



State of West Virginia
 Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

Request for Quotation

RFO NUMBER
06900194

PAGE
1

ADDRESS CORRESPONDENCE TO ATTENTION OF:
MICHAEL AUSTIN
304-558-2402

VENDOR

RFQ COPY
 TYPE NAME/ADDRESS HERE

SHIP TO

DIVISION OF HIGHWAYS
JOBSITE
SEE SPECIFICATIONS

DATE PRINTED	TERMS OF SALE	SHIP VIA	FOB	FREIGHT TERMS
12/14/2008				

BID OPENING DATE: **01/14/2009** BID OPENING TIME **01:30PM**

LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
0001	1	JB		210-16		
PRESTRESSED CONCRETE BEAMS WITH ACCESSORIES TO PROVIDE 1956 SF OF PRESTRESSED CONCRETE BEAMS WITH ACCESSORIES. THE BEAMS SHALL BE 42" DEEP X 36" WIDE X 81'-6" LONG. TWO (2) EXTERIOR BEAMS AND SIX (6) INTERIOR BEAMS ARE REQUIRED FOR STATE PROJECT S348-7-10.47, SUGAR CREEK BRIDGE, FOR THE WEST VIRGINIA DIVISION OF HIGHWAYS. PER THE ATTACHED SPECIFICATIONS AND DRAWINGS. EXHIBIT 10 REQUISITION NO.: ADDENDUM ACKNOWLEDGEMENT I HEREBY ACKNOWLEDGE RECEIPT OF THE FOLLOWING CHECKED ADDENDUM(S) AND HAVE MADE THE NECESSARY REVISIONS TO MY PROPOSAL, PLANS AND/OR SPECIFICATION, ETC. ADDENDUM NO.'S: NO. 1 NO. 2 NO. 3 NO. 4 NO. 5						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE		TELEPHONE	DATE
TITLE	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE	

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

**GENERAL TERMS & CONDITIONS
REQUEST FOR QUOTATION (RFQ) AND REQUEST FOR PROPOSAL (RFP)**

1. Awards will be made in the best interest of the State of West Virginia.
2. The State may accept or reject in part, or in whole, any bid.
3. All quotations are governed by the *West Virginia Code* and the *Legislative Rules* of the Purchasing Division.
4. Prior to any award, the apparent successful vendor must be properly registered with the Purchasing Division and have paid the required \$125 fee.
5. All services performed or goods delivered under State Purchase Order/Contracts are to be continued for the term of the Purchase Order/Contracts, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise available for these services or goods, this Purchase Order/Contract becomes void and of no effect after June 30.
6. Payment may only be made after the delivery and acceptance of goods or services.
7. Interest may be paid for late payment in accordance with the *West Virginia Code*.
8. Vendor preference will be granted upon written request in accordance with the *West Virginia Code*.
9. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.
10. The Director of Purchasing may cancel any Purchase Order/Contract upon 30 days written notice to the seller.
11. The laws of the State of West Virginia and the *Legislative Rules* of the Purchasing Division shall govern all rights and duties under the Contract, including without limitation the validity of this Purchase Order/Contract.
12. Any reference to automatic renewal is hereby deleted. The Contract may be renewed only upon mutual written agreement of the parties.
13. **BANKRUPTCY:** In the event the vendor/contractor files for bankruptcy protection, this Contract may be deemed null and void, and terminated without further order.
14. **HIPAA BUSINESS ASSOCIATE ADDENDUM:** The West Virginia State Government HIPAA Business Associate Addendum (BAA), approved by the Attorney General, and available online at the Purchasing Division's web site (<http://www.state.wv.us/admin/purchase/vrc/hipaa.htm>) is hereby made part of the agreement. Provided that, the Agency meets the definition of a Cover Entity (45 CFR §160.103) and will be disclosing Protected Health Information (45 CFR §160.103) to the vendor.
15. **WEST VIRGINIA ALCOHOL & DRUG-FREE WORKPLACE ACT:** If this Contract constitutes a public improvement construction contract as set forth in Article 1D, Chapter 21 of the West Virginia Code ("The West Virginia Alcohol and Drug-Free Workplace Act"), then the following language shall hereby become part of this Contract: "The contractor and its subcontractors shall implement and maintain a written drug-free workplace policy in compliance with the West Virginia Alcohol and Drug-Free Workplace Act, as set forth in Article 1D, Chapter 21 of the West Virginia Code. The contractor and its subcontractors shall provide a sworn statement in writing, under the penalties of perjury, that they maintain a valid drug-free work place policy in compliance with the West Virginia and Drug-Free Workplace Act. It is understood and agreed that this Contract shall be cancelled by the awarding authority if the Contractor: 1) Fails to implement its drug-free workplace policy; 2) Fails to provide information regarding implementation of the contractor's drug-free workplace policy at the request of the public authority; or 3) Provides to the public authority false information regarding the contractor's drug-free workplace policy."

INSTRUCTIONS TO BIDDERS

1. Use the quotation forms provided by the Purchasing Division.
2. **SPECIFICATIONS:** Items offered must be in compliance with the specifications. Any deviation from the specifications must be clearly indicated by the bidder. Alternates offered by the bidder as **EQUAL** to the specifications must be clearly defined. A bidder offering an alternate should attach complete specifications and literature to the bid. The Purchasing Division may waive minor deviations to specifications.
3. Complete all sections of the quotation form.
4. Unit prices shall prevail in case of discrepancy.
5. All quotations are considered F.O.B. destination unless alternate shipping terms are clearly identified in the quotation.
6. **BID SUBMISSION:** All quotations must be delivered by the bidder to the office listed below prior to the date and time of the bid opening. Failure of the bidder to deliver the quotations on time will result in bid disqualifications: Department of Administration, Purchasing Division, 2019 Washington Street East, P.O. Box 50130, Charleston, WV 25305-0130



State of West Virginia
 Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

Request for Quotation

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2

ADDRESS CORRESPONDENCE TO ATTENTION OF
**MICHAEL AUSTIN
 304-558-2402**

RFQ COPY
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DIVISION OF HIGHWAYS
 JOBSITE
 SEE SPECIFICATIONS

BIDDING

SHIP TO

DATE PRINTED 12/14/2008	TERMS OF SALE	SHIP VIA	FOB	FREIGHT TERMS
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BID OPENING DATE: **01/14/2009** BID OPENING TIME **01:30PM**

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
<p>I UNDERSTAND THAT FAILURE TO CONFIRM THE RECEIPT OF THE ADDENDUM(S) MAY BE CAUSE FOR REJECTION OF BIDS.</p> <p>VENDOR MUST CLEARLY UNDERSTAND THAT ANY VERBAL REPRESENTATION MADE OR ASSUMED TO BE MADE DURING ANY ORAL DISCUSSION HELD BETWEEN VENDOR'S REPRESENTATIVES AND ANY STATE PERSONNEL IS NOT BINDING. ONLY THE INFORMATION ISSUED IN WRITING AND ADDED TO THE SPECIFICATIONS BY AN OFFICIAL ADDENDUM IS BINDING.</p> <p>..... SIGNATURE</p> <p>..... COMPANY</p> <p>..... DATE</p> <p>REV. 11/96</p> <p>NOTICE</p> <p>A SIGNED BID MUST BE SUBMITTED TO:</p> <p>DEPARTMENT OF ADMINISTRATION PURCHASING DIVISION BUILDING 15 2019 WASHINGTON STREET, EAST CHARLESTON, WV 25305-0130</p> <p>THE BID SHOULD CONTAIN THIS INFORMATION ON THE FACE OF</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	TELEPHONE	DATE
TITLE	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE

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State of West Virginia
 Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

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RFQ NUMBER
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ADDRESS CORRESPONDENCE TO ATTENTION OF
MICHAEL AUSTIN 304-558-2402

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DIVISION OF HIGHWAYS
 JOBSITE
 SEE SPECIFICATIONS

VENDOR

SHIP TO

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
12/14/2008				

BID OPENING DATE: 01/14/2009 BID OPENING TIME 01:30PM

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
<p>THE ENVELOPE OR THE BID MAY NOT BE CONSIDERED: SEALED BID</p> <p>BUYER: 33</p> <p>RFQ. NO.: 06900194</p> <p>BID OPENING DATE: -----</p> <p>BID OPENING TIME: -----</p> <p>PLEASE PROVIDE A FAX NUMBER IN CASE IT IS NECESSARY TO CONTACT YOU REGARDING YOUR BID:</p> <p>-----</p> <p>CONTACT PERSON (PLEASE PRINT CLEARLY):</p> <p>-----</p> <p>***** THIS IS THE END OF RFQ 06900194 ***** TOTAL: _____</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	TELEPHONE	DATE
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TITLE	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE
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WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

1. DESCRIPTION

The beams shall be 42" deep X 36" wide X 81'-6" long.

Two (2) exterior beams and six (6) interior beams are required.

In addition to the beams the fabricator shall also supply in accordance with the attached plans all associated items included but not limited to the following.

Guardrail Posts and Hardware attached to the exterior beams; Bearing Pads; Anchor Dowels; Post Tensioning Bars with Nuts and Bearing Plates and 2 extra nuts; Sponge Rubber Joint Filler, Washers, and Grout Stop.

2. ACCEPTANCE

Cracks developing in a beam may be cause for rejection of the beam. Cracks that are not detrimental to the structural integrity of the beam, as determined by the Division of Highways, may be accepted under the following conditions:

- 1) Cracks of 0.004 inch or less shall be treated with a second coat of a Division of Highways approved concrete sealer.
 - 2) Cracks of greater than 0.004 inch shall be treated by a Division of Highways approved epoxy injection methods.
- All concrete sealer and epoxy injection required for acceptance shall be performed at no additional cost to the Division of Highways.

3. DELIVERY

ALL BEAMS AND ACCESSORIES SHALL BE DELIVERED TO THE PROJECT SITE DURING THE WEEK OF JULY 20, 2009.

Upon receipt of a Purchase Order the Vendor shall submit shop drawings to the District Bridge Engineer within fifteen (15) calendar days. Shop drawings must be approved by the Division of Highways prior to the manufacture of any beam sections.

Should the Vendor fail to meet the above delivery schedule, liquidated damages will be assessed in accordance with Section 108.7 of the current Division of Highways Standard Specifications Roads and Bridges.

Sites for delivery of beam sections and accessories under this contract shall be accessible to equipment that is normally and customarily used for transportation of beam sections. Delivery will not be required where gross vehicle loaded weights will exceed the legal road or bridge load. Upon receipt of an approved Purchase Order, the Vendor must notify the District Bridge Engineer within ten (10) calendar days if delivery under the terms of this contract cannot be performed due to weight restrictions or roadway geometrics.

Prior to delivery, all Beams, Accessories and Optional Items shall be tested and accepted in accordance with Section 603 of the Division of Highways Standard Specifications Roads and Bridges adopted 1993, as modified by the July 1, 1998 Supplemental Specifications.

