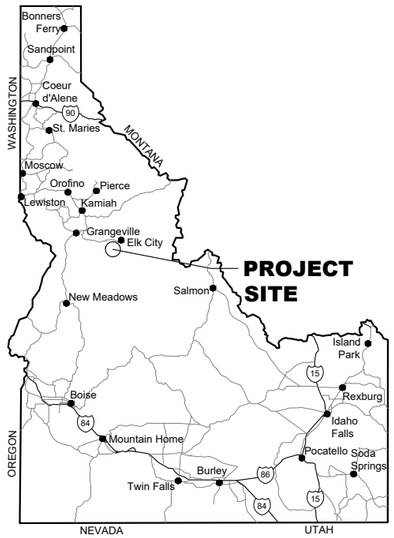


IDAHO INDEX MAP

NEZ PERCE TRIBE & IDAHO COUNTY

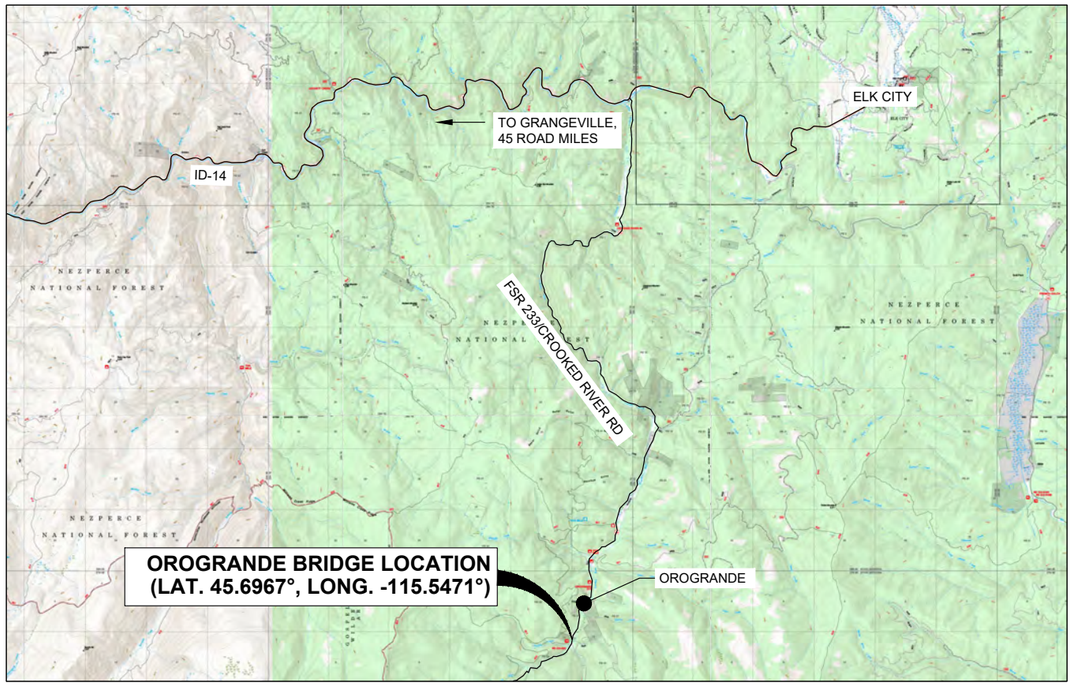
OROGRANDE BRIDGE REPLACEMENT

(BRIDGE KEY NO. 29264)

CROOKED RIVER ROAD/FOREST SERVICE RD 233 - M.P. 16.1

IDAHO COUNTY, IDAHO

T 27N, R 07E, SEC 12 (LAT. 45.6967°, LONG. -115.5471°)



VICINITY MAP

NO SCALE

NOTE:
DRAWING SCALE IS ONLY ACCURATE WHEN PLANS ARE PLOTTED ON 11" X 17" (TABLOID-SIZED) PAPER.

INDEX OF SHEETS	
SHEET NUMBER	**SHEET TITLE**
1	COVER
2	ESTIMATED QUANTITIES
3	GENERAL NOTES
4	EXISTING SITE PLAN & CONTROL DIAGRAM
5	TYPICAL ROAD & BRIDGE SECTIONS
6	CROOKED RIVER ROAD/FSR 233 PLAN & PROFILE
7	BRIDGE PLAN & ELEVATION
8	BENT NO. 1 PLAN & ELEVATION
9	BENT NO. 2 PLAN & ELEVATION
10	RIPRAP & FOUNDATION PLAN
11	SEDIMENTATION BASIN DETAILS
12	MISCELLANEOUS DETAILS
13	CROOKED RIVER ROAD/FSR 233 CROSS-SECTIONS
14	CROOKED RIVER ROAD/FSR 233 CROSS-SECTIONS & STAKING TABLE
15	BORING LOG ST-1
16	BORING LOG ST-2

STANDARD DETAILS*
STANDARD BRIDGE W-BEAM APPROACH GUARDRAIL SHEET 1 OF 2
STANDARD BRIDGE W-BEAM APPROACH GUARDRAIL SHEET 2 OF 2

*NOT INCLUDED IN SHEET NUMBERING

DESIGNED BY:

RYAN ELLIOTT, PE
GREAT WEST ENGINEERING

DATE

PROFESSIONAL ENGINEER LICENSED 15446 6/3/26 STATE OF IDAHO RYAN ELLIOTT

GreatWest ENGINEERING

6/3/26 17:15 R:\HOLM Y:\SHARED\HELENA PROJECTS\1-25180-APT – OROGRANDE BRIDGE DESIGN\CADD 1-25180\SHEETS\1-25180-01-COVER SHEET.DWG;

ESTIMATED QUANTITIES**

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	REMARKS
15101	MOBILIZATION	LS	All	INCLUDES SUBMITTAL OF ALL PLANS DELINEATED IN FSSS 153 INCLUDING TRAFFIC CONTROL. EQUIPMENT CLEANING AND ANY MAINTENANCE OF EXISTING ROADS FOR CONTRACTOR ACCESS IS INDIRECT TO THIS PAY ITEM.
15201	CONSTRUCTION SURVEY AND STAKING, METHOD 1, TOLERANCE CLASS B	LS	All	
15713	SOIL EROSION AND DEWATERING PLAN	LS	All	INCLUDES EROSION CONTROL AND DEWATERING PLAN PREPARATION, INSTALLATION AND REMOVAL.
15715	SEDIMENTATION BASIN	EA	1	INCLUDES NECESSARY EXCAVATION/EMBANKMENT AND CLASS 1 RIPRAP FOR SEDIMENTATION BASIN AND DREAINAGE DITCH. TOTAL CLASS 1 RIPRAP QUANTITY, APPROXIMATELY 14 CY.
20301	REMOVAL OF EXISTING BRIDGE, DISPOSAL METHOD A	LS	All	INCLUDES REMOVAL OF EXISTING BRIDGE COMPONENTS AND LEGAL DISPOSAL.
20403	ROADWAY EMBANKMENT, COMPACTION PLACEMENT METHOD 2	CY*	74	SUITABLE EMBANKMENT MATERIAL WILL BE SOURCED FROM ON-SITE EXCAVATION MATERIAL. INCLUDES PLACEMENT AND COMPACTION OF PREVIOUSLY SORTED SUITABLE STRUCTURE EXCAVATION MATERIAL. TOTAL ROADWAY EXCAVATION QUANTITY = 25 CY.
20803	STRUCTURAL BACKFILL (COMMERCIAL SOURCE)	CY*	204	STRUCTURAL BACKFILL TO MEET SPECIFICATION FP-14 704.04 FOR STRUCTURAL BACKFILL MATERIAL. INCLUDES PROCTOR AND DENSITY TESTING. COMMERCIAL SOURCE, CERTIFIED WEED FREE.
20804	STRUCTURE EXCAVATION	LS	All	EXCAVATION FOR BRIDGE BENTS, APPROXIMATELY 507 CY. 80% OF EXCAVATION MATERIAL ASSUMED TO BE SUITABLE FOR ROADWAY EMBANKMENT. SUITABLE STRUCTURE EXCAVATION MATERIAL FOR USE AS ROADWAY EMBANKMENT SHALL BE STOCKPILED. REMAINING UNSUITABLE AND/OR EXCESS MATERIAL SHALL BE REMOVED AND LEGALLY DISPOSED OF OFF THE PROJECT SITE.
25101	PLACED RIPRAP, CLASS 3 (COMMERCIAL SOURCE)	CY*	180	PLACED AT BRIDGE BENTS. COMMERCIAL SOURCE, CERTIFIED WEED FREE. STOCKPILE AND PLACEMENT OF SALVAGED STREAM SUBSTRATE AND TOPSOIL FROM RIPRAP EXCAVATION IS INDIRECT TO THIS PAY ITEM. FURNISHING AND INSTALLATION OF GEOTEXTILE UNDER RIPRAP IS INDIRECT TO THIS PAY ITEM.
27250	GEOCELL ABUTMENT STABILIZATION, 6 INCH DEPTH	SY	45	INCLUDES INSTALLATION OF GEOCELL, GRANULAR INFILL MATERIAL (COMMERCIAL SOURCE) AND GEOTEXTILE WRAP.
30207	AGGREGATE SURFACE COURSE, 1"-MINUS, COMPACTION PLACEMENT METHOD 2 (COMMERCIAL SOURCE)	CY*	97	INCLUDES ROADWAY SURFACING AND SURFACING INFILL OVER THE CORRUGATED STEEL DECK SECTION. COMMERCIAL SOURCE, CERTIFIED WEED FREE.
55220	PRECAST CONCRETE MEMBER, GRADE BEAM	LS	All	REQUIRES SHOP DRAWINGS. INCLUDES INSTALLATION AND ALL OTHER INSTALLATION ITEMS (SPLICES, HARDWARE, AND OTHER APPURTENANCES).
55503	PRE-FABRICATED STEEL MODULAR BRIDGE WITH RAIL	LS	All	INCLUDES SHOP DRAWINGS AND LOAD RATING. INCLUDES INSTALLATION AND ALL OTHER ASSOCIATED BRIDGE SUPERSTRUCTURE ITEMS (PREFABRICATED WEATHERING STEEL GIRDER MODULES WITH CORRUGATED STEEL DECKING, CORRUGATED STEEL BACKWALLS, STEEL SIDE DAMS, BEARINGS, BRIDGE RAIL, STEEL SHIMS (AS REQUIRED), AND OTHER APPURTENANCES).
61702	TERMINAL SECTION, TYPE W-BEAM FLARED	EA	4	INCLUDES ALL MATERIALS, HARDWARE, AND LABOR FOR INSTALLATION OF TERMINAL SECTION AT ALL BRIDGE CORNERS.
62201A	EQUIPMENT RENTAL: HYDRAULIC EXCAVATOR WITH THUMB (150-200 HP)	HR	4	INCLUDES MISCELLANEOUS WORK AS DIRECTED BY THE OWNER.
62201B	EQUIPMENT RENTAL: END DUMP TRUCK (12 CUBIC YARD)	HR	4	INCLUDES MISCELLANEOUS WORK AS DIRECTED BY THE OWNER.
63306	POST, WOOD	FT	40	FOR USE WITH OBJECT MARKERS.
63307	OBJECT MARKER, TYPE 3	EA	4	SIGNAGE FOR (4) OBJECT MARKERS AT BRIDGE EXTENTS.

*ITEMS TO BE MEASURED AS CONTRACT QUANTITY (CQ)

** INFORMATIONAL ONLY - NOT FOR BIDDING PURPOSES - REFER TO BID SCHEDULE

STAMPS, LOGOS, AND SEALS

PROFESSIONAL ENGINEER LICENSED 15446 6/3/26 STATE OF IDAHO RYAN ELLIOTT

GreatWest ENGINEERING

NO.	REVISION / ISSUE	DATE

PROJECT NAME

OROGRANDE BRIDGE REPLACEMENT

NEZ PERCE TRIBE & IDAHO COUNTY

DRAWING TITLE

ESTIMATED QUANTITIES

DATE 6/3/2026	ARCHIVE NO.
DESIGNER J. NETH	DRAWING SHEET NO.
DRAWN J. NETH	
CHECKED R. ELLIOTT	SHEET 2 OF 16
PROJECT NO. 1-25180	

GENERAL BRIDGE NOTES:

SPECIFICATIONS:

DESIGNS SHALL CONFORM TO HL-93 LOADING IN ACCORDANCE WITH AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 10TH EDITION, WITH CURRENT INTERIMS.

DESIGN:

DESIGN SPEED:	25 MPH
DESIGN VEHICLE:	HL-93
DEAD LOAD:	CONCRETE: 155 PCF STEEL: 490 PCF EARTH EMBANKMENT: 120 PCF EARTH PRESSURE: 120 PCF EARTH PRESSURE AT EQUIVALENT FLUID PRESSURE: 36 PCF
LIVE LOAD:	STRENGTH I LIMIT STATE: AASHTO HL-93 WITH DYNAMIC LOAD ALLOWANCE (IM = 0.33)
RAIL:	BRIDGE RAIL SYSTEM TO BE DESIGNED BY STEEL MODULAR BRIDGE SUPPLIER (MUST BE TL-2 OR TL-3 EQUIVALENT, CALCULATION BASED OR CRASH TESTED).

HYDROLOGY & HYDRAULICS:

THE STRUCTURE WAS DESIGNED TO PASS THE 100-YEAR FLOOD EVENT WITH AT LEAST 3-FEET OF FREEBOARD. FOR THIS SITE, THE 100-YEAR FLOOD EVENT WAS ESTIMATED AT 527 CFS AND THE 2-YEAR FLOOD EVENT WAS ESTIMATED AT 190 CFS. REFER TO HYDRAULIC RESULT INFORMATION ON SHEET 7.

MATERIALS:

CONCRETE: REINFORCED CONCRETE SHALL BE AIR ENTRAINED CLASS A(AE) WITH A 28-DAY COMPRESSIVE STRENGTH OF 4500 PSI. ALL CONCRETE SHALL BE MADE IN ACCORDANCE WITH AN APPROVED MIX DESIGN. CHAMFER ALL EXPOSED EDGES OF CONCRETE AND FILLET ALL RE-ENTRANT ANGLES 3/4" UNLESS NOTED OTHERWISE. GROUND CHAMFERS WILL NOT BE ACCEPTED. FINISH CONCRETE WITH A CLASS 1 - ORDINARY SURFACE FINISH.

REINFORCING STEEL: ALL REINFORCING STEEL SHALL BE OF THE DEFORMED BAR TYPE CONFORMING TO AASHTO M31 (ASTM A615), GRADE 60. CONCRETE CLEAR COVER SHALL BE 2-INCHES UNLESS SHOWN OTHERWISE ON THE PLANS. WHERE NOT SHOWN IT SHALL CONFORM TO AASHTO. BENDING, CUTTING AND SPLICING OF REINFORCEMENT SHALL BE IN ACCORDANCE WITH ACI 315.

STRUCTURAL STEEL: ALL STRUCTURAL STEEL AND HARDWARE SHALL MEET THE REQUIREMENTS OF AASHTO M270 GRADE 50W (ASTM 709, GRADE 50), EXCEPT AS NOTED. ALL WELDING SHALL BE IN ACCORDANCE WITH AWS D1.5, BRIDGE WELDING CODE. ALL ELECTRODES SHALL BE E70XX. REFER TO GUARDRAIL SHEETS FOR APPLICABLE STEEL SPECIFICATIONS. BRIDGE RAIL TO BE SUPPLIER DESIGNED.

WELDING: ALL WELDING TO BE IN ACCORDANCE WITH AWS D1.5, BRIDGE WELDING CODE AND AWS D1.4, STRUCTURAL WELDING CODE - REINFORCING STEEL. WELDERS SHALL BE CERTIFIED TO CARRY OUT THE WELDING PROCEDURE. ELECTRODE MATERIAL, PLANT EQUIPMENT AND WELDING PROCEDURE TO BE APPROPRIATE FOR THE PARENT MATERIAL AND INTENDED USE.

STEEL MODULAR BRIDGE:

THE STEEL BRIDGE SUPERSTRUCTURE (STEEL GIRDERS) LAYOUT PROVIDED UTILIZES A W36 GIRDER FOR PURPOSES OF ESTABLISHING ELEVATIONS. THE FINAL BRIDGE SUPERSTRUCTURE AND DECK SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF IDAHO. THE STEEL BRIDGE SUPPLIER IS TO SUPPLY AND DESIGN THE STEEL GIRDERS, DIAPHRAGMS, BACKWALLS, BEARING ASSEMBLY, BEARING ANCHORAGE, BACKWALL ATTACHMENT TO GIRDERS, SIDE DAM, STIFFENERS, CORRUGATED DECKING, BRIDGE RAIL, AND OTHER APPURTENANCES.

SUBMIT SHOP DRAWINGS FOR ALL STRUCTURAL STEEL ELEMENTS. SHOW ALL DIMENSIONS, FABRICATION DETAILS, AND MATERIAL SPECIFICATIONS ON THE SHOP DRAWINGS FOR ALL CUT OR BORED STEEL. FIELD DRILLING OF HOLES SHALL NOT BE ALLOWED UNLESS OTHERWISE NOTED ON THE DRAWINGS.

PROVIDE A STEEL ERECTION PLAN WITH THE STRUCTURAL STEEL SHOP DRAWINGS.

STEEL FABRICATOR SUPPLYING STRUCTURAL COMPONENTS SHALL BE CERTIFIED UNDER THE AISC QUALITY CERTIFICATION PROGRAM, SIMPLE STEEL BRIDGES (CATEGORY SBR), EFFECTIVE AS OF THE PROJECT LETTING DATE OR MEET REQUIREMENTS AS DELINEATED IN FSSS 555.

