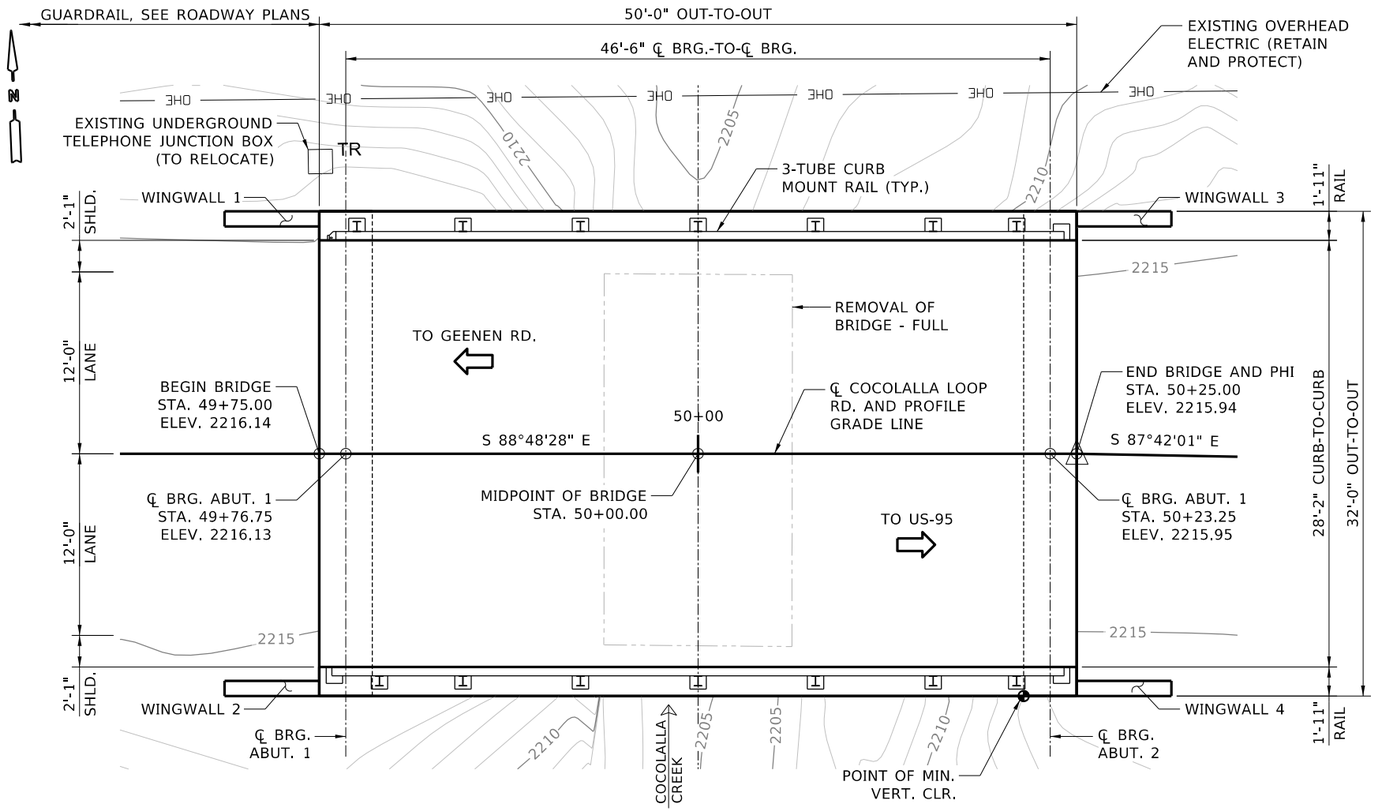
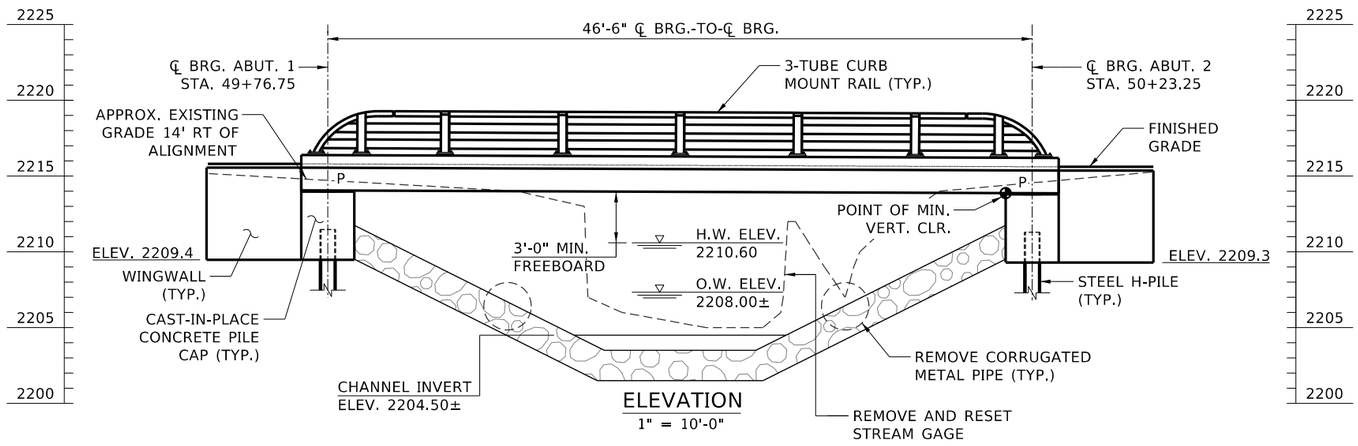
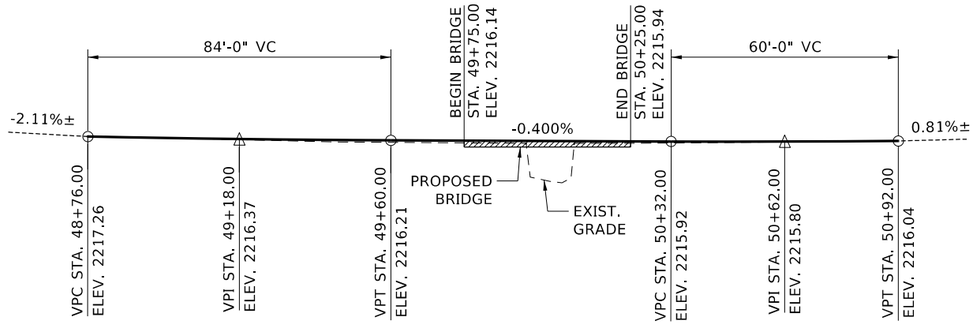
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PLAN
1" = 10'-0"



ELEVATION
1" = 10'-0"



PROFILE GRADE
N.T.S.
PROFILE GRADE MEASURED BASED ON TOP OF OVERLAY

HYDRAULIC DATA

FLOW PROFILE		DISCHARGE	H.W. ELEV.	VELOCITY
DESIGN	[Q_{50}]	1,020 CFS	2210.60 FT	7.02 FT/S
BASE	[Q_{100}]	1,180 CFS	2211.02 FT	7.51 FT/S
SCOUR	[Q_{scour}]	1,500 CFS	2211.82 FT	8.25 FT/S

SCOUR ELEVATIONS

FOUNDATION SCOUR IS MEASURED FROM BOTTOM OF PILE CAP TO THE FOLLOWING DEPTHS:

ABUTMENT 1 . . . . . 4.0 FT (ELEV. 2205.43)
ABUTMENT 2 . . . . . 4.0 FT (ELEV. 2205.25)

REVISIONS			
NO.	DATE	BY	DESCRIPTION
1			
2			
3			
4			
5			

DESIGNED: T. JOHNSON
DESIGN CHECKED: A. BOWEN
DETAILED: T. NORRIS
DWG. CHECKED: T. JOHNSON
CORRECTIONS:

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY

CADD FILE NAME
\xxxxxx-xxx\PLAN_SHEETS\BRIDGE\37905_a_SITL.DGN

DRAWING DATE: JUNE 2025

BONNER COUNTY

KELLER ASSOCIATES

ENGLISH

PROJECT NO.
N/A

SITUATION AND LAYOUT

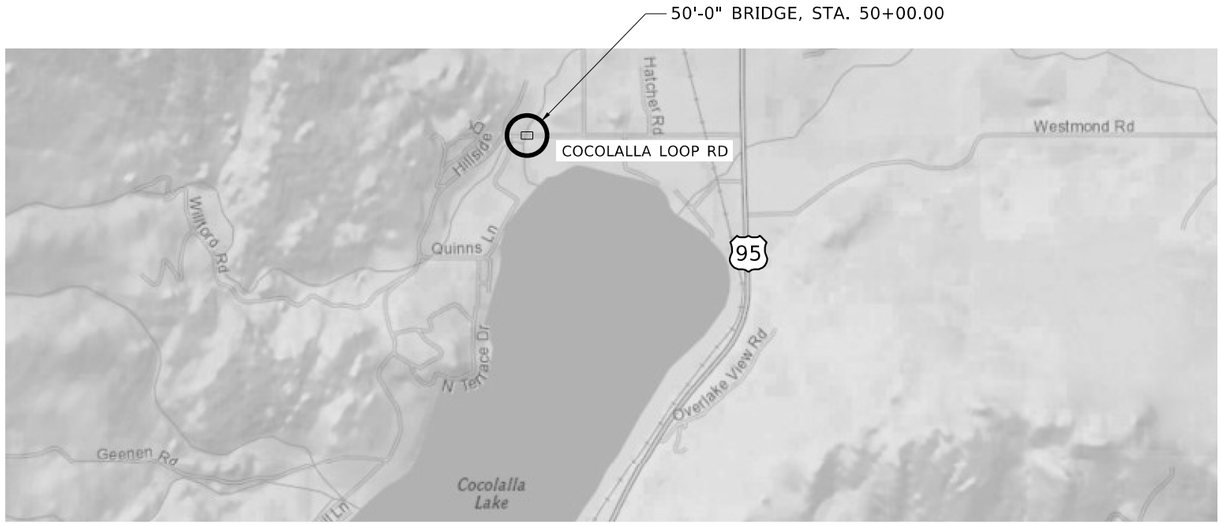
50'-0" PRESTRESSED VOIDED SLAB BRIDGE
COCOLALLA LOOP RD. OVER COCOLALLA CREEK
STA. 50+00.00

BRIDGE PLANS

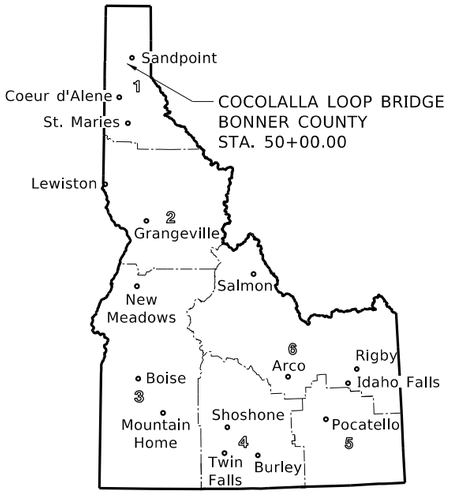
BRIDGE KEY NO. 37905
COUNTY: BONNER
KEY NO.: N/A
BRIDGE DWG. NO.: 18614
SHEET: 1 OF 20

PROFESSIONAL ENGINEER
REGISTERED
DocuSigned by:
Timothy P. Johnson
DB7A91BC436E444...
19248
9/30/2026
STATE OF IDAHO
TIMOTHY P. JOHNSON

Docusign Envelope ID: 5D1BB99F-F1C5-8A82-81A0-BC64E6B255BD



VICINITY MAP
N.T.S.



SHEET INDEX

SITUATION AND LAYOUT	1
SHEET INDEX, QUANTITIES, AND VICINITY MAP	2
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ONE DIRECTIONAL TRAFFIC DATA

CONSTRUCTION YEAR - 2027
AADT..... 900
CAADT..... 30
3.3%
FUTURE YEAR - 2046
AADT..... 940
CAADT..... 30
3.2%

QUANTITIES

203-020A	REMOVAL OF BRIDGE - FULL	1 EACH
203-122A	REMOVAL OF CORRUGATED METAL PIPE	2 EACH
210-005A	STRUCTURE EXCAVATION SCHEDULE NO. 1	155 CY
210-015A	COMPACTING BACKFILL	62 CY
215-005A	GEOSYNTHETIC REINFORCED ABUTMENT BACKFILL	147 CY
502-140A	CONCRETE CLASS 40A SCHEDULE NO. 1	46 CY
502-465A	PRESTRESSED SLAB (48" WIDTH x 18" DEPTH)	400 FT
503-010A	METAL REINFORCING SCHEDULE NO. 1	7324 LB
504-050A	3-TUBE CURB MOUNT RAIL	100 LF
505-030A	PROVIDE & DRIVE STEEL H PILES (12X74)	306 FT
505-185A	PROVIDE & DRIVE TEST PILES (HP-12X74)	153 FT
505-215B	SPLICE STEEL PILE DURING DRIVING	8 EACH
507-005A	ELASTOMERIC BEARINGS PLAIN (GRADE 3) (½"x7"x42")	16 EACH
511-005A	CONCRETE WATERPROOF SYSTEM (TYPE D)	166 SY
521-005A	DYNAMIC PILE TESTING	2 EACH
521-010A	CAPWAP ANALYSIS	4 EACH
560-005A	DEWATERING FOUNDATION	1 LS
586-005A	UTILITY CONDUIT	1 LS
624-005A	LOOSE RIPRAP	129 CY
640-010A	RIPRAP/EROSION CONTROL GEOTEXTILE	193 SY
S901-05A	REMOVE AND RESET STREAM GAGE	1 EACH

REVISIONS			
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DETAILED: T. NORRIS
DWG. CHECKED: T. JOHNSON
CORRECTIONS:

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CADD FILE NAME: \xxxxxx-xxx\PLAN_SHEETS\BRIDGE\37905_b_NOTE_01.dgn
DRAWING DATE: JUNE 2025

BONNER COUNTY
KELLER ASSOCIATES

ENGLISH
PROJECT NO.
N/A

SHEET INDEX, QUANTITIES, & VICINITY MAP
50'-0" PRESTRESSED VOIDED SLAB BRIDGE
COCOLALLA LOOP RD. OVER COCOLALLA CREEK
STA. 50+00.00

BRIDGE PLANS
BRIDGE KEY NO. 37905
COUNTY: BONNER
KEY NO.: N/A
BRIDGE DWG. NO.: 18614
SHEET: 2 OF 20

PROFESSIONAL ENGINEER
REGISTERED
DocuSigned by: Timothy P. Johnson
DB7A91BC436E444...
19248
9/30/2026
STATE OF IDAHO
TIMOTHY P. JOHNSON

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DESIGN NOTES

DESIGN SPECIFICATIONS

IN ACCORDANCE WITH "AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS" 10TH EDITION AND THE 2025 ITD BRIDGE DESIGN LRFD MANUAL.

DESIGN PROCEDURES

GIRDERS DESIGNED AS SIMPLE SPANS. RAILING IS IN ACCORDANCE WITH MASH TL-4 WITH A DESIGN SPEED OF 35 MPH.

PROPRIETARY COMPUTER SOFTWARE PROGRAMS USED TO FACILITATE THE DESIGN ARE AS FOLLOWS:

NAME	VERSION	RELEASE DATE
PGSuper	8.0.6.0 (x64)	07/10/2024

DESIGN LOADS

PERMANENT LOADS

DC	UNIT WEIGHT OF REINFORCED CONCRETE	0.150 kcf
	3-TUBE CURB MOUNT RAIL	0.308 klf
DW	INITIAL WEARING SURFACE	0.035 ksf
	FUTURE WEARING SURFACE	0.028 ksf
EV	UNIT WEIGHT OF SOIL	0.130 kcf
EH	ACTIVE PRESSURE	0.033 kcf
	AT-REST PRESSURE	0.058 kcf
	PASSIVE PRESSURE	0.900 kcf

TRANSIENT LOADS

LL	HL-93 INCLUDING PAIR OF DESIGN TANDEMS IN ACCORDANCE WITH "AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS" ARTICLE 3.6.1.3.	
IM	DYNAMIC IMPACT ALLOWANCE APPLIED TO TRUCK AND TANDEM	
LS	LIVE LOAD SURCHARGE AT ABUTMENT	3.86 feet
	LIVE LOAD SURCHARGE AT WINGWALLS	3.86 feet
TU	UNIFORM TEMPERATURE RANGE	0°F to 80°F
	BASE SETTING TEMPERATURE	60°F

EXTREME EVENT LOADS

EQ	SITE CLASS	E
	PEAK GROUND ACCELERATION (PGA)	0.258 g
	SHORT-PERIOD ACCELERATION COEFFICIENT S_{DS}	0.597 g
	1-SECOND ACCELERATION COEFFICIENT S_{D1}	0.254 g
	SEISMIC PERFORMANCE ZONE	2

GENERAL NOTES

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

MATERIALS

CONCRETE:	PARAPETS AND SIDEWALKS (CLASS 40AF)	f'_c = 4.00 ksi
	ABUTMENTS AND WINGWALLS (CLASS 40A)	f'_c = 4.00 ksi
	PRESTRESSED GIRDERS	SEE GIRDER SHEETS
METAL REINFORCEMENT:	AASHTO M31, GRADE 60 TYPE S	f_y = 60.00 ksi
PRESTRESSING STRAND:	AASHTO M203, GRADE 270 LOW RELAXATION	f_{pu} = 270.00 ksi

PLAN DIMENSIONS AND ELEVATIONS

- BEVEL EXPOSED EDGES OF CONCRETE 3/4" 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

- EPOXY-COATED REINFORCEMENT S DESIGNATED BY AN (E) AFTER THE BAR MARK. GLASS FIBER REINFORCED POLYMER REINFORCEMENT IS DESIGNATED BY A (G) AFTER THE BAR MARK.
- PROVIDE CONSTRUCTION JOINTS ONLY AT THE LOCATIONS SHOWN ON THE PLANS OR AS APPROVED.
- SET THE ROLLER IN THE STATIC MODE FOR COMPACTING THE ASPHALT WEARING SURFACE ON THE BRIDGE. ELEVATIONS BASED ON THE NAVD88 DATUM.
- ROUGHEN ALL HORIZONTAL CONSTRUCTION JOINTS TO ¼" AMPLITUDE UNLESS OTHERWISE NOTED.

INCIDENTAL ITEMS

WORK NECESSARY TO FULFILL THE CONTRACT IS NOT MEASURED OR PAID FOR SEPARATELY.

UTILITIES

COORDINATE ALL EXISTING CONDITIONS DURING CONSTRUCTON OF THE PROJECT. UTILITY INFORMATION SHOWN ON THE STRUCTURE PLANS MAY NOT BE COMPLETE OR ACCURATELY DEPICT THE LOCATION OF THE FACILITIES SHOWN. COORDINATE THE LOCATION OF ALL EXISTING, NEW, RELOCATED, AND ABANDONED UTILITIES WITH THE PROJECT PLANS AND NOTIFY RESPECTIVE OWNERS BEFORE COMMENCING EXCAVATION WORK. CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND RESOLVED PRIOR TO PROCEEDING WITH THE WORK. SEE ROADWAY AND UTILITY PLANS FOR ADDITIONAL INFORMATION.

MINIMUM LAP SPLICES

LAP SPLICES ARE PERMITTED ONLY AT THE LOCATIONS SPECIFIED ON THE PLANS. WHERE SPECIFIED BAR LENGTHS EXCEED STANDARD FABRICATION LENGTHS, MINIMUM SPLICES MAY BE PROVIDED AS FOLLOWS:

MINIMUM LAP SPLICE LENGTHS

BAR TYPE	#3	#4	#5	#6	#7	#8	#9	#10	#11
UNCOATED	2'-0"	2'-0"	2'-0"	2'-5"	2'-9"	3'-3"	3'-7"	4'-0"	4'-3"
UNCOATED (TOP)*	2'-0"	2'-1"	2'-7"	3'-1"	3'-8"	4'-1"	4'-7"	5'-2"	5'-9"
EPOXY COATED	2'-0"	2'-5"	2'-11"	3'-7"	4'-2"	4'-9"	5'-4"	5'-11"	6'-8"
EPOXY COATED (TOP)*	2'-0"	2'-8"	3'-4"	4'-0"	4'-8"	5'-4"	5'-11"	6'-9"	7'-6"

*TOP BARS ARE HORIZONTAL BARS WITH 12" OR MORE OF WET CONCRETE PLACED BELOW.

