

GEOLOGY

Geologist: _____
 Rig: _____
 Project Geologist: _____
 Date Drilled: _____
 Driller: _____

Circulation Medium	
Air	
Water	
Auger	

Remarks: Obtain alkali sample.

LAYOUT APPROVAL

State Bridge Engineer _____ Date _____

VTOMING DEPARTMENT OF TRANSPORTATION
 BRIDGE PROGRAM
 PRELIMINARY GEOLOGY LAYOUT
 BRIDGE OVER WOOD RIVER
 STA 320+18
 Meeteetse - Pitchfork Road
 (Wyo 290)
 1500006
 Design Section L M Nop
 Drwg. No. _____ Sheet 1 of 1

Wyo. Proj. 1500006
Sheet of Sheets

BRIDGE OVER WOOD RIVER

STA 320 ± 18

MEETEETSE - PITCHFORK ROAD

(WYO 290)

1500006

PARK COUNTY

PRELIMINARY

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DESIGN DATA

SPECIFICATIONS: AASHTO's Standard Specifications for Highway Bridges, 17th Edition
ADT: 260 (rear 2020)
LOADINGS: HS25. Future wearing surface 18 psf. Stop-In-place forms 15 psf.
REINFORCED CONCRETE: Load Factor Design -
 Class A Concrete $f'_c = 3750$ psi
 Class B Concrete $f'_c = 3250$ psi
 Reinforcing Steel $f_y = 60,000$ psi (Grade 60)
 $f_y = 40,000$ psi (Grade 40)
STRUCTURAL STEEL: Load Factor Design -
 $F_y = 50,000$ psi (Grade 50W)
APPROACH ROADWAY WIDTH: 32'-0"
DRILLED SHAFTS: Allowable Stress -
 Bents (Per drilled shaft)
 Total Load = X T
 Bearing = X T
 Friction = X T
PILE LOADS: Allowable Stress -
 Abutments, X T per pile
BEARING LOADS: Bents -
 Service Dead Load = X kips
 Service Live Load = X kips

ITEM NO.	ITEM	UNIT	TOTAL QUANTITY	ESTIMATE
202.03210	REMOVAL OF STEEL BRIDGES	EA		
212.02100	DRY EXCAVATION	CY		
217.01010	GEOTEXTILE, EROSION CONTROL	SY		
217.01030	GEOTEXTILE, EMB AND RETAINING WALL	SY		
501.01000	STRUCTURAL STEEL	LS	LUMP SUM	LB
503.01000	BRIDGE RAILING	FT		
504.04000	PREDRILLED HOLES	FT		
504.04010	PILE SPLICES	EA		
504.11473	STEEL PILING HP 14 X 73	FT		
505.01048	DRILLED SHAFT FOUNDATIONS 48 In	FT		
507.01000	REINFORCED CONC APPROACH SLABS	SY		
507.01000	BRIDGE APPROACH BACKFILL	CY		
511.06000	MACHINE-PLACED RIPRAP	CY		
513.00005	ELASTOMERIC COMP JOINT SEAL	FT		
513.00015	CLASS A CONCRETE	LS	LUMP SUM	CY
514.00015	CLASS B CONCRETE	LS	LUMP SUM	CY
514.00025	REINFORCING STEEL (COATED)	LS	LUMP SUM	LB
605.10006	UNDERDRAIN PIPE (PERF) 6 In	FT		
605.20006	UNDERDRAIN PIPE (NON-PERF) 6 In	FT		



STRUCTURE NO. LIN, RM 6.04
 SEC 22, T48N, R101W

WYOMING DEPARTMENT OF TRANSPORTATION
 BRIDGE PROGRAM

APPROVED: _____
 DATE: _____

DESIGNER: _____
 CHECKED: _____
 DRAWN: _____

Design Section L M Nop
 Drwg. No. P-0001 Sheet 1 of 3

Wyo. Proj. 1500006 Sheet of Sheets	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p style="text-align: center;">GENERAL NOTES</p> <p>SPECIFICATIONS: WYDOT Standard Specifications for Road and Bridge Construction, 2003 Edition</p> <p>DIMENSIONS: Longitudinal dimensions for the substructure are horizontal and include no correction for grade. Longitudinal dimensions for the superstructure are along grade unless noted. Slopes are vertical.</p> <p>CONCRETE: Use class A concrete in the deck. Use class B concrete made with type II Wyoming modified cement at all other locations.</p> <p>REINFORCING STEEL: Concrete cover to face of reinforcing steel is 2" unless noted. Dimensions for bent bars are cut to cut. Ensure bars marked with an asterisk (*) are coated.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>BAR MARKS</p> <p>Straight Bars  Length 508-3</p> </div> <div style="text-align: center;"> <p>Bent Bars  Size 4A2</p> </div> </div> <p>STRUCTURAL STEEL: Ensure structural steel conforms to ASTM A 709 (Grade 50W) unless noted. Ensure steel fabricators supplying structural components are certified under the AISC Quality Certification Program, Category Major Steel Bridges (CBR).</p> <p>Ensure steel components of the deck drain system conform to ASTM A 709 (Grade 50W) minimum and ASTM A 53 (Grade A or B). After fabrication operations are completed, ensure components are prepared in accordance with Steel Structures Painting Council Surface Preparation Specification No. 6 Commercial Blast Cleaning (SSPC-SP 6).</p> <p>STEEL PILING: Use steel piling conforming to ASTM A 709 (Grade 50).</p> <p>ELASTOMERIC COMP. JOINT SEAL: Provide one of the following products: CV-4000 as manufactured by The D. S. Brown Co. WJ-400 as manufactured by Watson Bowman Acme Corp.</p> <p>EYEBOLTS: Use galvanized bar conforming to ASTM A 709 (Grade 36). Work necessary for the eyebolts is incidental to the contract pay item Class B Concrete.</p> <p>BRIDGE BEARING ANCHOR BOLTS: Use one of the following adhesive anchorage systems for setting anchor bolts: Epoxy Anchoring Systems as manufactured by Coverl Operations Epoxy System as manufactured by ITW Ramsel/Red Head AC100 Plus/AC5.5 Plus as manufactured by Powers Fasteners, Inc. Sure-Anch 1 (J-5) as manufactured by Dayton Superior HSE 2421 Epoxy Adhesive Anchor as manufactured by Hilti, Inc. HIT HY 150 System as manufactured by Hilti, Inc.</p> <p>Use anchor bolts compatible with the adhesive product. Prepare holes and set anchor bolts as recommended by the manufacturer. Anchor bolts may be swedge bolts or threaded rod. Ensure swedge bolts conform to ASTM A 709 (Grade 36). Ensure the swedges are produced by deforming the steel through application of pressure, and not by any method such as grinding or cutting that removes material. Ensure threaded rod conforms to M A 307, grade C or ASTM F 1554, grade 36. Work necessary for the anchorage system is incidental to the contract pay item Structural Steel.</p> </div> <div style="width: 45%;"> <p style="text-align: center;">HAZARDOUS MATERIALS: The paint system on the steel components of the existing structure contains materials including lead and chromium which are hazardous if ingested, inhaled, or otherwise absorbed.</p> <p>REMOVAL OF STEEL BRIDGES: Remove the existing three span 165'-6" x 27'-0" steel girder bridge, Structure No. CSW.</p> <p>MISCELLANEOUS REMOVAL: Work necessary to remove and dispose of the car bodies along the river bank adjacent to the existing bents is incidental to the contract pay item Machine-Placed Riprap.</p> <p>DRY EXCAVATION: The estimated quantity of dry excavation is calculated below. Finished grade to the limits shown at approach slabs and below existing ground line at abutments.</p> <p>FOUNDATIONS: Abutments are on steel piles driven to refusal in bedrock. Bents are on drilled shafts founded in bedrock. Casing will be necessary to prevent caving of the granular materials and to control groundwater. An adequate seal between the casing and bedrock may not be possible and pouring concrete under water should be anticipated. The presence of very dense gravel and cobble lenses may result in difficult drilling.</p> <p>PREDRILLED HOLES: If any pile fails to achieve the bottom of pile elevations shown, predrill the remaining piles to the elevations shown. The estimated quantity of predrilled holes is calculated from the bottom of abutment cap to the bottom elevation of each pile.</p> <p>PILE POINTS: Fit the piles with pile points unless predrilled holes are used.</p> <p>STAY-IN-PLACE FORMS: Stay-in-place slab forms may be used for construction of the deck. Do not exceed 15 psf for the weight of the forms and additional concrete, including form deflection. Do not extend the vertical legs of support angles past the bottom of the bottom reinforcing steel mat or use these legs to support the reinforcing steel.</p> <p>BRIDGE OFFICE NOTIFICATION: The engineer will notify the State Bridge Engineer in writing within 14 calendar days after the existing structure has been removed and again within 14 calendar days after the new structure has been opened to traffic.</p> </div> </div>
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REFERENCES

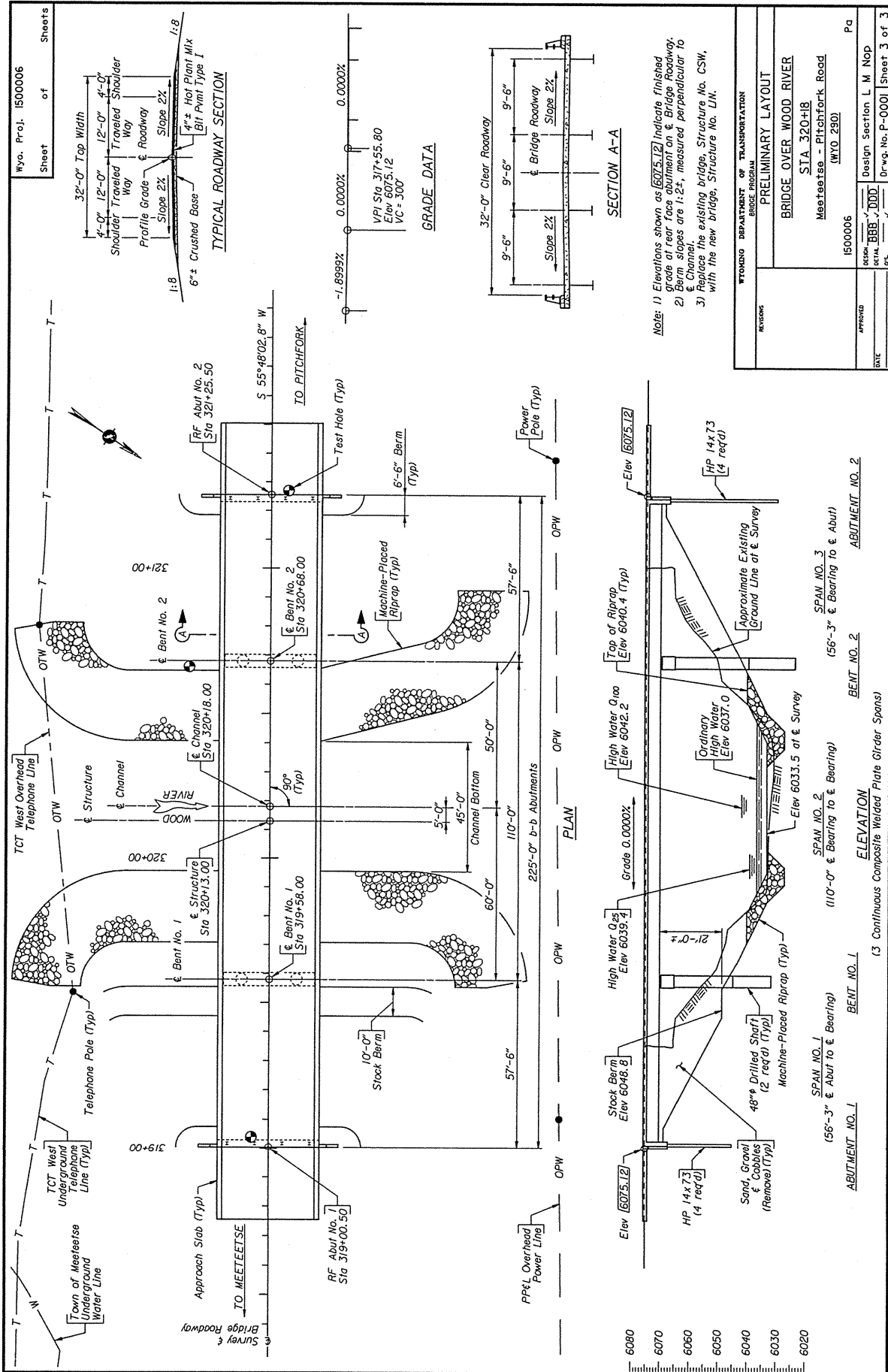
Supplementary Specifications: Dated
 SS-500B Welder Qualification -- Rev 12-7-04
 Bridge Bearing Correction -- Rev 7-9-04
 SS-500F Automatically End-Welded Studs -- 8-17-05

WYDOT Plans: Sheet No.
 Bridge Dwg No. 2727 -- X of X
 Bridge Dwg No. 5286 -- X of X

STREAM DATA

Drainage Area ----- 198.0 Sq. Mi
 Channel Slope ----- 1.41%
 Description of Channel Material -- Sand, gravel and cobbles
 Drift Potential ----- Trees and logs
 Ordinary High Water Elevation -- 6037.0 ft
 Headwater Elevation Q_{25} -- 6041.4 ft
 Q_{50} -- 6043.6 ft
 Q_{100} -- 6039.4 ft
 High Water Elevation Q_{25} -- 6042.2 ft
 Q_{50} -- 12.2 fpm
 Constricted Velocity Q_{25} -- 13.4 fpm
 Q_{50} -- 25 Year
 Design Frequency Q_{25} -- 3056 cfs
 Design Discharge Q_{25} -- 4290 cfs
 Review Discharge Q_{25} -- Log Pearson Type III
 Source of Discharge ----- HEC-RAS and WSP
 Method of Analysis ----- HEC-RAS and WSP
 Flood History ----- 5080 cfs (Year 1963)

WYOMING DEPARTMENT OF TRANSPORTATION BRIDGE PROGRAM	
PRELIMINARY GENERAL NOTES	
BRIDGE OVER WOOD RIVER	
STA 320+18 Meetteetse - Pitchfork Road (WYO 290)	
1500006	Pa
DESIGNED BY: CCC/JFF CHECKED BY: JFF	Design Section L M Nop Dwg. No. P-0001 Sheet 2 of 3



Note: 1) Elevations shown as [607.5, 12] indicate finished grade at rear face abutment on & Bridge Roadway. 2) Channel slopes are 1:2^s, measured perpendicular to & Channe. 3) Replace the existing bridge, Structure No. CSW, with the new bridge, Structure No. UN.