STEEL GIRDERS AND DIAPHRAGMS SHALL BE AASHTO M270, GRADE 50W (ASTM 709, GRADE 50), WEATHERING STEEL.

ALL STEEL SHAPES, PLATES, AND BARS SHALL MEET THE REQUIREMENTS OF AASHTO M270, GRADE 36 (ASTM A36) AND SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M111 (ASTM A123) UNLESS NOTED OTHERWISE. ALL NUTS AND BOLTS SHALL CONFORM TO ASTM A307, GRADE A, EXCEPT AS NOTED AND SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 (ASTM A153).

THE BEARING SYSTEM SHALL CONFORM TO AASHTO LRFD SPECIFICATIONS AND CONSIST OF A STEEL SOLE PLATE SYSTEM WITH ELASTOMERIC PADS. THE BEARING SYSTEM SHOULD PROVIDE FOR EXPANSION AND CONTRACTION OF THE BRIDGE THROUGHOUT THE DESIGN TEMPERATURE RANGE. COMPLETE BEARING SYSTEM SHALL BE PROVIDED WITH ANCHOR BOLTS. SUPPLIER IS REQUIRED TO COMPLETE FINAL DESIGN CALCULATIONS TO VERIFY PROPOSED BEARING SYSTEM IS ADEQUATE FOR THE FINAL SUPERSTRUCTURE. REFER TO FSSS 555 FOR ADDITIONAL INFORMATION.

AN ALTERNATE W-SECTION MAY BE USED IN LIEU OF THE GIRDER SHOWN IN THE PLANS. THE GIRDERS MAY BE DECREASED IN DEPTH UP TO 3" FROM THE PREFERRED W36 SECTION. THE BRIDGE MUST PROVIDE A MINIMUM USABLE WIDTH OF AT LEAST 24'-0", AND NO MORE THAN 24'-6". IF AN ALTERNATE BRIDGE SUPERSTRUCTURE IS USED, THE FINISHED GRADE OF THE ROAD SHALL BE MAINTAINED WITH ADJUSTMENTS MADE IN THE SUBSTRUCTURE ELEVATIONS TO ACCOMMODATE VARIATIONS IN THE SUPERSTRUCTURE DEPTH. NO ADDITIONAL COST TO THE OWNER SHALL BE INCURRED IF CONTRACTOR ELECTS TO UTILIZE AN ALTERNATE BRIDGE SECTION.

PRE-FABRICATED STEEL BRIDGE SUPPLIER TO PROVIDE A STAMPED LOAD RATING REPORT WHICH IS INCLUDED IN THE UNIT BID PRICE FOR THE PRE-FABRICATED STEEL MODULAR BRIDGE. THE LOAD RATING SHALL BE COMPLETED AFTER SHOP DRAWINGS HAVE BEEN REVIEWED AND APPROVED BY THE OWNER AND SUBMITTED TO THE OWNER AT THE CONCLUSION OF THE PROJECT. THE LOAD RATING SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 6 OF THE AASHTO MANUAL FOR BRIDGE EVALUATION, 3RD EDITION. THE LOAD RATING SHALL EVALUATE STANDARD AASHTO DESIGN (HL-93 INVENTORY/OPERATING) AND AASHTO LEGAL LOADS (TYPE 3, TYPE 3S2, TYPE 3-3 & NRL). THE STAMPED LOAD RATING REPORT SHALL INCLUDE A SUMMARY OF RATING FACTORS, SUPPLEMENTAL CALCULATIONS, AND ALL DOCUMENTATION NECESSARY TO SUBSTANTIATE THE RATING FACTORS. RATING ≥ 1 FOR HL-93.

GENERAL PROJECT NOTES:

SPECIFICATIONS:

MATERIALS AND CONSTRUCTION OF THIS STRUCTURE SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR CONSTRUCTION OF ROADS AND BRIDGES ON FEDERAL HIGHWAY PROJECTS, FP-14 (U.S. CUSTOMARY UNITS) AS MODIFIED BY THE FOREST SERVICE SUPPLEMENTAL SPECIFICATIONS (FSSS) AND CLAUSES IN THE CONTRACT DOCUMENTS OR THE PLANS.

USE OF EXISTING BRIDGE:

THE CONTRACTOR MAY USE THE TEMPORARY DETOUR BRIDGE DURING CONSTRUCTION. OVERLOAD PERMITS MAY BE ALLOWED, SUBMIT FOR REVIEW AND APPROVAL. THE CONTRACTOR SHALL NOT USE THE EXISTING TIMBER BRIDGE FOR ANY CONSTRUCTION RELATED ACTIVITY.

EROSION CONTROL PLAN:

SUBMIT AN EROSION CONTROL PLAN TO THE OWNER FOR REVIEW 21 CALENDAR DAYS PRIOR TO BEGINNING ANY WORK. PROVIDE METHODS TO PREVENT RUNOFF FROM THE CONSTRUCTION SITE FROM DIRECTLY ENTERING INTO LIVE STREAMS. STRAW OR HAY BASED BASED PRODUCTS (WATTLES, BLANKETS, ETC.) SHALL NOT BE USED FOR EROSION CONTROL. CONTRACTOR SHALL USE ASPEN FIBER, COCONUT, OR SIMILAR MATERIAL AND ANCHOR WITH WOODEN STAKES. SALVAGE WILLOW CLUMPS AND OTHER NATIVE PLANT MATERIAL TO BE USED DURING STREAM SIMULATION AND BANK RECONSTRUCTION. ON-SITE STORAGE LOCATION AND FINAL PLACEMENT MUST BE COORDINATED WITH THE OWNER'S REPRESENTATIVE.

CONTRACTOR QUALITY CONTROL:

REFER TO FP-14 SECTION 153 AND SUPPLEMENTAL SPECIFICATION 153 FOR TESTING AND SUBMITTAL REQUIREMENTS.

STAGING:

KEEP EQUIPMENT AT LEAST 300' FROM STREAMS WHEN NOT IN USE OR PROVIDE ALTERNATE PLAN FOR APPROVAL. IF AGREED TO BY OWNER, CONTRACTOR MAY REQUEST USE OF OTHER STORAGE AREAS. EQUIPMENT STAGED OUTSIDE THE PROJECT AREAS SHALL PROTECT EXISTING ROAD SURFACES AND CONTRACTOR SHALL REPAIR ANY DAMAGE AND RESTORE ANY DISTURBANCE CAUSED BY STORAGE SITES.

ALL EQUIPMENT MUST BE WEED FREE AND CLEANED BEFORE ENTERING THE PROJECT SITE. NOTIFY THE OWNER SEVEN BUSINESS DAYS PRIOR TO MOBILIZING EQUIPMENT TO THE WORK SITE.

GEOTECHNICAL INVESTIGATION:

A SUBSURFACE INVESTIGATION HAS BEEN PERFORMED AND A GEOTECHNICAL REPORT PREPARED FOR THE PROJECT SITE. GEOTECHNICAL REPORT IS AVAILABLE FOR VIEWING UPON REQUEST.

WASTE SITE & SITE CONSTRUCTION:

NO OWNER FURNISHED WASTE SITE IS AVAILABLE. CONTRACTOR IS RESPONSIBLE FOR ALL MATERIAL REMOVAL FROM THE PROJECT SITE, INCLUDING UNSUITABLE MATERIAL, EXCESS MATERIAL AND ALL CONSTRUCTION RELATED REFUSE, PRIOR TO FINAL ACCEPTANCE. REPAIR ANY DAMAGE TO THE EXISTING ROAD SYSTEM DUE TO CONTRACTOR'S OPERATIONS, INSIDE OR OUTSIDE THE PROJECT BOUNDARY, AT THE CONTRACTOR'S EXPENSE, PRIOR TO FINAL ACCEPTANCE.

SITE SECURITY:

THE CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION SITE SECURITY DURING THE PERFORMANCE OF THE CONTRACT.

ARCHEOLOGICAL SITES/ARTIFACTS:

STOP WORK AND NOTIFY OWNER IMMEDIATELY IF ANY PREVIOUSLY UNKNOWN ARCHAEOLOGICAL SITES OR ARTIFACTS ARE ENCOUNTERED.

UTILITIES:

LOCATION AND PROTECTION OF ALL UTILITIES (PUBLIC AND PRIVATE) IS THE RESPONSIBILITY OF THE CONTRACTOR.

TEMPORARY TRAFFIC CONTROL:

SUBMIT A TEMPORARY TRAFFIC CONTROL PLAN TO THE OWNER FOR APPROVAL AT LEAST 30 CALENDAR DAYS PRIOR TO PLANNED CLOSURE. SEE FSSS 156.

IN-STREAM WINDOW:

THE IN-STREAM WORK WINDOW FOR CONSTRUCTION IS JULY 15 - AUGUST 15.

PROJECT OWNER:

FOR THE PURPOSES OF THIS CONTRACT, THE "OWNER" IS THE NEZ PERCE TRIBE, WHO WILL ADMINISTER CONSTRUCTION ADMINISTRATION SERVICES. AFTER CONSTRUCTION, THE BRIDGE WILL BE OWNED AND MAINTAINED BY IDAHO COUNTY.

ABBREVIATIONS:

APPROX	APPROXIMATE	GOV'T	GOVERNMENT	PI	PAY ITEM
B.O.	BOTTOM OF	HR	HOURLY	QTY	QUANTITY
CFS	CUBIC FEET PER SECOND	ID	INNER DIAMETER, IDENTIFICATION	R	RADIUS
CL	CENTERLINE	LBS	POUNDS	RPC	RED PLASTIC CAP
CMP	CORRUGATED METAL PIPE	LF	LINEAR FOOT	RT	RIGHT
CP	CONTROL POINT	LS	LUMP SUM	SCH	SCHEDULE
CQ	CONTRACT QUANTITY	LT	LEFT	SPEC	SPECIFICATION
CY	CUBIC YARDS	MAX	MAXIMUM	T.O.	TOP OF
DIA., Ø	DIAMETER	MIN	MINIMUM	TYP	TYPICAL
EA	EACH	NPT	NEZ PERCE TRIBE	USFS	UNITED STATES FOREST SERVICE
ELEV	ELEVATION	NOM	NOMINAL	W/	WITH
FT	FEET, FOOT	OC	ON CENTER		

STAMPS, LOGOS, AND SEALS

PROFESSIONAL ENGINEER LICENSED 15446 6/3/26 STATE OF IDAHO RYAN ELLIOTT

GreatWest ENGINEERING

NO.	REVISION / ISSUE	DATE

PROJECT NAME

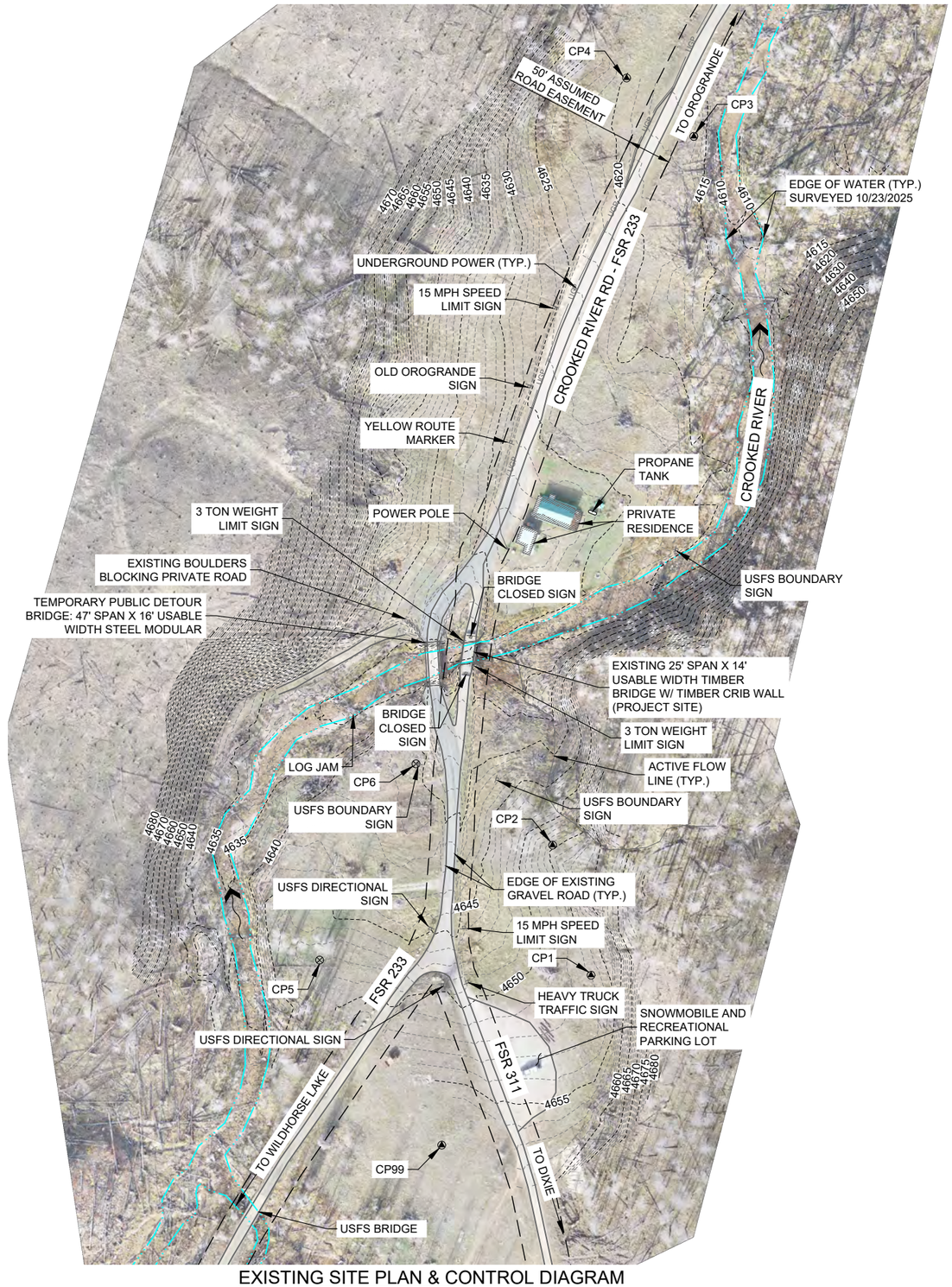
OROGRANDE BRIDGE REPLACEMENT

NEZ PERCE TRIBE & IDAHO COUNTY

DRAWING TITLE

GENERAL NOTES

DATE: 6/3/2026	ARCHIVE NO.
DESIGNER: J. NETH	DRAWING SHEET NO.
DRAWN: J. NETH	
CHECKED: R. ELLIOTT	SHEET 3 OF 16
PROJECT NO.: 1-25180	



EXISTING SITE PLAN & CONTROL DIAGRAM

0 75 150

SCALE IN FEET

CONTROL POINT COORDINATE TABLE				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
CP1	1,468,629.91	2,676,653.96	4,652.96	REBAR W/ RPC
CP2	1,468,778.98	2,676,609.87	4,654.62	REBAR W/ RPC
CP3	1,469,591.14	2,676,771.71	4,617.49	REBAR W/ RPC
CP4	1,469,658.04	2,676,694.66	4,619.84	REBAR W/ RPC
CP5	1,468,647.24	2,676,342.91	4,648.69	BLM STEEL CAP
CP6	1,468,872.11	2,676,453.35	4,640.94	BLM STEEL CAP
CP99	1,468,435.23	2,676,482.86	4,658.48	REBAR W/ RPC

SURVEY NOTES

1. THIS PROJECT UTILIZES A LOCAL GROUND COORDINATE SYSTEM. NORTHING AND EASTING COORDINATES AND ELEVATIONS ARE EXPRESSED IN UNITS OF U.S SURVEY FEET BOTH HORIZONTALLY AND VERTICALLY. ELEVATIONS ARE REFERENCED TO THE NAVDD88 (GEOID 18) VERTICAL DATUM.
2. THE PROJECT COORDINATES ARE LOCAL BUT ARE REFERENCED TO THE IDAHO WEST STATE PLANE COORDINATE SYSTEM (NAD 83).
3. RPC = RED PLASTIC CAP.
4. TOPOGRAPHIC SURVEY COMPLETED ON 10/23/2025.