REVISIONS			
NO.	DATE	BY	DESCRIPTION
1	____	__	_____
2	____	__	_____
3	____	__	_____
4	____	__	_____
5	____	__	_____

DESIGNED T. JOHNSON
DESIGN CHECKED A. BOWEN
DETAILED T. NORRIS
DWG. CHECKED T. JOHNSON
CORRECTIONS

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY

CADD FILE NAME
\xxxxxx-xxx\PLAN_SHEETS\BRIDGE\37905_b_NOTE_02.dgn

DRAWING DATE: JUNE 2025

BONNER COUNTY

KELLER ASSOCIATES

ENGLISH

PROJECT NO.
N/A

DESIGN AND GENERAL NOTES

50'-0" PRESTRESSED VOIDED SLAB BRIDGE
COCOLALLA LOOP RD. OVER COCOLALLA CREEK
STA. 50+00.00

BRIDGE PLANS

BRIDGE KEY NO. 37905
COUNTY BONNER
KEY NO. N/A
BRIDGE DWG. NO. 18614
SHEET 3 OF 20

PROFESSIONAL ENGINEER REGISTERED
DocuSigned by: Timothy P. Johnson
DB7A91BC436E444...
19248
9/30/2026
STATE OF IDAHO
TIMOTHY P. JOHNSON

Docusign Envelope ID: 5D1BB99F-F1C5-8A82-81A0-BC64E6B255BD

NOTES:

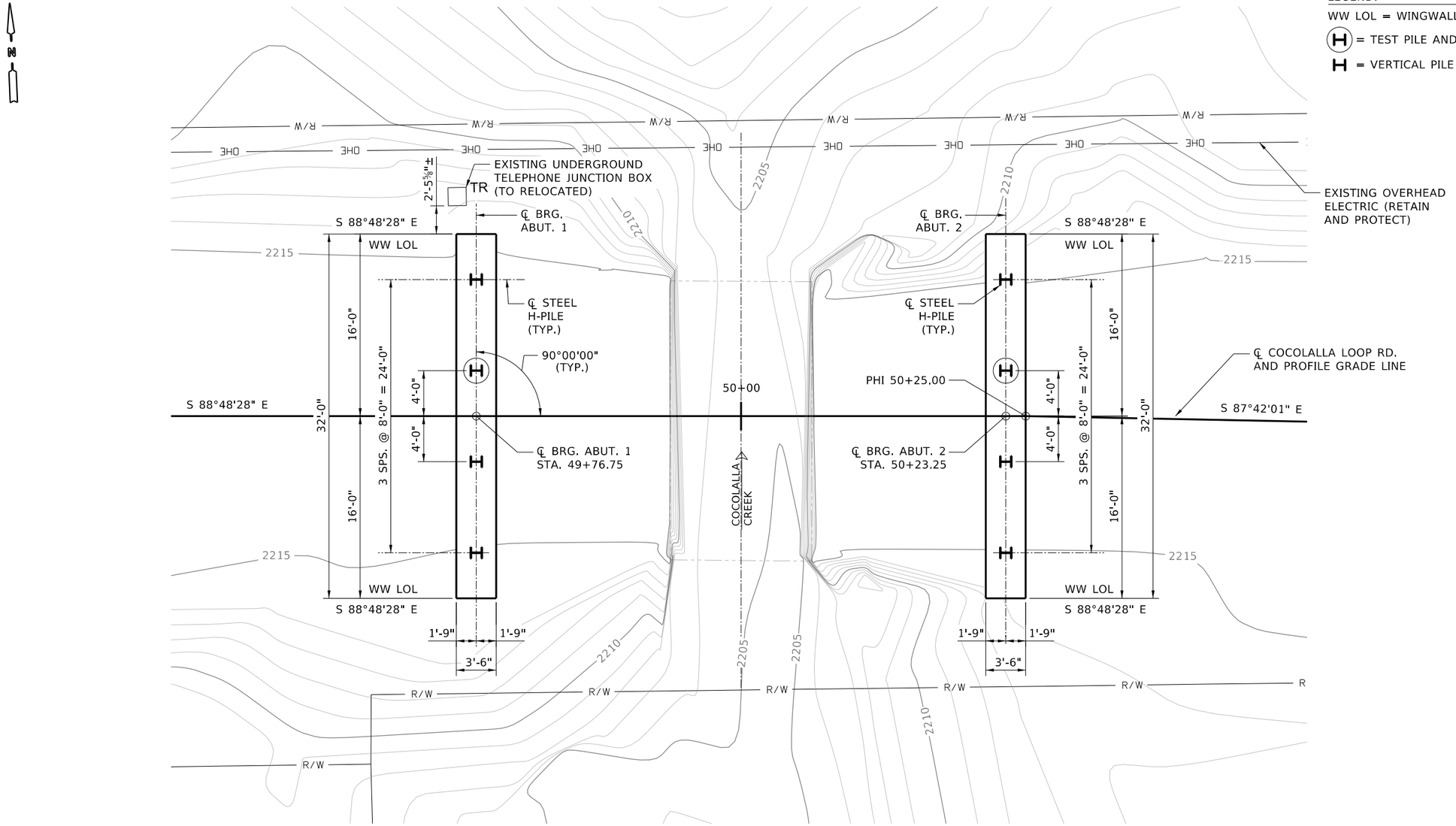
1. EXISTING GROUND SURFACE IS SHOWN.
2. WINGWALLS NOT SHOWN FOR CLARITY.

LEGEND:

WW LOL = WINGWALL LAYOUT LINE

H = TEST PILE AND DYNAMIC PILE TESTING

H = VERTICAL PILE



FOUNDATION PLAN

1" = 10'-0"

REVISIONS			
NO.	DATE	BY	DESCRIPTION
1	____	__	_____
2	____	__	_____
3	____	__	_____
4	____	__	_____
5	____	__	_____

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DESIGN CHECKED: A. BOWEN
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BONNER COUNTY

KELLER ASSOCIATES

ENGLISH

PROJECT NO.: N/A

FOUNDATION LAYOUT

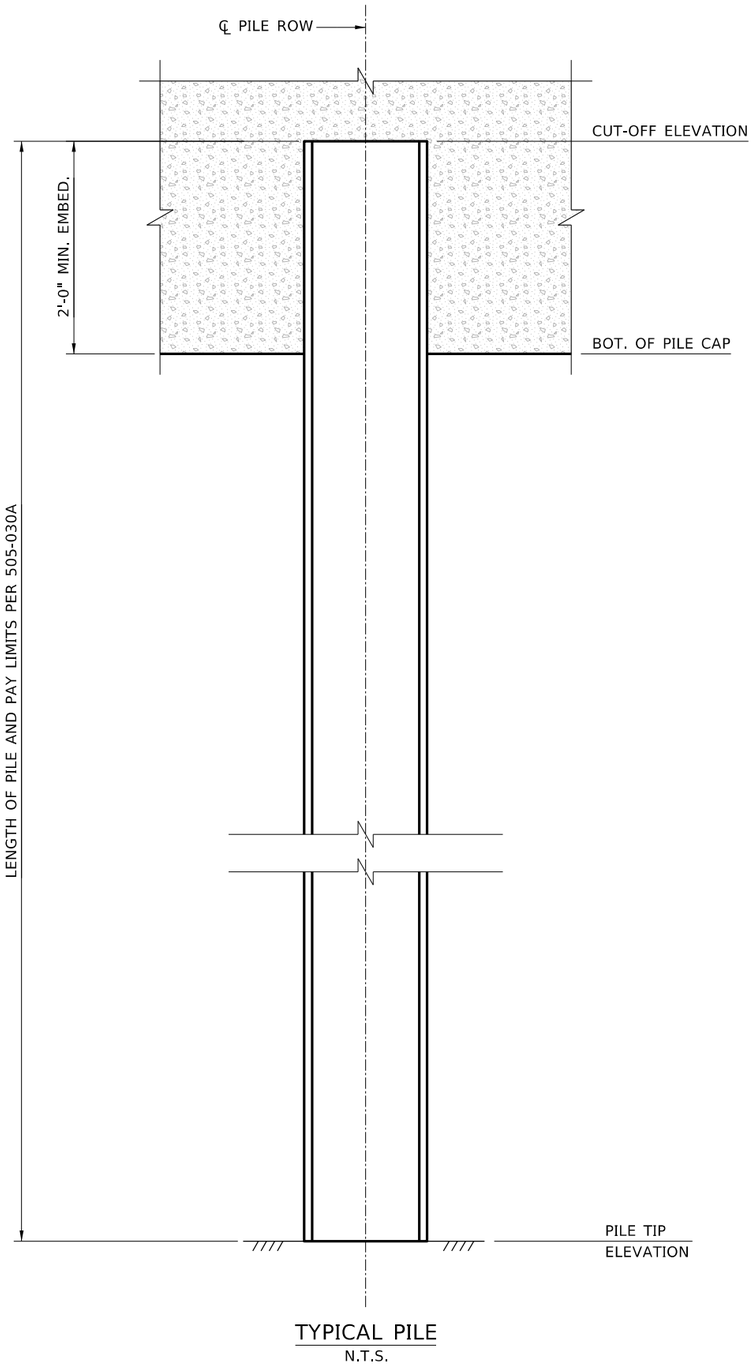
50'-0" PRESTRESSED VOIDED SLAB BRIDGE
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BRIDGE PLANS

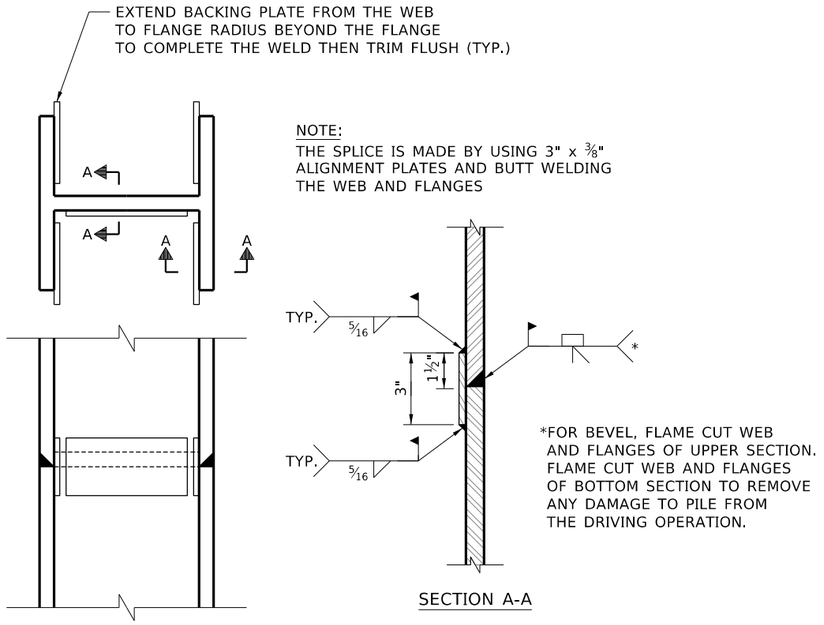
BRIDGE KEY NO.: 37905
COUNTY: BONNER
KEY NO.: N/A
BRIDGE DWG. NO.: 18614
SHEET: 4 OF 20

PROFESSIONAL ENGINEER
REGISTERED
DocuSigned by:
Timothy P. Johnson
DB7A91BC436E444...
19248
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TIMOTHY P. JOHNSON

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TYPICAL PILE
N.T.S.



SECTION A-A

H-PILE BUTT-WELD SPLICE DETAIL
N.T.S.

NOTES:

MATERIAL SPECIFICATIONS

1. PROVIDE 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 ALL 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. SPLICE PILE ACCORDING TO THE PILE SPLICE DETAIL OR PROVIDE PREFABRICATED SPLICERS ACCORDING TO 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 ALL H-PILE AND SHELL PILES WITH AN O.D. EQUAL TO OR LESS THAN 18" WILL CONFORM TO THE CURRENT EDITION OF ANSI/AWS D1.1.
6. ATTACH ALL PILE POINTS AND PREFABRICATED SPLICERS BY WELDING IN ACCORDANCE WITH THE CURRENT EDITION OF ANSI/AWS D1.1 WITH A FULL PENETRATION WELD. SUBMIT WELDING DETAILS AND PROCEDURES FOR APPROVAL.

DRIVING DATA

7. SUBMIT THE TYPE AND OPERATION SPECIFICATIONS OF THE HAMMER TO THE ENGINEER 15 CALENDAR DAYS BEFORE PILE DRIVING BEGINS.
8. DRIVE PILES TO (REFUSUAL) (NOMINAL AXIAL RESISTANCE OF 285 KIPS PER PILE) AS DETERMINED BY A WAVE EQUATION ANALYSIS IN ACCORDANCE WITH SECTION 505.03 PART G.
9. THE RATED ENERGY FOR THE HAMMER USED FOR DRIVING PILES IS RECOMMENDED TO BE BETWEEN 50 AND 75 KIP FEET. 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.

TEST PILES

11. DRIVE TEST PILES TO 1½ TIMES THE ESTIMATED PILE PENETRATION LENGTH OR REFUSAL, WHICHEVER COMES FIRST. PERFORM PILE DYNAMIC TESTING DURING INITIAL PILE DRIVING AND DURING RESTRIKE IF NECESSARY, OR AS DIRECTED.
12. IF THE TEST PILE NOMINAL AXIAL RESISTANCE IS NOT ACHIEVED, RESTRIKE THE TEST PILE TO 4 INCHES OF PENETRATION AFTER A 48 HOUR WAITING PERIOD, OR AS DIRECTED. IF THE TEST PILE ACHIEVES THE NOMINAL AXIAL RESISTANCE DURING INITIAL DRIVING, TEST PILE RESTRIKE IS NOT REQUIRED.
13. INCORPORATE TEST PILES THAT MEET PRODUCTION PILE DRIVING CRITERIA INTO THE PERMANENT WORK.
14. PERFORM CAPWAP ANALYSIS AT TWO TEST PILE PENETRATION DEPTHS:
    a. AT THE DEPTH WHERE THE CASE METHOD INDICATES THE ESTIMATED TEST PILE CAPACITY EQUALS THE NOMINAL AXIAL RESISTANCE SHOWN ON THE PLANS (THIS DEPTH MUST BE EQUAL TO OR DEEPER THAN THE HIGHEST PILE TIP ELEVATION SHOWN ON THE PLANS), OR AS DIRECTED.
    b. AT THE END OF INITIAL DRIVING AND ON PILE RESTRIKES.

MISCELLANEOUS

15. PILE TIP ELEVATIONS ARE SHOWN FOR ESTIMATING PURPOSES ONLY.
16. ESTIMATED PILE LENGTHS ARE COMPUTED FROM PILE CUT-OFF AND ESTIMATED PILE TIP ELEVATIONS.

PILE DATA TABLE

LOCATION	NO.	PILE TYPE	PILE ELEVATIONS			NOMINAL RESISTANCE			FACTORED DEMAND	
			CUT-OFF (FT.)	EST. TIP (FT.)	HIGH TIP (FT.)	DRIVING (KIPS)	COMP. (KIPS)	TENS. (KIPS)	COMP. (KIPS)	TENS. (KIPS)
ABUT. 1	4	HP12X74	2211.4	2160.4	2177.4	285	285	N/A	181	N/A
ABUT. 2	4	HP12X74	2211.4	2160.4	2177.4	285	285	N/A	181	N/A

PROFESSIONAL ENGINEER
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9/30/2026
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DWG. CHECKED: T. JOHNSON
CORRECTIONS:

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DRAWING DATE: JUNE 2025

BONNER COUNTY
KELLER ASSOCIATES

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PROJECT NO.: N/A

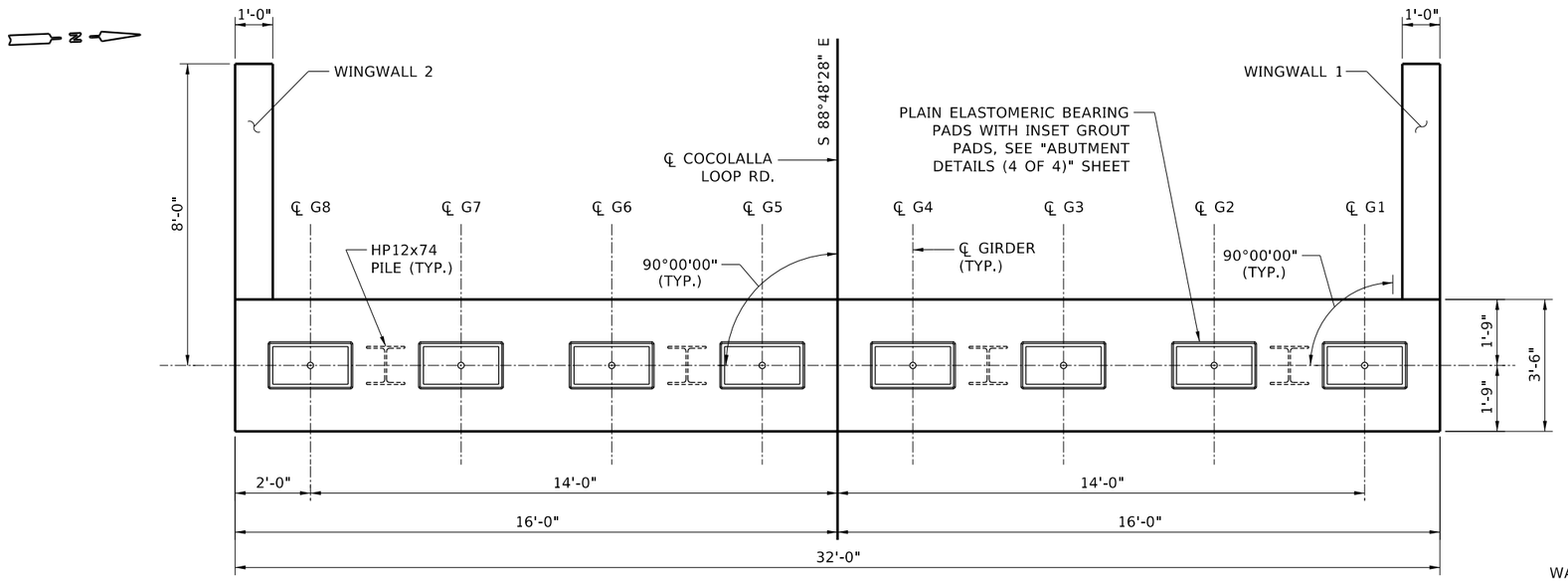
FOUNDATION DETAILS

50'-0" PRESTRESSED VOIDED SLAB BRIDGE
COCOLALLA LOOP RD. OVER COCOLALLA CREEK
STA. 50+00.00

BRIDGE PLANS

BRIDGE KEY NO.: 37905
COUNTY: BONNER
KEY NO.: N/A
BRIDGE DWG. NO.: 18614
SHEET: 5 OF 20

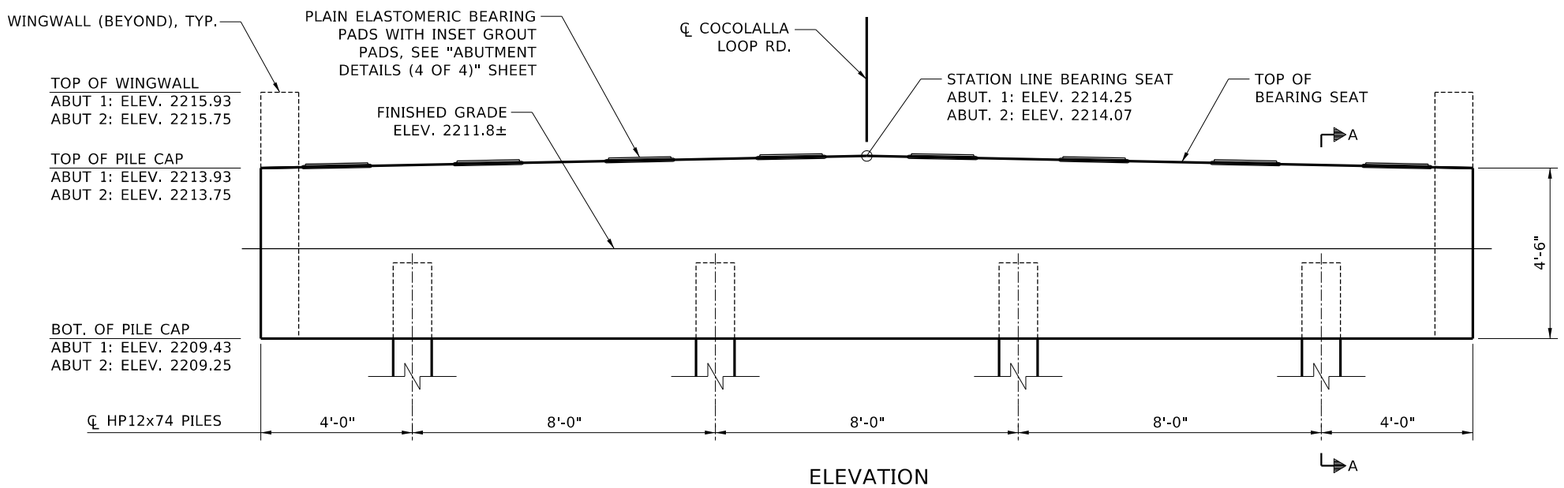
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PLAN

¼" = 1'-0"

(ABUTMENT 1 SHOWN, ABUTMENT 2 SIMILAR)