WYOMING DEPARTMENT OF TRANSPORTATION BRIDGE DIVISION	
PRELIMINARY LAYOUT	
BRIDGE OVER WOOD RIVER	
STA 320+18	
Meeteetse - Pitchfork Road	
(WYO 290)	
PROJECT NO.	1500006
DESIGNER	BBB, V, DDD
DATE	
APPROVED	
DESIGN SECTION	L M Nop
DRWG. NO.	P-0001
SHEET	3 of 3

Wyo. Proj. 1500006
Sheet B1 of B25 Sheets

BRIDGE OVER WOOD RIVER

STA 320+18

MEETEETSE - PITCHFORK ROAD

(WYO 290)

PARK COUNTY

1500006

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Log Baring Sheet	6
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Superstructure Details	9-11
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Deck Drain Details	14
Slab Details	15-16
Approach Slab Details	17-18
Reference Sheets	B19-B25

DESIGN DATA

SPECIFICATIONS: AASHTO's Standard Specifications for Highway Bridges, 17th Edition

ADT: 260 (Year 2020)

LOADING: HS25. Future wearing surface 18 psf. Stay-in-place forms 15 psf.

REINFORCED CONCRETE: Load Factor Design -
 Class A Concrete $f_c = 3750$ psi
 Class B Concrete $f_c = 3250$ psi
 Reinforcing Steel $f_y = 60,000$ psi (Grade 60)
 $f_y = 40,000$ psi (Grade 40)

STRUCTURAL STEEL: Load Factor Design -
 $F_y = 50,000$ psi (Grade 50W)

APPROACH ROADWAY WIDTH: 32'-0"

ESTIMATED QUANTITIES - CODE 11-CSW

ITEM NO.	ITEM	UNIT	TOTAL QUANTITY	ESTIMATE
202.03210	REMOVAL OF STEEL BRIDGES	EA	1	
212.02700	DRY EXCAVATION	CY	630	
217.01010	GEOTEXTILE, EROSION CONTROL	SY	2030	
217.01030	GEOTEXTILE, EMB AND RETAINING WALL	SY	1590	
501.01000	STRUCTURAL STEEL	LS	LUMP SUM	182,200 LB
503.01000	BRIDGE RAILING	FT	550	
504.04000	PREDRILLED HOLES	FT	216	
504.04010	PILE SPLICES	EA	1	
504.01048	DRILLED SHAFT FOUNDATIONS 48 in	FT	244	
507.01000	REINFORCED CONC. APPROACH SLABS	SY	197	
507.01000	BRIDGE APPROACH BACKFILL	CY	450	
511.06000	MACHINE-PLACED RIPRAP	CY	2330	
512.01050	ELASTOMERIC COMP JOINT SEAL	FT	73	
513.00005	CLASS A CONCRETE	LS	LUMP SUM	196.3 CY
513.00015	CLASS B CONCRETE	LS	LUMP SUM	161.8 CY
514.00015	REINFORCING STEEL	LS	LUMP SUM	22,940 LB
514.00025	REINFORCING STEEL (COATED)	LS	LUMP SUM	59,600 LB
605.10006	UNDERDRAIN PIPE (PERF) 6 in	FT	70	
605.20006	UNDERDRAIN PIPE (NON-PERF) 6 in	FT	48	

DRILLED SHAFTS: Allowable Stress -
 Bents (Per drilled shaft)
 Total Load = 24.57 T
 Bearing = 24 T
 Friction = 0.57 T

PILE LOADS: Allowable Stress -
 Abutments, 63 T per pile

BEARING LOADS: Bents -
 Service Dead Load = 85.80 kips
 Service Live Load = 67.23 kips

STRUCTURE NO. LIN. RM 6.04
SEC 22, T48N, R101W

WYOMING DEPARTMENT OF TRANSPORTATION
 BRIDGE PROGRAM
 REVISIONS

DATE	DESIGN	DETAIL	CHK	APP	DESIGN SECTION	L M Nop
		BBB	DDD			
					Drwg. No. 0001	Sheet 1 of 18

1500006_1ts.dgn

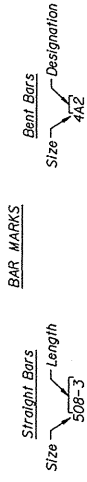
Wyo. Proj. 1500006
Sheet B2 of B25 Sheets

GENERAL NOTES

SPECIFICATIONS: WYDOT Standard Specifications for Road and Bridge Construction, 2003 Edition
DIMENSIONS: Longitudinal dimensions for the substructure are horizontal and include no correction for grade. Longitudinal dimensions for the superstructure are along grade unless noted. Slopes are vertical.

CONCRETE: Use class A concrete in the deck. Use class B concrete made with type II Wyoming modified cement at all other locations.

REINFORCING STEEL: Concrete cover to face of reinforcing steel is 2" unless noted. Dimensions for bent bars are out to out. Ensure bars marked with an asterisk (*) are coated.



STRUCTURAL STEEL: Ensure structural steel conforms to ASTM A 709 (Grade 50W) unless noted. Ensure steel fabricators supplying structural components are certified under the AISC Quality Certification Program, Category Major Steel Bridges (GBR).

Ensure steel components of the deck drain system conform to ASTM A 709 (Grade 50W) minimum and ASTM A 53 (Grade A or B). After fabrication operations are completed, ensure components are prepared in accordance with Steel Structures Painting Council Surface Preparation Specification No. 6 Commercial Blast Cleaning (SSPC-SP 6).

STEEL PILING: Use steel piling conforming to ASTM A 709 (Grade 50).

ELASTOMERIC COMP JOINT SEAL: Provide one of the following products: CV-4000 as manufactured by The D. S. Brown Co. WJ-400 as manufactured by Watson Bowman Acme Corp.

EYEBOLTS: Use galvanized bar conforming to ASTM A 709 (Grade 36). Work necessary for the eyebolts is incidental to the contract pay item Class B Concrete.

BRIDGE BEARING ANCHOR BOLTS: Use one of the following anchorage systems for setting anchor bolts:
Epoxy Anchoring Systems as manufactured by Coverl Operations
Epoxy System as manufactured by ITW Ramsel/Red Head
AC100 Plus/ACS.5 Plus as manufactured by Powers Fasteners, Inc.
Sure-Anchor I (I-51) as manufactured by Dayton Superior
HSE 2421 Epoxy Adhesive Anchor as manufactured by Hilti, Inc.
HIT HY 150 System as manufactured by Hilti, Inc.
Use anchor bolts compatible with the adhesive product. Prepare holes and set anchor bolts as recommended by the manufacturer. Anchor bolts may be sweage bolts or threaded rod. Ensure sweage bolts conform to ASTM A 709 (Grade 36). Ensure the sweages are produced by deforming the steel through application of pressure, and not by any method such as grinding or cutting that removes material. Ensure threaded rod conforms to M A 307, grade C or ASTM F 1554, grade 36. Work necessary for the anchorage system is incidental to the contract pay item Structural Steel.

REFERENCES

Supplementary Specifications:
SS-500B Welder Qualification ----- Dated Rev 12-7-04
SS-500E Bridge Bearing Correction ----- Rev 7-9-04
SS-500F Automatically End-Welded Studs ----- 8-17-05

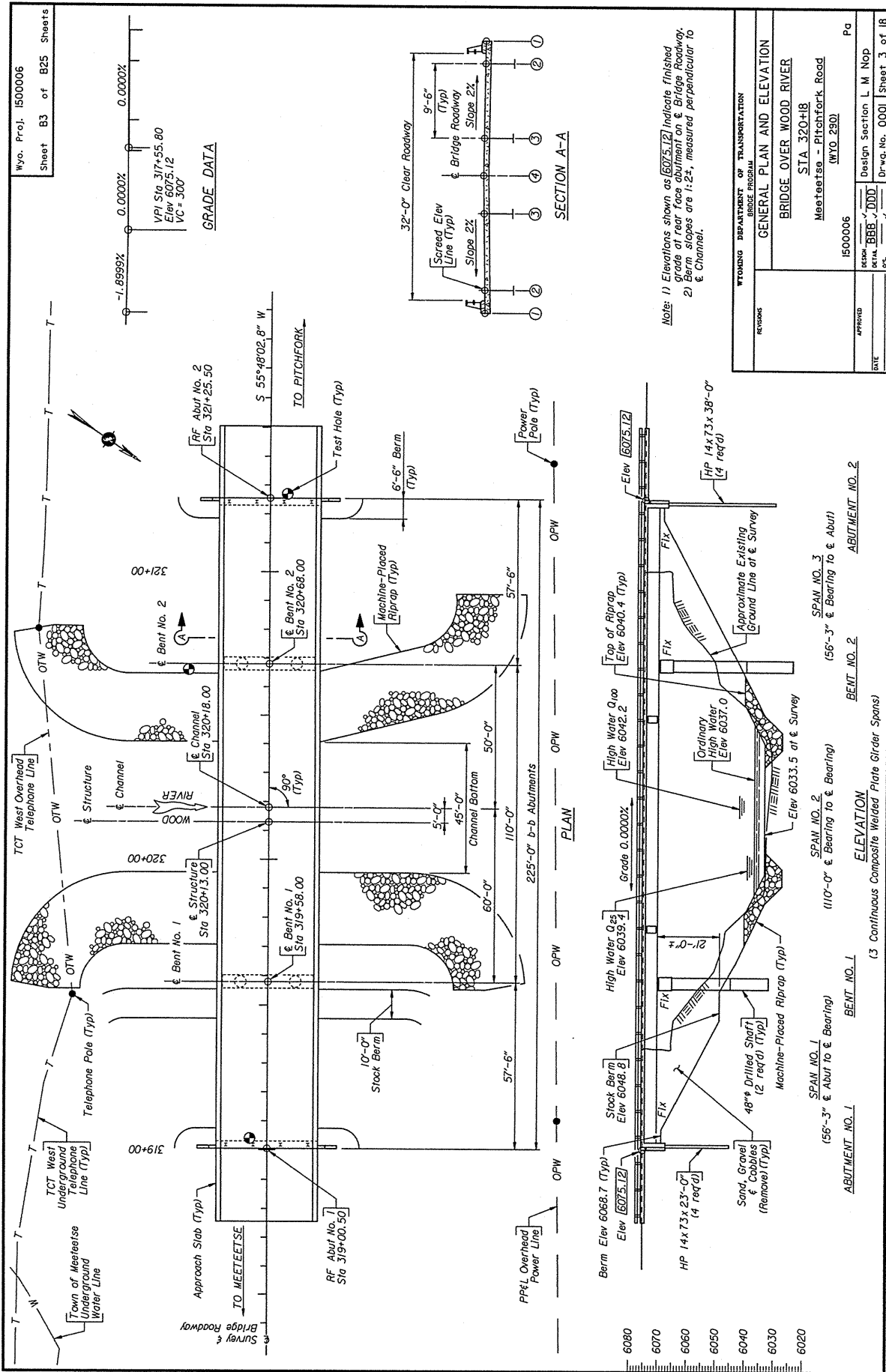
WYDOT Plans:
Bridge Dwg No. 2727 ----- Sheet No. 1-5 of 5
Bridge Dwg No. 5286 ----- 1 of 7 of 7

