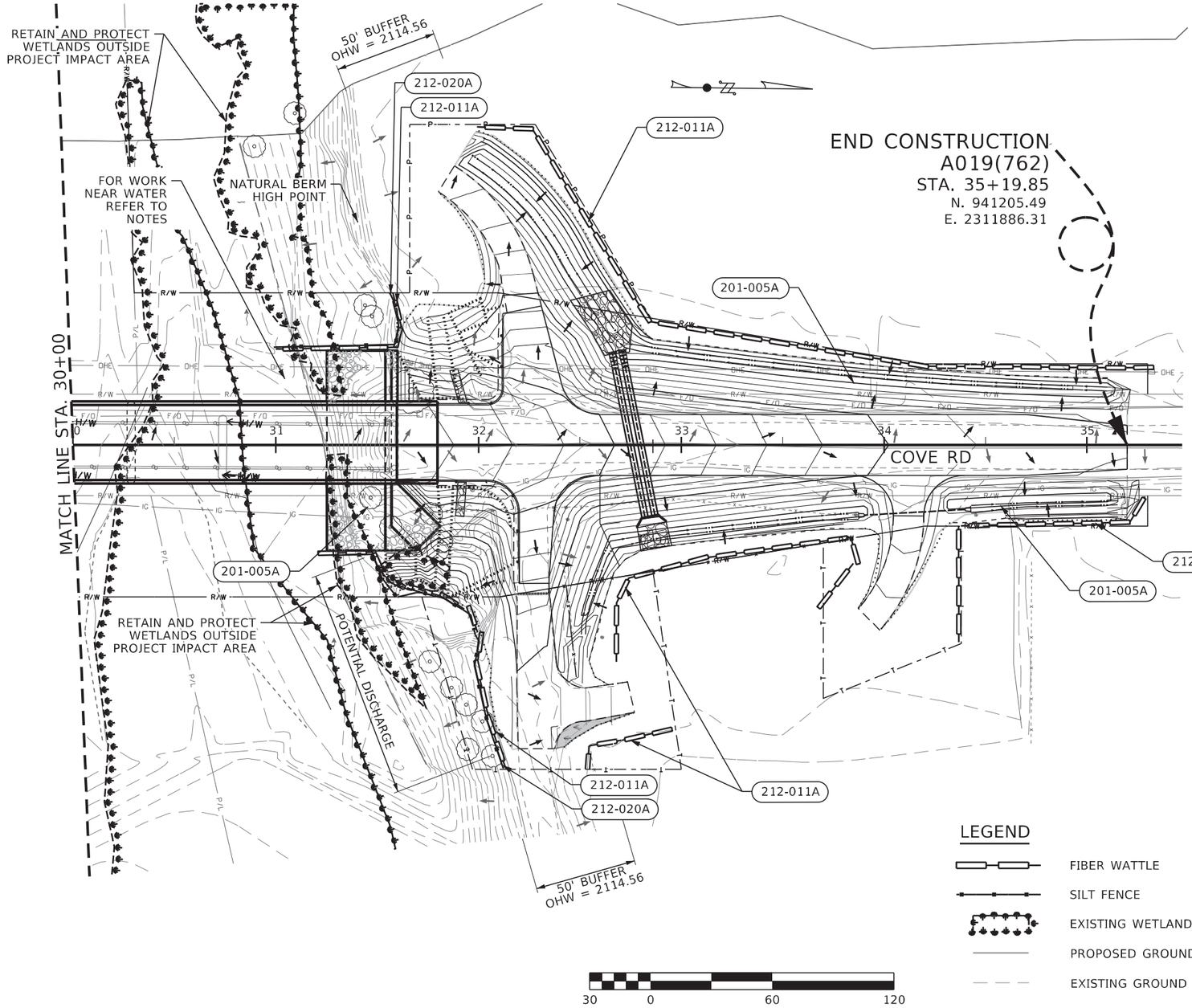
PROJECT NO. A019(129)

SWPP PLAN
COVE RD BRIDGE WASHINGTON CO
STA. 24+98.50 TO STA. 30+00

ENGLISH
COUNTY: WASHINGTON
KEY NUMBER: 19129
SHEET 26 OF 37

PROFESSIONAL ENGINEER LICENSED 19600 3/27/25 STATE OF IDAHO MICHELLE V. MCDONALD

pw://pwhdruswes01HDR_US_West_01/Documents/ITD_Headquarters/ITD-Cove_Rd_Brdg_Replacement/6.0_CAD_BIM/6.2_Work_in_Progress/6.2.3_Roadway/19129_swpp_001_2.0.sht 3/27/2025 9:24:49 AM



ALL WORK NEAR WATER WILL ADHERE TO THE FOLLOWING:

1. CONSTRUCTION IMPACTS WILL BE CONFINED TO THE MINIMUM AREA NECESSARY TO COMPLETE THE PROJECT.
2. ANY SOIL-DISTURBING WORK, INCLUDING EXCAVATION, BELOW THE OHW WILL BE CONDUCTED WITHIN DEWATERED WORK AREAS ISOLATED FROM FLOWING WATERS.
3. ANY DE-WATERING NEEDED FROM INSIDE RIVER DIVERSIONS, TEMPORARY SHORING, OR OTHER WORK ISOLATION STRUCTURES WILL BE PUMPED TO AN UPLAND SITE. SEDIMENT LADEN WATER WILL NOT BE ALLOWED TO RETURN TO THE RIVER. SUBMIT ALL DEWATERING PLANS TO THE ENGINEER FOR APPROVAL PRIOR TO BEGINNING DEWATERING RELATED WORK.
4. ALL CONCRETE WILL BE POURED IN THE DRY, OR WITHIN CONFINED WATERS NOT BEING DEWATERED TO SURFACE WATERS, AND WILL BE ALLOWED TO CURE BEFORE COMING INTO CONTACT WITH SURFACE WATER.

LEGEND

- FIBER WATTLE
- SILT FENCE
- EXISTING WETLANDS
- PROPOSED GROUND CONTOURS
- EXISTING GROUND CONTOURS
- EXISTING GROUND DIRECTION OF WATER FLOW
- PROPOSED GROUND DIRECTION OF WATER FLOW

201-005A CLEARING & GRUBBING

0.13 ACRE	STA. 31+00.00, 45.00' LT TO STA. 31+00.00, 50.00' RT
0.39 ACRE	STA. 31+59.00, 46.00' LT TO STA. 35+21.00, 32.00' LT
0.30 ACRE	STA. 31+28.00, 54.00' RT TO STA. 35+25.00, 40.00' RT

212-011A FIBER WATTLE

382 FT	STA. 32+00.00, 155.00' LT TO STA. 35+30.00, 38.00' LT
55 FT	STA. 32+53.00, 153.00' RT TO STA. 32+95.00, 140.00' RT
195 FT	STA. 32+68.00, 105.00' RT TO STA. 33+67.00, 80.00' RT
155 FT	STA. 34+35.00, 95.00' RT TO STA. 35+28.00, 26.00' RT
86 FT	STA. 31+00.00, 50.00' LT TO STA. 31+58.00, 75.00' LT
162 FT	STA. 31+28.00, 54.00' RT TO STA. 32+12.00, 160.00' RT

212-020A SILT FENCE

86 FT	STA. 31+00.00, 50.00' LT TO STA. 31+58.00, 75.00' LT
162 FT	STA. 31+28.00, 54.00' RT TO STA. 32+12.00, 160.00' RT

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED	M. HUFFMAN
DESIGN CHECKED	M. MCDONALD
DETAILED	M. HUFFMAN
DRAWING CHECKED	B. MARTIN

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY

CADD FILE NAME: 19129_swpp_002_2.0.sht

DRAWING DATE: MARCH 2025

WASHINGTON COUNTY

ARDURRA

PROJECT NO.: A019(129)

SWPP PLAN

COVE RD BRIDGE
WASHINGTON CO

STA. 30+00 TO STA. 35+19.85

ENGLISH

COUNTY: WASHINGTON

KEY NUMBER: 19129

SHEET 27 OF 37

PROFESSIONAL ENGINEER LICENSED 19600 STATE OF IDAHO MICHELLE V. MCDONALD 3/27/25

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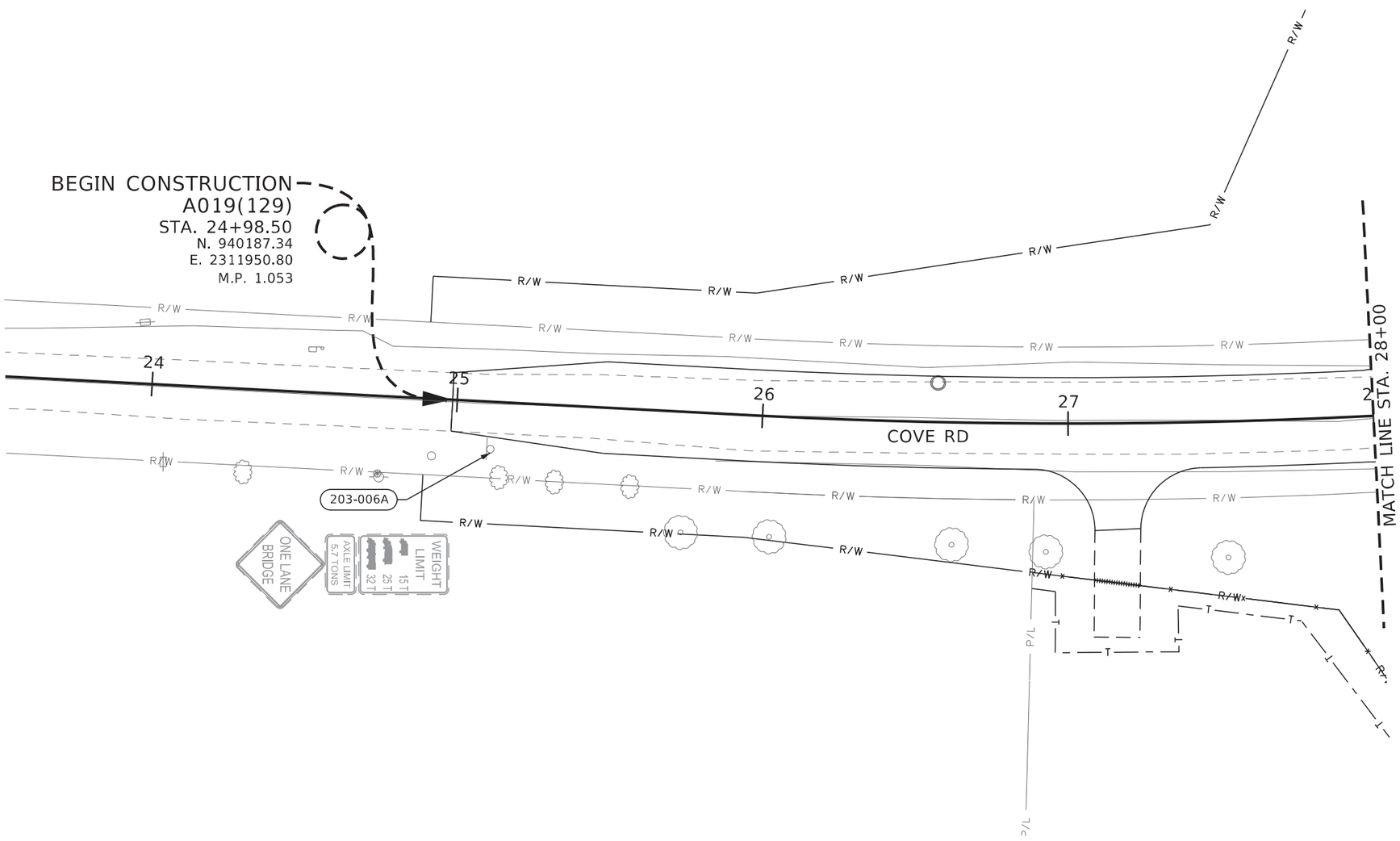
T.11N., R.5W., B.M.
SEC 33

BEGIN CONSTRUCTION
A019(129)
STA. 24+98.50
N. 940187.34
E. 2311950.80
M.P. 1.053



203-006A REMOVAL OF SIGN

1 EACH STA. 25+11.63, 15.51' RT

NOTES:

1. SALVAGE SIGN FACE FROM ALL SIGNS REMOVED UNDER 203-006A AND RETURN FACE TO WASHINGTON COUNTY

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED	M. HUFFMAN
DESIGN CHECKED	M. MCDONALD
DETAILED	M. HUFFMAN
DRAWING CHECKED	B. MARTIN

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY

CADD FILE NAME 19129_signpln_001.sht

DRAWING DATE: MARCH 2025

WASHINGTON COUNTY

ARDURRA

PROJECT NO. A019(129)

SIGNING & PAVEMENT MARKING PLAN

COVE RD BRIDGE
WASHINGTON CO

STA. 24+98.50 TO STA. 28+00

ENGLISH

COUNTY WASHINGTON

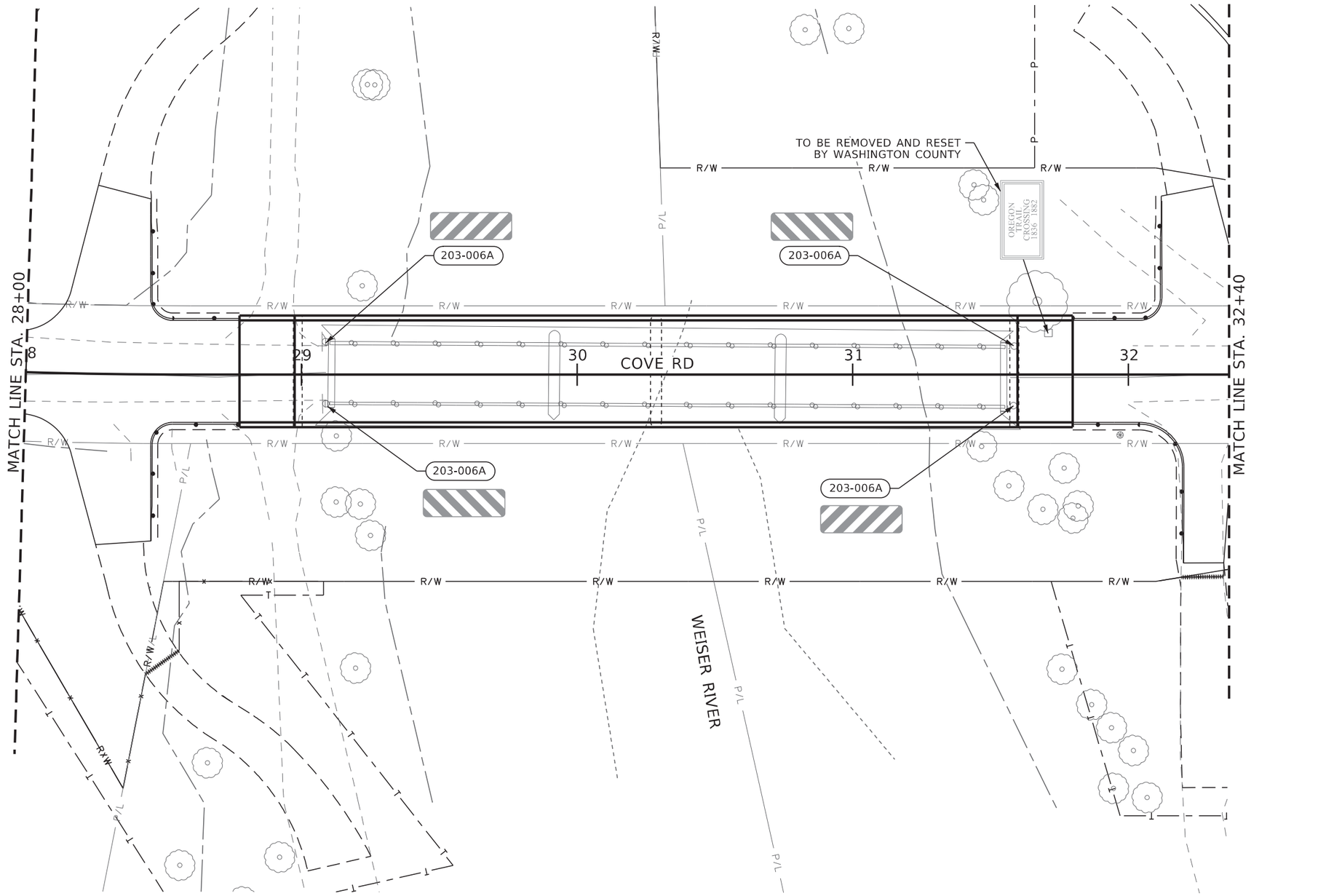
KEY NUMBER 19129

SHEET 28 OF 37

PROFESSIONAL ENGINEER LICENSED 19600 STATE OF IDAHO MICHELLE V. MCDONALD 3/27/25

pw:/pwhdruswest0iHDR_US_West_01/Documents/ITD_Headquarters/ITD-Cove_Rd_Brdg_Replacement/6.0_CAD_BIM/6.2_Work_In_Progress/6.2.3_Roadway/Signing Plan 003/27/2025 9:25:22 AM

T.11N., R.5W., B.M.
SEC 33



203-006A REMOVAL OF SIGN

1 EACH	STA. 29+08.67, 11.99' LT
1 EACH	STA. 29+08.86, 10.49' RT
1 EACH	STA. 31+58.32, 11.22' RT
1 EACH	STA. 31+58.59, 10.37' LT

NOTES:

1. SALVAGE SIGN FACE FROM ALL SIGNS REMOVED UNDER 203-006A AND RETURN FACE TO WASHINGTON COUNTY

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED M. HUFFMAN
DESIGN CHECKED M. MCDONALD
DETAILED M. HUFFMAN
DRAWING CHECKED B. MARTIN

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
CADD FILE NAME 19129_signpln_002.sht
DRAWING DATE: MARCH 2025

WASHINGTON COUNTY
ARDURRA

PROJECT NO. A019(129)

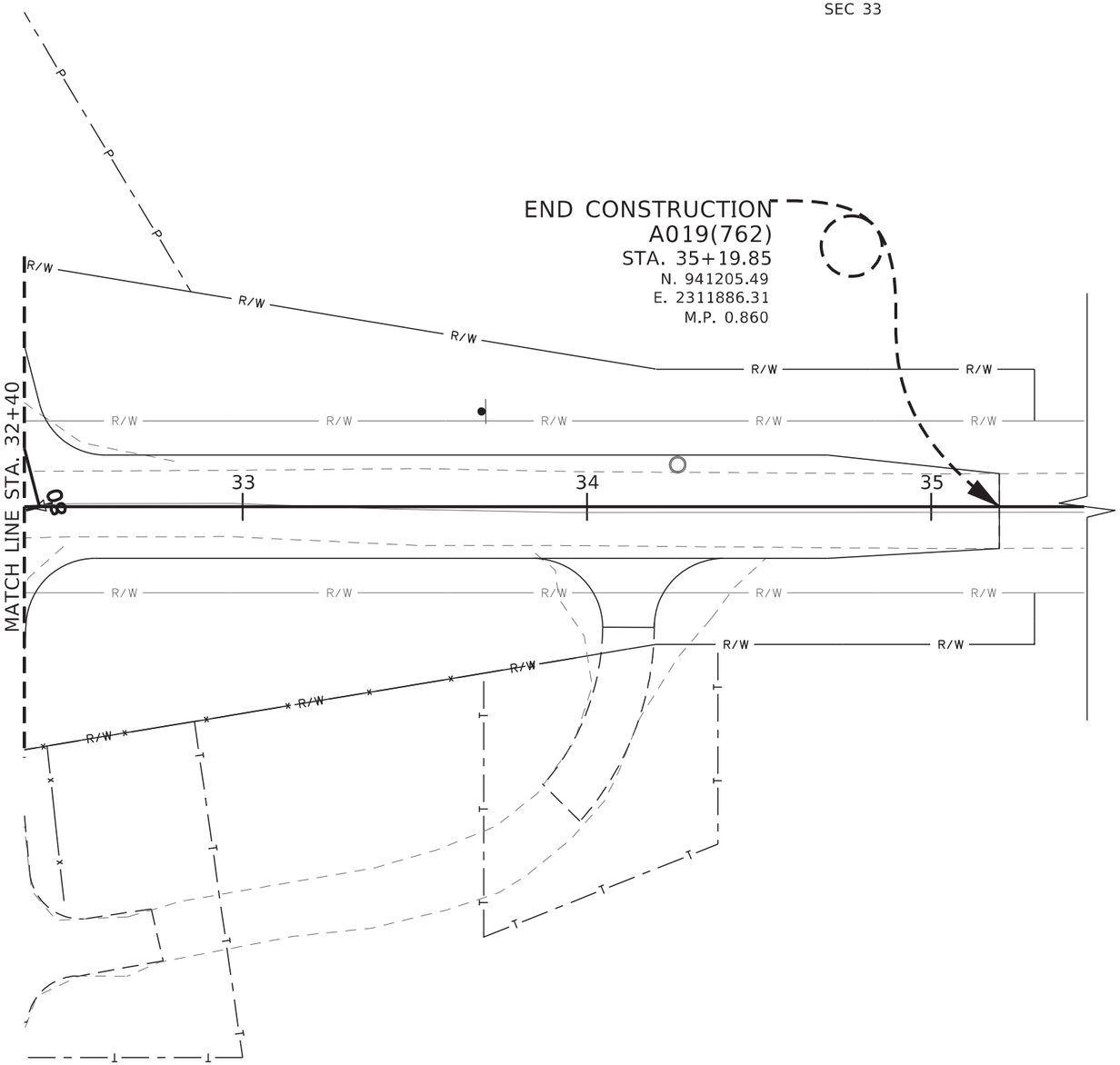
SIGNING & PAVEMENT MARKING PLAN
COVE RD BRIDGE
WASHINGTON CO
STA. 28+00 TO STA. 32+40

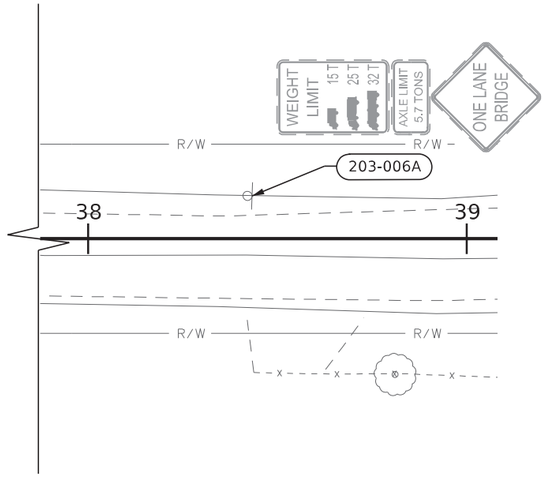
ENGLISH
COUNTY WASHINGTON
KEY NUMBER 19129
SHEET 29 OF 37

PROFESSIONAL ENGINEER LICENSED 19600 STATE OF IDAHO MICHELLE V. MCDONALD 7/22/25

T.11N., R.5W., B.M.
SEC 33

END CONSTRUCTION
A019(762)
STA. 35+19.85
N. 941205.49
E. 2311886.31
M.P. 0.860





203-006A REMOVAL OF SIGN
1 EACH STA. 38+42.11, 11.34' LT

NOTES:

1. SALVAGE SIGN FACE FROM ALL SIGNS REMOVED UNDER 203-006A AND RETURN FACE TO WASHINGTON COUNTY

REVISIONS				DESIGNED	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY	WASHINGTON COUNTY	PROJECT NO.	SIGNING & PAVEMENT MARKING PLAN	ENGLISH
NO.	DATE	BY	DESCRIPTION	M. HUFFMAN			A019(129)	COVE RD BRIDGE WASHINGTON CO	COUNTY WASHINGTON
				DESIGN CHECKED M. MCDONALD				STA. 32+40 TO STA. 39+00	KEY NUMBER 19129
				DETAILED M. HUFFMAN	CADD FILE NAME 19129_signpln_003.sht				SHEET 30 OF 37
				DRAWING CHECKED B. MARTIN	DRAWING DATE: MARCH 2025	ARDURRA			

PROFESSIONAL ENGINEER LICENSED 19600 STATE OF IDAHO MICHELLE V. MCDONALD 3/27/25

pw:/pwhdrusweS0iHDR_US_West_0i/Documents/ITD_Headquarters/ITD-Cove_Rd_Brdg_Replacement/6.0_CAD_BIM/6.2_Work_in_Progress/6.2.3_Roadway/Signing Plan 003 3/27/2025 9:25:35 AM

TEMPORARY TRAFFIC CONTROL SUMMARY

APPROXIMATE SIGNING QUANTITIES						
SIGN	DESCRIPTION	CLASS	SIZE (WxH)	AREA (SF)	QUANTITY	TOTAL AREA (SF)
M6-3(o)	DIRECTIONAL ARROW (UP)	B	21"X15"	2.2	1.0	2.2
M4-8	DETOUR	B	24"X12"	2.0	1.0	2.0
M4-8a	END DETOUR	B	24"X18"	3.0	2.0	6.0
M4-9L	DETOUR (ARROW) (LEFT)	B	30"X24"	5.0	4.0	20.0
M4-9R	DETOUR (ARROW) (RIGHT)	B	30"X24"	5.0	2.0	10.0
R5-10C	NO PEDESTRIANS	B	24"X12"	2.0	2.0	4.0
R11-2 (MOD)	BRIDGE OUT	B	48"X30"	10.0	4.0	40.0
R11-4	ROAD CLOSED TO THRU TRAFFIC	B	60"X30"	12.5	2.0	25.0
W16-8P(o) (MOD)	COVE ROAD	B	24"X8"	1.3	12.0	16.0
W20-1	ROAD WORK AHEAD	B	36"X36"	9.0	3.0	27.0
W20-2	DETOUR AHEAD	B	36"X36"	9.0	3.0	27.0
W20-3	ROAD CLOSED AHEAD	B	36"X36"	9.0	3.0	27.0
W20-4	ONE LANE ROAD AHEAD	B	36"X36"	9.0	2.0	18.0
W20-7	FLAGGER	B	36"X36"	9.0	2.0	18.0
W3-4(o)	BE PREPARED TO STOP	B	36"X36"	9.0	2.0	18.0
W21-5	SHOULDER WORK	B	36"X36"	9.0	1.0	9.0
SUPPLEMENTAL(o)	CALL TRAFFIC SUPERVISOR AT (XXX) XXX-XXXX FOR ACCESS ASSISTANCE	B	36"X12"	3.0	2.0	6.0
					SUBTOTAL:	275.20
					CONTINGENCY (20%):	56.0
					TOTAL:	332.0

NOTES:

1. PLACE DEVICES AT TAPER LENGTHS AND PROVIDE CONSTRUCTION TRAFFIC CONTROL SIGNING THAT MEETS OR EXCEEDS THE REQUIREMENTS OF THE 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), AS ADOPTED BY THE STATE.
2. IF THE TRAFFIC CONTROL PLAN AS SHOWN DOES NOT CONFORM TO CONTRACTOR'S METHOD OF OPERATION, SUBMIT A NEW TRAFFIC CONTROL PLAN FOR APPROVAL. ALLOW TWO (2) WEEKS FOR APPROVAL.
3. ALL DISTANCES BETWEEN SIGNS ARE MINIMUM. PERFORM REQUIRED SPACING ADJUSTMENTS IN THE FIELD DEPENDING ON CONDITIONS.
4. INSTALL ADDITIONAL REQUIRED SIGNING AS DIRECTED.
5. REMOVE OR COVER SIGNS, SIGN STANDS, AND TEMPORARY TRAFFIC CONTROL DEVICES THAT ARE NOT IN USE OR NO LONGER APPROPRIATE.
6. PROVIDE SIGNS AND CHANNELIZING DEVICES THAT ARE NEW OR IN LIKE-NEW CONDITION AND MEET THE RETROREFLECTIVITY REQUIREMENTS OF THE IDAHO TRANSPORTATION DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, SUBSECTION 712.02.
7. PROVIDE A BATTERY OPERATED FLASHING WARNING LIGHT ON ALL CONSTRUCTION WARNING SIGNS DURING THE HOURS OF DARKNESS. MOUNT THE WARNING LIGHT SO THAT THE CENTER OF THE LIGHT IS NO GREATER THAN 12 INCHES ABOVE THE SIGN.
8. PROVIDE ALL FLAGGERS WITH TWO-WAY RADIOS CAPABLE OF TRANSMITTING A DISTANCE OF 2 MILES AND BATTERIES TO LAST THROUGH EACH DAY OF OPERATION.
9. COVER OR REMOVE CONFLICTING SIGNS DURING CONSTRUCTION. DO NOT USE BLACK PLASTIC TO COVER SIGNS. SIGNS DAMAGED BY CONTRACTOR WILL BE REPLACED AT CONTRACTOR'S EXPENSE.
10. INSTALL ALL POST MOUNTED SIGNS AT A MINIMUM HEIGHT OF 7 FT ABOVE THE LEVEL OF THE ROADWAY MEASURED FROM THE BOTTOM OF THE SIGN TO THE TOP OF THE PAVEMENT SURFACE. THE HEIGHT TO THE BOTTOM OF A SECONDARY SIGN MOUNTED BELOW ANOTHER SIGN MAY BE 1 FT LESS THAN THE HEIGHT SPECIFIED ABOVE.
11. INSTALL ALL SIGNS MOUNTED ON TEMPORARY SIGN STANDS AT A MINIMUM HEIGHT OF 5 FT ABOVE THE LEVEL OF THE ROADWAY MEASURED FROM THE BOTTOM OF THE SIGN TO THE TOP OF THE PAVEMENT SURFACE. TEMPORARY SIGN STANDS WILL BE PERMITTED ONLY WHERE SIGNS ARE PLACED AT THE SAME LOCATION LESS THAN THREE (3) DAYS.
12. PROVIDE A CERTIFIED WORK SITE TRAFFIC CONTROL SUPERVISOR ON SITE TO DIRECT THE INSTALLATION AND MODIFICATION OF TRAFFIC CONTROL OPERATIONS.
13. PROVIDE ILLUMINATION TO FLAGGER STATIONS DURING THE HOURS OF DARKNESS.
14. USE DRUMS AS CHANNELIZING DEVICES ON ALL TAPERS.
15. COORDINATE WITH ALL AUTHORITIES HAVING JURISDICTION OVER THE LOCAL ROADS IMPACTED BY THIS PROJECT, INCLUDING OBTAINING ANY REQUIRED PERMITS.

TEMPORARY TRAFFIC CONTROL BID ITEMS			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
626-010A	TEMPORARY TRAFFIC CONTROL SIGNS	SF	332.00
626-040A	BARRICADE TYPE 3	EACH	8.0
626-050A	DRUMS	EACH	12.0
626-100A	MISCELLANEOUS TEMPORARY TRAFFIC CONTROL ITEMS	CA	20,000
626-105A	TEMPORARY TRAFFIC CONTROL MAINTENANCE	HR	400.0
626-120A	FLAGGER CONTROL	HR	100.0
626-135A	WEIGHTED BASE TUBULAR MARKERS	EACH	40.0

REVISIONS

NO.	DATE	BY	DESCRIPTION

DESIGNED M. HUFFMAN
DESIGN CHECKED M. MCDONALD
DETAILED M. HUFFMAN
DRAWING CHECKED B. MARTIN

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
CADD FILE NAME 19129_tcp_001.SHT
DRAWING DATE: MARCH 2025

WASHINGTON COUNTY

ARDURRA

PROJECT NO. A019(129)

TEMPORARY TRAFFIC CONTROL PLAN
COVE RD BRIDGE
WASHINGTON CO
NOTES AND QUANTITIES

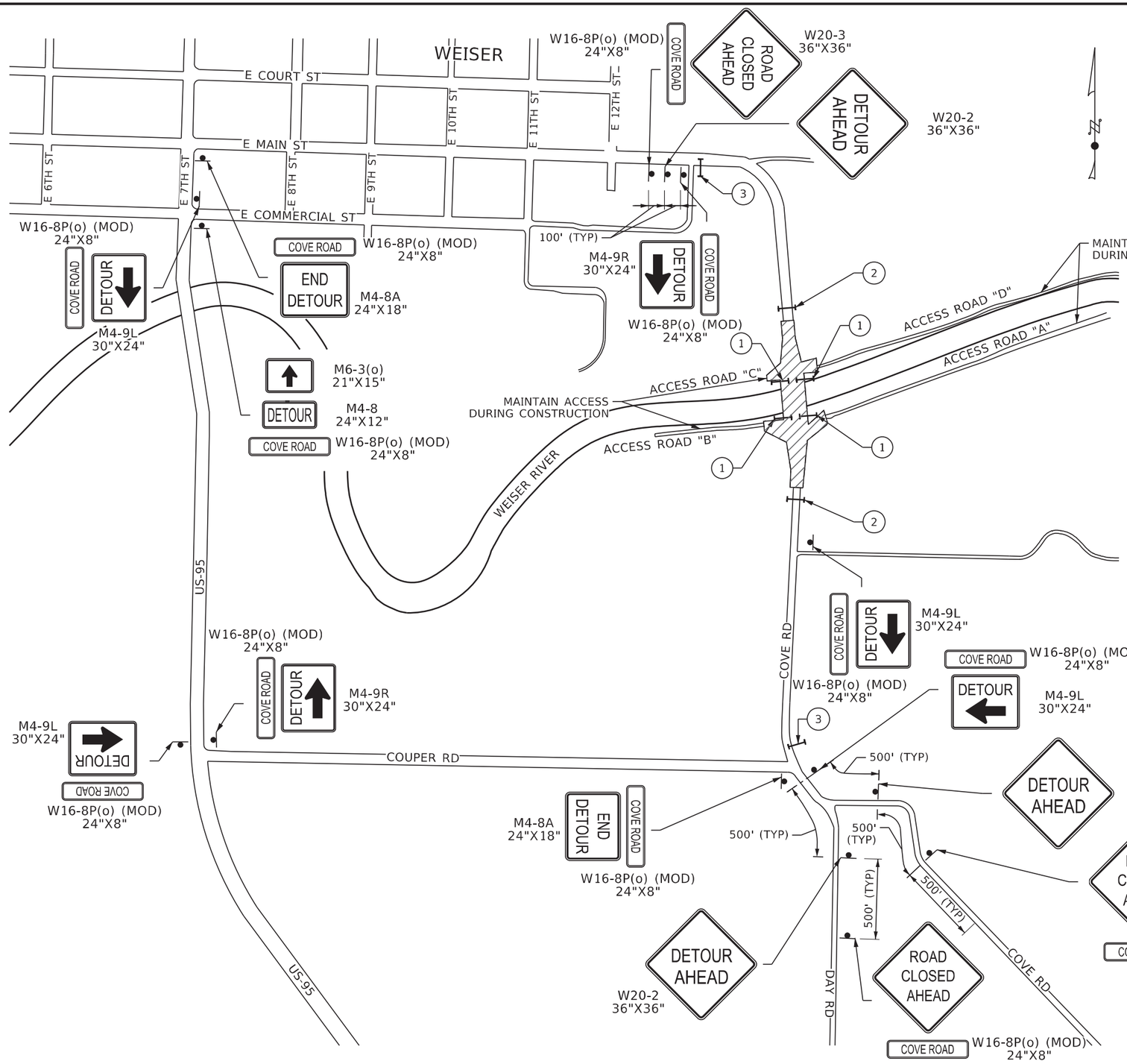
ENGLISH
COUNTY WASHINGTON
KEY NUMBER 19129
SHEET 31 OF 37

PROFESSIONAL ENGINEER LICENSED 19600 STATE OF IDAHO MICHELLE V. MCDONALD 3/27/25

pw:/pwhdrusws01HDR_US_West_01/Documents/ITD_Headquarters/ITD-Cove_Rd_Brdg_Replacement/6.0_CAD_BIM/6.2_Work_in_Progress/6.2.3_Roadway/TTCP Summary 3/26/2025 9:25:40 AM

TEMPORARY TRAFFIC CONTROL SIGNING PLAN

NOT TO SCALE



LEGEND

WORK AREA / LIMITS OF CONSTRUCTION

TYPE III BARRICADE

POST MOUNTED TRAFFIC CONTROL SIGNS

(1)

R11-2 (MOD)
48"X30"

TYPE III BARRICADE

(2)

R5-10C
24"X12"
SUPPLEMENTAL(O)
36"X12"

TYPE III BARRICADE

(3)

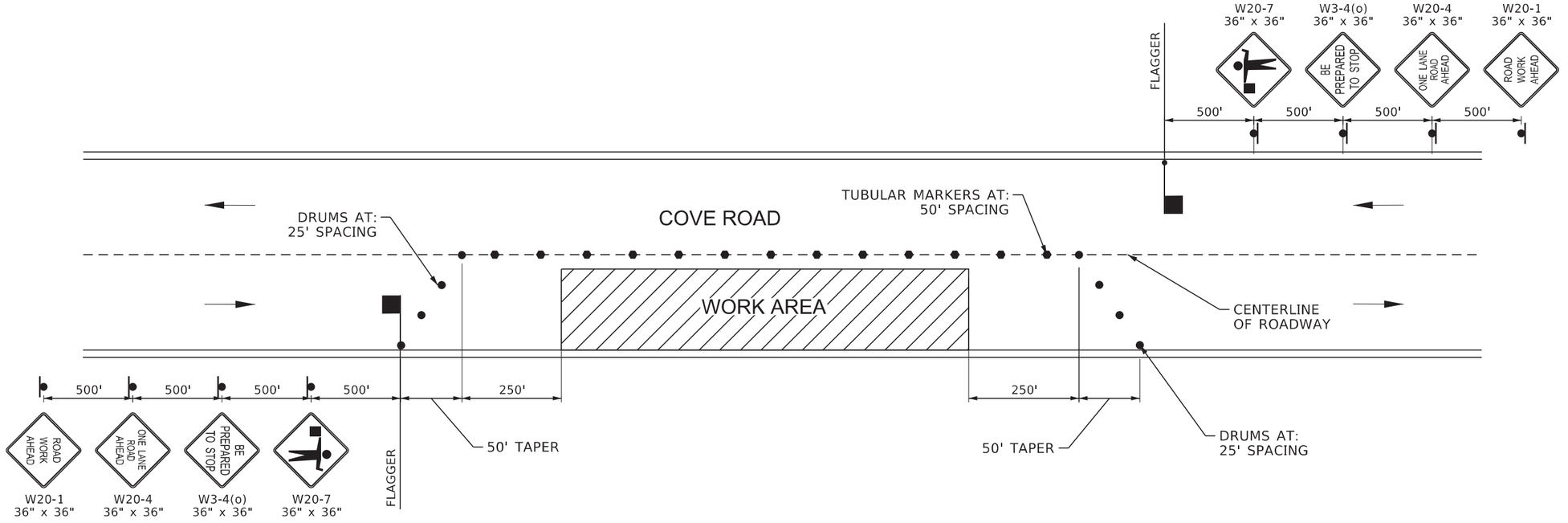
R11-4
60"X30"

TYPE III BARRICADE

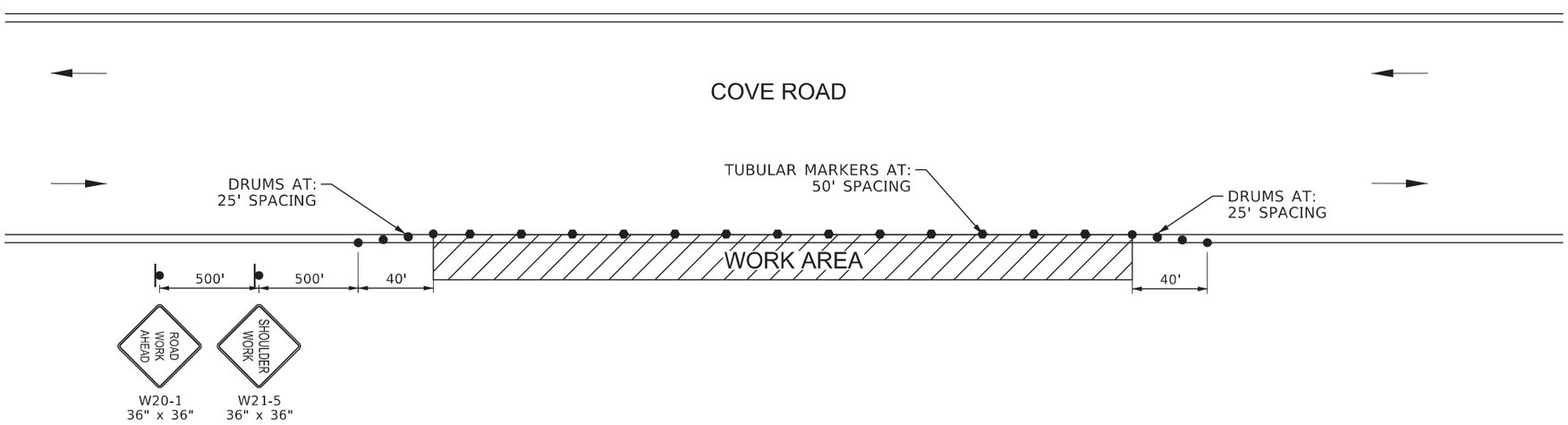
REVISIONS				DESIGNED	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY	WASHINGTON COUNTY	PROJECT NO.	TEMPORARY TRAFFIC CONTROL PLAN	ENGLISH
NO.	DATE	BY	DESCRIPTION	M. HUFFMAN			A019(129)	COVE RD BRIDGE WASHINGTON CO	COUNTY WASHINGTON
				DESIGN CHECKED M. MCDONALD					KEY NUMBER 19129
				DETAILED M. HUFFMAN	CADD FILE NAME 19129_tcp_002.sht				SHEET 32 OF 37
				DRAWING CHECKED B. MARTIN	DRAWING DATE: MARCH 2025	ARDURRA			

PROFESSIONAL ENGINEER LICENSED 19600 STATE OF IDAHO MICHELLE V. MCDONALD 3/27/25

TYPICAL FLAGGING SEQUENCE
NOT TO SCALE



TYPICAL SHOULDER CLOSURE
NOT TO SCALE



LEGEND:

- FLAGGER
- DRUM
- TUBULAR MARKER
- SIGN
- FLOW OF TRAFFIC
- WORK AREA

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED	M. HUFFMAN
DESIGN CHECKED	M. MCDONALD
DETAILED	M. HUFFMAN
DRAWING CHECKED	B. MARTIN

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY

CADD FILE NAME: 19129_tcp_003.dgn

DRAWING DATE: MARCH 2025

WASHINGTON COUNTY

ARDURRA

PROJECT NO.: A019(129)

TEMPORARY TRAFFIC CONTROL PLAN

COVE RD BRIDGE
WASHINGTON CO

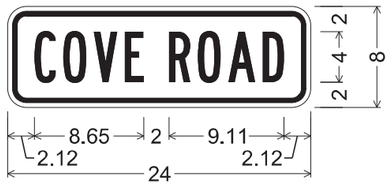
ENGLISH

COUNTY: WASHINGTON

KEY NUMBER: 19129

SHEET 33 OF 37

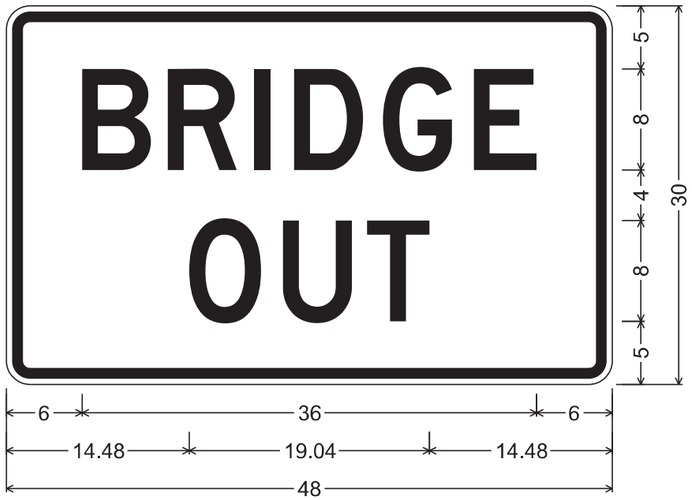
PROFESSIONAL ENGINEER LICENSED 19600 STATE OF IDAHO MICHELLE V. MCDONALD 3/27/25



W16-8P_VARx8;
1.50" Radius, 0.38" Border, 0.38" Indent, Black on Orange;
"COVE ROAD", B;
Table of widths and spaces

2.12	C 1.69	0.60	O 1.81	0.60	V 1.85	0.60	E 1.50

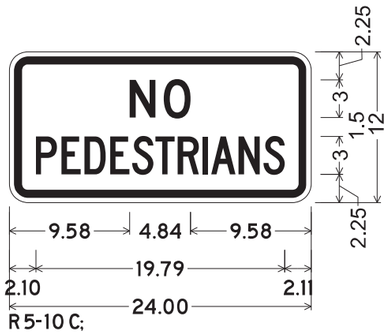
2.00	R 1.68	0.60	O 1.82	0.60	A 2.12	0.60	D 1.69	2.12



R11-2_48x30;
1.88" Radius, 0.75" Border, 0.50" Indent, Black on White;
"BRIDGE", D 2K; "OUT", D 2K;
Table of widths and spaces

6.00	B 5.44	1.36	R 5.44	1.36	I 1.28	1.92	D 5.44	1.60	G 5.44	1.76	E 4.96	6.00

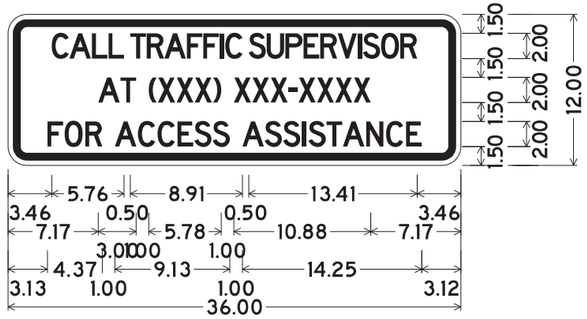
14.48	O 5.68	1.76	U 5.44	1.20	T 4.96	14.48



R5-10C;
1.50" Radius, 0.63" Border, 0.38" Indent, Black on Orange;
"NO", D 2K specified length;
"PEDESTRIANS", C 2K specified length;
Table of letter and object lefts

N 9.58	O 12.29

P 2.10	E 4.15	D 5.98	E 8.02	S 9.77	T 11.61	R 13.40	I 15.38	A 16.06	N 18.23	S 20.21	



CONTRACTOR TO INSERT CONTACT INFORMATION OF SITE TRAFFIC CONTROL SUPERVISOR;
1.50" Radius, 0.63" Border, 0.38" Indent, Black on Orange;
"CALL TRAFFIC SUPERVISOR", D 2K 25□ spacing;
"AT (XXX) XXX-XXXX", D 2K 50□ spacing;
"FOR ACCESS ASSISTANCE", D 2K 50□ spacing;
Table of letter and object lefts

C 3.46	A 4.89	L 6.66	L 7.98

T 9.72	R 11.03	A 12.43	F 14.21	F 15.52	I 16.84	C 17.27	

S 19.13	U 20.57	P 22.05	E 23.49	R 24.81	V 26.21	I 27.81	S 28.21	O 29.65	R 31.18

A 7.17	T 8.93	(11.17	X 11.92	X 13.38	X 14.84	) 16.29

X 17.95	X 19.41	X 20.87	- 22.31	X 23.09	X 24.55	X 26.01	X 27.47	

F 3.13	O 4.50	R 6.14

A 8.50	C 10.33	C 11.89	E 13.47	S 14.81	S 16.27	

A 18.63	S 20.41	S 21.87	I 23.40	S 23.89	T 25.33	A 26.63	N 28.48	C 30.06	E 31.64

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED	M. HUFFMAN
DESIGN CHECKED	M. MCDONALD
DETAILED	M. HUFFMAN
DRAWING CHECKED	B. MARTIN

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY

CADD FILE NAME	19129_tcp_004.SHT
DRAWING DATE:	MARCH 2025

WASHINGTON COUNTY

ARDURRA

PROJECT NO.	A019(129)
TEMPORARY TRAFFIC CONTROL PLAN	COVE RD BRIDGE WASHINGTON CO

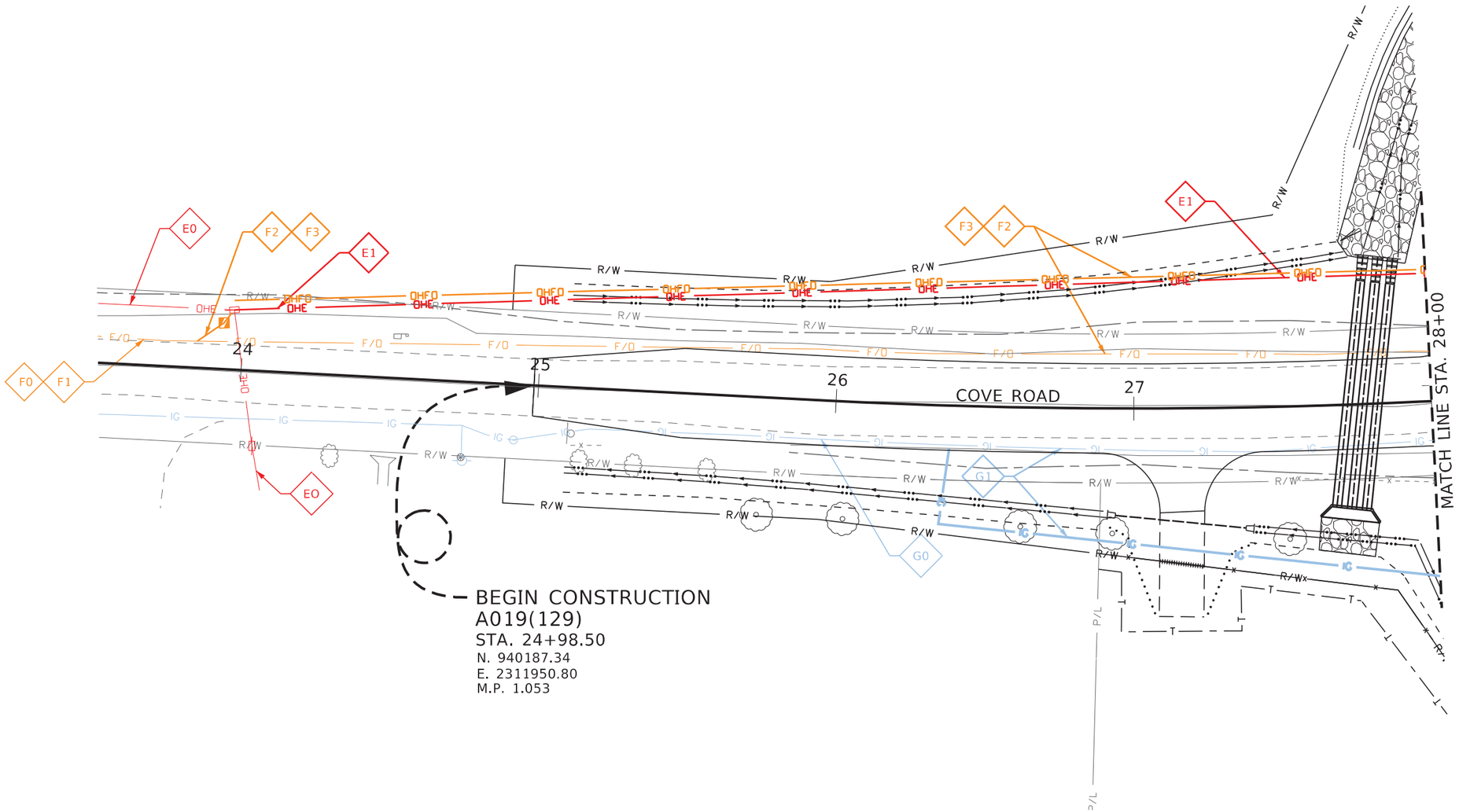
ENGLISH

COUNTY	WASHINGTON
KEY NUMBER	19129
SHEET	34 OF 37

PROFESSIONAL ENGINEER LICENSED 19600 STATE OF IDAHO MICHELLE V. MCDONALD 3/27/25

T.11N., R.5W., B.M.
SEC 33

IPCO EASEMENT INST NO. 93364



BEGIN CONSTRUCTION
A019(129)
STA. 24+98.50
N. 940187.34
E. 2311950.80
M.P. 1.053

E0 OVERHEAD ELECTRICAL FACILITY. (IDAHO POWER) RETAIN AND PROTECT IN PLACE.

E1 OVERHEAD ELECTRICAL FACILITY. (IDAHO POWER) ADJUST AT PROJECT EXPENSE.

F0 FIBER FACILITY. (SYRINGA) RETAIN AND PROTECT IN PLACE.

F1 FIBER FACILITY. (MTE) RETAIN AND PROTECT IN PLACE.

F2 FIBER FACILITY. (SYRINGA) RELOCATE AT COMPANY EXPENSE.

F3 FIBER FACILITY. (MTE) RELOCATE AT COMPANY EXPENSE.

G0 GAS FACILITY. (INT GAS) RETAIN AND PROTECT IN PLACE.

G1 GAS FACILITY. (INT GAS) RELOCATE AT COMPANY EXPENSE

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED	P. LUCIA
DESIGN CHECKED	B. HARRAL
DETAILED	P. LUCIA
DRAWING CHECKED	B. MARTIN

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY

CADD FILE NAME 19129_UTIL_001.sht

DRAWING DATE: MARCH 2025

WASHINGTON COUNTY

ARDURRA

PROJECT NO. A019(129)

UTILITY PLAN

COVE RD BRIDGE
WASHINGTON CO

STA. 24+98.50 TO STA. 28+00

ENGLISH

COUNTY WASHINGTON

KEY NUMBER 19129

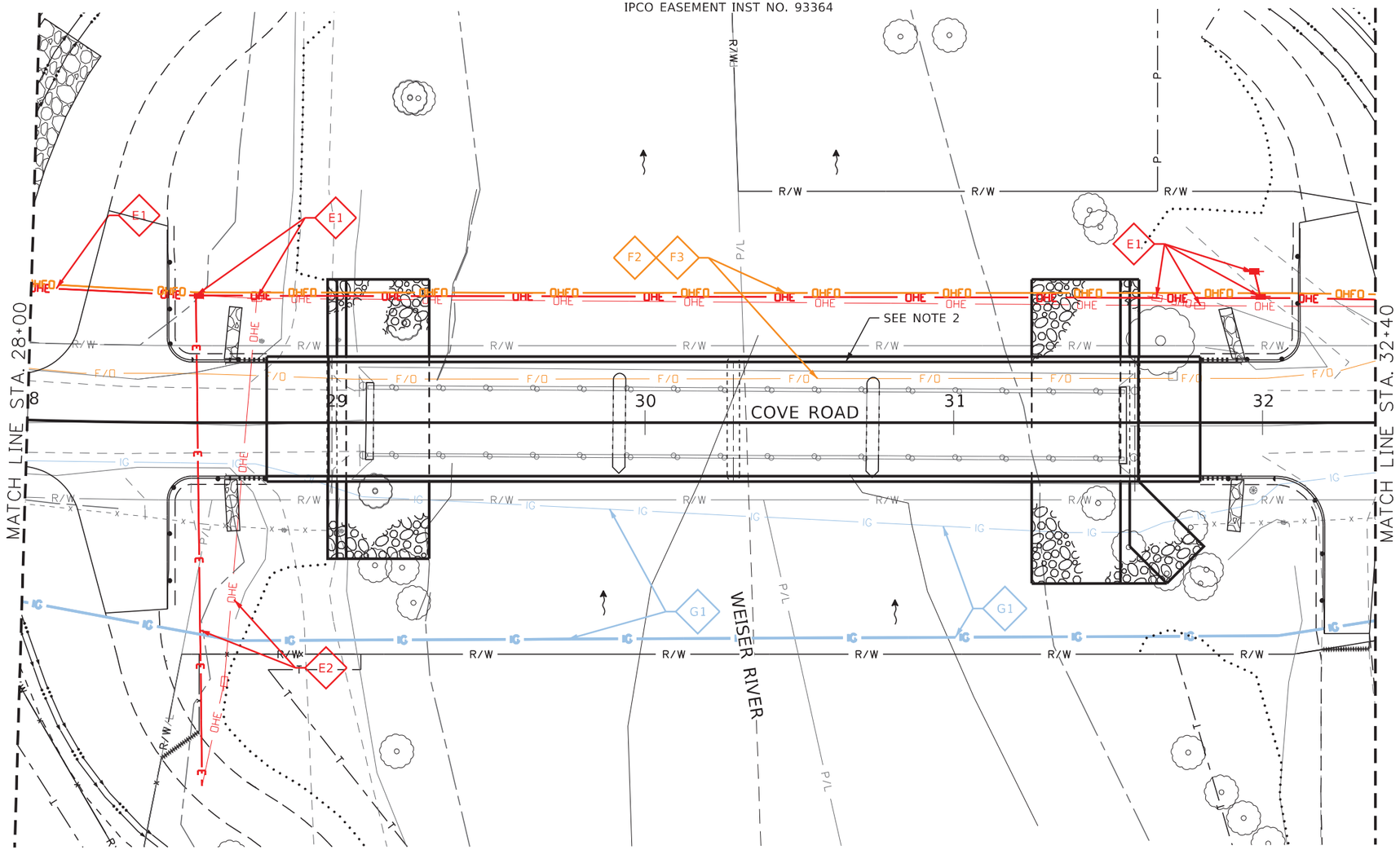
SHEET 35 OF 37

PROFESSIONAL ENGINEER LICENSED 20485 STATE OF IDAHO PAUL L. LUCIA III 03-27-25

pw://pwhdr-uswest01.HDR_US_West_01/Documents/ITD_Headquarters/ITD-Cove_Rd_Brdg_Replacement1/6.0_CAD_BIM/6.2_Work_In_Progress/6.2.3_Roadway/19129_UTIL_001.sht 3/27/2025 9:08:35 AM

T.11N., R.5W., B.M.
SEC 33

IPCO EASEMENT INST NO. 93364



NOTES:

1. SYRINGA, MTE TEMPORARY RELOCATE ON OVERHEAD POWER POLES DURING CONSTRUCTION.

2. SEE BRIDGE PLANS FOR UTILITY CONDUITS.

- E1 — OVERHEAD ELECTRICAL FACILITY, (IDAHO POWER) ADJUST AT PROJECT EXPENSE.
- E2 — OVERHEAD ELECTRICAL FACILITY, (IDAHO POWER) RELOCATE TO UNDERGROUND AT PROJECT EXPENSE
- F2 — FIBER FACILITY. (SYRINGA) RELOCATE AT COMPANY EXPENSE.
- F3 — FIBER FACILITY. (MTE) RELOCATE AT COMPANY EXPENSE.
- G1 — GAS FACILITY. (INT GAS) RELOCATE AT COMPANY EXPENSE.

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED	P. LUCIA
DESIGN CHECKED	B. HARRAL
DETAILED	P. LUCIA
DRAWING CHECKED	B. MARTIN

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY

CADD FILE NAME 19129_UTIL_002.sht

DRAWING DATE: MARCH 2025

WASHINGTON COUNTY

ARDURRA

PROJECT NO. A019(129)

UTILITY PLAN

COVE RD BRIDGE
WASHINGTON CO

STA. 28+00 TO STA. 32+40

ENGLISH

COUNTY WASHINGTON

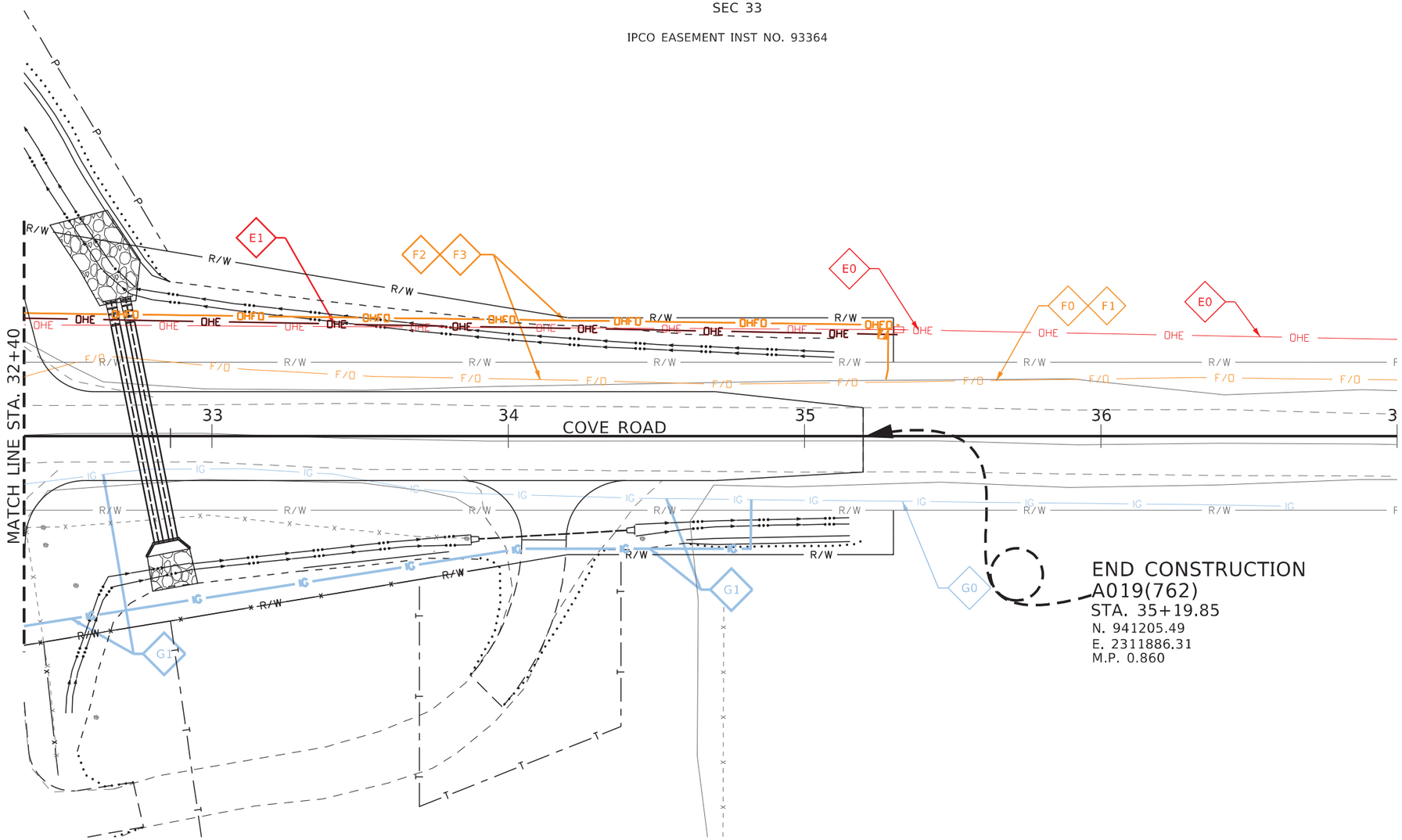
KEY NUMBER 19129

SHEET 36 OF 37

PROFESSIONAL ENGINEER LICENSED 20485 03-27-25 STATE OF IDAHO PAUL L. LUCIA III

T.11N., R.5W., B.M.
SEC 33

IPCO EASEMENT INST NO. 93364



E0 OVERHEAD ELECTRICAL FACILITY. (IDAHO POWER) RETAIN AND PROTECT IN PLACE.

E1 OVERHEAD ELECTRICAL FACILITY. (IDAHO POWER) ADJUST AT PROJECT EXPENSE.

F0 FIBER FACILITY. (SYRINGA) RETAIN AND PROTECT IN PLACE.

F1 FIBER FACILITY. (MTE) RETAIN AND PROTECT IN PLACE.

F2 FIBER FACILITY. (SYRINGA) RELOCATE AT COMPANY EXPENSE.

F3 FIBER FACILITY. (MTE) RELOCATE AT COMPANY EXPENSE.

G0 GAS FACILITY. (INT GAS) RETAIN AND PROTECT IN PLACE.

G1 GAS FACILITY. (INT GAS) RELOCATE AT COMPANY EXPENSE.