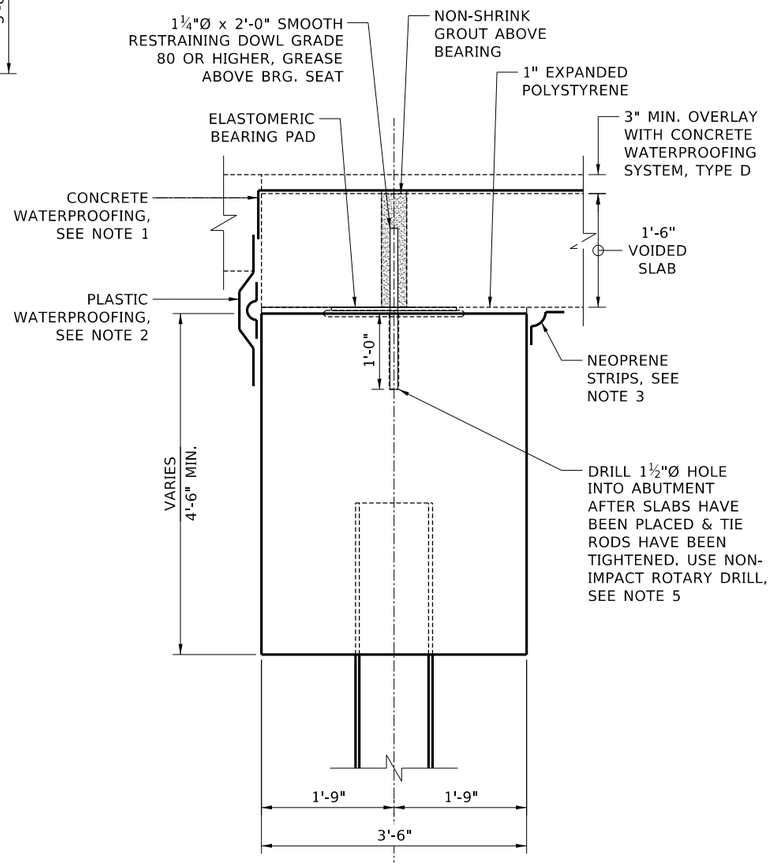
ELEVATION

¼" = 1'-0"

(ABUTMENT 1 LOOKING BACK ON STATIONING, ABUTMENT 2 SIMILAR LOOKING AHEAD ON STATIONING)

NOTES:

1. CONCRETE WATERPROOFING SYSTEM, TYPE D, APPLY 1'-0" DOWN FACE OF GIRDER.
2. 2'-0" WIDE FLEXIBLE PLASTIC SHEETING, 40 Mil. (0.04" MIN. THICKNESS), ASTM D-7176 OR APPROVED EQUAL. BOND TO CONCRETE WITH APPROVED ADHESIVE TO PROVIDE WATERPROOF SEAL BETWEEN SLAB AND ABUTMENT. COST INCIDENTAL WITH CONCRETE CLASS 40A, SHCEDULE NO. 1.
3. NEOPRENE STRIP SHALL BE A MINIMUM OF ⅛" THICK. FOLD AS SHOWN AND BOND A MINIMUM OF 3" TO BOTH FACE OF ABUTMENT AND VOIDED SLABS. EXTEND STRIP FOR LENGTH OF ABUTMENT.
4. ELEVATIONS ARE SHOWN IN DECIMAL FEET AND ARE TAKEN AT THE ℄ BEARING OF ABUTMENT, UNLESS NOTED OTHERWISE.
5. EPOXY BELOW BEARING USING HILTI RE-500, SIMPSON SET 3G, OR EQUIVALENT EPOXY AS APPROVED BY THE ENGINEER.
6. FOR TOP OF GROUT PAD ELEVATIONS, SEE "ABUTMENT DETAILS (4 OF 4)" SHEET.



SECTION A-A

⅜" = 1'-0"

REVISIONS			
NO.	DATE	BY	DESCRIPTION
△	____	__	_____
△	____	__	_____
△	____	__	_____
△	____	__	_____
△	____	__	_____

DESIGNED: T. JOHNSON
DESIGN CHECKED: A. BOWEN
DETAILED: T. NORRIS
DWG. CHECKED: T. JOHNSON
CORRECTIONS:

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY

CADD FILE NAME: \xxxxxx-xxx\PLAN_SHEETS\BRIDGE\37905_e_DABT_01.DGN

DRAWING DATE: JUNE 2025

BONNER COUNTY

KELLER ASSOCIATES

ENGLISH

PROJECT NO.

N/A

ABUTMENT DETAILS (1 OF 4)

50'-0" PRESTRESSED VOIDED SLAB BRIDGE
COCOLALLA LOOP RD. OVER COCOLALLA CREEK
STA. 50+00.00

BRIDGE PLANS

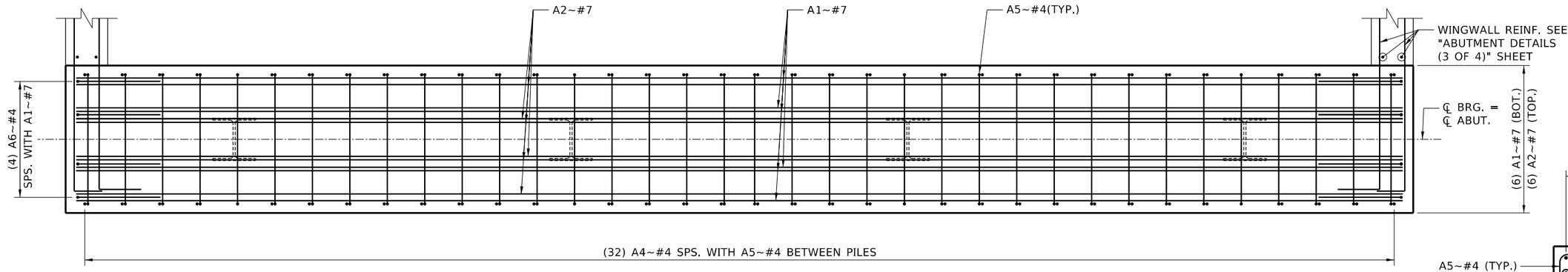
BRIDGE KEY NO. 37905

COUNTY: BONNER | KEY NO.: N/A

BRIDGE DWG. NO.: 18614 | SHEET: 6 OF 20

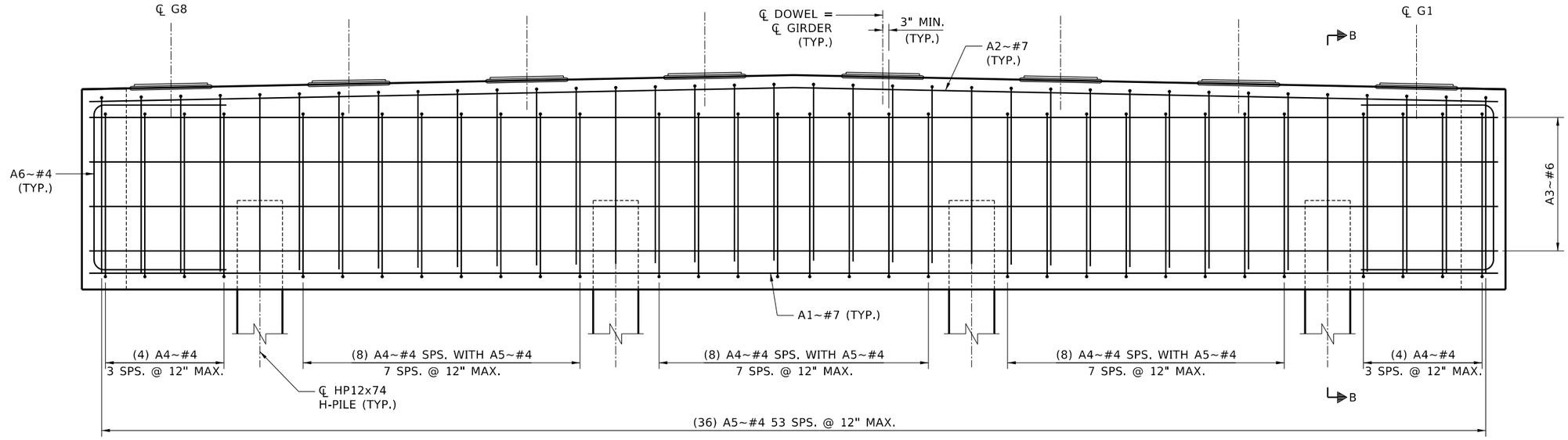
PROFESSIONAL ENGINEER
REGISTERED
DocuSigned by:
Timothy P. Johnson
DB7A91BC436E444...
19248
9/30/2026
STATE OF IDAHO
TIMOTHY P. JOHNSON

Docusign Envelope ID: 5D1BB99F-F1C5-8A82-81A0-BC64E6B255BD



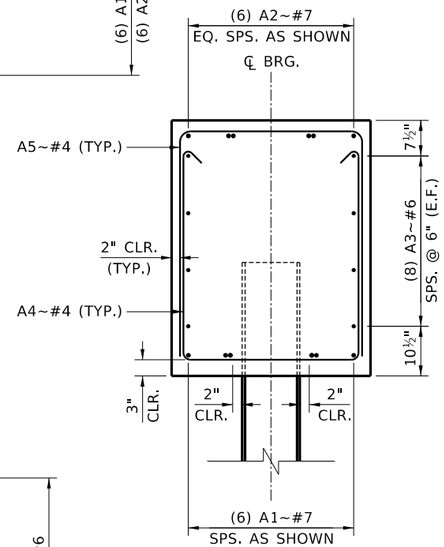
PLAN

3/8" = 1'-0"
(ABUTMENT 1 SHOWN, ABUTMENT 2 SIMILAR)



ELEVATION

3/8" = 1'-0"
(ABUTMENT 1 LOOKING BACK ON STATIONING. ABUTMENT 2 SIMILAR LOOKING AHEAD ON STATIONING.)



SECTION B-B

3/8" = 1'-0"

REVISIONS			
NO.	DATE	BY	DESCRIPTION
1			
2			
3			
4			
5			

DESIGNED: T. JOHNSON
DESIGN CHECKED: A. BOWEN
DETAILED: T. NORRIS
DWG. CHECKED: T. JOHNSON
CORRECTIONS:

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
CADD FILE NAME: \xxxxxx-xxx\PLAN_SHEETS\BRIDGE\37905_e_DABT_02.DGN
DRAWING DATE: JUNE 2025

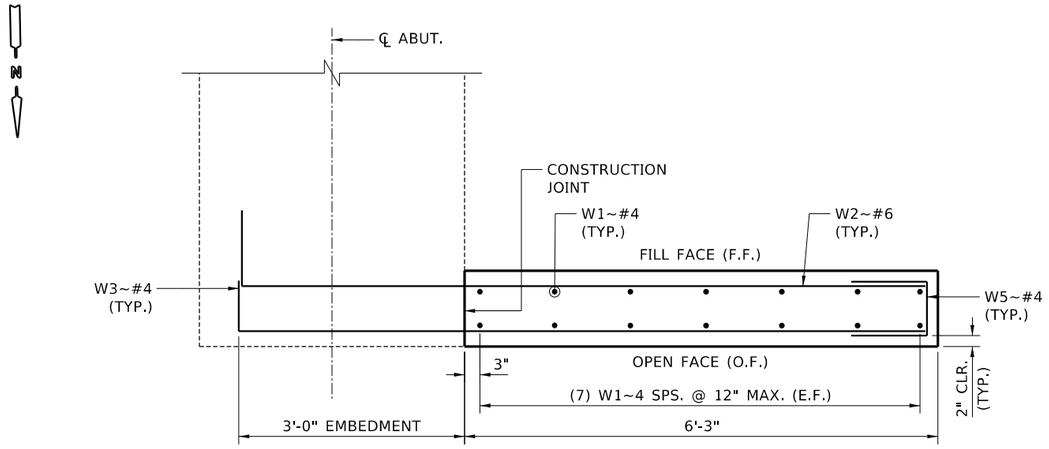
BONNER COUNTY
KELLER ASSOCIATES

ENGLISH
PROJECT NO.
N/A

ABUTMENT DETAILS (2 OF 4)
50'-0" PRESTRESSED VOIDED SLAB BRIDGE
COCOLALLA LOOP RD. OVER COCOLALLA CREEK
STA. 50+00.00

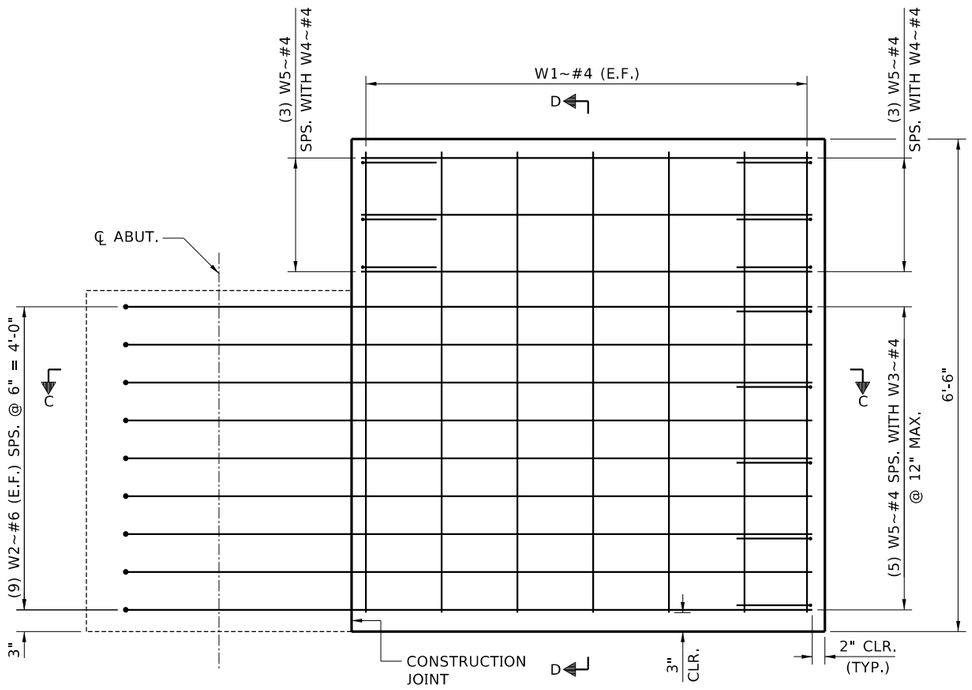
BRIDGE PLANS
BRIDGE KEY NO. 37905
COUNTY: BONNER
KEY NO.: N/A
BRIDGE DWG. NO.: 18614
SHEET: 7 OF 20

PROFESSIONAL ENGINEER
REGISTERED
DocuSigned by: Timothy P. Johnson
DB7A91BC436E444...
19248
9/30/2026
STATE OF IDAHO
TIMOTHY P. JOHNSON



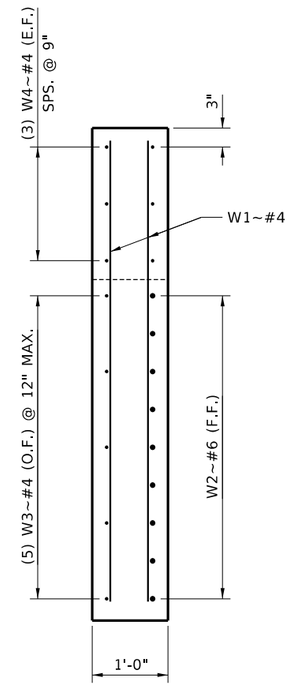
WINGWALL 1 (SECTION C-C)

½" = 1'-0"
(WINGWALLS 2, 3, & 4 SIMILAR)



WINGWALL 1 ELEVATION

½" = 1'-0"
(WINGWALLS 2, 3, & 4 SIMILAR)



WINGWALL 1 (SECTION D-D)

½" = 1'-0"

REVISIONS			
NO.	DATE	BY	DESCRIPTION
1	____	__	_____
2	____	__	_____
3	____	__	_____
4	____	__	_____
5	____	__	_____

DESIGNED: T. JOHNSON
DESIGN CHECKED: A. BOWEN
DETAILED: T. NORRIS
DWG. CHECKED: T. JOHNSON
CORRECTIONS:

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
CADD FILE NAME: \xxxxxx-xxx\PLAN_SHEETS\BRIDGE\37905_e_DABT_03.DGN
DRAWING DATE: JUNE 2025

BONNER COUNTY
KELLER ASSOCIATES

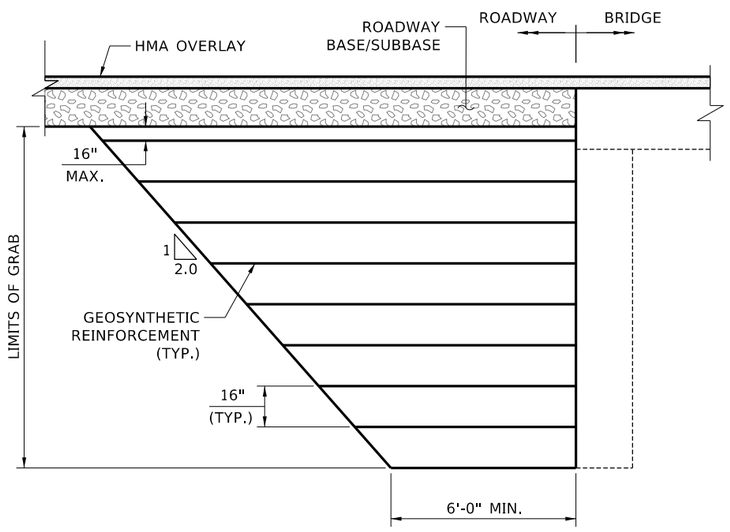
ENGLISH
PROJECT NO.
N/A

ABUTMENT DETAILS (3 OF 4)
50'-0" PRESTRESSED VOIDED SLAB BRIDGE
COCOLALLA LOOP RD. OVER COCOLALLA CREEK
STA. 50+00.00

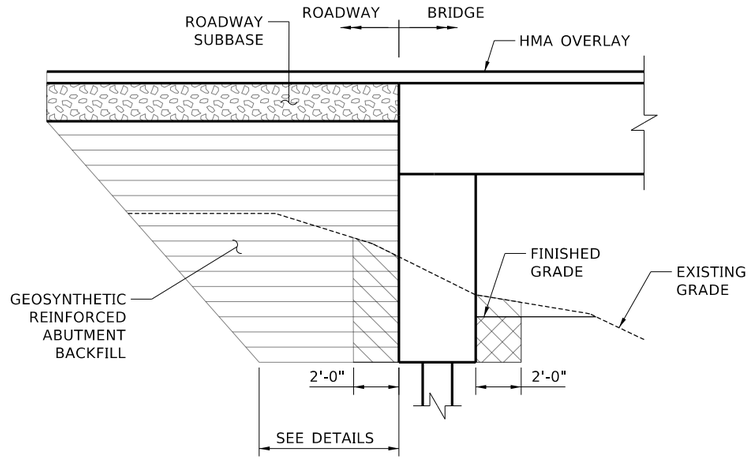
BRIDGE PLANS
BRIDGE KEY NO. 37905
COUNTY: BONNER
KEY NO.: N/A
BRIDGE DWG. NO.: 18614
SHEET: 8 OF 20

PROFESSIONAL ENGINEER
REGISTERED
DocuSigned by:
DB7A91BC436E444...
19248
9/30/2026
STATE OF IDAHO
TIMOTHY P. JOHNSON

Docusign Envelope ID: 5D1BB99F-F1C5-8A82-81A0-BC64E6B255BD



GEOSYNTHETIC REINFORCED ABUTMENT BACKFILL (GRAB)
TYPICAL SECTION
N.T.S.

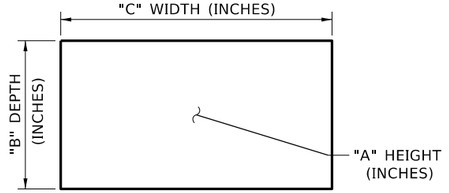


EXCAVATION AND BACKFILL LIMITS FOR PAYMENT
N.T.S.

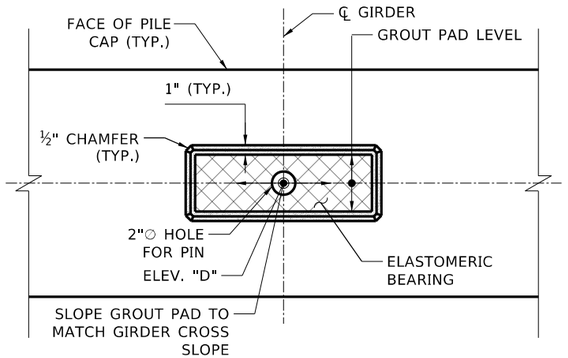
NOTES:

1. PROVIDE AND PAY FOR GEOSYNTHETIC REINFORCED ABUTMENT BACKFILL (GRAB) IN ACCORDANCE WITH 215. DRAINAGE SYSTEM INCIDENTAL TO COST OF GRAB PAY ITEM.
2. GRAB DRAINAGE SYSTEM TO BE CONTINUOUS OVER BACK OF ABUTMENT FACE AND ENDS OF WINGWALLS. WEEP HOLES NOT REQUIRED FOR WINGWALLS, BUT CONNECT WINGWALL PIPING TO BACK OF ABUTMENT PIPING.
3. WRAP FILTER FABRIC 6" UP BACK FACE OF WINGWALL AND BOND TO THE FACE OF CONCRETE. CUT HOLES AS NECESSARY TO FACITILATE PLACEMENT OF WEEP HOLE DRAIN PIPE.
4. WHEN WEEP HOLES ARE PLACED BENEATH FINISHED GRADE, PROVIDE DRAIN ROCK WRAPPED IN FILTER FABRIC AS SHOWN. CUT HOLES IN FILTER FABRIC TO FACILITATE WEEP HOLE DRAIN PIPE.

