

PoDI / NHS	
FHWA PROJECT OF DIVISION INTEREST (PoDI)?	<input type="checkbox"/> NO <input type="checkbox"/> YES
NATIONAL HIGHWAY SYSTEM?	<input type="checkbox"/> NO <input type="checkbox"/> YES

<b>Related Projects:</b>
P. E. UNDER PROJECT: Project Number Project Code:
<b>R.O.W. Projects:</b>
R.O.W. Project Description N/A

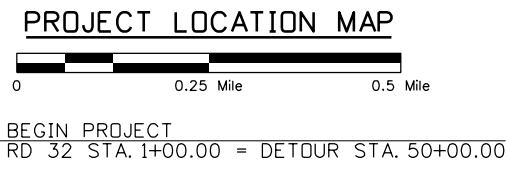
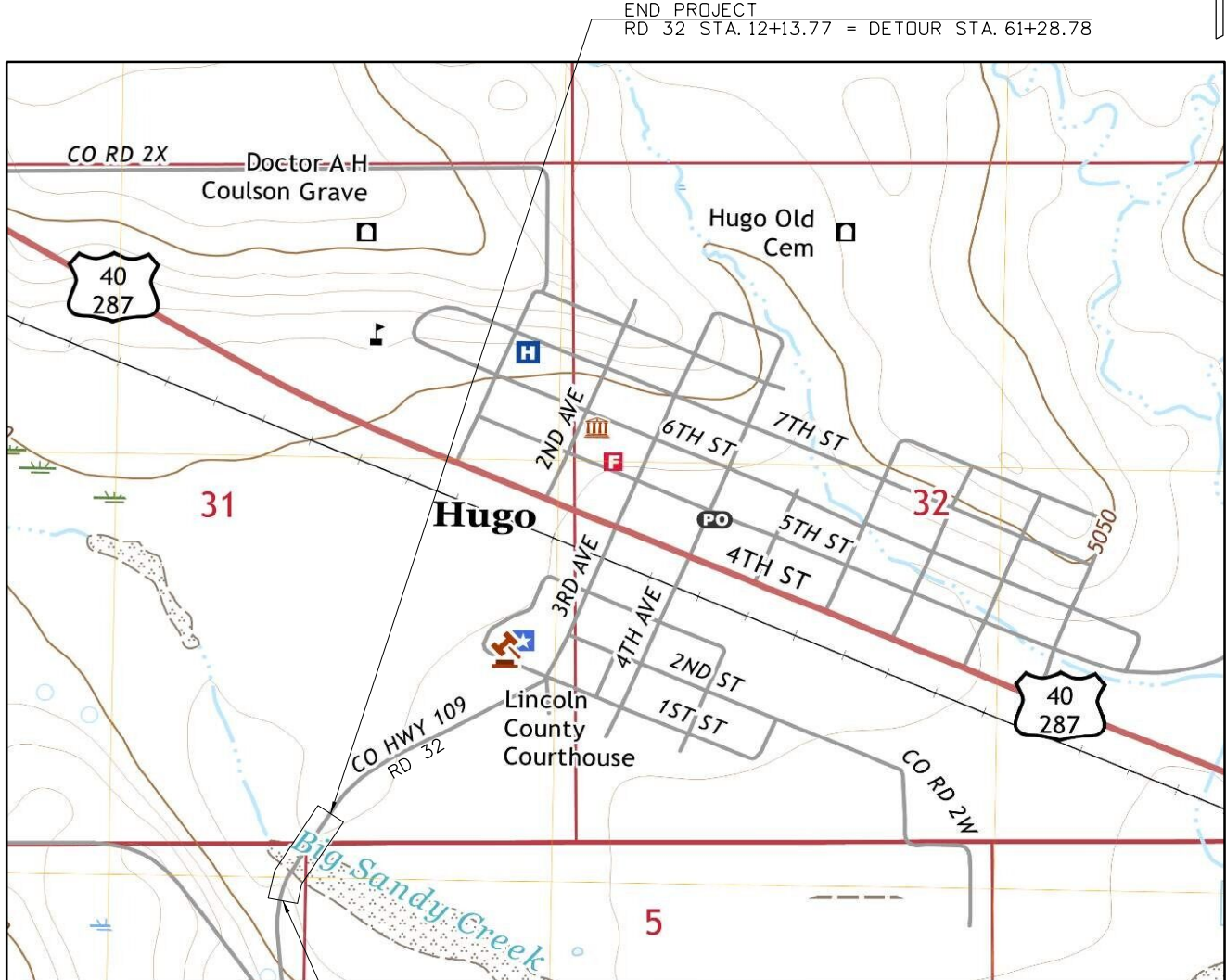
CONSTRUCTION BID PLANS OF PROPOSED  
**LINCOLN COUNTY ROAD 32**  
**BIG SANDY CREEK BRIDGE REHAB**  
**LINCOLN COUNTY, COLORADO**  
 FEDERAL PROJECT NO. BRO C330-013  
 PROJECT CODE NO. 26222

TABULATION OF LENGTH & DESIGN DATA		
STATION	LINEAR FEET	
	ROADWAY	MAJOR STR.
<b>LINCOLN COUNTY RD 32</b>		
<b>BEGIN RD 32</b>		
<b>STA. 2+81.00</b>		
	159.83	
<b>BEGIN RD 32 OVER BIG SANDY CREEK</b>		
<b>STA. 4+19.24</b>		
		417.17
<b>END RD 32 OVER BIG SANDY CREEK</b>		
<b>STA. 8+36.41</b>		
	165.09	
<b>END RD 32</b>		
<b>STA. 9+80.00</b>		
<b>DETOUR</b>		
<b>BEGIN DETOUR =</b>		
<b>STA. 50+00.00 = Rd 32 1+00.00</b>		
		1128.78
<b>END DETOUR =</b>		
<b>STA. 61+28.78 = Rd 32 12+13.77</b>		
<b>TOTAL</b>	<b>1,453.70</b>	<b>417.17</b>

SUMMARY OF PROJECT LENGTH	FEET	MILES
<b>ROADWAY (NET LENGTH)</b>	1,453.70	0.275
<b>MAJOR STRUCTURE</b>	417.17	0.079
<b>PROJECT GROSS LENGTH</b>	1,870.87	0.354

DESIGN DATA	DETOUR
<b>MINIMUM RADIUS OF CURVE</b>	105 FT1
<b>MAXIMUM GRADE</b>	7.00%
<b>DESIGN SPEED</b>	10 MPH
DESIGN DATA	RD 32
<b>MINIMUM RADIUS OF CURVE</b>	510
<b>MAXIMUM GRADE</b>	5.00%
<b>DESIGN SPEED</b>	35 MPH
<b>2040 ADT (LINCOLN COUNTY RD 32)</b>	1009

1. 105 FT radius based on Figure 6-14 of 2023 CDOT Roadway Design Guide for 2% superelevation on Detours at 20 MPH.



NO.	INDEX OF SHEETS
1	TITLE SHEET
2	STANDARD PLANS LIST
3	SURVEY TABULATION
4-7	SURVEY CONTROL DIAGRAM
8	OWNERSHIP MAP
9	DETOUR TYPICAL SECTIONS
10	RD 32 TYPICAL SECTIONS
11	GENERAL NOTES
12-13	GEOMETRIC PLANS
14-17	SUMMARY OF APPROXIMATE QUANTITIES
18-19	TABULATIONS
20-24	REMOVAL PLANS
25	DETOUR PLAN & PROFILE
26	RD 32 PLAN & PROFILE
27-50	STRUCTURE PLANS
51-56	STORMWATER MANAGEMENT NARRATIVE
57-62	STORMWATER MANAGEMENT PLAN
63	TRAFFIC CONTROL SHEET
64-77	DETOUR CROSS SECTIONS
78-85	RD 32 CROSS SECTIONS

PROJECT LIST OF CONTACTS		
JACOB PIPER	LINCOLN COUNTY	719-743-2810
GARY STIMSON	CDOT	970-502-1270

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All seals for this set of drawings are applied to the cover page(s)

Print Date: 6/13/2024
File Name: 78001_GN-001 Title Sheet.dgn
Horiz. Scale: As Noted Vert. Scale: N/A
RockSol Consulting Group, Inc. 12076 Grant Street, Thornton, CO 80241 Phone: (303) 962-9300 Web: www.RockSol.com

Sheet Revisions		
Date:	Comments	Init.



As Constructed
No Revisions:
Revised:
Void:

BIG SANDY CREEK BRIDGE REHAB TITLE SHEET			
Designer:	S. Scott	Structure Numbers	LIN 32-2W.0A
Detailer:	S. Scott	Sheet Subset:	General
Sheet Subset:	General	Subset Sheets:	1 of 2

Project No./Code	BRO C330-013
	26222
Sheet Number	1

8/15/2024

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PLAN NUMBER	M STANDARD TITLE	PAGE NUMBER
<input checked="" type="checkbox"/> M-100-1	STANDARD SYMBOLS (3 SHEETS).....	1-3
<input checked="" type="checkbox"/> M-100-2	ACRONYMS AND ABBREVIATIONS (4 SHEETS).....	4-7
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<input type="checkbox"/> M-203-2	DITCH TYPES.....	9
<input type="checkbox"/> M-203-11	SUPERELEVATION CROWNED AND DIVIDED HIGHWAYS (3 SHEETS)	10-12
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<input type="checkbox"/> M-206-2	EXCAVATION AND BACKFILL FOR BRIDGES (2 SHEETS)....	17-18
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<input type="checkbox"/> M-601-2	DOUBLE CONCRETE BOX CULVERT (CAST-IN-PLACE).....	43-44 (2 SHEETS)
<input type="checkbox"/> M-601-3	TRIPLE CONCRETE BOX CULVERT (CAST-IN-PLACE).....	45-46 (2 SHEETS)
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<input type="checkbox"/> M-603-1	METAL PIPE (4 SHEETS).....	52-55
<input checked="" type="checkbox"/> M-603-2	REINFORCED CONCRETE PIPE.....	56
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<input type="checkbox"/> M-606-14	PRECAST TYPE 7 CONCRETE BARRIER (4 SHEETS)..... <i>(REVISED ON FEBRUARY 9, 2023)</i>	<del>102-104</del>
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<input type="checkbox"/> M-607-3	BARRIER FENCE.....	122
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<input type="checkbox"/> M-611-2	DEER GUARD (2 SHEETS).....	154-155
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<input type="checkbox"/> M-615-2	EMBANKMENT PROTECTOR TYPE 5.....	162
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<input type="checkbox"/> S-613-1	ROADWAY LIGHTING (6 SHEETS)..... <i>(REVISED ON SEPTEMBER 30, 2020)</i>	<del>179-186</del>
<input type="checkbox"/> S-613-2	ALTERNATIVE ROADWAY LIGHTING (4 SHEETS) <i>(NEW, ISSUED ON SEPTEMBER 30, 2020)</i>	
<input type="checkbox"/> S-613-3	PULL BOX DETAIL (2 SHEETS) <i>(NEW, ISSUED ON APRIL 4, 2024)</i>	
<input type="checkbox"/> S-613-4	TRAFFIC SIGNAL ONE-LINE DIAGRAMS (6 SHEETS) <i>(NEW, ISSUED ON JUNE 15, 2023)</i>	
<input type="checkbox"/> S-614-1	GROUND SIGN PLACEMENT (2 SHEETS)..... <i>(REVISED ON MARCH 1, 2024)</i>	187-188
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<input type="checkbox"/> S-614-3	CLASS II SIGNS... <i>(REVISED ON MARCH 1, 2024)</i>	190
<input type="checkbox"/> S-614-4	CLASS III SIGNS (3 SHEETS)... <i>(REVISED ON MARCH 1, 2024)</i>	191-193
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**COLORADO**  
**DEPARTMENT OF TRANSPORTATION**  
**M&S STANDARDS PLANS LIST**  
 July 31, 2019  
**REVISED ON MAY 16, 2024**

ALL OF THE M&S STANDARD PLANS, AS SUPPLEMENTED AND REVISED, APPLY TO THIS PROJECT WHEN USED BY DESIGNATED PAY ITEM OR SUBSIDIARY ITEM.

THE M&S STANDARD PLANS USED TO DESIGN THIS PROJECT ARE INDICATED BY A MARKED BOX , AND WILL BE ATTACHED TO THE PLANS. ALL OTHER M&S STANDARD PLANS ARE STILL ELIGIBLE FOR USE IN CONSTRUCTION IF APPROVED BY AN APPROPRIATE CDOT ENGINEER.

All seals for this set of drawings are applied to the cover page(s)

Print Date: 6/13/2024  
 File Name: 78001\_GN-002 Standard Plans List.dgn  
 Horiz. Scale: N/A Vert. Scale: N/A

**RockSol** Consulting Group, Inc.  
 12076 Grant Street, Thornton, CO 80241  
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 Web: www.RockSol.com

Sheet Revisions		
Date:	Comments	Init.



As Constructed  
 No Revisions:  
 Revised:  
 Void:

**BIG SANDY CREEK BRIDGE REHAB STANDARD PLANS LIST**

Designer: S. Scott  
 Detailer: S. Scott  
 Sheet Subset: General

Structure Numbers: LIN 32-2W.OA  
 Subset Sheets: 2 of 2

Project No./Code  
 BRO C330-013  
 26222  
 Sheet Number 2

8/15/2024

**TO ESTABLISH GEOMETRIC CONTROL FOR THE CONSTRUCTION OF THIS PROJECT, THE DEPARTMENT HAS PROVIDED THE FOLLOWING INFORMATION:**

- Format \*
- 3D Design Modeling Electronic Files \_\_\_\_\_
  - Horizontal Control Plan Sheet
  - Vertical Control Plan Sheet
  - Roadway Alignment Plan Sheet
  - Original Terrain Data \_\_\_\_\_
  - Other: \_\_\_\_\_

\* Specify the information format, ie., plan sheet, computer disk, computer printout, or other. The information marked is either contained on the plans or is available from the Engineer.

**TYPE OF PROJECT**

- Landscaping
- Signalization
- Safety Improvement
- Asphalt Overlay
- Concrete Overlay
- Minor Widening
- Major Reconstruction
- New Roadway Construction
- Bridge Replacement
- Bridge Widening
- New Bridge
- Other: Bridge Rehabilitation

**SURVEY WORK TO BE PERFORMED BY OTHERS:** \_\_\_\_\_

**WORK PERFORMED BY THE CONTRACTOR'S SURVEYOR UNDER SECTION 625:**

- A complete passing Base Line report (completed within 6 months prior to the start of the project)
- An instrument calibration Certification (completed within 6 months prior to the start of the project)
- Establish and Maintain Project Centerline or Engineer Approved Offset Line(s)
- Verification and Maintenance of Horizontal and Vertical Control
- Verify or Determine existing grades and alignments
- Verify or Determine existing topography
- Clearing and Grubbing Limits (Section 201)
- Removal Limits (Section 202)
- Reset Items (Section 210)
- Excavation and Embankment (Section 203)

- Excavation
  - Unclassified
  - Stripping
  - Muck
  - Rock
  - Borrow
  - Other: \_\_\_\_\_
  - Potholing

- Embankment
- Site Grading
- Erosion Control (Perm)
- Other: Geotextile (Erosion Control)  
(Class 1)

- As Staked Earthwork Quantities (See General Notes)

- Landscaping
  - Top Soil (Section 207)
  - Seeding (Section 212)
  - Mulching (Section 213)
  - Planting (Section 214)
  - Herbicide (Section 217)
  - Other: \_\_\_\_\_

- Erosion Control (Section 208)
  - Seeding (Temp)
  - Silt Fence
  - Erosion Bales
  - Erosion Logs
  - Riprap (Temp)
  - Other: \_\_\_\_\_

- Roadway Bases
  - Untreated Subgrade
  - Treated Subgrade
  - Aggregate Base Course (Section 304)
  - Reconditioning
  - PMBB - Plant Mix Bituminous Base
  - Other: \_\_\_\_\_

	Slope Staking (Y/N)	Grid (Y/N)	Grade (Y/N)	Special Interval
Excavation	-	-	-	-
	-	-	-	-
	-	-	-	-
	-	-	-	-
	-	-	-	-

	Slope Staking (Y/N)	Grid (Y/N)	Grade (Y/N)	Special Interval
Embankment	-	-	-	-
	-	-	-	-
	-	-	-	-
	-	-	-	-
	-	-	-	-

	Grid (Y/N)	Grade (Y/N)	Special Interval	Special Offset
Roadway Bases	-	-	-	-
	-	-	-	-
	-	-	-	-
	-	-	-	-
	-	-	-	-

- Pavements
  - HMA - Hot Mix Asphalt (Section 403)
  - Concrete (Section 412)
  - Heating & Scarifying Treatment
  - Prime Coat, Tack Coat & Rejuvenating Agent (Section 407)
  - Seal Coat or Chip Seal (Section 409)
  - Other: \_\_\_\_\_

	Grid (Y/N)	Special Interval	Special Offset
Pavements	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-

- Roadway Elements
  - Curb and Gutter (Section 609)
  - Drop inlets - alignment and grades (Section 604)
  - Retaining Walls
  - Guard Rail (Section 606)
  - Sidewalk (Section 608)
  - Overlay Stationing
  - Other: \_\_\_\_\_

	Tangent Interval	Curve Interval	Special Offset
Curb & Gutter	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-

- Riprap (Perm) (Section 506)
- Slope and Ditch Paving (Section 507)

	Left Interval	Center Interval	Right Interval
Stationing	-	-	-
	-	-	-
	-	-	-
	-	-	-
	-	-	-

- Minor Structures
  - Structure Excavation limits (Section 206)
  - Culverts (Section 603)
  - Culverts w/ Headwalls and Wingwalls (Section 601)
  - Concrete Box Culverts w/ Headwalls and Wingwalls
  - Pipes (Section 603)
    - Sanitary Sewer
    - Storm Sewer
    - Water
    - Irrigation
    - Miscellaneous
  - Manholes (Section 604)
  - Inlets (Section 604)
  - Permanent Water Quality BMP (Section 208)
  - Other: Shoring

- Major Structures - Overhead Signs (Section 614), Concrete Box Culverts, Bridges - and all other structures assigned a structure number
  - Structure Excavation limits (Section 206)
  - Concrete Box Culverts (Section 603) w/ Headwalls and Wingwalls (Section 601)
  - Piling locations and cut off elevations (Section 502)
  - Caisson locations and elevations (Section 503)
  - Footing locations, alignment, and elevations
  - Abutment/Pier locations, alignment, and elevations
  - Wingwall skew angles/offsets
  - Structural concrete form locations
  - Substructure As-constructed survey required for Bridges (Subsection 601 .12) and Overhead signs (S-614-50)
  - Bridge expansion joint(s) alignment and grade (longitudinal and transverse)
  - Deck grades at Girder 10th or "n" th point locations and elevations
  - Slope and Ditch Paving (Section 507)
  - Other: \_\_\_\_\_

- Fencing (Section 607)
  - Temporary
  - Permanent
  - Sound Barrier
  - Other: \_\_\_\_\_

- Delineators (Section 612)
  - Temporary
  - Permanent

- Lighting (Section 613) and Traffic Control Devices (Permanent) (Section 614)
  - Signal pole locations and elevations
  - Light pole locations and elevations
  - Sign locations
  - Field verify sign post locations, elevations, and lengths before fabrication.
  - Other: \_\_\_\_\_

- Pavement Marking (Section 627)
  - Striping (Temp)
  - Striping (Perm)
  - Symbols
  - Other: \_\_\_\_\_
- Temporary Lighting and Construction Traffic Control Devices (Section 630)
  - Signal pole locations and elevations (Temp)
  - Light pole locations and elevations (Temp)
  - Sign Locations (Temp)
  - Other: \_\_\_\_\_
- All Easements (Temp Staking by P.L.S. Only)
- Right of Way (Temp Staking by P.L.S. Only)

**WORK PERFORMED BY THE CONTRACTOR'S SURVEYOR UNDER SECTION 629:**

- Monumentation (Section 629)
  - Control
  - Right of Way
  - Land corners, Aliquot corners
  - Easements
  - Reference the specified existing monuments: \*\* \_\_\_\_\_
  - Replace the specified existing monuments: \*\* \_\_\_\_\_
  - Locate monuments. It is estimated \_\_\_\_\_ hours are required.

NOTE: All 629 items shall include adequate research, calculations, and evaluations of evidence for monuments to be set.

\*\* A Tabulation of Survey Monuments may be provided on the plans.

**GENERAL NOTES:**

- Unless indicated otherwise on this Survey Tabulation Sheet, all survey work and staking intervals shall be done in accordance with the latest edition of the CDDT Survey Manual.
- Adequate information for establishing lines, grades, and locations for all work items have been specified on the plans. Any additional information required to stake the item or element shall be generated by the Contractor's surveyor.
- The Contractor's surveyor shall provide an estimate of the man-hours necessary to complete the work items indicated on this sheet. A copy of this sheet, with the estimated man-hours written on the blank line to the left of the specified items, shall be submitted with the Survey Schedule to the Engineer 3 days prior to the Presurvey Conference - Construction Survey.
- Stakes and Monuments which are damaged or destroyed by the progress of construction shall be replaced by the Contractor at no additional cost to the Department.
- The Contractor shall furnish an As Staked (or 3D Design Modeling Electronic Files) Earthwork Quantity report to the Engineer prior to completion of twenty percent (20%) of the planned earthwork in any phase as per the CDDT Survey Manual. A printed copy of the As Staked (or 3D Design Modeling Electronic Files) Earthwork data report and a computer disk with that information on it, in the specified format shall be submitted to the Engineer. The Contractor shall field verify original ground cross sections at a maximum 500 feet intervals.
- Prior to beginning work on any subsequent operation, such as placing base course or paving, the Contractor shall certify in writing to the Engineer that the final grade is within specified tolerance.
- The Contractor's surveyor shall perform all field surveying and calculations necessary to tie plan grades into field grades.
- The Contractor shall coordinate construction staking on the project with any utility work.
- Fieldbooks shall contain daily records of points set and or measurements observed. The information recorded shall contain: date, crew members' names, point no., description, staking information, and sketches. If the survey information is collected electronically, information recorded shall be provided to the Project Engineer in a hard copy format that is intuitive, clear and related to the supplemental information recorded in the field books. All linear surveys, such as slope stakes and blue tops, shall have the station and offset information related to the measured information. Non-linear surveys such as structures staking shall have sketches relating electronic information, such as point numbers, to the sketch.
- The Contractor's surveyor shall submit the following fieldbooks to the Engineer:
  - Horizontal Control (Primary & Secondary)
  - Vertical Control (i.e. Benchmarks)
  - Property Pin Ties
  - Horizontal Alignment
  - Grading
  - Slope Staking
  - Minor Structures
  - Major Structures
  - One fieldbook for each work category shown on this sheet
  - Other Fieldbook(s): \_\_\_\_\_
- The Contractor's surveyor shall submit the following (prior to surveying on the project) to the Engineer:
  - All required Instrument Calibrations

scott 7:27:47 PM R:\0-Projects\ACTIVE PROJECTS\78001\_Lincoln County Road 32 over Big Sandy Creek Bridge Rehabilitation\800-Computer Design Files\802-Sheet Files\78001\_SCT-001 Survey Tabulation.dgn

All seals for this set of drawings are applied to the cover page(s)

Print Date: 4/30/2024  
 File Name: 78001\_SCT-001 Survey Tabulation.dgn  
 Horiz. Scale: N/A Vert. Scale: N/A

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Sheet Revisions		
Date:	Comments	Init.



As Constructed	BIG SANDY CREEK BRIDGE REHAB SURVEY TABULATION			Project No./Code
No Revisions:				BRO C330-013
Revised:	Designer: S. Scott	Structure Numbers	LIN 32-2W.OA	26222
Void:	Detailer: S. Scott	Subset Sheets:	1 of 1	Sheet Number 3

8/15/2024



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Sheet Revisions			Sheet Revisions			Sheet Revisions		
Date	Description	Initials	Date	Description	Initials	Date	Description	Initials
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Project & Land Survey Control Diagram			
Title Sheet			
Project Number: BRO C330-013			
Project Location: Lincoln CR 32			
Right-of-Way			
Project Code:	Last Mod. Date:	Subset:	Sheet No.:
26222	08/24/2023	4.01 to 4.04	4.01



# DEPARTMENT OF TRANSPORTATION STATE OF COLORADO

## PROJECT AND LAND SURVEY CONTROL DIAGRAM

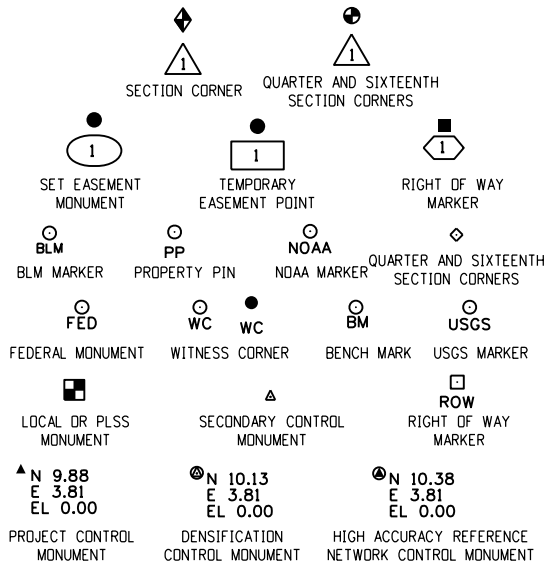
Lincoln CR 32  
Section 31, Township 10 South, Range 54 West,  
and Sections 5 & 6, Township 11 South, Range 54 West  
of the 6th Principal Meridian  
Lincoln County, Colorado

**SURVEYOR STATEMENT (PROJECT & LAND SURVEY CONTROL DIAGRAM)**

I, Chet Smith, a professional land surveyor licensed in the State of Colorado, do hereby state to the Colorado Department of Transportation that this Project and Land Survey Control Diagram was prepared and the field survey it represents was performed under my responsible charge and based upon my knowledge, information and belief is in accordance with applicable standards of practice, defined by Colorado Department of Transportation publications. This statement is not a guaranty or warranty, either expressed or implied.

PLS No. 38271

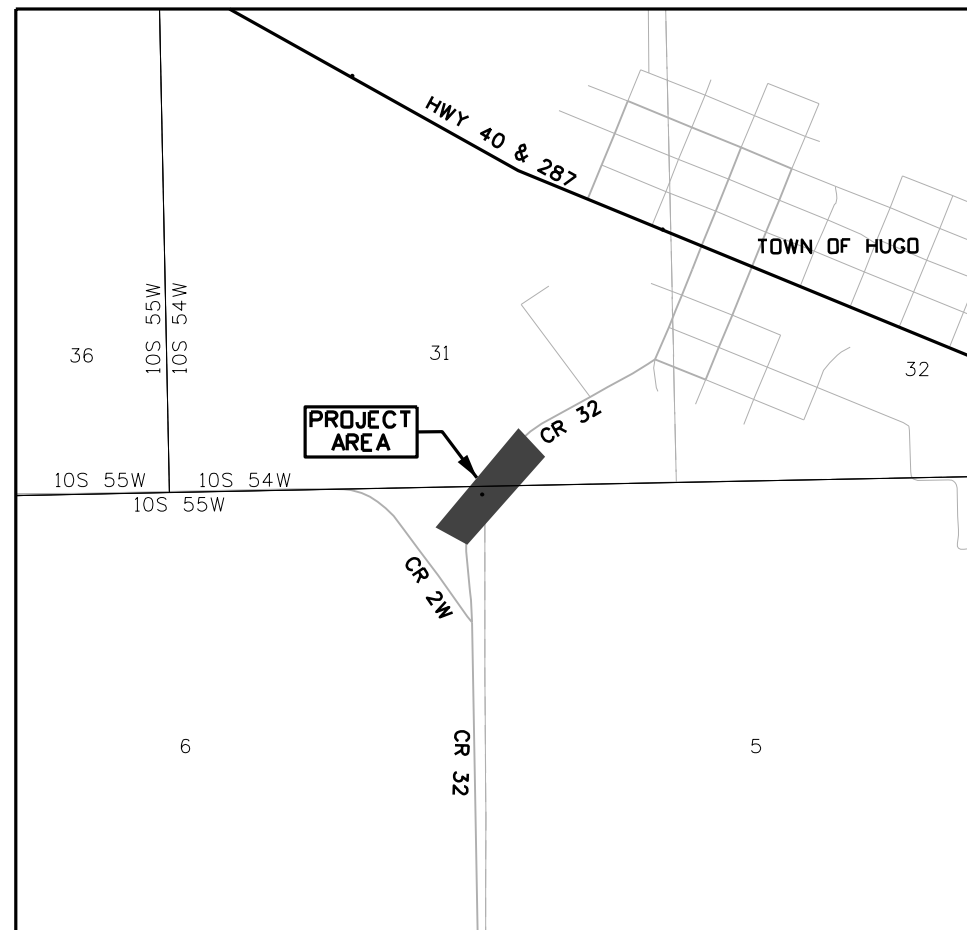
SHEET NO.	INDEX OF SHEETS
4.01	(1) Title Sheet
4.02-4.03	(2) Coordinate Tables
4.04	(1) Plan Sheet
	(4) Total Sheets



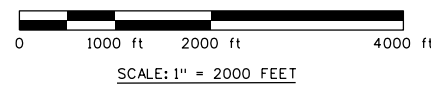
Note: For a complete listing of symbolology used within this set of plans, please refer to the M-100-1 Standard Symbols of the Colorado Department of Transportation M&S Standards Publication. Existing features are shown as screened weight (gray scale). Proposed or new features are shown as full weight without screening.

**General Notes:**

1. Date of Field Survey: June - July, 2023.
2. This Project and Land Survey Control Diagram is not a boundary survey of the adjoining property and is prepared for the Colorado Department of Transportation purposes only. No determination has been made to determine if the found monuments as shown are in their proper position or if they are at the corners they are intended to monument.
3. Title policy, title commitment, and title research are not part of this survey, therefore easements, rights, and restrictions of record were not researched and are not shown on this diagram. The verification of the physical evidence with relation to easements, rights of ways, property boundaries, and restrictions, as described in the instruments of record, were not included in this land survey control diagram.
4. This plan set is subject to change and may not be the most current set. It is the user's responsibility to verify with CDOT that this set is the most current. The information contained on the attached drawing is not valid unless this copy bears an original signature of the Professional Land Surveyor hereon named.
5. Refer to the M-629-1 Survey Monuments of the Standard found in The Colorado Department of Transportation, M & S Standards for typical survey monument descriptions.



PROJECT LOCATION MAP



**BASIS OF BEARINGS:** Bearings used in the calculations of coordinates are based on a grid bearing of N88°44'58"E and a distance of 1979.25 feet from the Northwest corner of Section 5, Township 11 South, Range 54 West, monumented by an illegible 3.25" aluminum cap, to the Southeast corner of Section 31, Township 10 South, Range 54 West, monumented by a 0.5' by 0.5' concrete post. The survey data was obtained from a Global Navigation Satellite System (GNSS) fast static survey.

**Basis of Elevations:** Project elevations are based on GNSS derived values (Geoid 18) utilizing a fast static survey.

**COORDINATE DATUM:** Project coordinates are modified Colorado State Plane Central Zone NAD '83/(11) coordinates. The combined elevation/scale factor used to modify the coordinates from state plane to project coordinates is 1.0003023537. The resulting project coordinates are truncated by 1,00,302.35 U.S. Survey Ft. in the Northing and 3,000,907.06 U.S. Survey Ft. in the Easting after converting from state plane coordinates to project coordinates.

Project Coordinates Northing US Survey Feet = (State Plane Coordinate Northing \* 1.0003023537 - 1,000,302.35).  
Project Coordinates Easting US Survey Feet = (State Plane Coordinate Easting \* 1.0003023537 - 3,000,907.06).

**NOTICE:** According to Colorado law you must commence any legal action based upon any defect in this survey within three years after you first discover such defect. In no event may any action based upon any defect in this survey be commenced more than ten years from the date of the certification shown hereon.



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Greely CO, 80634  
Phone: 970-350-2161

Region 4 Right of Way MDG

Sheet Revisions			Sheet Revisions			Sheet Revisions		
Date	Description	Initials	Date	Description	Initials	Date	Description	Initials
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Project & Land Survey Control Diagram			
Monument Coordinate Tables			
Project Number: BRO C330-013			
Project Location: Lincoln CR 32			
Right-of-Way			
Project Code	Last Mod. Date	Subset	Sheet No.
26222	08/24/2023	4.01 to 4.04	4.02



# PROJECT CONTROL

▲ GEODETIC COORDINATES SUMMARY TABLE OF PROJECT CONTROL

GEODETIC COORDINATE TABLE									
Point No.	Geodetic Coordinates NAD-83(11) (CORS)		Elip Height (NAVD88)(ft)	Ortho Height (ft)	Mapping Angle	Grid Scale Factor	NAD 83(11) Zone 0502		Description
	Latitude(N)	Longitude(W)					SP Northing(ft)	SP Easting(ft)	
AMC4*	38°48'11.22692"	104°31'28.49668"	6273.89	6334.63	0°36'54.67"	0.999649420	1354683.63	3277967.51	CORS STATION
COFC*	40°35'36.10799"	105°09'37.56860"	5236.16	5286.04	0°12'50.97"	1.000025918	2005515.28	3094330.64	CORS STATION
COSL*	40°37'11.86176"	103°13'34.59117"	3905.52	3970.31	1°26'02.45"	1.000101819	2022933.11	3631331.55	CORS STATION
CTMC*	39°43'17.49312"	105°11'34.33565"	5970.60	6022.26	0°11'37.33"	0.999709072	1687841.27	3086394.06	CORS STATION
P041*	39°56'58.15001"	105°11'39.31658"	5674.94	5728.28	0°11'34.19"	0.999774271	1770881.43	3085725.38	CORS STATION
P044*	40°10'18.42476"	103°13'20.90019"	4632.39	4698.85	1°26'11.09"	0.999889277	1859703.28	3636481.01	CORS STATION
TMG2*	40°07'47.83480"	105°13'58.99921"	5478.97	5531.22	0°10'06.09"	0.999835386	1836593.94	3074653.21	CORS STATION
100	39°07'34.12136"	103°28'48.35349"	4977.73	5045.29	1°16'26.15"	0.999698036	1477207.25	3572965.20	SET 2" ALUMINUM CAP STAMPED, " TOPO SURVEY CONTROL POINT"
101	39°07'37.85815"	103°28'47.58334"	4984.14	5051.69	1°16'26.64"	0.999697738	1477586.55	3573017.47	SET 2" ALUMINUM CAP STAMPED, " TOPO SURVEY CONTROL POINT"
102	39°07'42.89273"	103°28'43.55007"	4983.38	5050.93	1°16'29.18"	0.999697786	1478102.84	3573323.88	SET 2" ALUMINUM CAP STAMPED, " TOPO SURVEY CONTROL POINT"
103	39°07'45.99231"	103°28'40.35082"	4977.68	5045.23	1°16'31.20"	0.999698065	1478421.95	3573568.94	SET 2" ALUMINUM CAP STAMPED, " TOPO SURVEY CONTROL POINT"

\* POINTS NOT GRAPHICALLY DEPICTED ON PLANT SHEET

▲ SET SURVEY CONTROL POINT TABULATION - PROJECT SPECIFIC COORDINATES (U.S. FEET):

PROJECT COORDINATE TABLE				
Point No.	Project Coordinates		Elev(ft) (NAVD88)	Description
	Northing(ft)	Easting(ft)		
100	477351.54	573138.44	5045.29	SET 2" ALUMINUM CAP STAMPED, " TOPO SURVEY CONTROL POINT"
101	477730.95	573190.73	5051.69	SET 2" ALUMINUM CAP STAMPED, " TOPO SURVEY CONTROL POINT"
102	478247.40	573497.23	5050.93	SET 2" ALUMINUM CAP STAMPED, " TOPO SURVEY CONTROL POINT"
103	478566.61	573742.36	5045.23	SET 2" ALUMINUM CAP STAMPED, " TOPO SURVEY CONTROL POINT"

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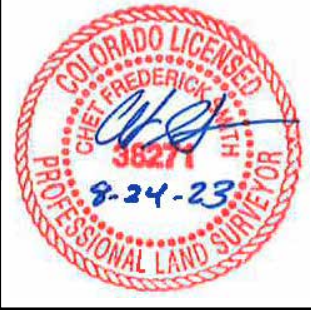
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Region 4 Right of Way MDG

Sheet Revisions			Sheet Revisions			Sheet Revisions		
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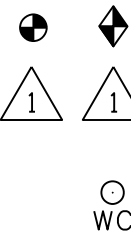


Project & Land Survey Control Diagram			
Monument Coordinate Tables			
Project Number: BRO C330-013			
Project Location: Lincoln CR 32			
Right-of-Way			
Project Code	Last Mod. Date	Subset	Sheet No.
26222	08/24/2023	4.01 to 4.04	4.03

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LOYALTY INNOVATION LEGACY

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# BOUNDARY EVIDENCE



FOUND ALIQUOT MONUMENT COORDINATE TABLE			
Point No.	Northing (ft)	Easting (ft)	Description
105	480712.05	575096.47	E 1/4 CORNER - S31, T10S, R54W, 6TH P.M. - 2.5"ALUMINUM CAP, STAMPED IN PART "HIGH PLAINS SURVEY 1999 PLS 30127"
106	478068.66	575180.14	SE CORNER - S31, T10S, R54W, 6TH P.M. - 0.5' x 0.5' SQUARE CONCRETE MONUMENT
108	471900.24	573383.60	WITNESS TO SW CORNER, S5, T11S, R54W, 6TH P.M. - 3.25" ALUMINUM CAP, STAMPED IN PART "MERRICK & CO. WC 50FT 2017 PLS 37043"
108 CALC	471899.07	573333.62	SW CORNER, S5, T11S, R54W, 6TH P.M. - CALCULATED POSITION FROM WITNESS CORNER AT POINT 108
111	478025.46	573201.36	NW CORNER - S5, T11S, R54W, 6TH P.M. - 3.25" ALUMINUM CAP, ILLEGIBLE
207	472022.98	578616.03	SE CORNER - S5, T11S, R54W, 6TH P.M. - 3 1/8" ALUMINUM CAP, STAMPED "T11S R54W S5 S4 S9 S8 1989 LS 7316"



FOUND BOUNDARY MONUMENT COORDINATE TABLE			
Point No.	Northing (ft)	Easting (ft)	Description
200	477786.51	573296.85	NO. 5 REBAR WITH ORANGE PLASTIC CAP, 2" ABOVE GROUND STAMPED, "PLS 38390"
201	478668.20	573972.83	NO. 5 REBAR 3" BELOW GROUND

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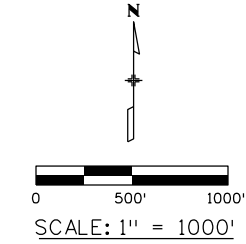
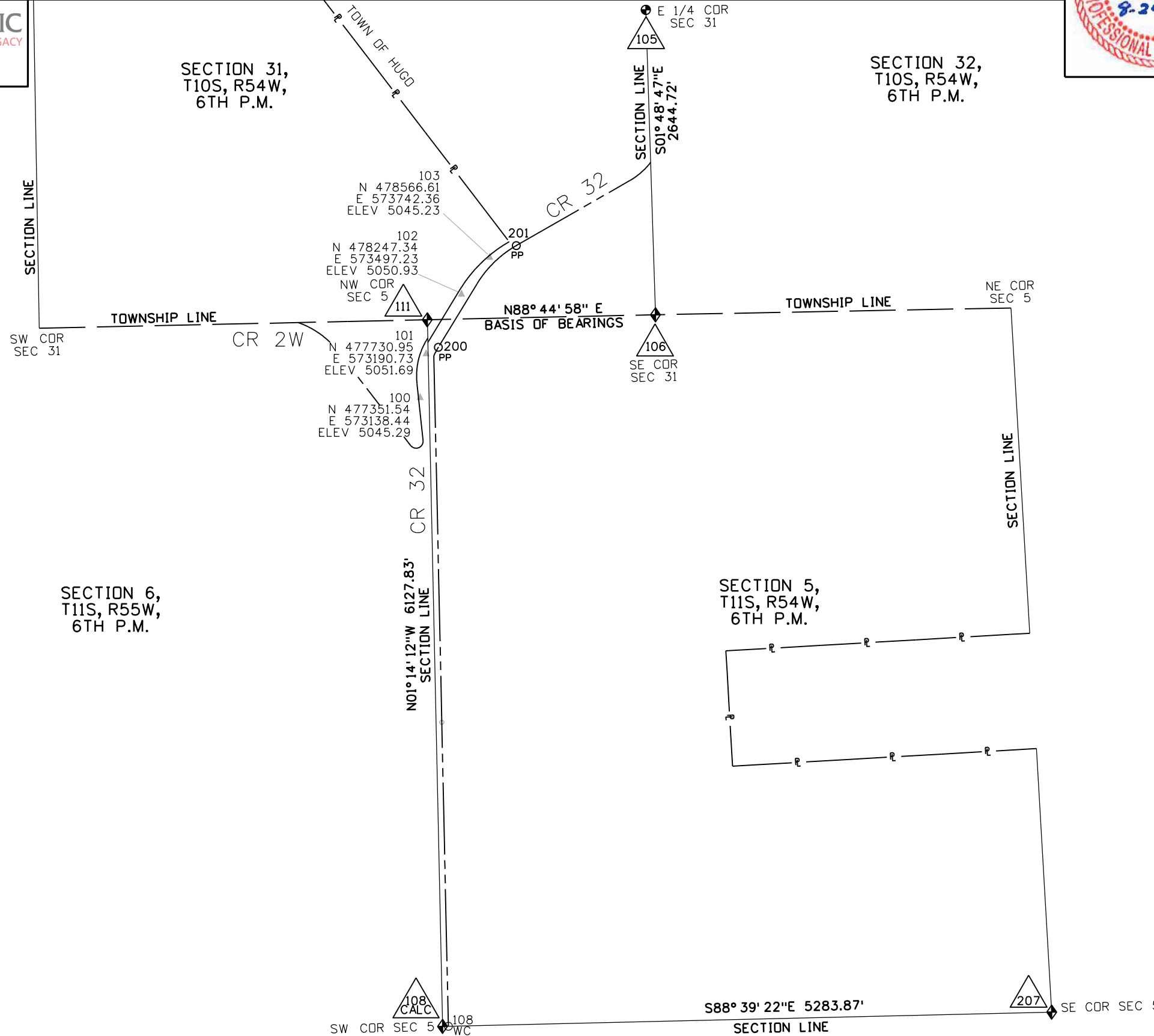
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Project & Land Survey Control Diagram

Project Number: BRO C330-013			
Project Location: Lincoln CR 32			
Right-of-Way			
Project Code:	Last Mod. Date:	Subset:	Sheet No.:
26222	08/24/2023	4.01 to 4.04	4.04





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Region 4

Right of Way

MDG

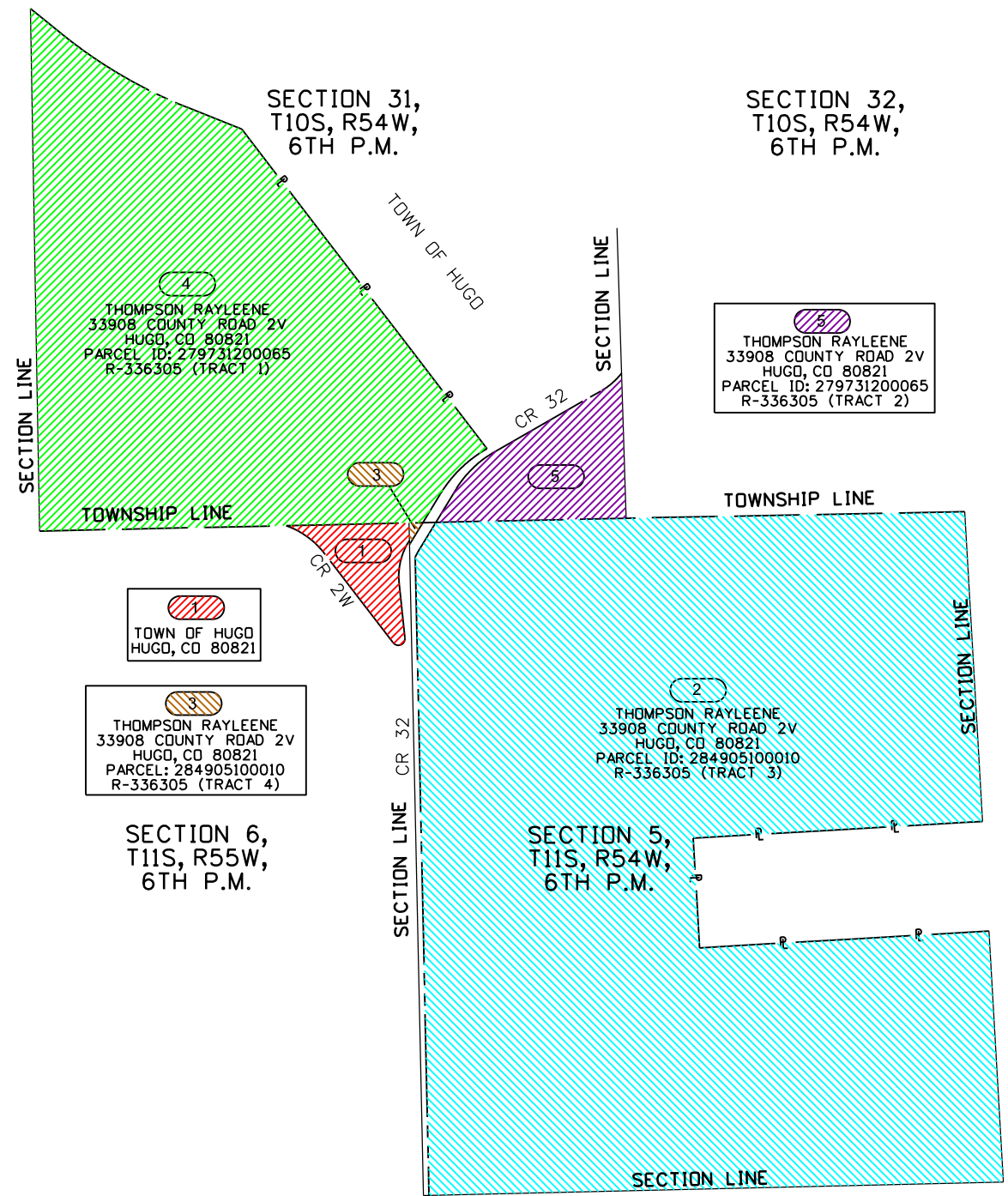
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Date	Description	Initials	Date	Description	Initials	Date	Description	Initials
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North arrow pointing up.

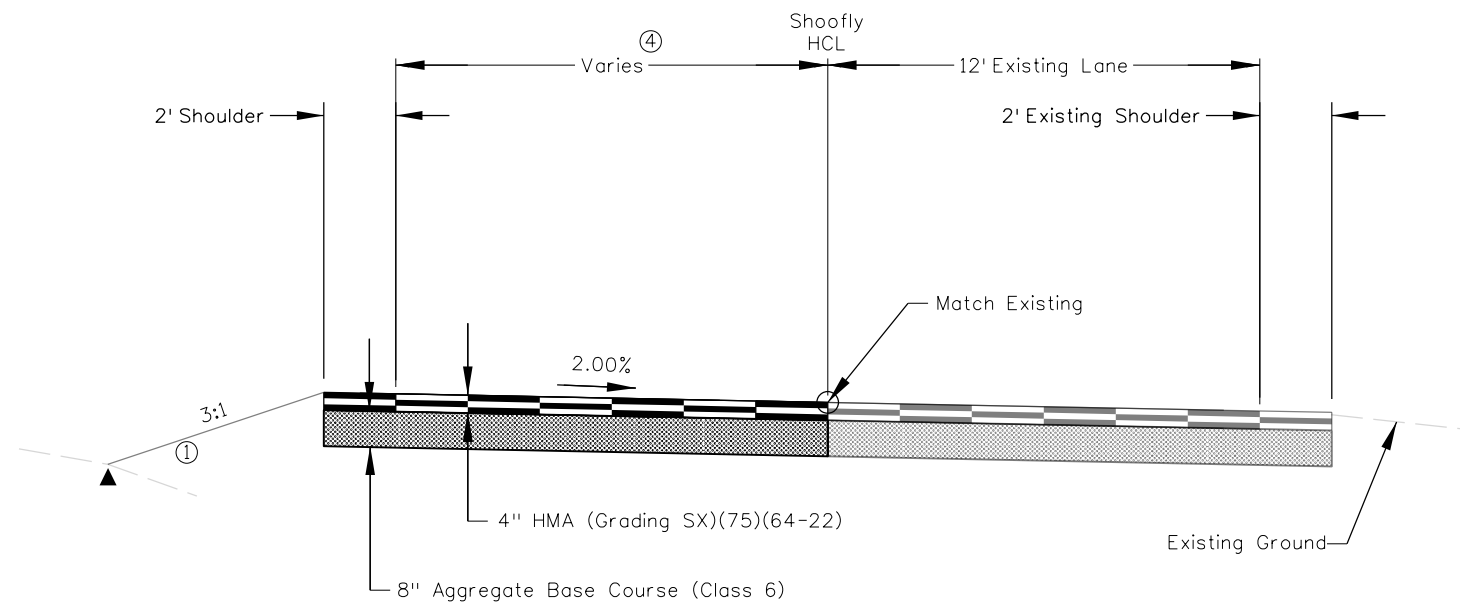
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Right of Way Plans			
Ownership Map			
Project Number: BRO C330-013			
Project Location: Lincoln CR 32			
Right-of-Way			
Project Code	Last Mod. Date	Subset	Sheet No.
26222	07/28/2023	8.01 to 8.01	8.01



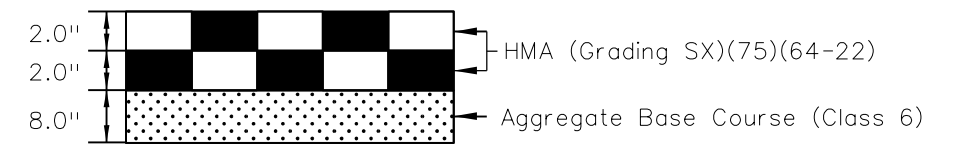


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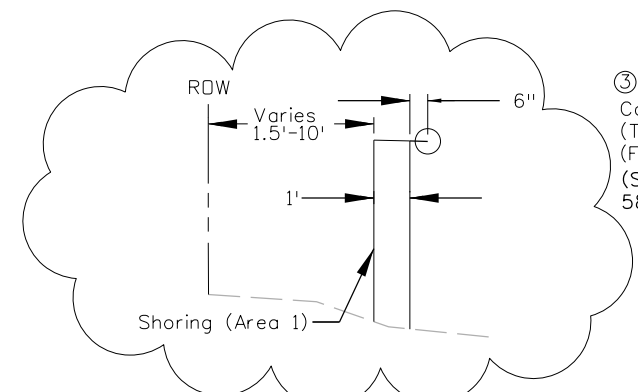


**LINCOLN COUNTY ROAD 32 DETOUR TRANSITION**

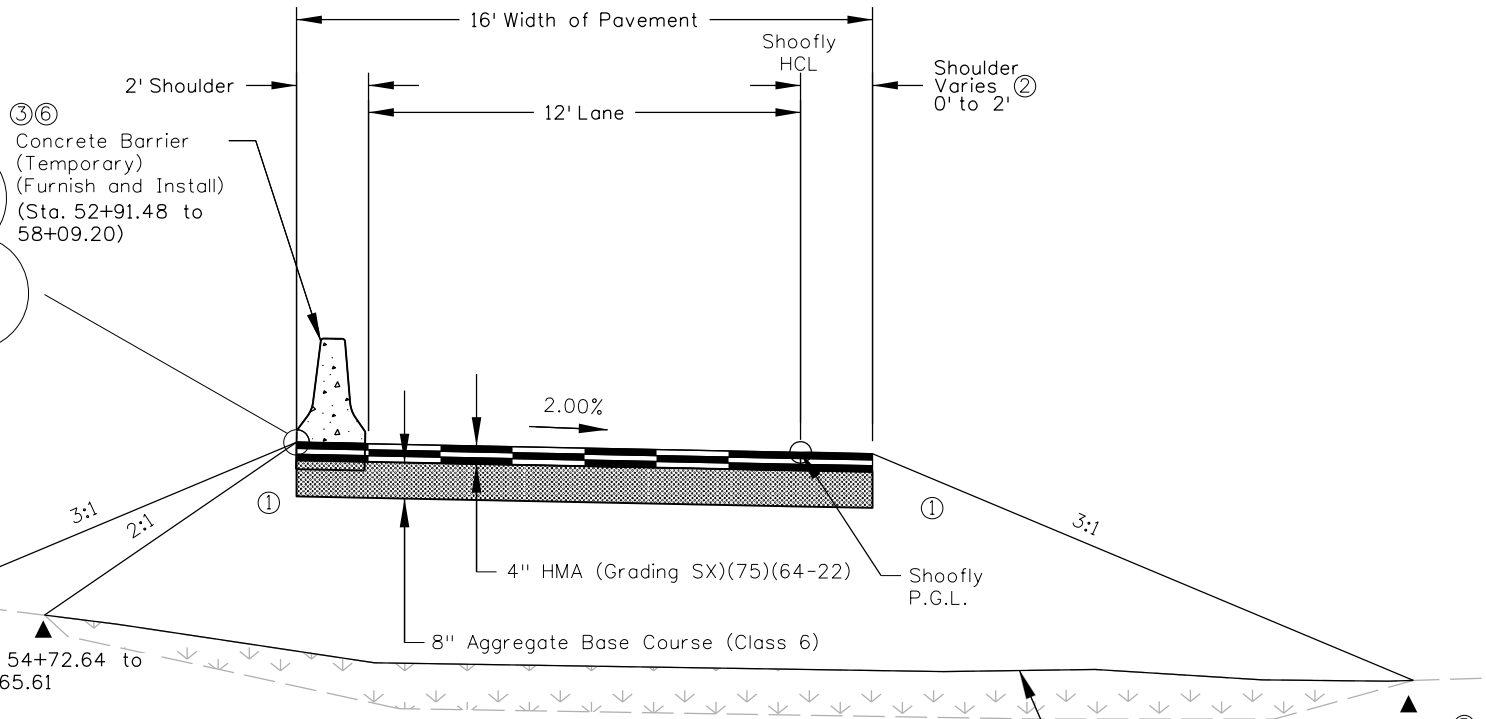
Sta. 50+00.00 to Sta. 51+38.94  
Sta. 59+45.00 to Sta. 61+28.78



**PAVEMENT DETAIL**  
Sta. 50+00.00 to 61+29.00



Sta. 53+36.00 to 54+72.64



**LINCOLN COUNTY ROAD 32 DETOUR**

Sta. 51+38.94 to Sta. 59+45.00

Sta. 53+35.61 to 57+65.61

**TYPICAL SECTION NOTES**

- P.G.L. Profile Grade Line
- ▲ Break points on slopes shall be rounded during construction for a pleasing appearance.
- ① See CDDT Standard Specifications sections 203 and 207 for materials, construction requirements, measurement, and payment of work in these areas.
- ② Sta. 51+38.94 to 51+58.94: 0' to 2', Sta. 59+25.00 to 59+45.00: 2' to 0'
- ③ Refer to Tabulation of Guardrail for station locations.
- ④ See Detour Plan & Profile & Cross Sections.
- ⑤ In the designated wetland area, the clearing and grubbing shall only consist of mowing wetland vegetation to 6 inches or less in height. Geotextile Class 1 will then be installed on top of the mowed area followed by the detour embankment.
- ⑥ Concrete Barrier shall be pinned to prevent overturning.

All seals for this set of drawings are applied to the cover page(s)

Print Date: 6/13/2024  
File Name: 78001\_TYP-001 Detour Typical Section.dgn  
Horiz. Scale: NTS Vert. Scale: NTS

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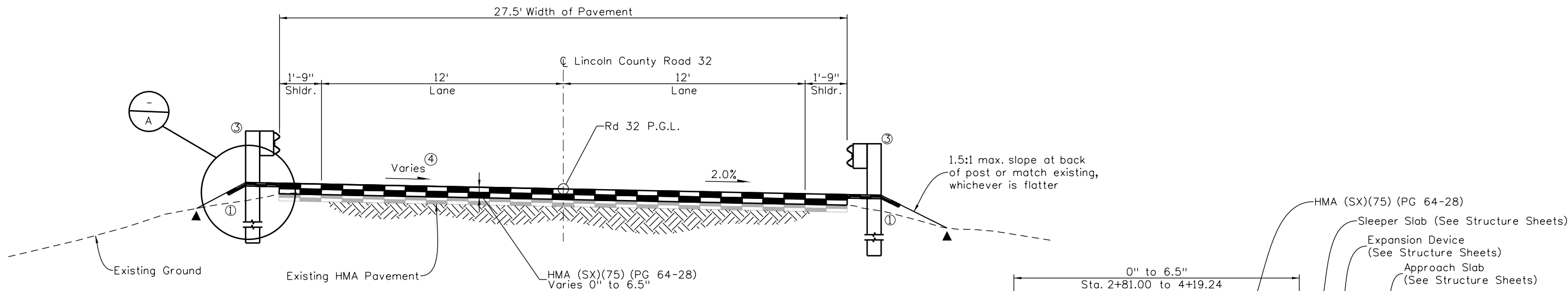
Sheet Revisions		
Date:	Comments	Init.



As Constructed	<b>BIG SANDY CREEK BRIDGE REHAB DETOUR TYPICAL SECTIONS</b>	Project No./Code		
No Revisions:		BRD C330-013		
Revised:		Designer: S. Scott	Structure Numbers	LIN 32-2W.0A
Void:		Detailer: S. Scott	Subset Sheets:	1 of 2
Sheet Subset: Typical		Sheet Number 9		

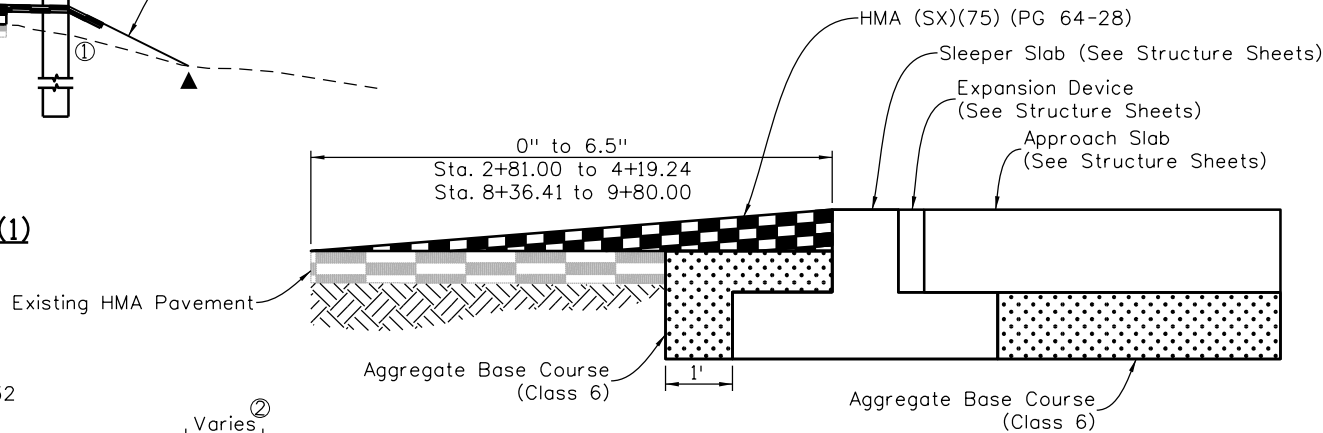
8/15/2024

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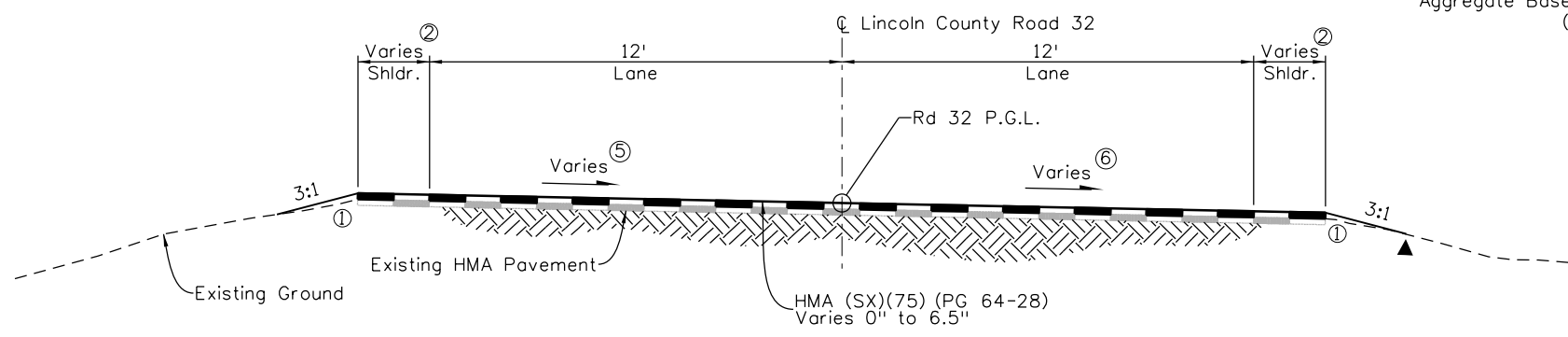


**LINCOLN COUNTY RD 32 TYPICAL SECTION - BRIDGE APPROACHES (1)**

Sta. 3+01.00 to 4+19.24  
Sta. 4+19.24 to 8+36.41 (See Structural Sheets)  
Sta. 8+36.41 to 9+60.00



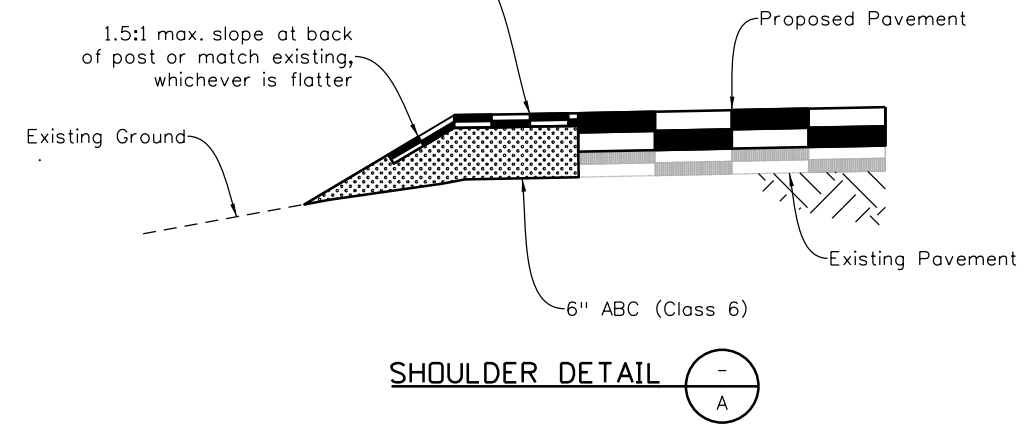
**PAVEMENT TRANSITION DETAIL**



**LINCOLN COUNTY RD 32 TYPICAL SECTION - BRIDGE APPROACHES (2)**

Sta. 2+81.00 to 3+01.00  
Sta. 9+60.00 to 9+80.00

2" Min HMA (Grading SX)(75)(PG 64-28)  
See Guardrail Tabulation Sheet for Detail and Tabulation of Surfacing sheet for quantities



**SHOULDER DETAIL**

**TYPICAL SECTION NOTES**

- P.G.L. Profile Grade Line
- ▲ Break points on slopes shall be rounded during construction for a pleasing appearance.
- ① See CDDT Standard Specifications sections 203 and 207 for materials, construction requirements, measurement, and payment of work in these areas.
- ② Sta. 2+81.00 to 3+01.00 : 7" to 1'-9" Lt., Sta. 2+81.00 to 3+01.00 : 8" to 1'-9" Rt., Sta. 9+60.00 to 9+80.00 : 1'-9" to 1'-3" Lt., Sta. 9+60.00 to 9+80.00 : 1'-9" to 11" Rt.
- ③ Refer to Guardrail Installation detail on the Tabulation of Guardrail sheet for station locations and grading details at guardrail locations.
- ④ Sta. 3+01.00 to 3+79.24 : -2.00%, Sta. 3+79.24 to 4+19.24 : -2.00% to 2.00%, Sta. 8+26.41 to 9+60.00 : 2.00%
- ⑤ Sta. 2+81.00 to 3+01.00 : Match Existing to -2.00%, Sta. 9+60.00 to 9+80.00 : 2.00% to Match Existing
- ⑥ Sta. 2+81.00 to 3+01.00 : Match Existing to -2.00%, Sta. 9+60.00 to 9+80.00 : -2.00% to Match Existing

All seals for this set of drawings are applied to the cover page(s)	Print Date: 5/1/2024	Sheet Revisions				As Constructed		BIG SANDY CREEK BRIDGE REHAB RD 32 TYPICAL SECTIONS		Project No./Code	
	File Name: 78001_TYP-002 Rd 32 Typical Section.dgn	Date:	Comments	Init.		No Revisions:			BRD C330-013		
	Horiz. Scale: NTS    Vert. Scale: NTS					Revised:	Designer: S. Scott	Structure Numbers: LIN 32-2W.0A	26223		
	RockSol Consulting Group, Inc. 12076 Grant Street, Thornton, CO 80241 Phone: (303) 962-9300 Web: www.RockSol.com					Void:	Detailer: S. Scott	Subset Sheets: 2 of 2	Sheet Number 10		

8/15/2024

**GENERAL NOTES**

1. THESE GENERAL NOTES ARE APPLICABLE TO ALL SHEETS CONTAINED WITHIN THIS SET OF PLANS.
2. ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE 2023 EDITION OF THE COLORADO DEPARTMENT OF TRANSPORTATION'S STANDARDS AND SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
3. THE CONTRACTOR SHALL HAVE ONE (1) SIGNED COPY OF PLANS APPROVED BY LINCOLN COUNTY, ONE (1) COPY OF THE APPROPRIATE DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS, ONE (1) COPY OF THE STORMWATER MANAGEMENT PLAN, AND ONE (1) COPY OF ALL NECESSARY PERMITS AT THE JOB SITE.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FOLLOWING ALL RECOMMENDATIONS AND PRACTICES CONTAINED WITHIN THE APPROVED PLANS, REPORTS, PERMITS, AND SUPPORTING DOCUMENTS FOR THIS PROJECT.
5. EACH SUBCONTRACTOR (INCLUDING THE SURVEYOR) SHALL HAVE A SIGNED COPY OF THE PLANS AND A COPY OF THE APPROPRIATE STANDARDS AND SPECIFICATIONS IN THEIR POSSESSION AT ALL TIMES WHILE IMPROVEMENTS ARE BEING PLANNED OR INSTALLED.
6. THE CONTRACTOR SHALL DOCUMENT EXISTING FEATURES, CONDITIONS, AND OTHER INFORMATION PRIOR TO ALL CONSTRUCTION ACTIVITIES.
7. THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS AT AND ADJACENT TO THE JOB SITE, INCLUDING, BUT NOT LIMITED TO, SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK, TRENCH EXCAVATION AND SHORING, TRAFFIC CONTROL AND SECURITY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.
8. LINCOLN COUNTY REVIEW OF THE CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES IN, ON OR NEAR THE CONSTRUCTION SITE.
9. FOR PLAN QUANTITIES OF BITUMINOUS AND AGGREGATE MATERIALS, THE FOLLOWING RATES WERE USED:
  - a. HOT MIX ASPHALT PAVEMENT.....@ 110 LBS./SY/INCH
  - b. AGGREGATE BASE COURSE (CLASS 6).....@ 135 LBS./CU.FT.
  - c. TACK COAT DILUTED EMULSIFIED ASPHALT (SLOW-SETTING)..... @ 0.10 GAL/SY
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FOR APPLICABLE AGENCIES PRIOR TO COMMENCEMENT OF CONSTRUCTION. THE PERMIT FEES SHALL BE PAID BY THE CONTRACTOR AND CONSIDERED SUBSIDIARY TO THE WORK.
11. AT LEAST (5) WORKING DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION, A TRAFFIC CONTROL PLAN SHALL BE SUBMITTED TO LINCOLN COUNTY. THE TRAFFIC CONTROL PLAN SHALL BE PREPARED BY A CERTIFIED TRAFFIC CONTROL SUPERVISOR AND SHALL BE IN CONFORMANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. NO WORK SHALL BEGIN UNTIL ALL TRAFFIC CONTROL DEVICES HAVE BEEN PLACED IN ACCORDANCE WITH THE PLAN. THE CONTRACTOR SHALL CONTINUOUSLY MAINTAIN THE TRAFFIC CONTROL DEVICES FOR THE ENTIRE DURATION OF THE PROJECT OR UNTIL THE ROADWAY HAS BEEN OPENED AND THE PERMANENT TRAFFIC CONTROL DEVICES HAVE BEEN INSTALLED AND THE COLORADO SUPPLEMENT TO THE MUTCD.
12. THE CONTRACTOR SHALL PROTECT EXISTING FEATURES TO REMAIN FROM DAMAGE. EXISTING FEATURES TO REMAIN THAT ARE DAMAGED BY THE CONTRACTOR SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE COUNTY.
13. THE CONTRACTOR SHALL CONFORM TO ALL FEDERAL, STATE AND LOCAL HEALTH AND SAFETY RULES AND REGULATIONS.
14. ALL MATERIALS REQUIRED TO BE REMOVED SHALL BECOME PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE INDICATED IN THE PLANS OR PROJECT SPECIAL PROVISIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN A DISPOSAL SITE FOR THE PROPER DISPOSAL OF UNUSABLE MATERIALS.
15. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR MAINTAINING REASONABLE ACCESS TO AND FROM ALL OF THE ADJACENT PROPERTIES THROUGHOUT THE COURSE OF THE WORK. THE CONTRACTOR SHALL BE REQUIRED TO MEET (INDIVIDUALLY OR COLLECTIVELY) WITH ALL ADJACENT PROPERTY OWNERS WHOSE ACCESS WILL BE AFFECTED BY THE WORK. AS CONSTRUCTION CONDITIONS CHANGE AND THE WORK PROGRESSES, THE CONTRACTOR SHALL BE REQUIRED TO PERIODICALLY UPDATE THOSE PROPERTY OWNERS SO THAT THEY ARE KEPT INFORMED ABOUT THEIR ACCESS.
16. THE CONTRACTOR SHALL NOT PARK ANY VEHICLES OR EQUIPMENT OR DISTURB ANY AREA WITHOUT WRITTEN PERMISSION FROM THE AFFECTED PROPERTY OWNERS, INCLUDING THE COUNTY, AS APPLICABLE. THE WRITTEN PERMISSION SHALL BE SUBMITTED TO THE COUNTY FOR DOCUMENTATION PURPOSES.