REVISIONS				DESIGNED	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY	WASHINGTON COUNTY	PROJECT NO.	UTILITY PLAN	ENGLISH
NO.	DATE	BY	DESCRIPTION	P. LUCIA			A019(129)	COVE RD BRIDGE WASHINGTON CO	COUNTY WASHINGTON
				DESIGN CHECKED B. HARRAL				STA. 32+40 TO STA. 35+19.85	KEY NUMBER 19129
				DETAILED P. LUCIA	CADD FILE NAME 19129_UTIL_003.sht				SHEET 37 OF 37
				DRAWING CHECKED B. MARTIN	DRAWING DATE: MARCH 2025	ARDURRA			

PROFESSIONAL ENGINEER LICENSED 20485 03-27-25 STATE OF IDAHO PAUL L. LUCIA III

PLOTTED: 3/27/2025 9:08:44 AM

EXISTING /PROPOSED

- PAVED APPROACH
- B — BARN
- F — BUILDING FOUNDATION
- H — HOUSE
- D — DECK
- S — SILO

EXISTING /PROPOSED

- BUSH
- SLOPE OF TERRAIN
- DRAINAGE FLOW
- EMBANKMENT PROTECTOR
- DRAINAGE FLOW
- FOUND GPS CONTROL POINT
- MAILBOX
- MARSH
- MATERIAL SOURCE
- PHOTO CENTER
- RIP RAP
- SIPHON
- SPOT ELEVATION
- STOCKPILE SITE
- STUMP
- TREE
- WETLAND
- FLAG POLE
- IRRIGATION BOX
- SPRINKLER
- BUSH BOUNDARY
- CULTIVATION BOUNDARY
- TREE BOUNDARY
- EDGE OF ROAD EXISTING
- TRAIL
- RAILROAD TRACKS
- TOP OF RAIL (RAILROAD)
- ANGLE POINT
- CONCRETE MONUMENT
- FOUND /SET BRASS OR ALLOY CAP
- FOUND PLASTIC CAP
- FOUND IRON PIPE /SET IRON PIPE
- PK NAIL
- FOUND /SET NUMBER 4 REBAR
- FOUND /SET NUMBER 5 REBAR
- FOUND NUMBER 6 REBAR
- RIGHT OF WAY MARKER
- FOUND /SET SPIKE
- FOUND /SET STONE

EXISTING /PROPOSED

- FOUND /ESTIMATED QUARTER CORNER
- FOUND /ESTIMATED SECTION CORNER
- STATE LINE
- TOWNSHIP AND RANGE LINE
- RESERVATION BOUNDARY
- FOREST BOUNDARY
- SECTION LINE
- QUARTER SECTION LINE
- SIXTEENTH SECTION LINE
- COUNTY LINE
- CITY LIMITS
- EASEMENT LINE
- PERMANENT EASEMENT LINE
- INTERSTATE RIGHT OF WAY LINE
- RIGHT OF WAY LINE
- PURCHASED ACCESS CONTROL LINE
- PROPERTY LINE
- RAILROAD RIGHT OF WAY LINE
- TEMPORARY EASEMENT
- SILT FENCE
- FIBER WATTLE
- SEDIMENT BASIN
- ROCK CHECK DAM
- DIKE SWALE
- SWALE BERM AND DRAIN ROCK CHANNEL
- TOPSOIL AND SEEDING/LIMITS OF GROUND DISTURBANCE
- 3/4" AGGREGATE TY B SUBGRADE SEPARATED WITH WEED BARRIER
- 3/4" AGGREGATE TY B SUBGRADE SEPARATED WITH PVC LINER
- SLOPE TREATMENT TY 1
- LANDSCAPE AND IRRIGATION REPAIR
- MAINTAIN LANDSCAPE
- REPAIR IRRIGATION
- MAINTAIN IRRIGATION
- THE SUB-EXCAVATION FOR THE BORROW DITCHES AND SEEPAGE BEDS TO BE BACKFILLED WITH FINE AGGERGATE AND 2" DRAIN ROCK WILL BE CLASS D COMPACTED BY TAMPING WITH AN EXCAVATOR BUCKET. THE BACKFILL SHOULD NOT BE DENSELY COMPACTED. SEE DRAINAGE PLANS/DETAILS FOR MORE INFORMATION.
- PRE-CONSTRUCTION DIRECTION OF WATER FLOW
- POST-CONSTRUCTION DIRECTION OF WATER FLOW

EXISTING /PROPOSED

- RAILROAD PROTECTION DEVISE
- RAILROAD SIGNAL
- RAILROAD SWITCH
- GUY & ANCHOR
- JUNCTION BOX
- ELECTRIC MANHOLE
- METER
- ELECTRIC POLE
- TRANSMISSION TOWER
- ELECTRIC VAULT
- FIRE HYDRANT
- RISER GAS OR OIL ETC.
- TELEPHONE OR LIGHT POLE
- MANHOLE
- WELL
- CATCH BASIN OR INLET
- OVER HEAD ELECTRIC
- UNDER GROUND ELECTRIC CABLE
- OVER HEAD FIBER OPTIC
- UNDER GROUND FIBER OPTIC
- OVER HEAD TELEPHONE
- UNDER GROUND TELEPHONE
- OVER HEAD TELEVISION
- UNDER GROUND TELEVISION CABLE
- WATER LINE
- GAS LINE
- OIL LINE
- PIPE BELL INDICATES FLOW DIRECTION
- IRRIGATION SIPHON
- IRRIGATION LINE
- SANITARY SEWER
- STORM SEWER
- UNDER DRAIN
- CONDUIT OR CASING
- ITS CONDUIT

EXISTING /PROPOSED

- HORIZONTAL ALIGNMENT CONTROL LINE
- CURB
- GUTTER
- COMBINATION CURB AND GUTTER
- CULVERT WITH FLOW INDICATOR
- CULVERT WITH APRONS
- METAL GUARDRAIL
- CONCRETE BARRIER
- FENCE
- FENCE ON INTERSTATE ROW LINE
- FENCE ON ROW LINE
- FENCE ON PURCHASED ACCESS LINE
- FENCE ON PROPERTY LINE
- FENCE ON RAILROAD ROW LINE
- GATE
- SNOW FENCE
- RETAINING WALL
- EDGE OF WATER OR FLOW LINE
- EXISTING GROUND
- TOE OF FILL (SLOPE LIMIT)
- TOP OF CUT (SLOPE LIMIT)
- ROAD CLOSURE
- DELINEATOR TYPE 1
- DELINEATOR TYPE 2
- DELINEATOR TYPE 3
- DELINEATOR TYPE 4
- SIGN SINGLE POST
- SIGN DOUBLE POST
- EMERGENCY VEHICLE PREEMPT DETECTOR
- ELECTRICAL SERVICE PEDESTAL
- VIDEO DETECTION CAMERA
- LUMINAIRE HEAD
- ILLUMINATION POLE
- STOP BAR
- YIELD LINE
- FLAGGER STATION
- FLAGGER STATION

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED M. HUFFMAN
DESIGN CHECKED M. MCDONALD
DETAILED M. HUFFMAN
DRAWING CHECKED S. FRISBIE

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
CADD FILE NAME 19129_ROW_LGND.dgn
DRAWING DATE: NOVEMBER 2024

WASHINGTON COUNTY

ARDURRA

PROJECT NO. A019(129)

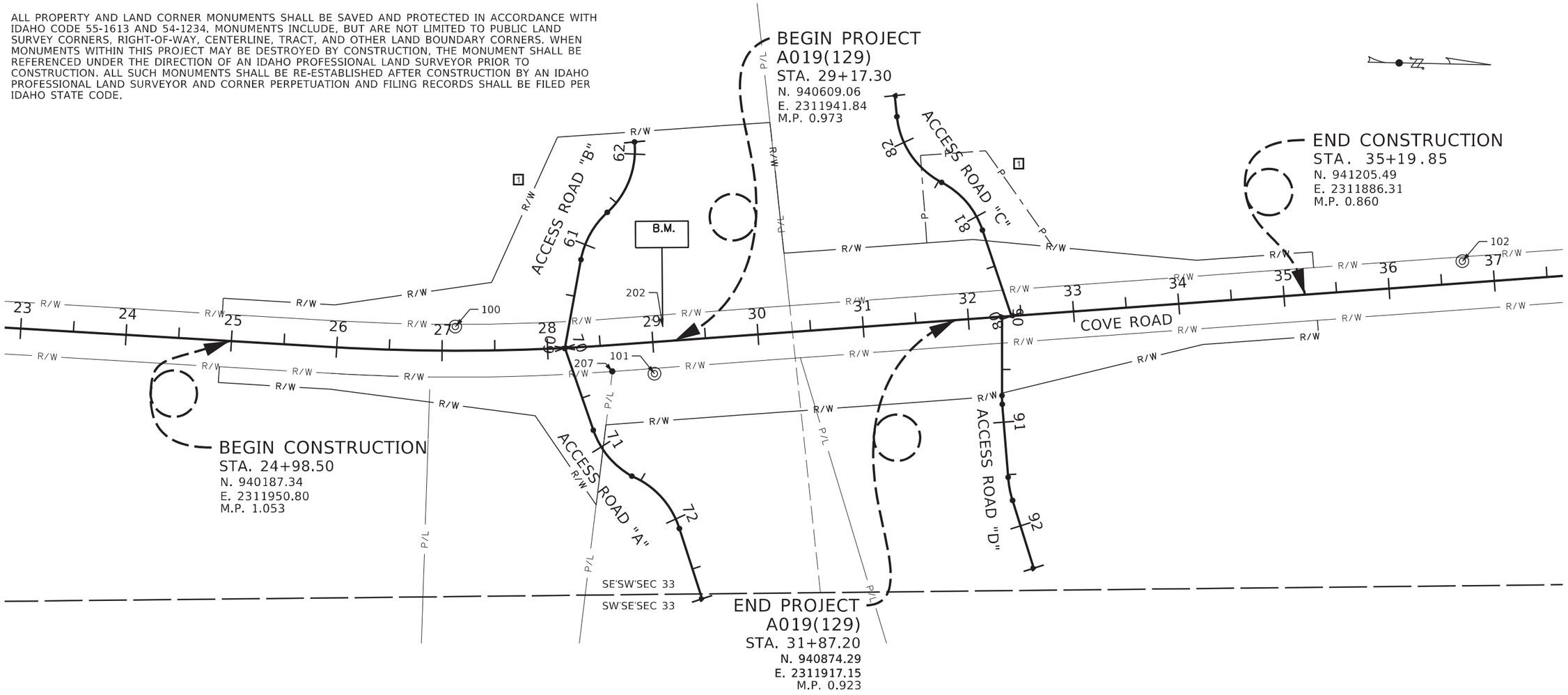
LEGEND SHEET
COVE RD BRIDGE
WASHINGTON CO

ENGLISH
COUNTY WASHINGTON
KEY NUMBER 19129
SHEET 1 OF 8

PROFESSIONAL LAND SURVEYOR REGISTERED 8961 3-27-25 STATE OF IDAHO STEVEN J. FRISBIE

T.11N., R.5W., B.M.
SEC 33

ALL PROPERTY AND LAND CORNER MONUMENTS SHALL BE SAVED AND PROTECTED IN ACCORDANCE WITH IDAHO CODE 55-1613 AND 54-1234. MONUMENTS INCLUDE, BUT ARE NOT LIMITED TO PUBLIC LAND SURVEY CORNERS, RIGHT-OF-WAY, CENTERLINE, TRACT, AND OTHER LAND BOUNDARY CORNERS. WHEN MONUMENTS WITHIN THIS PROJECT MAY BE DESTROYED BY CONSTRUCTION, THE MONUMENT SHALL BE REFERENCED UNDER THE DIRECTION OF AN IDAHO PROFESSIONAL LAND SURVEYOR PRIOR TO CONSTRUCTION. ALL SUCH MONUMENTS SHALL BE RE-ESTABLISHED AFTER CONSTRUCTION BY AN IDAHO PROFESSIONAL LAND SURVEYOR AND CORNER PERPETUATION AND FILING RECORDS SHALL BE FILED PER IDAHO STATE CODE.



SURVEY CONTROL POINTS

POINT	STATION	OFFSET	NORTHING	EASTING	ELEVATION	DESCRIPTION
100	27+12.60	22.81' LT	940400.91	2311932.94	2111.20	SET 5/8" REBAR WITH RED T-O CONTROL CAP
207	28+59.75	25.01' RT	940550.55	2311972.40	2112.92	FOUND 1/2" REBAR
101	28+99.51	30.10' RT	940590.61	2311973.79	2116.35	SET 5/8" REBAR WITH RED T-O CONTROL CAP
202	29+10.57	13.74' LT	940597.57	2311929.12	2117.34	BENCH MARK
102	36+71.19	20.74' LT	941354.25	2311851.63	2110.16	SET 5/8" REBAR WITH RED T-O CONTROL CAP

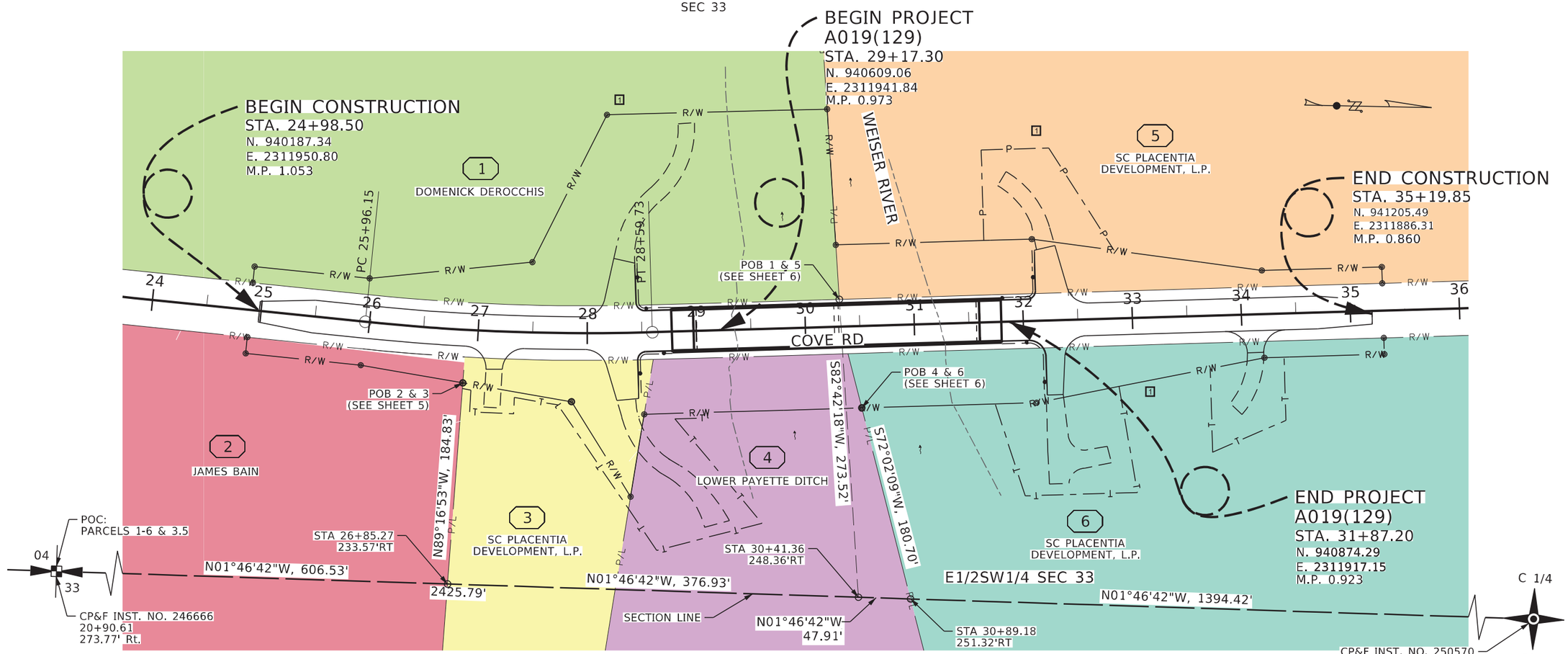
FEET
50 0 100 200

REVISIONS				DESIGNED	SCALES SHOWN	WASHINGTON COUNTY	PROJECT NO.	VICINITY MAP/SURVEY CONTROL	ENGLISH
NO.	DATE	BY	DESCRIPTION	M. HUFFMAN	ARE FOR 11" X 17" PRINTS ONLY		A019(129)	COVE RD BRIDGE WASHINGTON CO	COUNTY WASHINGTON
1	06/07/24	M.M.	FENCES, GATES, TEMP E, AQC TYPE	DESIGN CHECKED M. MCDONALD					KEY NUMBER 19129
				DETAILED M. HUFFMAN	CADD FILE NAME 19129_SCRL_001.SHT				SHEET 2 OF 8
				DRAWING CHECKED S. FRISBIE	DRAWING DATE: NOVEMBER 2024	ARDURRA			

PROFESSIONAL LAND SURVEYOR REGISTERED 8961 3-27-25 STATE OF IDAHO STEVEN J. FRISBIE

pw://pwhdr-uswest01HDR.US_West_01/Documents/ITD_Headquarters/ITD-Cove_Rd_Brdg_Replacement/6.0_CAD_BIM/6.2_Work_In_Progress/6.2.3_Roadway/19129_SCRL_001 11/25/2024 10:36:55 AM

T.11N., R.5W., B.M.
SEC 33



	Parcel No.	Parcel I.D. No.	Record Owner	Total Ownership Assessed Ac.	Right of Way		Remainder		Easement	
					Req'd Ac.	Exist Ac.	Left Ac.	Right Ac.	Perm. Ac.	Temp. Ac.
1	1	N/A	DOMENICK DEROCCHIS	18.800	1.136		17.664			
	2	N/A	JAMES BAIN	5.680	0.078			5.602		
	3	N/A	SC PLACENTIA DEVELOPMENT, L.P.	21.550	0.200			21.350		0.052
	4	N/A	LOWER PAYETTE DITCH COMPANY LTD	16.907	0.217			16.690		0.206
1	5	N/A	SC PLACENTIA DEVELOPMENT, L.P.	13.000	0.400		12.600		0.175	
1	6	N/A	SC PLACENTIA DEVELOPMENT, L.P.	27.670	0.385			27.285		0.332

NOTES:

1. TOTAL OWNERSHIP AREAS SHOWN REPRESENT THE AREAS WITHIN THE SECTIONS AS DETERMINED FROM ASSESSOR'S FIELD DATA SHEETS AND REPORTS. THE OWNERSHIP PARCELS WERE NOT SURVEYED AND SAID AREAS ARE APPROXIMATE. PARCELS SHOWN ARE FOR INFORMATION PURPOSES ONLY.
2. SEE HORIZONTAL CONTROL SHEETS FOR ALIGNMENT AND CURVE DATA.

FEET
50 0 100 200

REVISIONS			
NO.	DATE	BY	DESCRIPTION
1	06/07/24	M.M.	FENCES, GATES, TEMP E, AQC TYPE

DESIGNED M. HUFFMAN
DESIGN CHECKED M. MCDONALD
DETAILED M. HUFFMAN
DRAWING CHECKED S. FRISBIE

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
CADD FILE NAME 19129_TOM.SHT
DRAWING DATE: NOVEMBER 2024

WASHINGTON COUNTY
ARDURRA

PROJECT NO. A019(129)

TOTAL OWNERSHIP MAP
COVE RD BRIDGE
WASHINGTON CO

ENGLISH
COUNTY WASHINGTON
KEY NUMBER 19129
SHEET 3 OF 8

PROFESSIONAL LAND SURVEYOR REGISTERED 8961 3-27-25 STATE OF IDAHO STEVEN J. FRISBIE

pw:/pwhdruswes0ihDR_US_West_01/Documents/ITD_Headquarters/ITD-Cove_Rd_Brdg_Replacement/6.0_CAD_BIM/6.2_Work_in_Progress/6.2.3_Roadway/19129_TOM.SHT 11/25/2024 10:37:06 AM

CURVE 1

Δ 07°33'04" LT
T 131.98'
L 263.58'
R 2000.00'
P.I. 27+28.13
N. 940416.81
E. 2311959.74

CURVE C1

R 1975.00'
L 260.20'
Δ 07°33'04"
CH S1°32'38"E
CL 260.11'

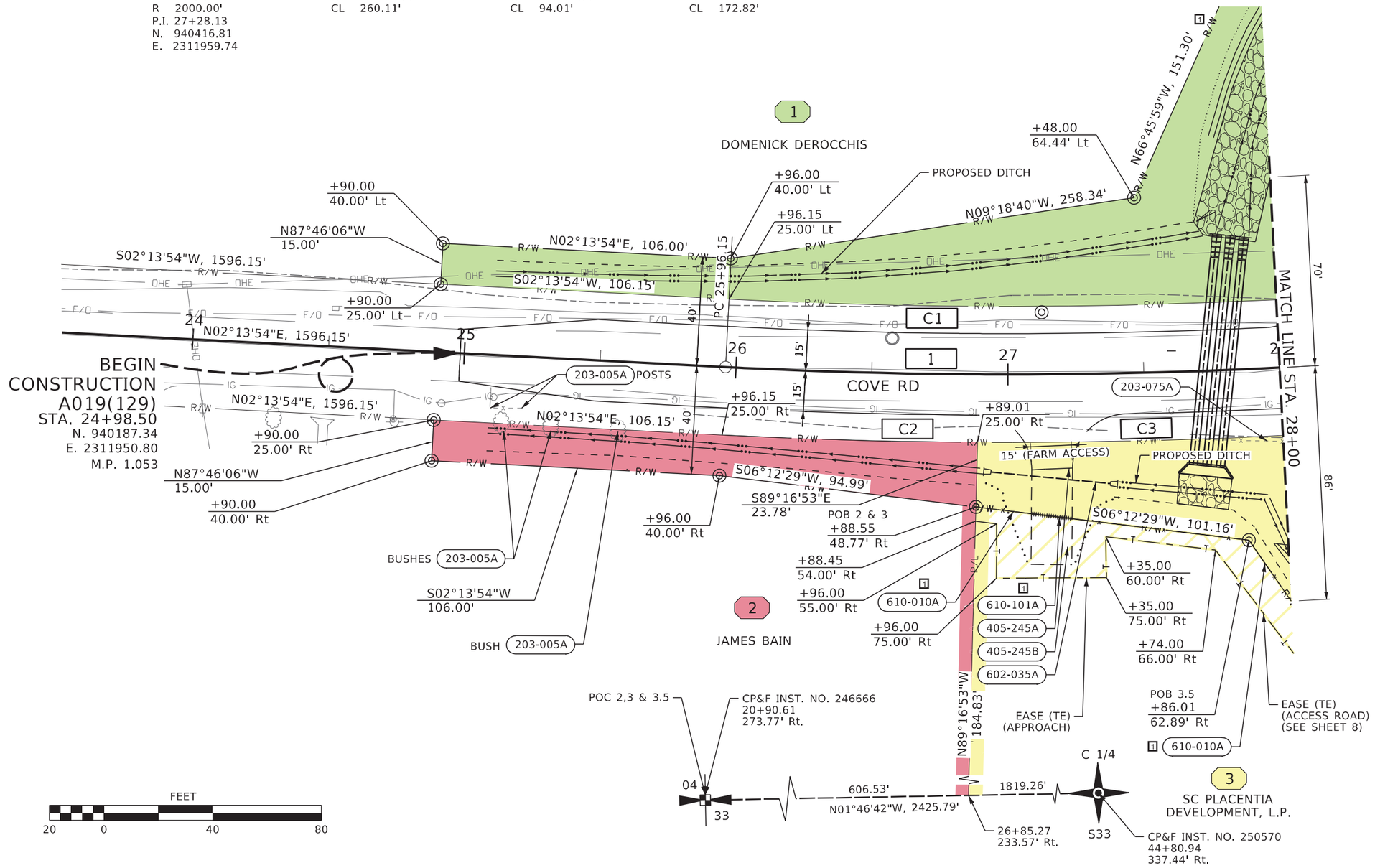
CURVE C2

R 2025.00'
L 94.02'
Δ 2°39'37"
CH N0°54'06"E
CL 94.01'

CURVE C3

R 2025.00'
L 172.87'
Δ 4°53'28"
CH N2°52'27"W
CL 172.82'

T.11N., R.5W., B.M.
SEC 33



203-005A REMOVAL OF OBSTRUCTIONS
1 LS

203-075A REMOVAL OF FENCE
48 FT STA. 27+51.98, 24.15' RT TO STA. 28+00.00, 27.18' RT

405-245A APPROACH (PAVED)
1 EACH STA. 27+15.97, 34.00' RT

405-245B APPROACH (GRAVEL)
1 EACH STA. 27+15.53, 70.00' RT

602-035A 18" PIPE CULVERT
44 FT STA. 26+94.00, 35.90' RT TO STA. 27+37.00, 40.50' RT

[1] 610-010A FENCE TYPE 1 A
21 FT STA. 26+88.60, 48.80' RT TO STA. 27+08.50, 51.30' RT
93 FT STA. 27+23.10, 53.20' RT TO STA. 28+00.00, 86.00' RT

[1] 610-101A GATE TYPE 1 A
1 EACH STA. 27+15.80, 52.20' RT

LEGEND:

[1] PERMANENT EASEMENT

TEMPORARY EASEMENT

NOTES:

1. RETAIN AND PROTECT ALL ITEMS OUTSIDE OF THE TEMPORARY EASEMENT UNLESS OTHERWISE NOTED.

REVISIONS

NO.	DATE	BY	DESCRIPTION
1	06/07/24	M.M.	FENCES, GATES, & ACQ. TYPE

DESIGNED M. HUFFMAN
DESIGN CHECKED M. MCDONALD
DETAILED M. HUFFMAN
DRAWING CHECKED S. FRISBIE

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
CADD FILE NAME 19129_ROW_001.sht
DRAWING DATE: NOVEMBER 2024

WASHINGTON COUNTY
ARDURRA

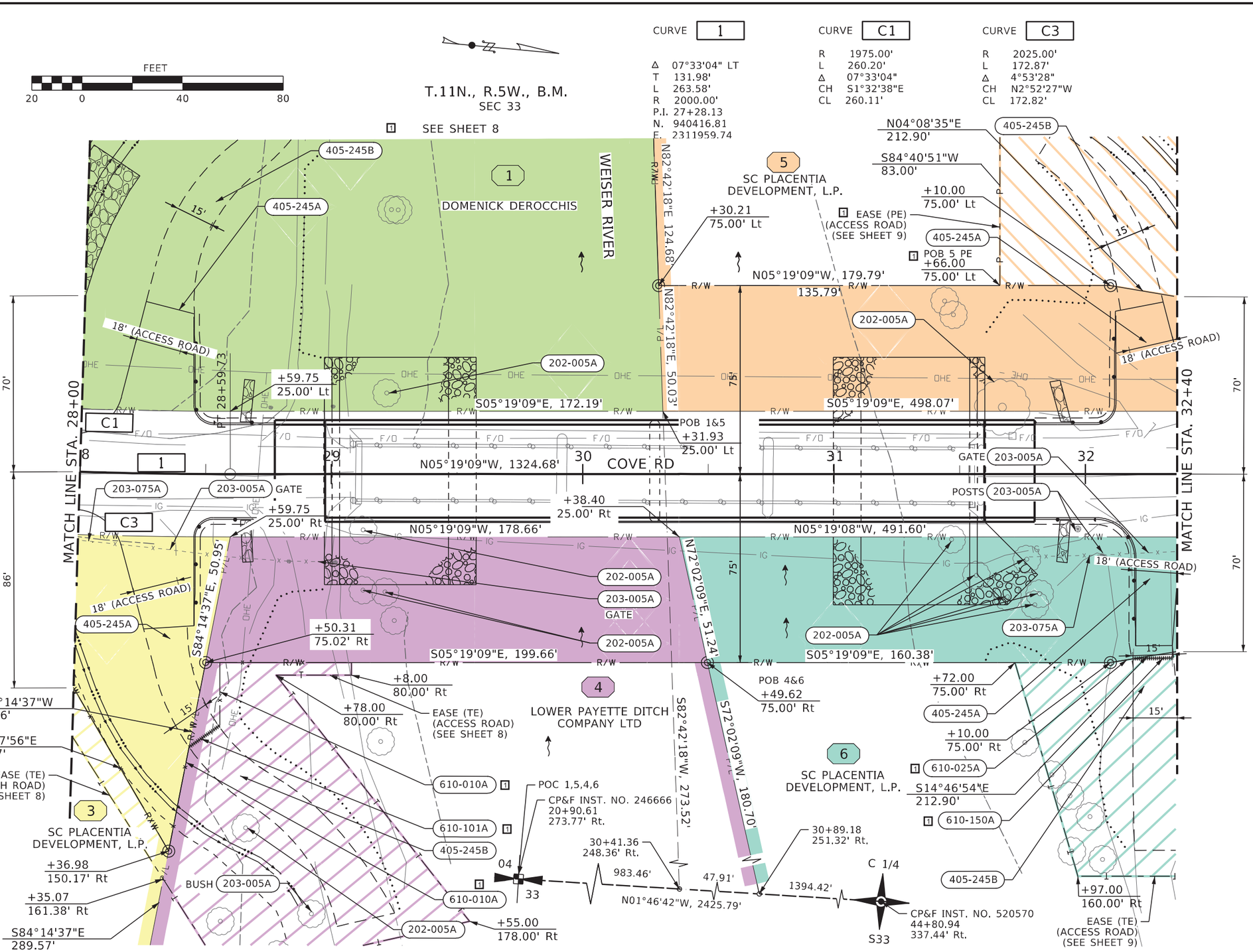
PROJECT NO. A019(129)

RIGHT-OF-WAY PLAN
COVE RD BRIDGE
WASHINGTON CO
STA. 24+98.49 TO STA. 28+00

ENGLISH
COUNTY WASHINGTON
KEY NUMBER 19129
SHEET 4 OF 8

PROFESSIONAL LAND SURVEYOR REGISTERED 8961 3-27-25 STATE OF IDAHO STEVEN J. FRISBIE

pw:// pwhdrusweso0ihDR_US_West_01/Documents/ITD_Headquarters/ITD-Cove_Rd_Brdg_Replacement/6.0_CAD_BIM/6.2_Work_In_Progress/6.2.3_Roadway/19129_ROW_001 11/25/2024 10:37:10 AM



202-005A	SELECTIVE REMOVAL OF TREES INCLUDING STUMPS	
1 EACH		STA. 28+65.87, 140.78' RT
1 EACH		STA. 29+12.56, 46.19' RT
1 EACH		STA. 29+12.58, 21.87' RT
1 EACH		STA. 29+21.37, 46.92' RT
1 EACH		STA. 29+22.01, 32.27' LT
1 EACH		STA. 31+46.78, 26.02' RT
1 EACH		STA. 31+56.65, 40.31' RT
1 EACH		STA. 31+66.97, 26.61' LT
1 EACH		STA. 31+69.01, 48.83' RT
1 EACH		STA. 31+76.70, 33.88' RT
1 EACH		STA. 31+79.92, 52.02' RT
1 EACH		STA. 31+81.83, 47.63' RT
203-005A	REMOVAL OF OBSTRUCTIONS	
1	LS	
203-075A	REMOVAL OF FENCE	
84	FT	STA. 28+00.00, 27.18' RT TO STA. 28+83.15, 34.69' RT
39	FT	STA. 31+77.57, 32.96' RT TO STA. 32+16.85, 31.73' RT
405-245A	APPROACH (PAVED)	
1 EACH		STA. 28+35.26, 70.70' LT
1 EACH		STA. 28+37.04, 68.68' RT
1 EACH		STA. 32+21.16, 70.93' LT
1 EACH		STA. 32+26.91, 67.65' RT
405-245B	APPROACH (GRAVEL)	
1 EACH		STA. 28+44.87, 102.41' LT
1 EACH		STA. 28+52.16, 107.50' RT
1 EACH		STA. 32+15.63, 94.18' LT
1 EACH		STA. 32+27.78, 97.09' RT
1 610-010A	FENCE TYPE 1 A	
118	FT	STA. 28+00.00, 86.00' RT TO STA. 28+44.20, 108.70' RT
76	FT	STA. 28+55.80, 100.00' RT TO STA. 29+06.10, 75.00' RT
1 610-025A	FENCE TYPE 3 A	
10	FT	STA. 32+11.30, 74.80' RT TO STA. 32+19.20, 73.50' RT
1 610-101A	GATE TYPE 1 A	
1 EACH		STA. 28+50.70, 103.90' RT
1 610-150A	GATE TYPE 2	
1 EACH		STA. 32+27.80, 73.30' RT

LEGEND:

1 PERMANENT EASEMENT

TEMPORARY EASEMENT

NOTES:

1. RETAIN AND PROTECT ALL ITEMS OUTSIDE OF THE TEMPORARY EASEMENT UNLESS OTHERWISE NOTED.

REVISIONS			
NO.	DATE	BY	DESCRIPTION
1	06/07/24	M.M.	FENCES, GATES, & ACQ. TYPE

DESIGNED	M. HUFFMAN
DESIGN CHECKED	M. MCDONALD
DETAILED	M. HUFFMAN
DRAWING CHECKED	S. FRISBIE

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY

CADD FILE NAME 19129_ROW_002.sht

DRAWING DATE: NOVEMBER 2024

WASHINGTON COUNTY

ARDURRA

PROJECT NO. A019(129)

RIGHT-OF-WAY PLAN

COVE RD BRIDGE
WASHINGTON CO

STA. 28+00 TO STA. 32+40

ENGLISH

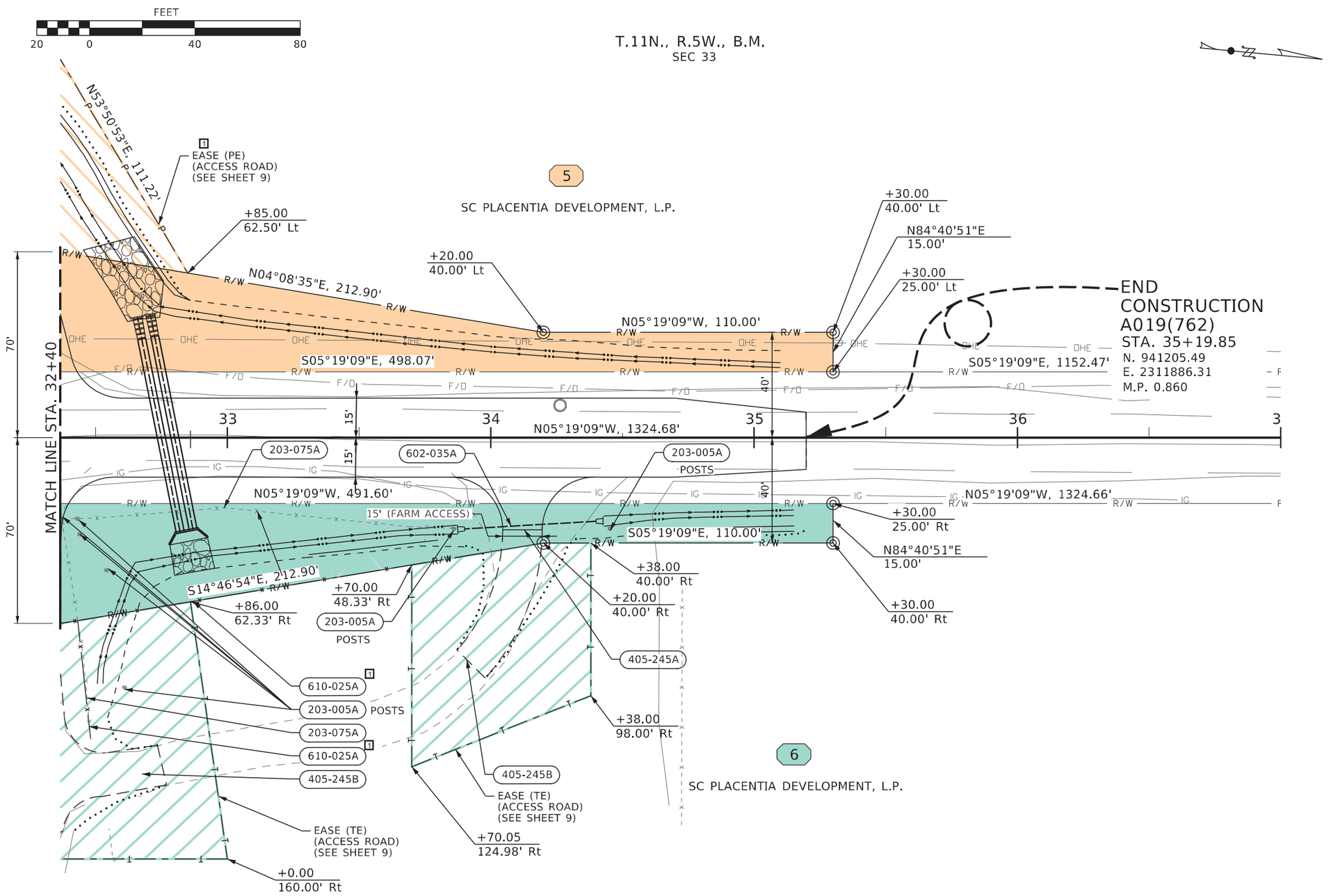
COUNTY WASHINGTON

KEY NUMBER 19129

SHEET 5 OF 8

PROFESSIONAL LAND SURVEYOR REGISTERED 8961 3-27-25 STATE OF IDAHO STEVEN J. FRISBIE

pw://pwhdr-uswest01-HDR_US_West_01/Documents/ITD_Headquarters/ITD-Cove_Rd_Brdg_Replacement/6.0_CAD_BIM/6.2_Work_In_Progress/6.2.3_Roadway/19129_ROW_002 11/25/2024 10:37:15 AM



203-005A REMOVAL OF OBSTRUCTIONS

1	LS	

203-075A REMOVAL OF FENCE

84	FT	STA. 32+37.11, 30.81' RT TO STA. 32+48.13, 114.49' RT
150	FT	STA. 32+37.11, 30.81' RT TO STA. 33+86.03, 34.43' RT

405-245A APPROACH (PAVED)

1	EACH	STA. 32+12.24, 35.02' RT

405-245B APPROACH (GRAVEL)

1	EACH	STA. 32+67.54, 127.78' RT
1	EACH	STA. 33+92.51, 85.90' RT

602-035A 18" PIPE CULVERT

50	FT	STA. 33+90.00, 34.70' RT TO STA. 34+40.00, 31.70' RT

1 610-025A FENCE TYPE 3 A

167	FT	STA. 32+34.60, 73.20' RT TO STA. 33+96.70, 43.90' RT
46	FT	STA. 32+43.20, 69.50' RT TO STA. 32+48.10, 114.50' RT

LEGEND:

1 PERMANENT EASEMENT

TEMPORARY EASEMENT

NOTES:

1. RETAIN AND PROTECT ALL ITEMS OUTSIDE OF THE TEMPORARY EASEMENT UNLESS OTHERWISE NOTED.

REVISIONS			
NO.	DATE	BY	DESCRIPTION
1	06/07/24	M.M.	FENCES, GATES, TEMP E, ACQ. TYPE

DESIGNED M. HUFFMAN
DESIGN CHECKED M. MCDONALD
DETAILED M. HUFFMAN
DRAWING CHECKED S. FRISBIE

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
CADD FILE NAME 19129_ROW_003.sht
DRAWING DATE: NOVEMBER 2024

WASHINGTON COUNTY

ARDURRA

PROJECT NO. A019(129)

RIGHT-OF-WAY PLAN

COVE RD BRIDGE
WASHINGTON CO

STA. 32+40 TO STA. 35+19.84

ENGLISH

COUNTY WASHINGTON
KEY NUMBER 19129
SHEET 6 OF 8

PROFESSIONAL LAND SURVEYOR REGISTERED 8961 3-27-25 STATE OF IDAHO STEVEN J. FRISBIE

T.11N., R.5W., B.M.
SEC 33

+25.91
199.61' Lt

+30.21
75.00' Lt

N82°42'18"E 124.68'

N82°42'18"E 50.03'

R/W

END CONSTRUCTION
ACCESS ROAD B

N05°06'26"W 201.94'

COVE R

S05°19'09"E, 172.19'

N05°19'09"W, 1324.68'

N05°19'09"W, 178.64'

END CONSTRUCTION
ACCESS ROAD A

S05°19'09"E, 199.66'

+8.00
80.00' Rt

+55.00
178.00' Rt

4

LOWER PAYETTE
DITCH LTD

+78.00
80.00' Rt

EASE (TE)
(ACCESS ROAD)

SW¼SE¼ SEC 33

+59.75
25.00' Lt

+59.75
25.00' Rt

PT 28+59.73

18' (ACCESS ROAD)

18' (ACCESS ROAD)

+50.31
75.02' Rt

S84°14'37"E
50.95'

N84°14'37"W, 76.46'

+36.98
150.17' Rt

+58.00
200.00' Rt

S84°14'37"E, 289.57'

+35.07
161.38' Rt

ACCESS
ROAD B

ACCESS
ROAD A

28

+20.00
200.00' Lt

N66°45'59"W, 151.30'

N54°27'56"E, 102.47'

EASE (TE)
(ACCESS ROAD)

3

SC PLACENTIA DEVELOPMENT, L.P.

1

DOMENICK DEROCCHIS

BEGIN CONSTRUCTION
ACCESS ROAD B
COVE RD STA. 28+16.44

N09°18'40"W, 258.34'

+48.00
64.44' Lt

C1

1

C3

S06°12'29"W, 101.16'

POB 3.5
+86.01
62.89' Rt

+74.00
66.00' Rt

BEGIN CONSTRUCTION
ACCESS ROAD A
COVE RD STA. 28+16.44

SEE SHEET 4 FOR
CURVE INFORMATION

FEET
20 0 40 80

LEGEND:

PERMANENT EASEMENT

TEMPORARY EASEMENT

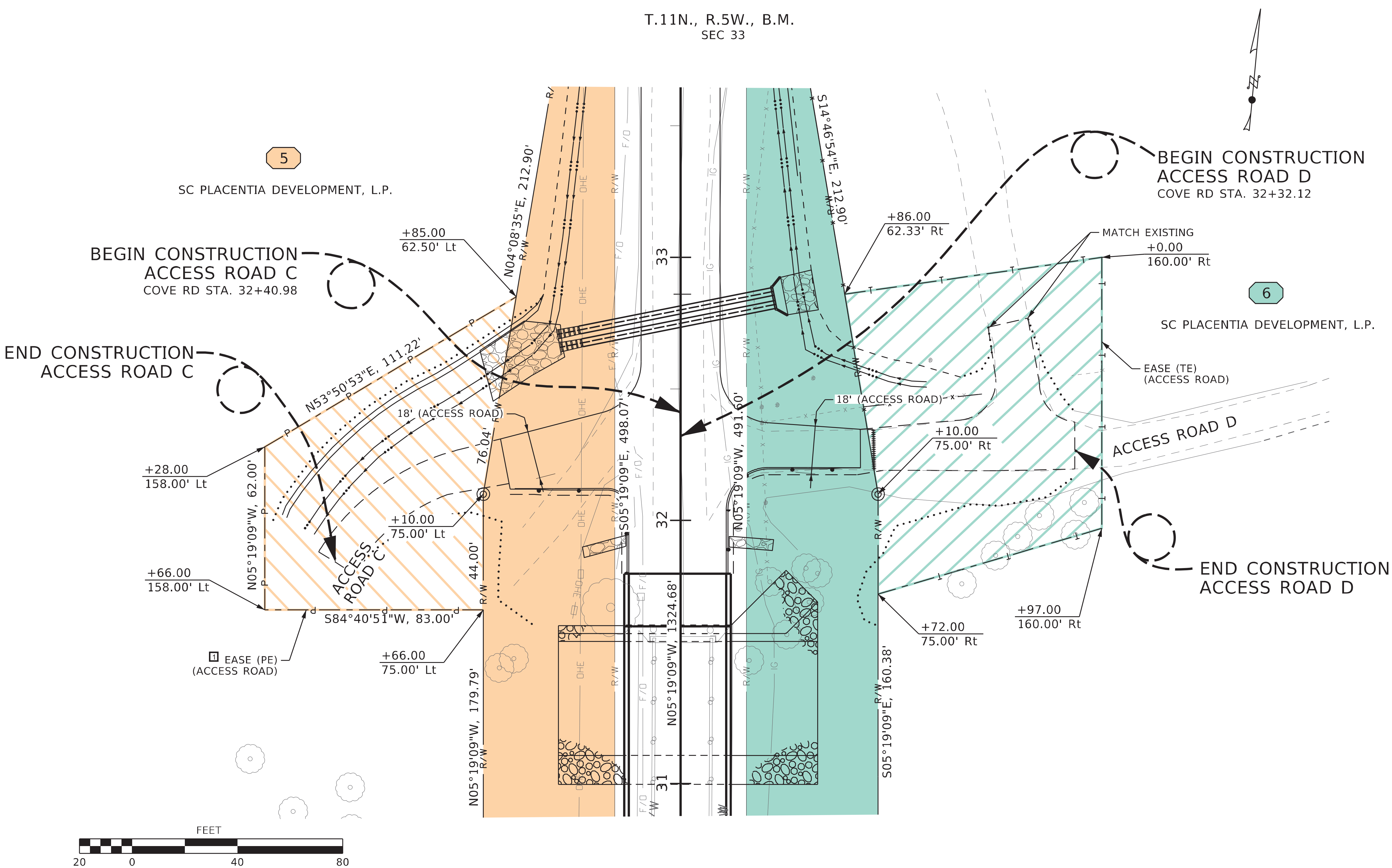
NOTES:

1. RETAIN AND PROTECT ALL ITEMS OUTSIDE OF THE TEMPORARY EASEMENT UNLESS OTHERWISE NOTED.

REVISIONS				DESIGNED	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY	WASHINGTON COUNTY	PROJECT NO.	RIGHT-OF-WAY PLAN	ENGLISH
NO.	DATE	BY	DESCRIPTION	M. HUFFMAN			A019(129)	COVE RD BRIDGE WASHINGTON CO	COUNTY WASHINGTON
1	06/07/24	M.M.	FENCES, GATES, & P. EASEMENTS	DESIGN CHECKED M. MCDONALD					KEY NUMBER 19129
				DETAILED M. HUFFMAN	CADD FILE NAME 19129_ROW_004.sht				SHEET 7 OF 8
				DRAWING CHECKED S. FRISBIE	DRAWING DATE: NOVEMBER 2024	ARDURRA			

PROFESSIONAL LAND SURVEYOR
REGISTERED
8961
3-27-25
STATE OF IDAHO
STEVEN J. FRISBIE

pw://pwhdr-uswest01HDR.US.West.01/Documents/ITD_Headquarters/ITD-Cove_Rd_Brdg_Replacement/6.0_CAD_BIM/6.2_Work_In_Progress/6.2.3_Roadway/19129_ROW_004 11/25/2024 10:37:27 AM



LEGEND:

PERMANENT EASEMENT

TEMPORARY EASEMENT

NOTES:

1. RETAIN AND PROTECT ALL ITEMS OUTSIDE OF THE TEMPORARY EASEMENT UNLESS OTHERWISE NOTED.

REVISIONS			
NO	DATE	BY	DESCRIPTION
1	06/07/24	M.M.	FENCES, GATES, & P. EASEMENTS

DESIGNED	M. HUFFMAN
DESIGN CHECKED	M. MCDONALD
DETAILED	M. HUFFMAN
DRAWING CHECKED	S. FRISBIE

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY

CADD FILE NAME 19129_ROW_005.dgn

DRAWING DATE: NOVEMBER 2024

WASHINGTON COUNTY

ARDURRA

PROJECT NO. A019(129)

RIGHT-OF-WAY PLAN

COVE RD BRIDGE WASHINGTON CO

ENGLISH

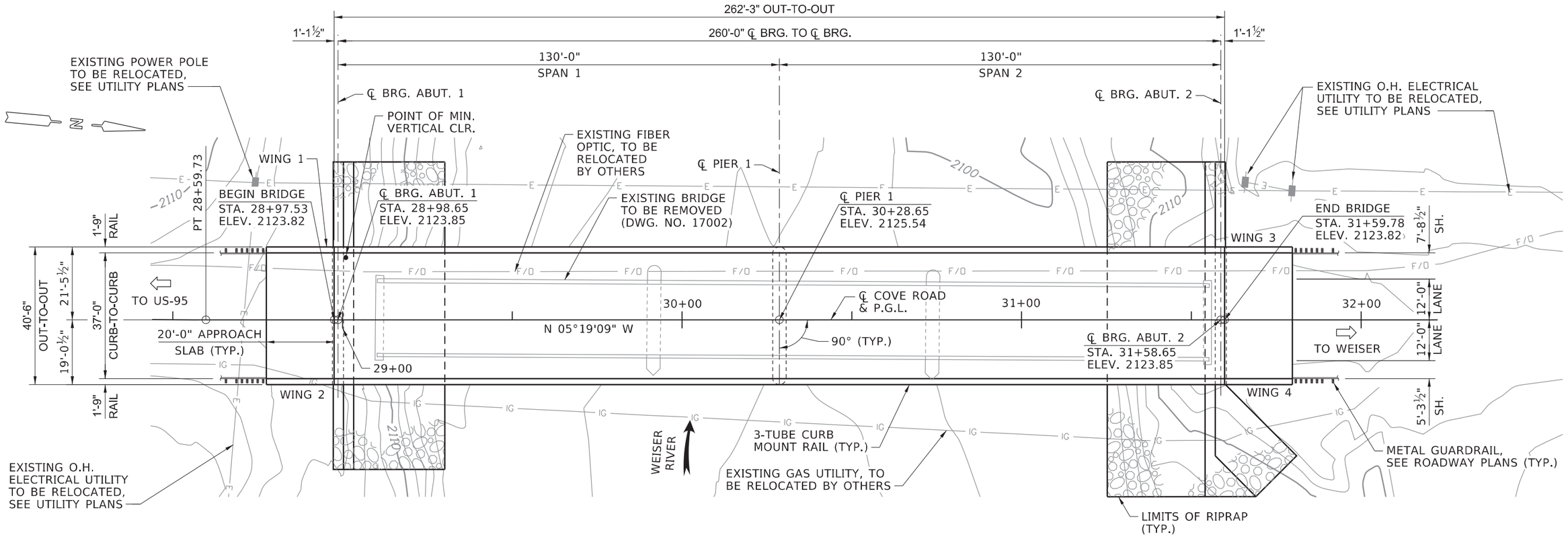
COUNTY WASHINGTON

KEY NUMBER 19129

SHEET 8 OF 8

PROFESSIONAL LAND SURVEYOR REGISTERED 8961 3-27-25 STATE OF IDAHO STEVEN J. FRISBIE

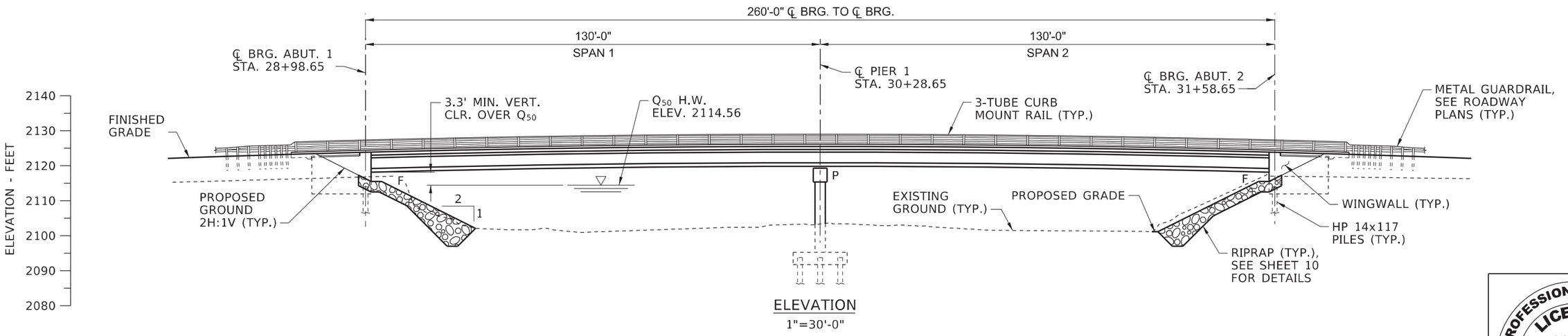
pw://pwhdruswest0lHDR.US.West_01/Documents/ITD_Headquarters/ITD-Cove_Rd_Brdg_Replacement/6.0_CAD_BIM/6.2_Work_in_Progress/6.2.3_Roadway/19129_ROW_005 11/25/2024 10:37:32 AM



PLAN
1"=30'-0"

HYDRAULIC DATA

FLOOD	DISCHARGE	H.W. ELEVATION	VELOCITY
DESIGN (Q_{50})	28,603 CFS	2114.56 FT	8.44 FPS
BASE (Q_{100})	31,852 CFS	2114.83 FT	8.77 FPS
SCOUR (Q_{SC})	39,031 CFS	2115.40 FT	9.44 FPS



ELEVATION
1"=30'-0"

ORIGINAL STORED AT: ITD BRIDGE SECTION - Boise, Idaho

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED W. MEYER
DESIGN CHECKED N. McDOWELL
DETAILED S. WALIMAA
DWG. CHECKED N. McDOWELL
CORRECTIONS

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
CADD FILE NAME
DX\prjXXXXX\Proj\Dev\Bridge\Plans
19129_brSI_001.dgn
DRAWING DATE: MARCH 2025

WASHINGTON COUNTY

FDR

ENGLISH

PROJECT NO.
A019(129)

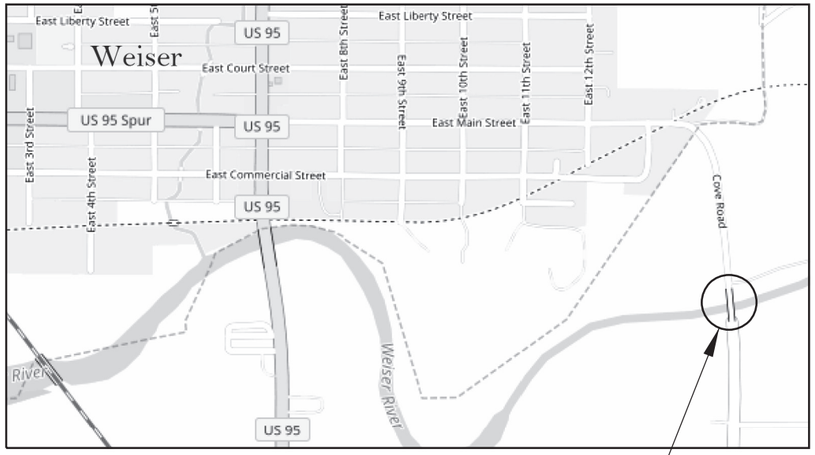
SITUATION AND LAYOUT

263' PRESTRESSED CONCRETE GIRDER BRIDGE
COVE ROAD OVER WEISER RIVER
STA. 30+28.65

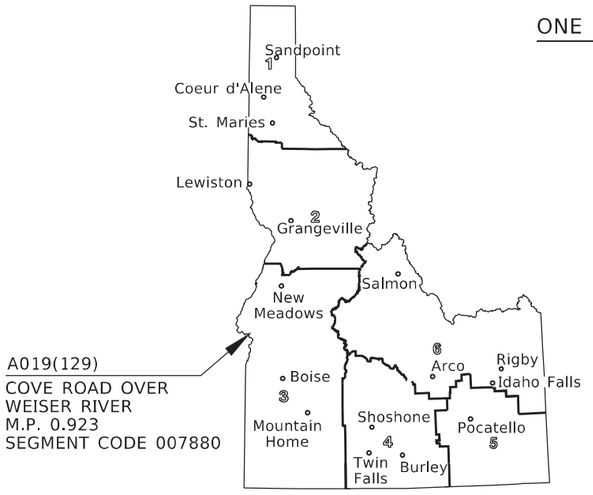
BRIDGE PLANS

BRIDGE KEY NO. 28806
COUNTY WASHINGTON
KEY NO. 19129
BRIDGE DWG. NO. 17761
SHEET 1 OF 30

PROFESSIONAL ENGINEER LICENSED 3/24/2025 20046 STATE OF IDAHO WESLEY A. MEYER



VICINITY MAP
NTS



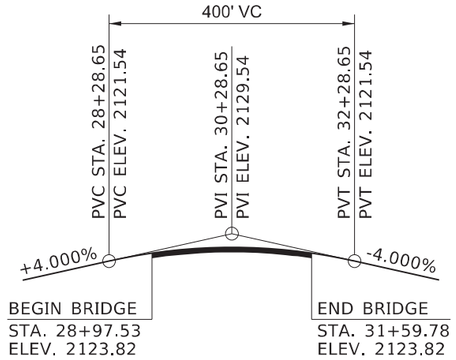
IDAHO MAP
NTS

A019(129)
COVE ROAD OVER
WEISER RIVER
M.P. 0.923
SEGMENT CODE 007880

263' PRESTRESSED CONCRETE
GIRDER BRIDGE
COVE ROAD OVER WEISER RIVER
STA. 30+28.65

ONE DIRECTIONAL TRAFFIC DATA

CONSTRUCTION YEAR 2025
AADT 380
CAADT 38
10.0%
FUTURE YEAR 2045
AADT 565
CAADT 56
10.1%



PROFILE DATA - ℄ COVE ROAD
NTS

INDEX OF SHEETS

QUANTITIES

203-010A	ASBESTOS REMOVAL AND DISPOSAL	10,000	CA
203-020A	REMOVAL OF BRIDGE - FULL, MULTI-SPAN TRUSS BRIDGE	1	EACH
205-005A	EXCAVATION	999	CY
205-040A	GRANULAR BORROW	798	CY
210-005A	STRUCTURE EXCAVATION SCHEDULE NO. 1	531	CY
210-015A	COMPACTING BACKFILL	798	CY
502-140A	CONCRETE CLASS 40-A SCHEDULE NO. 1	211.8	CY
+502-310A	CONCRETE CLASS 40 AF SCHEDULE NO. 2	392.7	CY
502-345A	SEAL CONCRETE	134.4	CY
+502-380A	PRESTRESS WF GIRDER - 58"	1,302.5	FT
+502-435A	APPROACH SLAB	180.0	SY
503-010A	METAL REINFORCEMENT SCHEDULE NO. 1	55,720	LB
503-015A	METAL REINFORCEMENT SCHEDULE NO. 2	27,262	LB
+503-020A	EPOXY COATED METAL REINFORCEMENT	40,653	LB
+504-050A	3-TUBE CURB MOUNT RAIL	604.5	FT
505-045A	PROVIDE & DRIVE STEEL H PILE (14 x 117)	1,089	FT
505-197A	PROVIDE & DRIVE TEST PILE (HP-14 x 117)	149	FT
505-205C	PROVIDE & INSTALL PILE SHOES OR TIPS	24	EACH
505-215A	SPLICE STEEL PILE BEFORE DRIVING	3	EACH
507-005A	ELASTOMERIC BEARINGS PLAIN (1"x12"x36")	20	EACH
521-005A	DYNAMIC PILE TESTING	2	EACH
521-010A	CAPWAP ANALYSIS	2	EACH
560-005A	DEWATERING FOUNDATION	1	LS
+566-010A	COMPRESSION EXPANSION JOINT (3" JEENE)	75.5	FT
+576-005A	(GFRP) REINFORCEMENT	410	FT
586-005A	UTILITY CONDUIT	1	LS
624-005B	LOOSE RIPRAP (CLASS V)	999	CY
640-010A	RIPRAP/EROSION CONT GEOTEXTILE	1,113	SY
S900-50B	CONTINGENCY AMOUNT LEAD BASED PAINT REMOVAL AND DISPOSAL	10,000	CA

+DENOTES PLAN QUANTITY

ORIGINAL STORED AT: ITD BRIDGE SECTION - Boise, Idaho

REVISIONS			
NO.	DATE	BY	DESCRIPTION
1			
2			
3			
4			
5			

DESIGNED W. MEYER
DESIGN CHECKED N. McDOWELL
DETAILED S. WALIMAA
DWG. CHECKED N. McDOWELL
CORRECTIONS

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
CADD FILE NAME
DX\prj\XXXXX\Pro[Dev\Bridge\Plans 19129_brVM_001.dgn
DRAWING DATE: MARCH 2025

WASHINGTON COUNTY

HDR

ENGLISH

PROJECT NO.
A019(129)

SHEET INDEX, QUANTITIES, & VICINITY MAP
263' PRESTRESSED CONCRETE GIRDER BRIDGE
COVE ROAD OVER WEISER RIVER
STA. 30+28.65

BRIDGE PLANS
BRIDGE KEY NO. 28806
COUNTY WASHINGTON
KEY NO. 19129
BRIDGE DWG. NO. 17761
SHEET 2 OF 30

PROFESSIONAL ENGINEER
LICENSED
3/24/2025
20046
STATE OF IDAHO
WESLEY A. MEYER

DESIGN NOTES

DESIGN SPECIFICATIONS

IN ACCORDANCE WITH: "AASHTO LRFD BRIDGE DESIGN SPECIFICATION" 9th EDITION.

DESIGN PROCEDURES

GIRDERS DESIGNED AS SIMPLE SPANS AND SLAB REINFORCEMENT ADDED TO CONTROL CRACKING OVER THE PIER.
DECK SLAB DESIGNED USING EMPIRICAL DESIGN METHOD.
RAILING CONFORMS TO MASH TL-4. DESIGN SPEED IS 35 mph.
THE FOLLOWING PROPRIETARY COMPUTER SOFTWARE PROGRAMS WERE USED TO FACILITATE THE STRUCTURAL ANALYSIS:

NAME	VERSION	RELEASE DATE	NAME	VERSION	RELEASE DATE
LARSA 4D	v8.00.r9021	2020	LEAP BRIDGE CONCRETE	19.02.00.33	2019
LPILE	2016.9.11	2016			
SP COLUMN	6.50	2018	GROUP	2019.11.3	2019

DESIGN LOADS

PERMANENT LOADS

DC	UNIT WEIGHT OF REINFORCED CONCRETE	0.150 kcf
DW	FUTURE WEARING SURFACE	0.028 ksf
	FUTURE UTILITIES	0.100 klf
EV	UNIT WEIGHT OF SOIL	0.130 kcf
EH	ACTIVE PRESSURE	0.034 kcf
	AT REST PRESSURE	0.057 kcf

TRANSIENT LOADS

LL	HL-93 INCLUDING PAIR OF DESIGN TANDEMS IN NEGATIVE MOMENT REGIONS	
IM	DYNAMIC ALLOWANCE APPLIED TO TRUCK & TANDEM	
LS	LIVE LOAD SURCHARGE AT ABUTMENT	0 feet
	LIVE LOAD SURCHARGE AT WING WALL	0 feet
TU	UNIFORM TEMPERATURE RANGE	0° F TO 80° F
	BASE SETTING TEMPERATURE	60° F

EXTREME EVENT LOADS

EQ	SITE CLASS	D
	ACCELERATION COEFFICIENT S_{D1}	0.18 g
	SEISMIC PERFORMANCE ZONE	2
IC	ICE CRUSHING STRENGTH	24 ksf
	ICE THICKNESS	2.0 feet

ABUTMENT PILE DESIGN LOADS

STRENGTH LIMIT STATE

NOMINAL AXIAL RESISTANCE R_n = 600 kips
AXIAL RESISTANCE FACTOR Φ = 0.65
FACTORED AXIAL RESISTANCE ΦR_n = 390 kips
MAX. APPLIED AXIAL LOAD Q = 336 kips
MIN. APPLIED AXIAL LOAD Q = 124 kips

PIER PILE DESIGN LOADS

STRENGTH LIMIT STATE

NOMINAL AXIAL RESISTANCE R_n = 550 kips
AXIAL RESISTANCE FACTOR Φ = 0.65
FACTORED AXIAL RESISTANCE ΦR_n = 358 kips
PULLOUT RESISTANCE FACTOR (phi) = 0.35
NOMINAL AXIAL PULLOUT RESISTANCE R_n = -200 kips
FACTORED AXIAL PULLOUT RESISTANCE (phi) R_n = -70 kips
MAX. APPLIED AXIAL LOAD Q = 332 kips
MIN. APPLIED AXIAL LOAD Q = 90 kips
NOMINAL LATERAL RESISTANCE R_n= 120 kips
BASED UPON 1" OF HORIZONTAL MOVEMENT
LATERAL RESISTANCE FACTOR Φ = 1.0
FACTORED LATERAL RESISTANCE ΦR_n= 120 kips
FACTORED LATERAL APPLIED LOAD γV = 11 kips

EXTREME LIMIT STATE

NOMINAL AXIAL RESISTANCE R_n = 550 kips
AXIAL RESISTANCE FACTOR Φ = 1.0
FACTORED AXIAL RESISTANCE ΦR_n= 550 kips
PULLOUT RESISTANCE FACTOR (phi) = 0.80
NOMINAL AXIAL PULLOUT RESISTANCE R_n = -200 kips
FACTORED AXIAL PULLOUT RESISTANCE (phi) R_n= -160 kips
MAX. APPLIED AXIAL LOAD Q = 465 kips
MIN. APPLIED AXIAL LOAD Q = -146 kips
LATERAL RESISTANCE FACTOR Φ = 1.0
FACTORED LATERAL RESISTANCE ΦR_n= 294 kips
FACTORED LATERAL APPLIED LOAD γV = 120 kips

GENERAL NOTES

CONSTRUCTION SPECIFICATIONS

MATERIALS, CONSTRUCTION AND WORKMANSHIP MUST BE IN ACCORDANCE WITH THE STATE OF IDAHO TRANSPORTATION DEPARTMENT, "STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION", 2023 EDITION, AND 2024 SUPPLEMENTAL SPECIFICATIONS, THE PROJECT PLANS AND SPECIFICATIONS.

MATERIAL

CONCRETE :	DECK SLAB, APPROACH SLABS, CURB, PIER DIAPHRAGM AND ABUTMENT DIAPHRAGM - CLASS 40AF	f'c= 4.00 ksi
	PIER, ABUTMENT CAPS, AND WINGS - CLASS 40A	f'c= 4.00 ksi
	PRESTRESS GIRDERS	f'c= 8.00 ksi
METAL REINFORCEMENT :	AASHTO M31, GRADE 60	fy= 60.00 ksi
PRESTRESS REINFORCEMENT :	AASHTO M203, GRADE 270 LOW RELAXATION	fpu= 270.00 ksi

PLAN DIMENSIONS AND ELEVATIONS

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS NOTED OTHERWISE.
DIMENSIONS TO REINFORCING STEEL ARE TO CENTERLINE OF BAR UNLESS NOTED OTHERWISE.
PROVIDE 2" CONCRETE COVER MEASURED FROM THE FACE OF THE CONCRETE TO THE FACE OF ANY REINFORCING BAR, UNLESS SHOWN OTHERWISE ON THE DRAWINGS.
PROVIDE REINFORCING STEEL SPLICE LENGTHS IN ACCORDANCE WITH AASHTO SPECIFICATIONS.

CONSTRUCTION

REINFORCING STEEL TO BE EPOXY COATED IS DESIGNATED BY AN "E" AFTER THE BAR MARK.
GLASS FIBER REINFORCED POLYMER REINFORCEMENT IS DESIGNATED BY A "G" AFTER THE BAR MARK.
CONSTRUCTION JOINTS WILL BE PERMITTED ONLY AT THE LOCATIONS SHOWN ON THE PLANS OR AS APPROVED BY THE ENGINEER.
ROUGHEN CONSTRUCTION JOINTS TO ¼" AMPLITUDE, UNLESS NOTED OTHERWISE.
WELDED FABRICATION MUST BE IN ACCORDANCE WITH ANSI/AASHTO/AWS D1.5 AND INTERIM REVISIONS PUBLISHED BY AASHTO.
ELEVATIONS ARE BASED ON NAVD 88 DATUM.
UTILITY INFORMATION SHOWN ON THE BRIDGE PLANS MAY NOT BE COMPLETE OR ACCURATELY DEPICT THE LOCATIONS OF THE FACILITIES SHOWN. THE CONTRACTOR WILL COORDINATE THE LOCATION OF EXISTING, NEW, RELOCATED, AND ABANDONED UTILITIES WITH THE PROJECT PLAN AND NOTIFY RESPECTIVE OWNERS BEFORE COMMENCING THE WORK OF EXCAVATION, INCLUDING ANY DRILLING OR PILING REQUIRED FOR TEMPORARY SHORING. CONFLICTS MUST BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND RESOLVED PRIOR TO PROCEEDING WITH THE WORK. SEE ROADWAY DRAWINGS FOR ADDITIONAL INFORMATION.

INCIDENTAL ITEMS

ITEMS SHOWN OR NOTED ON PLANS WHICH ARE NOT SPECIFICALLY BID ITEMS ARE INCIDENTAL ITEMS. THE COST OF FURNISHING AND INSTALLING INCIDENTAL ITEMS ARE INCLUDED IN THE UNIT PRICE BID FOR OTHER ITEMS, UNLESS NOTED OTHERWISE.

ELASTOMERIC BEARINGS

DESIGN PROCEDURE: METHOD A
GRADE 3 (60) DUROMETER POLYCHLOROPRENE
DESIGN LOADS: (SERVICE 1)
ABUTMENT 146 kips
PIER 239 kips

PILE DESIGN DATA FOR SCOUR

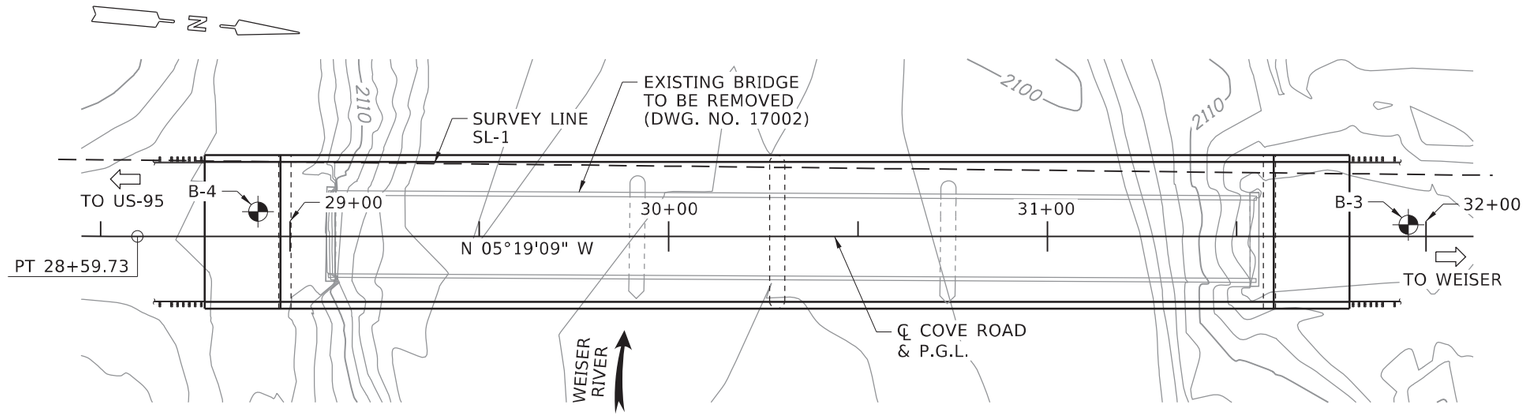
FOUNDATIONS DESIGNED FOR THE FOLLOWING SCOUR DEPTHS BELOW THE BOTTOM OF THE PILE CAP.

ABUTMENT = 0 ft
PIER = 4.1 ft

ORIGINAL STORED AT: ITD BRIDGE SECTION - Boise, Idaho

REVISIONS				DESIGNED	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY	WASHINGTON COUNTY	ENGLISH	DESIGN AND GENERAL NOTES	BRIDGE PLANS	
NO.	DATE	BY	DESCRIPTION	W. MEYER					BRIDGE KEY NO. 28806	
				DESIGN CHECKED N. McDOWELL	CADD FILE NAME DX\prj\XXXXX\Proj\Dev\Bridge\Plans 19129_brDN_001.dgn		PROJECT NO. A019(129)	263' PRESTRESSED CONCRETE GIRDER BRIDGE COVE ROAD OVER WEISER RIVER STA. 30+28.65	COUNTY WASHINGTON	KEY NO. 19129
				DETAILED S. WALIMAA					BRIDGE DWG. NO. 17761	SHEET 3 OF 30
				DWG. CHECKED N. McDOWELL	DRAWING DATE: MARCH 2025					
				CORRECTIONS						

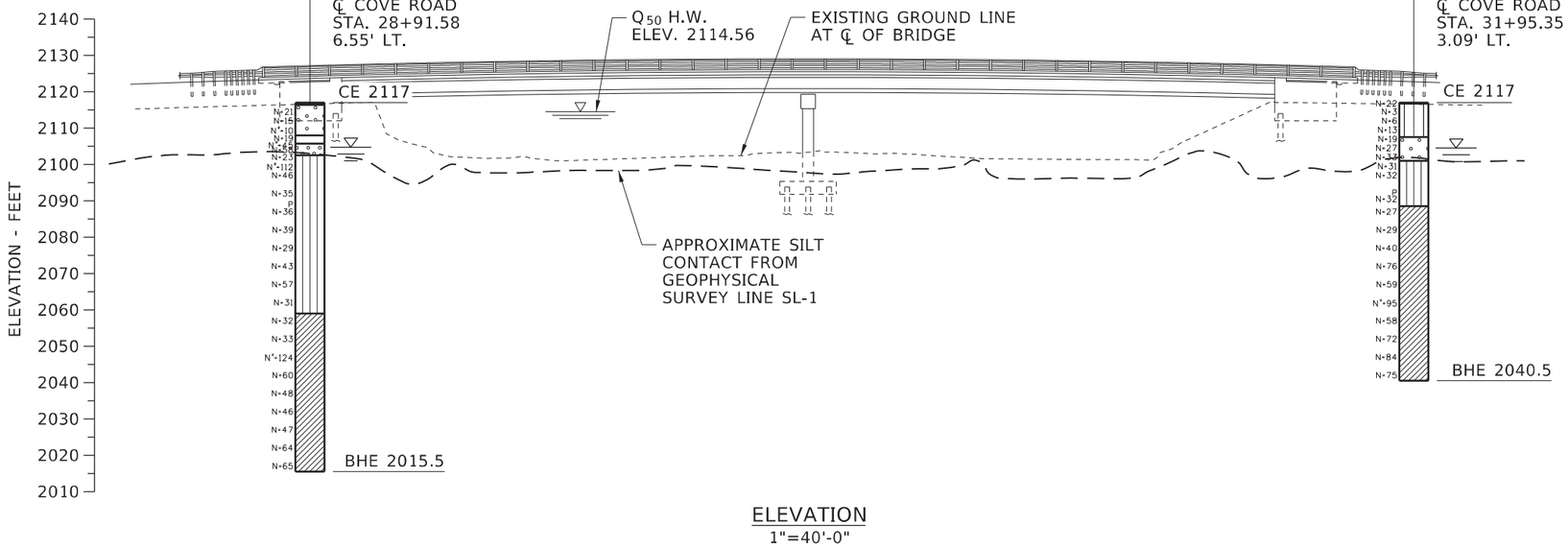
PROFESSIONAL ENGINEER LICENSED 3/24/2025 20046 STATE OF IDAHO WESLEY A. MEYER



PLAN
1"=40'-0"

NOTES

1. THE SUBSURFACE CONDITIONS SHOWN REPRESENT THE APPROXIMATE DEPTHS OF CHANGES IN SOIL TYPE. THE TRANSITION BETWEEN MATERIALS MAY BE GRADUAL OR ABRUPT.
2. THIS PROFILE SHOWS SUBSURFACE CONDITIONS SHOWN AT THE SPECIFIC BORING LOCATIONS AT THE TIME THE BORINGS WERE DRILLED. THEY MAY NOT BE REPRESENTATIVE OF SUBSURFACE SOIL, ROCK AND GROUNDWATER CONDITIONS AT OTHER LOCATIONS AND TIME.
3. GROUNDWATER ELEVATIONS SHOWN ARE BASED ON WATER LEVELS AT THE TIME OF DRILLING. GROUNDWATER LEVELS ARE APPROXIMATE AND SHOULD BE EXPECTED TO FLUCTUATE.
4. ESTIMATION OF SILT CONTACT FROM GEOPHYSICS IS APPROXIMATE.
5. THE FOUNDATION INVESTIGATION REPORT, BORING LOGS, AND OTHER INFORMATION RELATED TO FOUNDATION INVESTIGATION FOR THIS PROJECT ARE AVAILABLE AT THE ITD DISTRICT MATERIALS SECTION.