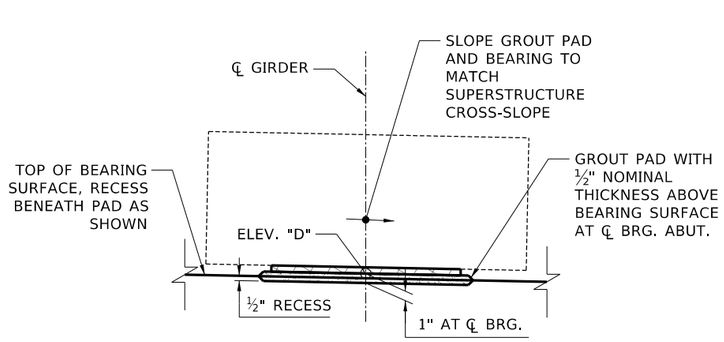
LOCATION	TYPE	"A"	"B"	"C"
ABUT. 1 BEARING PAD	PLAIN	½"	7"	42"
ABUT. 2 BEARING PAD	PLAIN	½"	7"	42"



ELASTOMERIC BEARING SIZES
N.T.S.



GROUT PAD AND ELASTOMERIC
BEARING PLAN
N.T.S.



GROUT PAD AND ELASTOMERIC
BEARING ELEVATION
N.T.S.

GROUT PAD ELEVATIONS*		
GIRDER	ELEV. "D"	
	ABUT. 1	ABUT. 2
G1	2214.01	2213.83
G2	2214.09	2213.91
G3	2214.17	2213.99
G4	2214.25	2214.07
G5	2214.25	2214.07
G6	2214.17	2213.99
G7	2214.09	2213.91
G8	2214.01	2213.83

"D" IS THE ELEVATION AT TOP OF GROUT PAD INTERSECTING ℄ GIRDER AND ℄ BRG.

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED: T. JOHNSON
DESIGN CHECKED: A. BOWEN
DETAILED: T. NORRIS
DWG. CHECKED: T. JOHNSON
CORRECTIONS:

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
CADD FILE NAME: \xxxxxx-xxx\PLAN_SHEETS\BRIDGE\37905_e_DABT_04.dgn
DRAWING DATE: JUNE 2025

BONNER COUNTY
KELLER ASSOCIATES

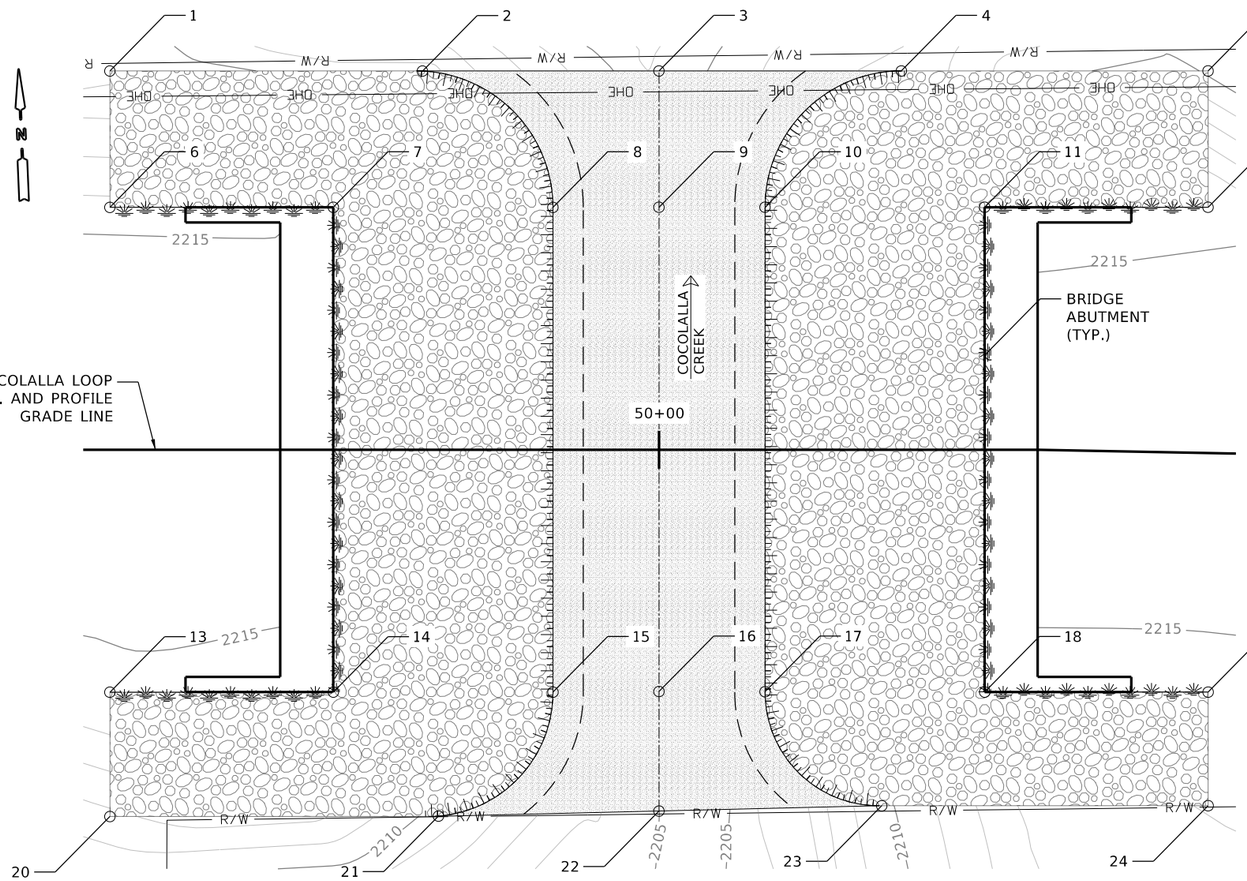
ENGLISH
PROJECT NO.
N/A

ABUTMENT DETAILS (4 OF 4)
50'-0" PRESTRESSED VOIDED SLAB BRIDGE
COCOLALLA LOOP RD. OVER COCOLALLA CREEK
STA. 50+00.00

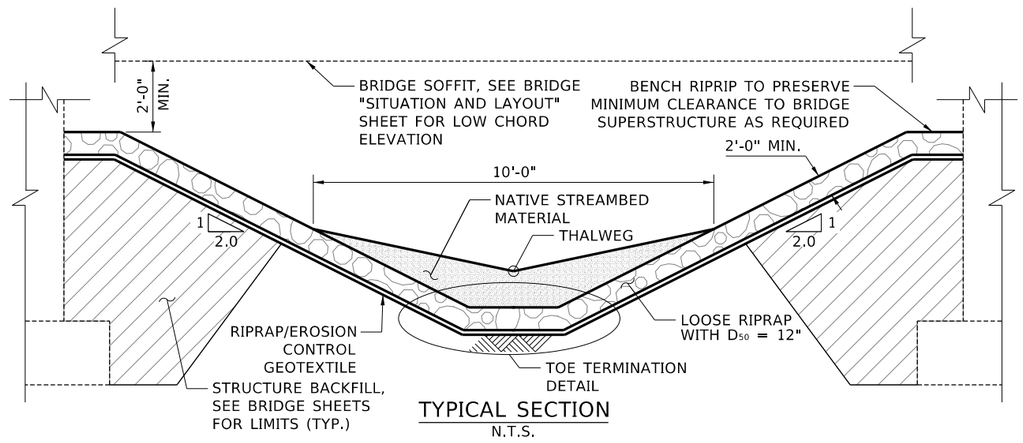
BRIDGE PLANS
BRIDGE KEY NO. 37905
COUNTY: BONNER
KEY NO.: N/A
BRIDGE DWG. NO.: 18614
SHEET: 9 OF 20

PROFESSIONAL ENGINEER
REGISTERED
DocuSigned by: Timothy P. Johnson
DB7A91BC436E444...
19248
9/30/2026
STATE OF IDAHO
TIMOTHY P. JOHNSON

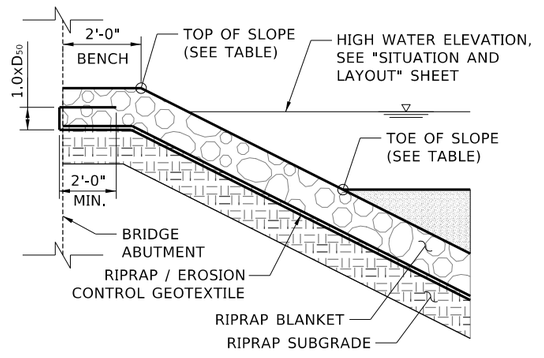
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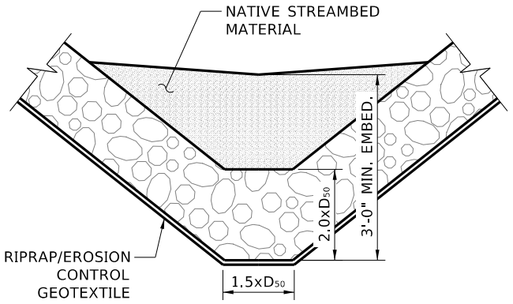
PLAN
1" = 10'-0"



TYPICAL SECTION
N.T.S.



RIPRAP SLOPE DETAIL AT ABUTMENT
N.T.S.



TOE TERMINATION DETAIL

LEGEND:

- EXPOSED RIPRAP
- SUBGRADE
- NATIVE STREAMBED OVER BURIED RIPRAP
- TOP OF EXPOSED RIPRAP EMBANKMENT
- TOE OF EXPOSED RIPRAP EMBANKMENT
- EMBEDDED TOE OF RIPRAP
- THALWEG

CHANNEL ELEVATIONS

NO.	STATION	OFFSET	ELEVATION
1	49+63.75	25.00 LT	2211.37
2	49+84.00	25.00 LT	2204.50
3	50+00.00	25.00 LT	2204.50
4	50+16.00	25.00 LT	2204.50
5	50+36.25	25.00 LT	2211.08
6	49+63.75	16.00 LT	2215.87
7	49+78.50	16.00 LT	2211.75
8	49+93.00	16.00 LT	2204.50
9	50+00.00	16.00 LT	2204.50
10	49+93.00	16.00 LT	2204.50
11	50+21.50	16.00 LT	2211.75
12	50+36.25	16.00 LT	2215.58
13	49+63.75	16.00 RT	2215.87
14	49+71.50	16.00 RT	2211.75
15	49+93.00	16.00 RT	2204.50
16	50+00.00	16.00 RT	2204.50
17	49+93.00	16.00 RT	2204.50
18	50+21.50	16.00 RT	2211.75
19	50+36.25	16.00 RT	2215.58
20	49+63.75	24.21 RT	2211.77
21	49+84.79	24.20 RT	2204.50
22	50+00.00	23.85 RT	2204.50
23	50+14.55	23.50 RT	2204.50
24	50+36.25	23.37 RT	2211.83

NOTES:

1. RESTORE DISTURBED STREAMBED REGIONS WITH NATIVE SUBSTRATE AND OTHER MATERIALS EXCAVATED FOR BRIDGE AND RIPRAP CONSTRUCTION.
2. PROVIDE AND INSTALL CLASS III RIPRAP IN ACCORDANCE WITH 624.
3. PROVIDE RIPRAP/EROSION CONTROL GEOTEXTILE IN ACCORDANCE WITH 640.03G THAT CONFORMS TO THE REQUIREMENTS OF 718.06.
4. FOR RIPRAP PLACED EXCEEDING THE MAXIMUM DROP CRITERIA PER 640.03, PROVIDE AN AGGREGATE CUSHION OF APPROPRIATE THICKNESS AND ADJUST PLAN ELEVATIONS FOR BOTTOM OF RIPRAP BY THE THICKNESS OF THE AGGREGATE CUSHION.
5. EXCAVATION REQUIRED FOR CONSTRUCTION OF THE RIPRAP NOT PAID FOR AS PART OF THE BRIDGE STRUCTURE EXCAVATION IS INCIDENTAL TO PAY ITEM 624-005A AND WILL BE MEASURED AND PAID FOR IN ACCORDANCE WITH 210.
6. ANCHOR GEOTEXTILE AT THE UPSTREAM/DOWNSTREAM TERMINATION LIMITS BY TURNING DOWNARD A MINIMUM OF 12" AND PLACING RIPRAP ALONG THE LEADING EDGE OR EDGES.

REVISIONS			
NO.	DATE	BY	DESCRIPTION
1	____	__	_____
2	____	__	_____
3	____	__	_____
4	____	__	_____
5	____	__	_____

DESIGNED: B. DAVIS
DESIGN CHECKED: A. DAVIS
DETAILED: T. NORRIS
DWG. CHECKED: T. JOHNSON
CORRECTIONS:

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
CADD FILE NAME: \xxxxxx-xxx\PLAN_SHEETS\BRIDGE\37905_f_RIPR_01.dgn
DRAWING DATE: JUNE 2025

BONNER COUNTY
KELLER ASSOCIATES

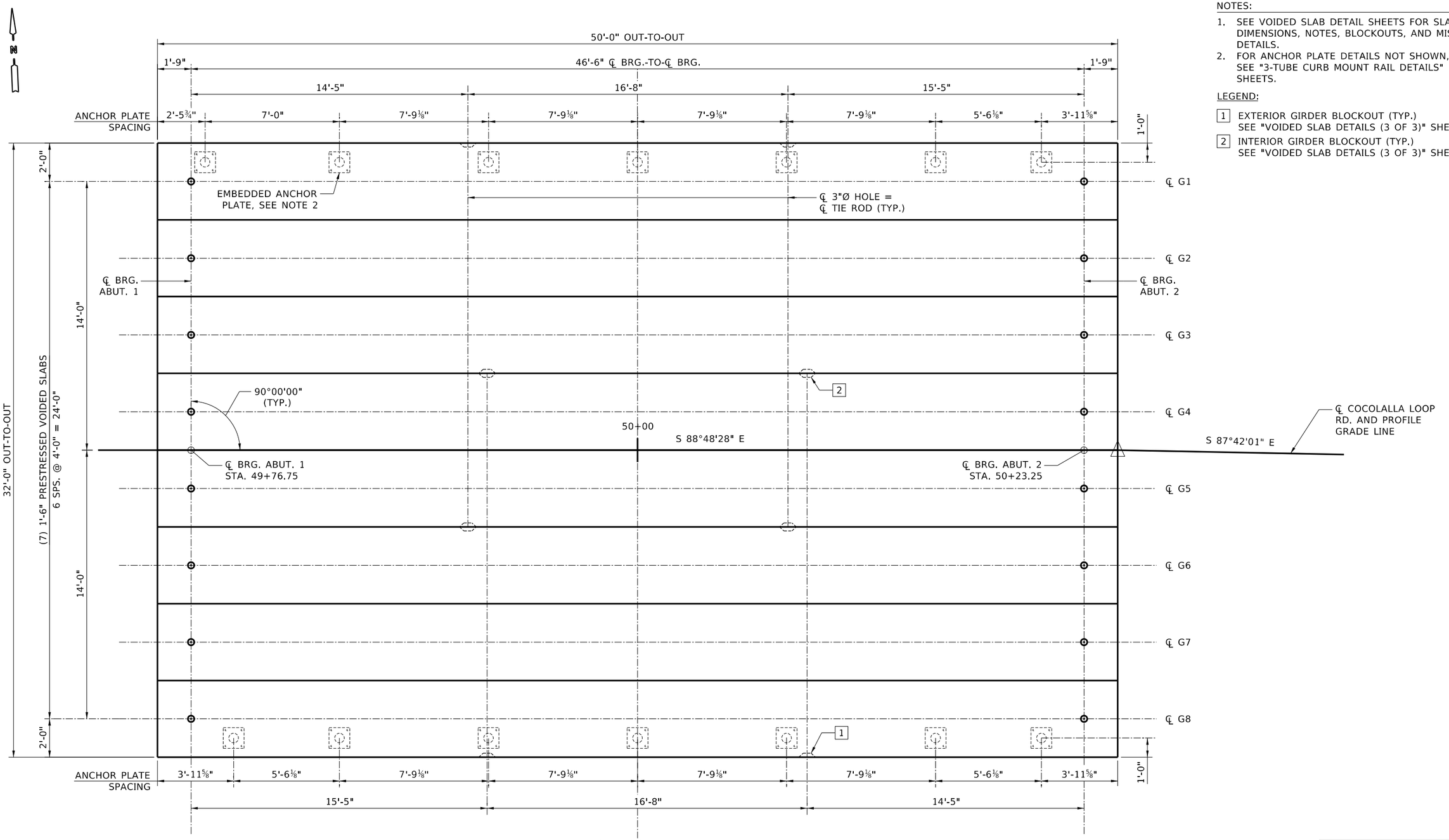
ENGLISH
PROJECT NO.
N/A

RIPRAP DETAILS
50'-0" PRESTRESSED VOIDED SLAB BRIDGE
COCOLALLA LOOP RD. OVER COCOLALLA CREEK
STA. 50+00.00

BRIDGE PLANS
BRIDGE KEY NO. 37905
COUNTY: BONNER
KEY NO.: N/A
BRIDGE DWG. NO.: 18614
SHEET: 10 OF 20

PROFESSIONAL ENGINEER LICENSED
DocuSigned by: Ben Davis
EF06E1A9A1E1CA...
17638
9/30/2026
STATE OF IDAHO
BEN DAVIS

Docusign Envelope ID: 5D1BB99F-F1C5-8A82-81A0-BC64E6B255BD



FRAMING PLAN
1" = 5'-0"

NOTES:

1. SEE VOIDED SLAB DETAIL SHEETS FOR SLAB DIMENSIONS, NOTES, BLOCKOUTS, AND MISC. DETAILS.
2. FOR ANCHOR PLATE DETAILS NOT SHOWN, SEE "3-TUBE CURB MOUNT RAIL DETAILS" SHEETS.