STREAM DATA

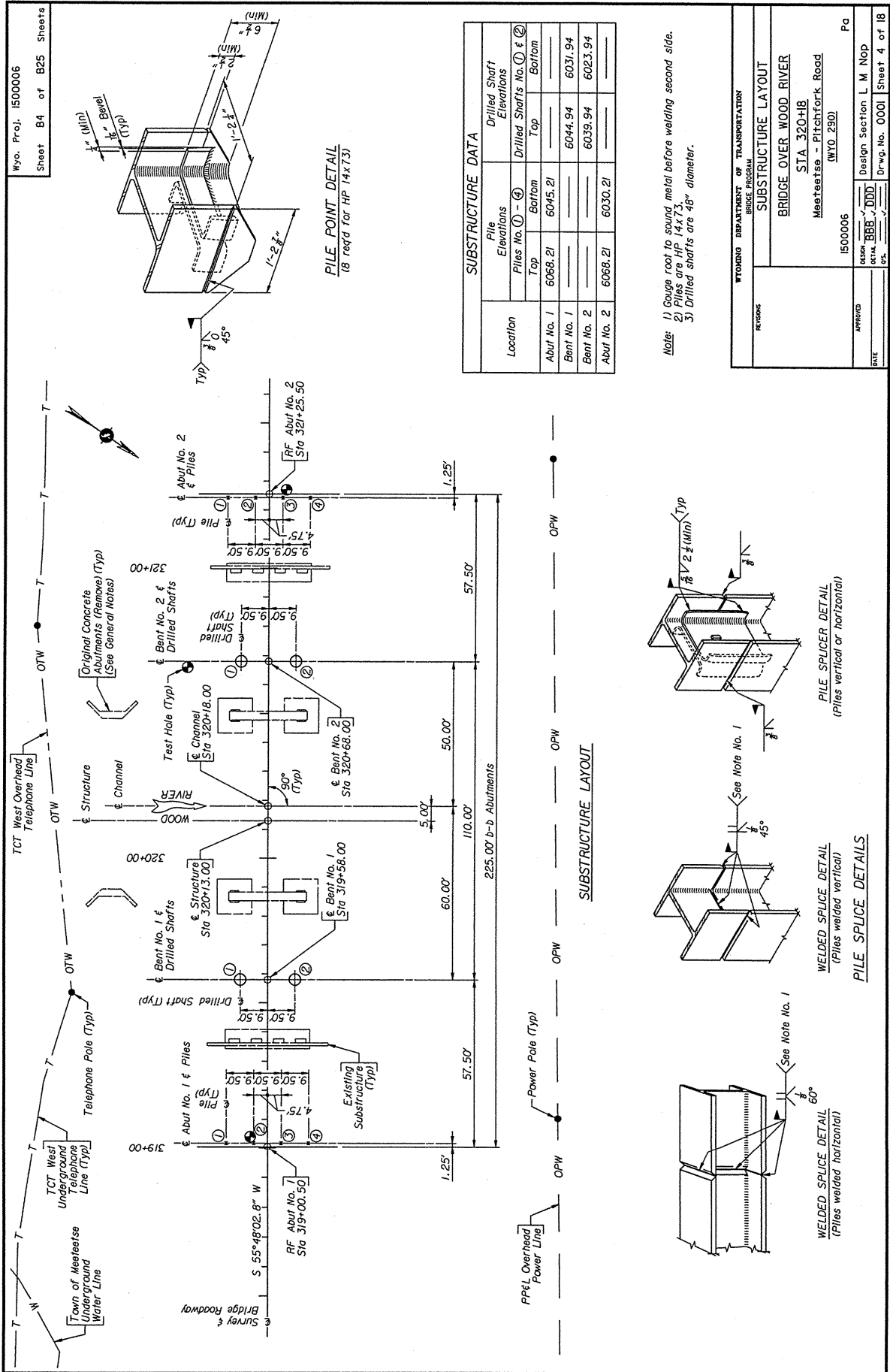
Drainage Area ----- 198.0 Sq Mi
Channel Slope ----- 1.41%
Description of Channel Material ----- Sand, gravel and cobbles
Drift Potential ----- Trees and logs
Ordinary High Water Elevation ----- 6037.0 ft
Headwater Elevation Q₂₅ ----- 6041.4 ft
High Water Elevation Q₂₅ ----- 6043.6 ft
Constricted Velocity Q₂₅ ----- 6039.4 ft
Design Frequency ----- 12.2 fps
Review Discharge Q₁₀₀ ----- 13.4 fps
Source of Discharge ----- 25 Year
Method of Analysis ----- Log Pearson Type III
Flood History ----- HEC-RAS and WSP
----- 5080 cfs (Year 1963)

WYOMING DEPARTMENT OF TRANSPORTATION	
BRIDGE PROGRAM	
GENERAL NOTES	
BRIDGE OVER WOOD RIVER	
STA. 320+18	
Meeteetse - Pitchfork Road	
(WYO. 290)	
PROJECT NO.	1500006
DESIGNER	BBB, DDD
DATE	
APPROVED	
DESIGN SECTION	L M Nop
DRWG. NO.	0001
SHEET	2 of 18

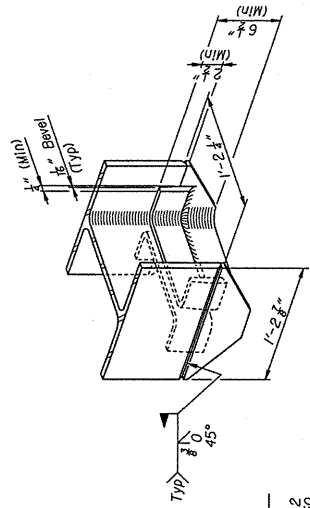
Section 4.03 - General Plan and Elevation



Section 4.04 - Substructure Layout



Wyo. Proj. 1500006
Sheet B4 of B25 Sheets

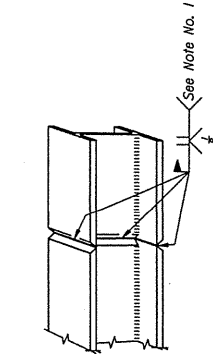
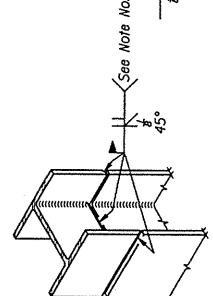
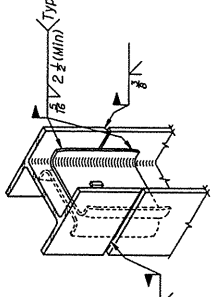


Location	Pile Elevations		Drilled Shaft Elevations	
	Top	Bottom	Top	Bottom
Abut. No. 1	6068.21	6045.21	6044.94	6031.94
Bent No. 1			6039.94	6023.94
Bent No. 2			6030.21	
Abut. No. 2				

Notes:

- 1) Gauge root to sound metal before welding second side.
- 2) Piles are HP 14x73.
- 3) Drilled shafts are 48" diameter.

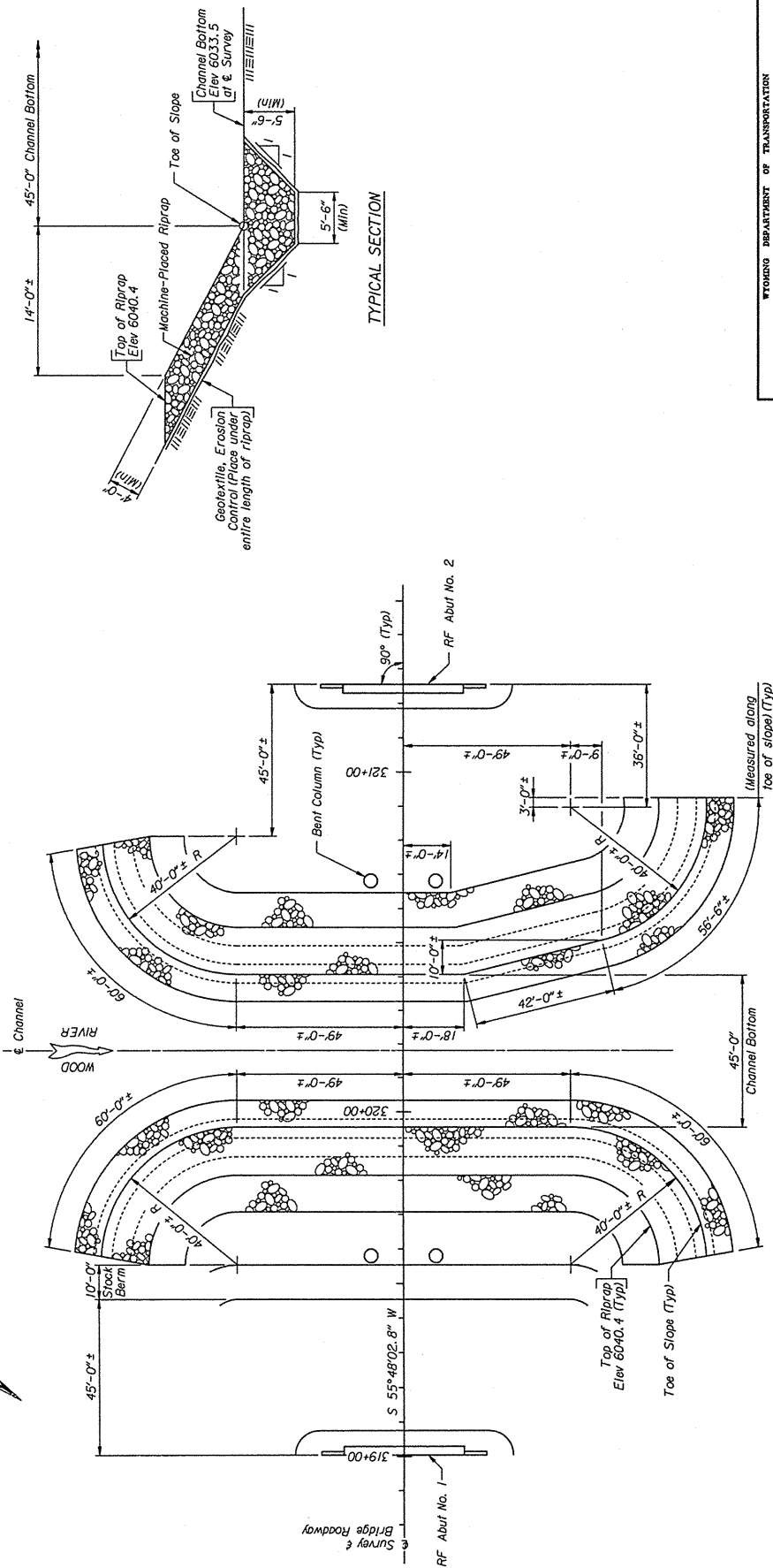
SUBSTRUCTURE LAYOUT



WYOMING DEPARTMENT OF TRANSPORTATION BRIDGE PROGRAM	
SUBSTRUCTURE LAYOUT	
BRIDGE OVER WOOD RIVER STA 320+18	
Meeteetse - Pitchfork Road (WYO 299)	
DESIGN	Pa
APPROVED	Design Section L M NOD
DATE	Drwg. No. 0001 Sheet 4 of 18