ELEVATION
1"=40'-0"

LEGEND

- LAYER 1 ASPHALT PAVEMENT
- LAYER 2 GRAVEL BASE
- LAYER 3 SILTY SAND (SM)
- LAYER 4 POORLY GRADED SAND/ SAND WITH SILT (SP/SP-SM)
- LAYER 5 GRAVEL/GRAVEL WITH SILT AND SAND (GP/GP-GM)
- LAYER 6 ELASTIC SILT (MH)
- LAYER 7 FAT CLAY (CH)
- LOCATION AND DESIGNATION OF GEOTECHNICAL BORING
- LOCATION AND DESIGNATION OF GEOPHYSICAL SEISMIC REFRACTION SURVEY
- CE — COLLAR ELEVATION (FEET)
- N — BLOWS OF 140 LB. HAMMER FALLING 30" REQUIRED TO DRIVE A 2" OD SPLIT-SPOON SAMPLER A DISTANCE OF 12 INCHES
- N* — BLOWS OF 140 LB. HAMMER FALLING 30" REQUIRED TO DRIVE A 3" OD SPLIT-SPOON SAMPLER A DISTANCE OF 12 INCHES
- P — SHELBY TUBE SAMPLER
- APPROXIMATE GROUNDWATER ELEVATION ENCOUNTERED DURING DRILLING

ORIGINAL STORED AT: ITD BRIDGE SECTION - Boise, Idaho

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED B. DUREE
DESIGN CHECKED M. McARTHUR
DETAILED S. WALIMAA
DWG. CHECKED M. McARTHUR
CORRECTIONS

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
CADD FILE NAME
DX\prjXXXXX\Proj\Dev\Bridge\Plans\19129_brFI_001.dgn
DRAWING DATE: MARCH 2025

WASHINGTON COUNTY

GEOENGINEERS

ENGLISH

PROJECT NO.
A019(129)

FOUNDATION INVESTIGATION
263' PRESTRESSED CONCRETE GIRDER BRIDGE
COVE ROAD OVER WEISER RIVER
STA. 30+28.65

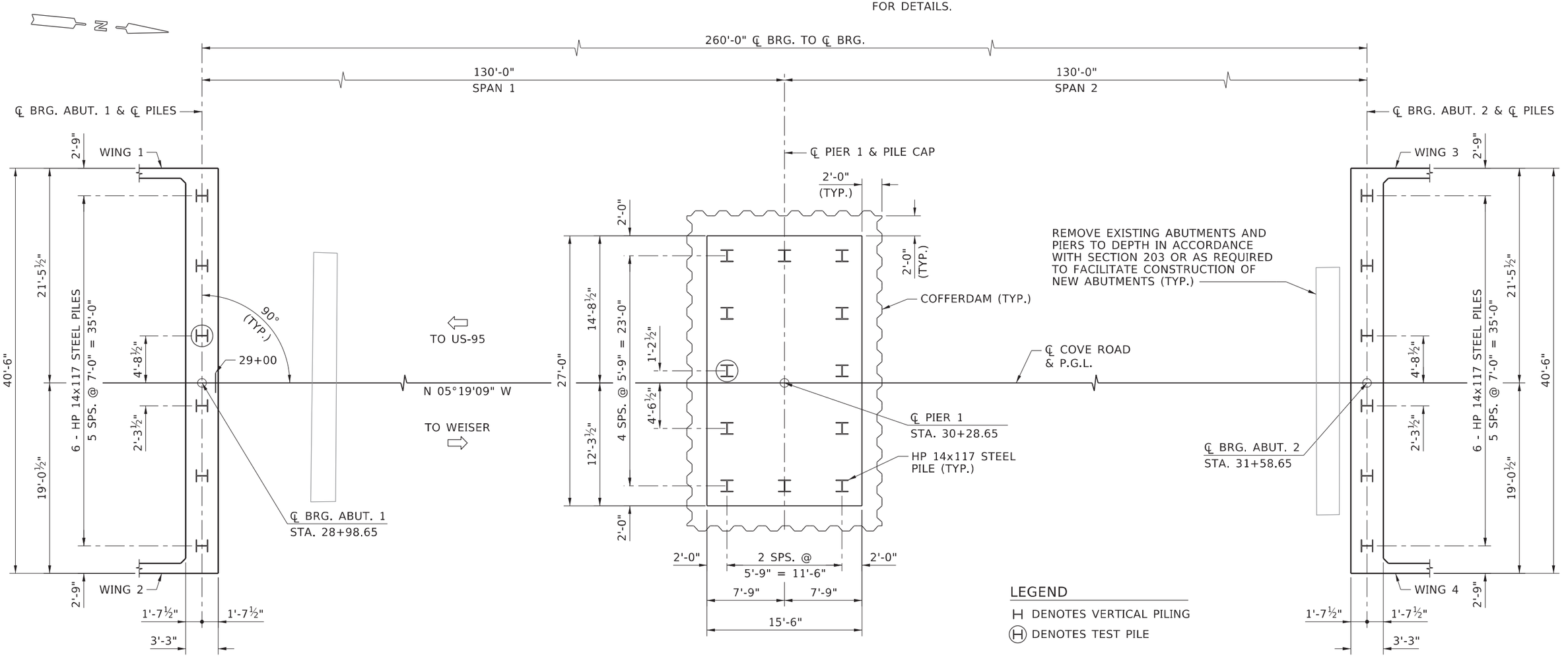
BRIDGE PLANS

BRIDGE KEY NO. 28806	
COUNTY WASHINGTON	KEY NO. 19129
BRIDGE DWG. NO. 17761	SHEET 4 OF 30

PROFESSIONAL ENGINEER LICENSED 3/24/25 20370 STATE OF IDAHO MORGAN McARTHUR

NOTES

1. SEE SHEET 6 FOR PILE NOTES AND DETAILS.
2. RIPRAP NOT SHOWN, SEE SHEET 10 FOR RIPRAP LIMITS AND DETAILS.
3. EXISTING PIER WALLS IN RIVER NOT SHOWN. EXISTING PIER FOUNDATION LIMITS UNKNOWN. IF ENCOUNTERED, REMOVE EXISTING PIER FOUNDATIONS AS REQUIRED TO FACILITATE NEW PIER CONSTRUCTION. DEWATERING MAY BE REQUIRED FOR EXISTING PIER REMOVAL.
4. EXISTING UTILITIES NOT SHOWN. SEE ROADWAY PLANS FOR DETAILS.
5. PROVIDE SHORING REQUIRED TO COMPLETE CONSTRUCTION ACTIVITIES FOR THE PIER FOUNDATION. COFFERDAM IS SHOWN ONLY TO ALERT CONTRACTOR THAT A COFFERDAM WILL BE NEEDED. CONTRACTOR MUST DETERMINE THE ACTUAL LOCATION, METHODS, MATERIALS, DESIGN AND LIMITS OF COFFERDAM. COST OF COFFERDAM IS INCIDENTAL TO BID ITEM 560-005A.



LEGEND

H DENOTES VERTICAL PILING

(H) DENOTES TEST PILE

FOUNDATION PLAN AND PILE LAYOUT
1"=10'-0"

ORIGINAL STORED AT: ITD BRIDGE SECTION - Boise, Idaho

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED W. MEYER
DESIGN CHECKED B. CORSON-MARQUESS
DETAILED S. WALIMAA
DWG. CHECKED N. McDOWELL
CORRECTIONS

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
CADD FILE NAME D:\prj\XXXX\Proj\Dev\Bridge\Plans 19129_brFP_001.dgn
DRAWING DATE: MARCH 2025

WASHINGTON COUNTY

HDR

ENGLISH

PROJECT NO. A019(129)

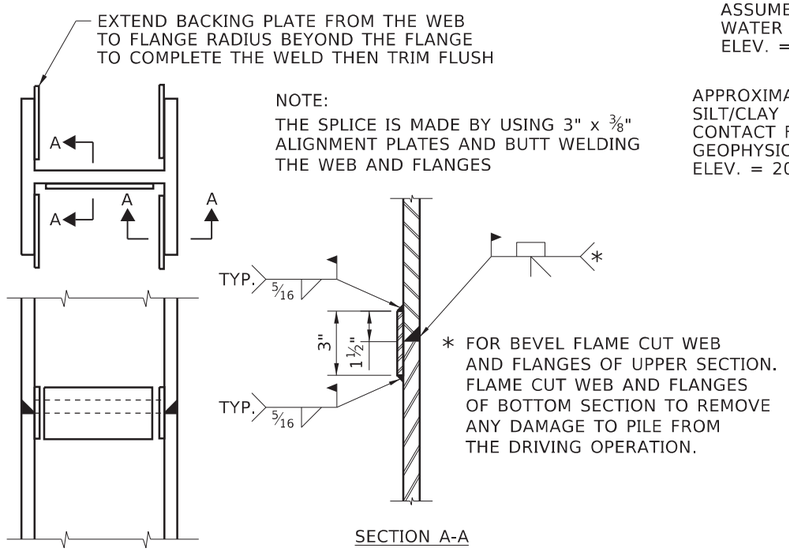
FOUNDATION PLAN

263' PRESTRESSED CONCRETE GIRDER BRIDGE
COVE ROAD OVER WEISER RIVER
STA. 30+28.65

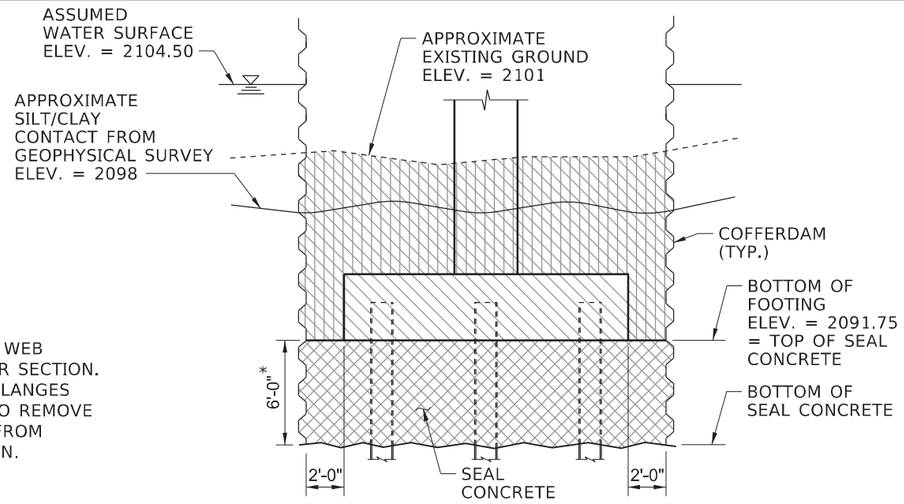
BRIDGE PLANS

BRIDGE KEY NO. 28806
COUNTY WASHINGTON | KEY NO. 19129
BRIDGE DWG. NO. 17761 | SHEET 5 OF 30

PROFESSIONAL ENGINEER LICENSED 3/24/2025 20046 STATE OF IDAHO WESLEY A. MEYER



H PILE BUTT WELDED SPLICE DETAIL
NTS



EXCAVATION AND BACKFILL DETAIL - PIER 1
NTS

*PROVIDED DEPTH OF SEAL CONCRETE CALCULATED BASED ON WATER SURFACE ELEVATION SHOWN ON THIS DETAIL AND IS USED FOR ESTIMATING PURPOSES ONLY. CONTRACTOR TO DETERMINE ACTUAL SEAL CONCRETE REQUIREMENTS BASED ON COFFERDAM DESIGN.

LEGEND

- 502-345A - SEAL CONCRETE
- 210-005A - STRUCTURE EXCAVATION SCHEDULE NO. 1
- 205-040A GRANULAR BORROW & 210-015A COMPACTING BACKFILL

NOTES

MATERIAL SPECIFICATIONS

1. PROVIDE HP 14 x 117 STEEL H PILES THAT CONFORM TO ASTM A572 GRADE 50.
2. PROVIDE SPLICE PLATES OF THE SAME MATERIAL AS THE STEEL H-PILES.
3. DRIVE PILES WITH HARDENED STEEL DRIVE SHOES PER ITD'S QUALIFIED PRODUCTS LIST FOR CATEGORY 505 PILING AND SUB-CATEGORY "H-PILE COMMON POINT WITH TEETH FOR ROCK OR GRAVEL WITH BOULDERS" MAINTAINED ONLINE AT HTTPS://APPS.ITD.IDAHO.GOV/APPS/MATERIALS/QPL.ASPX)
4. PREFABRICATED SPLICERS MAY BE USED PER ITD'S QUALIFIED PRODUCTS LIST FOR CATEGORY 505 PILING AND SUB-CATEGORY "SPLICING FOR STEEL H-PILES".

WELDING

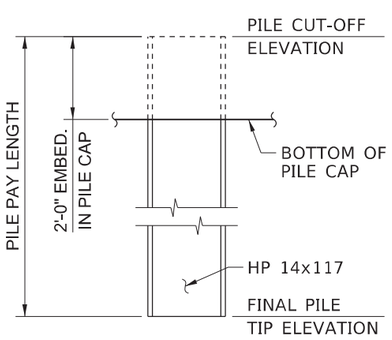
5. QUALIFICATION OF WELDERS, MATERIALS, INSPECTION, AND PROCEDURES FOR WELDING H-PILE WILL CONFORM TO THE CURRENT EDITION OF ANSI/AWS D1.1.
6. ATTACH PILE POINTS AND PREFABRICATED SPLICERS BY WELDING IN ACCORDANCE WITH THE CURRENT EDITION OF ANSI/AWS D1.1. SUBMIT WELDING DETAILS AND PROCEDURES FOR APPROVAL.

DRIVING DATA

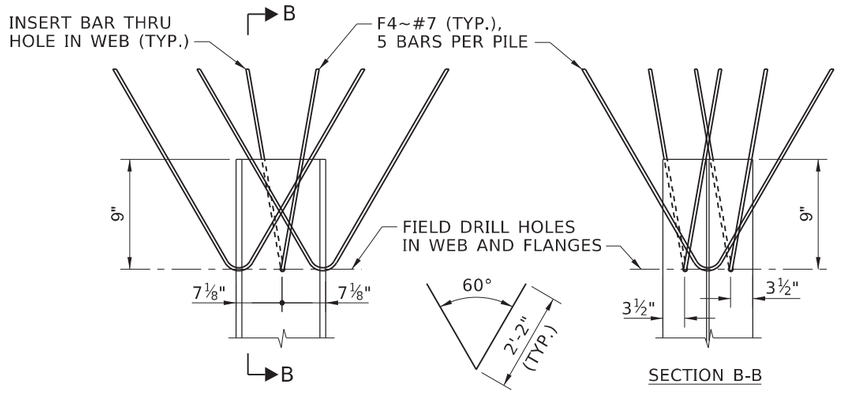
7. FURNISH THE TYPE AND OPERATION SPECIFICATIONS OF THE HAMMER TO THE ENGINEER 15 CALENDAR DAYS BEFORE PILE DRIVING BEGINS.
8. DRIVE PILES TO A MINIMUM BEARING CAPACITY OF 600 KIPS PER PILE AS DETERMINED BY A WAVE EQUATION ANALYSIS IN ACCORDANCE WITH SECTION 505.03G.
9. THE RATED ENERGY FOR THE HAMMER USED FOR DRIVING PILES IS RECOMMENDED TO BE BETWEEN 75,000 AND 100,000 FOOT-POUNDS. THE RATED ENERGY RANGE MAY BE CHANGED IF APPROVED.
10. NOTIFY THE ENGINEER BEFORE FURTHER PILE DRIVING IF THE HIGHEST PILE TIP ELEVATION IS NOT OBTAINED.

MISCELLANEOUS

11. DRIVE TEST PILES TO REFUSAL OR 1½ TIMES THE ESTIMATED PILE PENETRATION LENGTH, WHICHEVER COMES FIRST. TEST PILES BECOME PART OF THE COMPLETED STRUCTURE.
12. PILE TIP ELEVATIONS ARE SHOWN FOR ESTIMATING PURPOSES ONLY.
13. ESTIMATED PILE LENGTHS ARE COMPUTED FROM PILE CUT-OFF AND ESTIMATED PILE TIP ELEVATIONS.
14. TWO TEST PILES ARE REQUIRED FOR THIS PROJECT. ONE AT THE FIRST ABUTMENT CONSTRUCTED AND ONE AT THE CENTER PIER. FOR EACH TEST PILE, PERFORM PILE DYNAMIC TESTING DURING INITIAL DRIVING OF THE PILE AS SHOWN ON THE PLANS OR AS DIRECTED.
15. PERFORM CAPWAP ANALYSES FOR THE TEST PILES AT TWO PILE PENETRATION DEPTHS:
    a. AT THE DEPTH WHERE THE CASE METHOD INDICATES THE TEST PILE CAPACITY EQUALS THE DESIGN PILE CAPACITY SHOWN IN THE PLANS (THIS DEPTH MUST BE DEEPER THAN THE HIGHEST PILE TIP SHOWN IN THE PLANS), OR AS DIRECTED.
    b. AT THE END OF INITIAL DRIVING. IF THE DESIGN AXIAL CAPACITY OF A TEST PILE IS NOT ACHIEVED, THAT TEST PILE MUST BE RE-STRUCK TO AN ADDITIONAL PENETRATION OF AT LEAST 4 INCHES AFTER A WAITING PERIOD OF 4 DAYS OR AS DIRECTED. PERFORM CAPWAP ANALYSIS ON THE PILE RESTRIKE, IF THE TEST PILES ACHIEVE THE AXIAL DESIGN CAPACITY DURING INITIAL DRIVING, RE-STRIKING THE TEST PILE AFTER 4 DAYS IS NOT REQUIRED.



ABUTMENT/PIER
PILE PAY LENGTH DETAIL
NTS



H-PILE TENSION CONNECTION AT PIER 1
NTS

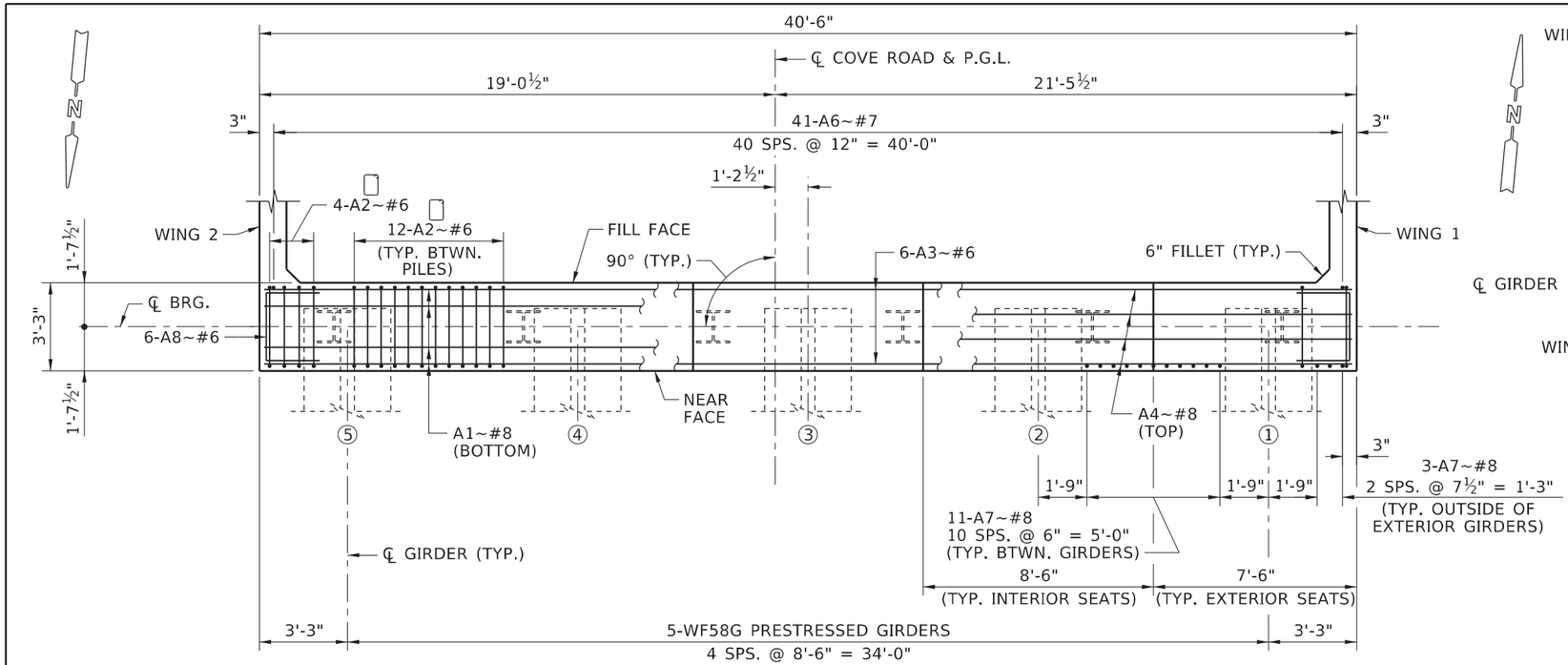
PILE SCHEDULE

LOCATION	NO.	ELEVATION			ESTIMATED PILE LENGTH
		PILE CUT-OFF	ESTIMATED PILE TIP	HIGHEST PILE TIP	
ABUT. 1	6	2114.78	2064	2082	51
PIER 1	12	2093.75	2046	2068	48
ABUT. 2	6	2114.78	2064	2082	51

PROFESSIONAL ENGINEER LICENSED 3/24/2025 20046 STATE OF IDAHO WESLEY A. MEYER

ORIGINAL STORED AT: ITD BRIDGE SECTION - Boise, Idaho

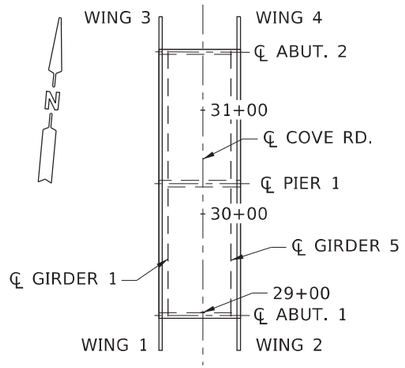
REVISIONS				DESIGNED W. MEYER	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY	WASHINGTON COUNTY	ENGLISH	PILE NOTES AND DETAILS	BRIDGE PLANS	
NO.	DATE	BY	DESCRIPTION	DESIGN CHECKED N. McDOWELL	CADD FILE NAME D:\prj\XXXXX\Proj\Dev\Bridge\Plans 19129_brPN_001.dgn		PROJECT NO.	263' PRESTRESSED CONCRETE GIRDER BRIDGE COVE ROAD OVER WEISER RIVER STA. 30+28.65	BRIDGE KEY NO. 28806	
				DETAILED E. PRESCOTT					COUNTY WASHINGTON	KEY NO. 19129
				DWG. CHECKED N. McDOWELL	DRAWING DATE: MARCH 2025	HDR	A019(129)		BRIDGE DWG. NO. 17761	SHEET 6 OF 30
				CORRECTIONS						



PLAN

(ABUTMENT 1 SHOWN, ABUTMENT 2 SIMILAR BY ROTATION)

3/16"=1'-0"



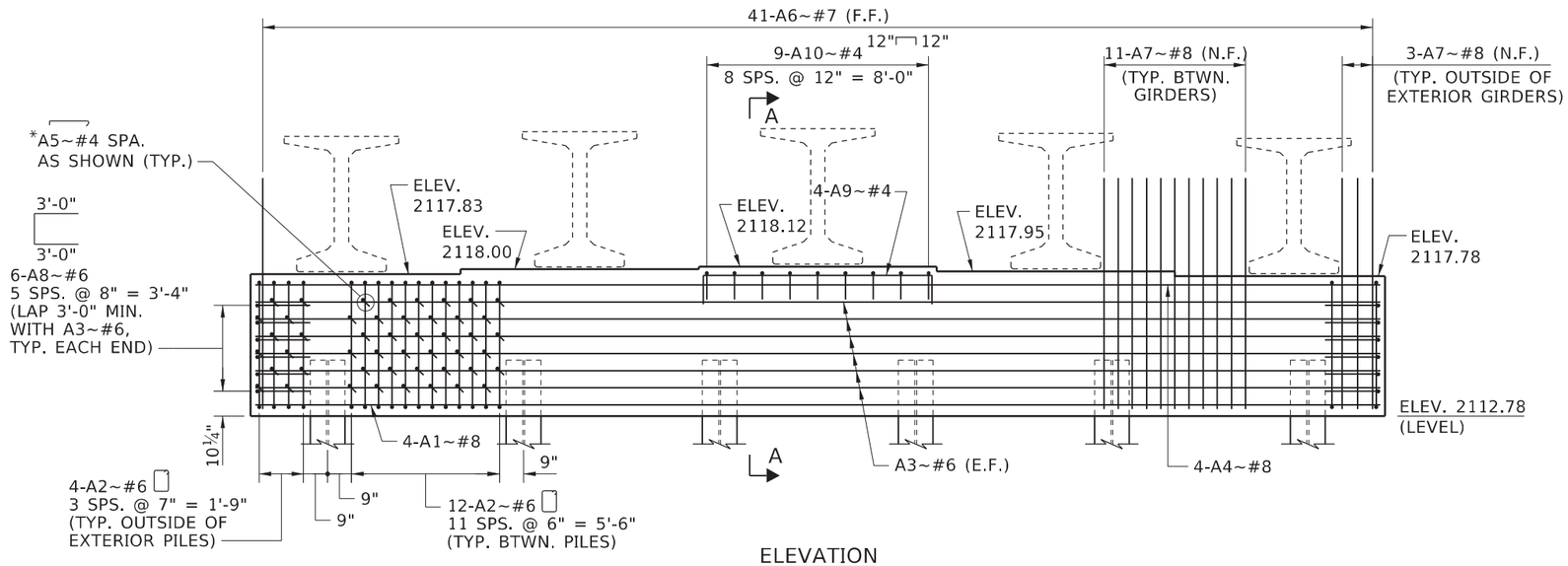
BRIDGE PLAN

NOT TO SCALE

NOTES

1. WINGWALL REINFORCEMENT NOT SHOWN FOR CLARITY. SEE SHEET 9 FOR DETAILS.
*2. ALTERNATE 90° AND 135° HOOKS, PLACED AT ALTERNATE VERTICAL BARS.
3. (F.F.) = FILL FACE
(N.F.) = NEAR FACE
(E.F.) = EACH FACE
U.N.O. = UNLESS NOTED OTHERWISE

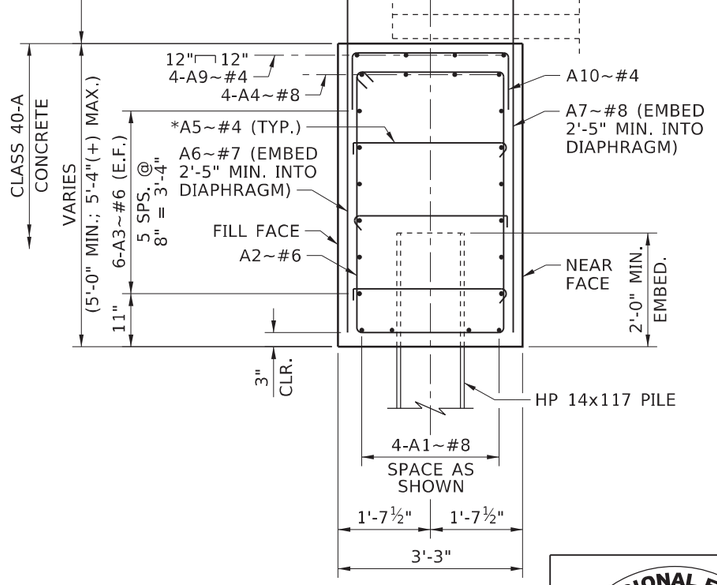
◯ INDICATES GIRDER NO.



ELEVATION

(ABUTMENT 1 SHOWN LOOKING BACK ON STATION,
ABUTMENT 2 SIMILAR BY ROTATION)

3/16"=1'-0"



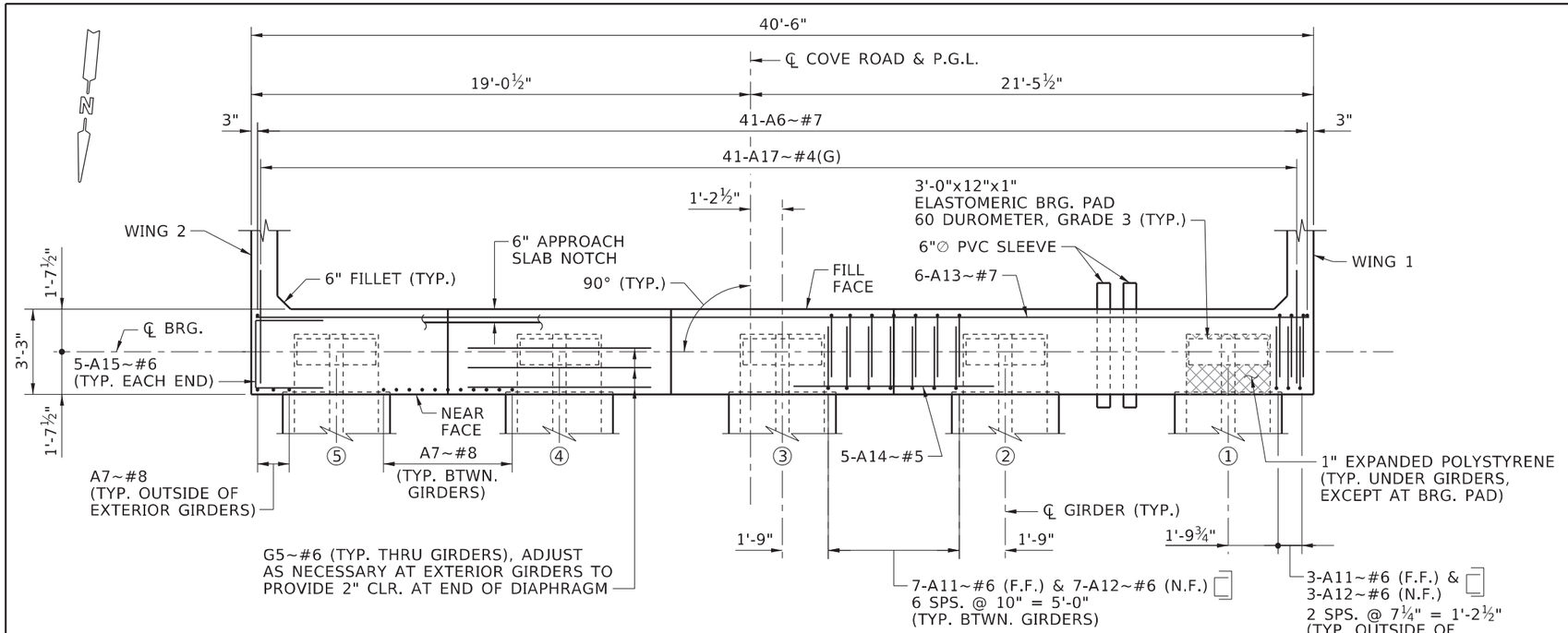
SECTION A-A

3/8"=1'-0"

ORIGINAL STORED AT: ITD BRIDGE SECTION - Boise, Idaho

REVISIONS				DESIGNED	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY	WASHINGTON COUNTY	ENGLISH	ABUTMENT 1 & 2 - PLAN AND ELEVATION	BRIDGE PLANS
NO.	DATE	BY	DESCRIPTION	C. BOWEN					BRIDGE KEY NO. 28806
				DESIGN CHECKED W. MEYER	CADD FILE NAME DX\prj\XXXXX\Proj\Dev\Bridge\Plans 19129_brAB_001.dgn		PROJECT NO. A019(129)	263' PRESTRESSED CONCRETE GIRDER BRIDGE COVE ROAD OVER WEISER RIVER STA. 30+28.65	COUNTY WASHINGTON / KEY NO. 19129
				DETAILED S. WALIMAA					BRIDGE DWG. NO. 17761 / SHEET 7 OF 30
				DWG. CHECKED W. MEYER	DRAWING DATE: MARCH 2025				
				CORRECTIONS					

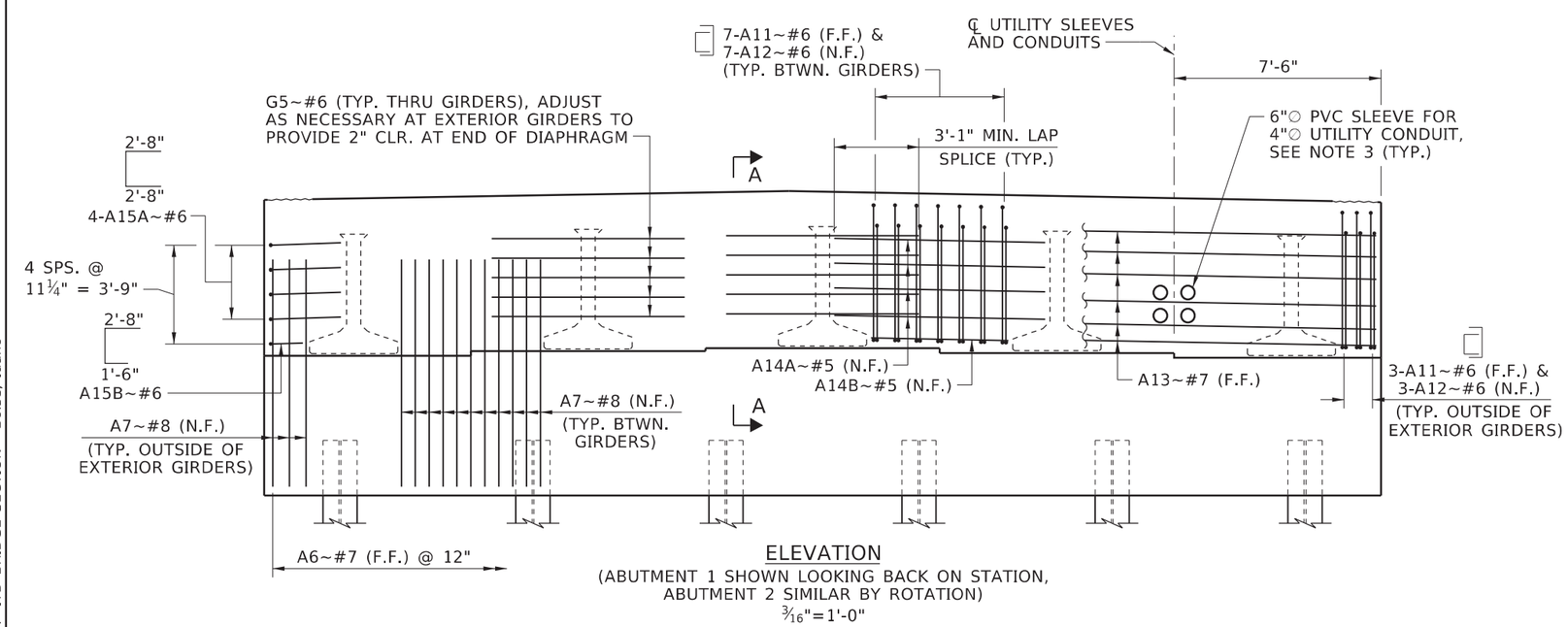
PROFESSIONAL ENGINEER LICENSED 3/24/2025 20046 STATE OF IDAHO WESLEY A. MEYER



PLAN

(ABUTMENT 1 SHOWN, ABUTMENT 2 SIMILAR BY ROTATION)

3/16"=1'-0"



ELEVATION

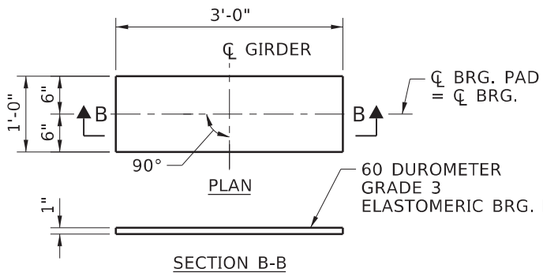
(ABUTMENT 1 SHOWN LOOKING BACK ON STATION,
ABUTMENT 2 SIMILAR BY ROTATION)

3/16"=1'-0"

NOTES

1. WINGWALL, DECK, ABUTMENT CAP AND CURB REINFORCEMENT NOT SHOWN FOR CLARITY.
*2. SEE SHEET 20 FOR DECK REINFORCEMENT DETAILS.
3. ADJUST REINFORCING AS NEEDED IN ABUTMENT DIAPHRAGM TO CLEAR UTILITY SLEEVES. FIELD BEND A6~#7 AND A7~#8 AS REQUIRED TO CLEAR UTILITY SLEEVES. SEE SHEET 22 FOR UTILITY SLEEVE DETAILS.
4. (F.F.) = FILL FACE
(N.F.) = NEAR FACE

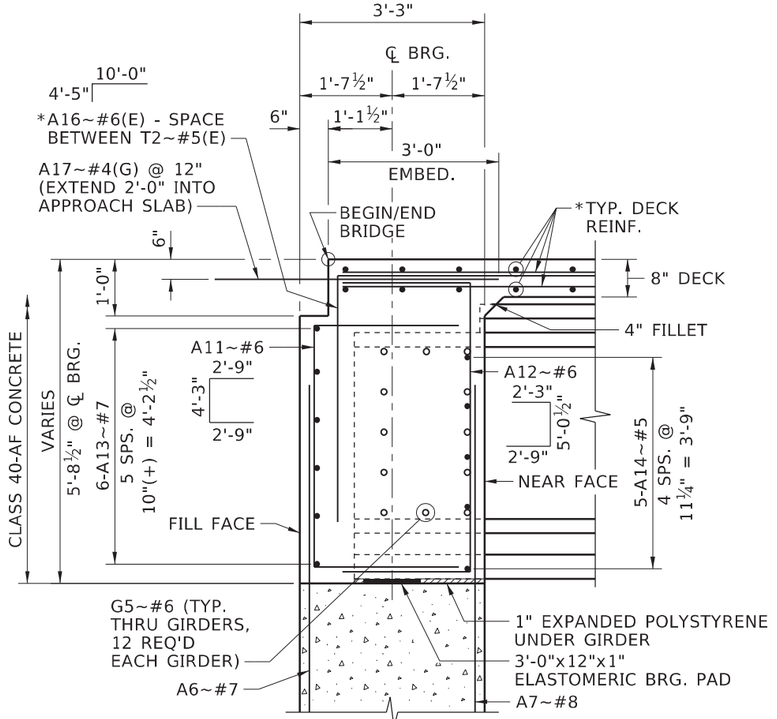
◯ INDICATES GIRDER NO.



SECTION B-B

BEARING PAD DETAIL AT ABUTMENT

½"=1'-0"



SECTION A-A

3/8"=1'-0"

ORIGINAL STORED AT: ITD BRIDGE SECTION - Boise, Idaho

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED C. BOWEN
DESIGN CHECKED W. MEYER
DETAILED S. WALIMAA
DWG. CHECKED W. MEYER
CORRECTIONS

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY

CADD FILE NAME
DX\prjXXXXX\Proj\Dev\Bridge\Plans
19129_brAB_002.dgn

DRAWING DATE: MARCH 2025

WASHINGTON COUNTY

FDR

ENGLISH

PROJECT NO.
A019(129)

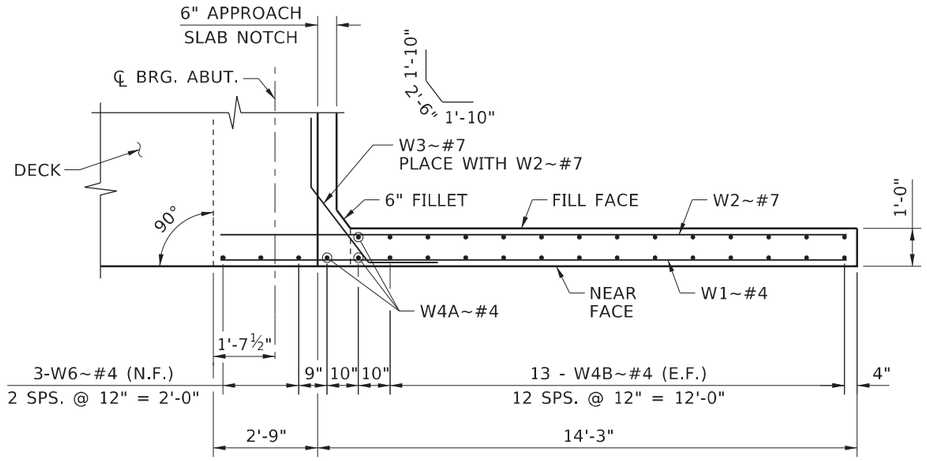
ABUTMENT 1 & 2 - DIAPHRAGM

263' PRESTRESSED CONCRETE GIRDER BRIDGE
COVE ROAD OVER WEISER RIVER
STA. 30+28.65

BRIDGE PLANS

BRIDGE KEY NO. 28806
COUNTY WASHINGTON
KEY NO. 19129
BRIDGE DWG. NO. 17761
SHEET 8 OF 30

PROFESSIONAL ENGINEER
LICENSED
3/24/2025
20046
STATE OF IDAHO
WESLEY A. MEYER



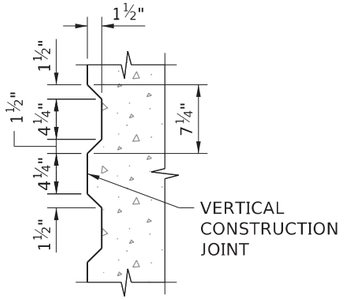
WINGWALL - PLAN

¼"=1'-0"

NOTES

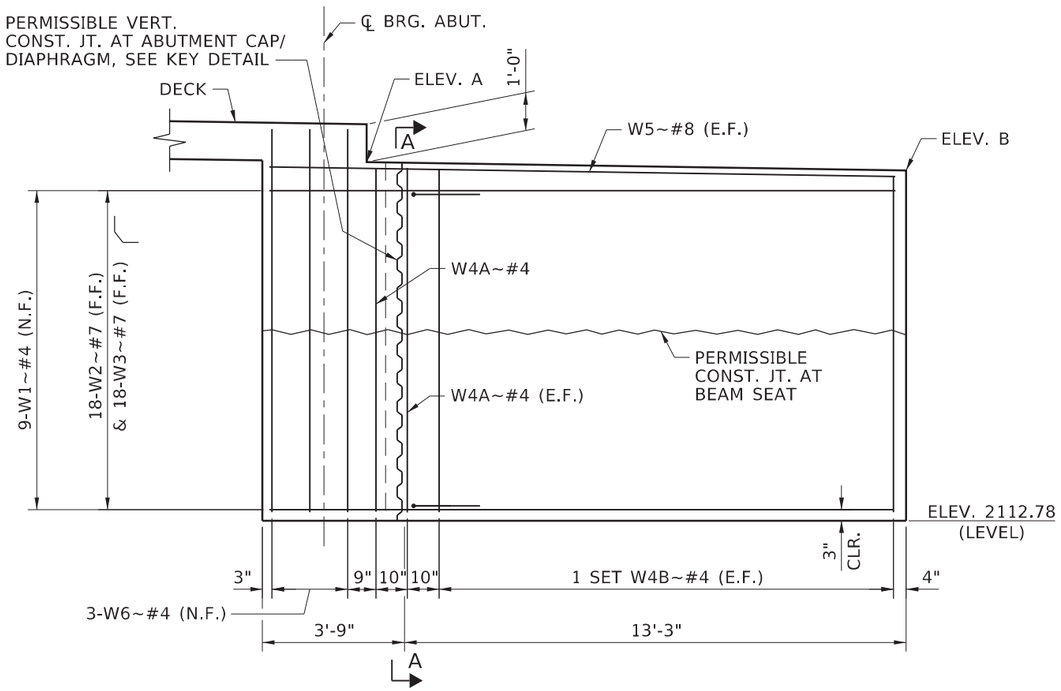
1. CONCRETE CURB, APPROACH SLAB, DECK, AND ABUTMENT REINFORCEMENT NOT SHOWN FOR CLARITY.
2. (F.F.) = FILL FACE
   (N.F.) = NEAR FACE
   (E.F.) = EACH FACE

CONCRETE ELEVATIONS @ TOP OF WINGWALL				
ELEVATION	WING 1	WING 2	WING 3	WING 4
A	2122.38	2122.43	2122.38	2122.43
B	2122.03	2122.08	2122.03	2122.08



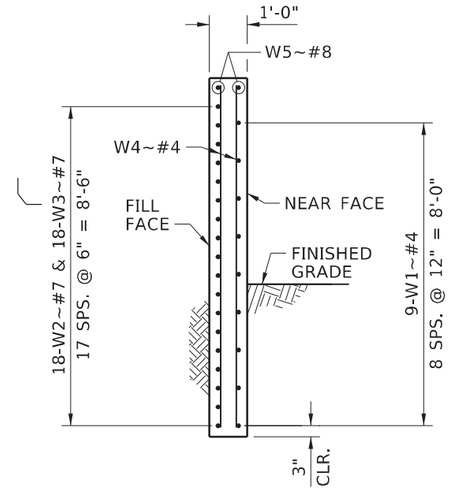
KEY DETAIL

NTS



WINGWALL - ELEVATION

¼"=1'-0"



SECTION A-A

¼"=1'-0"

ORIGINAL STORED AT: ITD BRIDGE SECTION - Boise, Idaho

REVISIONS			
NO.	DATE	BY	DESCRIPTION
△			
△			
△			
△			
△			

DESIGNED C. BOWEN
DESIGN CHECKED W. MEYER
DETAILED E. PRESCOTT
DWG. CHECKED W. MEYER
CORRECTIONS

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
CADD FILE NAME
D:\prj\XXXXX\Proj\Dev\Bridge\Plans\19129_brWW_001.dgn
DRAWING DATE: MARCH 2025

WASHINGTON COUNTY

HDR

ENGLISH

PROJECT NO. A019(129)

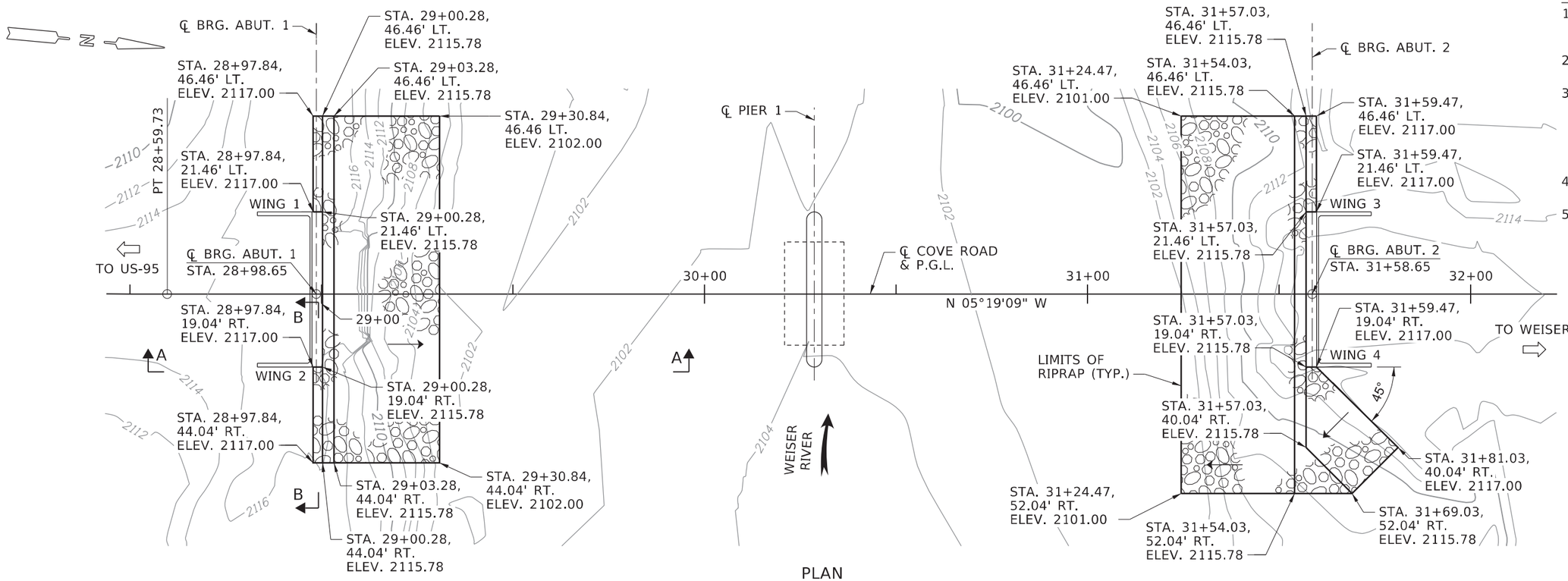
WINGWALL DETAILS

263' PRESTRESSED CONCRETE GIRDER BRIDGE
COVE ROAD OVER WEISER RIVER
STA. 30+28.65

BRIDGE PLANS

BRIDGE KEY NO. 28806
COUNTY WASHINGTON
KEY NO. 19129
BRIDGE DWG. NO. 17761
SHEET 9 OF 30

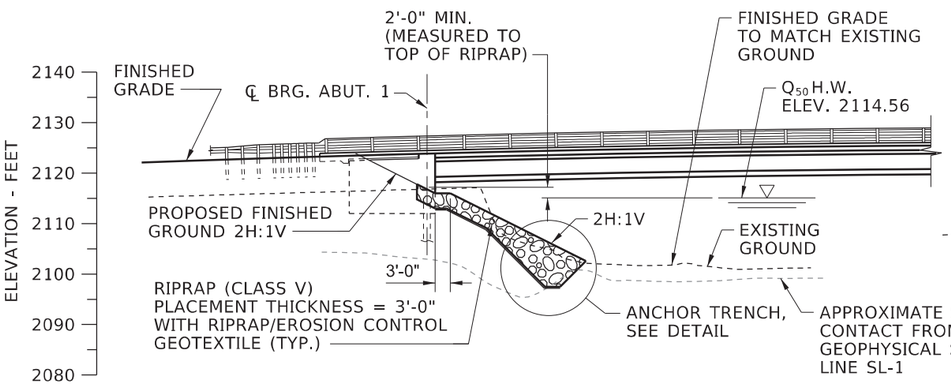
PROFESSIONAL ENGINEER LICENSED 3/24/2025 20046 STATE OF IDAHO WESLEY A. MEYER



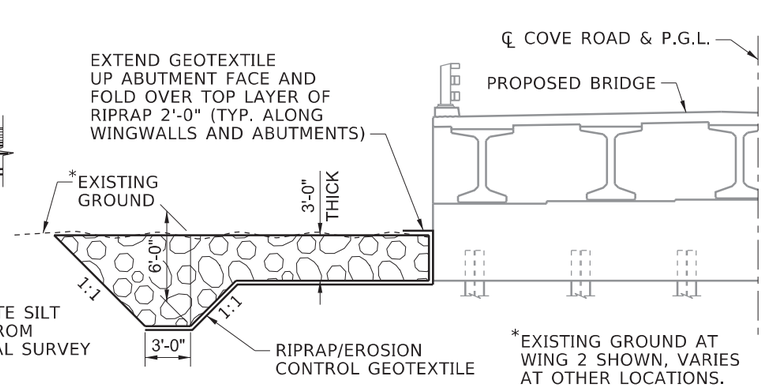
PLAN
1"=30'-0"

NOTES

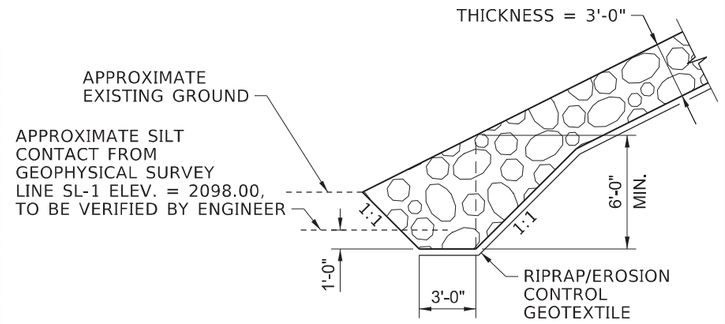
1. STATIONS AND OFFSETS ARE BASED ON ℄ COVE ROAD UNLESS NOTED OTHERWISE.
2. ELEVATIONS ARE REPORTED AT TOP OF RIPRAP MAT.
3. EXCAVATION REQUIRED FOR RIPRAP PLACEMENT ABOVE THE LIMITS OF RIPRAP MUST BE BACKFILLED WITH GRANULAR BORROW AND COMPACTED AND GRADED TO MATCH PLANS.
4. EXISTING UTILITIES NOT SHOWN, SEE UTILITY PLANS FOR DETAILS.
5. RIGHT-OF-WAY INFORMATION IS NOT SHOWN. SEE RIGHT-OF-WAY PLANS FOR DETAILS.



SECTION A-A
1"=30'-0"



SECTION B-B
1"=10'-0"



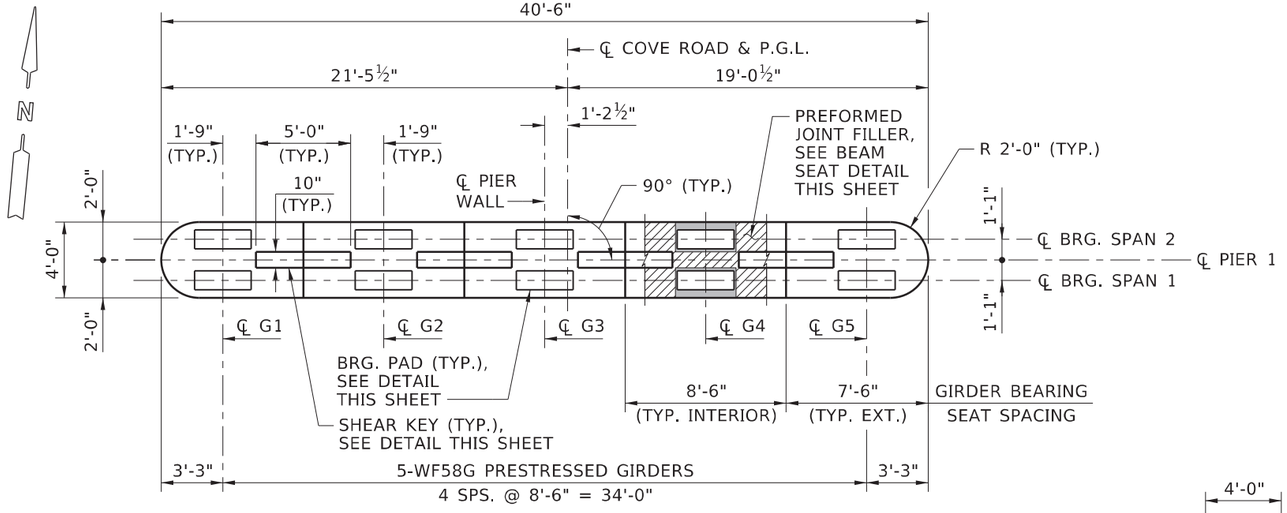
ANCHOR TRENCH DETAIL
NTS

ABUTMENT RIPRAP DETAILS
(ABUT. 1 SHOWN, ABUT. 2 SIMILAR)

ORIGINAL STORED AT: ITD BRIDGE SECTION - Boise, Idaho

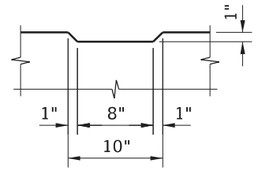
REVISIONS				DESIGNED	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY	WASHINGTON COUNTY	ENGLISH	RIPRAP LAYOUT	BRIDGE PLANS	
NO.	DATE	BY	DESCRIPTION	W. MEYER						
				DESIGN CHECKED N. McDOWELL	CADD FILE NAME DX\prjXXXXX\ProjDev\Bridge\Plans 19129_brRR_001.dgn		PROJECT NO. A019(129)	263' PRESTRESSED CONCRETE GIRDER BRIDGE COVE ROAD OVER WEISER RIVER STA. 30+28.65	BRIDGE KEY NO. 28806	
				DETAILED E. PRESCOTT					COUNTY WASHINGTON	KEY NO. 19129
				DWG. CHECKED N. McDOWELL					BRIDGE DWG. NO. 17761	SHEET 10 OF 30
				CORRECTIONS	DRAWING DATE: MARCH 2025	HDR				

PROFESSIONAL ENGINEER LICENSED 3/24/2025 20046 STATE OF IDAHO WESLEY A. MEYER



PLAN

⅛"=1'-0"

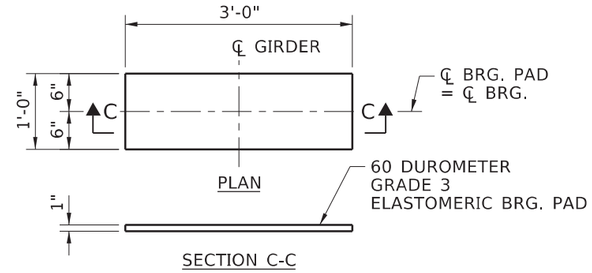


SHEAR KEY DETAIL

¾"=1'-0"

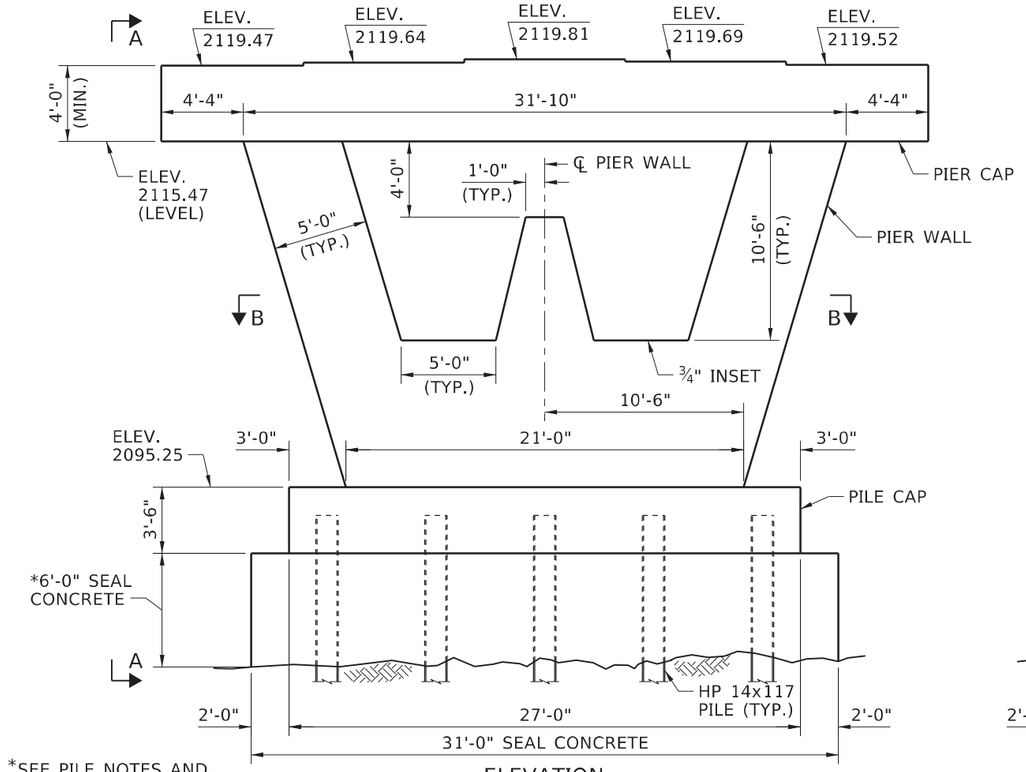
NOTE

1. PILE CAP, COFFERDAM, AND SEAL CONCRETE NOT SHOWN IN PLAN VIEW FOR CLARITY.



BEARING PAD DETAIL AT PIER 1

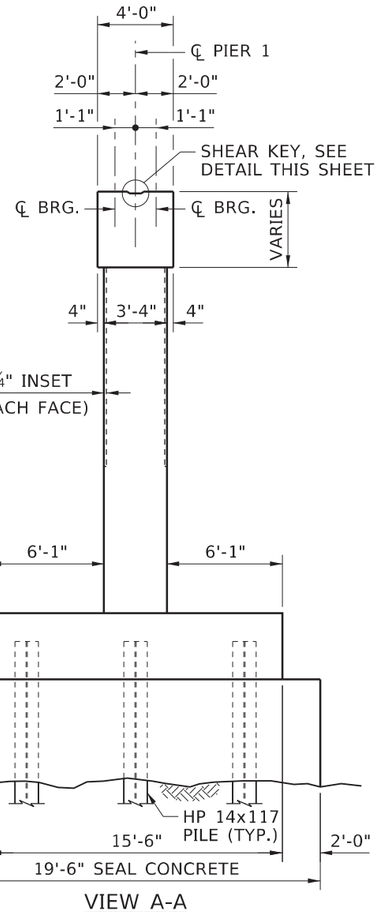
½"=1'-0"



*SEE PILE NOTES AND DETAILS SHEET FOR DETAILS.

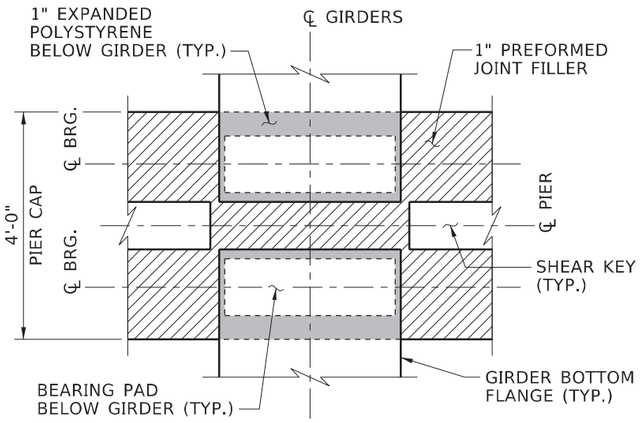
ELEVATION

⅛"=1'-0"



VIEW A-A

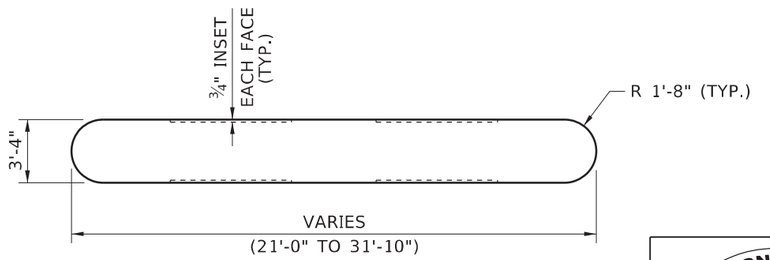
⅛"=1'-0"



NOTE:
DO NOT APPLY JOINT FILLER ON SHEAR KEY OR BENEATH BEARING PADS.

