



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

Request for Quotation

RFQ NUMBER

04120658

PAGE

1

ADDRESS CORRESPONDENCE TO ATTENTION OF:

ALAN CUMMINGS
304-558-2402

RFQ COPY

TYPE NAME/ADDRESS HERE

*709042451 304-425-8955

EASTERN VAULT CO., INC.

PO BOX 1134

PRINCETON, WV 24740

DIVISION OF HIGHWAYS

JOB SITE

SEE SPECIFICATIONS

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
03/26/2012	NET 30	OUR TRUCKS	JOB SITE	INCLUDED

BID OPENING DATE:

04/11/2012

BID OPENING TIME

01:30PM

LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
0001				210-16		\$ 76,535.00
PRESTRESSED CONCRETE BOX BEAMS AND ACCESSORIES						
THE WEST VIRGINIA STATE PURCHASING DIVISION FOR THE AGENCY, THE WEST VIRGINIA DIVISION OF HIGHWAYS, IS SOLICITING BIDS TO PROVIDE THE AGENCY WITH PRESTRESSED CONCRETE BEAMS WITH ACCESSORIES PER THE ATTACHED SPECIFICATIONS.						
BANKRUPTCY: IN THE EVENT THE VENDOR/CONTRACTOR FILES FOR BANKRUPTCY PROTECTION, THE STATE MAY DEEM THE CONTRACT NULL AND VOID, AND TERMINATE SUCH CONTRACT WITHOUT FURTHER ORDER.						
CANCELLATION: THE DIRECTOR OF PURCHASING RESERVES THE RIGHT TO CANCEL THIS CONTRACT IMMEDIATELY UPON WRITTEN NOTICE TO THE VENDOR IF THE COMMODITIES AND/OR SERVICES SUPPLIED ARE OF AN INFERIOR QUALITY OR DO NOT CONFORM TO THE SPECIFICATIONS OF THE BID AND CONTRACT HEREIN.						
PREFERENCE FOR USE OF DOMESTIC STEEL PRODUCTS						
1. EXCEPT WHEN AUTHORIZED BY THE DIRECTOR OF THE PURCHASING DIVISION PURSUANT TO SUBSECTION 2 BELOW, NO CONTRACTOR MAY USE OR SUPPLY STEEL PRODUCTS FOR A STATE CONTRACT PROJECT OTHER THAN THOSE STEEL PRODUCTS MADE IN THE UNITED STATES. AS USED IN THIS CONTRACT,						
A. "STATE CONTRACT PROJECT" MEANS ANY ERECTION OR CONSTRUCTION OF, OR ANY ADDITION TO, ALTERATIO						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE

BRIAN P. STRUBLE

TELEPHONE

304-425-8955

DATE

04-02-2012

TITLE

GENERAL MANAGER

FED

55-0520255

ADDRESS CHANGES TO BE NOTED ABOVE

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

RECEIVED

2012 APR 11 AM 8:07

WV PURCHASING
DIVISION

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. Prior to any award, the apparent successful vendor must be properly registered with the Purchasing Division and have paid the required \$125 fee.
 4. 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.
 5. Payment may only be made after the delivery and acceptance of goods or services.
 6. Interest may be paid for late payment in accordance with the *West Virginia Code*.
 7. Vendor preference will be granted upon written request in accordance with the *West Virginia Code*.
 8. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.
 9. The Director of Purchasing may cancel any Purchase Order/Contract upon 30 days written notice to the seller.
 10. The laws of the State of West Virginia and the *Legislative Rules* of the Purchasing Division shall govern the purchasing process.
 11. Any reference to automatic renewal is hereby deleted. The Contract may be renewed only upon mutual written agreement of the parties.
 12. **BANKRUPTCY:** In the event the vendor/contractor files for bankruptcy protection, the State may deem this contract null and void, and terminate such contract without further order.
 13. **HIPAA BUSINESS ASSOCIATE ADDENDUM:** The West Virginia State Government HIPAA Business Associate Addendum (BAA), approved by the Attorney General, is available online at www.state.wv.us/admin/purchase/vrc/hipaa.html and 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.
 14. **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. Vendor further agrees to comply with the Confidentiality Policies and Information Security Accountability Requirements, set forth in <http://www.state.wv.us/admin/purchase/privacy/noticeConfidentiality.pdf>.
 15. **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, and the West Virginia Insurance Commission. 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.
 16. **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 material, 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.

INSTRUCTIONS TO BIDDERS

1. Use the quotation forms provided by the Purchasing Division. Complete all sections of the quotation form.
2. 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. Unit prices shall prevail in case of discrepancy. All quotations are considered F.O.B. destination unless alternate shipping terms are clearly identified in the quotation.
4. 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
5. Communication during the solicitation, bid, evaluation or award periods, except through the Purchasing Division, is strictly prohibited (W.Va. C.S.R. §148-1-6.6).



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304-558-2402

*709042451 304-425-8955

EASTERN VAULT COMPANY INC
PO BOX 1134

PRINCETON WV 24740

DIVISION OF HIGHWAYS
JOBSITE
SEE SPECIFICATIONSV
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DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS		
03/26/2012						
BID OPENING DATE: 04/11/2012		BID OPENING TIME 01:30PM				
LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
				OF OR OTHER IMPROVEMENT TO ANY BUILDING OR STRUCTURE, INCLUDING, BUT NOT LIMITED TO, ROADS OR HIGHWAYS, OR THE INSTALLATION OF ANY HEATING OR COOLING OR VENTILATING PLANTS OR OTHER EQUIPMENT, OR THE SUPPLY OF AND MATERIALS FOR SUCH PROJECTS, PURSUANT TO A CONTRACT WITH THE STATE OF WEST VIRGINIA FOR WHICH BIDS WERE SOLICITED ON OR AFTER JUNE 6, 2001.		
				B. "STEEL PRODUCTS" MEANS PRODUCTS ROLLED, FORMED, SHAPED, DRAWN, EXTRUDED, FORGED, CAST, FABRICATED OR OTHERWISE SIMILARLY PROCESSED, OR PROCESSED BY A COMBINATION OF TWO OR MORE OF SUCH OPERATIONS, FROM STEEL MADE BY THE OPEN HEARTH, BASIC OXYGEN, ELECTRIC FURNACE, BESSEMER OR OTHER STEEL MAKING PROCESS.		
				C. "UNITED STATES" MEANS THE UNITED STATES OF AMERICA AND INCLUDES ALL TERRITORY, CONTINENTAL OR INSULAR, SUBJECT TO THE JURISDICTION OF THE UNITED STATES.		
2.	THE DIRECTOR OF THE PURCHASING DIVISION MAY, IN WRITING, AUTHORIZE THE USE OF FOREIGN STEEL PRODUCTS IF:					
				A. THE COST FOR EACH CONTRACT ITEM USED DOES NOT EXCEED ONE TENTH OF ONE PERCENT (.1%) OF THE TOTAL CONTRACT COST OR TWO THOUSAND FIVE HUNDRED DOLLARS (2,500.00), WHICHEVER IS GREATER. FOR THE PURPOSES OF THIS SECTION, THE COST IS THE VALUE OF THE STEEL PRODUCT AS DELIVERED TO THE PROJECT OR,		
				B. THE DIRECTOR OF THE PURCHASING DIVISION DETERMINES THAT SPECIFIED STEEL MATERIALS ARE		
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'



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PRINCETON WV 24740

DIVISION OF HIGHWAYS
JOBSITE
SEE SPECIFICATIONS

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS		
03/26/2012						
BID OPENING DATE: 04/11/2012		BID OPENING TIME 01:30PM				
LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
<p>NOT PRODUCED IN THE UNITED STATES IN SUFFICIENT QUANTITY OR OTHERWISE ARE NOT REASONABLY AVAILABLE TO MEET CONTRACT REQUIREMENTS.</p> <p>3. A CONTRACTOR WHO USES STEEL PRODUCTS IN VIOLATION OF THIS SECTION MAY BE SUBJECT TO CIVIL PENALTIES PURSUANT TO WV CODE SECTION 5A-3-56.</p> <p>REV. 10/01/01</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 THE ENVELOPE OR THE BID MAY NOT BE CONSIDERED:</p> <p>SEALED BID</p> <p>BUYER: ALAN CUMMINGS - FILE 33</p> <p>RFQ. NO.: 04120658</p> <p>BID OPENING DATE: 04/11/2012</p>						
SEE REVERSE SIDE FOR TERMS AND CONDITIONS						
SIGNATURE		TELEPHONE		DATE		
TITLE		FEIN		ADDRESS CHANGES TO BE NOTED ABOVE		

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PRINCETON WV 24740

DIVISION OF HIGHWAYS
JOBSITE
SEE SPECIFICATIONS

DATE PRINTED

03/26/2012

TERMS OF SALE

SHIP VIA

F.O.B.

FREIGHT TERMS

BID OPENING DATE:

04/11/2012

BID OPENING TIME

01:30PM

LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
BID OPENING TIME: 1:30 P.M.						
PLEASE PROVIDE A FAX NUMBER IN CASE IT IS NECESSARY TO CONTACT YOU REGARDING YOUR BID: 1-304-425-1171						
CONTACT PERSON (PLEASE PRINT CLEARLY): BRIAN P. STRUBLE						
ANY INDIVIDUAL SIGNING THIS BID IS CERTIFYING THAT: (1) HE OR SHE IS AUTHORIZED BY THE BIDDER TO EXECUTE THE BID OR ANY DOCUMENTS RELATED THERETO ON BEHALF OF THE BIDDER, (2) THAT HE OR SHE IS AUTHORIZED TO BIND THE BIDDER IN A CONTRACTUAL RELATIONSHIP, AND (3) THAT THE BIDDER HAS PROPERLY REGISTERED WITH ANY STATE AGENCIES THAT MAY REQUIRE REGISTRATION.						
***** THIS IS THE END OF RFQ 04120658 ***** TOTAL:						\$76,535.00

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE

TELEPHONE

DATE

TITLE

FEIN

ADDRESS CHANGES TO BE NOTED ABOVE

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RFQ#: 04120658

**Specifications
One Time Purchase**

Purpose: To provide the West Virginia Divisions of Highways with prestressed concrete box beams and accessories for state project S346-5/5-1.66, Wickwire I-Beam Bridge.