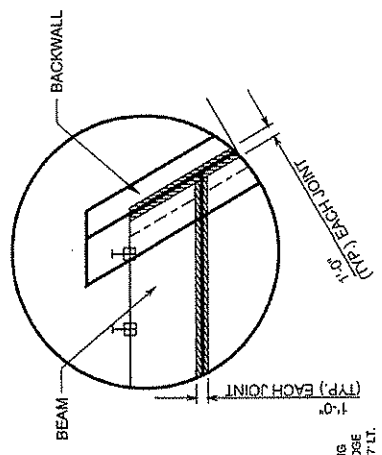
4. PARTIAL PAYMENT OF APPROVED BEAMS

Upon completion of manufacture and approval by the Division of Highways of all beams specified on Purchase Order, the vendor may invoice and the Division will pay for the cost of manufacturing the beams, not to exceed 65% of the total cost of the delivered beams. Partial payment for the beams shall be subject to the following conditions:

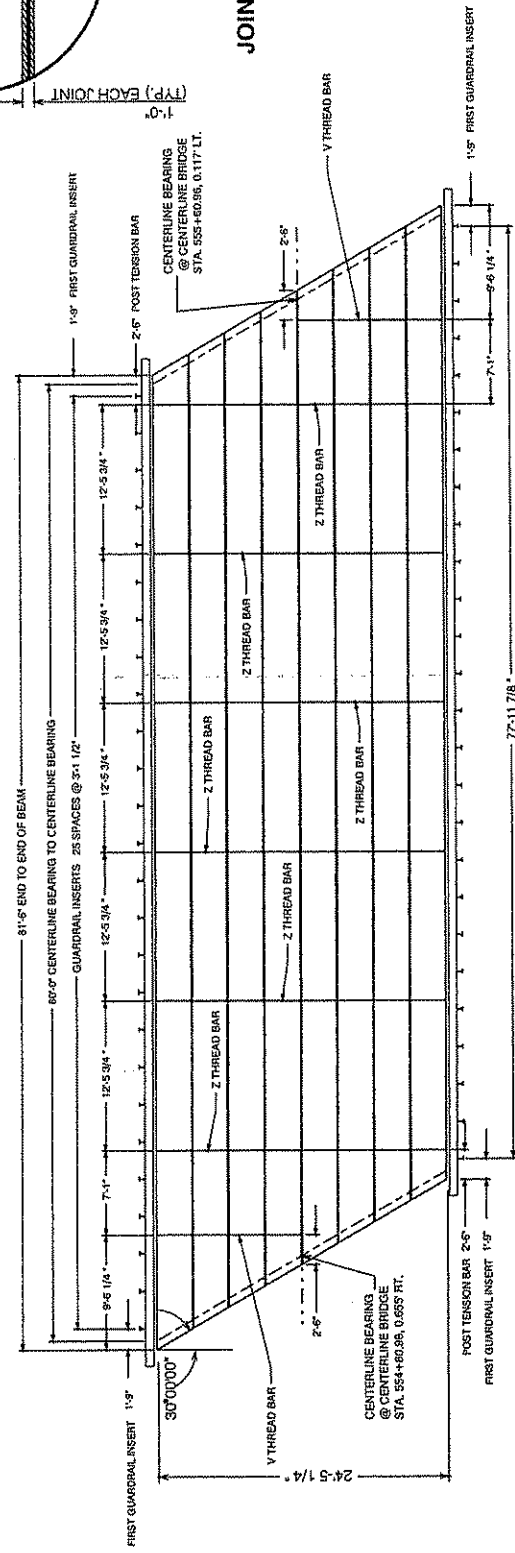
- a. The vendor must request partial payment and furnish an official invoice for the manufactured and approved beams.
- b. The partial payment invoice shall be accompanied by a surety bond equal to the invoiced amount guaranteeing delivery of all items specified on the Purchase Order.
- c. The vendor shall furnish a statement of approved beams condition and exact storage location.
- d. The vendor shall furnish a legal right-of-entry onto the storage site to Division of Highways' employees and/or agents for the purpose of inspecting, sampling, testing and removing any or all Beams.
- e. The vendor shall certify that the stored beams are suitably marked and identified as property of the Division of Highways and will not be for any purpose not designated by the Division.

Project No.	1000	Sheet No.	17
Contract No.	1000	Scale	AS SHOWN
Client	TYLER COUNTY	Drawn By	...
Checked By	...	Approved By	...

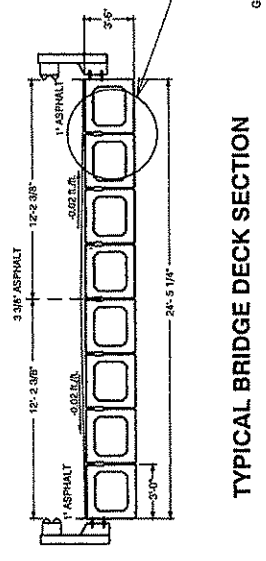
Butyl Waterproofing Membrane
12" Wide Centered Along Full
Length of Beam & Backwall



JOINT WATERPROOFING DETAIL



DECK PLAN

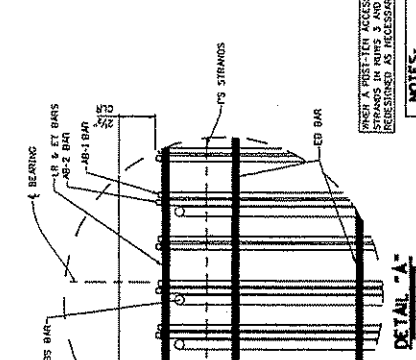
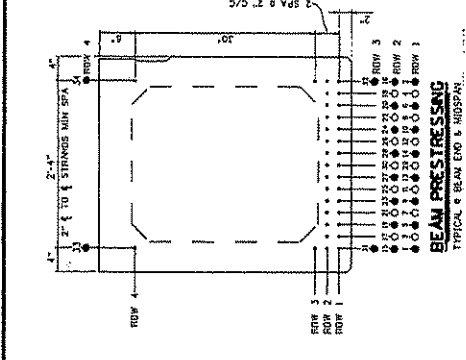
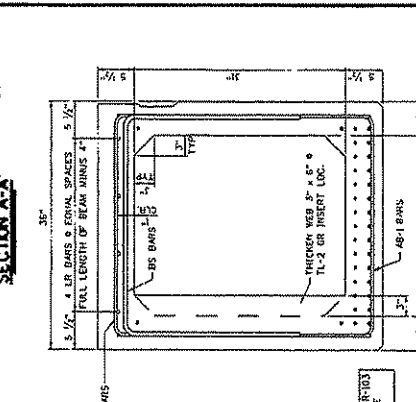
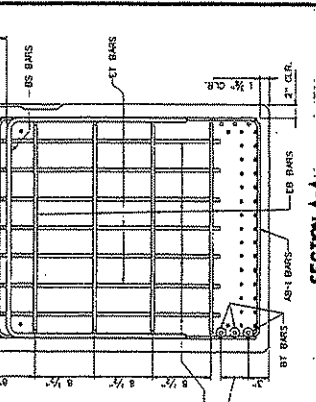


TYPICAL BRIDGE DECK SECTION

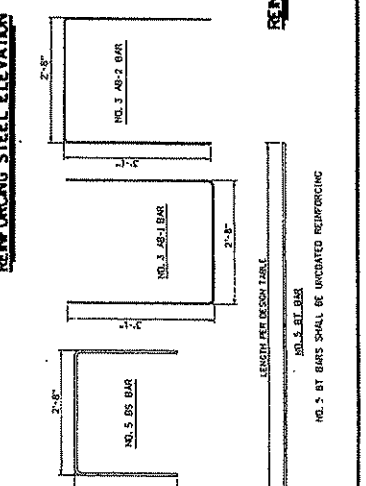
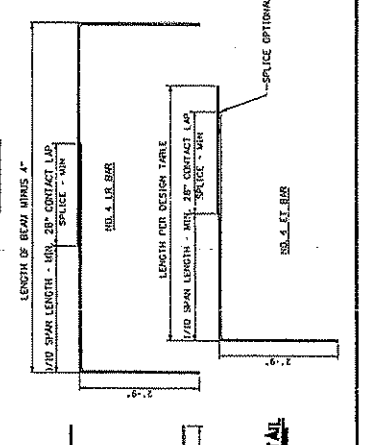
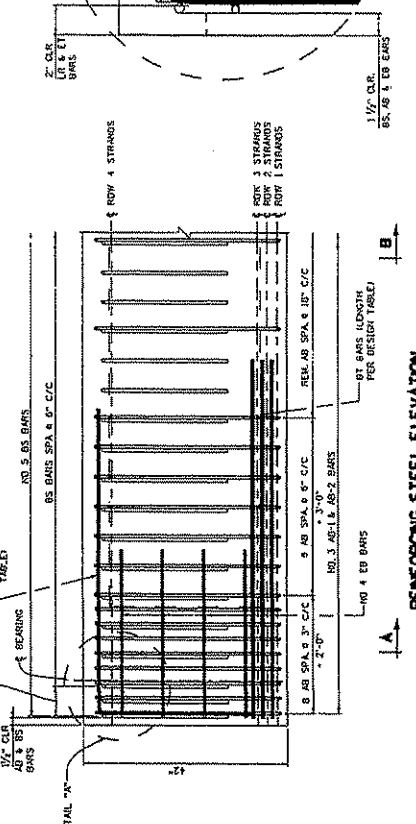
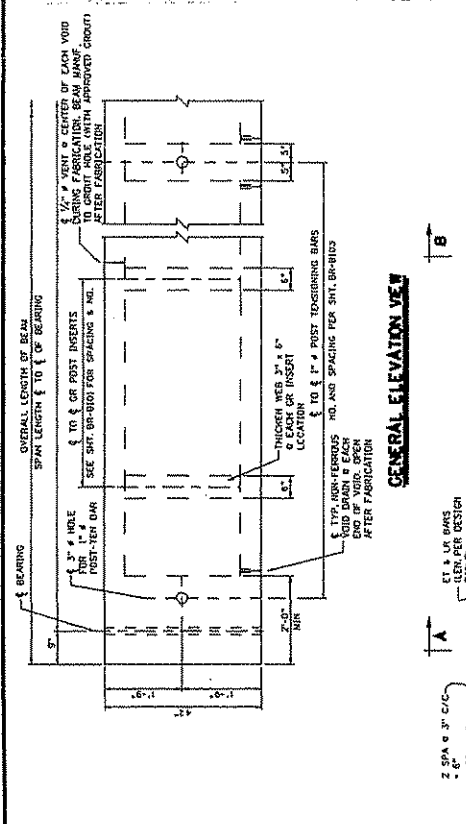
Grout stop must be removed and
grout inspected for voids prior to
post-tensioning. Any voids deeper
than 2" from the bottom of the beams
must be re-grouted in a manner
acceptable to the project engineer.

Project No.	1000	Sheet No.	17
Contract No.	1000	Scale	AS SHOWN
Client	TYLER COUNTY	Drawn By	...
Checked By	...	Approved By	...
SUGAR CREEK BRIDGE		DATE	BY
OVER SUGAR CREEK		REVISION	
C.R. 17			
BEAM LAYOUT			

PROJECT NUMBER	SECTION	COUNTY	SHEET TOTAL
3A48-7-10-A1	6	TYLER	12
STATE			27
1 LR BARS & EQUAL SPACES FULL LENGTH OF BEAM MINUS 4" 5/8" LENGTH PER DESIGN TABLE			



- NOTES**
- REFER TO SHEET BR-B024 FOR SHEAR KEY DETAILS.
 - DESIGNER SHALL USE THE FOLLOWING SPEC. TO INDICATE STRAND AND REINFORCING PATTERN ON BEAM PRESTRESSING VIEW - THIS SHEET.
 - ∇ - DESIGNS STRAND: LENGTH FROM END OF BEAM
 - Δ - DESIGNS STRAND: LENGTH FROM END OF BEAM
 - \circ - DESIGNS STRAND: LENGTH FROM END OF BEAM
 - THIS SHEET SHALL BE USED IN CONJUNCTION WITH BR-B024 & BR-B025 FOR BEAMS BR-B024, BR-B025 & BR-B026 AS APPLICABLE.