BEAM SEAT DETAIL

⅜"=1'-0"



SECTION B-B

⅛"=1'-0"

ORIGINAL STORED AT: ITD BRIDGE SECTION - Boise, Idaho

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED K. WALKER
DESIGN CHECKED B. CORSON-MARQUESS
DETAILED S. WALIMAA
DWG. CHECKED N. McDOWELL
CORRECTIONS

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
CADD FILE NAME DX\prjXXXXX\Proj\Dev\Bridge\Plans 19129_brPD_001.dgn
DRAWING DATE: MARCH 2025

WASHINGTON COUNTY

HDR

ENGLISH

PROJECT NO. A019(129)

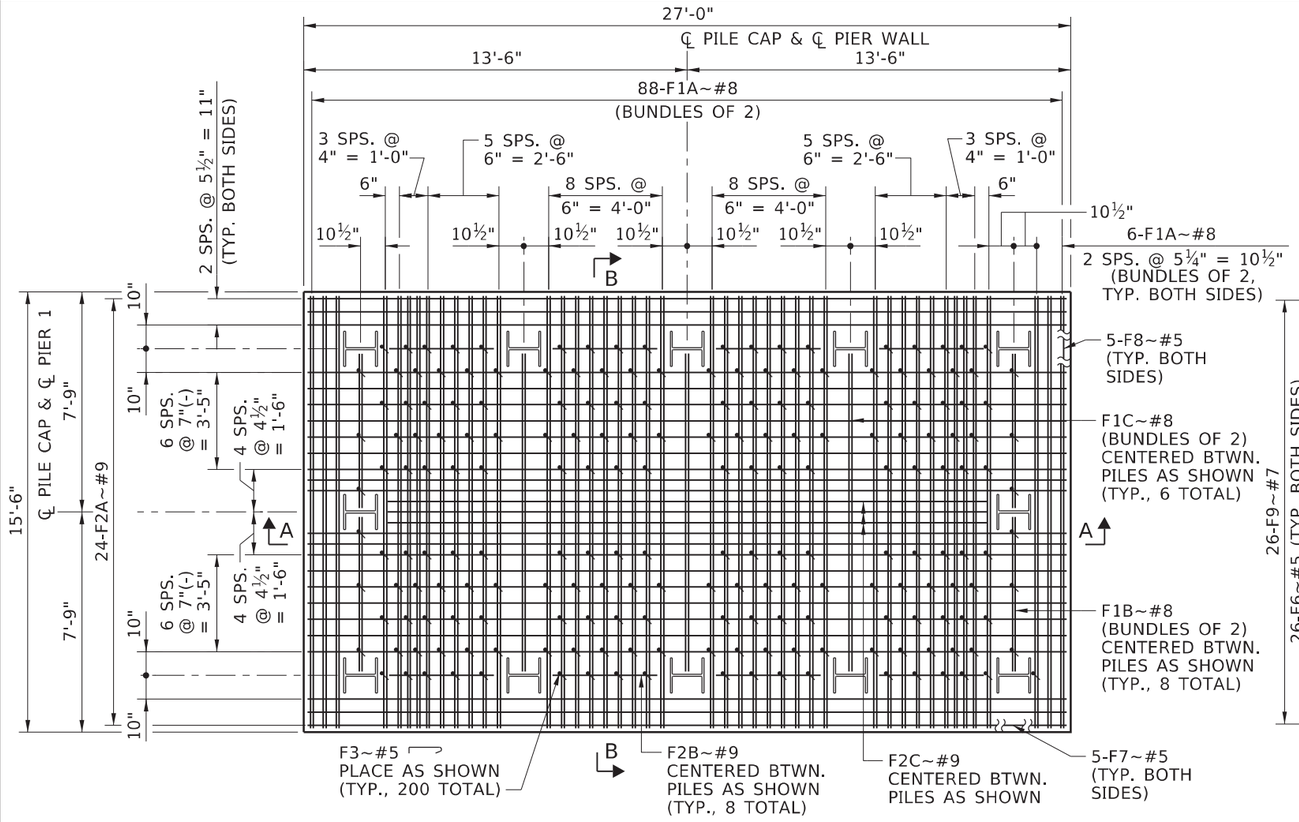
PIER - PLAN AND ELEVATION

263' PRESTRESSED CONCRETE GIRDER BRIDGE
COVE ROAD OVER WEISER RIVER
STA. 30+28.65

BRIDGE PLANS

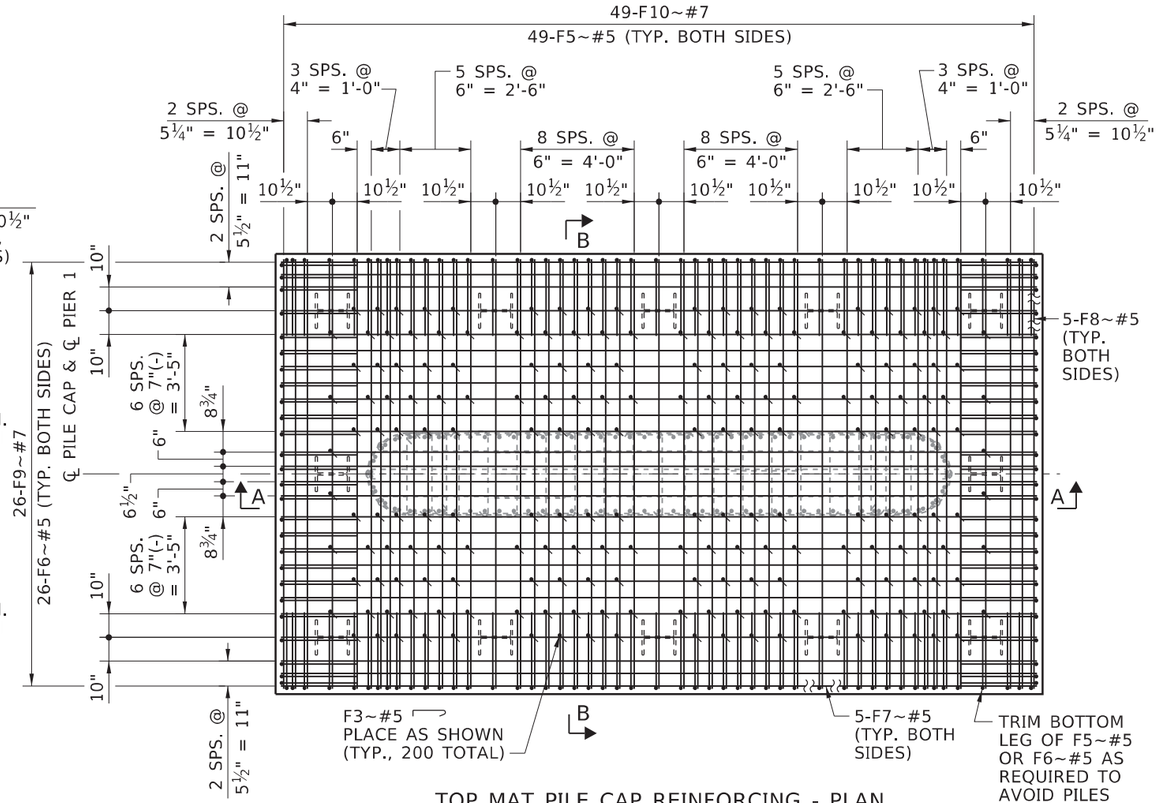
BRIDGE KEY NO. 28806
COUNTY WASHINGTON | KEY NO. 19129
BRIDGE DWG. NO. 17761 | SHEET 11 OF 30

PROFESSIONAL ENGINEER LICENSED 3/25/2025 18296 STATE OF IDAHO KRISTOPHER DAVID WALKER



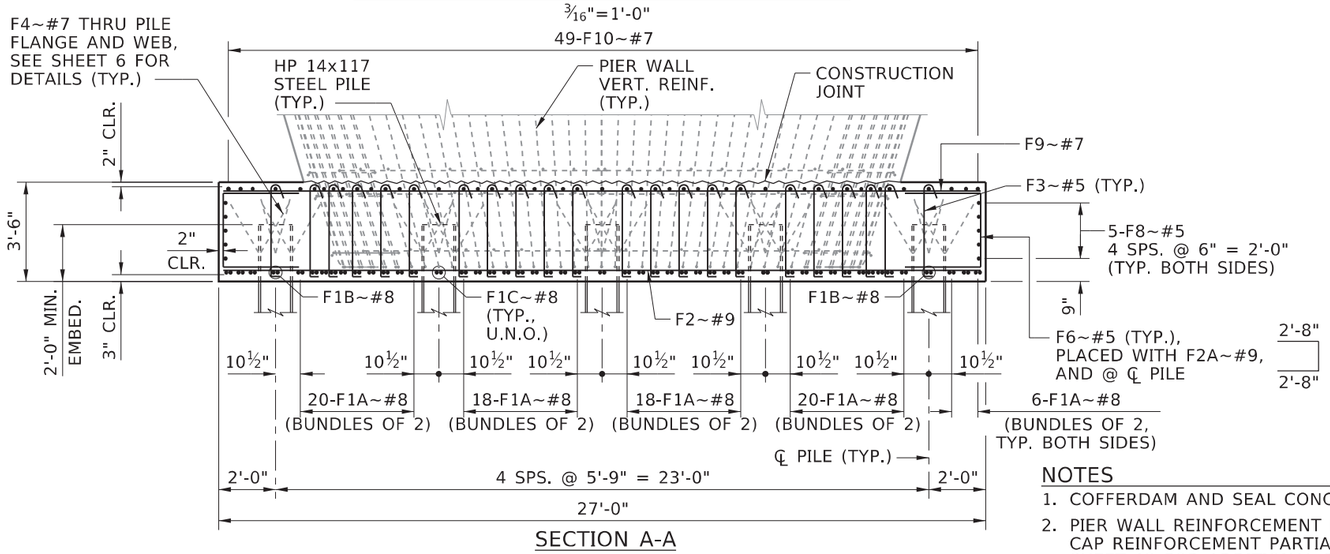
BOTTOM MAT PILE CAP REINFORCING - PLAN

3/16"=1'-0"



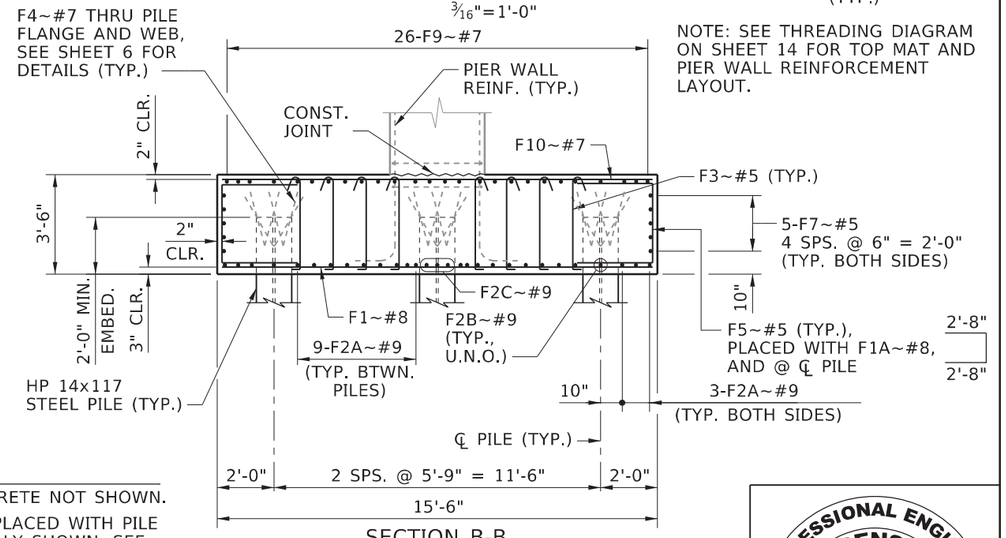
TOP MAT PILE CAP REINFORCING - PLAN

3/16"=1'-0"



SECTION A-A

3/16"=1'-0"



SECTION B-B

3/16"=1'-0"

NOTE: SEE THREADING DIAGRAM ON SHEET 14 FOR TOP MAT AND PIER WALL REINFORCEMENT LAYOUT.

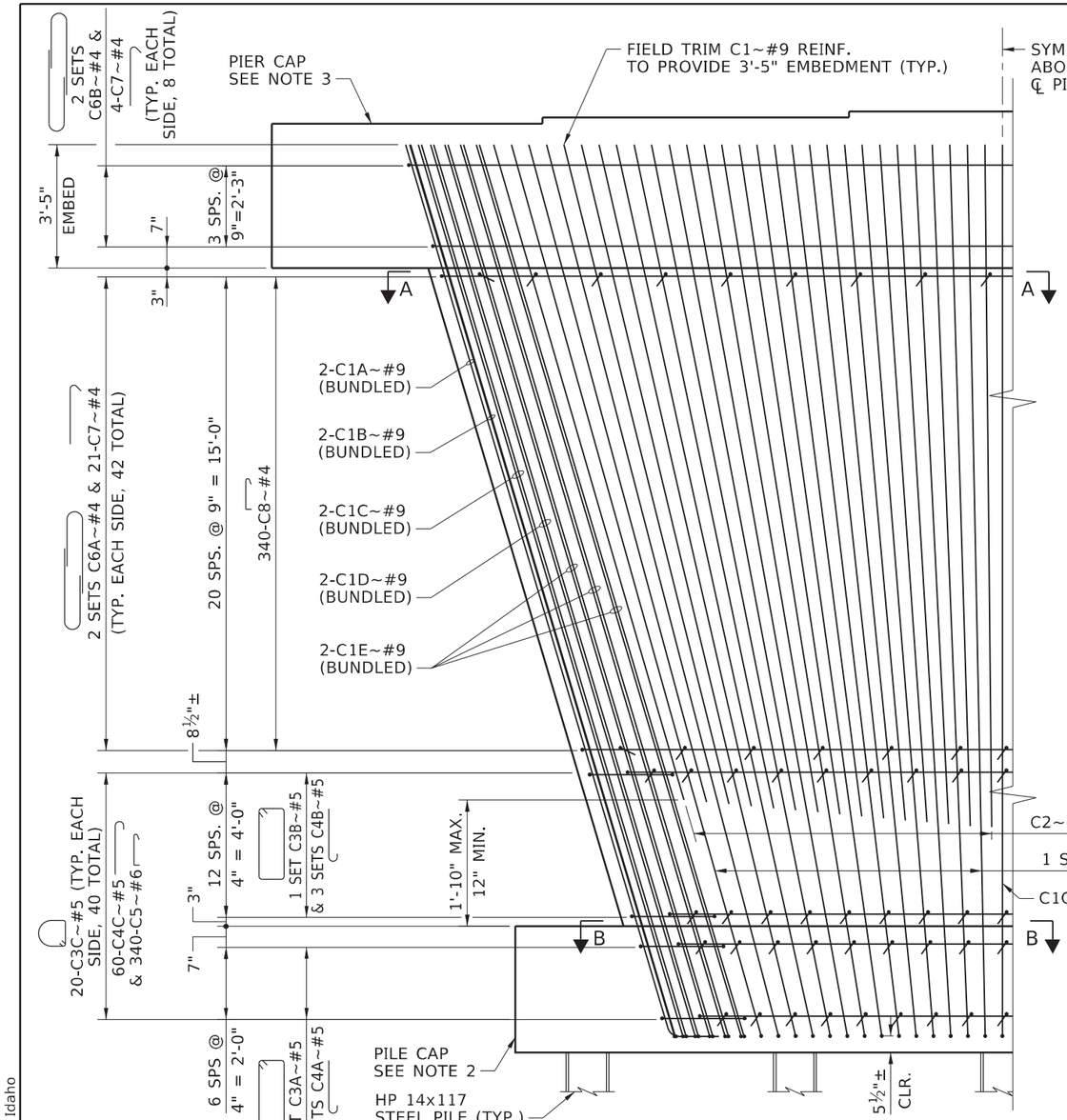
NOTES

1. COFFERDAM AND SEAL CONCRETE NOT SHOWN.
2. PIER WALL REINFORCEMENT PLACED WITH PILE CAP REINFORCEMENT PARTIALLY SHOWN, SEE SHEET 13 FOR ADDITIONAL DETAILS.

ORIGINAL STORED AT: ITD BRIDGE SECTION - Boise, Idaho

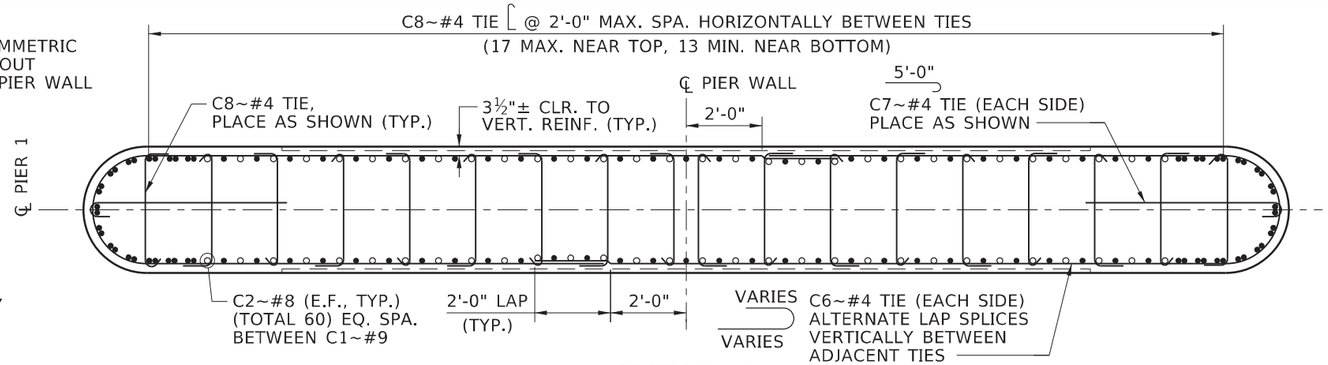
REVISIONS				DESIGNED	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY	WASHINGTON COUNTY	ENGLISH	PIER DETAILS - SHEET 1 OF 3	BRIDGE PLANS
NO.	DATE	BY	DESCRIPTION	K. WALKER					BRIDGE KEY NO. 28806
				DESIGN CHECKED B. CORSON-MARQUESS	CADD FILE NAME		PROJECT NO.	263' PRESTRESSED CONCRETE GIRDER BRIDGE	COUNTY WASHINGTON / KEY NO. 19129
				DETAILED E. PRESCOTT	DX\prj\XXXX\Proj\Dev\Bridge\Plans 19129_brPD_002.dgn		A019(129)	COVE ROAD OVER WEISER RIVER	BRIDGE DWG. NO. 17761 / SHEET 12 OF 30
				DWG. CHECKED N. McDOWELL	DRAWING DATE: MARCH 2025			STA. 30+28.65	
				CORRECTIONS					

PROFESSIONAL ENGINEER LICENSED 3/25/2025 18296 STATE OF IDAHO KRISTOPHER DAVID WALKER



HALF ELEVATION - PIER WALL REINFORCING

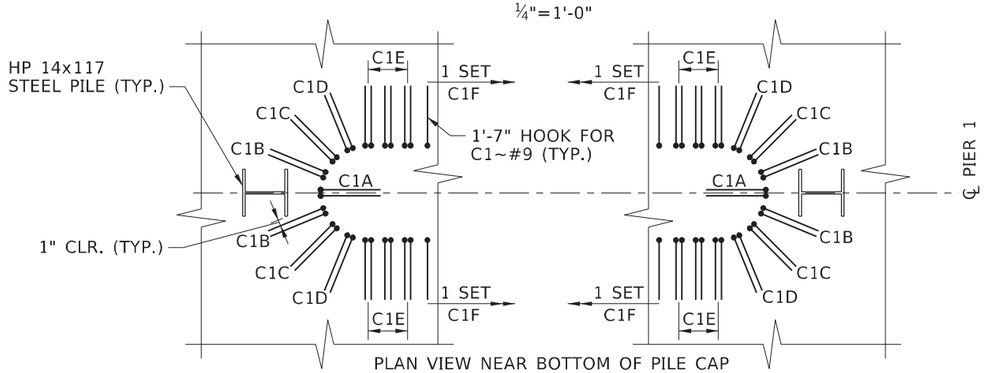
¼"=1'-0"



SECTION A-A

(SEE SECTION B-B FOR DETAILS NOT SHOWN OR NOTED)

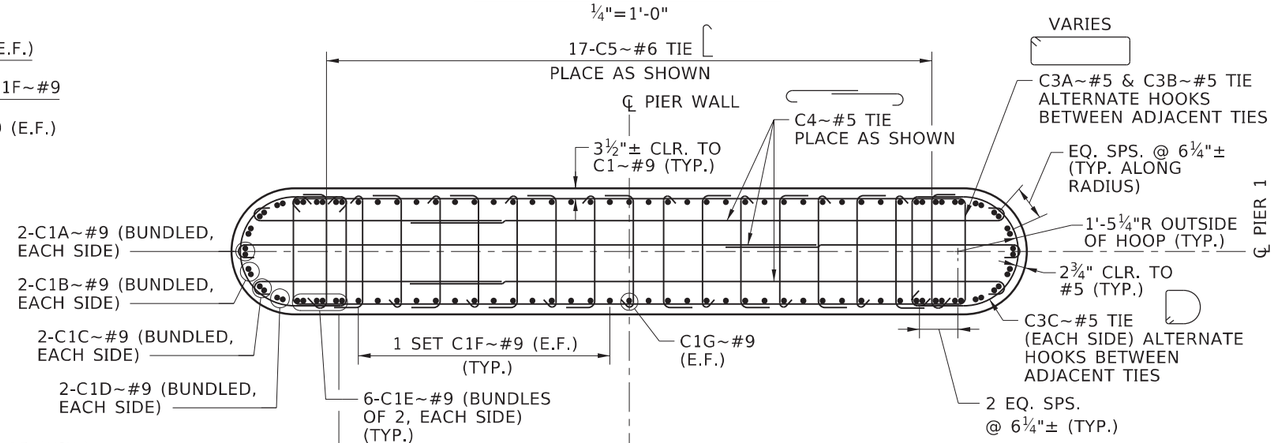
¼"=1'-0"



PLAN VIEW NEAR BOTTOM OF PILE CAP

HOOK ORIENTATION DETAIL

¼"=1'-0"

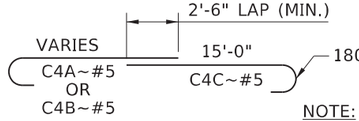


SECTION B-B

¼"=1'-0"

NOTES

1. COFFERDAM AND SEAL CONCRETE NOT SHOWN.
2. PILE CAP REINFORCEMENT NOT SHOWN, SEE SHEET 12 FOR ADDITIONAL DETAILS.
3. PIER CAP REINFORCEMENT NOT SHOWN, SEE SHEET 14 FOR ADDITIONAL DETAILS.
4. FOR ADDITIONAL WALL TIE DETAILS, SEE SHEET 14.



LAP SPLICE DIAGRAM

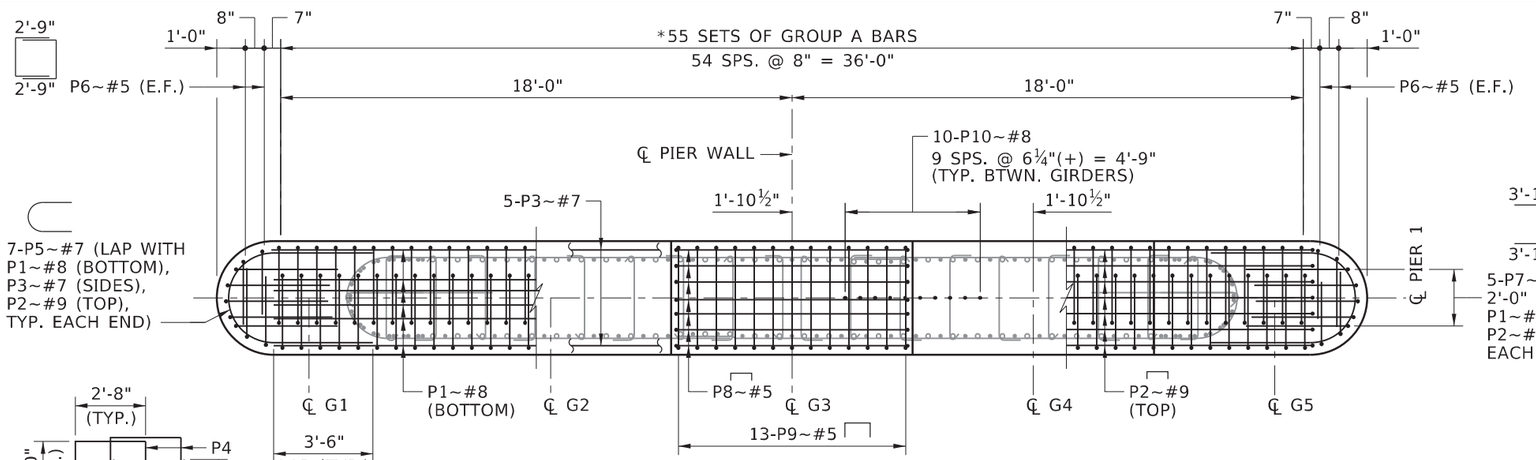
NTS

NOTE:
ALTERNATE LAP SPLICE LOCATIONS HORIZONTALLY & VERTICALLY BETWEEN ADJACENT BARS.

ORIGINAL STORED AT: ITD BRIDGE SECTION - Boise, Idaho

REVISIONS				DESIGNED	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY	WASHINGTON COUNTY	ENGLISH	PIER DETAILS - SHEET 2 OF 3	BRIDGE PLANS	
NO.	DATE	BY	DESCRIPTION	K. WALKER					BRIDGE KEY NO. 28806	
				DESIGN CHECKED B. CORSON-MARQUESS	CADD FILE NAME		PROJECT NO.	263' PRESTRESSED CONCRETE GIRDER BRIDGE	COUNTY WASHINGTON	KEY NO. 19129
				DETAILED E. PRESCOTT	D:\prj\XXXXX\Proj\Dev\Bridge\Plans 19129_brPD_003.dgn		A019(129)	COVE ROAD OVER WEISER RIVER	BRIDGE DWG. NO. 17761	SHEET 13 OF 30
				DWG. CHECKED N. McDOWELL	DRAWING DATE: MARCH 2025			STA. 30+28.65		
				CORRECTIONS						

PROFESSIONAL ENGINEER LICENSED 3/25/2025 18296 STATE OF IDAHO KRISTOPHER DAVID WALKER



PIER CAP REINFORCING - PLAN

$\frac{3}{16}$"=1'-0"

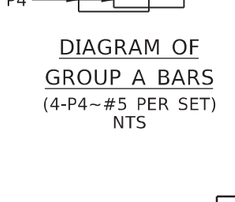
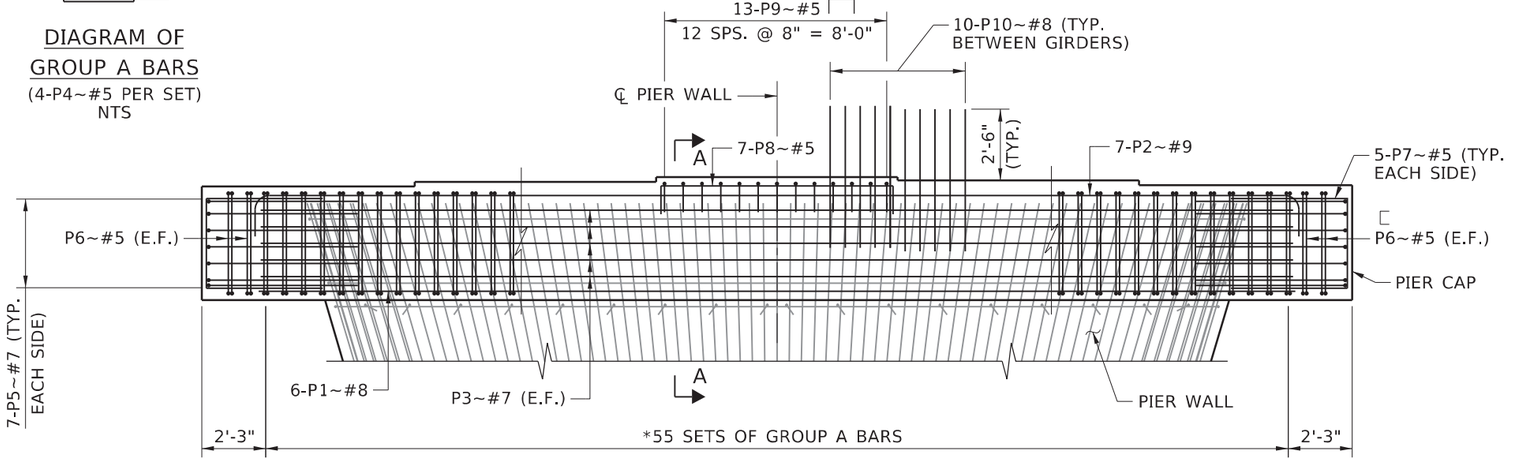
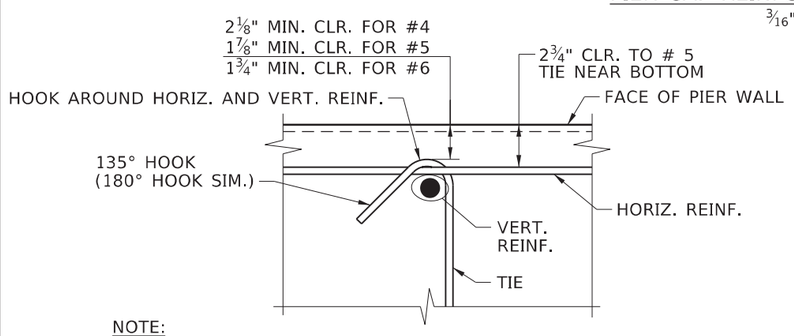


DIAGRAM OF
GROUP A BARS
(4-P4~#5 PER SET)
NTS



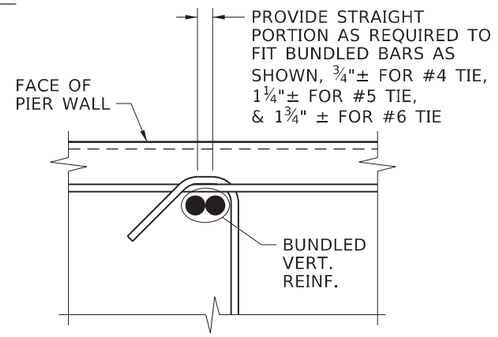
PIER CAP REINFORCING - ELEVATION

$\frac{3}{16}$"=1'-0"



NOTE:
TIES MUST BE PLACED SO THAT 90° AND 135° HOOKS OF ADJACENT TIES ARE ALTERNATED HORIZONTALLY AND VERTICALLY.

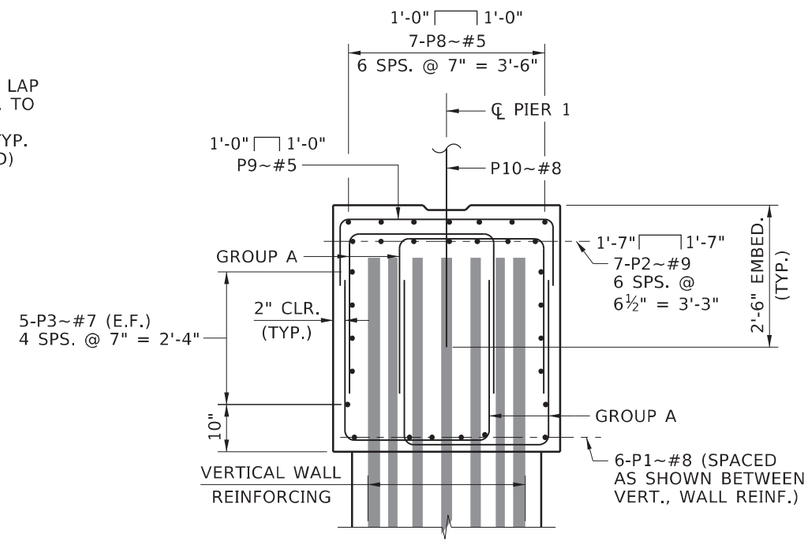
WALL TIE DETAIL
NTS



WALL TIE DETAIL
(SEE TIE BAR DETAIL FOR DETAILS NOT SHOWN OR NOTED)
NTS

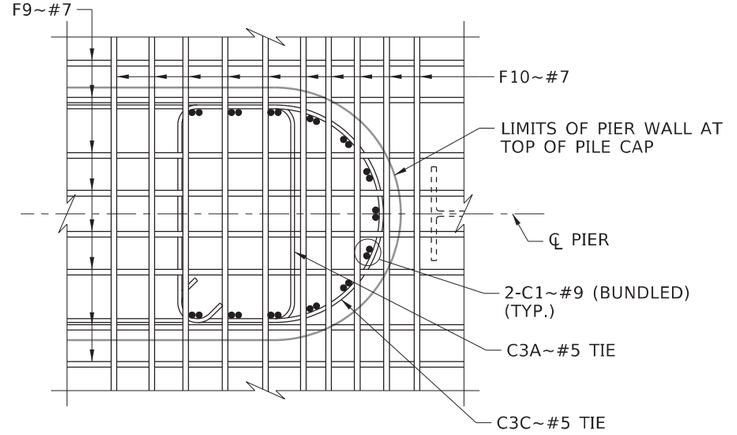
NOTES

1. SEE SHEET 13 FOR WALL REINFORCING DETAILS.
*2. ADJUST GROUP A BARS ±1" TO AVOID PIER WALL VERTICAL REINFORCING.



SECTION A-A

$\frac{3}{8}$"=1'-0"



THREADING DIAGRAM AT TOP OF PILE CAP

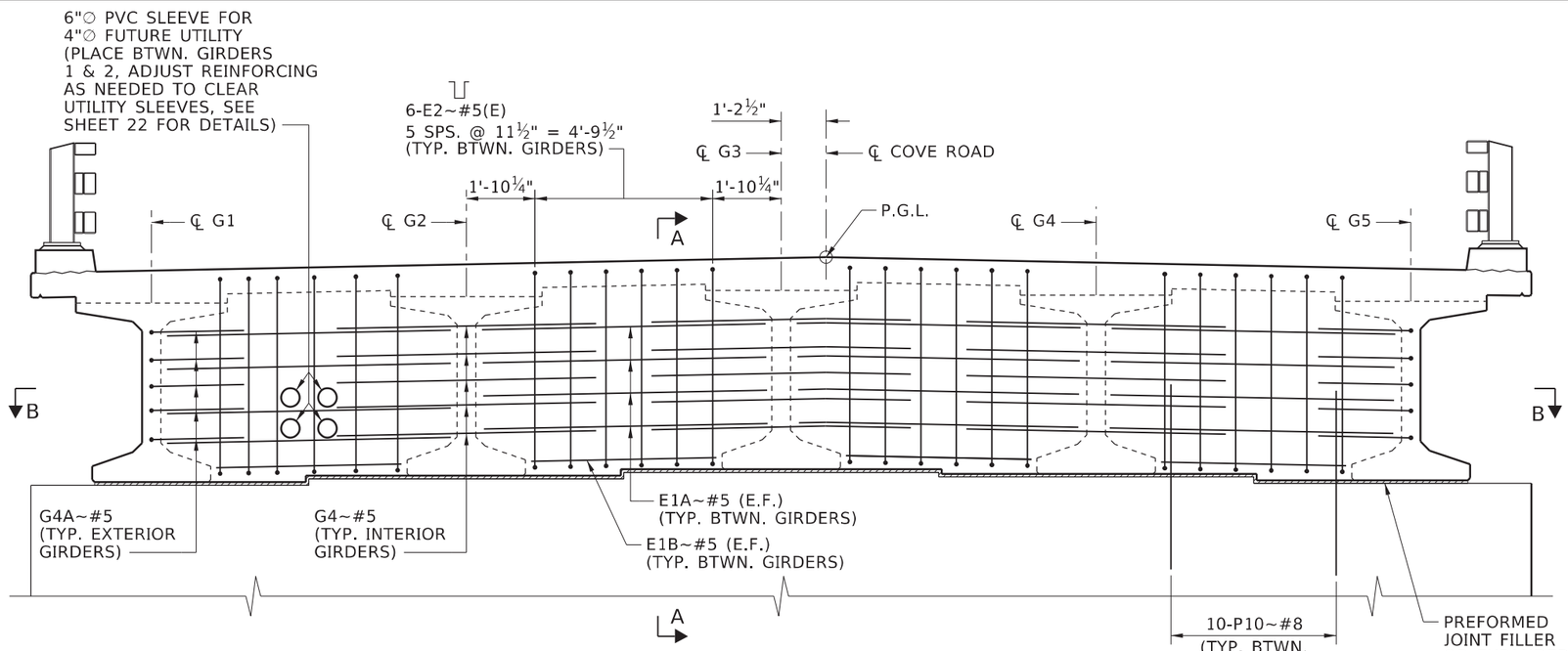
½"=1'-0"

NOTES:
1. THREADING DIAGRAM SHOWN AT THE TOP OF PILE CAP, PIER CAP INTERFACE SIMILAR.
2. ADJUST F9~#7 AND F10~#7 ±1" TO AVOID CONFLICTS WITH PIER WALL REINFORCEMENT.

ORIGINAL STORED AT: ITD BRIDGE SECTION - Boise, Idaho

REVISIONS				DESIGNED	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY	WASHINGTON COUNTY	ENGLISH	PIER DETAILS - SHEET 3 OF 3	BRIDGE PLANS	
NO.	DATE	BY	DESCRIPTION	K. WALKER					BRIDGE KEY NO. 28806	
				DESIGN CHECKED B. CORSON-MARQUESS	CADD FILE NAME DX\prjXXXXX\Proj\Dev\Bridge\Plans 19129_brPD_004.dgn		PROJECT NO. A019(129)	263' PRESTRESSED CONCRETE GIRDER BRIDGE COVE ROAD OVER WEISER RIVER STA. 30+28.65	COUNTY WASHINGTON	KEY NO. 19129
				DETAILED S. WALIMAA					BRIDGE DWG. NO. 17761	SHEET 14 OF 30
				DWG. CHECKED N. McDOWELL						
				CORRECTIONS	DRAWING DATE: MARCH 2025	HDR				

PROFESSIONAL ENGINEER LICENSED 3/25/2025 18296 STATE OF IDAHO KRISTOPHER DAVID WALKER



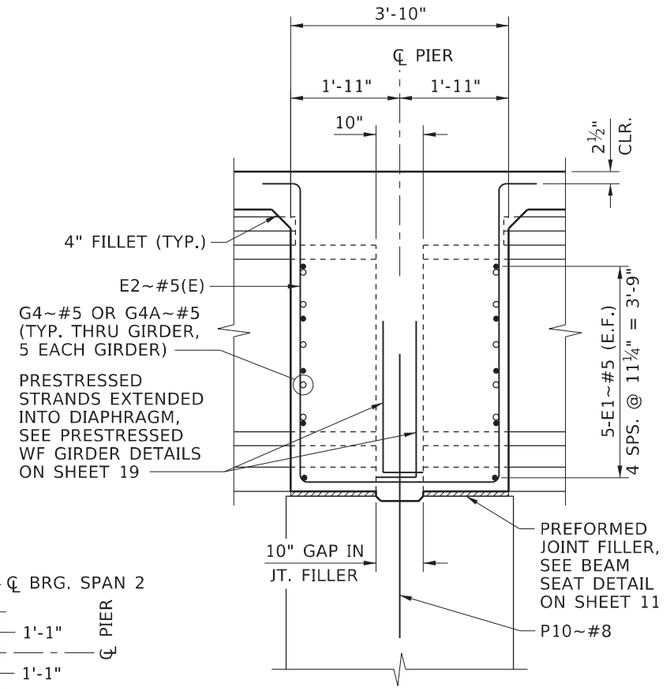
PIER DIAPHRAGM - ELEVATION

(SHOWN LOOKING AHEAD ON STATION)

¼"=1'-0"

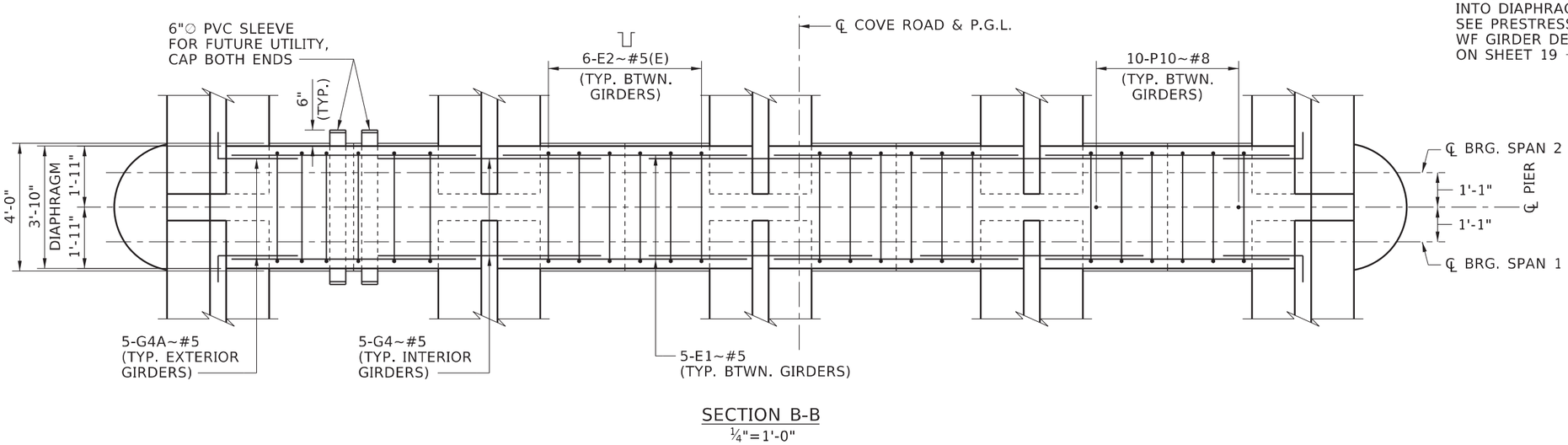
NOTES

1. POUR PIER DIAPHRAGM SIMULTANEOUSLY WITH DECK CONCRETE. HORIZONTAL CONSTRUCTION JOINTS ARE NOT PERMISSIBLE. SEE SHEET 21 FOR POUR SEQUENCE DETAILS.
2. DECK, CONCRETE CURB, AND PIER CAP REINFORCING NOT SHOWN FOR CLARITY.
3. SEE SHEET 22 FOR UTILITY SLEEVE DETAILS.



SECTION A-A

⅜"=1'-0"



SECTION B-B

¼"=1'-0"

ORIGINAL STORED AT: ITD BRIDGE SECTION - Boise, Idaho

REVISIONS			
NO.	DATE	BY	DESCRIPTION
1			
2			
3			
4			
5			

DESIGNED K. WALKER
DESIGN CHECKED B. CORSON-MARQUESS
DETAILED S. WALIMAA
DWG. CHECKED W. MEYER
CORRECTIONS

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY

CADD FILE NAME
DX\prjXXXXX\Proj\Dev\Bridge\Plans\19129_brPD_005.dgn

DRAWING DATE: MARCH 2025

WASHINGTON COUNTY

HDR

ENGLISH

PROJECT NO.
A019(129)

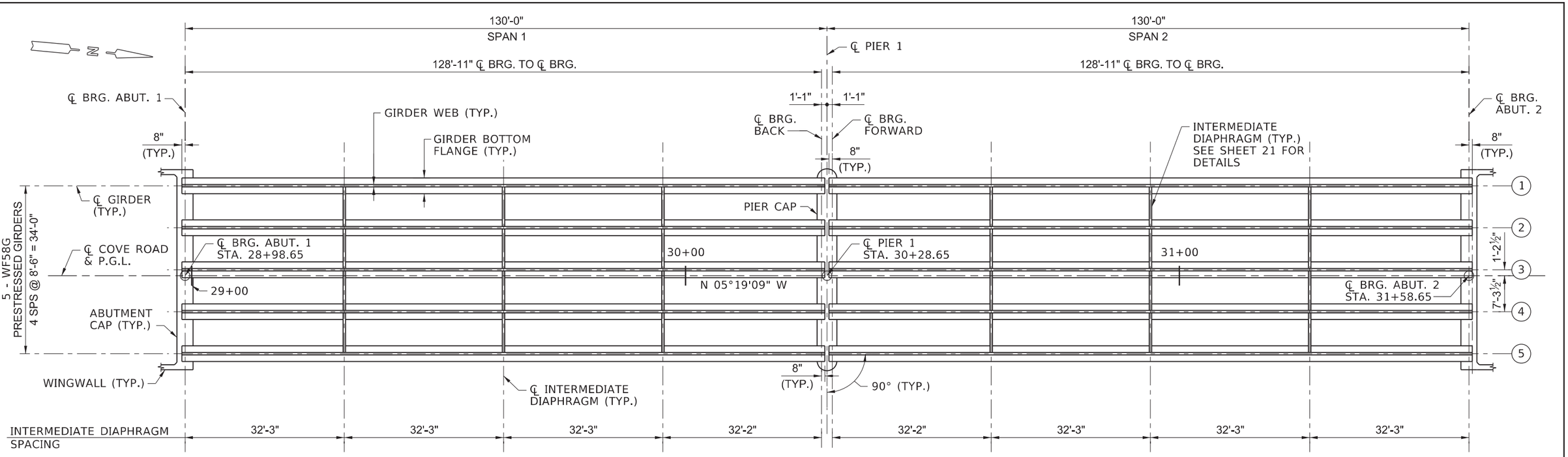
PIER DIAPHRAGM

263' PRESTRESSED CONCRETE GIRDER BRIDGE
COVE ROAD OVER WEISER RIVER
STA. 30+28.65

BRIDGE PLANS

BRIDGE KEY NO. 28806
COUNTY WASHINGTON
KEY NO. 19129
BRIDGE DWG. NO. 17761
SHEET 15 OF 30

PROFESSIONAL ENGINEER
LICENSED
3/25/2025
18296
STATE OF IDAHO
KRISTOPHER DAVID WALKER



FRAMING PLAN

1"=20'-0"

NOTE:
DECK, CONCRETE CURBS, PIER DIAPHRAGMS AND ABUTMENT DIAPHRAGMS NOT SHOWN FOR CLARITY.

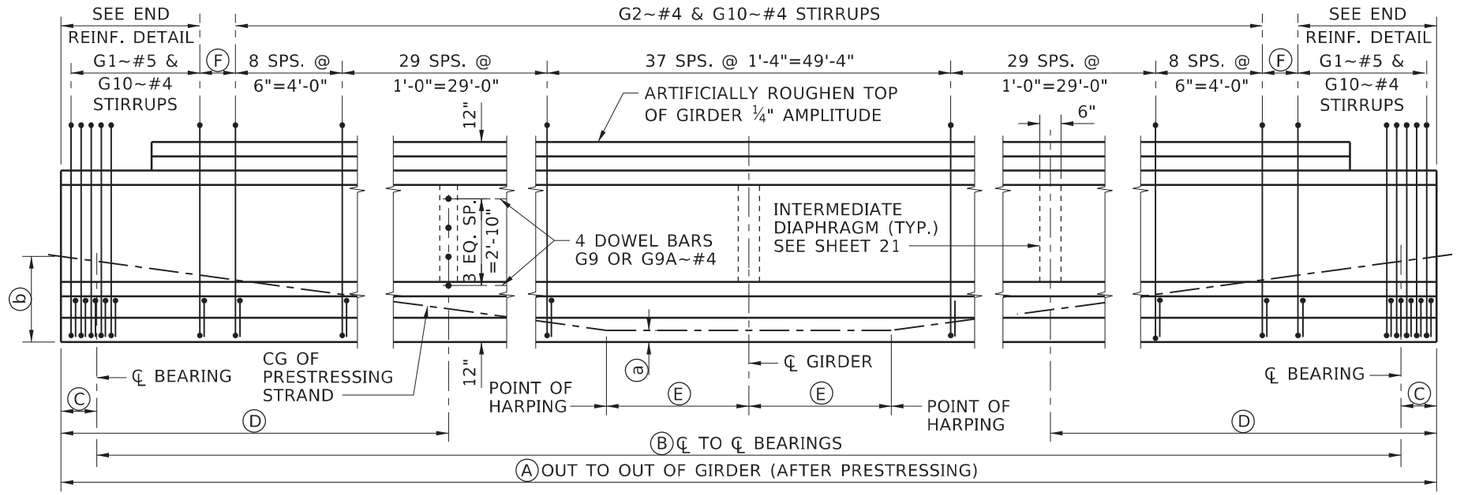
ORIGINAL STORED AT: ITD BRIDGE SECTION - Boise, Idaho

REVISIONS				DESIGNED K. WALKER	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY	WASHINGTON COUNTY	ENGLISH	FRAMING PLAN	BRIDGE PLANS	
NO.	DATE	BY	DESCRIPTION	DESIGN CHECKED B. CORSON-MARQUESS	CADD FILE NAME DX\prjXXXXX\Proj\Dev\Bridge\Plans 19129_brFR_001.dgn		PROJECT NO.	263' PRESTRESSED CONCRETE GIRDER BRIDGE COVE ROAD OVER WEISER RIVER STA. 30+28.65	BRIDGE KEY NO. 28806	
				DETAILED S. WALIMAA					COUNTY WASHINGTON	KEY NO. 19129
				DWG. CHECKED W. MEYER			A019(129)		BRIDGE DWG. NO. 17761	SHEET 16 OF 30
				CORRECTIONS	DRAWING DATE: MARCH 2025	HDR				

PROFESSIONAL ENGINEER LICENSED 3/25/2025 18296 STATE OF IDAHO KRISTOPHER DAVID WALKER

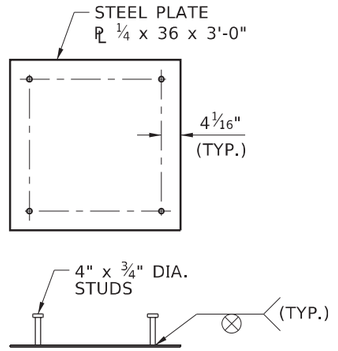
PRESTRESSED GIRDER SCHEDULE

GIRDERS		PRESTRESS FORCE ~ KIPS		CONCRETE STRENGTH ~ PSI		GIRDER DIMENSIONS								END DETAIL		C.G. OF STRAND	
NO.	LOCATION	FINAL AFTER LOSSES	INITIAL BEFORE LOSSES	AT RELEASE f'ci	AT 28 DAYS f'c	Ⓐ	Ⓑ	Ⓒ		Ⓓ		Ⓔ	Ⓕ	LEFT	RIGHT	ⓑ END GIRDER	ⓐ MID SPAN
								LEFT	RIGHT	LEFT	RIGHT						
5	SPAN 1	1652.4	2197.1	7.5	8.0	130'-3"	128'-11"	8"	8"	32'-11"	32'-10"	13'-0¼"	4½"	B	C	13.3"	4.0"
5	SPAN 2	1652.4	2197.1	7.5	8.0	130'-3"	128'-11"	8"	8"	32'-10"	32'-11"	13'-0¼"	4½"	C	B	13.3"	4.0"



GIRDER ELEVATION AND STIRRUP LAYOUT

NTS

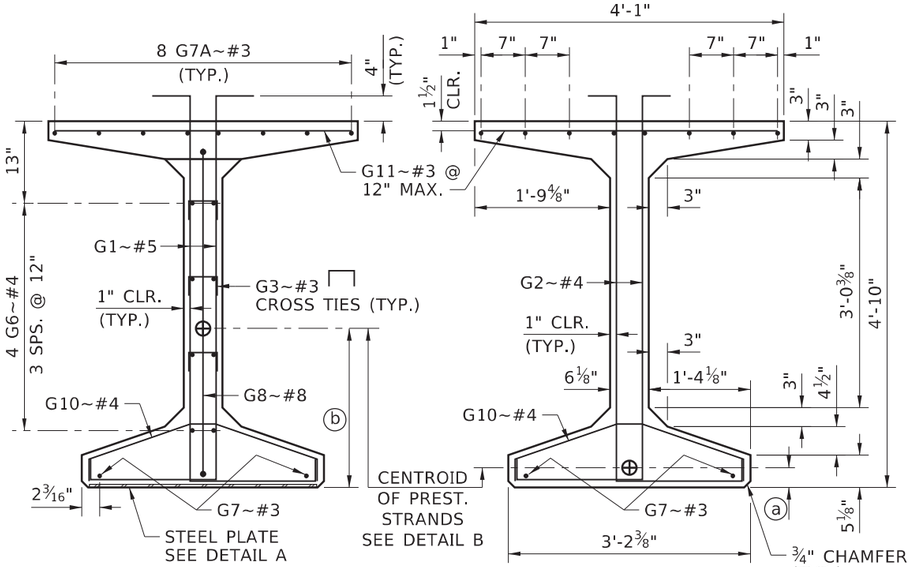


DETAIL A

⅜"=1'-0"

REINFORCEMENT DIAGRAM

MARK	SIZE	GRADE	SKETCH
G1*	#5	60	5'-1", 1'-8¼", 3½"
G2*	#4	60	
G3*	#3	60	4⅛"
G4	#5	60	5'-0"
G4A	#5	60	2'-6", 10"
G5	#6	60	7'-0"
G6	#4	60	6'-11"
G7	#3	60	Ⓐ - 4"
G7A	#3	60	Ⓐ - 2 (BLOCKOUT + 2")
G8	#8	60	4'-4", 3'-6", 1'-3"
G9	#4	60	3'-5"
G9A	#4	60	1'-8½", 10"
G10*	#4	60	3½", 17", 4", 4½", 13⅛"
G11	#3	60	3'-11"

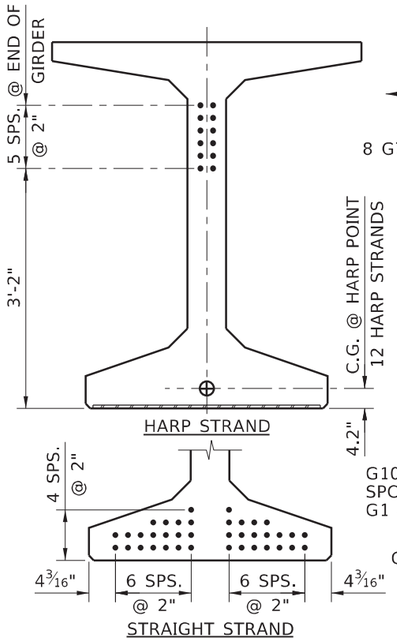


SECTION AT END OF GIRDER

½"=1'-0"

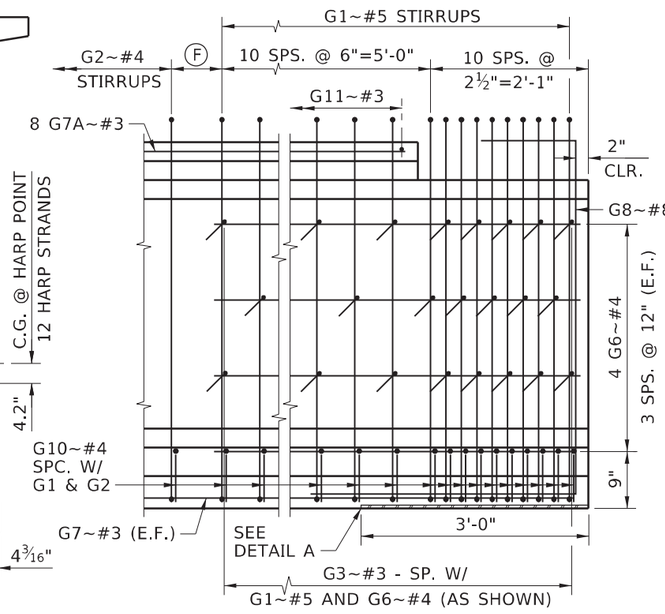
SECTION AT ℄ SPAN

½"=1'-0"



DETAIL B

½"=1'-0"



END REINFORCEMENT DETAIL

½"=1'-0"

NOTES

1. DIMENSIONS TO STIRRUPS AND DOWEL BARS ARE GIVEN AT ℄ OF GIRDER.
2. SEE PRESTRESSED GIRDER GENERAL DETAILS AND PRESTRESSED WF GIRDER DETAILS SHEETS FOR NOTES, DIAPHRAGM DOWEL DETAILS, END DETAILS AND DEFLECTION DATA.
3. PROVIDE BEND DETAILS IN ACCORDANCE WITH THE LATEST ACI STANDARD PRACTICE AND AASHTO SPECIFICATIONS.

*STIRRUP AND TIE HOOK BEND DIMENSIONS. STIRRUPS AND TIES MUST HAVE A MINIMUM 1" COVER OUTSIDE OF BARS.

GIRDER WEIGHT _____ 860 LBS. PER FOOT

ORIGINAL STORED AT: ITD BRIDGE SECTION - Boise, Idaho

REVISIONS			
NO.	DATE	BY	DESCRIPTION
△			
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△			
△			
△			

DESIGNED K. WALKER
DESIGN CHECKED B. CORSON-MARQUESS
DETAILED S. WALIMAA
DWG. CHECKED W. MEYER
CORRECTIONS

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
CADD FILE NAME DX\prjXXXXX\Proj\Dev\Bridge\Plans 19129_brGD_001.dgn
DRAWING DATE: MARCH 2025

WASHINGTON COUNTY

FDR

ENGLISH

PROJECT NO. A019(129)

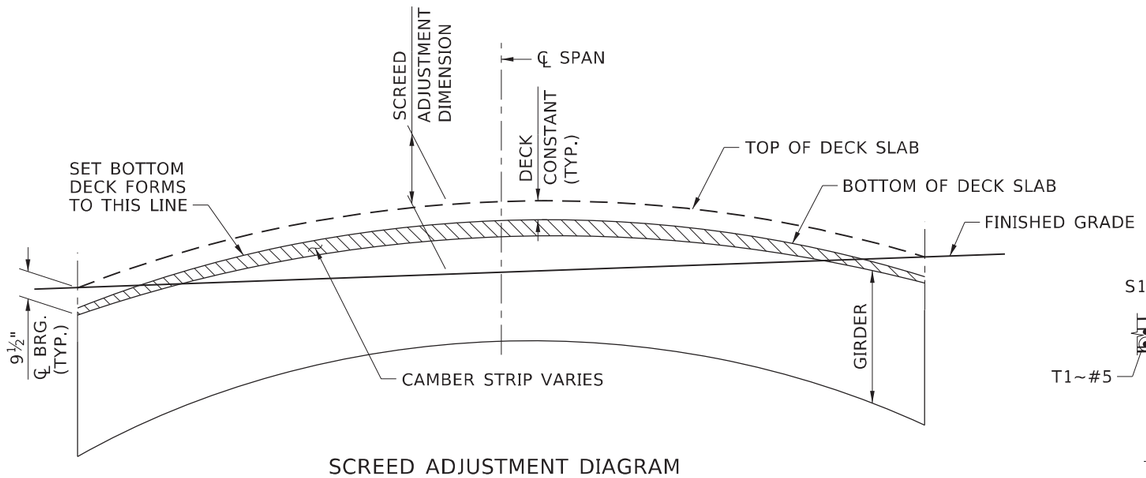
WF58G PRESTRESSED GIRDER

263' PRESTRESSED CONCRETE GIRDER BRIDGE
COVE ROAD OVER WEISER RIVER
STA. 30+28.65

BRIDGE PLANS

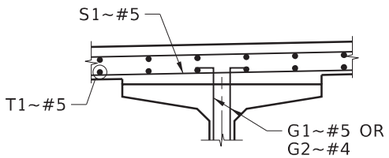
BRIDGE KEY NO. 28806
COUNTY WASHINGTON | KEY NO. 19129
BRIDGE DWG. NO. 17761 | SHEET 17 OF 30

PROFESSIONAL ENGINEER LICENSED 3/25/2025 18296 STATE OF IDAHO KRISTOPHER DAVID WALKER

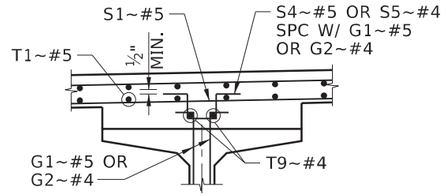


SCREED ADJUSTMENT DIAGRAM

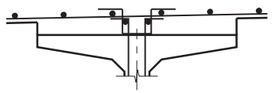
NTS



TYPICAL HAUNCH DETAIL



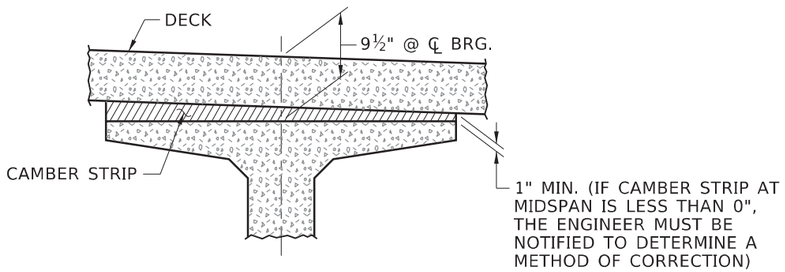
MODIFIED HAUNCH DETAIL



S4 & S5 ADJUSTMENT RANGE

HAT BAR DETAILS

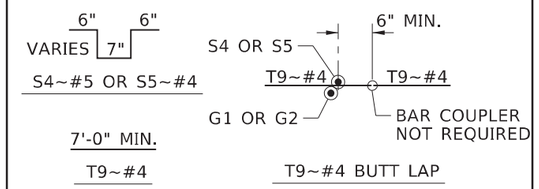
¾"=1'-0"



CAMBER STRIP DETAIL

NTS

REINFORCEMENT DIAGRAM



SCREED ADJUSTMENT DIMENSIONS AT ℄ OF GIRDERS											
0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	SPAN (TENTH POINTS)
0	1.1	2.2	3.1	3.6	3.8	3.6	3.1	2.2	1.1	0	SCREED ADJUSTMENT DIMENSION - INCHES

NOTE:

A. AT LOCATION THAT THE GIRDER STIRRUPS (G1 AND G2 BARS) DO NOT RISE ABOVE THE BOTTOM MAT OF REINFORCEMENT, HAT BARS (S4 AND S5 BARS) MUST BE ADDED.

B. ADDITIONAL S4, S5, AND T9 BARS WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR METAL REINF. SCH. NO. 2.

NOTES

LOSSES

1. GIRDERS DESIGNED USING IMMEDIATE PRESTRESS LOSSES OF 21,688 psi AND FINAL TOTAL PRESTRESS LOSSES OF 50,200 psi.

DOWELS

2. PROVIDE DOWELS BY ANY OF THE FOLLOWING METHODS:
   a. CAST IN PLACE AS SHOWN, PROVIDED THAT HOOKED BARS ARE USED WHEN NECESSARY ON THE EXTERIOR GIRDER.
   b. PROVIDE COIL ROD INSERTS AND THREADED DOWELS, IF THE ULTIMATE STRENGTH OF THE INSERT IS IN ACCORDANCE WITH THE FOLLOWING:

BAR SIZE	MINIMUM ULTIMATE TENSION CAPACITY (LBS.)
#4	12,000
#5	18,600
#6	26,400

   c. ON INTERIOR GIRDERS ONLY, 1½"○ HOLES MAY BE PROVIDED DURING FABRICATION AND DOWELS GROUTED IN PLACE AFTER DELIVERY TO THE JOB SITE.
3. PLACE END DIAPHRAGM DOWELS PARALLEL TO ℄ BEARING. PLACE INTERMEDIATE DIAPHRAGM DOWELS PERPENDICULAR TO ℄ GIRDERS.

SHOP DRAWINGS

4. PROVIDE SHOP DRAWING DETAILS THAT CONFORM TO CURRENT AASHTO SPECIFICATIONS. SHOW DETENSIONING SEQUENCE AND GIRDER LIFT POINTS ON SHOP DRAWINGS.
5. SUBMIT SHOP DRAWINGS TO THE ENGINEER ELECTRONICALLY IN PDF FORMAT IN ACCORDANCE WITH SECTION 506 AND INCLUDE COMPLETE DETAILS OF FABRICATION. CLEARLY SPECIFY MATERIALS BEING USED. FURNISH THE ENGINEER ELECTRONIC AS-BUILT SHOP DRAWINGS IN PDF FORMAT BEFORE PROJECT COMPLETION.
6. LATERALLY RESTRAIN THE GIRDER DURING TRANSPORTATION AND ERECTION. SHOW THE METHOD OF LATERAL RESTRAINT ON THE SHOP DRAWINGS.
7. PROVIDE DESIGN CALCULATIONS AND SHOW THE DETAILS ON THE SHOP DRAWINGS IF TEMPORARY STRANDS ARE ADDED IN THE TOP FLANGE FOR HANDLING, TRANSPORTATION, OR ERECTION. PROVIDE A REVISED DEFLECTION DATA TABLE AND SCREED ADJUSTMENT TABLE. CHANGES MUST BE APPROVED BY THE ENGINEER AND ARE AT THE CONTRACTOR'S EXPENSE.

MISCELLANEOUS GIRDER DETAILS

8. PROVIDE GIRDERS WITH ENDS THAT ARE PLUMB WHEN SET TO GRADE.
9. DIMENSION Ⓐ IN THE PRESTRESSED GIRDER SCHEDULE TABLE IS A HORIZONTAL DIMENSION. FINISHED LENGTH OF GIRDER MUST BE CORRECTED FOR GRADE AND ALLOWANCE MADE FOR BEAM SHORTENING.
10. BLOCK OUT TOP FLANGE OF WF GIRDERS TO ALLOW PLACEMENT OF CONCRETE FOR THE END DIAPHRAGMS.
11. IF THE TOP FLANGE OVERHANG IS TO BE USED FOR SUPPORT OF DECK FORMS OR SCREEDS, APPROVAL BY THE ENGINEER OF THE METHOD TO BE USED IS REQUIRED PRIOR TO CASTING OF THE BEAMS. SHOW THE METHOD OF DECK FORM AND SCREED SUPPORT ON SHOP DRAWINGS, AND DESIGN THE REINFORCEMENT ACCORDINGLY.
12. GIRDER ERECTION/DECK PLACEMENT ASSUMED TO OCCUR WITHIN 60-90 DAYS AFTER GIRDER FABRICATION.
13. FABRICATE IN ACCORDANCE WITH SECTION 506.

STRAND

14. DESIGN BASED UPON 0.6" DIA. AASHTO M203 LOW RELAXATION STRAND.

GIRDER SHIPPING

15. DO NOT SHIP PRESTRESSED CONCRETE MEMBERS UNTIL TESTS ON CONCRETE CYLINDERS MANUFACTURED FROM THE SAME CONCRETE AND CURED UNDER THE SAME CONDITIONS AS THE GIRDERS INDICATE THAT THE CONCRETE OF THE PARTICULAR MEMBER HAS ATTAINED A COMPRESSIVE STRENGTH EQUAL TO THE SPECIFIED DESIGN 28 DAY COMPRESSIVE STRENGTH.

BASIS OF PAYMENT

16. PRESTRESSING CONCRETE MEMBERS ARE INCIDENTAL TO THE COST OF PROVIDING PRECAST MEMBERS SPECIFIED IN SECTION 502.

DEFLECTION DATA ~ INCHES							
LOCATION	Δ P PRESTRESS	Δ G GIRDER	∑Δ * ΔP + ΔG	Δ 1 ** 1.55 Δ P + 1.65 Δ G	ΔS NON COMP. DL	ΔC COMP. DL	Δ2 ΔS + ΔC
EXTERIOR	6.3↑	2.7↓	3.7↑	5.4↑	2.9↓	0.5↓	3.4↓
INTERIOR	6.3↑	2.7↓	3.7↑	5.4↑	3.3↓	0.5↓	3.8↓

*ESTIMATED DEFLECTION OF PRESTRESSED GIRDER AT RELEASE

**ESTIMATED DEFLECTION OF PRESTRESSED GIRDER AT GIRDER ERECTION/DECK PLACEMENT

ORIGINAL STORED AT: ITD BRIDGE SECTION - Boise, Idaho

REVISIONS			
NO.	DATE	BY	DESCRIPTION
△			
△			
△			
△			
△			

DESIGNED K. WALKER
DESIGN CHECKED B. CORSON-MARQUESS
DETAILED S. WALIMAA
DWG. CHECKED W. MEYER
CORRECTIONS

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY

CADD FILE NAME
DX\prj\XXXXX\Proj\Dev\Bridge\Plans
19129_brGD_002.dgn

DRAWING DATE: MARCH 2025

WASHINGTON COUNTY

HDR

ENGLISH

PROJECT NO. A019(129)

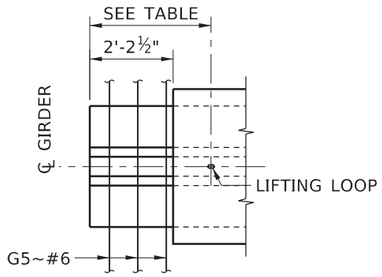
PRESTRESSED GIRDER GENERAL DETAILS

263' PRESTRESSED CONCRETE GIRDER BRIDGE
COVE ROAD OVER WEISER RIVER
STA. 30+28.65

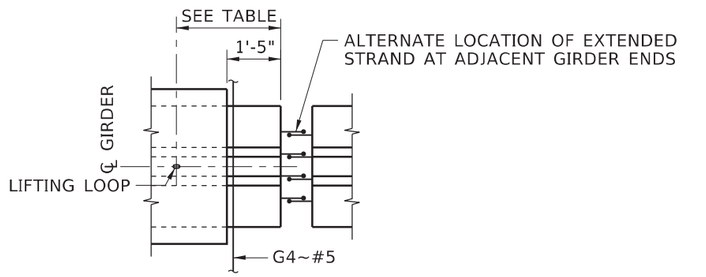
BRIDGE PLANS

BRIDGE KEY NO. 28806
COUNTY WASHINGTON | KEY NO. 19129
BRIDGE DWG. NO. 17761 | SHEET 18 OF 30

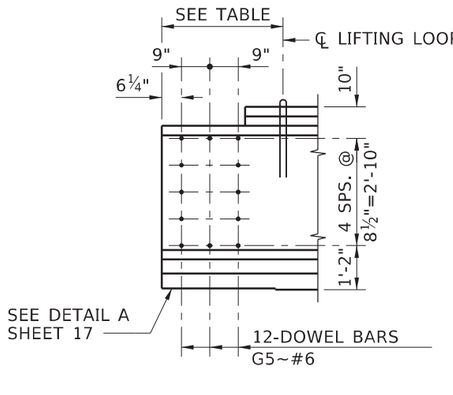
PROFESSIONAL ENGINEER LICENSED 3/25/2025 18296 STATE OF IDAHO KRISTOPHER DAVID WALKER



PLAN

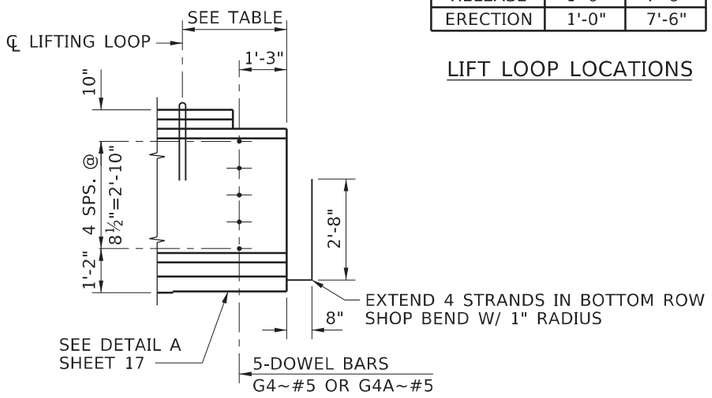


PLAN



ELEVATION

TYPE B - FIXED
CONNECTION AT ABUTMENT



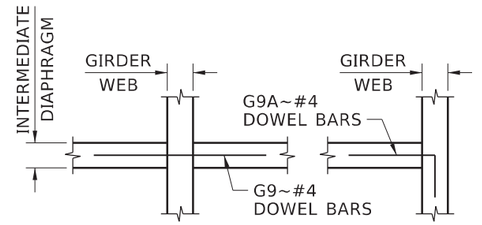
ELEVATION

TYPE C - POSITIVE MOMENT
CONNECTION AT PIER

GIRDER END DETAILS
¼"=1'-0"

	MIN.	MAX.
RELEASE	1'-0"	7'-6"
ERECTION	1'-0"	7'-6"

LIFT LOOP LOCATIONS



PLAN - INTERMEDIATE
DIAPHRAGM DOWEL DETAILS
NTS

ORIGINAL STORED AT: ITD BRIDGE SECTION - Boise, Idaho

REVISIONS			
NO.	DATE	BY	DESCRIPTION
1			
2			
3			
4			
5			

DESIGNED K. WALKER
DESIGN CHECKED B. CORSON-MARQUESS
DETAILED S. WALIMAA
DWG. CHECKED W. MEYER
CORRECTIONS

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
CADD FILE NAME
D:\prj\XXXXX\Proj\Dev\Bridge\Plans\19129_brGD_003.dgn
DRAWING DATE: MARCH 2025

WASHINGTON COUNTY

HDR

ENGLISH

PROJECT NO. A019(129)

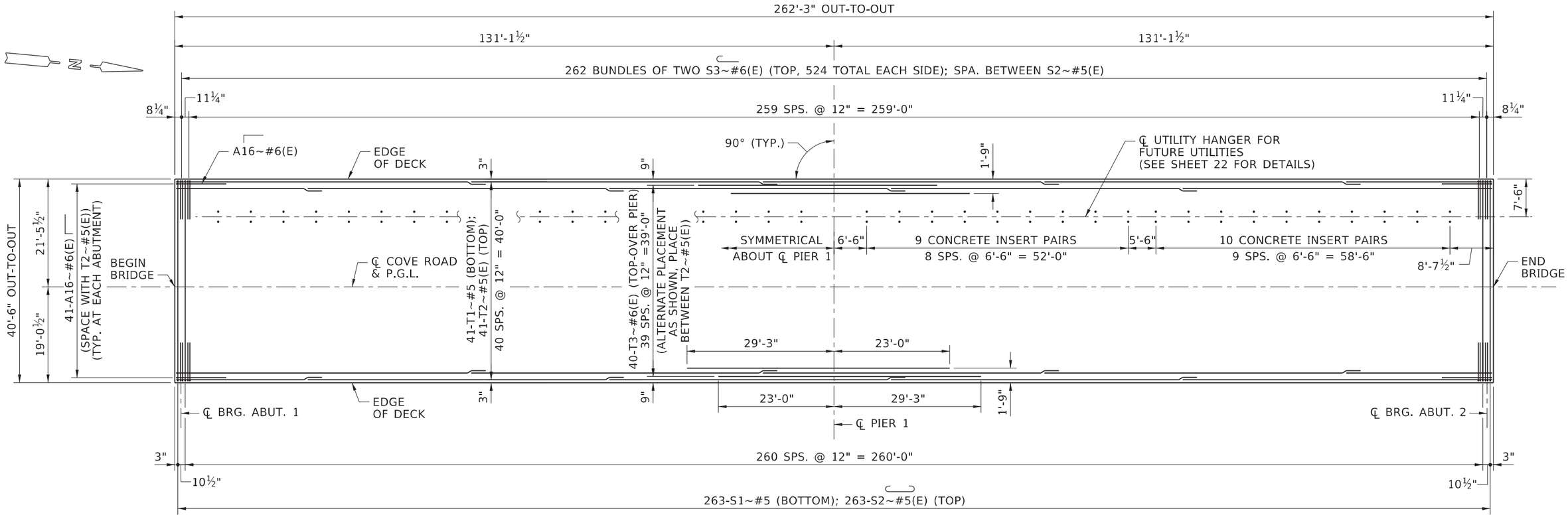
PRESTRESSED WF GIRDER DETAILS

263' PRESTRESSED CONCRETE GIRDER BRIDGE
COVE ROAD OVER WEISER RIVER
STA. 30+28.65

BRIDGE PLANS

BRIDGE KEY NO. 28806
COUNTY WASHINGTON
KEY NO. 19129
BRIDGE DWG. NO. 17761
SHEET 19 OF 30

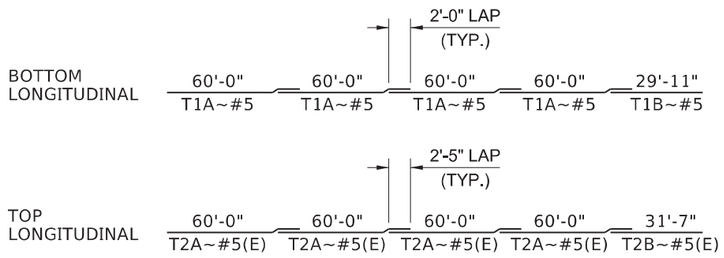
PROFESSIONAL ENGINEER LICENSED 3/25/2025 18296 STATE OF IDAHO KRISTOPHER DAVID WALKER



DECK REINFORCEMENT PLAN
1"=20'-0"

NOTES

1. GIRDERS, DIAPHRAGMS, ABUTMENTS, AND PIERS NOT SHOWN FOR CLARITY.
2. CONCRETE CURBS AND CURB REINFORCING NOT SHOWN FOR CLARITY. PLACE CONCRETE CURB REINFORCEMENT WITH DECK REINFORCEMENT. SEE SHEETS 23-25 FOR DETAILS.
3. ALTERNATE LAP SPLICE LOCATIONS BETWEEN ADJACENT BARS.