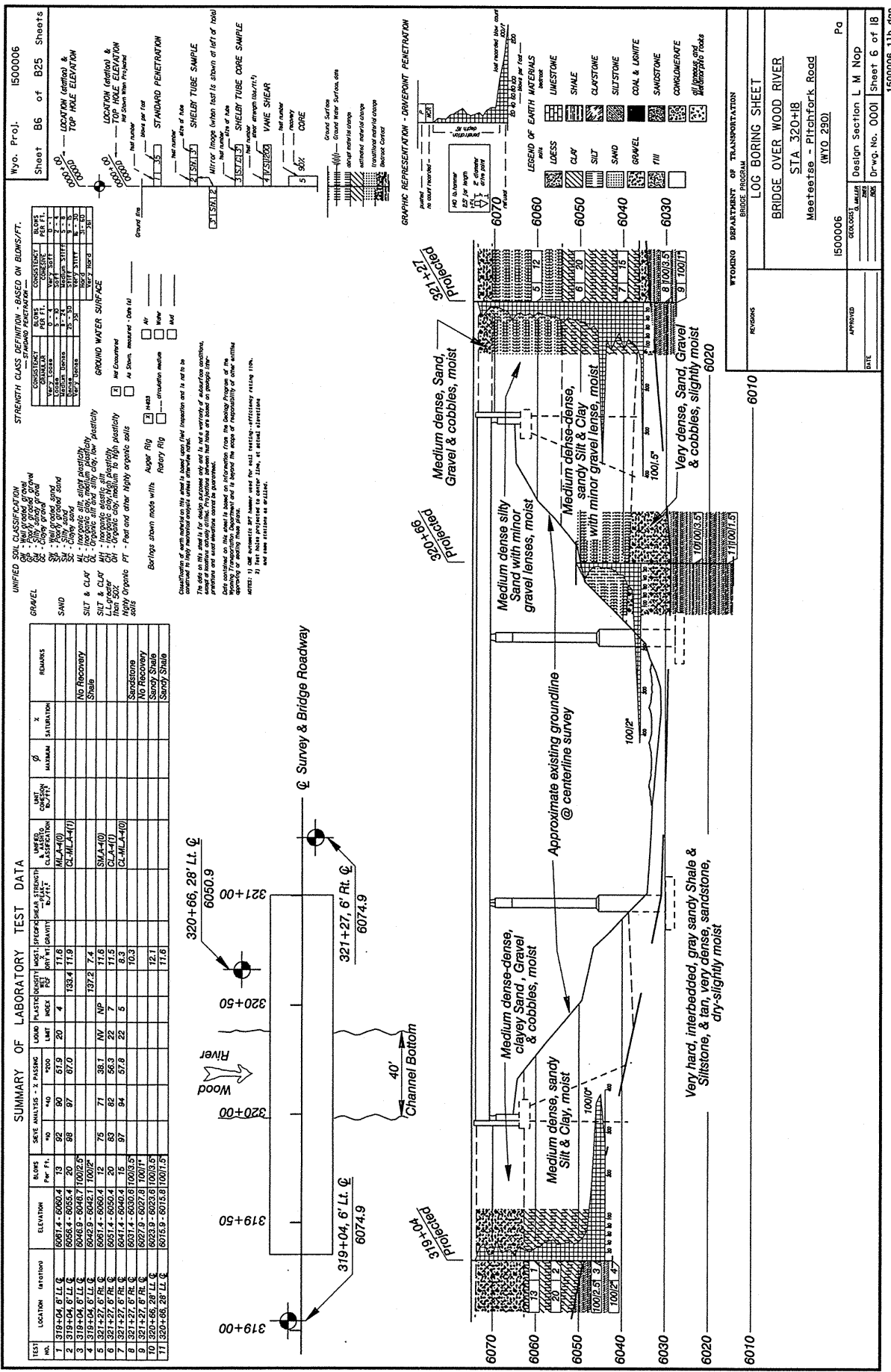
Section 4.05 – Riprap and Gabions

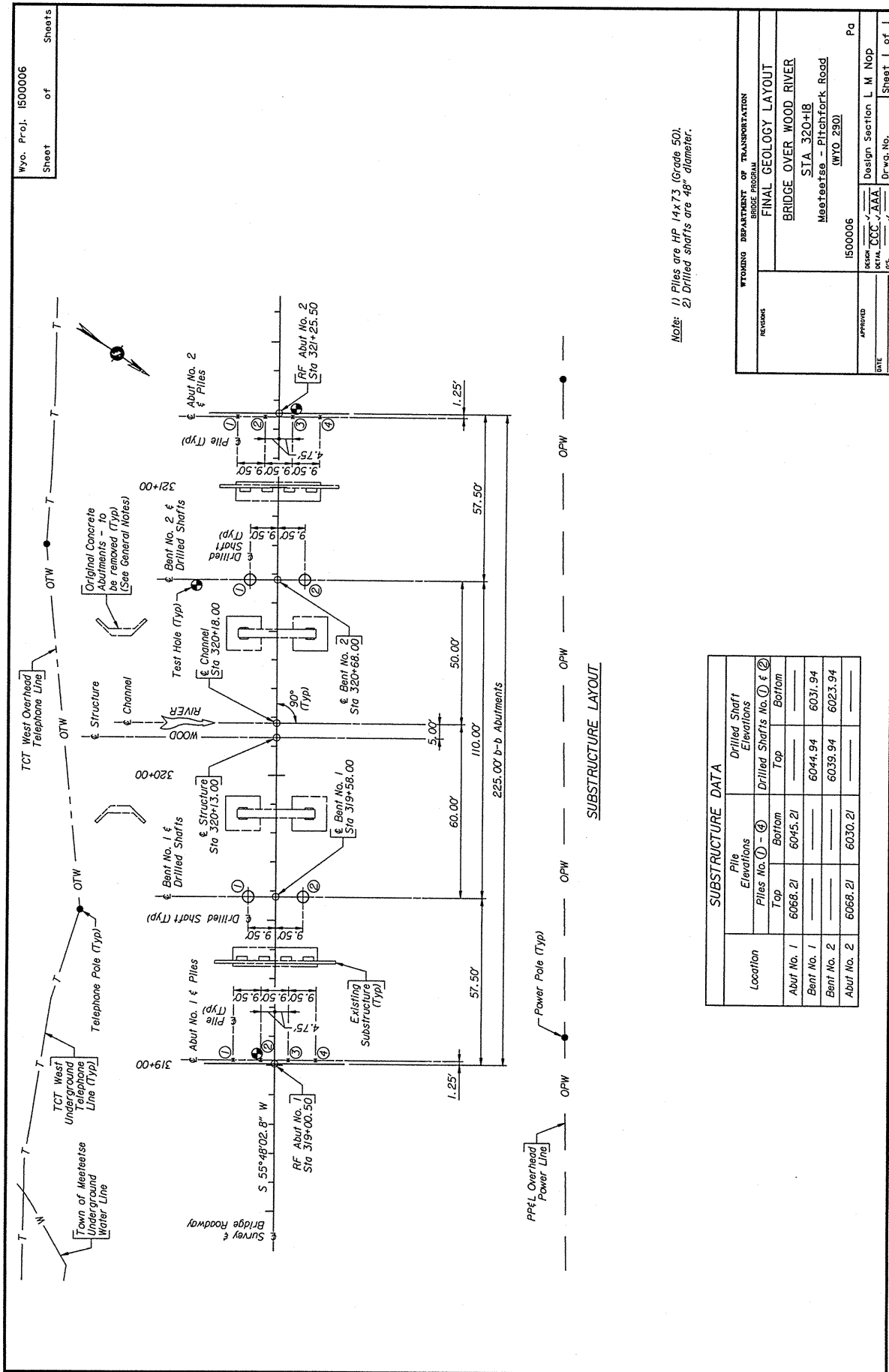
Wyo. Proj. 1500006
 Sheet B5 of B25 Sheets



WYOMING DEPARTMENT OF TRANSPORTATION BRIDGE PROGRAM	
RIPRAP DETAILS	
BRIDGE OVER WOOD RIVER	
STA 320+18	
Meeteetse - Pitchfork Road	
(WYO 230)	
DESIGN: <u>BBB/DAK</u>	APP'RD: <u>BBB/DAK</u>
CHECK: <u>BBB/DAK</u>	DATE: <u>BBB/DAK</u>
1500006	Pa
DESIGN SECTION L M NOP	Design Section L M NOP
SHEET 5 OF 18	Drawg. No. 0001 Sheet 5 of 18
1500006_1rr.dgn	

Section 4.06 - Geology





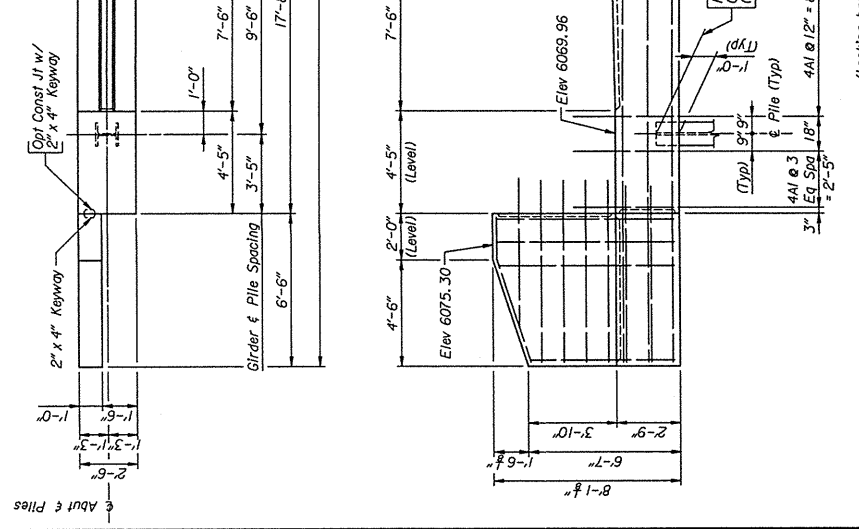
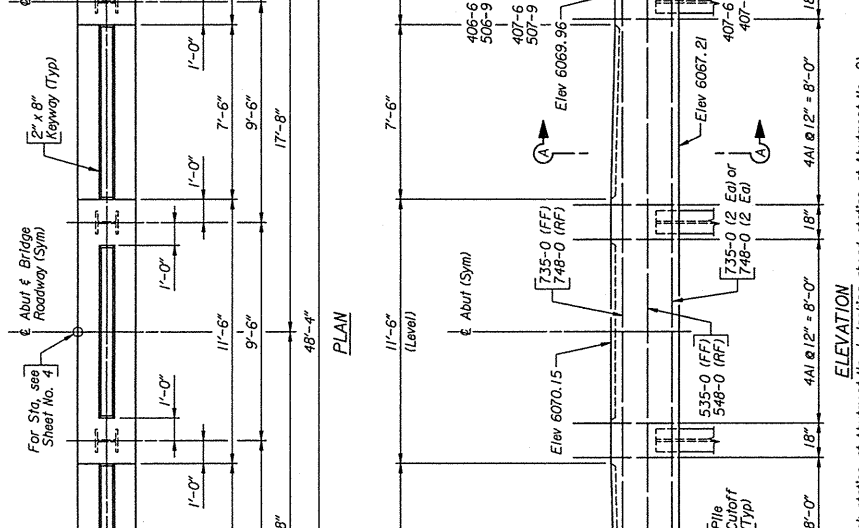
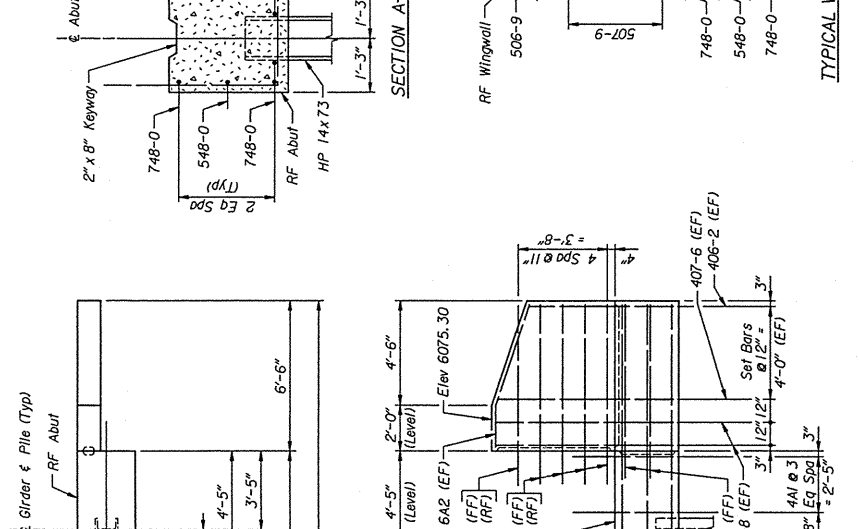
Note: 1) Piles are HP 14x73 (Grade 50).
2) Drilled shafts are 48" diameter.

SUBSTRUCTURE DATA			
Location	Pile Elevations		Drilled Shaft Elevations
	Piles No. ① - ④	① & ②	
	Top	Bottom	Top
Abut No. 1	6068.21	6045.21	6044.94
Bent No. 1			6031.94
Bent No. 2			6023.94
Abut No. 2	6068.21	6030.21	

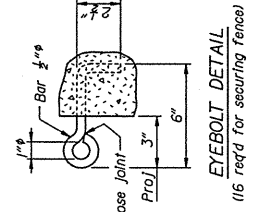
WYOMING DEPARTMENT OF TRANSPORTATION	
BRIDGE DIVISION	
FINAL GEOLOGY LAYOUT	
BRIDGE OVER WOOD RIVER	
STA 320+18	
Meeteetse - Pitchfork Road	
(WYO 290)	
DESIGN	Pa
DATE	1500006
APPROVED	Design Section L M Nop
DATE	Dr'wg. No. CCC-AAA
Sheet	1 of 1

Section 4.07 - Abutments

Wyo. Proj. 1500006
Sheet 87 of B25 Sheets



- Note: 1) Ensure the reinforcing steel fabricator prefixes bar marks this sheet with numeral 1 at Abutment No. 1 and numeral 2 at Abutment No. 2.
2) The estimated quantity of class B concrete is 13.0 CY per abutment.
3) For pile cutoff elevations, see Sheet No. 4.