1.0 DEFINITIONS

- A. The "Agency" shall be defined as the West Virginia Division of Highways
- B. The "Vendor" shall be defined as the successful bidder.
- C. The "Purchase Order" shall be defined as the binding agreement that is entered into between the State of West Virginia and the Vendor to provide the services as herein specified.
- D. "Mandatory Requirements: The terms "must", "will", "shall", "minimum", "maximum", or "is/are required" identify a mandatory item or factor. Decisions regarding compliance with any mandatory requirements shall be at the sole discretion of the Agency.

2.0 SCOPE OF WORK

The Vendor shall provide 36" wide by 21" deep Prestressed Concrete Box Beams with accessories.

2.1 Technical Requirements

All prestressed concrete box beams and accessories manufactured and delivered shall be in accordance with the West Virginia Division of Highways Standard Specifications Roads and Bridges adopted 2010 and the current Supplemental Specifications, and the attached control prints. If larger prints are required, contact District Four Bridge Department 304-842-

- 2.1.1 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 Agency, may be accepted under the following conditions:

A) Cracks of 0.004 inch or less shall be treated with a second coat of an Agency approved concrete sealer.

B) Cracks of greater than 0.004 inch shall be treated by an Agency approved epoxy injection method.

All concrete sealer and epoxy injection required for acceptance shall be performed at no additional cost to the Agency.

2.1.2 Upon receipt of a Purchase Order, the Vendor shall submit shop drawings to the District Bridge Engineer issuing the Purchase Order within twenty (20) calendar days. Shop drawings must be approved by the Agency prior to the manufacture of any items.

2.2 Freight

2.3.1 All shipments are to be FOB Destination

2.4 Delivery

2.4.1 All materials covered by this order shall be delivered to the project site on Taylor County Route 5/5 near Grafton, WV (See Attached Map).

2.4.2 Delivery is currently scheduled for a mid-morning time in August 2012. Vendor shall coordinate delivery with the District Bridge Engineer or his designated agent at 304-842-1512.

2.4.3 The Agency requires all materials to be delivered to the designated job site in a single calendar day.

2.4.4 Delivery is an integral part of this purchase order and failure to comply will be cause to initiate a WV-82, Vendor Performance Form. This form will officially notify the West Virginia Division of Purchasing and the vendor of unsatisfactory performance in the execution of this purchase order and the requirements herein.

3.0 INVOICING

3.1 Payment

3.1.1 The Vendor must send a proper invoice to:

West Virginia Division of Highways
District Four Headquarters
P.O. Box 4220
Clarksburg, WV 26302

3.2 Partial Payment of Approved Beams

3.1.3 Upon completion of manufacture and approval by the Agency of all Beams specified on the Purchase Order, the Vendor may invoice and the Agency will pay for the cost of manufacturing the Beams, not to exceed 65% of the total cost of the delivered Beams. The remaining may be invoiced when all beams are delivered. Partial payment for 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 Agency employees and/or agents for the purpose of inspecting, sampling, testing and removing any or all Beams

4.0 AWARD

- 4.1 A Purchase Order will be awarded complete and not split to the lowest acceptable bidder.

COST SHEET

RFQ # 04120658

Item Number	Quantity	Description	Unit Price	Amount
1	891	SF - Interior Beams; 21"D X 36"W Prestressed Concrete Box Beams. 6 Beams @ 49'6" Long.	35.00	31,185.00
2	297	SF - Exterior Beams; 21"D X 36"W Prestressed Concrete Box Beams. 2 Beams @ 49'6" Long.	50.00	14,850.00
3	16	EA - Additional cost of Skewing one beam end 5° RFS	200.00	3,200.00
4	14	EA - Elastomeric Laminated Bearing Pads B1 Pad 1 13/16" T X 4 3/4" W x 2'4" L (60 Duro)	200.00	2,800.00
5	4	EA - Elastomeric Laminated Bearing Pads B2 Pad 1 13/16" T X 4 3/4" W x 1'3 1/2" L (60 Duro)	200.00	800.00
6	16	EA - #8 Rebar Anchor Rods X 2'0" long Galvanized	20.00	320.00
7	61	LF - 2" Thick Sponge Rubber Preformed Joint Filler 6" wide	20.00	1,220.00
8	50	LF 1" Thick Sponge Rubber Preformed Joint Filler 21" wide	20.00	1,000.00
9	28	EA - Sponge Rubber Washers 8" X 8" X 1" thick	20.00	560.00
10	16	EA - Guardrail Attachment Assembly Type TL-2 Includes inserts, studs, nuts and washers. Galvanized	300.00	4,800.00
11	110	LF - 8"x 4" x 3/16" tubing for TL-2 Guardrail System. Includes blocks for posts, and splices. Galvanized	100.00	11,000.00
12	110	LF - Galvanized W-Beam Guardrail with bolts and nuts.	20.00	2,200.00
13	110	LF - 1" dia. Post-Tensioning Thread Bars with nuts. 4 @ 27'6"	20.00	2,200.00
14	8	EA - Bearing Plates 9" X 9" x 1" Galvanized	50.00	400.00
			TOTAL	\$ 76,535.00

Items for Project S346-5/5-1.66, Wickwire I-Beam

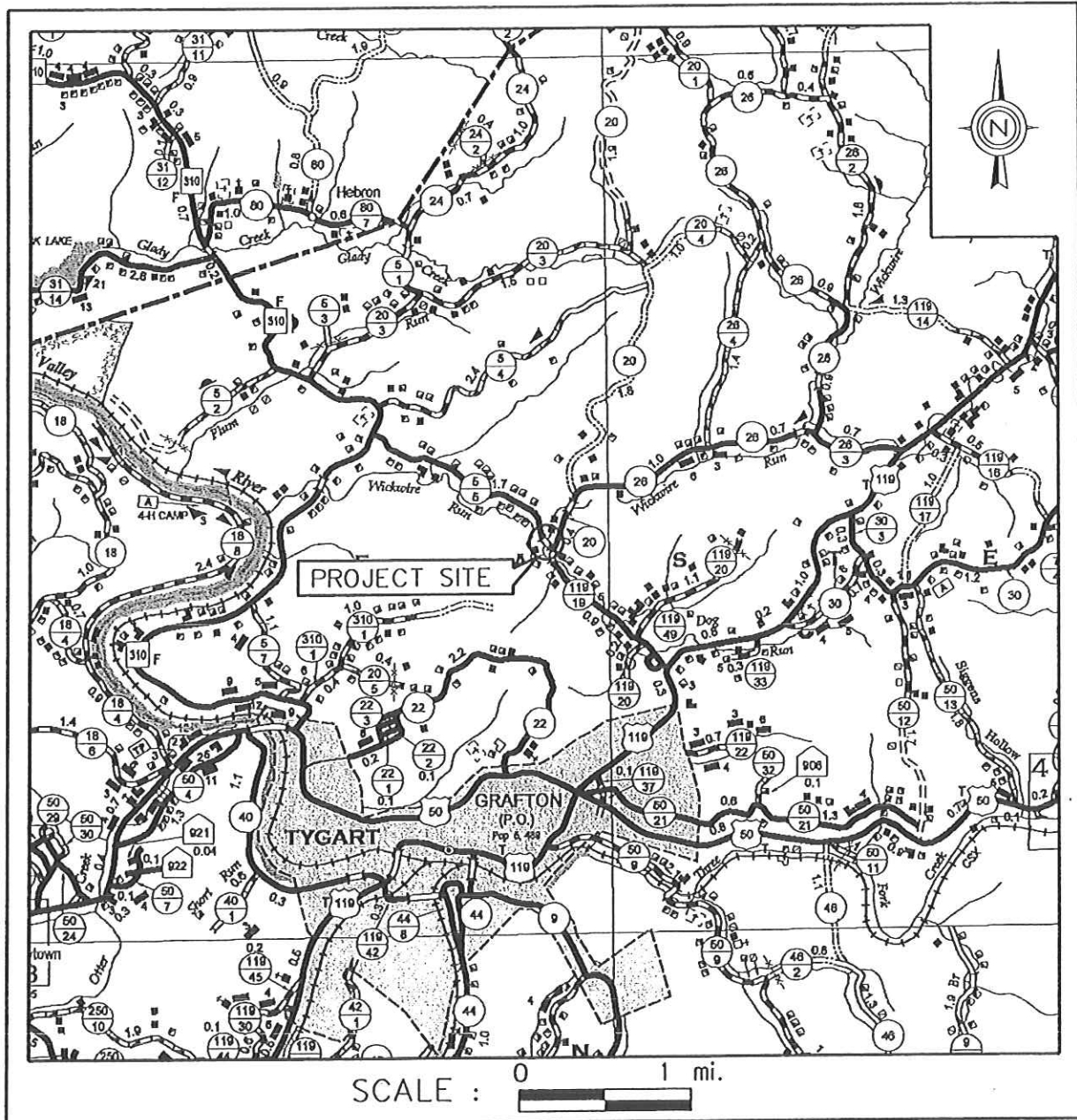
LOCATION MAP

WICKWIRE I-BEAM BRIDGE

STATE PROJECT NO. S346-5/5-1.66

FEDERAL PROJECT NO. N/A

TAYLOR COUNTY



WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
DISTRICT FOUR BRIDGE DEPARTMENT