STAMPS, LOGOS, AND SEALS

PROFESSIONAL ENGINEER LICENSE 15446 6/3/26 STATE OF IDAHO RYAN ELLIOTT

GreatWest ENGINEERING

NO.	REVISION / ISSUE	DATE

PROJECT NAME

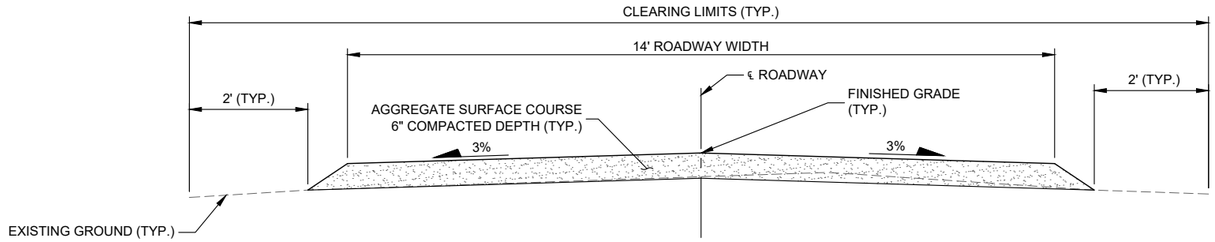
OROGRANDE BRIDGE REPLACEMENT

NEZ PERCE TRIBE & IDAHO COUNTY

DRAWING TITLE

EXISTING SITE PLAN & CONTROL DIAGRAM

DATE 6/3/2026	ARCHIVE NO.
DESIGNER J. NETH	DRAWING SHEET NO.
DRAWN J. NETH	
CHECKED R. ELLIOTT	SHEET 4 OF 16
PROJECT NO. 1-25180	

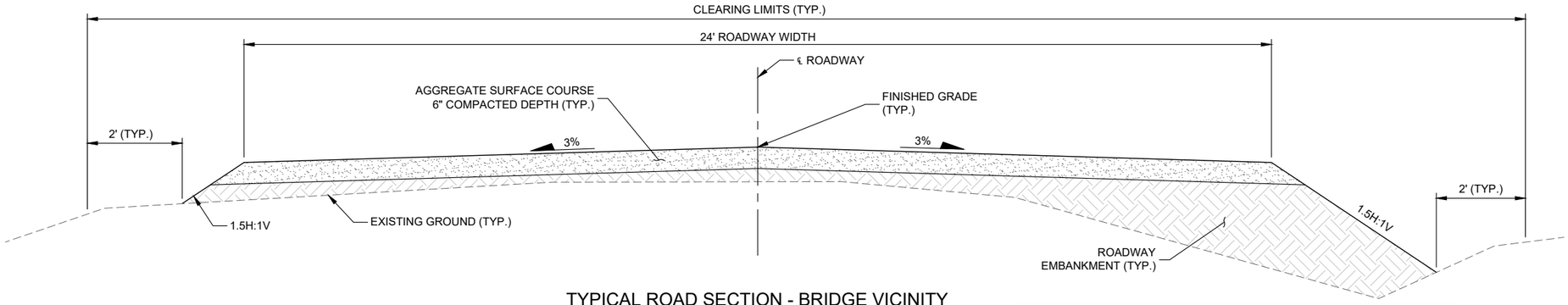


TYPICAL ROAD SECTION - END OF ROADWORK

NO SCALE

NOTE:

ROADWAY WIDTH VARIES IN TRANSITIONAL SECTIONS, REFER TO PLAN VIEW ON SHEET 6 AND ROADWAY CROSS-SECTIONS.

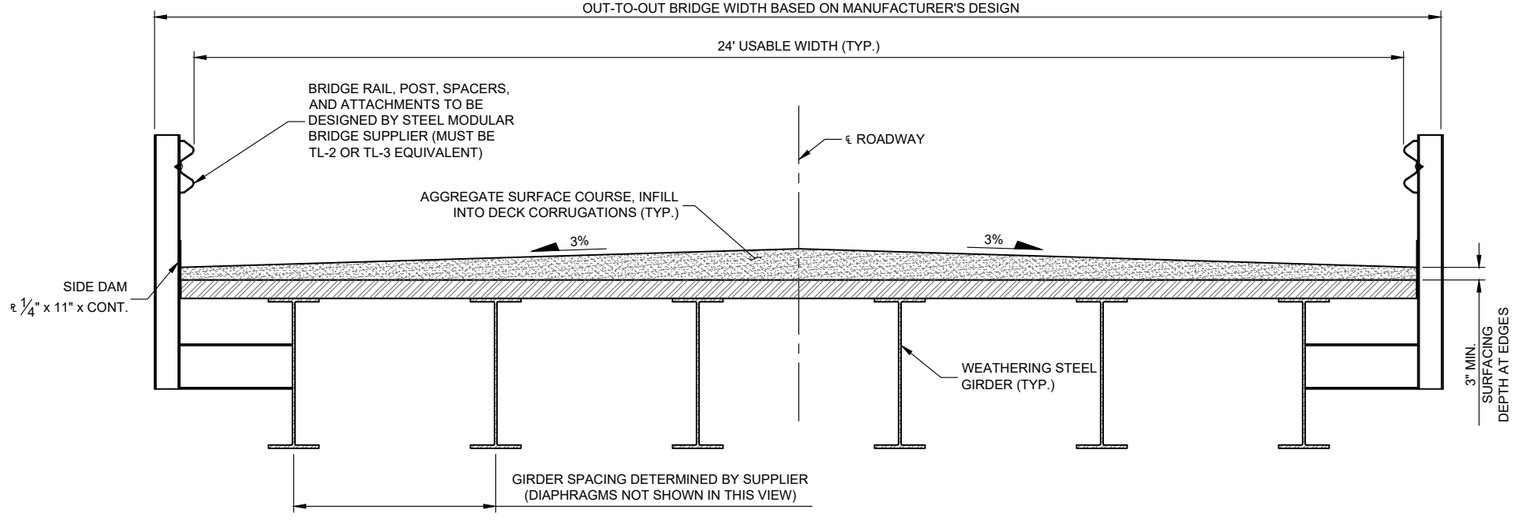


TYPICAL ROAD SECTION - BRIDGE VICINITY

NO SCALE

NOTE:

ROADWAY WIDTH VARIES IN TRANSITIONAL SECTIONS, REFER TO PLAN VIEW ON SHEET 6 AND ROADWAY CROSS-SECTIONS. APPROACH RAIL NOT SHOWN FOR CLARITY, REFER TO STANDARD APPROACH GUARDRAIL SHEETS.



TYPICAL BRIDGE SECTION

NO SCALE

NOTE:

*W36 GIRDERS WERE ASSUMED FOR THE BRIDGE LAYOUT AND ARE SHOWN THROUGHOUT THESE PLANS. REFER TO GENERAL NOTES ON SHEET 3. NUMBER OF GIRDERS AND LAYOUT BY SUPPLIER.

STAMPS, LOGOS, AND SEALS

PROFESSIONAL ENGINEER LICENSED 15446 6/3/26 STATE OF IDAHO RYAN ELLIOTT

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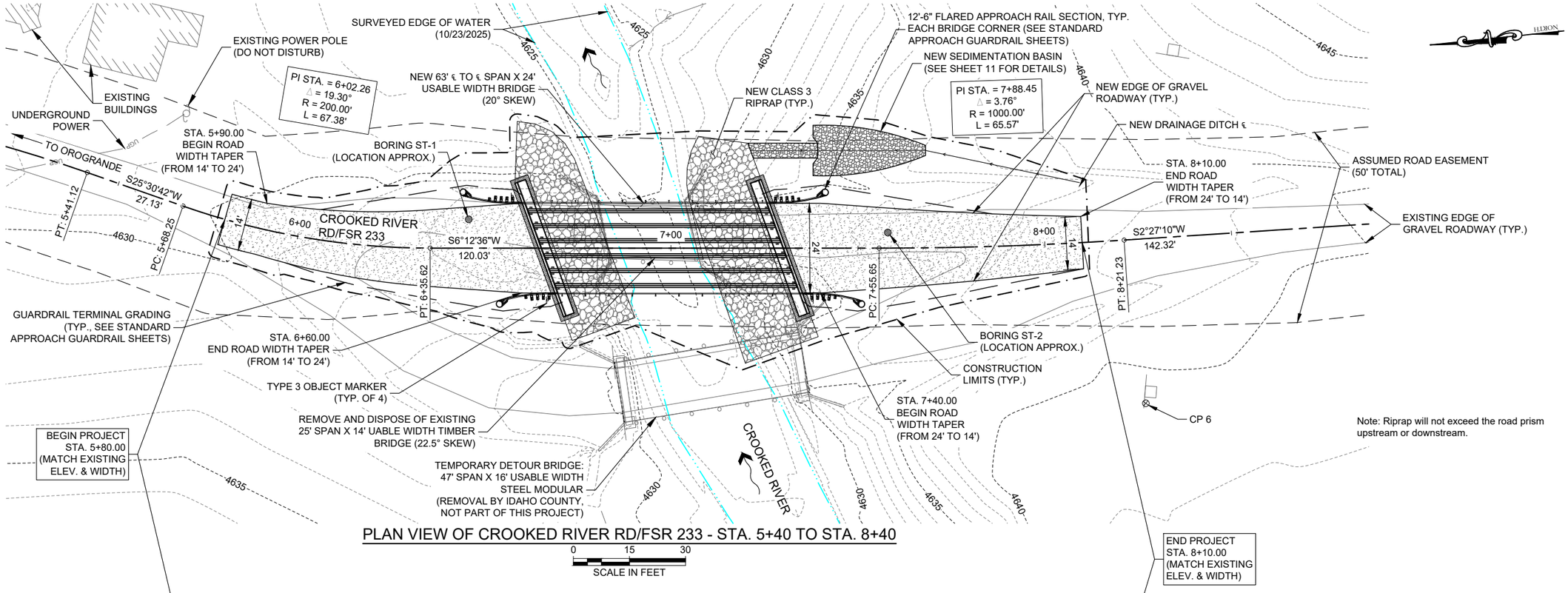
OROGRANDE BRIDGE REPLACEMENT

NEZ PERCE TRIBE & IDAHO COUNTY

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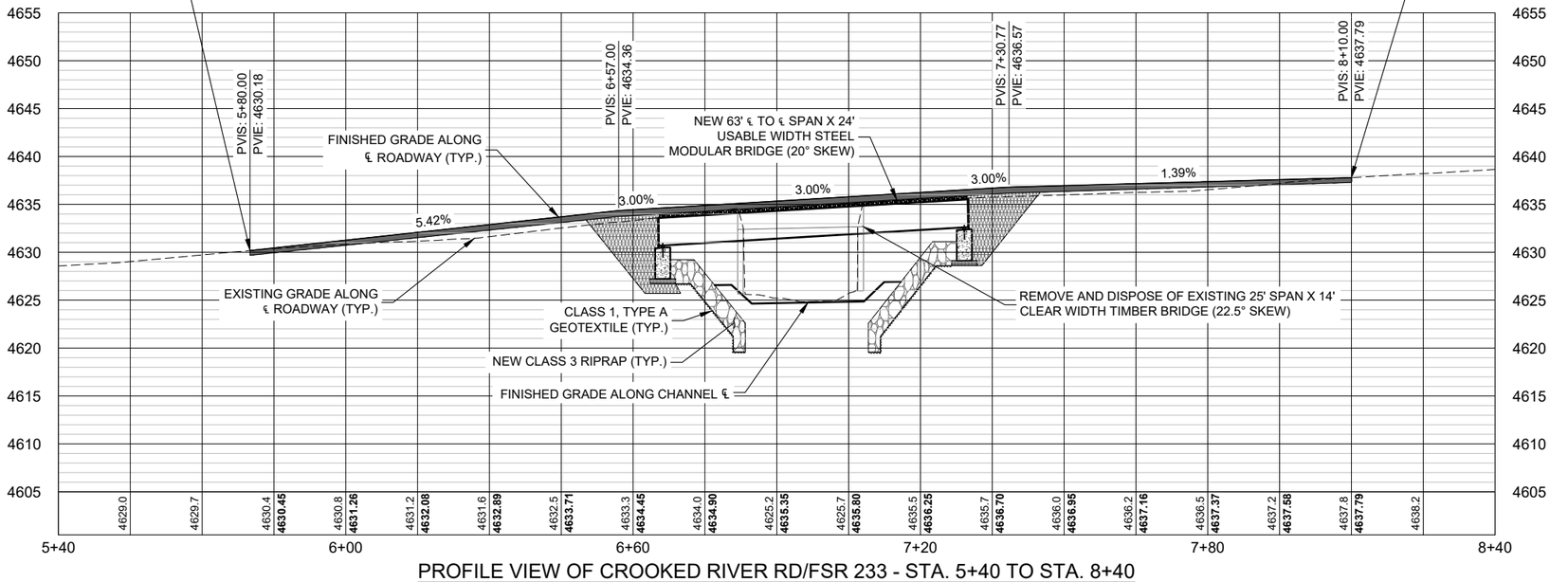
TYPICAL ROAD & BRIDGE SECTIONS

DATE 6/3/2026	ARCHIVE NO.
DESIGNER J. NETH	DRAWING SHEET NO.
DRAWN J. NETH	
CHECKED R. ELLIOTT	SHEET 5 OF 16
PROJECT NO. 1-25180	



PLAN VIEW OF CROOKED RIVER RD/FSR 233 - STA. 5+40 TO STA. 8+40

Note: Riprap will not exceed the road prism upstream or downstream.



PROFILE VIEW OF CROOKED RIVER RD/FSR 233 - STA. 5+40 TO STA. 8+40

HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 15'

NOTE:
BRIDGE AND APPROACH RAIL NOT SHOWN IN PROFILE VIEW FOR CLARITY.

STAMPS, LOGOS, AND SEALS

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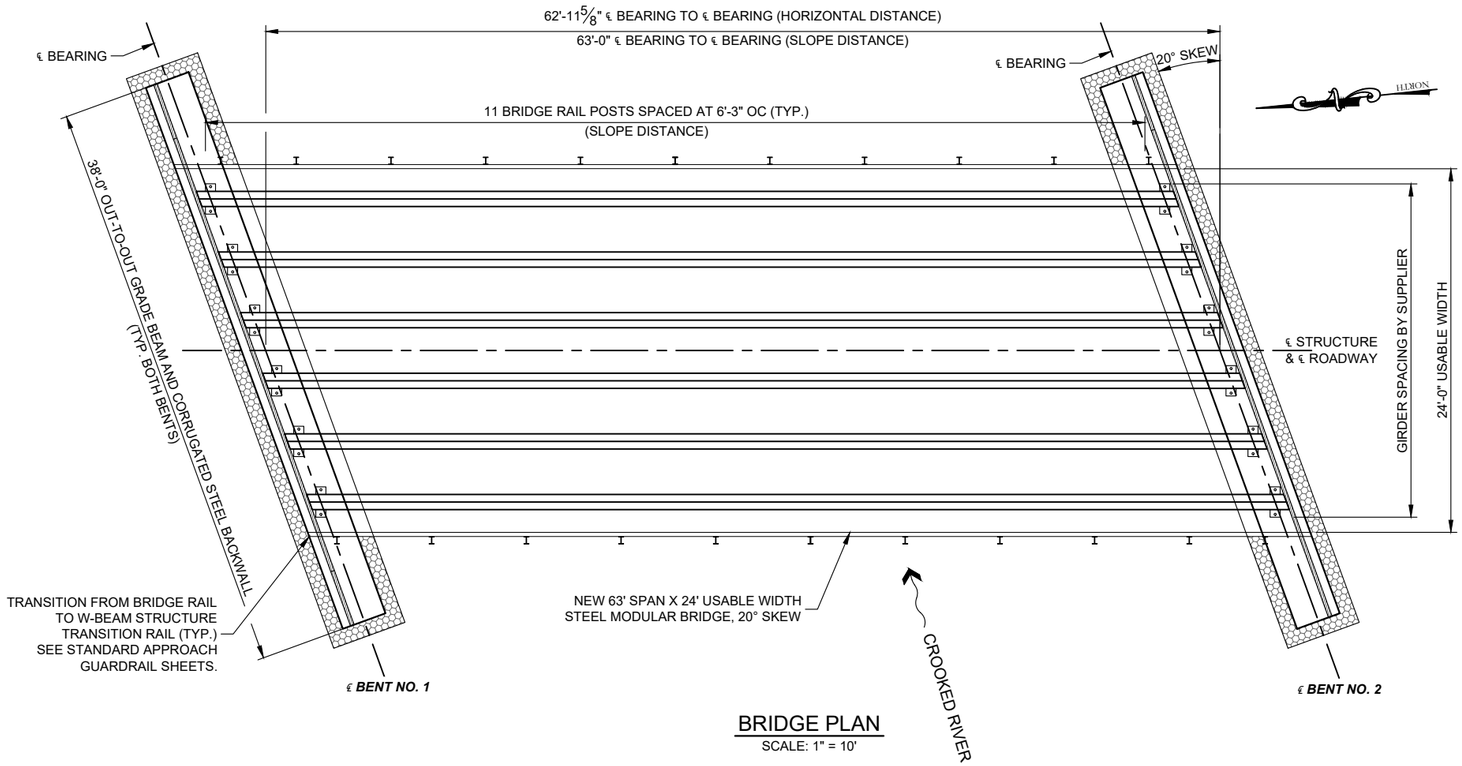
OROGRANDE BRIDGE REPLACEMENT

NEZ PERCE TRIBE & IDAHO COUNTY

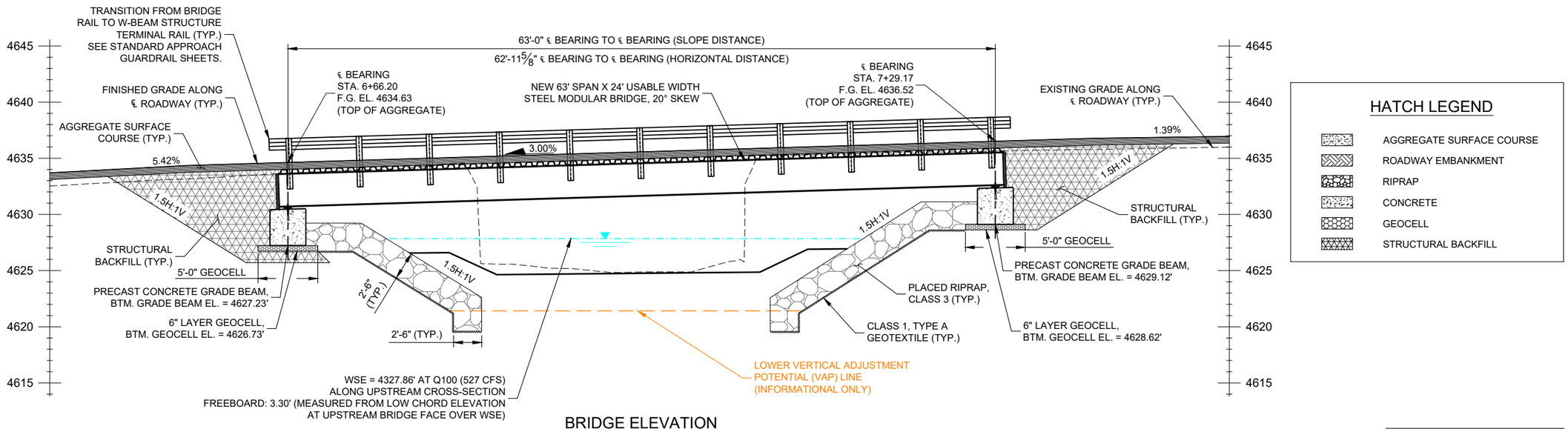
DRAWING TITLE

CROOKED RIVER RD/ FSR 233 PLAN & PROFILE

DATE 6/3/2026	ARCHIVE NO.
DESIGNER J. NETH	DRAWING SHEET NO.
DRAWN J. NETH	
CHECKED R. ELLIOTT	
PROJECT NO. 1-25180	SHEET 6 OF 16



BRIDGE PLAN
SCALE: 1" = 10'



BRIDGE ELEVATION
SCALE: 1" = 10'

GENERAL NOTES:

1. ELEVATIONS AND FREEBOARD ARE BASED ON THE PREFERRED W36 GIRDER SECTION. THE GIRDERS MAY BE DECREASED IN DEPTH UP TO 3". IF AN ALTERNATE BRIDGE SUPERSTRUCTURE IS USED, THE FINISHED GRADE OF THE ROAD SHALL BE MAINTAINED WITH ADJUSTMENTS MADE IN THE SUBSTRUCTURE ELEVATIONS TO ACCOMMODATE VARIATIONS IN THE SUPERSTRUCTURE DEPTH. SEE ADDITIONAL NOTES ON SHEET 3.
2. SEE RIPRAP PLAN ON SHEET 10 FOR RIPRAP PLACEMENT.
3. BRIDGE CAMBER IS THE RESPONSIBILITY OF THE SUPPLIER AND IS NOT SHOWN FOR CLARITY. REFER TO DETAILS ON SHEET 12.
4. GRADE IS SHOWN ALONG ℄ ROADWAY AND WILL BE SLIGHTLY VARIABLE AT UPSTREAM AND DOWNSTREAM ROAD EDGES.