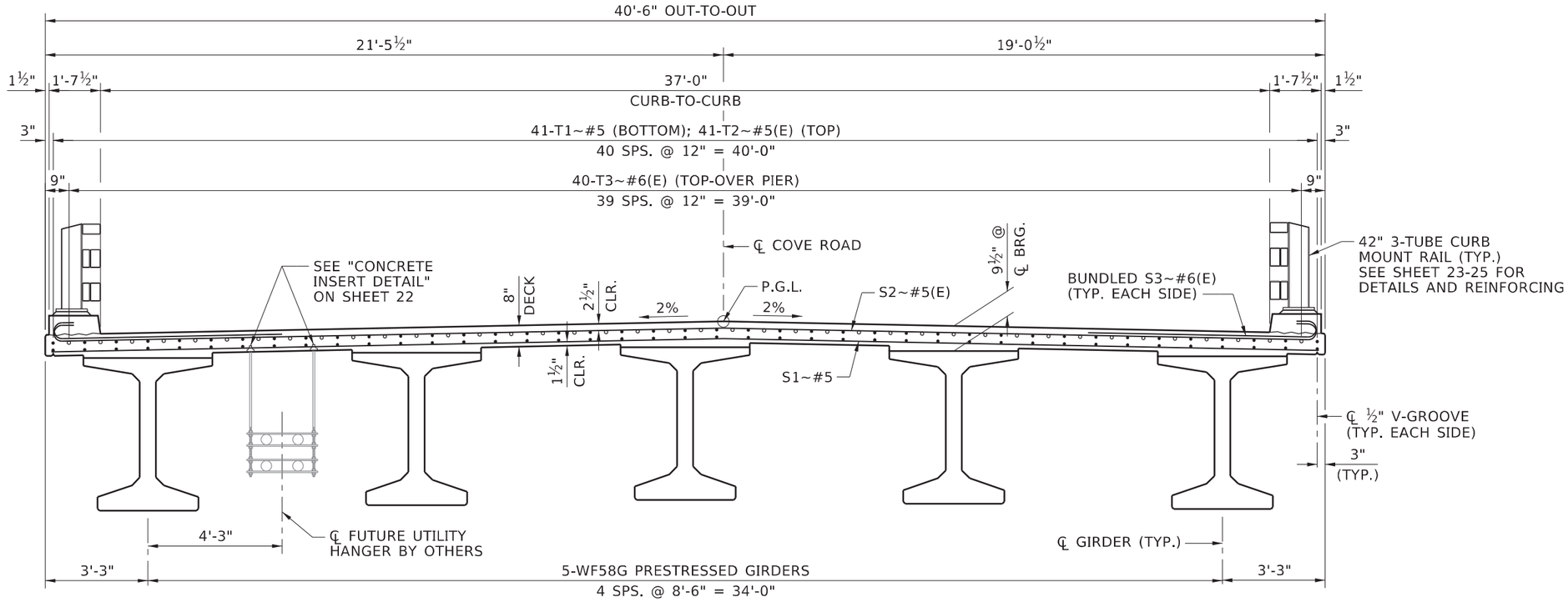
LAP SPLICE DIAGRAMS
NTS

NOTE: ALTERNATE LAP SPLICES

ORIGINAL STORED AT: ITD BRIDGE SECTION - Boise, Idaho

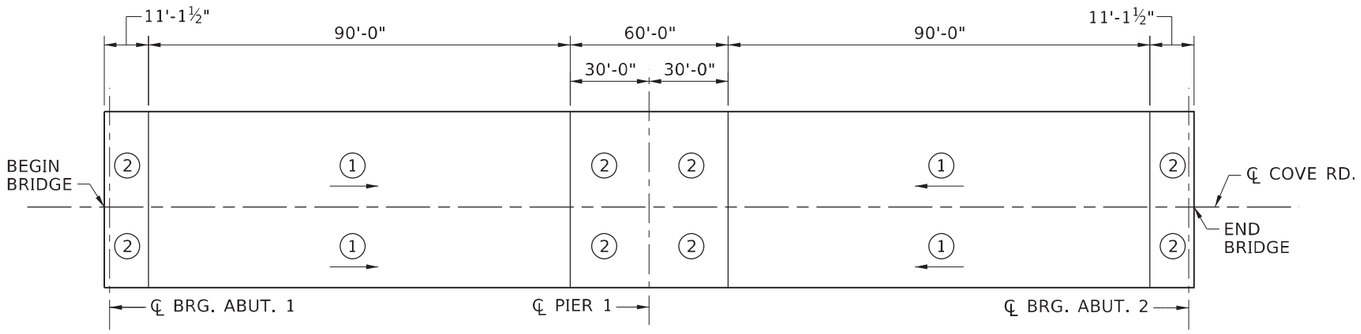
REVISIONS				DESIGNED C. BOWEN	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY	WASHINGTON COUNTY	ENGLISH	DECK PLAN AND REINFORCEMENT	BRIDGE PLANS	
NO.	DATE	BY	DESCRIPTION	DESIGN CHECKED W. MEYER	CADD FILE NAME D:\prj\XXXXX\Proj\Dev\Bridge\Plans 19129_brDP_001.dgn		PROJECT NO. A019(129)	263' PRESTRESSED CONCRETE GIRDER BRIDGE COVE ROAD OVER WEISER RIVER STA. 30+28.65	BRIDGE KEY NO. 28806	
				DETAILED E. PRESCOTT					COUNTY WASHINGTON	KEY NO. 19129
				DWG. CHECKED W. MEYER	DRAWING DATE: MARCH 2025	HDR			BRIDGE DWG. NO. 17761	SHEET 20 OF 30
				CORRECTIONS						

PROFESSIONAL ENGINEER LICENSED 3/24/2025 20046 STATE OF IDAHO WESLEY A. MEYER



TYPICAL SECTION

¼"=1'-0"

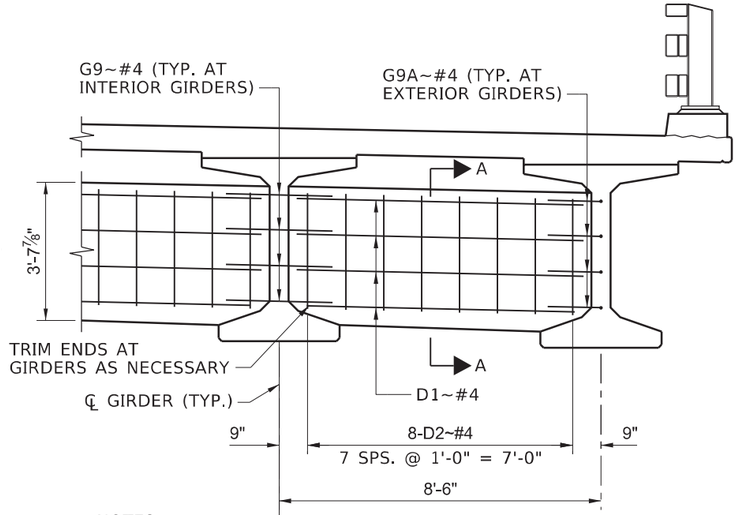


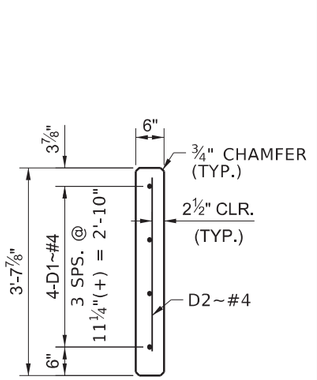
NOTES:

1. NO DEVIATION FROM THE DECK PLACING SEQUENCE IS PERMITTED WITHOUT PRIOR APPROVAL.
2. PLACE DECK SEQUENTIALLY, BASED ON THE NUMBERS SHOWN IN THE DECK AREAS INDICATED ABOVE. AREAS OF THE SAME NUMBER NEED NOT BE PLACED SIMULTANEOUSLY.
3. AFTER CONCRETE HAS BEEN PLACED IN ONE AREA, DO NOT COMMENCE PLACEMENT OF THE NEXT SEQUENCE UNTIL AT LEAST 48 HOURS HAVE ELAPSED.
4. PLACE ABUTMENT AND PIER DIAPHRAGMS SIMULTANEOUSLY WITH ADJACENT DECK AREA MARKED ②.
5. CAST CONCRETE CURBS AFTER THE DECK SLAB HAS OBTAINED THE COMPRESSIVE STRENGTH REQUIRED PER THE STANDARD SPECIFICATIONS.

DECK PLACING SEQUENCE

NTS





SECTION A-A

⅜"=1'-0"

NOTES:

1. PLACE INTERMEDIATE DIAPHRAGM CONCRETE BEFORE DECK CONCRETE PLACEMENT.
2. SEE FRAMING PLAN SHEET FOR DIAPHRAGM LOCATIONS.
3. SEE SHEET 22 FOR UTILITY SLEEVE BLOCKOUT LOCATIONS AND DETAILS FOR INTERMEDIATE DIAPHRAGMS BETWEEN GIRDERS 1 AND 2.

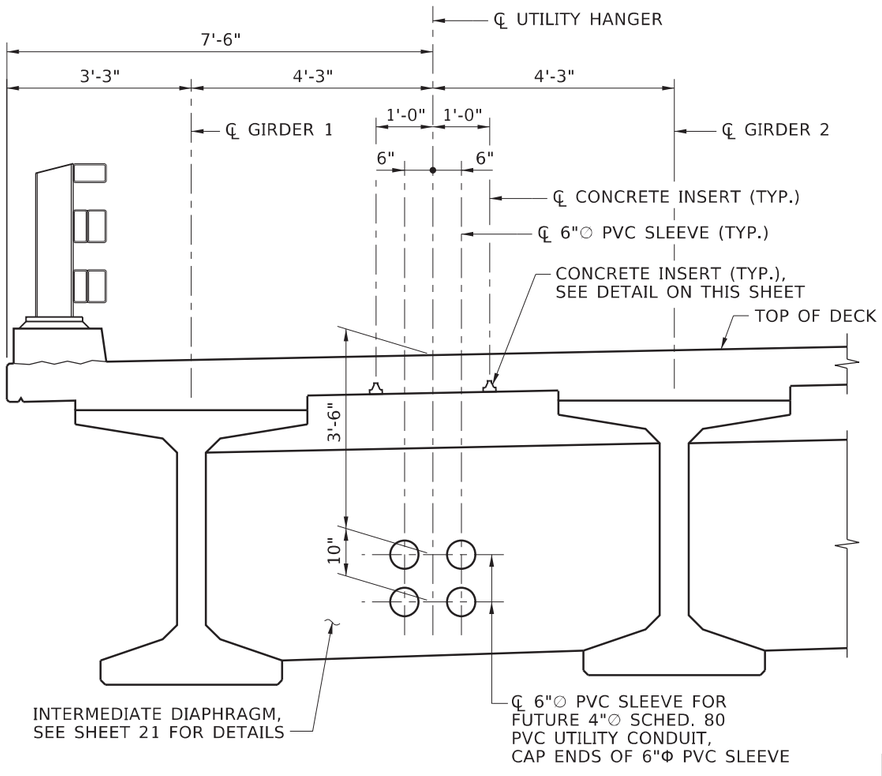
INTERMEDIATE DIAPHRAGM DETAIL

¼"=1'-0"

ORIGINAL STORED AT: ITD BRIDGE SECTION - Boise, Idaho

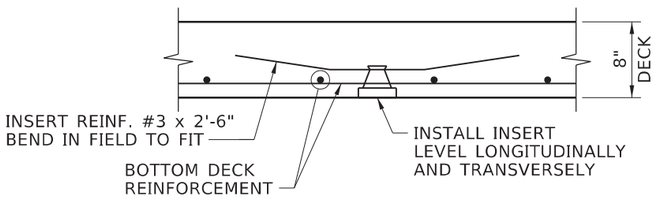
REVISIONS				DESIGNED	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY	WASHINGTON COUNTY	ENGLISH	DECK TYPICAL SECTION AND DETAILS	BRIDGE PLANS	
NO.	DATE	BY	DESCRIPTION	C. BOWEN					BRIDGE KEY NO. 28806	
				DESIGN CHECKED W. MEYER	CADD FILE NAME DX\prjXXXXX\Proj\Dev\Bridge\Plans 19129_brTS_001.dgn		PROJECT NO. A019(129)	263' PRESTRESSED CONCRETE GIRDER BRIDGE COVE ROAD OVER WEISER RIVER STA. 30+28.65	COUNTY WASHINGTON	KEY NO. 19129
				DETAILED E. PRESCOTT					BRIDGE DWG. NO. 17761	SHEET 21 OF 30
				DWG. CHECKED W. MEYER	DRAWING DATE: MARCH 2025					
				CORRECTIONS						

PROFESSIONAL ENGINEER LICENSED 3/24/2025 20046 STATE OF IDAHO WESLEY A. MEYER



INTERMEDIATE DIAPHRAGM DETAILS

(TYP. IN DIAPHRAGM BETWEEN GIRDERS 1 AND 2 ONLY)
(PIER AND ABUTMENT DIAPHRAGMS SIMILAR)
$\frac{3}{8}$"=1'-0"



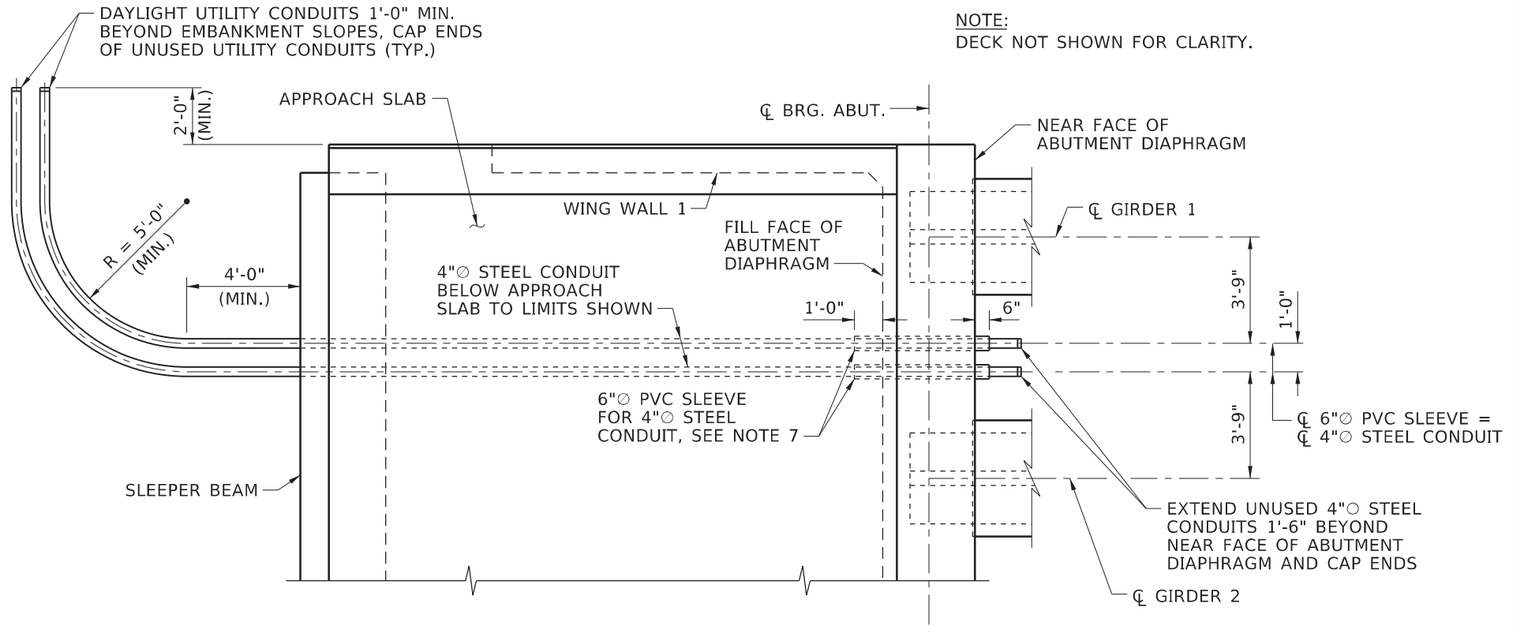
CONCRETE INSERT DETAIL

NTS

NOTES

1. INSTALL A PULL ROPE IN UNUSED CONDUIT AND CAP BOTH ENDS.
2. GALVANIZE MATERIALS AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 OR ASTM A153.
3. CLEAN AND PAINT ANY PAINTED SURFACES DAMAGED DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER. REMOVE ANY PAINT SPLATTER FROM THE BRIDGE.
4. PROVIDE GRINNELL UNIVERSAL INSERT FIG. 282, UNISTRUT M26 SWIVEL CONCRETE INSERT, RICHMOND IASM, OR APPROVED EQUAL.
5. EXTEND 6"∅ PVC SLEEVES FOR FUTURE UTILITIES 6" BEYOND FRONT FACE OF ABUTMENT DIAPHRAGMS, PIER DIAPHRAGMS, AND INTERMEDIATE DIAPHRAGMS, AND 1'-0" BEYOND FILL FACE OF ABUTMENTS.
6. FIELD ADJUST REINFORCEMENT TO CLEAR SLEEVES.
7. FILL ANNULAR VOID BETWEEN 6"∅ PVC SLEEVES AND 4"∅ STEEL CONDUIT WITH GROUT FOLLOWING INSTALLATION OF CONDUITS.
8. COST OF FURNISHING AND INSTALLING CONCRETE INSERTS, INSERT REINFORCEMENT, 6"∅ PVC SLEEVES, AND STEEL CONDUITS FOR FUTURE UTILITIES ARE INCLUDED IN THE UNIT BID PRICE FOR "586-005A UTILITY CONDUIT".

NOTE:
DECK NOT SHOWN FOR CLARITY.



PARTIAL PLAN - CONDUIT PLACEMENT AT ABUTMENT

(TYP. AT BOTH ABUTMENTS)
(ABUTMENT 1 SHOWN. ABUTMENT 2 SIMILAR.)
$\frac{3}{16}$"=1'-0"

ORIGINAL STORED AT: ITD BRIDGE SECTION - Boise, Idaho

REVISIONS			
NO.	DATE	BY	DESCRIPTION
1			
2			
3			
4			
5			

DESIGNED K. WALKER
DESIGN CHECKED W. MEYER
DETAILED S. WALIMAA
DWG. CHECKED W. MEYER
CORRECTIONS

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
CADD FILE NAME
DX\prjXXXXX\Proj\Dev\Bridge\Plans\19129_brUD_001.dgn
DRAWING DATE: MARCH 2025

WASHINGTON COUNTY

HDR

ENGLISH

PROJECT NO. A019(129)

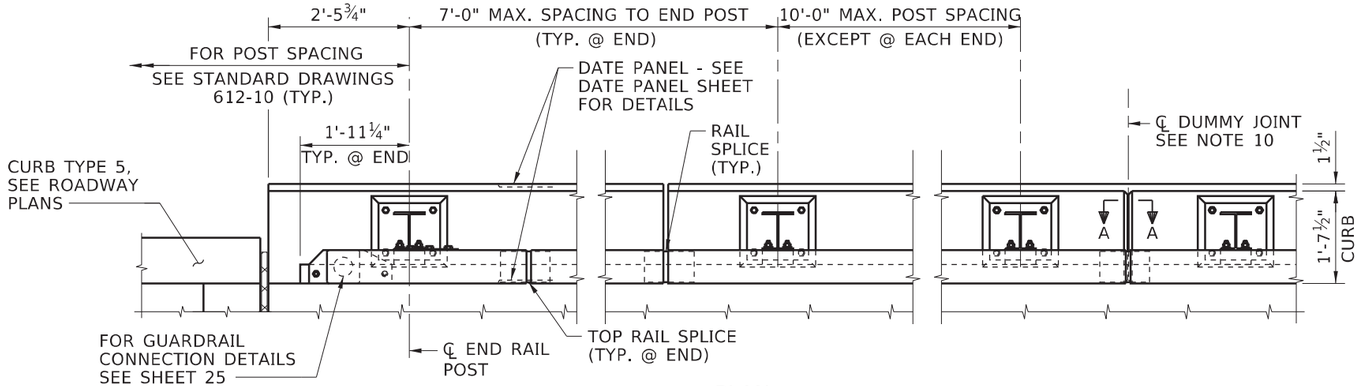
UTILITY DETAILS

263' PRESTRESSED CONCRETE GIRDER BRIDGE
COVE ROAD OVER WEISER RIVER
STA. 30+28.65

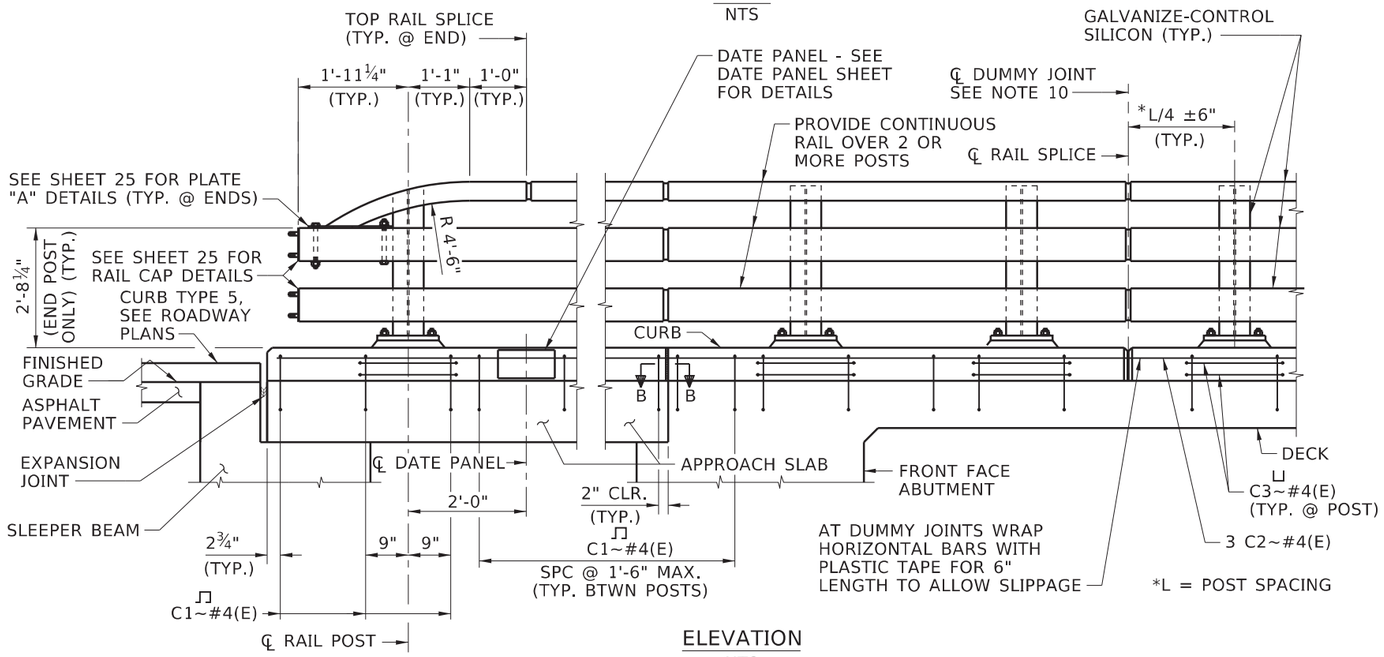
BRIDGE PLANS

BRIDGE KEY NO. 28806
COUNTY WASHINGTON | KEY NO. 19129
BRIDGE DWG. NO. 17761 | SHEET 22 OF 30

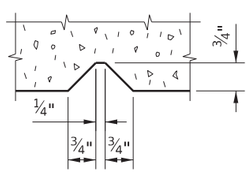
PROFESSIONAL ENGINEER LICENSED 3/24/2025 20046 STATE OF IDAHO WESLEY A. MEYER



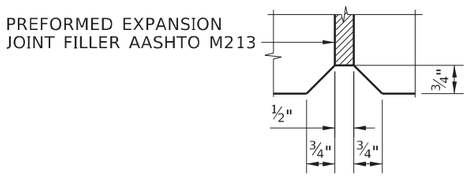
PLAN
NTS



ELEVATION
NTS



SECTION A-A ~ DUMMY JOINT
(TYP. @ BOTH SIDES AND TOP OF CURB)
3"=1'-0"



SECTION B-B
(TYP. @ BOTH SIDES AND TOP OF CURB)
3"=1'-0"

NOTES

MATERIALS

1. PROVIDE STRUCTURAL STEEL TUBING THAT CONFORMS WITH ASTM A500 GRADE B OR ASTM A501 GRADE B STEEL.
2. PROVIDE STRUCTURAL STEEL POSTS, PLATES, ANGLES, AND SLEEVES THAT CONFORMS WITH ASTM A709 GRADE 50.
3. PROVIDE ANCHOR BOLTS THAT CONFORM WITH ASTM F1554 GRADE 105.
   PROVIDE NUTS FOR ANCHOR BOLTS THAT CONFORM WITH ASTM A563 GRADE DH.
   PROVIDE WASHERS FOR ANCHOR BOLTS THAT CONFORM TO ASTM F436 TYPE 1.
   PROVIDE H.S. BOLTS THAT CONFORM WITH ASTM F3125 GRADE A325.
4. PROVIDE CONCRETE CLASS 40AF.
5. PROVIDE EPOXY COATED GRADE 60 REINFORCEMENT IN ACCORDANCE WITH SUBSECTION 708.02.
6. PROVIDE TYPE B CLASS 1 GROUT IN ACCORDANCE WITH SUBSECTION 705.02.

GALVANIZING

7. GALVANIZE STRUCTURAL STEEL PARTS, RAILING, AND SLEEVES AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 AND ASTM F2329. THOROUGHLY CLEAN WELDED AREAS PRIOR TO GALVANIZING TO REMOVE SLAG OR OTHER MATERIAL THAT WOULD INTERFERE WITH THE ADHERENCE OF THE ZINC. GALVANIZED SURFACES ARE TO BE FREE OF FINS, ABRASIONS, ROUGH OR SHARP EDGES, OR OTHER SURFACE DEFECTS. REPAIR DAMAGED COATINGS IN ACCORDANCE WITH ASTM A780 AND ASTM A123.
8. GALVANIZE-CONTROL SILICON MEANS SILICON CONTENT OF THE BASE METAL MUST BE IN THE RANGE OF 0 TO 0.06% (PREFERABLY 0 TO 0.04%) OR 0.15 TO 0.28% (PREFERABLY 0.15% TO 0.25%)

FABRICATION AND ERECTION

9. FABRICATE AND ERECT THE RAILING IN ACCORDANCE WITH THE CURRENT EDITION OF AASHTO SPECIFICATIONS FOR HIGHWAY BRIDGES AND ITD STANDARD SPECIFICATIONS.
10. SPACE CURB DUMMY JOINTS AT RAIL SPLICE LOCATIONS, EXPANSION JOINTS, AND AT THE ABUTMENT/APPROACH SLAB NOTCH ON INTEGRAL ABUTMENTS. SPACE INTERMEDIATE CURB DUMMY JOINTS UNIFORMLY THE LENGTH OF THE BRIDGE WITH SPACING NOT LESS THAT 6' NOR GREATER THAN 12'.
11. SUBMIT SHOP DRAWINGS TO THE ENGINEER ELECTRONICALLY IN PDF FORMAT IN ACCORDANCE WITH SECTION 504 AND INCLUDE COMPLETE DIMENSIONS AND DETAILS OF FABRICATION INCLUDING AN ERECTION DIAGRAM. CLEARLY SPECIFY MATERIALS BEING USED. FURNISH THE ENGINEER ELECTRONIC AS-BUILT SHOP DRAWINGS IN PDF FORMAT BEFORE PROJECT COMPLETION.
12. CONSTRUCT RAILING CONFORMING TO THE HORIZONTAL AND VERTICAL ALIGNMENT OF THE STRUCTURE, INSTALL POSTS NORMAL TO GRADE IN LONGITUDINAL DIRECTION AND VERTICAL IN TRANSVERSE DIRECTION.
13. SAW OR MILL BASE PLATES AND END TUBE SECTIONS AT SPLICES. PROVIDE CUT ENDS THAT ARE TRUE, SMOOTH AND FREE FROM BURRS OR RAGGED EDGES.
14. PROVIDE VENT HOLES FOR GALVANIZING AS REQUIRED AND SHOW ON THE SHOP DRAWINGS. DRILL VENT HOLES AWAY FROM TRAFFIC FACE AND NOT ON THE TOP SURFACE OF THE HORIZONTAL TUBES.
15. ATTACH RAIL SECTIONS TO AT LEAST TWO POSTS.
16. PROVIDE EXPANSION JOINT OR SPLICE JOINT IN RAIL AS REQUIRED.
17. ROUND OR CHAMFER EXPOSED EDGES OF STEEL COMPONENTS 1/16" BY GRINDING PRIOR TO GALVANIZING.

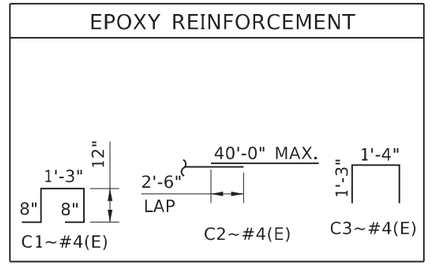
METHOD OF MEASUREMENT

18. FURNISH AND INSTALL THE "3-TUBE CURB MOUNT RAIL" AS SHOWN ON THE PLANS, COMPLETE IN PLACE.

APPROXIMATE QUANTITIES (10' POSTS SPACING)

CONCRETE	0.92 CF/LF
STRUCTURAL STEEL	66 LB/LF
EPOXY REINFORCEMENT	5 LB/LF

EPOXY REINFORCEMENT



ORIGINAL STORED AT: ITD BRIDGE SECTION - Boise, Idaho

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED W. MEYER
DESIGN CHECKED N. McDOWELL
DETAILED E. PRESCOTT
DWG. CHECKED N. McDOWELL
CORRECTIONS

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
CADD FILE NAME
DX\prjXXXXX\Proj\Dev\Bridge\Plans
19129_brRD_001.dgn
DRAWING DATE: MARCH 2025

WASHINGTON COUNTY

FDR

ENGLISH

PROJECT NO.
A019(129)

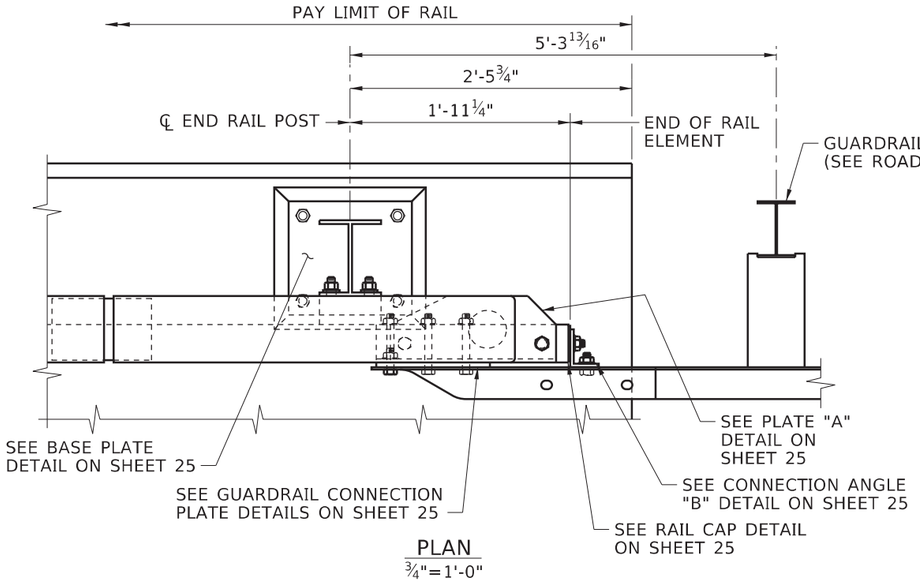
3-TUBE CURB MOUNT RAIL - SHEET 1 OF 3

263' PRESTRESSED CONCRETE GIRDER BRIDGE
COVE ROAD OVER WEISER RIVER
STA. 30+28.65

BRIDGE PLANS

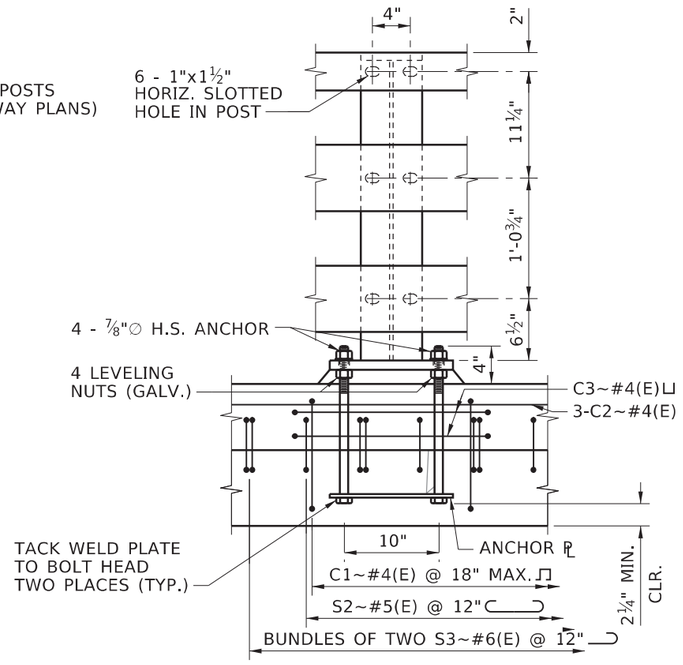
BRIDGE KEY NO. 28806	
COUNTY WASHINGTON	KEY NO. 19129
BRIDGE DWG. NO. 17761	SHEET 23 OF 30

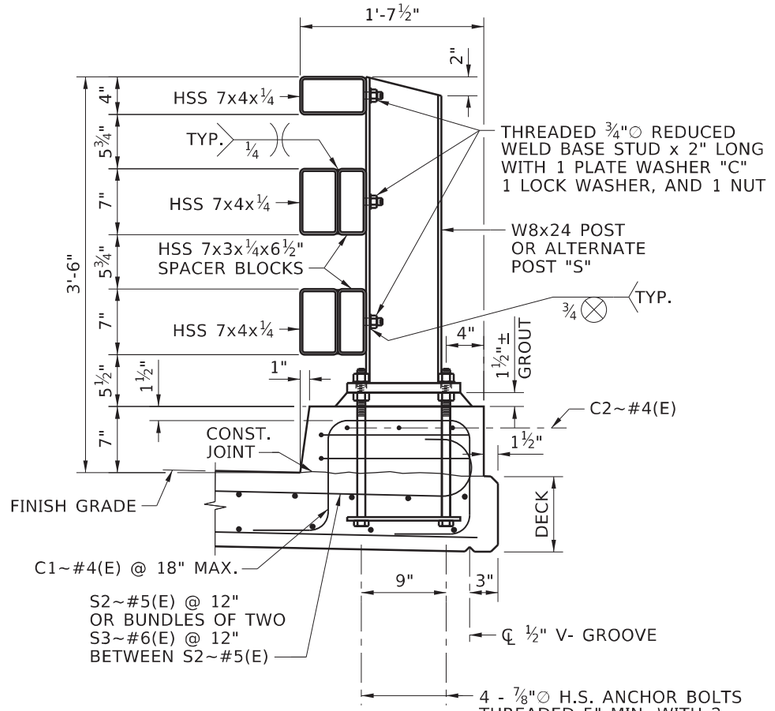
PROFESSIONAL ENGINEER
LICENSED
3/24/2025
20046
STATE OF IDAHO
WESLEY A. MEYER



PLAN

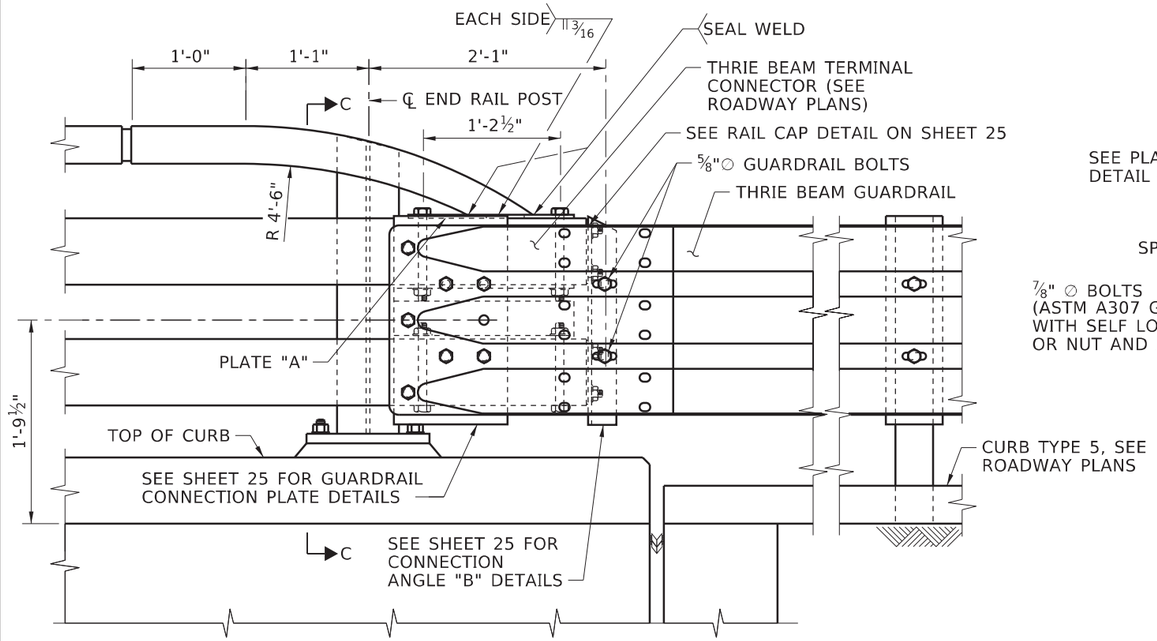
3/4"=1'-0"





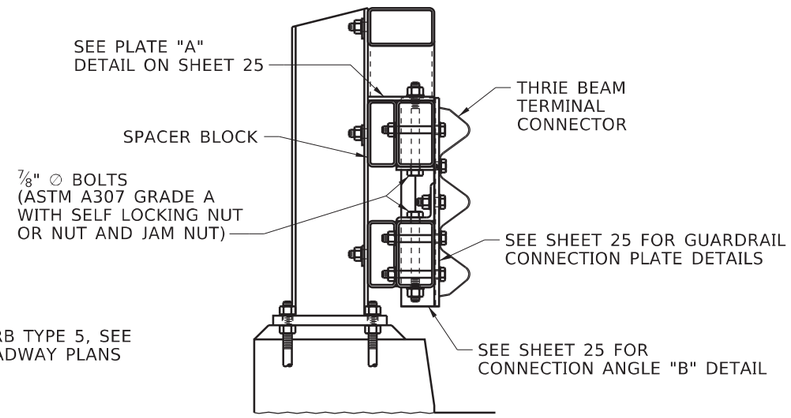
POST DETAILS

3/4"=1'-0"



ELEVATION

3/4"=1'-0"



SECTION C-C

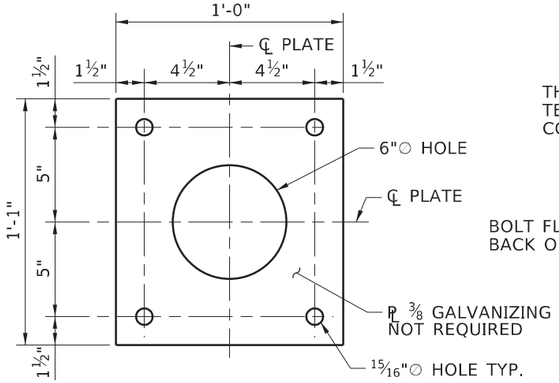
3/4"=1'-0"

TRANSITION CONNECTION

ORIGINAL STORED AT: ITD BRIDGE SECTION - Boise, Idaho

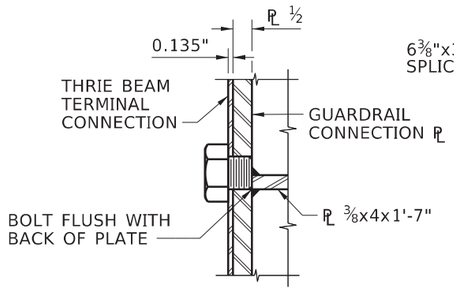
REVISIONS				DESIGNED	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY	WASHINGTON COUNTY	ENGLISH	3-TUBE CURB MOUNT RAIL - SHEET 2 OF 3	BRIDGE PLANS	
NO.	DATE	BY	DESCRIPTION	W. MEYER					BRIDGE KEY NO. 28806	
				DESIGN CHECKED N. McDOWELL	CADD FILE NAME DX\prjXXXXX\Proj\Dev\Bridge\Plans 19129_brRD_002.dgn		PROJECT NO.	263' PRESTRESSED CONCRETE GIRDER BRIDGE	COUNTY WASHINGTON	KEY NO. 19129
				DETAILED E. PRESCOTT				COVE ROAD OVER WEISER RIVER	BRIDGE DWG. NO. 17761	SHEET 24 OF 30
				DWG. CHECKED N. McDOWELL	DRAWING DATE: MARCH 2025		A019(129)	STA. 30+28.65		
				CORRECTIONS		HDR				

PROFESSIONAL ENGINEER LICENSED 3/24/2025 20046 STATE OF IDAHO WESLEY A. MEYER



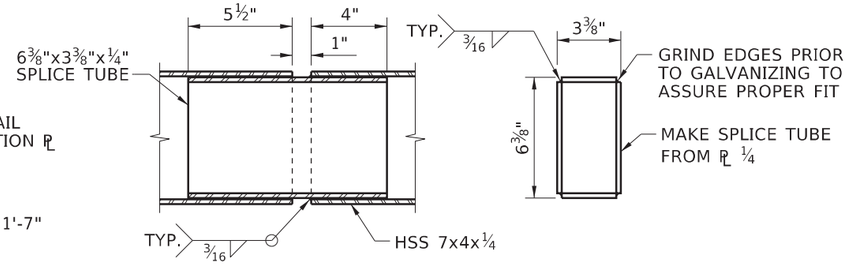
ANCHOR PLATE DETAIL

1½"=1'-0"



DETAIL A

3"=1'-0"



PROVIDE RAIL SPLICE IN PANEL THAT HAS DECK EXPANSION JOINT.

RAIL SPLICE DETAILS

1½"=1'-0"

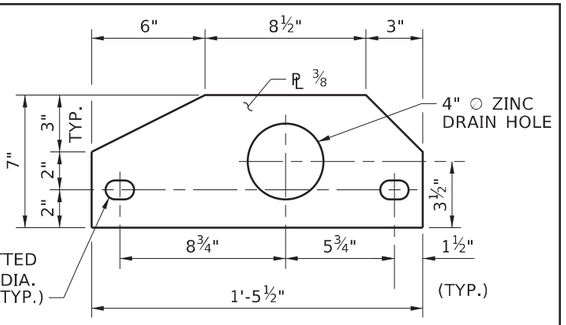
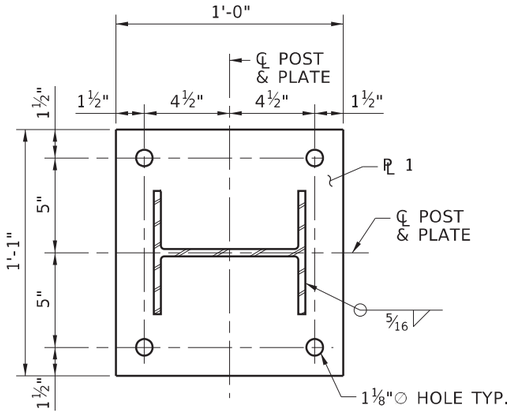


PLATE "A"

1½"=1'-0"



BASE PLATE DETAIL

1½"=1'-0"

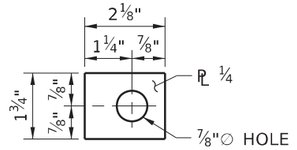
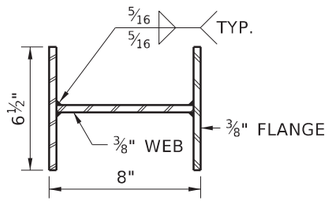


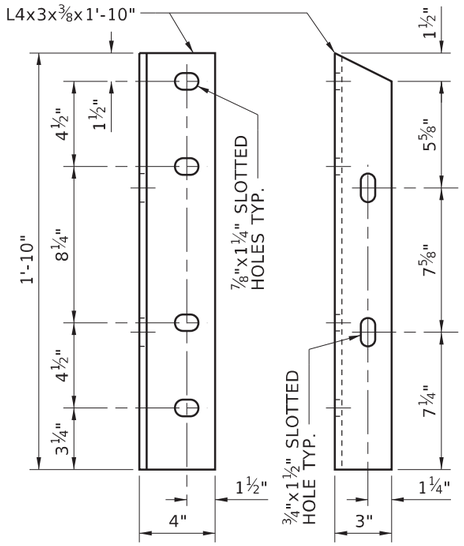
PLATE WASHER "C"

3"=1'-0"



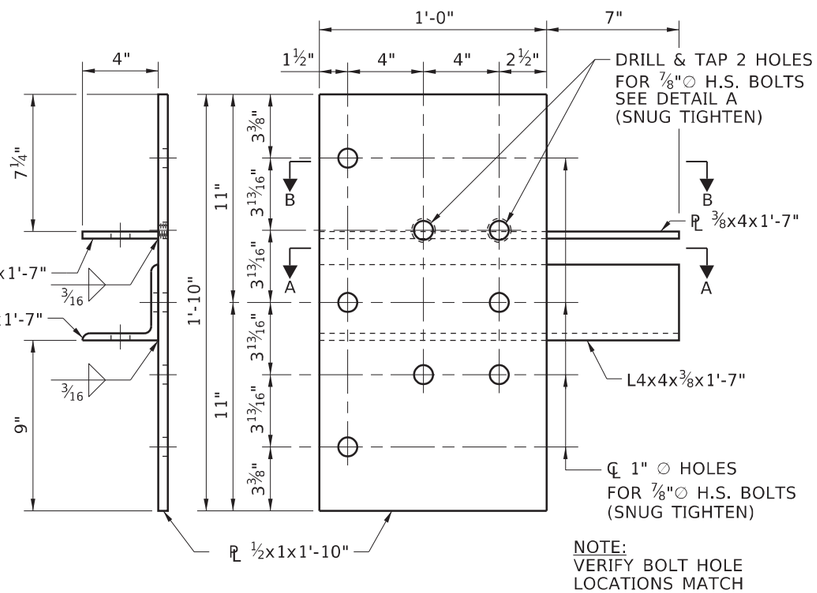
ALTERNATE POST "S"

1½"=1'-0"



CONNECTION ANGLE "B"

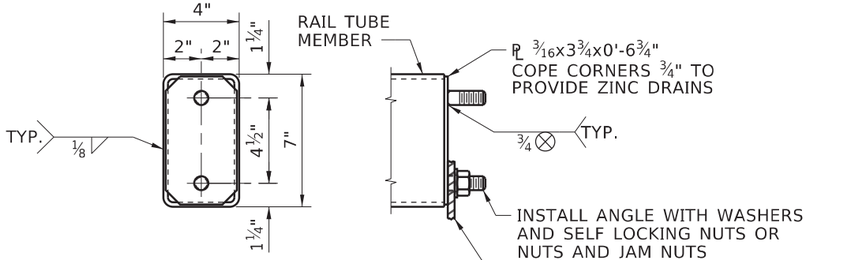
1½"=1'-0"



NOTE:
VERIFY BOLT HOLE LOCATIONS MATCH THRIE BEAM TERMINAL CONNECTOR

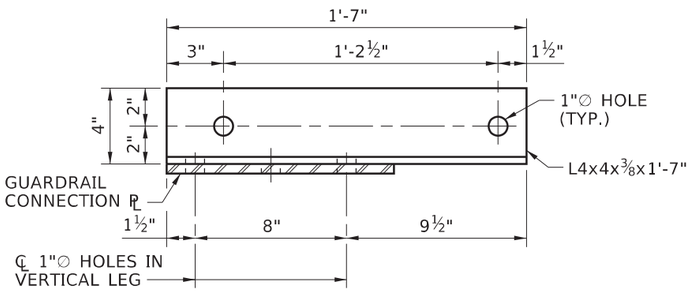
GUARDRAIL CONNECTION PLATE

1½"=1'-0"



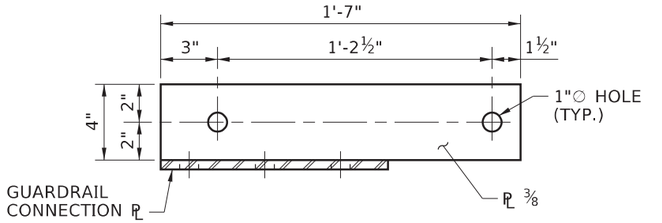
RAIL CAP DETAILS

1½"=1'-0"



SECTION A-A

1½"=1'-0"



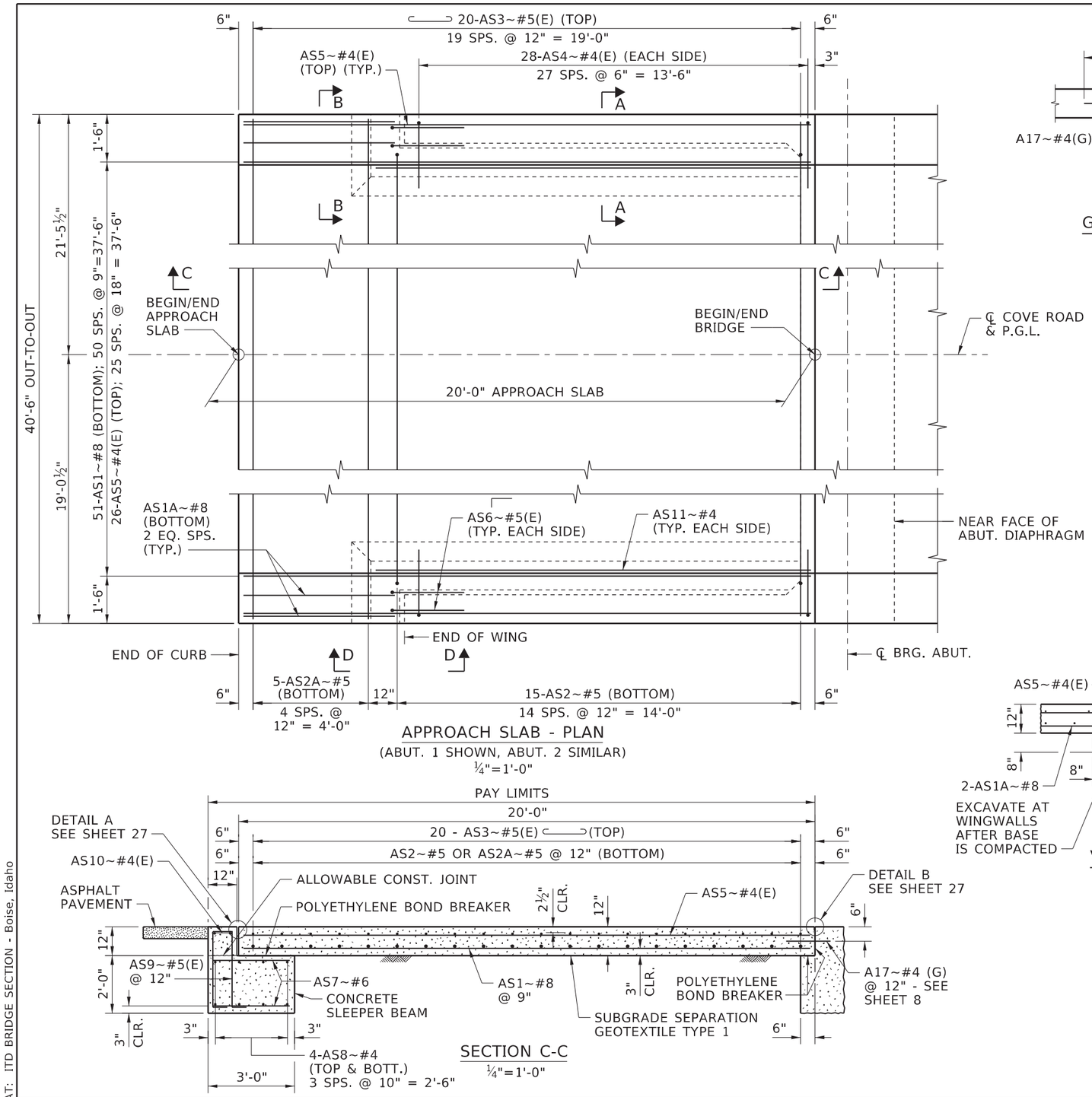
SECTION B-B

1½"=1'-0"

ORIGINAL STORED AT: ITD BRIDGE SECTION - Boise, Idaho

REVISIONS				DESIGNED	SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY	WASHINGTON COUNTY	ENGLISH	3-TUBE CURB MOUNT RAIL - SHEET 3 OF 3	BRIDGE PLANS	
NO.	DATE	BY	DESCRIPTION	W. MEYER					BRIDGE KEY NO. 28806	
				DESIGN CHECKED N. McDOWELL	CADD FILE NAME D:\prj\XXXXX\Proj\Dev\Bridge\Plans 19129_brRD_003.dgn		PROJECT NO.	263' PRESTRESSED CONCRETE GIRDER BRIDGE COVE ROAD OVER WEISER RIVER STA. 30+28.65	COUNTY WASHINGTON	KEY NO. 19129
				DETAILED E. PRESCOTT			A019(129)		BRIDGE DWG. NO. 17761	SHEET 25 OF 30
				DWG. CHECKED N. McDOWELL	DRAWING DATE: MARCH 2025	HDR				
				CORRECTIONS						

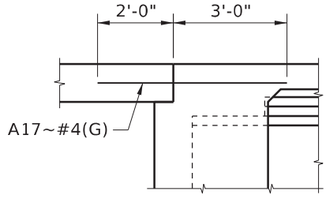
PROFESSIONAL ENGINEER LICENSED 3/24/2025 20046 STATE OF IDAHO WESLEY A. MEYER



APPROACH SLAB - PLAN

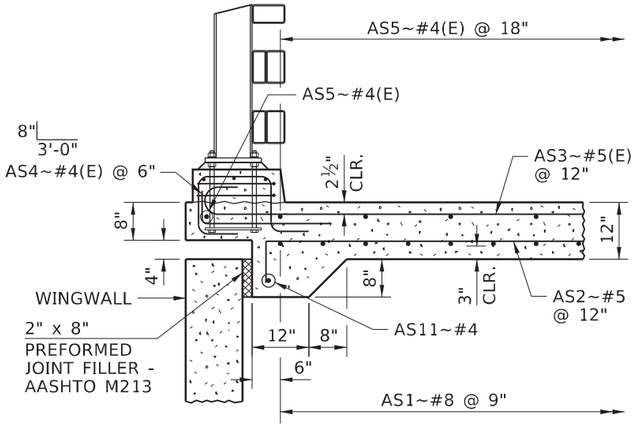
(ABUT. 1 SHOWN, ABUT. 2 SIMILAR)

¼"=1'-0"



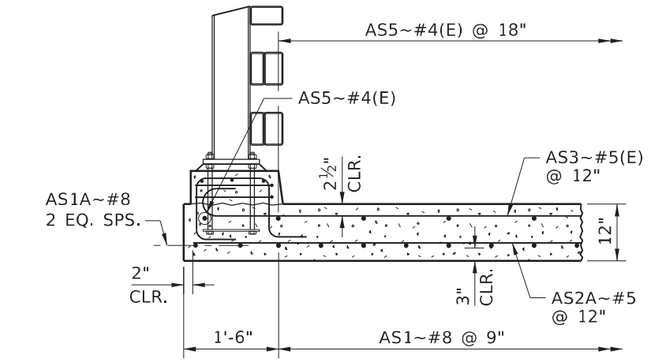
GFRP BAR DETAIL

¼"=1'-0"



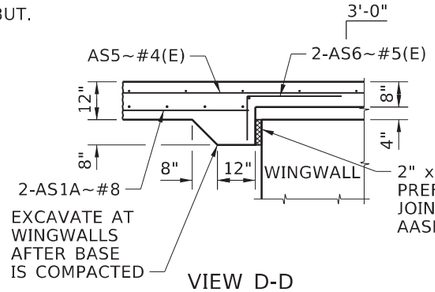
SECTION A-A

⅜"=1'-0"



SECTION B-B

⅜"=1'-0"

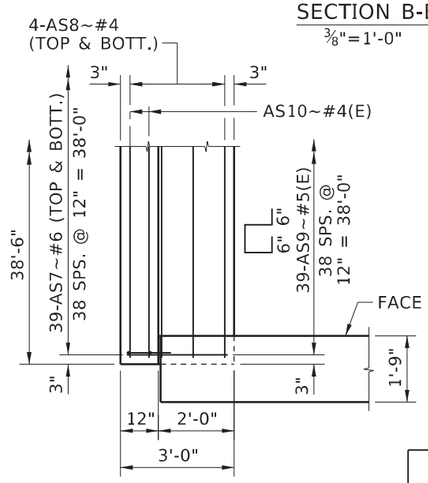


VIEW D-D

¼"=1'-0"

SECTION C-C

¼"=1'-0"



CONCRETE SLEEPER BEAM - PLAN

¼"=1'-0"

ORIGINAL STORED AT: ITD BRIDGE SECTION - Boise, Idaho

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED C. BOWEN
DESIGN CHECKED W. MEYER
DETAILED S. WALIMAA
DWG. CHECKED W. MEYER
CORRECTIONS

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
CADD FILE NAME
D:\prj\XXXXX\Proj\Dev\Bridge\Plans\19129_brAS_001.dgn
DRAWING DATE: MARCH 2025

WASHINGTON COUNTY

HDR

ENGLISH

PROJECT NO. A019(129)

APPROACH SLAB DETAILS - SHEET 1 OF 2

263' PRESTRESSED CONCRETE GIRDER BRIDGE
COVE ROAD OVER WEISER RIVER
STA. 30+28.65

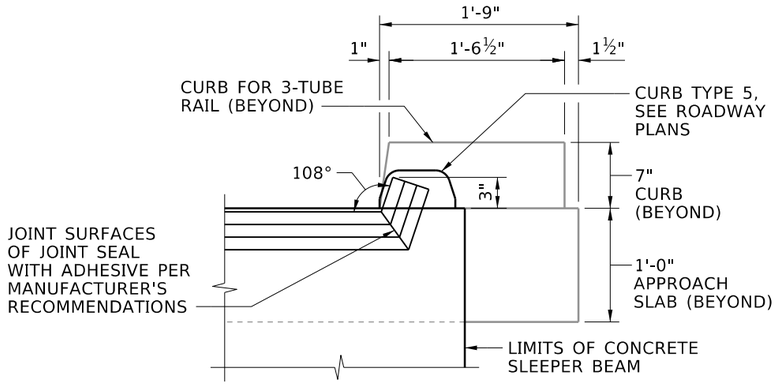
BRIDGE PLANS

BRIDGE KEY NO. 28806
COUNTY WASHINGTON | KEY NO. 19129
BRIDGE DWG. NO. 17761 | SHEET 26 OF 30

PROFESSIONAL ENGINEER LICENSED 3/24/2025 20046 STATE OF IDAHO WESLEY A. MEYER

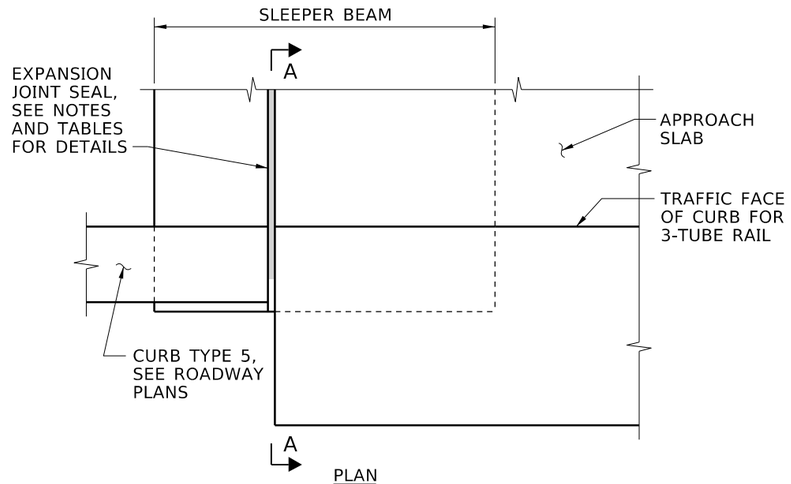
RECOMMENDED MANUFACTURERS OF THE SHOWN JOINT ASSEMBLY *					
MANUFACTURER	STYLE	SEAL SIZE (INCHES)		RANGE WIDTH (INCHES)	
		WIDTH	HEIGHT	MIN.	MAX.
D.S. BROWN	J-300	3.00	3.94	1.50	4.50
WATSON BOWMAN ACME	JEENE-75W	3.00	5.38	1.50	4.50

* OR APPROVED EQUAL



NOTE:
RAIL NOT SHOWN FOR CLARITY.

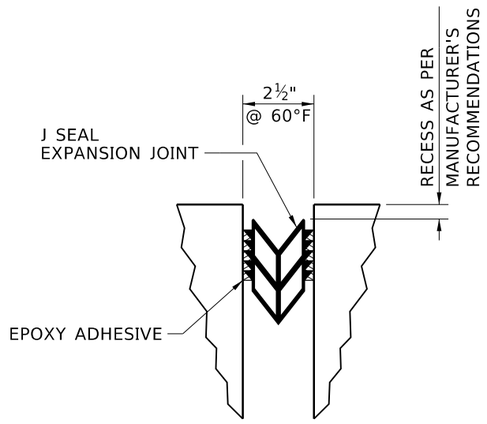
SECTION A-A



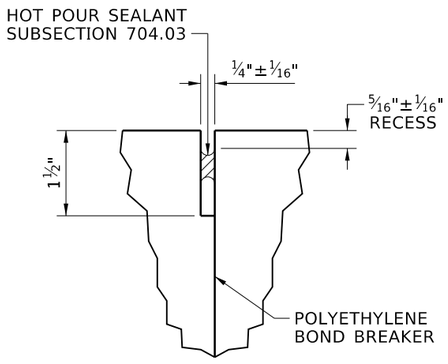
PLAN

SEAL DETAIL AT CURB

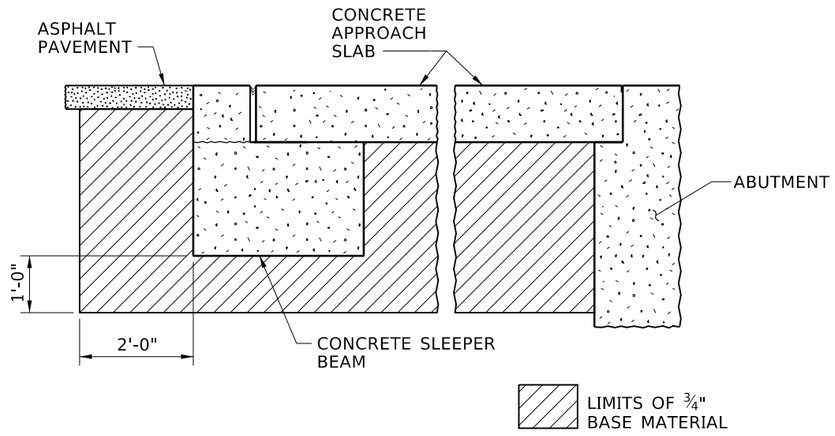
¾"=1'-0"



DETAIL A
NTS



DETAIL B
NTS



DETAIL C
⅜"=1'-0"

NOTES

APPROACH SLAB

1. PROVIDE ¾" TYPE A BASE MATERIAL COMPACTED TO MEET CLASS "A" COMPACTION REQUIREMENTS TO THE LIMITS SHOWN IN DETAIL C BEFORE POURING THE APPROACH SLAB. THE COST OF THE MATERIAL IS INCIDENTAL TO BID ITEM 502-435A.
2. PLACE LONGITUDINAL REINFORCEMENT PARALLEL TO THE CENTERLINE OF THE ROADWAY. PLACE THE TRANSVERSE REINFORCEMENT PARALLEL TO THE ABUTMENT.
3. PROVIDE REINFORCEMENT THAT CONFORMS WITH AASHTO M31 (ASTM A615) GRADE 60. EPOXY COAT THE TOP MAT OF BOTH TRANSVERSE AND LONGITUDINAL REINFORCEMENT. PROVIDE BEND DETAILS IN ACCORDANCE WITH THE LATEST A.C.I. STANDARD PRACTICE AND AASHTO SPECIFICATIONS.
4. PROVIDE APPROACH SLAB CONCRETE CLASS 40AF.
5. PLACE SUBGRADE SEPARATION GEOTEXTILE TYPE 1 BETWEEN APPROACH SLAB AND SUBGRADE.
6. MEASURE APPROACH SLAB BY THE SQUARE YARD, COMPLETE IN PLACE AND PAY FOR UNDER THE BID ITEM 502-435A.

EXPANSION JOINT

7. ADJUST EXPANSION JOINT 1/16" FOR EVERY 10° CHANGE IN TEMPERATURE FROM THE MEDIAN TEMPERATURE OF 60°F AT THE TIME OF INSTALLATION OF THE JOINT.
8. PROVIDE CONTINUOUS JOINT SEAL.
9. INSTALL THE SEAL AS PER MANUFACTURER'S RECOMMENDATIONS. 1
10. PAY FOR EXPANSION JOINT UNDER THE BID ITEM ~~566-005A~~, 566-010A
11. AFTER THE JOINT SYSTEM IS INSTALLED, FLOOD THE JOINT AREA WITH WATER AND INSPECT FROM BELOW FOR LEAKAGE. IF LEAKAGE IS OBSERVED, THE JOINT SYSTEM MUST BE REPAIRED AT THE EXPENSE OF THE CONTRACTOR, AS RECOMMENDED BY THE MANUFACTURER AND APPROVED BY THE ENGINEER.