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION	DIVISION OF HIGHWAYS	ENGINEERING DIVISION	DESIGNED BY/1/	4.11
			DRAWN BY/4/	4.12
			CHECKED BY/3/	4.13
			APPROVED BY/2/	4.14
			DATE/	4.15
			SCALE/	4.16
			THICK/	4.17
			PROJECT NO./	4.18
			10000	4.19

STATE	FEDERAL PROJECT NUMBER	STATE DIST. NO.	COUNTY	SHEET NO.	TOTAL SHEETS
3348-S-5-1-88	N/A	4	TAFLOM	7	18

NOTES:

1. REFER TO SHEET BR-102-04 FOR SHEAR KEY DETAILS.

2. DESIGNER SHALL USE THE FOLLOWING KEY TO LOCATE STRANDS AND REINFORCEMENT PATTERN ON "BEAM PRESSURES" VIEW.

KEY:

①—LOC. OF STRAND

▽—END OF STRAND, LENGTH FROM END OF BEAM

△—END OF STRAND, LENGTH FROM END OF BEAM

□—END OF STRAND, LENGTH FROM END OF BEAM

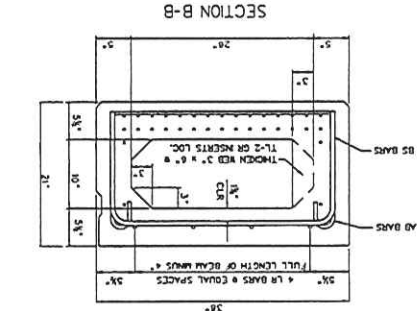
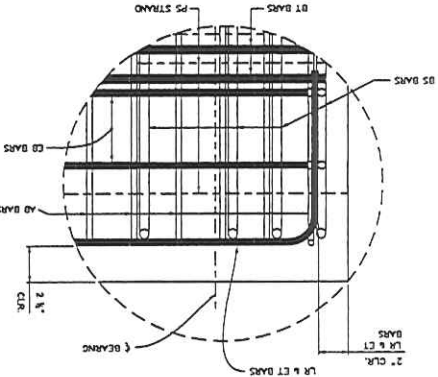
3. THE DESIGNER SHALL BE CISEN IN CONNECTION WITH THE FOLLOWING:

BR-102-03, BR-102-04, BR-102-05, BR-102-06, BR-102-07, BR-102-08, BR-102-09, BR-102-10, BR-102-11, BR-102-12, BR-102-13, BR-102-14, BR-102-15, BR-102-16, BR-102-17, BR-102-18, BR-102-19, BR-102-20, BR-102-21, BR-102-22, BR-102-23, BR-102-24, BR-102-25, BR-102-26, BR-102-27, BR-102-28, BR-102-29, BR-102-30, BR-102-31, BR-102-32, BR-102-33, BR-102-34, BR-102-35, BR-102-36, BR-102-37, BR-102-38, BR-102-39, BR-102-40, BR-102-41, BR-102-42, BR-102-43, BR-102-44, BR-102-45, BR-102-46, BR-102-47, BR-102-48, BR-102-49, BR-102-50, BR-102-51, BR-102-52, BR-102-53, BR-102-54, BR-102-55, BR-102-56, BR-102-57, BR-102-58, BR-102-59, BR-102-60, BR-102-61, BR-102-62, BR-102-63, BR-102-64, BR-102-65, BR-102-66, BR-102-67, BR-102-68, BR-102-69, BR-102-70, BR-102-71, BR-102-72, BR-102-73, BR-102-74, BR-102-75, BR-102-76, BR-102-77, BR-102-78, BR-102-79, BR-102-80, BR-102-81, BR-102-82, BR-102-83, BR-102-84, BR-102-85, BR-102-86, BR-102-87, BR-102-88, BR-102-89, BR-102-90, BR-102-91, BR-102-92, BR-102-93, BR-102-94, BR-102-95, BR-102-96, BR-102-97, BR-102-98, BR-102-99, BR-102-100, BR-102-101, BR-102-102, BR-102-103, BR-102-104, BR-102-105, BR-102-106, BR-102-107, BR-102-108, BR-102-109, BR-102-110, BR-102-111, BR-102-112, BR-102-113, BR-102-114, BR-102-115, BR-102-116, BR-102-117, BR-102-118, BR-102-119, BR-102-120, BR-102-121, BR-102-122, BR-102-123, BR-102-124, BR-102-125, BR-102-126, BR-102-127, BR-102-128, BR-102-129, BR-102-130, BR-102-131, BR-102-132, BR-102-133, BR-102-134, BR-102-135, BR-102-136, BR-102-137, BR-102-138, BR-102-139, BR-102-140, BR-102-141, BR-102-142, BR-102-143, BR-102-144, BR-102-145, BR-102-146, BR-102-147, BR-102-148, BR-102-149, BR-102-150, BR-102-151, BR-102-152, BR-102-153, BR-102-154, BR-102-155, BR-102-156, BR-102-157, BR-102-158, BR-102-159, BR-102-160, BR-102-161, BR-102-162, BR-102-163, BR-102-164, BR-102-165, BR-102-166, BR-102-167, BR-102-168, BR-102-169, BR-102-170, BR-102-171, BR-102-172, BR-102-173, BR-102-174, BR-102-175, BR-102-176, BR-102-177, BR-102-178, BR-102-179, BR-102-180, BR-102-181, BR-102-182, BR-102-183, BR-102-184, BR-102-185, BR-102-186, BR-102-187, BR-102-188, BR-102-189, BR-102-190, BR-102-191, BR-102-192, BR-102-193, BR-102-194, BR-102-195, BR-102-196, BR-102-197, BR-102-198, BR-102-199, BR-102-200, BR-102-201, BR-102-202, BR-102-203, BR-102-204, BR-102-205, BR-102-206, BR-102-207, BR-102-208, BR-102-209, BR-102-210, BR-102-211, BR-102-212, BR-102-213, BR-102-214, BR-102-215, BR-102-216, BR-102-217, BR-102-218, BR-102-219, BR-102-220, BR-102-221, BR-102-222, BR-102-223, BR-102-224, BR-102-225, BR-102-226, BR-102-227, BR-102-228, BR-102-229, BR-102-230, BR-102-231, BR-102-232, BR-102-233, BR-102-234, BR-102-235, BR-102-236, BR-102-237, BR-102-238, BR-102-239, BR-102-240, BR-102-241, BR-102-242, BR-102-243, BR-102-244, BR-102-245, BR-102-246, BR-102-247, BR-102-248, BR-102-249, BR-102-250, BR-102-251, BR-102-252, BR-102-253, BR-102-254, BR-102-255, BR-102-256, BR-102-257, BR-102-258, BR-102-259, BR-102-260, BR-102-261, BR-102-262, BR-102-263, BR-102-264, BR-102-265, BR-102-266, BR-102-267, BR-102-268, BR-102-269, BR-102-270, BR-102-271, BR-102-272, BR-102-273, BR-102-274, BR-102-275, BR-102-276, BR-102-277, BR-102-278, BR-102-279, BR-102-280, BR-102-281, BR-102-282, BR-102-283, BR-102-284, BR-102-285, BR-102-286, BR-102-287, BR-102-288, BR-102-289, BR-102-290, BR-102-291, BR-102-292, BR-102-293, BR-102-294, BR-102-295, BR-102-296, BR-102-297, BR-102-298, BR-102-299, BR-102-300, BR-102-301, BR-102-302, BR-102-303, BR-102-304, BR-102-305, BR-102-306, BR-102-307, BR-102-308, BR-102-309, BR-102-310, BR-102-311, BR-102-312, BR-102-313, BR-102-314, BR-102-315, BR-102-316, BR-102-317, BR-102-318, BR-102-319, BR-102-320, BR-102-321, BR-102-322, BR-102-323, BR-102-324, BR-102-325, BR-102-326, BR-102-327, BR-102-328, BR-102-329, BR-102-330, BR-102-331, BR-102-332, BR-102-333, BR-102-334, BR-102-335, BR-102-336, BR-102-337, BR-102-338, BR-102-339, BR-102-340, BR-102-341, BR-102-342, BR-102-343, BR-102-344, BR-102-345, BR-102-346, BR-102-347, BR-102-348, BR-102-349, BR-102-350, BR-102-351, BR-102-352, BR-102-353, BR-102-354, BR-102-355, BR-102-356, BR-102-357, BR-102-358, BR-102-359, BR-102-360, BR-102-361, BR-102-362, BR-102-363, BR-102-364, BR-102-365, BR-102-366, BR-102-367, BR-102-368, BR-102-369, BR-102-370, BR-102-371, BR-102-372, BR-102-373, BR-102-374, BR-102-375, BR-102-376, BR-102-377, BR-102-378, BR-102-379, BR-102-380, BR-102-381, BR-102-382, BR-102-383, BR-102-384, BR-102-385, BR-102-386, BR-102-387, BR-102-388, BR-102-389, BR-102-390, BR-102-391, BR-102-392, BR-102-393, BR-102-394, BR-102-395, BR-102-396, BR-102-397, BR-102-398, BR-102-399, BR-102-400, BR-102-401, BR-102-402, BR-102-403, BR-102-404, BR-102-

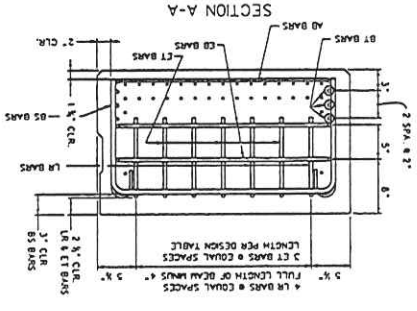
[illegible]

ES

DETAIL "A"



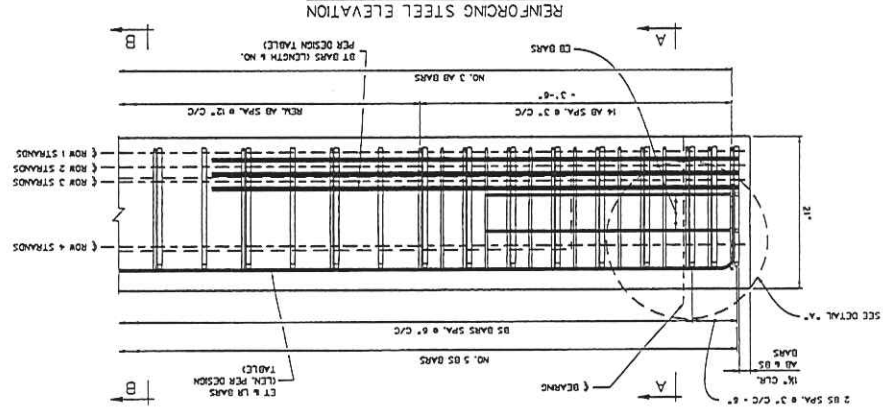
NOTE: The center ET bar shall be adjusted left or right to accommodate the 2" anchor sleeve.