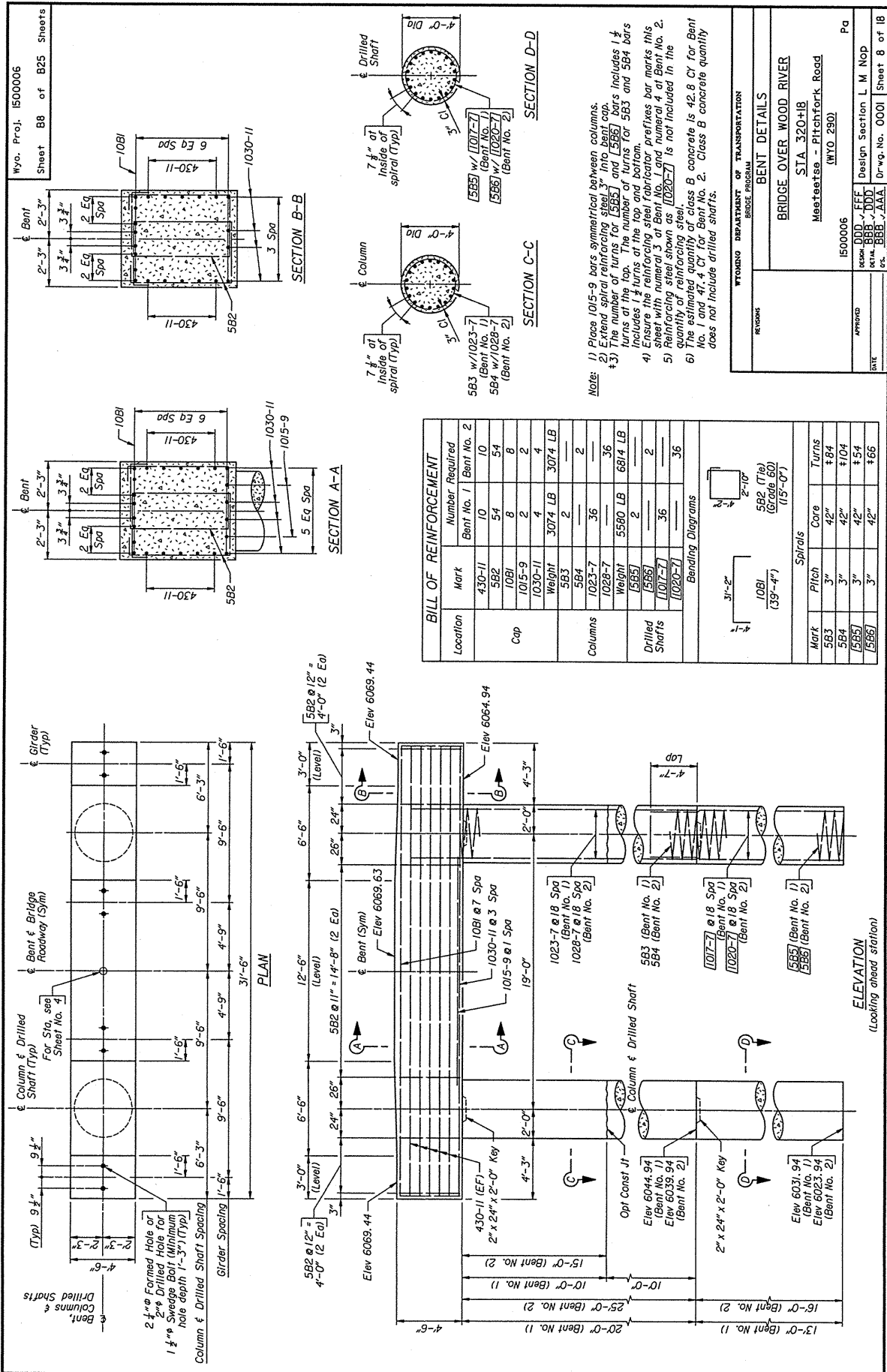


WYOMING DEPARTMENT OF TRANSPORTATION BRIDGE PROGRAM	
ABUTMENT DETAILS BRIDGE OVER WOOD RIVER STA 320+18 Meeteetse - Pitchfork Road (WYO 290)	
DESIGN	L. M. NOD
CHECKED	J. DODD
DATE	03/03/06
APPROVED	Pa
IS000006	
Design Section L. M. NOD	
Drwg. No. 0001 Sheet 7 of 18	

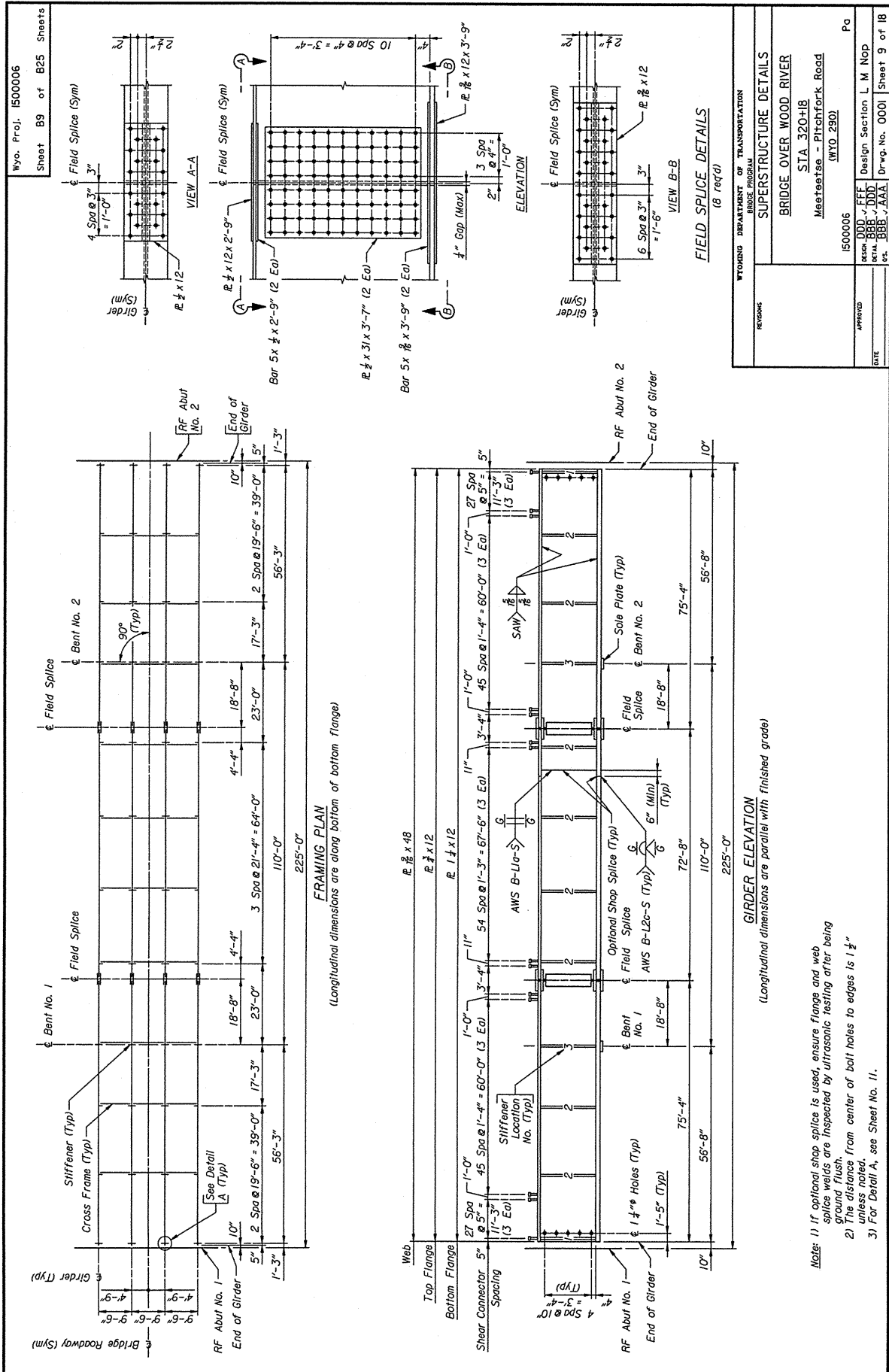
(Looking back station at Abutment No. 1, looking ahead station at Abutment No. 2)

BILL OF REINFORCEMENT					
Location	Mark	Number Required Per Abut	Bending Diagrams		Set Diagram
			Location	Mark	
Cap	4A1	35	Wingwalls	406-6	Set Bars (No. 4 Bars) (Avg length = 6'-10")
	535-0	1		407-6	
	548-0	1		407-8	
	735-0	3		Set Bars	
	748-0	3		506-9	
	Weight	849 LB		507-9	
			6A2	4	Weight
			Weight	318 LB	

Section 4.08 - Bent / Pier

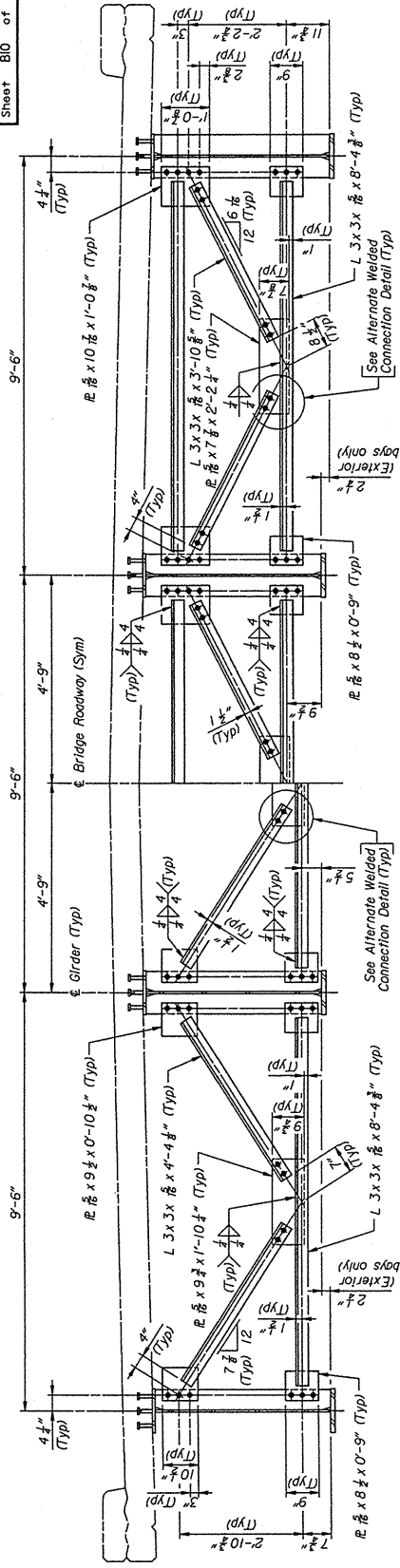


Section 4.09 – Superstructure



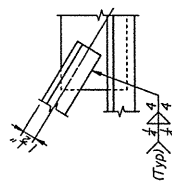
Section 4.09 - Superstructure

Wyo. Proj. 1500006
Sheet B10 of B25 Sheets

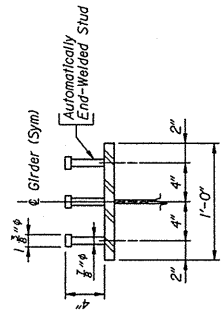


HALF SECTION
(Showing intermediate cross frames)
(24 req'd)

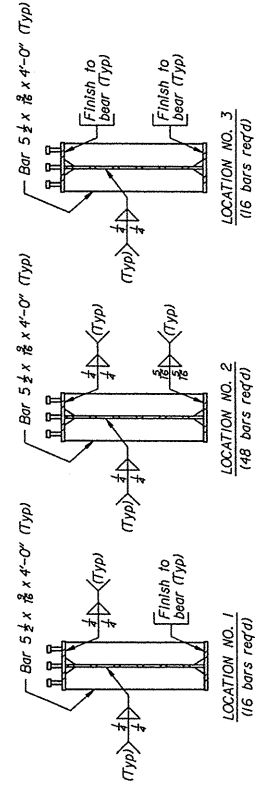
HALF SECTION
(Showing cross frames at bents)
(6 req'd)



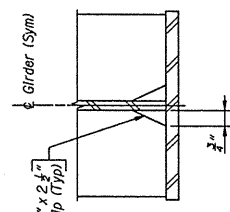
ALTERNATE WELDED CONNECTION DETAIL
(Bottom connection shown, top connection similar)



SHEAR CONNECTOR DETAIL
(2484 studs req'd)