APPROXIMATE QUANTITIES

CONCRETE	81.2 CY
PLAIN REINF.	3425 LB
EPOXY REINF.	8196 LB

ORIGINAL STORED AT: ITD BRIDGE SECTION - Boise, Idaho

REVISIONS			
NO.	DATE	BY	DESCRIPTION
1	6/2025	NM	EXPANSION JT BID ITEM

DESIGNED C. BOWEN
DESIGN CHECKED W. MEYER
DETAILED S. WALIMAA
DWG. CHECKED W. MEYER
CORRECTIONS

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
CADD FILE NAME
DX\prj\XXXXX\Proj\Dev\Bridge\Plans
19129_brAS_002.dgn
DRAWING DATE: JUNE 2025

WASHINGTON COUNTY

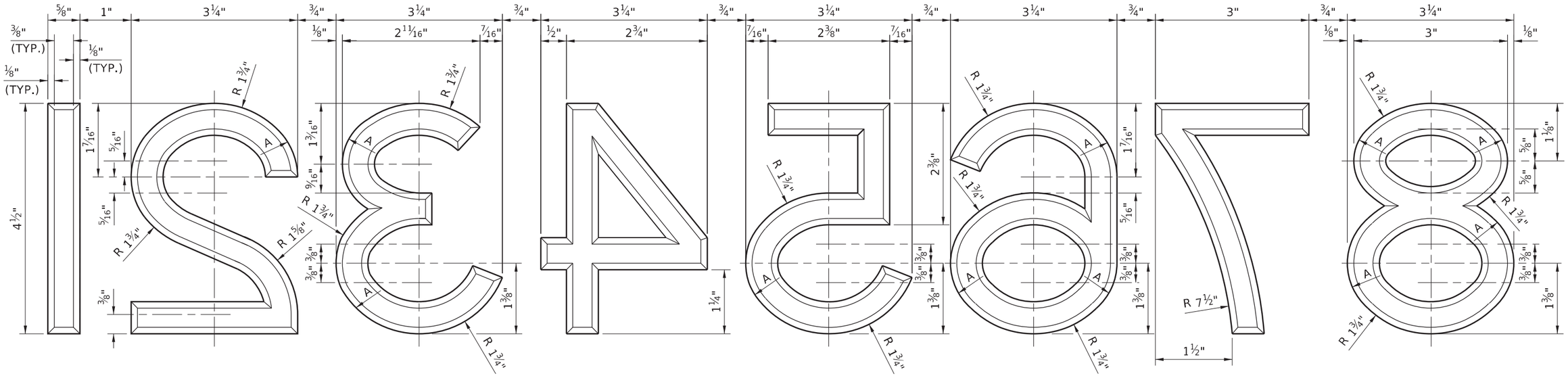
FDR

ENGLISH
PROJECT NO.
A019(129)

APPROACH SLAB DETAILS - SHEET 2 OF 2
263' PRESTRESSED CONCRETE GIRDER BRIDGE
COVE ROAD OVER WEISER RIVER
STA. 30+28.65

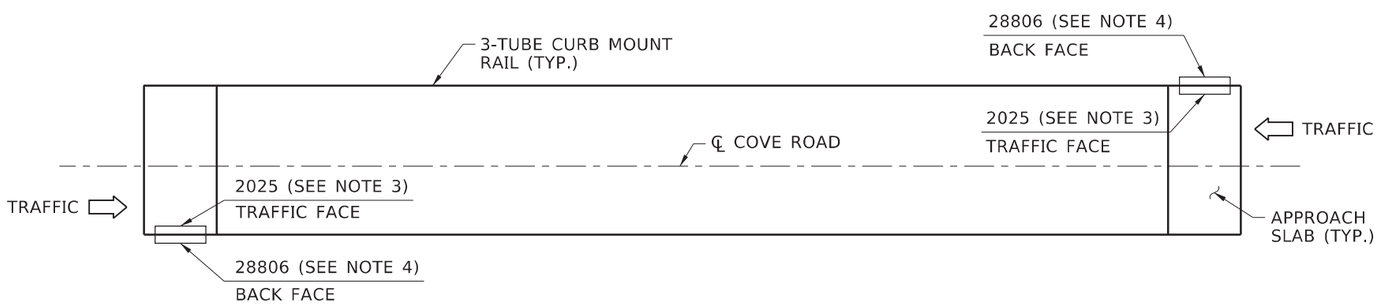
BRIDGE PLANS
BRIDGE KEY NO. 28806
COUNTY WASHINGTON | KEY NO. 19129
BRIDGE DWG. NO. 17761 | SHEET 27 OF 30

PROFESSIONAL ENGINEER LICENSED 6/9/2025 20046 STATE OF IDAHO WESLEY A. MEYER

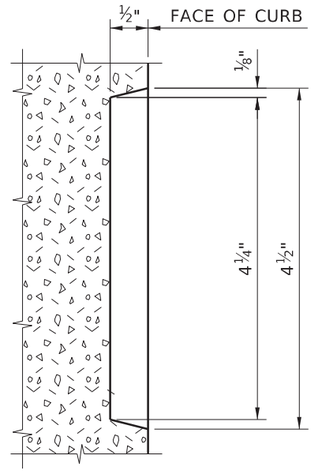


THE NUMBER "9" IS NOT SHOWN, BUT IS SIMILAR TO NUMBER "6".

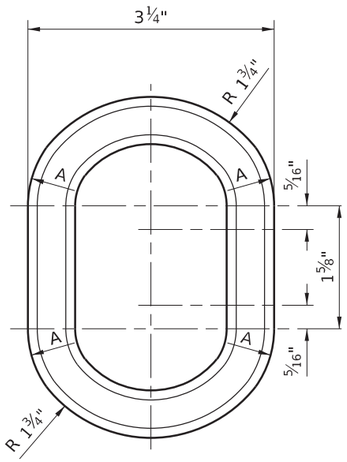
A = RADIUS TO SUIT



DATE PANEL LOCATION
(SEE SHEET 23 FOR PANEL LOCATIONS)
NTS



END VIEW OF NUMERALS
SHOWING ATTACHMENT TO FORMS
NTS



GENERAL NOTES

1. RECESS NUMBERS INTO THE DATE PANEL.
2. DATE PANEL IS INCIDENTAL TO BID ITEM 504-050A - 3-TUBE CURB MOUNT RAIL.
3. PLACE THE 4 DIGIT YEAR CONSTRUCTION COMPLETED ON TRAFFIC FACE.
4. PLACE THE 5 DIGIT BRIDGE KEY NUMBER ON BACK FACE.

ORIGINAL STORED AT: ITD BRIDGE SECTION - Boise, Idaho

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED K. WALKER
DESIGN CHECKED W. MEYER
DETAILED E. PRESCOTT
DWG. CHECKED W. MEYER
CORRECTIONS

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
CADD FILE NAME
DX\prj\XXXXX\Proj\Dev\Bridge\Plans 19129_brDA_001.dgn
DRAWING DATE: MARCH 2025

WASHINGTON COUNTY

HDR

ENGLISH

PROJECT NO. A019(129)

DATE PANEL

263' PRESTRESSED CONCRETE GIRDER BRIDGE
COVE ROAD OVER WEISER RIVER
STA. 30+28.65

BRIDGE PLANS

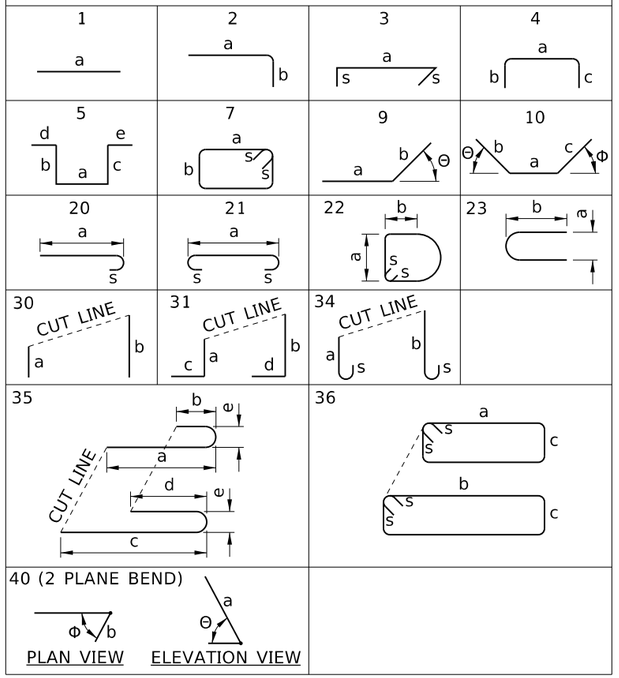
BRIDGE KEY NO. 28806
COUNTY WASHINGTON
KEY NO. 19129
BRIDGE DWG. NO. 17761
SHEET 28 OF 30

PROFESSIONAL ENGINEER LICENSED 3/24/2025 20046 STATE OF IDAHO WESLEY A. MEYER

SUBSTRUCTURE

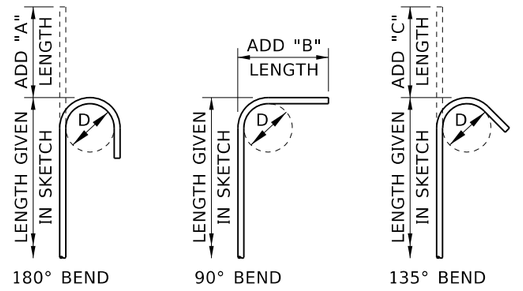
	MARK	LOCATION	BAR SIZE	COAT	NO. OF BARS	BAR TYPE	BARS/ SET	LENGTH a	LENGTH b	LENGTH c	LENGTH d	LENGTH e	ANGLE θ	ANGLE Φ	TOTAL
	A1	ABUTMENT	#8		8	1		40'-2"							321'-4"
*	A2	ABUTMENT	#6		136	7		2'-11"	4'-7"						2221'-4"
	A3	ABUTMENT	#6		24	1		40'-2"							964'-0"
	A4	ABUTMENT	#8		8	1		40'-2"							321'-4"
*	A5	ABUTMENT	#4		408	3		2'-11"							1496'-0"
	A6	ABUTMENT	#7		82	1		7'-6"							615'-0"
	A7	ABUTMENT	#8		100	1		7'-6"							750'-0"
	A8	ABUTMENT	#6		24	4		2'-9½"	3'-0"	3'-0"					211'-0"
	A9	ABUTMENT	#4		8	4		8'-2"	1'-0"	1'-0"					81'-4"
	A10	ABUTMENT	#4		18	4		2'-11"	1'-0"	1'-0"					88'-6"
	F1A	PIER PILE CAP	#8		88	1		15'-2"							1334'-8"
	F1B	PIER PILE CAP	#8		8	1		5'-5"							43'-4"
	F1C	PIER PILE CAP	#8		6	1		11'-2"							67'-0"
	F2A	PIER PILE CAP	#9		24	1		26'-8"							640'-0"
	F2B	PIER PILE CAP	#9		8	1		4'-2"							33'-4"
	F2C	PIER PILE CAP	#9		3	1		21'-5"							64'-3"
*	F3	PIER PILE CAP	#5		200	3		3'-1"							808'-4"
	F4	PIER PILE CAP	#7		60	9		2'-2"	2'-2"				120.00		260'-0"
	F5	PIER PILE CAP	#5		98	4		2'-9"	2'-8"	2'-8"					792'-2"
	F6	PIER PILE CAP	#5		52	4		2'-11"	2'-8"	2'-8"					429'-0"
	F7	PIER PILE CAP	#5		10	1		26'-8"							266'-8"
	F8	PIER PILE CAP	#5		10	1		15'-2"							151'-8"
	F9	PIER PILE CAP	#7		26	1		26'-8"							693'-4"
	F10	PIER PILE CAP	#7		49	1		15'-2"							743'-2"
	C1A	PIER WALL	#9		4	9		27'-9"	1'-7"				75.00		117'-4"
	C1B	PIER WALL	#9		8	40		27'-9"	1'-7"				75.00	22.50	234'-8"
	C1C	PIER WALL	#9		8	40		27'-9"	1'-7"				75.00	45.00	234'-8"
	C1D	PIER WALL	#9		8	40		27'-9"	1'-7"				75.00	67.50	234'-8"
	C1E	PIER WALL	#9		24	2		27'-9"	1'-7"						704'-0"
	C1F	PIER WALL	#9		56	31	14	27'-9"	26'-10"	1'-7"	1'-7"				1617'-0"
	C1G	PIER WALL	#9		2	2		26'-10"	1'-7"						56'-10"
	C2	PIER WALL	#8		60	1		22'-8"							1360'-0"
*	C3A	PIER WALL	#5		7	36	7	16'-7"	17'-8"	2'-10½"					286'-5"
*	C3B	PIER WALL	#5		13	36	13	18'-1"	20'-3"	2'-10½"					585'-0"
*	C3C	PIER WALL	#5		40	22		2'-10½"	1'-5"						445'-8"
	C4A	PIER WALL	#5		21	34	7	6'-8"	7'-9"						163'-8"
	C4B	PIER WALL	#5		39	34	13	8'-3"	10'-4"						385'-2"
	C4C	PIER WALL	#5		60	20		15'-0"							935'-0"
*	C5	PIER WALL	#6		340	3		2'-10½"							1544'-2"
	C6A	PIER WALL	#4		42	35	21	15'-8"	9'-8"	19'-9"	13'-9"	2'-10½"			1304'-6"
	C6B	PIER WALL	#4		8	35	4	19'-11"	13'-11"	20'-6"	14'-6"	2'-10½"			288'-6"
	C7	PIER WALL	#4		50	20		5'-0"							275'-0"
*	C8	PIER WALL	#4		340	3		2'-10½"							1232'-6"
	P1	PIER CAP	#8		6	1		36'-6"							219'-0"
	P2	PIER CAP	#9		7	4		36'-6"	1'-7"	1'-7"					277'-8"
	P3	PIER CAP	#7		10	1		36'-6"							365'-0"
	P4	PIER CAP	#5		220	4		2'-8"	2'-10"	2'-10"					1833'-4"
	P5	PIER CAP	#7		14	23		3'-6"	5'-4"						177'-4"
	P6	PIER CAP	#5		8	4		3'-8"	2'-9"	2'-9"					73'-4"
	P7	PIER CAP	#5		10	4		3'-6"	3'-10"	3'-10"					111'-8"
	P8	PIER CAP	#5		7	4		8'-2"	1'-0"	1'-0"					71'-2"
	P9	PIER CAP	#5		13	4		3'-8"	1'-0"	1'-0"					73'-8"
	P10	PIER CAP	#8		40	1		5'-0"							200'-0"

BAR BEND DIAGRAMS



s = STANDARD END HOOK, STIRRUP HOOK, OR TIE HOOK DIMENSION

BEND DETAILS



"L" = LENGTH GIVEN IN SKETCH

BAR SIZE	STANDARD END HOOK DIMENSIONS ALL GRADES D	A	B	STIRRUP AND TIE HOOK DIMENSIONS ALL GRADES D	B	C
#3	2¼"	5"	6"	1½"	4"	4"
#4	3"	6"	8"	2"	4½"	4½"
#5	3¾"	7"	10"	2½"	6"	5½"
#6	4½"	8"	1'-0"	4½"	1'-0"	8"
#7	5¼"	10"	1'-2"	5¼"	1'-2"	9"
#8	6"	11"	1'-4"	6"	1'-4"	10½"
#9	9½"	1'-3"	1'-7"			
#10	10¾"	1'-5"	1'-10"			
#11	1'-0"	1'-7"	2'-0"			
#14	1'-6¼"	2'-3"	2'-7"			
#18	2'-0"	3'-0"	3'-5"			

SUBSTRUCTURE BAR WEIGHT

BAR SIZE	LINEAR FEET	POUNDS PER FOOT	TOTAL WEIGHT
#4	6529'-0"	0.668	4362
#5	7411'-11"	1.043	7731
#6	4940'-6"	1.502	7421
#7	4497'-10"	2.044	9194
#8	4750'-0"	2.670	12683
#9	4214'-5"	3.400	14329
		TOTAL WEIGHT	55720

SUPERSTRUCTURE BAR WEIGHT

BAR SIZE	LINEAR FEET	POUNDS PER FOOT	TOTAL WEIGHT
#4	1360'-0"	0.668	909
#5	22155'-11"	1.043	23109
#6	1502'-10"	1.502	2258
#7	482'-0"	2.044	986
		TOTAL WEIGHT	27268

EPOXY COATED BAR WEIGHT

BAR SIZE	LINEAR FEET	POUNDS PER FOOT	TOTAL WEIGHT
#5	22315'-10"	1.043	23276
#6	11568'-10"	1.502	17377
		TOTAL WEIGHT	40653

REINFORCEMENT NOTES

1. PROVIDE BEND DETAILS IN ACCORDANCE WITH THE LATEST ACI STANDARD PRACTICE AND AASHTO SPECIFICATIONS.
2. DIMENSIONS SHOWN IN THE "BAR BEND DIAGRAMS" ARE OUT TO OUT OF BEND POINTS OR HOOKS AND/OR END OF BARS UNLESS NOTED OTHERWISE. PIN DIAMETER "D" IS THE SAME FOR ALL BENDS AND HOOKS ON A BAR.
3. NO DEDUCTIONS FOR CURVATURE AT BENDS ARE MADE EXCEPT FOR THE ADJUSTMENTS INCLUDED IN THE ABOVE "ADD LENGTH" DIMENSIONS.
4. * INDICATES STIRRUP OR TIE BAR.
5. PROVIDE BARS THAT CONFORM TO AASHTO M31, GRADE 60.
6. A. PROVIDE EPOXY COATED BARS DESIGNATED "E" IN THE "COAT" COLUMN.
   B. PROVIDE GLASS FIBER REINFORCED POLYMER COATED BARS DESIGNATED "G" IN THE "COAT" COLUMN.
7. ONLY REINFORCING STEEL TO BE PAID FOR UNDER THE BID ITEMS ~~503-005A,~~ 503-010A, 503-015A & 503-020A IS SHOWN ON THIS SHEET. SEE OTHER SHEETS FOR REINFORCING STEEL INCLUDED IN OTHER PAY ITEMS. (1)
8. VERIFY THE QUANTITY, SIZE, AND SHAPE OF THE BAR REINFORCEMENT AGAINST THE STRUCTURE DRAWINGS AND MAKE ANY NECESSARY CORRECTIONS BEFORE ORDERING, AS PER SUBSECTION 503.03 OF THE STANDARD SPECIFICATIONS.

GFRP BAR LENGTH

BAR SIZE	LINEAR FEET
#4	410'-0"

ORIGINAL STORED AT: ITD BRIDGE SECTION - Boise, Idaho

REVISIONS NO.	DATE	BY	DESCRIPTION
1	6/2025	NM	REMOVED 503-005A

DESIGNED W. MEYER
DESIGN CHECKED C. BOWEN
DETAILED S. WALIMAA
DWG. CHECKED C. BOWEN
CORRECTIONS

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
CADD FILE NAME
DX\prj\XXXXX\Proj\Dev\Bridge\Plans
19129_brMR_001.dgn
DRAWING DATE: JUNE 2025

WASHINGTON COUNTY

HDR

ENGLISH

PROJECT NO. A019(129)

METAL REINFORCEMENT - SHEET 1 OF 2

263' PRESTRESSED CONCRETE GIRDER BRIDGE
COVE ROAD OVER WEISER RIVER
STA. 30+28.65

BRIDGE PLANS

BRIDGE KEY NO. 28806	
COUNTY WASHINGTON	KEY NO. 19129
BRIDGE DWG. NO. 17761	SHEET 29 OF 30

PROFESSIONAL ENGINEER LICENSED 6/9/2025 20046 STATE OF IDAHO WESLEY A. MEYER

SUBSTRUCTURE (CONT.)

MARK	LOCATION	BAR SIZE	COAT	NO. OF BARS	BAR TYPE	BARS/ SET	LENGTH a	LENGTH b	LENGTH c	LENGTH d	LENGTH e	ANGLE θ	ANGLE Φ	TOTAL
W1	WINGWALL	#4		36	1		16'-8"							600'-0"
W2	WINGWALL	#7		72	1		16'-8"							1200'-0"
W3	WINGWALL	#7		72	10		2'-6"	1'-10"	1'-10"			45.00	45.00	444'-0"
W4A	WINGWALL	#4		12	1		9'-1"							109'-0"
W4B	WINGWALL	#4		104	30	13	9'-1"	8'-10"						931'-8"
W5	WINGWALL	#8		8	1		16'-8"							133'-4"
W6	WINGWALL	#4		12	1		10'-2"							122'-0"

SUPERSTRUCTURE

MARK	LOCATION	BAR SIZE	COAT	NO. OF BARS	BAR TYPE	BARS/ SET	LENGTH a	LENGTH b	LENGTH c	LENGTH d	LENGTH e	ANGLE θ	ANGLE Φ	TOTAL
A11	ABUT. DIAPH.	#6		68	4		4'-3"	2'-9"	2'-9"					663'-0"
A12	ABUT. DIAPH.	#6		68	4		5'-0½"	2'-3"	2'-9"					682'-10"
A13	ABUT. DIAPH.	#7		12	1		40'-2"							482'-0"
A14A	ABUT. DIAPH.	#5		32	1		7'-8"							245'-4"
A14B	ABUT. DIAPH.	#5		8	1		4'-11"							39'-4"
A15A	ABUT. DIAPH.	#6		16	4		2'-9"	2'-8"	2'-8"					129'-4"
A15B	ABUT. DIAPH.	#6		4	4		2'-9"	2'-8"	1'-6"					27'-8"
A16	ABUT. DIAPH.	#6	E	82	2		10'-0"	4'-5"						1182'-2"
A17	ABUT. DIAPH.	#4	G	82	1		5'-0"							410'-0"
D1	INT. DIAPH.	#4		96	1		7'-8"							736'-0"
D2	INT. DIAPH.	#4		192	1		3'-3"							624'-0"
E1A	PIER DIAPH.	#5		32	1		7'-8"							245'-4"
E1B	PIER DIAPH.	#5		8	1		4'-11"							39'-4"
E2	PIER DIAPH.	#5	E	24	5		3'-6"	5'-3"	5'-3"	0'-10"	0'-10"			376'-0"
S1	DECK TRANS.	#5		263	1		40'-0"							10520'-0"
S2	DECK TRANS.	#5	E	263	21		39'-11"							10804'-11"
S3	DECK TRANS.	#6	E	1048	20		7'-3"							8296'-8"
T1A	DECK LONG.	#5		164	1		60'-0"							9840'-0"
T1B	DECK LONG.	#5		41	1		29'-11"							1226'-7"
T2A	DECK LONG.	#5	E	164	1		60'-0"							9840'-0"
T2B	DECK LONG.	#5	E	41	1		31'-7"							1294'-11"
T3	DECK LONG.	#6	E	40	1		52'-3"							2090'-0"

ORIGINAL STORED AT: ITD BRIDGE SECTION - Boise, Idaho

REVISIONS			
NO.	DATE	BY	DESCRIPTION
△			
△			
△			
△			
△			

DESIGNED W. MEYER
DESIGN CHECKED C. BOWEN
DETAILED S. WALIMAA
DWG. CHECKED C. BOWEN
CORRECTIONS

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
CADD FILE NAME
DX\prjXXXXX\Proj\Dev\Bridge\Plans\19129_brMR_002.dgn
DRAWING DATE: MARCH 2025

WASHINGTON COUNTY

FDR

ENGLISH

PROJECT NO. A019(129)

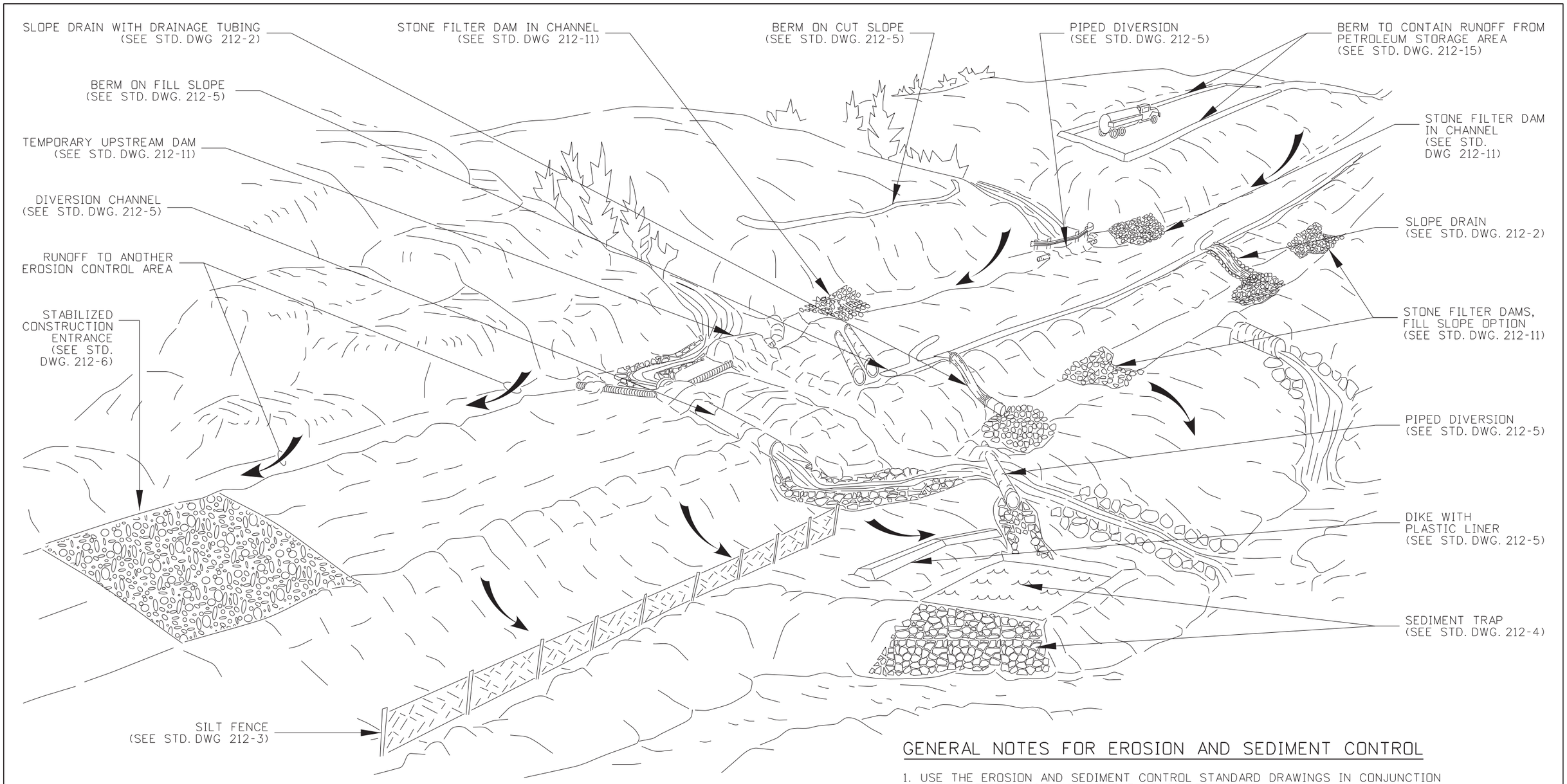
METAL REINFORCEMENT - SHEET 2 OF 2

263' PRESTRESSED CONCRETE GIRDER BRIDGE
COVE ROAD OVER WEISER RIVER
STA. 30+28.65

BRIDGE PLANS

BRIDGE KEY NO. 28806	
COUNTY WASHINGTON	KEY NO. 19129
BRIDGE DWG. NO. 17761	SHEET 30 OF 30

PROFESSIONAL ENGINEER LICENSED 3/24/2025 20046 STATE OF IDAHO WESLEY A. MEYER



GENERAL NOTES FOR EROSION AND SEDIMENT CONTROL

1. USE THE EROSION AND SEDIMENT CONTROL STANDARD DRAWINGS IN CONJUNCTION WITH THE ITD BEST MANAGEMENT PRACTICES MANUAL.
2. THE PLACEMENT OF EROSION CONTROL MEASURES IS SITE SPECIFIC. OBTAIN THE ENGINEER'S APPROVAL OF THE EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO INSTALLATION.
3. EROSION AND SEDIMENT CONTROL MEASURES PLACEMENT AND INSTALLATION MAY BE CONTROLLED BY THE NPDES, 404 PERMIT OR CONTRACT SPECIFICATIONS.
4. DRAWING NOT TO SCALE

ORIGINAL STORED AT: ITD, Headquarters 3311 West State Boise, Idaho

PROFESSIONAL ENGINEER LICENSED ORIGINAL SIGNED AND DATED STATE OF IDAHO MARCH 18, 2021 13683 RYAN D. LANCASTER

REVISIONS								
NO.	DATE	BY	NO.	DATE	BY	NO.	DATE	BY
1	9-93	MSM	6	12-16	RDL			
2	6-96	MSM	7	02-21	TWF			
3	10-10	KEH						
4	10-11	KEH						
5	12-12	RDL						

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY

CADD FILE NAME: 212-01_0421.dgn

DRAWING DATE: APRIL, 1993

IDAHO TRANSPORTATION DEPARTMENT

BOISE IDAHO

ORIGINAL SIGNED BY: KEVIN SABLAN

DESIGN/TRAFFIC SERVICES ENGINEER

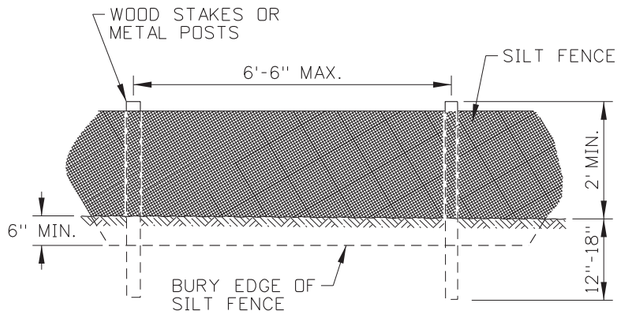
STANDARD DRAWING

EROSION AND SEDIMENT CONTROL EXAMPLE APPLICATIONS

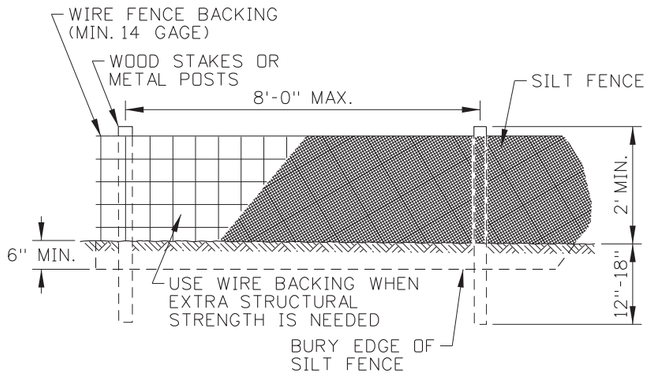
English

STANDARD DRAWING NO. 212-1

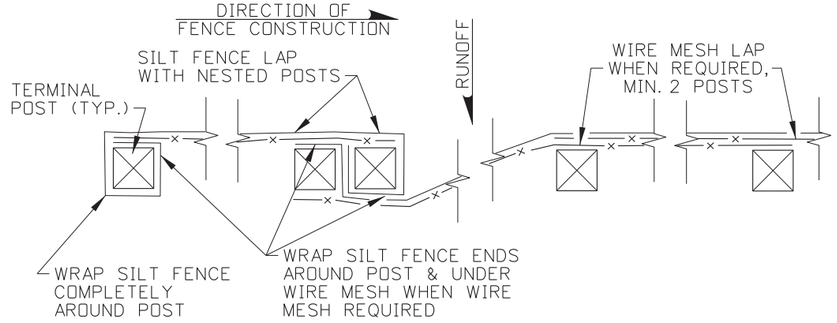
SHEET 1 OF 1



SILT FENCE (NO WIRE BACKING)



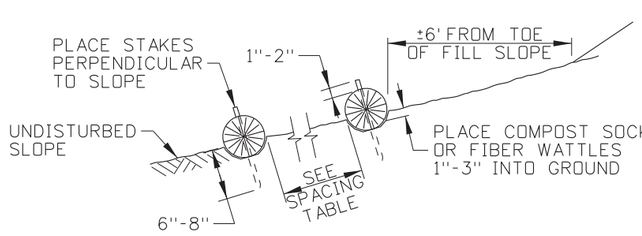
SILT FENCE (WIRE BACKING)



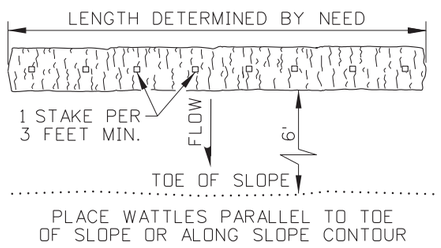
SILT FENCE LAP DETAIL

FIBER WATTLE & COMPOST SOCK SPACING TABLE				
SLOPE	WATTLE SIZE			
	6"	9"	12"	20"
1:1	5 FT	10 FT	15 FT	20 FT
2:1	10 FT	20 FT	30 FT	40 FT
3:1	15 FT	30 FT	45 FT	60 FT
4:1 OR FLATTER	20 FT	40 FT	60 FT	80 FT

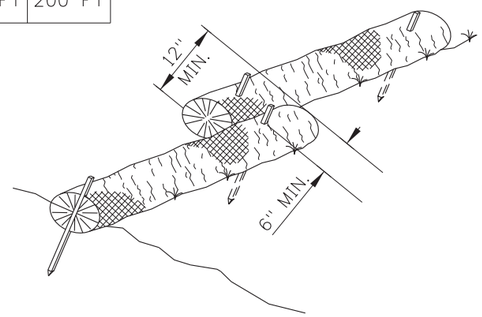
SILT FENCE SPACING TABLE			
SLOPE	SOIL TYPE		
	SILTY	CLAYS	SANDY
1:1	50 FT	75 FT	100 FT
2:1	75 FT	100 FT	125 FT
4:1	100 FT	125 FT	150 FT
10:1 OR FLATTER	125 FT	150 FT	200 FT



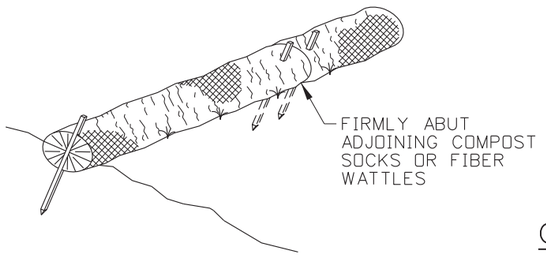
COMPOST SOCK AND FIBER WATTLE
SIDE VIEW



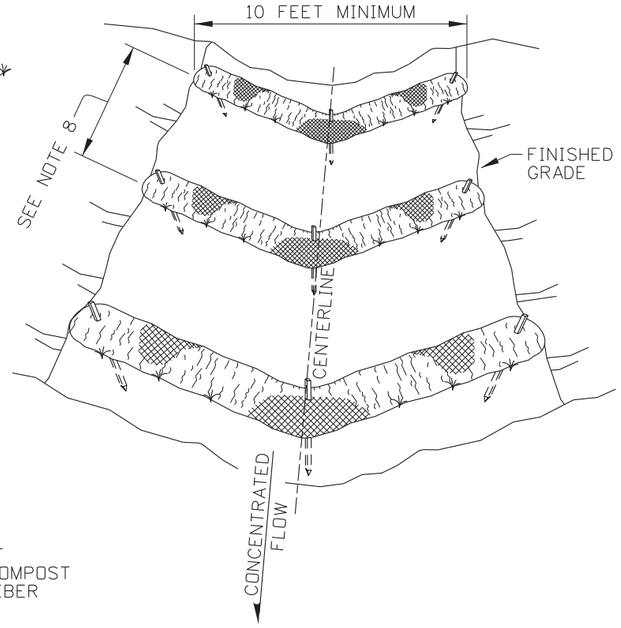
COMPOST SOCK AND FIBER WATTLE
PLAN VIEW



COMPOST SOCK AND FIBER WATTLE
OVERLAPPING DETAIL



COMPOST SOCK AND FIBER WATTLE
ABUTTING DETAIL



COMPOST SOCK AND FIBER WATTLE
TEMPORARY CHECK DAM DETAIL

NOTES

1. SEE THE GENERAL NOTES FOR EROSION CONTROL STANDARD DRAWINGS ON 212-1.
2. THE NEED FOR TEMPORARY SEDIMENT CONTROL DEVICES ARE DETERMINED BY SITE DESIGN. SPACE SILT FENCES, COMPOST SOCKS, AND FIBER WATTLES IN ACCORDANCE WITH THE SILT FENCE SPACING TABLE AND FIBER WATTLE & COMPOST SOCK SPACING TABLE.
3. INSTALL TEMPORARY SEDIMENT CONTROL BARRIERS IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS AND SPECIFICATIONS. THE DIMENSIONS SHOWN ARE GENERAL GUIDELINES.
4. PLACE SEDIMENT BARRIERS TO FOLLOW THE SLOPE CONTOURS. USE EITHER METAL POSTS OR WOOD STAKES.
5. ENSURE RUNOFF PASSES THROUGH THE SILT FENCE AND NOT AROUND THE FENCE.
6. GROUND SILT FENCES WITH WIRE MESH IN ACCORDANCE WITH THE GROUNDING DETAIL SHOWN ON STANDARD DRAWING 610-1.
7. EXTEND OR JOIN SILT FENCE USING SILT FENCE LAP WITH NESTED POSTS.
8. SPACE CHECK DAMS ACCORDING TO THE HEIGHT OF THE DAM AND THE SLOPE OF THE CHANNEL SO THE BACKWATER FROM THE DOWNSTREAM DAM REACHES THE TOE OF THE UPSTREAM DAM.
9. ON SLOPES, TURN THE ENDS OF EACH ROW OF COMPOST SOCKS AND FIBER WATTLES UPSLOPE TO PREVENT RUNOFF FROM FLOWING AROUND THE SOCK OR WATTLE.
10. REMOVE SEDIMENT FROM THE UPSLOPE SIDE OF SILT FENCES, COMPOST SOCKS, AND FIBER WATTLES WHEN ACCUMULATION HAS REACHED 1/2 OF THE EFFECTIVE HEIGHT OF THE BARRIER.
11. DRAWING NOT TO SCALE.

ORIGINAL STORED AT: ITD, Headquarters 3311 West State Boise, Idaho

PROFESSIONAL ENGINEER LICENSED RYAN D. LANCASTER ORIGINAL SIGNED DATE ORIGINAL SIGNED MARCH 18, 2021 13683 STATE OF IDAHO RYAN D. LANCASTER

REVISIONS									
NO.	DATE	BY	NO.	DATE	BY	NO.	DATE	BY
1	09-93	MSM	6	01-13	RDL			
2	12-94	MSM	7	03-21	TWF			
3	06-96	GFK						
4	10-10	KEH						
5	10-11	KEH						

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY

CADD FILE NAME: 212-03_0421.dgn

DRAWING DATE: APRIL, 1993

IDAHO TRANSPORTATION DEPARTMENT

BOISE IDAHO

ORIGINAL SIGNED BY: KEVIN SABLAN

DESIGN/TRAFFIC SERVICES ENGINEER

STANDARD DRAWING

TEMPORARY EROSION AND SEDIMENT CONTROL

SILT FENCE, FIBER WATTLE, AND COMPOST SOCK

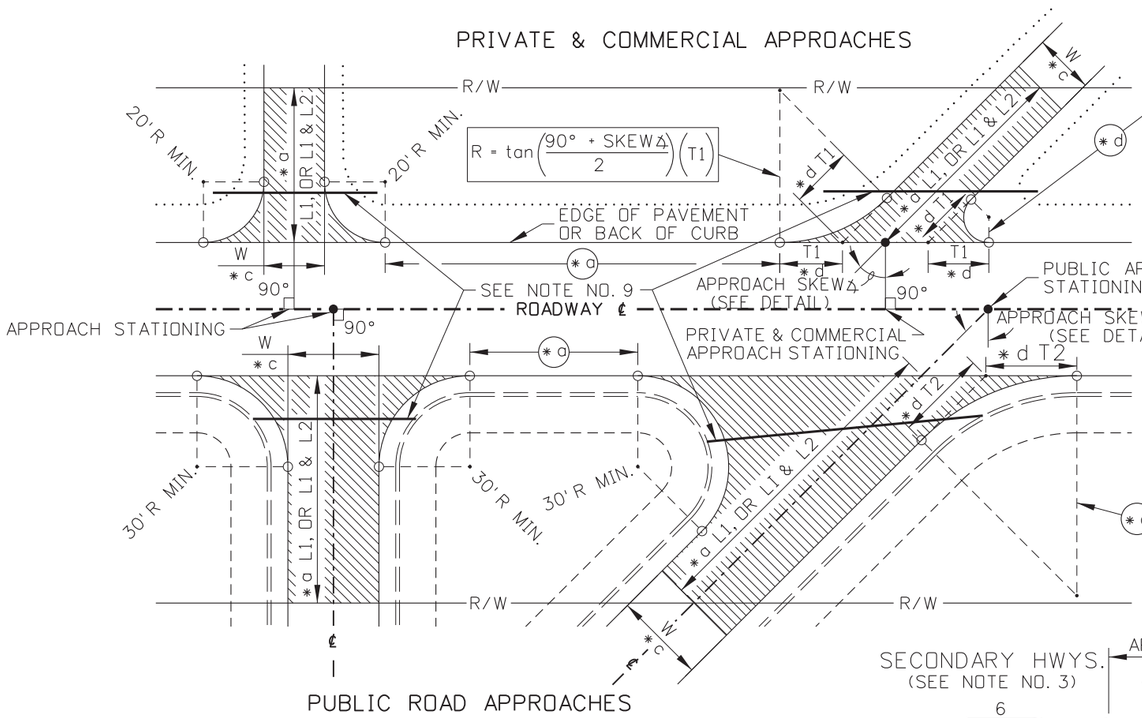
REQUIRES STD. DWG. 212-1

English

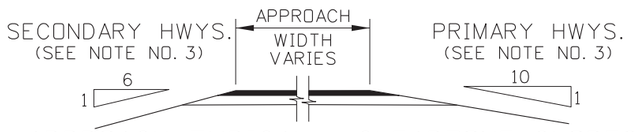
STANDARD DRAWING NO.

212-3

SHEET 1 OF 1



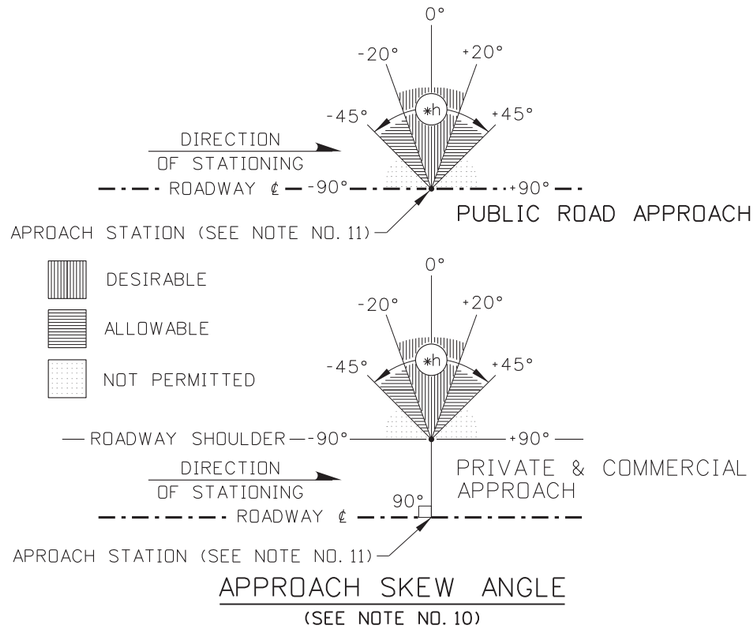
APPROACH PLAN TYPICALS



APPROACH TYPICAL - CLEARZONE SLOPES

(PUBLIC & PRIVATE)

APPROACH PLAN LEGEND & APPROACH NOMENCLATURE	
CUT	
FILL	
PROPOSED DITCH	
PROPOSED CULVERT	
SKEW Δ	SEE NOTE NO. 10
R	RADIUS OF SHD. CURVE
T1 & T2	TANGENT OF SHD. CURVE
W	APPROACH WIDTH
G1 & G2	APPR. GRADES 1 & 2 (%)
C	CHANGE IN GRADE (%)
L1 & L2	HORZ. LENGTH OF GRADE

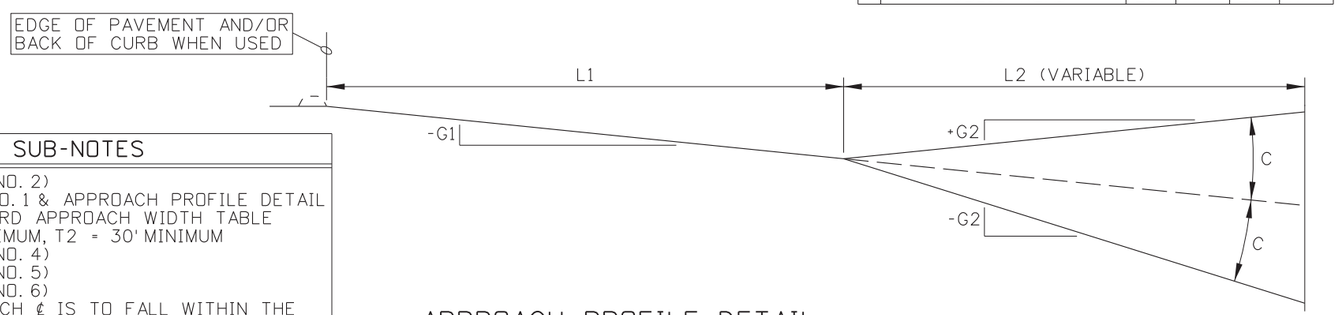


APPROACH SKEW ANGLE

(SEE NOTE NO. 10)

APPROACH GRADE TABLE				
TRAFFIC TYPE	GRADE PARAMETER G1 (RANGE)	G2 (MAX.)	MAX. CHANGE IN GRADE C (*e)	MINIMUM LENGTH L1
HIGH VOLUME (COMMERCIAL, INDUSTRIAL)	-2% TO -3%	±5%	±3%	40'
LOW VOLUME (COMMERCIAL, INDUSTRIAL)	-2% TO -5%	±8%	±6%	40'
SINGLE RESIDENTIAL, FARMYARD, FIELD	-2% TO -8%	±15% * g	VEHICLE CLEARANCE	10'
MULTIPLE RESIDENTIAL	-2% TO -8%	±15% * g	±6%	20'
PUBLIC ROAD	-2%	* f	±2%	20'

(*a) STANDARD APPROACH WIDTH TABLE					
POSTED SPEED (mph)		≤35		>35	
MIN./MAX. WIDTH		MIN.	MAX.	MIN.	MAX.
APPR. TYPE	MULTIPLE RESIDENTIAL	28'	40'	28'	40'
	SINGLE RESIDENTIAL, FARMYARD, FIELD	12'	40'	20'	40'
	COMMERCIAL (ONE-WAY)	15'	30'	20'	30'
	COMMERCIAL (TWO-WAY)	25'	40'	25'	40'
	PUBLIC ROAD	28'	N/A	28'	N/A



APPROACH PROFILE DETAIL

SUB-NOTES

- * a (SEE NOTE NO. 2)
- * b SEE NOTE NO. 1 & APPROACH PROFILE DETAIL
- * c SEE STANDARD APPROACH WIDTH TABLE
- * d T1 = 20' MINIMUM, T2 = 30' MINIMUM
- * e (SEE NOTE NO. 4)
- * f (SEE NOTE NO. 5)
- * g (SEE NOTE NO. 6)
- * h THE APPROACH ℄ IS TO FALL WITHIN THE ALLOWABLE OR DESIRABLE LIMITS. THE DESIRABLE LIMIT IS CONSIDERED THE "SAFEST OPTION."

NOTES

1. RURAL PRIVATE, COMMERCIAL, AND PUBLIC APPROACHES SHALL BE PAVED TO THE RIGHT-OF-WAY LINE OR TO THE BACK OF THE SHOULDER CURVE (APPROACH RADIUS). FARMYARD AND FIELD APPROACHES THAT ARE OCCASIONALLY USED MAY BE PAVED A MINIMUM OF 5' FROM THE SHOULDER LINE. APPROACHES ON EXISTING UNPAVED HIGHWAYS ARE EXEMPT.
2. REFER TO THE ITD ADMINISTRATIVE POLICY 5005 FOR ADDITIONAL INFORMATION ON LOCATION OF APPROACHES.
3. WITHIN THE CLEARZONE THE SIDE SLOPES OF APPROACHES SHALL BE A MINIMUM OF 6:1 OF SECONDARY HIGHWAYS AND A MINIMUM OF 10:1 ON PRIMARY HIGHWAYS.
4. WHEN THE "MAXIMUM CHANGE IN GRADE" (APPROACH GRADE TABLE) "C" IS EXCEEDED, A MINIMUM 10' VERTICAL CURVE SHALL BE USED IN THE APPROACH PROFILE.
5. THE % GRADE OF "G2" SHALL BE A MAXIMUM OF 7% FOR FLAT TERRAIN, 11% FOR ROLLING TERRAIN, OR 15% FOR MOUNTAINOUS.
6. APPROACH GRADES EXCEEDING 10% ARE NOT RECOMMENDED BECAUSE EMERGENCY VEHICLES MAY BE IMPEDED.
7. THE BALLAST REQUIREMENTS OF RURAL APPROACHES SHALL BE AS SHOWN ON THE PLANS.
8. WHEN A MAILBOX TURNOUT IS INSTALLED WITH A RURAL APPROACH, STD. DWG. 405-2 IS REQUIRED.
9. ALL RURAL PRIVATE AND COMMERCIAL APPROACHES SHALL BE DESIGNED AND CONSTRUCTED IN A MANNER THAT THE APPROACH DRAINAGE IS INDEPENDENT AND DOES NOT CONTRIBUTE TO EXISTING HIGHWAY DRAINAGE. ALL RURAL PUBLIC APPROACHES SHALL BE DESIGNED AND CONSTRUCTED TO ADDRESS BOTH THE MAIN HIGHWAY AND APPROACH DRAINAGE.
10. THE APPROACH SKEW ANGLE IS THE DEFLECTION ANGLE BETWEEN A LINE PERPENDICULAR TO THE HIGHWAY CENTERLINE AND THE APPROACH CENTERLINE.
11. RURAL PRIVATE AND COMMERCIAL APPROACHES ARE REFERENCED LEFT OR RIGHT OF THE HIGHWAY CENTERLINE STATION TO THE CENTER OF THE APPROACH OPENING WHICH IS AT THE EDGE OF PAVEMENT OR BACK OF CURB. A PUBLIC APPROACH STATION OCCURS WHERE THE PUBLIC APPROACH CENTERLINE INTERSECTS THE HIGHWAY CENTERLINE.
12. NOT TO SCALE.

ORIGINAL STORED AT: ITD, Headquarters 3311 West State Boise, Idaho

PROFESSIONAL ENGINEER * LAND SURVEYOR REGISTERED ORIGINAL SIGNED BY: MILFORD MILLER DATE ORIGINAL SIGNED: JUNE 19, 2007 STATE OF IDAHO MILFORD MILLER

REVISIONS									
NO.	DATE	BY	NO.	DATE	BY	NO.	DATE	BY
1	01-00	MSM	6	12-05	MSM			
2	01-02	MSM	7	06-07	MSM			
3	07-02	MSM						
4	10-02	MSM						
5	08-04	MSM						

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY

CADD FILE NAME: 405-1_0607.dgn

DRAWING DATE: SEPTEMBER, 1993

IDAHO TRANSPORTATION DEPARTMENT

BOISE IDAHO

ORIGINAL SIGNED BY: LOREN THOMAS
ASSISTANT CHIEF ENGINEER (DEVELOPMENT)
ORIGINAL SIGNED BY: STEVEN HUTCHINSON
CHIEF ENGINEER

STANDARD DRAWING

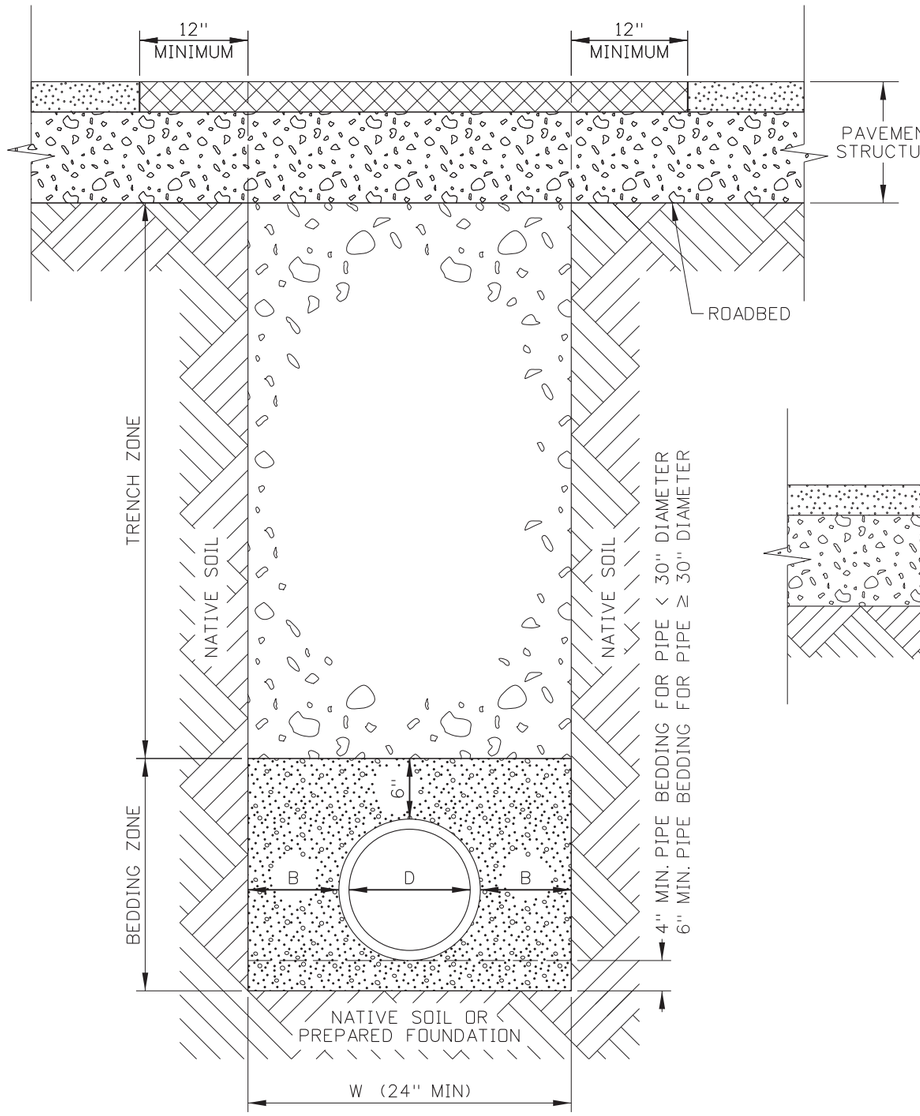
RURAL APPROACHES

English

STANDARD DRAWING NO. 405-1

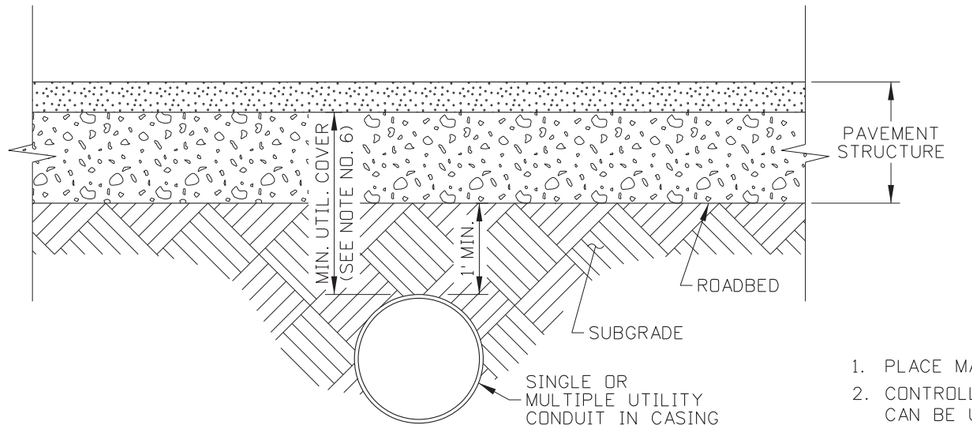
SHEET 1 OF 1

2240

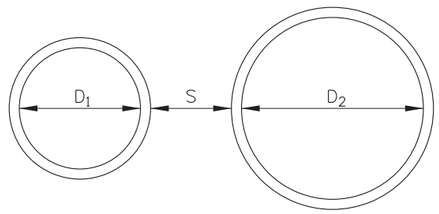


TRENCHING

MATERIALS AND COMPACTION TABLE				
PIPE LOCATION	BEDDING ZONE		TRENCH ZONE	
	MATERIAL REQUIREMENT	COMPACTION REQUIREMENT	MATERIAL REQUIREMENT	COMPACTION REQUIREMENT
INSIDE ROADWAY PRISM	COARSE AGGREGATE FOR CONCRETE SIZE NO. 1, NO. 2A, OR NO. 2B (SUBSECTION 703.02)	ENGINEER ACCEPTANCE	3/4" AGGREGATE FOR BASE (SUBSECTION 703.04) (SEE NOTE NO. 1)	CLASS A COMPACTION (SECTION 205) OR 95% OF IT-74
OUTSIDE ROADWAY PRISM	COARSE AGGREGATE FOR CONCRETE SIZE NO. 1, NO. 2A, OR NO. 2B (SUBSECTION 703.02)	ENGINEER ACCEPTANCE	GRANULAR BORROW OR NATIVE MATERIALS WITH MAXIMUM SIZE OF 6" AND FREE FROM WOOD WASTE OR DELETERIOUS MATERIALS. (SEE NOTE NO. 1)	CLASS D COMPACTION (SECTION 205)



JACKING, DRIVING, OR BORING



MULTIPLE PIPE INSTALLATION DETAIL
(SEE NOTE NO. 4)

MINIMUM DIMENSION TABLE (SEE NOTE NOS. 3 AND 4)		
D (INCHES)	B (INCHES)	S (INCHES)
≤ 6	10	24
7 TO 15	12	24
16 TO 30	18	24
> 30	24	GREATER OF 24 OR D/2

NOTES

1. PLACE MATERIAL IN ACCORDANCE WITH SECTION 210.
2. CONTROLLED DENSITY FILL (CDF) IN ACCORDANCE WITH SECTION 522 CAN BE USED IF APPROVED BY THE ENGINEER.
3. LOOSE LIFT THICKNESS DIRECTLY ON TOP OF PIPE MAY BE INCREASED WITH APPROVAL TO PREVENT DAMAGE TO PIPE DURING COMPACTION.
4. WHEN TWO DIFFERENT DIAMETER PIPES ARE INSTALLED, USE THE LARGER D DIMENSION TO DETERMINE THE S DIMENSION.
5. WHEN THE PIPE DIAMETER IS 36 INCHES OR GREATER AND THE PIPE IS INSTALLED DURING EMBANKEMENT CONSTRUCTION, USE B DIMENSION EQUAL TO THE PIPE DIAMETER.
6. PROVIDE THE FOLLOWING MINIMUM COVER DEPTHS:
   WATER: 4'
   LIQUID OR GAS PETROLEUM: 4'
   ELECTRICAL MAIN LINE: 4'
   COMMUNICATIONS OR ELECTRONICS: 2'
   UTILITY OWNERS AND LOCAL PUBLIC AGENCIES MAY HAVE DIFFERENT MINIMUM COVER DEPTHS. CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE REQUIRED COVER DEPTHS.
7. PERFORM TRENCHING PER OSHA REQUIREMENTS.
8. DO NOT DISTURB THE INSTALLED PIPE OR CONDUIT, OR LEAVE VOIDS WHEN USING TRENCH BOXES OR SHIELDS.
9. DRAWINGS NOT TO SCALE.

ORIGINAL STORED AT: ITD, Headquarters 3311 West State Boise, Idaho

PROFESSIONAL ENGINEER REGISTERED JOHN W. INGRAM III 6755 STATE OF IDAHO

REVISIONS									
NO.	DATE	BY	NO.	DATE	BY	NO.	DATE	BY
1	12-15	RDL	6	03-21	TWF			
2	03-16	RDL						
3	06-17	RDL						
4	06-18	HEB						
5	11-18	TWF						

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY

CADD FILE NAME: 601-1_0421.dgn

DRAWING DATE: MAY 2014

IDAHO TRANSPORTATION DEPARTMENT

BOISE IDAHO

ORIGINAL SIGNED BY: KEVIN SABLAN

DESIGN/TRAFFIC SERVICES ENGINEER

STANDARD DRAWING

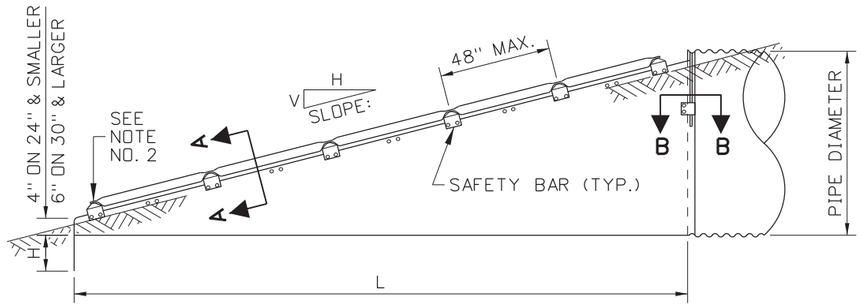
PIPE AND CONDUIT INSTALLATION

English

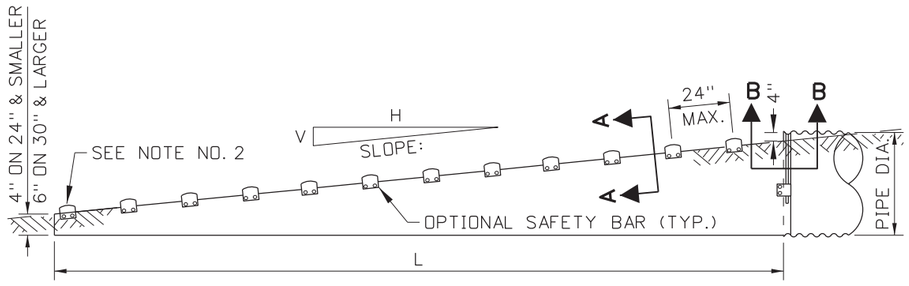
STANDARD DRAWING NO.