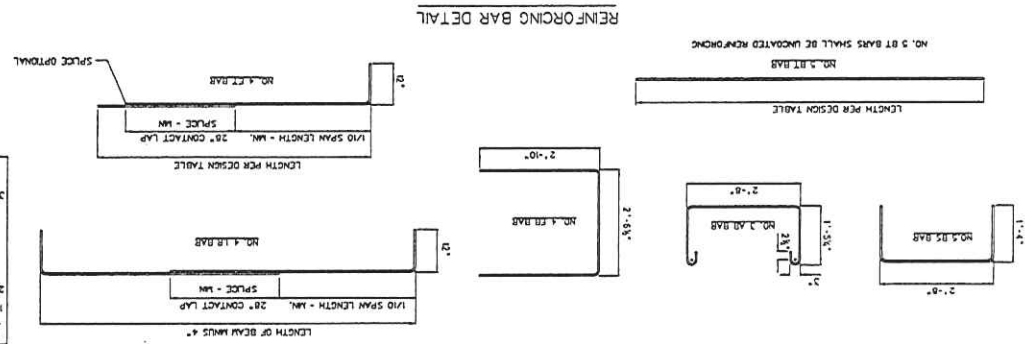
SECTION A-A

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GENERAL ELEVATION VIEW



REINFORCING STEEL ELEVATION



REINFORCING BAR DETAIL

MIN. CONCRETE STRENGTH @ RELEASE	= 5500 PSI
MIN. CONCRETE STRENGTH @ 28 DAYS	= 8000 PSI
INITIAL PULL/STRAND	= 33,820 LBS
CROSS-SECTION AREA/STRAND	= 0.167 SQ. IN.

MIN. CONCRETE STRENGTH @ RELEASE	= 5500 PSI
MIN. CONCRETE STRENGTH @ 28 DAYS	= 8000 PSI
INITIAL PULL/STRAND	= 33,820 LBS
CROSS-SECTION AREA/STRAND	= 0.167 SQ. IN.

1. BEAM WEIGHTS LISTED IN THIS DESIGN TABLE ARE BASED ON ZERO SKEW, 2 FT. LONG ENDBLOCK AND DIAPHRAGMS SPACED @ 15 FT C/C. WEIGHTS FOR SKEWED BEAMS, LONGER ENDBLOCKS AND ADDITIONAL DIAPHRAGMS SHOULD BE ADJUSTED ACCORDINGLY.
FOR ADDITIONAL DIAPHRAGMS, ADD 226 LBS/DIAPHRAGM.
FOR SKEW ADD 21 LBS/DEGREE OF SKEW/END.
FOR LONGER ENDBLOCK, ADD 271 LBS/UF/END.
2. DESIGNERS SHOULD NOTE THAT DATA IN STANDARD TABLE IS BASED ON EVEN SPAN LENGTHS, A TWO LANE STRUCTURE & BEAMS W/ ZERO SKEW. SUPERIMPOSED DEAD LOADS INCLUDE TYPE F PARAPET (321 PLF) AND A FWS OF 30 PSF. FOR NON-STANDARD BRIDGES DATA SHOULD BE VERIFIED AND F REQUIRED NEW DESIGN DATA ENTERED INTO BLANK COLUMNS. IN NO CASE SHALL THE STANDARD DESIGN TABLE BE ALTERED.
3. IF BEAM DOES NOT MEET ALL TOLERANCES REFER TO W/ 603.10.40 FOR GUIDANCE. MEASUREMENT OF CURB OR PARAPET HEIGHTS AND WEIGHT VALUES SHOULD BE COMPLETED WITHIN 72 HOURS OF RELEASE. ADDITIONALLY, CAMBER SHOULD BE EVALUATED UNDER CONDITIONS THAT MINIMIZE THE EFFECT OF TEMPERATURE VARIATION

4. DESIGNER, FABRICATOR, AND ERECTOR SHALL BE AWARE THAT SKEWED END BEAMS MAY TWIST OR WARP, CAUSING UNEVEN BEAM SEATING AT THE BEARINGS. THE CONTRACTOR IS REQUIRED TO CORRECT AT THE TIME OF ERECTION, BEFORE THE BEAMS ARE SECURED IN PLACE. METHOD OF CORRECTION SHALL PROVIDE AN EVEN, TOTAL BEARING AND A LEVEL TOP BEAM SURFACE. TOLERANCE, AFTER CORRECTION, SHALL BE $\pm 1/4$ " INCH. THE FABRICATOR SHALL NOTIFY THE CONTRACTOR AND DESIGNER IF CORRECTIONS ARE REQUIRED PRIOR TO SHIPMENT.
5. MAXIMUM BEAM SKEW SHALL BE 30 DEGREES.
6. DESIGNER INPUT VALUES OF NUMBER OF INSERTS, DISTANCE FROM END OF BEAM TO ϵ FIRST INSERT, AND ϵ FIRST INSERT TO ϵ SECOND INSERT. ABOVE VALUES SHALL BE BASED ON THE REQUIRED 6"-3" GUARDRAIL POST SPACING ACROSS THE DROVE.
7. THIS SHEET SHALL BE USED IN CONJUNCTION WITH STANDARD SHEETS BR-021A, BR-010D, BR-010B, BR-0102A & B, BR-0103, BR-0104, BR-0105A & B AND BR-0106 AS APPLICABLE.

APPROVED: James H. [Signature] DATE: 10-25-01
 PROJECT: STANDARD SHEET BR-B21B
 WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 ENGINEERING DIVISION
 DESIGN TABLE FOR 21"
 PRESTRESSED BOX BEAM
 STANDARD SHEET BR-B21B

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS ENGINEERING DIVISION		DESIGNED BY/TA JLS
WICKWIRE I-BEAM BRIDGE		DRAWN BY/TA JLS
		CHECKED BY/TA CIB
		REVIEWED BY/TA JLS
		DATE
		SCALE
DESIGN TABLE FOR 21" PRESTRESSED BOX BEAM		SHEET NO 5 OF 15 BRIDGE NUMBER 11008

STATE PROJECT NUMBER	FEDERAL PROJECT NUMBER	STATE DIST. NO.	COUNTY	SHEET NO.	TOTAL SHEETS
5248-S/3-LR8	N/A	4	TAYLOR	9	15

GOVERNING SPECIFICATIONS

THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION, DIVISION OF HIGHWAYS, STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES, ADOPTED 2000, AS AMENDED BY THE CURRENT SUPPLEMENTAL SPECIFICATIONS, THE CONTRACT PLANS AND CONTRACT SPECIAL PROVISIONS ARE THE GOVERNING PROVISIONS APPLICABLE TO THIS PROJECT.

ALL BEAMS ARE DESIGNED IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, DATED 1998, 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 LOADS:

HL-93 LIVE LOAD IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.

FUTURE WEARING SURFACE OF 50 PSF OF ROADWAY.

TYPE F PARAPET WEIGHING 321 PLF.

DIAPHRAGM DEAD LOAD, NUMBER REQUIRED BASED ON 15'-0" MAX. SPACING.

2. TWO LANE BRIDGE WITH AN OVERALL WIDTH OF 24'-5" INCL. 8" GAP BETWEEN ADJ. BEAMS, A CURB-TO-CURB WIDTH OF 22'-4", TRANSVERSE POST-TENSIONING, AND ZERO SKEW.

3. DESIGN STRENGTH AND UNIT STRESSES:

MINIMUM CONCRETE STRENGTH @ STRAND RELEASE	5500 PSI
MINIMUM CONCRETE STRENGTH @ 28 DAYS	8000 PSI
TEMPORARY STRESS LIMITS IN CONCRETE BEFORE LOSSES:	
COMPRESSION STRESS LIMIT @ STRAND RELEASE	3300 PSI
TENSION STRESS LIMIT @ STRAND RELEASE	200 PSI
COMPRESSION STRESS LIMIT IN CONCRETE @ SERVICE I AFTER LOSSES:	
@ FINAL 1 (PS-DL+LL)	4800 PSI
@ FINAL 2 (PS-DL)	3600 PSI
@ FINAL 3 (50%PS-DL+LL)	3200 PSI
TENSION STRESS LIMIT IN CONCRETE @ SERVICE II AFTER LOSSES:	
@ FINAL 1 (PS-DL+LL)	540 PSI
TENSION STRESS LIMIT PRIOR TO TRANSFER:	202.5 KSI
TENSION STRESS LIMIT AFTER ALL LOSSES:	194.4 KSI

4. DEBONDING OR SHELING OF STRANDS TO REDUCE TEMPORARY TENSILE STRESSES IS PERMITTED, HOWEVER DEBONDING IS LIMITED TO 40% PER ROW AND 25% TOTAL. IN NO INSTANCES SHALL OUTER STRANDS BE DEBONDED. DEBONDED STRANDS SHALL BE SEPARATED BY AT LEAST ONE FULLY BONDED STRAND AND SHALL BE SYMMETRICAL ABOUT THE C OF THE BEAM. SHELING OF STRANDS SHALL BE ACCOMPLISHED BY TAPING OR TIGHT FITTING PLASTIC TUBES TAPED AT EACH END.