17. RECORD DRAWINGS SHOWING ALL CHANGES FROM THE APPROVED CONSTRUCTION DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER AND LINCOLN COUNTY. THE RECORD DRAWINGS WILL CONSIST OF A MARKED-UP SET OF "ISSUED FOR CONSTRUCTION" DRAWINGS VERIFYING THE FOLLOWING:
  - (1) ANY OTHER VARIATIONS FROM THE CONSTRUCTION DOCUMENTS MUST BE CLEARLY NOTED AND DETAILED ON THE PLANS.
  - (2) AS-BUILT FIELD NOTES, FROM WHICH THE AS-BUILT DRAWINGS ARE PREPARED, ARE TO BE PROVIDED AND STAMPED/SIGNED AND DATED BY A COLORADO REGISTERED PROFESSIONAL LAND SURVEYOR.
18. DURING CONSTRUCTION AND UPON COMPLETION OF CONSTRUCTION, THE SITE SHALL BE CLEANED AND RESTORED TO A CONDITION EQUAL TO, OR BETTER THAN, THAT WHICH EXISTED BEFORE CONSTRUCTION.
19. IF CRITICAL DIMENSIONS ARE NOT SHOWN ON THE DRAWING THE CONTRACTOR SHALL CONTACT ENGINEER FOR ADDITIONAL INFORMATION.
20. REMOVAL OF HEDGES, SHRUBS, AND TREES SMALLER THAN 6 INCH IN DIAMETER WILL BE REQUIRED AND SHALL NOT BE PAID FOR SEPARATELY. THEY SHALL BE INCLUDED IN THE COST OF PAY ITEM CLEARING AND GRUBBING (LUMP SUM).
21. THE CONTRACTOR SHALL TAKE APPROPRIATE MEASURES TO ENSURE PUBLIC SAFETY DURING CONSTRUCTION AS NEEDED.
22. THE FOLLOWING SHALL BE FURNISHED WITH EACH ASPHALT PAVER:
  - (1) A SKI TYPE DEVICE AT LEAST 30 FEET IN LENGTH.
  - (2) SHORT SKI OR SHOE.
  - (3) 500 FEET OF CONTROL LINE AND STAKES.
  - (4) TAPER SHOE REQUIRED FOR LONGITUDINAL JOINT.
23. PRIOR TO PLACING HOT MIX ASPHALT, THE PAVED SURFACE SHALL BE SWEEP AND CLEANED. THIS WORK WILL BE PERFORMED BY A PICKUP BROOM. THIS WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF THE HOT MIX ASPHALT ITEMS.
24. MILLED SURFACES SHALL BE COVERED WITH NEW ASPHALT WITHIN 5 DAYS.
25. WHERE IT IS REQUIRED TO CUT EXISTING PAVEMENT, THE CUTTING SHALL BE PERFORMED TO A NEAT WORK LINE TO THE FULL DEPTH OF PAVEMENT WITH A PAVEMENT CUTTING SAW OR OTHER METHOD AS APPROVED BY THE PROJECT ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE WORK. SAWING AND CUTTING CONCRETE AND ASPHALT SHALL NOT BE MEASURED AND PAID FOR SEPARATELY BUT IT SHALL BE CONSIDERED AS INCIDENTAL TO THE WORK.
26. WHERE NEW PAVEMENT IS TO ABUT EXISTING PAVEMENT, THE EXISTING PAVEMENT SHALL BE REMOVED FULL DEPTH TO A NEAT VERTICAL LINE USING A PAVEMENT CUTTING SAW.
27. A TACK COAT SHALL BE PLACED PRIOR TO THE PLACEMENT OF SUBSEQUENT LIFTS OF HOT MIX ASPHALT. BEFORE PLACEMENT OF TACK COAT, THE CONTRACTOR SHALL CLEAN THE EXISTING ASPHALT SURFACE AS DIRECTED BY THE COUNTY. CLEANING SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED AS INCIDENTAL TO THE HOT MIX ASPHALT.
28. DILUTED EMULSIFIED ASPHALT FOR TACK COAT SHALL CONSIST OF 1-PART EMULSIFIED ASPHALT AND 1-PART WATER. THIS SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF ITEM 403, HOT MIX ASPHALT (HMA).
29. THE CONTRACTOR SHALL SUBMIT A PAVING SCHEDULE TO THE ENGINEER AT LEAST 5 WORKING DAYS PRIOR TO THE PRE-PAVING CONFERENCE. PAVING SHALL NOT BEGIN UNTIL THE SCHEDULE HAS BEEN ACCEPTED IN WRITING BY THE ENGINEER.
30. DEPTH OF RECONDITIONING AND MOISTURE-DENSITY CONTROL FOR THIS PROJECT SHALL BE AS FOLLOWS: FULL DEPTH OF ALL EMBANKMENTS FULL DEPTH FOR AGGREGATE BASE COURSE 6 INCHES FOR BASES OF CUTS AND FILLS.
31. EXCAVATION REQUIRED FOR COMPACTION OF BASES OF CUTS AND FILLS WILL BE SUBSIDIARY TO THAT OPERATION AND WILL NOT BE PAID SEPARATELY.
32. THE SEVERITY OF SULFATE EXPOSURE FOR ALL CONCRETE SHALL BE CLASS 0.
33. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROTECT EXISTING FEATURES NOT DESIGNATED FOR REMOVAL INCLUDING, BUT NOT LIMITED TO: LANDSCAPING, UTILITIES, FENCES, AND EXISTING SIGNAGE. DAMAGED FEATURES SHALL BE REPLACED "IN KIND" BY THE CONTRACTOR AND AT THE CONTRACTOR'S EXPENSE.
34. ALL WORK SHALL BE DONE WITHIN LINCOLN COUNTY RIGHT OF WAY.
35. CONTRACTOR SHALL WORK WITH THE LOCAL LANDOWNER CONCERNING CATTLE THAT ARE LOCATED ON BOTH SIDES OF AND UNDER THE BRIDGE.

**UTILITY NOTES**

1. LOCATION OF UTILITIES REPRESENT THE BEST KNOWN LOCATIONS AT THE TIME OF PREPARATION OF DRAWINGS. ADDITIONAL EXISTING UTILITIES MAY BE PRESENT WHICH ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL FIELD LOCATE ALL UTILITIES IN ADVANCE OF EXCAVATION. RELOCATION OF UTILITIES MAY OR MAY NOT BE NEEDED AFTER THEY ARE EXPOSED. RESPONSIBILITY FOR RELOCATION OF UTILITY LINES SHALL BE DISCUSSED WITH THE ENGINEER. THE CONTRACTOR SHALL COOPERATE WITH THE COMPANIES TRYING TO COORDINATE THE RELOCATION EFFORT. LINES NOT RELOCATED SHALL BE PROTECTED BY THE CONTRACTOR IN PLACE. ANY DAMAGE TO UTILITIES BY THE CONTRACTOR SHALL BE REPAIRED AT NO ADDITIONAL COST TO LINCOLN COUNTY. NO ADDITIONAL PAYMENT WILL BE ALLOWED FOR THE MINOR ADJUSTMENT OF STRUCTURES IN ORDER TO CLEAR A CONFLICTING UTILITY. THE CONTRACTOR SHALL CALL 811 PRIOR TO ANY WORK IN ACCORDANCE WITH STATE AND LOCAL STANDARDS.

**TRAFFIC CONTROL, SIGNING, AND STRIPING**

1. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MOST RECENT VERSION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), AND THE "COLORADO SUPPLEMENTAL MUTCD". FURTHER SPECIFICATIONS AND ILLUSTRATIONS ARE LOCATED IN THE COLORADO DEPARTMENT OF TRANSPORTATION "M&S STANDARDS".

**ENVIRONMENTAL**

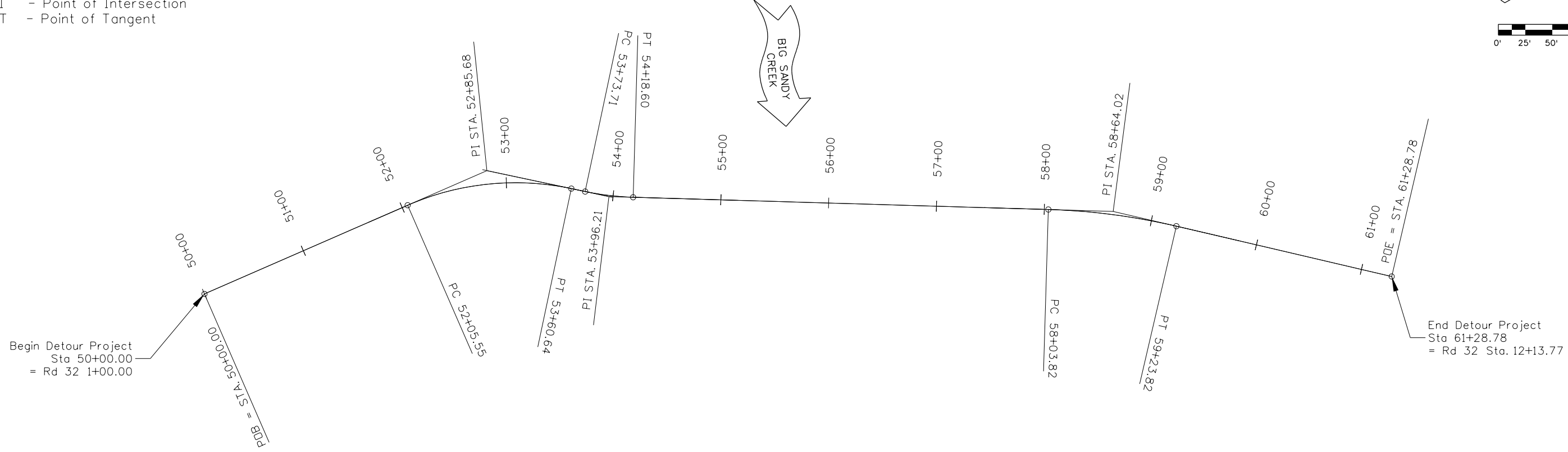
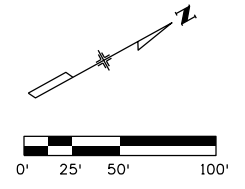
1. WETLANDS THAT WILL BE UNDERNEATH THE DETOUR SHALL BE MOWED ONLY, NOT CLEARED AND GRUBBED. GEOTEXTILE (EROSION CONTROL) CLASS 1 SHALL BE PLACED OVER THE WETLAND AREA, PRIOR TO PLACING EMBANKMENT MATERIAL. THE GEOTEXTILE SHALL EXTEND SLIGHTLY PAST THE LIMITS OF THE EMBANKMENT MATERIAL. MOWING SHALL BE INCLUDED IN THE COST OF WORK.
2. WETLANDS THAT WILL BE DISTURBED EAST OF THE DETOUR AND UNDERNEATH THE BRIDGE DECK SHALL BE MINIMIZED. THE WETLAND AREAS THAT ARE REQUIRED TO BE IMPACTED IN THESE LOCATIONS SHALL BE CLEARED AND GRUBBED AND STOCKPILED IN ACCORDANCE WITH SECTION 207. IMMEDIATELY AFTER COMPLETING THE WORK UNDER THE BRIDGE DECK, THE WETLAND TOPSOIL SHALL BE PLACED BACK AND SEEDED AS SOON AS POSSIBLE IN ACCORDANCE WITH SECTION 212.
3. WETLAND AREAS THAT DO NOT NEED TO BE IMPACTED BY THE WORK SHALL BE PROTECTED WITH PLASTIC FENCE.

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All seals for this set of drawings are applied to the cover page(s)	Print Date: 6/13/2024	Sheet Revisions				As Constructed		BIG SANDY CREEK BRIDGE REHAB GENERAL NOTES		Project No./Code	
	File Name: 78001_NT-001 GeneralNotes.dgn	Date:	Comments	Init.		No Revisions:				BRD C330-013	
	Horiz. Scale: N/A    Vert. Scale: N/A					Revised:		Designer:	S. Scott	Structure Numbers	26223
						Void:		Detailer:	S. Scott	Sheet Subset: Notes	Subset Sheets: 1 of 1

8/15/2024

POB - Point of Begin  
 POE - Point of End  
 PC - Point of Curve  
 PI - Point of Intersection  
 PT - Point of Tangent



Begin Detour Project  
 Sta 50+00.00  
 = Rd 32 Sta. 1+00.00

End Detour Project  
 Sta 61+28.78  
 = Rd 32 Sta. 12+13.77

DETOUR ALIGNMENT								
Point	Stations	Northing	Easting	Radius	Length	Line Bearing	Tangent	Delta
Start	50+00.00	477493.60	573156.10					
					205.55	N5°18'58.08"E		
PC	52+05.55	477698.27	573175.14					
PI	52+85.68	477778.05	573182.57	250	155.09		80.13	35° 32' 38.4"
PT	53+60.64	477838.66	573234.99					
					13.07	N40°51'35.60"E		
PC	53+73.71	477848.54	573243.54					
PI	53+96.21	477865.56	573258.26	250	44.89		22.51	10° 17' 16.8"
PT	54+18.60	477884.94	573269.71					
					385.23	N30°34'18.81"E		
PC	58+03.83	478216.62	573465.64					
PI	58+64.02	478268.44	573496.26	600	119.99		60.20	11° 27' 28.8"
PT	59+23.82	478313.16	573536.56					
					204.97	N42°01'48.37"E		
End	61+28.78	478465.41	573673.79					

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All seals for this set of drawings are applied to the cover page(s)

Print Date: 4/24/2024  
 File Name: 78001\_CRV-001 Detour Geometric Plan.dgn  
 Horiz. Scale: As Noted Vert. Scale: N/A

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Sheet Revisions		
Date:	Comments	Init.



As Constructed  
 No Revisions:  
 Revised:  
 Void:

**BIG SANDY CREEK BRIDGE REHAB  
 GEOMETRIC PLANS  
 DETOUR**

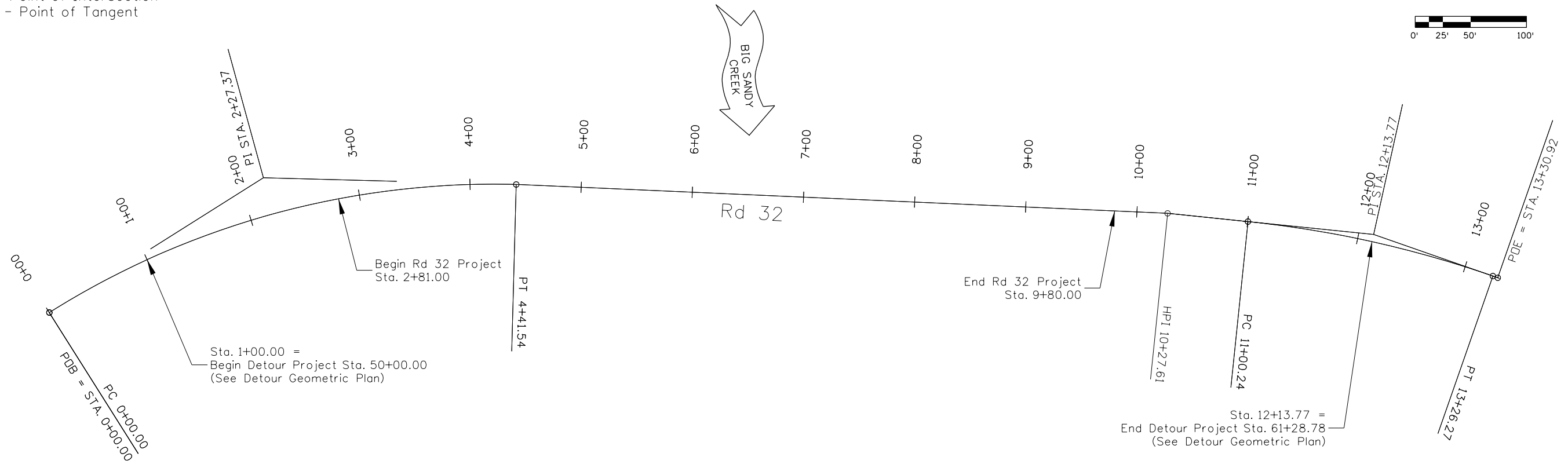
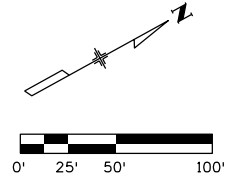
Designer: S. Scott  
 Detailer: S. Scott  
 Sheet Subset: Halign

Structure Numbers  
 Subset Sheets: 1 of 2

Project No./Code  
 BRD C330-013  
 26222  
 Sheet Number 12

8/15/2024

POB - Point of Begin  
 POE - Point of End  
 PC - Point of Curve  
 PI - Point of Intersection  
 PT - Point of Tangent



**RD 32 ALIGNMENT**

Point	Stations	Northing	Easting	Radius	Length	Line Bearing	Tangent	Delta
PC	0+00.00	477393.68	573155.23					
PI	2+27.37	477620.67	573142.05	750	441.54		227.37	33° 43' 51.6"
PT	4+41.54	477816.76	573257.13					
					586.07	N31°25'39.95"E		
PI	10+27.61	478316.85	573562.72					
					72.63	N34°45'10.07"E		
PC	11+00.24	478376.51	573604.11					
PI	12+13.77	478469.79	573668.83	970	226.03		113.53	13° 21' 3.6"
PT	13+26.27	478545.60	573753.33					
					4.66	N48°06'13.55"E		
End	13+30.92	478548.71	573756.80					

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Print Date: 4/24/2024  
 File Name: 78001\_CRV-002 Rd 32 Geometric Plan.dgn  
 Horiz. Scale: As Noted Vert. Scale: N/A

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 No Revisions:  
 Revised:  
 Void:

**BIG SANDY CREEK BRIDGE REHAB  
 GEOMETRIC PLANS  
 RD 32**

Designer: S. Scott  
 Detailer: S. Scott  
 Sheet Subset: Halign  
 Structure Numbers:  
 Subset Sheets: 2 of 2

Project No./Code  
 BRD C330-013  
 26222  
 Sheet Number 13

8/15/2024









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INDEX			CONTRACT ITEM NO.	CONTRACT ITEM	UNIT	PROJECT		STRUCTURE		DETOUR												PROJECT TOTALS	
BOOK	PAGE	SHEET				PLAN	AS CONST.														PLAN	AS CONST.	
			630-80341	Construction Traffic Sign (Panel Size A)	EACH	29														29			
			630-80342	Construction Traffic Sign (Panel Size B)	EACH	2														2			
			630-80360	Drum Channelizing Device	EACH	30														30			
			630-80372	Concrete Barrier (Temporary) (Install and Furnish)	LF	150				520										670			
			630-80380	Traffic Cone	EACH	100														100			
			630-86801	Traffic Signal (Temporary)	LS	1														1			
			700-70010	F/A Minor Contract Revisions	FA	1														1			
			700-70012	F/A Asphalt Pavement Incentive	FA	1														1			
			700-70016	F/A Fuel Cost Adjustment	FA	1														1			
			700-70019	F/A Asphalt Cement Cost Adjustment	FA	1														1			
			700-70023	F/A On-The-Job Trainee	FA	1														1			
			700-70380	F/A Erosion Control	FA	1														1			

8/15/2024

All seals for this set of drawings are applied to the cover page(s)	Print Date: 8/15/2024 File Name: 78001_SAO-001 Summary of Approx Quantities2.dgn	<b>Sheet Revisions</b>				As Constructed	<b>BIG SANDY CREEK BRIDGE REHAB SUMMARY OF APPROX. QUANTITIES</b>				Project No./Code BRD C330-013								
	Horiz. Scale: N/A    Vert. Scale: N/A	<table border="1" style="width: 100%;"> <tr> <th>Date:</th> <th>Comments</th> <th>Init.</th> </tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </table>	Date:	Comments		Init.										No Revisions:	Designer: S. Scott	Structure Numbers	26222
	Date:	Comments	Init.																
	Revised:	Detailer: S. Scott	Sheet Subset: SAQ	Subset Sheets: 4 of 4	Sheet Number 17														
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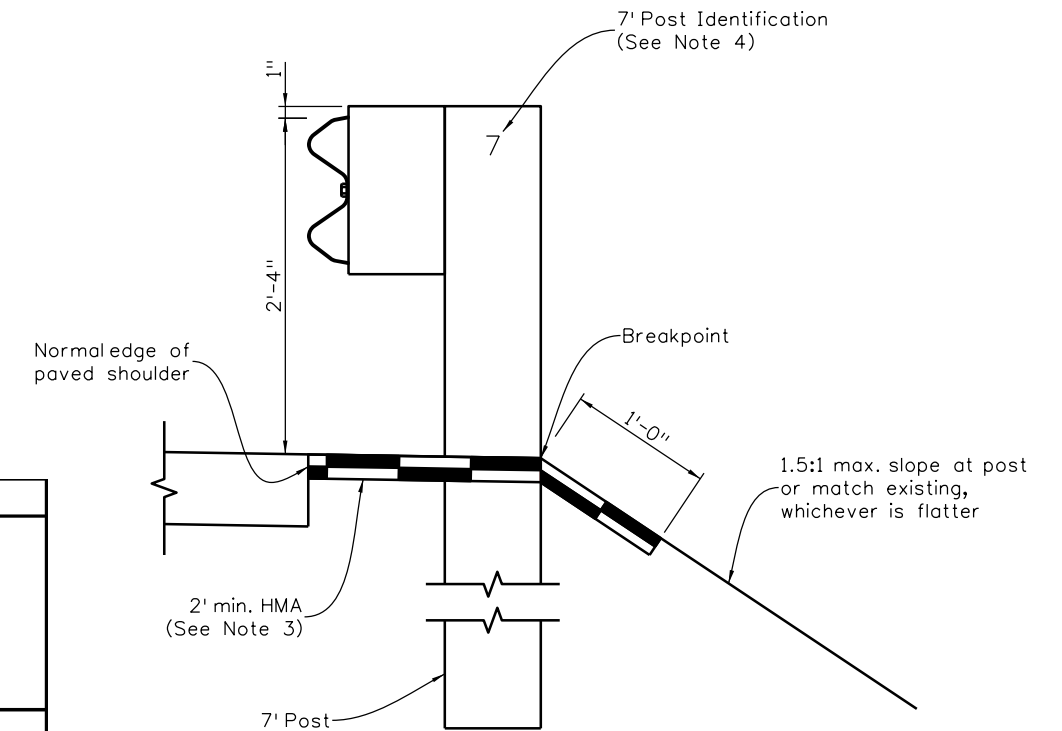
TABULATION OF SURFACING									
STATION			SIDE	REMOVAL OF ASPHALT MAT	AGGREGATE BASE COURSE (CLASS 6)	HOT MIX ASPHALT (GRADING SX)(75) (PG 64-22)	HOT MIX ASPHALT (GRADING SX)(75) (PG 64-28)	GEOTEXTILE (EROSION CONTROL) (CLASS 1)	COMMENTS/DESCRIPTIONS
				202-00220	304-06007	403-34741	403-34751	420-00102	
FROM	-	TO	LT/RT	SY	CY	TON	TON	SY	
<b>RD 32</b>									
2+81.00	-	4+19.24	LT/RT				93		
3+11.46	-	4+15.14	RT		2		8		Guardrail location
3+52.26	-	4+15.33	LT		2		5		Guardrail location
4+16.74	-	4+40.43	LT/RT	72					
4+16.74	-	4+19.24	LT/RT		3				
4+21.74	-	4+40.24	LT/RT		19				Under Approach Slab
8+15.41	-	8+33.91	LT/RT		19				Under Approach Slab
8+36.41	-	8+38.91	LT/RT		3				
8+15.41	-	8+38.91	LT/RT	72					
8+40.41	-	9+42.20	LT		2		7		Guardrail location
8+40.41	-	9+04.68	RT		2		5		Guardrail location
8+36.41	-	9+80.00	LT/RT				97		
<b>DETOUR</b>									
50+00.00	-	61+28.78	LT/RT		396	342			
51+58.99	-	53+30.03	LT/RT	227					
53+35.61	-	57+65.61	LT/RT					1603	
57+59.94	-	60+20.22	LT/RT	244					
<b>SUBTOTALS</b>				615	448	342	215	1603	
<b>10% ADDITIONAL FOR ASPHALT ONLY</b>						34	22		
<b>TOTALS</b>				<b>615</b>	<b>448</b>	<b>376</b>	<b>237</b>	<b>1603</b>	

All seals for this set of drawings are applied to the cover page(s)	Print Date: 5/1/2024	Sheet Revisions				As Constructed	BIG SANDY CREEK BRIDGE REHAB TABULATION OF SURFACING			Project No./Code
	File Name: 78001_TAB-001_Tabulations.dgn	Date:	Comments	Init.		No Revisions:				BRD C330-013
	Horiz. Scale: N/A    Vert. Scale: N/A					Revised:	Designer: S. Scott	Structure Numbers	LIN 32-2W.0A	26222
	 RockSol Consulting Group, Inc. 12076 Grant Street, Thornton, CO 80241 Phone: (303) 962-9300 Web: www.RockSol.com					Void:	Detailer: S. Scott	Sheet Subset: Tabs	Subset Sheets: 1 of 2	Sheet Number 18

8/15/2024

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TABULATION OF GUARDRAIL									
STATION		SIDE	REMOVAL OF GUARDRAIL TYPE 3	GUARDRAIL TYPE 3 (6-3 POST SPACING)	TRANSITION TYPE 3G	END ANCHORAGE (NONFLARED)	CONCRETE BARRIER (TEMPORARY) (INSTALL AND FURNISH)	REMARKS	
FROM	TO		202-01130	606-00301	606-01370	606-02003	630-80372		
LF	LF	LF	LF	EACH	EACH	LF			
<b>RD 32</b>									
3+26.00	-	3+76.94	RT				1		
3+35.32	-	4+40.83	RT	105					
3+76.94	-	3+89.67	RT		12.5				7' length guardrail posts required
3+41.76	-	3+78.52	LT				1		
3+89.07	-	4+40.83	LT	52					
3+89.67	-	4+15.14	RT				1		
3+90.79	-	4+15.33	LT				1		
8+14.91	-	9+18.06	LT	103					
8+14.91	-	8+67.72	RT	53					
8+40.41	-	8+65.41	LT				1		
8+40.41	-	8+65.41	RT				1		
8+65.41	-	9+15.38	RT					1	
8+65.41	-	8+77.91	LT		12.5				7' length guardrail posts required
8+77.91	-	9+27.90	LT				1		
<b>DETOUR</b>									
52+91.48	-	58+09.20	LT					520	
<b>TOTALS</b>				<b>313</b>	<b>25</b>	<b>4</b>	<b>4</b>	<b>520</b>	



**RESTRICTIVE ROADSIDE INSTALLATION WITH 7 FOOT GUARDRAIL POSTS**

Guardrail locations are as shown in the Tabulation of Guardrail

**GUARDRAIL NOTES:**

- Restrictive Roadside Installation Detail shall be used. Guardrail includes 7' posts, which shall be included in the guardrail pay item.
- For Guardrail face 2' or less from the normal edge of paved shoulder, continue the rate of slope of the normal paved shoulder to the breakpoint.
- When specified on the plans, extend a 2" minimum thickness paved surface to 1' behind the guardrail posts. Asphalt cutting & patching or other approved method shall be used to minimize damage to all paved surfaces under guardrail installations. All repairs to the paved area will not be measured and paid for separately but shall be included in the cost of the work. Install the post in a 1/2" oversized formed hole for guardrail runs and terminals as directed. Payment for this paved surface will be made under a pavement pay item with quantities shown in Tabulation of Surfacing.
- The 7' posts shall be marked with the number 7 to ensure permanent identification. Steel posts shall be stamped prior to galvanizing. The number 7 shall be a minimum 2" tall and located as shown on the detail.

All seals for this set of drawings are applied to the cover page(s)

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 RockSol Consulting Group, Inc.  
 12076 Grant Street, Thornton, CO 80241  
 Phone: (303) 962-9300  
 Web: www.RockSol.com

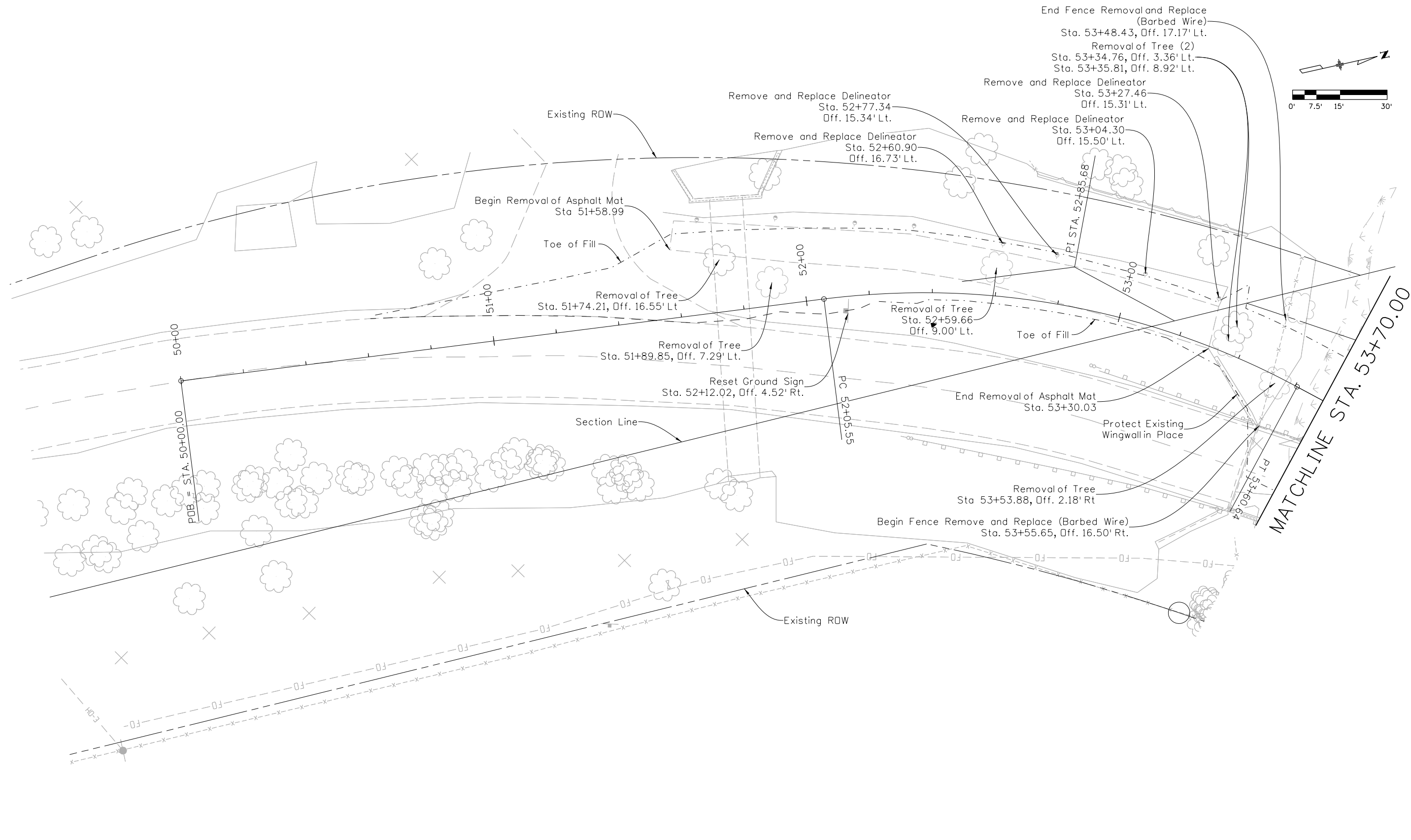
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Date:	Comments	Init.



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Revised:	Designer: S. Scott	Structure Numbers	LIN 32-2W.OA	26222
Void:	Detailer: S. Scott	Sheet Subset: Tabs	Subset Sheets: 2 of 2	Sheet Number 19

8/15/2024

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Sheet Revisions		
Date:	Comments	Init.



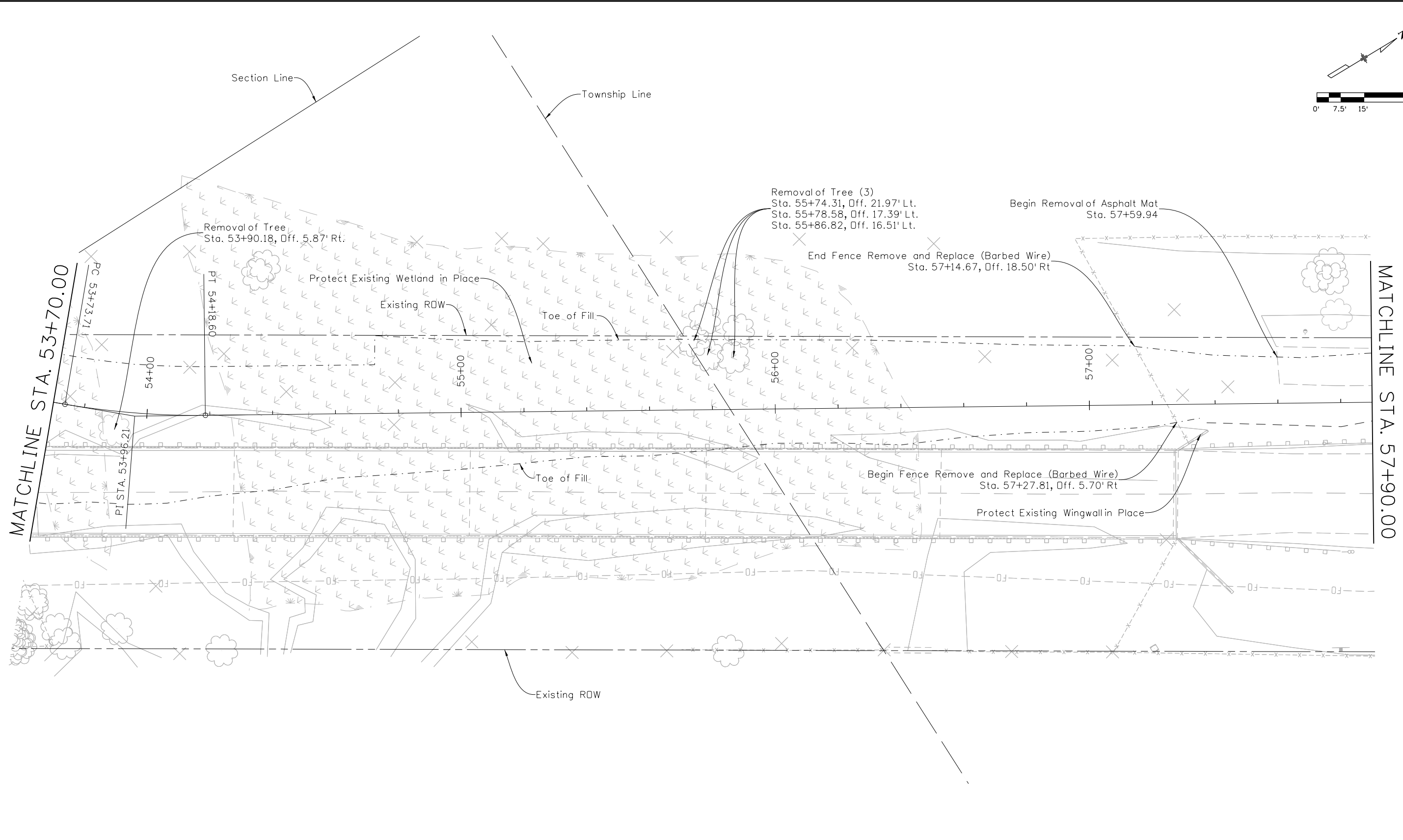
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Designer:	S. Scott	Structure Numbers	LIN 32-2W.0A
Detailer:	H. Pugh	Subset Sheets:	1 of 5
Sheet Subset:	Removals		

Project No./Code	BRD C330-013
	26222
Sheet Number	20

8/15/2024

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Sheet Revisions		
Date:	Comments	Init.



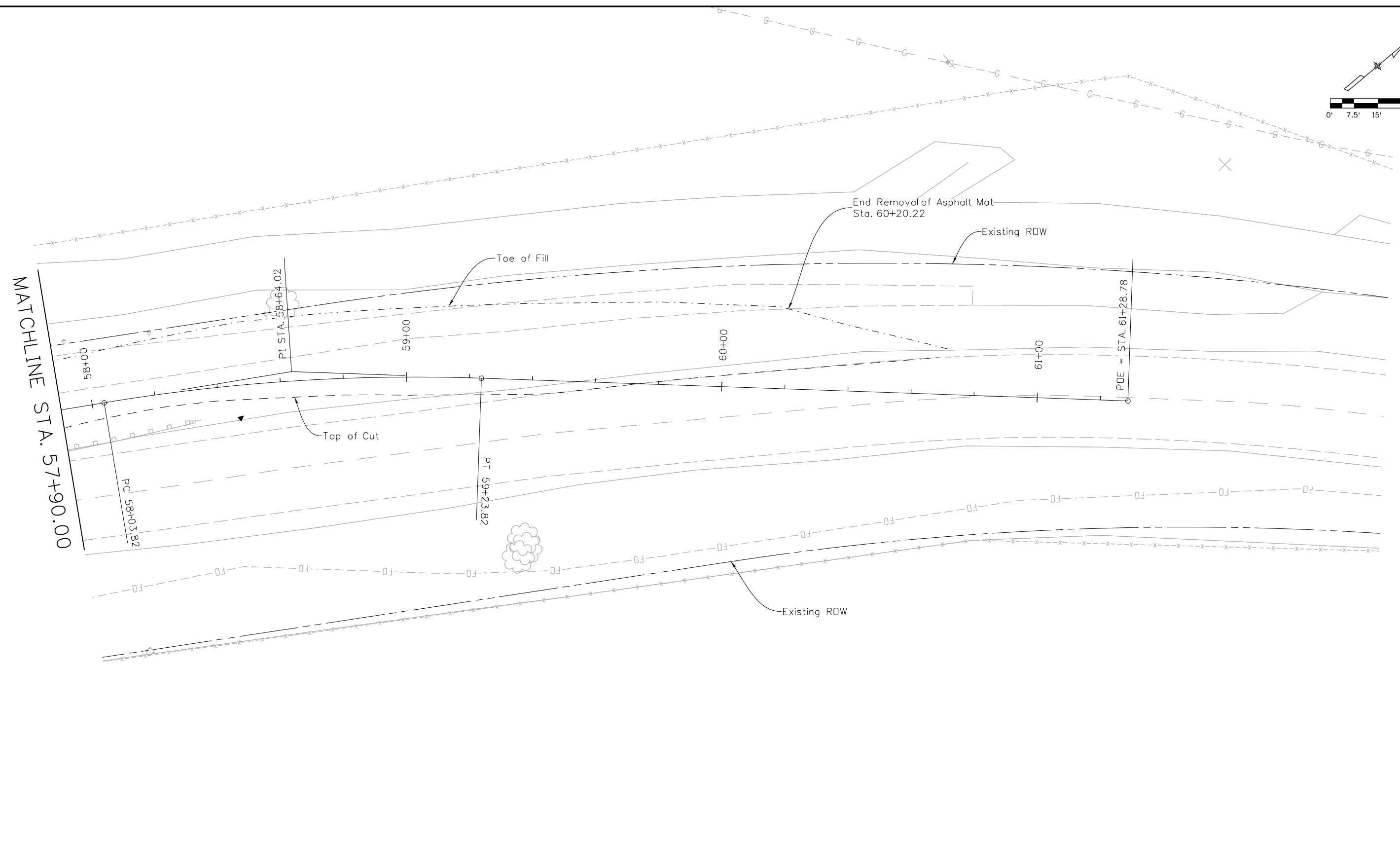
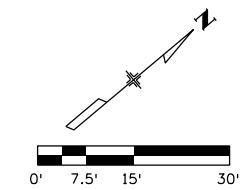
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Designer:	S. Scott	Structure Numbers	LIN 32-2W.0A
Detailer:	H. Pugh	Subset Sheets:	2 of 5
Sheet Subset:	Removals		

Project No./Code	BRD C330-013
Sheet Number	21

8/15/2024

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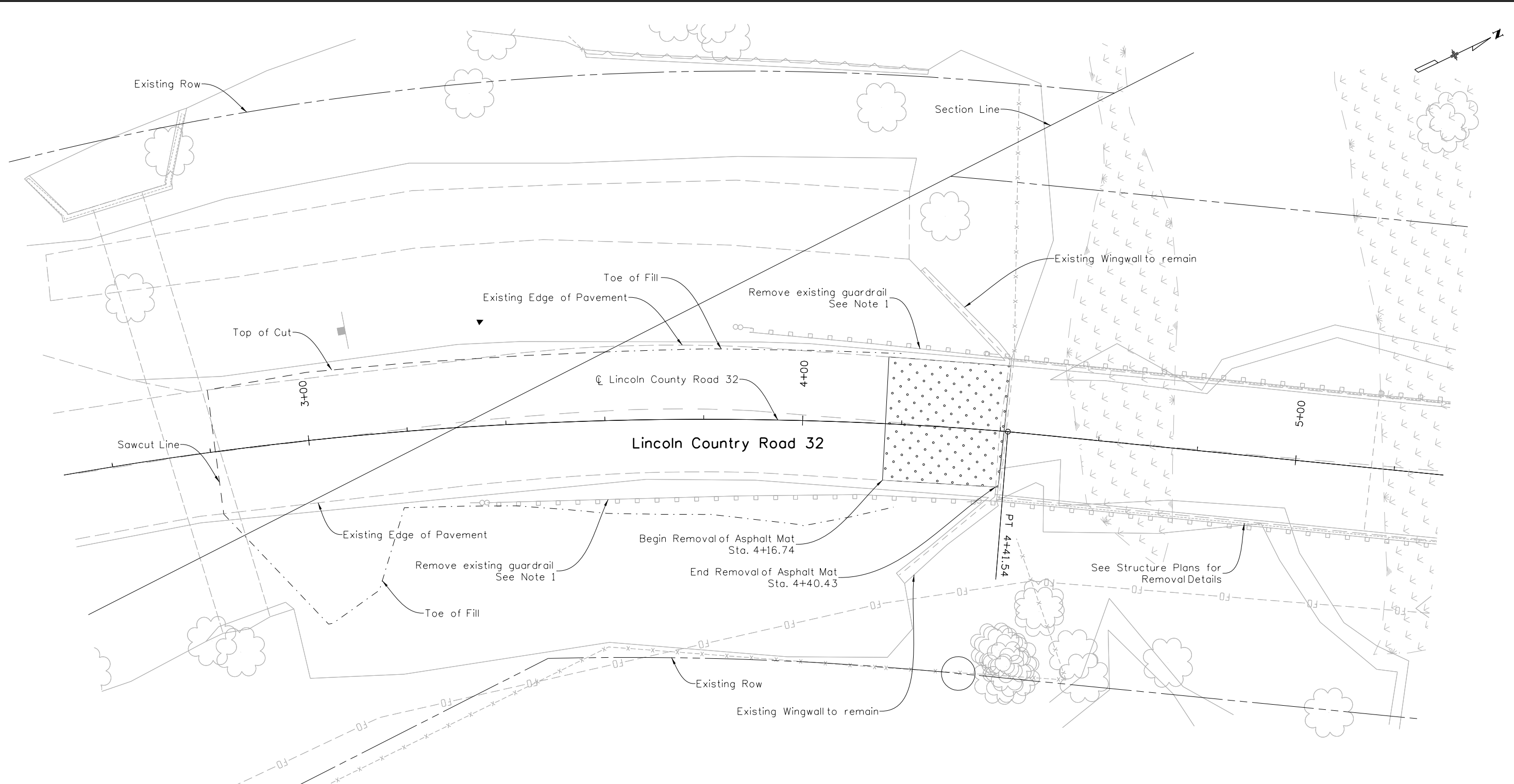
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Designer:	S. Scott	Structure Numbers	LIN 32-2W.0A
Detailer:	H. Pugh	Sheet Subset:	Removals
Subset Sheets:	3 of 5		

Project No./Code  
 BRD C330-013  
 26222  
 Sheet Number 22


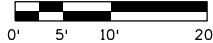
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**PLAN**

**LEGEND**

 Removal of Asphalt Mat  
 0' 5' 10' 20'

**NOTES**

1. Refer to Tabulation of Guardrail sheet for stations and lengths of removals for guardrail.

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Date:	Comments	Init.



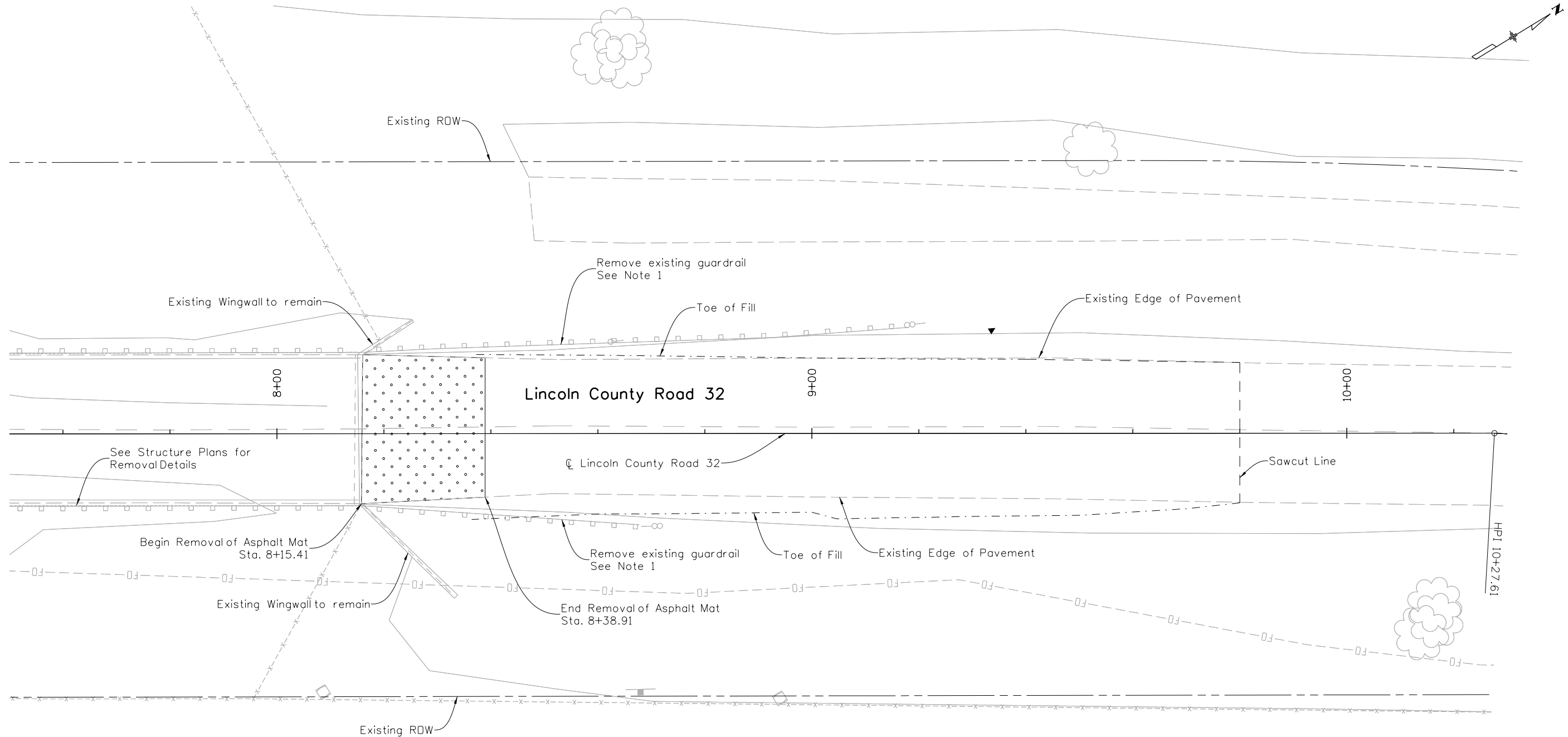
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Revised:
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Designer:	S. Scott	Structure Numbers	LIN 32-2W.0A
Detailer:	H. Pugh	Subset Sheets:	4 of 5
Sheet Subset:	Removals		

Project No./Code	BRD C330-013
Sheet Number	23


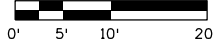
8/15/2024

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**PLAN**

**LEGEND**

 Removal of Asphalt Mat  


**NOTES**

1. Refer to Tabulation of Guardrail sheet for stations and lengths of removals for guardrail.

All seals for this set of drawings are applied to the cover page(s)

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Date:	Comments	Init.



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No Revisions:
Revised:
Void:

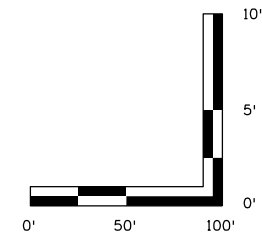
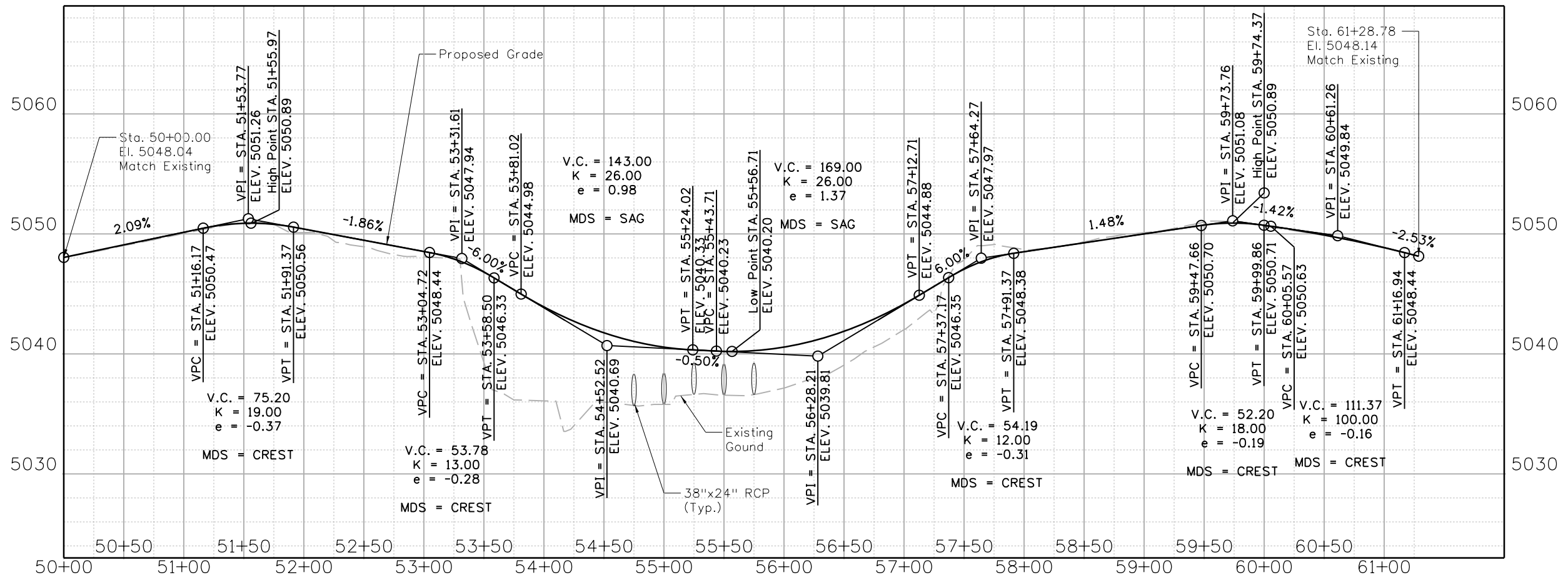
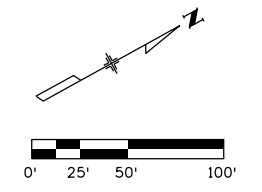
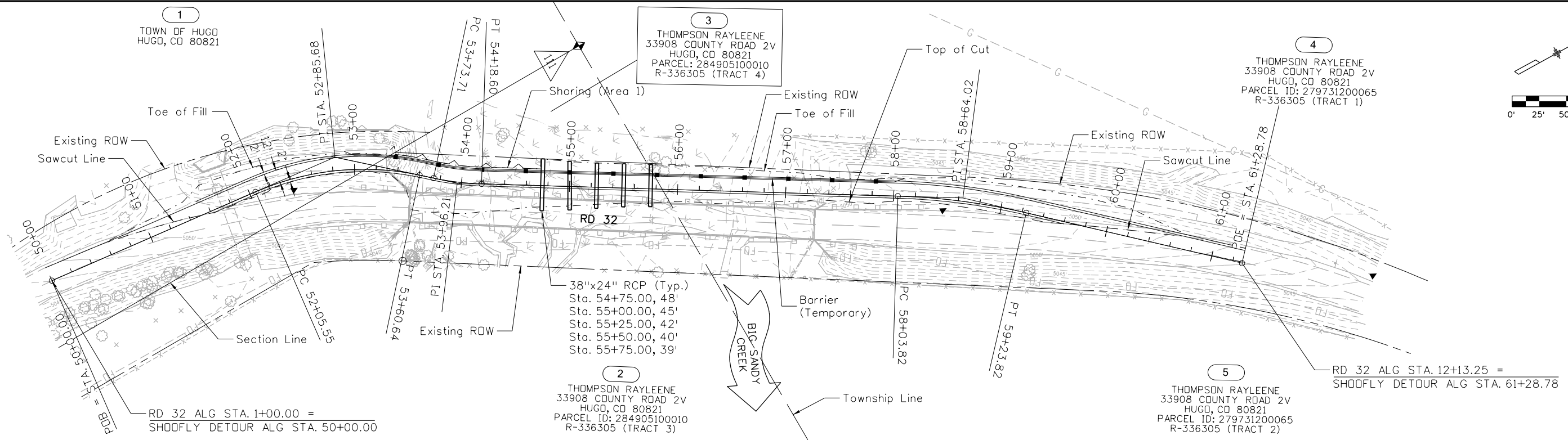
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Detailer:	H. Pugh	Subset Sheets:	5 of 5
Sheet Subset:	Removals		

Project No./Code	BRD C330-013
Sheet Number	24

8/15/2024



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Date:	Comments	Init.



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No Revisions:

Revised:

Void:

**BIG SANDY CREEK BRIDGE REHAB  
DETOUR PLAN & PROFILE**

Designer: S. Scott  
Detailer: S. Scott  
Sheet Subset: P&P

Structure Numbers:      

Subset Sheets: 1 of 2

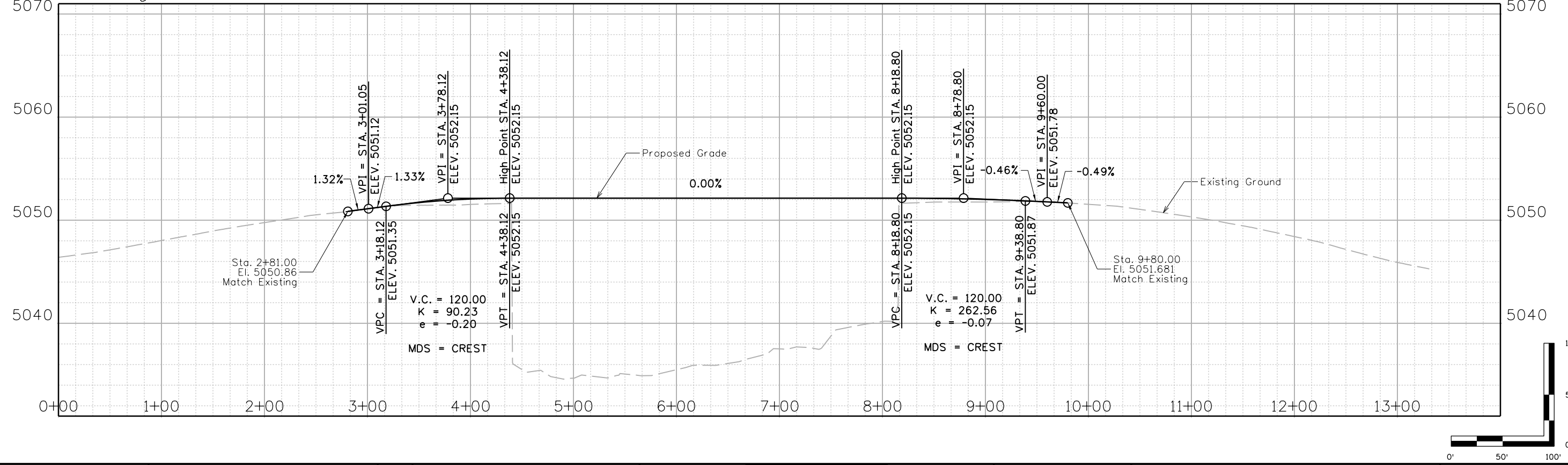
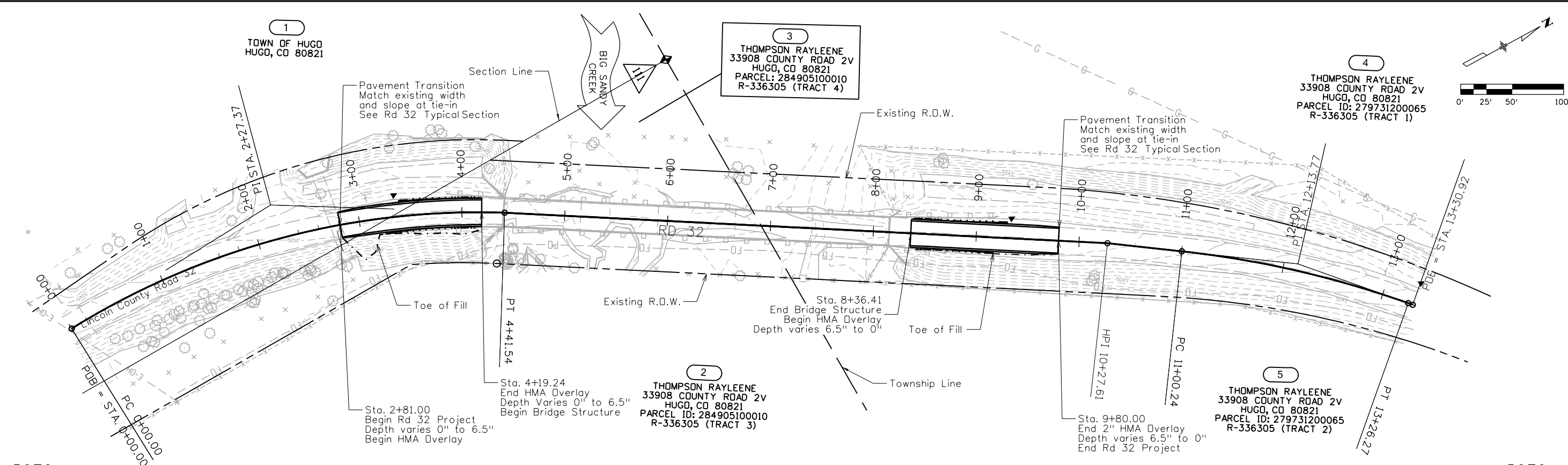
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26222

Sheet Number 25

8/15/2024

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 Phone: (303) 962-9300  
 Web: www.RockSol.com

Sheet Revisions		
Date:	Comments	Init.



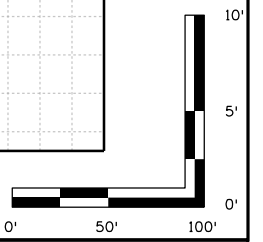
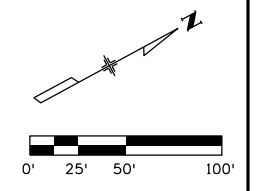
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**BIG SANDY CREEK BRIDGE REHAB  
 MAINLINE PLAN & PROFILE**

Designer: S. Scott  
 Detailer: S. Scott  
 Sheet Subset: P&P

Structure Numbers:  
 Subset Sheets: 2 of 2

Project No./Code  
 BRD C330-013  
 26222  
 Sheet Number 26



8/15/2024

**GENERAL NOTES**

All work shall be done in accordance with the Colorado Department of Transportation 2023 Standard Specifications for Road and Bridge Construction, as described in Project Special Provisions, and as noted in the drawings.

Stations, elevations, and dimensions contained in these plans are calculated from the "As Constructed Plans" and from a recent field survey. These stations, elevations, and dimensions may be adjusted to meet the existing structure. The Contractor shall verify all dependent dimensions in the field before ordering or fabricating any material.

All longitudinal and transverse dimensions are measured horizontally and include no correction for grade.

The Contractor shall be responsible for the stability of the structure during construction.

Falsework may be required, but is not anticipated unless the Contractor applies lateral loads to the girders. All falsework shall conform to the requirements of Subsection 601.11 of the 2023 CDDT Standard Specifications for Road and Bridge Construction.

The following structural steel shall be AASHTO M270 Grade 50 (ASTM A709 Grade 50): rolled sections, plates, bars.

The following structural steel shall be AASHTO M270 Grade 36 (ASTM A709 Grade 36 or Grade 50 (ASTM A709 Grade 50): expansion device bridging plates, washer plates, angles.

Structural steel for the bridge rail shall be as shown on the plans.

Bolts shall conform to ASTM A325.

Welded shear studs shall conform to Specifications Sections 509.12, 509.20(h), and 509.26.

Steel stay-in-place deck forms are optional. Conform to Specifications Section 601.10.

Concrete precast deck forms are not allowed, since girder flanges are not wide enough to accommodate them.

Expansion joint material shall meet AASHTO Specification M213.

All reinforcing steel shall be epoxy coated unless otherwise noted.

Ⓝ indicates non-epoxy coated (black reinforcement)

Grade 60 reinforcing steel is required unless otherwise noted.

Concrete finish for bridge rail curb, deck, and all other exposed concrete surfaces shall receive a Class 1 final finish, except top surface of deck, Class 1 finish not required. Concrete deck shall be finished according to 601.15(e) of the Standard Specifications.

All concrete shall be Concrete Class D (Bridge), unless noted otherwise.

Structural concrete shall conform to Cementitious Material Requirements Class 0, corresponding to Sulfate Exposure Class 0.

The location of splices, except where shown on the plans, shall be based upon using 60 foot stock length bars for No. 6 bars and larger and 40 foot stock length bars for No. 4 and No. 5 bars. Splice locations not shown herein shall be approved by the Engineer. Splices shall be alternately staggered unless noted otherwise.

The information shown on these plans concerning the type and location of underground utilities is not guaranteed to be accurate or all-inclusive. The Contractor is responsible for making his own determination as to the type and location of underground utilities as may be necessary to avoid damage thereto. The Contractor shall contact The Utility Notification Center of Colorado at 811 or 1-800-922-1987 at least 3 days (not including the day of notification) prior to any excavation or other earthwork.

Contractor shall notify the Engineer of Record for approval of emergency construction joints.

**DESIGN DATA**

AASHTO, Ninth Edition LRFD (2020) with current interims

Design Method: Load and Resistance Factor Design

Live Load: HL-93 (design truck or tandem, and design lane load)

Dead Load: Assumes 36 lbs per sq ft for bridge deck overlay

Reinforced Concrete:

Class D Concrete:  $f'_c = 4,500$  psi

Reinforcing Steel:  $f_y = 60,000$  psi

Structural Steel: AASHTO M270 (ASTM A709) Grade 36  $f_y = 36,000$  psi  
 AASHTO M270 (ASTM A709) Grade 50  $f_y = 50,000$  psi  
 Bolted Surfaces Conditions = Class A (slip coefficient 0.33)

Existing rolled girders structural steel grade is identified as ASTM A36 in 1983 plans and is consistent with most commonly available structural steel for rolled wide flange girders:  
 ASTM A36  $f_y = 36,000$  psi

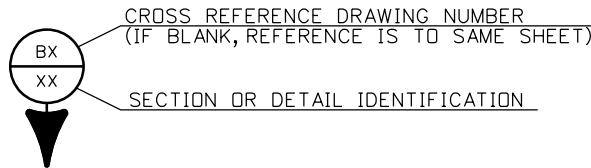
Strength I Limit State:  
 Reinforced Concrete Structural Strength  
 Composite Girder Structural Strength

Service I Limit State:  
 Service Stresses Compared to Service Allowable Stresses

**ABBREVIATIONS**

BF = Back Face El. = Elevation  
 RC = Reinforced Concrete

See Standard Plan No M-100-2 for additional abbreviations



**Know what's below.  
 Call before you dig.**

**INDEX OF DRAWINGS**

- B1 GENERAL INFORMATION, SUMMARY OF QUANTITIES
- B2 GENERAL LAYOUT
- B3 BRIDGE TYPICAL SECTION
- B4 REMOVAL DETAILS
- B5 CONSTRUCTABILITY CONCEPT
- B6 SUPERSTRUCTURE DETAILS - STRUCTURAL STEEL
- B7 SUPERSTRUCTURE DETAILS - DECK REINFORCEMENT
- B8 SUPERSTRUCTURE DETAILS - DECK PLAN
- B9 BRIDGE RAIL LAYOUT
- B10 BRIDGE RAIL TYPE 10 MASH
- B11 TRANSITION TYPE BR10-GR3 SHEET 1 - CURB DETAILS
- B12 TRANSITION TYPE BR10-GR3 SHEET 2 - TUBE AND PLATE DETAILS
- B13 BRIDGE EXPANSION DEVICE
- B14 BRIDGE EXPANSION DEVICE (0-4 INCH) OVER CURB
- B15 APPROACH SLAB DETAILS
- B16 DECK DRAIN DETAILS
- B17 BRIDGE DECK ELEVATIONS (1 OF 8)
- B18 BRIDGE DECK ELEVATIONS (2 OF 8)
- B19 BRIDGE DECK ELEVATIONS (3 OF 8)
- B20 BRIDGE DECK ELEVATIONS (4 OF 8)
- B21 BRIDGE DECK ELEVATIONS (5 OF 8)
- B22 BRIDGE DECK ELEVATIONS (6 OF 8)
- B23 BRIDGE DECK ELEVATIONS (7 OF 8)
- B24 ROADWAY APPROACHES (8 OF 8)

**WORK DESCRIPTION**

Lincoln County Road 32 over Big Sandy Creek, built 1984.

Removal of corrugated steel bridge plank deck and asphalt wearing surface. Structural steel modifications to existing girder connections. 5 spans modified to be fixed for moment continuity for 2 superstructure units. New reinforced concrete deck and bridge rail, waterproofing membrane and asphalt wearing surface.

375'-0" length, no skew, 30'-6" Bridge out-to-out, 27'-6" Roadway, Bridge Rail Type 10 MASH.