601-1

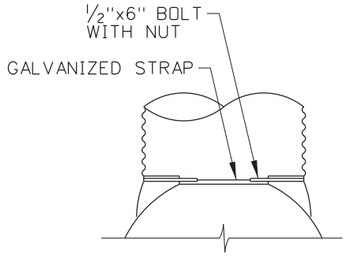
SHEET 1 OF 1



SIDE VIEW OF CROSS DRAINAGE STRUCTURE

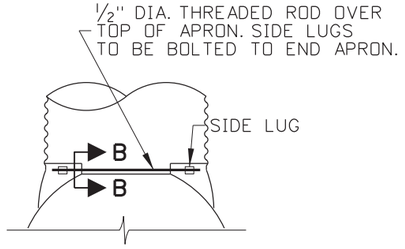


SIDE VIEW OF PARALLEL DRAINAGE STRUCTURE



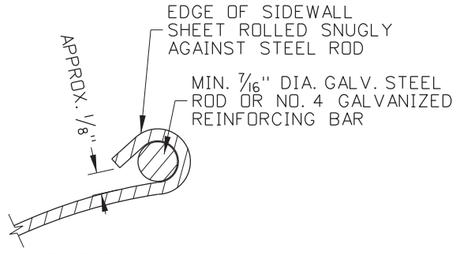
TYPE 1 CONNECTOR DETAIL

CIRCULAR POPES 15" THROUGH 24"

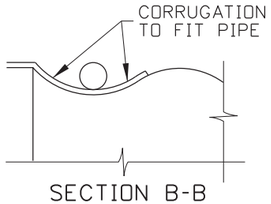


TYPE 2 CONNECTOR DETAIL

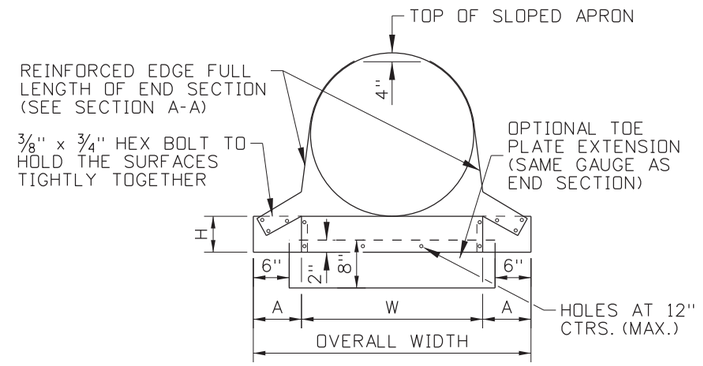
USE WITH 30" AND LARGER CIRCULAR PIPES AND ALL ARCHED PIPES



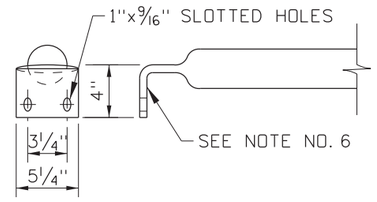
SECTION A-A



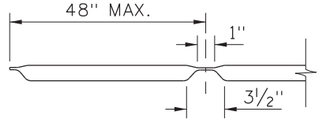
SECTION B-B



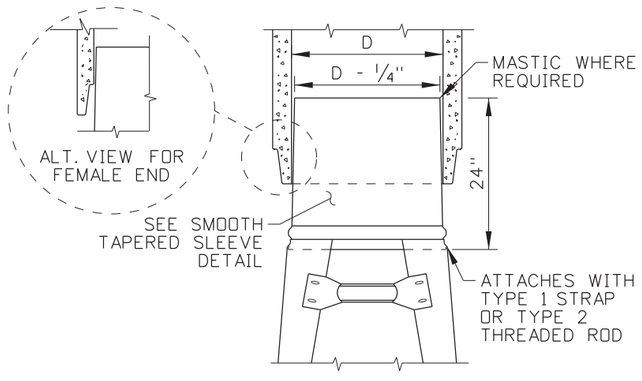
FRONT VIEW - ROUND PIPE



SAFETY BAR DETAIL

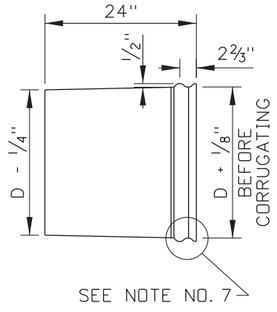


LONGITUDINAL BAR DETAIL

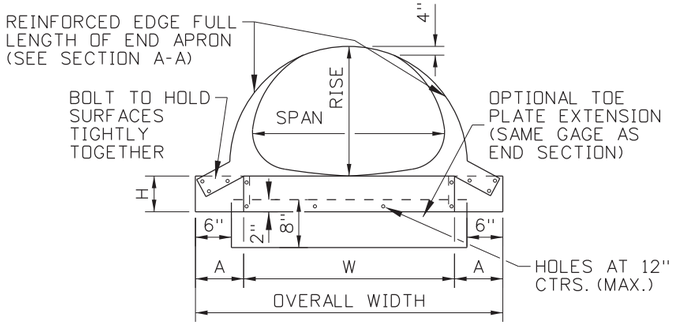


TAPERED SLEEVE FOR ATTACHING STEEL END SECTIONS TO CONCRETE OR SMOOTH PIPE

END SECTION WITH OPTIONAL SAFETY BAR SHOWN FOR ILLUSTRATION ONLY



SMOOTH TAPERED SLEEVE DETAIL



FRONT VIEW - ARCHED PIPE

ORIGINAL STORED AT: ITD, Headquarters 3311 West State Boise, Idaho

PROFESSIONAL ENGINEER LICENSED RYAN D. LANCASTER ORIGINAL SIGNED BY MAY 12, 2016 13683 STATE OF IDAHO RYAN D. LANCASTER

REVISIONS								
NO.	DATE	BY	NO.	DATE	BY	NO.	DATE	BY
1	7-92	MSM	6	05-16	RDL			
2	6-97	MSM						
3	11-00	MSM						
4	3-05	MSM						
5	12-12	RDL						

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY

CADD FILE NAME: 608-3_0516.dgn

DRAWING DATE: NOVEMBER, 1990

IDAHO TRANSPORTATION DEPARTMENT

BOISE IDAHO

ORIGINAL SIGNED BY: JESSE BARRUS

DESIGN/TRAFFIC SERVICES ENGINEER

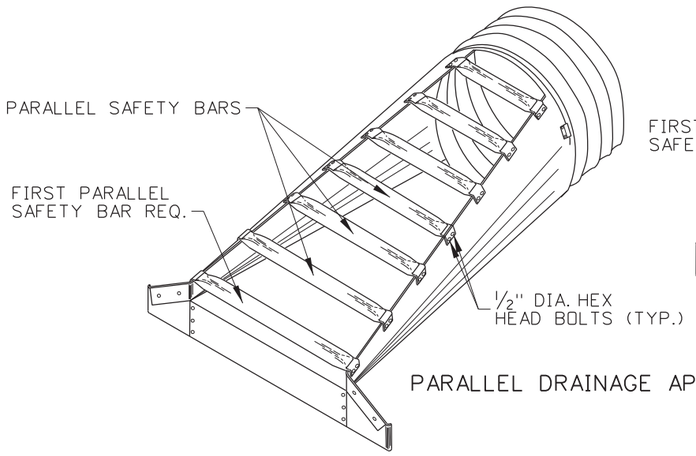
STANDARD DRAWING

METAL SAFETY SLOPE APRON

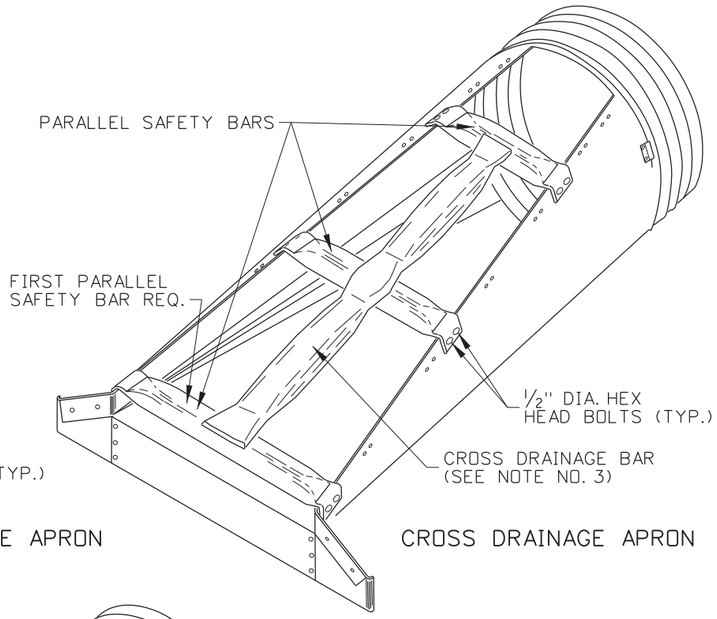
English

STANDARD DRAWING NO. 608-3

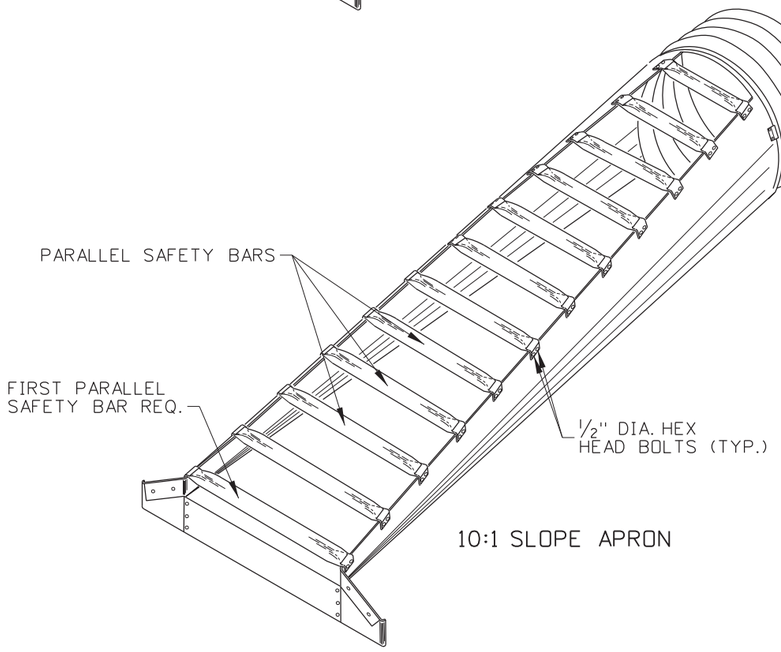
SHEET 1 OF 2



PARALLEL DRAINAGE APRON



CROSS DRAINAGE APRON



10:1 SLOPE APRON

PERSPECTIVE VIEWS - APRONS

APRONS FOR CIRCULAR PIPES												
PIPE DIA. (IN.)	MIN. THICK.		DIMENSIONS (±2")				L DIMENSIONS (±2") (SEE NOTE NO. 5)					
	IN.	GAGE	A	H	W	OVERALL WIDTH	SLOPE H:V	LENGTH (IN.)	SLOPE H:V	LENGTH (IN.)	SLOPE H:V	LENGTH (IN.)
15	.064	16	8	6	21	37	4:1	20	6:1	30	10:1	70
18	.064	16	8	6	24	40	4:1	32	6:1	48	10:1	100
21	.064	16	8	6	27	43	4:1	44	6:1	66	10:1	130
24	.064	16	8	6	30	46	4:1	56	6:1	84	10:1	160
30	.109	12	12	9	36	60	4:1	80	6:1	120	10:1	220
36	.109	12	12	9	42	66	4:1	104	6:1	156	10:1	280
42	.109	12	16	12	48	80	4:1	128	6:1	192	N/A	
48	.109	12	16	12	54	86	4:1	152	6:1	228	N/A	
54	.109	12	16	12	60	92	4:1	176	6:1	264	N/A	
60	.109	12	16	12	66	98	4:1	200	6:1	300	N/A	

APRONS FOR ARCHED PIPES														
EQUIV. DIA. (IN.)	(INCHES)		MIN. THICK.		DIMENSIONS (±2")				L DIMENSIONS (±2") (SEE NOTE NO. 5)					
	SPAN	RISE	IN.	GAGE	A	H	W	OVERALL WIDTH	SLOPE H:V	LENGTH (IN.)	SLOPE H:V	LENGTH (IN.)	SLOPE H:V	LENGTH (IN.)
18	21	15	.064	16	8	6	27	43	4:1	20	6:1	30	10:1	70
21	24	18	.064	16	8	6	30	46	4:1	32	6:1	48	10:1	100
24	28	20	.064	16	8	6	34	50	4:1	40	6:1	60	10:1	120
30	35	24	.079	14	12	9	41	65	4:1	56	6:1	84	10:1	160
36	42	29	.109	12	12	9	48	72	4:1	76	6:1	114	10:1	210
42	49	33	.109	12	16	12	55	87	4:1	92	6:1	138	N/A	
48	57	38	.109	12	16	12	63	95	4:1	112	6:1	168	N/A	
54	64	43	.109	12	16	12	70	102	4:1	132	6:1	198	N/A	
60	71	47	.109	12	16	12	77	109	4:1	148	6:1	222	N/A	
72	83	57	.109	12	16	12	89	121	4:1	188	6:1	282	N/A	

NOTES

1. PROVIDE SLOTTED HOLES FOR PARALLEL SAFETY BAR ATTACHMENT.
2. USE AT LEAST ONE PARALLEL SAFETY BAR AT THE STRUCTURE OPENING. USE PARALLEL SAFETY BARS AT THE SPACING SHOWN WHEN THE PIPE DIAMETER IS GREATER THAN 18". THE NUMBER OF BARS WILL VARY DEPENDING ON THE STRUCTURE LENGTH (L).
3. USE CROSS DRAINAGE BAR WHEN THE PIPE DIAMETER IS GREATER THAN 30". WELD CROSS DRAINAGE BAR TO PARALLEL SAFETY BARS FOR SINGLE PIECE STRUCTURE.
4. LARGE END SECTIONS MAY BE PROVIDED IN MULTIPLE PANELS. WHEN MULTIPLE PANELS ARE USED, JOIN THE PANELS WITH BOLTS AND NUTS.
5. FOR 10:1 SLOPE END SECTIONS, USE 0.109" THICK (12 GAUGE) MATERIALS.
6. USE SCHEDULE 40 3" GALVANIZED STEEL PIPE FOR SAFETY BARS. FLATTEN END, THEN BEND OUTSIDE 4" TO MATCH STRUCTURE SIDES.
7. FORM ½"x2⅔" CORRUGATIONS. MAINTAIN INSIDE DIAMETER OF SLEEVE. FINISHED END TO BE THE SAME DIAMETER AS CORRUGATED STEEL PIPE DIAMETER.
8. DRAWINGS NOT TO SCALE.

ORIGINAL STORED AT: ITD, Headquarters 3311 West State Boise, Idaho

PROFESSIONAL ENGINEER LICENSED RYAN D. LANCASTER STATE OF IDAHO 13683 ORIGINAL SIGNED BY MAY 12, 2016 ORIGINAL SIGNED

REVISIONS									
NO.	DATE	BY	NO.	DATE	BY	NO.	DATE	BY
1	7-92	MSM	6	05-16	RDL			
2	6-97	MSM						
3	11-00	MSM						
4	3-05	MSM						
5	12-12	RDL						

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY

CADD FILE NAME: 608-3_0516.dgn

DRAWING DATE: NOVEMBER, 1990

IDAHO TRANSPORTATION DEPARTMENT

BOISE IDAHO

ORIGINAL SIGNED BY: JESSE BARRUS

DESIGN/TRAFFIC SERVICES ENGINEER

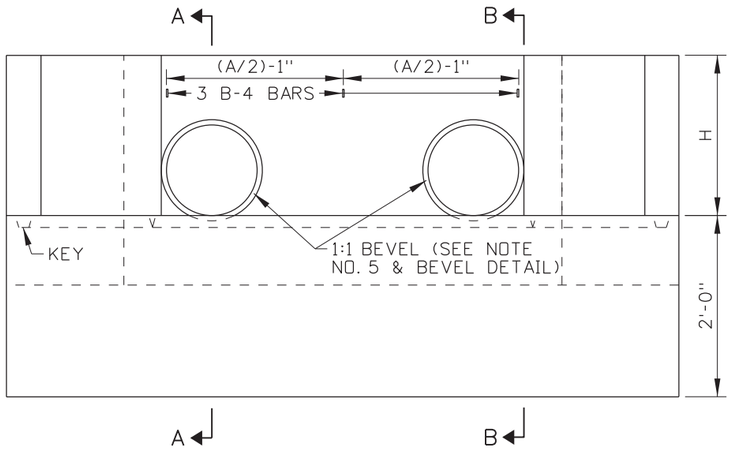
STANDARD DRAWING

METAL SAFETY SLOPE APRON

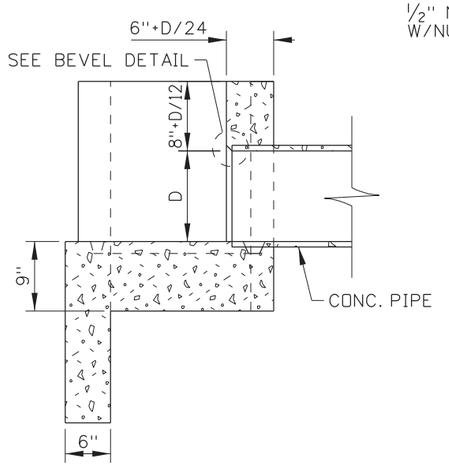
English

STANDARD DRAWING NO. 608-3

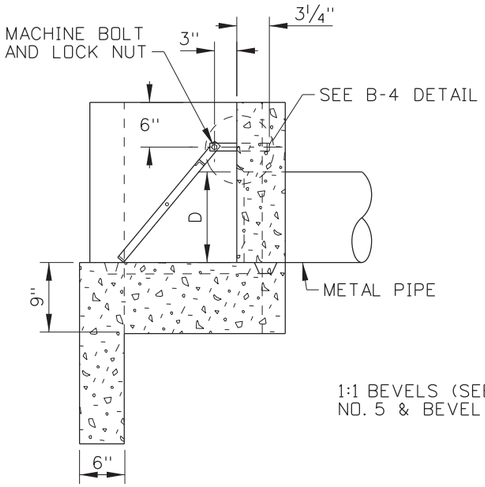
SHEET 2 OF 2



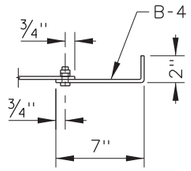
ELEVATION



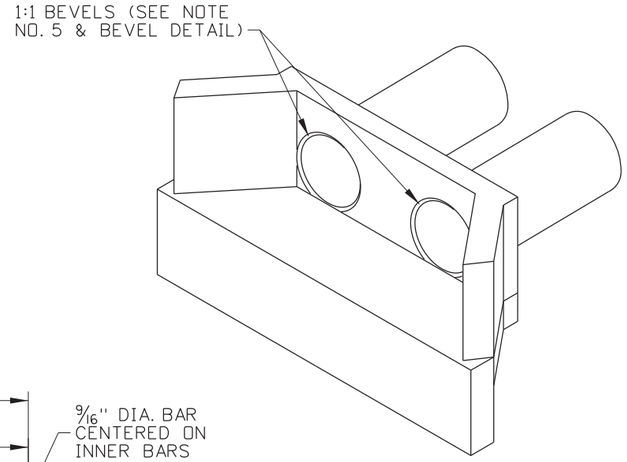
SECTION A-A



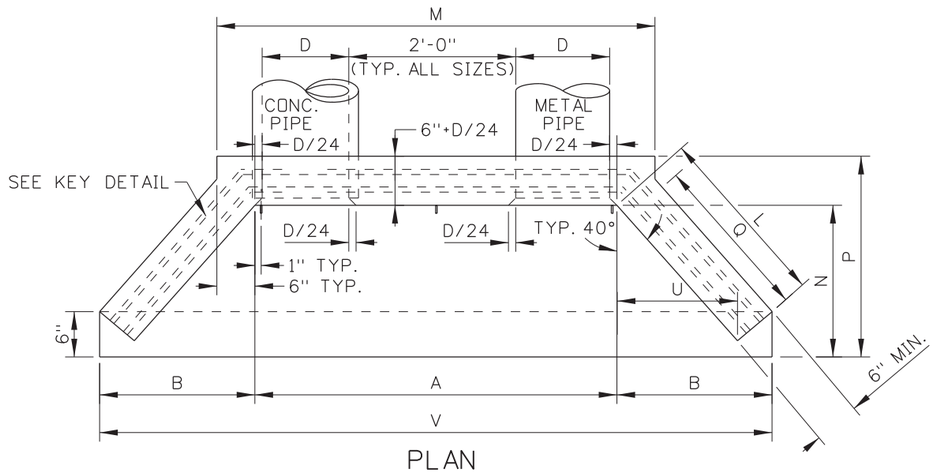
SECTION B-B



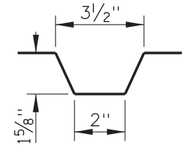
B-4 DETAIL



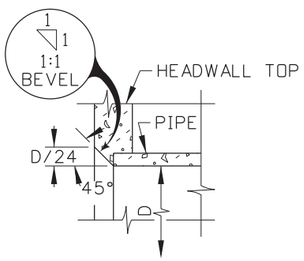
ISOMETRIC VIEW



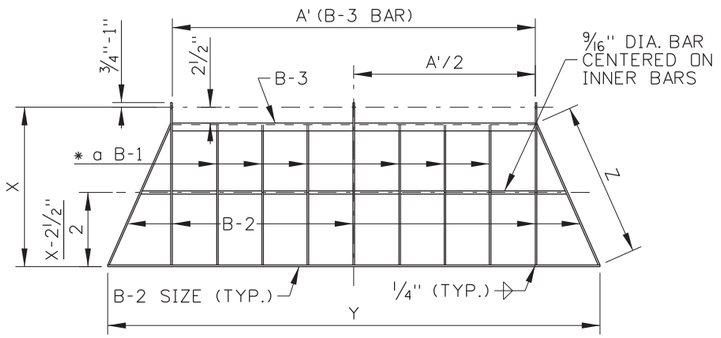
PLAN



KEY DETAIL



BEVEL DETAIL



* a BARS SHALL BE EQUALLY SPACED IN GRATE NOT TO EXCEED 8" CENTER TO CENTER OR LESS THAN 6" CENTER TO CENTER.

INLET GRATE DETAIL

ORIGINAL STORED AT: ITD, Headquarters 3311 West State Boise, Idaho

PROFESSIONAL ENGINEER * LAND SURVEYOR REGISTERED ORIGINAL SIGNED MILFORD MILLER MARCH 4, 2005 STATE OF IDAHO MILFORD MILLER

2240

REVISIONS								
NO.	DATE	BY	NO.	DATE	BY	NO.	DATE	BY
1	02-68		6	12-92	TMR			
2	09-68		7	10-01	MSM			
3	10-69		8	06-03	MSM			
4	04-90	GB	9	03-05	MSM			
5	03-92	MSM						

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY

CADD FILE NAME: 609-3_0305.dgn

DRAWING DATE: MAY, 1964

IDAHO TRANSPORTATION DEPARTMENT

BOISE IDAHO

ORIGINAL SIGNED BY: LOREN THOMAS
ASSISTANT CHIEF ENGINEER (DEVELOPMENT)
ORIGINAL SIGNED BY: STEVEN HUTCHINSON
CHIEF ENGINEER

STANDARD DRAWING

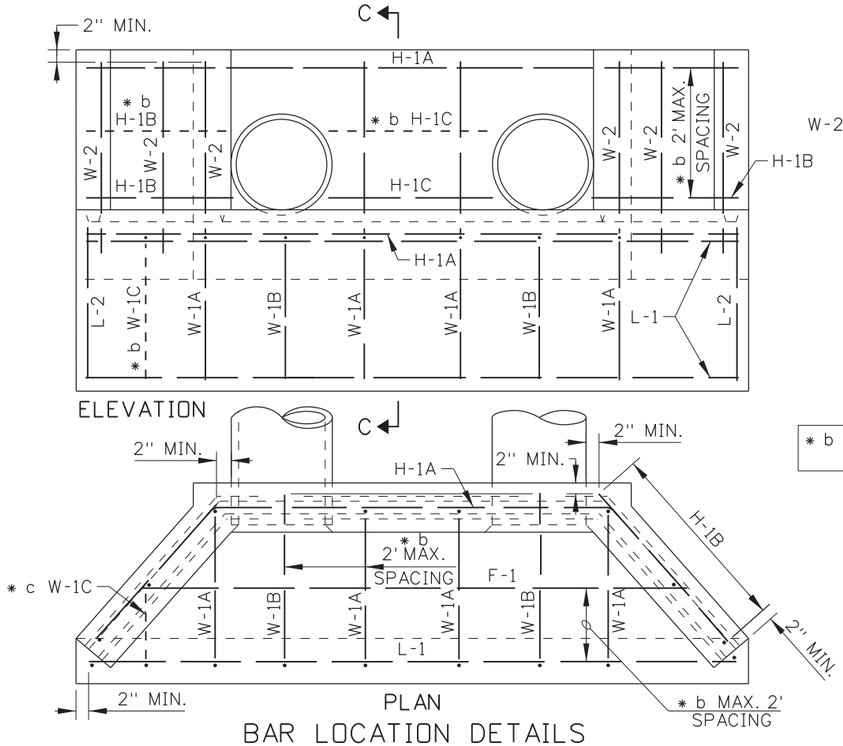
CONCRETE HEADWALL FOR TWIN PIPE CULVERTS

English

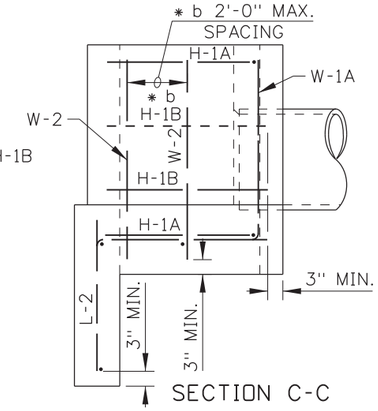
STANDARD DRAWING NO. 609-3

METAL REINFORCEMENT TABLE

MARK	LOCATION	BAR SIZE	SKETCH
F-1	FLOOR	NO. 4	
H-1A	HORIZ. IN TOP OF WING WALL & IN FLOOR BACKWALL	NO. 4	130°
H-1B	HORIZ. IN WING WALL BETWEEN H-1As' (PAIRS)	NO. 4	2" MIN., 2" MIN., 2"*TYP., PIPE, H-1C, PIPE, W-1A, 130°
H-2	VERT. IN BCKWL. WALL BETWEEN AROUND PIPE	NO. 4	2", VARIES, 2", PIPE, PIPE
L-1	TOP & BOTOM OF INLET LIP IN FLOOR	NO. 4	
L-2	VERTICAL IN FLOOR, & INLET LIP	NO. 4	
W-1A	EACH SIDE OF PIPE IN BACKWALL, FLOOR, & INLET LIP	NO. 4	90°, 90°
W-1B	IN FLOOR, & INLET LIP, UNDER PIPES	NO. 4	90°
W-1C	IN FLOOR, & INLET LIP	NO. 4	90°
W-2	VERTICAL IN WING WALLS	NO. 4	



BAR LOCATION DETAILS



* b ADDITIONAL BARS NEEDED WHEN SPACE IS GREATER THAN 2'-0"

CONCRETE QUANTITY TABLE

NOMINAL SIZE DIA. (IN.)	CONCRETE (C.Y.)			
	WING & BCKWL.	FLOOR	LIP	TOTAL
12	0.3	0.4	0.2	0.9
15	0.4	0.6	0.2	1.2
18	0.5	0.7	0.2	1.4
21	0.6	0.8	0.3	1.7
24	0.7	1.0	0.3	2.0
30	1.0	1.3	0.3	2.6
36	1.3	1.7	0.4	3.4
42	1.7	2.1	0.5	4.3

GRATE DIMENSION & MATERIALS TABLE

NOMINAL SIZE DIA. (IN.)	IN INCHES							
	DIMENSIONS				BAR SIZES			
	A'	* c X	Y	Z	B-1	B-2	B-3	B-4
12	12	19 1/4	29 1/2	18 7/8	1x1/4	1 1/4x1/4	1 1/4x1 1/4x1/4	1x1/4x9
15	15 1/4	24	39 1/2	24 3/4	1x1/4	1 1/4x1/4	1 1/4x1 1/4x1/4	1x1/4x9
18	18 1/2	28	46 1/2	29	1x1/4	1 1/4x1/4	1 1/4x1 1/4x1/4	1x1/4x9
21	21 3/4	33	55 3/4	35	1x1/4	1 1/4x1/4	1 1/4x1 1/4x1/4	1x1/4x9
24	25	37 1/2	66 1/2	40 5/8	1x1/4	1 1/4x1/4	1 1/4x1 1/4x1/4	1x1/4x9
30	31 1/2	46 3/4	81 1/2	50 7/8	1 1/4x1/4	1 1/2x1/4	1 1/2x1 1/2x1/4	1 1/2x1/4x9
36	38	56	98	61 1/8	1 1/2x1/4	1 3/4x1/4	1 3/4x1 3/4x1/4	1 3/4x1/4x9
42	44 1/2	65	116	72	1 3/4x1/4	2 1/4x3/8	2 1/4x2 1/2x3/8	2 1/4x3/8x9

* c ALLOW 3/4"-1" EXTRA BAR LENGTH FOR HOLE FABRICATION

HEADWALL DIMENSION TABLE

NOMINAL SIZE DIA. (IN.)	IN INCHES										
	D/24	A	B	H	L	M	N	P	Q	U	V
12	1/2	49	20 3/8	21	24 5/8	61	21	27 1/2	22 1/2	15 7/8	89 3/4
15	5/8	55 1/4	23 1/8	24 1/4	28 7/8	67 1/4	24 1/4	30 7/8	26 5/8	18 5/8	101 1/2
18	3/4	61 1/2	25 7/8	27 1/2	33 1/8	73 1/2	27 1/2	34 1/4	30 7/8	21 1/4	113 1/4
21	7/8	67 3/4	28 5/8	30 3/4	37 3/8	79 3/4	30 3/4	37 5/8	35 1/8	24	125
24	1	74	31 3/8	34	41 5/8	86	34	41	39 3/8	26 3/4	136 3/4
30	1 1/4	86 1/2	36 3/4	40 1/2	50 1/8	98 1/2	40 1/2	47 3/4	47 7/8	32 1/4	160
36	1 1/2	99	42 1/4	47	58 5/8	111	47	54 1/2	56 3/8	37 5/8	183 1/2
42	1 3/4	111 3/4	47 5/8	53 1/2	67 1/8	123 1/2	53 1/2	61 1/4	64 7/8	43 1/8	207

METAL REINFORCEMENT TABLE

BAR	NOMINAL PIPE SIZE DIAMETER (IN.)													
	12		15		18		21		24		30		36		42	
	NO.	LGTH.	NO.	LGTH.	NO.	LGTH.	NO.	LGTH.	NO.	LGTH.	NO.	LGTH.	NO.	LGTH.	NO.	LGTH.
F-1	1	71 7/8	1	80	1	90	1	98	1	106	1	124	1	143	2	145/175
H-1A	2	100	2	115	2	129	2	149	2	160	2	189	2	218	2	248
H-1B	2	25	2	30	4	34	4	38	4	43	4	52	4	58	6	67
H-1C	1	22	1	28	2	22/25	2	22/23	2	22/28	2	22/32	2	21/36	3	29/20/40
L-1	2	85 7/8	2	100	2	109	2	121	2	132 3/4	2	156	2	179	2	202
L-2	2	19	2	19	2	19	2	19	2	19	2	19	2	19	2	19
W-1A	4	61 3/4	4	68 3/4	4	74 3/4	4	81 1/2	3	87 1/2	3	100 1/2	4	114	4	127
W-1B	0	N/A	0	N/A	2	N/A	2	49	2	53	2	59	2	66	2	68
W-1C	0	N/A	0	N/A	2	34	2	34	2	35	2	40	2	43	2	47
W-2	4	25	4	28 1/2	4	32	4	35 1/4	4	38 1/4	6	44 3/4	6	51	6	57 1/2
TOT. WT.	51 lbs.		58 lbs.		72 lbs.		81 lbs.		86 lbs.		105 lbs.		126 lbs.		158 lbs.	

NOTES

1. THIS HEADWALL SHALL BE USED ONLY WHEN PROTECTED BY GUARDRAIL OR INSTALLED OUTSIDE THE CLEAR ZONE.
2. CAST-IN-PLACE HEADWALLS SHALL CONFORM TO SECTION 609 - MINOR STRUCTURES, OF THE CURRENT ITD STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
3. THE METAL REINFORCEMENT SHALL BE NO. 4 BARS. ALL REINFORCEMENT SHALL HAVE A MINIMUM CONCRETE COVER OF 2" AND 3" MINIMUM COVER IF CAST AGAINST EARTH.
4. ALL EDGES TO HAVE 3/4" CHAMFER OR TOOLED EDGES.
5. ALL PIPE CULVERTS WITH A CONCRETE HEADWALL SHALL HAVE THE INLET HEADWALLS BEVELED. USE ENTRANCE LOSS COEFFICIENT K_e = 0.2 FOR BEVELED ENTRANCES.
6. THE METAL FOR THE GRATE SHALL MEET THE REQUIREMENTS OF ASTM A 36. WELDING OF THE METAL GRATE SHALL MEET THE REQUIREMENTS OF THE AMERICAN WELDING SOCIETY D1.1. GRATES FOR INLET HEADWALLS WILL BE REQUIRED ONLY WHEN SHOWN ON THE ROADWAY PLANS. GRATES NEED NOT BE PAINTED OR GALVANIZED.
7. USE CONCRETE, METAL, OR PLASTIC PIPE WITH HEADWALL (CONCRETE PIPE SHOWN ON DRAWING).
8. NOT TO SCALE.

ORIGINAL STORED AT: ITD, Headquarters 3311 West State Boise, Idaho

PROFESSIONAL ENGINEER * LAND SURVEYOR REGISTERED ORIGINAL SIGNED MILFORD MILLER DATE ORIGINAL SIGNED MARCH 4, 2005 STATE OF IDAHO

REVISIONS

NO.	DATE	BY	NO.	DATE	BY	NO.	DATE	BY
1	02-68		6	12-92	TMR			
2	09-68		7	10-01	MSM			
3	10-69		8	06-03	MSM			
4	04-90	GB	9	03-05	MSM			
5	03-92	MSM						

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY

CADD FILE NAME: 609-3_0305.dgn

DRAWING DATE: MAY, 1964

IDAHO TRANSPORTATION DEPARTMENT

BOISE IDAHO

ORIGINAL SIGNED BY: LOREN THOMAS
ASSISTANT CHIEF ENGINEER (DEVELOPMENT)
ORIGINAL SIGNED BY: STEVEN HUTCHINSON
CHIEF ENGINEER

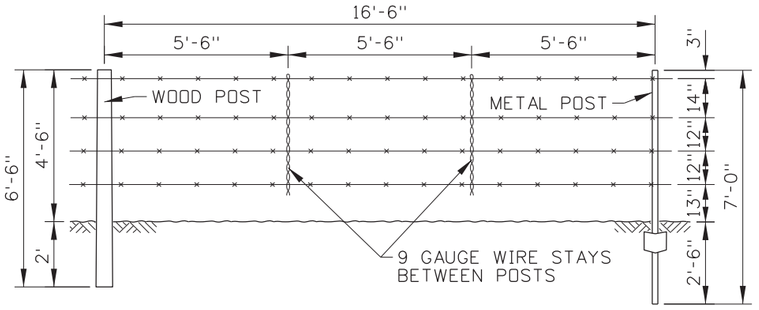
STANDARD DRAWING

CONCRETE HEADWALL FOR TWIN PIPE CULVERTS

English

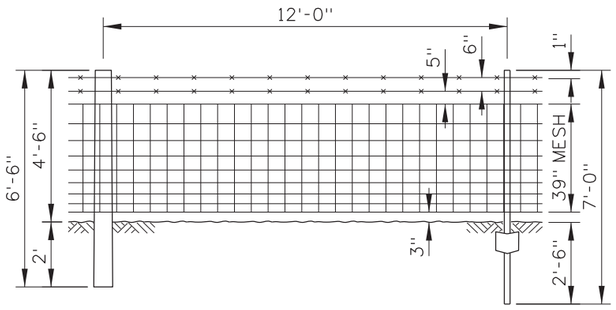
STANDARD DRAWING NO. 609-3

SHEET 2 OF 2



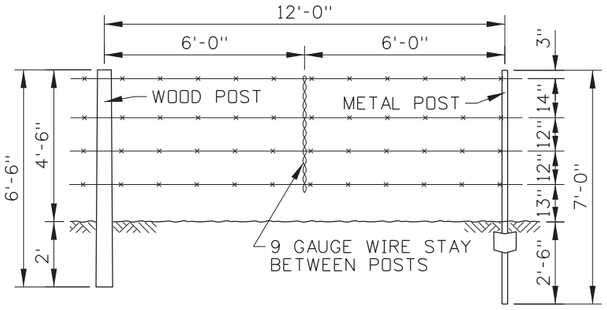
1A (WOOD) 1B (METAL)

FENCE TYPE 1



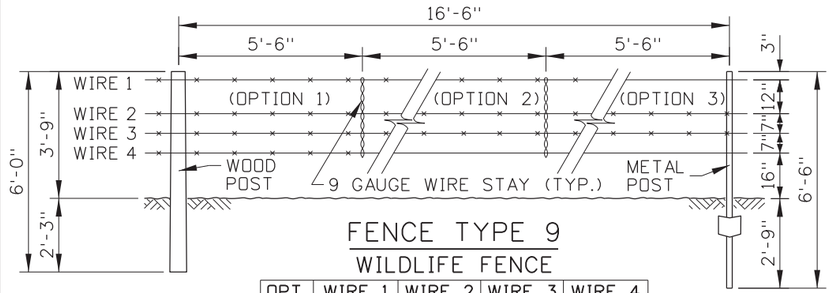
3A (WOOD) 3B (METAL)

FENCE TYPE 3



5-A (WOOD) 5-B (METAL)

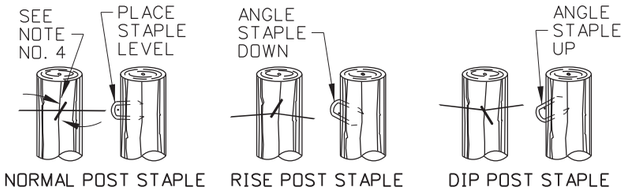
FENCE TYPE 5



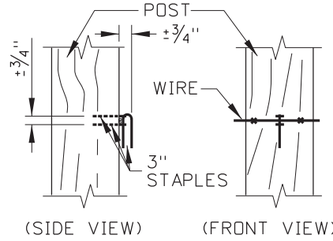
9-A (WOOD) 9-B (METAL)

FENCE TYPE 9
WILDLIFE FENCE

OPT.	WIRE 1	WIRE 2	WIRE 3	WIRE 4
1	BARBED	BARBED	BARBED	BARBED
2	BARBED	BARBED	BARBED	SMOOTH
3	SMOOTH	BARBED	BARBED	SMOOTH

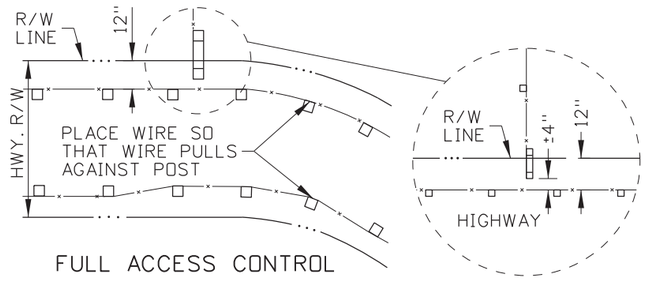


WOOD FENCE POST STAPLE DETAILS
(SEE NOTE NO. 4)

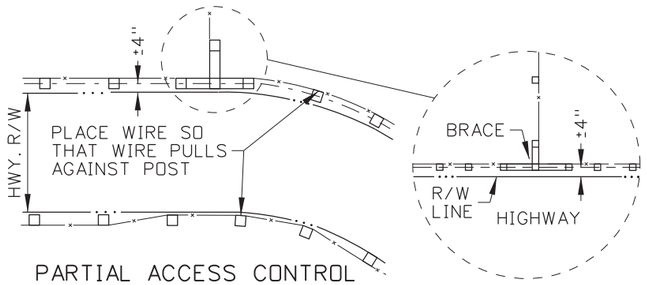


DROP FENCE STAPLE DETAIL
(SEE NOTE NO. 1)

WIRE AND WIRE MESH FENCE GROUNDING TABLE			
FENCE DIST. FROM TRANSMISSION LINE	kV	POST MATERIAL	GROUNDING INTERVAL
0' - 100'	500	ALL	200'
100' - 200'	500	ALL	500'
0' - 100'	345	ALL	400'
100' - 150'	345	ALL	1,000'
50' - 100'	230	ALL	500'

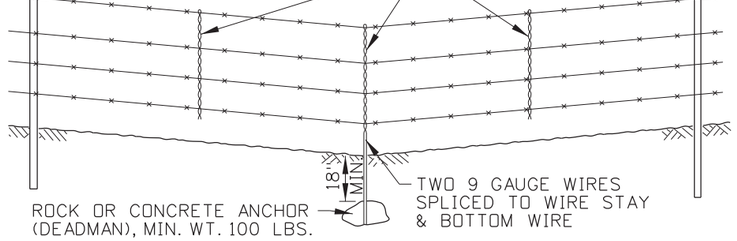


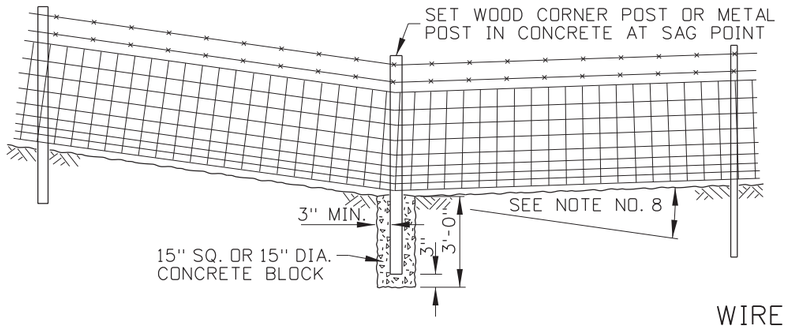
FULL ACCESS CONTROL



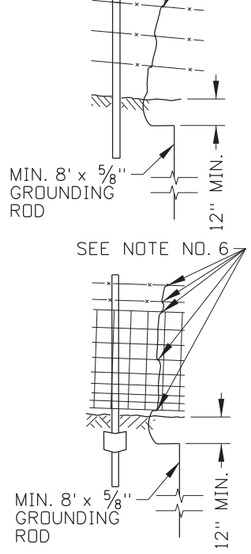
PARTIAL ACCESS CONTROL

RIGHT-OF-WAY FENCE LOCATION DETAILS





SAG DETAILS



WIRE AND WIRE MESH FENCE GROUNDING DETAILS

BARBED OR WOVEN WIRE FENCE NOTES

1. DESIGNATE POST MATERIAL ON PROJECT PLANS. INDICATE WHETHER THE FENCE WILL BE A DROP FENCE AND THE LOCATION WHERE DROP FENCE STAPLES WILL BE USED.
2. DESIGNATE OPTION 1, 2, OR 3 FOR FENCE TYPE 9 - WILDLIFE FENCE - ON PROJECT PLANS.
3. ATTACH ANCHOR PLATES TO METAL POSTS UNLESS THE POST IS SET IN SOLID ROCK. GROUT DRILL HOLES WHEN METAL POSTS ARE SET IN SOLID ROCK.
4. STAPLE EACH WIRE TO EACH WOOD POST. STAPLE ALTERNATING WIRES ON MESH WIRE FENCES. USE TWO STAPLES ON BRACES AND IN SAG SECTIONS. ROTATE THE STAPLES TO STRADDLE ACROSS THE WOOD GRAIN. ALLOW ENOUGH SPACE FOR WIRE TO SLIDE THROUGH THE STAPLE.
5. ATTACH FENCE WIRE OR WIRE MESH TO STEEL POSTS WITH WIRE CLAMPS. USE ONE WIRE CLAMP PER WIRE. ON WIRE MESH, USE FOUR WIRE CLAMPS PER POST OR EIGHT WIRE CLAMPS PER POST IN SAG SECTIONS.
6. GROUND WIRE AND WIRE MESH FENCES THAT ARE NEAR POWER TRANSMISSION LINES OR THAT PASS UNDER TRANSMISSION LINES. SEE THE WIRE AND WIRE MESH FENCE GROUNDING TABLE AND WIRE AND WIRE MESH FENCE GROUNDING DETAILS. TO GROUND, CONNECT EACH FENCE WIRE TO 6 GAUGE BRAIDED GROUND CABLE WITH SPLIT BOLT CABLE CONNECTORS. FOR WIRE MESH FENCE, CONNECT THE BRAIDED GROUND CABLE EVERY 18". GROUND THE FENCE ONCE IF THE FENCE SECTION IS SHORTER THAN THE GROUNDING INTERVAL.
7. WHEN THE FENCE TERMINATES AT A BRIDGE, ENSURE THAT THE TOP OF THE FENCE DOES NOT EXTEND BEYOND THE TOP OF THE PARAPET OR RAILING.
8. ON THE SAG DETAIL, INSTALL CORNER BRACE IN ADDITION TO THE CONCRETE BASE WHEN THE ANGLE IS GREATER THAN 20°.

ORIGINAL STORED AT: ITD, Headquarters 3311 West State Boise, Idaho

PROFESSIONAL ENGINEER LICENSED RYAN D. LANCASTER 13683 STATE OF IDAHO ORIGINAL SIGNED BY RYAN D. LANCASTER DECEMBER 6, 2016

REVISIONS								
NO.	DATE	BY	NO.	DATE	BY	NO.	DATE	BY

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY

CADD FILE NAME: 610-1_1216.dgn

DRAWING DATE: NOVEMBER, 2016

IDAHO TRANSPORTATION DEPARTMENT

BOISE IDAHO

ORIGINAL SIGNED BY: TED MASON

DESIGN/TRAFFIC SERVICES ENGINEER

STANDARD DRAWING

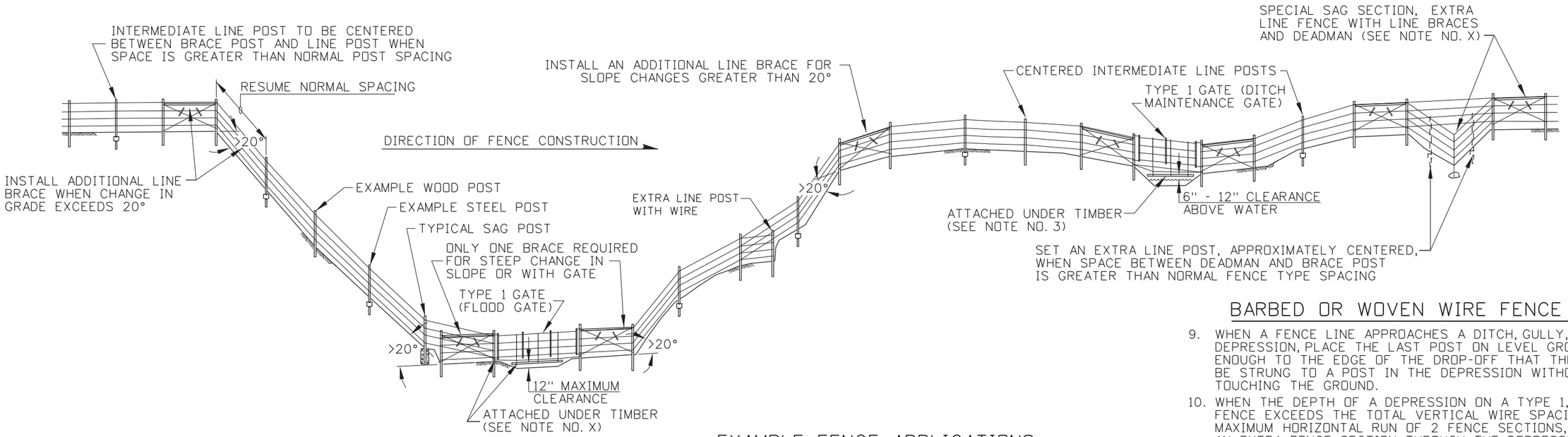
FENCES

English

STANDARD DRAWING NO.

610-1

SHEET 1 OF 3

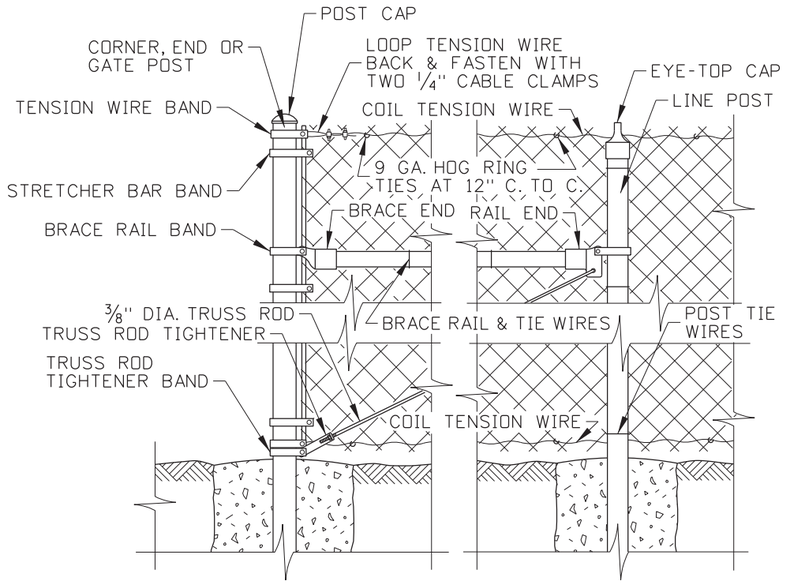


EXAMPLE FENCE APPLICATIONS

FOR FENCE TYPES 1, 3, 5, & 9

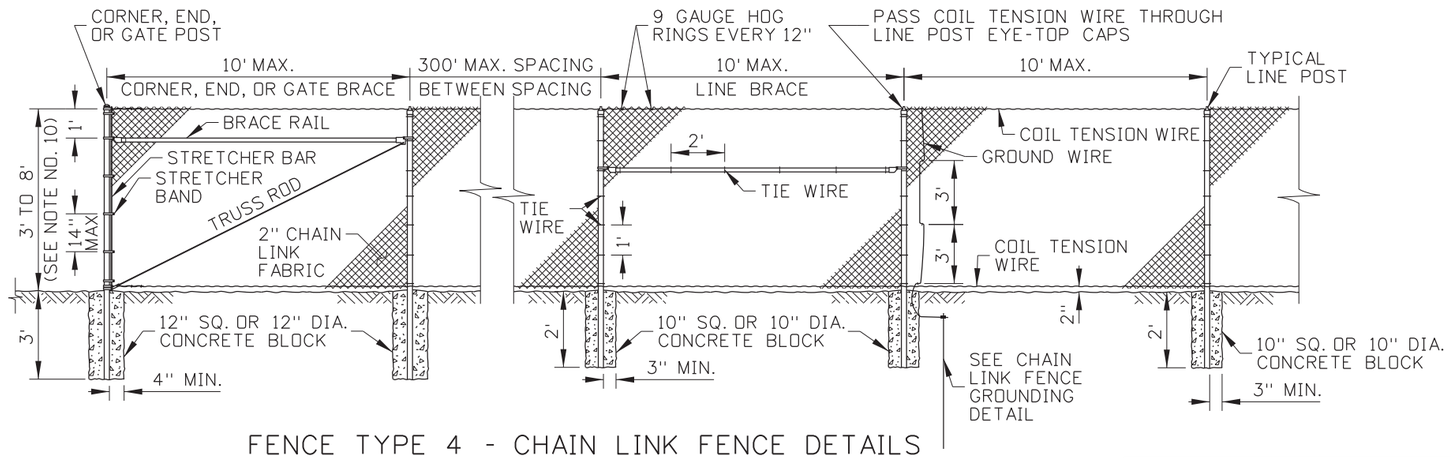
BARBED OR WOVEN WIRE FENCE NOTES

9. WHEN A FENCE LINE APPROACHES A DITCH, GULLY, OR DEPRESSION, PLACE THE LAST POST ON LEVEL GROUND CLOSE ENOUGH TO THE EDGE OF THE DROP-OFF THAT THE WIRE MAY BE STRUNG TO A POST IN THE DEPRESSION WITHOUT TOUCHING THE GROUND.
10. WHEN THE DEPTH OF A DEPRESSION ON A TYPE 1, 5, OR 9 FENCE EXCEEDS THE TOTAL VERTICAL WIRE SPACING OVER A MAXIMUM HORIZONTAL RUN OF 2 FENCE SECTIONS, CONSTRUCT AN EXTRA FENCE SECTION THROUGH THE DEPRESSION. SEE THE EXAMPLE FENCE APPLICATIONS.
11. IF THE DISTANCE BETWEEN THE GROUND AND THE BOTTOM WIRE OF A TYPE 1 GATE IS GREATER THAN 16", INSTALL AN UNDER TIMBER, ADDITIONAL WIRE, AND WIRE STAYS, AND BRACES.



FENCE TYPE 4

CHAIN LINK FENCE



FENCE TYPE 4 - CHAIN LINK FENCE DETAILS

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PROFESSIONAL ENGINEER LICENSED ORIGINAL SIGNED BY RYAN D. LANCASTER STATE OF IDAHO DECEMBER 6, 2016 13683 RYAN D. LANCASTER

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NO.	DATE	BY	NO.	DATE	BY	NO.	DATE	BY

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DRAWING DATE: NOVEMBER, 2016

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BOISE IDAHO

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DESIGN/TRAFFIC SERVICES ENGINEER

STANDARD DRAWING

FENCES

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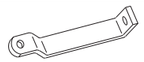
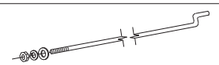
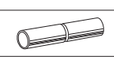
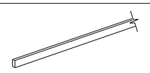
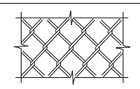
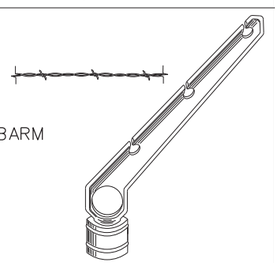
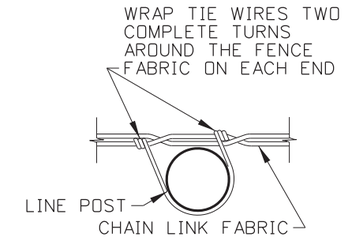
STANDARD DRAWING NO.

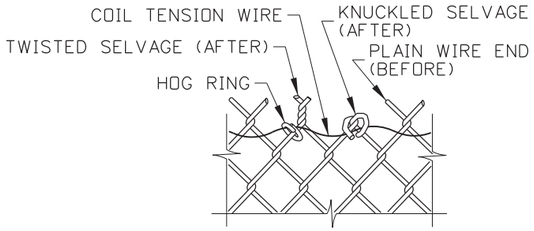
610-1

CHAIN LINK FENCE HARDWARE TABLE		
CORNER, END AND GATE POSTS		SEE STANDARD SPECIFICATIONS FOR HIGHWAY CONST.
LINE POST		SEE STANDARD SPECIFICATIONS FOR HIGHWAY CONST.
BRACE RAIL/TOP RAIL		SEE STANDARD SPECIFICATIONS FOR HIGHWAY CONST.
POST CAP		CAST NON-FERROUS ALLOY OR GALVANIZED PRESSED STEEL CAP. MUST FIT SNUGGLY ON POST.
EYE-TOP CAP		GALVANIZED PRESSED STEEL MIN. 3/32" THICKNESS OR GALVANIZED MALLEABLE FERROUS ALLOY
STRECHER BAR BAND		CLASS 1 - MIN. 1/8" x 3/4" MIN. GALVANIZED STEEL CLASS 2 - MIN. 3/32" x 5/16" MIN. GALVANIZED STEEL
TENSION WIRE/BRACE BAND		CLASS 1 - MIN. 1/8" x 3/4" MIN. GALVANIZED STEEL CLASS 2 - MIN. 3/32" x 5/16" MIN. GALVANIZED STEEL
BAND BOLT		CLASS 1 - 5/16" DIA. x 1 3/4" GALV. CARRIAGE BOLT CLASS 2 - 3/8" DIA. x 1 1/4" GALV. CARRIAGE BOLT, (LOCK WASHER & FLAT WASHER FOR EACH BAND)
RAIL END		GALVANIZED PRESSED STEEL OR GALVANIZED MALLEABLE FERROUS ALLOY MIN. 3/8" THICKNESS ON BACK BOLTING APPENDAGE
BRACE END		GALVANIZED PRESSED STEEL OR GALVANIZED MALLEABLE FERROUS ALLOY MIN. 3/8" THICKNESS ON BACK BOLTING APPENDAGE
TRUSS ROD TIGHTENER		CLASS 1 - MIN. 3/8" FORMED GALVANIZED STEEL CLASS 2 - MIN. 1/4" FORMED GALVANIZED STEEL
TRUSS ROD		3/8" GALVANIZED, NC TREADED ROD, LOCK WASHER, & FLAT WASHER WITH TWO 90° BENDS OPPOSITE OF TREADED END
TOP RAIL SLEEVE		GALVANIZED STEEL, NOT TO BE USED ON R/W FENCES, MUST MEET REQUIRED PIPE THICKNESSES
TENSION BAR		CLASS 1 - MIN. 1/8" x 3/4" GALVANIZED STEEL CLASS 2 - MIN. 1/8" x 5/16" GALVANIZED STEEL
FENCE FABRIC		2" GALVANIZED DIAMOND MESH STEEL FABRIC
TIE WIRES		MIN. 9 GAUGE ALUMINUM WITH ONE HOOKED END
COIL TENSION WIRE		MIN. 7 GAUGE
BARBED WIRE & 3-WIRE BARBARM		BARBED WIRE: 14 GAUGE SPACED GALVANIZED MEDIUM CARBON STEEL WIRE WITH BARBS SPACED AT 5" C. to C. GALVANIZING SHALL CONFORM TO APPLICABLE A.S.T.M. DES. A-121-66 FOR ZINC-COATED & AASHTO M 280 SPECIFICATIONS. 3-WIRE BARBARM: BARBWIRE ARM (ONE PIECE "Z" CUT) FITS 1 5/8" O.D. POST, 1 5/8" TOP RAIL" FITS 2" O.D. POST, 1 5/8" TOP RAIL" FITS 2 1/2" O.D. POST, 1 5/8" TOP RAIL" FITS 3" O.D. POST, 1 5/8" TOP RAIL"

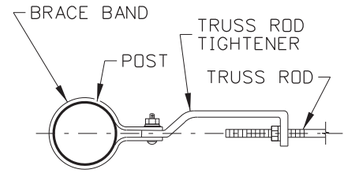
CHAIN LINK FENCE GROUNDING TABLE		
FENCE DIST. FROM TRANSMISSION LINE	kV	GROUNDING INTERVAL
0' - 100'	500	200'
100' - 200'	500	500'
0' - 100'	345	400'
100' - 150'	345	1,000'
50' - 100'	230	500'



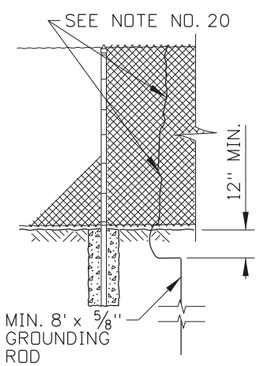
CHAIN LINK
FENCE TIE DETAIL



WIRE SELVAGE DETAIL
(SEE NOTE NO. 16)



TRUSS ROD TIGHTENER DETAIL



CHAIN LINK FENCE
GROUNDING DETAIL

CHAIN LINK FENCE NOTES

12. THE MINIMUM FENCE HEIGHT IS 8' WHEN BARBED WIRE AND THE 3-WIRE BARBARM ARE USED. DO NOT USE RAZOR WIRE WITH THE 3-WIRE BARBARM.
13. SPACE POSTS EQUAL DISTANCES APART, 10' MAXIMUM SPACING.
14. ADJUST THE POST TOP ELEVATIONS TO PROVIDE A SMOOTH VISUAL FENCE PROFILE. INSTALL CORNER POSTS AT HORIZONTAL BREAKS IN THE FENCE OF 15° OR MORE.
15. STRETCH THE FENCE FABRIC SMOOTH SO THAT IT HAS A UNIFORM APPEARANCE.
16. SELVAGE THE PLAIN WIRE ENDS ON THE TOP AND BOTTOM OF THE CHAIN LINK FABRIC BY THE TWISTED OR KNUCKLED METHOD. SEE WIRE SELVAGE DETAIL.
17. CHAIN LINK FENCE HARDWARE MAY VARY SOMEWHAT FROM THAT SHOWN IN THE CHAIN LINK FENCE HARDWARE TABLE. ENSURE THAT HARDWARE AND MATERIALS USED ARE UNIFORM AND COMPATIBLE.
18. INSTALL A TOP RAIL WHEN BARBED WIRE AND THE 3-WIRE BARBARM ARE USED.
19. INSTALL PRIVACY FENCE SLATS IF SHOWN ON PROJECT PLANS.
20. GROUND CHAIN LINK FENCES THAT ARE NEAR POWER TRANSMISSION LINES OR THAT INTERSECT TRANSMISSION LINES. SEE THE CHAIN LINK FENCE GROUNDING TABLE AND CHAIN LINK FENCE GROUNDING DETAILS. TO GROUND, CONNECT 6 GAUGE BRAIDED GROUND CABLE TO THE CHAIN LINK FABRIC EVERY 36". GROUND THE FENCE ONCE IF THE FENCE SECTION IS SHORTER THAN THE GROUNDING INTERVAL.
21. DRAWING NOT TO SCALE.

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REVISIONS									
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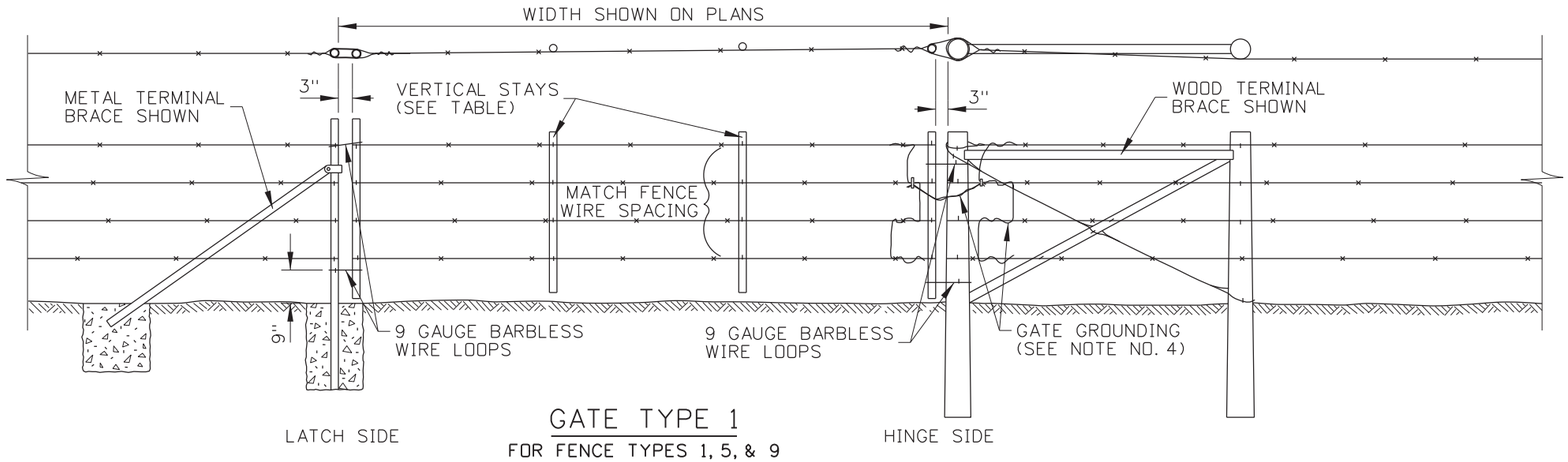
STANDARD DRAWING

FENCES

English

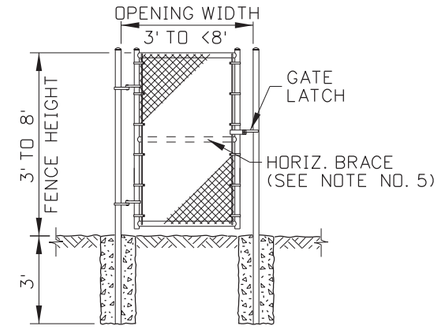
STANDARD DRAWING NO.

610-1

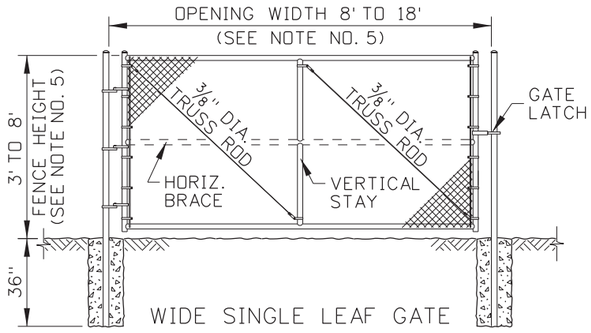


GATE TYPE 1

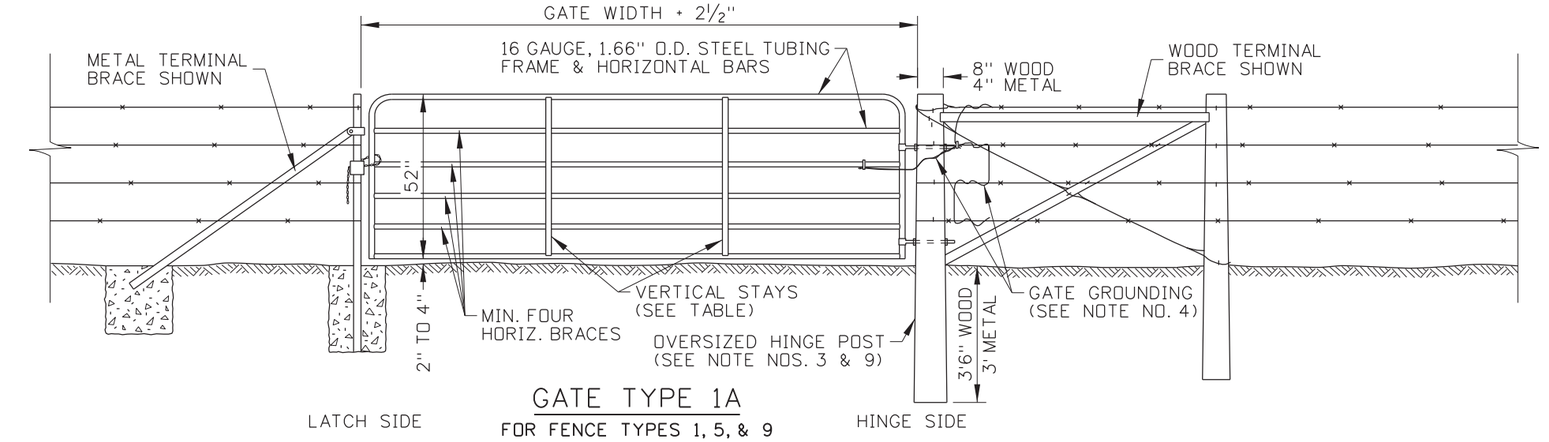
FOR FENCE TYPES 1, 5, & 9



NARROW SINGLE LEAF GATE

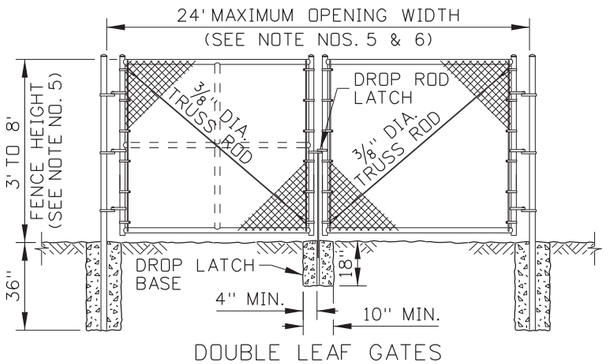


WIDE SINGLE LEAF GATE

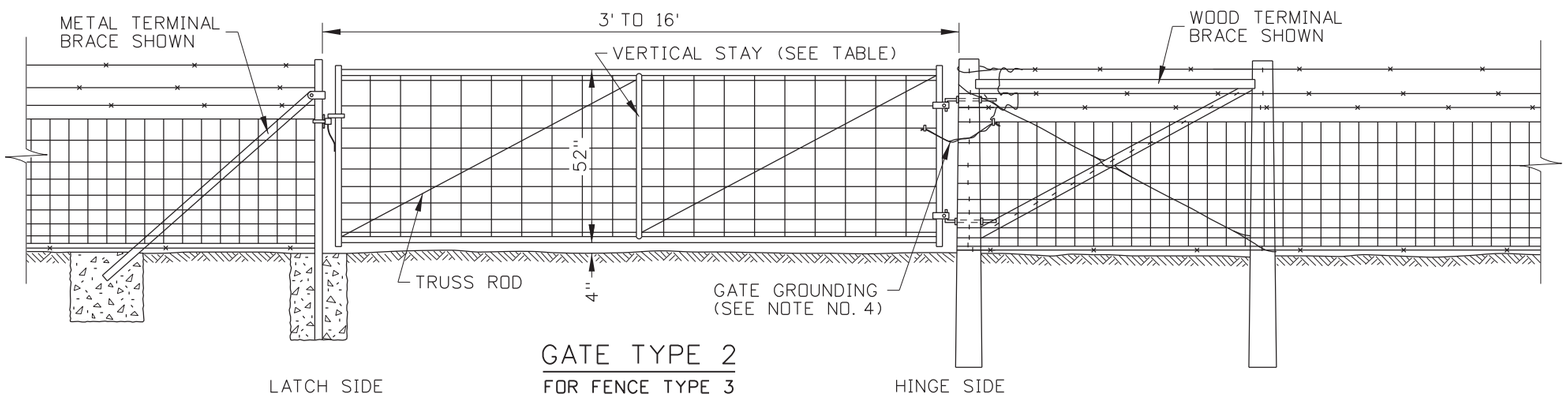


GATE TYPE 1A

FOR FENCE TYPES 1, 5, & 9



DOUBLE LEAF GATES



GATE TYPE 2

FOR FENCE TYPE 3

GATE TYPE 3

FOR FENCE TYPE 4

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PROFESSIONAL ENGINEER LICENSED ORIGINAL SIGNED BY RYAN D. LANCASTER DATE ORIGINAL SIGNED DECEMBER 6, 2016 13683 STATE OF IDAHO RYAN D. LANCASTER

REVISIONS								
NO.	DATE	BY	NO.	DATE	BY	NO.	DATE	BY

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DESIGN/TRAFFIC SERVICES ENGINEER

STANDARD DRAWING

GATES

REQUIRES STD. DWGS. 610-1 & 610-3

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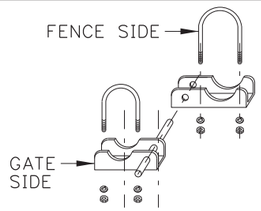
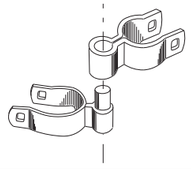
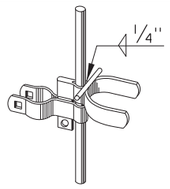
STANDARD DRAWING NO.

610-2

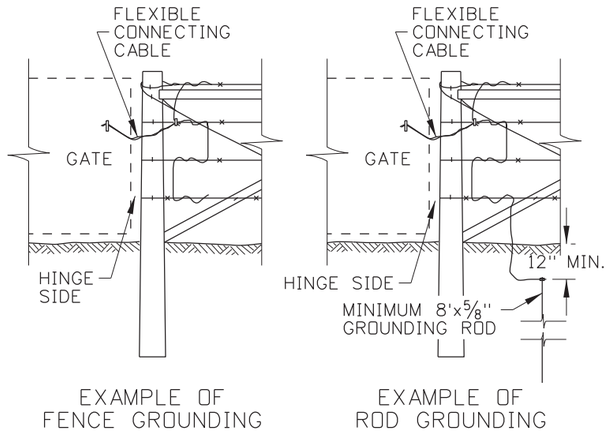
SHEET 1 OF 2

CHAIN LINK FENCE GATE HARDWARE TABLE	
GATE FORK LATCH 	MIN. 1/8" GALVANIZED PRESSED STEEL OR MALLEABLE FERROUS ALLOY. ONE LATCH PER EACH SINGLE GATE WITH BENT MIN. 3/8" DIA. ATTACHMENT BOLT, WASHER & NUT.
HEAVY GATE HINGE 	MIN. 1/8" GALVANIZED PRESSED STEEL WITH TWO 3/8" U-BOLTS, LOCK WASHER & NUTS PER HINGE. USE 2 HINGES PER GATE LEAF UP TO 8' IN WIDTH AND 3 HINGES PER GATE LEAF WIDTHS GREATER THAN 8' (THESE HINGES ARE RECOMMENDED FOR MAINTENANCE & COMMERCIAL INSTALLATIONS).
RESIDENTAL GATE HINGE 	MIN. 1/8" GALVANIZED PRESSED STEEL WITH 3/8" DIA. x 3" CARRIAGE BOLTS, LOCK WASHER & NUTS PER HINGE. USE 2 HINGES PER GATE LEAF UP TO 6' IN HEIGHT AND 3 HINGES PER GATE LEAF HEIGHTS GREATER THAN 6'.
INDUSTRIAL DROP ROD FORK & GUIDE 	MIN. 1/8" GALVANIZED PRESSED STEEL. DROP ROD GUIDE INCLUDES 3/8" x 3" CARRIAGE BOLT WITH LOCK WASHER & NUT. DROP ROD FORK IS TO BE WELDED TO ROD & PAINTED WITH AN APPROVED ZINC RICH PAINT.