NO. 3 BS BARS SHALL BE UNCOATED REINFORCING

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION	DESIGNED BY/NO.	BR-B024
DIVISION OF HIGHWAYS	CHECKED BY/NO.	
ENGINEERING DIVISION	REVIEWED BY/NO.	
	DATE	02-08
	SCALE	AS SHOWN
	SHEET NO.	27
	TOTAL SHEETS	10/27

SUGAR CREEK BRIDGE
OVER SUGAR CREEK
TYLER CO.
C.R. 7
42" PRESTRESSED BOX BEAM
DESIGN AND ASSEMBLY DETAILS

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
ENGINEERING DIVISION
DESIGNED BY/NO. *J. Boyer*
CHECKED BY/NO. *...*
DATE 03-02-07
SCALE 1/2" = 1'-0"
42" PRESTRESSED CONCRETE
BOX BEAM
DESIGN AND ASSEMBLY DETAILS
STANDARD SHEET BR-B024

STATE	PROJECT NUMBER	DATE	SCALE	SHEET NO.	TOTAL SHEETS
VA	3748-1-10-47	N/A	1/8"	13	27

DESIGN DATA FOR 42" DEPTH ADJACENT BOX BEAM

SPAN LENGTH & TO & BEARING	78'-0"	76'-0"	80'-0"	82'-0"	84'-0"	86'-0"	88'-0"	90'-0"	92'-0"	94'-0"	96'-0"	98'-0"	100'-0"
OVERALL LENGTH OF BEAM	78'-0"	76'-0"	80'-0"	82'-0"	84'-0"	86'-0"	88'-0"	90'-0"	92'-0"	94'-0"	96'-0"	98'-0"	100'-0"
NO. OF 270 KSI, 1/2" x LOW-RELAXATION STRANDS, AREA/STRAND - 0.167 SQ. IN.	20	20	20	20	20	20	20	20	20	20	20	20	20
ROW 1	14.3, 6.0, 10.0, 12.5, 6.5, 10.0, 13.14	14.3, 6.0, 10.0, 12.5, 6.5, 10.0, 13.14	14.3, 6.0, 10.0, 12.5, 6.5, 10.0, 13.14	14.3, 6.0, 10.0, 12.5, 6.5, 10.0, 13.14	14.3, 6.0, 10.0, 12.5, 6.5, 10.0, 13.14	14.3, 6.0, 10.0, 12.5, 6.5, 10.0, 13.14	14.3, 6.0, 10.0, 12.5, 6.5, 10.0, 13.14	14.3, 6.0, 10.0, 12.5, 6.5, 10.0, 13.14	14.3, 6.0, 10.0, 12.5, 6.5, 10.0, 13.14	14.3, 6.0, 10.0, 12.5, 6.5, 10.0, 13.14	14.3, 6.0, 10.0, 12.5, 6.5, 10.0, 13.14	14.3, 6.0, 10.0, 12.5, 6.5, 10.0, 13.14	14.3, 6.0, 10.0, 12.5, 6.5, 10.0, 13.14
ROW 2	14.3, 6.0, 10.0, 12.5, 6.5, 10.0, 13.14	14.3, 6.0, 10.0, 12.5, 6.5, 10.0, 13.14	14.3, 6.0, 10.0, 12.5, 6.5, 10.0, 13.14	14.3, 6.0, 10.0, 12.5, 6.5, 10.0, 13.14	14.3, 6.0, 10.0, 12.5, 6.5, 10.0, 13.14	14.3, 6.0, 10.0, 12.5, 6.5, 10.0, 13.14	14.3, 6.0, 10.0, 12.5, 6.5, 10.0, 13.14	14.3, 6.0, 10.0, 12.5, 6.5, 10.0, 13.14	14.3, 6.0, 10.0, 12.5, 6.5, 10.0, 13.14	14.3, 6.0, 10.0, 12.5, 6.5, 10.0, 13.14	14.3, 6.0, 10.0, 12.5, 6.5, 10.0, 13.14	14.3, 6.0, 10.0, 12.5, 6.5, 10.0, 13.14	14.3, 6.0, 10.0, 12.5, 6.5, 10.0, 13.14
ROW 3	14.3, 6.0, 10.0, 12.5, 6.5, 10.0, 13.14	14.3, 6.0, 10.0, 12.5, 6.5, 10.0, 13.14	14.3, 6.0, 10.0, 12.5, 6.5, 10.0, 13.14	14.3, 6.0, 10.0, 12.5, 6.5, 10.0, 13.14	14.3, 6.0, 10.0, 12.5, 6.5, 10.0, 13.14	14.3, 6.0, 10.0, 12.5, 6.5, 10.0, 13.14	14.3, 6.0, 10.0, 12.5, 6.5, 10.0, 13.14	14.3, 6.0, 10.0, 12.5, 6.5, 10.0, 13.14	14.3, 6.0, 10.0, 12.5, 6.5, 10.0, 13.14	14.3, 6.0, 10.0, 12.5, 6.5, 10.0, 13.14	14.3, 6.0, 10.0, 12.5, 6.5, 10.0, 13.14	14.3, 6.0, 10.0, 12.5, 6.5, 10.0, 13.14	14.3, 6.0, 10.0, 12.5, 6.5, 10.0, 13.14
ROW 4	14.3, 6.0, 10.0, 12.5, 6.5, 10.0, 13.14	14.3, 6.0, 10.0, 12.5, 6.5, 10.0, 13.14	14.3, 6.0, 10.0, 12.5, 6.5, 10.0, 13.14	14.3, 6.0, 10.0, 12.5, 6.5, 10.0, 13.14	14.3, 6.0, 10.0, 12.5, 6.5, 10.0, 13.14	14.3, 6.0, 10.0, 12.5, 6.5, 10.0, 13.14	14.3, 6.0, 10.0, 12.5, 6.5, 10.0, 13.14	14.3, 6.0, 10.0, 12.5, 6.5, 10.0, 13.14	14.3, 6.0, 10.0, 12.5, 6.5, 10.0, 13.14	14.3, 6.0, 10.0, 12.5, 6.5, 10.0, 13.14	14.3, 6.0, 10.0, 12.5, 6.5, 10.0, 13.14	14.3, 6.0, 10.0, 12.5, 6.5, 10.0, 13.14	14.3, 6.0, 10.0, 12.5, 6.5, 10.0, 13.14

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
ENGINEERING DIVISION

SUGAR CREEK BRIDGE
OVER SUGAR CREEK
TYLER CO. C.R. 7

DESIGN TABLE FOR 42" PRESTRESSED BOX BEAM

STANDARD SHEET BR-842B

DESIGNED BY	DATE
CHECKED BY	DATE
APPROVED BY	DATE
PROJECT NUMBER	3748-1-10-47
SHEET NO.	13 OF 27
TITLE	DESIGN TABLE FOR 42" PRESTRESSED BOX BEAM

- NOTES
- BEAM WEIGHTS LISTED IN THE DESIGN TABLE ARE BASED ON ZERO SKEW, 2 FT. LONG ENDBLOCK AND DIAPHRAGMS SPACED @ 15 FT. C/C. WEIGHTS FOR SKEWED BEAMS, UNDER ENDBLOCKS AND ADDITIONAL DIAPHRAGMS SHOULD BE ADJUSTED ACCORDINGLY.
 - DESIGNERS SHOULD NOTE THAT DATA IN STANDARD TABLE IS BASED ON EVEN SPAN LENGTHS. A TWO LANE STRUCTURE @ BEAMS WIDE AND ZERO SKEW. SUPERIMPOSED DEAD LOADS INCLUDE TYPE F PARAPET (321 PLT) AND A FWS OF 50 PSF. FOR NON-STANDARD BRIDGES DATA SHOULD BE VERIFIED AND IF REQUIRED NEW DESIGN DATA ENTERED INTO BLANK COLUMNS. IN NO CASE SHALL THE STANDARD DESIGN TABLE BE ALTERED.
 - PREDICTED DESIGN CAMBER VALUES LISTED IN THE TABLE ARE BASED ON EMPIRICAL FORMULAS AND AS SUCH ARE APPROXIMATE. FOR MEMBERS 8 FT. OR LONGER, INCLUDING 25' AND 30' MEMBERS LISTED IN APPENDIX B OF PCI MANUAL. FOR QUALITY CONTROL, MIN-116.44Y MEASUREMENT OF CAMBER FOR COMPARISON TO PREDICTED DESIGN VALUES SHOULD BE COMPLETED WITHIN 72 HOURS OF RELEASE. ADDITIONALLY CAMBER SHOULD BE EVALUATED UNDER CONDITIONS THAT MINIMIZE THE EFFECT OF TEMPERATURE VARIATION.
 - DESIGNER, FABRICATOR, AND ERECTOR SHALL BE AWARE THAT SKEWED END BEAMS MAY TRUST OR WARP CAUSING INEVEN BEAM SPACING AND THE RESULTING UNDESIRABLE BEAM SPACING. CORRECTIONS SHALL BE MADE TO AN EVEN TOTAL BEARING AND A LEVEL TOP BEAM SURFACE. TOLERANCE, AFTER CORRECTION SHALL BE 1/4" RICH THE FABRICATOR SHALL NOTIFY THE CONTRACTOR AND DESIGNER IF CORRECTIONS ARE REQUIRED PRIOR TO SHIPMENT.
 - MAXIMUM BEAM SKEW SHALL BE 30 DEGREES.
 - CROSSER SPACING VALUES OF NUMBER OF INSERTS DISTANCE FROM END OF BEAM TO @ FIRST INSERT AND @ SECOND INSERT. ABOVE VALUES SHALL BE BASED ON THE REQUIRED 4'-3" QUADRANT POST SPACING ACCESS TO THE BRIDGE.
 - THIS SHEET SHALL BE USED IN CONJUNCTION WITH STANDARD SHEETS BR-842A, BR-842B, BR-842C, BR-842D, BR-842E & B, BR-910A, BR-910B, BR-910C, BR-910D, BR-910E, BR-910F & B AND BR-106 AS APPLICABLE.

STATE	FEDERAL PROJECT NUMBER	STATE PROJECT NUMBER	COUNTY	SHEET NO.	TOTAL SHEETS
VA	174-10-47	174	TYLER	14	27

CONCRETE SPECIFICATIONS
 THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS HAS ADOPTED THE 2003 ACI 308R-11M AS A BASIS FOR THE DESIGN AND CONSTRUCTION OF CONCRETE STRUCTURES. THE CONTRACT PLANS AND CONTRACT SPECIAL SPECIFICATIONS ARE THE GOVERNING PROVISIONS APPLICABLE TO THIS PROJECT.

STEEL SPECIFICATIONS
 ALL BEAMS ARE DESIGNED IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS DATED 1989 AS AMENDED BY THE 2003 INTERIM SPECIFICATIONS.

DESIGN NOTES
 ALL STANDARD ADJACENT PRESTRESSED CONCRETE BRIDGE BEAMS ARE DESIGNED TO MEET THE FOLLOWING CRITERIA:
 1. DESIGN LONG TERM LOAD IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.
 FUTURE WEARING SURFACE OF 40 PSF OF ROADWAY.
 TYPE F PARALLEL WEIGHING 321 PLF.
 DIMENSION DEAD LOAD NUMBER REQUIRED BASED ON 15'-0" MAX. SPACING.
 BETWEEN MAIN BEAMS. A CURB-TO-CURB WIDTH OF 22'-11" TRANSVERSE POST-TENSIONING.

DESIGN STRENGTH AND UNIT STRESSES
 MINIMUM CONCRETE STRENGTH @ STRAND RELEASE 6000 PSI
 MINIMUM CONCRETE STRENGTH @ 28 DAYS 8000 PSI
 TEMPORARY STRESS LIMITS IN CONCRETE BEFORE LOSSES:
 COMPRESSION STRESS LIMIT @ STRAND RELEASE 3000 PSI
 TENSION STRESS LIMIT @ STRAND RELEASE -200 PSI
 COMPRESSIVE STRESS LIMITS IN CONCRETE @ SERVICE I AFTER LOSSES:
 @ FINAL 1 (PSI-DL-LL) 4800 PSI
 @ FINAL 2 (CONCRETE-DL-LL) 3600 PSI
 @ FINAL 3 (CONCRETE-DL-LL) 3200 PSI
 TENSILE STRESS LIMIT IN CONCRETE @ SERVICE III AFTER LOSSES:
 @ FINAL 1 (PSI-DL-LL) -270 PSI
 @ FINAL 2 -202.5 PSI
 @ FINAL 3 -194.4 PSI
 TENSION STRESS LIMIT PRIOR TO TRANSFER 202.5 PSI
 TENSION STRESS LIMIT AFTER ALL LOSSES 194.4 PSI

DEBONDING OR SHELTING OF STRANDS TO REDUCE TEMPORARY TENSILE STRESSES
 IS PERMITTED, HOWEVER DEBONDING IS LIMITED TO 40% PER FOOT OF 28% TOTAL IN NO INSTANCES SHALL OUTER STRANDS BE DEBONDED. DEBONDED STRANDS SHALL BE SEPARATED BY AT LEAST ONE FULLY BENDED STRAND AND SHALL BE SYMMETRICAL ABOUT THE F OF THE BEAM.
SHELTING OF STRANDS SHALL BE ACCOMPLISHED BY TAPPING OR TIGHT FITTING PLASTIC TUBES TAPPED AT EACH END.

THE ELASTOMERIC BEARING PADS PROVIDED IN THE STANDARD DESIGNS ARE BASED ON ZERO GRADE AND ARE LIMITED TO A MAXIMUM OF 5% GRADE. IN INSTANCES WHERE GRADES EXCEEDING THIS LIMIT, PADS SHALL BE SPECIFICALLY DESIGNED. INDIVIDUAL PAD DESIGNS SHALL BE IN ACCORDANCE WITH SECTION 14, AASHTO LRFD. BEVEELED SOLE PLATES ARE PERMITTED.