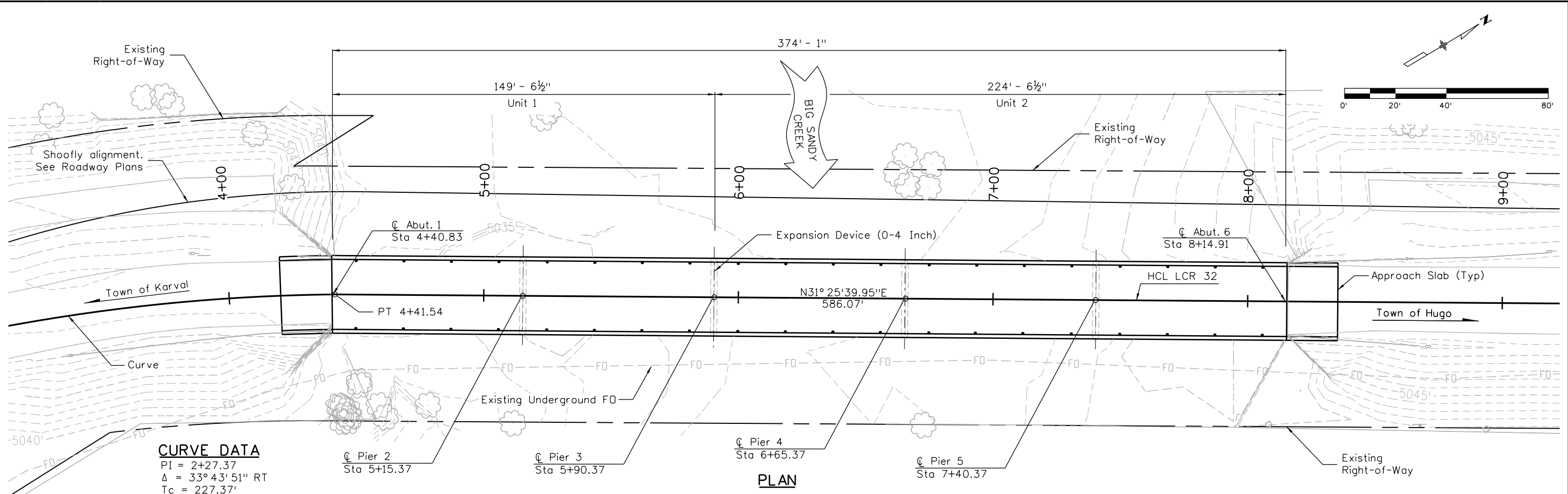
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ITEM NO.	DESCRIPTION	UNIT	SUPER STR	ABUT 1	ABUT 6	TOTAL
202-00503	Removal of Portions of Present Structure	SY	1167			1167
202-05150	Sandblasting	SF	14626			14626
206-00000	Structure Excavation	CY		39	39	78
206-00100	Structure Backfill (Class 1)	CY		25	25	50
403-34752	Hot Mix Asphalt (Grading SX)(75)(PG 64-28)	TON	189	10	10	209
508-90000	Paint Existing Structure	LS	1			1
509-00000	Structural Steel	LB	13485			13485
513-00690	Bridge Drain (Special)	EACH	40			40
515-00120	Waterproofing Membrane	SY	1146	62	62	1270
518-01004	Bridge Expansion Device (0-4 Inch)	LF	83			83
601-03040	Concrete Class D	CY	305	29	29	363
602-00020	Reinforcing Steel (Epoxy Coated)	LB	95344	4802	4802	104949
606-01400	Transition Type BR10M-GR3	EACH	4			4
606-11035	Bridge Rail Type 10 MASH	LF	750	41	41	832

j.kelly 11:54:29 AM R:\Q-Projects\ACTIVE PROJECTS\78001\_Lincoln County Road 32 over Big Sandy Creek Bridge Rehabilitation\800\_Computer Design Files\802\_Sheet Files\78001\_BI\_General\_Information.dgn

8/15/2024

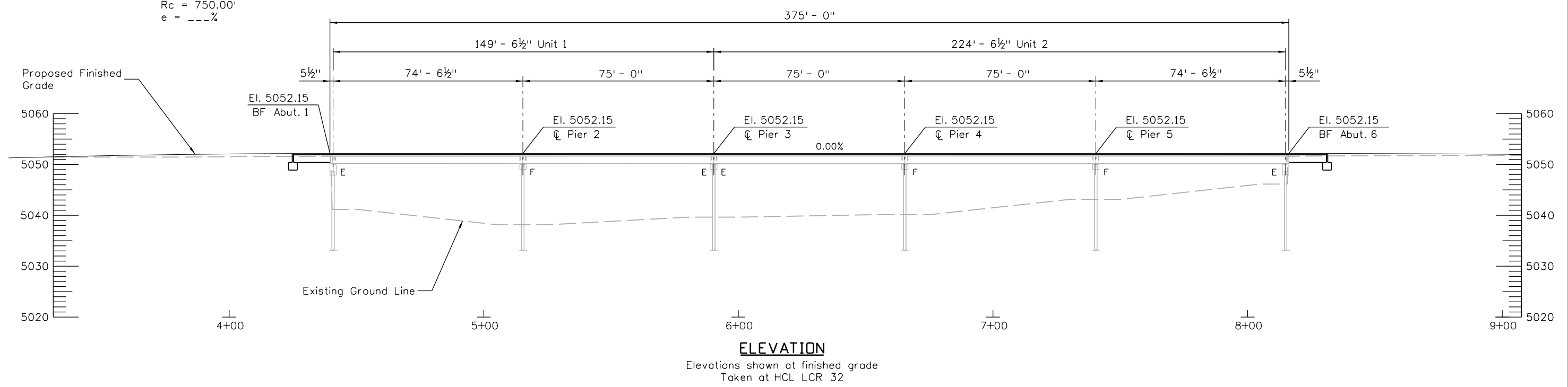
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	RockSol Consulting Group, Inc. 12076 Grant Street, Thornton, CO 80241 Phone: (303) 962-9300 Web: www.RockSol.com					Void:		Detailer: D. Gonzales	Subset Sheets: B1 of 24	26222	
						Sheet Subset: Bridge				Sheet Number 27	

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**CURVE DATA**  
 PI = 2+27.37  
 $\Delta = 33^\circ 43' 51''$  RT  
 Tc = 227.37'  
 Dc =  $07^\circ 38' 22''$   
 Lc = 441.54'  
 Rc = 750.00'  
 e = ---%

**PLAN**



**ELEVATION**

Elevations shown at finished grade  
 Taken at HCL LCR 32

Design		Detail		Quantities	
Designed By	Checked By	INITIAL	DATE	INITIAL	DATE
XXX	XXX	XXX	YYYY	XXX	YYYY
Checked By	Checked By	Detailed By	Checked By	Quantities By	Checked By
XXX	XXX	XXX	YYYY	XXX	YYYY

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Sheet Revisions		
Date:	Comments	Init.



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No Revisions:
Revised:
Void:

**BIG SANDY CREEK BRIDGE REHABILITATION  
 GENERAL LAYOUT**

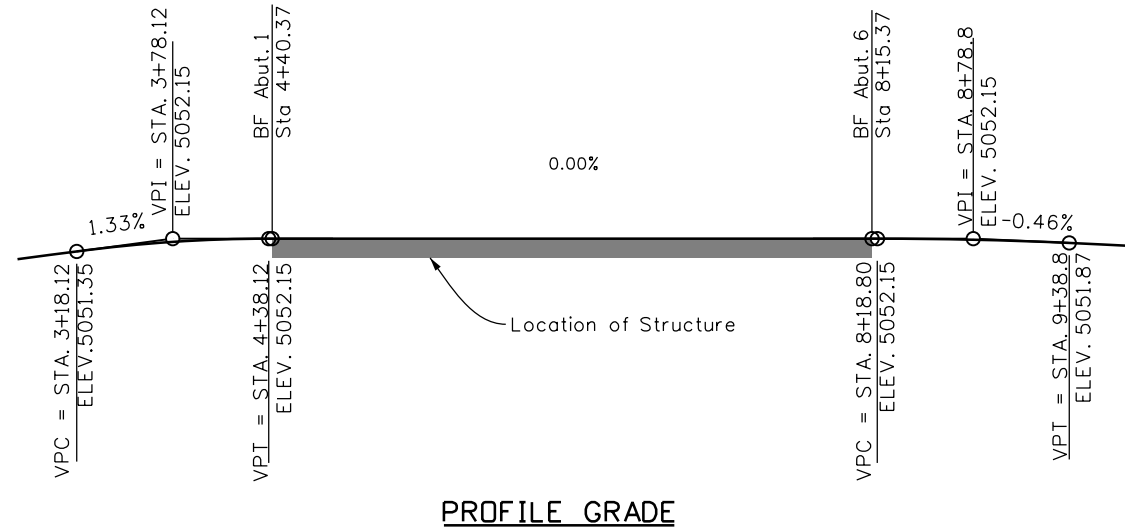
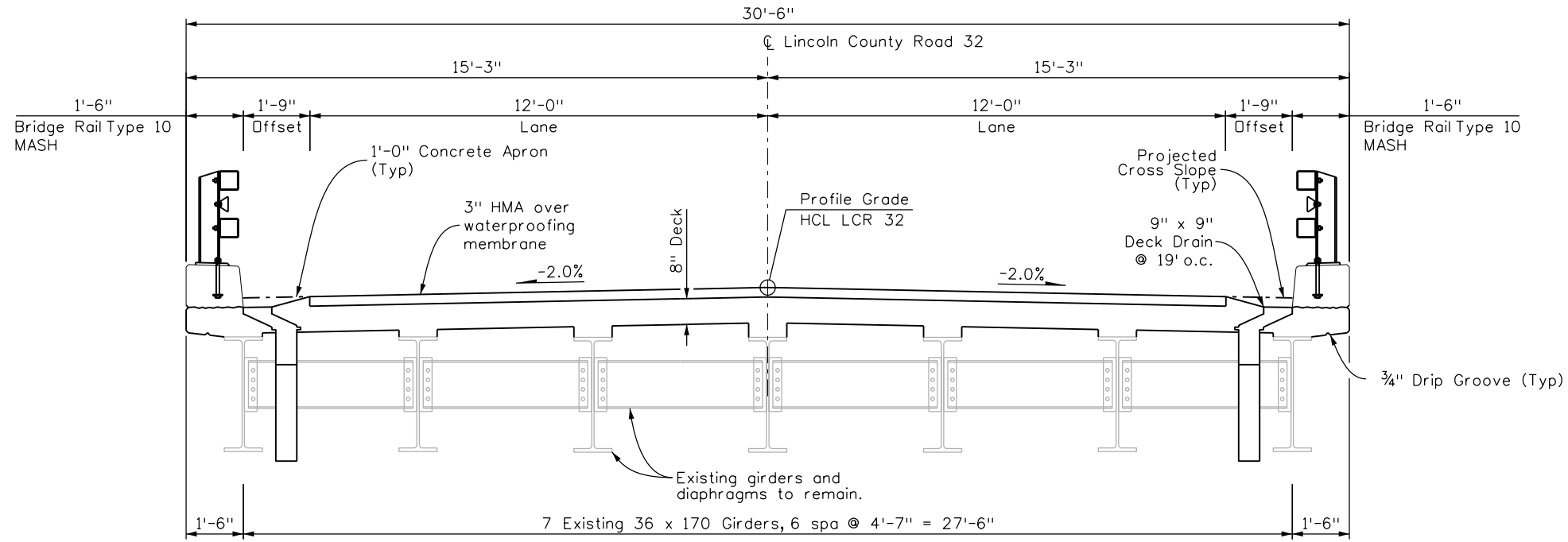
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Detailer:	D. Gonzales	Subset Sheets:	Bridge
Sheet Subset:	Bridge	Subset Sheets:	B2 of 24

Project No./Code	BRO C330-013
Sheet Number	28

8/15/2024

Design		Detail		Quantities	
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Checked By	Checked By	Checked By	Checked By	Checked By	Checked By
XXX	XXX	XXX	YYYY	XXX	YYYY

j.kelly 2:48:41 PM R:\0-Projects\ACTIVE PROJECTS\78001-Lincoln County Road 32 over Big Sandy Creek Bridge Rehabilitation\800-Computer Design Files\802\_Sheet Files\78001\_B3\_Typical.dgn



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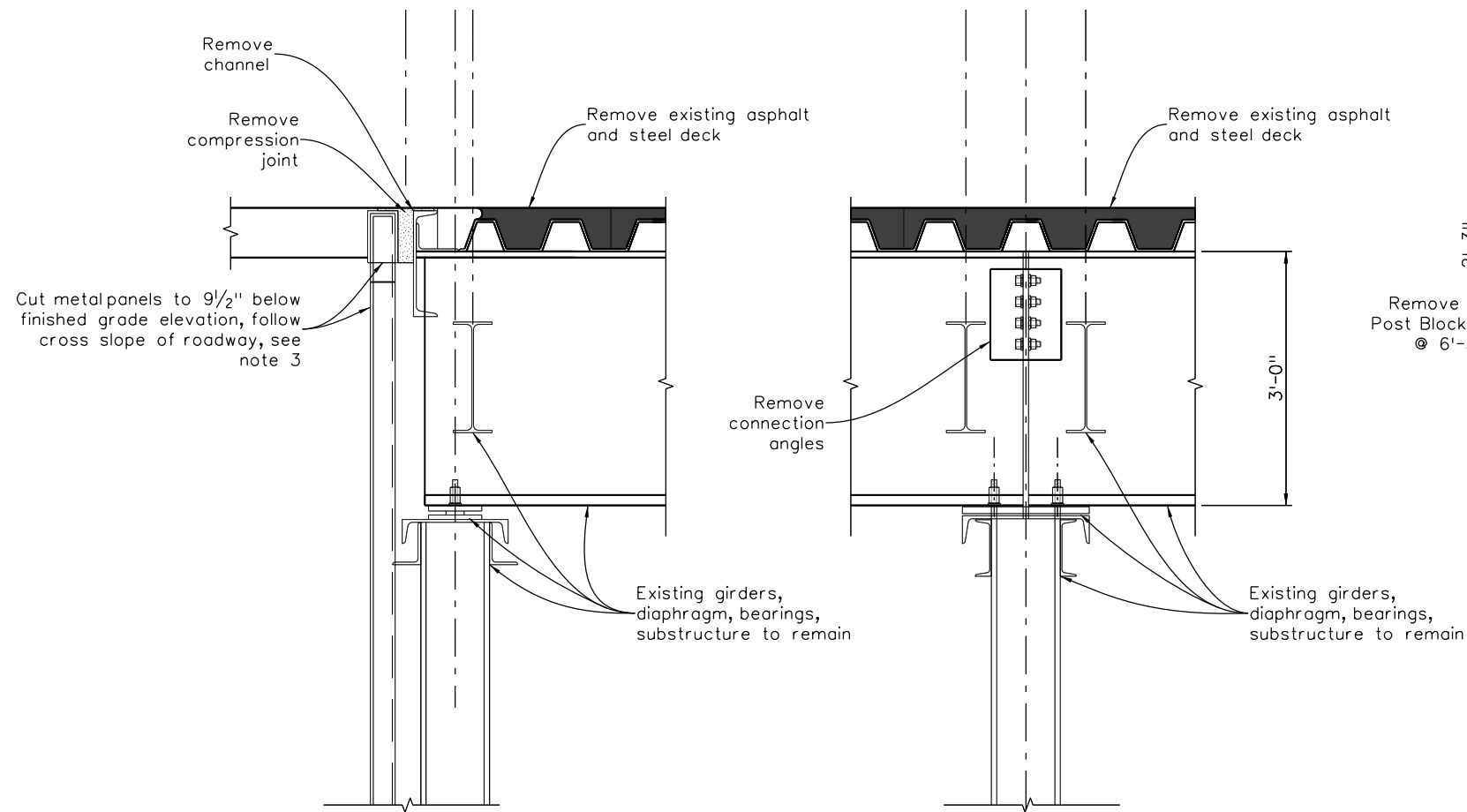
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No Revisions:	BRIDGE TYPICAL SECTION		BRO C330-013
Revised:	Designer: J. Kelly	Structure Numbers	26222
Void:	Detailer: D. Gonzales	Sheet Subset: Bridge	Sheet Number 29
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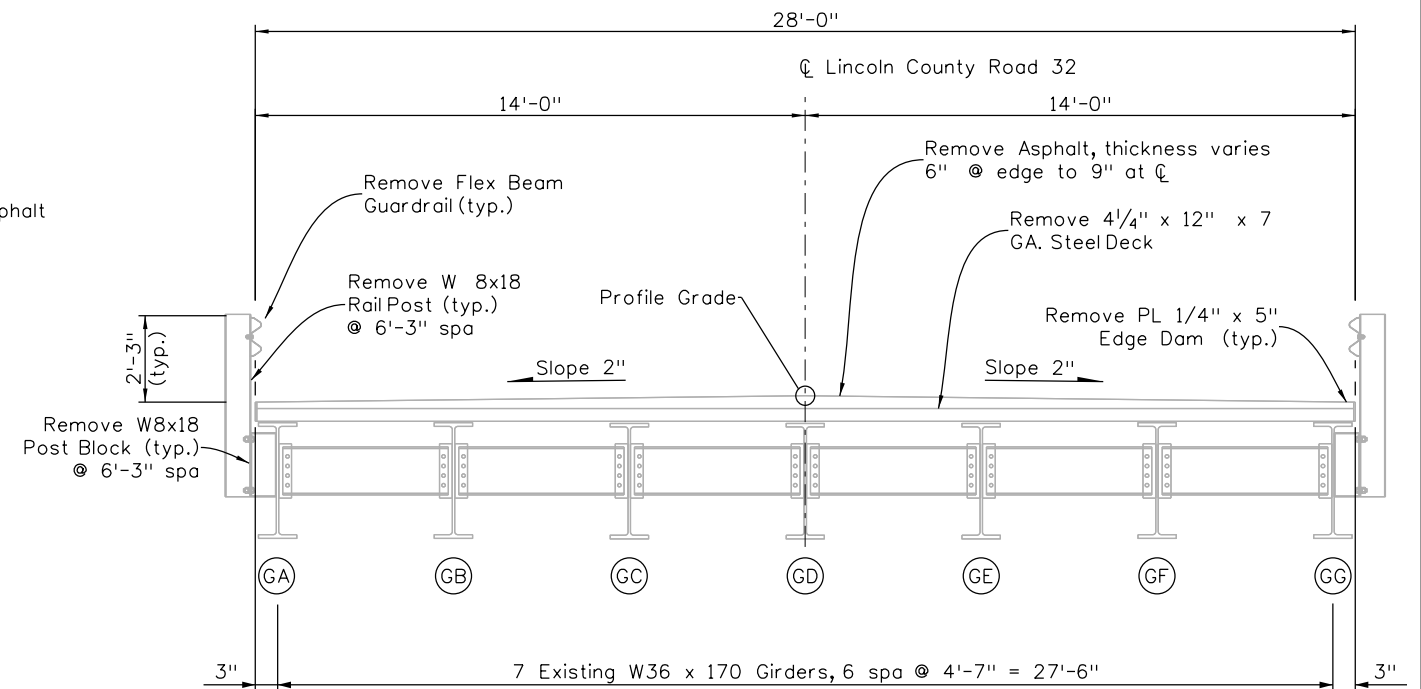
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**REMOVAL DETAIL AT ABUTMENT**

**REMOVAL DETAIL AT PIER**



**EXISTING BRIDGE TYPICAL SECTION**

**NOTES:**

1. Item 202 - Removal of Portions of Present Structure includes:
  - Remove existing corrugated steel deck, asphalt overlay, steel edge dams, expansion devices. Dispose.
  - Torch or plasma shall not be used when cutting welded attachments to girder flanges.
  - Remove existing railing; flex beam guardrail, post blocks; place in neat pile near bridge, since guardrail, posts, post blocks shall remain county property. Torch or plasma shall not be used when cutting the welded attachment to exterior girders webs; remaining weld on girder need not be ground smooth.
  - Remove dirt and debris from pier caps and abutment caps.
2. Item 202 - Sandblasting operations to be conducted only on areas of steel superstructure where corrosion, peeling or flaking of paint, or where exposed steel is visible. Sandblasting includes removing paint, rust, corrosion, and all fractured steel particles after removal of existing steel deck, railing, posts, post blocks, asphalt, and expansion devices. Containment shall prevent paint fragments, sand or other removal fragments from falling into the channel.
3. Contractor to verify depth to bottom of approach slab prior to removal of abutment metal panel.

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Print Date: 5/21/2024  
 File Name: 78001\_B4\_Removal.dgn  
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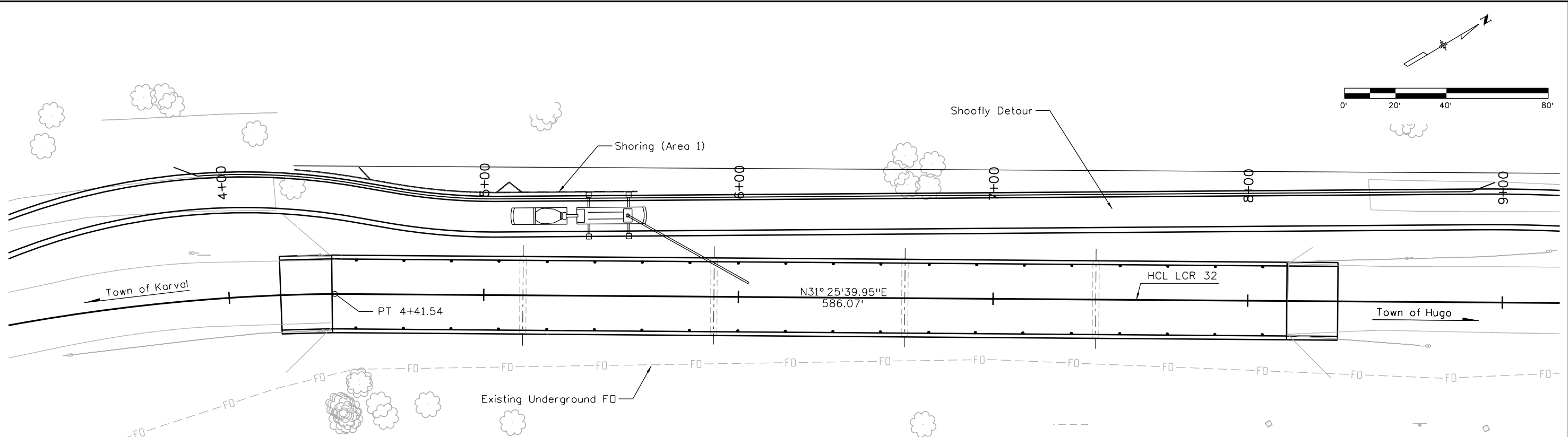


As Constructed	BIG SANDY CREEK BRIDGE REHABILITATION REMOVAL DETAILS			Project No./Code
No Revisions:				BRO C330-013
Revised:	Designer: J. Kelly	Structure Numbers	LIN-32-2W-0A	26222
Void:	Detailer: D. Gonzales	Sheet Subset: Bridge	Subset Sheets: B4 of 24	Sheet Number 30

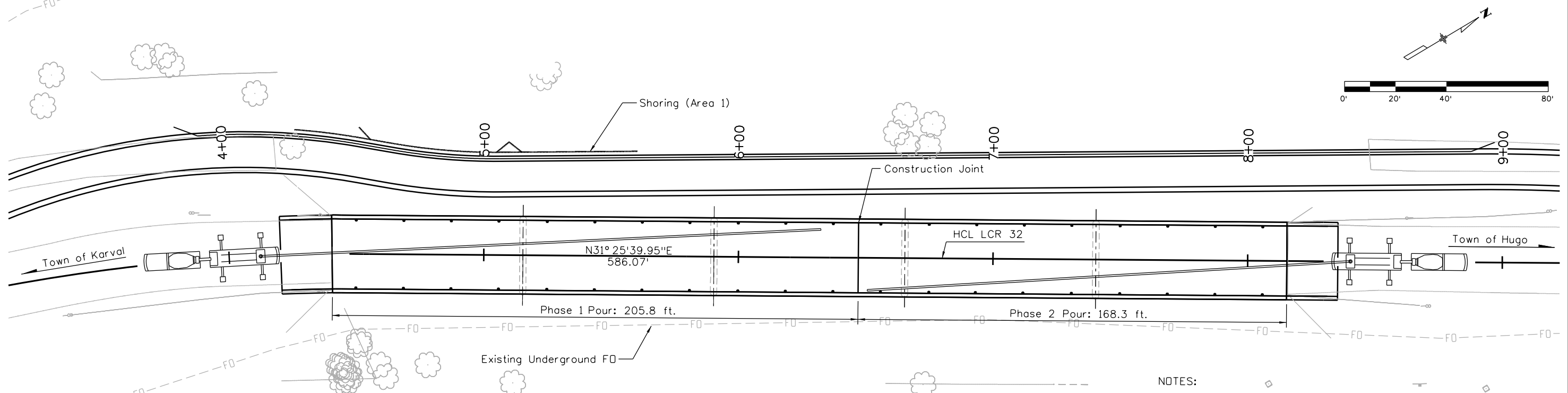
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INITIAL	DATE	INITIAL	DATE	INITIAL	DATE
XXX	YYYY	XXX	YYYY	XXX	YYYY
Designed By	Checked By	Designed By	Checked By	Quantities By	Checked By
XXX	XXX	XXX	XXX	XXX	XXX



**CONCEPT 1: CONCRETE PUMP TRUCK ACCESS FROM SHOOFLY DETOUR**



**CONCEPT 2: CONCRETE PUMP TRUCK ACCESS FROM ABUTMENTS**

- NOTES:**
- If necessary, transverse construction joints are permitted at the 3/4 point of the span being poured.
  - All shoring placed in the channel shall be fully removed at project completion.

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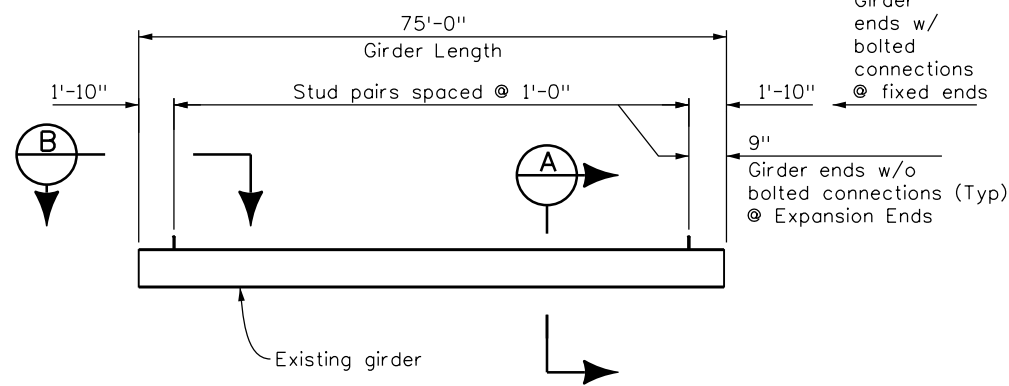
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BIG SANDY CREEK BRIDGE REHABILITATION CONSTRUCTABILITY CONCEPT			
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Detailer:	D. Gonzales	Sheet Subset:	Bridge
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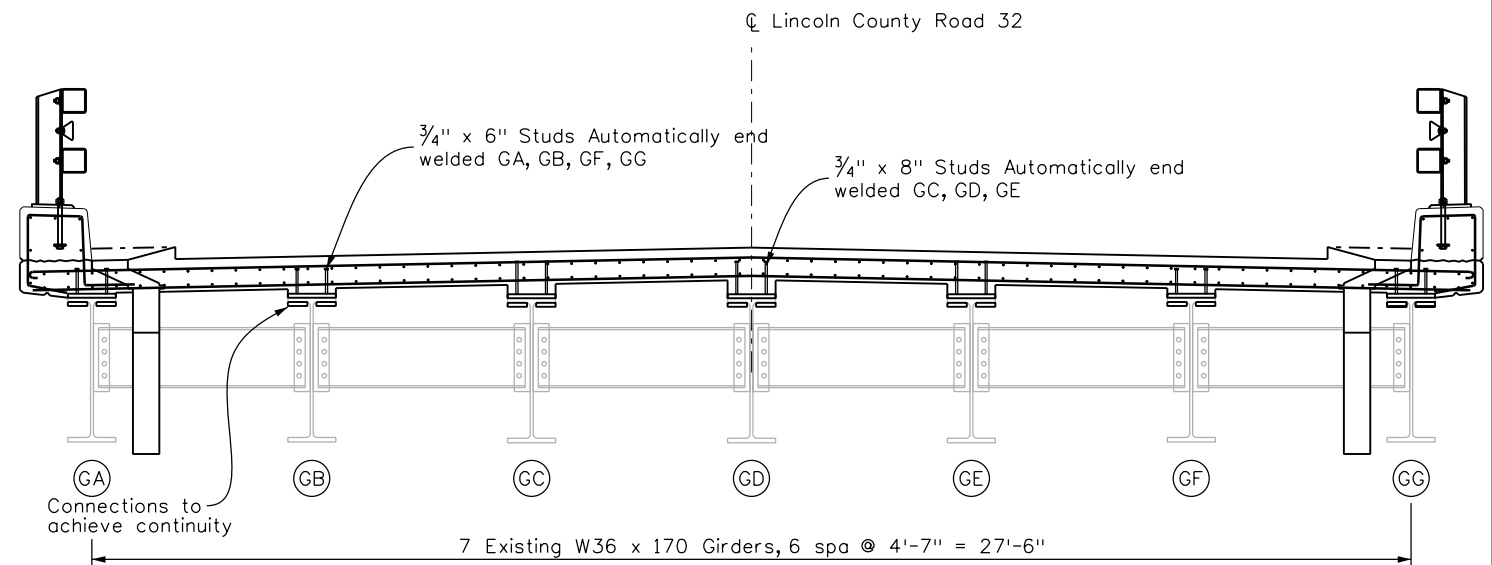
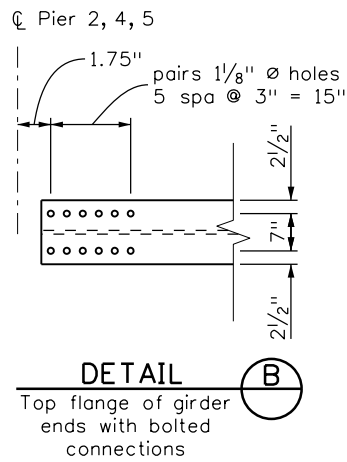
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	26222
Sheet Number	31

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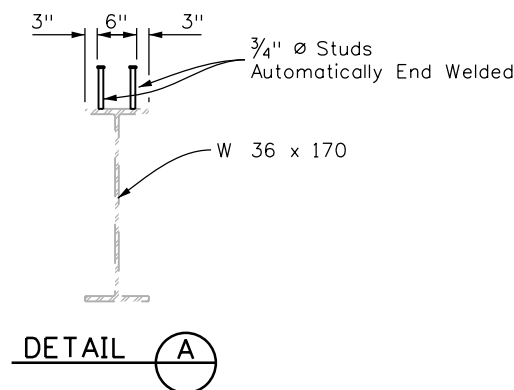
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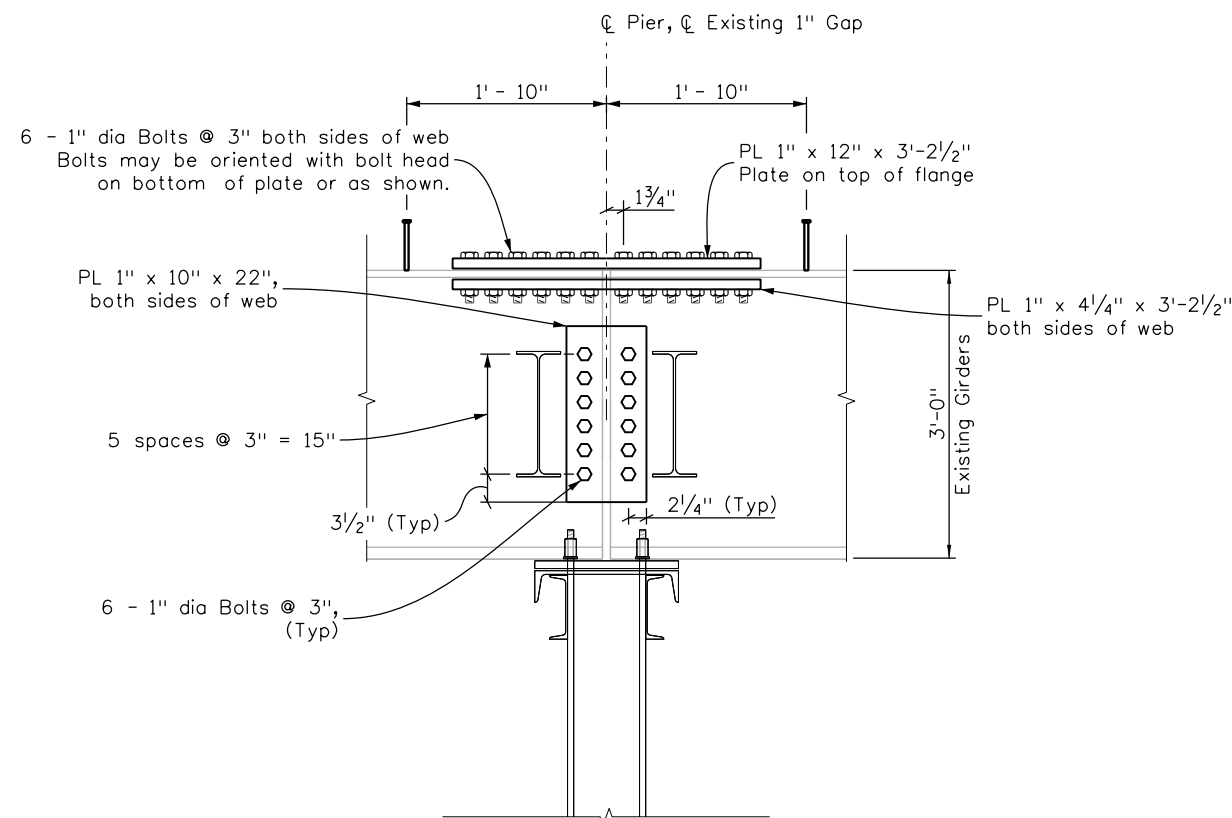
**PROPOSED SHEAR STUD ELEVATION**



**SUPERSTRUCTURE TYPICAL SECTION**

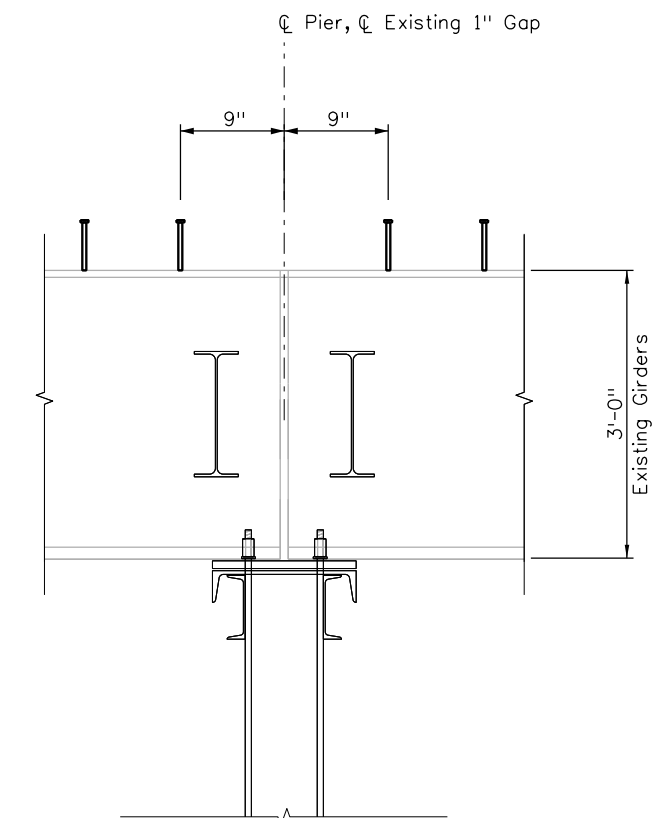


**DETAIL A**



**FIXED GIRDER JOINT SECTION: PIER 2, 4, 5**

Existing Piers Expansion for Translation  
Proposed Fixed for Translation and Moment Continuity



**EXPANSION JOINT SECTION: PIER 3**

Piers Expansion for Translation

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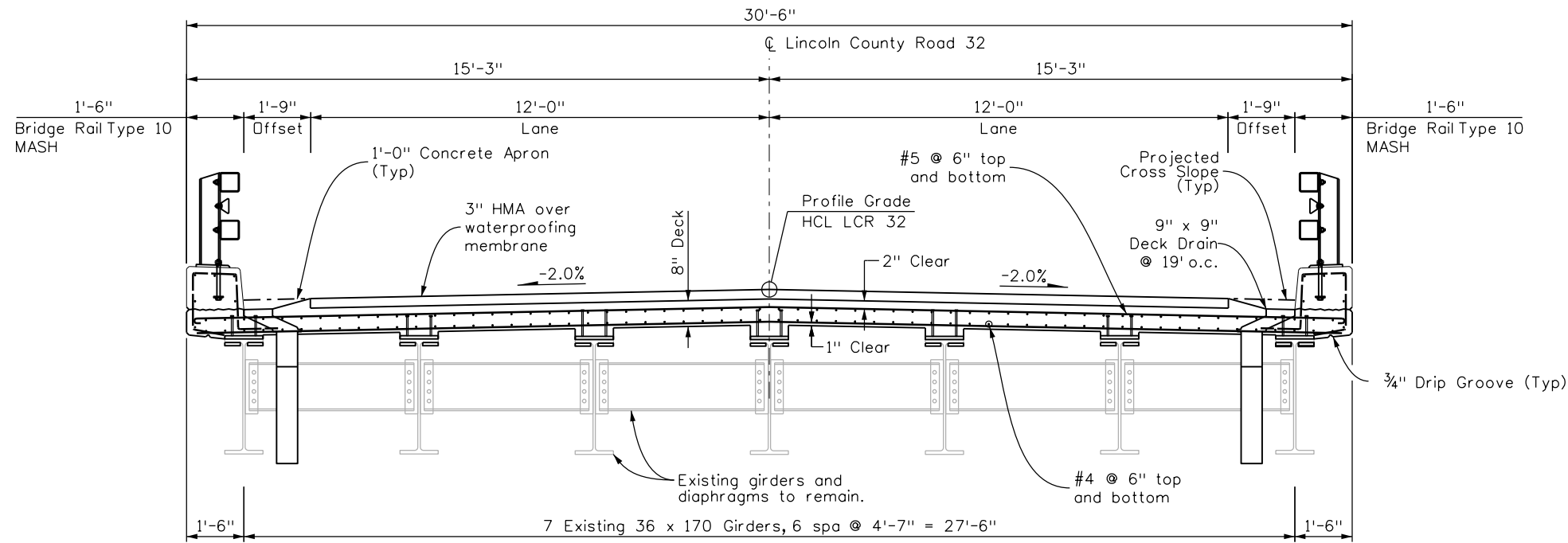
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Designer:	J. Kelly	Structure Numbers	LIN-32-2W-0A
Detailer:	D. Gonzales	Subset Sheets:	B6 of 24
Sheet Subset:	Bridge		

Project No./Code	BRO C330-013
	26222
Sheet Number	32

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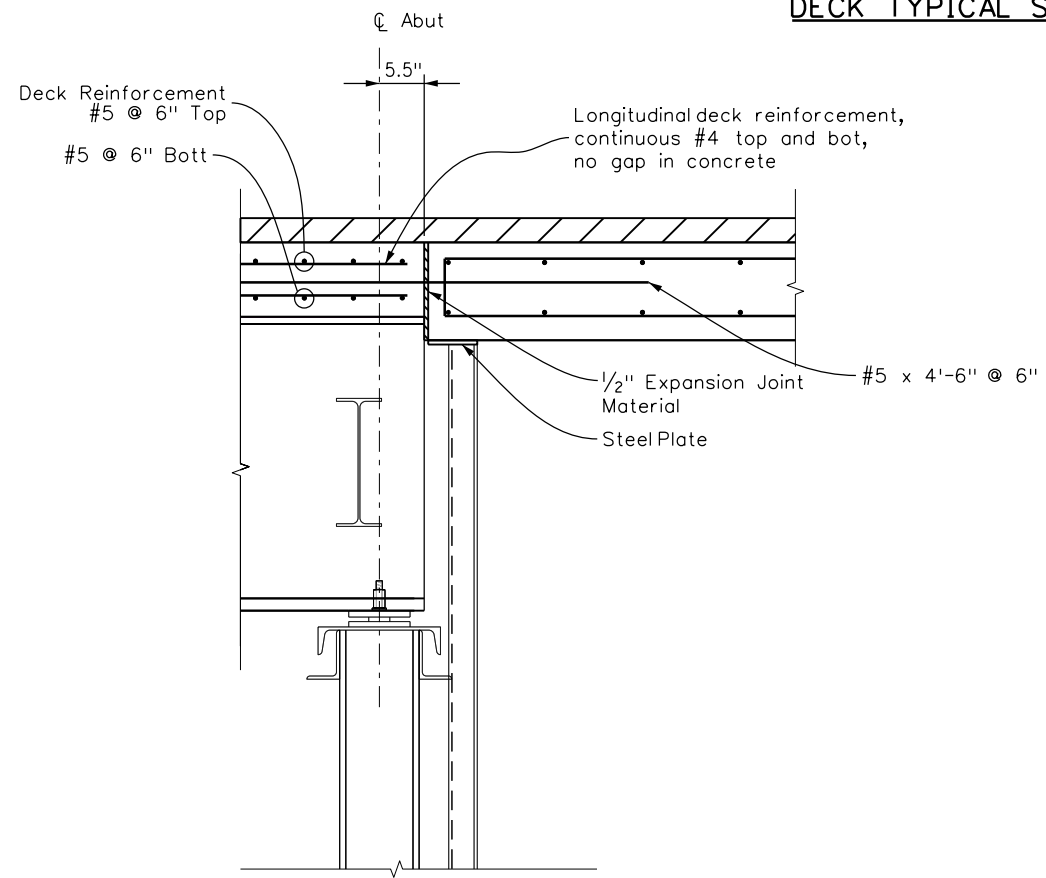
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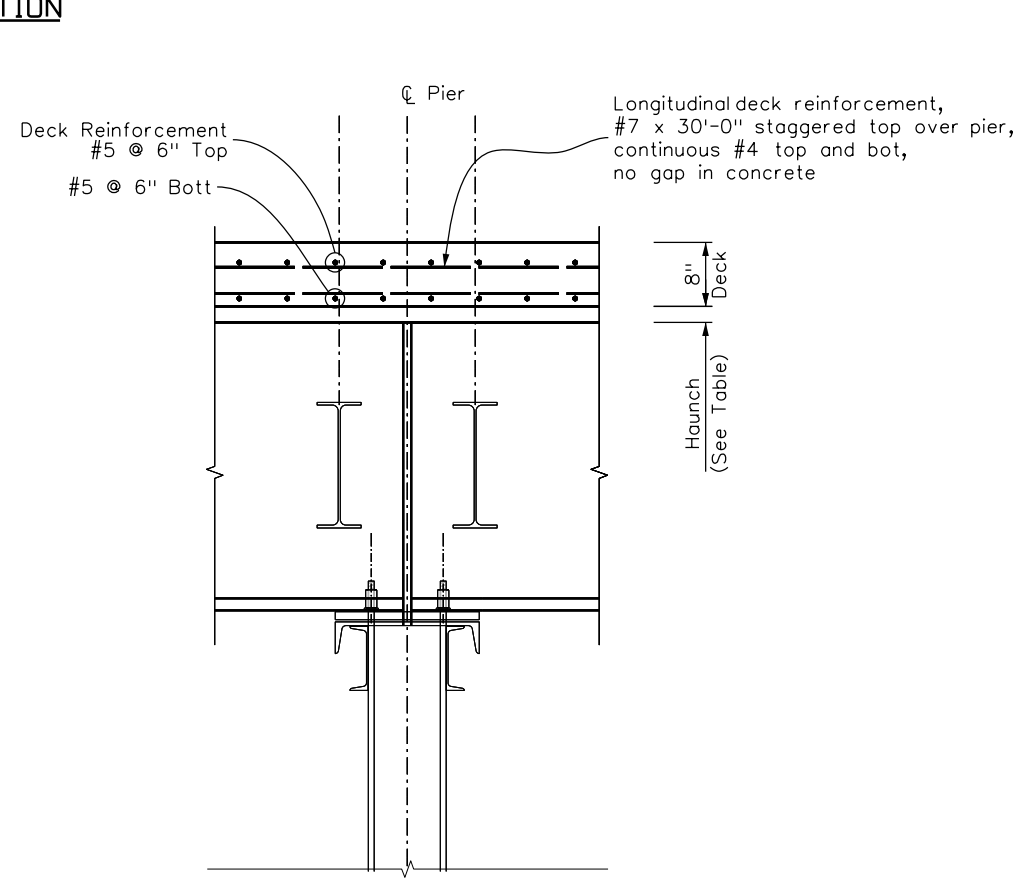
**DECK TYPICAL SECTION**

HAUNCH TABLE				
	Haunch (in)			
	GA, GG	GB, GF	GC, GE	GD
CL Brg. Abut 1	1.12	2.22	3.32	4.42
Pier 2	1.12	2.22	3.32	4.42
Pier 3	1.12	2.22	3.32	4.42
Pier 4	1.12	2.22	3.32	4.42
Pier 5	1.12	2.22	3.32	4.42
CL Brg. Abut 6	1.12	2.22	3.32	4.42

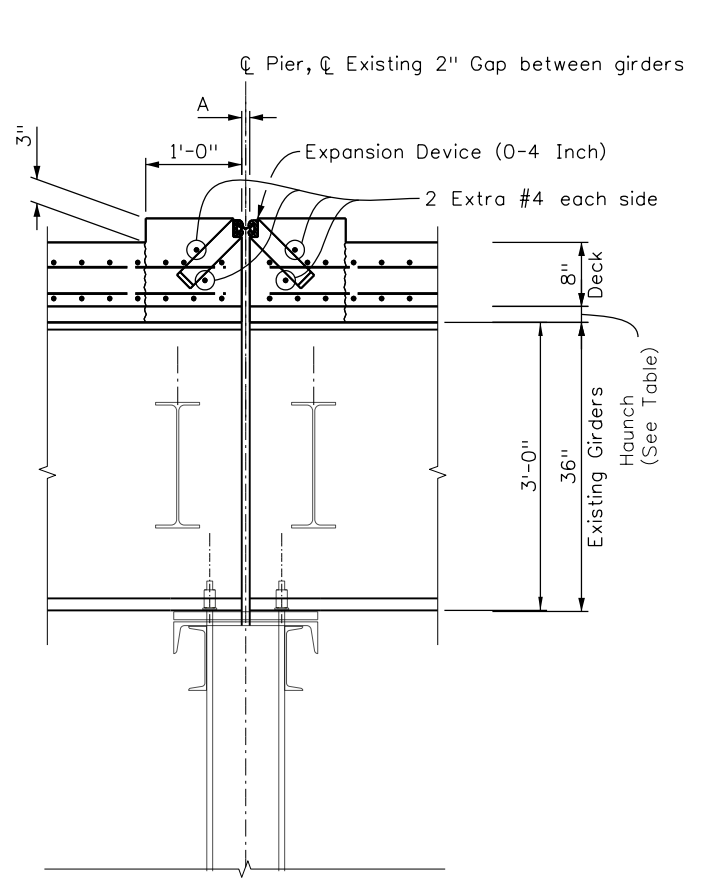
Haunch height within spans (between the locations identified above) is increased by the height of dead load deflections. See Bridge Deck Elevations sheets.



**APPROACH SLAB: ABUTMENT 1, 6**  
See sheet B15 for Approach Slab Reinforcing



**FIXED GIRDER JOINT SECTION: PIER 2, 4, 5**  
Proposed Fixed for Translation and Moment Continuity



**EXPANSION JOINT SECTION: PIER 3**  
Piers Expansion for Translation

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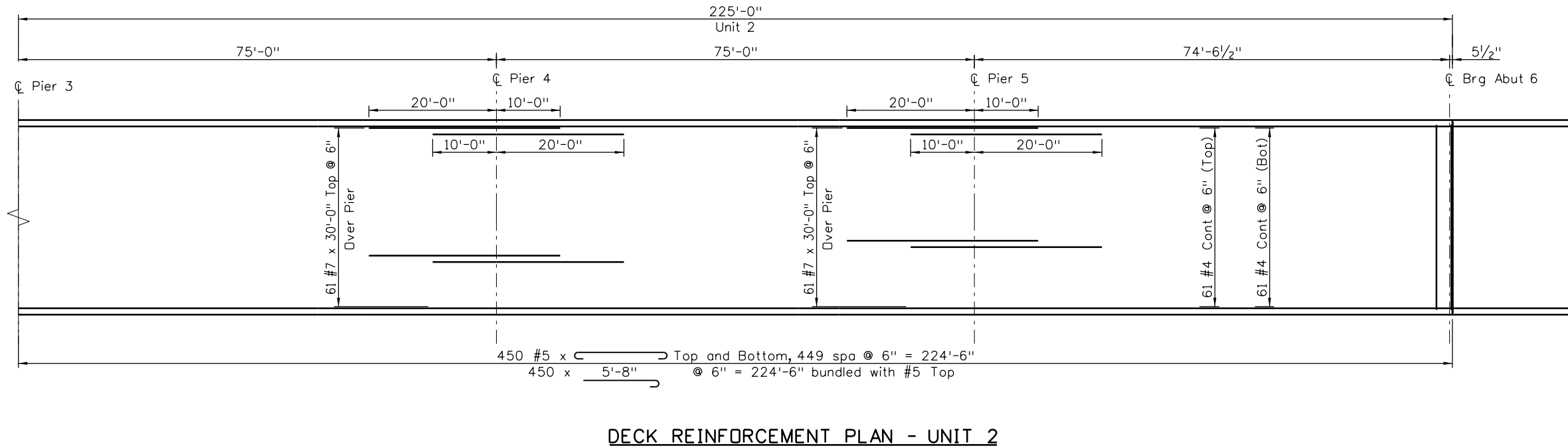
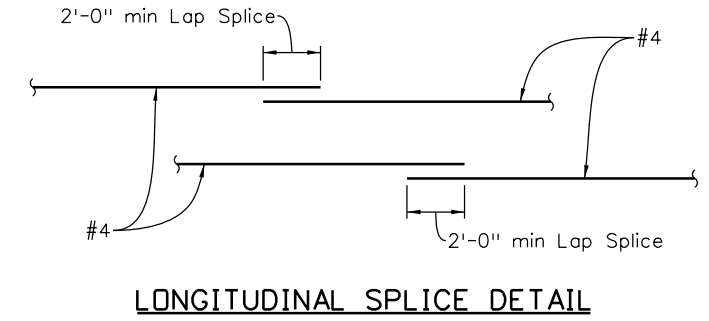
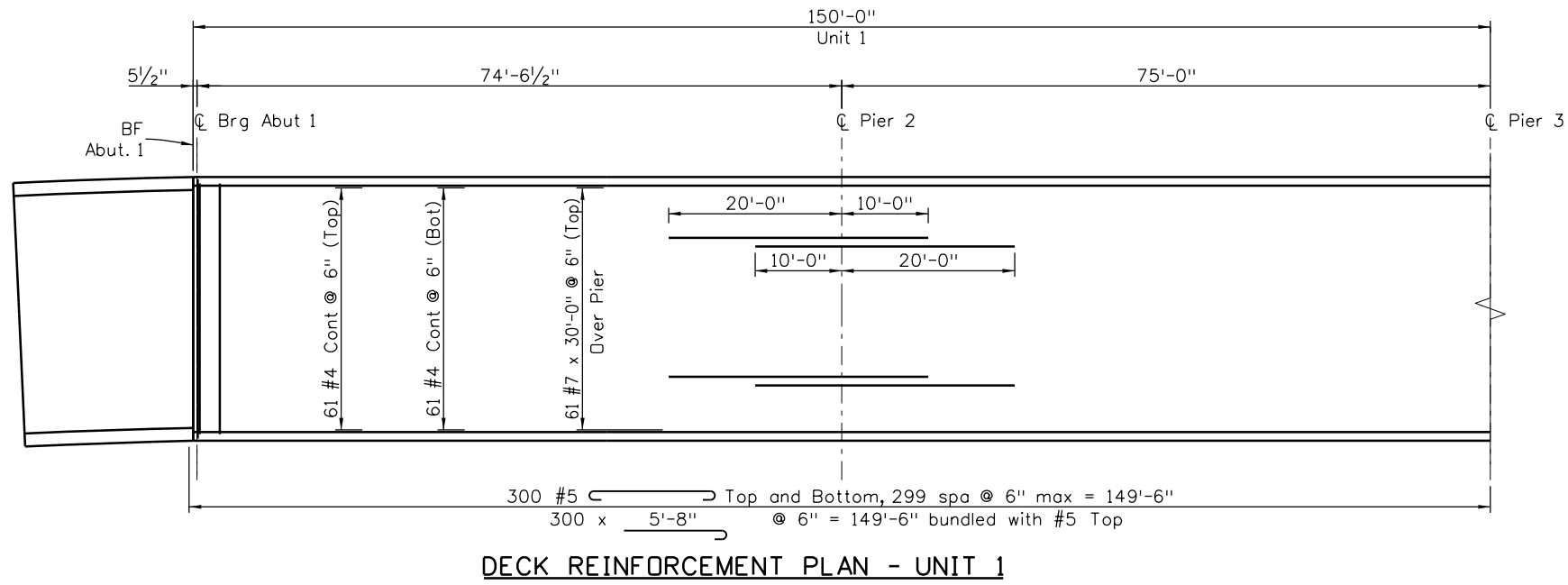
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Designer:	J. Kelly	Structure Numbers	LIN-32-2W-0A
Detailer:	D. Gonzales	Subset Sheets:	B7 of 24
Sheet Subset:	Bridge		

Project No./Code	BRD C330-013
Sheet Number	33

8/15/2024

Design		Detail		Quantities	
Designed By	DATE	INITIAL	DATE	INITIAL	DATE
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Checked By	SDL	Checked By	MRM	Checked By	SDL

jkelly 10/21/24 AM R:\Q-Projects\ACTIVE PROJECTS\78001-Lincoln County Road 32 over Big Sandy Creek Bridge Rehabilitation\800-Computer Design Files\802-Sheet Files\78001-BB-SS-Deck\_Plan.dgn



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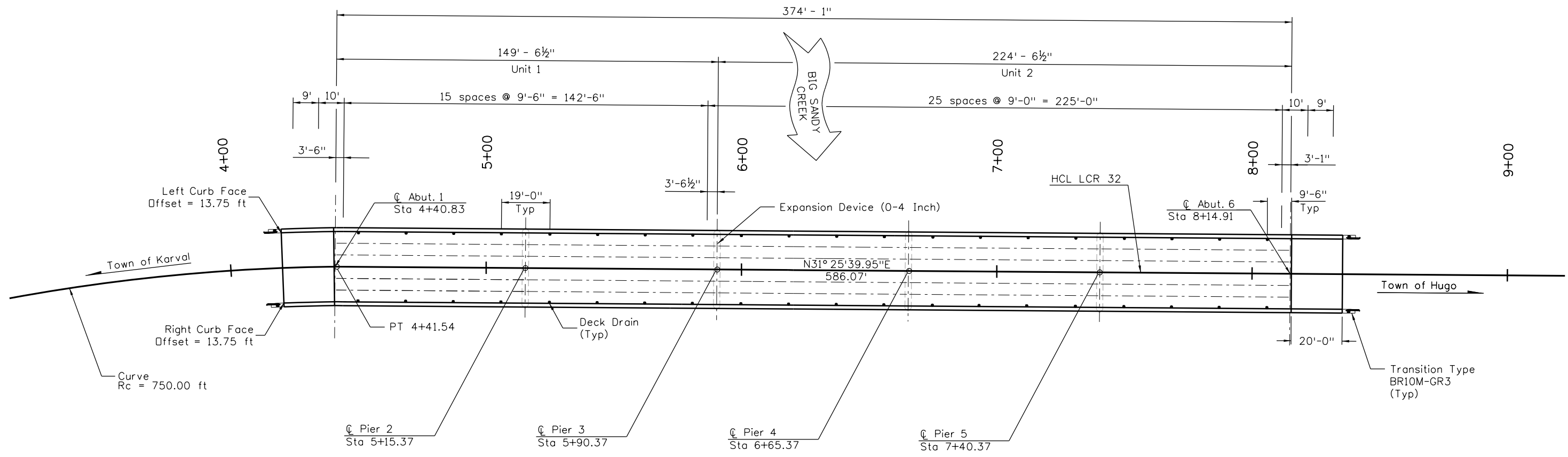
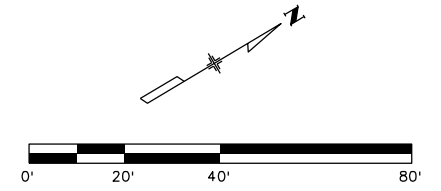


As Constructed
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Designer:	J. Kelly	Structure Numbers	LIN-32-2W-0A
Detailer:	D. Gonzales	Subset Sheets:	B8 of 24
Sheet Subset:	Bridge		

Project No./Code	BRD C330-013
Sheet Number	34

8/15/2024



**BRIDGE RAIL LAYOUT**

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Designed By	Checked By	INITIAL	DATE	INITIAL	DATE
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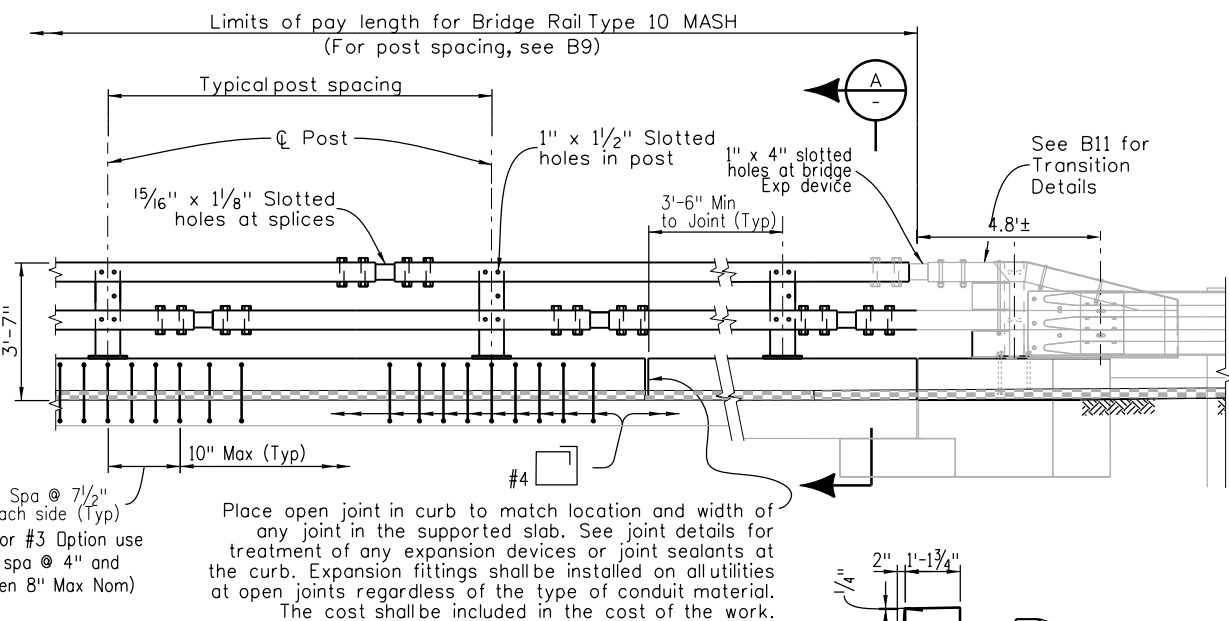
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Designer:	J. Kelly	Structure Numbers	LIN-32-2W-0A
Detailer:	D. Gonzales	Subset Sheets:	B9 of 24
Sheet Subset:	Bridge		

Project No./Code	BRD C330-013
Sheet Number	35

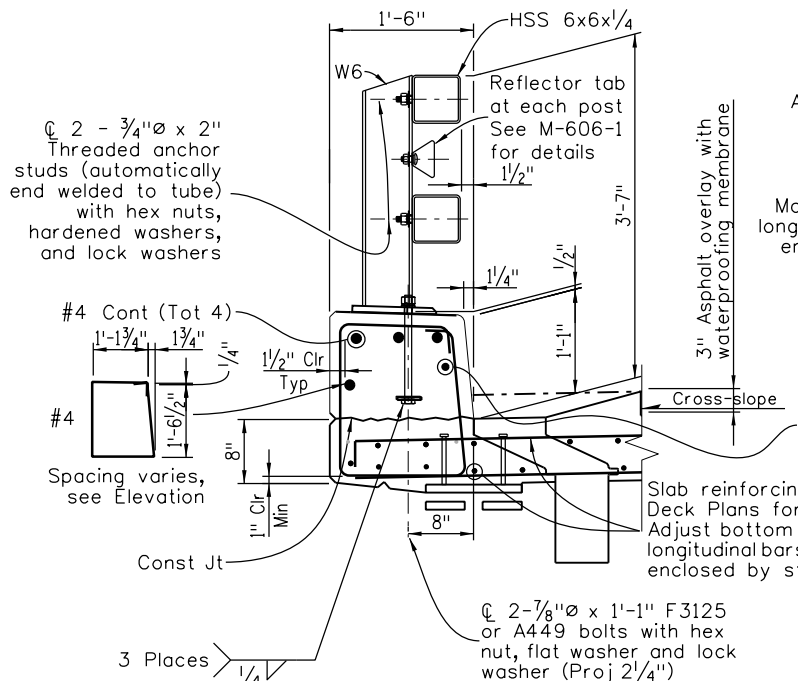
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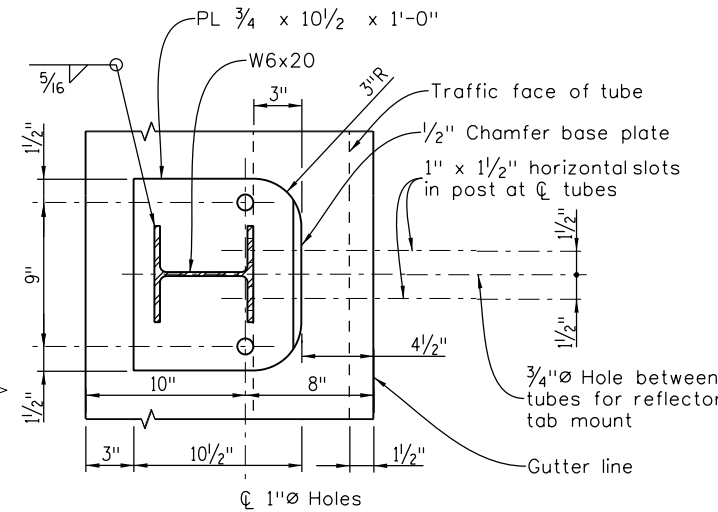
**ELEVATION - BRIDGE RAIL**

Place open joint in curb to match location and width of any joint in the supported slab. See joint details for treatment of any expansion devices or joint sealants at the curb. Expansion fittings shall be installed on all utilities at open joints regardless of the type of conduit material. The cost shall be included in the cost of the work.

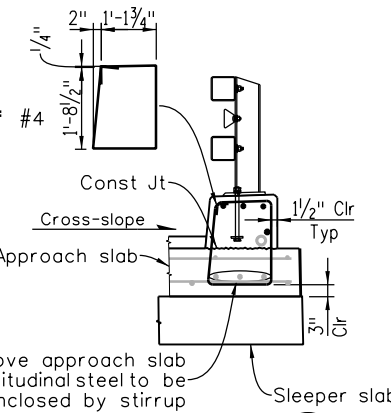


**BRIDGE TYPICAL SECTION**

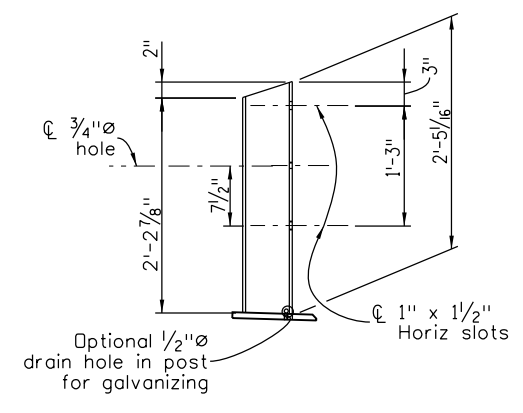
Used when placed on concrete slab. Bottom of stirrup parallel to top of deck steel.



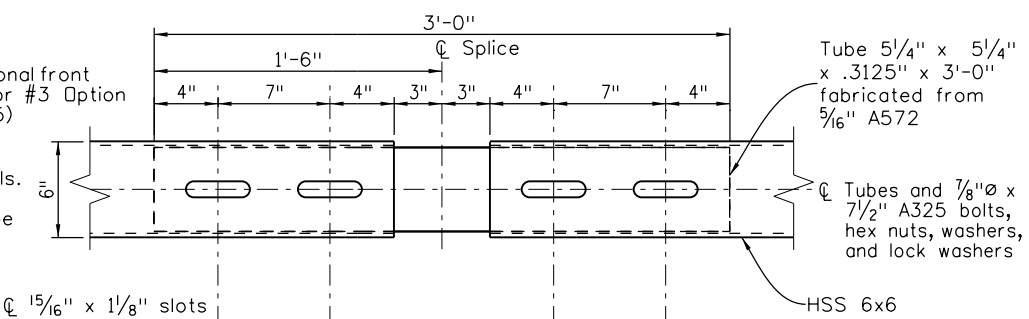
**PLAN - POST DETAIL**



**SECTION A**



**POST ELEVATION**

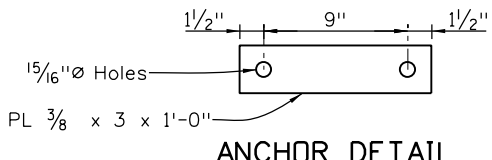


**PLAN - TUBE SPLICE**

FOR INFORMATION ONLY

DESCRIPTION	UNIT	PER LF
Concrete Sealer	SY	0.28
Structural Steel (Galvanized)	LB	49.6
Concrete Class D with Macrofiber	CY	0.059
Reinforcing Steel (High Performance)	LB	8.7

(6.6 for #3 Option) (For 8" Bridge Deck & 10-foot post spacing)



**ANCHOR DETAIL**

**NOTES:**

- All tubes shall be ASTM A1085. All posts, base plates, and splice tubes fabricated by welding shall be ASTM A572 Grade 50. Post anchor, encased in concrete, shall be Grade 36 steel and need not be galvanized. All other steel shall be Grade 36 unless otherwise noted.
- The above material and all anchor bolts and miscellaneous bolts, nuts, and washers shall be galvanized after fabrication in accordance with Section 509. Concrete, reinforcing steel, and structural steel elements shall conform to the requirements of Sections 601 & 606, 602, and 509, respectively unless otherwise noted. Concrete sealer shall conform to Section 515.
- The tubes shall be shop bent or fabricated to fit horizontal curve when radius is less than 1,800 feet.
- Tubes shall be continuous over not less than 2 posts, preferably 4 posts except at approach slab end joint. No welded butt splices will be allowed in the tube sections.
- The centerline of the tube splice shall be 1'-8" minimum and 2'-6" maximum from the centerline of the posts.
- All bolts that have lock washers shall be tightened to snug only.
- Posts, curbs, and stirrups shall be perpendicular to the longitudinal roadway grade and cross slopes. For Bridge rail at sidewalks, all posts, curb, & stirrups shall be plumb.
- One or more 10'-0" post spaces may be reduced (6'-8" Min) in order to maintain dimensions from the end of the rail and expansion joints or concrete buttresses.
- The top and inside face of the rail curb shall receive a coating of Item 515, Concrete Sealer, either a silane/siloxane or a type compatible with the concrete coating or sealer/stain shown in the plans.
- Payment will be made under item 606, Bridge Rail Type 10 MASH, for all posts, post anchors, base plates, anchor bolts, miscellaneous bolts, nuts, washers, tubes, tube expansion devices, tube splices, end plates, Concrete Class D with Macrofiber, reinforcing steel, concrete sealer, and reflector tabs.
- Prior to fabrication of this item, an electronic PDF which complies with the requirements of section 105, shall be submitted to the Engineer for information only.
- #3 reinforcing may be substituted for #4 reinforcing with the spacing and additional bars shown.

**DESIGN DATA**

Design: AASHTO MASH 2016 TL-5 with rail height of 42" (by calculation), AASHTO MASH 2016 TL-4 for overlay thickness over 1" and resulting in a height of the top of rail over pavement of 36" Min (by Professional Evaluation and Crash Testing).

Structural Steel:  
 AASHTO M270 Gr 36 (ASTM A709 Gr 36)  $f_y = 36$  KSI  
 AASHTO M270 Gr 50 (ASTM A992/A572 Gr 50)  $f_y = 50$  KSI  
 ASTM A1085  $f_y = 50$  KSI

Concrete: Class D with Macrofiber  $f'_c = 4.5$  KSI

Splice Length = 2'-5" for #4, 1'-10" for #3  
 All tie wire, chairs and supports shall be stainless steel or plastic coated.  
 All reinforcing bends shown shall use a 4D pin diameter.

ASTM A1035CS, (Grade 100)  $f_y = 100$  KSI Min  
 Reinforcing steel shall be low-carbon, chromium, conforming to ASTM A1035/A1035M Alloy Type 1035 CS Grade 100 with a minimum chromium content of 9.2%. Stainless steel per ASTM A955 may be substituted.