STIFFENER DETAILS



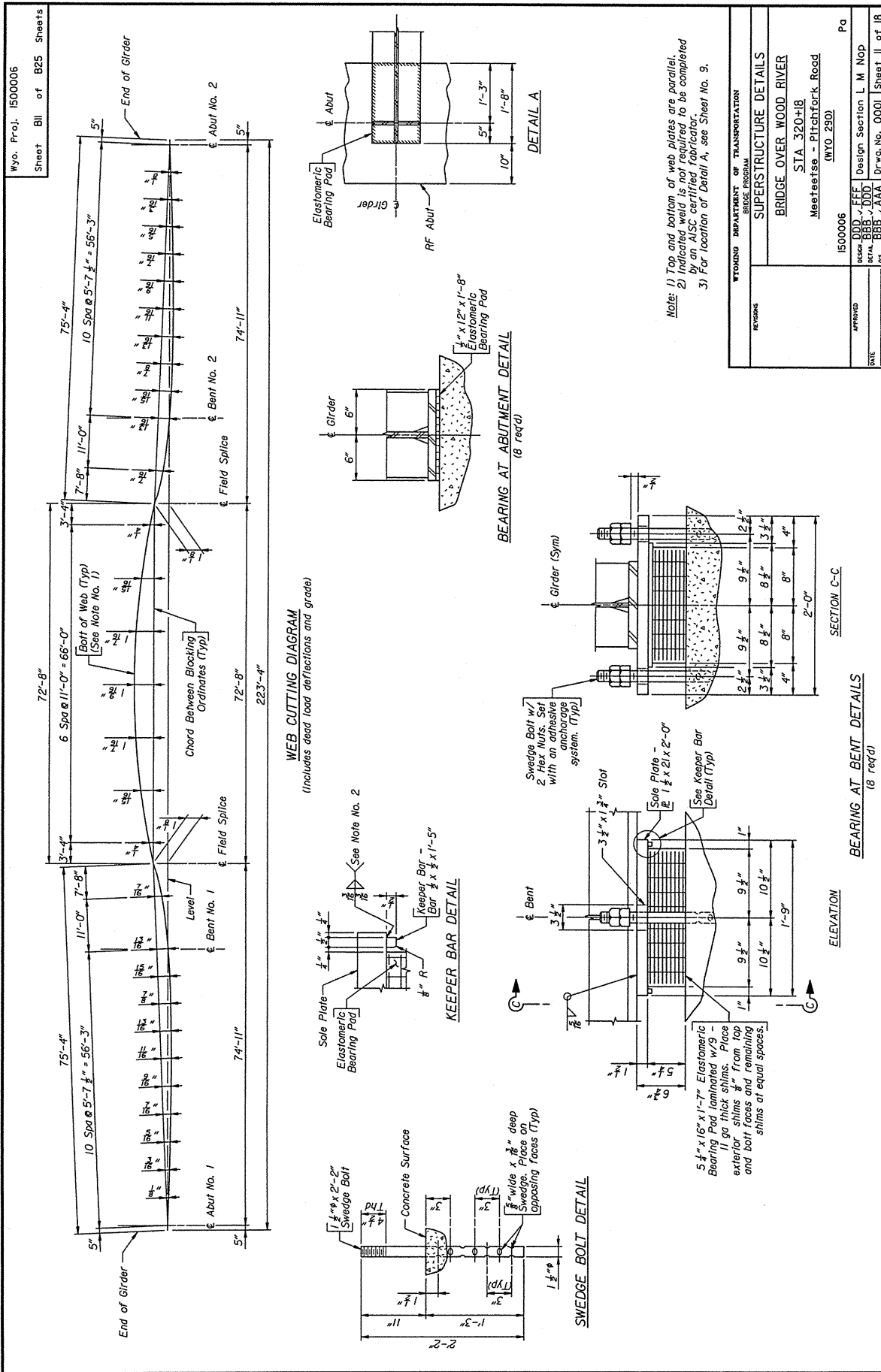
STIFFENER CLIP DETAIL
(Typ top & bott)

- Note:
- 1) Terminate stiffener and cross frame welds 1/4" from edge of members.
 - 2) Bolt pitch is 3" unless noted. The distance from center of bolt holes to edges is 1 1/2", unless noted.
 - 3) Alternate shop welding or bolted cross frame connections and the use of oversized holes in cross frame to stiffener connections will be permitted, at no additional cost to the department. Gusset plates have been sized to accommodate the use of both welded and bolted connections. Ensure that the laborer details the proposed connection on the shop drawings.
 - 4) Shear connectors are intended to be field installed in accordance with Supplementary Specification SS-500F, Automatically End-Welded Studs. If shear connectors are shop applied, ensure compliance with OSHA regulations.
 - 5) For stiffener locations, see Sheet No. 9.

WYOMING DEPARTMENT OF TRANSPORTATION BRIDGE PROGRAM	
SUPERSTRUCTURE DETAILS	
BRIDGE OVER WOOD RIVER	
STA. 320+18	
Mestetsite - Pitetfork Road (WYO 290)	
DESIGN	1500006
APPROVED	DDO, DFF, DET, BBB, V, AAA
DATE	Design Section L M NOP
SCALE	Drwg. No. 0001
	Sheet ID of 18
	Pa

1500006_1s22.dgn

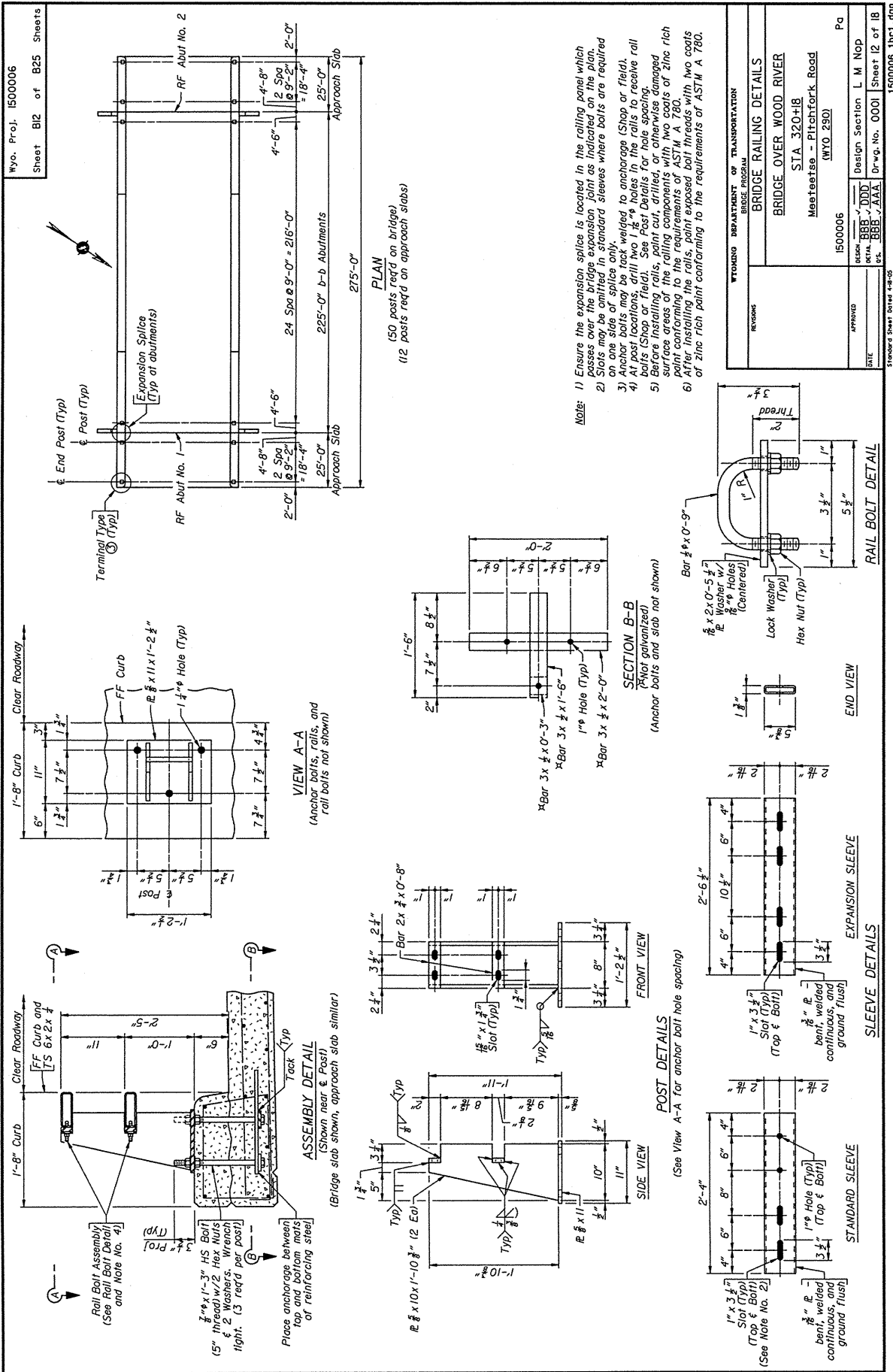
Section 4.09 - Superstructure



Note: 1) Top and bottom of web plates are parallel.
 2) Indicated weld is not required to be completed by an AISC certified fabricator.
 3) For location of Detail A, see Sheet No. 9.

WYOMING DEPARTMENT OF TRANSPORTATION	
BRIDGE PROGRAM	
SUPERSTRUCTURE DETAILS	
BRIDGE OVER WOOD RIVER	
STA 320+18	
Meeteetse - Pitchfork Road	
(WYO 230)	
DESIGN	Pa
DETAIL	Design Section L M NOP
DATE	Dr'wg. No. 0001 Sheet II of 18
1500006	1500006_1.sss.dgn

Section 4.10 - Bridge Railing

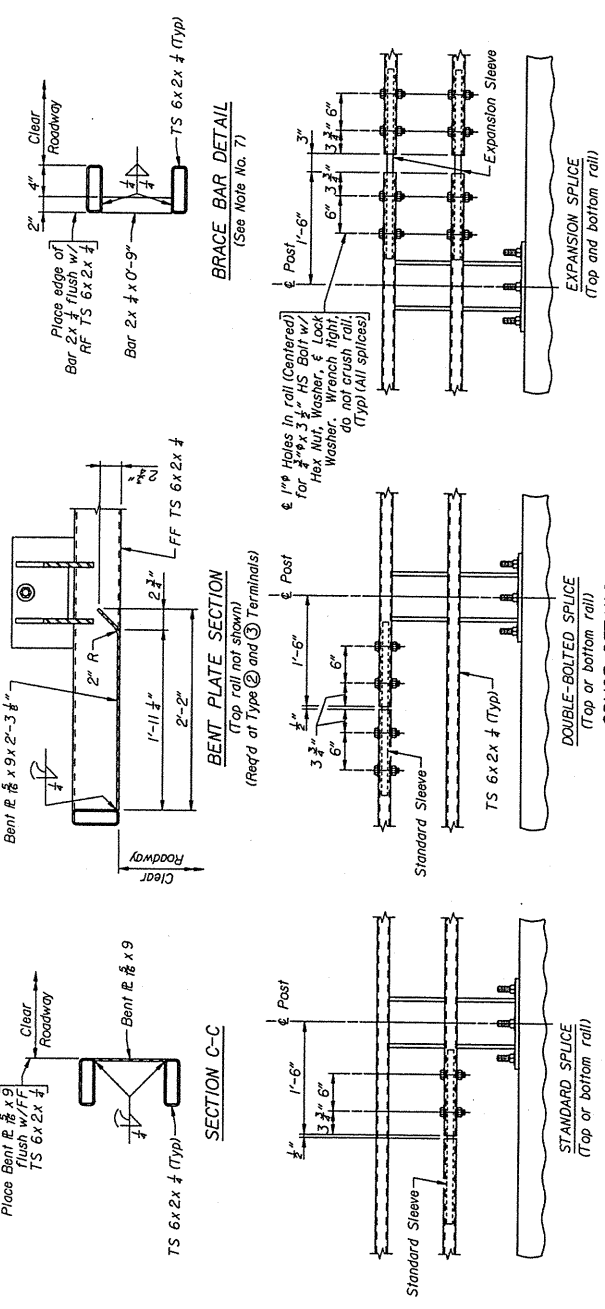
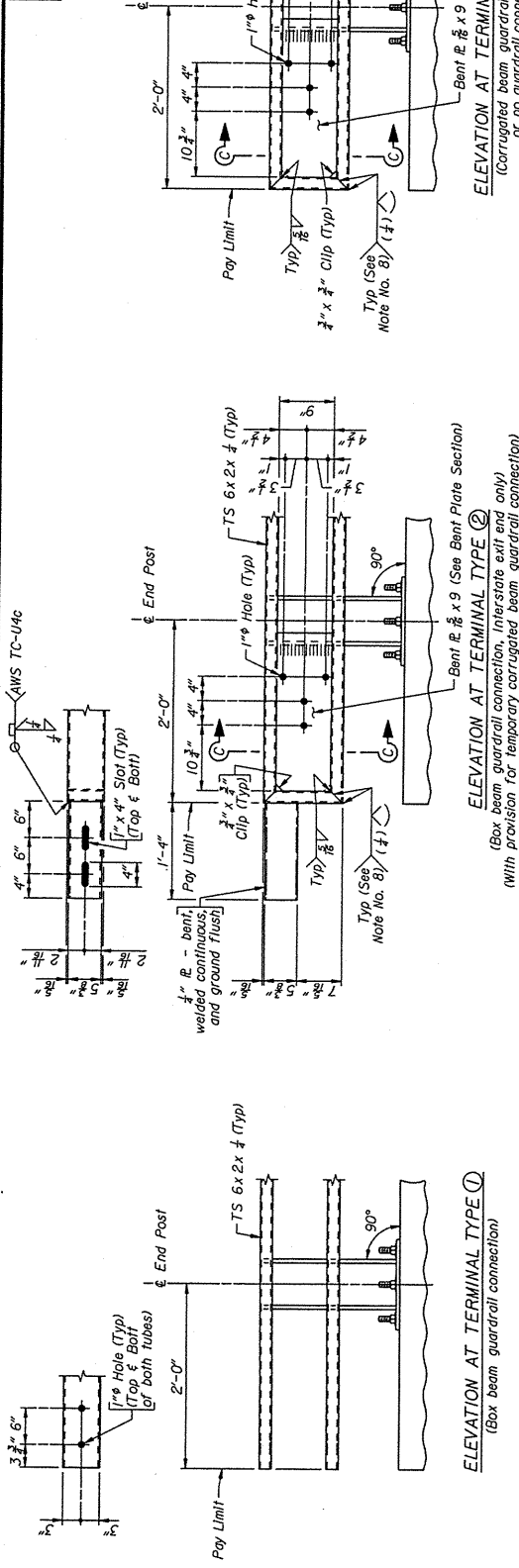