MAXIMUM BEAM SKEW SHALL BE 30 DEGREES.
WHEN ALTERNATE DESIGNS OR SITE SPECIFIC DESIGNS ARE PROVIDED, CRITERIA SET FORTH IN THESE STANDARDS SHALL APPLY.
NEGATIVE DESIGN CMBER AFTER ALL LOSSES IS NOT PERMITTED.
EACH BEAM PROVIDED IN THESE STANDARD DESIGNS HAS BEEN LOADED IN ACCORDANCE WITH SECTION 8.1.5 OF THE WEST VIRGINIA DIVISION OF HIGHWAYS BRIDGE DESIGN MANUAL, 2004. ADDITIONALLY, LOAD RATING PROCEDURES ARE IN ACCORDANCE WITH THE AASHTO MANUAL FOR CONDITION EVALUATION AND LOAD AND RESISTANCE FACTOR RATING OF HIGHWAY BRIDGES, 2003.

THIS SHEET SHALL BE USED IN CONJUNCTION WITH STANDARD SHEETS BR-BETA & B THRU BR-GTA & B, BR-VIB, BR-COROTA & B, BR-BIOL, BR-BIOL, BR-BIOL & B AND BR-BIOL AS APPLICABLE.

MATERIALS & FABRICATION NOTES
 * THE PRESTRESSED CONCRETE BEAMS SHALL CONFORM TO ALL APPLICABLE PROVISIONS OF SECTION 603 OF THE STANDARD SPECIFICATIONS.
MILD REINFORCEMENT
 * ALL MILD REINFORCING STEEL SHALL BE GRADE 60, DEFORMED BILLET STEEL AND SHALL BE HOT-ROLLED UNLESS OTHERWISE NOTED. ALL UNGRADED BILLET STEEL AND STEEL SHALL MEET THE REQUIREMENTS OF AASHTO M31. ALL EPOXY COATED REINFORCING SHALL MEET THE REQUIREMENTS OF AASHTO M284, EXCEPT WHERE AMENDED BY SECTION 708.1 OF THE STANDARD SPECIFICATIONS.
 * ALL TENSION LAP SPICES SHALL BE A CLASS B CONTACT TYPE. MINIMUM LAP SPICE LENGTHS SHALL BE AS GIVEN IN THE "LAP SPICE TABLE", THIS SHEET. ADDITIONALLY, IF LAP SPICING OF ETLOR AND B1 BARS IS USED, TERMINATION OF LAP SPICES SHALL BE NO CLOSER TO THE END OF THE BEAM THAN 1/10 OF THE SPAN LENGTH.
 * MINIMUM BAR BENDING DIAMETER SHALL BE 6 BAR DIAMETERS, EXCEPT THAT NO. 4 & 8 BARS MAY HAVE A MINIMUM BEND DIAMETER OF 4 BAR DIAMETERS.
 * MINIMUM CONCRETE COVER SHALL BE AS SPECIFIED IN SECTION 603.0 OF THE STANDARD SPECIFICATIONS, EXCEPT WHERE NOTED ON THE PLANS.
PRESTRESSING STRANDS
 * ALL PRESTRESSING STEEL SHALL BE 1/2" 9, GRADE 270, 7 WIRE UNCOILED, LOW-RELAXATION STRAND MEETING THE REQUIREMENTS OF AASHTO M303, SUPPLEMENT S1.
 * ALL BEAMS DESIGNED IN THESE STANDARDS UTILIZE STRANDS WITH A NOMINAL AREA OF 0.167 SQ. IN. STRANDS WITH A NOMINAL AREA OF 0.163 SQ. IN. IS PERMITTED FOR INDIVIDUAL OR ALTERNATE DESIGNS, HOWEVER THE DESIGNER IS ENCOURAGED TO USE THE LARGER STRAND FOR UNIFORMITY REASONS. IN NO CASES WILL STRESS-RELIEVED STRAND BE PERMITTED.
 * ALL STRANDS SHALL BE ENCLOSED INSIDE THE STRAPUP CAGE FOR THE FULL LENGTH OF THE BEAM.
 * ALL EXPOSED PRESTRESSING STRAND AT EACH BEAM END SHALL BE SHOP COATED WITH A LIQUID COLO-APPLIED BITUMINOUS ELASTOMERIC WATERPROOFING MEMBRANE. MATERIAL SHALL MEET ASTM C636-94.
CONCRETE
 * ALL CONCRETE USED IN MANUFACTURING PRESTRESSED CONCRETE BEAMS SHALL MEET THE REQUIREMENTS OF SECTION 603.4 OF THE STANDARD SPECIFICATIONS. DESIGN STRENGTHS SHALL MEET OR EXCEED THE NOMINAL VALUES SET FORTH IN THESE PLANS.
 * ALL CONCRETE USED IN PARAPETS AND CURBS SHALL BE CLASS K CONCRETE.
ELASTOMERIC BEARING PADS:
 * ALL BEARING PADS SHALL MEET THE APPLICABLE REQUIREMENTS AS SET FORTH IN SECTION 14.2 OF THE AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS, 1998 EDITION WITH CURRENT INTERIMS. ALL BEARINGS SHALL BE STEEL REINFORCED LAMINATED BEARINGS.
 * THE ELASTOMERIC MATERIAL SHALL BE 60 DUROMETERS WITH A MINIMUM LOW TEMPERATURE GRADE OF 3 (ZONE C).
 * ALL STEEL REINFORCING SHALL MEET THE REQUIREMENTS OF AASHTO M270, GRADE 36.

POST-TENSIONING BEAMS
 * TENSIONING THREAD BARS SHALL BE ONE INCH DIAMETER, 150 KSI STEEL, AND SHALL CONFORM TO AASHTO M275, TYPE II. STEEL THREADED BARS SHALL BE DESIGNED TO ALLOW THE USE OF HEAVY HEX NUTS AND COUPLERS THAT THREAD ONTO THE END OF THE DEFORMATIONS. HEAVY HEX NUTS AND COUPLERS SHALL BE OF A DESIGN AND MATERIAL RECOMMENDED BY THE BAR MANUFACTURER TO DEVELOP THE FULL TENSILE STRENGTH OF THE BAR. PROPERLY DOCUMENTED CERTIFIED MILL TEST REPORTS SHALL BE PROVIDED FOR EACH HEAT OF STEEL THREADED BARS.
 * ALL POST-TENSIONING THREE (3) BARS, NUTS, BEARING PLATES, COUPLERS, AND ANCILLARY HARDWARE SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH AASHTO M11. THE GALVANIZING PLANT SHALL ADMINISTER ACCURATE QUALITY CONTROL MEASURES TO SAFEGUARD AGAINST HYDROGEN EMBRITTLEMENT. QUALITY CONTROL MEASURES SHALL COMPLY WITH ASTM A-143. CERTIFICATION FOR HOT-DIP GALVANIZING SHALL BE PROVIDED BY THE GALVANIZING PLANT.
 * ALL POST-TENSIONING BEARING PLATES SHALL CONFORM TO AASHTO M270, GRADE 36.
SPINER KEY CRACKS:
 * SPINER KEY CRACK SHALL BE A CRACK THAT IS RECOMMENDED BY THE MANUFACTURER FOR A REMEDIABLE CRACK. APPLICATION AND THAT BASED ON THE MANUFACTURER'S TEST DATA WILL ATTAIN A MINIMUM OF 4500 PSI COMPRESSIVE STRENGTH IN 3 DAYS UNDER CONDITIONS REPRESENTATIVE OF THE CONDITIONS TO BE EXPERIENCED AT THE SITE. THE CRACK MUST BE LISTED ON THE APPROVED LIST OF CRACKS PUBLISHED BY THE WEST VIRGINIA DIVISION OF HIGHWAYS, MATERIALS CONTROL, SOIL AND TESTING DIVISION. THE CONTRACTOR SHALL PRE-TEST THE PROPOSED GROUT FOR COMPRESSIVE STRENGTH AT 3 AND 7 DAYS AND SUBMIT THE RESULTS TO THE BRIDGE PROJECT-MANAGER FOR APPROVAL PRIOR TO INSTALLATION OF THE GROUT IN THE STRUCTURE. THE TESTS WILL BE BASED ON A FAVORABLE CONSISTENCY WITH THE SAME WATER/GROUT MIXTURE RATIO TO BE USED IN THE STRUCTURE.
 * THE CONTRACTOR SHALL BE REQUIRED TO SUBMIT FOR EACH PROJECT, THE GROUT PRE-TEST RESULTS OBTAINED IN THE NOTE ABOVE. THE CONTRACTOR SHALL BE REQUIRED TO PERFORM A NEW PRE-TEST AND SUBMISSION FOR APPROVAL UNDER ANY OF THE FOLLOWING CONDITIONS:
 * A PERIOD OF 18 MONTHS HAS ELAPSED SINCE LAST PRE-APPROVAL TESTING.
 * GROUT MANUFACTURER HAS REVISED OR CHANGED THE GROUT SPECIFICATIONS.
 * THE CONTRACTOR ALTERS THE WATER/GROUT MIXTURE RATIO.
 * THE CONTRACTOR CHANGES GROUT MANUFACTURER.
 * THE CONTRACTOR IS REQUIRED TO COMPLETE THE GROUT STRENGTH TABLE ON BR-BIOL.
 * TEST PROCEDURE FOR RETESTING THE COMPRESSIVE STRENGTH OF GROUT SHALL BE SPECIFIED IN ACCORDANCE WITH ASTM C109, AS MODIFIED BY ASTM C109Z. GROUT TESTING IN ACCORDANCE WITH AASHTO T23 (STANDARD CYLINDER TEST) IS NOT ACCEPTABLE.

RECTANGULAR SUBGRADE REINFORCEMENT:
 * EACH PRESTRESSED CONCRETE BEAM SHALL BE TREATED BY THE MANUFACTURER AT THE FABRICATION PLANT WITH AN APPROVED CONCRETE SEALER (ISLAND). AN APPROVED LIST OF CONCRETE SEALERS ARE ON FILE AT THE WEST VIRGINIA DIVISION OF HIGHWAYS. MATERIALS CONTROL, SOIL AND TESTING DIVISION. COVERAGE SHALL INCLUDE TOP AND BOTTOM OF INTERIOR BEAMS, AND TOP, BOTTOM AND EXTERIOR SIDE OF EXTERIOR BEAM. APPLICATION RATE SHALL BE PER TREATMENT MANUFACTURER'S RECOMMENDATION.
 * AFTER COMPLETION OF THE SILENCE TREATMENT BY FABRICATOR AND A MAXIMUM OF FIVE WORKING DAYS PRIOR TO SHIPMENT OF THE BEAMS, THE FABRICATOR SHALL BE RESPONSIBLE FOR ABRASIVE BLAST CLEANING TO CLEAN WHITE CONCRETE THE INTERIOR SIDES OF BEAMS FOR THE FULL LENGTH. CLEAN WHITE CONCRETE SHALL MEAN REMOVAL OF ALL OIL, GREASE, OIL, AND LOOSE CONCRETE LAMINAE AND PROVIDE A ROUGHENED CONCRETE SURFACE. BLASTING MEDIUM SHALL BE APPROVED BY THE DIVISION.
SOIL BEARINGS:
 * THE FABRICATOR SHALL BE RESPONSIBLE FOR THE PREPARATION OF SHOP DRAWINGS IN ACCORDANCE WITH THE WEST VIRGINIA DIVISION OF HIGHWAYS DOCUMENTS, 00-102 AND THE STANDARD SPECIFICATIONS. ADDITIONAL INFORMATION IS PROVIDED IN SECTION 7 OF THE BRIDGE DESIGN MANUAL. SHOP DRAWINGS SHALL INCLUDE THE FABRICATOR'S DIMENSIONING PLAN.

WELDING:
 * TACK WELDING IF REINFORCEMENT IS NOT PERMITTED. REINFORCING CAGES AND LONGITUDINAL STEEL SHALL BE ADEQUATELY TIED WITH APPROVED MEANS TO PREVENT RACKING AND MISALIGNMENT.
 * ALL WELDING OF FABRICATED ITEMS, AS SHOWN IN THESE PLANS SHALL BE IN ACCORDANCE WITH ALL APPLICABLE PROVISIONS OF AASHTO M5.5, 2002.