All seals for this set of drawings are applied to the cover page(s)

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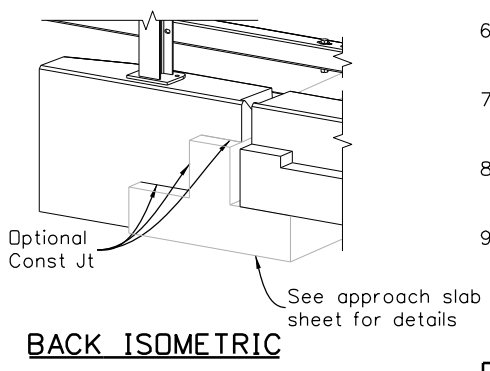
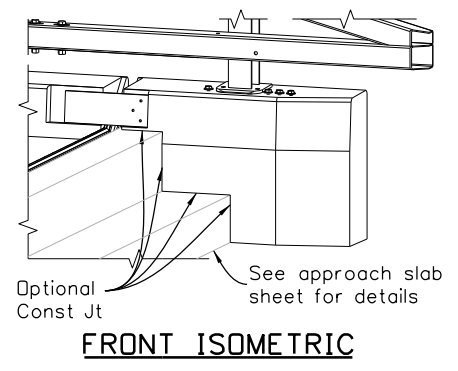
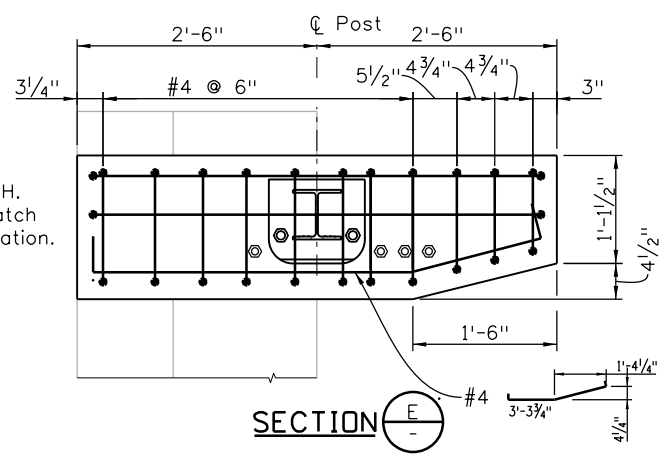
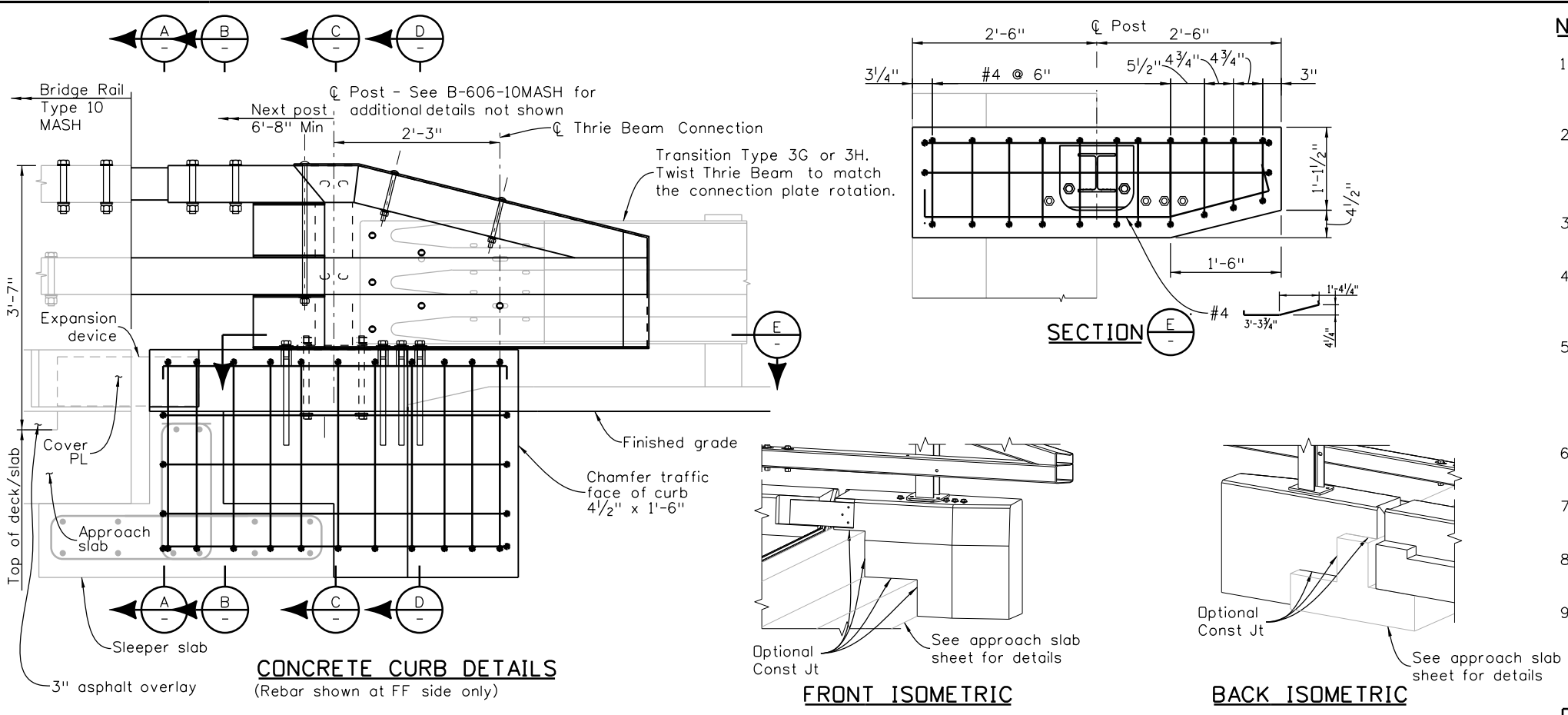
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Date	Comments	Init.



BIG SANDY CREEK BRIDGE REHABILITATION BRIDGE RAIL TYPE 10 MASH				Project No./Code
As Constructed				BRO C330-013
No Revisions:				
Revised:	Designer: J. Kelly	Structure: LIN-32-2W-0A	Numbers: 26222	
Void:	Detailer: D. Gonzales	Sheet Subset: Bridge	Subset Sheets: B10 of 24	Sheet Number 36

8/15/2024

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**NOTES:**

- All tubes shall be ASTM A1085. All posts, base plates, and splice tubes fabricated by welding shall be ASTM A572 Grade 50. All other steel shall be Grade 36 unless otherwise noted.
- The above material and all anchor bolts and miscellaneous bolts, nuts, and washers shall be galvanized after fabrication in accordance with Section 509. Concrete, reinforcing steel, and structural steel elements shall conform to the requirements of Sections 601 & 606, 602, and 509, respectively unless otherwise noted.
- All bolts that have lock washers shall be tightened to snug only. All anchors shall be cast in place unless approved by Engineer.
- The top and inside face of the rail shall receive a coating conforming to Item 515, Concrete Sealer, compatible with the concrete coating or sealer/stain shown in the plans.
- Payment will be made under item 606, Transition Type BR10M-GR3, for all anchor bolts, miscellaneous bolts, nuts, washers, tubes, tube expansion device, joint filler, expansion joint material, concrete (Class D with macrofiber), reinforcing steel, and concrete sealer. Excavation and backfill will not be paid for separately, but shall be included in the work.
- Prior to fabrication of this item, an electronic pdf which complies with the requirements of section 105, shall be submitted to the Engineer for information only.
- All longitudinal reinforcement shall terminate with standard stirrup hooks as shown. Rotate or adjust reinforcing hooks to avoid interferences as required.
- The Thrie Beam connection/post of Type 3G or 3H shall be adjusted or rotated to match the transition plate.
- Posts, concrete curbs, and stirrups shall be perpendicular to the longitudinal roadway grade and cross slopes.

**DESIGN DATA**

Structural Steel:  
 AASHTO M270 Gr 36 (ASTM A709 Gr 36) f<sub>y</sub> = 36 KSI  
 AASHTO M270 Gr 50 (ASTM A992/A572 Gr 50) f<sub>y</sub> = 50 KSI  
 ASTM A1085 f<sub>y</sub> = 50 KSI

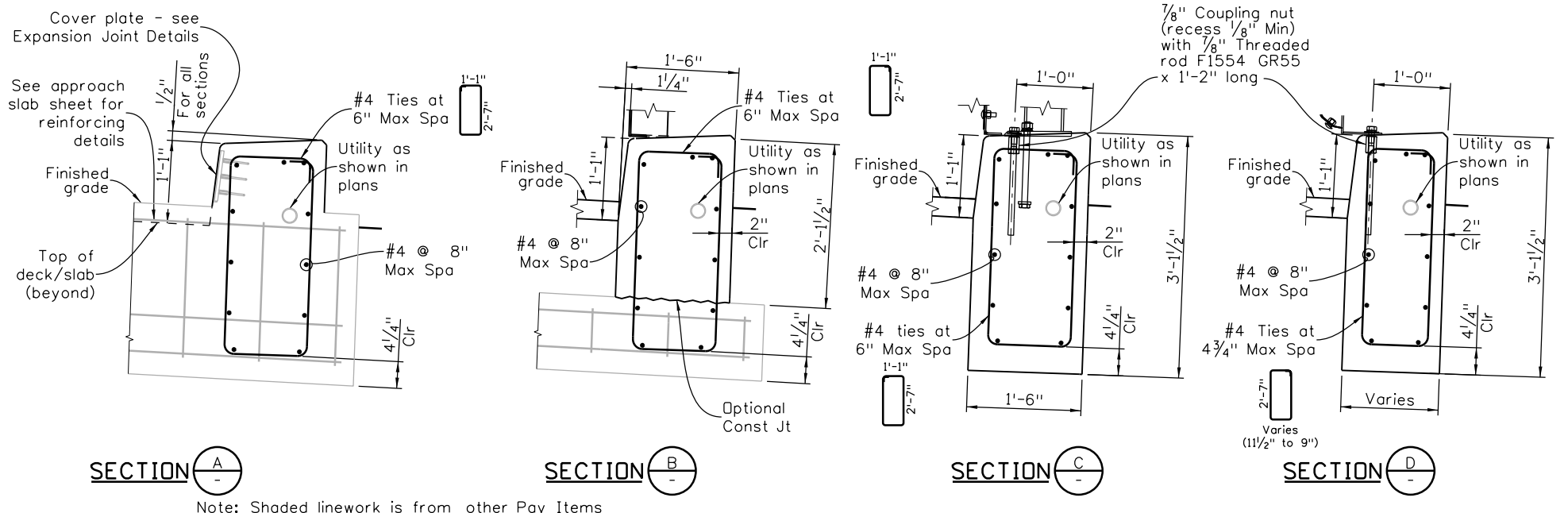
Concrete: Class D with Macrofiber f'<sub>c</sub> = 4.5 KSI

Reinforcing Steel: f<sub>y</sub> = 60 KSI Min

All reinforcing bends shown shall use a 4D pin diameter.

**INFORMATION ONLY**

DESCRIPTION	UNIT	QUANTITY
Structural Steel (Galvanized)	LB	610
Concrete Sealer	SY	2.5
Concrete Class D with Macrofiber	CY	.7
Reinforcing Steel (Epoxy Coated)	LB	99



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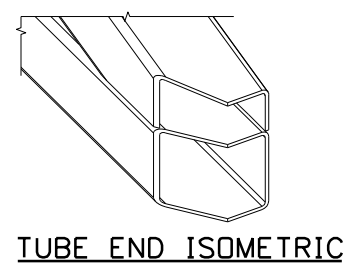
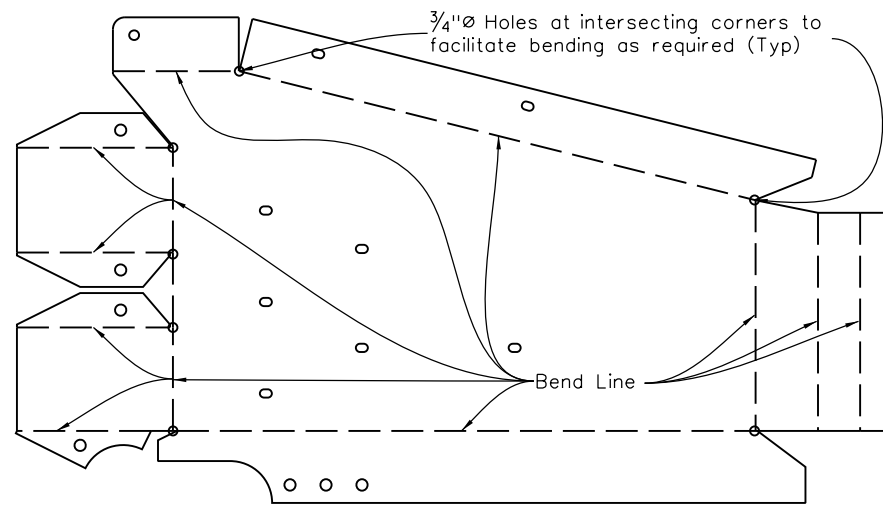
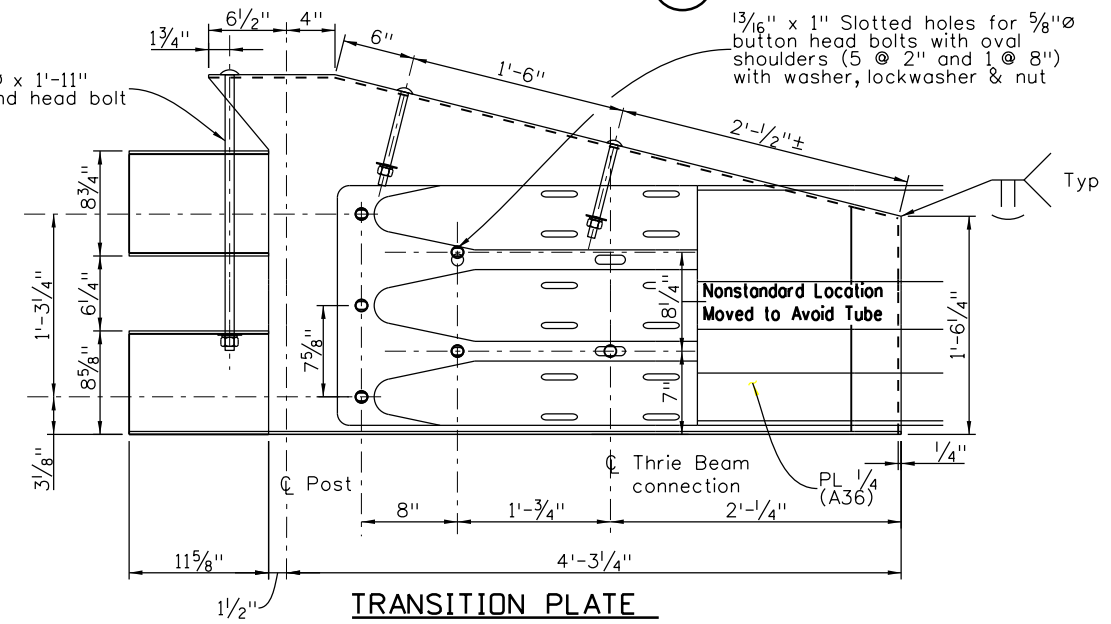
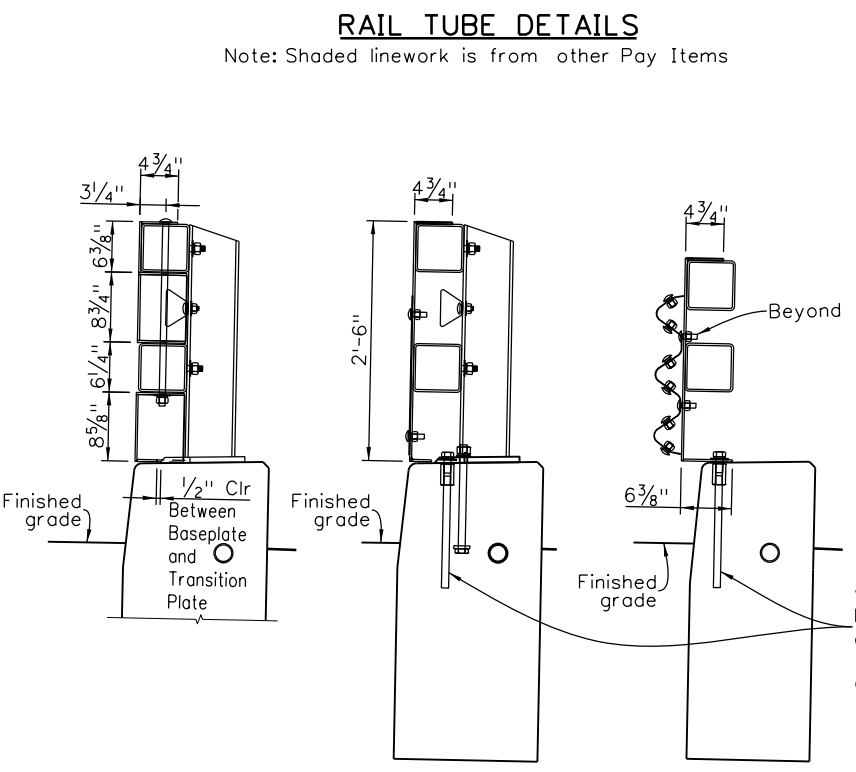
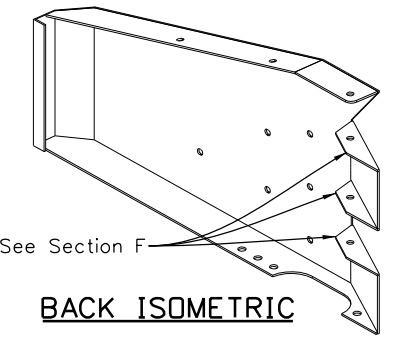
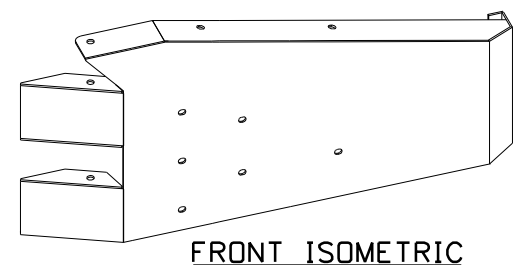
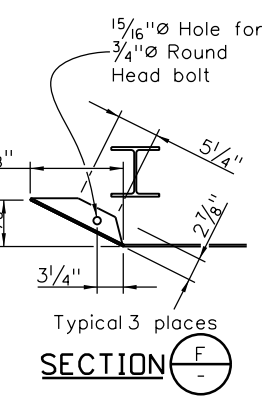
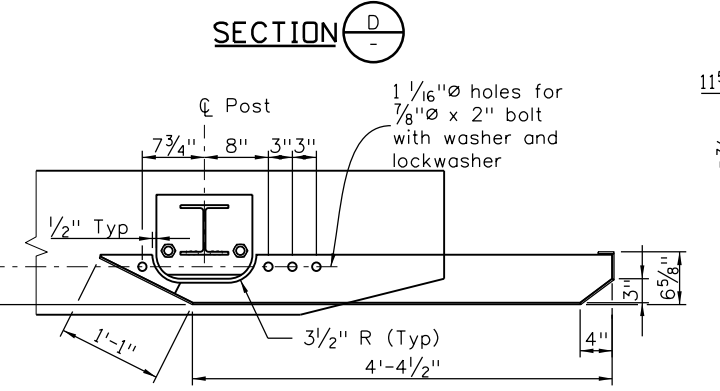
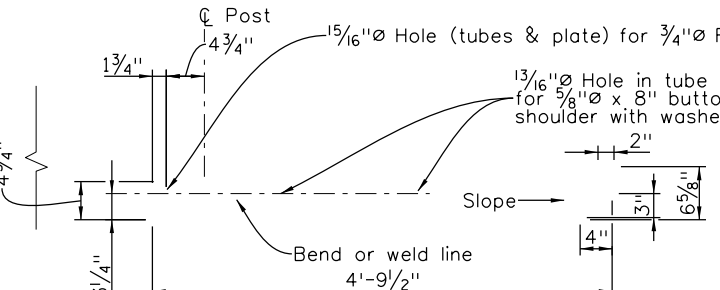
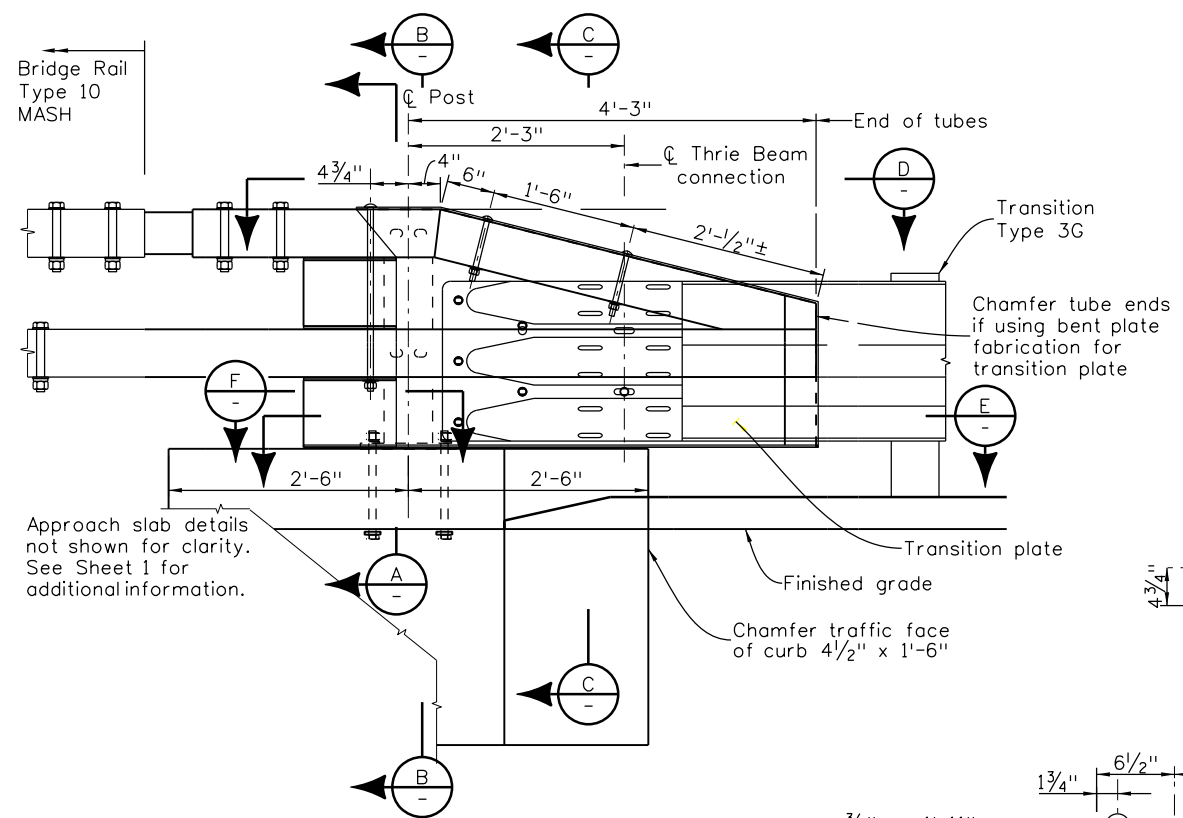
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Date:	Comments	Init.



As Constructed	BIG SANDY CREEK BRIDGE REHABILITATION		Project No./Code
No Revisions:	TRANSITION TYPE BR10-GR3		BRO C330-013
Revised:	Designer: J. Kelly	Structure Numbers	26222
Void:	Detailer: D. Gonzales	Sheet Subset: Bridge	Sheet Number 37
	Sheet Subset: Bridge	Subset Sheets: B11 of 24	

8/15/2024

R:\Q-Projects\ACTIVE PROJECTS\78001\_Lincoln County Road 32 over Big Sandy Creek Bridge Rehabilitation\800\_Computer Design Files\802\_Sheet Files\BR10-GR3-2\_of\_2-T\_Plate\_Details.dgn  
 jkelly 3:07:42 PM



- NOTES:**
- See B10 (B-606-10MASH) for payment details and quantities.
  - Shaded Linework is from other Pay Items.
  - Transition Plate may be fabricated with bent plates and/or welded construction. All welds shall be square root with convex contouring.
  - Verify location of Cover Plate holes based on supplied Thrie Beam Terminal Section (Connector).

See Transition BR10M-GR3 Sheet 1 for Curb Details (Typ)

All seals for this set of drawings are applied to the cover page(s)

Print Date: 5/21/2024  
 File Name: 78001\_B12\_BR10-GR3-2\_of\_2-T\_Plate\_Details.dgn  
 Horiz. Scale: NTS    Vert. Scale:   

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 12076 Grant Street, Thornton, CO 80241  
 Phone: (303) 962-9300  
 Web: www.RockSol.com

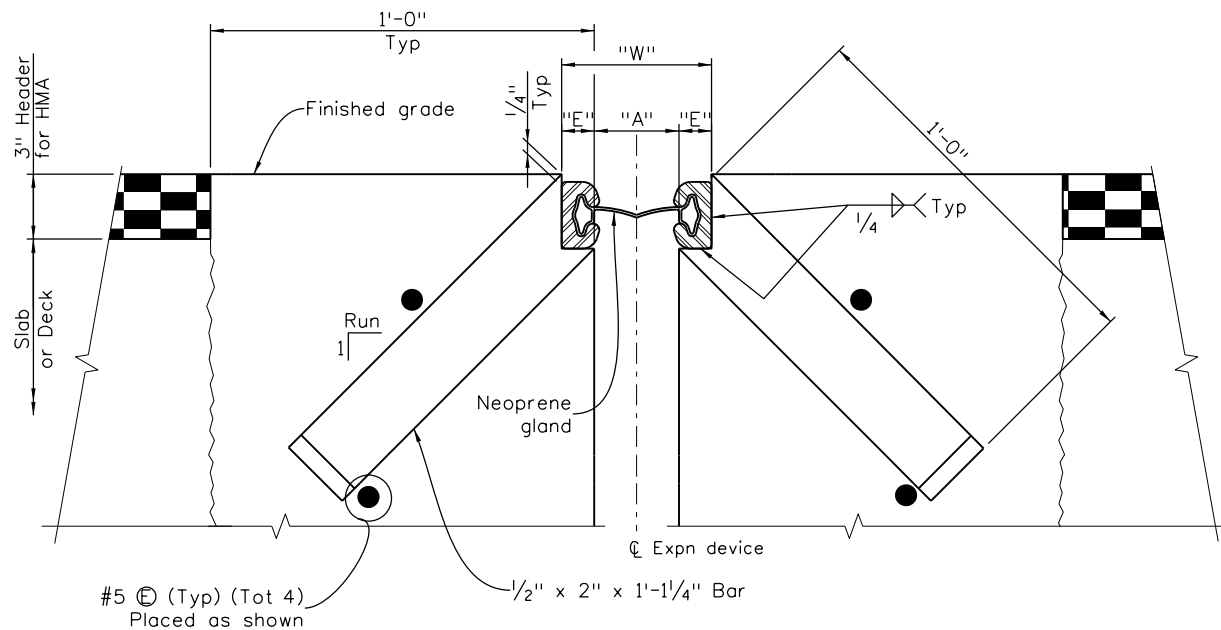
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As Constructed	BIG SANDY CREEK BRIDGE REHABILITATION		Project No./Code
No Revisions:	TRANSITION TYPE BR10M-GR3		BRO C330-013
Revised:	Designer: J. Kelly	Structure Numbers	26222
Void:	Detailer: D. Gonzales	Sheet Subset: Bridge	Sheet Number 38
		Subset Sheets: B12 of 24	

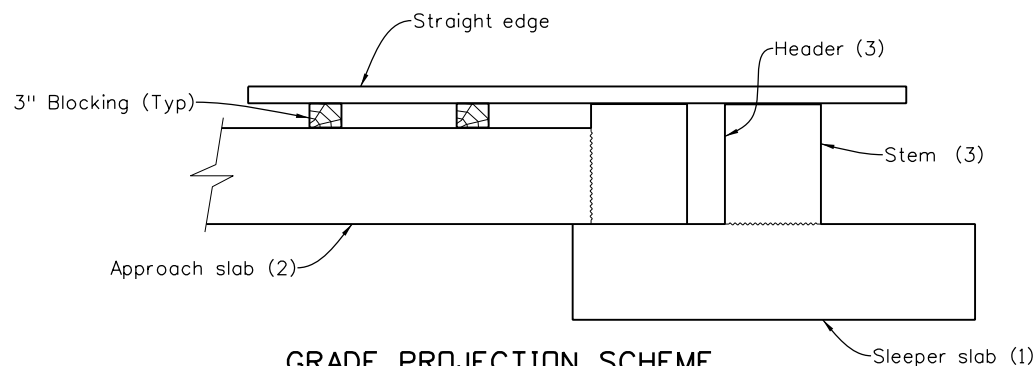
8/15/2024

3:08:47 PM R:\Q-Projects\ACTIVE PROJECTS\78001\_Lincoln County Road 32 over Big Sandy Creek Bridge Rehabilitation\800\_Computer Design Files\802\_Sheet Files\78001\_B13\_Bridge\_Expansion\_Device.dgn  
 Design: MRM 1/16 1/16  
 Detail: MRM 1/16 1/16  
 Quantities: MRM 1/16 1/16  
 Designed By: MRM 1/16 1/16  
 Checked By: MRM 1/16 1/16



**SECTION THRU STRIP SEAL BRIDGE EXPANSION DEVICE**

Section taken perpendicular to Exn device

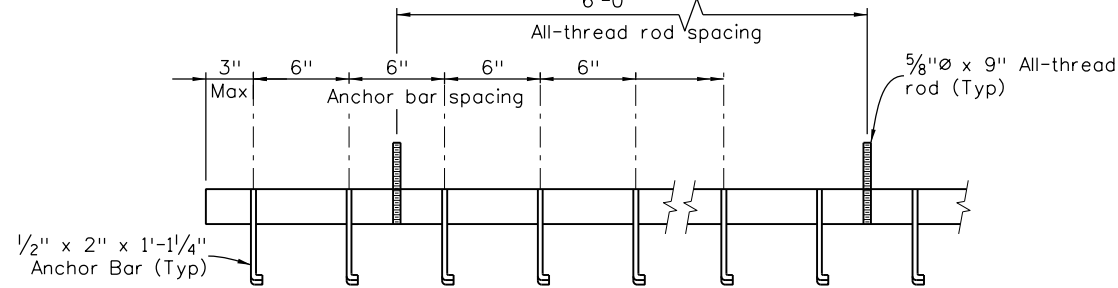


**GRADE PROJECTION SCHEME**

Numbers in parenthesis refer to first, second and third concrete pours

AIR TEMP	"A"	"W"*
0° F	2.99	5.49
10° F	2.87	5.37
20° F	2.75	5.25
30° F	2.62	5.12
40° F	2.50	5.00
50° F	2.38	4.88
60° F	2.25	4.75
70° F	2.13	4.63
80° F	2.01	4.51
90° F	1.89	4.39
100° F	1.76	4.26
110° F	1.64	4.14

\*For E = 1/4" (Min)

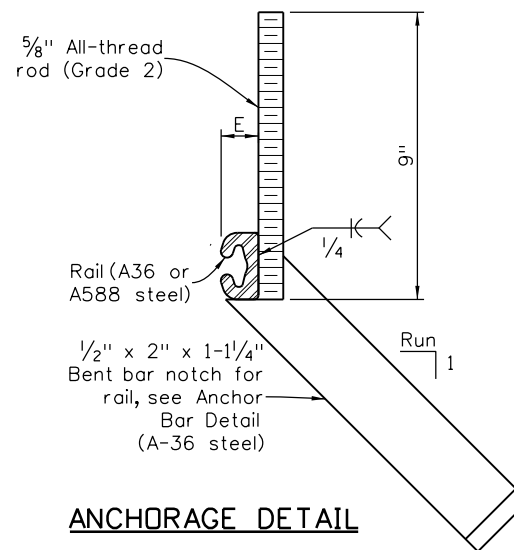


**ANCHOR BAR SPACING**

First anchor bar to be within 1" of flowline unless otherwise approved

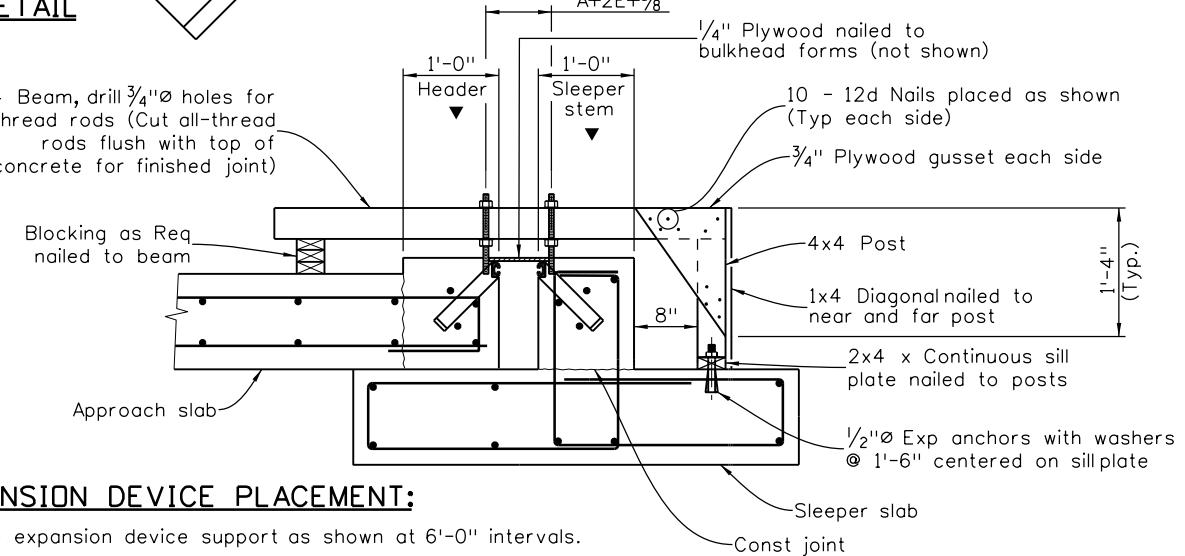
Welding not allowed in interior of rail that contacts rubber gland

**RAIL FIELD SPLICE DETAIL**



**ANCHORAGE DETAIL**

4x4 Beam, drill 3/4 inch diameter holes for all-thread rods (Cut all-thread rods flush with top of concrete for finished joint)



**EXPANSION DEVICE PLACEMENT:**

1. Provide expansion device support as shown at 6'-0" intervals.
2. For reinforcing not shown, see Approach Slab Details.

Alternate support bracket connections may be submitted for approval.

Concrete shall be placed after expansion device has been adjusted to proper grade and approved by the Engineer using the Grade Projection Scheme.

**MINIMUM SUPPORT BRACKET REQUIREMENTS**

**NOTES:**

1. The expansion device shall be installed on grade, parallel to the slope and grade of the deck.
2. The expansion device shall not be set before the deck elevations have been approved by the Engineer. The Contractor shall take shots of the expansion device to achieve the required elevations for smoother rideability on bridge approaches.
3. After the concrete has attained initial set, the attachments used to hold the expansion device assembly in its proper position shall be removed.
4. "W" and "E" dimensions are dependent upon the particular expansion device supplied, and shall be shown on the working drawings.
5. See table for dimensions "A" and "W"; interpolate as needed. Do not install the gland until dimension "A" has opened up to at least 1/2".
6. The neoprene gland shall be installed in one piece in accordance with Section 518 of the Standard Specifications.
7. See Section 518.09 in the Standard Specifications for water tight integrity testing requirements.
8. Set elevations at top of header and sleeper stem with the grade projection scheme.
9. All steel elements (whether grade A36 or A588) of the bridge expansion device, including cover plates, shall be hot dip galvanized after fabrication as per Section 509.11 of the Standard Specifications.
10. Use a run of 1 or more to accommodate existing conditions and a run of 1 for new construction.

**ACCEPTABLE EXPANSION DEVICE ALTERNATES**

D.S. Brown A2R400-SSA2  
 WABO SE400 Type A  
 E-poxy Engineered Materials S400-A Strip Seal

All seals for this set of drawings are applied to the cover page(s)

Print Date: 5/21/2024  
 File Name: 78001\_B13\_Bridge\_Expansion\_Device.dgn  
 Horiz. Scale: NTS Vert. Scale:  
  
 RockSol Consulting Group, Inc.  
 12076 Grant Street, Thornton, CO 80241  
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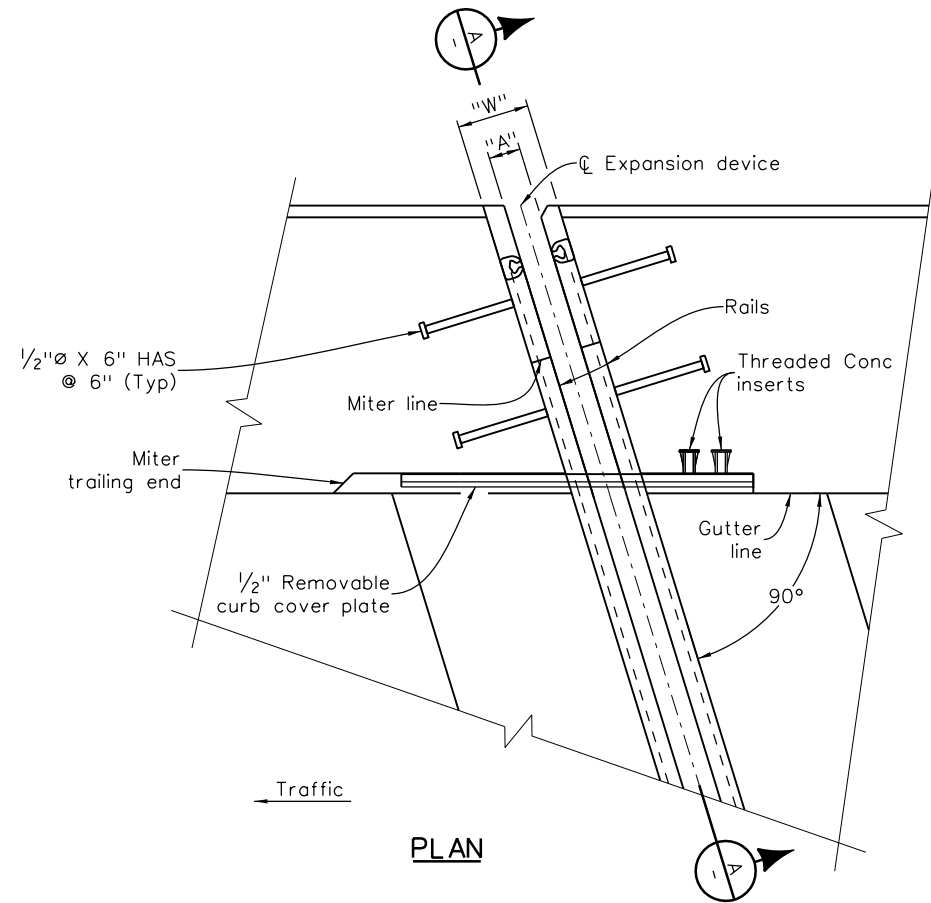
Sheet Revisions		
Date:	Comments	Init.



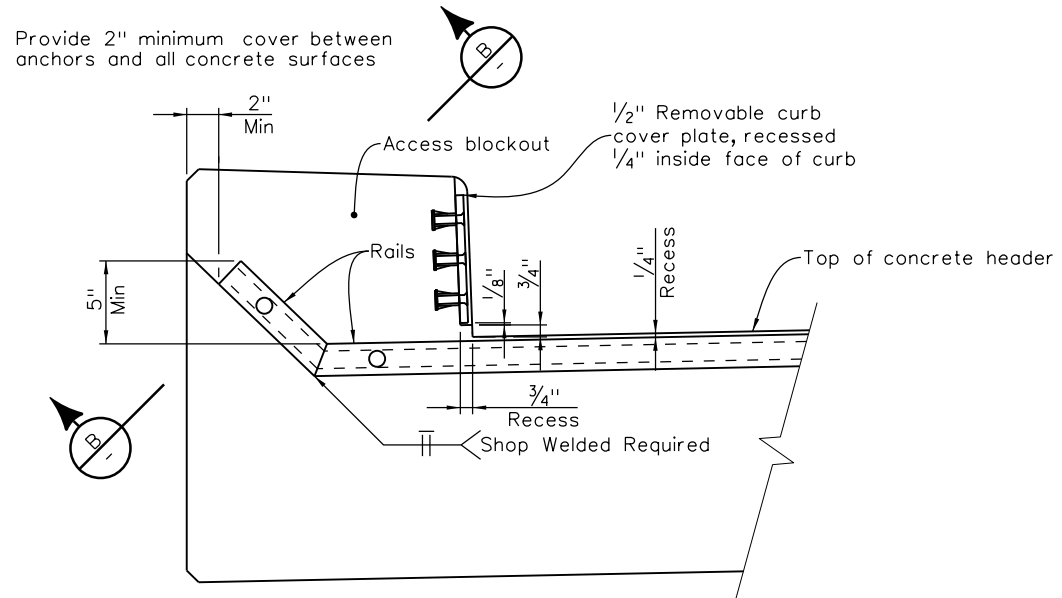
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No Revisions:				BRO C330-013
Revised:	Designer: J. Kelly	Structure Numbers	LIN-32-2W-0A	26222
Void:	Detailer: D. Gonzales	Sheet Subst: Bridge	Subst Sheets: B13 of 24	Sheet Number 39

8/15/2024

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 jkelly

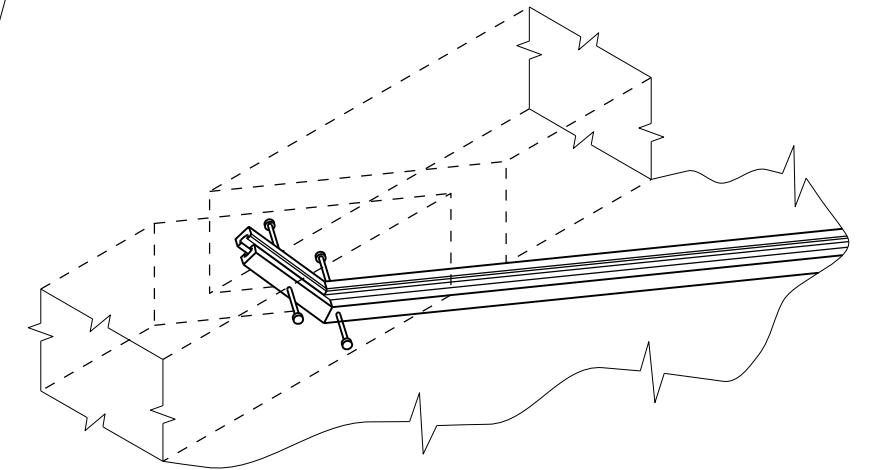


**PLAN**

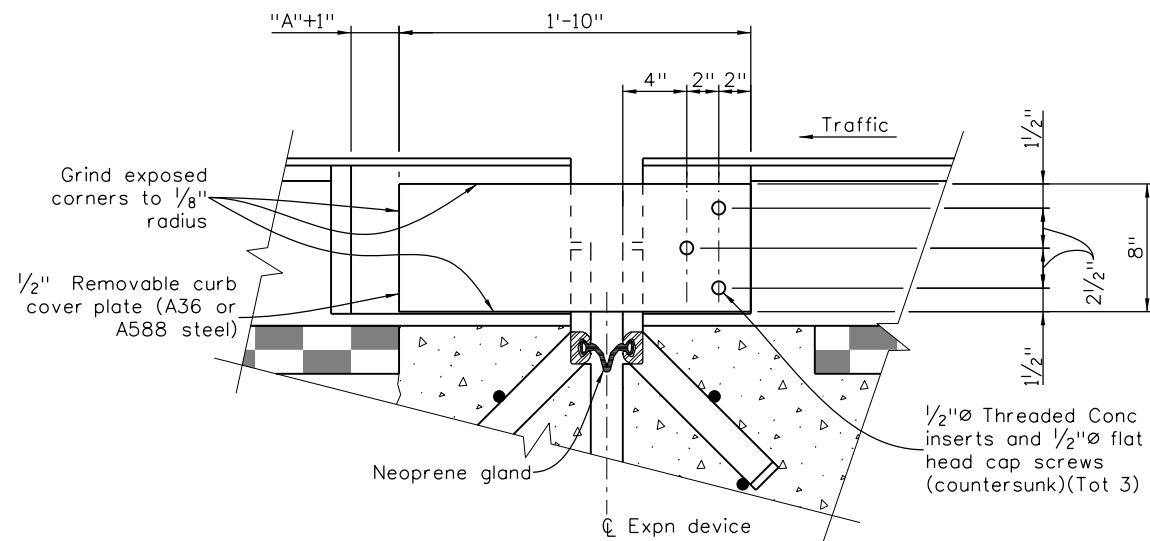


**SECTION A**

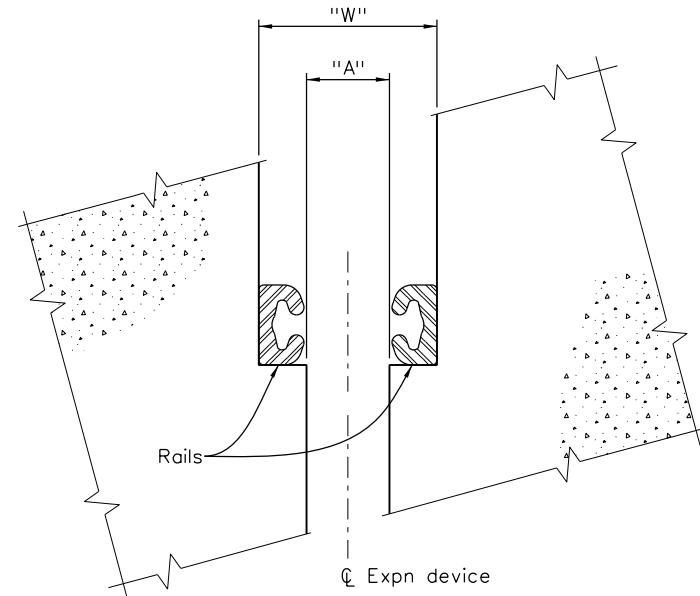
NOTE: Anchors not shown for clarity. See Bridge Typical Section for utilities.



**ISOMETRIC VIEW**



**ELEVATION**



**SECTION B**

Design		Detail		Quantities	
Designed By	Checked By	INITIAL	DATE	INITIAL	DATE
MRM	SDL	DAK	1/16	MRM	1/16
		MRM	1/16	SDL	1/16

All seals for this set of drawings are applied to the cover page(s)

Print Date: 5/21/2024  
 File Name: 78001\_B14\_Bridge\_Expansion\_Device\_0\_4\_Inch.dgn  
 Horiz. Scale: NTS Vert. Scale:  
  
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 12076 Grant Street, Thornton, CO 80241  
 Phone: (303) 962-9300  
 Web: www.RockSol.com

Sheet Revisions		
Date:	Comments	Init.



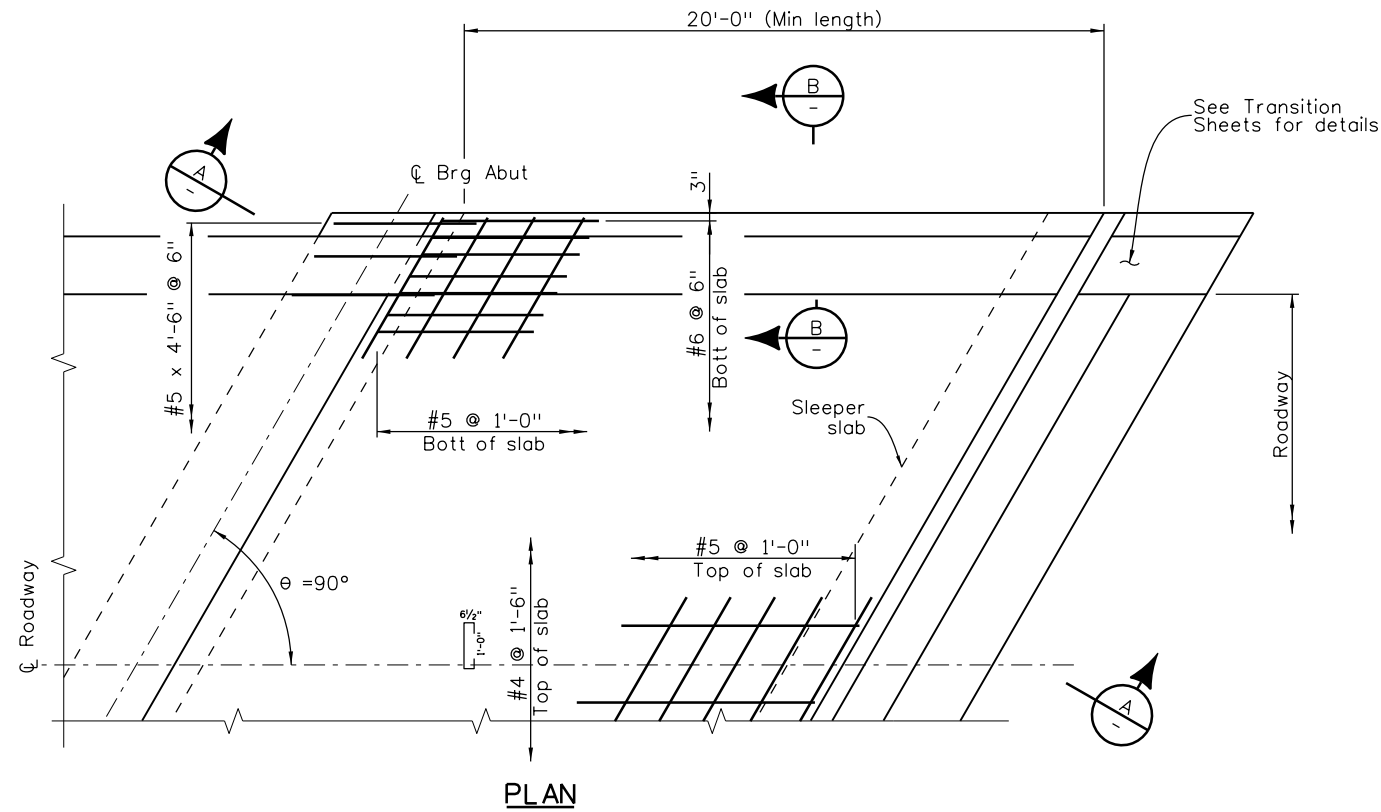
As Constructed	BIG SANDY CREEK BRIDGE REHABILITATION BRIDGE EXPANSION DEVICE (0-4 INCH) OVER CURB			Project No./Code
No Revisions:				BRO C330-013
Revised:	Designer: J Kelly	Structure Numbers	LIN-32-2W-0A	26222
Void:	Detailer: D. Gonzales	Subset Sheets: B14 of 24		Sheet Number 40

8/15/2024

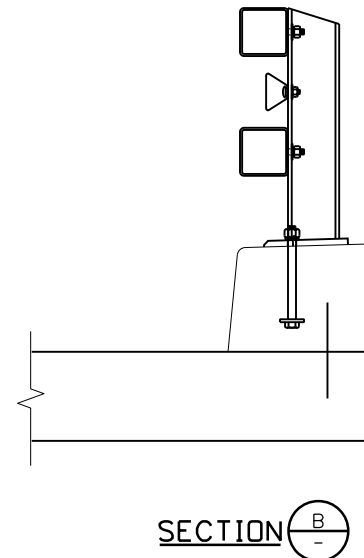


jkelly 3:10:32 PM R:\0-Projects\ACTIVE PROJECTS\78001\_Lincoln County Road 32 over Big Sandy Creek Bridge Rehabilitation\800\_Computer Design Files\802\_Sheet Files\78001\_B15\_Approach Slab Details.dgn

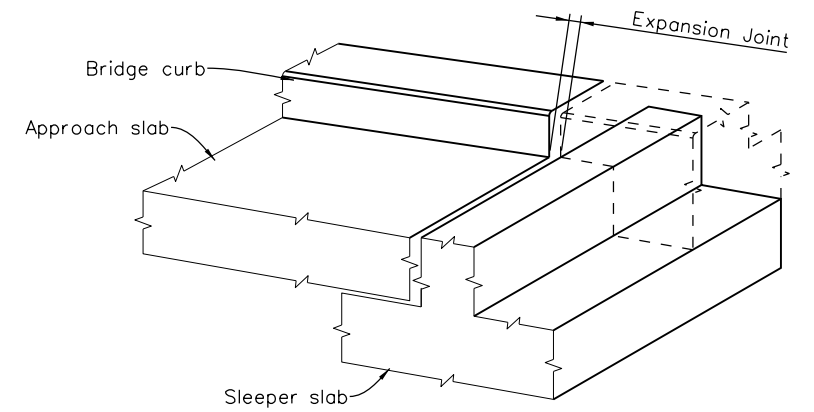
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Designed By	Checked By	INITIAL	DATE	INITIAL	DATE
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		MRM	1/16	SDL	1/16



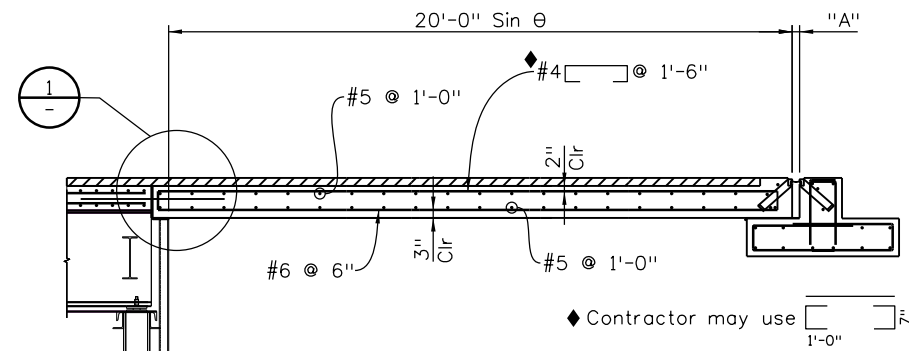
**PLAN**



**SECTION B-B**



**ISOMETRIC VIEW TYPE 10 RAIL**



**SECTION A-A**

With HMA roadway Approach slab

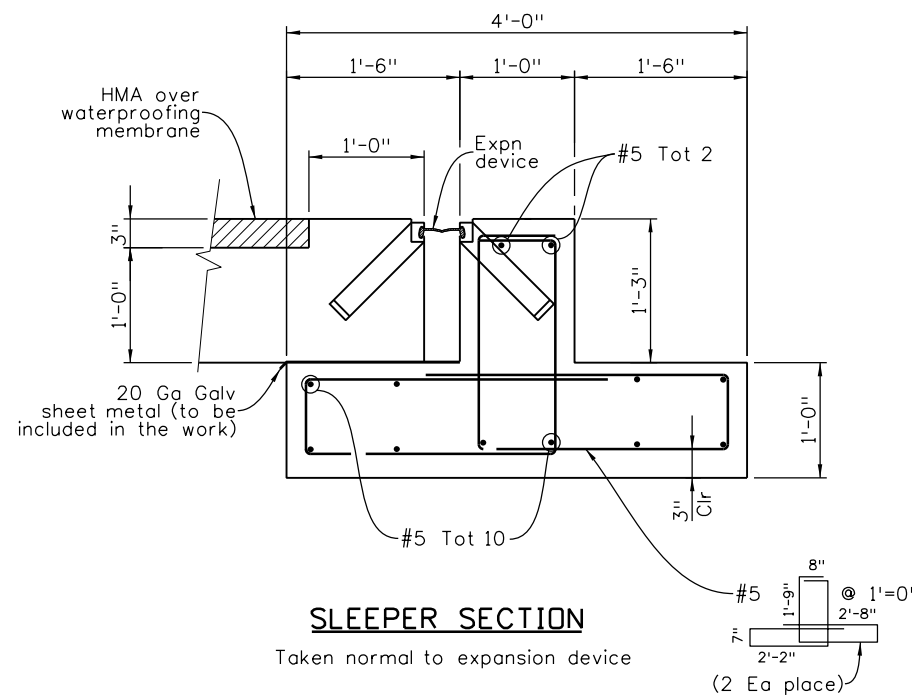
Saw cut 2" deep, 1/2" wide for poured joint sealant, see Note 6

2" deep poured joint filler, polysulfide or silicone sealant. Extend 6" up face of rail curb.

1/2" Expn Jt Matl

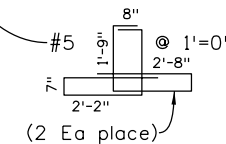
Steel Plate

**DETAIL 1-1**



**SLEEPER SECTION**

Taken normal to expansion device



(2 Ea place)

**NOTES:**

- Expansion joint material shall meet AASHTO M213.
- For expansion device details see B13.
- For curb and rail details see B10.
- Approach slab concrete shall be cured in accordance with the Specifications for Bridge Deck Concrete in Subsection 601.
- Saw cut 2" deep of new HMA for 1/2" wide poured joint sealant. The poured joint shall be included in Item 408, Joint Sealant, LF.

All seals for this set of drawings are applied to the cover page(s)

Print Date: 5/21/2024  
 File Name: 78001\_B15\_Approach Slab Details.dgn  
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**Sheet Revisions**

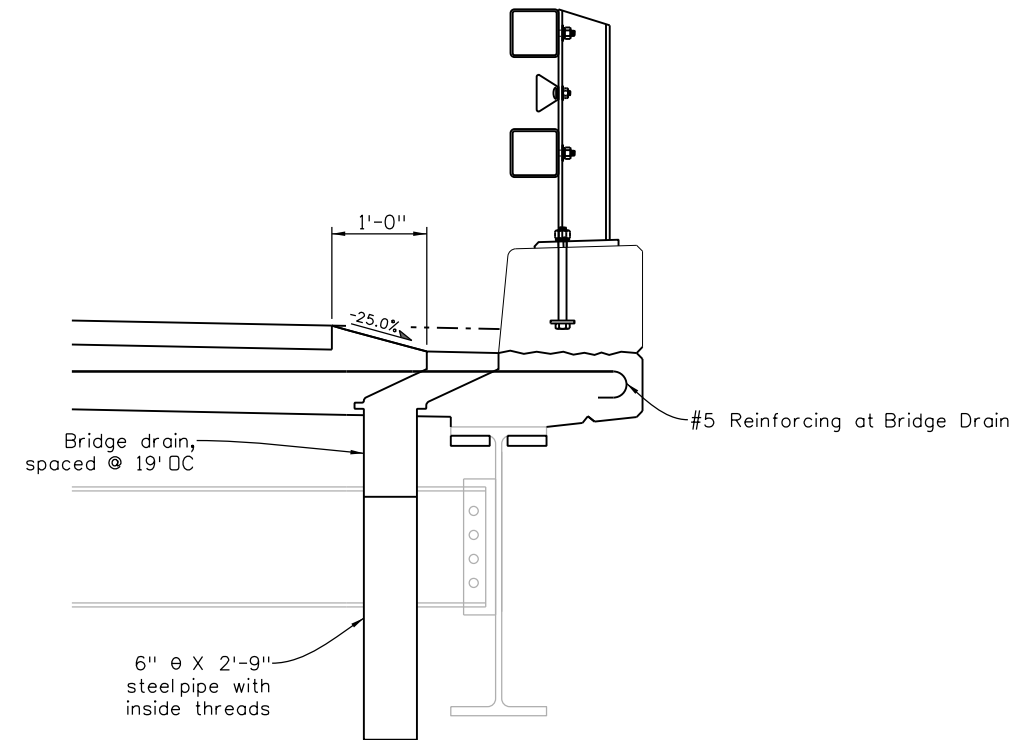
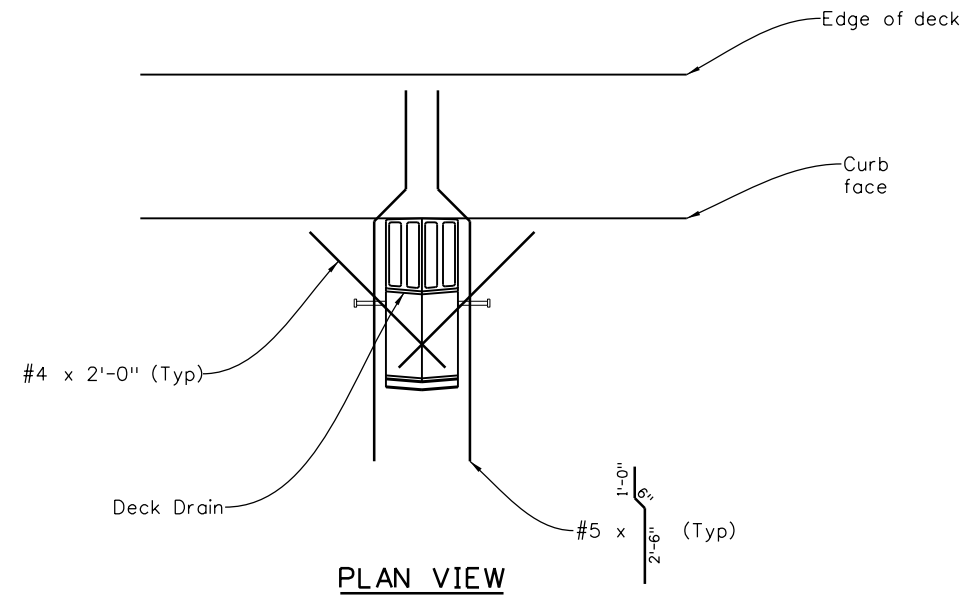
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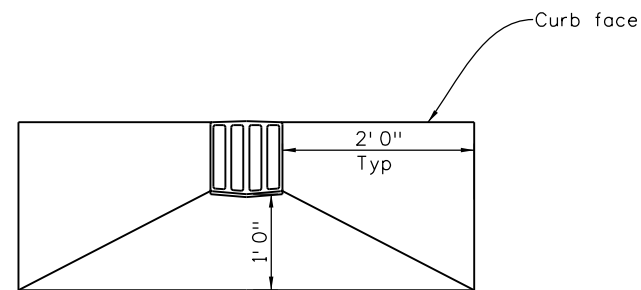
As Constructed	BIG SANDY CREEK BRIDGE REHABILITATION APPROACH SLAB DETAILS			Project No./Code
No Revisions:				BRD C330-013
Revised:	Designer: J Kelly	Structure Numbers	LIN-32-2W-0A	26222
Void:	Detailer: D. Gonzales	Sheet Subset: Bridge	Subset Sheets: B15 of 24	Sheet Number 41

8/15/2024

j.kelly 3:11:28 PM R:\Q-Projects\ACTIVE PROJECTS\78001-Lincoln County Road 32 over Big Sandy Creek Bridge Rehabilitation\800-Computer Design Files\802-Sheet Files\78001\_B16\_Deck\_Drain\_Details.dgn



Deck reinforcement not shown for clarity



**NOTES:**

1. Cost of 6" Ø pipe shall be included in item 513 Bridge Drain (Special)
2. For location of Bridge Drains, see Construction Layout
3. Acceptable Bridge Drain Alternatives: Neenah R-3930 Offset Bridge Scupper or Engineer approved alternative

All seals for this set of drawings are applied to the cover page(s)

Print Date: 5/21/2024  
 File Name: 78001\_B16\_Deck\_Drain\_Details.dgn  
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As Constructed	BIG SANDY CREEK BRIDGE REHABILITATION DECK DRAIN DETAILS			Project No./Code
No Revisions:				BRO C330-013
Revised:	Designer: J. Kelly	Structure Numbers	LIN-32-2W-0A	26222
Void:	Detailer: D. Gonzales	Sheet Subset: Bridge	Subset Sheets: B16 of 24	Sheet Number 42

8/15/2024

State of Colorado  
 Department of Transportation  
 Staff Bridge Design  
 Bridge Geometry Project Coordinate Converter  
 Version 1.00

Run date & time = Sat Mar 09 15:27:50 2024

Input Northing Offset = 477816.163000  
 Input Easting Offset = 573256.766000  
 Input Bearing = N 31 25 39.9500 E

DESCRIPTION

Units: Feet;  
 Project: BR0 C330-013; Subaccount: 26222;  
 Designer: JTK; Detailer: JTK;  
 Location: Lincoln County;

HORIZONTAL ALIGNMENT DATA

PC 51+83.0867 T 73.7333  
 PI 52+56.8200 Lc 144.6005 DELTA 27 37 00.00 LT Dc 19 05 54.94 RADIUS 300.000000  
 PT 53+27.6872 T 73.7333

VERTICAL ALIGNMENT DATA

ELEVATION AT PI	ELEVATION AT GRADE	STATION	ELEVATION AT GRADE	ELEVATION AT PI	PERCENT GRADE
5052.1500	5052.1500	PI 3+98.3300			0.000000
		4+35.8300	PI 5052.1500	5052.1500	0.000000
					0.000000

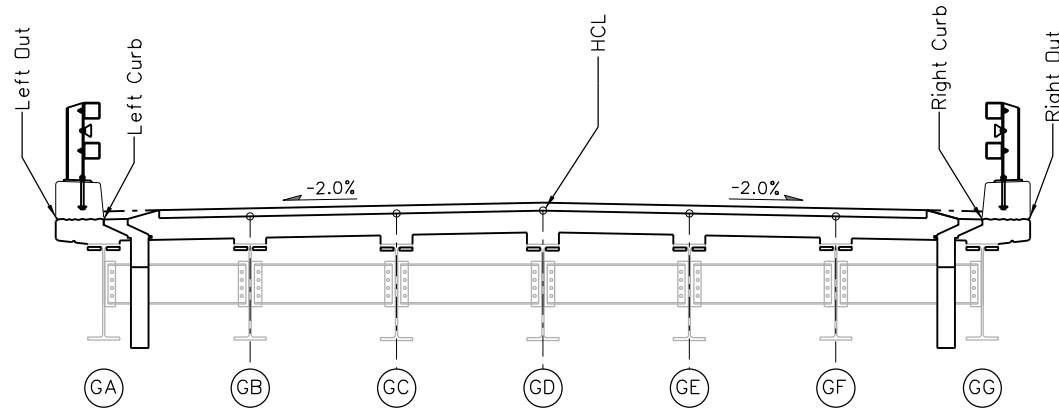
TABLE OF ROADWAY CROSS-SLOPES (SUPERELEVATION: E= -NC- )

STATION (ON TANGENT)	SLOPE LEFT	SLOPE RIGHT	VC LENGTH
	-0.0200	-0.0200	50.00 (MAX)

OFFSET PROFILE CONTROL TO PIVOT POINT = 0.0000 FEET

LIMITS OF VALID ELEVATION AND CROSS-SLOPE DATA

\* BEGIN UNLIMITED \* \* END UNLIMITED \*



LAYOUT LINE DATA

LAYOUT LINE DEFINED AS BACK TANGENT

LAYOUT LINE INTERSECTS REF LINE AT HCL STA 4+40.8300 OFFSET 0.00000000 X 0.0000 Y 0.0000

DEAD LOAD DEFLECTION DATA

DEFLECTIONS AT TENTH POINTS FROM FITTED CURVE

0.0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0

FOR BENT LINE: CL Brg A1 07 CARD(S): 1 GIRDER LINES REFERENCED BY: A

INCH 0.0000 0.2580 0.4800 0.6396 0.7211 0.7190 0.6384 0.4950 0.3147 0.1341 0.0000 INCH  
 FOOT 0.0000 0.0215 0.0400 0.0533 0.0601 0.0599 0.0532 0.0413 0.0262 0.0112 0.0000 FOOT

SLOPE 0.220581 -0.077086 SLOPE

0.0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0

DEFLECTIONS AT TENTH POINTS FROM FITTED CURVE

FOR BENT LINE: CL Brg A1 07 CARD(S): 1 GIRDER LINES REFERENCED BY: B

INCH 0.0000 0.2716 0.5046 0.6716 0.7564 0.7534 0.6683 0.5174 0.3283 0.1394 0.0000 INCH  
 FOOT 0.0000 0.0226 0.0420 0.0560 0.0630 0.0628 0.0557 0.0431 0.0274 0.0116 0.0000 FOOT

SLOPE 0.232552 -0.079550 SLOPE

FOR BENT LINE: CL Brg P2 07 CARD(S): 1 GIRDER LINES REFERENCED BY: A

INCH 0.0000 0.0004 -0.0030 0.0146 0.0393 0.0505 0.0393 0.0146 -0.0030 0.0004 0.0000 INCH  
 FOOT 0.0000 0.0000 -0.0002 0.0012 0.0033 0.0042 0.0033 0.0012 -0.0002 0.0000 0.0000 FOOT

SLOPE 0.023578 -0.023578 SLOPE

FOR BENT LINE: CL Brg P2 07 CARD(S): 1 GIRDER LINES REFERENCED BY: B

INCH 0.0000 0.0005 -0.0031 0.0228 0.0558 0.0672 0.0500 0.0243 0.0204 0.0411 0.0000 INCH  
 FOOT 0.0000 0.0000 -0.0003 0.0019 0.0046 0.0056 0.0042 0.0020 0.0017 0.0034 0.0000 FOOT

SLOPE 0.034374 -0.115553 SLOPE

0.0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0

DEFLECTIONS AT TENTH POINTS FROM FITTED CURVE

0.0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0

FOR BENT LINE: CL Brg P3 07 CARD(S): 1 GIRDER LINES REFERENCED BY: A

INCH 0.0000 0.1341 0.3147 0.4950 0.6384 0.7190 0.7211 0.6396 0.4800 0.2580 0.0000 INCH  
 FOOT 0.0000 0.0112 0.0262 0.0413 0.0532 0.0599 0.0601 0.0533 0.0400 0.0215 0.0000 FOOT

SLOPE 0.077086 -0.220581 SLOPE

FOR BENT LINE: CL Brg P3 07 CARD(S): 1 GIRDER LINES REFERENCED BY: B

INCH 0.0000 0.1399 0.3290 0.5180 0.6686 0.7534 0.7560 0.6710 0.5039 0.2711 0.0000 INCH  
 FOOT 0.0000 0.0117 0.0274 0.0432 0.0557 0.0628 0.0630 0.0559 0.0420 0.0226 0.0000 FOOT

SLOPE 0.080167 -0.231935 SLOPE

FOR BENT LINE: CL Brg P4 07 CARD(S): 1 GIRDER LINES REFERENCED BY: A

INCH 0.0000 0.2139 0.3943 0.5177 0.5709 0.5515 0.4671 0.3359 0.1866 0.0582 0.0000 INCH  
 FOOT 0.0000 0.0178 0.0329 0.0431 0.0476 0.0460 0.0389 0.0280 0.0156 0.0048 0.0000 FOOT

SLOPE 0.183563 -0.003268 SLOPE

0.0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0

DEFLECTIONS AT TENTH POINTS FROM FITTED CURVE

0.0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0

FOR BENT LINE: CL Brg P4 07 CARD(S): 1 GIRDER LINES REFERENCED BY: B

INCH 0.0000 0.2261 0.4167 0.5470 0.6033 0.5828 0.4938 0.3555 0.1978 0.0620 0.0000 INCH  
 FOOT 0.0000 0.0188 0.0347 0.0456 0.0503 0.0486 0.0412 0.0296 0.0165 0.0052 0.0000 FOOT

SLOPE 0.194116 -0.004146 SLOPE

FOR BENT LINE: CL Brg P5 07 CARD(S): 1 GIRDER LINES REFERENCED BY: A

INCH 0.0000 0.0582 0.1866 0.3359 0.4671 0.5515 0.5709 0.5177 0.3943 0.2139 0.0000 INCH  
 FOOT 0.0000 0.0048 0.0156 0.0280 0.0389 0.0460 0.0476 0.0431 0.0329 0.0178 0.0000 FOOT

SLOPE 0.003268 -0.183563 SLOPE

FOR BENT LINE: CL Brg P5 07 CARD(S): 1 GIRDER LINES REFERENCED BY: B

INCH 0.0000 0.0620 0.1978 0.3555 0.4938 0.5828 0.6033 0.5470 0.4167 0.2261 0.0000 INCH  
 FOOT 0.0000 0.0052 0.0165 0.0296 0.0412 0.0486 0.0503 0.0456 0.0347 0.0188 0.0000 FOOT

SLOPE 0.004146 -0.194116 SLOPE

0.0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0

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 A1=-2.63778  
 A0=-2.64697

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 A3= 0.00000  
 A2= 4.56401  
 A1=-2.72799  
 A0=-2.79063

A4=-17.3314  
 A3= 34.6628  
 A2=-21.9881  
 A1= 4.65671  
 A0=-.282933

A4=-30.6550  
 A3= 56.7517  
 A2=-34.0048  
 A1= 6.93399  
 A0=-.412487

A4= 0.00000  
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 A2= 4.35972  
 A1=-6.08166  
 A0=-.925033

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A4= 0.00000  
 A3= 0.00000  
 A2= 4.56708  
 A1=-6.84673  
 A0=-.497479E-01

Note: Elevations are at top of concrete deck 3 Inches below Finished Grade. Negative Roadway Cross Slope is Downwards from the Profile Grade Line. These Stations, Coordinates, Offsets and Lengths define the layout of the structure in a two dimensional horizontal plane. Elevations define the final grade of the finished concrete deck. Fabrication of structural components through the direct use of this information is not intended or advisable.