Note: 1) Ensure the expansion splice is located in the railing panel which passes over the bridge expansion joint as indicated on the plan. 2) Slabs may be omitted in standard sleeves where bolts are required. 3) Anchor bolts may be back welded to anchorages (Shop or field). 4) At post locations, drill two 1 1/4" holes in the rails to receive rail bolts (Shop or field). See Post Details for hole spacing. 5) Before installing rails, paint cut, drilled, or otherwise damaged surface areas of the railing components with two coats of zinc rich paint conforming to the requirements of ASTM A 780. 6) After installing the rails, paint exposed bolt threads with two coats of zinc rich paint conforming to the requirements of ASTM A 780.

WYOMING DEPARTMENT OF TRANSPORTATION		Design Section L M Nop	
BRIDGE PROGRAM		Drwg. No. 0001	
BRIDGE RAILING DETAILS		Sheet 12 of 18	
BRIDGE OVER WOOD RIVER			
STA 320+18			
Meeteetse - Pitchfork Road			
WYO 2901			
1500006		Pa	
REVISIONS	APPROVED	DATE	1500006_1br1.dgn

Section 4.10 - Bridge Railing

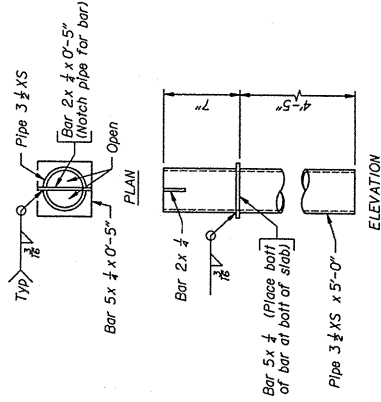
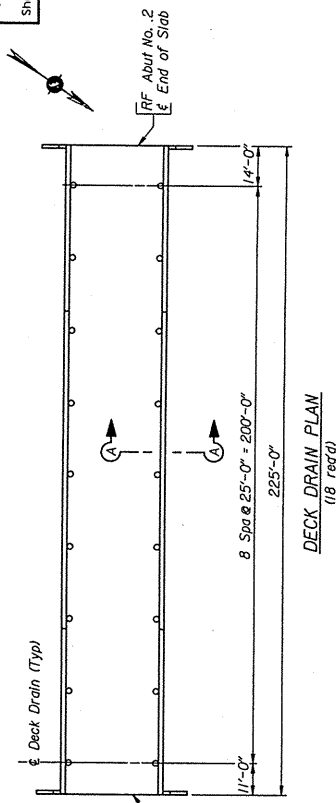
Wyo. Proj. 1500006
Sheet B13 of B25 Sheets



- Note:**
- 1) Either top or bottom rail in terminal section may be the facing rail.
 - 2) Ensure each rail length is continuous over a minimum of two posts. Railing that is part of a type ② or ③ terminal is continuous if either the top or bottom rail in the terminal is continuous over a minimum of two posts.
 - 3) In rehabilitation work, ensure railing that cannot feasibly be made continuous over a minimum of two posts has a double-bared splice.
 - 4) Splices may be located on either side of post, except at expansion splices.
 - 5) Splices shall be permitted per side of post, but do not snap splice rails.
 - 6) Do not snap splice rails.
 - 7) Ensure a brace bar is placed 2'-0" from the splice end of the shorter tube at types ② and ③ terminals.
 - 8) Ensure the fabricator prepares a sample of the indicated joint and it is macroetched to demonstrate that the required effective throat is achieved.

WORKING DEPARTMENT OF TRANSPORTATION BRIDGE PROGRAM	
BRIDGE RAILING DETAILS	
BRIDGE OVER WOOD RIVER	
STA 320+18	
Meeteetse - Pitchfork Road	
(WYO 290)	
DESIGN	Pa
DETAIL	BBB-DDD
DATE	BBB-AAA
APPROVED	L. M. NOP
DESIGN SECTION	L. M. NOP
DATE	BBB-AAA
DRWG. NO.	0001
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1500006_1br2.dgn	

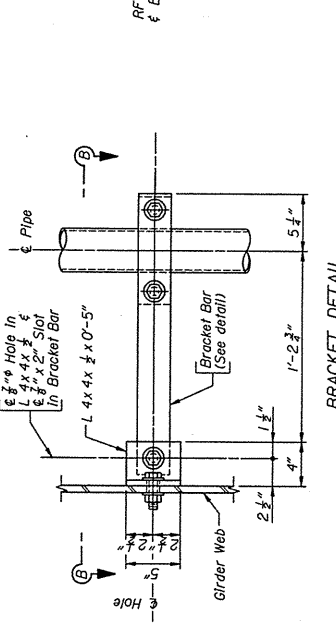
Wyo. Proj. 1500006
Sheet B14 of B25 Sheets



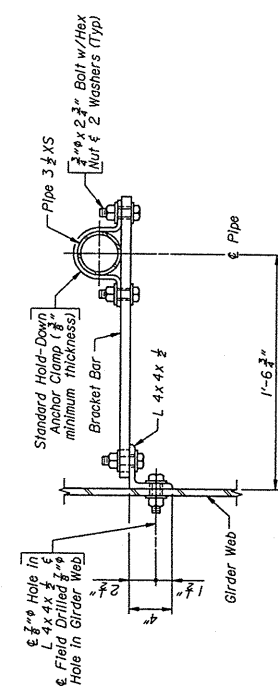
DECK DRAIN DETAILS

- Note: 1) Spacing of 1st holes in bracket bar may vary to match actual standard hold-down anchor clamp hole spacing.
2) Shift locations of deck drains, as necessary, to avoid interference with bridge railing anchorages.
3) Before placing slab, install and properly align deck drains, including brackets.

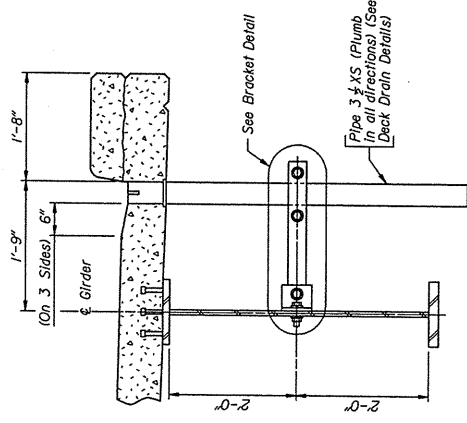
WYOMING DEPARTMENT OF TRANSPORTATION BRIDGE PROGRAM		DECK DRAIN DETAILS	
BRIDGE OVER WOOD RIVER STA. 320+18 Meetstreet - Pitchfork Road (WYO. 290)			
APPROVED	DESIGN	DATE	PO
	DDO / FFF		1500006
	BBB / DDD		Design Section L. M. NOD
	AAA / AAA		Drawg. No. 0001 Sheet 14 of 18