LEGEND:

[1] EXTERIOR GIRDER BLOCKOUT (TYP.) SEE "VOIDED SLAB DETAILS (3 OF 3)" SHEET

[2] INTERIOR GIRDER BLOCKOUT (TYP.) SEE "VOIDED SLAB DETAILS (3 OF 3)" SHEET

REVISIONS			
NO.	DATE	BY	DESCRIPTION
1	____	__	_____
2	____	__	_____
3	____	__	_____
4	____	__	_____
5	____	__	_____

DESIGNED: T. JOHNSON
DESIGN CHECKED: A. BOWEN
DETAILED: T. NORRIS
DWG. CHECKED: T. JOHNSON
CORRECTIONS:

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY

CADD FILE NAME: \xxxxxx-xxx\PLAN_SHEETS\BRIDGE\37905_g_FRPL_01.DGN

DRAWING DATE: JUNE 2025

BONNER COUNTY

KELLER ASSOCIATES

ENGLISH

PROJECT NO.: N/A

FRAMING PLAN

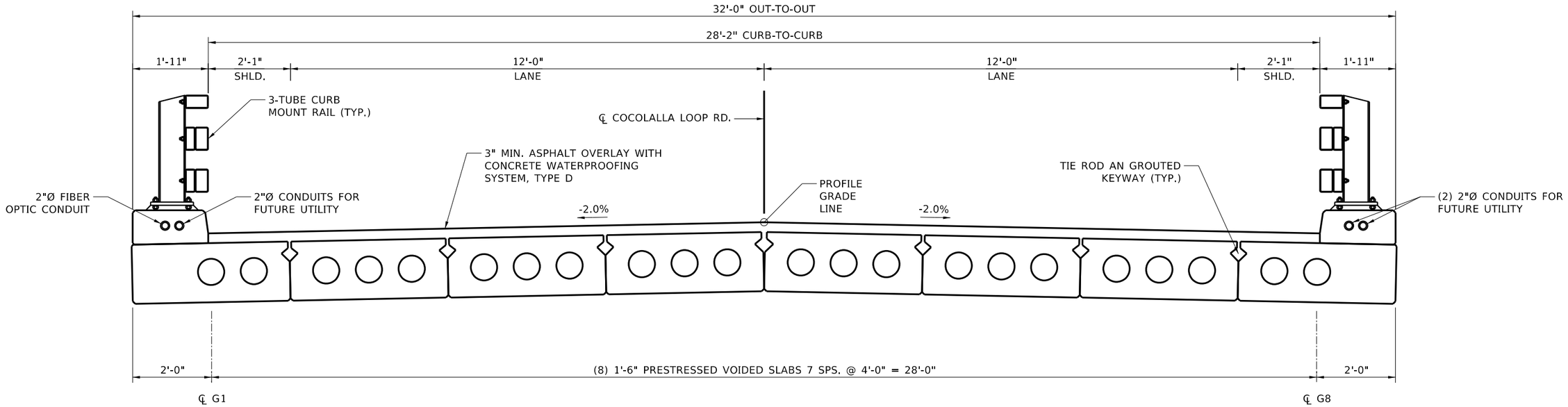
50'-0" PRESTRESSED VOIDED SLAB BRIDGE
COCOLALLA LOOP RD. OVER COCOLALLA CREEK
STA. 50+00.00

BRIDGE PLANS

BRIDGE KEY NO.	
37905	
COUNTY: BONNER	KEY NO.: N/A
BRIDGE DWG. NO.: 18614	SHEET: 11 OF 20

PROFESSIONAL ENGINEER
REGISTERED
DocuSigned by:
Timothy P. Johnson
DB7A91BC436E444...
19248
9/30/2026
STATE OF IDAHO
TIMOTHY P. JOHNSON

Docusign Envelope ID: 5D1BB99F-F1C5-8A82-81A0-BC64E6B255BD



TYPICAL SECTION

½" = 1'-0"
(LOOKING AHEAD ON STATION)

REVISIONS			
NO.	DATE	BY	DESCRIPTION
1	____	__	_____
2	____	__	_____
3	____	__	_____
4	____	__	_____
5	____	__	_____

DESIGNED: T. JOHNSON
DESIGN CHECKED: A. BOWEN
DETAILED: T. NORRIS
DWG. CHECKED: T. JOHNSON
CORRECTIONS:

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
CADD FILE NAME: \xxxxxx-xxx\PLAN_SHEETS\BRIDGE\37905_g_TYPS_01.DGN
DRAWING DATE: JUNE 2025

BONNER COUNTY
KELLER ASSOCIATES

ENGLISH
PROJECT NO.
N/A

TYPICAL SECTION
50'-0" PRESTRESSED VOIDED SLAB BRIDGE
COCOLALLA LOOP RD. OVER COCOLALLA CREEK
STA. 50+00.00

BRIDGE PLANS
BRIDGE KEY NO. 37905
COUNTY: BONNER
KEY NO.: N/A
BRIDGE DWG. NO.: 18614
SHEET: 12 OF 20

PROFESSIONAL ENGINEER
REGISTERED
DocuSigned by: Timothy P. Johnson
DB7A91BC436E444...
19248
9/30/2026
STATE OF IDAHO
TIMOTHY P. JOHNSON

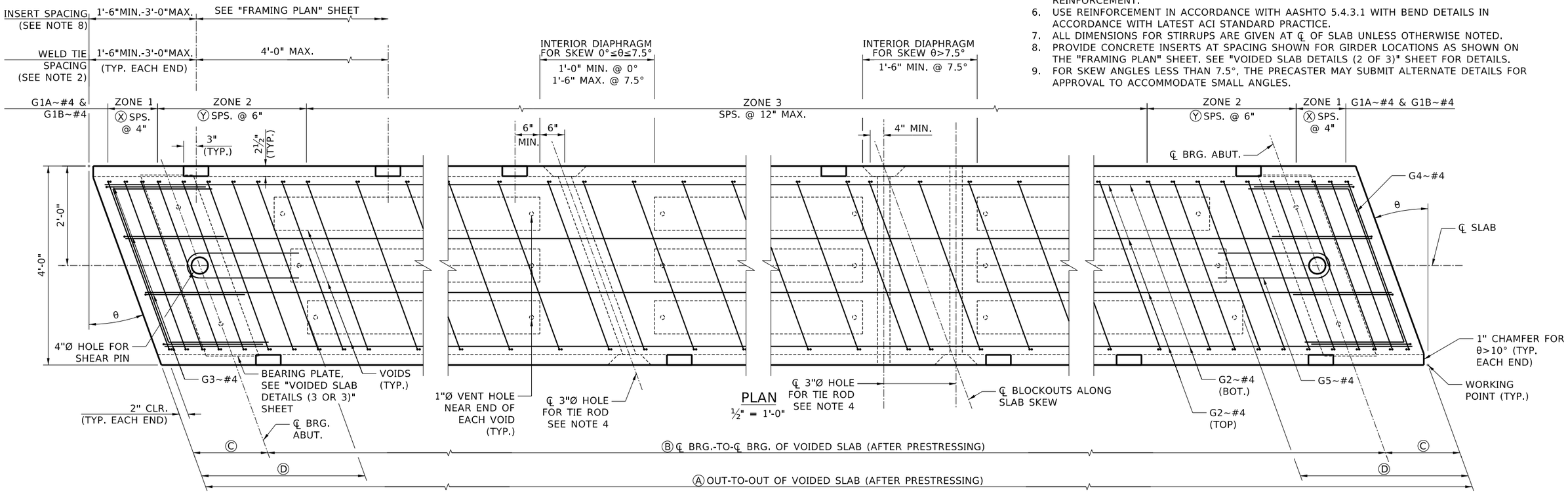
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PRESTRESSED VOIDED SLAB SCHEDULE

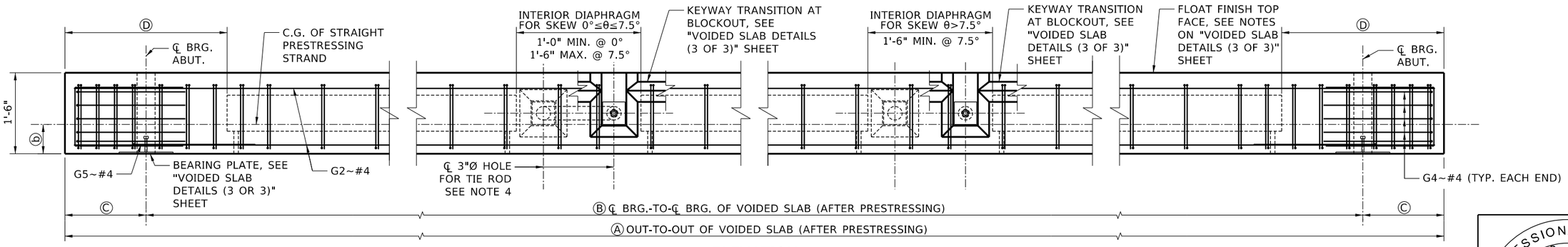
SLABS		PRESTRESS FORCE (KIPS)		PRESTRESS LOSS (KSI)		CONC. STRENGTH (PSI)		SLAB DIMENSIONS								REINFORCING ZONES		C.G. OF STRAND	SHIPPING
NO.	LOCATION	INITIAL BEFORE LOSSES	FINAL AFTER LOSSES	TOTAL IMMED. LOSSES	TOTAL FINAL LOSSES	RELEASE f'_{ci}	28 DAYS f'_c	Ⓐ	Ⓑ	Ⓒ		Ⓓ		θ		ⓧ # SPS. ZONE 1	Ⓨ # SPS. ZONE 2	ⓑ	APPROX. WEIGHT (LBF/FT)
										LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT				
G1,G8	EXTERIOR	1,494	1,194	11.38	40.66	5,200	6,800	50'-0"	46'-6"	1'-9"	1'-9"	3'-9"	3'-9"	00°00'00"	00°00'00"	12	20	6.15"	823
G2,G7	INTERIOR	1,494	1,181	12.35	42.46	5,200	6,800	50'-0"	46'-6"	1'-9"	1'-9"	3'-9"	3'-9"	00°00'00"	00°00'00"	12	20	6.15"	763
G3-G6	INTERIOR	1,494	1,179	12.35	42.72	5,200	6,800	50'-0"	46'-6"	1'-9"	1'-9"	3'-9"	3'-9"	00°00'00"	00°00'00"	12	20	6.15"	763

NOTES:

1. FOR ADDITIONAL DETAILS, SEE "VOIDED SLAB DETAILS (2 OF 3)" AND "VOIDED SLAB DETAILS (3 OR 3)" SHEETS.
2. PROVIDE FULL-LENGTH KEYWAY WITH WELD TIES AT ALL INTERIOR FACES OF ALL SLABS. OMIT KEYWAY AND WELD TIES ON EXTERIOR FACE OF EXTERIOR SLABS.
3. PROVIDE INTERIOR AND EXTERIOR BLOCKOUTS FOR SLABS AT LOCATIONS AS SHOWN ON THE "FRAMING PLAN" SHEET. FOR BLOCKOUT DETAILS, SEE THE "VOIDED SLAB DETAILS (3 OF 3)" SHEET.
4. PROVIDE TIE RODS WITH ASSOCIATED HARDWARE, SEE "FRAMING PLAN" AND "VOIDED SLAB DETAILS (3 OF 3)" SHEETS.
5. PROVIDE PARAPET/RAILING ON EXTERIOR GIRDERS WITH APPROPRIATE EMBEDDED REINFORCEMENT.
6. USE REINFORCEMENT IN ACCORDANCE WITH AASHTO 5.4.3.1 WITH BEND DETAILS IN ACCORDANCE WITH LATEST ACI STANDARD PRACTICE.
7. ALL DIMENSIONS FOR STIRRUPS ARE GIVEN AT ℄ OF SLAB UNLESS OTHERWISE NOTED.
8. PROVIDE CONCRETE INSERTS AT SPACING SHOWN FOR GIRDER LOCATIONS AS SHOWN ON THE "FRAMING PLAN" SHEET. SEE "VOIDED SLAB DETAILS (2 OF 3)" SHEET FOR DETAILS.
9. FOR SKEW ANGLES LESS THAN 7.5°, THE PRECASTER MAY SUBMIT ALTERNATE DETAILS FOR APPROVAL TO ACCOMMODATE SMALL ANGLES.



PLAN
½" = 1'-0"



ELEVATION
½" = 1'-0"

REVISIONS			
NO.	DATE	BY	DESCRIPTION
△	____	__	_____
△	____	__	_____
△	____	__	_____
△	____	__	_____
△	____	__	_____

DESIGNED: T. JOHNSON
DESIGN CHECKED: A. BOWEN
DETAILED: T. NORRIS
DWG. CHECKED: T. JOHNSON
CORRECTIONS:

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
CADD FILE NAME: \xxxxxx-xxx\PLAN_SHEETS\BRIDGE\37905_h_GIRD_01.DGN
DRAWING DATE: JUNE 2025

BONNER COUNTY
KELLER ASSOCIATES

ENGLISH
PROJECT NO.
N/A

VOIDED SLAB DETAILS (1 OF 3)

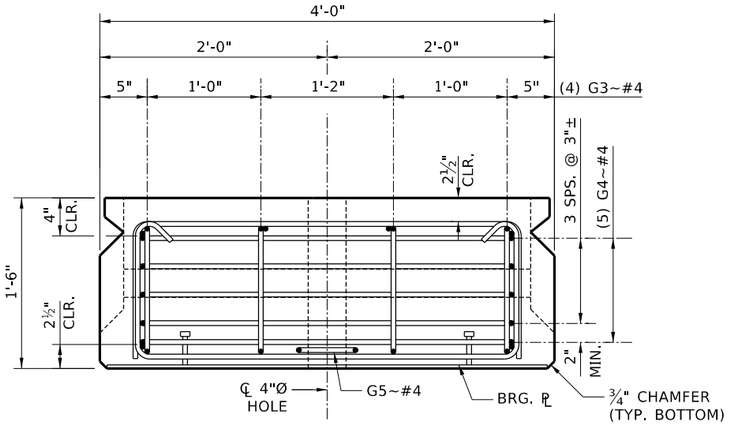
50'-0" PRESTRESSED VOIDED SLAB BRIDGE
COCOLALLA LOOP RD. OVER COCOLALLA CREEK
STA. 50+00.00

BRIDGE PLANS

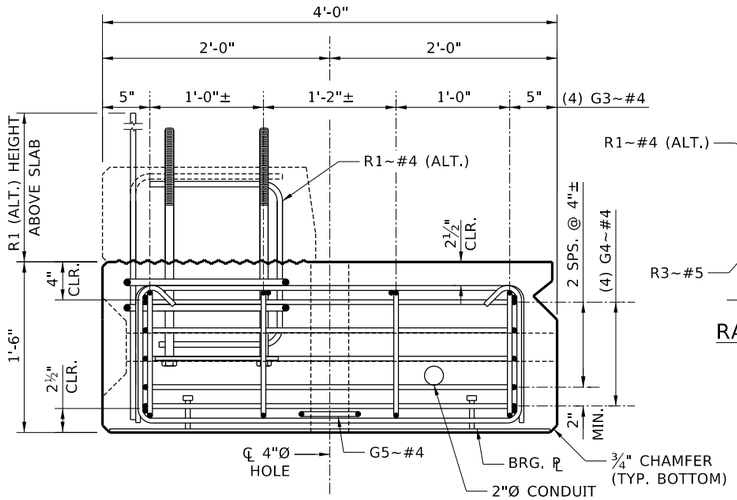
BRIDGE KEY NO.	
37905	
COUNTY: BONNER	KEY NO.: N/A
BRIDGE DWG. NO.: 18614	SHEET: 13 OF 20

PROFESSIONAL ENGINEER REGISTERED
DocuSigned by: Timothy P. Johnson
DBZA91BC436E444...
19248
9/30/2026
STATE OF IDAHO
TIMOTHY P. JOHNSON

Docusign Envelope ID: 5D1BB99F-F1C5-8A82-81A0-BC64E6B255BD

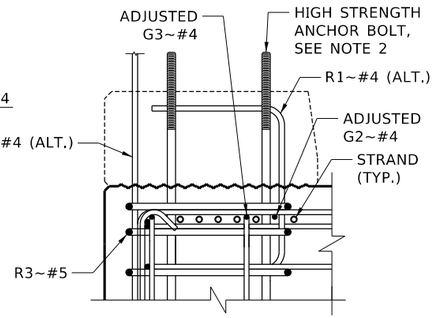


SECTION AT ℄ BEARING



SECTION AT ℄ BEARING

NOTE: FOR DIMENSIONS NOTATED ±, ADJUST GIRDER REINFORCEMENT 2"± ALONG DIMENSION LINE TO AVOID CONFLICT WITH RAILING REINFORCEMENT



RAILING ANCHOR DETAIL AT SLAB ENDS

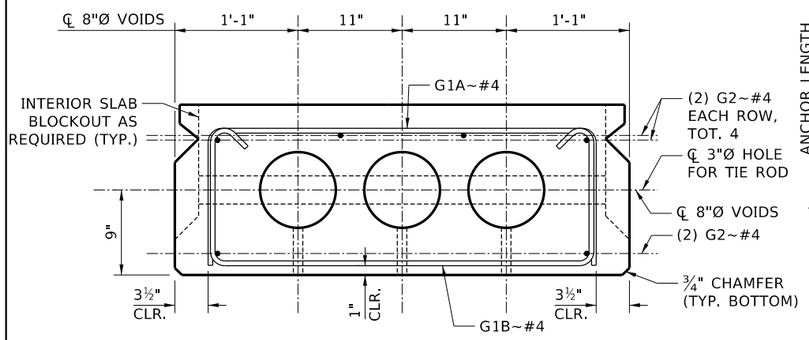
¾" = 1'-0"

REINFORCEMENT SCHEDULE

MARK	SIZE	GRADE	SKETCH
G1A	#4(E)	60	3'-5", 1'-2½"
G1B	#4(E)	60	3'-5", 1'-2½"
G2	#4(E)	60	Ⓐ - 4", SEE NOTE 1
G3	#4(E)	60	Ⓓ - 6", 1'-1½"
G4	#4(E)	60	3'-4", Ⓓ - 6"
G5	#4(E)	60	2'-3", 3" RAD., 6"
R1-R3	EMBEDDED REINFORCEMENT DETAILS ON OTHER SHEETS, SEE NOTE 2		

NOTES:

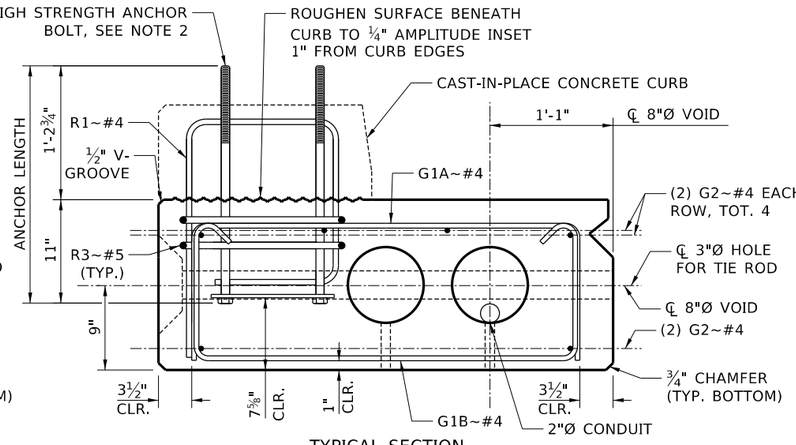
1. FOR #4 BARS REQUIRING LONGITUDINAL LAP SPLICES, PROVIDE A 2'-4" MINIMUM LAP WITH A MINIMUM BAR LENGTH OF 18'-0". STAGGER LAP SPLICES SUCH THAT NO MORE THAN 50% OF BARS TERMINATE AT ONE LOCATION. SEE "VOIDED SLAB DETAILS (1 OF 3)" SHEET FOR "A" DIMENSION.
2. FOR EMBEDDED RAILING REINFORCEMENT DIMENSIONING NOT SHOWN, SEE "3-TUBE CURB MOUNT RAIL DETAILS" SHEETS.
3. FOR BLOCKOUT DETAILS, SEE "VOIDED SLAB DETAILS (3 OF 3)" SHEET.
4. ADJUST HORIZONTAL POSITION OF PRESTRESSING STRAND ±1" WITHIN SECTION AS NECESSARY TO ALLOW PLACEMENT OF MILD REINFORCEMENT. VERTICAL POSITIONS OF STRANDS ARE NOT TO BE ADJUSTED.
5. IF CONCRETE COIL INSERTS ARE REQUIRED PER THE DRAWINGS, PROVIDE HOT-DIP GALVANIZED INSERTS WITH CLOSED-BACK FERRULE THREADS CAPABLE OF RECEIVING ¾" GR36 ASTM A307 OR ASTM F1557 THREADED RODS. PROVIDE A MINIMUM EMBEDMENT OF 4½" WITH MINIMUM WORKING TENSILE LOAD CAPACITY OF 4500 LBS.
6. IF CONCRETE CHANNEL INSERTS ARE REQUIRED PER THE DRAWINGS, PROVIDE COOPER B-LINE B22, POWERSTRUT PS349, OR APPROVED EQUAL.



TYPICAL SECTION

INTERIOR SLAB

¾" = 1'-0"

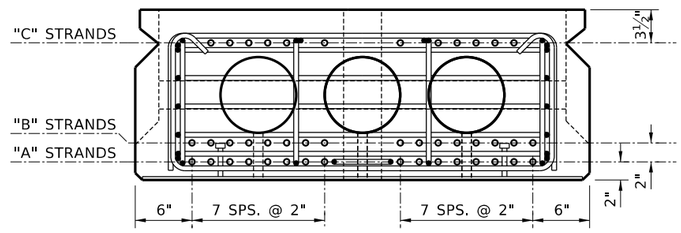


TYPICAL SECTION

EXTERIOR SLAB

¾" = 1'-0"

PRESTRESSING STRAND SCHEDULE			
GIRDER LOCATION	STRAND COUNT		
	"A"	"B"	"C"
G1,G8	16	8	10
G2,G7	16	8	10
G3-G6	16	8	10



STRAND LAYOUT

(POTENTIAL POSITION CONFLICTS SHOWN FOR ALL SLAB SECTIONS)

REVISIONS			
NO.	DATE	BY	DESCRIPTION
1	____	__	_____
2	____	__	_____
3	____	__	_____
4	____	__	_____
5	____	__	_____

DESIGNED: T. JOHNSON
DESIGN CHECKED: A. BOWEN
DETAILED: T. NORRIS
DWG. CHECKED: T. JOHNSON
CORRECTIONS:

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY

CADD FILE NAME: \xxxxxx-xxx\PLAN_SHEETS\BRIDGE\37905_h_GIRD_02.DGN

DRAWING DATE: JUNE 2025

BONNER COUNTY

KELLER ASSOCIATES

ENGLISH

PROJECT NO.: N/A

VOIDED SLAB DETAILS (2 OF 3)

50'-0" PRESTRESSED VOIDED SLAB BRIDGE
COCOLALLA LOOP RD. OVER COCOLALLA CREEK
STA. 50+00.00

BRIDGE PLANS

BRIDGE KEY NO.: 37905
COUNTY: BONNER
KEY NO.: N/A
BRIDGE DWG. NO.: 18614
SHEET: 14 OF 20

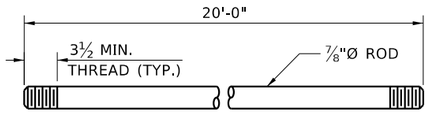
PROFESSIONAL ENGINEER REGISTERED
DocuSigned by: Timothy P. Johnson
DB7A91BC436E444...
19248
9/30/2026
STATE OF IDAHO
TIMOTHY P. JOHNSON

Docusign Envelope ID: 5D1BB99F-F1C5-8A82-81A0-BC64E6B255BD

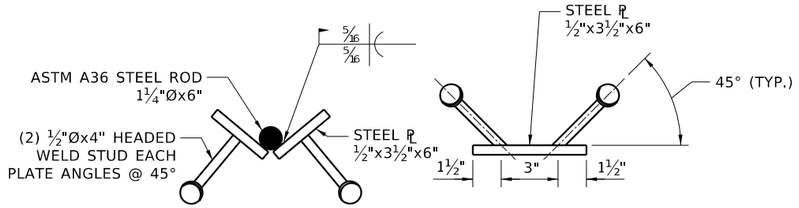
MIDSPAN DEFLECTION (INCHES)

NO.	LOCATION	ΔP (PRESTRESSING)	ΔG (GIRDER SELF WT.)	ΣΔ* ΔP + ΔG	Δ1** 1.55ΔP +1.65ΔG	Δ2 (ADD. DEAD LOAD)
G1,G8	EXTERIOR	1.58 ↑	1.03 ↓	0.55 ↑	0.75 ↑	0.26 ↓
G2,G7	INTERIOR	1.57 ↑	0.98 ↓	0.59 ↑	0.82 ↑	0.32 ↓
G3-G6	INTERIOR	1.57 ↑	0.98 ↓	0.59 ↑	0.82 ↑	0.17 ↓

* ESTIMATED DEFLECTION OF PRESTRESSED GIRDER AT RELEASE
** ESTIMATED DEFLECTION OF PRESTRESSED GIRDER AT ERECTION

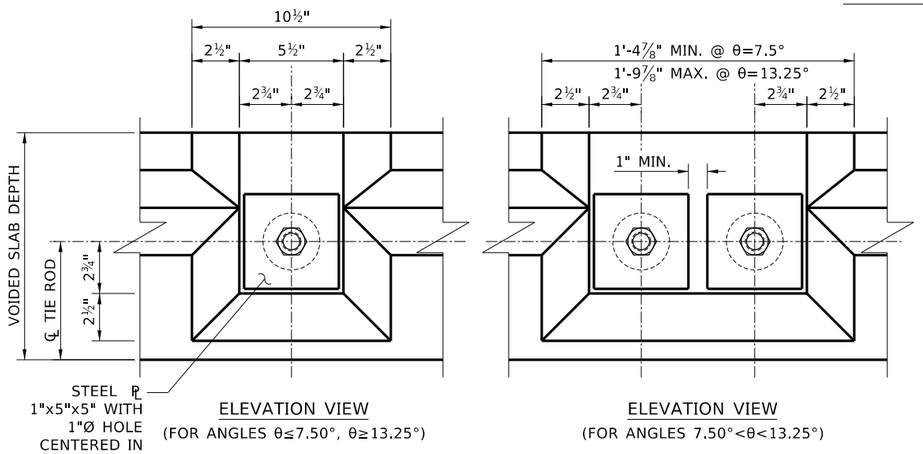


TIE ROD DETAIL
N.T.S.