All seals for this set of drawings are applied to the cover page(s)	Print Date: 5/21/2024	Sheet Revisions				As Constructed	BIG SANDY CREEK BRIDGE REHABILITATION			Project No./Code	
	File Name: 78001_B17_to_B24_Deck_Elevations.dgn	Date:	Comments	Init.			BRIDGE DECK ELEVATIONS				BR0 C330-013
	Horiz. Scale: NTS Vert. Scale:						(1 OF 8)				
								Revised:	Designer: J. Kelly		Structure Numbers
					Void:	Detailer: D. Gonzales	Sheet Subset: Bridge	Subset Sheets: B17 of 24	Sheet Number 43		

8/15/2024

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* HORIZONTAL CONTROL LINE *		AT FINISHED GRADE	
End AS1	4+20.3717	0.0000	5052.1500
BFA1	4+40.3717	0.0000	5052.1500
CL Brg A1	4+40.8300	0.0000	5052.1500
CL Brg P2	5+15.8300	0.0000	5052.1500
CL Brg P3	5+90.8300	0.0000	5052.1500
CL Brg P4	6+95.8300	0.0000	5052.1500
CL Brg P5	7+40.8300	0.0000	5052.1500
CL Brg A6	8+15.8300	0.0000	5052.1500
BFA6	8+16.2883	0.0000	5052.1500
End AS6	8+36.2883	0.0000	5052.1500

Left Out		PARALLEL TO HORIZONTAL CONTROL										0.250000 FEET BELOW FINISHED GRADE										Left Curb		PARALLEL TO HORIZONTAL CONTROL										0.250000 FEET BELOW FINISHED GRADE									
BENT LINE	STATION	OFFSET	ELEVATION	ELEV+DL	X	Y	NORTHING	EASTING	BENT LNTH	SKEW	GIRDER LNTH	CRS-SLP	BENT LINE	STATION	OFFSET	ELEVATION	ELEV+DL	X	Y	NORTHING	EASTING	BENT LNTH	SKEW	GIRDER LNTH	CRS-SLP	BENT LINE	STATION	OFFSET	ELEVATION	ELEV+DL	X	Y	NORTHING	EASTING	BENT LNTH	SKEW	GIRDER LNTH	CRS-SLP					
End AS1	4+20.3717	-15.2500	5051.5950	-15.2500	-20.4583	477806.6577	573233.0858	-15.2500	0 00 00.00	-20.4583	-0.020000	End AS1	4+20.3717	-13.7500	5051.6250	-13.7500	-20.4583	477805.8755	573234.3657	-13.7500	0 00 00.00	-20.4583	-0.020000																				
BFA1	4+40.3717	-15.2500	5051.5950	-15.2500	-0.4583	477823.7236	573243.5142	-15.2500	0 00 00.00	-0.4583	-0.020000	BFA1	4+40.3717	-13.7500	5051.6250	-13.7500	-0.4583	477822.9415	573244.7942	-13.7500	0 00 00.00	-0.4583	-0.020000																				
CL Brg A1	4+40.8300	-15.2500	5051.5950	-15.2500	0.0000	477816.1630	573256.7660	-15.2500	0 00 00.00	0.0000	-0.020000	CL Brg A1	4+40.8300	-13.7500	5051.6250	-13.7500	0.0000	477823.3326	573245.0331	-13.7500	0 00 00.00	0.0000	-0.020000																				
F-1	4+48.3300	-15.2500	5051.5950	-15.2500	7.5000	477830.5144	573247.6639	-15.2500	0 00 00.00	7.5000	-0.020000	F-1	4+48.3300	-13.7500	5051.6250	-13.7500	7.5000	477829.7323	573248.9438	-13.7500	0 00 00.00	7.5000	-0.020000																				
F-2	4+55.8300	-15.2500	5051.5950	-15.2500	15.0000	477836.9142	573251.5745	-15.2500	0 00 00.00	15.0000	-0.020000	F-2	4+55.8300	-13.7500	5051.6250	-13.7500	15.0000	477836.1320	573252.8545	-13.7500	0 00 00.00	15.0000	-0.020000																				
F-3	4+63.3300	-15.2500	5051.5950	-15.2500	22.5000	477843.3139	573255.4852	-15.2500	0 00 00.00	22.5000	-0.020000	F-3	4+63.3300	-13.7500	5051.6250	-13.7500	22.5000	477842.5318	573256.7652	-13.7500	0 00 00.00	22.5000	-0.020000																				
F-4	4+70.8300	-15.2500	5051.5950	-15.2500	30.0000	477849.7137	573259.3959	-15.2500	0 00 00.00	30.0000	-0.020000	F-4	4+70.8300	-13.7500	5051.6250	-13.7500	30.0000	477848.9315	573260.6758	-13.7500	0 00 00.00	30.0000	-0.020000																				
F-5	4+78.3300	-15.2500	5051.5950	-15.2500	37.5000	477856.1134	573263.3066	-15.2500	0 00 00.00	37.5000	-0.020000	F-5	4+78.3300	-13.7500	5051.6250	-13.7500	37.5000	477855.3313	573264.5865	-13.7500	0 00 00.00	37.5000	-0.020000																				
F-6	4+85.8300	-15.2500	5051.5950	-15.2500	45.0000	477862.5131	573267.2172	-15.2500	0 00 00.00	45.0000	-0.020000	F-6	4+85.8300	-13.7500	5051.6250	-13.7500	45.0000	477861.7310	573268.4972	-13.7500	0 00 00.00	45.0000	-0.020000																				
F-7	4+93.3300	-15.2500	5051.5950	-15.2500	52.5000	477868.9128	573271.1282	-15.2500	0 00 00.00	52.5000	-0.020000	F-7	4+93.3300	-13.7500	5051.6250	-13.7500	52.5000	477868.1537	573272.4079	-13.7500	0 00 00.00	52.5000	-0.020000																				
F-8	5+00.8300	-15.2500	5051.5950	-15.2500	60.0000	477875.3126	573275.0386	-15.2500	0 00 00.00	60.0000	-0.020000	F-8	5+00.8300	-13.7500	5051.6250	-13.7500	60.0000	477874.5305	573276.3185	-13.7500	0 00 00.00	60.0000	-0.020000																				
F-9	5+08.3300	-15.2500	5051.5950	-15.2500	67.5000	477881.7123	573278.9493	-15.2500	0 00 00.00	67.5000	-0.020000	F-9	5+08.3300	-13.7500	5051.6250	-13.7500	67.5000	477880.9302	573280.2292	-13.7500	0 00 00.00	67.5000	-0.020000																				
CL Brg P2	5+15.8300	-15.2500	5051.5950	-15.2500	75.0000	477888.1121	573282.8599	-15.2500	0 00 00.00	75.0000	-0.020000	CL Brg P2	5+15.8300	-13.7500	5051.6250	-13.7500	75.0000	477887.3299	573284.1399	-13.7500	0 00 00.00	75.0000	-0.020000																				
F-1	5+23.3300	-15.2500	5051.5950	-15.2500	82.5000	477894.5118	573286.7706	-15.2500	0 00 00.00	82.5000	-0.020000	F-1	5+23.3300	-13.7500	5051.6250	-13.7500	82.5000	477893.7297	573288.0506	-13.7500	0 00 00.00	82.5000	-0.020000																				
F-2	5+30.8300	-15.2500	5051.5950	-15.2500	90.0000	477900.9115	573290.6813	-15.2500	0 00 00.00	90.0000	-0.020000	F-2	5+30.8300	-13.7500	5051.6250	-13.7500	90.0000	477900.1294	573291.9612	-13.7500	0 00 00.00	90.0000	-0.020000																				
F-3	5+38.3300	-15.2500	5051.5950	-15.2500	97.5000	477907.3113	573294.5920	-15.2500	0 00 00.00	97.5000	-0.020000	F-3	5+38.3300	-13.7500	5051.6250	-13.7500	97.5000	477906.5291	573295.8719	-13.7500	0 00 00.00	97.5000	-0.020000																				
F-4	5+45.8300	-15.2500	5051.5950	-15.2500	105.0000	477913.7110	573298.5026	-15.2500	0 00 00.00	105.0000	-0.020000	F-4	5+45.8300	-13.7500	5051.6250	-13.7500	105.0000	477912.9289	573299.7826	-13.7500	0 00 00.00	105.0000	-0.020000																				
F-5	5+53.3300	-15.2500	5051.5950	-15.2500	112.5000	477920.1108	573302.4133	-15.2500	0 00 00.00	112.5000	-0.020000	F-5	5+53.3300	-13.7500	5051.6250	-13.7500	112.5000	477919.3286	573303.6933	-13.7500	0 00 00.00	112.5000	-0.020000																				
F-6	5+60.8300	-15.2500	5051.5950	-15.2500	120.0000	477926.5105	573306.3240	-15.2500	0 00 00.00	120.0000	-0.020000	F-6	5+60.8300	-13.7500	5051.6250	-13.7500	120.0000	477925.7284	573307.6039	-13.7500	0 00 00.00	120.0000	-0.020000																				
F-7	5+68.3300	-15.2500	5051.5950	-15.2500	127.5000	477932.9102	573310.2347	-15.2500	0 00 00.00	127.5000	-0.020000	F-7	5+68.3300	-13.7500	5051.6250	-13.7500	127.5000	477932.1281	573311.5146	-13.7500	0 00 00.00	127.5000	-0.020000																				
F-8	5+75.8300	-15.2500	5051.5950	-15.2500	135.0000	477939.3100	573314.1453	-15.2500	0 00 00.00	135.0000	-0.020000	F-8	5+75.8300	-13.7500	5051.6250	-13.7500	135.0000	477938.5278	573315.4253	-13.7500	0 00 00.00	135.0000	-0.020000																				
F-9	5+83.3300	-15.2500	5051.5950	-15.2500	142.5000	477945.7097	573318.0560	-15.2500	0 00 00.00	142.5000	-0.020000	F-9	5+83.3300	-13.7500	5051.6250	-13.7500	142.5000	477944.9276	573319.3360	-13.7500	0 00 00.00	142.5000	-0.020000																				
CL Brg P3	5+90.8300	-15.2500	5051.5950	-15.2500	150.0000	477952.1094	573321.9667	-15.2500	0 00 00.00	150.0000	-0.020000	CL Brg P3	5+90.8300	-13.7500	5051.6250	-13.7500	150.0000	477951.3273	573323.2466	-13.7500	0 00 00.00	150.0000	-0.020000																				
F-1	5+98.3300	-15.2500	5051.5950	-15.2500	157.5000	477958.5092	573325.8774	-15.2500	0 00 00.00	157.5000	-0.020000	F-1	5+98.3300	-13.7500	5051.6250	-13.7500	157.5000	477957.7270	573327.1573	-13.7500	0 00 00.00	157.5000	-0.020000																				
F-2	6+05.8300	-15.2500	5051.5950	-15.2500	165.0000	477964.9089	573329.7880	-15.2500	0 00 00.00	165.0000	-0.020000	F-2	6+05.8300	-13.7500	5051.6250	-13.7500	165.0000	477964.1268	573331.0680	-13.7500	0 00 00.00	165.0000	-0.020000																				
F-3	6+13.3300	-15.2500	5051.5950	-15.2500	172.5000	477971.3086	573333.6987	-15.2500	0 00 00.00	172.5000	-0.020000	F-3	6+13.3300	-13.7500	5051.6250	-13.7500	172.5000	477970.5265	573334.9786	-13.7500	0 00 00.00	172.5000	-0.020000																				
F-4	6+20.8300	-15.2500	5051.5950	-15.2500	180.0000	477977.7084	573337.6094	-15.2500	0 00 00.00	180.0000	-0.020000	F-4	6+20.8300	-13.7500	5051.6250	-13.7500	180.0000	477976.9263	573338.8893	-13.7500	0 00 00.00	180.0000	-0.020000																				
F-5	6+28.3300	-15.2500	5051.5950	-15.2500	187.5000	477984.1081	573341.5200	-15.2500	0 00 00.00	187.5000	-0.020000	F-5	6+28.3300	-13.7500	5051.6250	-13.7500	187.5000	477983.3260	573342.8000	-13.7500	0 00 00.00	187.5000	-0.020000																				
F-6	6+35.8300	-15.2500	5051.5950	-15.2500	195.0000	477990.5079	573345.4307	-15.2500	0 00 00.00	195.0000	-0.020000	F-6	6+35.8300	-13.7500	5051.6250	-13.7500	195.0000	477989.7257	573346.7107	-13.7500	0 00 00.00	195.0000	-0.020000																				
F-7	6+43.3300	-15.2500	5051.5950	-15.2500	202.5000	477996.9076	573349.3414	-15.2500	0 00 00.00	202.5000	-0.020000	F-7	6+43.3300	-13.7500	5051.6250	-13.7500	202.5000	477996.1255	573350.6213	-13.7500	0 00 00.00	202.5000	-0.020000																				
F-8	6+50.8300	-15.2500	5051.5950	-15.2500	210.0000	478003.3073	573353.2521	-15.2500	0 00 00.00	210.0000	-0.020000	F-8	6+50.8300	-13.7500	5051.6250	-13.7500	210.0000	478002.5252	573354.5320	-13.7500	0 00 00.00	210.0000	-0.020000																				
F-9	6+58.3300	-15.2500	5051.5950	-15.2500	217.5000	478009.7071	573357.1627	-15.2500	0 00 00.00	217.5000	-0.020000	F-9	6+58.3300	-13.7500	5051.6250	-13.7500	217.5000	478008.9249	573358.4427	-13.7500	0 00 00.00	217.5000	-0.020000																				
CL Brg P4	6+65.8300	-15.2500	5051.5950	-15.2500	225.0000	478016.1068	573361.0734	-15.2500	0 00 00.00	225.0000	-0.020000	CL Brg P4	6+65.8300	-13.7500	5051.6250	-13.7500	225.0000	478015.3247	573362.3534	-13.7500	0 00 00.00	225.0000	-0.020000																				
F-1	6+73.3300	-15.2500	5051.5950	-15.2500	232.5000	478022.5065	573364.9841	-15.2500	0 00 00.00	232.5000	-0.020000	F-1	6+73.3300	-13.7500	5051.6250	-13.7500	232.5000	478021.7244	573366.2640	-13.7500	0 00 00.00	232.5000	-0.020000																				
F-2	6+80.8300	-15.2500	5051.5950	-15.2500	240.0000	478028.9063	573368.8948	-15.2500	0 00 00.00	240.0000	-0.020000	F-2	6+80.8300	-13.7500	5051.6250	-13.7500	240.0000	478028.1241	573370.1747	-13.7500	0 00 00.00	240.0000	-0.020000																				
F-3	6+88.3300	-15.2500	5051.5950	-15.2500	247.5000	478035.3060																																					

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Girder A											Girder B														
PARALLEL TO HORIZONTAL CONTROL											PARALLEL TO HORIZONTAL CONTROL														
0.250000 FEET BELOW FINISHED GRADE											0.250000 FEET BELOW FINISHED GRADE														
BENT LINE	STATION	OFFSET	ELEVATION	ELEV+DL	X	Y	NORTHING	EASTING	BENT LNTH	SKEW	GIRDER LNTH	CRS-SLP	BENT LINE	STATION	OFFSET	ELEVATION	ELEV+DL	X	Y	NORTHING	EASTING	BENT LNTH	SKEW	GIRDER LNTH	CRS-SLP
End AS1	4+20.3717	-13.7500	5051.6250		-13.7500	-20.4583	477805.8755	573234.3657	-13.7500	0 00 00.00	-20.4583	-0.020000	End AS1	4+20.3717	-9.1670	5051.7167		-9.1670	-20.4583	477803.4859	573238.2764	-9.1670	0 00 00.00	-20.4583	-0.020000
BFA1	4+40.3717	-13.7500	5051.6250		-13.7500	-0.4583	477822.9415	573244.7942	-13.7500	0 00 00.00	-0.4583	-0.020000	BFA1	4+40.3717	-9.1670	5051.7167		-9.1670	-0.4583	477820.5518	573248.7048	-9.1670	0 00 00.00	-0.4583	-0.020000
CL Brg A1	4+40.8300	-13.7500	5051.6250	051.6250	-13.7500	0.0000	477823.3326	573245.0331	-13.7500	0 00 00.00	0.0000	-0.020000	CL Brg A1	4+40.8300	-9.1670	5051.7167	051.7167	-9.1670	0.0000	477820.9429	573248.9438	-9.1670	0 00 00.00	0.0000	-0.020000
F-1	4+49.8300	-13.7500	5051.6250	051.6645	-13.7500	7.5000	477829.7323	573248.9438			7.5000	-0.020000	F-1	4+49.8300	-9.1670	5051.7167	051.7393	-9.1670	7.5000	477827.3426	573252.8545			7.5000	-0.020000
F-2	4+55.8300	-13.7500	5051.6250	051.6650	-13.7500	15.0000	477836.1320	573252.8545			15.0000	-0.020000	F-2	4+55.8300	-9.1670	5051.7167	051.7587	-9.1670	15.0000	477833.7424	573256.7652			15.0000	-0.020000
F-3	4+63.3300	-13.7500	5051.6250	051.6783	-13.7500	22.5000	477842.5318	573256.7652			22.5000	-0.020000	F-3	4+63.3300	-9.1670	5051.7167	051.7726	-9.1670	22.5000	477840.1421	573260.6758			22.5000	-0.020000
F-4	4+70.8300	-13.7500	5051.6250	051.6851	-13.7500	30.0000	477848.9315	573260.6758			30.0000	-0.020000	F-4	4+70.8300	-9.1670	5051.7167	051.7797	-9.1670	30.0000	477846.5418	573264.5865			30.0000	-0.020000
F-5	4+78.3300	-13.7500	5051.6250	051.6849	-13.7500	37.5000	477855.3313	573264.5865			37.5000	-0.020000	F-5	4+78.3300	-9.1670	5051.7167	051.7794	-9.1670	37.5000	477852.9416	573268.4972			37.5000	-0.020000
F-6	4+85.8300	-13.7500	5051.6250	051.6782	-13.7500	45.0000	477861.7310	573268.4972			45.0000	-0.020000	F-6	4+85.8300	-9.1670	5051.7167	051.7723	-9.1670	45.0000	477859.3413	573272.4079			45.0000	-0.020000
F-7	4+93.3300	-13.7500	5051.6250	051.6663	-13.7500	52.5000	477868.1307	573272.4079			52.5000	-0.020000	F-7	4+93.3300	-9.1670	5051.7167	051.7698	-9.1670	52.5000	477865.7410	573276.3185			52.5000	-0.020000
F-8	5+00.8300	-13.7500	5051.6250	051.6512	-13.7500	60.0000	477874.5305	573276.3185			60.0000	-0.020000	F-8	5+00.8300	-9.1670	5051.7167	051.7440	-9.1670	60.0000	477872.1408	573280.2292			60.0000	-0.020000
F-9	5+08.3300	-13.7500	5051.6250	051.6362	-13.7500	67.5000	477880.9302	573280.2292			67.5000	-0.020000	F-9	5+08.3300	-9.1670	5051.7167	051.7283	-9.1670	67.5000	477878.5406	573284.1399			67.5000	-0.020000
CL Brg P2	5+15.8300	-13.7500	5051.6250	051.6250	-13.7500	75.0000	477887.3299	573284.1399	-13.7500	0 00 00.00	75.0000	-0.020000	CL Brg P2	5+15.8300	-9.1670	5051.7167	051.7167	-9.1670	75.0000	477884.9403	573288.0506	-9.1670	0 00 00.00	75.0000	-0.020000
F-1	5+23.3300	-13.7500	5051.6250	051.6250	-13.7500	82.5000	477893.7297	573288.0506			82.5000	-0.020000	F-1	5+23.3300	-9.1670	5051.7167	051.7167	-9.1670	82.5000	477891.3400	573291.9612			82.5000	-0.020000
F-2	5+30.8300	-13.7500	5051.6250	051.6248	-13.7500	90.0000	477900.1294	573291.9612			90.0000	-0.020000	F-2	5+30.8300	-9.1670	5051.7167	051.7164	-9.1670	90.0000	477897.7397	573295.8719			90.0000	-0.020000
F-3	5+38.3300	-13.7500	5051.6250	051.6262	-13.7500	97.5000	477906.5291	573295.8719			97.5000	-0.020000	F-3	5+38.3300	-9.1670	5051.7167	051.7186	-9.1670	97.5000	477904.1395	573299.7826			97.5000	-0.020000
F-4	5+45.8300	-13.7500	5051.6250	051.6283	-13.7500	105.0000	477912.9289	573299.7826			105.0000	-0.020000	F-4	5+45.8300	-9.1670	5051.7167	051.7213	-9.1670	105.0000	477910.5392	573303.6932			105.0000	-0.020000
F-5	5+53.3300	-13.7500	5051.6250	051.6292	-13.7500	112.5000	477919.3286	573303.6932			112.5000	-0.020000	F-5	5+53.3300	-9.1670	5051.7167	051.7223	-9.1670	112.5000	477916.9389	573307.6039			112.5000	-0.020000
F-6	5+60.8300	-13.7500	5051.6250	051.6283	-13.7500	120.0000	477925.7284	573307.6039			120.0000	-0.020000	F-6	5+60.8300	-9.1670	5051.7167	051.7208	-9.1670	120.0000	477923.3387	573311.5146			120.0000	-0.020000
F-7	5+68.3300	-13.7500	5051.6250	051.6262	-13.7500	127.5000	477932.1281	573311.5146			127.5000	-0.020000	F-7	5+68.3300	-9.1670	5051.7167	051.7187	-9.1670	127.5000	477929.7384	573315.4253			127.5000	-0.020000
F-8	5+75.8300	-13.7500	5051.6250	051.6248	-13.7500	135.0000	477938.5278	573315.4253			135.0000	-0.020000	F-8	5+75.8300	-9.1670	5051.7167	051.7184	-9.1670	135.0000	477936.1381	573319.3359			135.0000	-0.020000
F-9	5+83.3300	-13.7500	5051.6250	051.6250	-13.7500	142.5000	477944.9276	573319.3360			142.5000	-0.020000	F-9	5+83.3300	-9.1670	5051.7167	051.7201	-9.1670	142.5000	477942.5379	573323.2466			142.5000	-0.020000
CL Brg P3	5+90.8300	-13.7500	5051.6250	051.6250	-13.7500	150.0000	477951.3273	573323.2466	-13.7500	0 00 00.00	150.0000	-0.020000	CL Brg P3	5+90.8300	-9.1670	5051.7167	051.7167	-9.1670	150.0000	477948.9376	573327.1573	-9.1670	0 00 00.00	150.0000	-0.020000
F-1	5+98.3300	-13.7500	5051.6250	051.6362	-13.7500	157.5000	477957.7270	573327.1573			157.5000	-0.020000	F-1	5+98.3300	-9.1670	5051.7167	051.7283	-9.1670	157.5000	477955.3374	573331.0680			157.5000	-0.020000
F-2	6+05.8300	-13.7500	5051.6250	051.6512	-13.7500	165.0000	477964.1268	573331.0680			165.0000	-0.020000	F-2	6+05.8300	-9.1670	5051.7167	051.7441	-9.1670	165.0000	477961.7371	573334.9786			165.0000	-0.020000
F-3	6+13.3300	-13.7500	5051.6250	051.6663	-13.7500	172.5000	477970.5265	573334.9786			172.5000	-0.020000	F-3	6+13.3300	-9.1670	5051.7167	051.7598	-9.1670	172.5000	477968.1368	573338.8893			172.5000	-0.020000
F-4	6+20.8300	-13.7500	5051.6250	051.6782	-13.7500	180.0000	477976.9263	573338.8893			180.0000	-0.020000	F-4	6+20.8300	-9.1670	5051.7167	051.7724	-9.1670	180.0000	477974.5366	573342.8000			180.0000	-0.020000
F-5	6+28.3300	-13.7500	5051.6250	051.6849	-13.7500	187.5000	477983.3260	573342.8000			187.5000	-0.020000	F-5	6+28.3300	-9.1670	5051.7167	051.7794	-9.1670	187.5000	477980.9363	573346.7107			187.5000	-0.020000
F-6	6+35.8300	-13.7500	5051.6250	051.6851	-13.7500	195.0000	477989.7257	573346.7107			195.0000	-0.020000	F-6	6+35.8300	-9.1670	5051.7167	051.7797	-9.1670	195.0000	477987.3360	573350.6213			195.0000	-0.020000
F-7	6+43.3300	-13.7500	5051.6250	051.6783	-13.7500	202.5000	477996.1255	573350.6213			202.5000	-0.020000	F-7	6+43.3300	-9.1670	5051.7167	051.7726	-9.1670	202.5000	477993.7358	573354.5320			202.5000	-0.020000
F-8	6+50.8300	-13.7500	5051.6250	051.6650	-13.7500	210.0000	478002.5252	573354.5320			210.0000	-0.020000	F-8	6+50.8300	-9.1670	5051.7167	051.7586	-9.1670	210.0000	478000.1355	573358.4427			210.0000	-0.020000
F-9	6+58.3300	-13.7500	5051.6250	051.6465	-13.7500	217.5000	478008.9249	573358.4427			217.5000	-0.020000	F-9	6+58.3300	-9.1670	5051.7167	051.7392	-9.1670	217.5000	478006.5353	573362.3534			217.5000	-0.020000
CL Brg P4	6+65.8300	-13.7500	5051.6250	051.6250	-13.7500	225.0000	478015.3247	573362.3534	-13.7500	0 00 00.00	225.0000	-0.020000	CL Brg P4	6+65.8300	-9.1670	5051.7167	051.7167	-9.1670	225.0000	478012.9350	573366.2640	-9.1670	0 00 00.00	225.0000	-0.020000
F-1	6+73.3300	-13.7500	5051.6250	051.6428	-13.7500	232.5000	478021.7244	573366.2640			232.5000	-0.020000	F-1	6+73.3300	-9.1670	5051.7167	051.7355	-9.1670	232.5000	478019.3347	573370.1747			232.5000	-0.020000
F-2	6+80.8300	-13.7500	5051.6250	051.6579	-13.7500	240.0000	478028.1241	573370.1747			240.0000	-0.020000	F-2	6+80.8300	-9.1670	5051.7167	051.7514	-9.1670	240.0000	478025.7345	573374.0854			240.0000	-0.020000
F-3	6+88.3300	-13.7500	5051.6250	051.6681	-13.7500																				

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Girder C											Girder D														
PARALLEL TO HORIZONTAL CONTROL											PARALLEL TO HORIZONTAL CONTROL														
0.250000 FEET BELOW FINISHED GRADE											0.250000 FEET BELOW FINISHED GRADE														
BENT LINE	STATION	OFFSET	ELEVATION	ELEV+DL	X	Y	NORTHING	EASTING	BENT LNTH	SKEW	GIRDER LNTH	CRS-SLP	BENT LINE	STATION	OFFSET	ELEVATION	ELEV+DL	X	Y	NORTHING	EASTING	BENT LNTH	SKEW	GIRDER LNTH	CRS-SLP
End AS1	4+20.3717	-4.5830	5051.8083		-4.5830	-20.4583	477801.0957	573242.1879	-4.5830	0 00 00.00	-20.4583	-0.020000	End AS1	4+20.3717	0.0000	5051.9000		0.0000	-20.4583	477798.7060	573246.0986	0.0000	0 00 00.00	-20.4583	-0.020000
BFA1	4+40.3717	-4.5830	5051.8083		-4.5830	-0.4583	477818.1616	573252.6164	-4.5830	0 00 00.00	-0.4583	-0.020000	BFA1	4+40.3717	0.0000	5051.9000		0.0000	-0.4583	477815.7719	573256.5270	0.0000	0 00 00.00	-0.4583	-0.020000
CL Brg A1	4+40.8300	-4.5830	5051.8083	051.8083	-4.5830	0.0000	477818.5527	573252.8553	-4.5830	0 00 00.00	0.0000	-0.020000	CL Brg A1	4+40.8300	0.0000	5051.9000	051.9000	0.0000	0.0000	477816.1630	573256.7660	0.0000	0 00 00.00	0.0000	-0.020000
F-1	4+49.8300	-4.5830	5051.8083	051.8315	-4.5830	7.5000	477824.9524	573256.7660			7.5000	-0.020000	F-1	4+49.8300	0.0000	5051.9000	051.9226	0.0000	7.5000	477822.5627	573260.6787	0.0000		7.5000	-0.020000
F-2	4+55.8300	-4.5830	5051.8083	051.8504	-4.5830	15.0000	477831.3522	573260.6767			15.0000	-0.020000	F-2	4+55.8300	0.0000	5051.9000	051.9420	0.0000	15.0000	477828.9625	573264.5873	0.0000		15.0000	-0.020000
F-3	4+63.8300	-4.5830	5051.8083	051.8643	-4.5830	22.5000	477837.7519	573264.5874			22.5000	-0.020000	F-3	4+63.8300	0.0000	5051.9000	051.9560	0.0000	22.5000	477835.3622	573268.4980	0.0000		22.5000	-0.020000
F-4	4+70.8300	-4.5830	5051.8083	051.8714	-4.5830	30.0000	477844.1516	573268.4980			30.0000	-0.020000	F-4	4+70.8300	0.0000	5051.9000	051.9630	0.0000	30.0000	477841.7619	573272.4087	0.0000		30.0000	-0.020000
F-5	4+78.8300	-4.5830	5051.8083	051.8711	-4.5830	37.5000	477850.5514	573272.4087			37.5000	-0.020000	F-5	4+78.8300	0.0000	5051.9000	051.9628	0.0000	37.5000	477848.1617	573276.3194	0.0000		37.5000	-0.020000
F-6	4+85.8300	-4.5830	5051.8083	051.8640	-4.5830	45.0000	477856.9511	573276.3194			45.0000	-0.020000	F-6	4+85.8300	0.0000	5051.9000	051.9557	0.0000	45.0000	477854.5614	573280.2300	0.0000		45.0000	-0.020000
F-7	4+93.8300	-4.5830	5051.8083	051.8515	-4.5830	52.5000	477863.3508	573280.2301			52.5000	-0.020000	F-7	4+93.8300	0.0000	5051.9000	051.9431	0.0000	52.5000	477860.9612	573284.1407	0.0000		52.5000	-0.020000
F-8	5+00.8300	-4.5830	5051.8083	051.8357	-4.5830	60.0000	477869.7506	573284.1407			60.0000	-0.020000	F-8	5+00.8300	0.0000	5051.9000	051.9274	0.0000	60.0000	477867.3609	573288.0514	0.0000		60.0000	-0.020000
F-9	5+08.8300	-4.5830	5051.8083	051.8200	-4.5830	67.5000	477876.1503	573288.0514			67.5000	-0.020000	F-9	5+08.8300	0.0000	5051.9000	051.9116	0.0000	67.5000	477873.7606	573291.9621	0.0000		67.5000	-0.020000
CL Brg P2	5+15.8300	-4.5830	5051.8083	051.8083	-4.5830	75.0000	477882.5500	573291.9621	-4.5830	0 00 00.00	75.0000	-0.020000	CL Brg P2	5+15.8300	0.0000	5051.9000	051.9000	0.0000	75.0000	477880.1604	573295.8727	0.0000	0 00 00.00	75.0000	-0.020000
F-1	5+23.8300	-4.5830	5051.8083	051.8084	-4.5830	82.5000	477888.9498	573295.8727			82.5000	-0.020000	F-1	5+23.8300	0.0000	5051.9000	051.9000	0.0000	82.5000	477886.5601	573299.7834	0.0000		82.5000	-0.020000
F-2	5+30.8300	-4.5830	5051.8083	051.8081	-4.5830	90.0000	477895.3495	573299.7834			90.0000	-0.020000	F-2	5+30.8300	0.0000	5051.9000	051.8997	0.0000	90.0000	477892.9598	573303.6941	0.0000		90.0000	-0.020000
F-3	5+38.8300	-4.5830	5051.8083	051.8102	-4.5830	97.5000	477901.7493	573303.6941			97.5000	-0.020000	F-3	5+38.8300	0.0000	5051.9000	051.9019	0.0000	97.5000	477899.3596	573307.6048	0.0000		97.5000	-0.020000
F-4	5+45.8300	-4.5830	5051.8083	051.8130	-4.5830	105.0000	477908.1490	573307.6048			105.0000	-0.020000	F-4	5+45.8300	0.0000	5051.9000	051.9046	0.0000	105.0000	477905.7593	573311.5154	0.0000		105.0000	-0.020000
F-5	5+53.8300	-4.5830	5051.8083	051.8139	-4.5830	112.5000	477914.5487	573311.5154			112.5000	-0.020000	F-5	5+53.8300	0.0000	5051.9000	051.9056	0.0000	112.5000	477912.1591	573315.4261	0.0000		112.5000	-0.020000
F-6	5+60.8300	-4.5830	5051.8083	051.8125	-4.5830	120.0000	477920.9485	573315.4261			120.0000	-0.020000	F-6	5+60.8300	0.0000	5051.9000	051.9042	0.0000	120.0000	477918.5588	573319.3368	0.0000		120.0000	-0.020000
F-7	5+68.8300	-4.5830	5051.8083	051.8104	-4.5830	127.5000	477927.3482	573319.3368			127.5000	-0.020000	F-7	5+68.8300	0.0000	5051.9000	051.9020	0.0000	127.5000	477924.9585	573323.2475	0.0000		127.5000	-0.020000
F-8	5+75.8300	-4.5830	5051.8083	051.8100	-4.5830	135.0000	477933.7479	573323.2475			135.0000	-0.020000	F-8	5+75.8300	0.0000	5051.9000	051.9017	0.0000	135.0000	477931.3583	573327.1581	0.0000		135.0000	-0.020000
F-9	5+83.8300	-4.5830	5051.8083	051.8118	-4.5830	142.5000	477940.1477	573327.1581			142.5000	-0.020000	F-9	5+83.8300	0.0000	5051.9000	051.9034	0.0000	142.5000	477937.7580	573331.0688	0.0000		142.5000	-0.020000
CL Brg P3	5+90.8300	-4.5830	5051.8083	051.8083	-4.5830	150.0000	477946.5474	573331.0688	-4.5830	0 00 00.00	150.0000	-0.020000	CL Brg P3	5+90.8300	0.0000	5051.9000	051.9000	0.0000	150.0000	477944.1577	573334.9795	0.0000	0 00 00.00	150.0000	-0.020000
F-1	5+98.8300	-4.5830	5051.8083	051.8200	-4.5830	157.5000	477952.9472	573334.9795			157.5000	-0.020000	F-1	5+98.8300	0.0000	5051.9000	051.9117	0.0000	157.5000	477950.5575	573338.8902	0.0000		157.5000	-0.020000
F-2	6+05.8300	-4.5830	5051.8083	051.8358	-4.5830	165.0000	477959.3469	573338.8902			165.0000	-0.020000	F-2	6+05.8300	0.0000	5051.9000	051.9274	0.0000	165.0000	477956.9572	573342.8008	0.0000		165.0000	-0.020000
F-3	6+13.8300	-4.5830	5051.8083	051.8515	-4.5830	172.5000	477965.7466	573342.8008			172.5000	-0.020000	F-3	6+13.8300	0.0000	5051.9000	051.9432	0.0000	172.5000	477963.3569	573346.7115	0.0000		172.5000	-0.020000
F-4	6+20.8300	-4.5830	5051.8083	051.8641	-4.5830	180.0000	477972.1464	573346.7115			180.0000	-0.020000	F-4	6+20.8300	0.0000	5051.9000	051.9557	0.0000	180.0000	477969.7567	573350.6222	0.0000		180.0000	-0.020000
F-5	6+28.8300	-4.5830	5051.8083	051.8711	-4.5830	187.5000	477978.5461	573350.6222			187.5000	-0.020000	F-5	6+28.8300	0.0000	5051.9000	051.9628	0.0000	187.5000	477976.1564	573354.5328	0.0000		187.5000	-0.020000
F-6	6+35.8300	-4.5830	5051.8083	051.8713	-4.5830	195.0000	477984.9458	573354.5329			195.0000	-0.020000	F-6	6+35.8300	0.0000	5051.9000	051.9630	0.0000	195.0000	477982.5562	573358.4435	0.0000		195.0000	-0.020000
F-7	6+43.8300	-4.5830	5051.8083	051.8643	-4.5830	202.5000	477991.3456	573358.4435			202.5000	-0.020000	F-7	6+43.8300	0.0000	5051.9000	051.9559	0.0000	202.5000	477988.9559	573362.3542	0.0000		202.5000	-0.020000
F-8	6+50.8300	-4.5830	5051.8083	051.8503	-4.5830	210.0000	477997.7453	573362.3542			210.0000	-0.020000	F-8	6+50.8300	0.0000	5051.9000	051.9420	0.0000	210.0000	477995.3556	573366.2649	0.0000		210.0000	-0.020000
F-9	6+58.8300	-4.5830	5051.8083	051.8309	-4.5830	217.5000	478004.1450	573366.2649			217.5000	-0.020000	F-9	6+58.8300	0.0000	5051.9000	051.9226	0.0000	217.5000	478001.7554	573370.1755	0.0000		217.5000	-0.020000
CL Brg P4	6+65.8300	-4.5830	5051.8083	051.8083	-4.5830	225.0000	478010.5448	573370.1755	-4.5830	0 00 00.00	225.0000	-0.020000	CL Brg P4	6+65.8300	0.0000	5051.9000	051.9000	0.0000	225.0000	478008.1551	573374.0862	0.0000	0 00 00.00	225.0000	-0.020000
F-1	6+73.8300	-4.5830	5051.8083	051.8272	-4.5830	232.5000	478016.9445	573374.0862			232.5000	-0.020000	F-1	6+73.8300	0.0000	5051.9000	051.9188	0.0000	232.5000	478014.5548	573377.9969	0.0000		232.5000	-0.020000
F-2	6+80.8300	-4.5830	5051.8083	051.8431	-4.5830	240.0000	478023.3443	573377.9969			240.0000	-0.020000	F-2	6+80.8300	0.0000	5051.9000	051.9347	0.0000	240.0000	478020.9546	573381				

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PARALLEL TO HORIZONTAL CONTROL										PARALLEL TO HORIZONTAL CONTROL															
0.250000 FEET BELOW FINISHED GRADE										0.250000 FEET BELOW FINISHED GRADE															
BENT LINE	STATION	OFFSET	ELEVATION	ELEV+DL	X	Y	NORTHING	EASTING	BENT LNTH	SKEW	GIRDER LNTH	CRS-SLP	BENT LINE	STATION	OFFSET	ELEVATION	ELEV+DL	X	Y	NORTHING	EASTING	BENT LNTH	SKEW	GIRDER LNTH	CRS-SLP
End AS1	4+20.3717	0.0000	5051.9000	0.0000	-20.4583	477798.7060	573246.0986	0.0000	0 00 00.00	-20.4583	0.0000	0 00 00.00	End AS1	4+20.3717	4.5830	5051.8083	0.0000	4.5830	-20.4583	477796.3163	573250.0092	4.5830	0 00 00.00	-20.4583	-0.020000
BFA1	4+40.3717	0.0000	5051.9000	0.0000	-0.4583	477815.7719	573256.5270	0.0000	0 00 00.00	-0.4583	0.0000	0 00 00.00	BFA1	4+40.3717	4.5830	5051.8083	0.0000	4.5830	-0.4583	477813.3823	573260.4377	4.5830	0 00 00.00	-0.4583	-0.020000
CL Brg A1	4+40.8300	0.0000	5051.9000	0.0000	0.0000	477816.1630	573256.7660	0.0000	0 00 00.00	0.0000	0.0000	0 00 00.00	CL Brg A1	4+40.8300	4.5830	5051.8083	051.8083	4.5830	0.0000	477813.7733	573260.6767	4.5830	0 00 00.00	0.0000	-0.020000
F-1	4+48.8300	0.0000	5051.9000	0.0000	7.5000	477822.5627	573260.8767	7.5000		7.5000			F-1	4+48.8300	4.5830	5051.8083	051.8310	4.5830	7.5000	477820.9731	573264.5873	4.5830	0 00 00.00	7.5000	-0.020000
F-2	4+55.8300	0.0000	5051.9000	0.0000	15.0000	477828.9625	573264.5873	15.0000		15.0000			F-2	4+55.8300	4.5830	5051.8083	051.8504	4.5830	15.0000	477826.5728	573268.4980	4.5830	0 00 00.00	15.0000	-0.020000
F-3	4+63.3300	0.0000	5051.9000	0.0000	22.5000	477835.3622	573268.4980	22.5000		22.5000			F-3	4+63.3300	4.5830	5051.8083	051.8643	4.5830	22.5000	477832.9725	573272.4087	4.5830	0 00 00.00	22.5000	-0.020000
F-4	4+70.8300	0.0000	5051.9000	0.0000	30.0000	477841.7619	573272.4087	30.0000		30.0000			F-4	4+70.8300	4.5830	5051.8083	051.8714	4.5830	30.0000	477839.3723	573276.3194	4.5830	0 00 00.00	30.0000	-0.020000
F-5	4+78.3300	0.0000	5051.9000	0.0000	37.5000	477848.1617	573276.3194	37.5000		37.5000			F-5	4+78.3300	4.5830	5051.8083	051.8711	4.5830	37.5000	477845.7720	573280.2300	4.5830	0 00 00.00	37.5000	-0.020000
F-6	4+85.8300	0.0000	5051.9000	0.0000	45.0000	477854.5614	573280.2300	45.0000		45.0000			F-6	4+85.8300	4.5830	5051.8083	051.8640	4.5830	45.0000	477852.1717	573284.1407	4.5830	0 00 00.00	45.0000	-0.020000
F-7	4+93.3300	0.0000	5051.9000	0.0000	52.5000	477860.9612	573284.1407	52.5000		52.5000			F-7	4+93.3300	4.5830	5051.8083	051.8515	4.5830	52.5000	477858.5715	573288.0514	4.5830	0 00 00.00	52.5000	-0.020000
F-8	5+00.8300	0.0000	5051.9000	0.0000	60.0000	477867.3609	573288.0514	60.0000		60.0000			F-8	5+00.8300	4.5830	5051.8083	051.8357	4.5830	60.0000	477864.9712	573291.9621	4.5830	0 00 00.00	60.0000	-0.020000
F-9	5+08.3300	0.0000	5051.9000	0.0000	67.5000	477873.7606	573291.9621	67.5000		67.5000			F-9	5+08.3300	4.5830	5051.8083	051.8200	4.5830	67.5000	477871.3709	573295.8727	4.5830	0 00 00.00	67.5000	-0.020000
CL Brg P2	5+15.8300	0.0000	5051.9000	0.0000	75.0000	477880.1604	573295.8727	75.0000	0.0000	0 00 00.00	75.0000		CL Brg P2	5+15.8300	4.5830	5051.8083	051.8083	4.5830	75.0000	477877.7707	573299.7834	4.5830	0 00 00.00	75.0000	-0.020000
F-1	5+23.3300	0.0000	5051.9000	0.0000	82.5000	477886.5601	573299.7834	82.5000		82.5000			F-1	5+23.3300	4.5830	5051.8083	051.8084	4.5830	82.5000	477884.1704	573303.6941	4.5830	0 00 00.00	82.5000	-0.020000
F-2	5+30.8300	0.0000	5051.9000	0.0000	90.0000	477892.9598	573303.6941	90.0000		90.0000			F-2	5+30.8300	4.5830	5051.8083	051.8081	4.5830	90.0000	477890.5702	573307.6048	4.5830	0 00 00.00	90.0000	-0.020000
F-3	5+38.3300	0.0000	5051.9000	0.0000	97.5000	477899.3596	573307.6048	97.5000		97.5000			F-3	5+38.3300	4.5830	5051.8083	051.8102	4.5830	97.5000	477896.9699	573311.5154	4.5830	0 00 00.00	97.5000	-0.020000
F-4	5+45.8300	0.0000	5051.9000	0.0000	105.0000	477905.7593	573311.5154	105.0000		105.0000			F-4	5+45.8300	4.5830	5051.8083	051.8130	4.5830	105.0000	477903.3696	573315.4261	4.5830	0 00 00.00	105.0000	-0.020000
F-5	5+53.3300	0.0000	5051.9000	0.0000	112.5000	477912.1591	573315.4261	112.5000		112.5000			F-5	5+53.3300	4.5830	5051.8083	051.8139	4.5830	112.5000	477909.7694	573319.3368	4.5830	0 00 00.00	112.5000	-0.020000
F-6	5+60.8300	0.0000	5051.9000	0.0000	120.0000	477918.5588	573319.3368	120.0000		120.0000			F-6	5+60.8300	4.5830	5051.8083	051.8125	4.5830	120.0000	477916.1691	573323.2474	4.5830	0 00 00.00	120.0000	-0.020000
F-7	5+68.3300	0.0000	5051.9000	0.0000	127.5000	477924.9585	573323.2475	127.5000		127.5000			F-7	5+68.3300	4.5830	5051.8083	051.8104	4.5830	127.5000	477922.5688	573327.1581	4.5830	0 00 00.00	127.5000	-0.020000
F-8	5+75.8300	0.0000	5051.9000	0.0000	135.0000	477931.3583	573327.1581	135.0000		135.0000			F-8	5+75.8300	4.5830	5051.8083	051.8118	4.5830	135.0000	477928.9686	573331.0688	4.5830	0 00 00.00	135.0000	-0.020000
F-9	5+83.3300	0.0000	5051.9000	0.0000	142.5000	477937.7580	573331.0688	142.5000		142.5000			F-9	5+83.3300	4.5830	5051.8083	051.8118	4.5830	142.5000	477935.3683	573334.9795	4.5830	0 00 00.00	142.5000	-0.020000
CL Brg P3	5+90.8300	0.0000	5051.9000	0.0000	150.0000	477944.1577	573334.9795	150.0000	0.0000	0 00 00.00	150.0000		CL Brg P3	5+90.8300	4.5830	5051.8083	051.8083	4.5830	150.0000	477941.5681	573338.8901	4.5830	0 00 00.00	150.0000	-0.020000
F-1	5+98.3300	0.0000	5051.9000	0.0000	157.5000	477950.5575	573338.8902	157.5000		157.5000			F-1	5+98.3300	4.5830	5051.8083	051.8200	4.5830	157.5000	477948.1678	573342.8008	4.5830	0 00 00.00	157.5000	-0.020000
F-2	6+05.8300	0.0000	5051.9000	0.0000	165.0000	477956.9572	573342.8008	165.0000		165.0000			F-2	6+05.8300	4.5830	5051.8083	051.8358	4.5830	165.0000	477954.5675	573346.7115	4.5830	0 00 00.00	165.0000	-0.020000
F-3	6+13.3300	0.0000	5051.9000	0.0000	172.5000	477963.3569	573346.7115	172.5000		172.5000			F-3	6+13.3300	4.5830	5051.8083	051.8515	4.5830	172.5000	477960.9673	573350.6222	4.5830	0 00 00.00	172.5000	-0.020000
F-4	6+20.8300	0.0000	5051.9000	0.0000	180.0000	477969.7567	573350.6222	180.0000		180.0000			F-4	6+20.8300	4.5830	5051.8083	051.8641	4.5830	180.0000	477967.3670	573354.5328	4.5830	0 00 00.00	180.0000	-0.020000
F-5	6+28.3300	0.0000	5051.9000	0.0000	187.5000	477976.1564	573354.5328	187.5000		187.5000			F-5	6+28.3300	4.5830	5051.8083	051.8711	4.5830	187.5000	477973.7667	573358.4435	4.5830	0 00 00.00	187.5000	-0.020000
F-6	6+35.8300	0.0000	5051.9000	0.0000	195.0000	477982.5562	573358.4435	195.0000		195.0000			F-6	6+35.8300	4.5830	5051.8083	051.8713	4.5830	195.0000	477980.1665	573362.3542	4.5830	0 00 00.00	195.0000	-0.020000
F-7	6+43.3300	0.0000	5051.9000	0.0000	202.5000	477988.9559	573362.3542	202.5000		202.5000			F-7	6+43.3300	4.5830	5051.8083	051.8643	4.5830	202.5000	477986.5662	573366.2649	4.5830	0 00 00.00	202.5000	-0.020000
F-8	6+50.8300	0.0000	5051.9000	0.0000	210.0000	477995.3556	573366.2649	210.0000		210.0000			F-8	6+50.8300	4.5830	5051.8083	051.8503	4.5830	210.0000	477992.9659	573370.1755	4.5830	0 00 00.00	210.0000	-0.020000
F-9	6+58.3300	0.0000	5051.9000	0.0000	217.5000	478001.7554	573370.1755	217.5000		217.5000			F-9	6+58.3300	4.5830	5051.8083	051.8309	4.5830	217.5000	477999.3657	573374.0862	4.5830	0 00 00.00	217.5000	-0.020000
CL Brg P4	6+65.8300	0.0000	5051.9000	0.0000	225.0000	478008.1551	573374.0862	225.0000	0.0000	0 00 00.00	225.0000		CL Brg P4	6+65.8300	4.5830	5051.8083	051.8083	4.5830	225.0000	478005.7654	573377.9969	4.5830	0 00 00.00	225.0000	-0.020000
F-1	6+73.3300	0.0000	5051.9000	0.0000	232.5000	478014.5548	573377.9969	232.5000		232.5000			F-1	6+73.3300	4.5830	5051.8083	051.8272	4.5830	232.5000	478012.1652	573381.9076	4.5830	0 00 00.00	232.5000	-0.020000
F-2	6+80.8300	0.0000	5051.9000	0.0000	240.0000	478020.9546	573381.9076	240.0000		240.0000			F-2	6+80.8300	4.5830	5051.8083	051.8431	4.5830	240.0000	478018.5649	57338				

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Girder F											Girder G														
PARALLEL TO HORIZONTAL CONTROL						0.250000 FEET BELOW FINISHED GRADE					PARALLEL TO HORIZONTAL CONTROL						0.250000 FEET BELOW FINISHED GRADE								
BENT LINE	STATION	OFFSET	ELEVATION	ELEV+DL	X	Y	NORTHING	EASTING	BENT LNTH	SKEW	GIRDER LNTH	CRS-SLP	BENT LINE	STATION	OFFSET	ELEVATION	ELEV+DL	X	Y	NORTHING	EASTING	BENT LNTH	SKEW	GIRDER LNTH	CRS-SLP
End AS1	4+20.3717	9.1670	5051.7167		9.1670	-20.4583	477793.9261	573253.9208	9.1670	0 00 00.00	-20.4583	-0.020000	End AS1	4+20.3717	13.7500	5051.6250		13.7500	-20.4583	477791.5364	573257.8314	13.7500	0 00 00.00	-20.4583	-0.020000
BFA1	4+40.3717	9.1670	5051.7167		9.1670	-0.4583	477810.9920	573264.3492	9.1670	0 00 00.00	-0.4583	-0.020000	BFA1	4+40.3717	13.7500	5051.6250		13.7500	-0.4583	477808.6024	573268.2599	13.7500	0 00 00.00	-0.4583	-0.020000
CL Brg A1	4+40.8300	9.1670	5051.7167	051.7167	9.1670	0.0000	477811.3831	573264.5882	9.1670	0 00 00.00	0.0000	-0.020000	CL Brg A1	4+40.8300	13.7500	5051.6250	051.6250	13.7500	0.0000	477808.9934	573268.4989	13.7500	0 00 00.00	0.0000	-0.020000
F-1	4+49.8300	9.1670	5051.7167	051.7393	9.1670	7.5000	477817.7829	573269.4989			7.5000	-0.020000	F-1	4+49.8300	13.7500	5051.6250	051.6465	13.7500	7.5000	477815.3932	573272.4095			7.5000	-0.020000
F-2	4+55.8300	9.1670	5051.7167	051.7587	9.1670	15.0000	477824.1826	573272.4095			15.0000	-0.020000	F-2	4+55.8300	13.7500	5051.6250	051.6650	13.7500	15.0000	477821.7929	573276.3202			15.0000	-0.020000
F-3	4+63.3300	9.1670	5051.7167	051.7726	9.1670	22.5000	477830.5823	573276.3202			22.5000	-0.020000	F-3	4+63.3300	13.7500	5051.6250	051.6783	13.7500	22.5000	477828.1926	573280.2309			22.5000	-0.020000
F-4	4+70.8300	9.1670	5051.7167	051.7797	9.1670	30.0000	477836.9821	573280.2309			30.0000	-0.020000	F-4	4+70.8300	13.7500	5051.6250	051.6851	13.7500	30.0000	477834.5924	573284.1415			30.0000	-0.020000
F-5	4+78.3300	9.1670	5051.7167	051.7794	9.1670	37.5000	477843.3818	573284.1416			37.5000	-0.020000	F-5	4+78.3300	13.7500	5051.6250	051.6849	13.7500	37.5000	477840.9921	573288.0522			37.5000	-0.020000
F-6	4+85.8300	9.1670	5051.7167	051.7723	9.1670	45.0000	477849.7815	573288.0522			45.0000	-0.020000	F-6	4+85.8300	13.7500	5051.6250	051.6782	13.7500	45.0000	477847.3919	573291.9629			45.0000	-0.020000
F-7	4+93.3300	9.1670	5051.7167	051.7598	9.1670	52.5000	477856.1813	573291.9629			52.5000	-0.020000	F-7	4+93.3300	13.7500	5051.6250	051.6663	13.7500	52.5000	477853.7916	573295.8736			52.5000	-0.020000
F-8	5+00.8300	9.1670	5051.7167	051.7440	9.1670	60.0000	477862.5810	573295.8736			60.0000	-0.020000	F-8	5+00.8300	13.7500	5051.6250	051.6512	13.7500	60.0000	477860.1913	573299.7843			60.0000	-0.020000
F-9	5+08.3300	9.1670	5051.7167	051.7283	9.1670	67.5000	477868.9807	573299.7842			67.5000	-0.020000	F-9	5+08.3300	13.7500	5051.6250	051.6362	13.7500	67.5000	477866.5949	573303.6949			67.5000	-0.020000
CL Brg P2	5+15.8300	9.1670	5051.7167	051.7167	9.1670	75.0000	477875.3805	573303.6949	9.1670	0 00 00.00	75.0000	-0.020000	CL Brg P2	5+15.8300	13.7500	5051.6250	051.6250	13.7500	75.0000	477872.9908	573307.6056	13.7500	0 00 00.00	75.0000	-0.020000
F-1	5+23.3300	9.1670	5051.7167	051.7167	9.1670	82.5000	477881.7802	573307.6056			82.5000	-0.020000	F-1	5+23.3300	13.7500	5051.6250	051.6250	13.7500	82.5000	477879.3905	573311.5163			82.5000	-0.020000
F-2	5+30.8300	9.1670	5051.7167	051.7164	9.1670	90.0000	477888.1800	573311.5163			90.0000	-0.020000	F-2	5+30.8300	13.7500	5051.6250	051.6248	13.7500	90.0000	477885.7903	573315.4269			90.0000	-0.020000
F-3	5+38.3300	9.1670	5051.7167	051.7186	9.1670	97.5000	477894.5797	573315.4269			97.5000	-0.020000	F-3	5+38.3300	13.7500	5051.6250	051.6262	13.7500	97.5000	477892.1900	573319.3376			97.5000	-0.020000
F-4	5+45.8300	9.1670	5051.7167	051.7213	9.1670	105.0000	477900.9794	573319.3376			105.0000	-0.020000	F-4	5+45.8300	13.7500	5051.6250	051.6283	13.7500	105.0000	477898.5897	573323.2483			105.0000	-0.020000
F-5	5+53.3300	9.1670	5051.7167	051.7223	9.1670	112.5000	477907.3792	573323.2483			112.5000	-0.020000	F-5	5+53.3300	13.7500	5051.6250	051.6292	13.7500	112.5000	477904.9895	573327.1590			112.5000	-0.020000
F-6	5+60.8300	9.1670	5051.7167	051.7208	9.1670	120.0000	477913.7789	573327.1590			120.0000	-0.020000	F-6	5+60.8300	13.7500	5051.6250	051.6283	13.7500	120.0000	477911.3892	573331.0696			120.0000	-0.020000
F-7	5+68.3300	9.1670	5051.7167	051.7187	9.1670	127.5000	477920.1786	573331.0696			127.5000	-0.020000	F-7	5+68.3300	13.7500	5051.6250	051.6262	13.7500	127.5000	477917.7890	573334.9803			127.5000	-0.020000
F-8	5+75.8300	9.1670	5051.7167	051.7184	9.1670	135.0000	477926.5784	573334.9803			135.0000	-0.020000	F-8	5+75.8300	13.7500	5051.6250	051.6248	13.7500	135.0000	477924.1887	573338.8910			135.0000	-0.020000
F-9	5+83.3300	9.1670	5051.7167	051.7201	9.1670	142.5000	477932.9781	573338.8910			142.5000	-0.020000	F-9	5+83.3300	13.7500	5051.6250	051.6250	13.7500	142.5000	477930.5884	573342.8017			142.5000	-0.020000
CL Brg P3	5+90.8300	9.1670	5051.7167	051.7167	9.1670	150.0000	477939.3778	573342.8017	9.1670	0 00 00.00	150.0000	-0.020000	CL Brg P3	5+90.8300	13.7500	5051.6250	051.6250	13.7500	150.0000	477936.9882	573346.7123	13.7500	0 00 00.00	150.0000	-0.020000
F-1	5+98.3300	9.1670	5051.7167	051.7283	9.1670	157.5000	477945.7776	573346.7123			157.5000	-0.020000	F-1	5+98.3300	13.7500	5051.6250	051.6362	13.7500	157.5000	477943.3879	573350.6230			157.5000	-0.020000
F-2	6+05.8300	9.1670	5051.7167	051.7441	9.1670	165.0000	477952.1773	573350.6230			165.0000	-0.020000	F-2	6+05.8300	13.7500	5051.6250	051.6512	13.7500	165.0000	477949.7876	573354.5337			165.0000	-0.020000
F-3	6+13.3300	9.1670	5051.7167	051.7598	9.1670	172.5000	477958.5771	573354.5337			172.5000	-0.020000	F-3	6+13.3300	13.7500	5051.6250	051.6663	13.7500	172.5000	477956.1874	573358.4443			172.5000	-0.020000
F-4	6+20.8300	9.1670	5051.7167	051.7724	9.1670	180.0000	477964.9768	573358.4444			180.0000	-0.020000	F-4	6+20.8300	13.7500	5051.6250	051.6782	13.7500	180.0000	477962.5871	573362.3550			180.0000	-0.020000
F-5	6+28.3300	9.1670	5051.7167	051.7794	9.1670	187.5000	477971.3765	573362.3550			187.5000	-0.020000	F-5	6+28.3300	13.7500	5051.6250	051.6849	13.7500	187.5000	477968.9868	573366.2657			187.5000	-0.020000
F-6	6+35.8300	9.1670	5051.7167	051.7797	9.1670	195.0000	477977.7763	573366.2657			195.0000	-0.020000	F-6	6+35.8300	13.7500	5051.6250	051.6851	13.7500	195.0000	477975.3866	573370.1764			195.0000	-0.020000
F-7	6+43.3300	9.1670	5051.7167	051.7726	9.1670	202.5000	477984.1760	573370.1764			202.5000	-0.020000	F-7	6+43.3300	13.7500	5051.6250	051.6783	13.7500	202.5000	477981.7863	573374.0870			202.5000	-0.020000
F-8	6+50.8300	9.1670	5051.7167	051.7586	9.1670	210.0000	477990.5757	573374.0871			210.0000	-0.020000	F-8	6+50.8300	13.7500	5051.6250	051.6650	13.7500	210.0000	477988.1861	573377.9977			210.0000	-0.020000
F-9	6+58.3300	9.1670	5051.7167	051.7392	9.1670	217.5000	477996.9755	573377.9977			217.5000	-0.020000	F-9	6+58.3300	13.7500	5051.6250	051.6465	13.7500	217.5000	477994.5858	573381.9084			217.5000	-0.020000
CL Brg P4	6+65.8300	9.1670	5051.7167	051.7167	9.1670	225.0000	478003.3752	573381.9084	9.1670	0 00 00.00	225.0000	-0.020000	CL Brg P4	6+65.8300	13.7500	5051.6250	051.6250	13.7500	225.0000	478000.9855	573385.8191	13.7500	0 00 00.00	225.0000	-0.020000
F-1	6+73.3300	9.1670	5051.7167	051.7355	9.1670	232.5000	478009.7750	573385.8191			232.5000	-0.020000	F-1	6+73.3300	13.7500	5051.6250	051.6428	13.7500	232.5000	478007.3853	573389.7297			232.5000	-0.020000
F-2	6+80.8300	9.1670	5051.7167	051.7514	9.1670	240.0000	478016.1747	573389.7297			240.0000	-0.020000	F-2	6+80.8300	13.7500	5051.6250	051.6579	13.7500	240.0000	478013.7850	573393.6404			240.0000	-0.020000
F-3	6+88.3300	9.1670	5051.7167	051.7622	9.1670	247.5000	478022.5744	573393.6404			247.5000	-0.020000	F-3	6+88.3300	13.7500	5051.6250	051.6681	13.7500	247.5000	478020.1847	573397.5511			247.5000	-0.020000
F-4	6+95.8300	9.1670	5051.7167	051.7669	9.1670	255.0000	478028.9742	573397.5511			255.0000	-0.020000	F-4	6+95.8300	13.7500	5051.6250	051.6726	13.7500	255.0000	478026.5845	573401.4618			255.0000	-0.020000
F-5	7+03.3300	9.1670	5051.7167	051.7652	9.1670	262.5000	478035.3739	573401.4618			262.5000	-0.020000	F-5	7+03.3300	13.7500	5051.6250	051.6710	13.7500	262.5000	478032.9842	573405.3724			262.5000	-0.020000
F-6	7+10.8300	9.167																							



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Right Curb				PARALLEL TO HORIZONTAL CONTROL						0.250000 FEET BELOW FINISHED GRADE						Right Out				PARALLEL TO HORIZONTAL CONTROL						0.250000 FEET BELOW FINISHED GRADE					
BENT LINE	STATION	OFFSET	ELEVATION	ELEV+DL	X	Y	NORTHING	EASTING	BENT LNTH	SKEW	GIRDER LNTH	CRS-SLP	BENT LINE	STATION	OFFSET	ELEVATION	ELEV+DL	X	Y	NORTHING	EASTING	BENT LNTH	SKEW	GIRDER LNTH	CRS-SLP						
End AS1	4+20.3717	13.7500	5051.6250		13.7500	-20.4583	477791.5364	573257.8314	13.7500	0 00 00.00	-20.4583	-0.020000	End AS1	4+20.3717	15.2500	5051.5950		15.2500	-20.4583	477790.7543	573259.1114	15.2500	0 00 00.00	-20.4583	-0.020000						
BFA1	4+40.3717	13.7500	5051.6250		13.7500	-0.4583	477808.6024	573268.2599	13.7500	0 00 00.00	-0.4583	-0.020000	BFA1	4+40.3717	15.2500	5051.5950		15.2500	-0.4583	477807.8202	573269.5398	15.2500	0 00 00.00	-0.4583	-0.020000						
CL Brg A1	4+40.8300	13.7500	5051.6250		13.7500	0.0000	477808.9934	573268.4989	13.7500	0 00 00.00	0.0000	-0.020000	CL Brg A1	4+40.8300	15.2500	5051.5950		15.2500	0.0000	477808.2113	573269.7788	15.2500	0 00 00.00	0.0000	-0.020000						
F-1	4+49.8300	13.7500	5051.6250		13.7500	7.5000	477815.3832	573272.4095			7.5000	-0.020000	F-1	4+49.8300	15.2500	5051.5950		15.2500	7.5000	477814.6110	573273.6895			7.5000	-0.020000						
F-2	4+55.8300	13.7500	5051.6250		13.7500	15.0000	477821.7929	573276.3202			15.0000	-0.020000	F-2	4+55.8300	15.2500	5051.5950		15.2500	15.0000	477821.0108	573277.6001			15.0000	-0.020000						
F-3	4+63.3300	13.7500	5051.6250		13.7500	22.5000	477828.1926	573280.2309			22.5000	-0.020000	F-3	4+63.3300	15.2500	5051.5950		15.2500	22.5000	477827.4105	573281.5108			22.5000	-0.020000						
F-4	4+70.8300	13.7500	5051.6250		13.7500	30.0000	477834.5924	573284.1415			30.0000	-0.020000	F-4	4+70.8300	15.2500	5051.5950		15.2500	30.0000	477833.8102	573285.4215			30.0000	-0.020000						
F-5	4+78.3300	13.7500	5051.6250		13.7500	37.5000	477840.9921	573288.0522			37.5000	-0.020000	F-5	4+78.3300	15.2500	5051.5950		15.2500	37.5000	477840.2100	573289.3322			37.5000	-0.020000						
F-6	4+85.8300	13.7500	5051.6250		13.7500	45.0000	477847.3919	573291.9629			45.0000	-0.020000	F-6	4+85.8300	15.2500	5051.5950		15.2500	45.0000	477846.6097	573293.2428			45.0000	-0.020000						
F-7	4+93.3300	13.7500	5051.6250		13.7500	52.5000	477853.7916	573295.8736			52.5000	-0.020000	F-7	4+93.3300	15.2500	5051.5950		15.2500	52.5000	477853.0095	573297.1535			52.5000	-0.020000						
F-8	5+00.8300	13.7500	5051.6250		13.7500	60.0000	477860.1913	573299.7842			60.0000	-0.020000	F-8	5+00.8300	15.2500	5051.5950		15.2500	60.0000	477859.4092	573301.0695			60.0000	-0.020000						
F-9	5+08.3300	13.7500	5051.6250		13.7500	67.5000	477866.5911	573303.6949			67.5000	-0.020000	F-9	5+08.3300	15.2500	5051.5950		15.2500	67.5000	477866.8089	573304.9749			67.5000	-0.020000						
CL Brg P2	5+15.8300	13.7500	5051.6250		13.7500	75.0000	477872.9908	573307.6056	13.7500	0 00 00.00	75.0000	-0.020000	CL Brg P2	5+15.8300	15.2500	5051.5950		15.2500	75.0000	477872.2087	573308.8855	15.2500	0 00 00.00	75.0000	-0.020000						
F-1	5+23.3300	13.7500	5051.6250		13.7500	82.5000	477879.3905	573311.5163			82.5000	-0.020000	F-1	5+23.3300	15.2500	5051.5950		15.2500	82.5000	477878.6084	573312.7962			82.5000	-0.020000						
F-2	5+30.8300	13.7500	5051.6250		13.7500	90.0000	477885.7903	573315.4269			90.0000	-0.020000	F-2	5+30.8300	15.2500	5051.5950		15.2500	90.0000	477885.0081	573316.7069			90.0000	-0.020000						
F-3	5+38.3300	13.7500	5051.6250		13.7500	97.5000	477892.1900	573319.3376			97.5000	-0.020000	F-3	5+38.3300	15.2500	5051.5950		15.2500	97.5000	477891.4079	573320.6176			97.5000	-0.020000						
F-4	5+45.8300	13.7500	5051.6250		13.7500	105.0000	477898.5897	573323.2483			105.0000	-0.020000	F-4	5+45.8300	15.2500	5051.5950		15.2500	105.0000	477897.8076	573324.5282			105.0000	-0.020000						
F-5	5+53.3300	13.7500	5051.6250		13.7500	112.5000	477904.9895	573327.1590			112.5000	-0.020000	F-5	5+53.3300	15.2500	5051.5950		15.2500	112.5000	477904.2073	573328.4389			112.5000	-0.020000						
F-6	5+60.8300	13.7500	5051.6250		13.7500	120.0000	477911.3892	573331.0696			120.0000	-0.020000	F-6	5+60.8300	15.2500	5051.5950		15.2500	120.0000	477910.6071	573331.9498			120.0000	-0.020000						
F-7	5+68.3300	13.7500	5051.6250		13.7500	127.5000	477917.7890	573334.9803			127.5000	-0.020000	F-7	5+68.3300	15.2500	5051.5950		15.2500	127.5000	477917.0068	573336.2603			127.5000	-0.020000						
F-8	5+75.8300	13.7500	5051.6250		13.7500	135.0000	477924.1887	573338.8910			135.0000	-0.020000	F-8	5+75.8300	15.2500	5051.5950		15.2500	135.0000	477923.4066	573340.1709			135.0000	-0.020000						
F-9	5+83.3300	13.7500	5051.6250		13.7500	142.5000	477930.5884	573342.8017			142.5000	-0.020000	F-9	5+83.3300	15.2500	5051.5950		15.2500	142.5000	477929.8063	573344.0816			142.5000	-0.020000						
CL Brg P3	5+90.8300	13.7500	5051.6250		13.7500	150.0000	477936.9882	573346.7123	13.7500	0 00 00.00	150.0000	-0.020000	CL Brg P3	5+90.8300	15.2500	5051.5950		15.2500	150.0000	477936.2060	573347.9923	15.2500	0 00 00.00	150.0000	-0.020000						
F-1	5+98.3300	13.7500	5051.6250		13.7500	157.5000	477943.3879	573350.6230			157.5000	-0.020000	F-1	5+98.3300	15.2500	5051.5950		15.2500	157.5000	477942.6058	573351.9029			157.5000	-0.020000						
F-2	6+05.8300	13.7500	5051.6250		13.7500	165.0000	477949.7876	573354.5337			165.0000	-0.020000	F-2	6+05.8300	15.2500	5051.5950		15.2500	165.0000	477949.0055	573355.8136			165.0000	-0.020000						
F-3	6+13.3300	13.7500	5051.6250		13.7500	172.5000	477956.1874	573358.4443			172.5000	-0.020000	F-3	6+13.3300	15.2500	5051.5950		15.2500	172.5000	477955.4052	573359.7243			172.5000	-0.020000						
F-4	6+20.8300	13.7500	5051.6250		13.7500	180.0000	477962.5871	573362.3550			180.0000	-0.020000	F-4	6+20.8300	15.2500	5051.5950		15.2500	180.0000	477961.8050	573363.6350			180.0000	-0.020000						
F-5	6+28.3300	13.7500	5051.6250		13.7500	187.5000	477968.9868	573366.2657			187.5000	-0.020000	F-5	6+28.3300	15.2500	5051.5950		15.2500	187.5000	477968.2047	573367.5456			187.5000	-0.020000						
F-6	6+35.8300	13.7500	5051.6250		13.7500	195.0000	477975.3866	573370.1764			195.0000	-0.020000	F-6	6+35.8300	15.2500	5051.5950		15.2500	195.0000	477974.6045	573371.4563			195.0000	-0.020000						
F-7	6+43.3300	13.7500	5051.6250		13.7500	202.5000	477981.7863	573374.0870			202.5000	-0.020000	F-7	6+43.3300	15.2500	5051.5950		15.2500	202.5000	477981.0042	573375.3670			202.5000	-0.020000						
F-8	6+50.8300	13.7500	5051.6250		13.7500	210.0000	477988.1861	573377.9977			210.0000	-0.020000	F-8	6+50.8300	15.2500	5051.5950		15.2500	210.0000	477987.4039	573379.2777			210.0000	-0.020000						
F-9	6+58.3300	13.7500	5051.6250		13.7500	217.5000	477994.5858	573381.9084			217.5000	-0.020000	F-9	6+58.3300	15.2500	5051.5950		15.2500	217.5000	477993.8037	573383.1883			217.5000	-0.020000						
CL Brg P4	6+65.8300	13.7500	5051.6250		13.7500	225.0000	478000.9855	573385.8191	13.7500	0 00 00.00	225.0000	-0.020000	CL Brg P4	6+65.8300	15.2500	5051.5950		15.2500	225.0000	478000.2034	573387.0990	15.2500	0 00 00.00	225.0000	-0.020000						
F-1	6+73.3300	13.7500	5051.6250		13.7500	232.5000	478007.3853	573389.7297			232.5000	-0.020000	F-1	6+73.3300	15.2500	5051.5950		15.2500	232.5000	478006.6031	573391.0097			232.5000	-0.020000						
F-2	6+80.8300	13.7500	5051.6250		13.7500	240.0000	478013.7850	573393.6404			240.0000	-0.020000	F-2	6+80.8300	15.2500	5051.5950		15.2500	240.0000	478013.0029	573394.9204			240.0000	-0.020000						
F-3	6+88.3300	13.7500	5051.6250		13.7500	247.5000	478020.1847	573397.5511			247.5000	-0.020000	F-3	6+88.3300	15.2500	5051.5950		15.2500	247.5000	478019.4026	573398.8310			247.5000	-0.020000						
F-4	6+95.8300	13.7500	5051.6250		13.7500	255.0000	478026.5845	573401.4618			255.0000	-0.020000	F-4	6+95.8300	15.2500	5051.5950		15.2500	255.0000	478025.8023	573402.7417			255.0000	-0.02						

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* ROADWAY APPROACHES *			
STATION	OFFSET	ELEVATION	CROSS-SLOPE
2+90	-13.7500	5051.8750	-0.020000
3+00	-13.7500	5051.8750	-0.020000
3+10	-13.7500	5051.8750	-0.020000
3+20	-13.7500	5051.8750	-0.020000
3+30	-13.7500	5051.8750	-0.020000
3+40	-13.7500	5051.8750	-0.020000
3+50	-13.7500	5051.8750	-0.020000
3+60	-13.7500	5051.8750	-0.020000
3+70	-13.7500	5051.8750	-0.020000
3+80	-13.7500	5051.8750	-0.020000
3+90	-13.7500	5051.8750	-0.020000
4+00	-13.7500	5051.8750	-0.020000
4+10	-13.7500	5051.8750	-0.020000
4+20	-13.7500	5051.8750	-0.020000
4+30	-13.7500	5051.8750	-0.020000
4+40	-13.7500	5051.8750	-0.020000
2+90	-12.0000	5051.9100	-0.020000
3+00	-12.0000	5051.9100	-0.020000
3+10	-12.0000	5051.9100	-0.020000
3+20	-12.0000	5051.9100	-0.020000
3+30	-12.0000	5051.9100	-0.020000
3+40	-12.0000	5051.9100	-0.020000
3+50	-12.0000	5051.9100	-0.020000
3+60	-12.0000	5051.9100	-0.020000
3+70	-12.0000	5051.9100	-0.020000
3+80	-12.0000	5051.9100	-0.020000
3+90	-12.0000	5051.9100	-0.020000
4+00	-12.0000	5051.9100	-0.020000
4+10	-12.0000	5051.9100	-0.020000
4+20	-12.0000	5051.9100	-0.020000
4+30	-12.0000	5051.9100	-0.020000
4+40	-12.0000	5051.9100	-0.020000
2+90	0.0000	5052.1500	
3+00	0.0000	5052.1500	
3+10	0.0000	5052.1500	
3+20	0.0000	5052.1500	
3+30	0.0000	5052.1500	
3+40	0.0000	5052.1500	
3+50	0.0000	5052.1500	
3+60	0.0000	5052.1500	
3+70	0.0000	5052.1500	
3+80	0.0000	5052.1500	
3+90	0.0000	5052.1500	
4+00	0.0000	5052.1500	
4+10	0.0000	5052.1500	
4+20	0.0000	5052.1500	
4+30	0.0000	5052.1500	
4+40	0.0000	5052.1500	
2+90	12.0000	5051.9100	-0.020000
3+00	12.0000	5051.9100	-0.020000
3+10	12.0000	5051.9100	-0.020000
3+20	12.0000	5051.9100	-0.020000
3+30	12.0000	5051.9100	-0.020000
3+40	12.0000	5051.9100	-0.020000
3+50	12.0000	5051.9100	-0.020000
3+60	12.0000	5051.9100	-0.020000
3+70	12.0000	5051.9100	-0.020000
3+80	12.0000	5051.9100	-0.020000
3+90	12.0000	5051.9100	-0.020000
4+00	12.0000	5051.9100	-0.020000
4+10	12.0000	5051.9100	-0.020000
4+20	12.0000	5051.9100	-0.020000
4+30	12.0000	5051.9100	-0.020000
4+40	12.0000	5051.9100	-0.020000
2+90	13.7500	5051.8750	-0.020000
3+00	13.7500	5051.8750	-0.020000
3+10	13.7500	5051.8750	-0.020000
3+20	13.7500	5051.8750	-0.020000
3+30	13.7500	5051.8750	-0.020000
3+40	13.7500	5051.8750	-0.020000
3+50	13.7500	5051.8750	-0.020000
3+60	13.7500	5051.8750	-0.020000
3+70	13.7500	5051.8750	-0.020000
3+80	13.7500	5051.8750	-0.020000
3+90	13.7500	5051.8750	-0.020000
4+00	13.7500	5051.8750	-0.020000
4+10	13.7500	5051.8750	-0.020000
4+20	13.7500	5051.8750	-0.020000
4+30	13.7500	5051.8750	-0.020000
4+40	13.7500	5051.8750	-0.020000

Note: Elevations are at top of concrete deck 3 Inches below Finished Grade. Negative Roadway Cross Slope is Downwards from the Profile Grade Line. These Stations, Coordinates, Offsets and Lengths define the layout of the structure in a two dimensional horizontal plane. Elevations define the final grade of the finished concrete deck. Fabrication of structural components through the direct use of this information is not intended or advisable.