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

6. MAXIMUM BEAM SKEW SHALL BE 30 DEGREES.

7. WHEN ALTERNATE DESIGNS OR SITE SPECIFIC DESIGNS ARE PROVIDED, CRITERIA SET FORTH IN THESE STANDARDS SHALL APPLY.

8. NEGATIVE DESIGN CAMBER AFTER ALL LOSSES IS NOT PERMITTED.

9. EACH BEAM PROVIDED IN THESE STANDARD DESIGNS HAS BEEN LOAD RATED IN ACCORDANCE WITH SECTION 3.15 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.

LAP SPLICING TABLE				
BAR SIZE	NO. 3	NO. 4	NO. 5	NO. 6
SPLICE LEN.	21"	28"	34"	41"

THIS SHEET SHALL BE USED IN CONJUNCTION WITH STANDARD SHEETS BR-017A & B THRU BR-042A & B, BR-0101, BR-0102A & B, BR-0103, BR-0104, BR-0105A & B AND BR-0106 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 EPOXY COATED EXCEPT WHERE NOTED. ALL UNCOATED REINFORCING SHALL MEET THE REQUIREMENTS OF AASHTO M31. ALL EPOXY COATED REINFORCING SHALL MEET THE REQUIREMENTS OF AASHTO M284, EXCEPT WHERE AMENDED BY SECTION 709.1 OF THE STANDARD SPECIFICATIONS.
- ALL TENSION LAP SPLICES SHALL BE A CLASS B, CONTACT TYPE. MINIMUM LAP SPLICE LENGTHS SHALL BE AS GIVEN IN THE "LAP SPLICE TABLE", THIS SHEET. ADDITIONALLY, IF LAP SPLICING OF CT, LR, AND BT BARS IS USED, TERMINATION OF THE SPLICE 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. 3 BAR BARS MAY HAVE A MINIMUM BEND DIAMETER OF 4 BAR DIAMETERS.
- MINIMUM CONCRETE COVER SHALL BE AS SPECIFIED IN SECTION 603.5 OF THE STANDARD SPECIFICATIONS, EXCEPT WHERE NOTED ON THE PLANS.

PRESTRESSING STRAND

- ALL PRESTRESSING STEEL SHALL BE 3/8" #, GRADE 270, 7 WIRE UNCOATED, LOW-RELAXATION STRAND MEETING THE REQUIREMENTS OF AASHTO M203, 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 0.153 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 STRUT CAGE FOR THE FULL LENGTH OF THE BEAM.
- ALL EXPOSED PRESTRESSING STRAND AT EACH BEAM END SHALL BE SHOP COATED WITH A LIQUID COLD-APPLIED BITUMINOUS ELASTOMERIC WATERPROOFING MEMBRANE. MATERIAL SHALL MEET ASTM C636-04.

CONCRETE

- ALL CONCRETE USED IN MANUFACTURING PRESTRESSED CONCRETE BEAMS SHALL MEET THE REQUIREMENTS OF SECTION 603.6 OF THE STANDARD SPECIFICATIONS. DESIGN STRENGTHS SHALL MEET OR EXCEED THE MINIMUM 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 18.2 OF THE AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS, 2010 EDITION WITH CURRENT INTERIMS. ALL BEARINGS SHALL BE STEEL REINFORCED LAMINATED BEARINGS.
- THE ELASTOMER 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.

GUARDRAIL, GUARDRAIL POSTS, TUBING & INSERTS

- ALL W-BEAM GUARDRAIL AND ATTACHMENT HARDWARE SHALL BE IN ACCORDANCE WITH SECTION 712.4 OF THE STANDARD SPECIFICATIONS. GUARDRAIL POSTS, STRUCTURAL TUBING, POST ATTACHMENT INSERTS, AND HARDWARE SHALL MEET THE LISTED MATERIAL AND COATING SPECIFICATIONS:

ITEM	DESCRIPTION	MATERIAL SPEC.	COATING SPEC.
POST	W6x25	AASHTO M270, GR 36	AASHTO M111
PLATE	3/4" x 7"	AASHTO M270, GR 36	AASHTO M111
TUBING	TS 8x4x3/16	ASTM A500, GR B	AASHTO M111
CHANNEL	C7x9.8	AASHTO M270, GR 36	AASHTO M111
FERRULE	TYPE 2A 1/4" # x 2 1/2" MIN. LEN.	ASTM A108 (M117 STEEL)	AASHTO M232
WIRE	ANCHOR 3/8"	ASTM A510 (H10 STEEL)	AASHTO M232
STUDS	1/4" # x 8" LONG	ASTM A108 (H045 C.D. STEEL)	AASHTO M232
NUTS	1/4" #	AASHTO M291, CLASS C	AASHTO M232
COUPLERS	TYPE 1A 1/4" # x 5" LONG	ASTM A108 (H214 STEEL)	AASHTO M232
BOLTS	ANCHOR 1/4" # x 12" LONG	AASHTO M164 (TYPE 1, H4)	AASHTO M232
BOLTS	1/4" # x ALL LEN.	AASHTO M164 (TYPE 1, H4)	AASHTO M232
NUTS	1/4" #	AASHTO M291, CLASS C	AASHTO M232
WASHERS	ALL	AASHTO M293	AASHTO M232

WELDING

- TACK WELDING OF 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, D1.2, 2002.

POST-TENSIONING BARS

- POST - TENSIONING THREAD BARS SHALL BE ONE INCH DIAMETER, 150 KSI STEEL, AND SHALL CONFORM TO AASHTO M270, TYPE 1. STEEL THREAD 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 THREAD BARS.
- ALL POST-TENSIONING THREAD BARS, NUTS, BEARING PLATES, COUPLERS, AND ANCHLARY HARDWARE SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH AASHTO M11. THE GALVANIZING PLANT SHALL ADOPTER ADEQUATE QUALITY CONTROL MEASURES TO SAFEGUARD AGAINST HYDROGEN CRACKING. QUALITY CONTROL MEASURES SHALL COMPLY WITH ASTM A443. CERTIFICATION FOR HOT-DIP GALVANIZING SHALL BE PROVIDED BY THE GALVANIZING PLANT.
- ALL POST-TENSIONING BEARING PLATES SHALL CONFORM TO AASHTO M270, GRADE 36.

SHEAR KEY GROUT

- SHEAR KEY GROUT SHALL BE A GROUT THAT IS RECOMMENDED BY THE MANUFACTURER FOR A POURABLE GROUT 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 GROUT MUST BE LISTED ON THE APPROVED LIST OF GROUTS 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 POURABLE 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-0103.
- TEST PROCEDURE FOR DETERMINING THE COMPRESSIVE STRENGTH OF GROUT SHALL USE CUBE SPECIMENS IN ACCORDANCE WITH ASTM C109, AS MODIFIED BY ASTM C1097. GROUT TESTING IN ACCORDANCE WITH AASHTO T23 (STANDARD CYLINDER TEST) IS NOT ACCEPTABLE.

PROTECTIVE SURFACE TREATMENT

- EACH PRESTRESSED CONCRETE BEAM SHALL BE TREATED BY THE MANUFACTURER AT THE FABRICATION PLANT WITH AN APPROVED CONCRETE SEALER (SILANE). 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 SILANE 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 DIRT, GREASE, OIL, AND LOOSE CONCRETE LAUNCE AND PROVIDE A ROUGHENED CONCRETE SURFACE. BLASTING MEDIUM SHALL BE APPROVED BY THE DIVISION OF HIGHWAYS.

SHOP DRAWINGS

- THE FABRICATOR SHALL BE RESPONSIBLE FOR THE PREPARATION OF SHOP DRAWINGS IN ACCORDANCE WITH THE WEST VIRGINIA DIVISION OF HIGHWAYS DOCUMENTS, DD-102 AND THE STANDARD SPECIFICATIONS. ADDITIONAL INFORMATION IS PROVIDED IN SECTION 7 OF THE BRIDGE DESIGN MANUAL. SHOP DRAWINGS SHALL INCLUDE THE FABRICATOR'S DETENSIONING PLAN.

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
ENGINEERING DIVISION

WICKWIRE I-BEAM BRIDGE

PRESTRESSED CONCRETE BEAM

DESIGN & ASSEMBLY NOTES

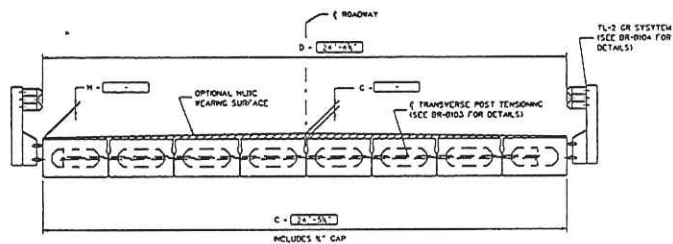
APPROVED: *[Signature]* DATE: 10-25-07
BY: *[Signature]*