STRUCTURAL BACKFILL NOTES:

1. STRUCTURAL BACKFILL MATERIAL SHALL BE PLACED IN ACCORDANCE WITH FP-14, SECTION 208. THE PROCTOR DENSITY FOR STRUCTURAL BACKFILL MATERIAL SHALL BE OBTAINED IN ACCORDANCE WITH ***AASHTO T99, METHOD C***. SAMPLING AND TESTING IS REQUIRED PER FP-14 TABLE 208-1.
2. BACKFILL LIMITS SHOWN ARE MINIMUM REQUIREMENTS. ANY BACKFILL OUTSIDE THE LIMITS SHOWN SHALL BE CONSIDERED ROADWAY EMBANKMENT AND MUST MEET THE REQUIREMENTS FOR ROADWAY EMBANKMENT.

STRUCTURE EXCAVATION NOTES:

1. STRUCTURE EXCAVATION SHALL BE COMPLETED IN ACCORDANCE WITH FP-14, SECTION 208.
2. LIMITS SHOWN ARE MINIMUM EXCAVATION REQUIREMENTS BASED ON ASSUMED OSHA SOIL TYPE C AND THE RELATED OSHA EXCAVATION REQUIREMENTS. DETERMINATION IS BASED ON LIMITED DATA. ACTUAL SITE CONDITIONS AND EXCAVATION SOILS MAY VARY.
3. APPROXIMATELY 80% PERCENT OF THE STRUCTURE EXCAVATION MATERIAL IS ANTICIPATED TO BE SUITABLE FOR USE AS ROADWAY EMBANKMENT.
   A. MIXING, SORTING, AND DRYING MAY BE REQUIRED.
   B. MUST HAVE APPROVAL FROM OWNER PRIOR TO REUSE.
4. STRUCTURE EXCAVATION QUANTITY SHOWN IS FOR INFORMATION ONLY AND HAS BEEN APPROXIMATED BASED ON THE LIMITS SHOWN. CONTRACTOR IS RESPONSIBLE FOR DETERMINING ACTUAL QUANTITIES BASED ON THEIR OWN EXCAVATION PLAN.
5. CONTRACTOR SHALL SUBMIT EXCAVATION PLAN TO OWNER FOR APPROVAL. PLAN SHALL INCLUDE DRAWINGS AND WRITTEN OUTLINE ILLUSTRATING AND DESCRIBING PROPOSED EXCAVATION LIMITS, METHODS, EQUIPMENT, LOCATION OF STOCKPILES, AND ESTIMATED QUANTITIES AND COMPLY WITH OSHA EXCAVATION SOIL TYPING AND REQUIREMENTS. CHANGES TO THE EXCAVATION LIMITS SHOWN FOR CONTRACTOR'S CONVENIENCE MUST BE SHOWN ON THE CONTRACTORS' PLAN AND ARE THE RESPONSIBILITY OF THE CONTRACTOR. THIS WORK IS INCLUDED IN THE CONTRACT.

HATCH LEGEND

- AGGREGATE SURFACE COURSE
- ROADWAY EMBANKMENT
- RIPRAP
- CONCRETE
- GEOCELL
- STRUCTURAL BACKFILL

NOTE:
APPROACH RAIL AND EXISTING BRIDGE NOT SHOWN FOR CLARITY.

NEZ PERCE TRIBE TREATY OF 1855

GREAT SEAL OF IDAHO COUNTY · Mountains Prairie Rivers ·

STAMPS, LOGOS, AND SEALS

PROFESSIONAL ENGINEER LICENSED 15446 6/3/26 STATE OF IDAHO RYAN ELLIOTT

GreatWest ENGINEERING

NO.	REVISION / ISSUE	DATE

PROJECT NAME

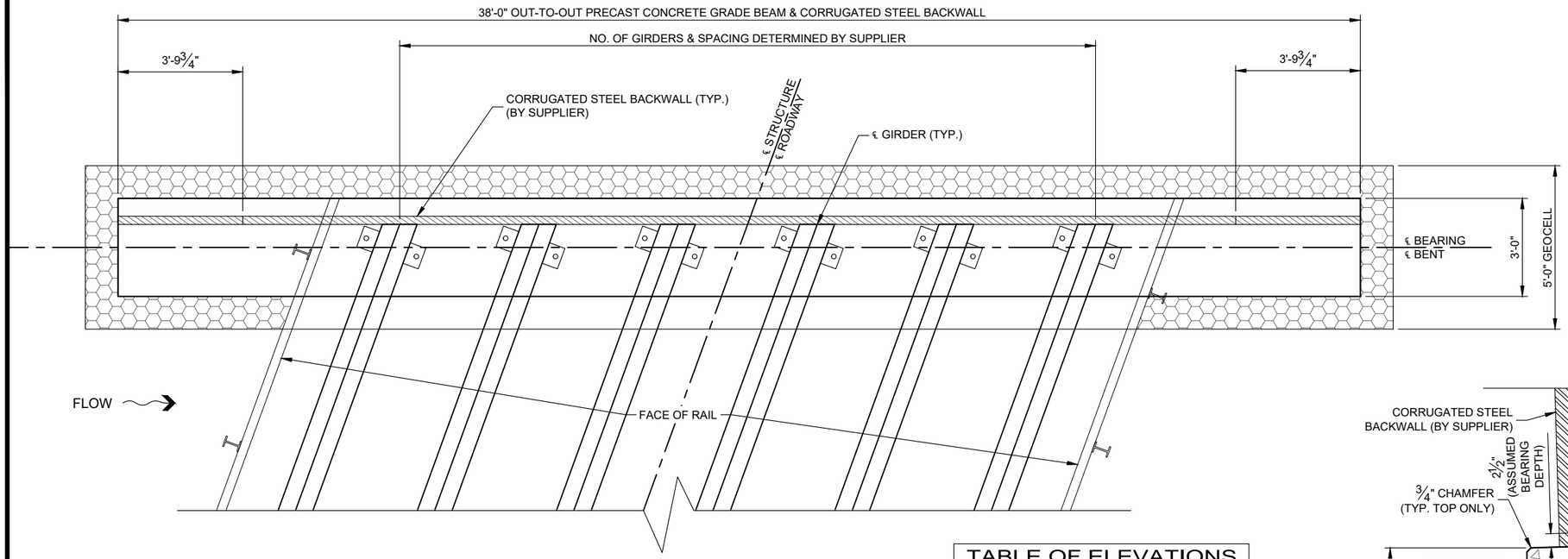
OROGRANDE BRIDGE REPLACEMENT

NEZ PERCE TRIBE & IDAHO COUNTY

DRAWING TITLE

BRIDGE PLAN & ELEVATION

DATE 6/3/2026	ARCHIVE NO.
DESIGNER J. NETH	DRAWING SHEET NO.
DRAWN J. NETH	
CHECKED R. ELLIOTT	
PROJECT NO. 1-25180	SHEET 7 OF 16



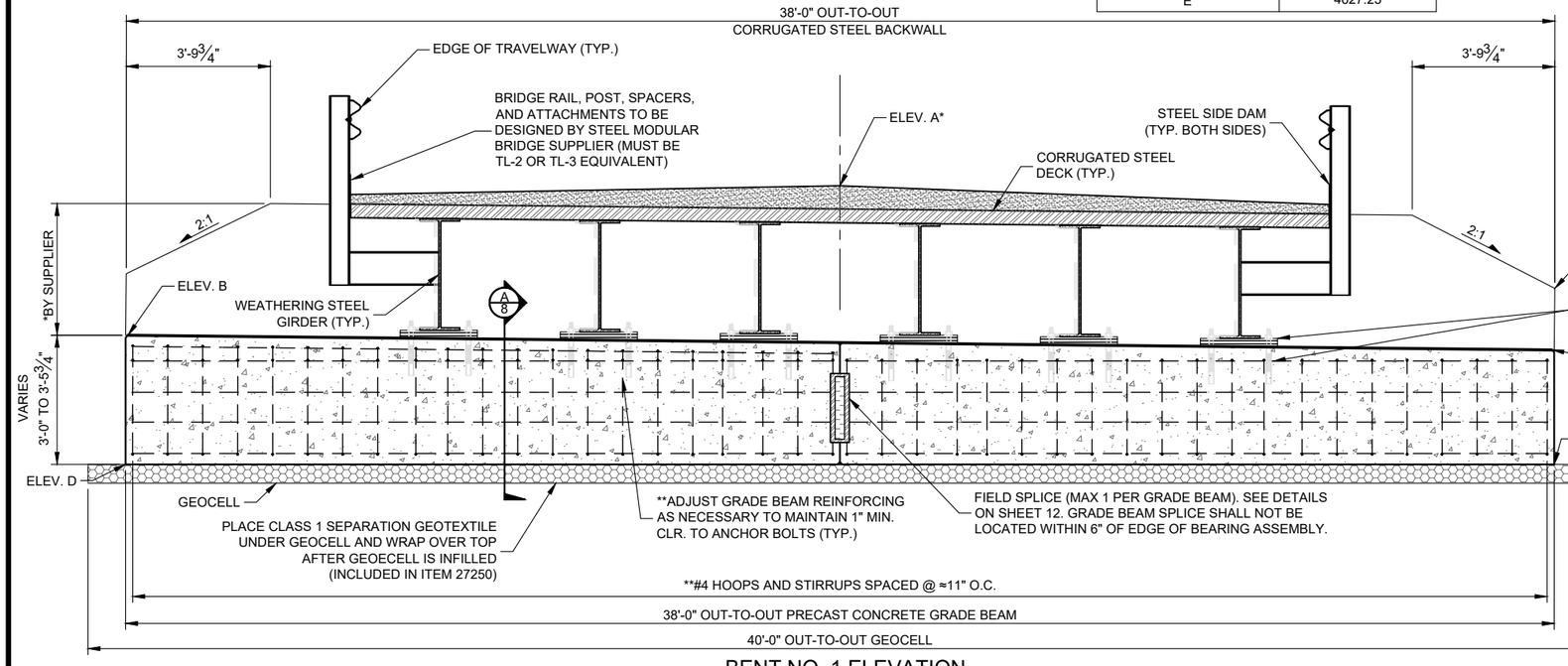
BENT NO. 1 PLAN

SCALE: 1/4" = 1'-0"

*NOTE:

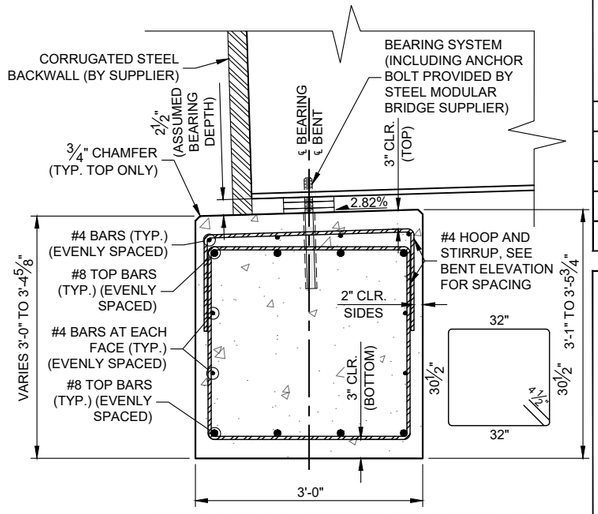
ELEVATIONS ARE BASED ON THE PREFERRED W36 GIRDER SECTION. THE GIRDERS MAY BE DECREASED IN DEPTH UP TO 3". IF AN ALTERNATE BRIDGE SUPERSTRUCTURE IS USED, THE FINISHED GRADE OF THE ROAD SHALL BE MAINTAINED WITH ADJUSTMENTS MADE IN THE SUBSTRUCTURE ELEVATIONS TO ACCOMMODATE VARIATIONS IN THE SUPERSTRUCTURE DEPTH. SEE ADDITIONAL NOTES ON SHEET 3.

TABLE OF ELEVATIONS	
ELEVATION	BENT NO. 1
A	4634.63
B	4630.66
C	4630.27
D	4627.23
E	4627.23



BENT NO. 1 ELEVATION

SCALE: 1/4" = 1'-0"



A 8 PRECAST CONCRETE GRADE BEAM

SCALE: 1/2" = 1'-0"

*NOTE:

DUE TO LONGITUDINAL SLOPE, SKEW AND GIRDER CAMBER, THE TOP OF THE GRADE BEAM ELEVATIONS HAVE BEEN MODIFIED TO THE EXTENT POSSIBLE TO COUNTERACT THESE ITEMS. HOWEVER, DUE TO THE PRECAST NATURE OF THE ABUTMENTS, SHIMMING WILL LIKELY BE REQUIRED. CONTRACTOR TO BE PREPARED WITH STAINLESS OR GALVANIZED STEEL SHIMS IN A VARIETY OF THICKNESS TO ASSIST IN FITUP. USE SHIMS OF THE SAME WIDTH/LENGTH AND GRADE AS THE BEARING SOLE PLATE. PLACE SHIMS BETWEEN THE BEARING PLATE AND GRADE BEAM. SHIMS ARE INDIRECT TO ITEM 55503.

**NOTE:

CONCRETE GRADE BEAM SUPPLIER TO COORDINATE WITH STEEL BRIDGE SUPPLIER TO VERIFY GRADE BEAM REINFORCEMENT DOES NOT INTERFERE WITH ANCHOR BOLT SPACING. LIFTING LOOPS/EMBEDS/ANCHORAGE LOCATIONS NECESSARY FOR TRANSPORTATION AND PLACEMENT OF PRECAST CONCRETE GRADE BEAMS ARE NOT SHOWN AND SHALL BE BY DESIGNED BY SUPPLIER, INCLUDING ANY METHODS FOR POST-PLACEMENT TREATMENT. INDIRECT TO PAY ITEM 55220.