All seals for this set of drawings are applied to the cover page(s)	Print Date: 5/21/2024	Sheet Revisions				As Constructed	BIG SANDY CREEK BRIDGE REHABILITATION		Project No./Code
	File Name: 78001_B17_to_B24_Deck_Elevations.dgn	Date:	Comments	Init.		No Revisions:	ROADWAY APPROACHES		BRO C330-013
	Horiz. Scale: NTS Vert. Scale:					Revised:	(8 OF 8)		26222
						Void:	Designer: J. Kelly	Structure Numbers	LIN-32-2W-0A
						Detailer: D. Gonzales	Subset Sheets: B24 of 24		

8/15/2024

**STORMWATER MANAGEMENT PLAN**

**1. SITE DESCRIPTION**

The Contractor shall comply with all County contractual requirements. The SWMP Administrator for Construction shall update to reflect current project site conditions.

**A. PROJECT SITE LOCATION:**

Location or address of construction office: TBD  
 The project is located just south of Hugo, Lincoln County, Colorado on Lincoln County Road 32 approximately 3,700 feet southwest of the intersection of US-287 and 3rd Avenue.

**B. PROJECT SITE DESCRIPTION:**

The project will consist of replacing the existing bridge deck. A detour will be constructed to maintain public access to Hugo via CR 32 during construction, which will line up with the previous bridge location. To create the detour, a temporary stream crossing will need to be created, embankment material will be installed on top of the temporary stream crossing pipes, then detour pavement will be placed. After the detour is in place, interim stabilization of the side slopes of the detour will be completed, the existing bridge deck will be removed, and the new bridge deck installed will replace the existing. Signing, striping, removal of the stream crossing, and final stabilization will be the finishing elements to complete the project.

**C. PROPOSED SEQUENCING FOR MAJOR CONSTRUCTION ACTIVITIES:**

- Sequence of project elements:
1. Install initial control measures
  2. Install stream crossing
  3. Grading for detour
  4. Paving for detour
  5. Interim stabilization of side slopes on detour
  6. Remove existing bridge deck and replace with new bridge deck
  7. Signing and striping on new bridge deck
  8. Remove detour
  9. Final stabilization.

**D. ACRES OF DISTURBANCE:**

1. Total area of construction site (LOC): 2.0 acres
2. Total area of proposed disturbance (LDA): 1.5 acres
3. Total area of seeding: 1.1 acres

**E. EXISTING SOIL DATA:**

Soil type is described as the Bankard-Glenberg Complex, consisting of loamy sand from the hydrologic soil group A. It is somewhat excessively drained.  
Data Source(s): Web Soil Survey; <https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>

**F. EXISTING VEGETATION, INCLUDING PERCENT OF VEGETATIVE COVER:**

During design, the SWMP Administrator for Design in consultation with the Engineer will determine if the SWMP Administrator for Design or the SWMP Administrator for Construction will conduct the Vegetation Transects. If the site is disturbed, an Adequate Reference Site(s) may be utilized, refer to the permit.

Pre-Construction Date of survey: \_\_\_\_\_ Percent Existing Vegetative Cover: \_\_\_\_\_  
 Description of existing vegetation: \_\_\_\_\_  
 Method for determining percent vegetative cover: \_\_\_\_\_

Include a map or table showing transect locations, photos documenting pre-Construction vegetative cover, and methodology used to determine existing vegetative cover to SWMP tab 17:

Post-Construction Date of survey: \_\_\_\_\_ Percent Vegetative Cover: \_\_\_\_\_  
 Description of vegetation: \_\_\_\_\_  
 The method used to determine pre-construction percent cover shall be used to determine post construction percent cover.  
 Include map or table showing transect locations, photos documenting post-Construction vegetative cover, and methodology used to determine existing vegetative cover to SWMP tab 17:

**2. STORMWATER MANAGEMENT CONTROLS FOR FIRST CONSTRUCTION ACTIVITIES**

THE CONTRACTOR SHALL PERFORM THE FOLLOWING:

**A. POTENTIAL POLLUTANT SOURCES**

Refer to Potential Pollutant Sources in SWMP Section 4A. Evaluate, identify and describe all potential sources of pollutants at the site in accordance with subsection 107.25 and place any Control Measures required to contain potential pollutants.

**B. OFFSITE DRAINAGE (RUN ON WATER):**

Place Control Measures to address run-on water in accordance with subsection 208.03.

**C. CONSTRUCTION DEWATERING:**

Obtain a CDPS Dewatering Permit from CDPHE if conditions of their Low Risk Guidance for Discharges of Uncontaminated Groundwater to Land are not met; see subsections 107.02 and 107.25.

Refer to CDPHE Low Risk Discharge Guidance Document of Uncontaminated Groundwater to Land. <https://www.colorado.gov/pacific/sites/default/files/WQ%20LOW%20RISK%20GW.pdf>

**D. VEHICLE TRACKING CONTROL:**

Control Measures shall be implemented in accordance with subsection 208.04.

**E. PERIMETER CONTROL:**

Perimeter control shall be established as the first item on the SWMP to prevent the potential for pollutants leaving the construction site boundaries, entering the stormwater drainage system, or discharging to state waters. Perimeter control may consist of berms, silt fence, erosion logs, existing landforms, or other Control Measures as approved.

**3. QUALIFIED STORMWATER MANAGERS:**

**A. SWMP ADMINISTRATOR FOR DESIGN:**

CDOT Certified Individual responsible for developing SWMP Plan Sheets and SWMP Site Maps during the design phase.

Name/Title	Contact Information	Certification #
Lauren Gentile / Environmental Manager	gentile@rocksol.com	33D95D1A

**B. SWMP ADMINISTRATOR FOR CONSTRUCTION:**

(As defined in Section 208) The Contractor shall designate a SWMP Administrator for Construction. The SWMP Administrator for Construction shall become the operator for the SWMP and assume responsibility for all design changes to the SWMP implementation and maintenance in accordance to 208.03, the SWMP shall remain the property of the County. The SWMP Administrator for Construction shall be responsible for implementing, maintaining, and revising SWMP, including the title and contact information. The activities and responsibilities of the SWMP Administrator for Construction shall address all aspects of the project's SWMP. (Update the information below for each new SWMP Administrator for Construction) (Copy of TECS Certification must also be included in the SWMP.)

Name/Title	Contact Information (phone & email)	TECS Certification #	Start Date	Engineer Approval

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 Web: www.RockSol.com

Sheet Revisions

Date:	Comments	Init.



As Constructed	BIG SANDY CREEK BRIDGE REHAB SWMP NARRATIVE		Project No./Code
No Revisions:			2023-LC-01
Revised:	Designer: L. Gentile	Structure Numbers	
	Detailer: C. McNamara		
Void:	Sheet Subset: SWMP	Subset Sheets: 1 of 6	Sheet Number 51

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**4. DURING CONSTRUCTION**

- A. **MATERIALS HANDLING AND SPILL PREVENTION:**  
Materials handling shall be in accordance with subsection 208.06.
- B. **OTHER CDPS PERMITS:**  
All CDPS permits associated with the permitted site and activities shall be followed as stated in the permit.
- C. **STOCKPILE MANAGEMENT:**  
Shall be done in accordance with subsections 107.25 and 208.07
- D. **CONCRETE WASHOUT:**  
Concrete wash out water or waste from field laboratories and paving equipment shall be contained in accordance with subsection 208.05.
- E. **SAW CUTTING:**  
Shall be done in accordance with subsections 107.25, 208.04, 208.05
- F. **STREET SWEEPING:**  
Shall be done in accordance with subsection 208.04

**5. CONTROL MEASURE MAINTENANCE**

Maintenance shall be in accordance with subsection 208.04 (f).

**6. INTERIM AND PERMANENT STABILIZATION**

The Contractor shall comply with all interim stabilization and permanent stabilization requirements in accordance with subsection 208.04(e).

A. **SEEDING PLAN**

The following native seed mix and rate is for drill seeding method as shown on the Permanent Stabilization Site Maps shall be used. Hand broadcast method for native seed mix shall be done at 1.5x the drill seeding rate below. The wetland seed mix is assumed that hand broadcast method will be used, and already accounts for the additional seed for this method.

**Native Seed Mix (Drill)**

COMMON NAME	BOTANICAL NAME	LBS. PLS PER ACRE
Western Wheatgrass	Pascopyrum smithii Arriba	4.0
Blue Grama	Bouteloua gracilis v Hachita	3.5
Buffalo Grass	Boutelous dactyloides	4.0
Sideoats Grama	Boutelous curtipendula	1.5
Sand dropseed	Sporobulus cryptandrus	1.0
Blue Flax	Linum Perenne v. Appar	2.0
Indian Ricegrass	Achnatherum hymenoides v. Paloma	2.0
Oats	Avena Sativa	3.5
<b>TOTAL</b>		<b>21.5</b>

**Wetland Seed Mix (Broadcast)**

COMMON NAME	BOTANICAL NAME	LBS. PLS PER ACRE
switchgrass	Panicum virgatum	6.0
saltgrass	Distichlis spicata	6.0
slender wheatgrass	Elymus trachycoulus	6.0
prairie cordgrass	Spartina pectinata	6.0
alkali sacaton	Sporobolus airoides	4.0
common spike rush	Eleocharis palustris	4.0
common three-square	Schoenoplectus pungens	4.0
wooley sedge	Carex pellita	3.0
New England aster	Symphotrichum novae-angliae	3.0
cloaked bulrush	Scirpus pallidus	2.0
swamp milkweed	Asclepias incarnata	2.0
Bebb's sedge	Carex bebbii	2.0
meadow sedge	Catrex praticola	1.0
Torrey's rush	Juncus torreyi	1.0
<b>TOTAL</b>		<b>50.0</b>

B. **SEEDING APPLICATION:**

The following seeding methods shall be used for all areas which are not surfaced and as shown on the Permanent Stabilization Site Maps. Soil compaction shall be minimized for areas where permanent stabilization will be achieved through vegetative cover.

Pay Item	Seeding Method (subsection 212.05)	Acre
212-00032	Seeding (Native)	0.3
212-00711	Seeding (Wetland) Broadcast	0.2
	<b>Total</b>	<b>0.5</b>

The Contractor shall provide the location of where seed is stored and access to stored seed locations to the Engineer. Seed stored by the Contractor for longer than 30 days will be rejected.

C. **MULCHING APPLICATION:**

Apply a minimum of 2 tons/ac of certified weed free hay or 2 1/2 tons/ac of certified weed free straw per acre and in accordance with Section 213, and mechanically crimp it into the soil in combination with an organic mulch tackifier.

Prior to winter shutdown or the summer seeding window closure: Uncompleted slopes shall be mulched with 2 tons of mulching (weed free) per acre, mechanically crimped into the topsoil in combination with an organic mulch tackifier in accordance with Sections 208 and 213.

D. **SPECIAL REQUIREMENTS:**

Soil amendments, seedbed preparation, and permanent stabilization mulching shall be accomplished within four working days of placing the topsoil on the de-compacted civil subgrades. If placed topsoil is not mulched with permanent stabilization mulch within four working days, the Contractor shall complete interim stabilization methods in accordance with subsection 208.04(e) at no additional cost to the Department. Permanent stabilization mulching shall be accomplished within 24 hours of hydraulic application of native seed.

The Contractor shall submit a proposed Permanent Stabilization Phasing Plan to the Engineer for approval showing how the SWMP Permanent Stabilization Plans will be implemented to minimize damage to seeded areas.

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	File Name: 78001_SWMP-001_SWMP Narrative.dgn	Date:	Comments	Init.			2023-LC-01			
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	 RockSol Consulting Group, Inc. 12076 Grant Street, Thornton, CO 80241 Phone: (303) 962-9300 Web: www.RockSol.com						Designer: L. Gentile Detailer: C. McNamara Sheet Subset: SWMP    Subset Sheets: 2 of 6	Sheet Number <b>52</b>		

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**E. SOIL AMENDMENT REQUIREMENTS:**

Minimum amendment material requirements for all disturbances to receive seeding (native). Soil amendments shall be paid as "soil conditioning" per acre. Seeding (wetland) **does not** require soil conditioning.

0.70 Total Acres of Seeding (Native) With Topsoil Generated From Topsoil (Onsite)

Seeding (Native) Pay Item 212-00032	Description	Amount/Acre	Units	Total For This Method
	Organic Fertilizer Low N	600	Pounds	180
	Compost (Mechanically Applied)	95	CY	28.5
	Humate	200	Pounds	60

\*Biological nutrient shall not exceed 8-8-8 (N-P-K). Fertilizer, Humate, and Compost based material shall be in accordance with Section 212.

**F. BONDED FIBER MATRIX:**

Bonded fiber matrix shall be applied in accordance with Spec 213. It is anticipated that the wetland area will be too wet to place and crimp straw mulch correctly in accordance with the Specs. Because of this, bonded fiber matrix was determined to be used for final stabilization of the wetland area.

**G. PERMANENT STABILIZATION APPLICATION UNDER STRUCTURES:**

Under structures shade patterns should be considered and the use of Median Cover Material (Stone) or other stabilized options with an approved Project Special Provision should be used. See SWMP Site Map for locations.

**H. RESEEDING OPERATIONS/CORRECTIVE STABILIZATION:**

Prior to partial acceptance. All seeded areas shall be reviewed by the SWMP Administrator for Construction and or Engineer for bare soils caused by surface or wind erosion. Bare areas caused by surface or gully erosion, blown away mulch, etc. shall be re-graded, seeded, and have the designated mulching applied as necessary, at no additional cost to the project.

**7. PRIOR TO PROJECT FINAL ACCEPTANCE**

- When directed by the Engineer, removal and disposal of temporary control measures shall be included in the cost of work.
- At the end of the project, all ditch checks shall consist of either temporary erosion logs (or equivalent) or permanent riprap.
- Refer to Specification 208.10 for Items to be completed prior to requesting partial acceptance of water quality work.

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**8. NARRATIVES:**

**Control Measure Matrixes During Construction:**

- Control measure narratives have been included for the CDOT Standard Specifications and Standard Plan M-208 and M-216 along with any non-standard control measures approved during the design process. If a Non-Standard Control Measure not included in the SWMP is proposed and approved by the Engineer the SWMP Administrator for Construction shall do the following: Place an "X" in the column for non-standard and complete a Non-Standard Control Measure Specification and Narrative covering the what, when, where and why the control measure is being used shall be add to the SWMP. The appropriate "X" shall also be added to the implementation phase(s).
- The SWMP Administrator for Construction shall place an "X" in the column In Use On Site when the control measure has been installed.
- A "B" in the Initial Activities Column indicates that the control measure shall be installed **before** construction activity starts. Locations and quantities will be discussed during the Environmental Pre-Construction Conference.

**STRUCTURAL Control Measures** that may be potentially used on the project for erosion and sediment control; practices may include, but are not limited to:

APPLICATION, CONTROL MEASURE	NARRATIVE	M- 208 STANDARD or "X" for NON-STANDARD	IN USE ON SITE	CONTROL MEASURE IMPLEMENTATION PHASE		
				INITIAL ACTIVITIES	INTERIM ACTIVITIES	PERMANENT STABILIZATION
PROTECTION OF EXISTING WETLANDS Fence (plastic) and erosion logs	Fence (plastic) shall be placed in combination with erosion logs to prevent encroachment of construction traffic and sediment into state waters prior to start of construction disturbances. Fence (plastic) shall be placed adjacent to the wetlands; erosion logs shall be placed between the plastic fence and disturbance area. Logs shall be placed to direct flows away from or filter water running into wetlands from disturbance areas.			B	X	
CHECK DAM/DITCH CHECK Erosion log, silt berm, silt dike, rock check dam	Placed in ditches immediately upon completion of ditch grading to reduce velocity of runoff in ditch. For existing ditches, place prior to start of construction disturbances.	M-208		X	X	
CULVERT INLET/OUTLET PROTECTION Erosion logs, aggregate bags	Placed at mouth of culvert inlets and over top of culvert at inlet and outlet where disturbance may be occurring adjacent to pipe to prevent sediment laden water from entering pipe or drainage. Place prior to start of construction disturbances.	M-208		B or X	X	X
STOCKPILE PROTECTION Temporary berm, erosion logs, aggregate bags*	Placed within specified distance, in accordance with subsection 208.06, from toe to contain sediment around stockpile. *Aggregate bags are easily moved and replaced for access during the work day. Place prior to start of stockpile, increase control as stockpile increases size.	M-208			X	
TOE OF FILL PROTECTION Erosion logs, temporary berm, silt fence, topsoil windrow*	Place prior to slope/embankment work to capture sediment and protect and delineate undisturbed areas. *Can be used to stockpile topsoil for salvage.	M-208		X	X	
PERIMETER CONTROL Erosion logs, silt fence, temporary berm, topsoil windrow*	Placed prior to construction commencing to address potential run-on water from off site, and to divert around disturbed area. *Can be used to stockpile topsoil for salvage.	M-208		B	X	
SLOPE CONTROL Silt fence, erosion logs	Placed on the contour of a slope to contain and slow down construction runoff. Place prior to start of construction disturbances.	M-208		X	X	
CONCRETE WASHOUT In-ground or fabricated	Construction control, used for waste management of concrete and concrete equipment cleaning. Place prior to start of concrete activities.	M-208		X	X	
VEHICLE TRACKING PAD	Source control, placed to prevent tracking of sediment from disturbed area to offsite surface. Place prior to start of construction disturbances.	M-208		B	X	
DEWATERING (Contractor is responsible for obtaining a permit from Colorado Department of Health and Environment.)	Shall be done in such a manner to prevent potential pollutants from entering state waters.					
TEMPORARY STREAM CROSSING	Constructed over stream or drainage to prevent discharge of pollutants from construction equipment into water.			X		
CLEAN WATER DIVERSION	Placed to divert clean surface or ground water around disturbance area to prevent it from mixing with construction runoff.					
OTHER						

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	Horiz. Scale: N/A Vert. Scale: N/A					Revised:	Designer: L. Gentile	Structure Numbers	
						Void:	Detailer: C. McNamara	Subset Sheets: 4 of 6	Sheet Number 54

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**NON-STRUCTURAL Control Measures** that may be potentially used on the project for erosion and sediment control; practices may include, but are not limited to: Erosion control devices are used to limit the amount of soil loss on site. Sediment control devices are designed to capture sediment on the project site.

APPLICATION, CONTROL MEASURE	NARRATIVE	M-STANDARD or "For NON-STANDARD	IN USE ON SITE	CONTROL MEASURE IMPLEMENTATION PHASE		
				INITIAL ACTIVITY	INTERIM ACTIVITIES	PERMANENT STABILIZATION
VEGETATIVE BUFFER STRIP	Finishing component for filtering sediment-laden runoff from disturbance area. Area within CDOT ROW or temporary easement to be identified on SWMP prior to construction starting.			X	X	X
GRADING APPLICATIONS (LANDFORM)	Existing or created landforms may be used as a control measure if they prevent sediment from entering or leaving the disturbance area. If a landform directs flow of water to a concentrated outfall point, the outfall point shall be protected to prevent erosion. Area to be identified on SWMP prior to construction starting.	M-208		X	X	
TOPSOIL MANAGEMENT STOCKPILE/SALVAGE Stockpile	Prior to any site disturbance work commencing, existing topsoil shall be scraped to a depth six inches or as specified, and placed in stockpiles or windrows. Upon completion of final grading, topsoil shall be evenly distributed over embankment to a depth of six inches or as specified.	M-208		X	X	X
SURFACE ROUGHENING / GRADING TECHNIQUES	Temporary stabilization of disturbance and to minimize wind and erosion.				X	
SEEDING (TEMPORARY)	Temporary stabilization used for over wintering of disturbance or used to control erosion for areas scheduled for future construction.				X	
BONDED FIBER MATRIX or MULCHING (HYDRAULIC)	Not to be used in areas of concentrated flows, i.e. ditch lines. To be for either Interim or Permanent Stabilization placed as a surface cover for erosion control. May be used as surface cover when work is temporarily halted and as approved by the Engineer for stockpiles.				X	X
Straw or Hay MULCH/MULCH TACKIFIER	Interim or Permanent Stabilization placed as a surface cover for erosion control and or seeding establishment. To be installed as Interim Stabilization as a surface cover when work is temporarily halted and as approved by the Engineer				X	X
SPRAY-ON MULCH BLANKET (Not to be used in areas of concentrated flows, i.e. ditch lines.)	Interim or Permanent Stabilization placed as a surface cover for erosion control and or seeding establishment. To be installed as temporary surface cover when work is temporarily halted and as approved by the Engineer				X	X
SEEDING PERMANENT (NATIVE)	Permanent Stabilization of disturbance and to reduce runoff and control erosion on disturbed areas.					X
SOIL RETENTION BLANKET (SRB)	Permanent Stabilization of disturbance and to reduce runoff and control erosion on disturbed areas.	M-216			X	X
Sweeping	Source control, used to remove sediment tracked onto paved surfaces and to prevent sediment from entering drainage system. Sweep daily and at the end of the construction shift as needed. Kick brooms shall not be permitted.			X	X	X
OTHER						

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	Horiz. Scale: N/A Vert. Scale: N/A					Revised:	Designer: L. Gentile	Structure Numbers	
						Void:	Detailer: C. McNamara	Subset Sheets: 5 of 6	Sheet Number 55

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**9. TABULATION OF STORMWATER QUANTITIES**

1. Control Measure sediment removal and disposal shall be paid for as: 208 Removal and Disposal of Sediment (Equipment) and 208 Removal and Disposal of Sediment (Labor). All other control measure maintenance shall be included in the cost of the control measure.

PSP Spec.	Pay Item	Description	Pay Unit	Initial Const.	Interim Const.	Permanent Stabilization	*Total Quantity
	207-00700	Topsoil (Onsite)	CY			238	238
	207-00703	Topsoil (wetland)	CY			290	290
	208-00002	Erosion Log Type 1 (12 inch)	LF	500	500		1000
	208-00020	Silt Fence	LF	1170	1170		2340
	208-00035	Aggregate Bag	LF	100	250		350
	208-00046	Pre-fabricated Concrete Washout Structure (Type 1)	Each		2		2
	208-00075	Pre-fabricated Vehicle Tracking Pad	Each	2			2
	208-00103	Removal and Disposal of Sediment (Labor)	Hour		60		60
	208-00105	Removal and Disposal of Sediment (Equipment)	Hour		40		40
	208-00106	Sweeping (Sediment Removal)	Hour		40		40
	208-00207	Erosion Control Management (ECM)	Day				20
	212-00032	Soil Conditioning	Acre			0.7	0.7
	212-00006	Seeding (Native)	Acre			0.7	0.7
	212-00711	Seeding (Wetland) Broadcast	Acre			0.4	0.4
	213-00003	Mulching (Weed Free)	Acre			0.7	0.7
	213-00061	Mulch Tackifier	LB			140	140
	213-00150	Bonded Fiber Matrix	Acre		0.6	0.4	1.0
	214-00008	Extended Landscape Preservation	LS			1	1
	217-00020	Herbicide Treatment	Hour	20	20	20	60
	607-11525	Fence (Plastic)	LF	1000			1000

\*It is anticipated that additional control measures and control measure quantities not shown on the SWMP Site Maps shall be required on the project for unforeseen conditions and replacement of items that are beyond their useful service life, see subsections 208.03 and 208.04. **Quantities for all control measures shown above are estimated, and have been increased for unforeseen conditions and normal control measure life expectancy.** Quantities shall be adjusted according to the conditions encountered in the field as directed and approved by the Engineer. Payment shall be for the actual work completed and material used.  
 \*\*Pay Item 208-00071 is included for anticipated maintenance of vehicle tracking pads based on the service life of the control measure in the field. The use of the material shall be directed and approved by the Engineer.  
 \*\*\* Using Erosion Control Management Pay Item on the project must be approved by the Regional Environmental Staff and Engineer. See 208.11 for method of measurement for the day pay unit.  
 \*\*\*\* F/A refers to CDOT's Force Account Pay Items.

**10. BIOLOGICAL IMPACTS and DEWATERING**

- A. ENVIRONMENTAL IMPACTS:  
 Wetland Impacts: YES  
 Stream Impacts: Yes, just temporary during construction.  
 Threatened and Endangered Species: None anticipated.
- B. DEWATERING:  
 (Not covered under the CDPHE guidance document Low Risk Discharge Guidance Discharges of Uncontaminated Groundwater to Land):  
<https://www.colorado.gov/pacific/sites/default/files/WQ%20LOW%20RISK%20GW.pdf>  
 Dewatering: Refer to other environmental permits in accordance with subsection 107.02 and the permits contained in Tab 16 of the SWMP.  
 If groundwater does not meet water quality standards for receiving water a separate CDPS Dewatering Permit shall be obtained by the Contractor from CDPHE in accordance with subsections 107.02 and 107.25.

**11. NOTES**

1. Wetland Impacts
- i. Wetland impacts will be minimized to the greatest extent possible.
  - ii. Follow the detail for the detour to minimize wetland impacts under the detour route. Geotextile installed as part of the detour detail shall be removed with detour removal.
  - iii. Wetland topsoil shall be stockpiled and protected in accordance with Spec 207.
  - iv. Wetland topsoil that was cleared and stockpiled shall be placed back after subsoil prep and protected from being compacted after placement. Seeding and mulching shall be completed immediately after wetland topsoil is placed in accordance with Spec 212.
  - v. No equipment other than that used for permanent stabilization will be allowed in the wetland restoration area once soil preparation is complete and equipment compaction shall be minimized.
  - vi. Bonded Fiber Matrix will be used for permanent stabilization of the wetland restoration area.

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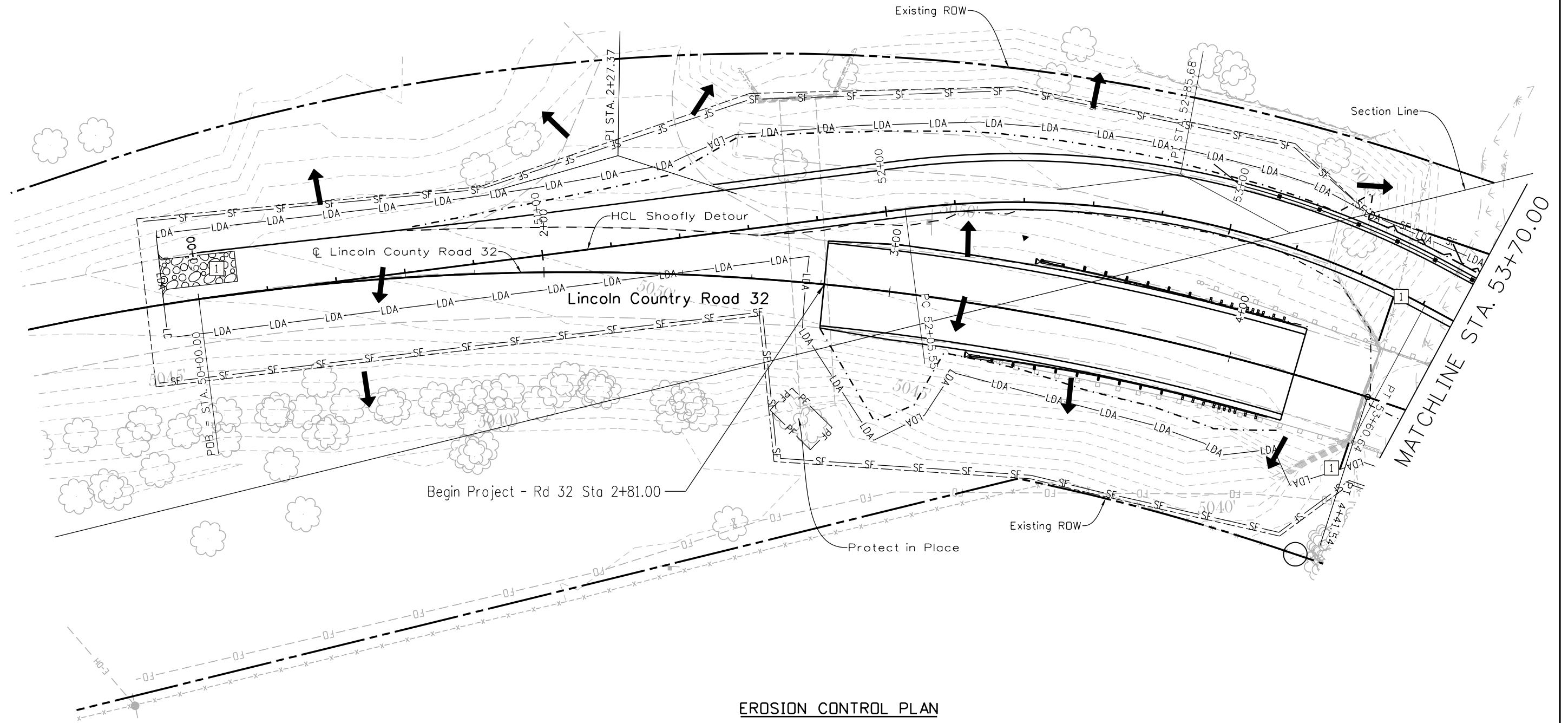
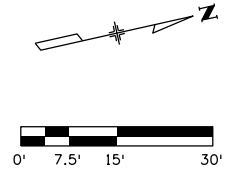
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	Horiz. Scale: N/A    Vert. Scale: N/A					Revised:	Designer: L. Gentile	Structure Numbers	
	 RockSol Consulting Group, Inc. 12076 Grant Street, Thornton, CO 80241 Phone: (303) 962-9300 Web: www.RockSol.com					Void:	Detailer: C. McNamara	Subset Sheets: 6 of 6	Sheet Number <b>56</b>

8/15/2024



**LEGEND**

—LDA—	Limits of Disturbance		Vehicle Tracking Pad (VTP)
- - - - -	Limits of Construction		Wetlands
-PF-	Plastic Fence	1	Initial
-SF-	Silt Fence	2	Interim
	Flow Arrow (Direction of Flow)	3	Final
	Erosion Log/Pipes Erosion Log		



**EROSION CONTROL PLAN**

pugh 8:52:32 AM R:\0-Projects\ACTIVE PROJECTS\78001\_Lincoln County Road 32 over Big Sandy Creek Bridge Rehabilitation\800\_Computer Design Files\802\_Sheet Files\78001\_SWMP-002\_SWMP\_Plans.dgn

All seals for this set of drawings are applied to the cover page(s)

Print Date: 6/25/2024  
 File Name: 78001\_SWMP-002\_SWMP\_Plans.dgn  
 Horiz. Scale: 1:20    Vert. Scale: N/A

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 Phone: (303) 962-9300  
 Web: www.RockSol.com

Sheet Revisions		
Date:	Comments	Init.



As Constructed
No Revisions:
Revised:
Void:

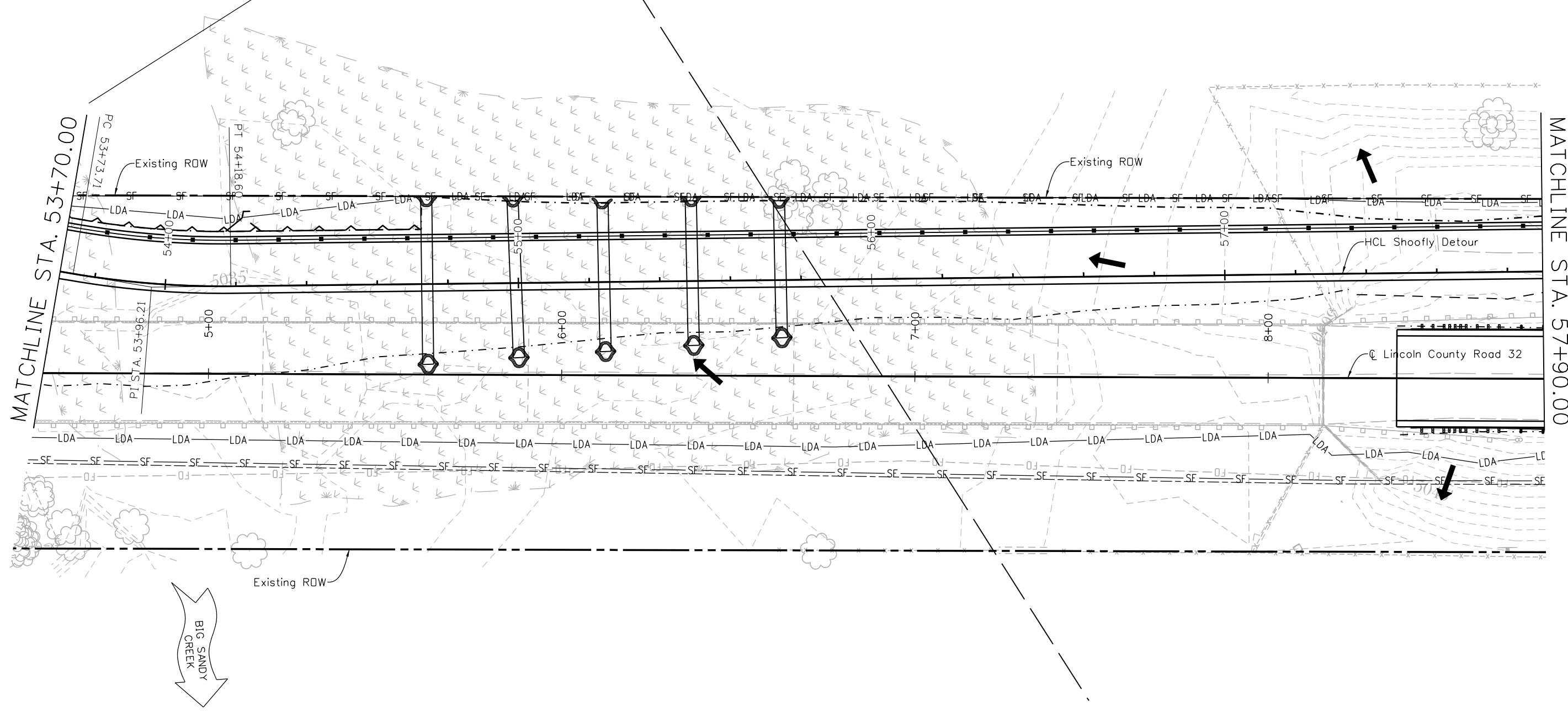
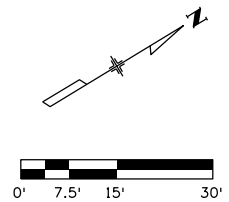
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Designer:	S. Scott	Structure Numbers	LIN 32-2W.0A
Detailer:	H. Pugh	Sheet Subset:	SWMP
Sheet Subset:	SWMP	Subset Sheets:	1 of 6

Project No./Code	BRD C330-013
Sheet Number	57

8/15/2024

**LEGEND**

—LDA—	Limits of Disturbance		Vehicle Tracking Pad (VTP)
- - - - -	Limits of Construction		Wetlands
-PF-	Plastic Fence		1 Initial
-SF-	Silt Fence		2 Interim
	Flow Arrow (Direction of Flow)		3 Final
	Erosion Log/Pipes Erosion Log		



**EROSION CONTROL PLAN**

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All seals for this set of drawings are applied to the cover page(s)

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 File Name: 78001\_SWMP-002\_SWMP\_Plans.dgn  
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Sheet Revisions		
Date:	Comments	Init.



As Constructed	No Revisions:	Revised:	Void:
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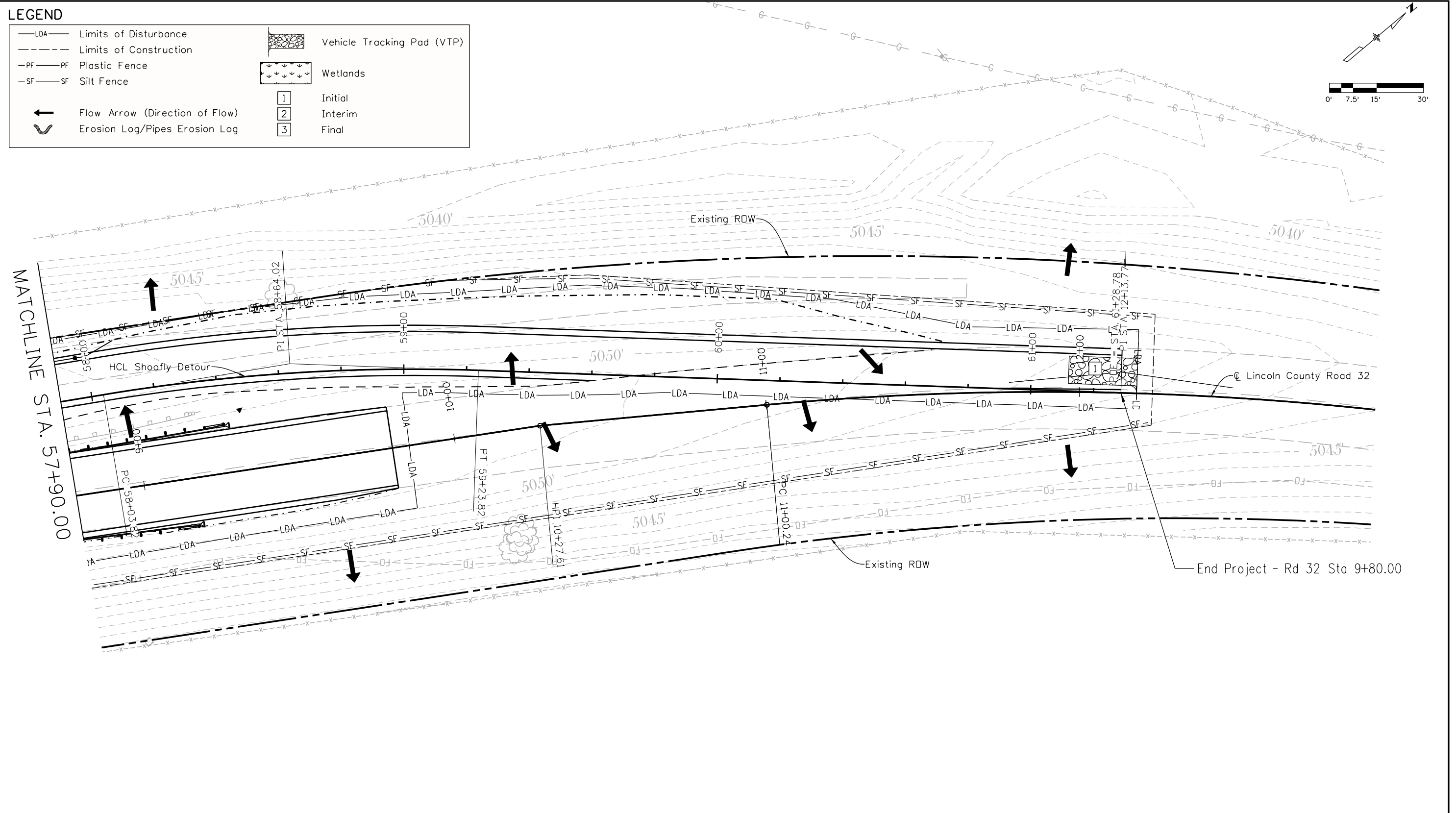
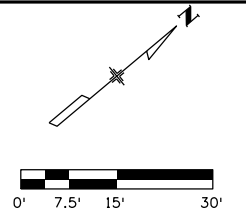
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Detailer:	H. Pugh	Sheet Subset:	SWMP
Subset Sheets:	2 of 6		

Project No./Code	BRD C330-013
Sheet Number	58

8/15/2024

**LEGEND**

— LDA —	Limits of Disturbance		Vehicle Tracking Pad (VTP)
- - - - -	Limits of Construction		Wetlands
- PF -	Plastic Fence	1	Initial
- SF -	Silt Fence	2	Interim
	Flow Arrow (Direction of Flow)	3	Final
	Erosion Log/Pipes Erosion Log		



**EROSION CONTROL PLAN**

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All seals for this set of drawings are applied to the cover page(s)

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 Horiz. Scale: 1:20    Vert. Scale: N/A



Sheet Revisions		
Date:	Comments	Init.



As Constructed  
 No Revisions:  
 Revised:  
 Void:

**BIG SANDY CREEK BRIDGE REHAB  
 STORMWATER MANAGEMENT PLAN  
 INITIAL/INTERIM**

Designer: S. Scott  
 Detailer: H. Pugh  
 Sheet Subset: SWMP

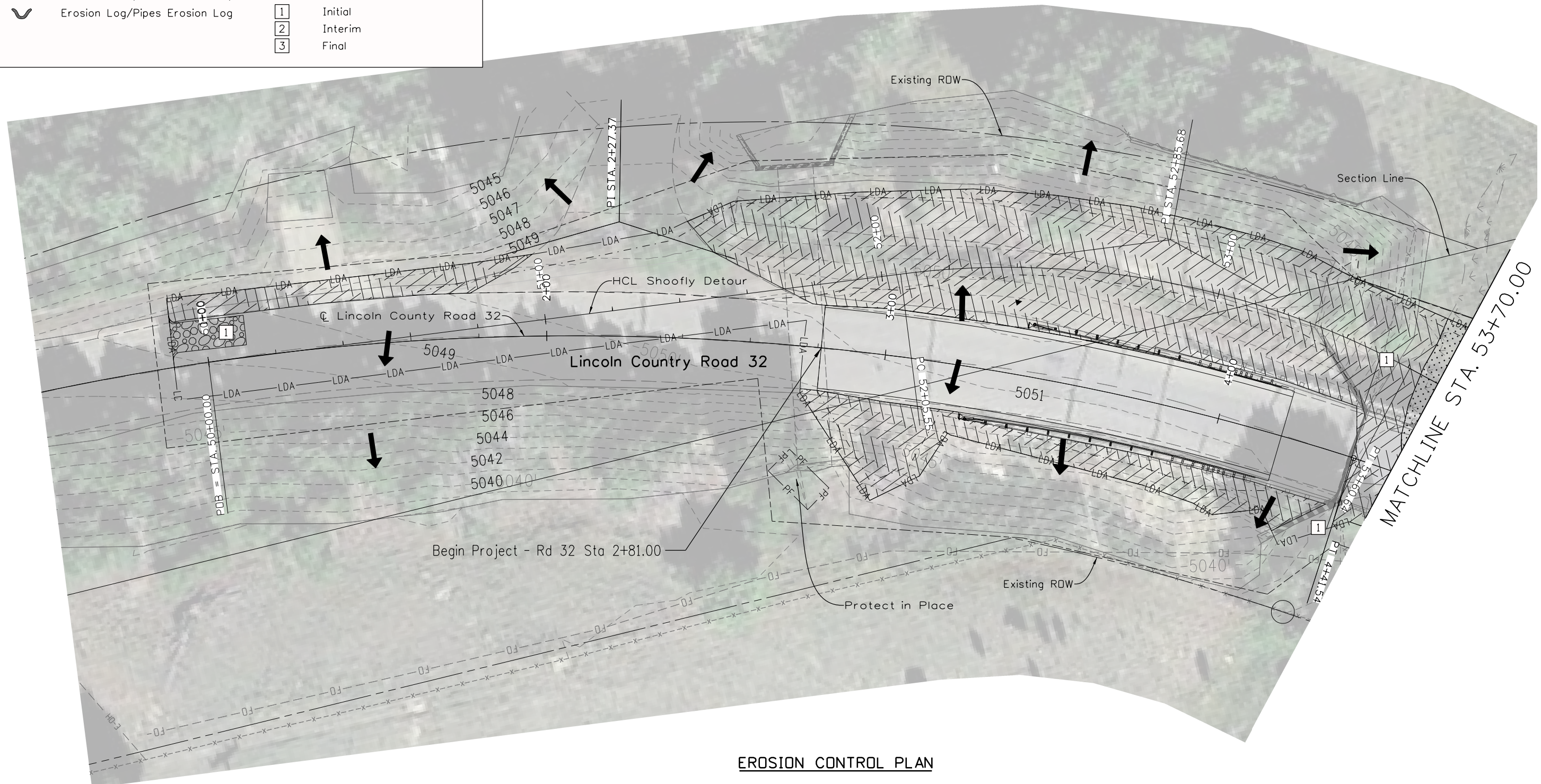
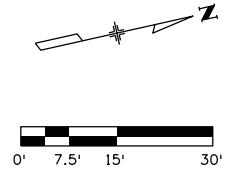
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 Subset Sheets: 3 of 6

Project No./Code  
 BRD C330-013  
 26222  
 Sheet Number 59

8/15/2024

**LEGEND**

—LDA—	Limits of Disturbance		Seeding (Native)
- - - - -	Limits of Construction		Existing Wetlands
-PF-	Plastic Fence		Seeding (Wetland)
-SF-	Silt Fence		Initial
	Flow Arrow (Direction of Flow)		Interim
	Erosion Log/Pipes Erosion Log		Final



**EROSION CONTROL PLAN**

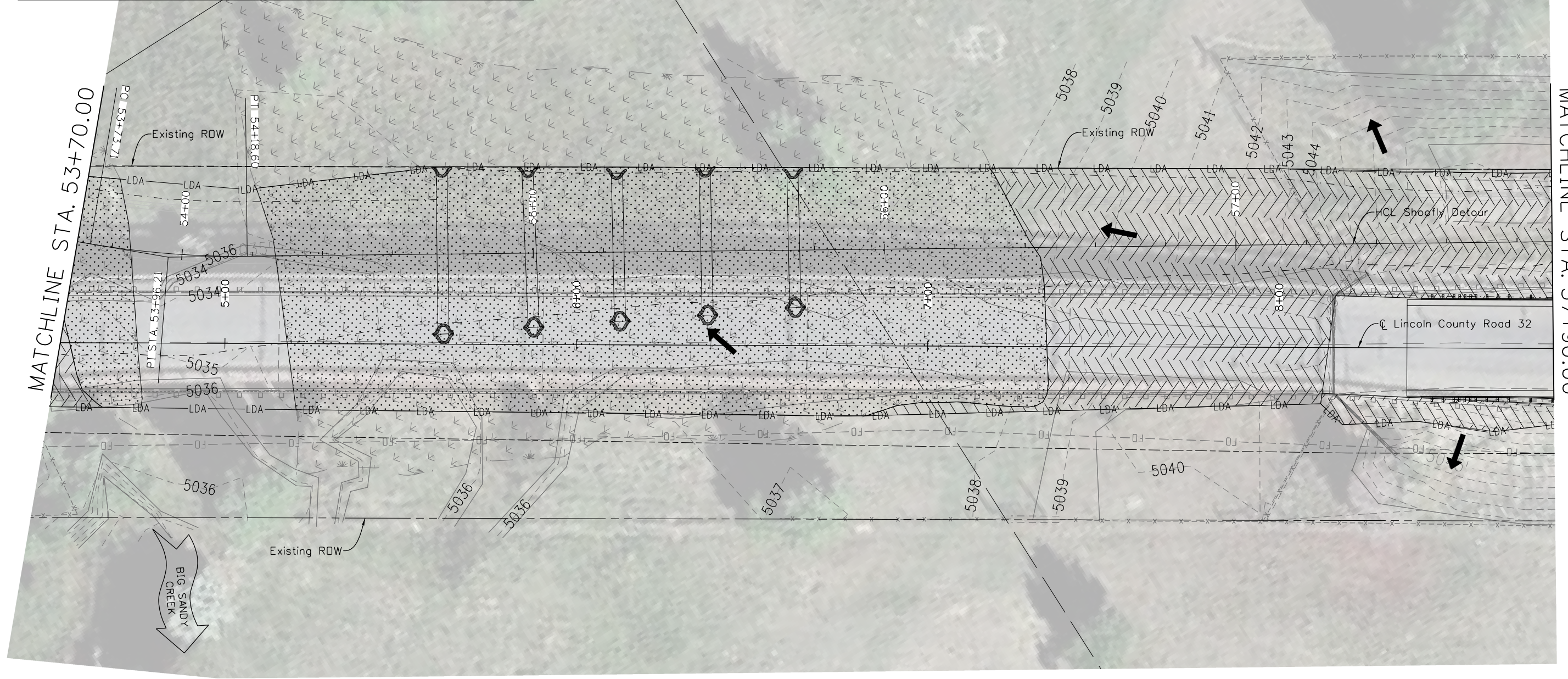
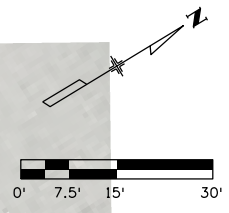
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8/15/2024

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Detailer:	H. Pugh	Sheet Subset:	SWMP																																		
		Subset Sheets:	4 of 6																																		
RockSol Consulting Group, Inc. 12076 Grant Street, Thornton, CO 80241 Phone: (303) 962-9300 Web: www.RockSol.com																																					

**LEGEND**

— LDA —	Limits of Disturbance		Seeding (Native)
- - - - -	Limits of Construction		Existing Wetlands
- PF -	Plastic Fence		Seeding (Wetland)
- SF -	Silt Fence		1 Initial
	Flow Arrow (Direction of Flow)		2 Interim
	Erosion Log/Pipes Erosion Log		3 Final



**EROSION CONTROL PLAN**

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 File Name: 78001\_SWMP-003 SWMP Plans.dgn  
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Date:	Comments	Init.



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No Revisions:
Revised:
Void:

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Detailer:	H. Pugh	Sheet Subset:	SWMP
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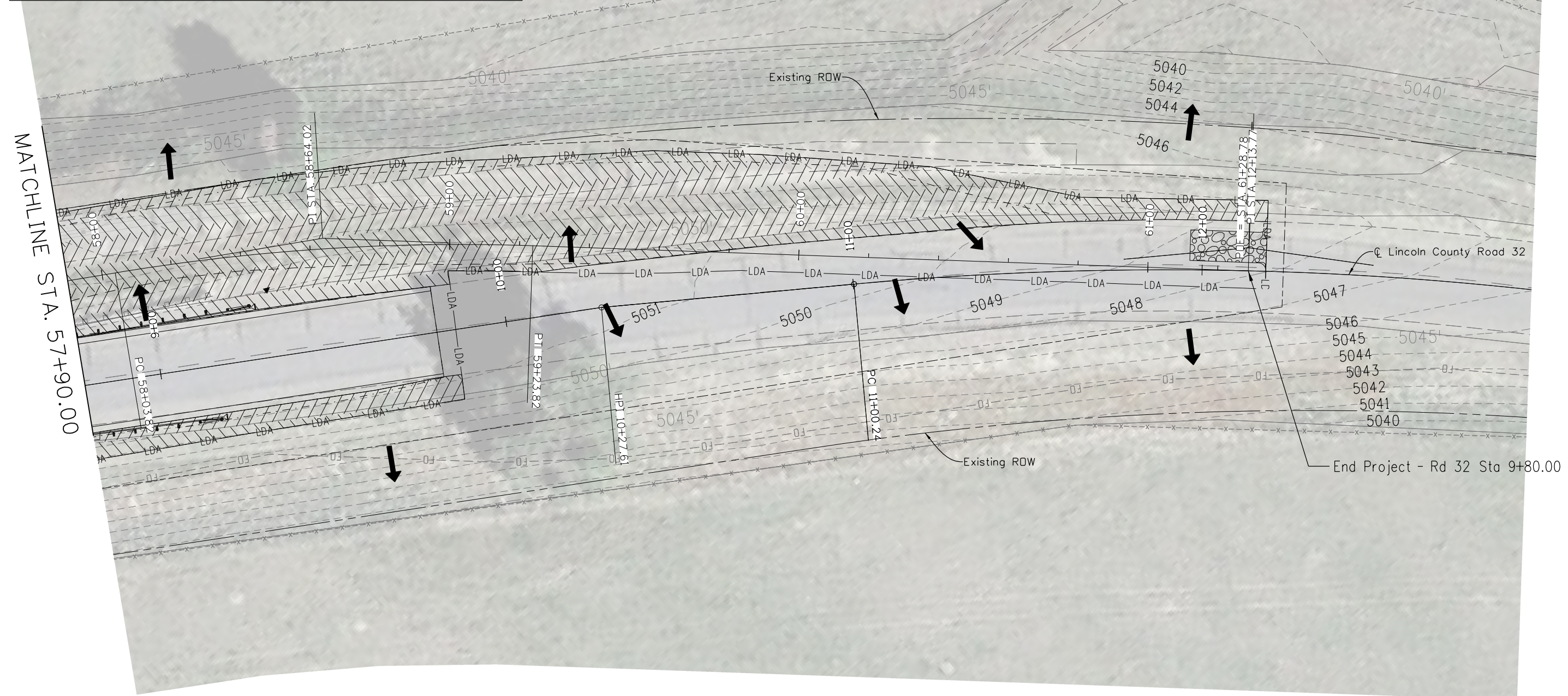
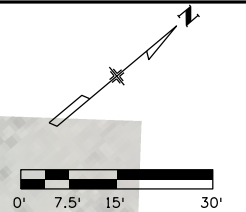
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Sheet Number	61

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8/15/2024

**LEGEND**

— LDA —	Limits of Disturbance		Seeding (Native)
- - - - -	Limits of Construction		Existing Wetlands
- PF -	Plastic Fence		Seeding (Wetland)
- SF -	Silt Fence		1 Initial
	Flow Arrow (Direction of Flow)		2 Interim
	Erosion Log/Pipes Erosion Log		3 Final



**EROSION CONTROL PLAN**

pugh 8/14/24 AM R:\0-Projects\ACTIVE PROJECTS\78001\_Lincoln County Road 32 over Big Sandy Creek Bridge Rehabilitation\800-Computer Design Files\802\_Sheet Files\78001\_SWMP-003\_SWMP\_Plans.dgn

8/15/2024

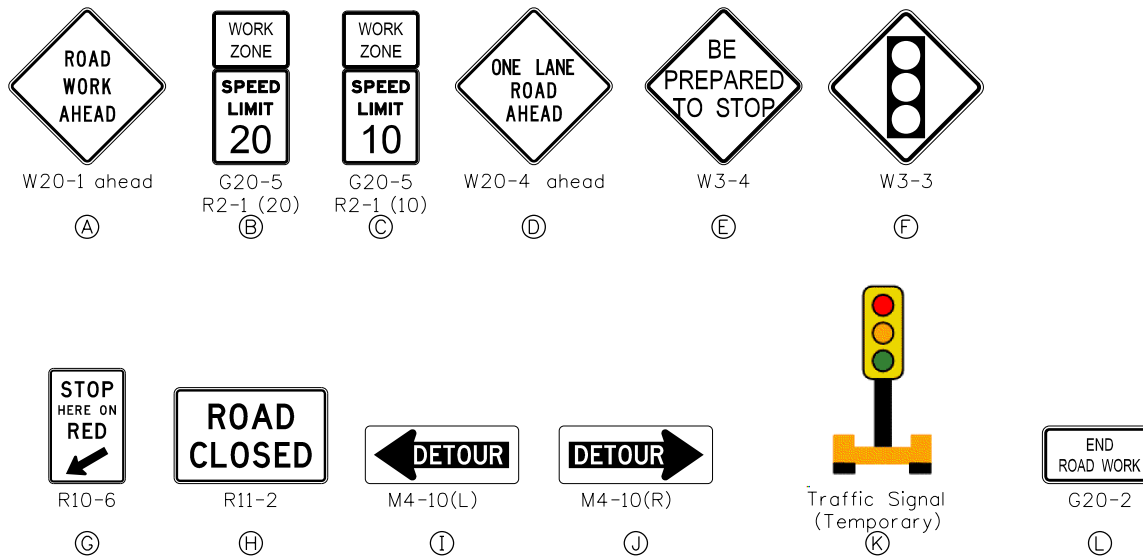
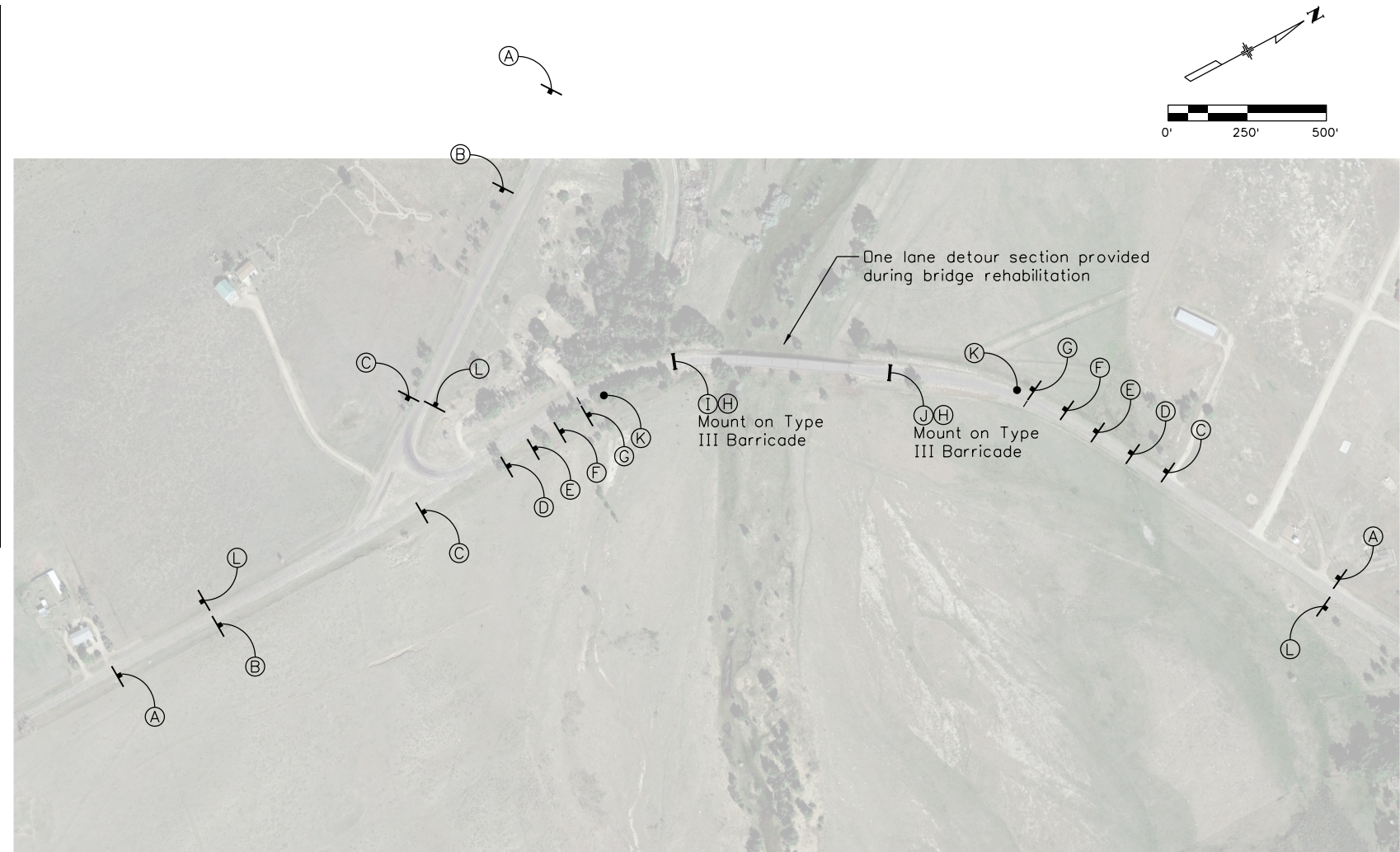
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	RockSol Consulting Group, Inc. 12076 Grant Street, Thornton, CO 80241 Phone: (303) 962-9300 Web: www.RockSol.com	<table border="1"> <thead> <tr> <th>Date:</th> <th>Comments</th> <th>Init.</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>	Date:	Comments		Init.										Revised: Void:	Designer: S. Scott Detailer: H. Pugh Sheet Subset: SWMP	Structure Numbers: LIN 32-2W.OA Subset Sheets: 6 of 6	26222 Sheet Number 62
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scott 4:01:23 PM R:\Q-Projects\ACTIVE PROJECTS\78001\_Lincoln County Road 32 over Big Sandy Creek Bridge Rehabilitation\800\_Comp Computer Design Files\802\_Sheet Files\78001\_traf-001 traffic control.dgn

TABULATION OF TEMPORARY TRAFFIC CONTROL SIGNING				
SIGN	DESCRIPTION	DIMENSION	PANEL SIZE EACH	
			A	B
W20-1	ROAD WORK AHEAD	36" x 36"	3	
G20-2	END ROAD WORK	36" x 18"	3	
G20-5aP	WORK ZONE PLAQUE	24" x 30"	5	
R2-1	SPEED LIMIT (10 MPH)	24" x 18"	3	
R2-1	SPEED LIMIT (20 MPH)	24" x 18"	2	
W20-7	FLAGGER (SYMBOL)	36" x 36"	2	
W20-4	ONE LANE ROAD AHEAD	36" x 36"	2	
W3-4	BE PREPARED TO STOP	36" x 36"	2	
W3-3	SIGNAL AHEAD	36" x 36"	2	
R10-6	STOP HERE ON RED	24" x 36"	2	
R11-2	ROAD CLOSED	48" x 30"		2
M4-10L	DETOUR LEFT	48" x 18"	1	
M4-10R	DETOUR RIGHT	48" x 18"	1	
R4-7	KEEP RIGHT	24" x 30"	1	
<b>TOTALS</b>			<b>29</b>	<b>2</b>

**NOTES:**

- One lane detour shall use temporary traffic signals to direct traffic 24/7 during construction. MUTCD Typical Application 12 shall be followed for this detour.
- A 10 MPH design speed was used for this detour and shall be used for applicable device spacing and taper lengths as per MUTCD.
- A traffic control plan and MHT's shall be approved prior to implementing traffic control measures.
- Concrete Barrier (Temporary) (Furnish and Install) shall be pinned to prevent overturning. All material and work to complete the item shall be included in the cost of the item, including pinning.