LAP SPICE TABLE

BAR SIZE	NO. 3	NO. 4	NO. 5	NO. 6
SPICE LEN.	21"	28"	34"	41"

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
ENGINEERING DIVISION
SUGAR CREEK BRIDGE
OVER SUGAR CREEK
TYLER CO.
C.R. 7
PRESTRESSED CONCRETE BEAM
DESIGN & ASSEMBLY NOTES
STANDARD SHEET BR-B100

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
ENGINEERING DIVISION
SUGAR CREEK BRIDGE
OVER SUGAR CREEK
TYLER CO.
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STANDARD SHEET BR-B100

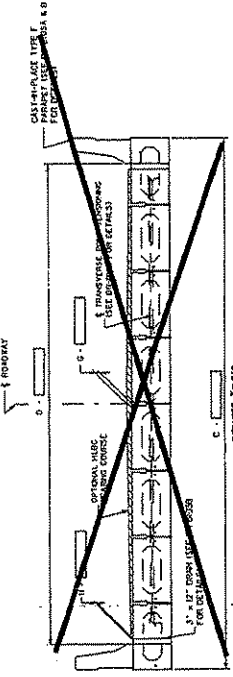
SHEET NO.	15	TOTAL SHEETS	27
PROJECT NUMBER	5348-7-10.4T	COUNTY	TYLER
GENERAL PROJECT NUMBER	N/A	ROUTE	6

CONTROL DIMENSIONS	DESCRIPTION	CODE	VALUE
OVERALL BEAM LENGTH		A	81'-4"
SPAN LENGTH, & REFERR TO DRAWING		B	80'-0"
SUPPORT STRUCTURE MOVT. OUT TO BUT		C	24'-5 1/2"
NUMBER OF BEAMS REQUIRED		D	8
BEAM SIZE (MOVT + DEPTH)		E	3'-0" X 48"
SHEAR ANGLE (NORMAL DEC. OF 50% OR DEC. 1/3)		F	30°
PERFORMANCE DISTANCE FROM FACE OF BEAM TO BEARING		G	7 1/2"
MINIMUM COURSE REQUIRED (YES/NO)		H	YES
THICKNESS OF REINFORCING COURSE @ TOP OF BEAM OR JOINT		I	3 3/4"
THICKNESS OF REINFORCING COURSE @ EDGE OF CURB OR PARAPET		J	1"
11-2 BEAMS CONCRETE SYSTEM REQUIRED (YES/NO)		K	YES
CONCRETE FOR BRIDGE 11-2 BRIDGE GUARDRAIL (YES/NO)		L	YES
FOUNDATION TO INSTALL BRIDGE GUARDRAIL, REFER TO SUBMITTALS (YES/NO) IF NO, INDICATE TO SHOP DRAWING		M	NO
NUMBER OF GUARDRAIL POSTS REQUIRED PER DEC		N	26
TYPE OF PARAPET REQUIRED (YES/NO)		O	NO
CURBS REQUIRED (YES/NO)		P	NO
NUMBER OF CURBS REQUIRED PER DEC		Q	0
10" CURB REQUIRED (YES/NO)		R	NO

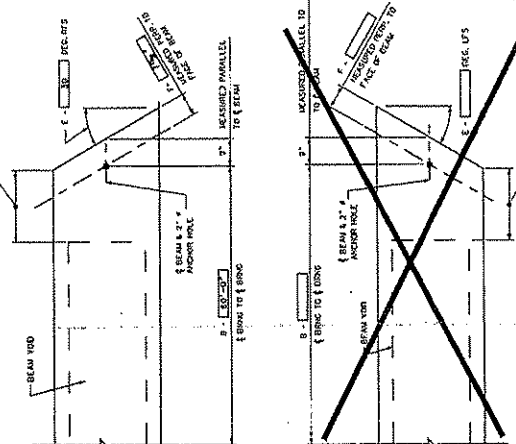
WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
ENGINEERING DIVISION

SUGAR CREEK BRIDGE
OVER SUGAR CREEK
TYLER CO. C.R. 7
PRESTRESSED CONCRETE BEAM
DESIGN & ASSEMBLY NOTES

DESIGNER: [Signature]
CHECKED BY: [Signature]
DATE: 07-02-07
SCALE: AS SHOWN
SHEET NO. 15 OF 27
PROJECT NO. 5348-7-10.4T

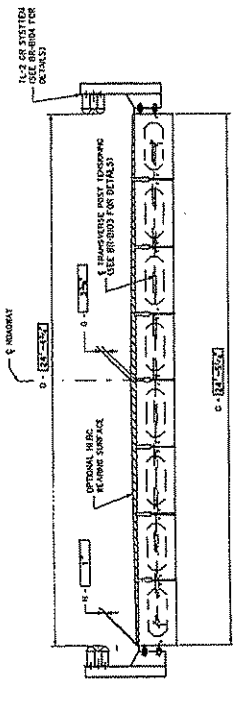


TYPICAL CROSS-SECTION WITH PARAPET OR CURB

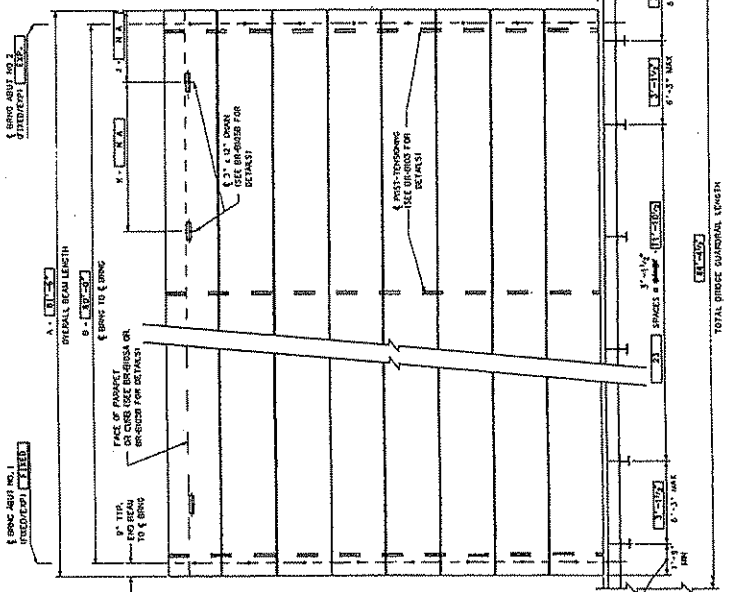


BEAM PLAN VIEW - SKEWED ENDS

ITEM NO.	DESCRIPTION	UNITS	QUANTITY
8028H	PRESTRESSED CONCRETE BOX BEAM	LF	652



TYPICAL CROSS-SECTION WITH GUARDRAIL



DECK PLAN VIEW

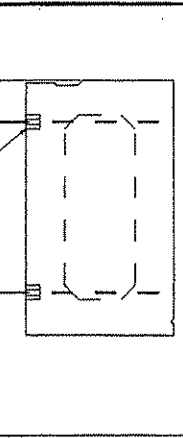
NOTES:

- WHEN BRIDGE GUARDRAIL IS TO BE SUPPLIED BY THE BEAM FABRICATOR, THE FABRICATOR SHALL PROVIDE THE GUARDRAIL ATTACHMENT HARDWARE, AND ACCESSORIES ITEMS REQUIRED TO COMPLETELY INSTALL BRIDGE GUARDRAIL. ALL HARDWARE SHALL BE INCLUDED WITH THE BRIDGE PRESTRESSED CONCRETE BOX BEAM.
- THE BRIDGE GUARDRAIL SHALL BE SUPPLIED BY THE BEAM FABRICATOR, BR-802A & B AND BR-802B, BR-803, BR-804, BR-805A & B AND BR-806.

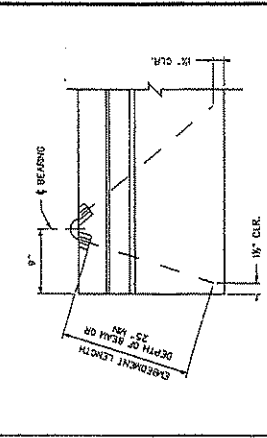
STATE	FEDERAL	STATE	PROJECT NUMBER	DATE	CONTRACT	SHEET NUMBER	TOTAL SHEETS
VA	N/A	6	10-41	1961	TYLER	16	27

2" x 4 OR 3" x 4 FORM BLOCKS TO BE USED FOR ALL STRINGS AFTER SETTING OF STRINGS AND FULL DEPTH OF BEAM FORM COVER OR NUMBER OF STRINGS PER SIDE SHALL BE DETERMINED BY THE FABRICATOR.

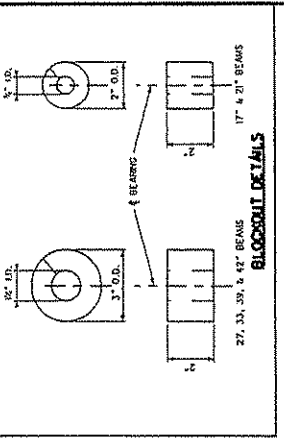
17" x 4 STRAND LIFTS LONGER EXPOSED FULL DEPTH OF BEAM FORM COVER OR NUMBER OF STRINGS PER SIDE SHALL BE DETERMINED BY THE FABRICATOR.



END BEARING DETAIL WITH BACKWALL



END BEARING DETAIL WITHOUT BACKWALL



BLOCKOUT DETAILS

DESIGNED BY	DATE	APPROVED BY	DATE
TYLER	10-41		

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
ENGINEERING DIVISION

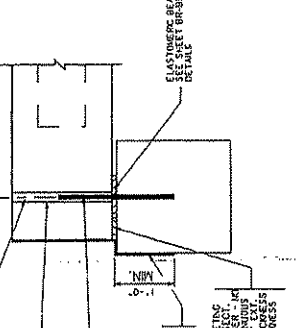
SUGAR CREEK BRIDGE
OVER SUGAR CREEK
TYLER CO. C.R. 7

PRESTRESSED CONCRETE BEAM
SHEETS AND REINFORCING
MISC. DESIGN AND ASSEMBLY DETAILS

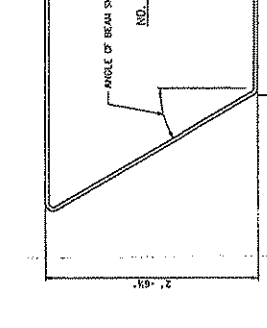
STANDARD SHEET BR-8102A

10227

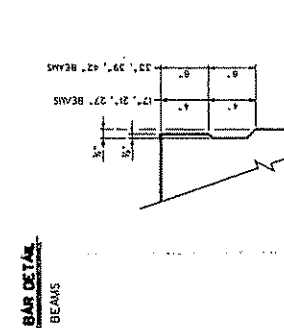
SEAL JOINT WITH HOT POWER...
PREFORMED JOINT FILLER MEETING THE REQUIREMENTS OF SUB-SECT. 715.5.1...
ELASTOMER BEARING PAD SEE SHEET BR-802B FOR DETAILS



END BEARING DETAIL WITH BACKWALL

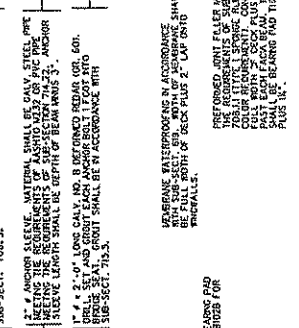


END BEARING DETAIL WITHOUT BACKWALL

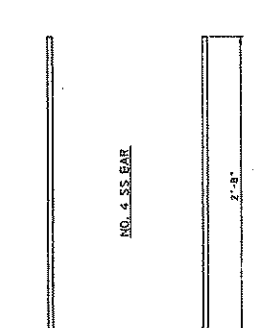


BLOCKOUT DETAILS

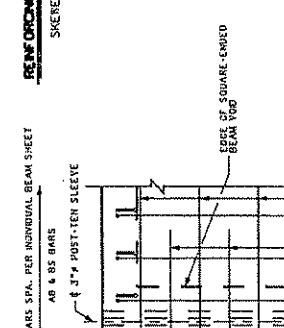
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PREFORMED JOINT FILLER MEETING THE REQUIREMENTS OF SUB-SECT. 715.5.1...
ELASTOMER BEARING PAD SEE SHEET BR-802B FOR DETAILS



END BEARING DETAIL WITH BACKWALL

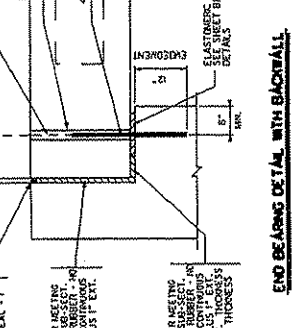


END BEARING DETAIL WITHOUT BACKWALL

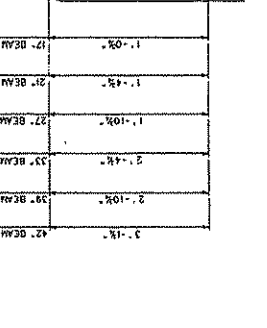


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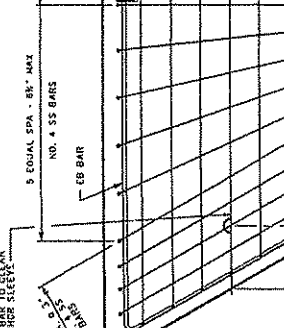
SEAL JOINT WITH HOT POWER...
PREFORMED JOINT FILLER MEETING THE REQUIREMENTS OF SUB-SECT. 715.5.1...
ELASTOMER BEARING PAD SEE SHEET BR-802B FOR DETAILS