STAMPS, LOGOS, AND SEALS

PROFESSIONAL ENGINEER LICENSED 15446 6/3/26 STATE OF IDAHO RYAN ELLIOTT

GreatWest ENGINEERING

NO.	REVISION / ISSUE	DATE

PROJECT NAME

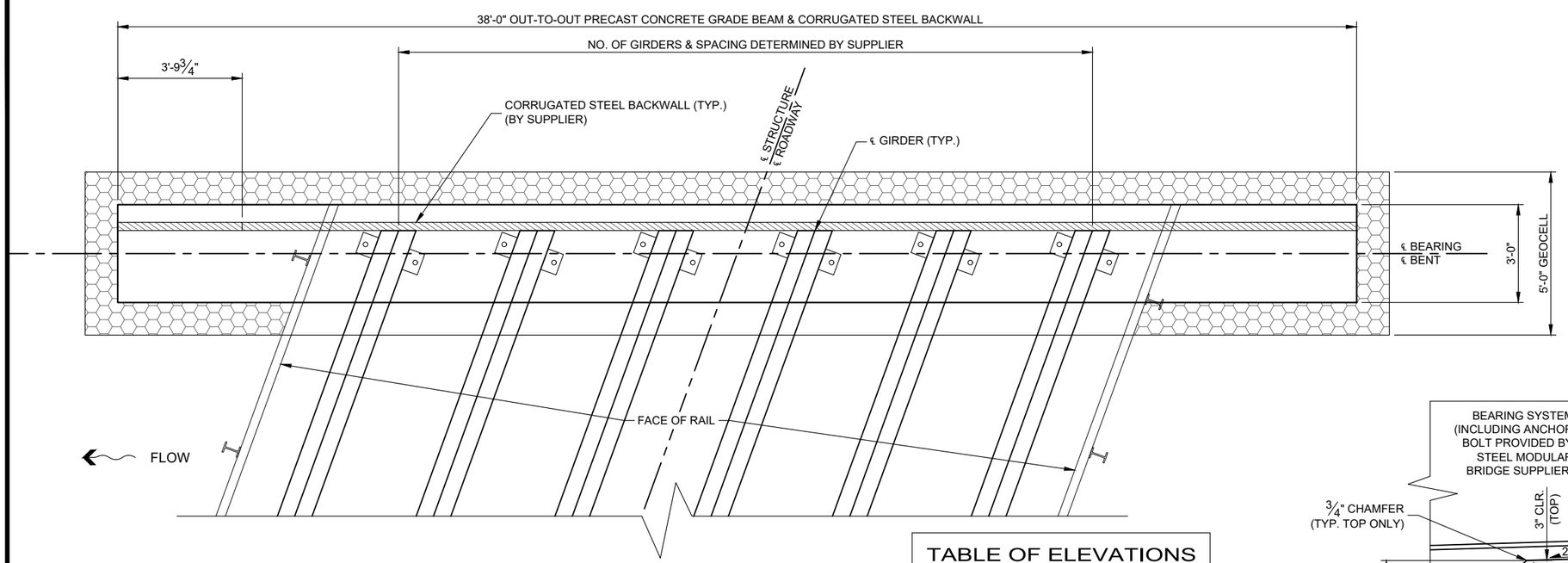
OROGRANDE BRIDGE REPLACEMENT

NEZ PERCE TRIBE & IDAHO COUNTY

DRAWING TITLE

BENT NO. 1 PLAN & ELEVATION

DATE 6/3/2026	ARCHIVE NO.
DESIGNER J. NETH	DRAWING SHEET NO.
DRAWN J. NETH	
CHECKED R. ELLIOTT	
PROJECT NO. 1-25180	SHEET 8 OF 16



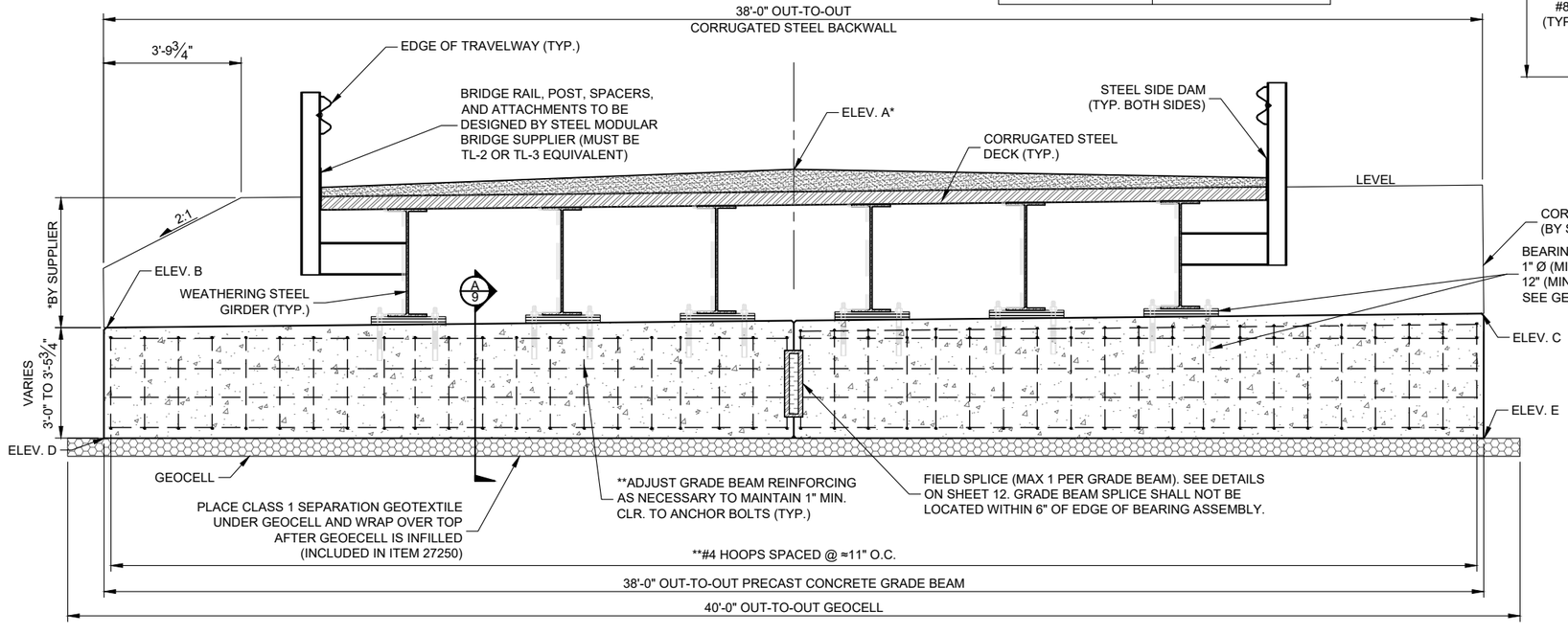
BENT NO. 2 PLAN

SCALE: 1/4" = 1'-0"

TABLE OF ELEVATIONS	
ELEVATION	BENT NO. 2
A	4636.52
B	4632.16
C	4632.55
D	4629.12
E	4629.12

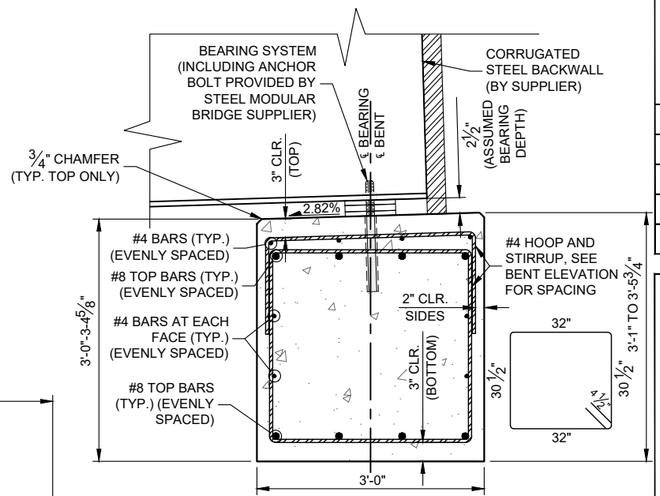
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BENT NO. 2 ELEVATION

SCALE: 1/4" = 1'-0"



A
9
PRECAST CONCRETE GRADE BEAM

SCALE: 1/2" = 1'-0"

**NOTE:

CONCRETE GRADE BEAM SUPPLIER TO COORDINATE WITH STEEL BRIDGE SUPPLIER TO VERIFY GRADE BEAM REINFORCEMENT DOES NOT INTERFERE WITH ANCHOR BOLT SPACING. LIFTING LOOPS/EMBEDS/ANCHORAGE LOCATIONS NECESSARY FOR TRANSPORTATION AND PLACEMENT OF PRECAST CONCRETE GRADE BEAMS ARE NOT SHOWN AND SHALL BE BY DESIGNED BY SUPPLIER, INCLUDING ANY METHODS FOR POST-PLACEMENT TREATMENT. INDIRECT TO PAY ITEM 55220.

*NOTE:

DUE TO LONGITUDINAL SLOPE, SKEW AND GIRDER CAMBER, THE TOP OF THE GRADE BEAM ELEVATIONS HAVE BEEN MODIFIED TO THE EXTENT POSSIBLE TO COUNTERACT THESE ITEMS. HOWEVER, DUE TO THE PRECAST NATURE OF THE ABUTMENTS, SHIMMING WILL LIKELY BE REQUIRED. CONTRACTOR TO BE PREPARED WITH STAINLESS OR GALVANIZED STEEL SHIMS IN A VARIETY OF THICKNESS TO ASSIST IN FITUP. USE SHIMS OF THE SAME WIDTH/LENGTH AND GRADE AS THE BEARING SOLE PLATE. PLACE SHIMS BETWEEN THE BEARING PLATE AND GRADE BEAM. SHIMS ARE INDIRECT TO ITEM 55503.

STAMPS, LOGOS, AND SEALS

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GreatWest ENGINEERING

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PROJECT NAME

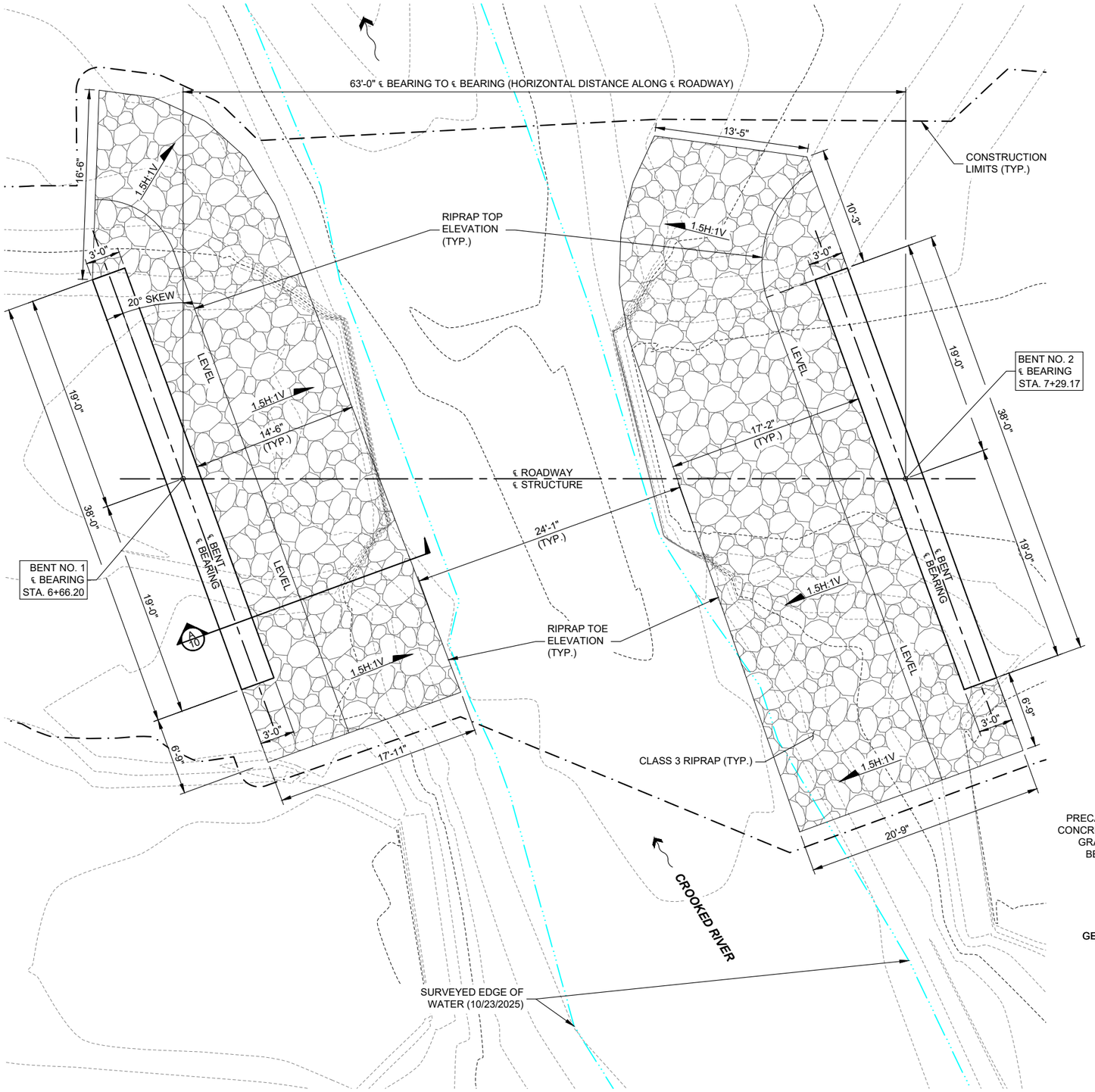
OROGRANDE BRIDGE REPLACEMENT

NEZ PERCE TRIBE & IDAHO COUNTY

DRAWING TITLE

BENT NO. 2 PLAN & ELEVATION

DATE: 6/3/2026	ARCHIVE NO.
DESIGNER: J. NETH	DRAWING SHEET NO.
DRAWN: J. NETH	
CHECKED: R. ELLIOTT	SHEET 9 OF 16
PROJECT NO.: 1-25180	



RIPRAP & FOUNDATION PLAN

0 5 10

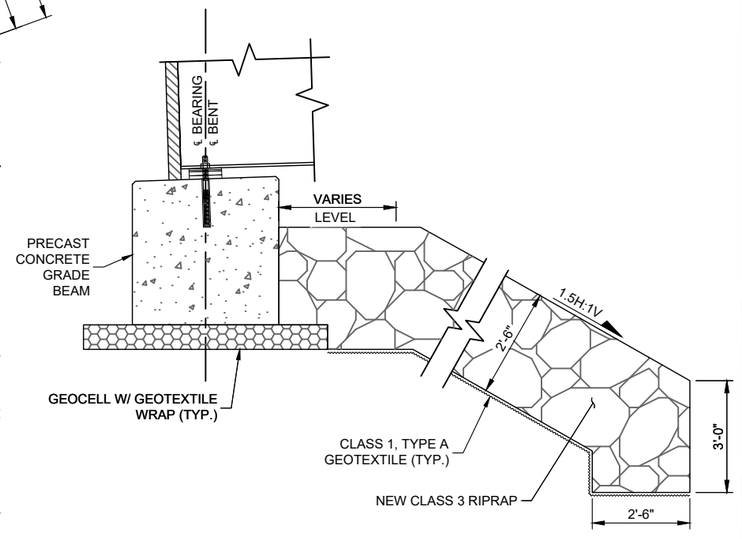
SCALE IN FEET

NORTH

NOTES:

1. RIPRAP LAYOUT IS BASED ON THE FACTORED LOWER VERTICAL ADJUSTMENT POTENTIAL (VAP) GRADIENT FOR THE CHANNEL. CLASS 3 RIPRAP WAS CHOSEN TO PROVIDE CHANNEL STABILITY AND SCOUR PROTECTION TO THE GRADE BEAM ABUTMENT SYSTEMS.
2. SALVAGE STREAM SUBSTRATE MATERIAL FROM RIPRAP EXCAVATION AND STOCKPILE ONSITE. AT THE CONCLUSION OF RIPRAP PLACEMENT, AT THE DIRECTION OF THE OWNER, CONTRACTOR TO REGRADE STOCKPILED STREAM SUBSTRATE MATERIAL INTO REGION IMPACTED BY RIPRAP EXCAVATION TO BLEND WITH THE NATIVE EXISTING STREAM TOPOGRAPHY. THIS WORK IS INDIRECT TO ITEM 25101.
3. SALVAGE TOPSOIL MATERIAL FROM RIPRAP EXCAVATION AND STOCKPILE ONSITE. AT THE CONCLUSION OF RIPRAP PLACEMENT, AT THE DIRECTION OF THE OWNER, CONTRACTOR TO REGRADE STOCKPILED TOPSOIL MATERIAL TO BLEND EXISTING TOPOGRAPHY INTO THE NEW RIPRAP EXTENTS. THIS WORK IS INDIRECT TO ITEM 25101.

Note: Riprap will not extend beyond the extent of the road either upstream or downstream of the bridge. Riprap will be covered with soil upon completion of placement.