TABULATION OF TRAFFIC CONTROL DEVICES			
ITEM	DESCRIPTION	UNIT	QUANTITY
630-00000	FLAGGING	HOUR	80
630-00007	TRAFFIC CONTROL INSPECTION	DAY	140
630-00012	TRAFFIC CONTROL MANAGEMENT	DAY	20
630-80335	BARRICADE (TYPE 3M-A) (TEMPORARY)	EACH	4
630-80341	CONSTRUCTION TRAFFIC SIGN (PANEL SIZE A)	EACH	29
630-80342	CONSTRUCTION TRAFFIC SIGN (PANEL SIZE B)	EACH	2
630-80360	DRUM CHANNELIZING DEVICE	EACH	30
630-80372	CONCRETE BARRIER (TEMPORARY) (FURNISH AND INSTALL)	LF	150
630-80380	TRAFFIC CONE	EACH	100
630-86801	TRAFFIC SIGNAL (TEMPORARY)	LS	1

All seals for this set of drawings are applied to the cover page(s)

Print Date: 6/13/2024  
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 RockSol Consulting Group, Inc.  
 12076 Grant Street, Thornton, CO 80241  
 Phone: (303) 962-9300  
 Web: www.RockSol.com

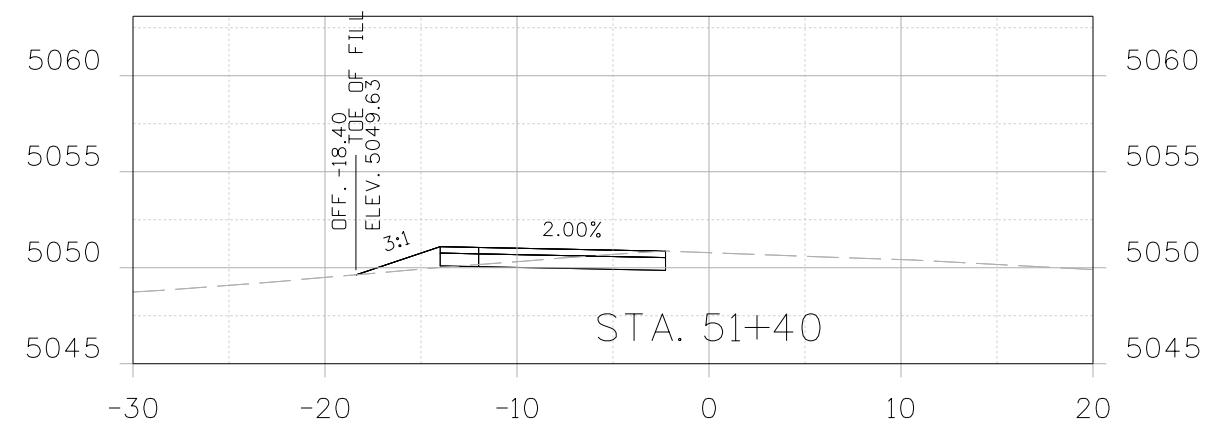
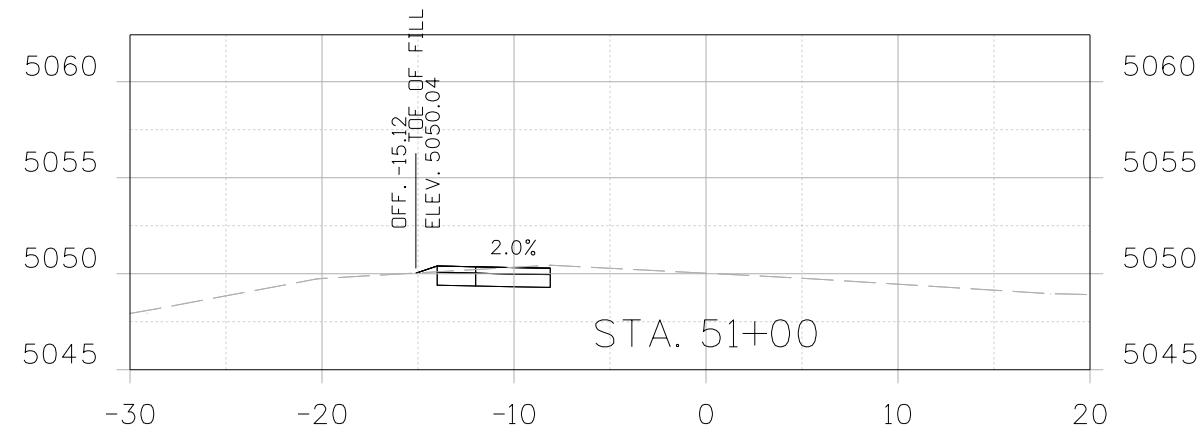
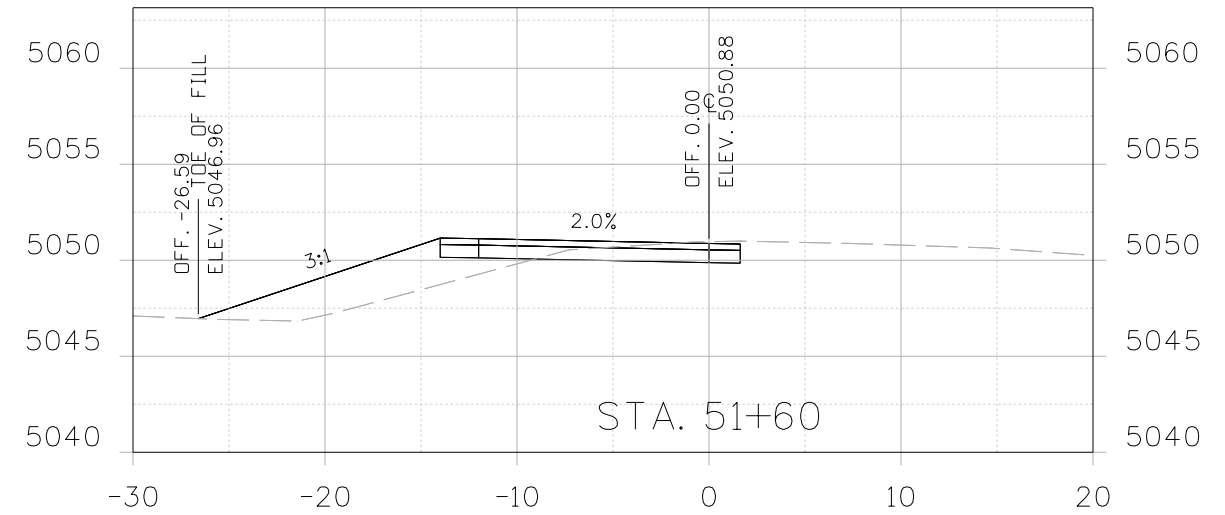
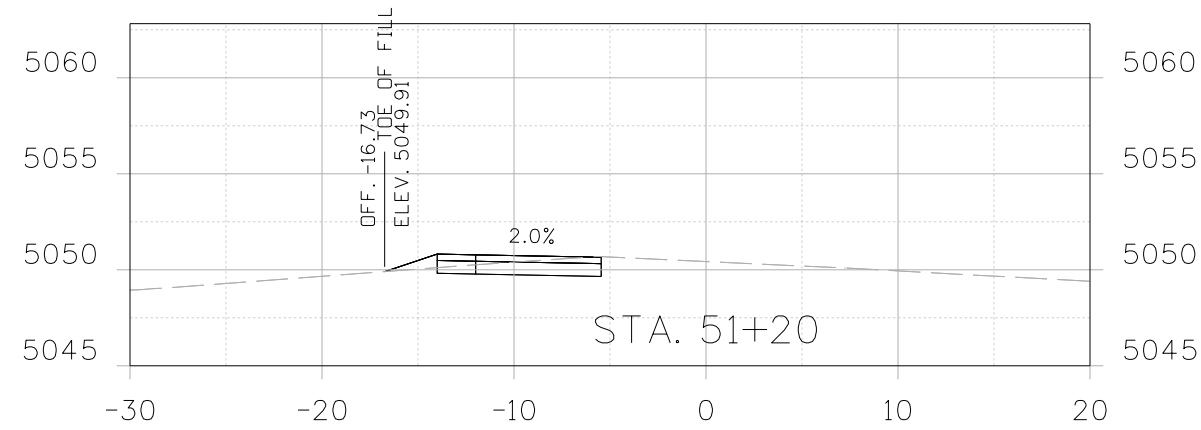
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Date:	Comments	Init.



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No Revisions:				BRO C330-013
Revised:	Designer: N. Clouse	Structure Numbers	LIN 32-2W.0A	26222
Void:	Detailer: H. Pugh	Sheet Subset: Traffic	Subset Sheets: 1 of 1	Sheet Number 63

8/15/2024

scott 11:29:49 AM R:\0-Projects\ACTIVE PROJECTS\78001\_Lincoln County Road 32 over Big Sandy Creek Bridge Rehabilitation\800\_Computer Design Files\802\_Sheet Files\78001\_XS-001 Detour Cross Sections.dgn



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Print Date: 5/1/2024  
 File Name: 78001\_XS-001 Detour Cross Sections.dgn  
 Horiz. Scale: 1":10' Vert. Scale: 1":10'

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 Phone: (303) 962-9300  
 Web: www.RockSol.com

Sheet Revisions

Date:	Comments	Init.

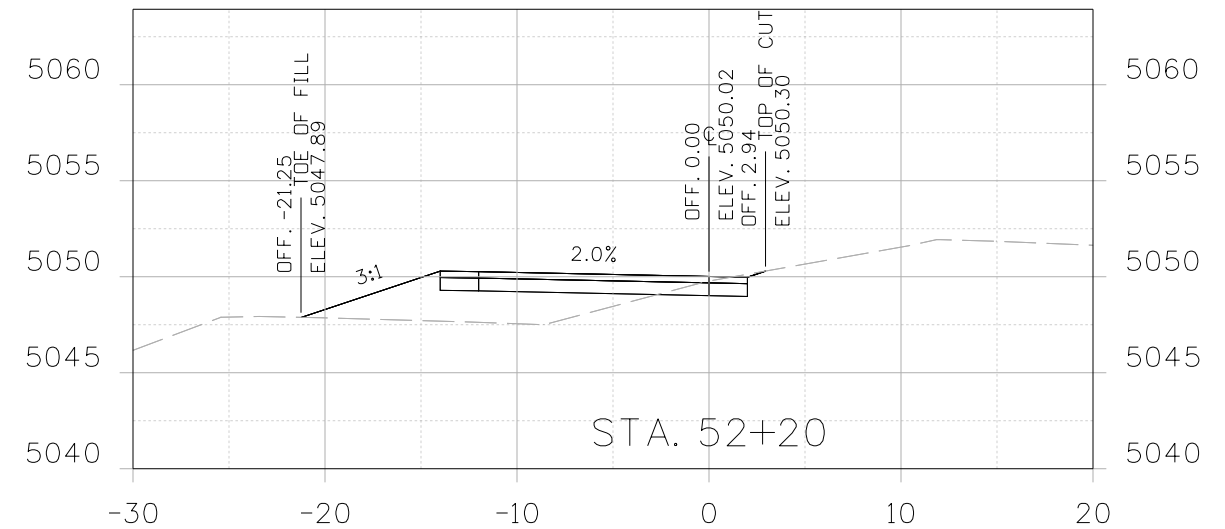
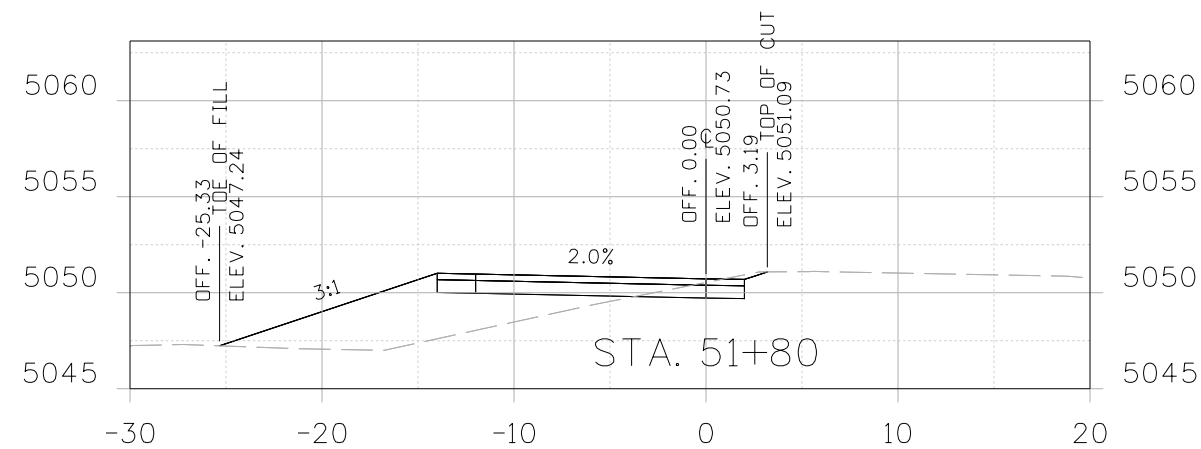
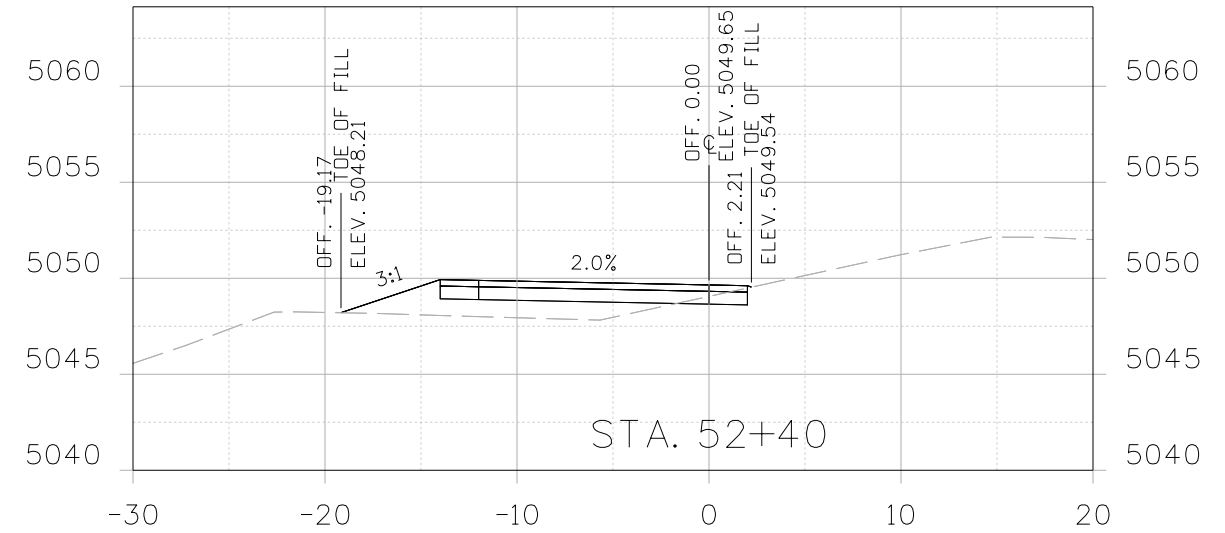
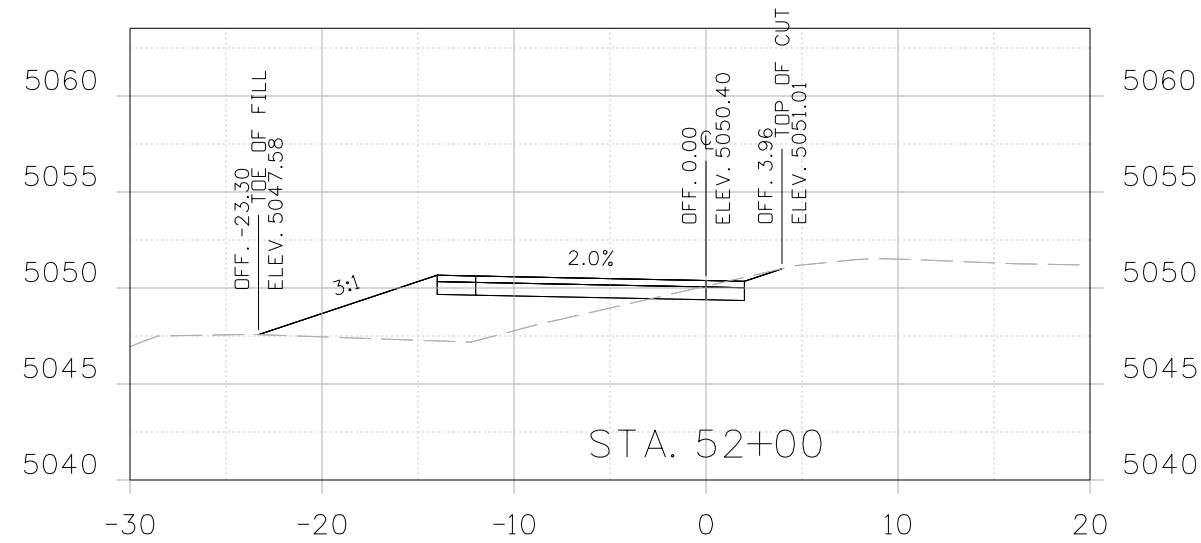


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No Revisions:				BRO C330-013
Revised:	Designer: S. Scott	Structure Numbers	LIN 32-2W.0A	26222
Void:	Detailer: H. Pugh	Sheet Subset: X-Sections	Subset Sheets: 1 of 14	Sheet Number 64

8/15/2024



scott 11:29:54 AM R:\0-Projects\ACTIVE PROJECTS\78001\_Lincoln County Road 32 over Big Sandy Creek Bridge Rehabilitation\800\_Computer Design Files\802\_Sheet Files\78001\_XS-001 Detour Cross Sections.dgn



All seals for this set of drawings are applied to the cover page(s)

Print Date: 5/1/2024  
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RockSol Consulting Group, Inc.  
 12076 Grant Street, Thornton, CO 80241  
 Phone: (303) 962-9300  
 Web: www.RockSol.com

Sheet Revisions

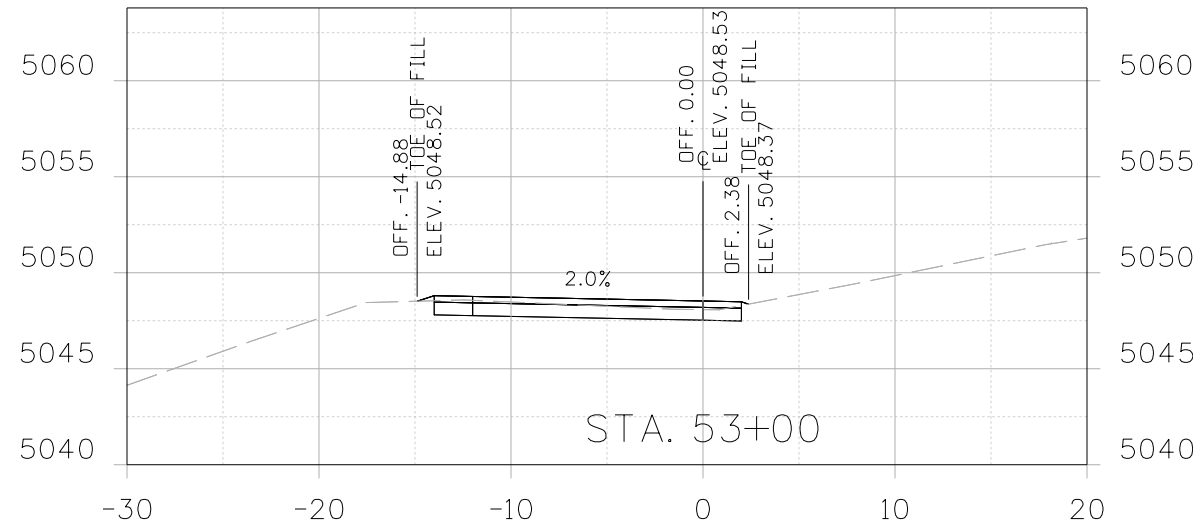
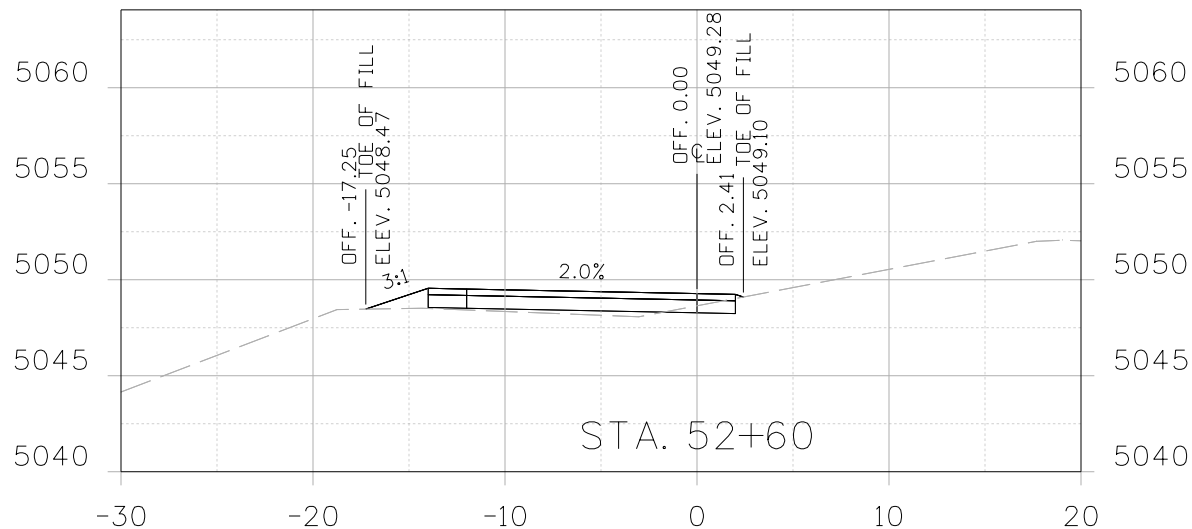
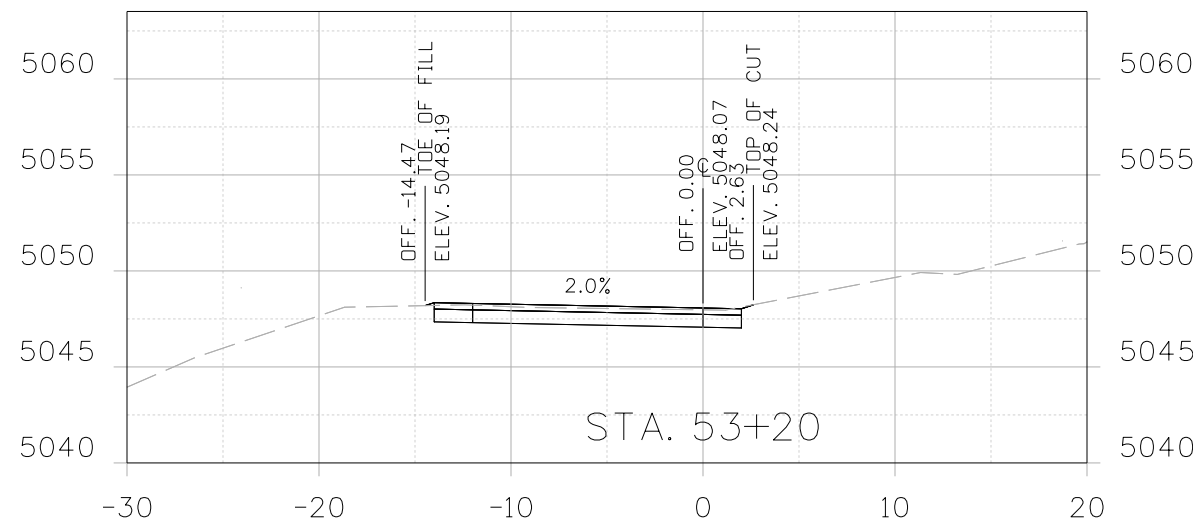
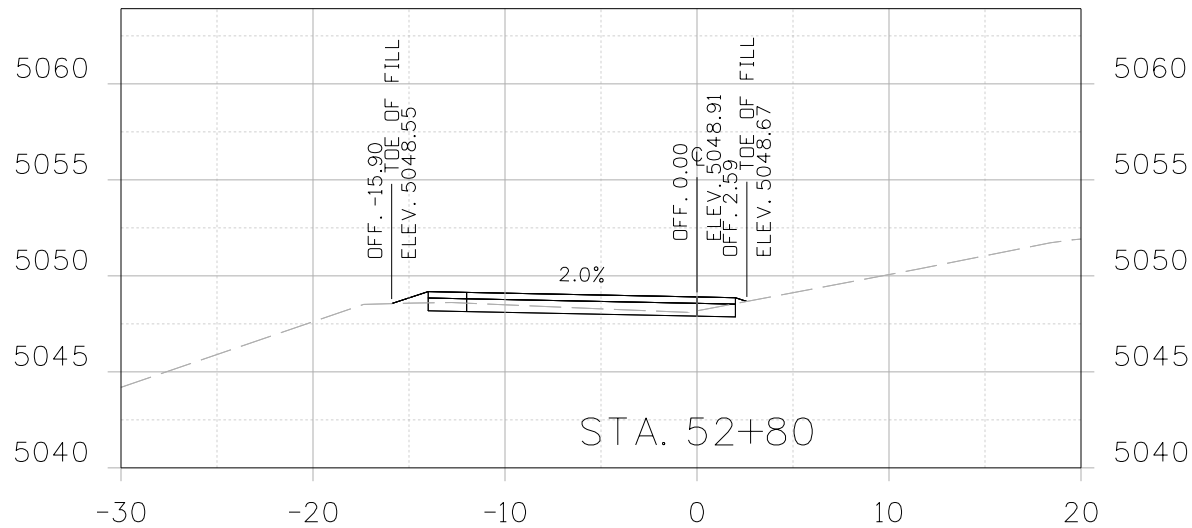
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Void:	Detailer: H. Pugh	Sheet Subset: X-Sections	Subset Sheets: 2 of 14	Sheet Number 65

8/15/2024

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All seals for this set of drawings are applied to the cover page(s)

Print Date: 5/1/2024  
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RockSol Consulting Group, Inc.  
 12076 Grant Street, Thornton, CO 80241  
 Phone: (303) 962-9300  
 Web: www.RockSol.com

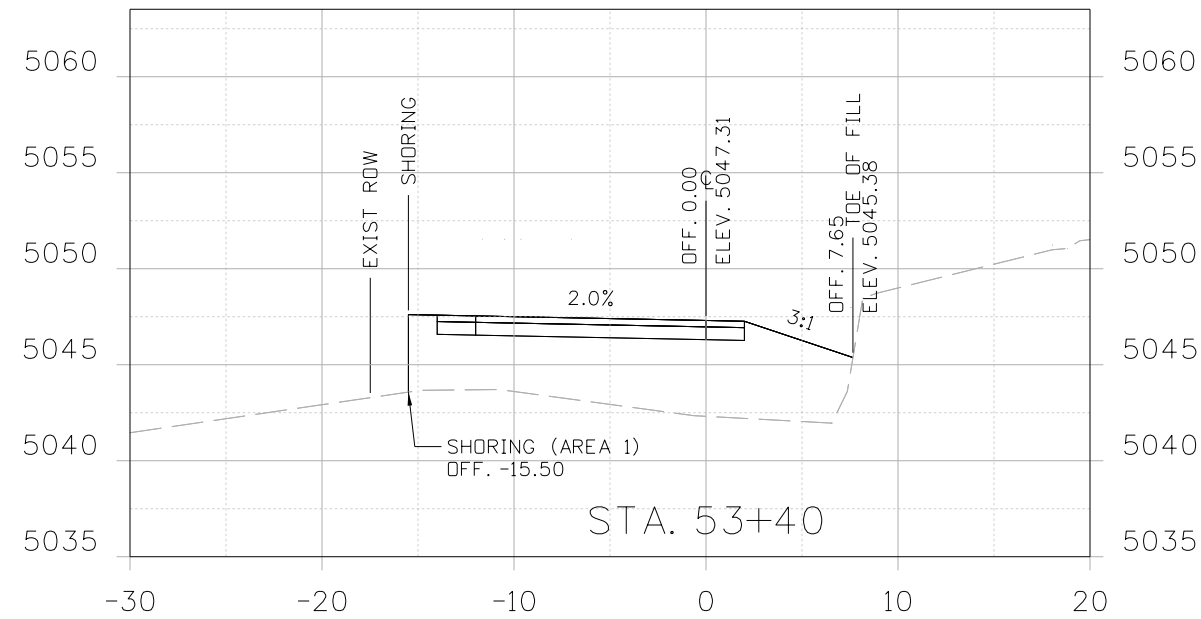
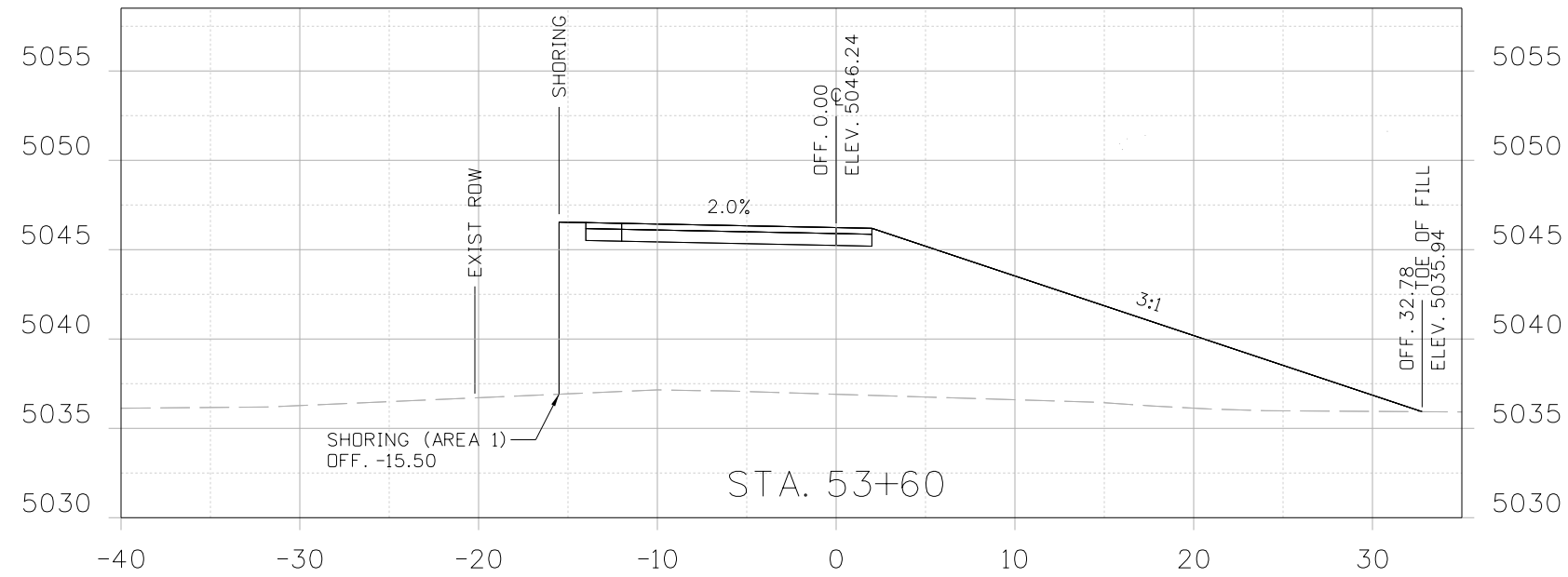
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Date:	Comments	Init.



As Constructed	BIG SANDY CREEK BRIDGE REHAB		Project No./Code
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Revised:	Designer: S. Scott	Structure Numbers	26222
Void:	Detailer: H. Pugh	Sheet Subset: X-Sections	Sheet Number 66
		Subset Sheets: 3 of 14	

8/15/2024

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All seals for this set of drawings are applied to the cover page(s)

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 RockSol Consulting Group, Inc.  
 12076 Grant Street, Thornton, CO 80241  
 Phone: (303) 962-9300  
 Web: www.RockSol.com

Sheet Revisions

Date:	Comments	Init.



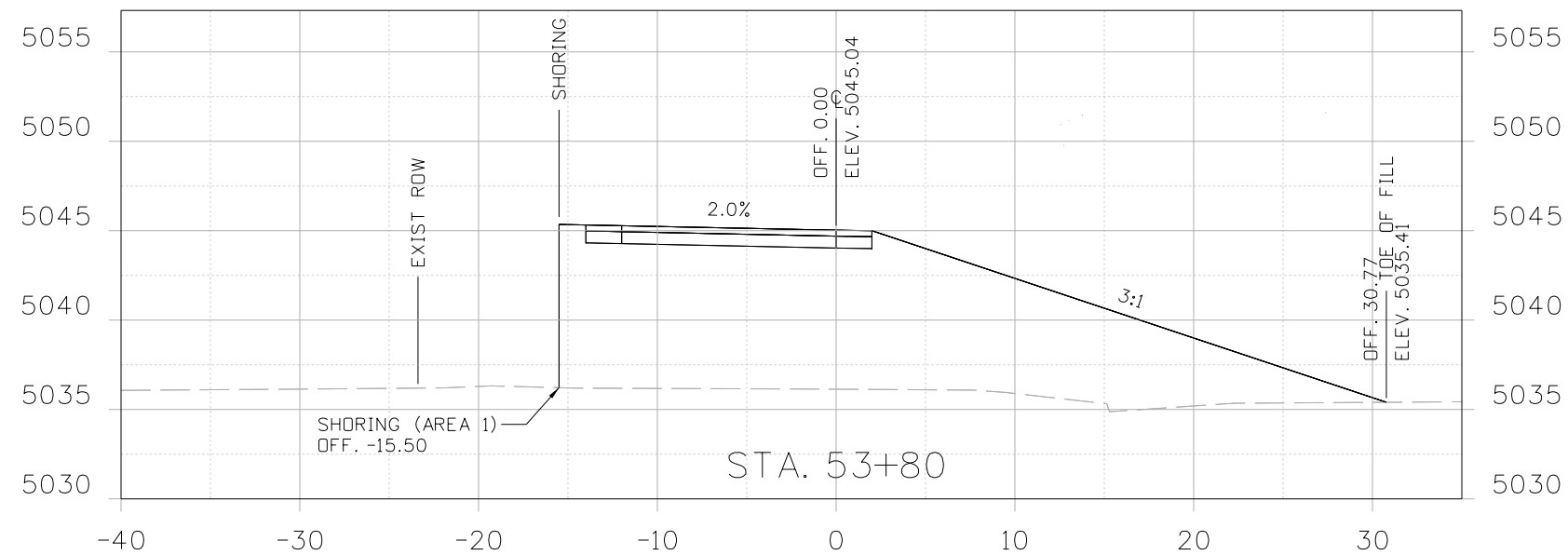
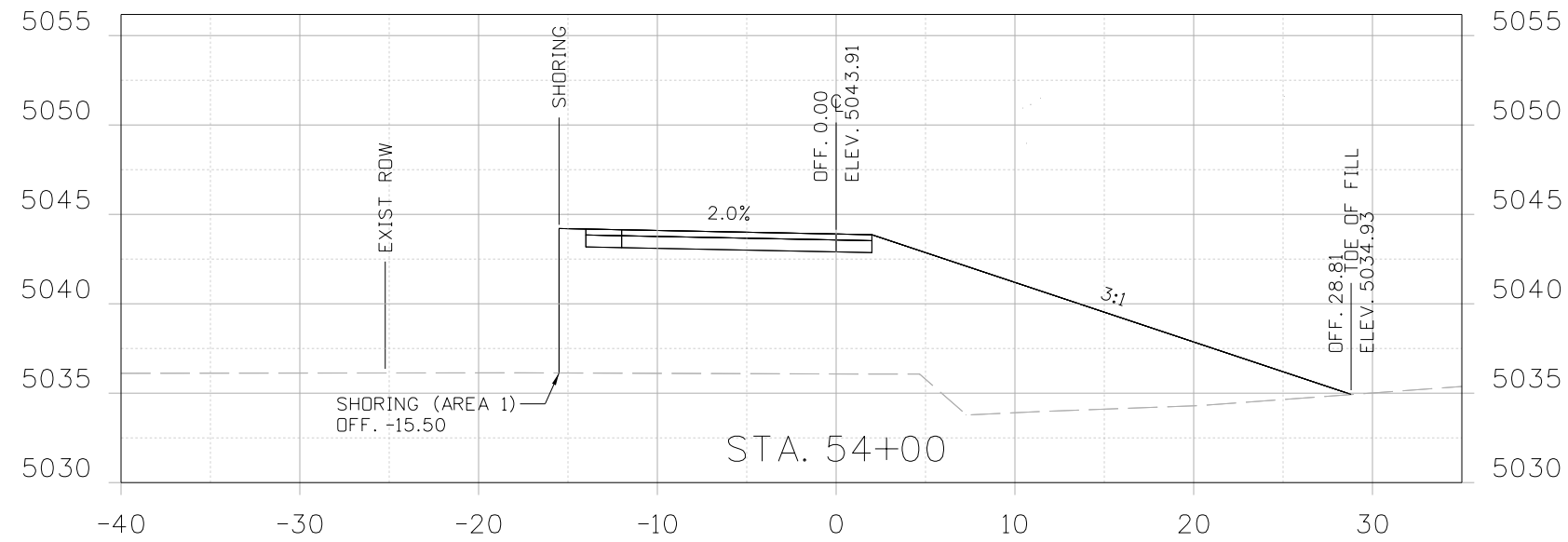
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BIG SANDY CREEK BRIDGE REHAB  
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 DETOUR  
 Designer: S. Scott  
 Detailer: H. Pugh  
 Sheet Subset: X-Sections  
 Structure Numbers: LIN 32-2W.0A  
 Subset Sheets: 4 of 14

Project No./Code  
 BR0 C330-013  
 26222  
 Sheet Number 67

8/15/2024

scott 11:30:04 AM R:\0-Projects\ACTIVE PROJECTS\78001\_Lincoln County Road 32 over Big Sandy Creek Bridge Rehabilitation\800\_Computer Design Files\802\_Sheet Files\78001\_XS-001 Detour Cross Sections.dgn



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Print Date: 5/1/2024  
 File Name: 78001\_XS-001 Detour Cross Sections.dgn  
 Horiz. Scale: 1"=10' Vert. Scale: 1"=10'

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 12076 Grant Street, Thornton, CO 80241  
 Phone: (303) 962-9300  
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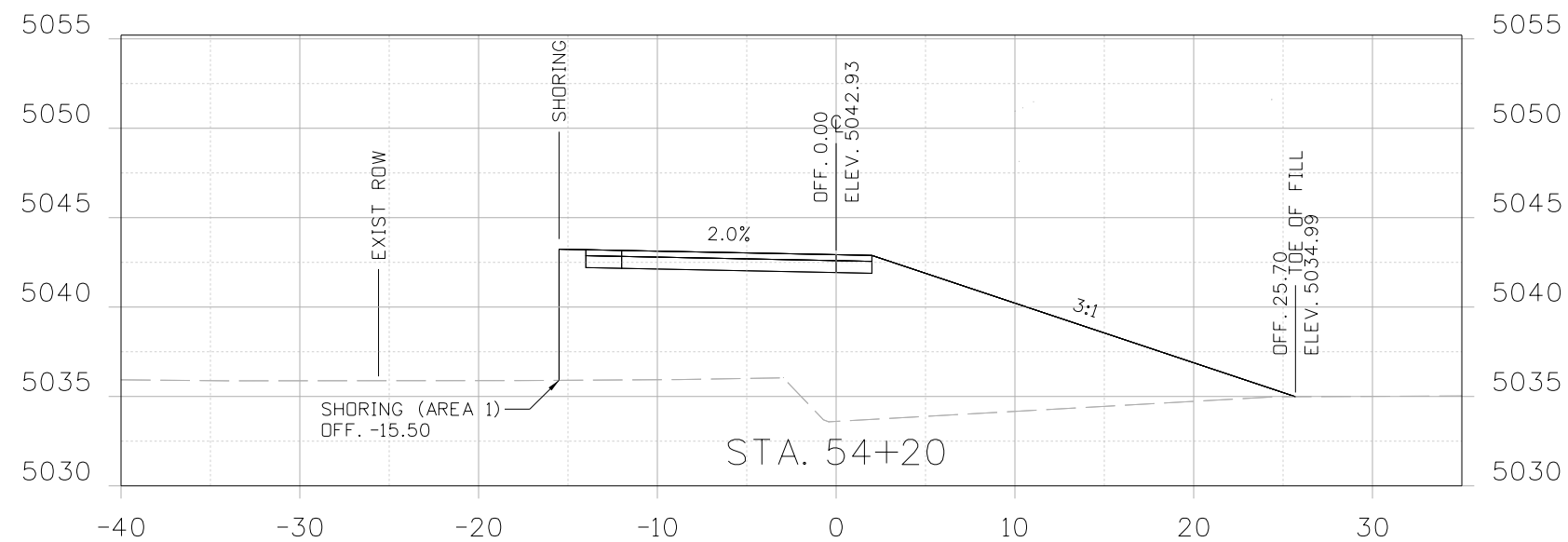
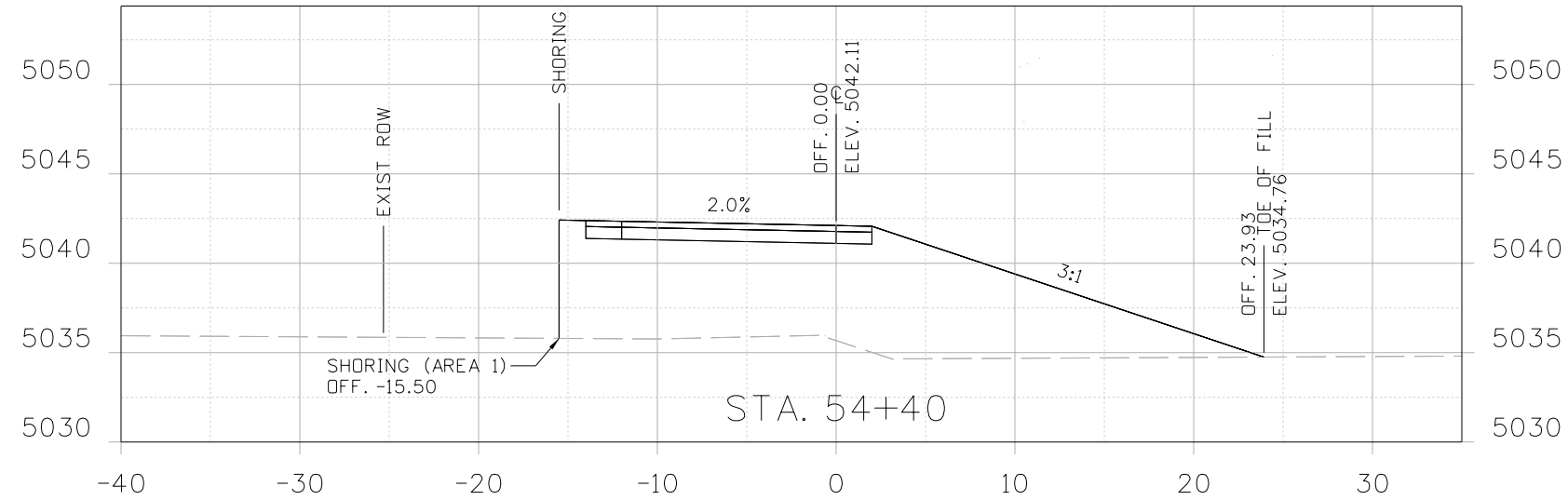
Sheet Revisions		
Date:	Comments	Init.



As Constructed	BIG SANDY CREEK BRIDGE REHAB		Project No./Code
No Revisions:	CROSS SECTIONS		BRO C330-013
Revised:	Designer: S. Scott	Structure Numbers	26222
Void:	Detailer: H. Pugh	Sheet Subset: X-Sections	Sheet Number 68
		Subset Sheets: 5 of 14	

8/15/2024

scott 11:30:07 AM R:\Q-Projects\ACTIVE PROJECTS\78001\_Lincoln County Road 32 over Big Sandy Creek Bridge Rehabilitation\800\_Computer Design Files\802\_Sheet Files\78001\_XS-001 Detour Cross Sections.dgn



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Print Date: 5/1/2024  
 File Name: 78001\_XS-001 Detour Cross Sections.dgn  
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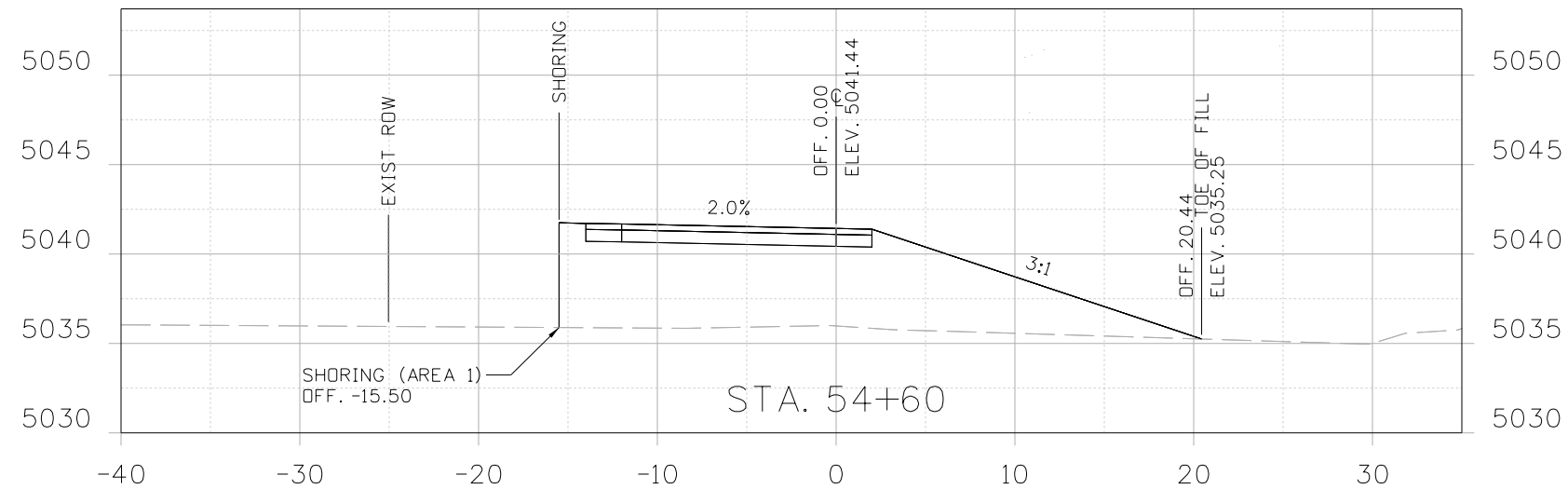
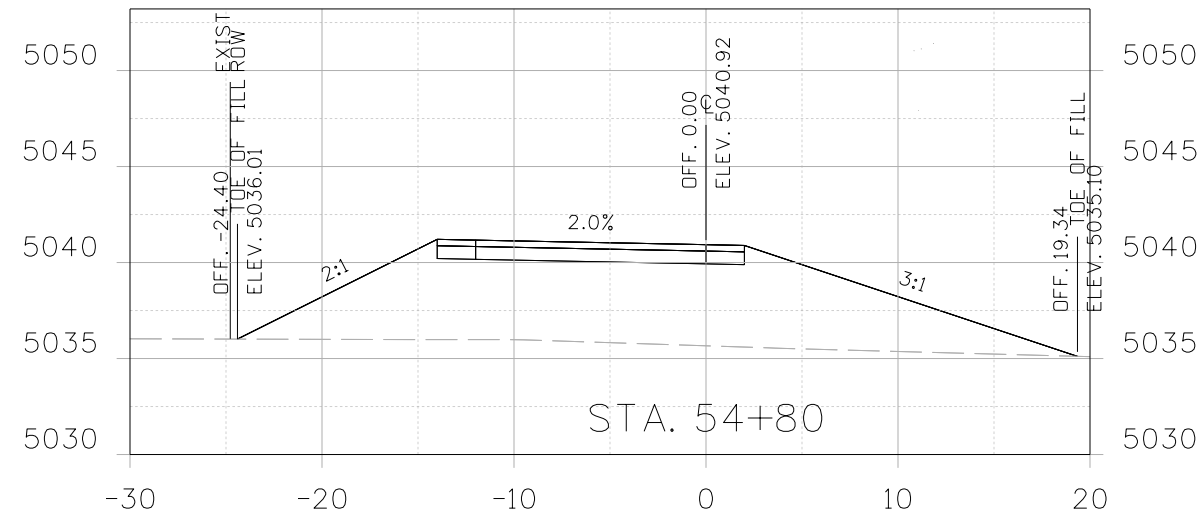
Sheet Revisions		
Date:	Comments	Init.



As Constructed	BIG SANDY CREEK BRIDGE REHAB		Project No./Code
No Revisions:	CROSS SECTIONS		BRO C330-013
Revised:	Designer: S. Scott	Structure Numbers	26222
Void:	Detailer: H. Pugh	Sheet Subset: X-Sections	Sheet Number 69
		Subset Sheets: 6 of 14	

8/15/2024

scott 11:30:08 AM R:\0-Projects\ACTIVE PROJECTS\78001\_Lincoln County Road 32 over Big Sandy Creek Bridge Rehabilitation\800\_Computer Design Files\802\_Sheet Files\78001\_XS-001\_Detour Cross Sections.dgn



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 Horiz. Scale: 1"=10' Vert. Scale: 1"=10'

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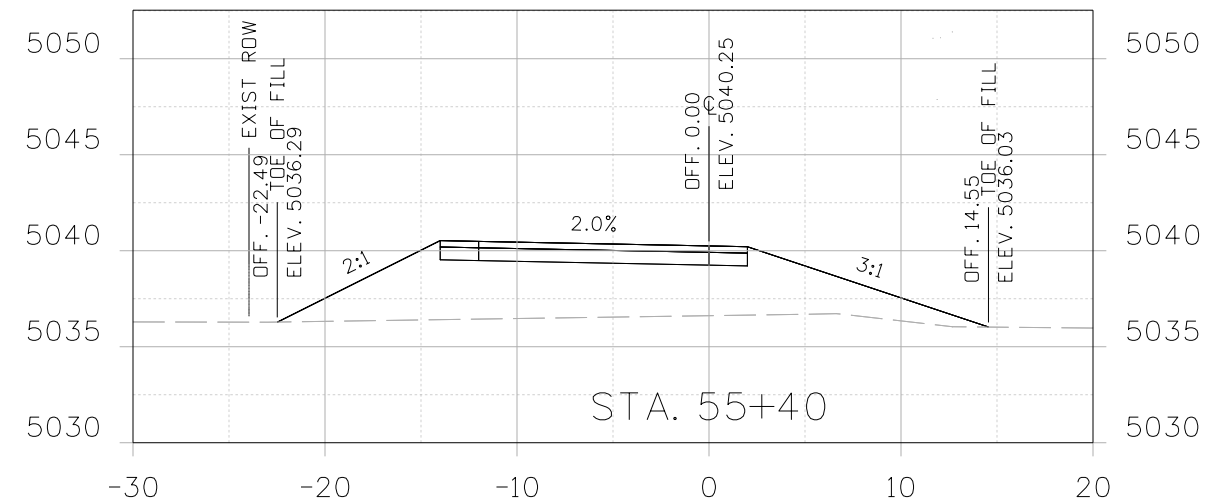
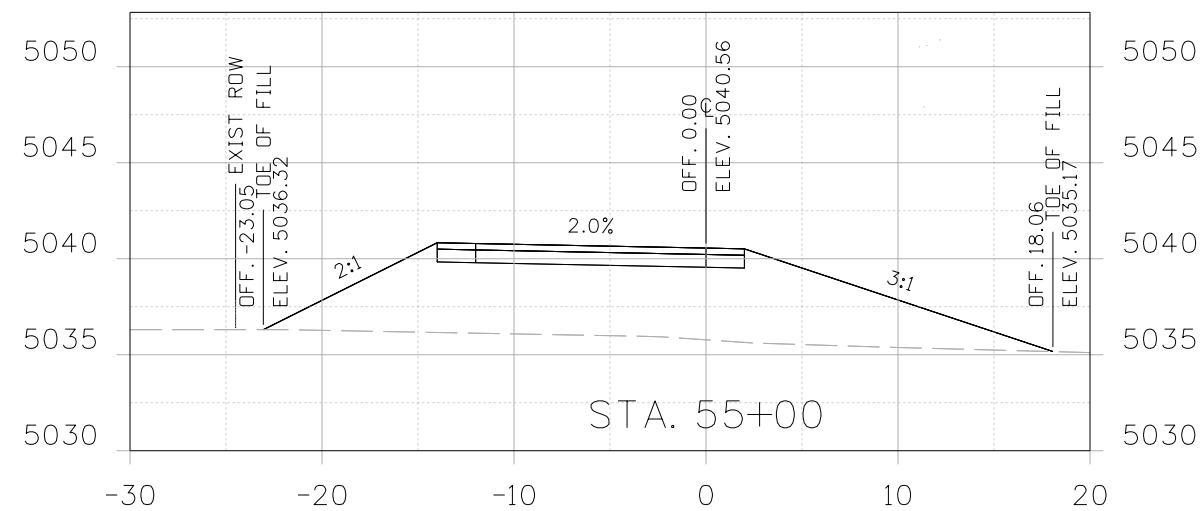
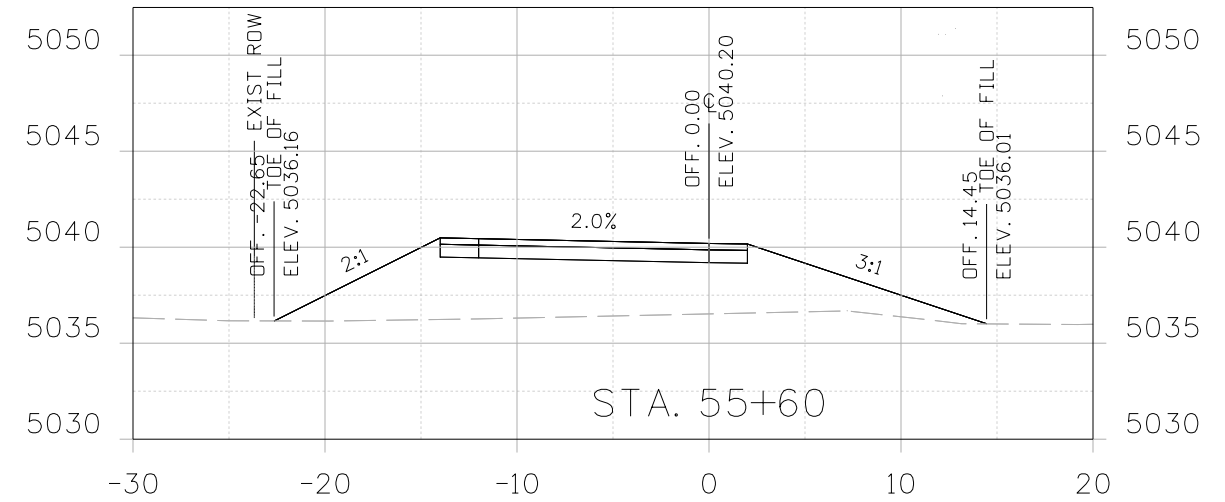
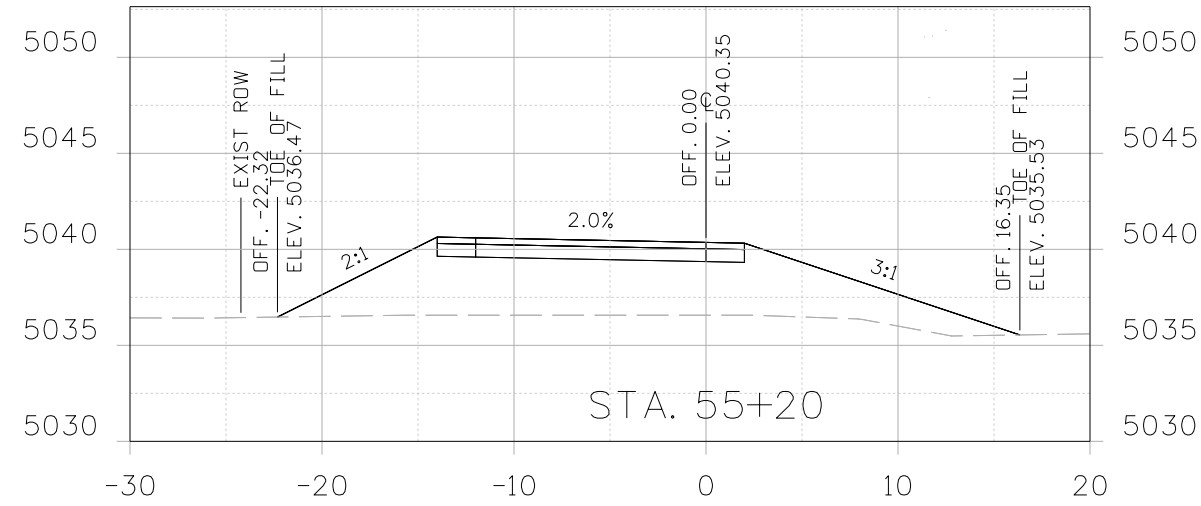
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As Constructed	BIG SANDY CREEK BRIDGE REHAB		Project No./Code
No Revisions:	CROSS SECTIONS		BRO C330-013
Revised:	Designer: S. Scott	Structure Numbers	26222
Void:	Detailer: H. Pugh	Sheet Subset: X-Sections	Sheet Number 70
		Subset Sheets: 7 of 14	

8/15/2024

scott 11:30:12 AM R:\0-Projects\ACTIVE PROJECTS\78001\_Lincoln County Road 32 over Big Sandy Creek Bridge Rehabilitation\800\_Computer Design Files\802\_Sheet Files\78001\_XS-001 Detour Cross Sections.dgn



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Print Date: 5/1/2024  
 File Name: 78001\_XS-001 Detour Cross Sections.dgn  
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BIG SANDY CREEK BRIDGE REHAB  
 CROSS SECTIONS  
 DETOUR

Designer:	S. Scott	Structure Numbers	LIN 32-2W.0A
Detailer:	H. Pugh		
Sheet Subset:	X-Sections	Subset Sheets:	8 of 14

Project No./Code

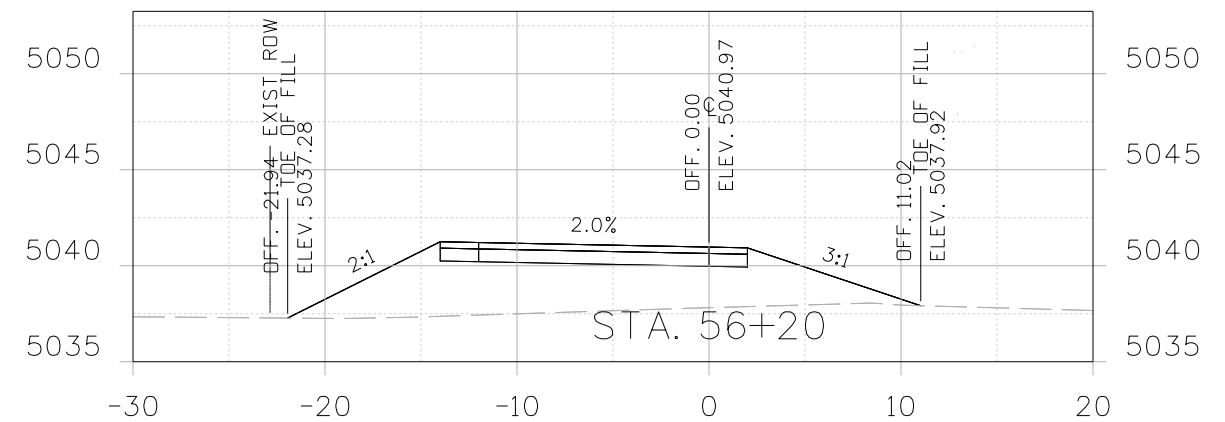
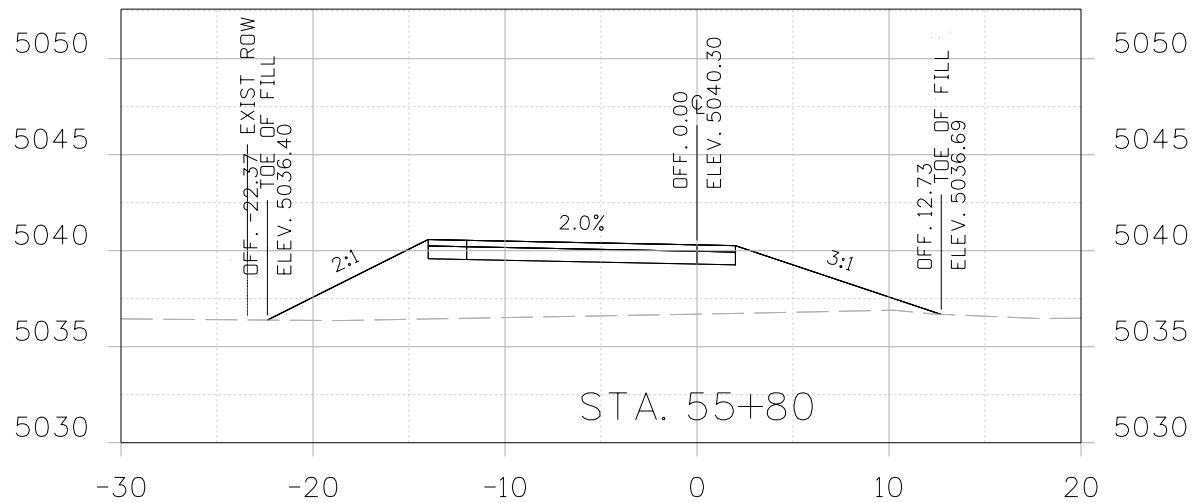
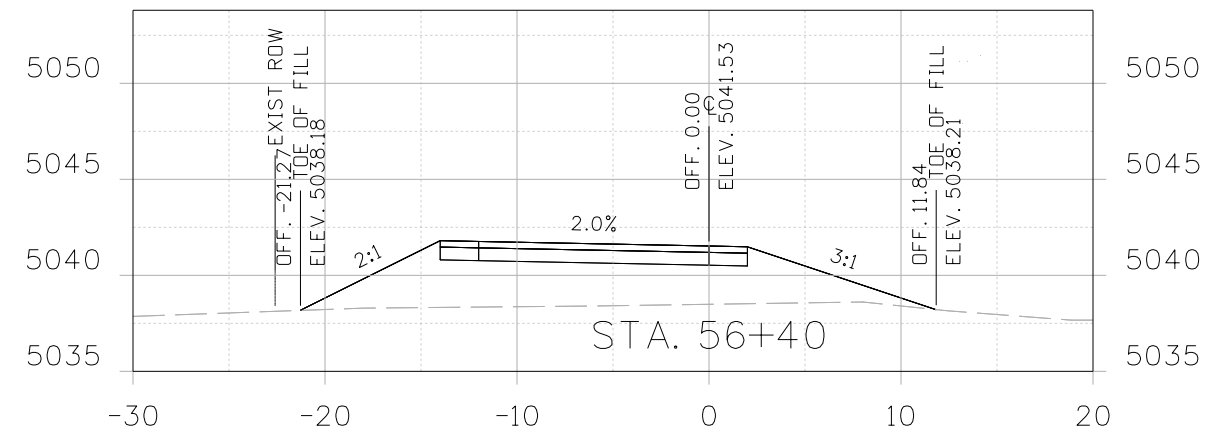
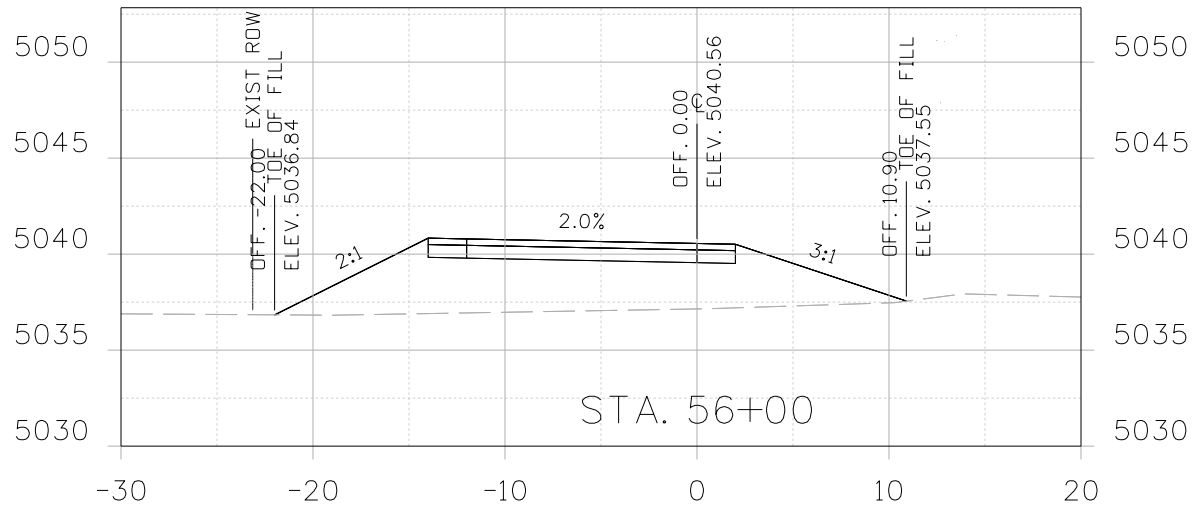
BRD C330-013

26222

Sheet Number 71

8/15/2024

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Print Date: 5/1/2024  
 File Name: 78001\_XS-001 Detour Cross Sections.dgn  
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Sheet Revisions

Date:	Comments	Init.