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
ENGINEERING DIVISION

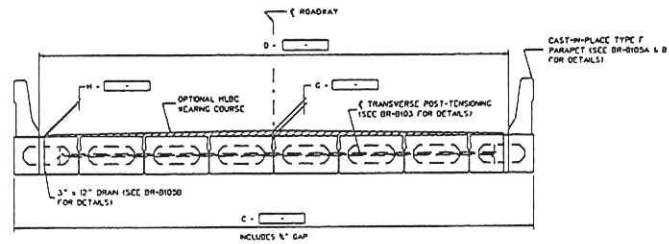
PREPARED: 07-02-07
BY: *[Signature]*

DESIGN & ASSEMBLY NOTES
STANDARD SHEET BR-0100

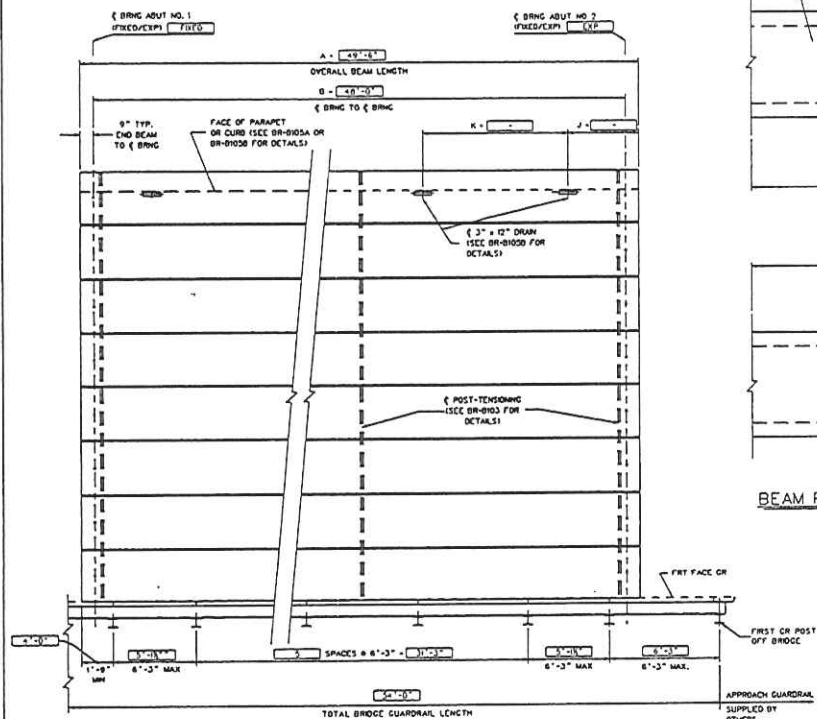
DESIGNED BY/CHK: *[Signature]*
CHECKED BY/CHK: *[Signature]*
REVIEWED BY/CHK: *[Signature]*
DATE: *[Signature]*
SCALE: *[Signature]*
SHEET NO. 9 OF 15
BRIDGE NUMBER: 11006



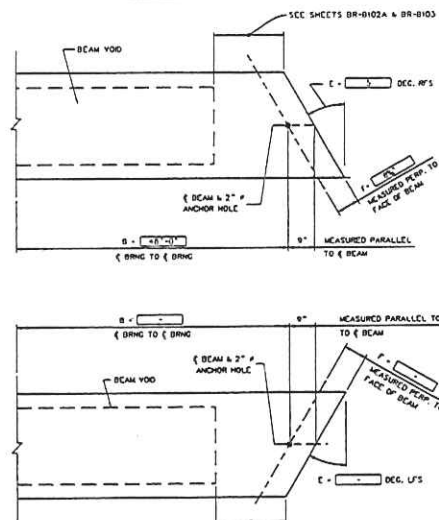
TYPICAL CROSS-SECTION WITH GUARDRAIL



TYPICAL CROSS-SECTION WITH PARAPET OR CURB



DECK PLAN VIEW



BEAM PLAN VIEW - SKEWED ENDS

ESTIMATE OF QUANTITIES

ITEM NO.	DESCRIPTION	UNITS	QUANTITY
80001-01	PRESTRESSED CONCRETE BOX BEAM	LF	398'-10"

DESIGNED BY: *John B. ...* DATE: 10-25-07
 WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 ENGINEERING DIVISION
 PREPARED BY: *John B. ...* DATE: 07-02-07
 DESIGN AND ASSEMBLY NOTES
 STANDARD SHEET BR-8101

STATE PROJECT NUMBER	FEDERAL PROJECT NUMBER	STATE DIST. NO.	COUNTY	SHEET NO.	TOTAL SHEETS
1344-S/PL-86	N/A	4	TAYLOR	10	15

DESCRIPTION	CODE	VALUE
OVERALL BEAM LENGTH	A	48'-6"
SPAN LENGTH, E BEARING TO E BEARING	B	48'-0"
SUPERSTRUCTURE WIDTH - OUT TO OUT	C	24'-5 1/2"
ROADWAY WIDTH - FACE OF PARAPET TO FACE OF PARAPET	D	24'-4 1/2"
NUMBER OF BEAMS REQUIRED	—	8
BEAM SIZE (WIDTH x DEPTH)	—	36"x31"
SKW. ANGLE (NORMAL, DEG. RF'S OR DEG. LF'S)	E	3° 10' 5"
PERPENDICULAR DISTANCE FROM FACE OF BEAM TO E BEARING	F	8' 2"
HILIC BEARING COURSE REQUIRED (YES/NO)	—	NO
THICKNESS OF BEARING COURSE # E OF DECK OR ROADWAY	G	N/A
THICKNESS OF BEARING COURSE # E OF DECK OR PARAPET	H	N/A
TL-2 BRIDGE GUARDRAIL SYSTEM REQUIRED (YES/NO)	—	YES
FABRICATOR TO SUPPLY TL-2 BRIDGE GUARDRAIL (YES/NO)	—	YES
FABRICATOR TO INSTALL BRIDGE GUARDRAIL PRIOR TO SHIPMENT (YES/NO) IF NO, FABRICATOR TO SHIP LOOSE	—	YES
NUMBER OF GUARDRAIL POST INSERTS REQUIRED PER SOC	—	8
TYPE F PARAPET REQUIRED (YES/NO)	—	NO
DRAWS REQUIRED (YES/NO)	—	NO
NUMBER OF DRAWS REQUIRED PER SOC	—	N/A
10" CURB REQUIRED (YES/NO)	—	NO

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 ENGINEERING DIVISION

WICKWIRE I-BEAM BRIDGE

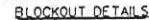
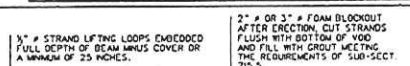
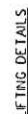
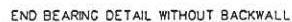
PRESTRESSED CONCRETE BEAM
 DESIGN & ASSEMBLY NOTES

DESIGNED BY/CHK	ALL
DRAWN BY/CHK	ALL
CHECKED BY/CHK	ALL
REVIEWED BY/CHK	ALL
DATE	
SHEET NO. 10 OF 15	
BRIDGE NUMBER	11008

NOTES

1. WHEN BRIDGE GUARDRAIL IS TO BE SUPPLIED BY THE BEAM FABRICATOR, COST OF ALL BRIDGE GUARDRAIL ITEMS TO INCLUDE POSTS, RAIL ELEMENTS, ATTACHMENT HARDWARE, AND MISCELLANEOUS ITEMS NEEDED TO COMPLETELY INSTALL BRIDGE GUARDRAIL SHALL BE INCLUDED IN ITEM 80006, "PRESTRESSED CONCRETE BOX BEAM."

2. THIS SHEET SHALL BE USED IN CONJUNCTION WITH STANDARD SHEETS BR-817A & B THRU BR-842A & B, BR-8100, BR-8102A & B, BR-8103, BR-8104, BR-8105A & B AND BR-8105.



THIS SHEET SHALL BE USED IN CONJUNCTION WITH STANDARD
SHEETS BR-B17A & B THRU BR-B42A & B, BR-B100, BR-B101, BR-B102B,
BR-B103, BR-B104, BR-B105A & B AND BR-B106 AS APPROPRIATE.

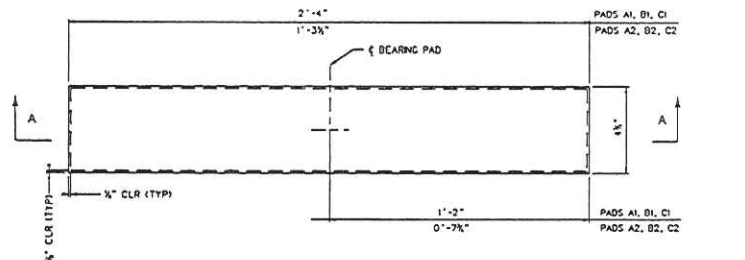
APPROVED: <i>Gregory D. Bick</i>	DATE: 10-25-07
DIRECTOR, ENGINEERING DIVISION	
WEST VIRGINIA DEPARTMENT OF TRANSPORTATION	
DIVISION OF HIGHWAYS	
ENGINEERING DIVISION	
PREPARED: 07-02-07	
PROJECT: T.V. 91272	
PRESTRESSED CONCRETE BEAM	
SKEWED END REINFORCING	
MSC.DESIGN AND ASSEMBLY DETAILS	
STANDARD SHEET BR-B102A	

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
ENGINEERING DIVISION

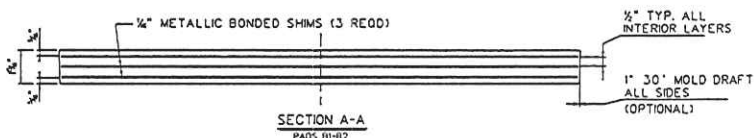
WICKWIRE I-BEAM BRIDGE

PRESTRESSED CONCRETE BEAM
SKEWED END REINFORCING
MSC.DESIGN AND ASSEMBLY DETAILS

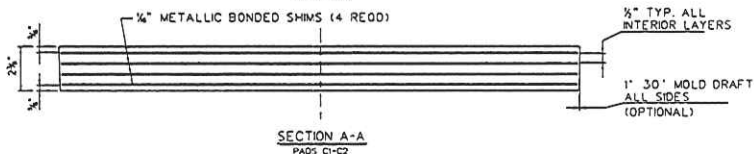
DESIGNED BY: THB/ ALS
DRAWN BY: THB/ ALS
CHECKED BY: TW/ CSB
REVIEWED BY: TW/ ALS
DATE:
SCALE:
SHEET 11 OF 13
BRIDGE NO. 11008