A 10 RIPRAP SECTION

NO SCALE

STAMPS, LOGOS, AND SEALS

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PROJECT NAME

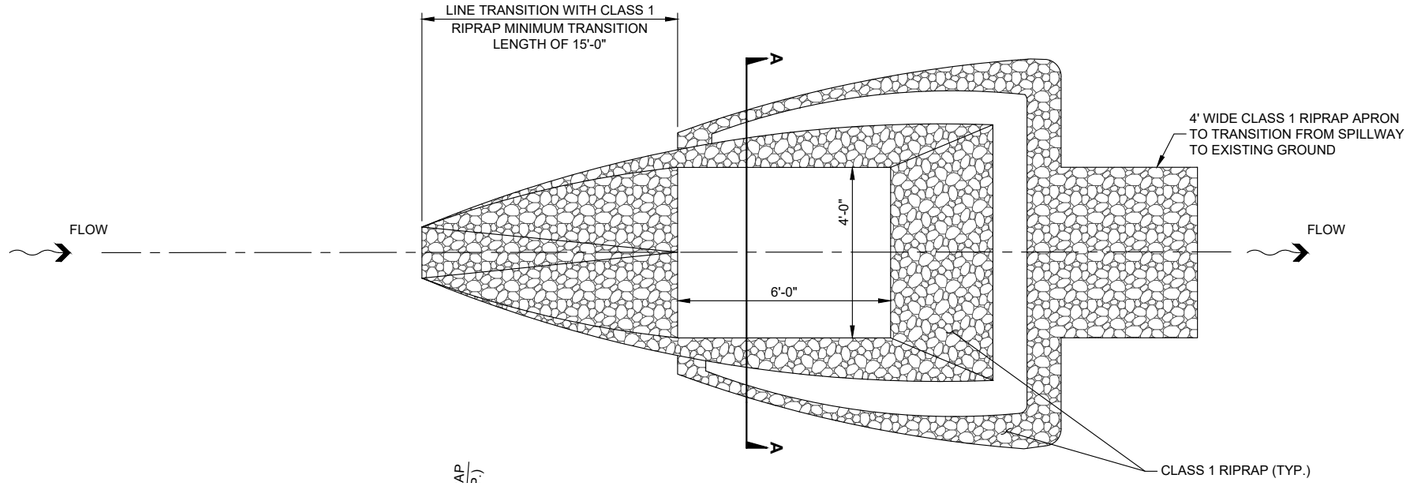
OROGRANDE BRIDGE REPLACEMENT

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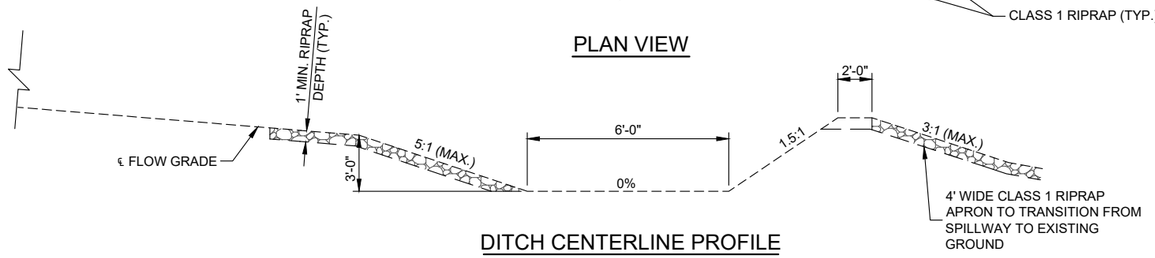
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RIPRAP & FOUNDATION PLAN

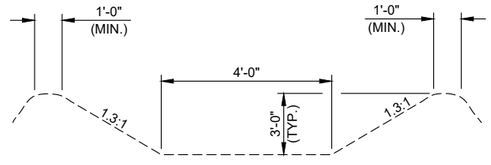
DATE 6/3/2026	ARCHIVE NO.
DESIGNER J. NETH	DRAWING SHEET NO.
DRAWN J. NETH	
CHECKED R. ELLIOTT	SHEET 10 OF 16
PROJECT NO. 1-25180	



PLAN VIEW



DITCH CENTERLINE PROFILE



SECTION A - A

A
11

SEDIMENTATION BASIN DETAILS

NO SCALE

SEDIMENTATION BASIN NOTES:

1. DIMENSIONS SHOWN ARE OPTIMUM BUT ARE SUBJECT TO CHANGE TO FIT THE SITE UPON APPROVAL FROM THE OWNER. LOCATION OF SEDIMENTATION BASIN TO BE STAKED BY THE CONTRACTOR AND APPROVED BY THE OWNER.
2. WHEN THE BASIN IS LOCATED IN A SECTION OF ROADBED WITH ADJACENT CUT SLOPE, THE SIDEWALLS SHALL BE CONSTRUCTED TO MATCH CUT SLOPE.
3. MATERIAL REQUIRED FOR CONSTRUCTION OF THE SPILLWAY SHALL BE OBTAINED FROM A COMMERCIAL SOURCE.
4. TRANSITIONS FROM DITCH TO SEDIMENTATION BASIN AND FROM SPILLWAY TO DITCH SHALL BE LINED WITH CLASS 1 RIPRAP FOR A MINIMUM OF 15 FEET.
5. ALL WORK AND MATERIALS ASSOCIATED WITH CONSTRUCTION OF THE SEDIMENTATION BASIN SHALL BE PAID FOR UNDER ITEM 15715.

STAMPS, LOGOS, AND SEALS

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GreatWest ENGINEERING

NO.	REVISION / ISSUE	DATE

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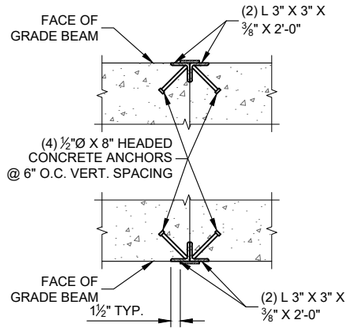
OROGRANDE BRIDGE REPLACEMENT

NEZ PERCE TRIBE & IDAHO COUNTY

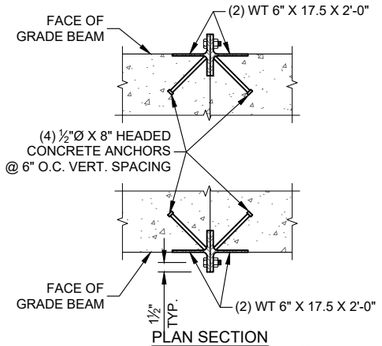
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SEDIMENTATION BASIN DETAILS

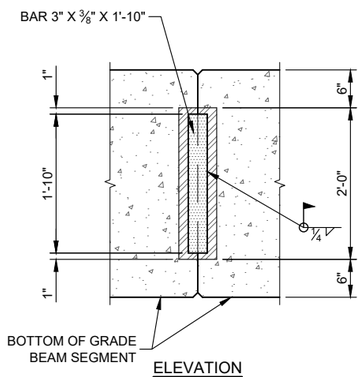
DATE 6/3/2026	ARCHIVE NO.
DESIGNER J. NETH	DRAWING SHEET NO.
DRAWN J. NETH	
CHECKED R. ELLIOTT	SHEET 11 OF 16
PROJECT NO. 1-25180	



PLAN SECTION

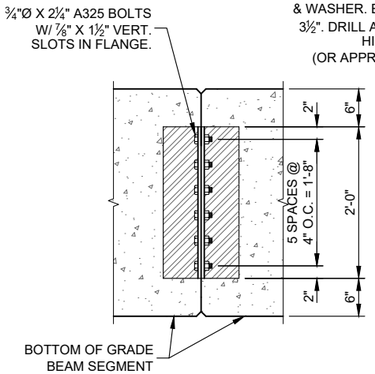


PLAN SECTION



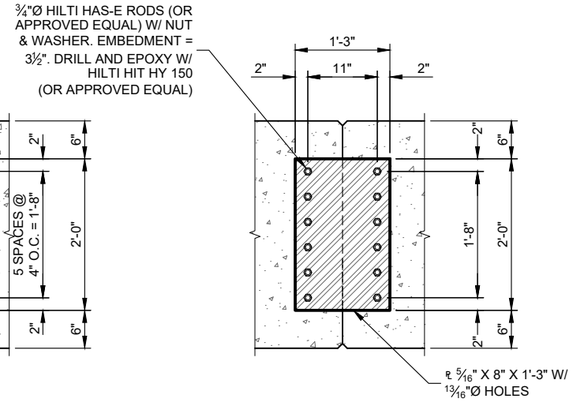
ELEVATION

FIELD WELD ALTERNATIVE



ELEVATION

FIELD BOLT ALTERNATIVE

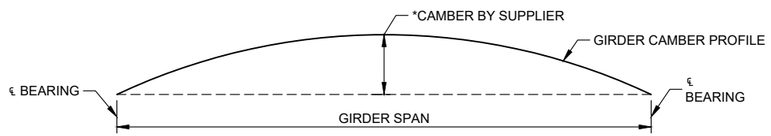


ELEVATION

POST-INSTALLED ANCHOR PLATE ALTERNATIVE

A/12 OPTIONAL GRADE BEAM FIELD SPLICE DETAILS

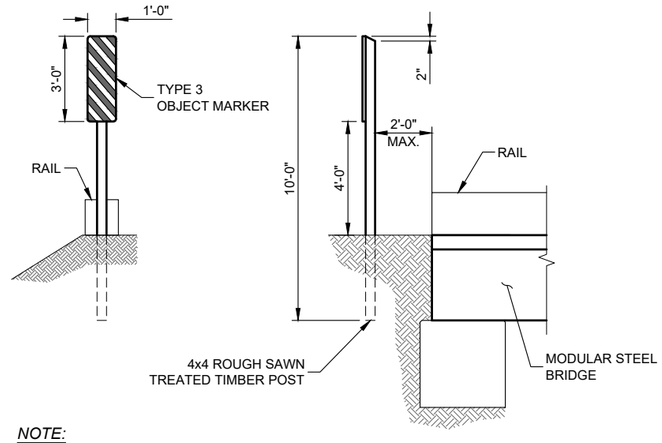
SCALE: 1/2" = 1'-0"



NOTE:
MAKE FINAL CAMBER 1.5 TIMES TOTAL DEAD LOAD DEFLECTION. CAMBER IS NOTED AS THE DISTANCE FROM THE WORKING LINE TO THE BOTTOM OF THE GIRDER. DEAD LOAD DEFLECTION INCLUDES ALL BRIDGE ITEMS INCLUDING BUT NOT LIMITED TO SUPERSTRUCTURE, DECK, AGGREGATE SURFACING, RAIL AND APPURTENANCES.

C/12 CAMBER DIAGRAM

NO SCALE



NOTE:
TYPE 3 OBJECT MARKERS SHALL BE 12" x 36" AND COLORED YELLOW AND BLACK. MATERIAL SHALL MEET MUTCD OM-3L OR OM-3R SPECIFICATIONS. FASTEN TO POST W/ (2) Ø ¼" MACHINE BOLTS W/ WASHERS. FIELD DRILL BOLT HOLES. INSTALL POSTS SUCH THAT THE INSIDE EDGE OF THE RETROREFLECTIVE PANEL IS IN LINE WITH THE INSIDE EDGE OF THE RAIL.

B/12 TYPE 3 OBJECT MARKER INSTALLATION DETAIL

NO SCALE

STAMPS, LOGOS, AND SEALS

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GreatWest ENGINEERING

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OROGRANDE BRIDGE REPLACEMENT

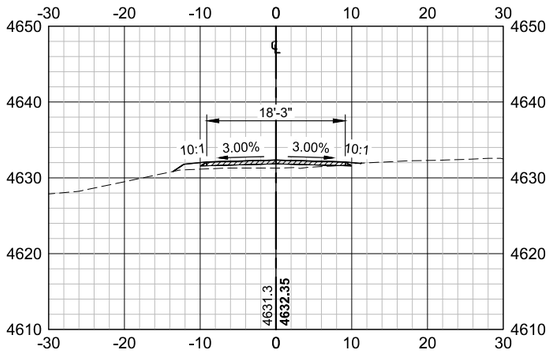
NEZ PERCE TRIBE & IDAHO COUNTY

DRAWING TITLE

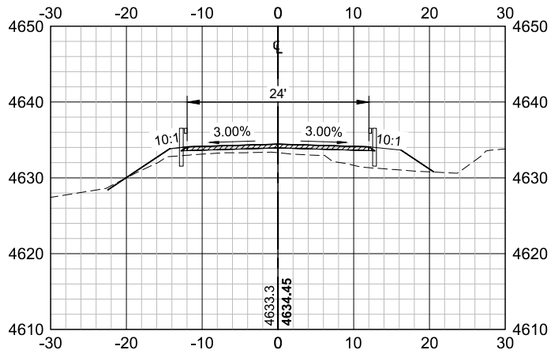
MISCELLANEOUS DETAILS

DATE: 6/3/2026	ARCHIVE NO.
DESIGNER: J. NETH	DRAWING SHEET NO.
DRAWN: J. NETH	
CHECKED: R. ELLIOTT	SHEET 12 OF 16
PROJECT NO.: 1-25180	

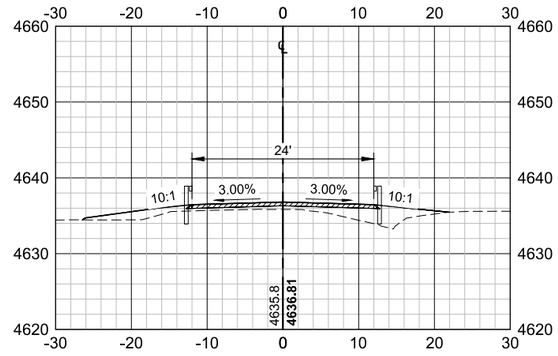
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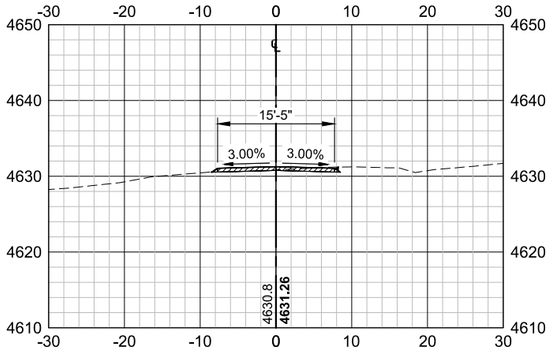
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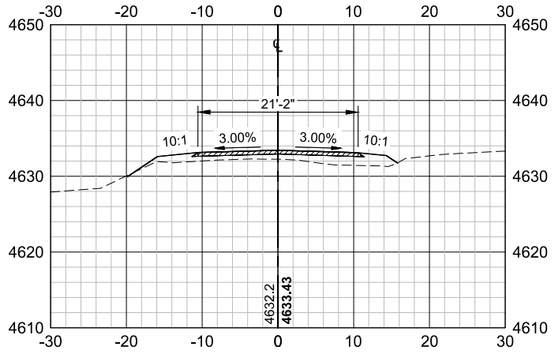
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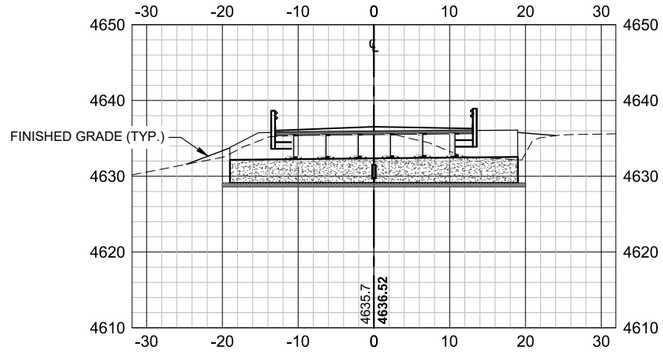


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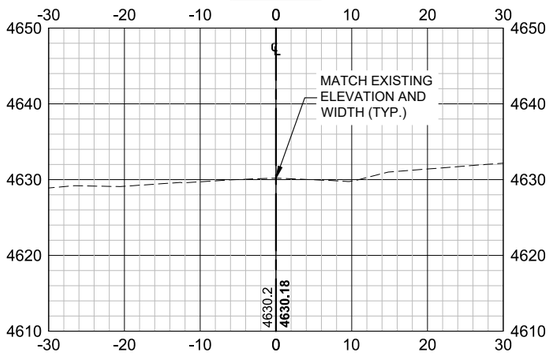
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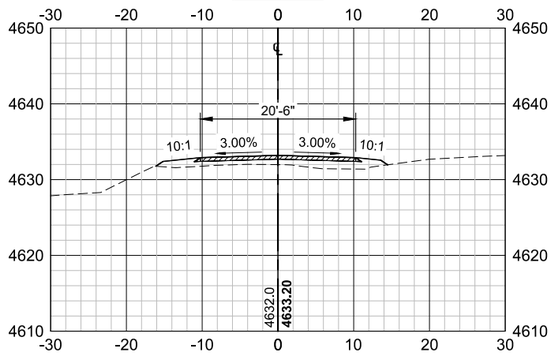


BEGIN ROAD WORK

5+80.00

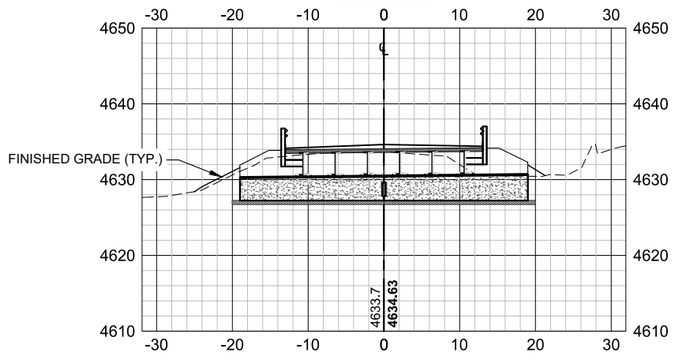


6+35.62



℄ BENT NO. 1 - SKEWED

6+66.20



CROOKED RIVER ROAD/FSR 233 CROSS-SECTIONS

SCALE: 1" = 20'

STAMPS, LOGOS, AND SEALS

PROFESSIONAL ENGINEER LICENSED 15446 6/3/26 STATE OF IDAHO RYAN ELLIOTT

GreatWest ENGINEERING

NO.	REVISION / ISSUE	DATE

PROJECT NAME

OROGRANDE BRIDGE REPLACEMENT

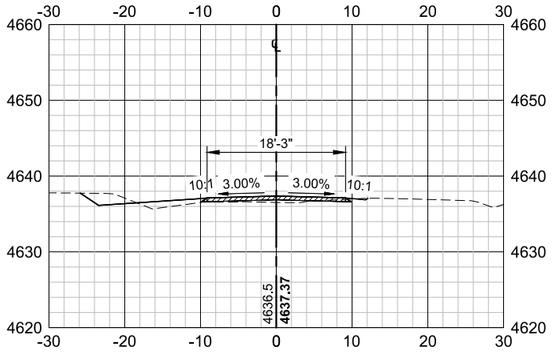
NEZ PERCE TRIBE & IDAHO COUNTY

DRAWING TITLE

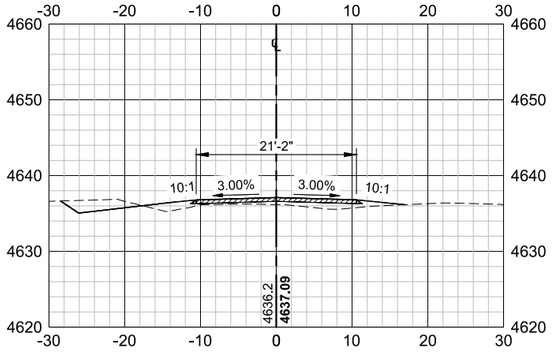
CROOKED RIVER ROAD/FSR 233 CROSS-SECTIONS