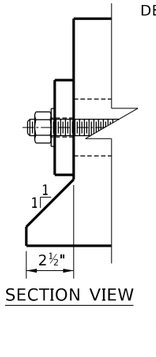
SECTION VIEW PLAN VIEW

WELD TIE DETAIL
N.T.S.

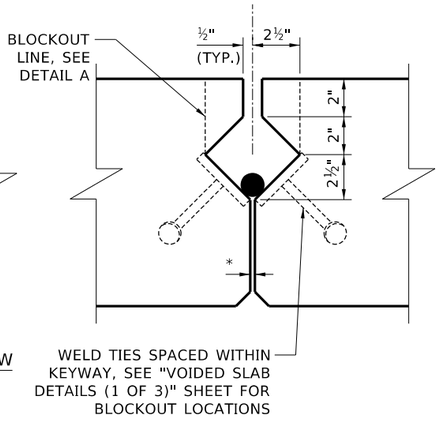


ELEVATION VIEW
(FOR ANGLES θ≤7.50°, θ≥13.25°)

ELEVATION VIEW
(FOR ANGLES 7.50°<θ<13.25°)

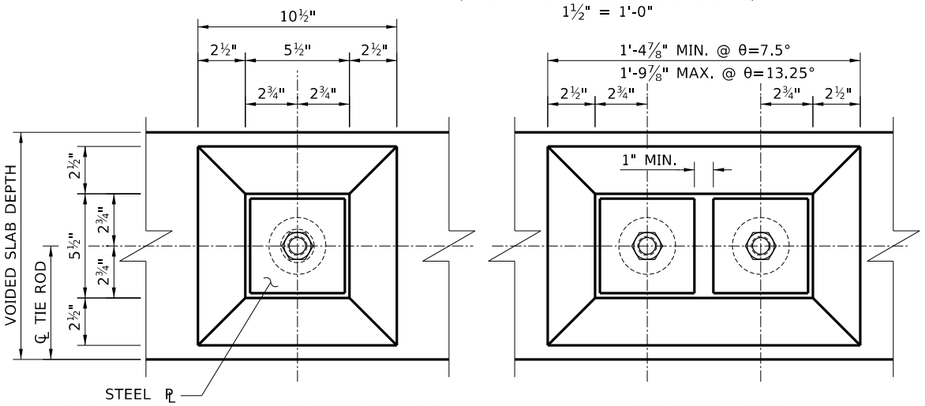


SECTION VIEW



WELD TIES SPACED WITHIN KEYWAY, SEE "VOIDED SLAB DETAILS (1 OF 3)" SHEET FOR BLOCKOUT LOCATIONS

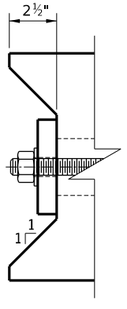
DETAIL A
(INTERIOR GIRDER BLOCKOUT DETAIL)
1½" = 1'-0"



ELEVATION VIEW
(FOR ANGLES θ≤7.50°, θ≥13.25°)

ELEVATION VIEW
(FOR ANGLES 7.50°<θ<13.25°)

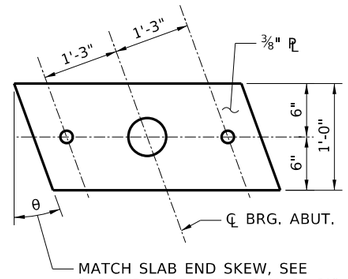
DETAIL B
(EXTERIOR GIRDER BLOCKOUT DETAIL)
1½" = 1'-0"



SECTION VIEW

KEYWAY AND WELD TIE DETAIL
1½" = 1'-0"

* SLAB GAP TO BE DETERMINED BY PRECASTER, SEAL WITH BACKER ROD BEYOND WELD TIE LOCATIONS



BEARING PLATE DETAIL
(IF SPECIFIED IN "VOIDED SLAB DETAILS 1 OF 3" SHEET)
N.T.S.

NOTES:

CONSTRUCTION SEQUENCE

1. SET SLABS AND INSTALL ABUTMENT VERTICAL DOWELS IF SPECIFIED.
2. PREPARE DUCT HOLES FOR TIE RODS IN ACCORDANCE WITH 506.
3. INSTALL TENSION TIE RODS. SPLICE AS REQUIRED WITH HEAVY DUTY SLEEVE NUTS.
4. GROUT 4" DIAMETER VERTICAL DOWEL HOLE AT THE ABUTMENT IF SPECIFIED.
5. WELD 1¼" DIAMETER STEEL ROD AT WELD TIE LOCATIONS.
6. GROUT KEYWAY AND BLOCKOUTS.

TIE RODS

7. PROVIDE ⅞" DIAMETER ASTM A449 HIGH STRENGTH TIE RODS.
8. PROVIDE AN INITIAL MINIMUM TENSION OF 39,250 LBS. FOR EACH TIE ROD.
9. MEASURE BOLT TENSION BY THE USE OF DIRECT TENSION INDICATORS (D.T.I.). PROVIDE D.T.I. THAT CONFORM TO ASTM F959 AND HARDENED STEEL WASHERS THAT CONFORM TO ASTM F436.
10. PROVIDE BEARING PLATES THAT CONFORM TO ASTM A36.
11. PROVIDE HEAVY HEX NUTS THAT CONFORM TO ASTM A563 GRADE DH.
12. PROVIDE EACH TIE ROD WITH TWO 1" STEEL BEARING PLATES, TWO HEAVY HEX NUTS, AND TWO WASHERS.
13. HOT DIP GALVANIZE TIE RODS, NUTS, WASHERS, AND BEARING PLATES AFTER FABRICATION IN ACCORDANCE WITH ASTM A123. APPLY AN ANTIGALLING LUBRICANT TO THE THREADS PRIOR TO TENSIONING THE TIE RODS.
14. FOR SKEW ANGLES θ≤7.50° AND A SINGLE TIE ROD, TIE RODS MAY BE SPLICED USING HOT DIP GALVANIZED ASTM A563 GRADE DH COUPLING OR SLEEVE NUTS.

CONCRETE

15. PROVIDE CONCRETE STRENGTH AS SHOWN ON THE PLANS.
16. PROVIDE CONCRETE THAT CONFORMS TO 502 EXCEPT ENTRAINED AIR TO BE 5%±1%. SELF CONSOLIDATING CONCRETE MAY BE USED IN ACCORDANCE WITH 502.

GROUT

17. PROVIDE GROUT THAT CONFORMS TO TYPE "B", CLASS I NON-METALLIC NON-SHRINK AS SPECIFIED IN 705.02.
18. SANDBLAST, CLEAN, AND GROUT LEVEL WITH SURROUNDING GIRDER SURFACES, KEYWAYS, AND BLOCKOUTS. PROVIDE A BACKER ROD AS A SEAL FOR THE GROUT. ALTERNATIVELY, KEYWAYS AND BLOCKOUTS MAY BE ROUGHENED WITH AN APPROVED CHEMICAL RETARDER APPLIED TO THE FORMS.
19. DO NOT ALLOW VEHICULAR TRAFFIC ON THE STRUCTURE UNTIL THE GROUT HAS ATTAINED A MINIMUM STRENGTH OF 4,000 PSI.

SHOP DRAWINGS

20. PROVIDE SHOP DRAWING DETAILS THAT CONFORM TO CURRENT AASHTO SPECIFICATIONS. SHOW DETENSIONING SEQUENCE AND GIRDER LIFT POINTS ON SHOP DRAWINGS.
21. SUBMIT SHOP DRAWINGS IN ACCORDANCE WITH 506 AND 105.2.
22. KEEP THE PRESTRESSED SLAB IN A FLAT POSITION (TOP SURFACE UPWARDS) AT ALL TIMES DURING TRANSPORTATION AND ERECTION. LIFT ONLY BY MEANS OF THE LIFTING DEVICES PROVIDED. SUBMIT THE PROVISION FOR SUPPORT POINTS TO BE USED DURING TRANSPORTATION TO THE JOB SITE FOR APPROVAL.

MISCELLANEOUS GIRDER DETAILS

23. DIMENSIONS ARE HORIZONTAL DIMENSIONS. CORRECT THE FURNISHED LENGTH OF THE SLAB FOR GRADE AND ALLOWANCE MADE FOR BEAM SHORTENING.
24. FABRICATE IN ACCORDANCE WITH SECTION 506.
25. FLOAT FINISH THE TOP SURFACE OF THE SLAB IN ACCORDANCE WITH 502.03 PART I PARAGRAPH 3d.
26. SLAB ERECTION ASSUMED TO OCCUR 60-90 DAYS AFTER SLAB FABRICATION.

STRAND AND REINFORCEMENT

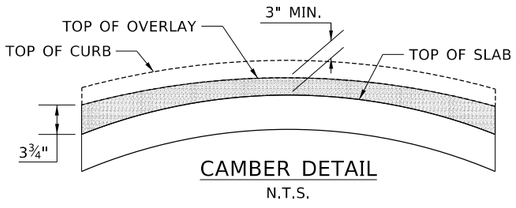
27. DESIGN BASED UPON 0.6" DIAMETER AASHTO M203 LOW RELAXATION STRAND.

GIRDER SHIPPING

28. 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

29. PRESTRESSING CONCRETE MEMBERS IS INCIDENTAL TO PRECAST AND PRESTRESSED MEMBERS SPECIFIED IN 502.



CAMBER DETAIL
N.T.S.

REVISIONS

NO.	DATE	BY	DESCRIPTION
1			
2			
3			
4			
5			

DESIGNED T. JOHNSON
DESIGN CHECKED A. BOWEN
DETAILED T. NORRIS
DWG. CHECKED T. JOHNSON
CORRECTIONS

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
CADD FILE NAME \xxxxxx-xxx\PLAN_SHEETS\BRIDGE\37905_h_GIRD_03.DGN
DRAWING DATE: JUNE 2025

BONNER COUNTY
KELLER ASSOCIATES

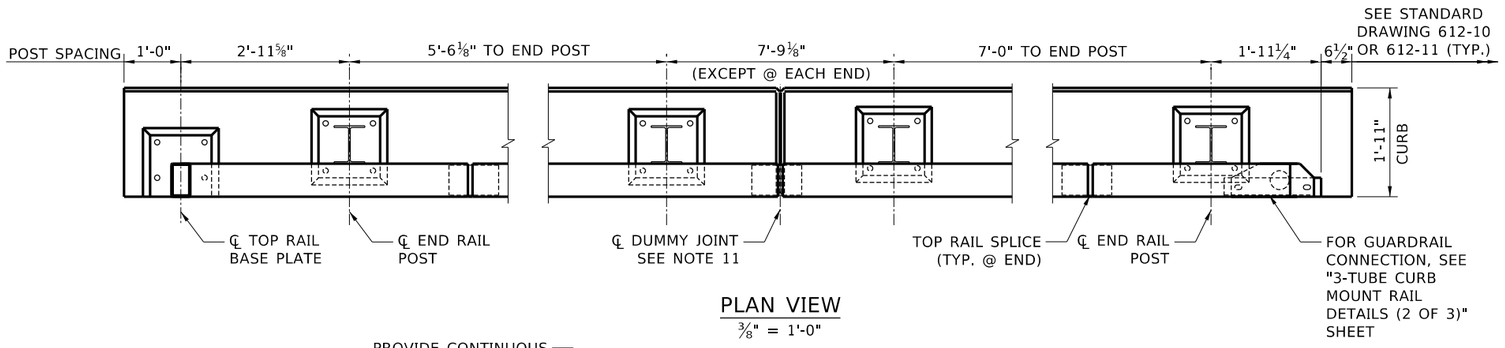
ENGLISH
PROJECT NO. N/A

VOIDED SLAB DETAILS (3 OF 3)
50'-0" PRESTRESSED VOIDED SLAB BRIDGE
COCOLALLA LOOP RD. OVER COCOLALLA CREEK
STA. 50+00.00

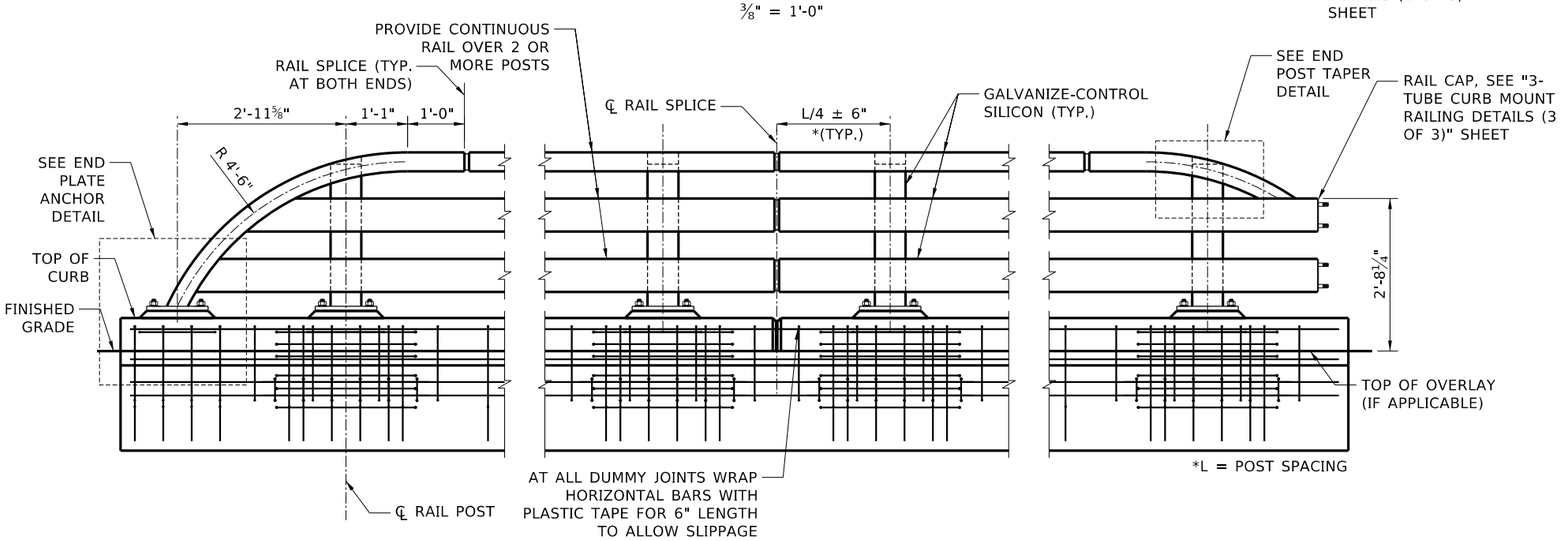
BRIDGE PLANS
BRIDGE KEY NO. 37905
COUNTY BONNER | KEY NO. N/A
BRIDGE DWG. NO. 18614 | SHEET 15 OF 20

PROFESSIONAL ENGINEER REGISTERED 19248 9/30/2026 STATE OF IDAHO TIMOTHY P. JOHNSON
DocuSigned by: Timothy P. Johnson DB7A91BC436E444...

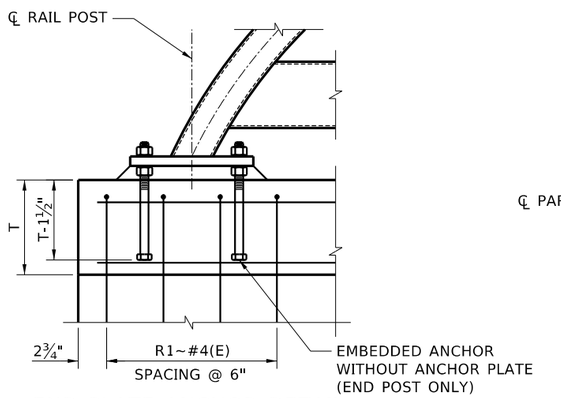
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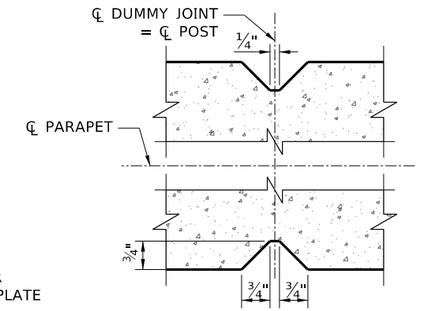
PLAN VIEW
⅜" = 1'-0"



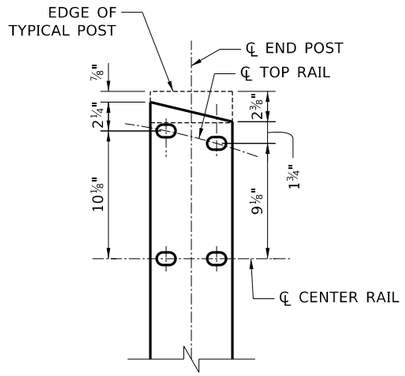
ELEVATION VIEW
⅜" = 1'-0"



END PLATE ANCHOR DETAIL
¾" = 1'-0"
T = CURB HEIGHT



DUMMY JOINT
N.T.S.



END POST TAPER DETAIL
¾" = 1'-0"
IDENTICAL TO TYPICAL POST EXCEPT AS SHOWN

NOTES:

MATERIALS

1. PROVIDE STRUCTURAL STEEL TUBING THAT CONFORMS WITH ASTM A500 GRADE B, ASTM A618, OR ASTM A501 STEEL.
2. PROVIDE STRUCTURAL STEEL POSTS, PLATES, ANGLES, AND SLEEVES THAT CONFORM WITH ASTM A709 GRADE 50.
3. PROVIDE ANCHOR BOLTS, NUTS, AND WASHERS THAT CONFORM WITH ASTM F1154 GRADE 105. PROVIDE H.S. BOLTS THAT CONFORM WITH ASTM F3125 GRADE A325.
4. PROVIDE CONCRETE CLASS 40AF.
5. PROVIDE EPOXY COATED GRADE 60 TYPE S REINFORCEMENT IN ACCORDANCE WITH 708.02.
6. PROVIDE TYPE B CLASS 1 GROUT IN ACCORDANCE WITH 705.02.