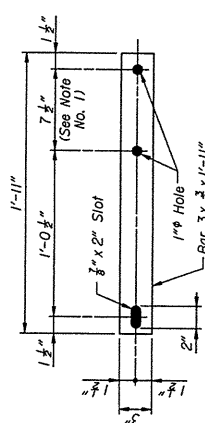
BRACKET DETAIL



SECTION B-B

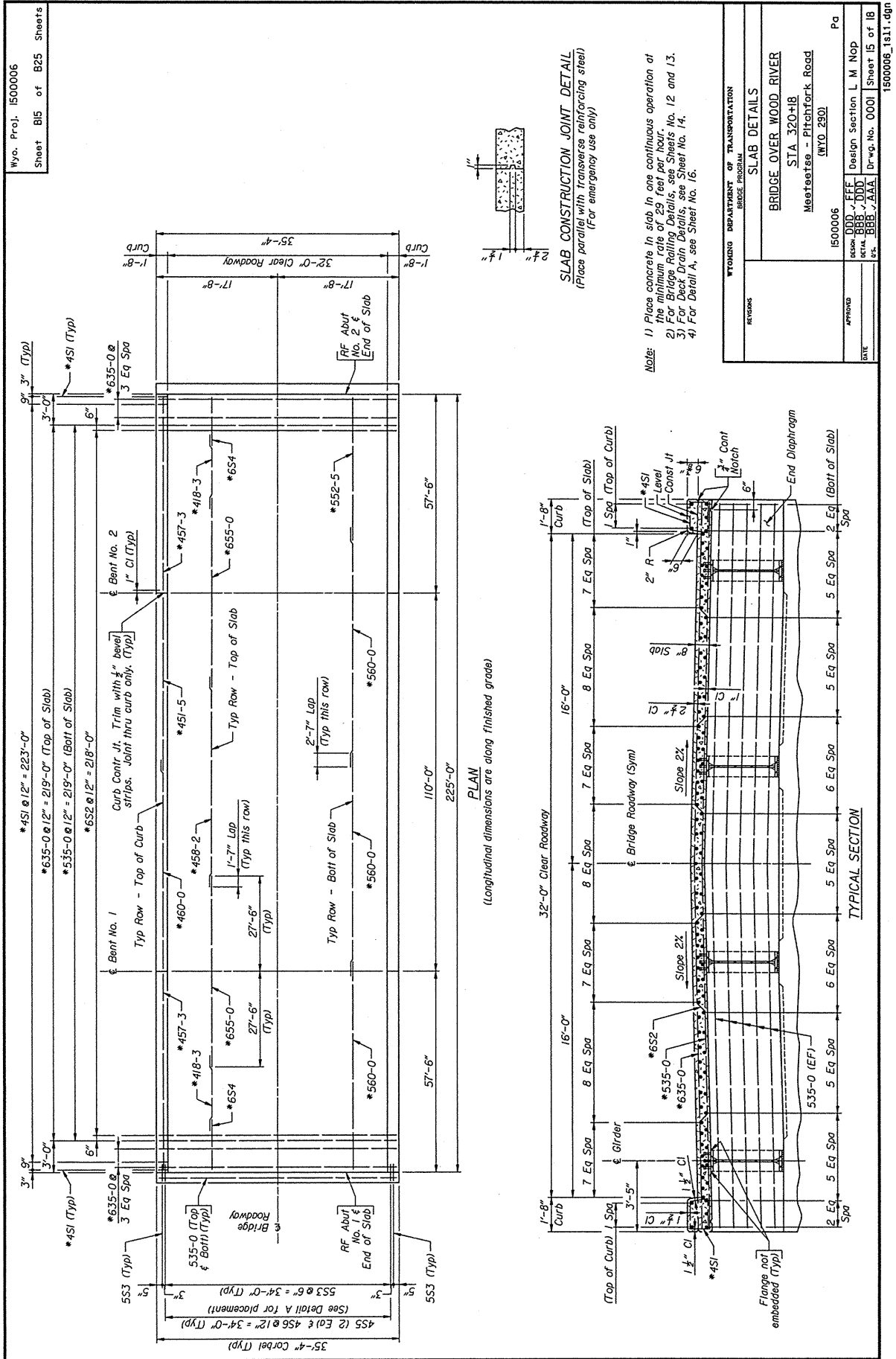


SECTION A-A



BRACKET BAR DETAIL

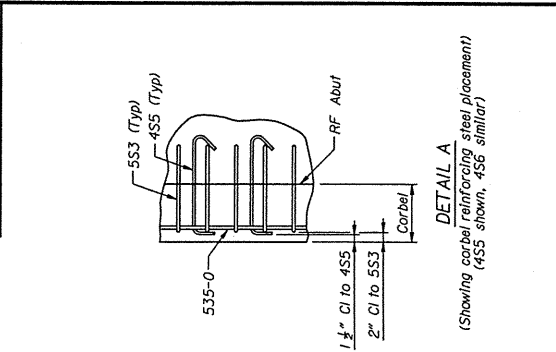
Section 4.13 - Slab



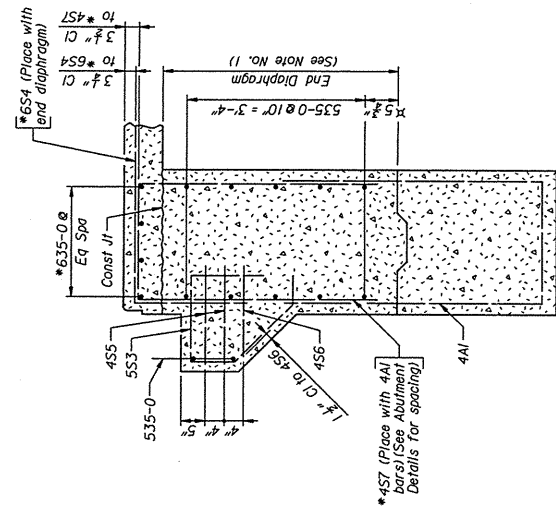
Wyo. Proj. 1500006
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WYOMING DEPARTMENT OF TRANSPORTATION BRIDGE PROGRAM	
SLAB DETAILS	
BRIDGE OVER WOOD RIVER	
STA 320+18	
Meeteetse - Pitchfork Road (WYO 290)	
DESIGN	1500006 Pa
DETAIL	DDO, JFF, L M Nop
DATE	BBB, J, AAA
Dr. No.	0001
Sheet	15 of 18

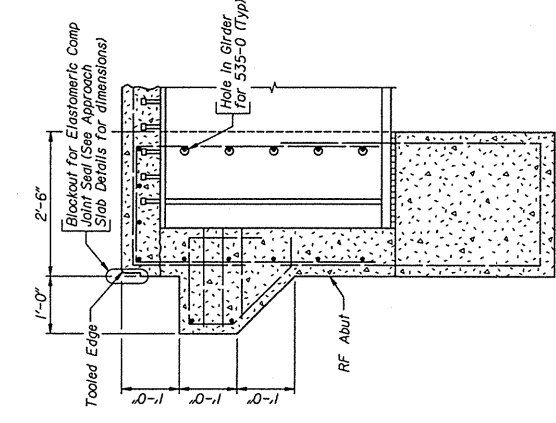
Wyo. Proj. 1500006
Sheet B16 of B25 Sheets



DETAIL A
(Showing corbel reinforcing steel placement)
(4S5 shown, 4S6 similar)



SECTION BETWEEN GIRDERS
(Showing typical reinforcing steel)



SECTION AT GIRDER
(Showing typical dimensions)

TYPICAL SECTIONS THRU END DIAPHRAGM

- NOTE: 1) Ensure end diaphragms attain 80% of ultimate design strength (f_c) by cylinder tests before placing slab.
2) Ensure the reinforcing steel fabricator prefixes bar marks this sheet with numeral 5.
3) Dimensions are in feet.
4) The estimated quantity of class A concrete for slab is 196.3 CY.
5) The estimated quantity of class B concrete for end diaphragms is 31.6 CY. The estimated quantity of class B concrete for curbs is 14.0 CY.
6) For location of Detail A, see Sheet No. 15.
7) For Abutment Details, see Sheet No. 7.

BILL OF REINFORCEMENT	
Location	Number Required
End Diaphragms	140
	4S5 70
	*4S7 70
	5S3 142
	5S5-0 24
	*6S4 106
	*Weight 3174 LB
Slab and Curbs	2058 LB
	*4S1 452
	*41B-3 106
	*4S1-5 4
	*4S7-3 8
	*4S8-2 53
	*460-0 4
	*5S5-0 220
	*5S2-5 42
	*560-0 126
	*6S2 219
	*6S5-0 228
	*Weight 456148 LB

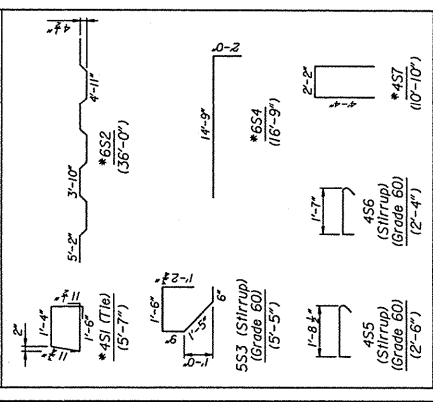
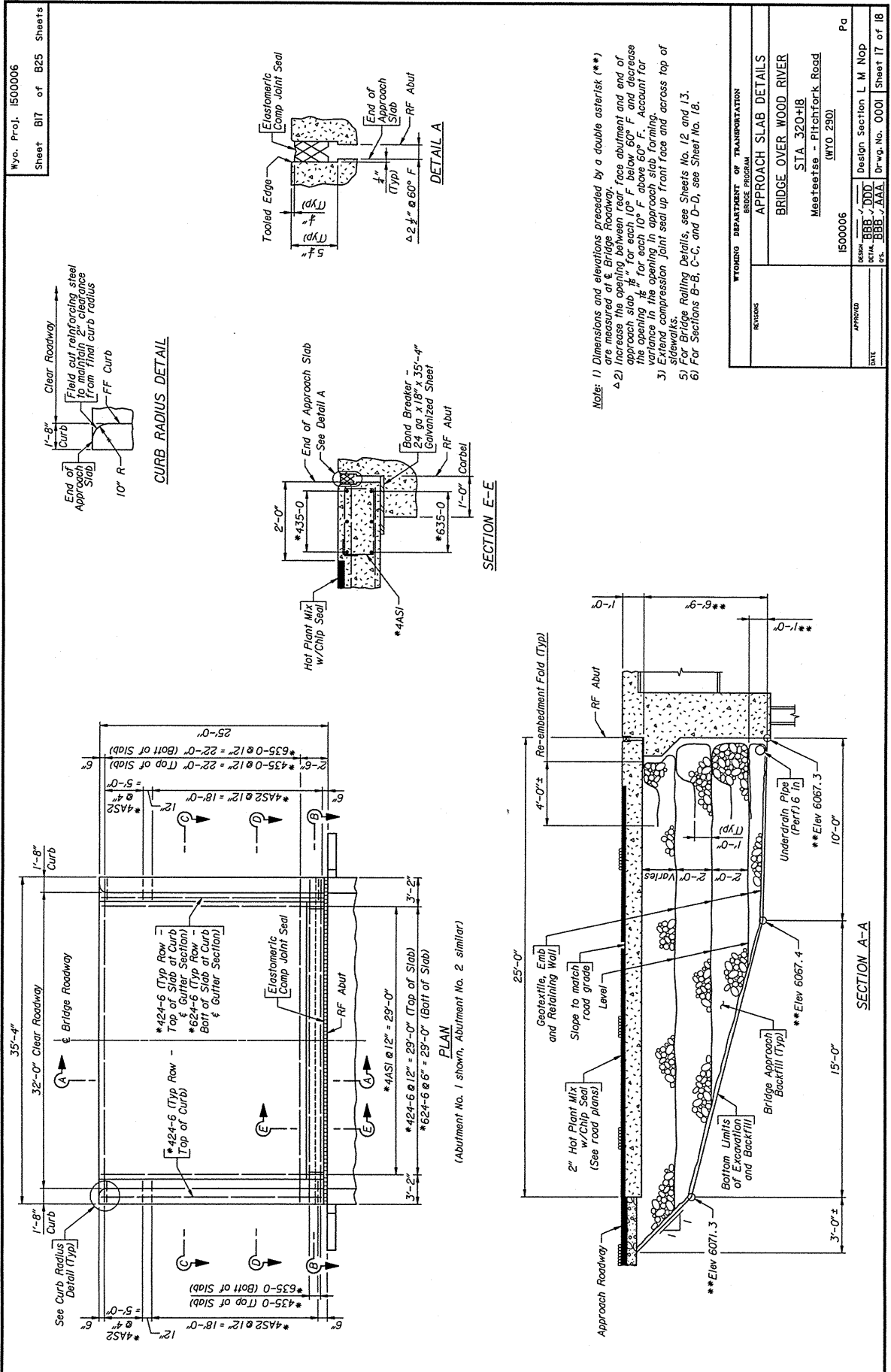


TABLE OF SCREED ELEVATIONS												
Add base elevation 6070.00 to elevations listed in table. Elevations include grade, slope, and correction for dead load deflection. For screed line locations, see Sheet No. 3.												
Screed Line No.	Abut No. 1	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	Tenth Point of Spans	
											Abut No. 2	2.0
1	4.77	4.77	4.76	4.76	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75
2	4.84	4.83	4.83	4.82	4.82	4.82	4.82	4.82	4.82	4.82	4.82	4.82
3	5.03	5.02	5.02	5.02	5.01	5.01	5.01	5.01	5.01	5.01	5.01	5.01
4	5.12	5.12	5.12	5.11	5.11	5.11	5.11	5.11	5.10	5.10	5.11	5.12

Section 4.14 - Approach Slabs



Section 4.14 - Approach Slabs

Wyo. Proj. 1500006
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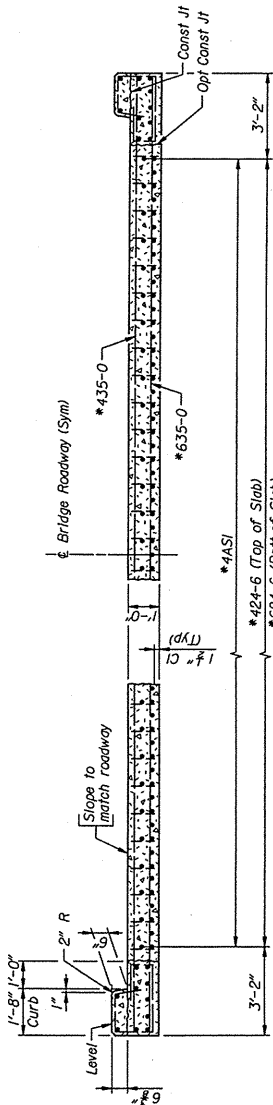
BILL OF REINFORCEMENT	
Location	Mark
Approach Slab and Curbs	*4ASI
	*4AS2
	*424-6
	*435-0
	*624-6
	*635-0
Bending Diagrams	

*4ASI (15'-6")
1'-8"

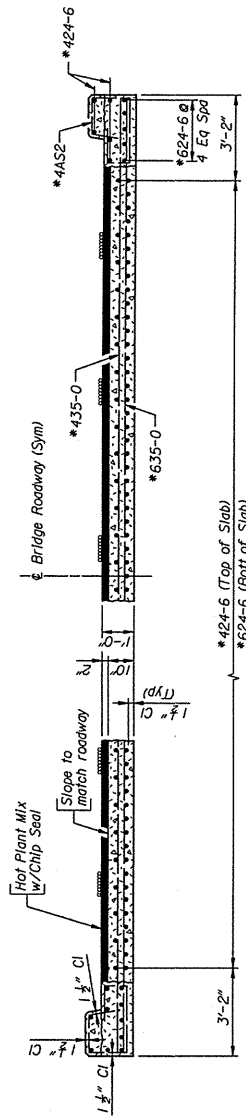
*4AS2 (7'-10")
2'-4 1/2"

Notes: 1) Ensure the reinforcing steel fabricator prefixes bar marks this sheet with numeral 6 at Abutment No. 1 and numeral 7 at Abutment No. 2.
2) Extend bottom layer of geotextile up side limits of excavation and backfill to bottom of first layer of geotextile.
3) For locations of Sections B-B, C-C, and D-D, see Sheet No. 17.

DESIGNED	DATE	APPROVED	DESIGN SECTION L. M. NOP
BBB	DDD	AAA	Dr-wg. No. 0001 Sheet 18 of 18
BBB	DDD	AAA	1500006 Pa
WYOMING DEPARTMENT OF TRANSPORTATION BRIDGE PROGRAM		APPROACH SLAB DETAILS	
BRIDGE OVER WOOD RIVER		STA 320+18	
Meeteetse - Pitchfork Road		(WYO 290)	



SECTION B-B
(Showing typical curb and gutter dimensions)



SECTION D-D
(Showing typical curb and gutter reinforcing steel)