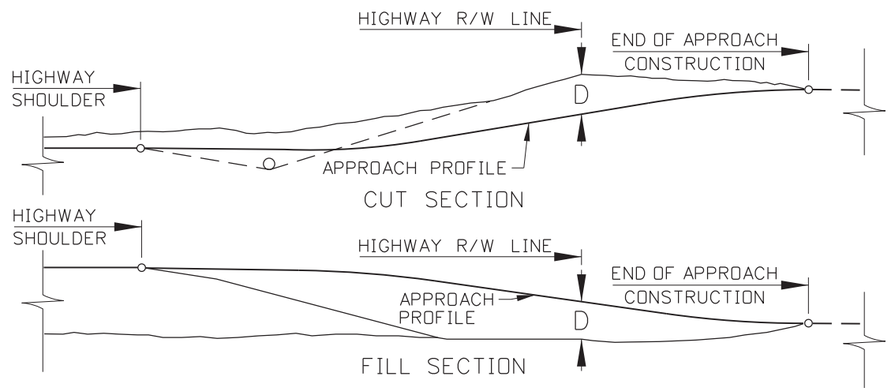
GATE GROUNDING TABLE			
FENCE DIST. FROM TRANSMISSION LINE	kV	GATE TYPE	GROUNDING TYPE
0' - 100'	500	1A, 2, 3	ROD
100' - 200'	500	1A, 2, 3	FENCE
0' - 100'	345	1A, 2, 3	ROD
100' - 150'	345	1A, 2, 3	FENCE
50' - 100'	230	1A, 2, 3	FENCE

GATE VERTICAL STAY TABLE		
GATE TYPE	GATE WIDTH	NO. OF VERT. STAYS
TYPE 1	4' TO 6'	0
	8' TO 12'	1
	14' TO 16'	2
TYPE 1A	4' TO 6'	0
	8' TO 12'	1
	14' TO 16'	2
TYPE 2	3' TO 7'	0
	8' TO 16'	1
TYPE 3	3' TO 7'	0
	8' TO 15'	1
	16' TO 18'	2

GATE HORIZONTAL BRACE TABLE		
GATE TYPE	GATE HEIGHT	NO. OF HORIZ. BRACES
TYPE 1A	4.33'	4
TYPE 3	4' TO 5'	0
	6' TO 8'	1



GATE GROUNDING DETAILS



GATE LOCATION DETAIL

(SEE NOTE NO. 7)

NOTES

1. CONSTRUCT GATES FROM THE MATERIALS SHOWN ON FENCES STANDARD DRAWING UNLESS OTHERWISE SHOWN.
2. ALTERNATE GATE DESIGNS MAY BE USED WITH ENGINEER APPROVAL.
3. CONSTRUCT MATCHING METAL OR WOOD TERMINAL BRACES ON BOTH SIDES OF THE GATE OPENING. MODIFY THE TERMINAL BRACE ON THE HINGE SIDE OF TYPE 1A GATES.
4. GROUND GATES THAT ARE NEAR POWER TRANSMISSION LINES OR THAT PASS UNDER TRANSMISSION LINES. GROUND BY CONNECTING THE HINGE SIDE OF THE GATE TO THE FENCE OR TO THE FENCE AND A GROUNDING ROD. SEE THE GATE GROUNDING TABLE AND GATE GROUNDING DETAILS. ENSURE THAT THE GATE IS GROUNDED WITH A FLEXIBLE COPPER CABLE. TYPE 1 GATES DO NOT NEED TO BE GROUNDED.
5. CONSTRUCT VERTICAL STAYS AND HORIZONTAL BRACES IN ACCORDANCE WITH THE GATE VERTICAL STAY TABLE AND THE GATE HORIZONTAL BRACE TABLE.
6. WHERE TWO TYPE 1A, TYPE 2, OR TYPE 3 GATES ARE USED IN A SINGLE OPENING, PROVIDE A DROP ROD TO SECURE THE GATES.
7. ON THE GATE LOCATION DETAIL, WHEN D IS 5' OR LESS, INSTALL GATES AT THE RIGHT-OF-WAY LINE. WHEN D IS GREATER THAN 5', INSTALL GATES AT THE END OF THE APPROACH CONSTRUCTION OR AS OTHERWISE DIRECTED BY THE ENGINEER. IF INSTALLED AT THE END OF THE APPROACH, ANGLE AND INSTALL RIGHT-OF-WAY FENCE ALONG THE EDGE OF THE APPROACH CUT OR FILL SLOPE.
8. TYPE 1 GATES:
   A. CONSTRUCT GATE ENDS AND VERTICAL STAYS FROM A SECTION OF METAL FENCE POST OR ROUND WOOD POST 2 1/2" TO 3" IN DIAMETER. PLACE LARGER WOODEN STAYS AT THE GATE ENDS.
   B. ATTACH WIRE LOOPS MADE WITH A DOUBLE WOVEN 9 GAUGE BARBLESS WIRE OR A SUITABLE CHAIN. ADJUST THE LOOPS SO THAT THE GATE IS TAUT WHEN CLOSED. FASTEN THE LOOPS TO THE ADJACENT LATCH/HINGE POST.
   C. STAPLE THE STAYS AND END POSTS TO THE CONNECTING WIRES.
9. TYPE 1A GATES:
   A. USE A MODIFIED METAL OR WOOD POST ON THE HINGE SIDE. USE A 4" DIAMETER, 7'-6" METAL TUBE OR A 8" DIAMETER, 8' WOOD POST. IF THE METAL POST IS USED, SET THE POST IN AN 18" SQUARE OR ROUND FOUNDATION.
   B. ENSURE THAT HINGES ON GATES WIDER THAN 10' HAVE LEVELING THREADS ON A 3/4" DIAMETER OR LARGER ROD.
   C. ENSURE THAT LATCHES ARE LOCKABLE.
   D. CLEAR THE GROUND NEAR THE GATE SO THAT THE GATE CAN SWING 90° IN EACH DIRECTION.
10. TYPE 2 GATES:
   A. FABRICATE GATE FRAMES WITH 1.05" O.D. GALVANIZED STEEL TUBING WITH 0.095" WALL THICKNESS OR 1" DIAMETER GALVANIZED PIPE.
   B. USE 12.5 GAUGE OR HEAVIER GALVANIZED WIRE MESH.
   C. EQUIP GATE WITH AN ADJUSTABLE DIAGONAL TRUSS ROD. THE TRUSS ROD TIGHTENER AND NON-TIGHTENING END OF THE TRUSS ROD MAY BE WELDED TO THE GATE.
   D. USE GALVANIZED MALLEABLE STEEL HINGES AND LATCHES.
   E. PAINT WELDS WITH ITD PAINT FORMULA NO. 2.
   F. CLEAR THE GROUND NEAR THE GATE SO THAT THE GATE CAN SWING 90° IN EACH DIRECTION.
11. TYPE 3 GATES:
   A. CHAIN LINK FENCE HARDWARE MAY VARY SOMEWHAT FROM THAT SHOWN. ENSURE THAT THE HARDWARE AND MATERIALS USED ARE UNIFORM AND COMPATIBLE.
   B. PAINT WELDS WITH ITD PAINT FORMULA NO. 2.
   C. CLEAR THE GROUND NEAR THE GATE SO THAT THE GATE CAN SWING 90° IN EACH DIRECTION.
12. DRAWING NOT TO SCALE.

ORIGINAL STORED AT: ITD, Headquarters 3311 West State Boise, Idaho

PROFESSIONAL ENGINEER LICENSED RYAN D. LANCASTER ORIGINAL SIGNED DECEMBER 6, 2016 13683 STATE OF IDAHO RYAN D. LANCASTER

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STANDARD DRAWING

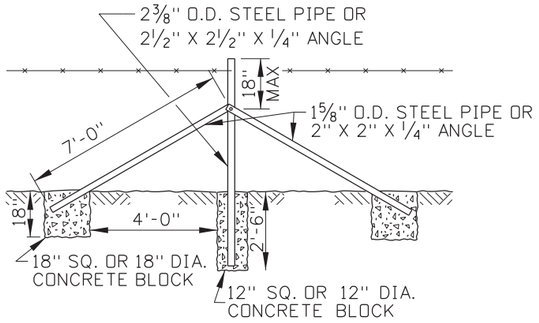
GATES

REQUIRES STD. DWGS. 610-1 & 610-3

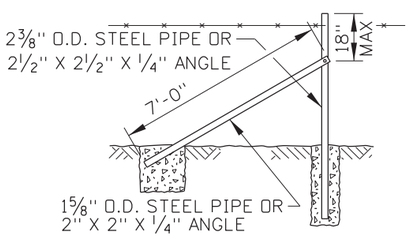
English

STANDARD DRAWING NO. 610-2

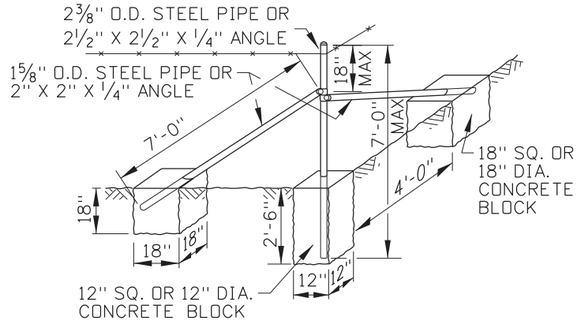
SHEET 2 OF 2



LINE BRACE



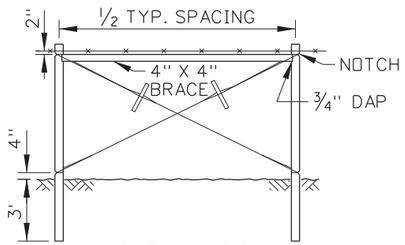
TERMINAL BRACE



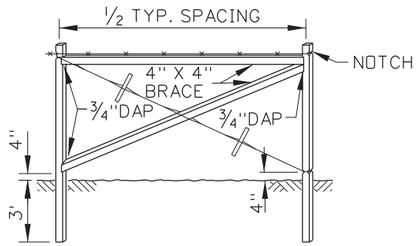
CORNER BRACE

BRACE SPACING TABLE			
FENCE TYPE	DISTANCE BETWEEN BRACES	METAL BRACES	WOOD BRACES
1, 5, & 9	<66'	NONE	NONE
	66' TO 660'	SINGLE	SINGLE
	660' TO 990'	DO NOT EXCEED 660'	DOUBLE
3	<33'	NONE	NONE
	33' TO 330'	SINGLE	SINGLE
	330' TO 660'	DO NOT EXCEED 330'	DOUBLE
4	INTEGRATED INTO CHAIN LINK FENCE		

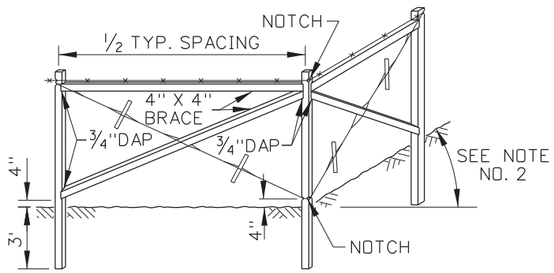
METAL BRACES



LINE BRACE

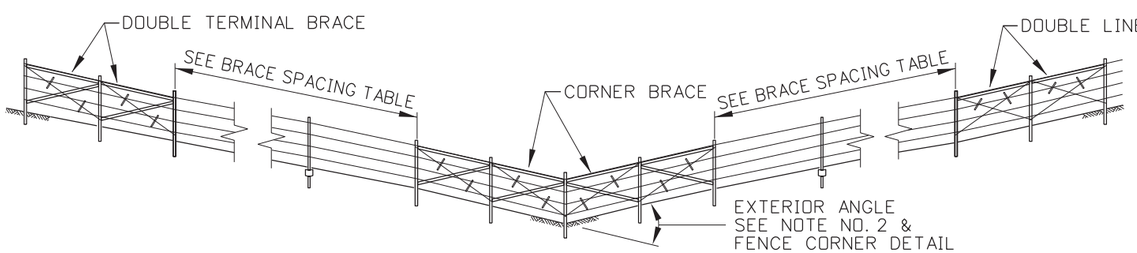


TERMINAL BRACE

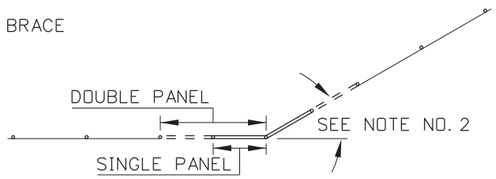


CORNER BRACE

WOOD BRACES



WOOD DOUBLE BRACE PANELS



FENCE CORNER DETAIL

NOTES

1. USE METAL BRACES WHEN METAL FENCE POSTS ARE USED. USE WOOD BRACES WHEN WOOD FENCE POSTS ARE USED.
2. USE DOUBLE WOOD CORNER BRACES WHEN THE EXTERIOR FENCE CORNER ANGLE EXCEEDS 30°. INSTALL DOUBLE LINE AND TERMINAL BRACES IN ACCORDANCE WITH THE FENCE BRACE TABLE.
3. SEE THE BRACE SPACING TABLE FOR THE MAXIMUM DISTANCES BETWEEN BRACES.

ORIGINAL STORED AT: ITD, Headquarters 3311 West State Boise, Idaho

PROFESSIONAL ENGINEER
LICENSED
ORIGINAL SIGNED BY
RYAN D. LANCASTER
DATE ORIGINAL SIGNED
DECEMBER 6, 2016
13683
STATE OF IDAHO
RYAN D. LANCASTER

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IDAHO TRANSPORTATION DEPARTMENT

BOISE IDAHO

ORIGINAL SIGNED BY: TED MASON

DESIGN/TRAFFIC SERVICES ENGINEER

STANDARD DRAWING

FENCE BRACES

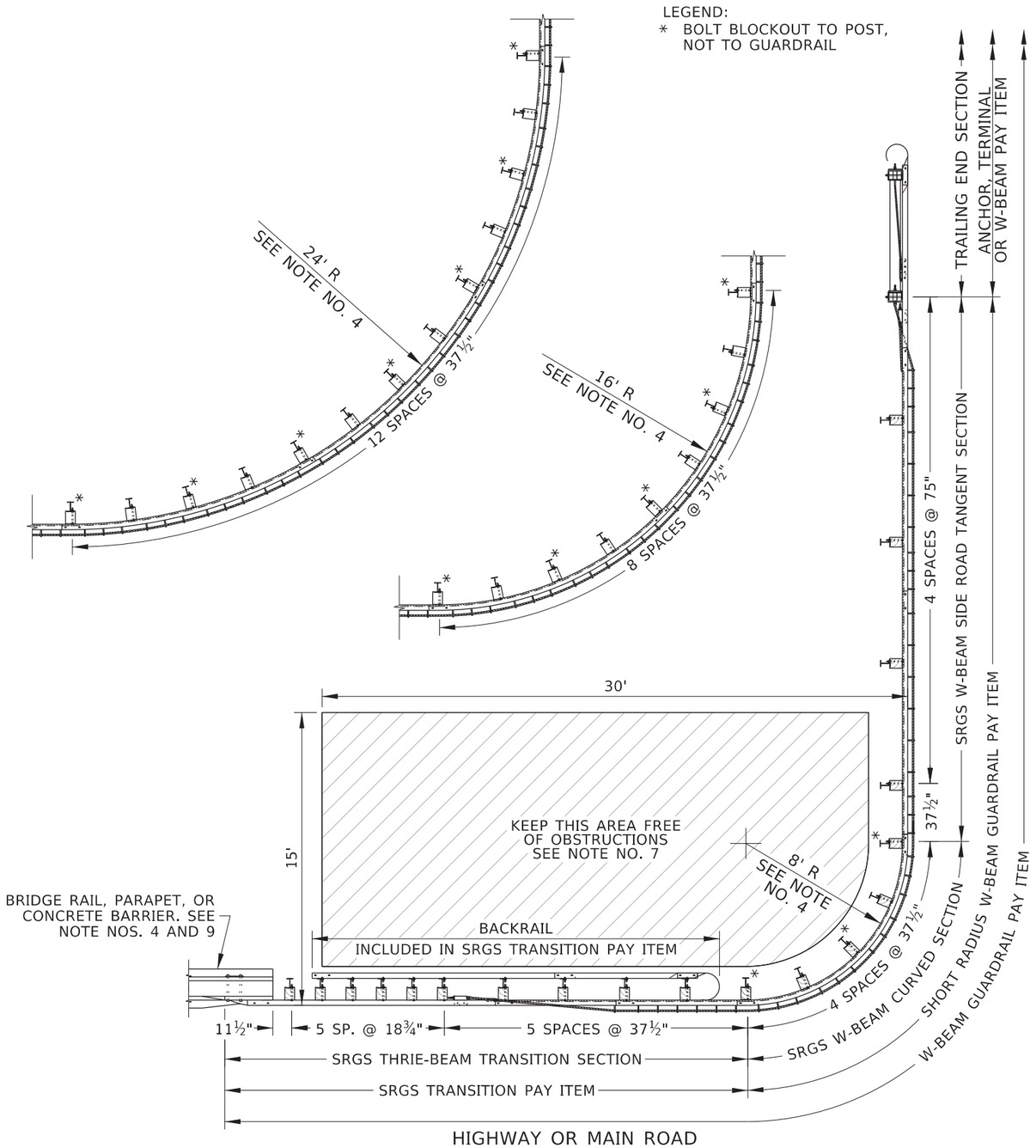
REQUIRES STD. DWG. 610-1

English

STANDARD DRAWING NO.

610-3

SHEET 1 OF 1



SHORT RADIUS W-BEAM GUARDRAIL SYSTEM (SRGS) OVERVIEW

SHORT RADIUS W-BEAM GUARDRAIL SYSTEM (SRGS) COMPONENTS TABLE					
ITEM NO.	COMPONENT DESCRIPTION	QUANTITIES 8' R	16' R	24' R	TF-13 NAME
(1)	THRIE-BEAM TERMINAL CONNECTOR	1	1	1	RTE01b
(2)	SRGS 8-SPACE THRIE-BEAM GUARDRAIL WITH HOLES AND SLOT	1	1	1	RTM20b
(3)	ASYMMETRICAL W-THRIE BEAM TRANSITION SECTION	1	1	1	RWT02
(4)	SRGS W-BEAM SPACER GUARDRAIL, WITH HOLES	1	1	1	RWM23b
(5)	SRGS CURVED 4-SPACE W-BEAM GUARDRAIL WITH HOLES	1	2	3	RWM24b
(6)	SRGS STRAIGHT 4-SPACE W-BEAM GUARDRAIL WITH HOLES	1	1	1	RWM25b (MOD.)
(7)	SRGS STRAIGHT 4-SPACE W-BEAM GUARDRAIL WITH HOLES & SLOT	1	1	1	RWM26b
(8)	SRGS 4-SPACE W-BEAM ANCHOR GUARDRAIL WITH HOLES	1	1	1	RWM27b
(9)	8-SPACE W-BEAM GUARDRAIL	1	1	1	RWM08b
(10)	W-BEAM SPACER GUARDRAIL	1	1	1	RWM01b (MOD.)
(11)	W-BEAM END END SECTION (ROUNDED), 12 GAUGE	1	1	1	RWE03a
(12)	72" WIDE-FLANGE GUARDRAIL POSTS	19	23	27	PWE01
(13)	W-BEAM BLOCKOUT	19	23	27	PDB01b OR POLYETHYLENE
(14)	BCT TIMBER POST	1	1	1	PDF04
(15)	FOUNDATION TUBE FOR MGS	1	1	1	PTE06
(16)	BCT POST SLEEVE	1	1	1	FMM02
(17)	BCT BEARING PLATE	1	1	1	FPB01
(18)	WIRE ROPE, ¾" DIA. 6x19, LENGTH VARIES	2	2	2	RCM01
(19)	CABLE END FITTING	4	4	4	RCE03
(20)	SHORT GUARDRAIL ANCHOR BRACKET	3	3	3	FPA01a
(21)	1¼" GUARDRAIL SPLICE BOLT AND RECESSED NUT	76	84	92	FBB01
(22)	2" GUARDRAIL BOLT AND RECESSED NUT	11	11	11	FBB02
(23)	10" GUARDRAIL BOLT & RECESSED NUT	19	23	27	FBB03
(24)	EYE BOLT, ⅝" x 8" WITH 2 WASHERS AND 2 NUTS	37	49	61	FBE01a
(25)	⅝" x 1½" HEX HEAD BOLT & NUT	12	12	12	FBX16a
(26)	⅝" x 8" HEX HEAD BOLT & NUT	1	1	1	FBX16a
(27)	⅝" x 10" HEX HEAD BOLT & NUT	1	1	1	FBX16a
(28)	⅝" FLAT WASHER	156	188	220	FWC16a
(29)	⅞" x 15" STRUCTURAL HEX HEAD BOLT & NUT	5	5	5	FBX22b
(30)	⅞" HARDENED ROUND WASHER	10	10	10	FWC22b
(31)	CONCRETE BARRIER TO THRIE-BEAM TRANSITION CONNECTOR PLATE	1	1	1	FPB--
(32)	THRIE-BEAM TRANSITION CONNECTOR PLATE	1	1	1	FPB07
(33)	RECTANGULAR GUARDRAIL PLATE WASHER	12	12	12	FWR03
(34)	16D GALVANIZED NAIL	2	2	2	N/A

ORIGINAL STORED AT: ITD, Headquarters 3311 West State Boise, Idaho

PROFESSIONAL ENGINEER LICENSED ORIGINAL SIGNED BY: RYAN D. LANCASTER DATE OF ORIGINAL SIGNATURE: APRIL 24, 2024 STATE OF IDAHO 13683 RYAN D. LANCASTER

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BOISE IDAHO

ORIGINAL SIGNED BY: MONICA CRIDER
HIGHWAY DESIGN ENGINEER

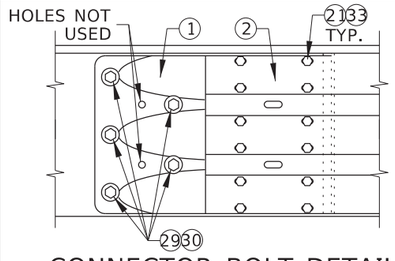
STANDARD DRAWING

SHORT RADIUS W-BEAM GUARDRAIL SYSTEM

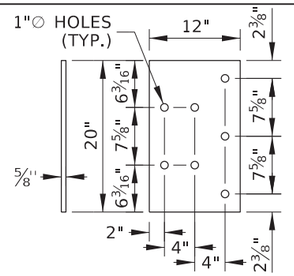
ENGLISH

STANDARD DRAWING NO. 612-3

SHEET 1 OF 6



CONNECTOR BOLT DETAIL



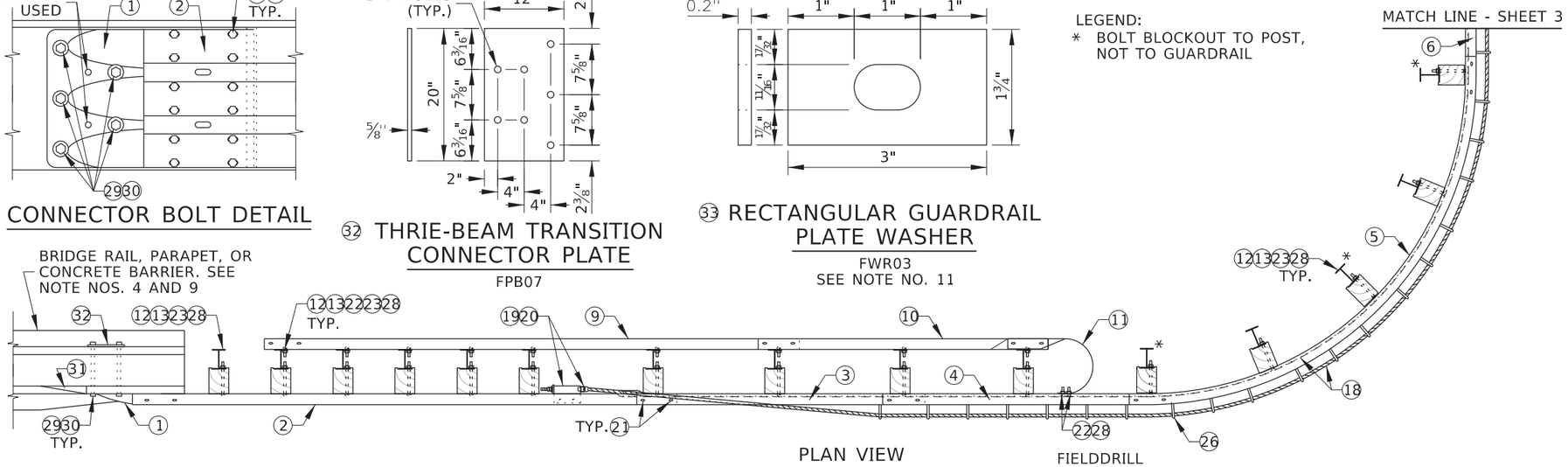
32 THRIE-BEAM TRANSITION CONNECTOR PLATE

FPB07

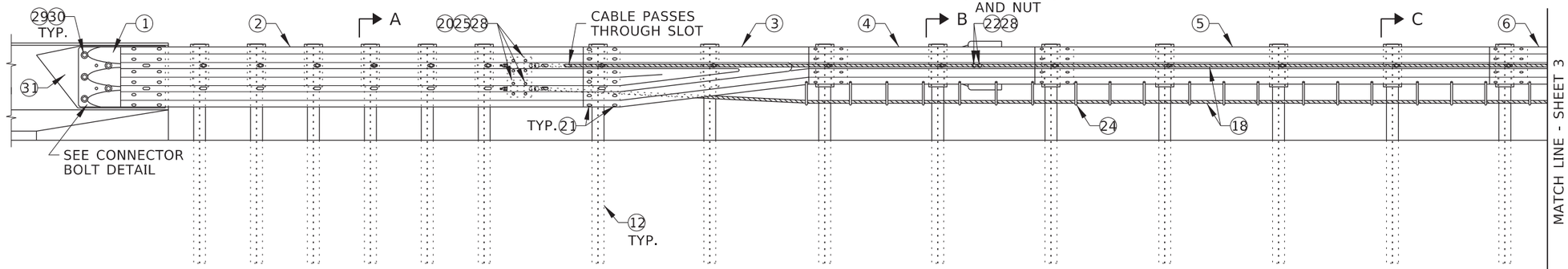
33 RECTANGULAR GUARDRAIL PLATE WASHER

FWR03
SEE NOTE NO. 11

LEGEND:
* BOLT BLOCKOUT TO POST, NOT TO GUARDRAIL

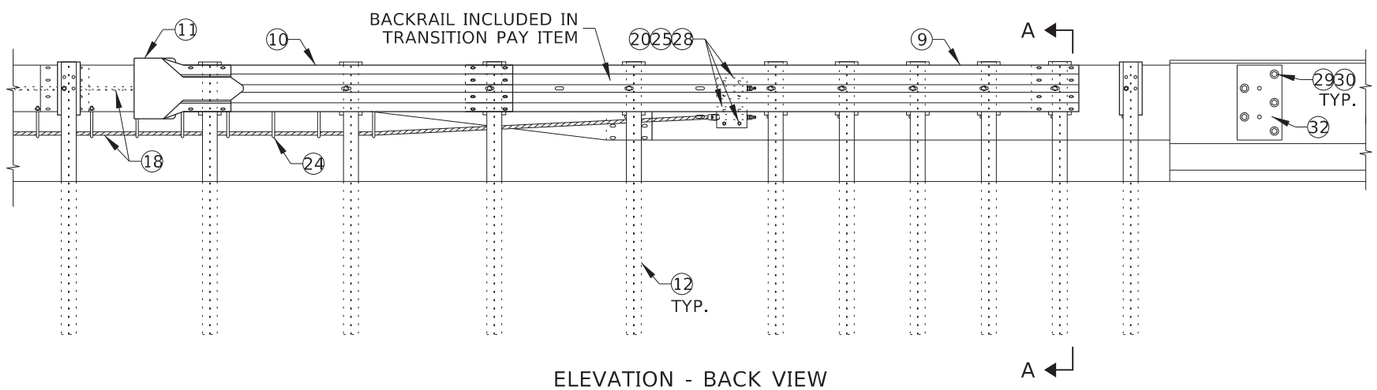


PLAN VIEW

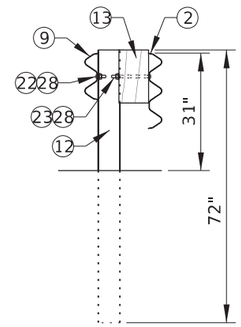


FIELDDRILL HOLES USE WASHERS BEHIND BOLD AND NUT

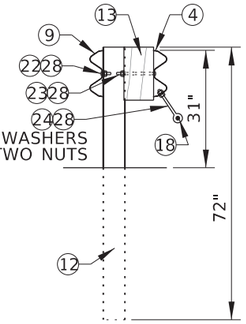
ELEVATION - FRONT VIEW



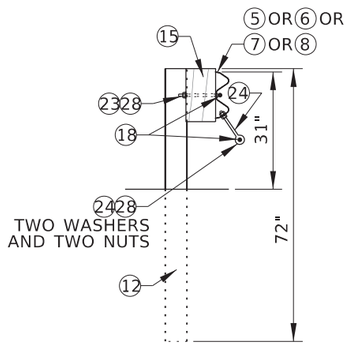
ELEVATION - BACK VIEW



SECTION A-A



SECTION B-B



SECTION C-C

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PROFESSIONAL ENGINEER LICENSED RYAN D. LANCASTER ORIGINAL SIGNED BY STATE OF IDAHO APRIL 24, 2024 13683 RYAN D. LANCASTER

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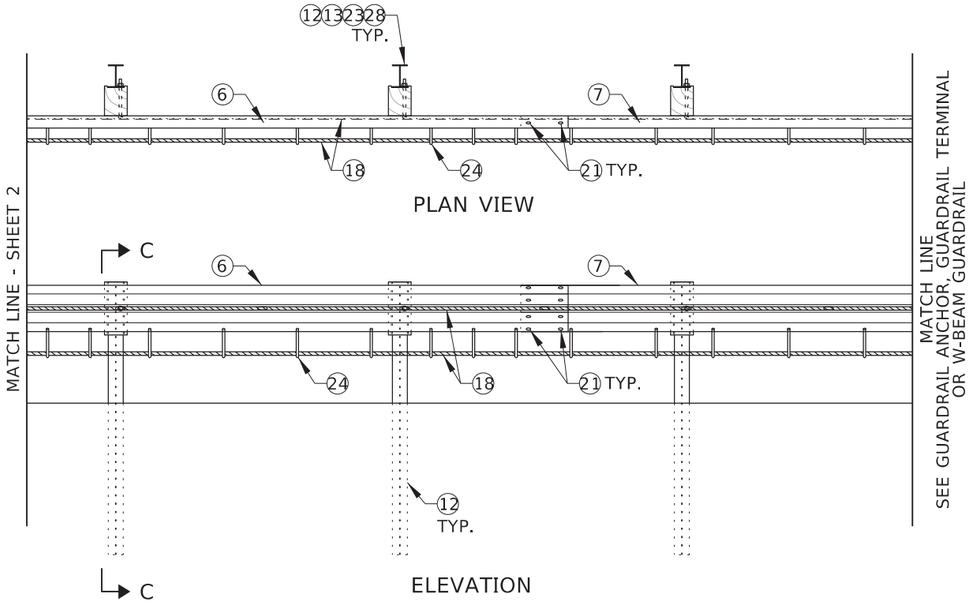
HIGHWAY DESIGN ENGINEER

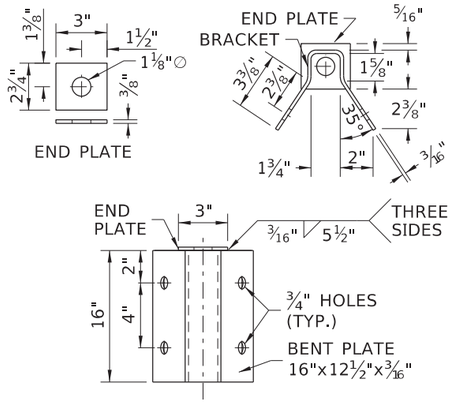
STANDARD DRAWING

SHORT RADIUS W-BEAM GUARDRAIL SYSTEM

ENGLISH

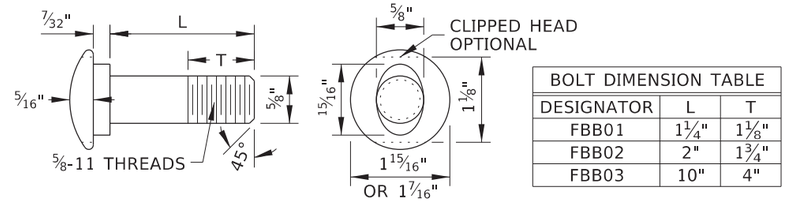
STANDARD DRAWING NO. 612-3





20 SHORT RADIUS GUARD-RAIL ANCHOR BRACKET

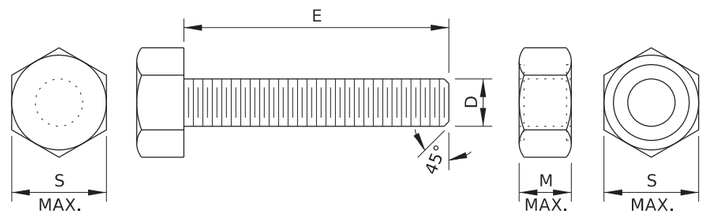
FPA01a



BOLT DIMENSION TABLE		
DESIGNATOR	L	T
FBB01	1¼"	1⅛"
FBB02	2"	1¾"
FBB03	10"	4"

21 22 23 GUARDRAIL BOLT

FBB01, FBB02, FBB03
USE WITH RECESSED NUT AND
PLAIN ROUND WASHER (FWC16a)



HEX BOLT DIMENSION TABLE				
DESIGNATOR	D	E	M	S
FBX16a	⅝"	1½",8",10"	37/64"	15/16"
FBX22b	⅞"	15"	15/16"	1 7/16"

25 26 27 HEX BOLT AND NUT
29 STRUCTURAL HEX BOLT AND NUT

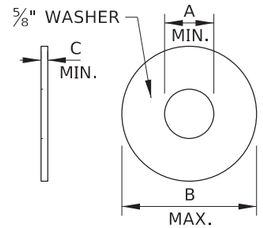
FBX16a, FBX22b

GUARDRAIL ANCHOR

SEE NOTE NO. 4

GUARDRAIL TERMINAL OR 31" W-BEAM GUARDRAIL

SEE NOTE NO. 4



WASHER DIMENSION TABLE				
DESIGNATOR	A	B	C	ANSI
FWC16a	11/16"	1¾"	⅛"	¾"
FWC22b	15/16"	1 25/32"	0.136"	⅞"

28 PLAIN ROUND WASHER
30 HARDENED ROUND WASHER

FWC16a, FWC22b

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HIGHWAY DESIGN ENGINEER

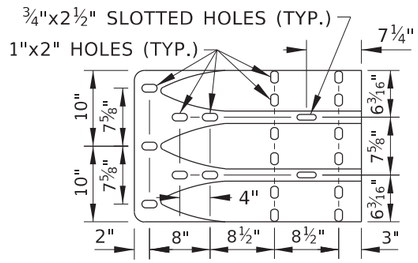
STANDARD DRAWING

SHORT RADIUS W-BEAM GUARDRAIL SYSTEM

ENGLISH

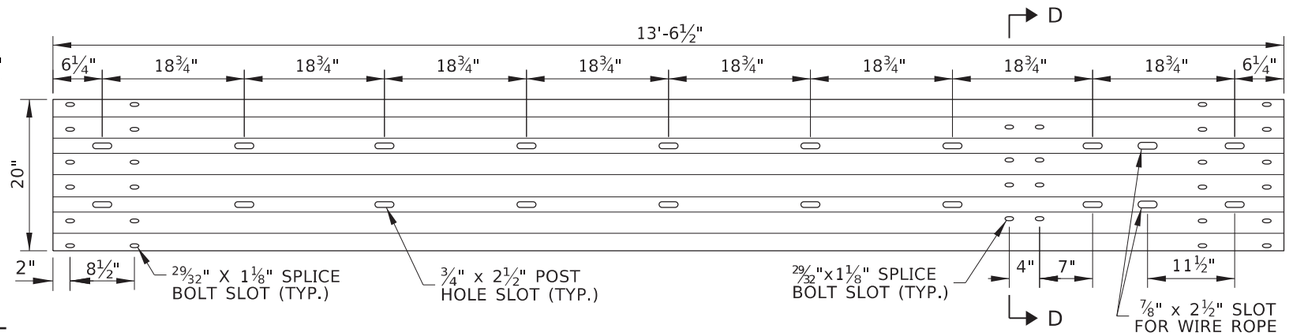
STANDARD DRAWING NO. 612-3

SHEET 3 OF 6



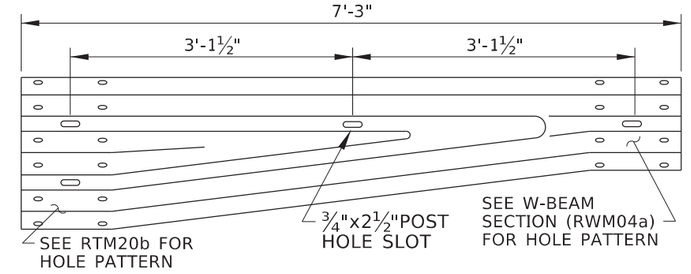
① THRIE-BEAM TERMINAL CONNECTOR

RTE01b



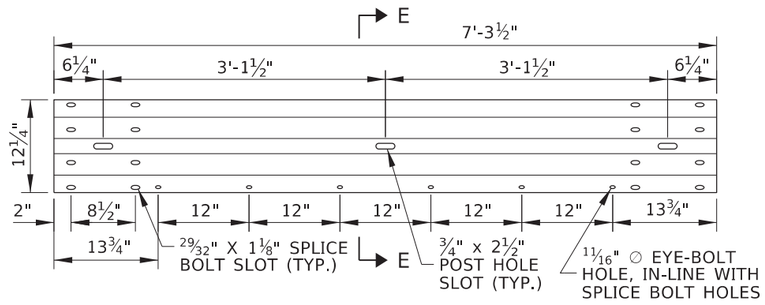
② SRGS 8-SPACE THRIE-BEAM GUARDRAIL WITH HOLES AND SLOT

RTM20b



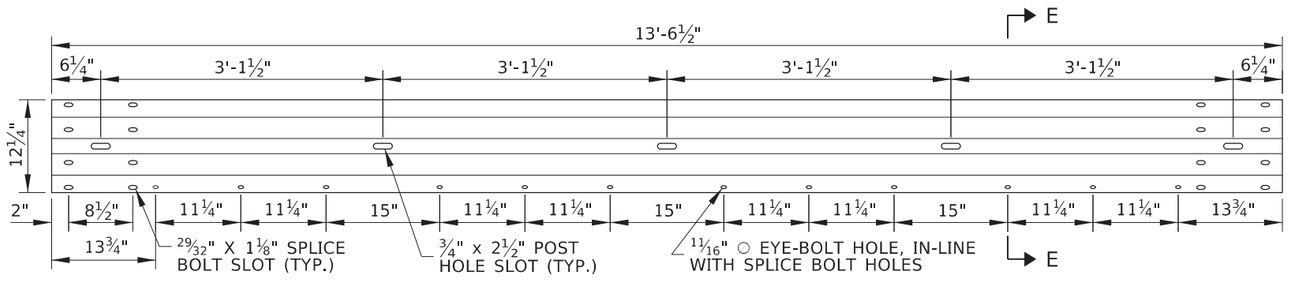
③ ASYMMETRICAL W-THRIE BEAM TRANSITION SECTION

RWT02
RIGHT-HAND OR LEFT-HAND CONFIGURATION
RIGHT-HAND SHOWN



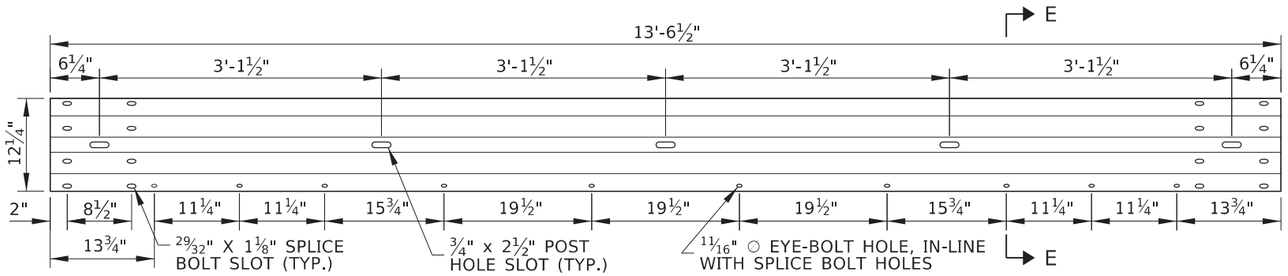
④ SRGS W-BEAM SPACER GUARDRAIL WITH HOLES

RWM23b



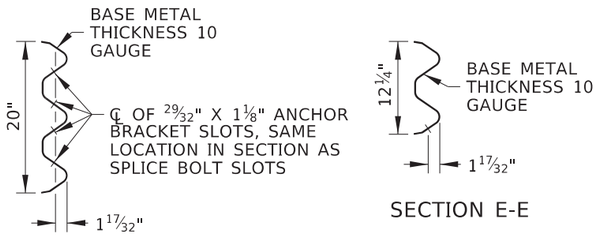
⑤ SRGS CURVED 4-SPACE W-BEAM GUARDRAIL WITH HOLES

RWM24b



⑥ SRGS STRAIGHT 4-SPACE W-BEAM GUARDRAIL WITH HOLES

RWM25b (MOD.)



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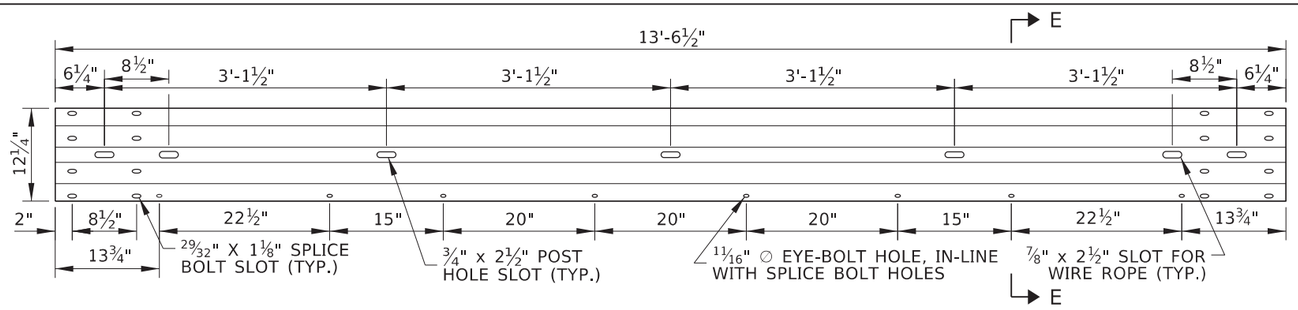
HIGHWAY DESIGN ENGINEER

STANDARD DRAWING

SHORT RADIUS W-BEAM GUARDRAIL SYSTEM

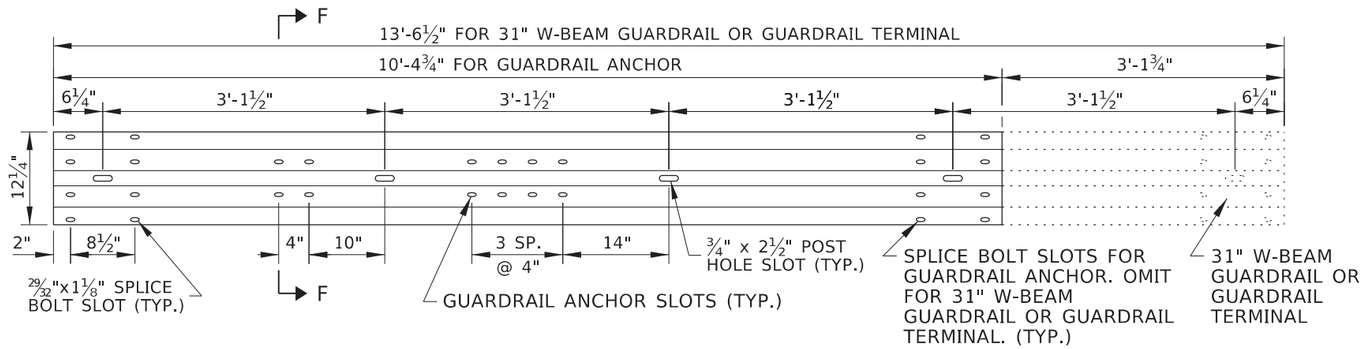
ENGLISH

STANDARD DRAWING NO. 612-3



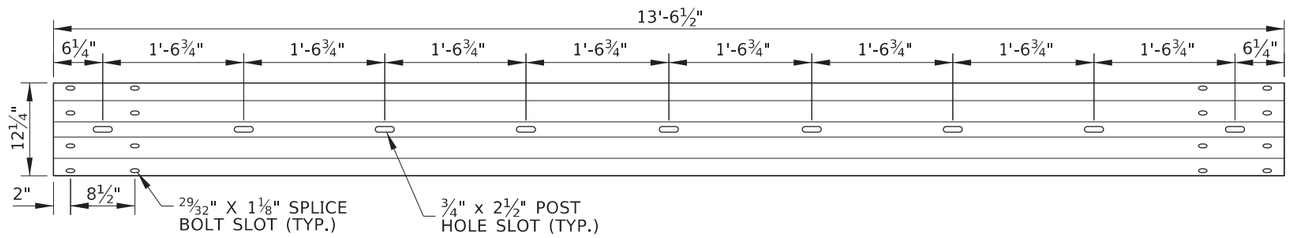
⑦ SRGS STRAIGHT 4-SPACE W-BEAM GUARDRAIL WITH HOLES AND SLOT

RWM26b



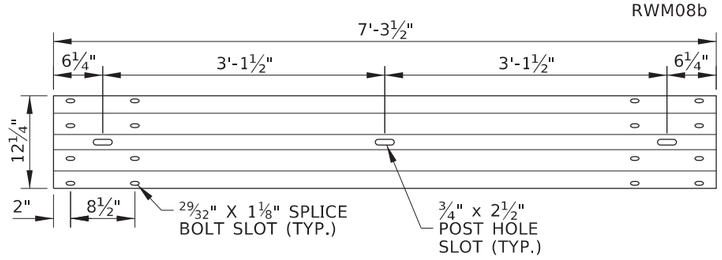
⑧ SRGS 4-SPACE W-BEAM GUARDRAIL WITH HOLES

RWM27b



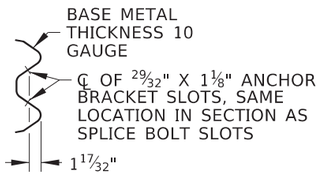
⑨ 8-SPACE W-BEAM GUARDRAIL

RWM08b



⑩ W-BEAM SPACER GUARDRAIL

RWM01b (MOD.)



SECTION F-F

NOTES

1. THE SHORT RADIUS W-BEAM GUARDRAIL SYSTEM (SRGS) SHOWN IS A MASH TEST LEVEL 3 BARRIER SYSTEM. THE SYSTEM IS FOR SHIELDING HIGHWAY OR ROAD USERS FROM ROADSIDE AREAS WHERE A MAIN ROAD AND A SIDE ROAD INTERSECT IN CLOSE PROXIMITY TO A BRIDGE OR LOCATION THE LENGTH OF NEED CANNOT BE PROVIDED UPSTREAM OF THE HAZARD.
2. PROVIDE BARRIER HARDWARE AS SHOWN AND AS SPECIFIED IN THE PUBLICATION "A GUIDE TO STANDARDIZED HIGHWAY BARRIER HARDWARE." WHERE THE GUIDE AND PLANS CONFLICT, PROVIDE HARDWARE COMPONENTS AS SHOWN ON THE PLANS.
3. USE 10 GAUGE W-BEAM AND THRIE-BEAM UNLESS OTHERWISE NOTED. DRILL OR PUNCH HOLES AND SLOTS BEFORE GALVANIZING UNLESS OTHERWISE NOTED.
4. THE SRGS SYSTEM CONSISTS OF FOUR SECTIONS (AND UP TO FOUR PAY ITEMS).
   A. SRGS THRIE-BEAM TRANSITION: USE THE SRGS THRIE-BEAM TRANSTION WITH W-BEAM BACKRAIL (INCLUDED IN TRANSITION PAY ITEM) AS SHOWN. DO NOT SHORTEN THE TRANSITION. CURB IS NOT REQUIRED BENEATH THE THRIE-BEAM TRANSITION, BUT CAN BE ADDED (SEE THE GUARDRAIL TRANSITION, HIGH SPEED STANDARD DRAWING). THE FOLLOWING APPLY WHEN CONNECTING THE SRGS TO VARYING RIGID BARRIER CONNECTIONS:
      I. BRIDGE RAIL OR PARAPET: SEE BRIDGE PLANS.
      II. CAST-IN-PLACE CONCRETE BARRIER: USE THE CONCRETE BARRIER TO THRIE-BEAM TRANSITION CONNECTOR PLATE.
      III. PRECAST CONCRETE BARRIER:
         a. USE THE CONCRETE BARRIER TO THRIE-BEAM TRANSITION CONNECTOR PLATE.
         b. CHAMFER THE FIRST 43½" OF THE BARRIER THAT EXTENDS BEYOND THE FACE OF THE CURB BENEATH THE TRANSITION (SEE THE PRECAST CONCRETE BARRIER STD. DWG.).
         c. USE ANCHOR PINS TO PIN DOWN THE FIRST THREE BARRIER SECTIONS.
   B. SRGS W-BEAM CURVED SECTION: USE 8', 16', OR 24' RADII. DO NOT USE OTHER RADII. SHOP BEND CURVED W-BEAM. WHERE INDICATED, BOLT BLOCKOUT TO POST, BUT DO NOT BOLT THROUGH W-BEAM (RWM24b). DO NOT INSTALL CURB IN THE CURVED SECTION.
   C. SRGS W-BEAM SIDE ROAD TANGENT SECTION: DO NOT SHORTEN OR MODIFY THE SIDE ROAD TANGENT SECTION. DO NOT INSTALL CURB IN THE SIDE ROAD TANGENT SECTION.
   D. SRGS W-BEAM TRAILING-END CONSISTING OF A GUARDRAIL ANCHOR, A GUARDRAIL TERMINAL, OR CONTINUATION OF 31" W-BEAM GUARDRAIL ON THE SIDE ROAD.
      I. ANCHOR: USE THE ANCHOR SYSTEM TO END THE SRGS WHEN THE ANCHOR IS OUTSIDE OF THE CLEAR ZONE FOR APPROACHING TRAFFIC ON THE MINOR ROAD. USE RWM27b.
      II. GUARDRAIL TERMINAL: USE A CRASHWORTHY GUARDRAIL TERMINAL TO END THE SRGS WHEN APPROACHING TRAFFIC ON THE MINOR ROAD IS WITHIN THE CLEAR ZONE FOR THE MINOR ROAD. USE 10'-4¾" RWM27b.
      III. 31" W-BEAM GUARDRAIL: EXTEND THE 31" W-BEAM GUARDRAIL WHEN GUARDRAIL CONTINUES ON THE MINOR ROAD. USE 13'-6½" RWM27b.
5. THE WIRE ROPES BEGIN IN THE SRGS THRIE-BEAM TRANSITION SECTION AND END IN THE TRAILING END SECTION. THE WIRE ROPES ARE PAID UNDER THE SHORT RADIUS W-BEAM GUARDRAIL PAY ITEM.
6. TENSION THE FINISHED CABLE ASSEMBLIES UNTIL THE SLACK IS REMOVED.
7. KEEP THE AREA BEHIND THE SRGS FREE OF RIGID OBJECTS. IN HIGH-SPEED (TL-3 SPEED) IMPACTS WITH THE SRGS, VEHICLES (MASH TL-3 SPECIFICATIONS) CAN ENTER INTO AN AREA MEASURED 15' FROM THE HIGHWAY OR MAIN ROAD AND 30' FROM THE SIDE ROAD.
8. OVERLAP SPLICES SO THE EXPOSED W-BEAM EDGE IS DOWNSTREAM OF THE ADJACENT TRAFFIC ON THE HIGHWAY OR MAIN ROAD.
9. IF THERE IS NO RIGID BARRIER ON THE HIGHWAY OR MAIN ROAD, THE SRGS SHOULD BE INSTALLED SYMMETRICALLY WITHOUT THE SRGS THRIE-BEAM TRANSITION. THE SECTION ALONG THE HIGHWAY OR MAIN ROAD SHOULD BE THE MIRROR IMAGE OF THE SIDE ROAD INSTALLATION.
10. THE FOLLOWING APPLY TO THE CONCRETE BARRIER TO THRIE-BEAM TERMINAL CONNECTOR PLATE:
    A. USE ASTM A36 STEEL. USE 3/16" THICK STEEL FOR PLATES P1 AND P2. USE ¼" THICK STEEL FOR STIFFENERS S1 THROUGH S10.
    B. WELD COMPONENTS WITH E60 ROD.
    C. WELD STIFFENERS LOCATED ON THE OUTSIDE EDGES OF THE COVER PLATES WITH 3/16" CONTINUOUS BACK WELD ON EXTERNAL SIDES AND 3/16" FILLET WELD BY 1" LONG SPACED AT 2" ON INTERNAL SIDES.
    D. WELD STIFFENERS LOCATED ON THE INSIDE OF THE COVER PLATES WITH 3/16" FILLET WELD BY 1" LONG SPACED AT 2" ON INTERNAL SIDES.
    E. WELD RECTANGULAR AND TRIANGULAR COVER PLATES TOGETHER WITH A 3/16" CONTINUOUS BACK WELD ON BOTH SIDES.
    F. GALVANIZE CONNECTOR PLATES AFTER PUNCHING AND ASSEMBLY.
11. INSTALL RECTANGULAR GUARDRAIL PLATE WASHERS UNDER GUARDRAIL NUTS AT THE SPLICE BETWEEN THE THRIE-BEAM GUARDRAIL AND THRIE-BEAM TERMINAL CONNECTOR.
12. DELINEATE THE SRGS WITH TYPE 9 DELINEATORS. SEE THE DELINEATOR STANDARD DRAWING FOR DELINEATOR SPACING.
13. DRAWING NOT TO SCALE.

ORIGINAL STORED AT: ITD, Headquarters 3311 West State Boise, Idaho

PROFESSIONAL ENGINEER LICENSED RYAN D. LANCASTER STATE OF IDAHO 13683 ORIGINAL SIGNED BY RYAN D. LANCASTER APRIL 24, 2024 STATE OF IDAHO

REVISIONS								
NO.	DATE	BY	NO.	DATE	BY	NO.	DATE	BY

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY

CADD FILE NAME: 612-3_0424.dgn

DRAWING DATE: APRIL 2024

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BOISE IDAHO

ORIGINAL SIGNED BY: MONICA CRIDER
HIGHWAY DESIGN ENGINEER

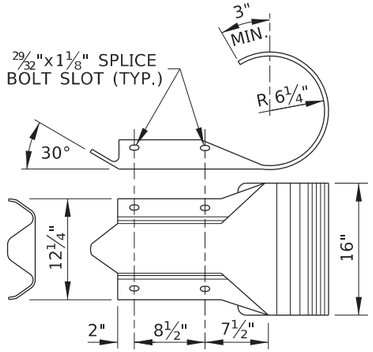
STANDARD DRAWING

SHORT RADIUS W-BEAM GUARDRAIL SYSTEM

ENGLISH

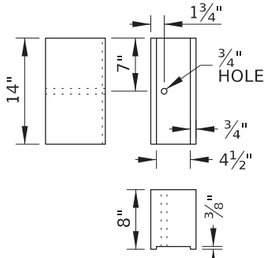
STANDARD DRAWING NO. 612-3

SHEET 5 OF 6



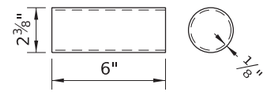
⑪ W-BEAM END SECTION DETAIL

RWE03a



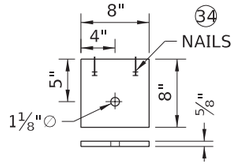
W-BEAM TIMBER ⑬ BLOCKOUT DETAIL

PDB01b



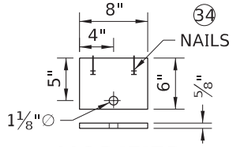
⑯ BCT POST SLEEVE DETAIL

FMM02



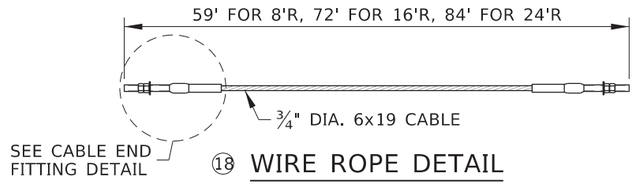
BCT BEARING ⑰ PLATE DETAIL

FPB01



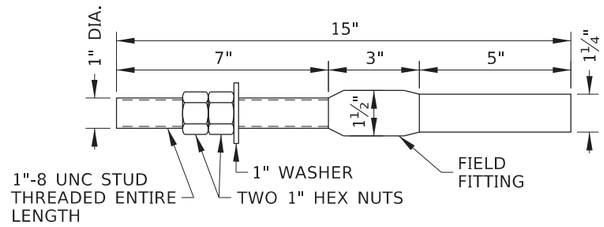
MODIFIED BCT BEARING ⑰ MOD. PLATE DETAIL

FPB01(MOD.)



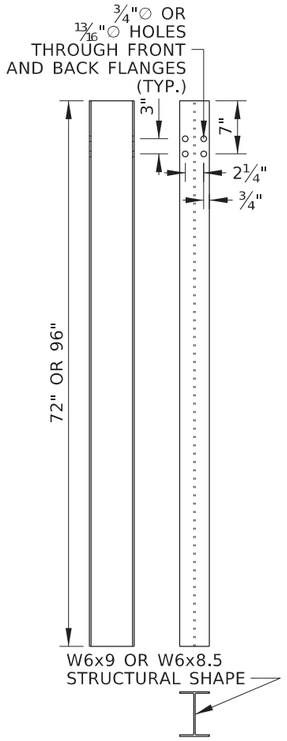
⑱ WIRE ROPE DETAIL

FCA01



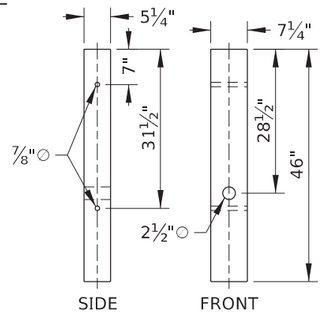
⑲ CABLE END FITTING DETAIL

RCE03 (WITH FNX24a AND FWC24a)



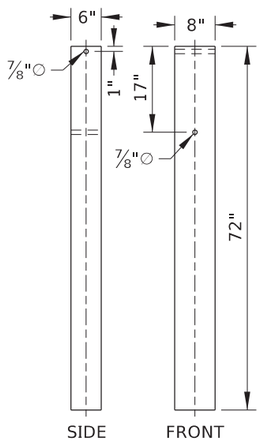
72" WIDE-FLANGE ⑫ GUARDRAIL POSTS

PWE01



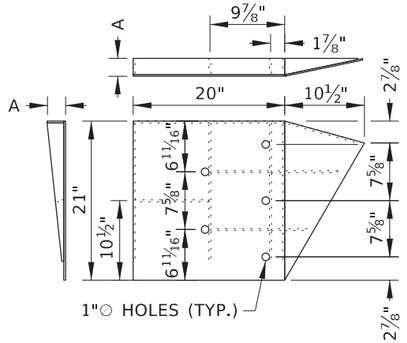
BCT TIMBER ⑭ POST DETAIL

PDF04

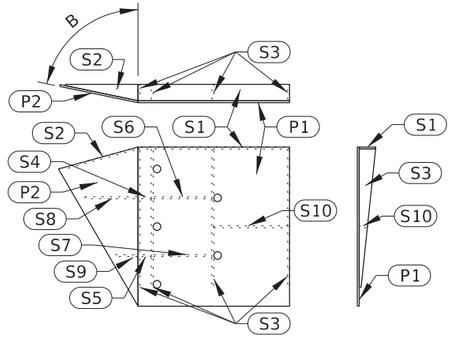


FOUNDATION ⑮ TUBE DETAIL

PTE06



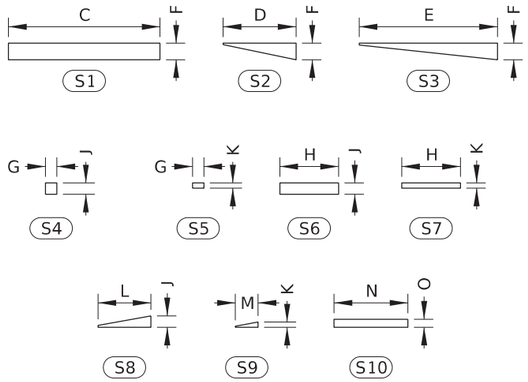
LEFT-HAND VERSION



RIGHT-HAND VERSION

㉛ CONCRETE BARRIER TO THRIE-BEAM TRANSITION CONNECTOR PLATE

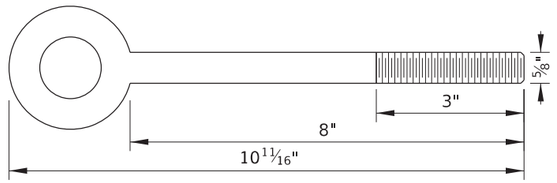
FPB--, ASTM A36, SEE NOTE NO. 10

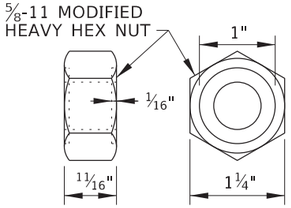


STIFFENER DIMENSION TABLE		
DIM.	F-SHAPE / NJ SHAPE	SINGLE SLOPE SHAPE
A	2 3/8"	4"
B	78°	69°
C	20"	20"
D	9 5/8"	9 5/8"
E	18 1/4"	18 1/4"
F	2 3/16"	3 13/16"
G	1 1/2"	1 1/2"
H	7 3/4"	7 3/4"
J	1 1/2"	2 7/16"
K	1 1/16"	1 1/8"
L	7"	7"
M	3"	3"
N	9 3/4"	9 3/4"
O	1 1/16"	1 13/16"

CONNECTOR PLATE STIFFENER DETAIL

SEE NOTE NO. 10





㉔ EYE-BOLT AND RECESSED NUT

FBE01a
USE WITH TWO (2) RECESSED NUTS AND TWO (2) PLAIN ROUND WASHERS (FWC16a)

ORIGINAL STORED AT: ITD, Headquarters 3311 West State Boise, Idaho

PROFESSIONAL ENGINEER LICENSED RYAN D. LANCASTER ORIGINAL SIGNED BY RYAN D. LANCASTER APRIL 24, 2024 STATE OF IDAHO 13683 RYAN D. LANCASTER

REVISIONS								
NO.	DATE	BY	NO.	DATE	BY	NO.	DATE	BY

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY

CADD FILE NAME: 612-3_0424.dgn

DRAWING DATE: APRIL 2024

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ORIGINAL SIGNED BY: MONICA CRIDER
HIGHWAY DESIGN ENGINEER

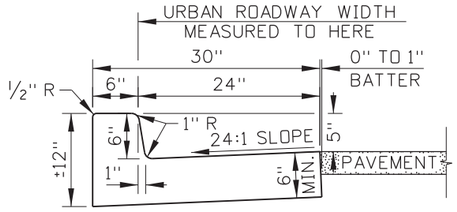
STANDARD DRAWING

SHORT RADIUS W-BEAM GUARDRAIL SYSTEM

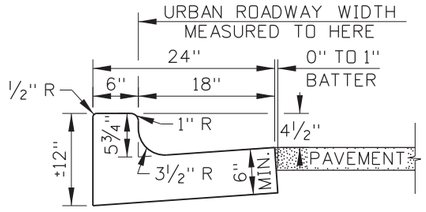
ENGLISH

STANDARD DRAWING NO. 612-3

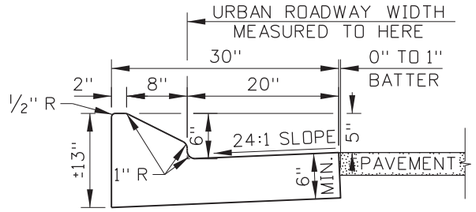
SHEET 6 OF 6



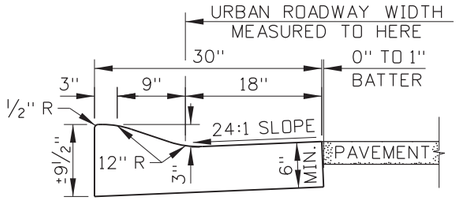
CURB AND GUTTER TYPE 1



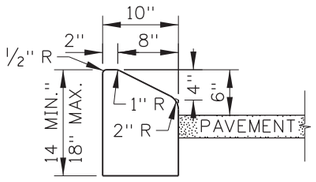
CURB AND GUTTER TYPE 2
(SEE NOTE NO. 4)



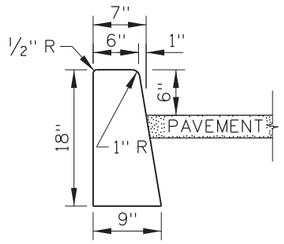
CURB AND GUTTER TYPE 3



CURB AND GUTTER TYPE 4



CURB TYPE 1



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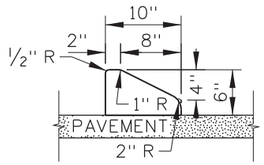
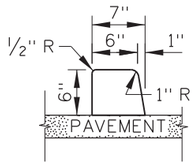
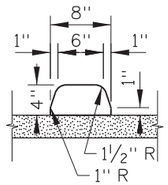


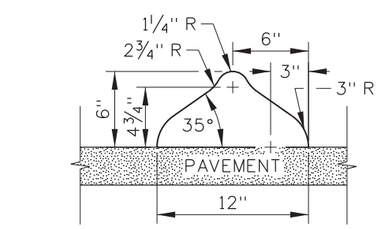
CURB TYPE 3
(SEE NOTE NO. 3)



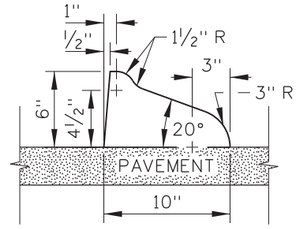
CURB TYPE 4
(SEE NOTE NO. 3)



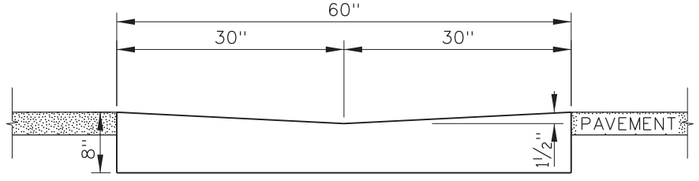
CURB TYPE 5
(SEE NOTE NO. 3)



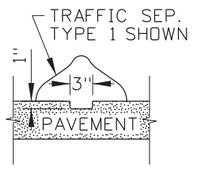
TRAFFIC SEPARATOR TYPE 1
(SEE NOTE NO. 3)



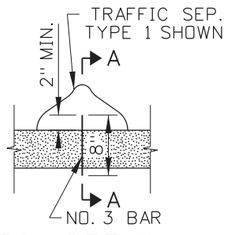
TRAFFIC SEPARATOR TYPE 2
(SEE NOTE NO. 3)



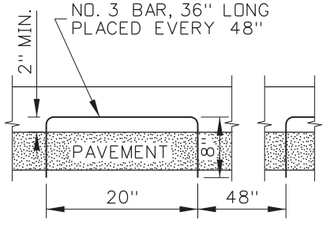
GUTTER TYPE 1



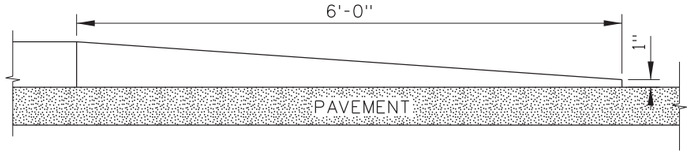
KEY DETAIL
(SEE NOTE NO. 3)



PIN DETAIL
(SEE NOTE NO. 3)



SECTION A-A



CURB TERMINUS DETAIL
(SEE NOTE NO. 5)

NOTES

1. TRANSITION BETWEEN DIFFERENT TYPES OVER 10 FEET.
2. PROVIDE 4 INCHES OF AGGREGATE BASE UNDER CURB AND GUTTER, CURB, OR GUTTER UNLESS THE CURB IS PLACED ON PAVEMENT.
3. PORTLAND CEMENT CONCRETE CURB OR TRAFFIC SEPARATOR ON ASPHALT CONCRETE PAVEMENT:

   PROVIDE A KEY IN THE PAVEMENT AT THE CENTERLINE OF THE CURB OR TRAFFIC SEPARATOR. SEE THE KEY DETAIL.

   CONCRETE CURBS OR TRAFFIC SEPARATORS MAY BE PINNED TO THE PAVEMENT STRUCTURE IN LIEU OF THE KEY. DRILL THE PAVEMENT AND PLACE PINS BEFORE THE CURB OR TRAFFIC SEPARATOR IS CONSTRUCTED. SEE THE PIN DETAIL.

   PORTLAND CEMENT CONCRETE CURB OR TRAFFIC SEPARATOR ON PORTLAND CEMENT CONCRETE PAVEMENT:

   USE AN EPOXY BONDING AGENT. NO KEY IS NEEDED.

   ASPHALT CONCRETE CURB OR TRAFFIC SEPARATOR ON ASPHALT CONCRETE PAVEMENT:

   NO KEY IS NEEDED. ENSURE THAT THE CURB IS BONDED TO THE PAVEMENT.
4. ENSURE THAT THE GUTTER SLOPE DOES NOT EXCEED 5 PERCENT AT CURB RAMPS.
5. TAPER THE LAST 6 FEET OF CURB AND GUTTER TYPES 1, 2, 3, AND 4 AND CURB TYPES 1 AND 2 DOWN TO A 1 INCH HEIGHT. TAPER CURB TYPES 3, 4, AND 5 AND TRAFFIC SEPARATORS TYPES 1 AND 2 DOWN TO A 1 INCH HEIGHT AT A 1:1 SLOPE.
6. DRAWING NOT TO SCALE.

ORIGINAL STORED AT: ITD, Headquarters 3311 West State Boise, Idaho

PROFESSIONAL ENGINEER
LICENSED
ORIGINAL SIGNED
RYAN D. LANCASTER
AUGUST 22, 2018
13683
STATE OF IDAHO

REVISIONS									
NO.	DATE	BY	NO.	DATE	BY	NO.	DATE	BY
1	02-76		6	12-04	MSM	11	07-18	RDL
2	12-90	GB	7	06-05	MSM			
3	09-93	MSM	8	07-10	JAW			
4	12-94	MSM	9	11-14	RDL			
5	12-01	MSM	10	06-17	RDL			

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CADD FILE NAME: 615-1_0818.dgn

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IDAHO TRANSPORTATION DEPARTMENT

BOISE IDAHO

ORIGINAL SIGNED BY: KEVIN SABLAN

DESIGN/TRAFFIC SERVICES ENGINEER

STANDARD DRAWING

CURB AND GUTTER

English

STANDARD DRAWING NO.

615-1

SHEET 1 OF 1