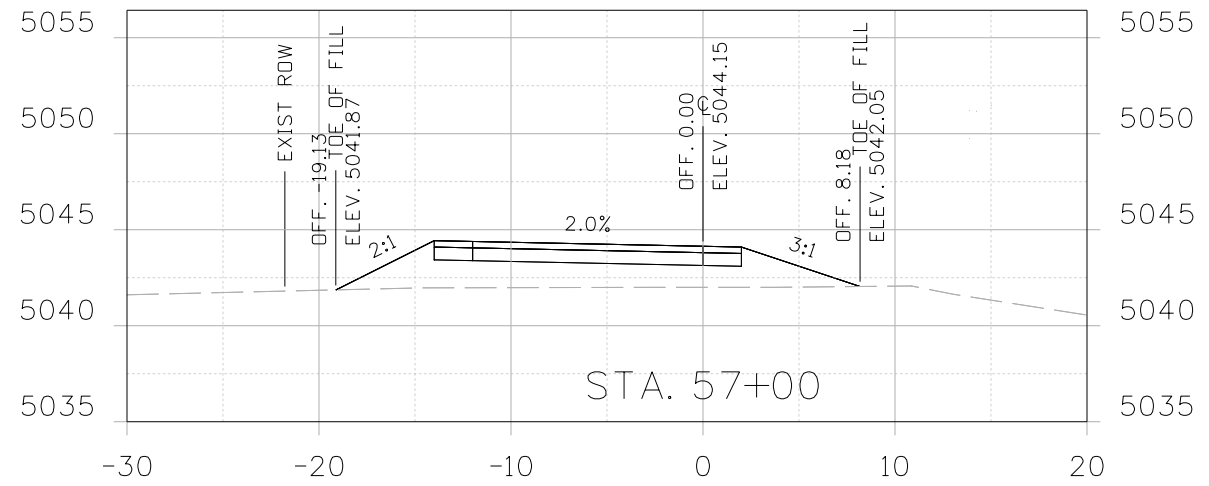
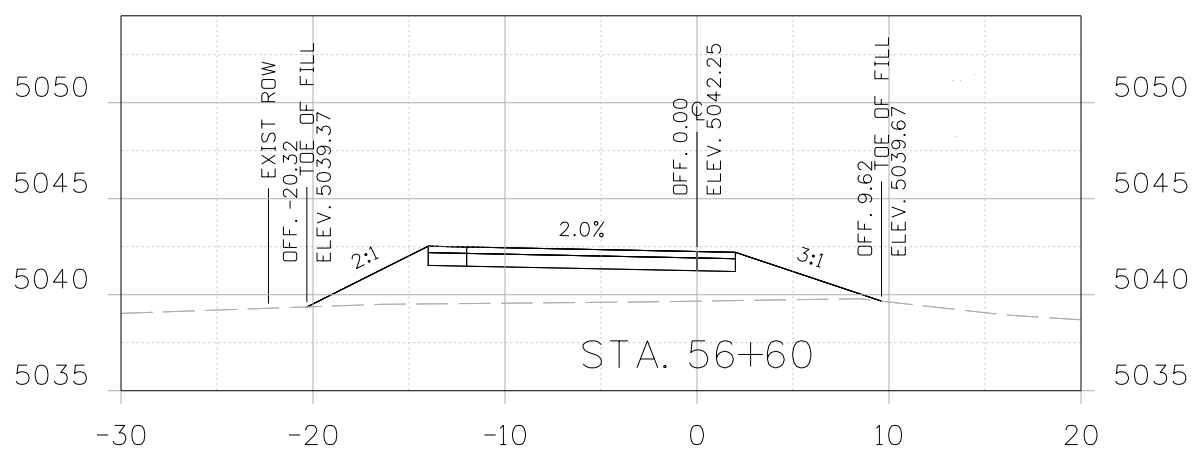
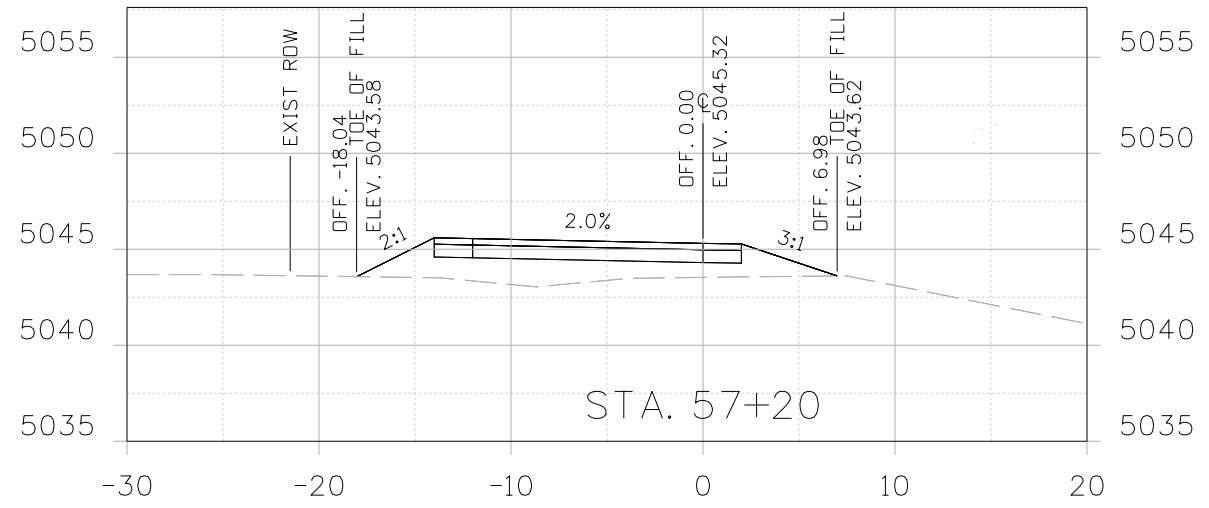
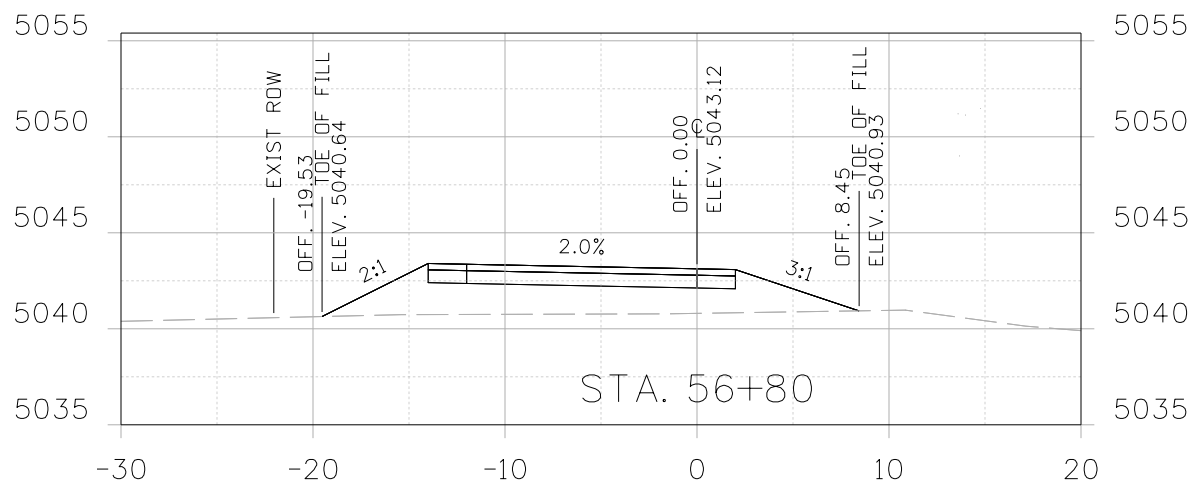


As Constructed	BIG SANDY CREEK BRIDGE REHAB CROSS SECTIONS DETOUR			Project No./Code
No Revisions:				BRO C330-013
Revised:	Designer: S. Scott	Structure Numbers	LIN 32-2W.0A	26222
Void:	Detailer: H. Pugh	Sheet Subset: X-Sections	Subset Sheets: 9 of 14	Sheet Number 72

8/15/2024



scott 11:30:20 AM R:\0-Projects\ACTIVE PROJECTS\78001\_Lincoln County Road 32 over Big Sandy Creek Bridge Rehabilitation\800\_Computer Design Files\802\_Sheet Files\78001\_XS-001 Detour Cross Sections.dgn



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Print Date: 5/1/2024  
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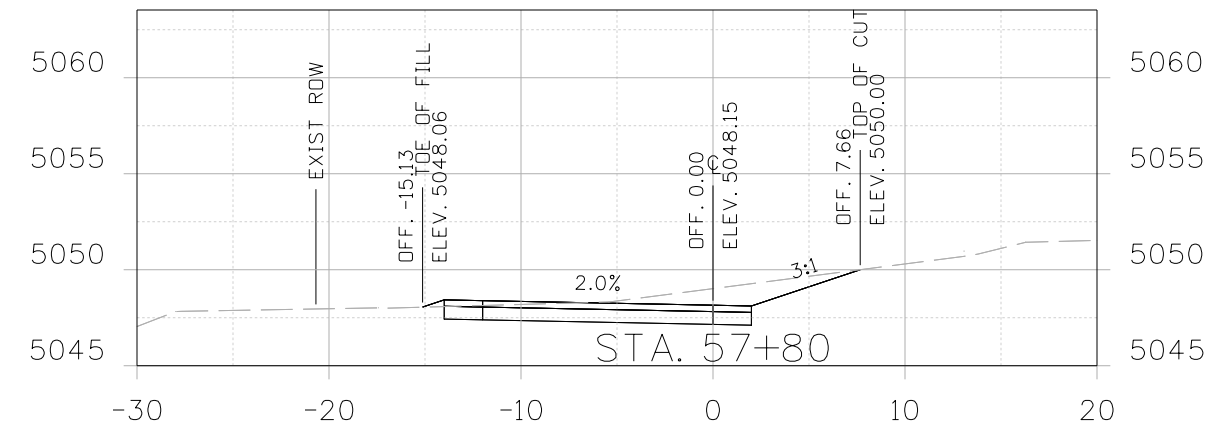
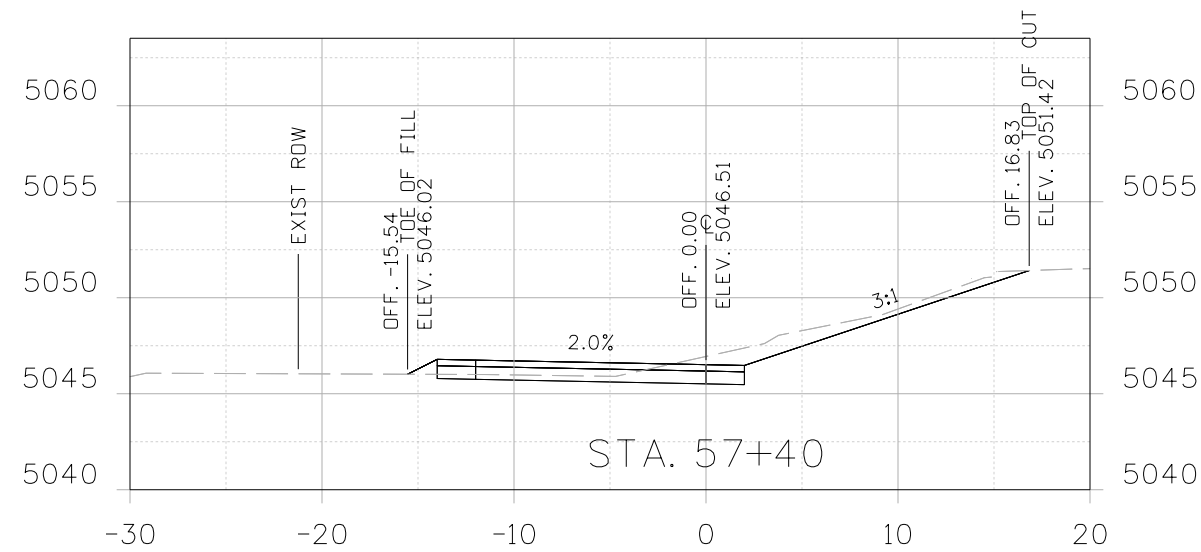
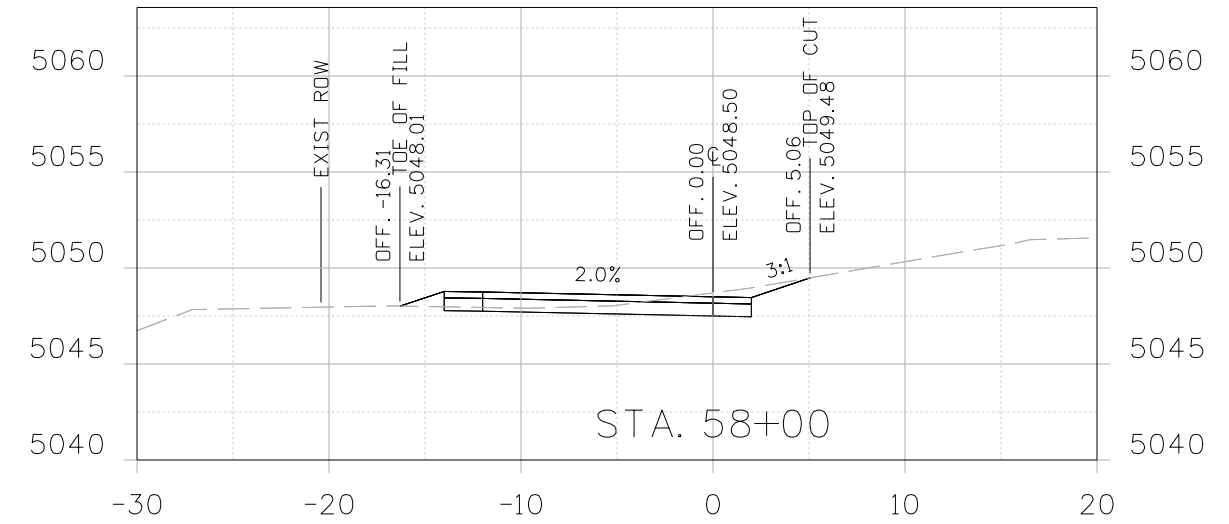
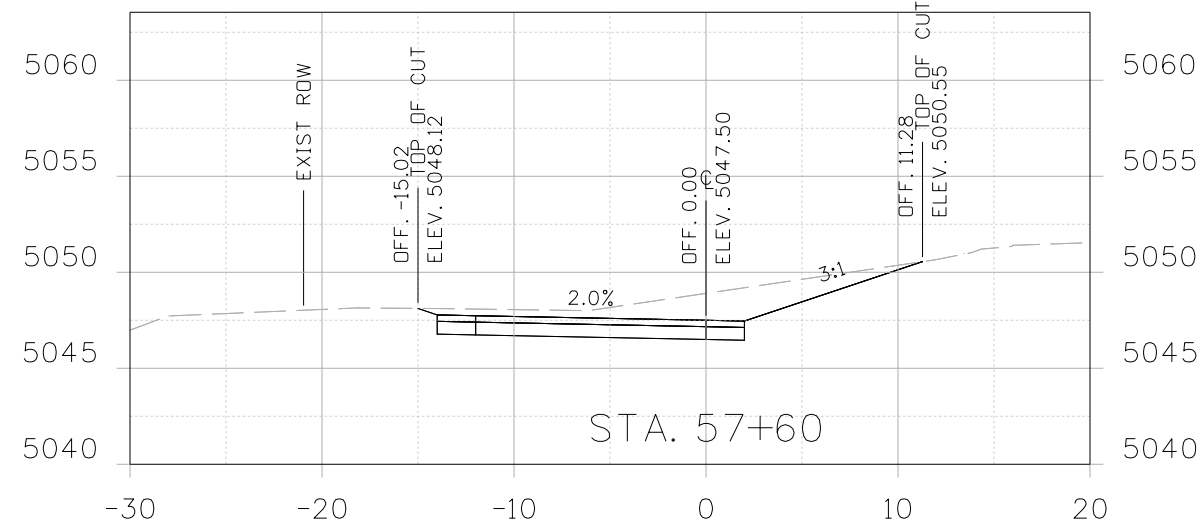
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Date:	Comments	Init.



As Constructed	BIG SANDY CREEK BRIDGE REHAB CROSS SECTIONS DETOUR			Project No./Code
No Revisions:				BRO C330-013
Revised:	Designer: S. Scott	Structure Numbers	LIN 32-2W.0A	26222
Void:	Detailer: H. Pugh	Sheet Subset: X-Sections	Subset Sheets: 10 of 14	Sheet Number 73

8/15/2024

scott 11:30:24 AM R:\0-Projects\ACTIVE PROJECTS\78001-Lincoln County Road 32 over Big Sandy Creek Bridge Rehabilitation\800-Computer Design Files\802-Sheet Files\78001-XS-001 Detour Cross Sections.dgn



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Sheet Revisions

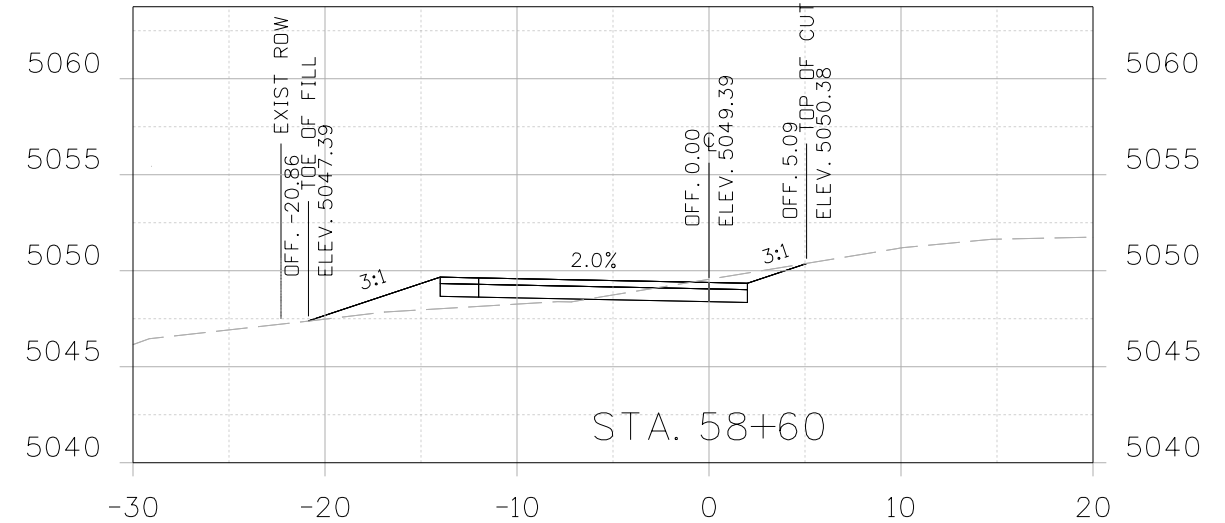
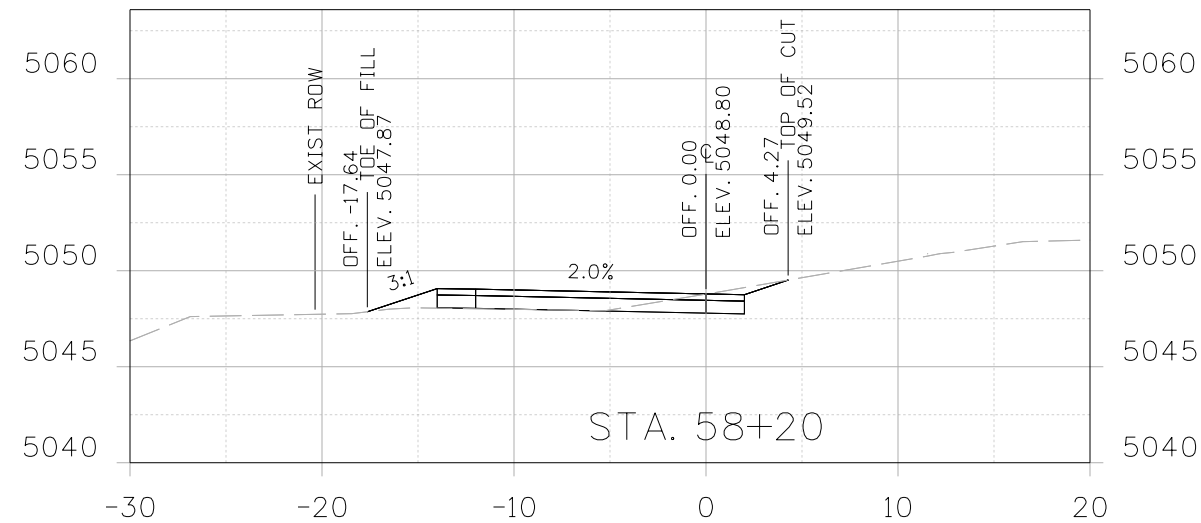
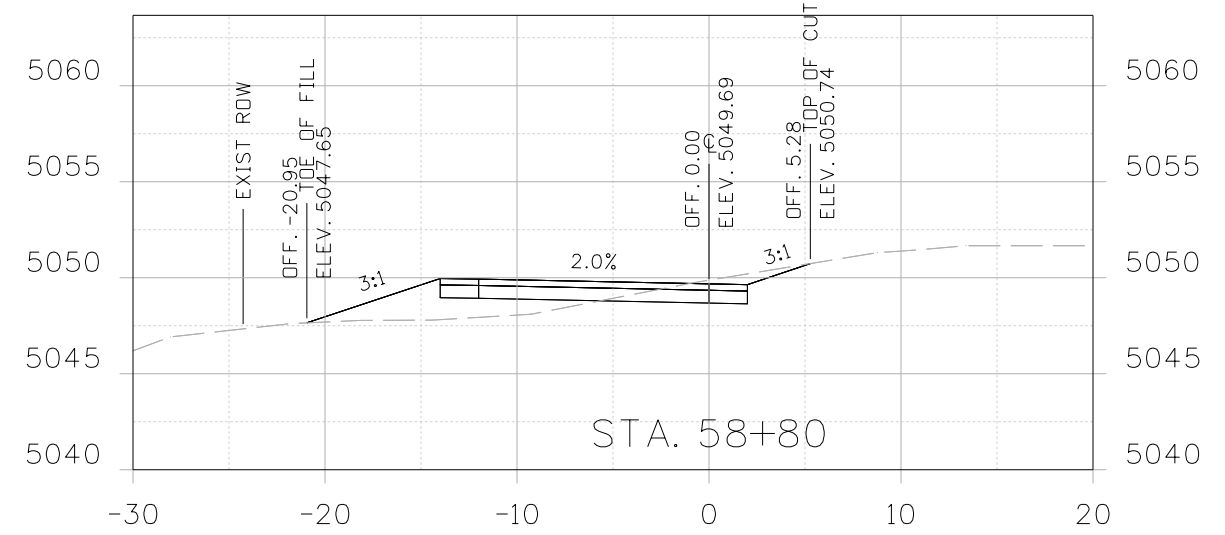
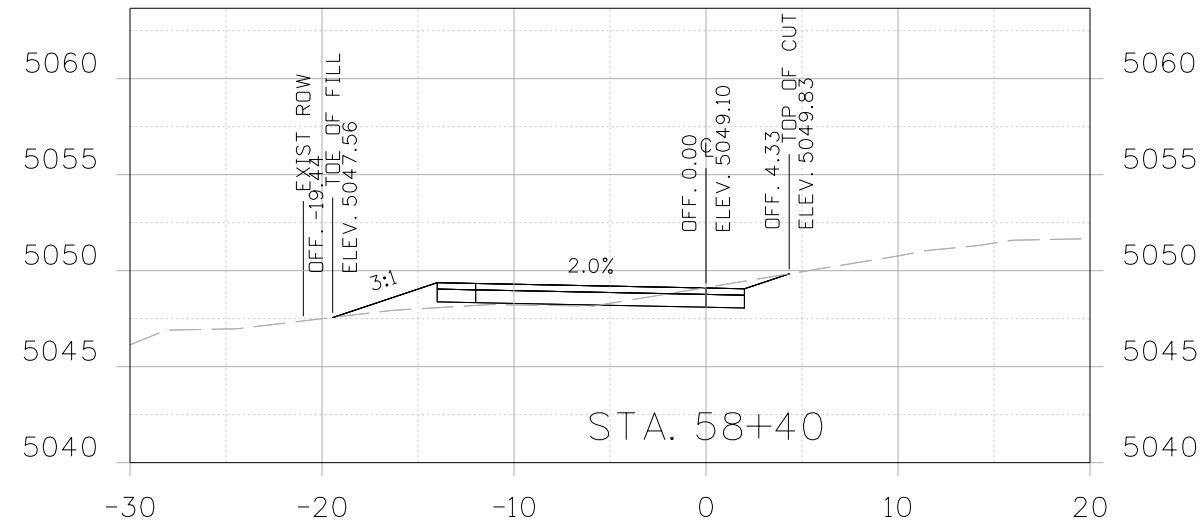
Date:	Comments	Init.



As Constructed	BIG SANDY CREEK BRIDGE REHAB CROSS SECTIONS DETOUR			Project No./Code
No Revisions:				BRO C330-013
Revised:	Designer: S. Scott	Structure Numbers	LIN 32-2W.0A	26222
Void:	Detailer: H. Pugh	Subset Sheets:	11 of 14	Sheet Number 74

8/15/2024

scott 11:30:28 AM R:\0-Projects\ACTIVE PROJECTS\78001\_Lincoln County Road 32 over Big Sandy Creek Bridge Rehabilitation\800\_Computer Design Files\802\_Sheet Files\78001\_XS-001 Detour Cross Sections.dgn



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Print Date: 5/1/2024  
 File Name: 78001\_XS-001 Detour Cross Sections.dgn  
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Date:	Comments	Init.



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No Revisions:

Revised:

Void:

BIG SANDY CREEK BRIDGE REHAB  
 CROSS SECTIONS  
 DETOUR

Designer:	S. Scott	Structure Numbers	LIN 32-2W.0A
Detailer:	H. Pugh	Subset Sheets:	12 of 14

Project No./Code

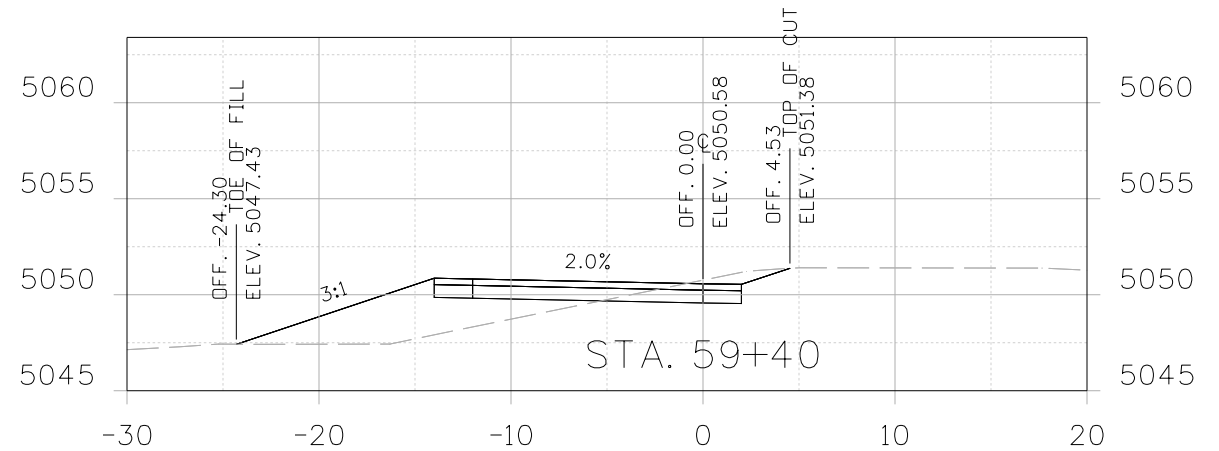
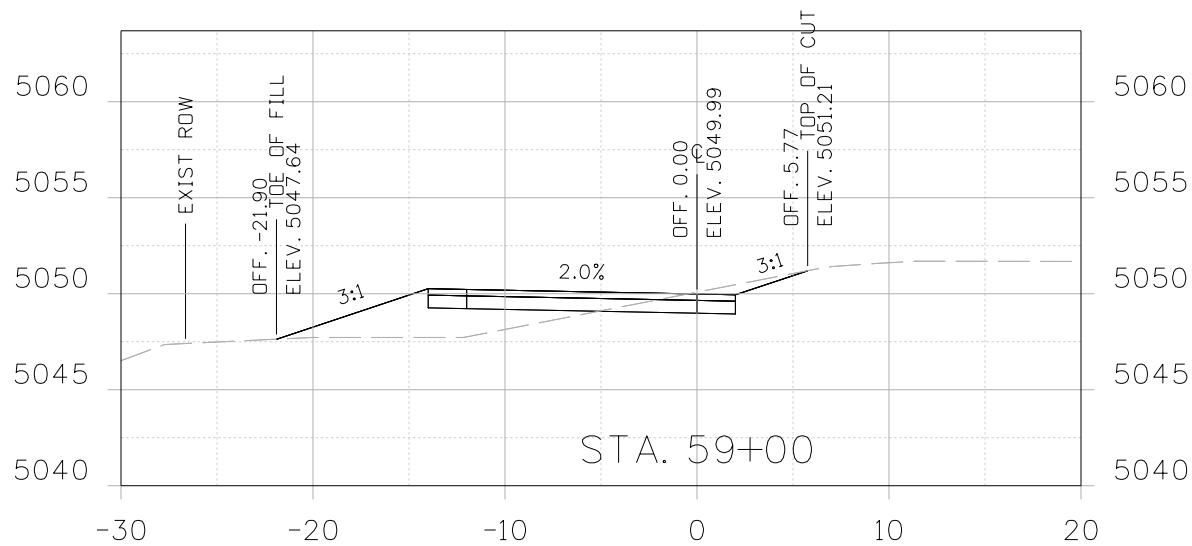
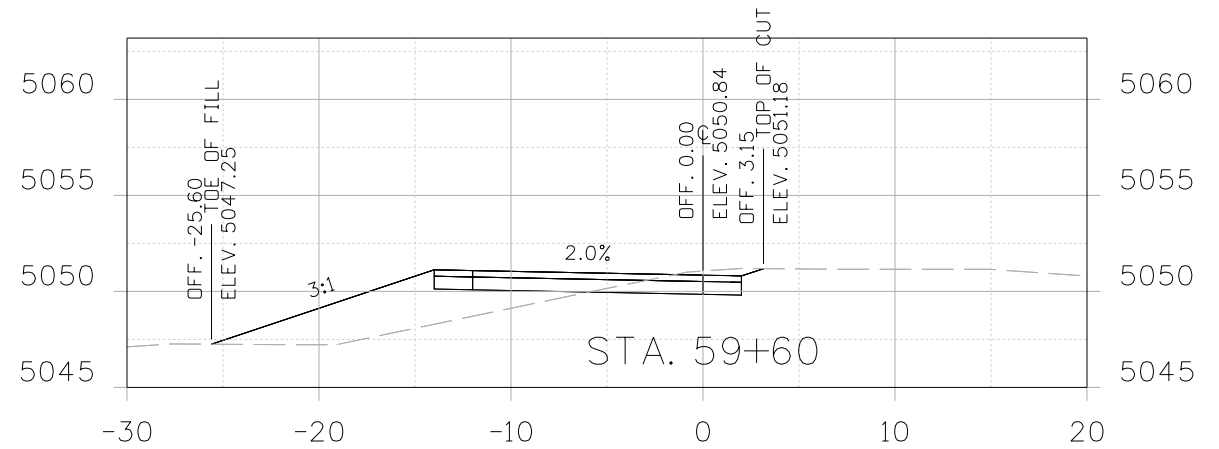
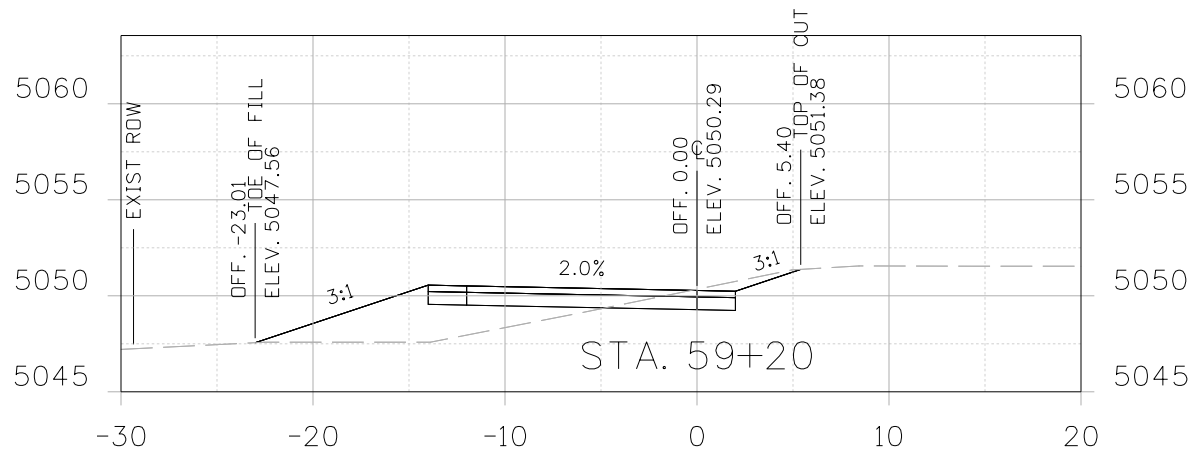
BRD C330-013

26222

Sheet Number 75

8/15/2024

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 File Name: 78001\_XS-001 Detour Cross Sections.dgn  
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Sheet Revisions

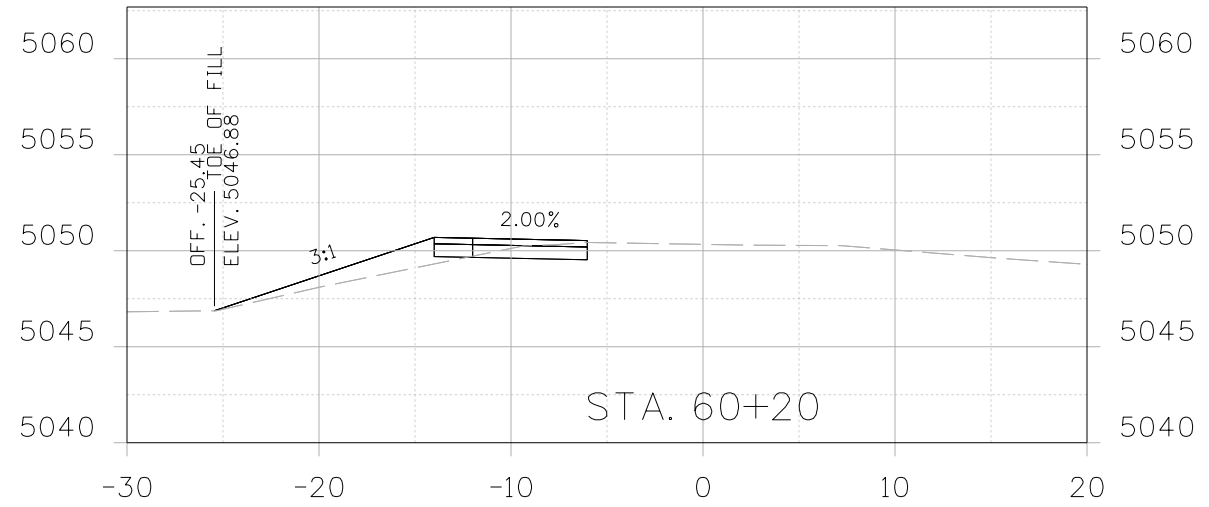
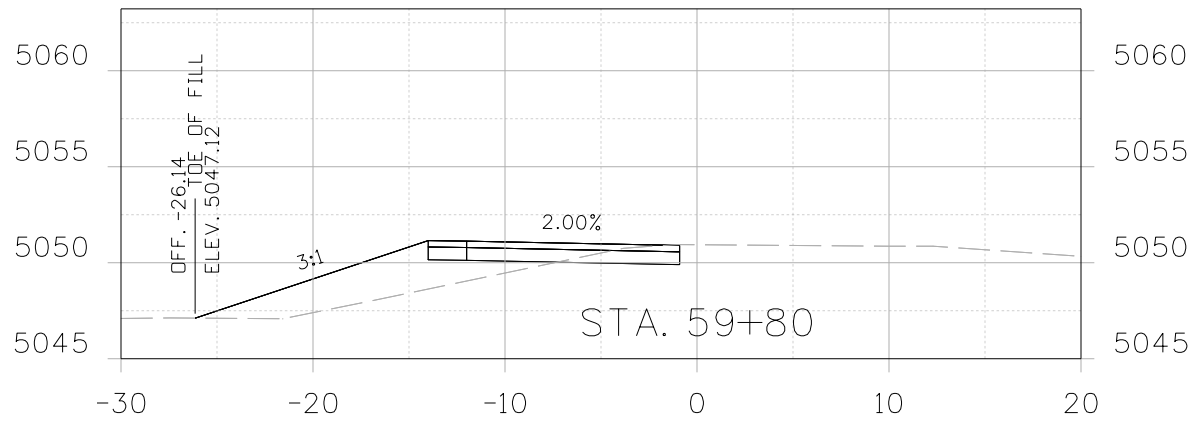
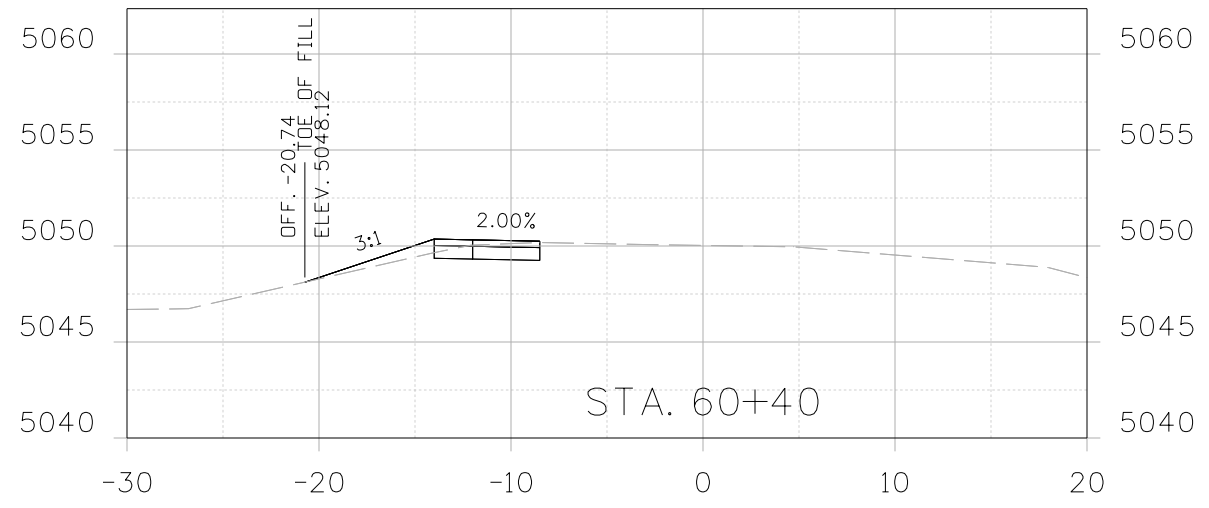
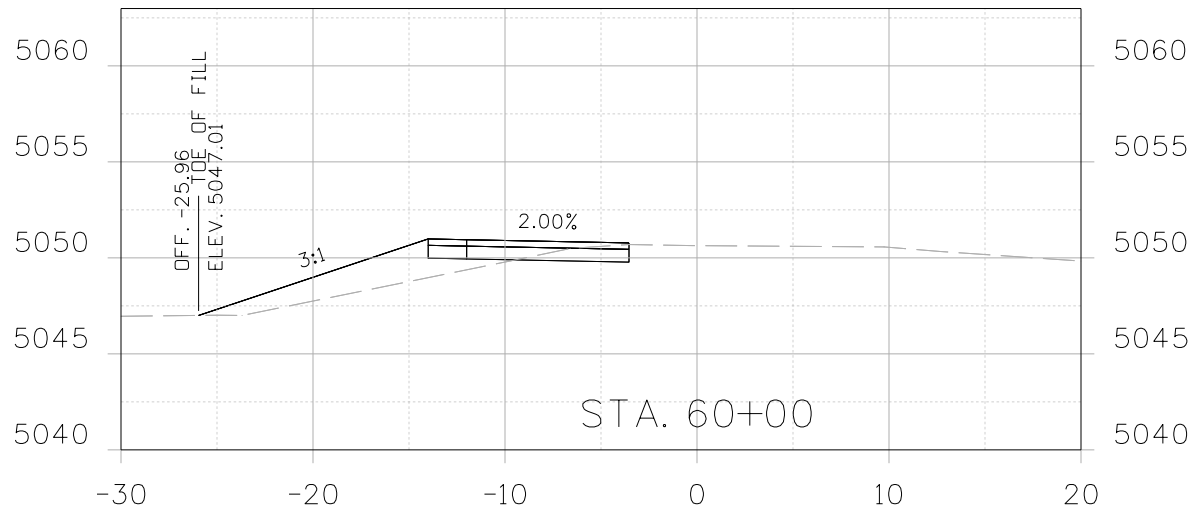
Date:	Comments	Init.



As Constructed	BIG SANDY CREEK BRIDGE REHAB CROSS SECTIONS DETOUR			Project No./Code BRD C330-013
No Revisions:	Designer: S. Scott	Structure Numbers	LIN 32-2W.0A	26222
Revised:	Detailer: H. Pugh	Subset Sheets:	13 of 14	Sheet Number 76
Void:	Sheet Subset: X-Sections			

8/15/2024

scott 11:30:37 AM R:\0-Projects\ACTIVE PROJECTS\78001\_Lincoln County Road 32 over Big Sandy Creek Bridge Rehabilitation\800\_Computer Design Files\802\_Sheet Files\78001\_XS-001 Detour Cross Sections.dgn



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 Phone: (303) 962-9300  
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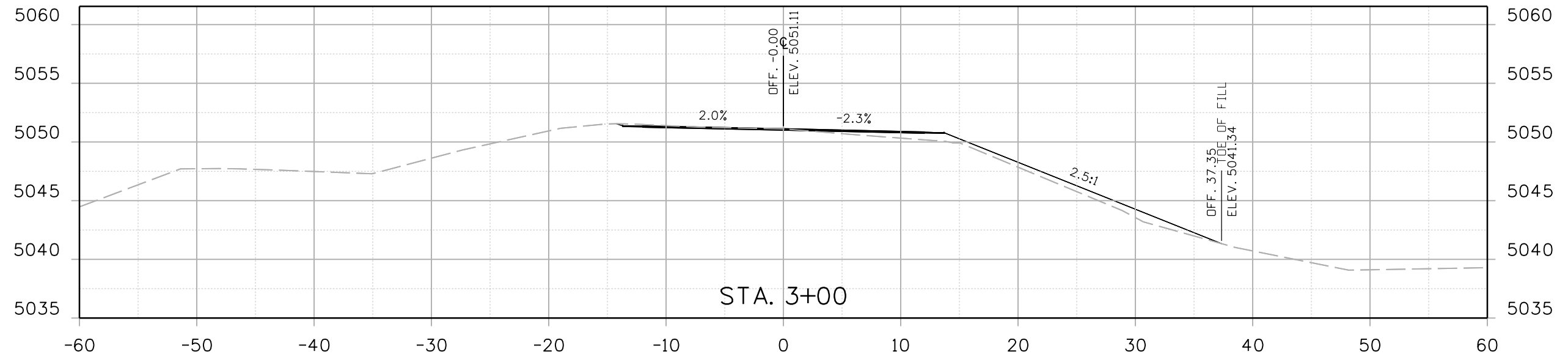
Sheet Revisions		
Date:	Comments	Init.



As Constructed	BIG SANDY CREEK BRIDGE REHAB CROSS SECTIONS DETOUR		Project No./Code
No Revisions:			BRO C330-013
Revised:	Designer: S. Scott	Structure Numbers	LIN 32-2W.0A 26222
Void:	Detailer: H. Pugh	Sheet Subset: X-Sections	Subset Sheets: 14 of 14 Sheet Number 77

8/15/2024

scott 4:26:54 PM R:\Q-Projects\ACTIVE PROJECTS\78001\_Lincoln County Road 32 over Big Sandy Creek Bridge Rehabilitation\800\_Computer Design Files\802\_Sheet Files\78001\_XS-001\_CROSS SECTIONS.dgn



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Print Date: 6/13/2024  
 File Name: 78001\_XS-001 CROSS SECTIONS.dgn  
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 12076 Grant Street, Thornton, CO 80241  
 Phone: (303) 962-9300  
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Sheet Revisions		
Date:	Comments	Init.



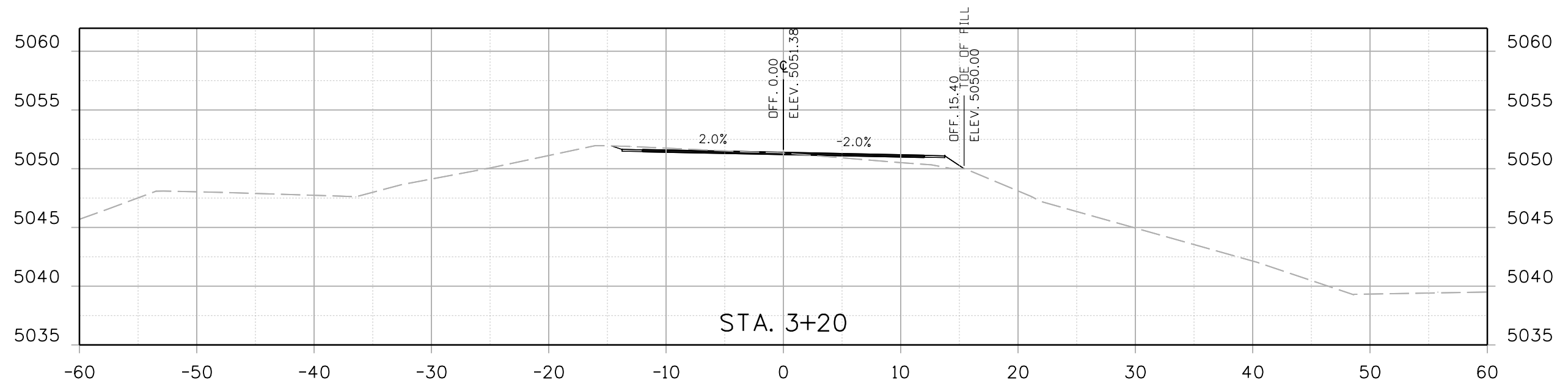
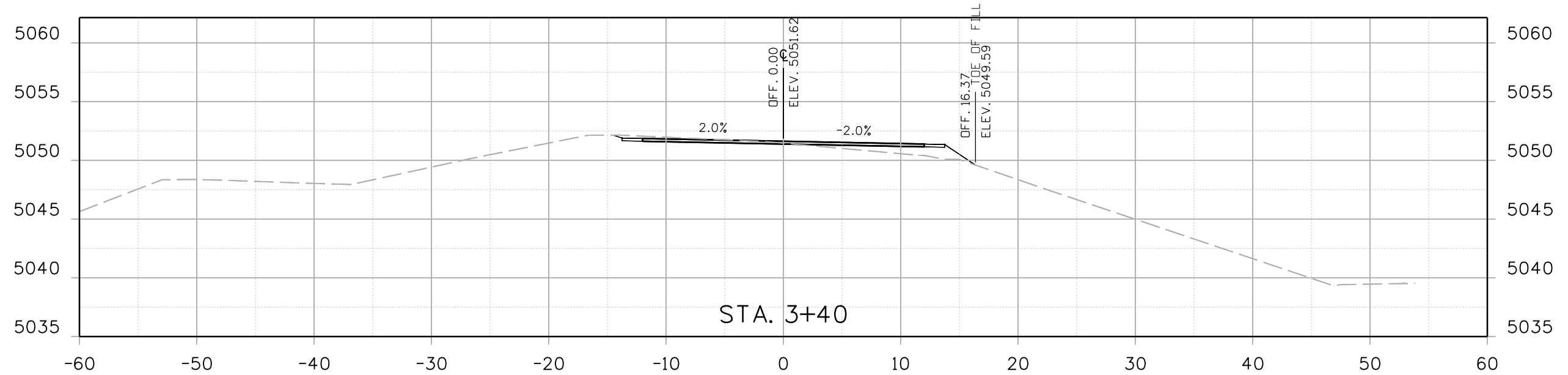
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<b>BIG SANDY CREEK BRIDGE REHAB CROSS SECTIONS RD 32</b>			
Designer:	S. Scott	Structure Numbers	LIN 32-2W.0A
Detailer:	H. Pugh	Subset Sheets:	1 of 8
Sheet Subset: X-Sections			

Project No./Code	BRO C330-013
Sheet Number	78

8/15/2024

scott 4:27:57 PM R:\0-Projects\ACTIVE PROJECTS\78001\Lincoln County Road 32 over Big Sandy Creek Bridge Rehabilitation\800-Computer Design Files\802\_Sheet Files\78001\_XS-001\_CROSS SECTIONS.dgn



All seals for this set of drawings are applied to the cover page(s)

Print Date: 6/13/2024  
 File Name: 78001\_XS-001 CROSS SECTIONS.dgn  
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Sheet Revisions		
Date:	Comments	Init.



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 No Revisions:  
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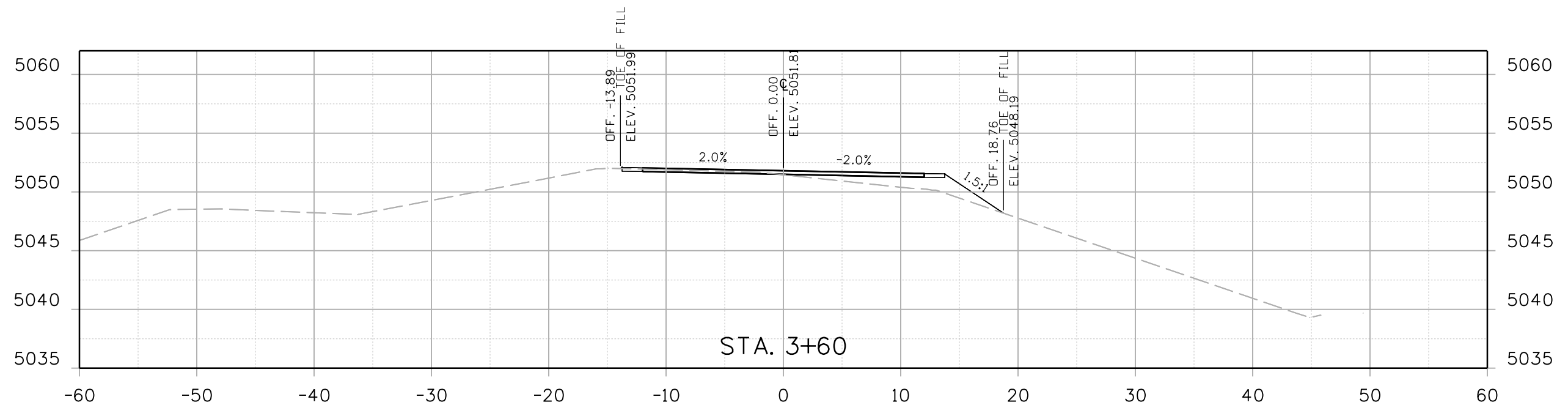
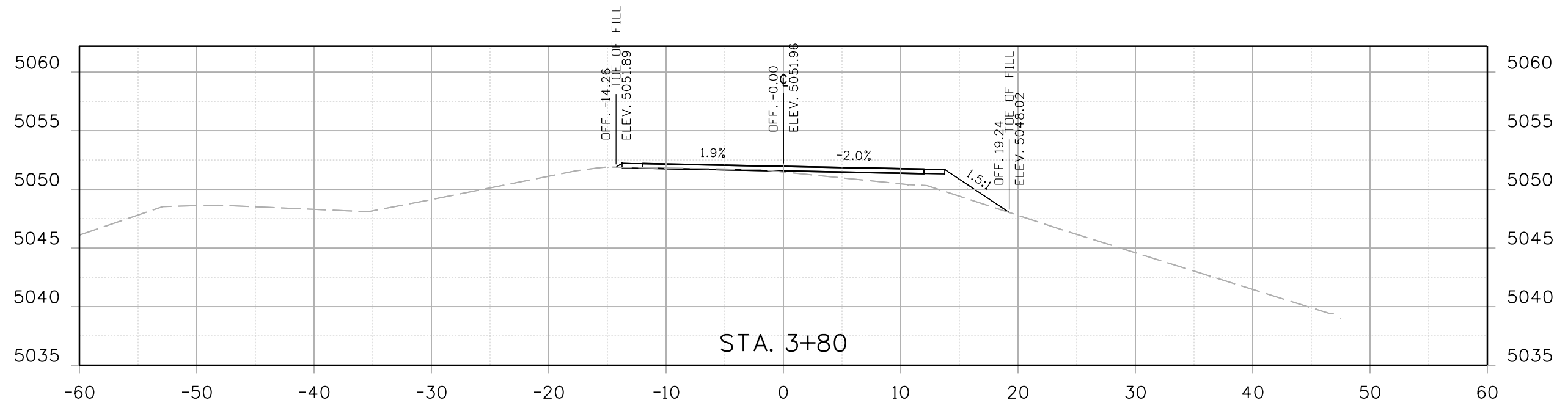
**BIG SANDY CREEK BRIDGE REHAB  
 CROSS SECTIONS  
 RD 32**

Designer: S. Scott	Structure Numbers	LIN 32-2W.0A
Detailer: H. Pugh	Subset Sheets:	2 of 8

Project No./Code  
 BRD C330-013  
 26222  
 Sheet Number 79

8/15/2024

scott 4:28:36 PM R:\0-Projects\ACTIVE PROJECTS\78001\Lincoln County Road 32 over Big Sandy Creek Bridge Rehabilitation\800\_Computer Design Files\802\_Sheet Files\78001\_XS-001\_CROSS SECTIONS.dgn



8/15/2024

All seals for this set of drawings are applied to the cover page(s)

Print Date: 6/13/2024  
 File Name: 78001\_XS-001\_CROSS SECTIONS.dgn  
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 Phone: (303) 962-9300  
 Web: www.RockSol.com

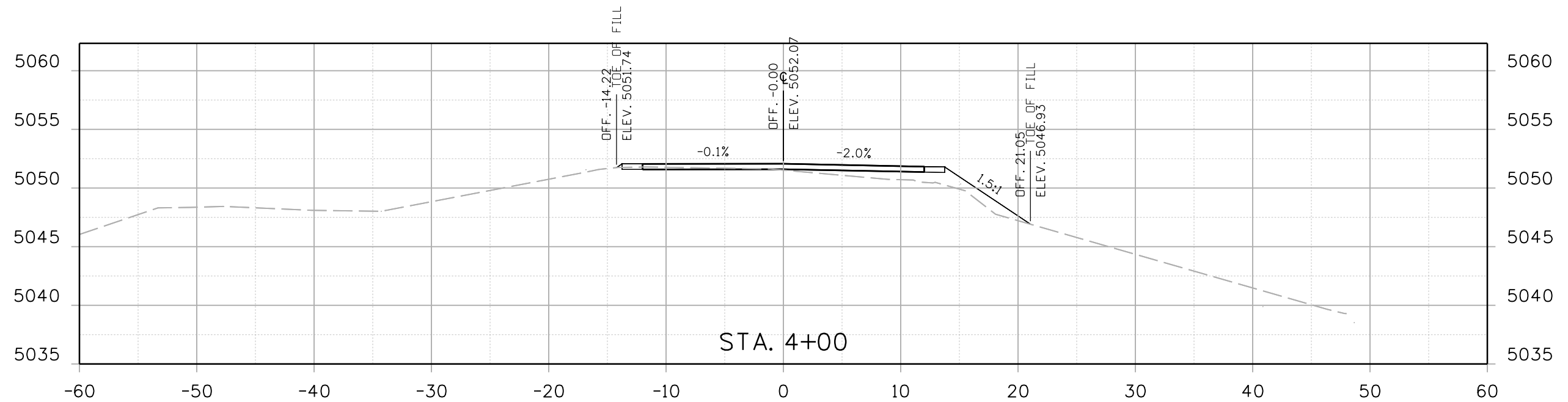
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Date:	Comments	Init.



As Constructed No Revisions: Revised: Void:	BIG SANDY CREEK BRIDGE REHAB CROSS SECTIONS RD 32		Project No./Code	
			BRD C330-013	
	Designer: S. Scott	Structure Numbers	26222	
	Detailer: H. Pugh	Sheet Subset: X-Sections	Subset Sheets: 3 of 8	Sheet Number 80



scott 4:29:21 PM R:\Q-Projects\ACTIVE PROJECTS\78001-Lincoln County Road 32 over Big Sandy Creek Bridge Rehabilitation\800-Computer Design Files\802\_Sheet Files\78001\_XS-001\_CROSS SECTIONS.dgn



8/15/2024

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Print Date: 6/13/2024	
File Name: 78001_XS-001_CROSS SECTIONS.dgn	
Horiz. Scale: 1":10'	Vert. Scale: 1":10'
RockSol Consulting Group, Inc. 12076 Grant Street, Thornton, CO 80241 Phone: (303) 962-9300 Web: www.RockSol.com	

Sheet Revisions		
Date:	Comments	Init.

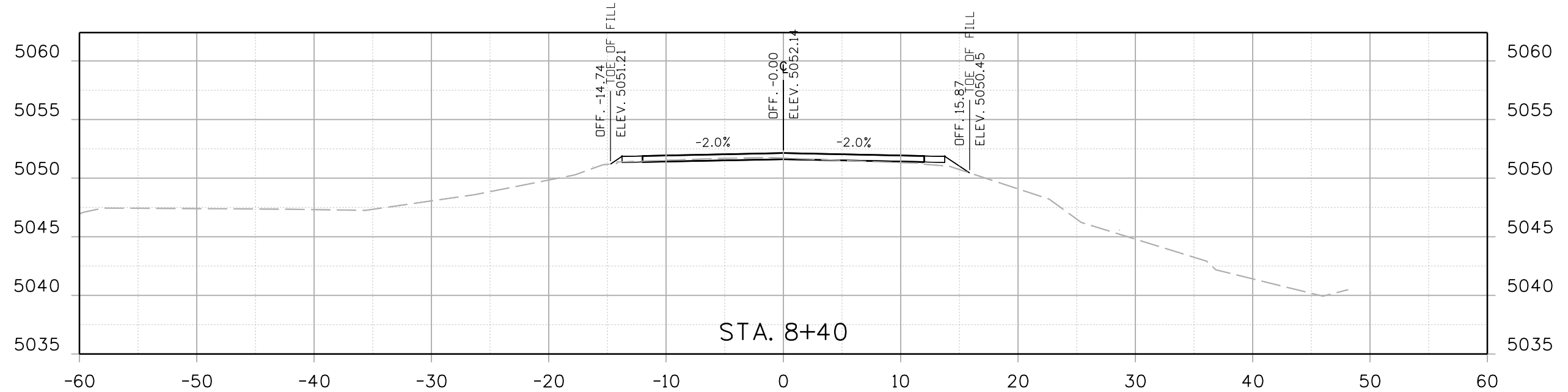
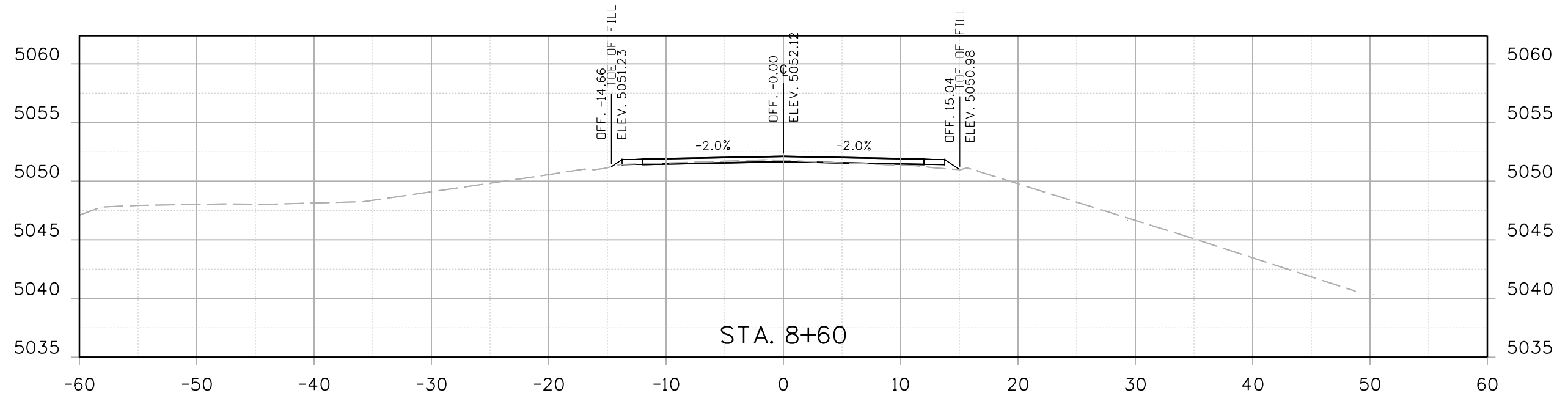


As Constructed
No Revisions:
Revised:
Void:

BIG SANDY CREEK BRIDGE REHAB CROSS SECTIONS RD 32			
Designer:	S. Scott	Structure Numbers	LIN 32-2W.0A
Detailer:	H. Pugh	Subset Sheets:	4 of 8
Sheet Subset:	X-Sections		

Project No./Code	BRO C330-013
	26222
Sheet Number	81

scott 4:29:55 PM R:\0-Projects\ACTIVE PROJECTS\78001\_Lincoln County Road 32 over Big Sandy Creek Bridge Rehabilitation\800\_Computer Design Files\802\_Sheet Files\78001\_XS-001\_CROSS SECTIONS.dgn



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Print Date: 6/13/2024  
 File Name: 78001\_XS-001\_CROSS SECTIONS.dgn  
 Horiz. Scale: 1":10' Vert. Scale: 1":10'  
 RockSol Consulting Group, Inc.  
 12076 Grant Street, Thornton, CO 80241  
 Phone: (303) 962-9300  
 Web: www.RockSol.com

Sheet Revisions		
Date:	Comments	Init.



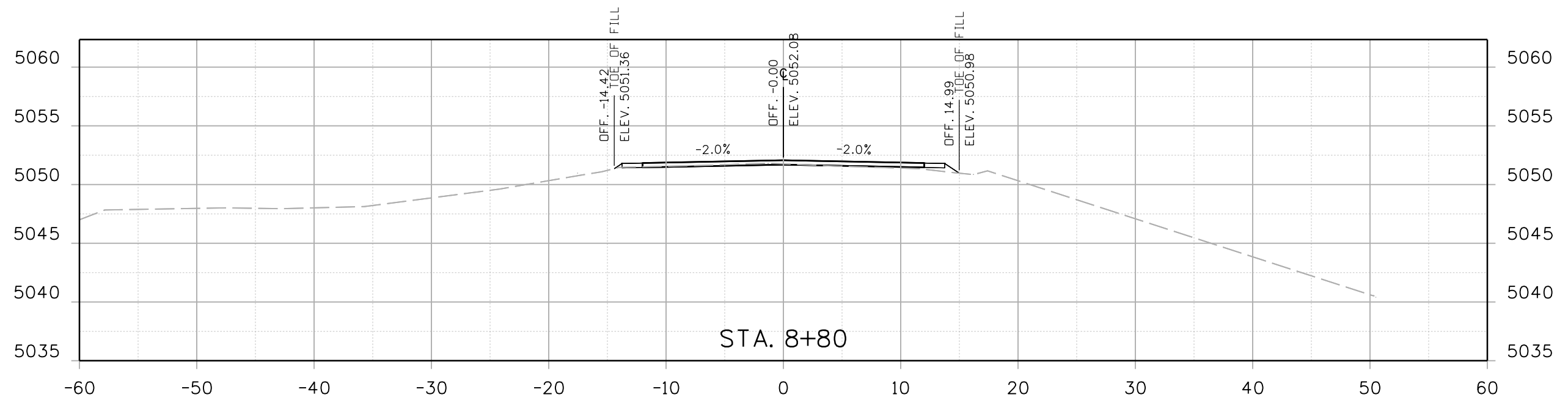
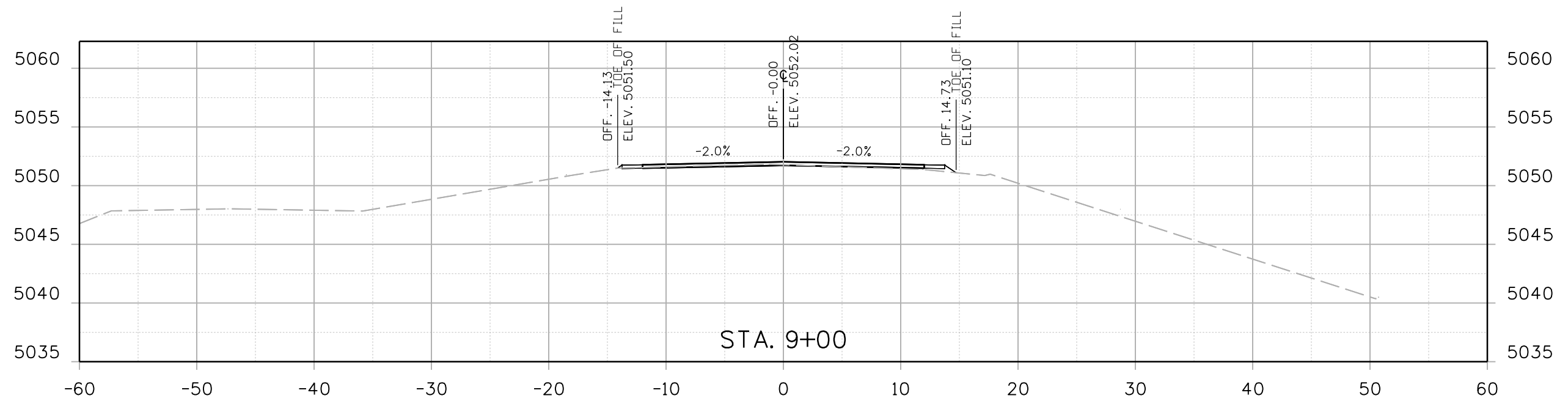
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BIG SANDY CREEK BRIDGE REHAB CROSS SECTIONS RD 32			
Designer:	S. Scott	Structure Numbers	LIN 32-2W.0A
Detailer:	H. Pugh	Subset Sheets:	5 of 8
Sheet Subset:	X-Sections		


Project No./Code  
 BRD C330-013  
 26222  
 Sheet Number 82

8/15/2024

scott 4:30:25 PM R:\Projects\ACTIVE PROJECTS\78001\Lincoln County Road 32 over Big Sandy Creek Bridge Rehabilitation\800\_Computer Design Files\802\_Sheet Files\78001\_XS-001\_CROSS SECTIONS.dgn



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Print Date: 6/13/2024  
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 Horiz. Scale: 1"=10' Vert. Scale: 1"=10'  
 RockSol Consulting Group, Inc.  
 12076 Grant Street, Thornton, CO 80241  
 Phone: (303) 962-9300  
 Web: www.RockSol.com

Sheet Revisions		
Date:	Comments	Init.



As Constructed  
 No Revisions:  
 Revised:  
 Void:

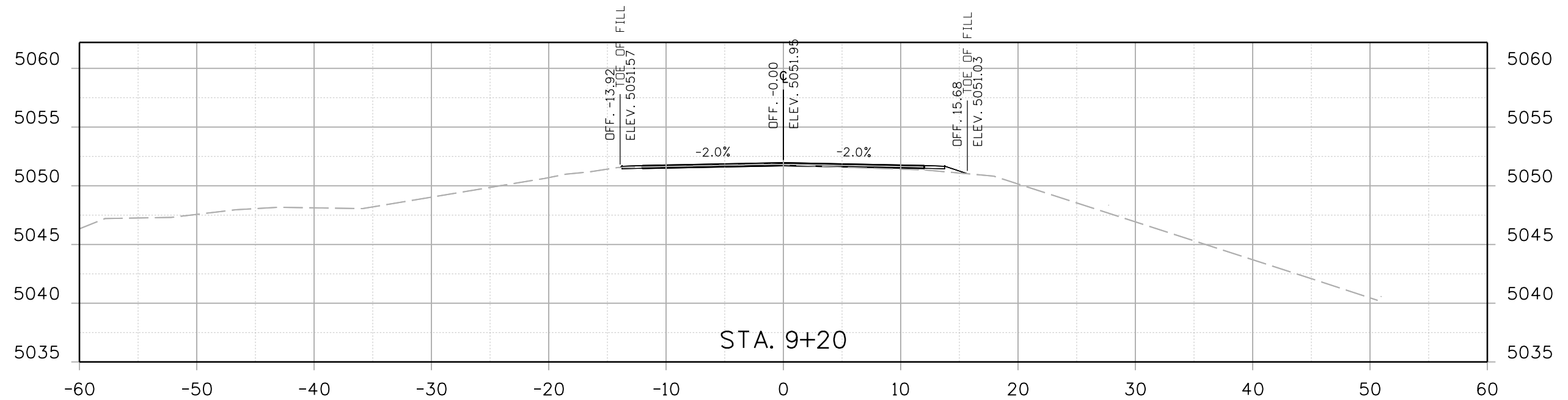
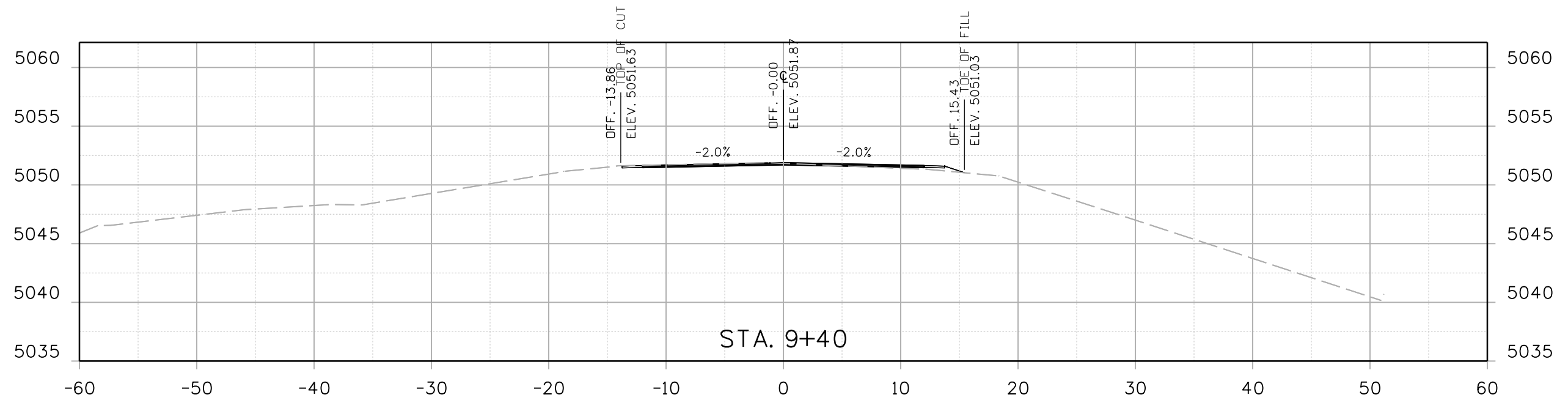
**BIG SANDY CREEK BRIDGE REHAB  
 CROSS SECTIONS  
 RD 32**

Designer:	S. Scott	Structure Numbers	LIN 32-2W.0A
Detailer:	H. Pugh	Subset Sheets:	6 of 8

Project No./Code  
 BRD C330-013  
 26222  
 Sheet Number 83

8/15/2024

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Date:	Comments	Init.



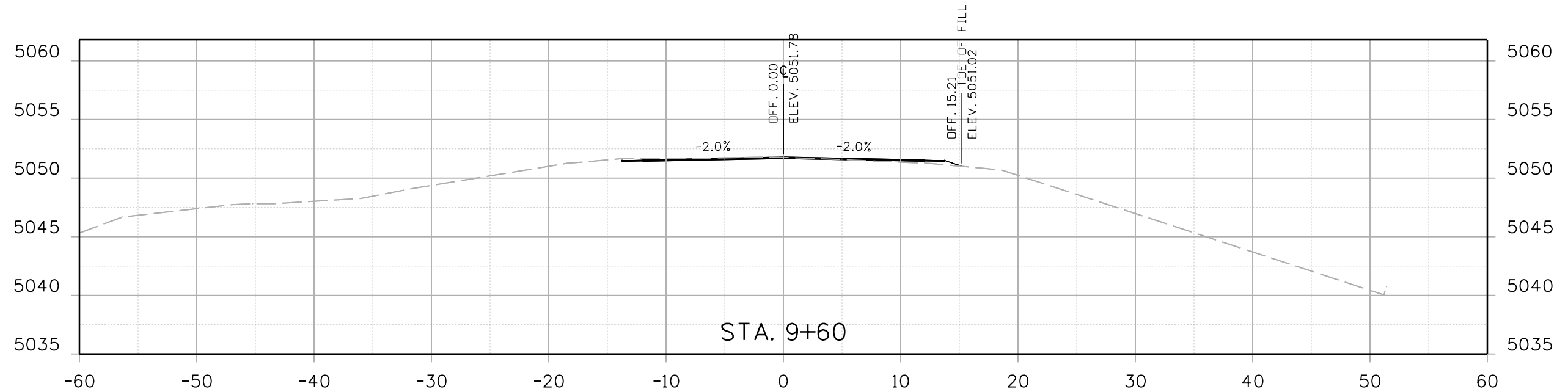
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BIG SANDY CREEK BRIDGE REHAB CROSS SECTIONS RD 32			
Designer:	S. Scott	Structure Numbers	LIN 32-2W.0A
Detailer:	H. Pugh	Subset Sheets:	7 of 8
Sheet Subset:	X-Sections		

Project No./Code  
 BRD C330-013  
 26222  
 Sheet Number 84

8/15/2024

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8/15/2024

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Print Date: 6/13/2024  
 File Name: 78001\_XS-001 CROSS SECTIONS.dgn  
 Horiz. Scale: 1"=10'    Vert. Scale: 1"=10'



Sheet Revisions		
Date:	Comments	Init.



As Constructed  
 No Revisions:  
 Revised:  
 Void:

BIG SANDY CREEK BRIDGE REHAB CROSS SECTIONS RD 32			
Designer:	S. Scott	Structure Numbers	LIN 32-2W.0A
Detailer:	H. Pugh	Subset Sheets:	8 of 8
Sheet Subset:	X-Sections		

Project No./Code  
 BRD C330-013  
 26222  
 Sheet Number 85