END BEARING DETAIL WITH BACKWALL

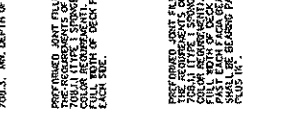


END BEARING DETAIL WITHOUT BACKWALL



BLOCKOUT DETAILS

SEAL JOINT WITH HOT POWER...
PREFORMED JOINT FILLER MEETING THE REQUIREMENTS OF SUB-SECT. 715.5.1...
ELASTOMER BEARING PAD SEE SHEET BR-802B FOR DETAILS



END BEARING DETAIL WITH BACKWALL



END BEARING DETAIL WITHOUT BACKWALL



BLOCKOUT DETAILS

SEAL JOINT WITH HOT POWER...
PREFORMED JOINT FILLER MEETING THE REQUIREMENTS OF SUB-SECT. 715.5.1...
ELASTOMER BEARING PAD SEE SHEET BR-802B FOR DETAILS



END BEARING DETAIL WITH BACKWALL

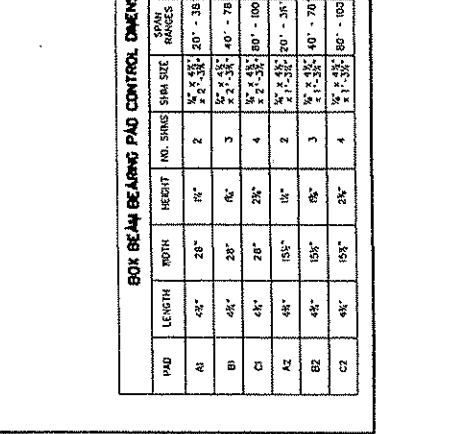
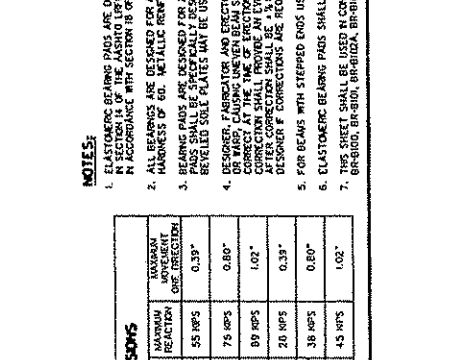
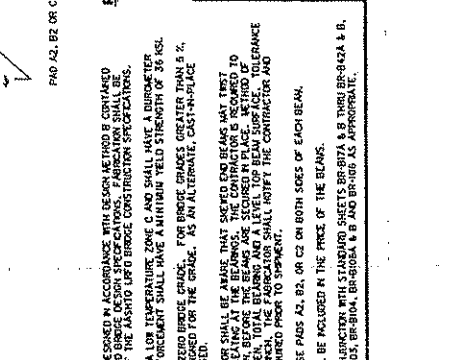
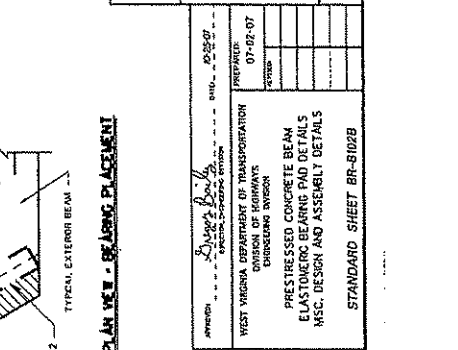
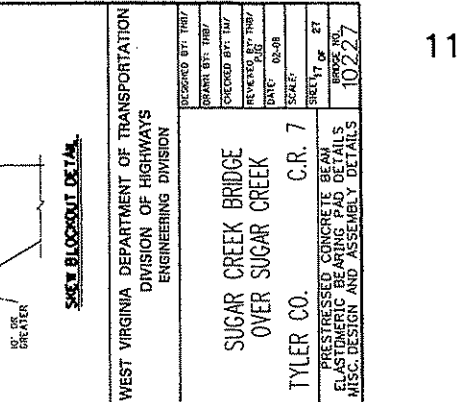
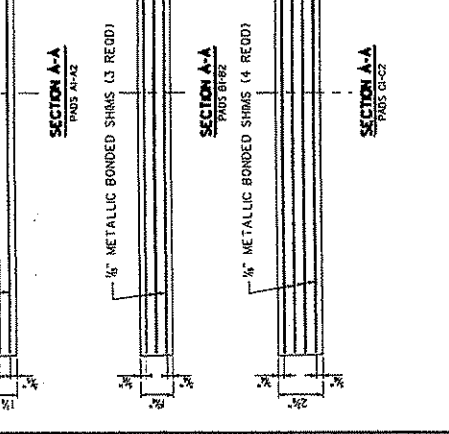
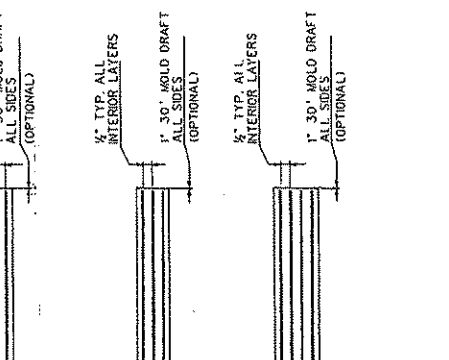
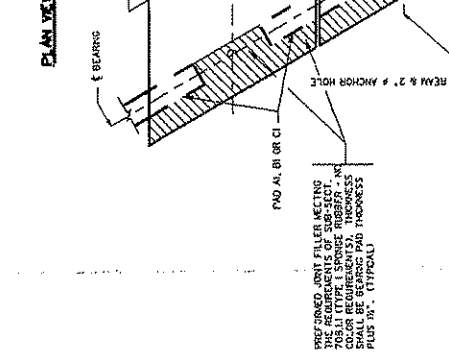
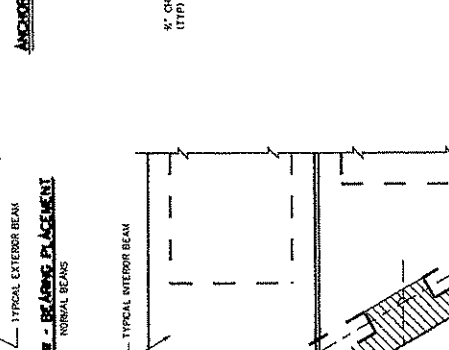
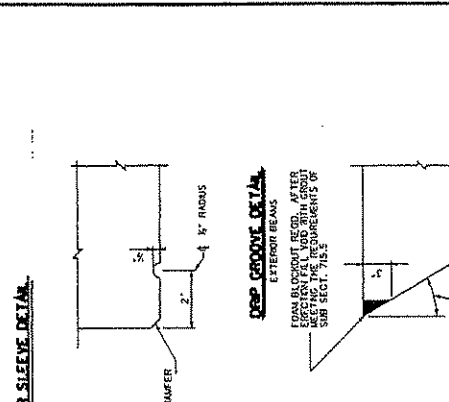
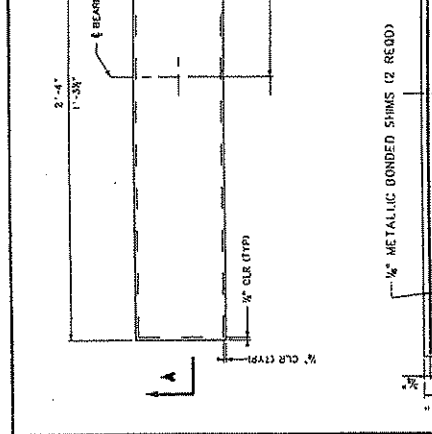
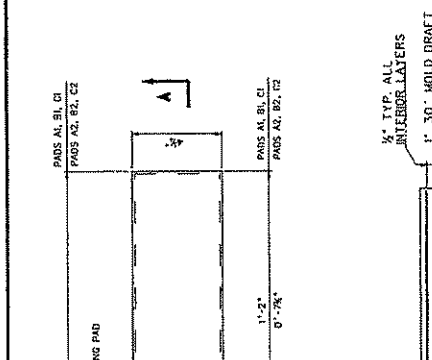
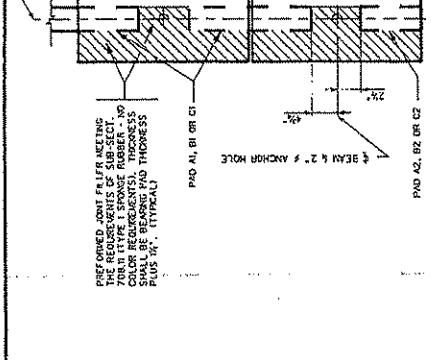
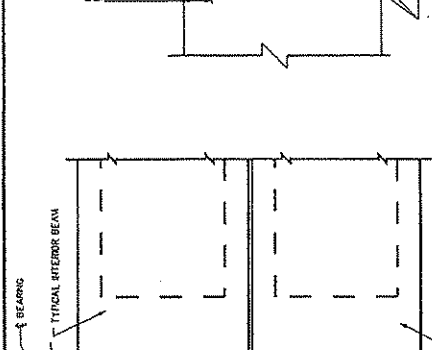


END BEARING DETAIL WITHOUT BACKWALL



BLOCKOUT DETAILS

STATE	FEDERAL	DIST.	COUNTY	SHEET NO.	TOTAL SHEETS
PROJECT NUMBER	PROJECT NUMBER	DIST. NO.	PROJECT NUMBER	PROJECT NUMBER	PROJECT NUMBER
5348-7-10-4T	R/A	6	TULER	17	27



WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
ENGINEERING DIVISION

SUGAR CREEK BRIDGE
OVER SUGAR CREEK

TYLER CO. C.R. 7

PRESTRESSED CONCRETE BEAM
ELASTOMERIC BEARING PAD DETAILS
MISC. DESIGN AND ASSEMBLY DETAILS

STANDARD SHEET BR-802B

DESIGNED BY: THT
DRAWN BY: THT
CHECKED BY: THT
REVIEWED BY: THT
DATE: 02-08
SCALE:
SHEET OF 27
BRIDGE NO.
10227

APPROVED: [Signature]
WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
ENGINEERING DIVISION

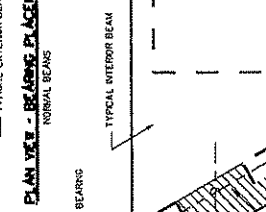
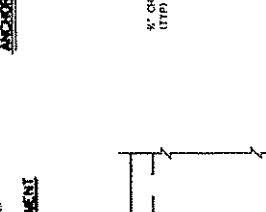
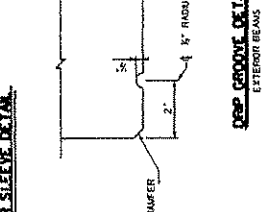
PREPARED: 07-02-07
BY: [Signature]

NOTES:

- ELASTOMERIC BEARING PADS ARE USED IN ACCORDANCE WITH SECTION 10.02.07 OF THE SPECIFICATIONS FOR BRIDGE CONSTRUCTION. FABRICATION SHALL BE IN ACCORDANCE WITH SECTION 10.02.07 OF THE SPECIFICATIONS FOR BRIDGE CONSTRUCTION.
- ALL BEARINGS ARE DESIGNED FOR A LOW TEMPERATURE ZONE C AND SHALL HAVE A DIAMETER HARDNESS OF 60. METALLIC REINFORCEMENT SHALL HAVE A MINIMUM YIELD STRENGTH OF 36 KSI.
- BEARING PADS ARE DESIGNED FOR ZERO BRODE GRADE. FOR BRODE GRADES GREATER THAN 1/4", BEARING PADS SHALL BE SPECIFICALLY DESIGNED FOR THE GRADE. AS AN ALTERNATE, CAST-IN-PLACE BEVELED SOLE PLATES MAY BE USED.
- DESIGNER, FABRICATOR AND ERECTOR SHALL BE AWARE THAT SLEW PAD BEAMS MAY TWIST OR WARP, CAUSING UNEVEN BEAM SETTING AT THE BEARING SURFACE. THE ERECTOR SHALL BE RESPONSIBLE FOR CORRECTING THE BEARING SURFACE TO THE BEARING SURFACE. THE FABRICATOR SHALL VERIFY THE CORRECTION SHALL BE 1/8" INCH. TOTAL BEARING AND A LEVEL TOP BEAM SURFACE. TOLERANCE AFTER CORRECTION SHALL BE 1/8" INCH. THE FABRICATOR SHALL NOTIFY THE CONTRACTOR AND DESIGNER IF CORRECTIONS ARE REQUIRED PRIOR TO SUPPORT.
- FOR BEAMS WITH STEPPED ENDS USE PADS A1, B1, C1, OR C2 ON BOTH SIDES OF EACH BEAM.
- ELASTOMERIC BEARING PADS SHALL BE INCLUDED IN THE PRICE OF THE BEAMS.
- THIS SHEET SHALL BE USED IN CONNECTION WITH STANDARD SHEETS BR-801A & B, BR-802A & B, BR-803A & B, BR-804A & B, BR-805A & B AND BR-106 AS APPROPRIATE.