DATE 6/3/2026	ARCHIVE NO.
DESIGNER J. NETH	DRAWING SHEET NO.
DRAWN J. NETH	
CHECKED R. ELLIOTT	SHEET 13 OF 16
PROJECT NO. 1-25180	

7+80.00

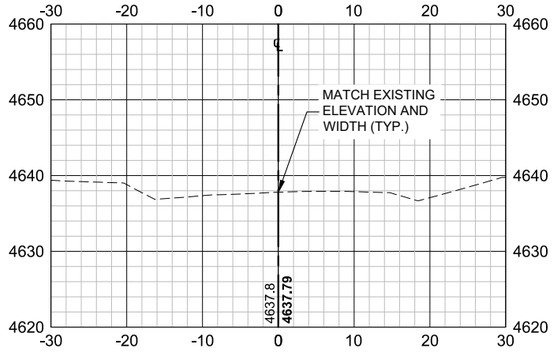


7+60.00

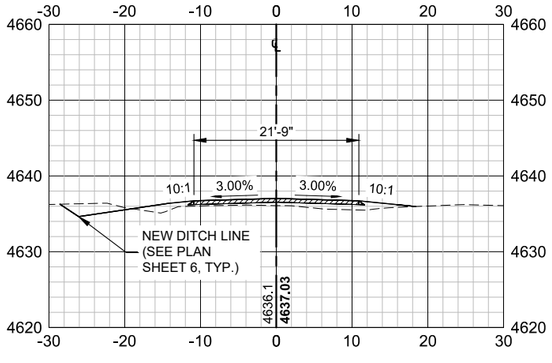


END ROAD WORK

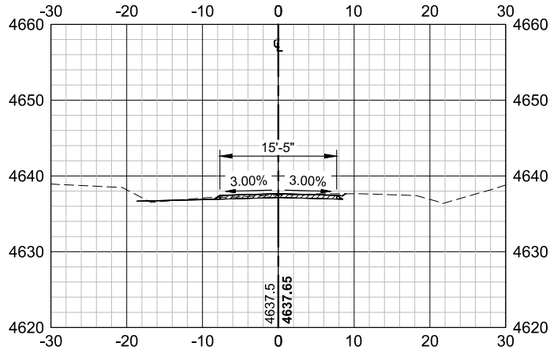
8+10.00



7+55.65



8+00.00



CROOKED RIVER ROAD/FSR 233 CROSS-SECTIONS

SCALE: 1" = 20'

CROOKED RIVER ROAD/FSR 233 CENTERLINE COORDINATE STAKING TABLE

NORTHING	EASTING	ELEVATION	DESCRIPTION
1,469,122.38	2,676,533.61	N/A	STA. 5+68.25 PC
1,469,111.63	2,676,528.87	4,630.18	STA. 5+80.00 BEGIN ROAD WORK
1,469,092.76	2,676,522.27	4,631.26	STA. 6+00.00
1,469,073.32	2,676,517.58	4,632.35	STA. 6+20.00
1,469,057.87	2,676,515.29	4,633.20	STA. 6+35.62 PT
1,469,053.52	2,676,514.81	4,633.43	STA. 6+40.00
1,469,033.64	2,676,512.65	4,634.45	STA. 6+60.00
1,469,027.48	2,676,511.98	4,634.63	STA. 6+66.20 CL BEARING
1,468,964.88	2,676,505.17	4,636.52	STA. 7+29.17 CL BEARING
1,468,954.11	2,676,504.00	4,636.81	STA. 7+40.00
1,468,938.55	2,676,502.30	4,637.03	STA. 7+55.65 PC
1,468,934.23	2,676,501.84	4,637.09	STA. 7+60.00
1,468,914.31	2,676,499.96	4,637.37	STA. 7+80.00
1,468,894.37	2,676,498.49	4,637.65	STA. 8+00.00
1,468,884.39	2,676,497.90	4,637.79	STA. 810.00 END ROAD WORK
1,468,873.17	2,676,497.35	N/A	STA. 8+21.23 PT

STAMPS, LOGOS, AND SEALS

PROFESSIONAL ENGINEER LICENSED 15446 6/3/26 STATE OF IDAHO RYAN ELLIOTT

GreatWest ENGINEERING

NO.	REVISION / ISSUE	DATE

PROJECT NAME

OROGRANDE BRIDGE REPLACEMENT

NEZ PERCE TRIBE & IDAHO COUNTY

DRAWING TITLE

CROOKED RIVER ROAD/FSR 233 CROSS-SECTIONS

DATE 6/3/2026	ARCHIVE NO.
DESIGNER J. NETH	DRAWING SHEET NO.
DRAWN J. NETH	
CHECKED R. ELLIOTT	
PROJECT NO. 1-25180	SHEET 14 OF 16

SK GEOTECHNICAL
2511 Holman Avenue
P. O. Box 80190
Billings, MT 59108-0190
Phone: 406.652.3930
Fax: 406.652.3944

LOG OF BORING

PROJECT: 25-4580G
GEOTECHNICAL EVALUATION
Orogrande Bridge over Crooked River
Orogrande, Idaho

BORING: **ST-1**
LOCATION:
See Attached Sketch

DRILLED BY: E. Hollibaugh | METHOD: CME 75HT | DATE: 11/6/25 | SCALE: 1" = 4'

Elev.	Depth	Symbol	Description of Materials	BPF	WL MC	qp (tsf)	Remarks
4632.5	0.0		2" Gravel Surfacing over Embankment FILL: Clayey Gravel with Sand, fine- to coarse-grained, dark brown, moist, loose to medium dense.	20	3.8		Elevation reference: contour lines from bridge plans
				9	17.0		
				6	19.7		
4626.0	6.5		POORLY GRADED GRAVEL with SILT, SAND, and COBBLES, fine- to coarse-grained, light brown, moist to wet, dense to very dense. (Alluvium)	50-5",set	18.8 ▽		Boulders likely
				35	6.1		LL=NP,PL=NP,PI=NP P_{200}= 6.1%
				29/50-2½"	7.4		Boulders likely
				36	9.7		
				33	12.4		
4608.5	24.0		GRANITE, gray, very soft to soft field hardness.	50-5½",set	5.6		
				50-1"	5.2		

GM

BORING BPF WL-MC QP ELEV ~ 4580.GPJ LAGNN06.GDT 4/2/26

SK GEOTECHNICAL
2511 Holman Avenue
P. O. Box 80190
Billings, MT 59108-0190
Phone: 406.652.3930
Fax: 406.652.3944

LOG OF BORING

PROJECT: 25-4580G
GEOTECHNICAL EVALUATION
Orogrande Bridge over Crooked River
Orogrande, Idaho

BORING: **ST-1 (cont.)**
LOCATION:
See Attached Sketch

DRILLED BY: E. Hollibaugh | METHOD: CME 75HT | DATE: 11/6/25 | SCALE: 1" = 4'

Elev.	Depth	Symbol	Description of Materials	BPF	WL MC	qp (tsf)	Remarks
4600.5	32.0		Granite Continued...	50-1¼"	5.0		
4592.5	40.0		END OF BORING Water observed at a depth of 8.0' with 19.0' of hollow-stem auger in the ground. Water not observed to wet cave-in depth of 12.3' immediately after withdrawal of auger. Boring then backfilled.	50-2",set	5.5		

BORING BPF WL-MC QP ELEV ~ 4580.GPJ LAGNN06.GDT 4/2/26

STAMPS, LOGOS, AND SEALS

PROFESSIONAL ENGINEER LICENSED 15446 6/3/26 STATE OF IDAHO RYAN ELLIOTT

GreatWest ENGINEERING

NO.	REVISION / ISSUE	DATE

PROJECT NAME
OROGRANDE BRIDGE REPLACEMENT

NEZ PERCE TRIBE & IDAHO COUNTY

DRAWING TITLE
BORING LOG ST-1

DATE 6/3/2026	ARCHIVE NO.
DESIGNER J. NETH	DRAWING SHEET NO.
DRAWN J. NETH	
CHECKED R. ELLIOTT	SHEET 15 OF 16
PROJECT NO. 1-25180	

SK GEOTECHNICAL
2511 Holman Avenue
P. O. Box 80190
Billings, MT 59108-0190
Phone: 406.652.3930
Fax: 406.652.3944

LOG OF BORING

PROJECT: 25-4580G
GEOTECHNICAL EVALUATION
Orogrande Bridge over Crooked River
Orogrande, Idaho

BORING: **ST-2**

LOCATION:
See Attached Sketch

DRILLED BY: E. Hollibaugh | METHOD: CME 75HT | DATE: 11/5/25 | SCALE: 1" = 4'

Elev.	Depth	Symbol	Description of Materials	BPF	WL MC	qp (tsf)	Remarks
4636.2	0.0		6" Gravel Surfacing over Embankment Fill: Clayey Gravel with Sand, fine- to coarse-grained, dark brown, moist.	17	2.3		
4633.7	2.5	GP GM	POORLY GRADED GRAVEL with SILT, SAND, and COBBLES, fine- to coarse-grained, light brown, rather dry to moist, medium dense to very dense. (Alluvium)	6/18	13.9		
				61	10.6		Boulders likely
				52	11.0		
				65	9.1		
				68	5.3		Boulders likely
				29	9.6		
				42	11.8		
				36	17.1		
4609.2	27.0		GRANITE, gray, very soft to soft field hardness.	50-3",set	13.2		

BORING BPF WL-MC QP ELEV ~ 4580.GPJ LAGNNN06.GDT 4/2/26

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2511 Holman Avenue
P. O. Box 80190
Billings, MT 59108-0190
Phone: 406.652.3930
Fax: 406.652.3944

LOG OF BORING

PROJECT: 25-4580G
GEOTECHNICAL EVALUATION
Orogrande Bridge over Crooked River
Orogrande, Idaho

BORING: **ST-2** **(cont.)**

LOCATION:
See Attached Sketch

DRILLED BY: E. Hollibaugh | METHOD: CME 75HT | DATE: 11/5/25 | SCALE: 1" = 4'

Elev.	Depth	Symbol	Description of Materials	BPF	WL MC	qp (tsf)	Remarks
4604.2	32.0		Granite Continued...	50-1½"	7.4		
				50-3½",set	9.4		
				50-5",set	6.4		
4591.7	44.5		END OF BORING Water observed at a depth of 14.2' with 24' of hollow-stem auger in the ground. Water not observed to wet cave-in depth of 13.9' immediately after withdrawal of auger. Flowing water observed entering borehole at 3.9' Boring then backfilled.				

BORING BPF WL-MC QP ELEV ~ 4580.GPJ LAGNNN06.GDT 4/2/26

NEZ PERCE TRIBE TREATY OF 1855

GREAT SEAL OF IDAHO COUNTY · Mountains · Prairie · Rivers ·

STAMPS, LOGOS, AND SEALS

PROFESSIONAL ENGINEER LICENSED 15446 6/3/26 STATE OF IDAHO RYAN ELLIOTT

GreatWest ENGINEERING

NO.	REVISION / ISSUE	DATE

PROJECT NAME

OROGRANDE BRIDGE REPLACEMENT

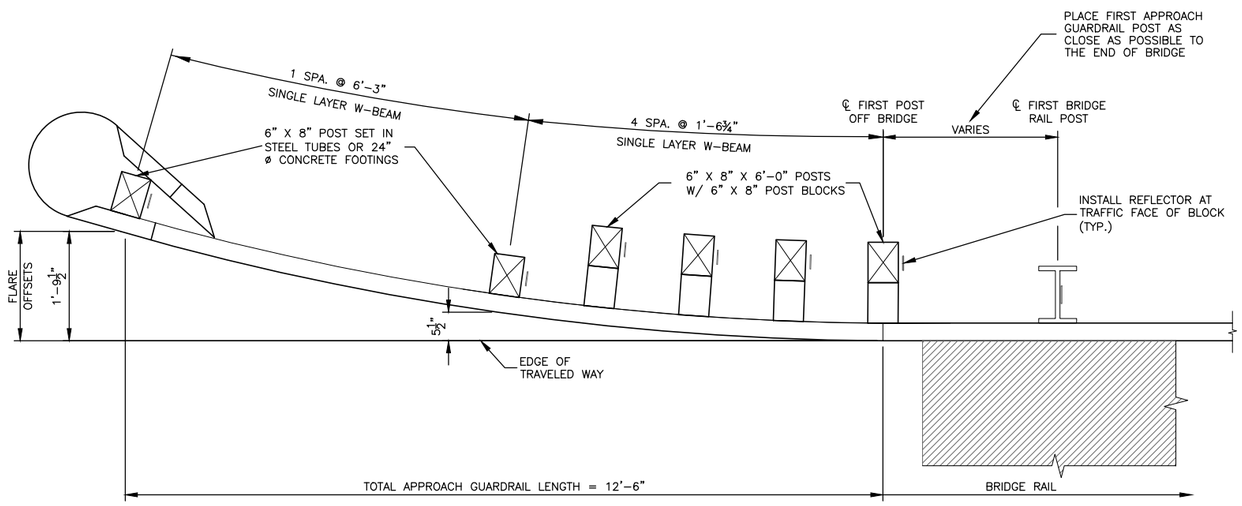
NEZ PERCE TRIBE & IDAHO COUNTY

DRAWING TITLE

BORING LOG ST-2

DATE 6/3/2026	ARCHIVE NO.
DESIGNER J. NETH	DRAWING SHEET NO.
DRAWN J. NETH	
CHECKED R. ELLIOTT	
PROJECT NO. 1-25180	SHEET 16 OF 16

W–BEAM METAL GUARDRAIL SECTIONS SHALL BE PRECURVED FOR BENDS LESS THAN 150 FT. RADIUS.



W-BEAM GUARDRAIL TERMINAL SECTION: 12' - 6"

NOT TO SCALE

GENERAL NOTES:

MATERIALS:
STEEL SHAPES, PLATES AND BARS SHALL BE STRUCTURAL STEEL CONFORMING TO AASHTO M270, GRADE 36, EXCEPT STRUCTURAL TUBING SHALL CONFORM TO ASTM A500 GRADE B, OR ASTM A501. IF NOT COVERED BY 1 INCH OR MORE OF CONCRETE, STEEL SHAPE, PLATES AND BARS SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M111 (ASTM A123). W–BEAM GUARDRAIL AND ASSOCIATED HARDWARE SHALL MEET AASHTO M180, CLASS A, AND SHALL BE TYPE 1 (GALVANIZED) OR TYPE 4 (A588) PER GENERAL LAYOUT SHEET. W–BEAM TERMINAL PIECE SHALL BE CLASS B. ALL BOLTS, NUTS AND WASHERS, EXCEPT BUTTONHEAD BOLTS, SHALL CONFORM TO AASHTO M164 (ASTM A325 OR A449) AND SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 (ASTM A153). CABLE ASSEMBLY SHALL BE GALVANIZED AND CONFORM TO AASHTO M30 (ASTM A741).

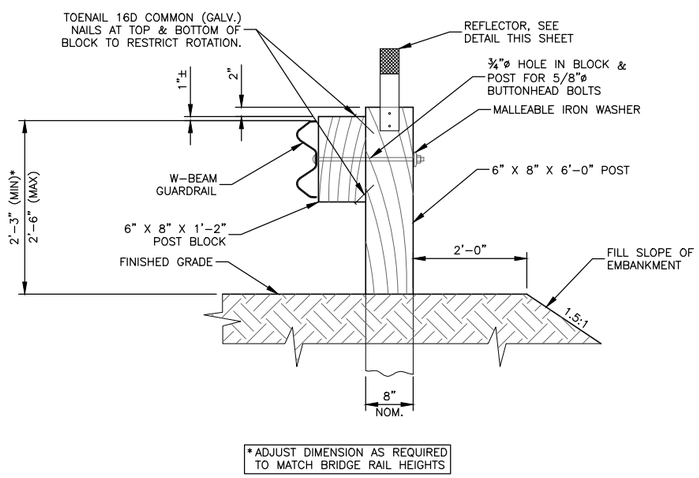
TIMBERS SHALL BE WESTERN WOOD (NO. 1 GRADE) CONFORMING TO THE CURRENT WWPA OR WCLIB GRADING RULES FOR WESTERN LUMBER.

CONCRETE FOR END ANCHORS SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI. WELDED WIRE FABRIC SHALL CONFORM TO AASHTO M55 (ASTM A185).

FABRICATION:
ALL LUMBER FABRICATION SHALL BE COMPLETED BEFORE TREATMENT. STRUCTURAL STEEL SHALL BE SHOP FABRICATED. WELDING SHALL CONFORM TO AWS STRUCTURAL WELDING CODE D1.1 AND SHALL BE BY A CERTIFIED WELDER. ALL STEEL SHALL BE FABRICATED BEFORE BEING GALVANIZED, EXCEPT MINOR SHOP CUTTING. DRILLING AND WELDING IS PERMITTED ON GALVANIZED METAL, PROVIDED THESE AREAS ARE CLEANED AND REPAIRED WITH 2 COATS OF ZINC DUST–ZINC OXIDE PAINT MEETING FEDERAL SPECIFICATION TT–P–641 OR MILITARY SPECIFICATION MIL–P–21035. ALL RAIL SPLICES SHALL OCCUR AT POSTS. SHOP BEND CURVED RAIL SECTIONS.