GALVANIZING

7. GALVANIZE STRUCTURAL STEEL PARTS, RAILING, AND SLEEVES AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 AND ASTM A153. THOROUGHLY CLEAN WELDED AREAS PRIOR TO GALVANIZING TO REMOVE SLAG OR OTHER MATERIAL THAT WOULD INTERFERE WITH THE ADHERENCE OF THE ZINC. PROVIDE GALVANIZED SURFACES THAT ARE 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 REQUIRES THE CONTENT OF THE BASE METAL WILL 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

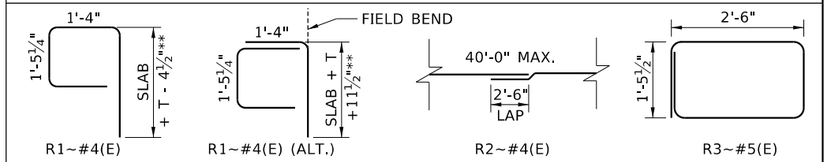
9. FABRICATE AND ERECT THE RAILING IN ACCORDANCE WITH THE CURRENT EDITION OF AASHTO SPECIFICATIONS FOR HIGHWAY BRIDGES AND ITD STANDARD SPECIFICATIONS.
10. CONSTRUCT RAILING WITH TOP OF POST 3'-6" ABOVE FINISHED GRADE. ADJUST HEIGHT OF CURB TO COMPENSATE FOR THE CAMBER AND LOAD DEFLECTION OF THE SUPERSTRUCTURE. THE AMOUNT OF ADJUSTMENT WILL BE DETERMINED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.
11. SPACE CURB DUMMY JOINTS AT ALL RAIL SPLICE LOCATIONS AND AT THE END OF THE BRIDGE. SPACE INTERMEDIATE CURB DUMMY JOINTS UNIFORMLY THE LENGTH OF THE BRIDGE WITH SPACING NOT LESS THAN 6' NOR GREATER THAN 12'.
12. SUBMIT SHOP DRAWINGS IN ACCORDANCE WITH 504.01F AND 105.02.
13. CONSTRUCT RAILING CONFORMING TO THE HORIZONTAL AND VERTICAL ALIGNMENT OF THE STRUCTURE, INSTALL POSTS NORMAL TO GRADE IN LONGITUINAL DIRECTION AND VERTICAL IN TRANSVERSE DIRECTION.
14. 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.
15. 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.
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. PAYMENT FOR "3-TUBE CURB MOUNT RAIL" IS PER PAY ITEM 504-050A. THE COSTS OF CONCRETE AND EPOXY-COATED REINFORCEMENT ARE INCIDENTAL TO THIS PAY ITEM.

** ADJUST CONCRETE AND REINFORCEMENT QUANTITIES IF A WEARING SURFACE IS APPLIED DURING INITIAL BRIDGE CONSTRUCTION. INCREASE HEIGHT OF CURB TO MATCH OVERLAY THICKNESS AT INITIAL CONSTRUCTION.

EPOXY REINFORCEMENT



** APPROXIMATE QUANTITIES (10' POST SPACING)	
CONCRETE	0.90 CF/LF
STRUCTURAL STEEL	50 LB/LF
EPOXY REINFORCMENT	10 LB/LF

PROFESSIONAL ENGINEER REGISTERED — DocuSigned by: Timothy P. Johnson — DB7A91BC436E444... — 19248 — 9/30/2026 — STATE OF IDAHO — TIMOTHY P. JOHNSON

REVISIONS			
NO.	DATE	BY	DESCRIPTION
1	____	__	_____
2	____	__	_____
3	____	__	_____
4	____	__	_____
5	____	__	_____

DESIGNED T. JOHNSON
DESIGN CHECKED A. BOWEN
DETAILED T. NORRIS
DWG. CHECKED T. JOHNSON
CORRECTIONS

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
CADD FILE NAME \xxxxxx-xxx\PLAN_SHEETS\BRIDGE\37905_I_RAIL_01.DGN
DRAWING DATE: JUNE 2025

BONNER COUNTY
KELLER ASSOCIATES

ENGLISH
PROJECT NO. N/A

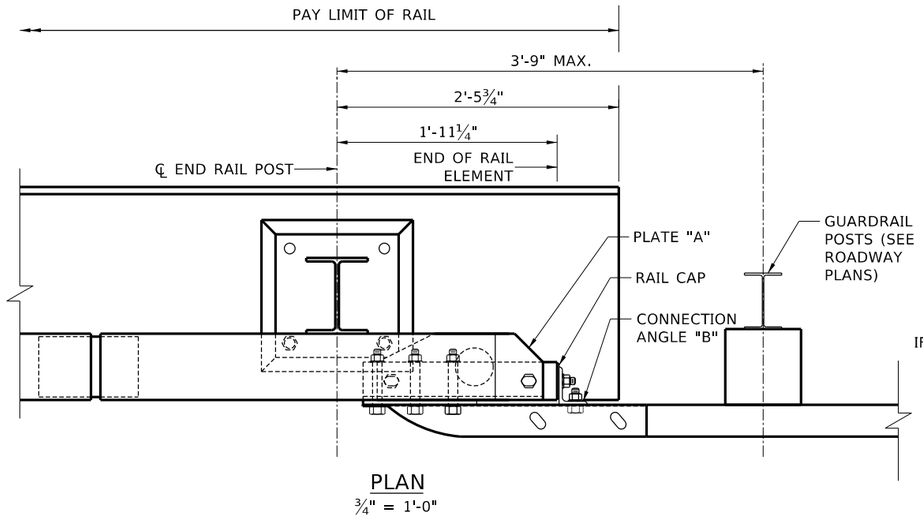
3-TUBE CURB MOUNT RAIL DETAILS (1 OF 3)

50'-0" PRESTRESSED VOIDED SLAB BRIDGE
COCOLALLA LOOP RD. OVER COCOLALLA CREEK
STA. 50+00.00

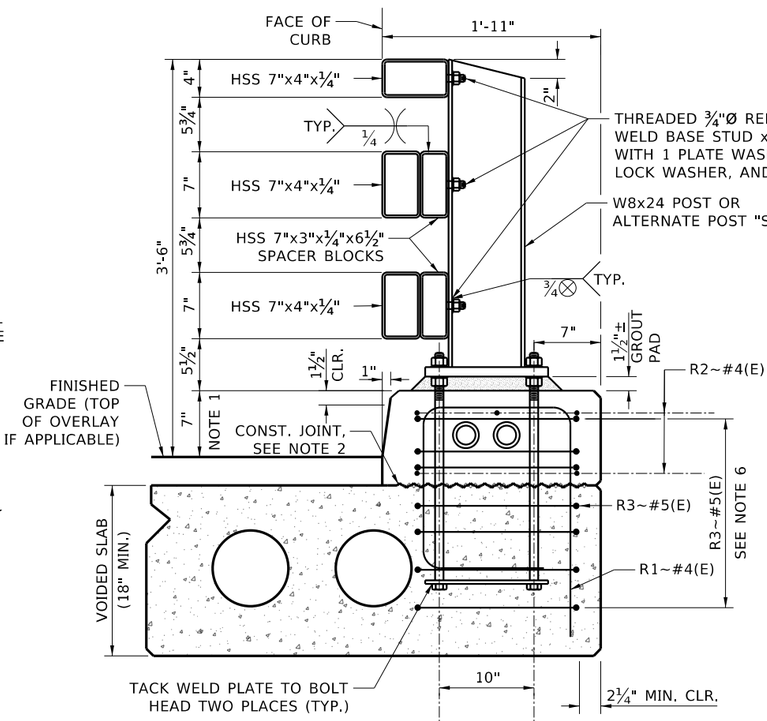
BRIDGE PLANS

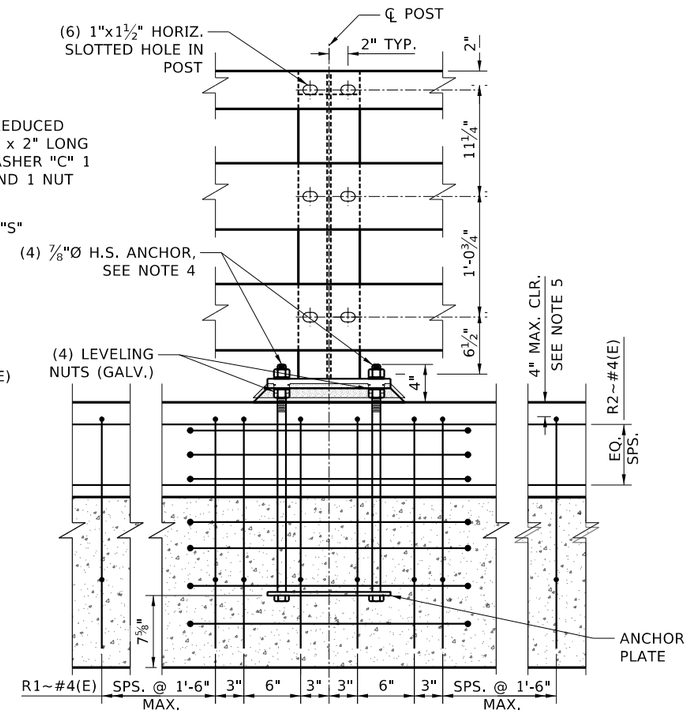
BRIDGE KEY NO.	
37905	
COUNTY	KEY NO.
BONNER	N/A
BRIDGE DWG. NO.	SHEET
18614	16 OF 20

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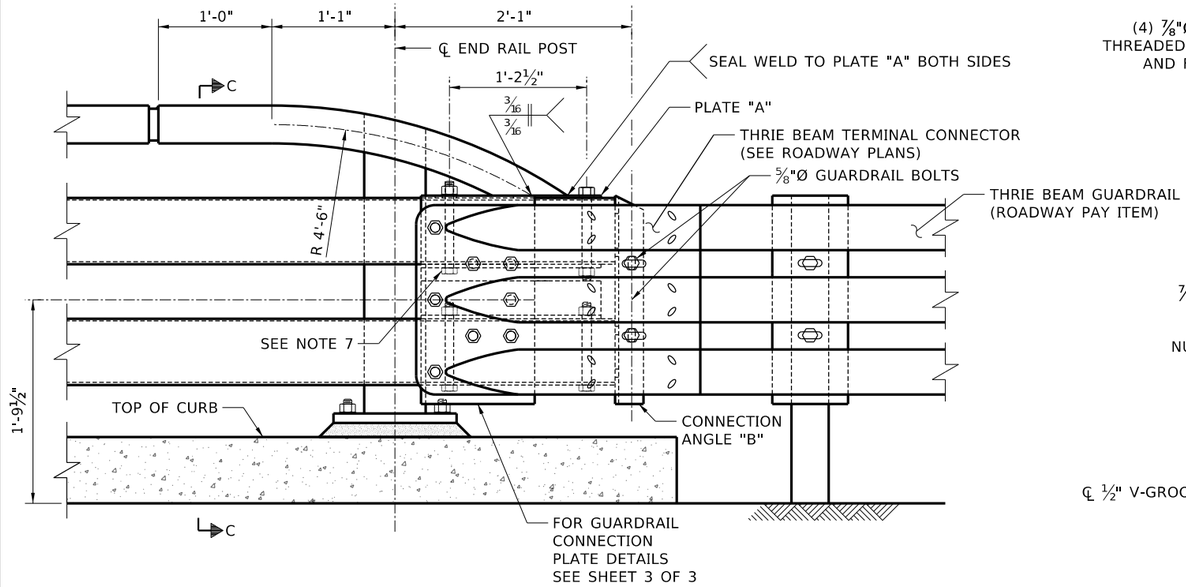


PLAN
¾" = 1'-0"

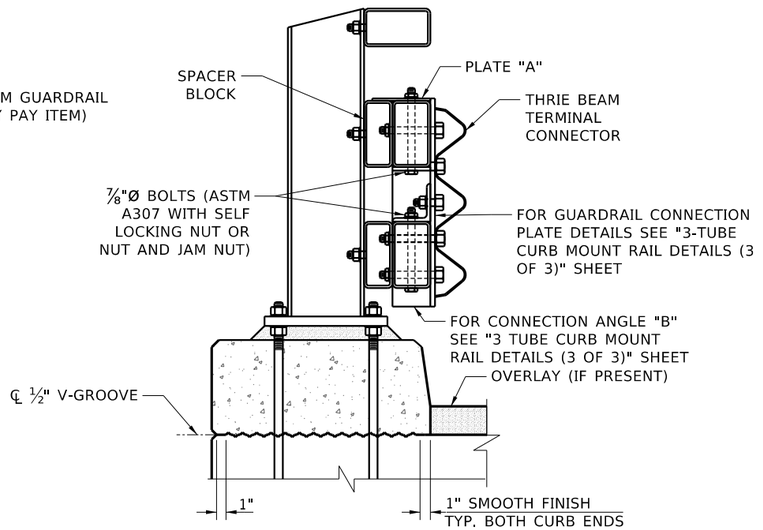




POST DETAILS
¾" = 1'-0"



ELEVATION
¾" = 1'-0"



SECTION C-C
¾" = 1'-0"

NOTES:

1. ADJUST CONCRETE AND REINFORCEMENT QUANTITIES IF A WEARING SURFACE IS APPLIED DURING INITIAL BRIDGE CONSTRUCTION. INCREASE HEIGHT OF CURB AND LENGTH OF REINFORCEMENT TO ACCOUNT FOR INITIAL OVERLAY THICKNESS AT TIME OF CONSTRUCTION.
2. PROVIDE 1'-8" WIDE, ¼" AMPLITUDE ROUGHENED SURFACE BETWEEN CURB AND VOIDED SLAB WITH 1" SMOOTH STRIPS AT THE EDGES OF THE CURB. EXTERIOR FACE OF THE JOINT SHALL HAVE A ½" V-GROOVE BETWEEN THE CURB AND TOP OF VOIDED SLAB.
3. WHERE SPECIFIED, PROVIDE MAXIMUM OF 2-2" ASTM A500 SCH. 40 CONDUITS IN CURB LOCATED AS SHOWN. ADJUST R3 BAR DOWNWARD AS NEEDED TO FIT CONDUITS. MAINTAIN 1" MIN. CLEAR TO POST ANCHOR BOLTS AND BETWEEN CONDUITS TO ENSURE ADEQUATE CONCRETE FLOW.
4. PROVIDE ADDITIONAL HEIGHT ON HIGH STRENGTH RODS TO ACCOUNT FOR ESTIMATED CAMBERS AND DEFLECTIONS. CUT TO LENGTH AS REQUIRED.
5. WHERE CURB HEIGHT VIOLATES 4" MAXIMUM CLEAR ON R1 BARS, ALTERNATE SHAPE R1 BARS MAY BE PROVIDED AND FIELD BENT TO MEET REQUIRED CLEAR.
6. SPACE R3 BARS WITHIN CURB AS SHOWN TO ALLOW PLACEMENT OF 2" DIAMETER CONDUITS. FOR R3 BARS WITHIN VOIDED SLAB, PLACE ONE BAR ABOVE G1 STIRRUPS AND OTHERS SPACED WITH G4. SEE "VOIDED SLAB DETAILS" SHEETS FOR G1 AND G4 BAR PLACEMENT.
7. TO AVOID CONFLICT WITH ANGLED TUBE SECTION, INSTALL BOLT FROM BELOW THROUGH SLOTTED HOLE IN PLATE AND BOTTOM FACE OF RAILING TUBE. SEE "3-TUBE CURB MOUNT RAIL DETAILS (3 OF 3)" SHEET FOR SLOT SIZE.

REVISIONS			
NO.	DATE	BY	DESCRIPTION
1	____	__	_____
2	____	__	_____
3	____	__	_____
4	____	__	_____
5	____	__	_____

DESIGNED: T. JOHNSON
DESIGN CHECKED: A. BOWEN
DETAILED: T. NORRIS
DWG. CHECKED: T. JOHNSON
CORRECTIONS:

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
CADD FILE NAME: \xxxxxx-xxx\PLAN_SHEETS\BRIDGE\37905_I_RAIL_02.DGN
DRAWING DATE: JUNE 2025

BONNER COUNTY
KELLER ASSOCIATES

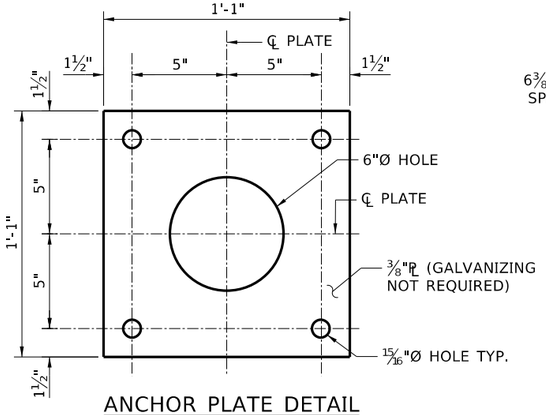
ENGLISH
PROJECT NO.
N/A

3-TUBE CURB MOUNT RAIL DETAILS (2 OF 3)
50'-0" PRESTRESSED VOIDED SLAB BRIDGE
COCOLALLA LOOP RD. OVER COCOLALLA CREEK
STA. 50+00.00

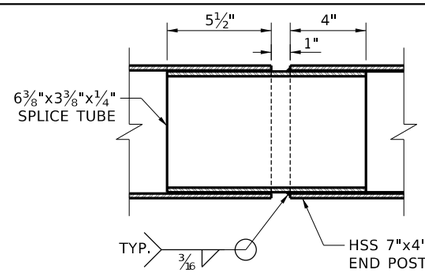
BRIDGE PLANS
BRIDGE KEY NO. 37905
COUNTY: BONNER
KEY NO.: N/A
BRIDGE DWG. NO.: 18614
SHEET: 17 OF 20

PROFESSIONAL ENGINEER REGISTERED
DocuSigned by: Timothy P. Johnson
DB7A91BC436E444...
19248
9/30/2026
STATE OF IDAHO
TIMOTHY P. JOHNSON

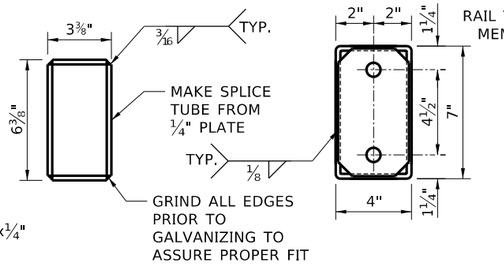
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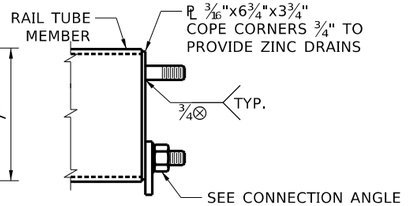


ANCHOR PLATE DETAIL
1½" = 1'-0"



RAIL SPLICE DETAILS
1½" = 1'-0"





RAIL CAP DETAILS
1½" = 1'-0"

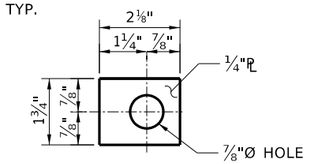


PLATE WASHER "C"
3" = 1'-0"

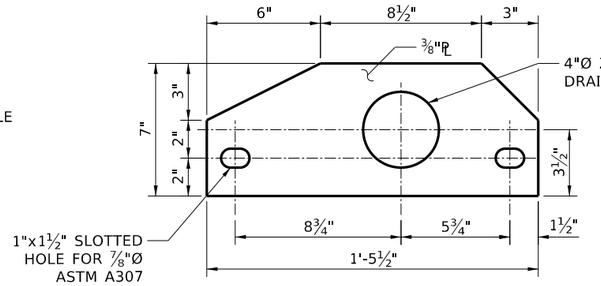
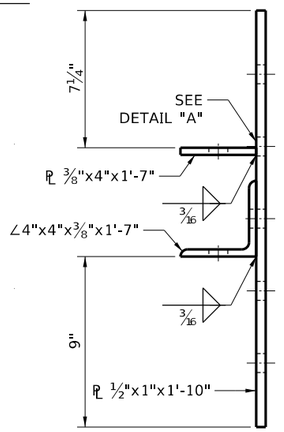
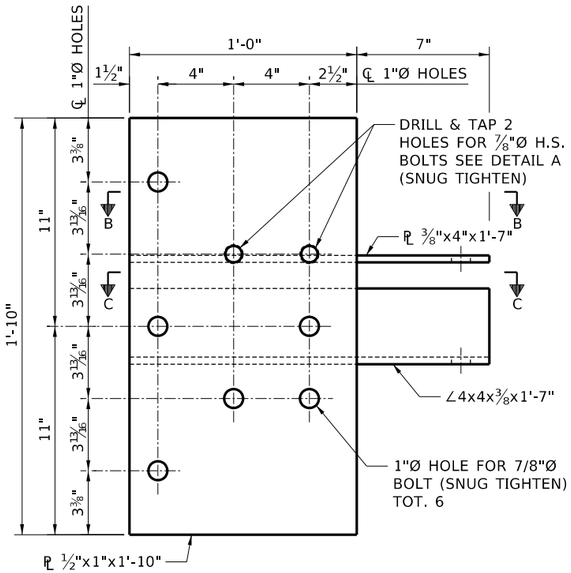
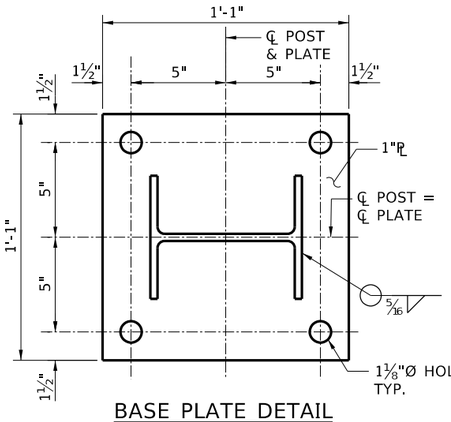