BOX BEAM BEARING PAD CONTROL DIMENSIONS

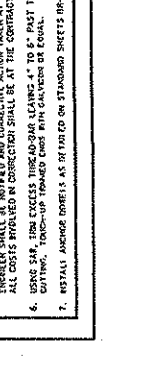
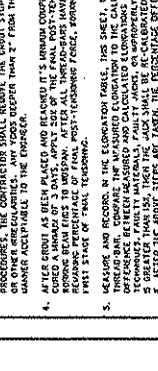
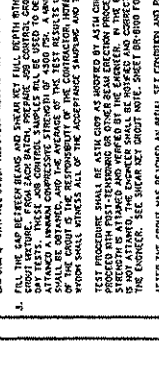
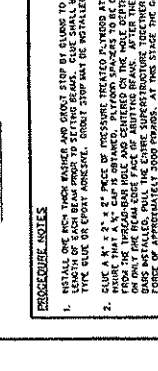
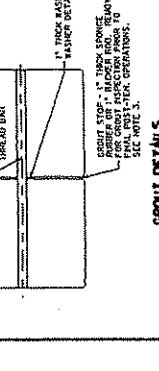
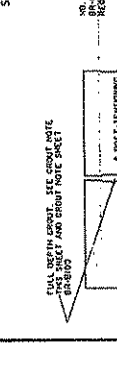
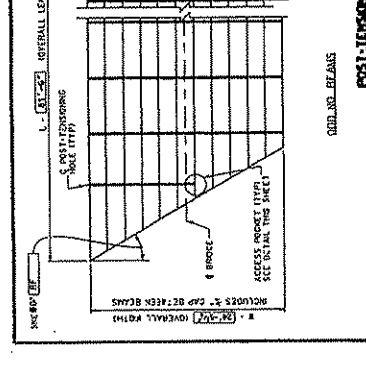
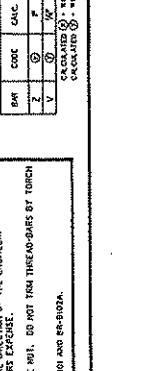
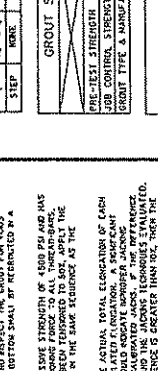
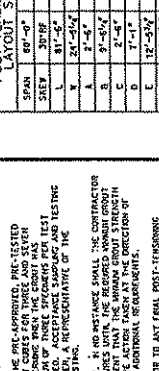
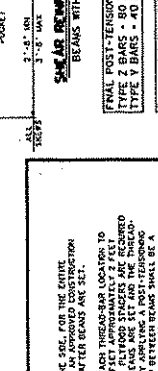
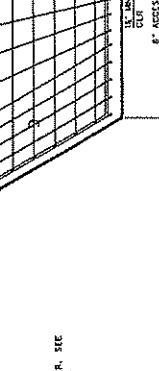
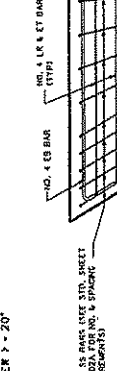
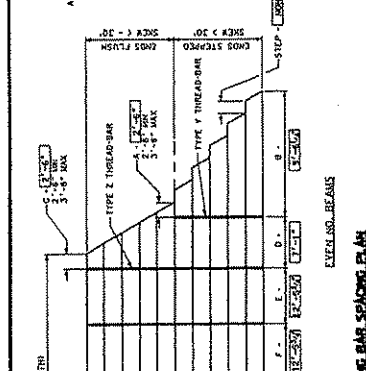
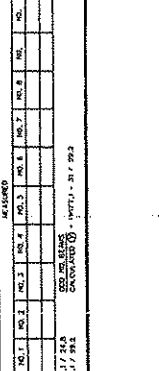
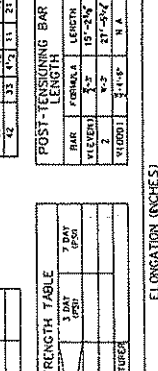
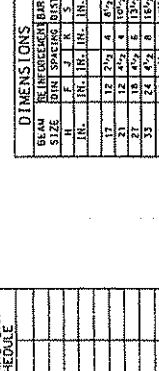
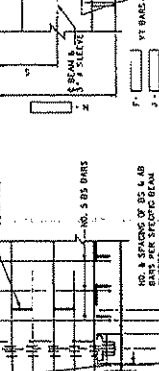
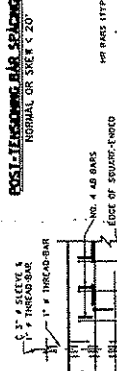
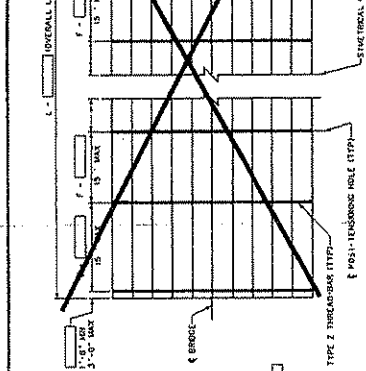
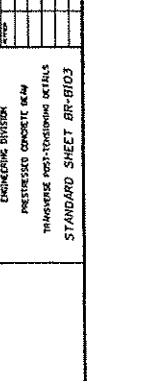
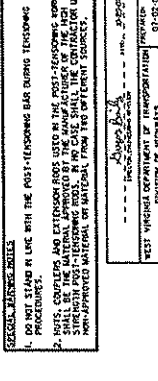
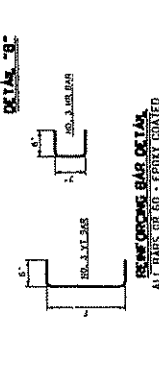
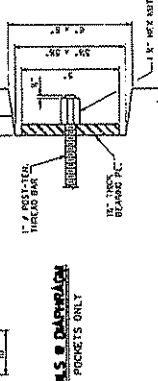
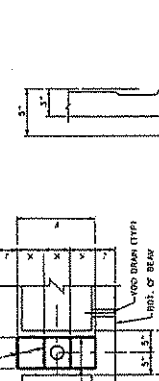
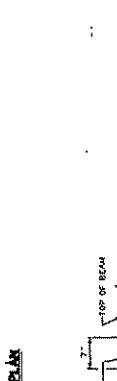
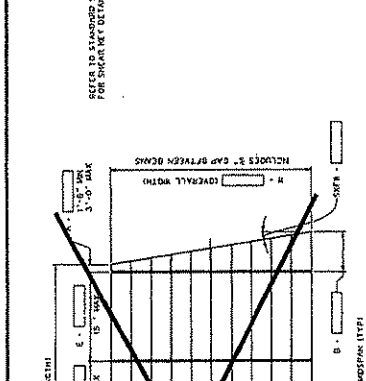
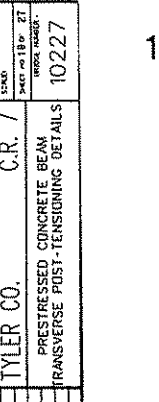
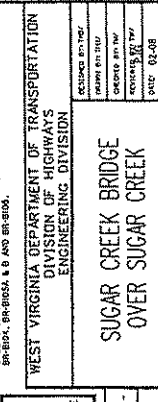
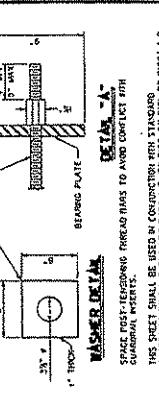
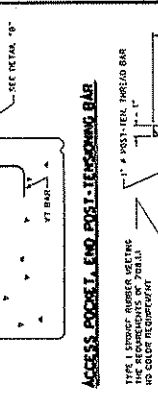
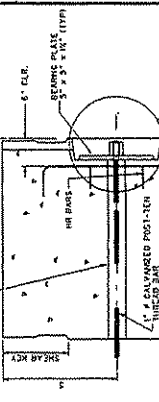
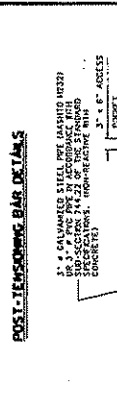
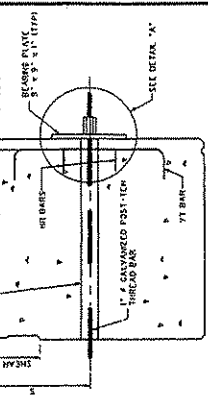
PAD	LENGTH	WIDTH	HEIGHT	NO. SHIMS	SHIM SIZE	SPACING RANGES	MAXIMUM JOINT MOVEMENT ONE DIRECTION	MOVEMENT IN BOTH DIRECTIONS
A1	48"	28"	16"	2	1/2" x 4 1/2" x 1/2"	20" - 38"	55 MPa	0.33"
B1	48"	28"	16"	3	1/2" x 4 1/2" x 1/2"	40" - 78"	75 MPa	0.80"
C1	48"	28"	16"	4	1/2" x 4 1/2" x 1/2"	80" - 100"	89 MPa	1.02"
A2	48"	15 1/2"	16"	2	1/2" x 4 1/2" x 1/2"	20" - 36"	20 MPa	0.33"
B2	48"	15 1/2"	16"	3	1/2" x 4 1/2" x 1/2"	40" - 78"	38 MPa	0.80"
C2	48"	15 1/2"	16"	4	1/2" x 4 1/2" x 1/2"	80" - 100"	45 MPa	1.02"



STATE	PROJECT NUMBER	PROJECT NAME	DATE	COUNT	SHEET NO.	TOTAL SHEETS
VA	S348-7-10-4T	N/A	6	TYLER	18	27

SEE S348-7-10-4T FOR SHEET INDEX AND SHEET NO. 18 OF 27

SEE S348-7-10-4T FOR SHEET INDEX AND SHEET NO. 18 OF 27



SPAN	60'-0"	70'-0"	80'-0"	90'-0"	100'-0"	110'-0"	120'-0"	130'-0"	140'-0"	150'-0"	160'-0"	170'-0"	180'-0"	190'-0"	200'-0"	210'-0"	220'-0"	230'-0"	240'-0"	250'-0"	260'-0"	270'-0"	280'-0"	290'-0"	300'-0"	
POST-TENSIONING BAR SIZE	1/2"	3/8"	1/2"	3/8"	1/2"	3/8"	1/2"	3/8"	1/2"	3/8"	1/2"	3/8"	1/2"	3/8"	1/2"	3/8"	1/2"	3/8"	1/2"	3/8"	1/2"	3/8"	1/2"	3/8"	1/2"	3/8"
POST-TENSIONING BAR LENGTH	17'	12'	21'	18'	27'	24'	33'	30'	39'	36'	45'	42'	51'	48'	57'	54'	63'	60'	69'	66'	75'	72'	81'	78'	87'	84'