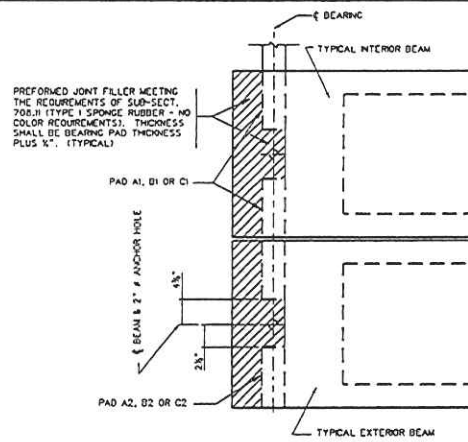
SECTION A-A
PADS A1-A2



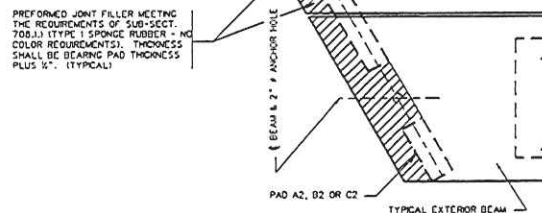
SECTION A-A
PADS B1-B2



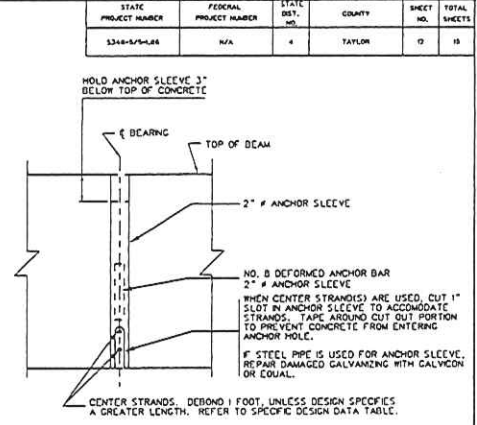
SECTION A-A
PADS C1-C2



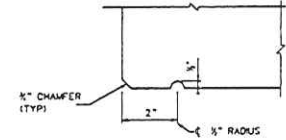
PLAN VIEW - BEARING PLACEMENT
NORMAL BEAMS



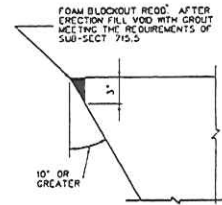
PLAN VIEW - BEARING PLACEMENT
SKEW BEAMS



ANCHOR SLEEVE DETAIL



DRIP GROOVE DETAIL
EXTERIOR BEAMS



SKEW BLOCKOUT DETAIL

BOX BEAM BEARING PAD CONTROL DIMENSIONS									
PAD	LENGTH	WIDTH	HEIGHT	NO. SHIMS	SHIM SIZE	SPAN RANGES	MAXIMUM REACTION	MAXIMUM MOVEMENT (INCL. ORIENTATION)	
B1	48"	28"	7 1/2"	3	3/4" x 4 1/2" x 2'-3 3/4"	40' - 78'	75 KIPS	0.80"	
B2	48"	28"	7 1/2"	3	3/4" x 4 1/2" x 2'-3 3/4"	40' - 78'	75 KIPS	0.80"	
B3	48"	28"	7 1/2"	3	3/4" x 4 1/2" x 2'-3 3/4"	40' - 78'	75 KIPS	0.80"	
B4	48"	28"	7 1/2"	3	3/4" x 4 1/2" x 2'-3 3/4"	40' - 78'	75 KIPS	0.80"	
B5	48"	28"	7 1/2"	3	3/4" x 4 1/2" x 2'-3 3/4"	40' - 78'	75 KIPS	0.80"	
B6	48"	28"	7 1/2"	3	3/4" x 4 1/2" x 2'-3 3/4"	40' - 78'	75 KIPS	0.80"	
B7	48"	28"	7 1/2"	3	3/4" x 4 1/2" x 2'-3 3/4"	40' - 78'	75 KIPS	0.80"	
B8	48"	28"	7 1/2"	3	3/4" x 4 1/2" x 2'-3 3/4"	40' - 78'	75 KIPS	0.80"	
B9	48"	28"	7 1/2"	3	3/4" x 4 1/2" x 2'-3 3/4"	40' - 78'	75 KIPS	0.80"	
B10	48"	28"	7 1/2"	3	3/4" x 4 1/2" x 2'-3 3/4"	40' - 78'	75 KIPS	0.80"	

NOTES:

- ELASTOMERIC BEARING PADS ARE DESIGNED IN ACCORDANCE WITH DESIGN METHOD B CONTAINED IN SECTION 14 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS. FABRICATOR SHALL BE IN ACCORDANCE WITH SECTION 15 OF THE AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS.
- ALL BEARINGS ARE DESIGNED FOR A LOW TEMPERATURE ZONE C AND SHALL HAVE A DUROMETER HARDNESS OF 60. METALLIC REINFORCEMENT SHALL HAVE A MINIMUM YIELD STRENGTH OF 36 KSI.
- BEARING PADS ARE DESIGNED FOR ZERO BRIDGE GRADE. FOR BRIDGE GRADES GREATER THAN 3 %, 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 SKEWED END BEAMS MAY TWIST OR WARP, CAUSING UNEVEN BEAM SEATING AT THE BEARINGS. THE CONTRACTOR IS REQUIRED TO CORRECT AT THE TIME OF ERECTION, BEFORE THE BEAMS ARE SECURED IN PLACE. METHOD OF CORRECTION SHALL PROVIDE AN EVEN, 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 SHIPMENT.
- FOR BEAMS WITH STEPPED ENDS USE PADS A2, B2, 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 CONJUNCTION WITH STANDARD SHEETS BR-017A & B THRU BR-042A & B, BR-0100, BR-0101, BR-0102A, BR-0103, BR-0104, BR-0105A & B AND BR-106 AS APPROPRIATE.

APPROVED: *[Signature]* DATE: 10-25-07

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
ENGINEERING DIVISION

PREPARED: 07-02-07

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

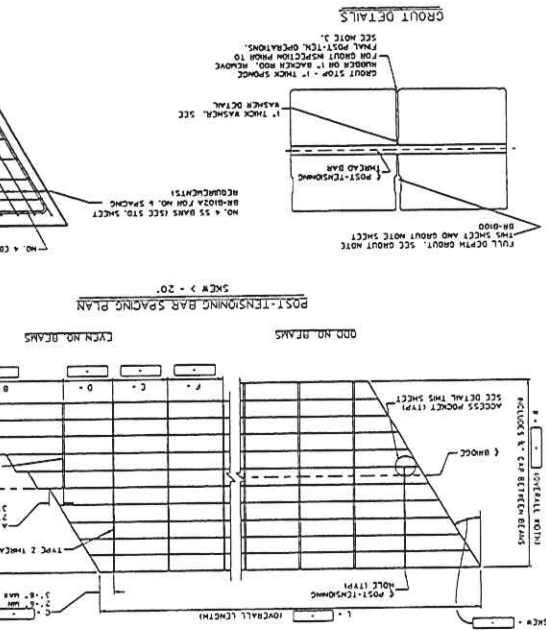
STANDARD SHEET BR-0102B

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
ENGINEERING DIVISION

WICKWIRE I-BEAM BRIDGE

DESIGNED BY: THW/AL
DRAWN BY: THW/AL
CHECKED BY: THW/AL
REVIEWED BY: THW/AL
DATE: 07/22/06
SCALE: 1/2" = 1'-0"
SHEET 12 OF 15
BRIDGE NO. 11008

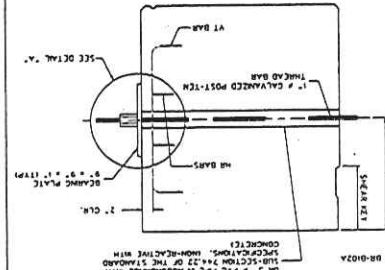
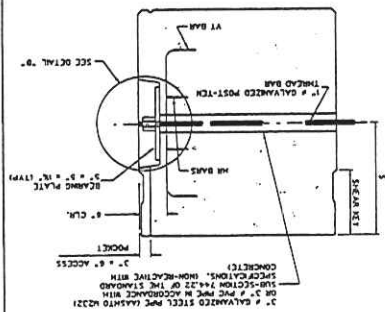
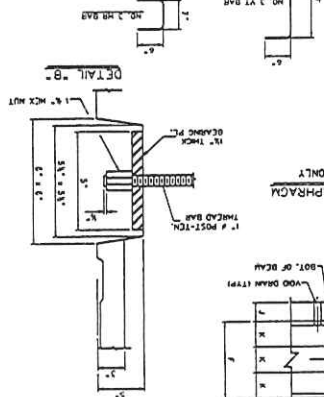
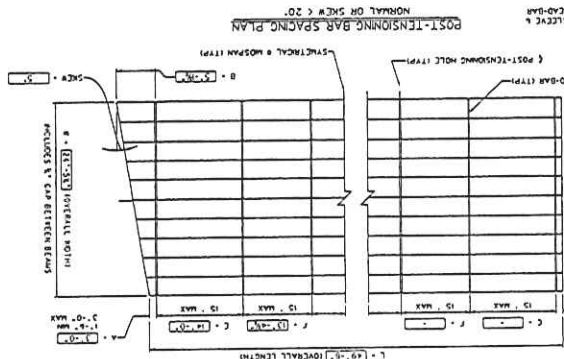
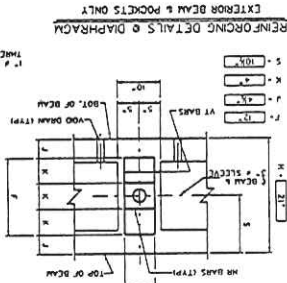
PRESTRESSED CONCRETE BEAM
ELASTOMERIC BEARING PAD DETAILS
MISC. DESIGN AND ASSEMBLY DETAILS