PLATE "A"
1½" = 1'-0"

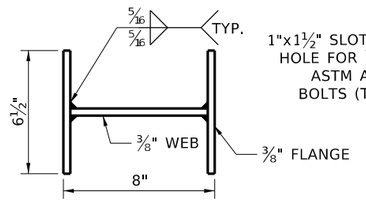




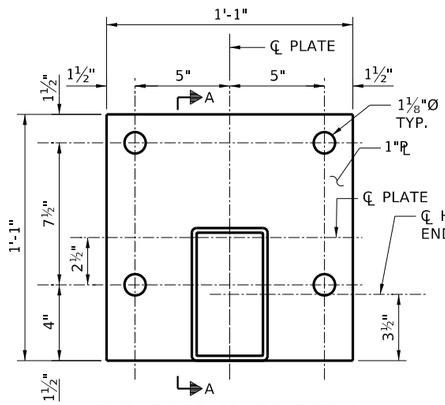
GUARDRAIL CONNECTION PLATE
1½" = 1'-0"



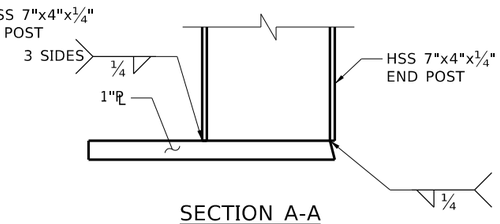
BASE PLATE DETAIL
1½" = 1'-0"



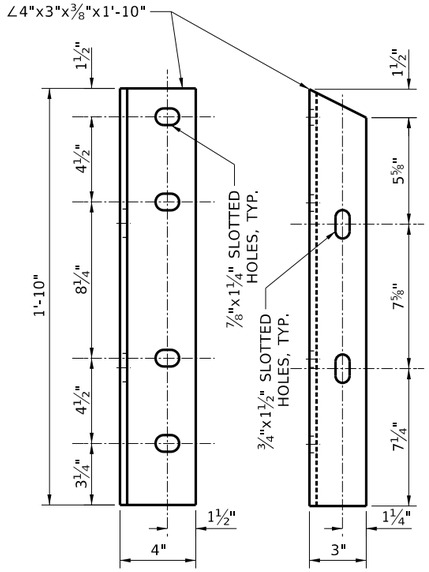
ALTERNATE POST "S"
1½" = 1'-0"



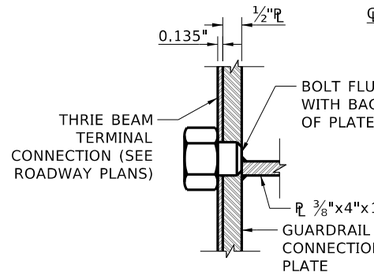
END POST PLATE DETAIL
1½" = 1'-0"



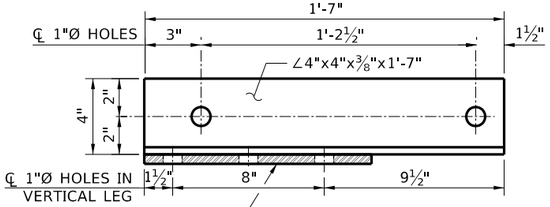
SECTION A-A
1½" = 1'-0"



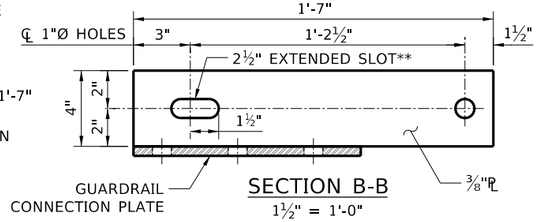
CONNECTION ANGLE "B"
1½" = 1'-0"



DETAIL A
3" = 1'-0"



GUARDRAIL CONNECTION PLATE
SECTION C-C
1½" = 1'-0"



SECTION B-B
1½" = 1'-0"

**PROVIDE SLOTTED HOLE OF EQUAL SIZE ON BOTTOM OF TUBE RAIL TO ALLOW FOR BOLT INSTALLATION

REVISIONS			
NO.	DATE	BY	DESCRIPTION
1			
2			
3			
4			
5			

DESIGNED: T. JOHNSON
DESIGN CHECKED: A. BOWEN
DETAILED: T. NORRIS
DWG. CHECKED: T. JOHNSON
CORRECTIONS:

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
CADD FILE NAME: \xxxxxx-xxx\PLAN_SHEETS\BRIDGE\37905_LRAIL_03.DGN
DRAWING DATE: JUNE 2025

BONNER COUNTY
KELLER ASSOCIATES

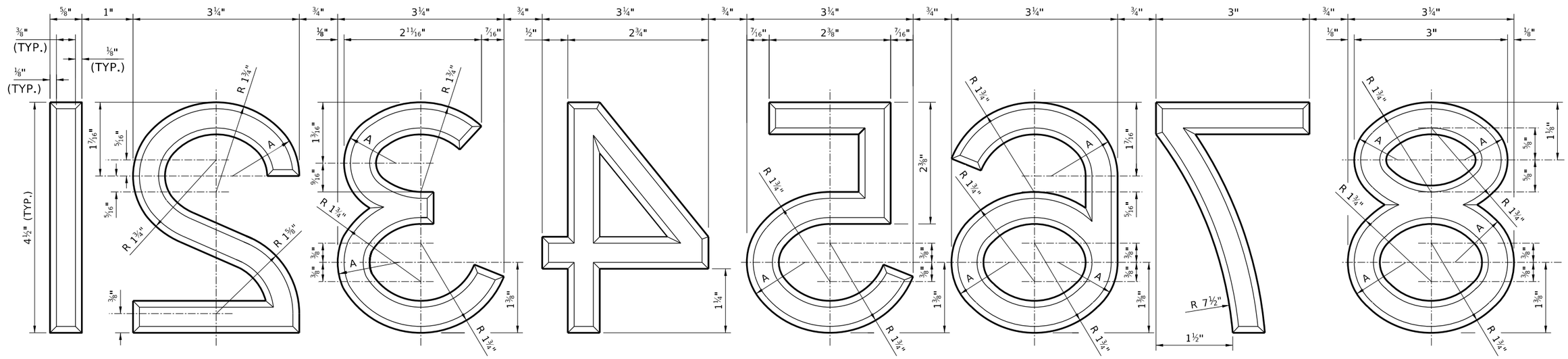
ENGLISH
PROJECT NO.
N/A

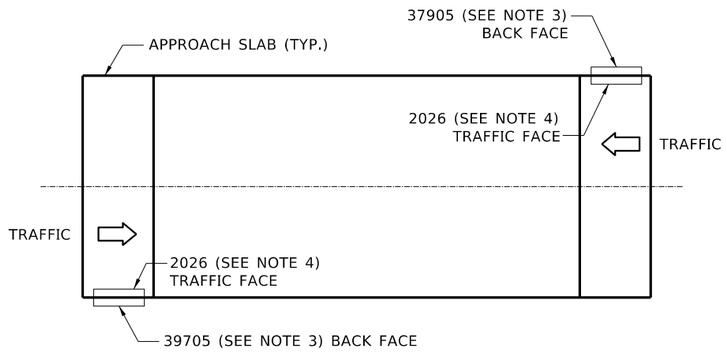
3-TUBE CURB MOUNT RAIL DETAILS (3 OF 3)
50'-0" PRESTRESSED VOIDED SLAB BRIDGE
COCOLALLA LOOP RD. OVER COCOLALLA CREEK
STA. 50+00.00

BRIDGE PLANS
BRIDGE KEY NO. 37905
COUNTY: BONNER
KEY NO.: N/A
BRIDGE DWG. NO.: 18614
SHEET: 18 OF 20

PROFESSIONAL ENGINEER REGISTERED
DocuSigned by: Timothy P. Johnson
DB7A91BC436E444...
19248
9/30/2026
STATE OF IDAHO
TIMOTHY P. JOHNSON

Docusign Envelope ID: 5D1BB99F-F1C5-8A82-81A0-BC64E6B255BD



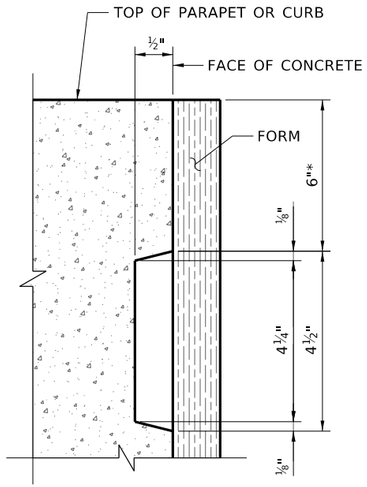


DATE PANEL LOCATION (BRIDGE)

N.T.S.
(SEE RAILING OR PARAPET SHEETS FOR DETAILS)

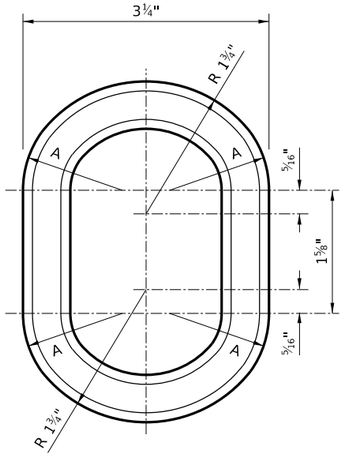
GENERAL NOTES (BRIDGE):

1. RECESS NUMBERS INTO THE DATE PANEL.
2. DATE PANEL IS INCIDENTAL TO BRIDGE RAILING OR PARAPET PAY ITEM.
3. INSET THE 5 DIGIT BRIDGE KEY NUMBER ON BACK FACE OF CONCRETE PARAPET OR CURB.
4. INSET THE 4 DIGIT DATE PANEL INDICATING YEAR OF COMPLETION ON TRAFFIC FACE OF CONCRETE PARAPET OR CURB.
5. FIELD ADJUST LOCATION OF DATE PANEL ON BACK OF PARAPETS OR CURBS WITH PROTECTIVE FENCING.



END VIEW OF NUMERALS SHOWING ATTACHMENT TO FORMS

N.T.S.
*FOR CURBS, ADJUST DIMENSION TO CENTER DATE PANEL ON CURB FACE



FABRICATION NOTES:

1. THE NUMBER "9" IS NOT SHOWN BUT IS SIMILAR TO THE NUMBER "6".
2. THE "A" DIMENSION IS A FABRICATION RADIUS TO CREATE THE ELLIPTICAL SHAPES SHOWN.

REVISIONS			
NO.	DATE	BY	DESCRIPTION
1			
2			
3			
4			
5			

DESIGNED: T. JOHNSON
DESIGN CHECKED: A. BOWEN
DETAILED: T. NORRIS
DWG. CHECKED: T. JOHNSON
CORRECTIONS:

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
CADD FILE NAME: \xxxxxx-xxx\PLAN_SHEETS\BRIDGE\37905_I_RAIL_04.DGN
DRAWING DATE: JUNE 2025

BONNER COUNTY
KELLER ASSOCIATES

ENGLISH

PROJECT NO.
N/A

DATE PANEL

50'-0" PRESTRESSED VOIDED SLAB BRIDGE
COCOLALLA LOOP RD. OVER COCOLALLA CREEK
STA. 50+00.00

BRIDGE PLANS

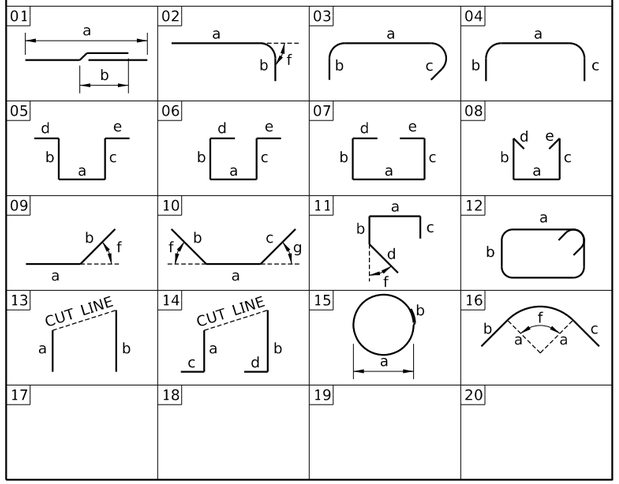
BRIDGE KEY NO.: 37905
COUNTY: BONNER
KEY NO.: N/A
BRIDGE DWG. NO.: 18614
SHEET: 19 OF 20

PROFESSIONAL ENGINEER
REGISTERED
DocuSigned by:
Timothy P. Johnson
DB7A91BC436E444...
19248
9/30/2026
STATE OF IDAHO
TIMOTHY P. JOHNSON

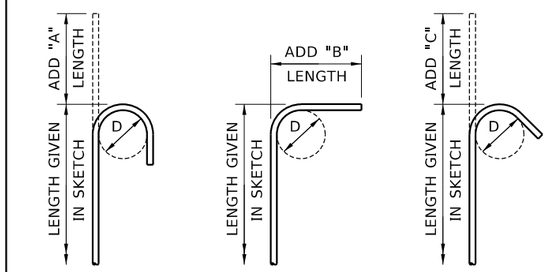
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MARK	LOCATION	BAR SIZE	COAT	NO. OF BARS	BAR TYPE	BARS/ SET	LENGTH "a"	LENGTH "b"	LENGTH "c"	LENGTH "d"	LENGTH "e"	ANGLE "f"	ANGLE "g"	TOTAL LENGTH
A1	Abutment 1	7		6	1		31'-9''	0'-0''						190'-6''
A2	Abutment 1	7		6	1		31'-9''	0'-0''						190'-6''
A3	Abutment 1	6		8	1		31'-9''	0'-0''						254'-0''
A4	Abutment 1	4		32	8		3'-2''	3'-8''	3'-8''	0'-8''	0'-8''			378'-8''
A5	Abutment 1	4		36	4		3'-2''	4'-0''	4'-0''					402'-0''
A6	Abutment 1	4		8	4		4'-0''	2'-0''	2'-0''					64'-0''
A1	Abutment 2	7		6	1		31'-9''	0'-0''						190'-6''
A2	Abutment 2	7		6	1		31'-9''	0'-0''						190'-6''
A3	Abutment 2	6		8	1		31'-9''	0'-0''						254'-0''
A4	Abutment 2	4		32	8		3'-2''	3'-8''	3'-8''	0'-8''	0'-8''			378'-8''
A5	Abutment 2	4		36	4		3'-2''	4'-0''	4'-0''					402'-0''
A6	Abutment 2	4		8	4		4'-0''	2'-0''	2'-0''					64'-0''
W1	Wingwall 1	4		14	1		6'-1''	0'-0''						85'-2''
W2	Wingwall 1	6		9	2		9'-0''	1'-0''						90'-0''
W3	Wingwall 1	4		5	2		9'-0''	0'-8''						48'-4''
W4	Wingwall 1	4		6	1		5'-11''	0'-0''						35'-6''
W5	Wingwall 1	4		11	4		0'-8''	0'-8''	0'-8''					22'-0''
W1	Wingwall 2	4		14	1		6'-1''	0'-0''						85'-2''
W2	Wingwall 2	6		9	2		9'-0''	1'-0''						90'-0''
W3	Wingwall 2	4		5	2		9'-0''	0'-8''						48'-4''
W4	Wingwall 2	4		6	1		5'-11''	0'-0''						35'-6''
W5	Wingwall 2	4		11	4		0'-8''	0'-8''	0'-8''					22'-0''
W1	Wingwall 3	4		14	1		6'-1''	0'-0''						85'-2''
W2	Wingwall 3	6		9	2		9'-0''	1'-0''						90'-0''
W3	Wingwall 3	4		5	2		9'-0''	0'-8''						48'-4''
W4	Wingwall 3	4		6	1		5'-11''	0'-0''						35'-6''
W5	Wingwall 3	4		11	4		0'-8''	0'-8''	0'-8''					22'-0''
W1	Wingwall 4	4		14	1		6'-1''	0'-0''						85'-2''
W2	Wingwall 4	6		9	2		9'-0''	1'-0''						90'-0''
W3	Wingwall 4	4		5	2		9'-0''	0'-8''						48'-4''
W4	Wingwall 4	4		6	1		5'-11''	0'-0''						35'-6''
W5	Wingwall 4	4		11	4		0'-8''	0'-8''	0'-8''					22'-0''

BAR BEND DIAGRAMS



BEND DETAILS AND STANDARD DIMENSIONS



180° BEND 90° BEND 135° BEND

"L" = LENGTH GIVEN IN SKETCH

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.

SUBSTRUCTURE BARS (503-010A)

BAR SIZE	TOT. LENGTH (LINEAR FT.)	UNIT WT. (LB/FT.)	TOT. WEIGHT (LB)
#3	0'-0''	0.376	0
#4	2453'-5''	0.668	1640
#5	0'-0''	1.044	0
#6	868'-0''	1.503	1305
#7	762'-0''	2.046	1560
#8	0'-0''	2.673	0
#9	0'-0''	3.400	0
#10	0'-0''	4.311	0
#11	0'-0''	5.313	0
#14	0'-0''	7.660	0
#18	0'-0''	13.614	0
TOTAL WEIGHT (ALL BARS, LB):			4505

SUPERSTRUCTURE BARS (503-015A)

BAR SIZE	TOT. LENGTH (LINEAR FT.)	UNIT WT. (LB/FT.)	TOT. WEIGHT (LB)
#4		0.668	
#5		1.044	
#6		1.503	
#7		2.046	
TOTAL WEIGHT (ALL BARS, LB):			

EPOXY-COATED BARS (503-020A)

BAR SIZE	TOT. LENGTH (LINEAR FT.)	UNIT WT. (LB/FT.)	TOT. WEIGHT (LB)
#4		0.668	
#5		1.044	
#6		1.503	
#7		2.046	
TOTAL WEIGHT (ALL BARS, LB):			

STD. END HOOK DIMENSIONS

BAR SIZE	ALL GRADES		
	"D" DIM.	"A" DIM.	"B" DIM.
#3	2¼"	5"	6"
#4	3"	6"	8"
#5	3¾"	7"	10"
#6	4½"	8"	12"
#7	5¼"	10"	14"
#8	6"	11"	16"
#9	9½"	15"	19"
#10	10¾"	17"	22"
#11	12"	19"	24"
#14	18¼"	27"	31"
#18	24"	36"	41"

STIRRUP/TIE HOOK DIMENSIONS

BAR SIZE	ALL GRADES		
	"D" DIM.	"B" DIM.	"C" DIM.
#3	1½"	4"	4"
#4	2"	4½"	4½"
#5	2½"	6"	5½"
#6	4½"	12"	8"
#7	5¼"	14"	9"
#8	6"	16"	10½"
BAR LIST DENOTES STIRRUP/TIE BARS BY "*"			

NOTES:

1. ALL BEND DETAILS TO BE IN ACCORDANCE WITH THE LATEST ACI STANDARD PRACTICE AND AASHTO SPECIFICATIONS.
2. NO DEDUCTIONS FOR CURVATURE AT BENDS ARE MADE EXCEPT FOR THE ADJUSTMENTS INCLUDED IN THE ABOVE "ADD LENGTH" DIMENSIONS.
3. PROVIDE REINFORCING BARS THAT CONFORM TO AASHTO M31 (GRADE 60, TYPE S).
4. PROVIDE EPOXY-COATED REINFORCING BARS FOR ALL BARS DESIGNATED "E" UNDER THE "COAT" COLUMN.
5. ONLY REINFORCING STEEL WEIGHTS TO BE PAID UNDER BID ITEMS 503-005A, 503-010A, 503-015A, AND 503-020A ARE SHOWN ON THIS SHEET. SEE OTHER SHEETS FOR REINFORCING STEEL INCIDENTAL WITHIN OTHER PAY ITEMS.

REVISIONS			
NO.	DATE	BY	DESCRIPTION
1			
2			
3			
4			
5			

DESIGNED T. JOHNSON
DESIGN CHECKED A. BOWEN
DETAILED T. NORRIS
DWG. CHECKED T. JOHNSON
CORRECTIONS

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
CADD FILE NAME \xxxxxx-xxx\PLAN_SHEETS\BRIDGE\37905_n_RSCH_01.DGN
DRAWING DATE: JUNE 2025

BONNER COUNTY
KELLER ASSOCIATES

ENGLISH
PROJECT NO. N/A

METAL REINFORCEMENT (1 OF 1)
50'-0" PRESTRESSED VOIDED SLAB BRIDGE
COCOLALLA LOOP RD. OVER COCOLALLA CREEK
STA. 50+00.00

BRIDGE PLANS
BRIDGE KEY NO. 37905
COUNTY BONNER
KEY NO. N/A
BRIDGE DWG. NO. 18614
SHEET 20 OF 20

PROFESSIONAL ENGINEER
REGISTERED
DocuSigned by: Timothy P. Johnson
DB7A91BC436E444...
19248
9/30/2026
STATE OF IDAHO
TIMOTHY P. JOHNSON