BAR	CODE	CAC	NO. 1	NO. 2	NO. 3	NO. 4	NO. 5	NO. 6	NO. 7	NO. 8	NO. 9	NO. 10	NO. 11	NO. 12	NO. 13	NO. 14	NO. 15	NO. 16	NO. 17	NO. 18	NO. 19	NO. 20	NO. 21	NO. 22	NO. 23	NO. 24	NO. 25	NO. 26	NO. 27	NO. 28	NO. 29	NO. 30
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ELONGATION (PERCENT)	NO. 1	NO. 2	NO. 3	NO. 4	NO. 5	NO. 6	NO. 7	NO. 8	NO. 9	NO. 10	NO. 11	NO. 12	NO. 13	NO. 14	NO. 15	NO. 16	NO. 17	NO. 18	NO. 19	NO. 20	NO. 21	NO. 22	NO. 23	NO. 24	NO. 25	NO. 26	NO. 27	NO. 28	NO. 29	NO. 30
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POST-TENSIONING BAR TYPE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
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POST-TENSIONING BAR TYPE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
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POST-TENSIONING BAR TYPE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
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POST-TENSIONING BAR TYPE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
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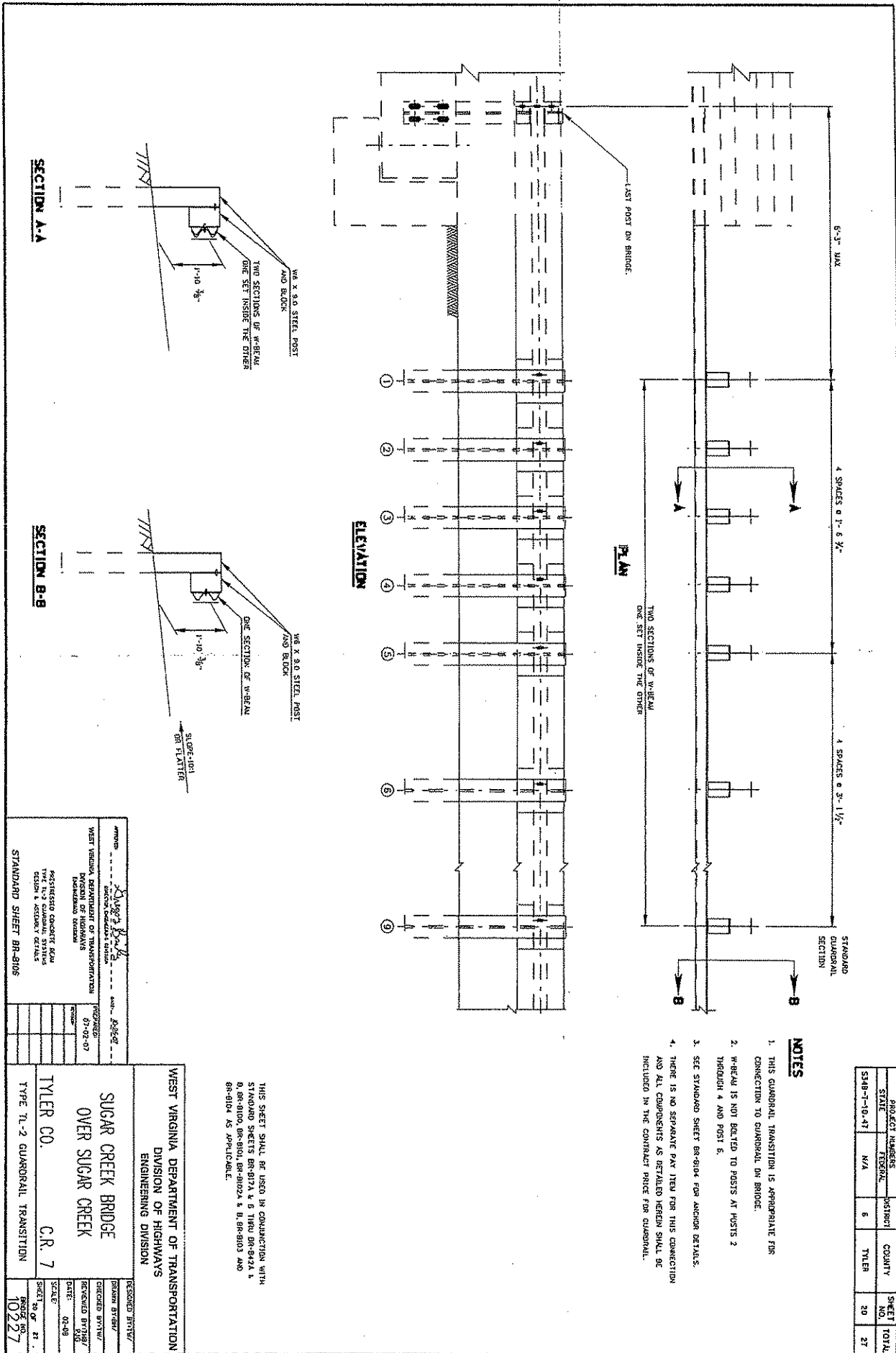
WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
ENGINEERING DIVISION

TYLER CO. C.R. 7

PRESTRESSED CONCRETE BEAM
TRANSVERSE POST-TENSIONING DETAILS

STANDARD SHEET BR-B103

10227



PROJECT NUMBER	DISTRICT	COUNTY	SHEET NO.	TOTAL
SM48-7-10-47	N/A	TYLER	20	27

NOTES

1. THIS GUARDRAIL TRANSITION IS APPROPRIATE FOR CONNECTION TO GUARDRAIL ON BRIDGE.
2. W-BEAM IS NOT DETACHED TO POSTS AT POSTS 2 THROUGH 4 AND POST 5.
3. SEE STANDARD SHEET BR-8104 FOR ANCHOR DETAILS.
4. THERE IS NO SEPARATE PAY ITEM FOR THIS CONNECTION AND ALL COMPONENTS AS DETAILED HEREIN SHALL BE INCLUDED IN THE CONTRACT PRICE FOR GUARDRAIL.

THIS SHEET SHALL BE USED IN CONNECTION WITH STANDARD SHEETS BR-817A & B, TIRU DR-8142A & B, BR-8100, BR-8101, BR-8102A & B, BR-8103 AND BR-8104 AS APPLICABLE.

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
ENGINEERING DIVISION

RESIGNED BY: [Signature]

BRANN STEVEN
CHECKED BY: [Signature]
RECEIVED BY: [Signature]

DATE: 02-09
SCALE:

SHEET NO. 21
10227

PROJECT: SUGAR CREEK BRIDGE OVER SUGAR CREEK
TYLER CO. C.R. 7
TYPE: T1-2 GUARDRAIL TRANSITION

APPROVED: [Signature]
WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
ENGINEERING DIVISION

DESIGNED: 07-02-87
CHECKED: [Signature]

REGISTERED CONTRACTOR
TYLER CO. C.R. 7
STANDARD SHEET BR-8106

VENDOR PREFERENCE CERTIFICATE

Certification and application* is hereby made for Preference in accordance with *West Virginia Code*, §5A-3-37. (Does not apply to construction contracts). *West Virginia Code*, §5A-3-37, provides an opportunity for qualifying vendors to request (at the time of bid) preference for their residency status. Such preference is an evaluation method only and will be applied only to the cost bid in accordance with the *West Virginia Code*. This certificate for application is to be used to request such preference. The Purchasing Division will make the determination of the Resident Vendor Preference, if applicable.

- 1. **Application is made for 2.5% resident vendor preference for the reason checked:**
 Bidder is an individual resident vendor and has resided continuously in West Virginia for four (4) years immediately preceding the date of this certification; **or,**
 Bidder is a partnership, association or corporation resident vendor and has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; **or** 80% of the ownership interest of Bidder is held by another individual, partnership, association or corporation resident vendor who has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; **or,**
 Bidder is a nonresident vendor which has an affiliate or subsidiary which employs a minimum of one hundred state residents and which has maintained its headquarters or principal place of business within West Virginia continuously for the four (4) years immediately preceding the date of this certification; **or,**
- 2. **Application is made for 2.5% resident vendor preference for the reason checked:**
 Bidder is a resident vendor who certifies that, during the life of the contract, on average at least 75% of the employees working on the project being bid are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; **or,**
- 3. **Application is made for 2.5% resident vendor preference for the reason checked:**
 Bidder is a nonresident vendor employing a minimum of one hundred state residents or is a nonresident vendor with an affiliate or subsidiary which maintains its headquarters or principal place of business within West Virginia employing a minimum of one hundred state residents who certifies that, during the life of the contract, on average at least 75% of the employees or Bidder's affiliate's or subsidiary's employees are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; **or,**
- 4. **Application is made for 5% resident vendor preference for the reason checked:**
 Bidder meets either the requirement of both subdivisions (1) and (2) or subdivision (1) and (3) as stated above; **or,**
- 5. **Application is made for 3.5% resident vendor preference who is a veteran for the reason checked:**
 Bidder is an individual resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard and has resided in West Virginia continuously for the four years immediately preceding the date on which the bid is submitted; **or,**
- 6. **Application is made for 3.5% resident vendor preference who is a veteran for the reason checked:**
 Bidder is a resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard, if, for purposes of producing or distributing the commodities or completing the project which is the subject of the vendor's bid and continuously over the entire term of the project, on average at least seventy-five percent of the vendor's employees are residents of West Virginia who have resided in the state continuously for the two immediately preceding years.

Bidder understands if the Secretary of Revenue determines that a Bidder receiving preference has failed to continue to meet the requirements for such preference, the Secretary may order the Director of Purchasing to: (a) reject the bid; or (b) assess a penalty against such Bidder in an amount not to exceed 5% of the bid amount and that such penalty will be paid to the contracting agency or deducted from any unpaid balance on the contract or purchase order.

By submission of this certificate, Bidder agrees to disclose any reasonably requested information to the Purchasing Division and authorizes the Department of Revenue to disclose to the Director of Purchasing appropriate information verifying that Bidder has paid the required business taxes, provided that such information does not contain the amounts of taxes paid nor any other information deemed by the Tax Commissioner to be confidential.

Under penalty of law for false swearing (West Virginia Code, §61-5-3), Bidder hereby certifies that this certificate is true and accurate in all respects; and that if a contract is issued to Bidder and if anything contained within this certificate changes during the term of the contract, Bidder will notify the Purchasing Division in writing immediately.

Bidder: _____ Signed: _____

Date: _____ Title: _____

*Check any combination of preference consideration(s) indicated above, which you are entitled to receive.

STATE OF WEST VIRGINIA
Purchasing Division**PURCHASING AFFIDAVIT****VENDOR OWING A DEBT TO THE STATE:**

West Virginia Code §5A-3-10a provides that: No contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and the debt owed is an amount greater than one thousand dollars in the aggregate.

PUBLIC IMPROVEMENT CONTRACTS & DRUG-FREE WORKPLACE ACT:

West Virginia Code §21-1D-5 provides that: Any solicitation for a public improvement construction contract shall require each vendor that submits a bid for the work to submit at the same time an affidavit that the vendor has a written plan for a drug-free workplace policy in compliance with Article 1D, Chapter 21 of the West Virginia Code. A public improvement construction contract may not be awarded to a vendor who does not have a written plan for a drug-free workplace policy in compliance with Article 1D, Chapter 21 of the West Virginia Code and who has not submitted that plan to the appropriate contracting authority in timely fashion. For a vendor who is a subcontractor, compliance with Section 5, Article 1D, Chapter 21 of the West Virginia Code may take place before their work on the public improvement is begun.

ANTITRUST:

In submitting a bid to any agency for the state of West Virginia, the bidder offers and agrees that if the bid is accepted the bidder will convey, sell, assign or transfer to the state of West Virginia all rights, title and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the state of West Virginia for price fixing and/or unreasonable restraints of trade relating to the particular commodities or services purchased or acquired by the state of West Virginia. Such assignment shall be made and become effective at the time the purchasing agency tenders the initial payment to the bidder.

I certify that this bid is made without prior understanding, agreement, or connection with any corporation, firm, limited liability company, partnership or person or entity submitting a bid for the same materials, supplies, equipment or services and is in all respects fair and without collusion or fraud. I further certify that I am authorized to sign the certification on behalf of the bidder or this bid.

LICENSING:

Vendors must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, West Virginia Insurance Commission, or any other state agencies or political subdivision. Furthermore, the vendor must provide all necessary releases to obtain information to enable the Director or spending unit to verify that the vendor is licensed and in good standing with the above entities.

CONFIDENTIALITY:

The vendor agrees that he or she will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the agency's policies, procedures and rules. Vendors should visit www.state.wv.us/admin/purchase/privacy for the Notice of Agency Confidentiality Policies.

Under penalty of law for false swearing (*West Virginia Code* §61-5-3), it is hereby certified that the vendor acknowledges the information in this said affidavit and is in compliance with the requirements as stated.

Vendor's Name: _____

Authorized Signature: _____ Date: _____