TREATMENT:
AFTER FABRICATION, ALL TIMBER SHALL BE INCISED AND THEN PRESSURE TREATED IN ACCORDANCE WITH AWPA C14 FOR POST, GUARDRAIL, AND SPACER BLOCKS USAGE. TREATMENT SHALL COMPLY WITH THE REQUIREMENTS OF THE CURRENT EDITION OF WWPA'S "BEST MANAGEMENT PRACTICES FOR THE USE OF TREATED WOOD IN AQUATIC ENVIRONMENTS" AND THE SUPPLIER SHALL FURNISH, UPON DELIVERY OF MATERIALS, A CERTIFICATE OF COMPLIANCE.

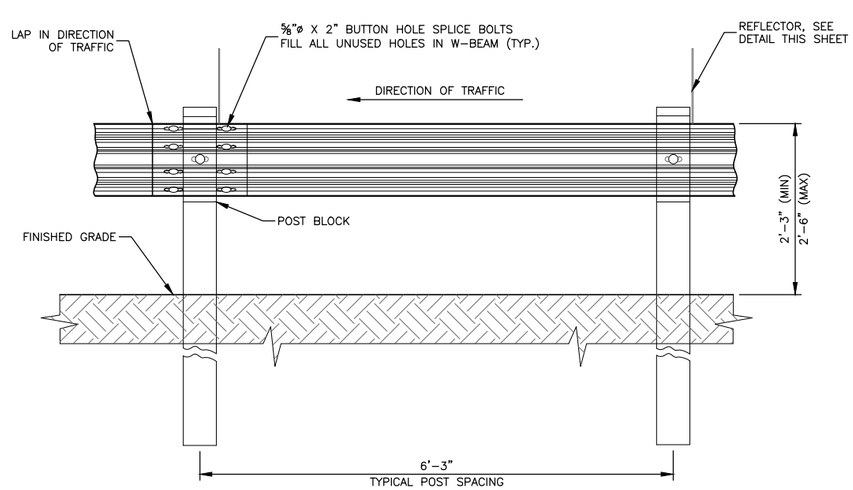
ERECTION:
NO FIELD CUTTING OR WELDING IS PERMITTED ON GALVANIZED METAL UNLESS APPROVED BY THE CONTRACTING OFFICER. ALL RAIL POSTS SHALL BE SET VERTICALLY AND THE RAILING ERECTED PARALLEL TO GRADE. THE CONTRACTOR SHALL FURNISH GALVANIZED STEEL SHIM PLATES AS REQUIRED TO ALIGN RAILING. APPROACH GUARDRAIL POST HOLES SHALL BE A MINIMUM OF 18" IN DIAMETER, UNLESS AUGERED OR DRIVEN. BOTTOM OF EXCAVATED HOLES SHALL BE THOROUGHLY COMPACTED AND BACKFILL SHALL BE THOROUGHLY TAMPED IN 4 INCH LAYERS. FILL ALL UNUSED HOLES IN W–BEAM WITH STANDARD BUTTONHEAD BOLTS AND NUTS. AFTER ERECTION IS COMPLETE, BURR THREADS OF ALL RODS AND BOLTS TO PREVENT BACKING OFF OF NUTS. ALL DAMAGED GALVANIZED SURFACES SHALL BE REPAIRED WITH 2 COATS OF ZINC PAINT AS SPECIFIED IN THE FABRICATION NOTE ABOVE. THERE SHALL BE NO MORE THAN ONE RAIL SPLICE PER POST WHEN DOUBLE–LAYER W–BEAM GUARDRAIL ELEMENTS ARE SPECIFIED.



*ADJUST DIMENSION AS REQUIRED TO MATCH BRIDGE RAIL HEIGHTS

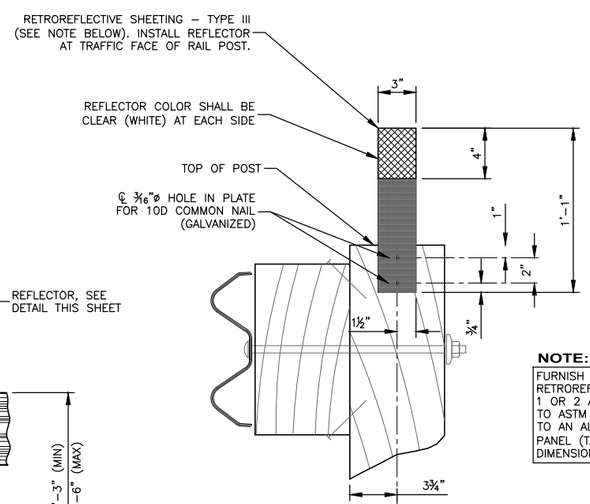
TYPICAL GUARDRAIL CROSS-SECTION

NOT TO SCALE



GUARDRAIL SPLICE DETAIL

NOT TO SCALE



NOTE:
FURNISH A FUNGUS RESISTANT TYPE III RETROREFLECTIVE SHEETING WITH A CLASS 1 OR 2 ADHESIVE BACKING CONFORMING TO ASTM D 4956. ATTACH THE SHEETING TO AN ALUMINUM OR PLASTIC SUPPORT PANEL (TARGET PLATE) OF THE SIZE AND DIMENSION SPECIFIED.

GUARDRAIL REFLECTORS

NOT TO SCALE

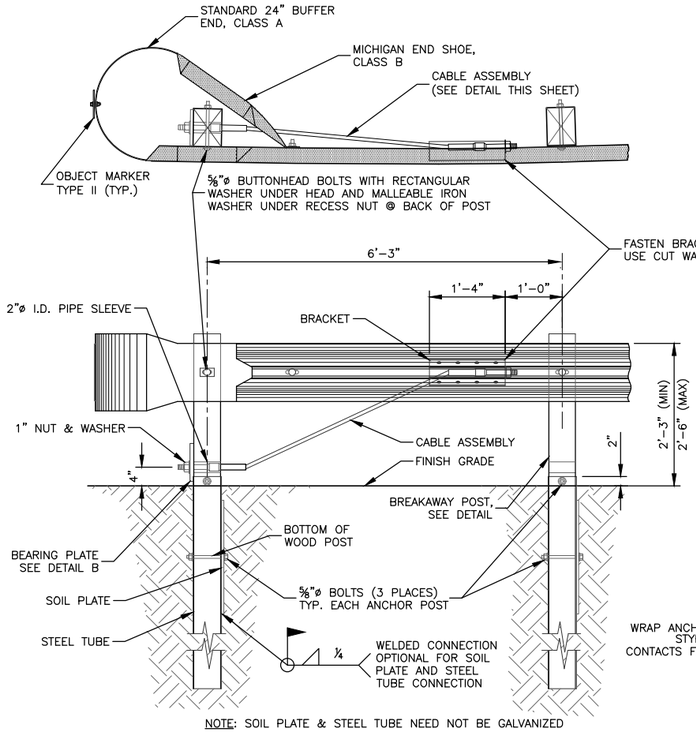
FLARED APPROACH GUARDRAIL SECTION

STANDARD DETAILS

NO.	REVISION DESCRIPTION	BY	DATE
△			
△			

SHEET NO. 1 OF 2

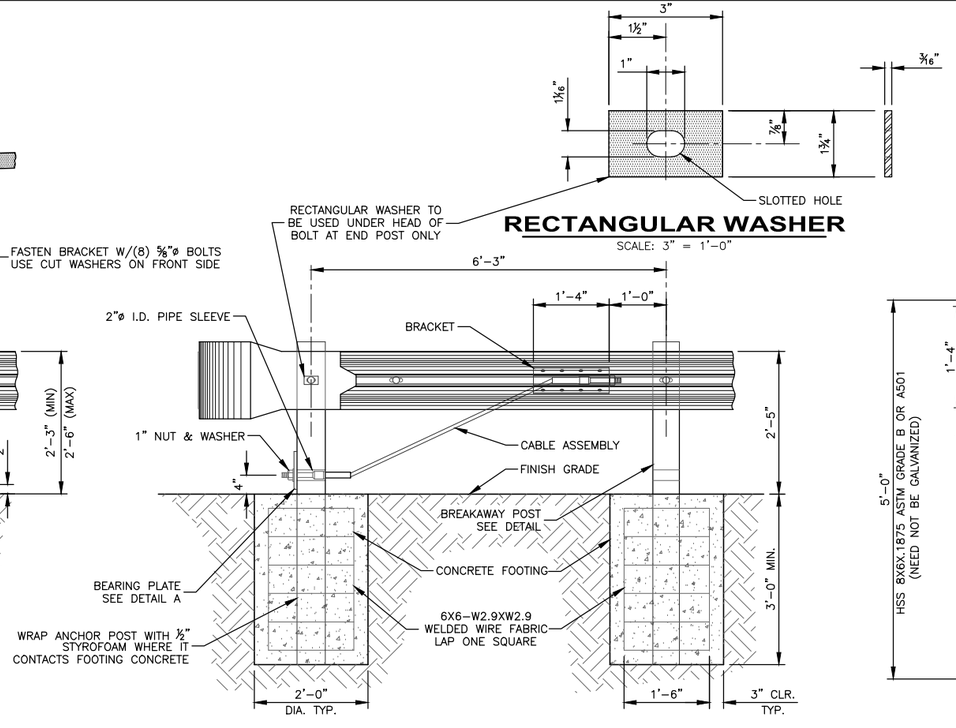
Y:\Shared\Helena Projects\1-25180-NPT ? Orogrande Bridge Design\CADD 1-25180\Sheets\1-25180-19-Flared Approach Rail 12.5'.dwg



NOTE: SOIL PLATE & STEEL TUBE NEED NOT BE GALVANIZED

END ANCHOR DETAIL (STEEL PLATES)

SCALE: 3/8" = 1'-0"

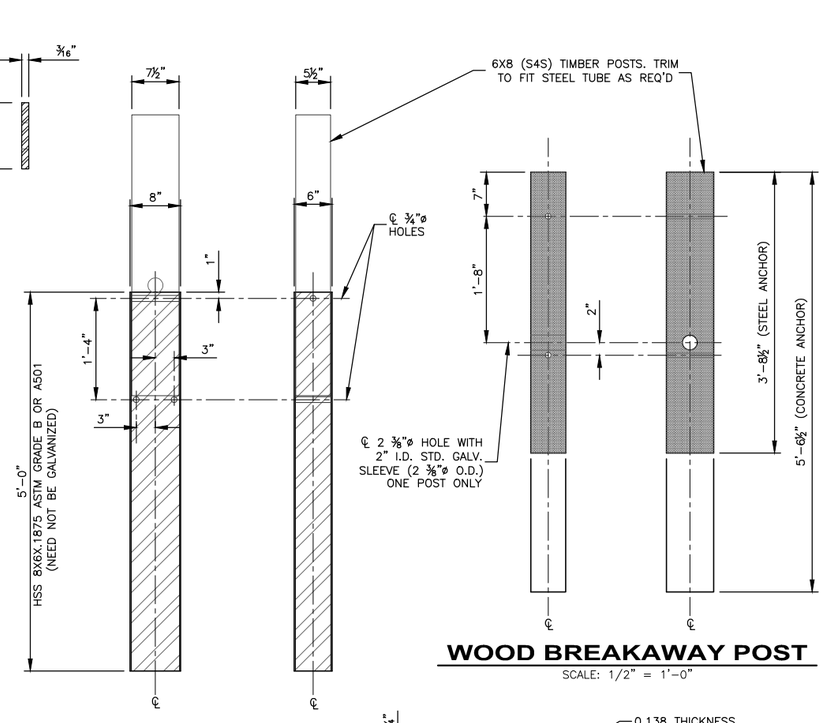


ALTERNATE END ANCHOR DETAIL (CONCRETE FOOTINGS)

SCALE: 3/8" = 1'-0"

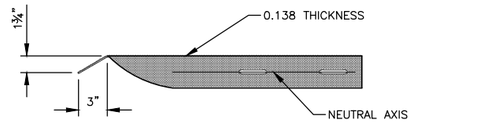
RECTANGULAR WASHER

SCALE: 3" = 1'-0"



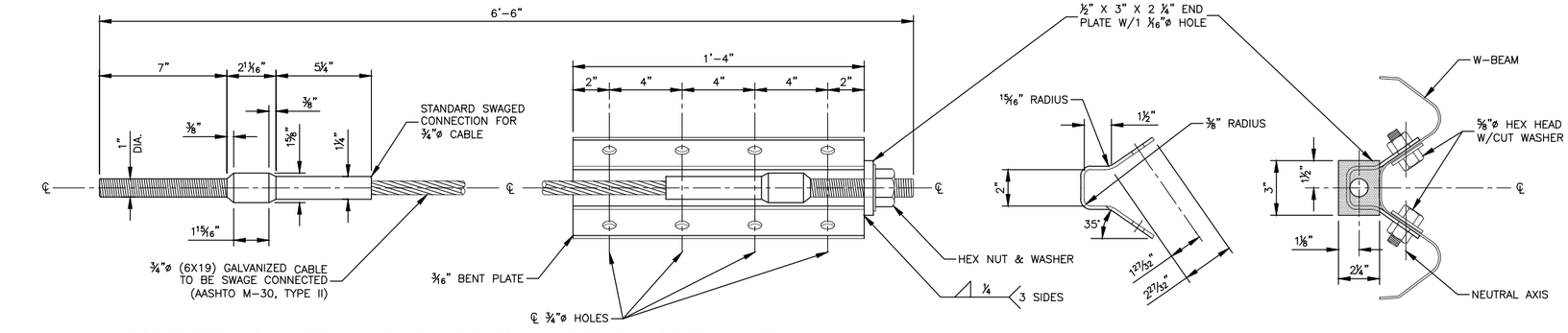
WOOD BREAKAWAY POST

SCALE: 1/2" = 1'-0"



STEEL TUBE DETAIL

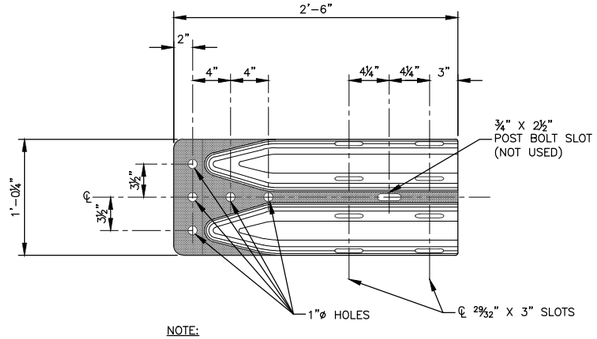
SCALE: 1/2" = 1'-0"



ANCHOR BRACKET AND CABLE ASSEMBLY DETAILS

SCALE: 1 1/2" = 1'-0"

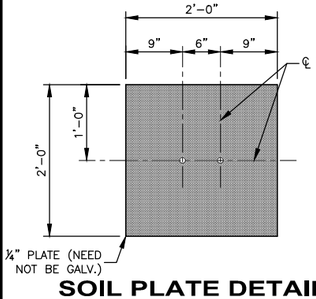
TYPICAL SECTION END VIEW



NOTE:
THE 4 INTERIOR SLOTTED HOLES ARE OPTIONAL THESE HOLES NEED NOT BE FILLED WITH BOLTS

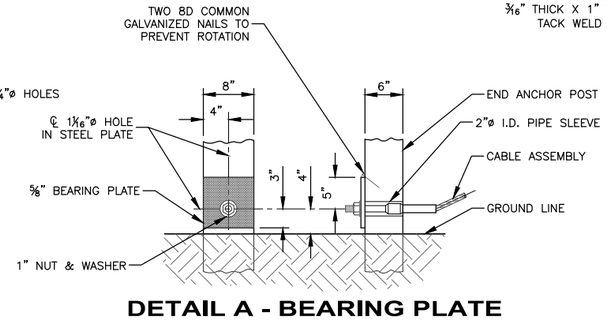
MICHIGAN END SHOE DETAIL

SCALE: 3/4" = 1'-0"



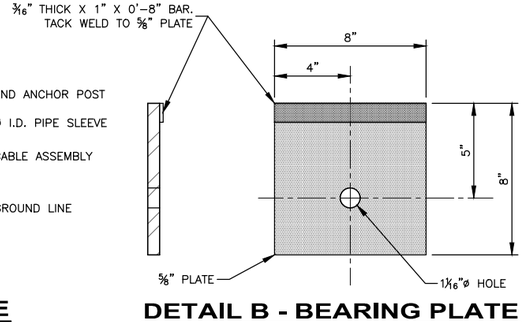
SOIL PLATE DETAIL

SCALE: 1/2" = 1'-0"



DETAIL A - BEARING PLATE

SCALE: 1/2" = 1'-0"
USE WITH CONCRETE ANCHOR



DETAIL B - BEARING PLATE

SCALE: 1 1/2" = 1'-0"
USE WITH STEEL ANCHOR

FLARED APPROACH GUARDRAIL SECTION

STANDARD DETAILS

NO.	REVISION DESCRIPTION	BY	DATE
△			
△			

SHEET NO. 2 OF 2

Y:\Shared\Helena Projects\1-25180-NPT ? Orogrande Bridge Design\CADD 1-25180\Sheets\1-25180-20-Flared Approach Rail Details.dwg