FINAL POST-TENSIONING FORCE	TYPE 2 BARS - 80 KPS	TYPE V BARS - 40 KPS
-----------------------------	----------------------	----------------------

GROUT STRENGTH TABLE			
3 DAY (1PSI)		PRE-TEST STRENGTH	
7 DAY (1PSI)		JOB CONTROL STRENGTH	
		GROUP TYPE & MANUFACTURER	

GROUT STRENGTH TABLE		POST-TENSIONING BAR	
3 DAY (PSY)	7 DAY (PSY)	BAR	FORMULA
 PRE-TEST STRENGTH JOI CONTROL STRENGTH GROUT TYPE & MANUFACTURER 		VERTICAL $\frac{1}{2}$	$27 \div 50 \%$
		2	$\frac{1}{2}$
		$\frac{1}{2}$	$\frac{1}{2}$

[illegible]

STATE	FEDERAL	PROJECT NUMBER	NO.	4	TABLE	13	13
STATE	FEDERAL	PROJECT NUMBER	NO.	4	TABLE	13	13

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS ENGINEERING DIVISION		DATE: 01-22-07 PROJECT NO.: 03-07 DRAWING NO.: 03-07	WEST VIRGINIA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS CHECKED DRAWING PROJECT NO.: 03-07 DRAWING NO.: 03-07	PRESTRESSED POST-TENSIONING DETAILS PRESTRESSED CONCRETE BEAM	STANDARD SHEET BR-8103 PRESTRESSED POST-TENSIONING DETAILS PRESTRESSED CONCRETE BEAM
--	--	--	---	--	--

WASHER DETAIL

DETAIL - A-A

SPACE POST-TENSIONING TENDON BARS TO AVOID CONFLICT WITH QUADRANTAL INSERTS.

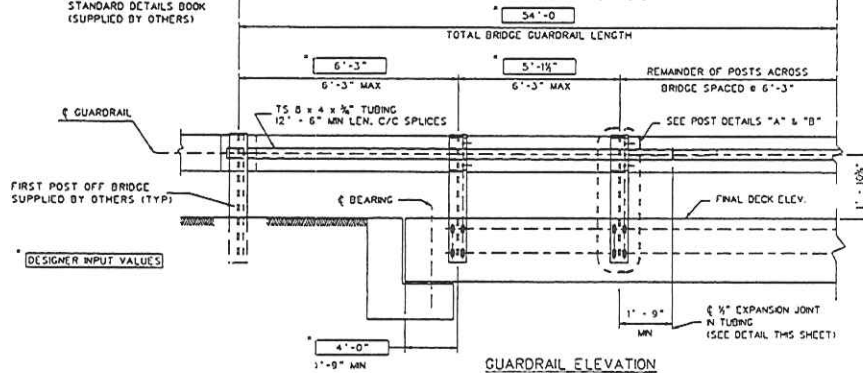
THIS SHEET SHALL BE USED IN CONNECTION WITH STANDARD SHEETS BR-017A & B THRU BR-012A & B AND BR-010B.

BR-010I, BR-010JA & B AND BR-010B.

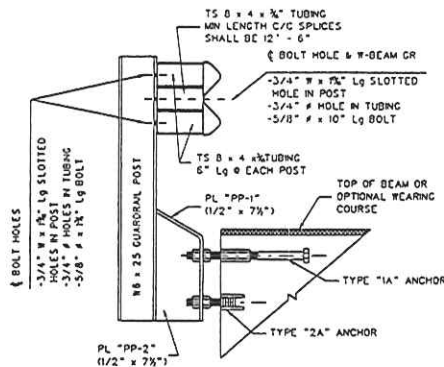
STATE	FEDERAL	PROJECT NUMBER	STATE DIST. NO.	COUNTY	SHEET NO.	SHEET TOTAL
SD-6-S-188	N/A	4	TAYLOR	13	13	

BRIDGE APPROACH GUARDRAIL
SEE SHEETS GR THRU GR11,
STANDARD DETAILS BOOK
(SUPPLIED BY OTHERS)

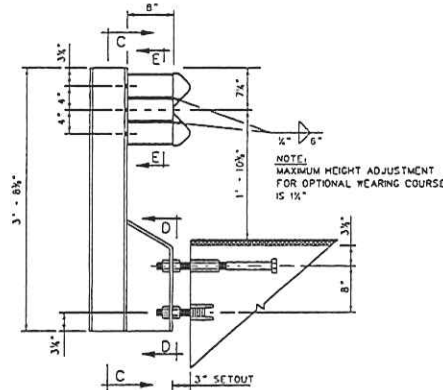
NOTE TO BEAM FABRICATOR: REFER TO BR-B101
FOR SUPPLY AND INSTALLATION REQUIREMENTS



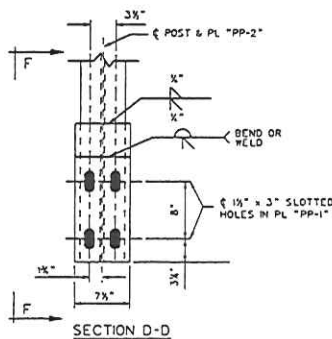
GUARDRAIL ELEVATION



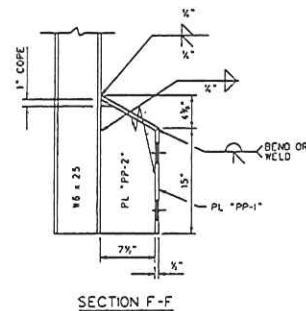
GUARDRAIL POST DETAIL "A"



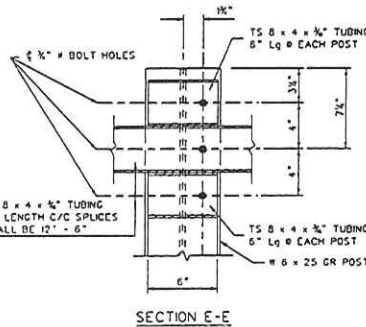
GUARDRAIL POST DETAIL "B"



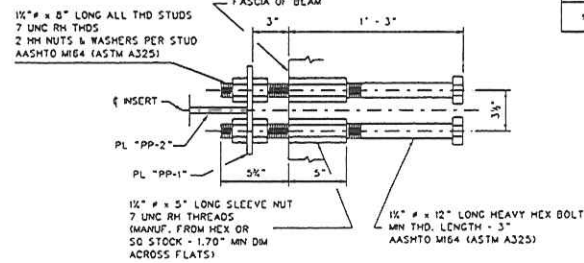
SECTION D-D



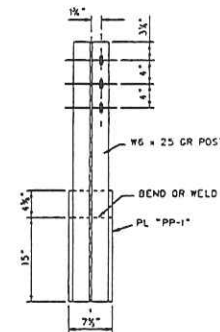
SECTION F-F



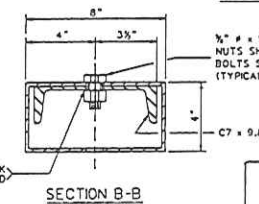
SECTION E-E



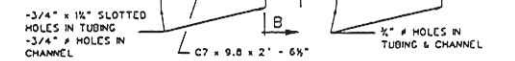
TYPE "1A" ANCHOR DETAIL



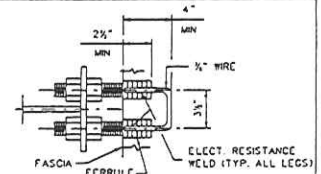
SECTION C-C



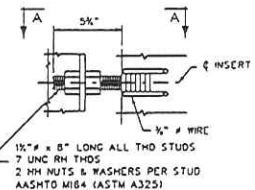
SECTION B-B



TUBING SPLICE/EXPANSION JOINT DETAIL



SECTION A-A



TYPE "2A" ANCHOR DETAIL

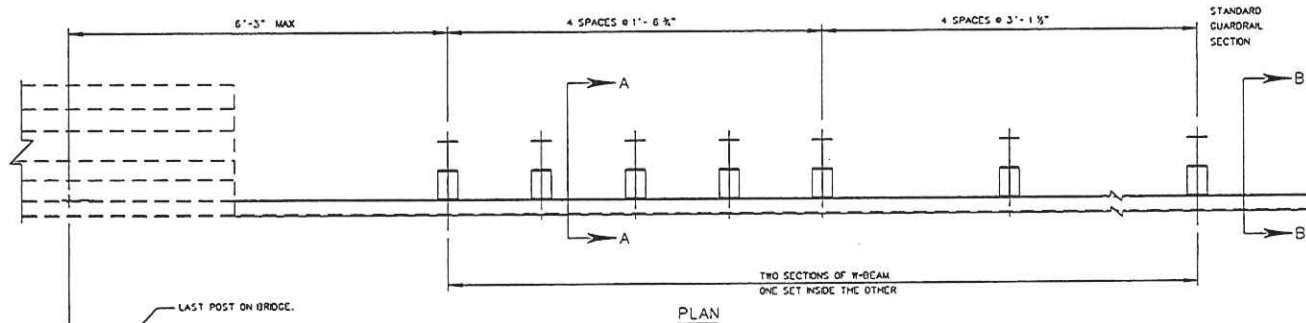
WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
ENGINEERING DIVISION

WICKWIRE I-BEAM BRIDGE

PRESTRESSED CONCRETE BEAM
TYPE TL-2 GUARDRAIL SYSTEM
DESIGN & ASSEMBLY DETAILS

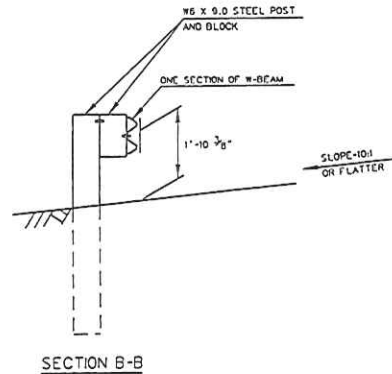
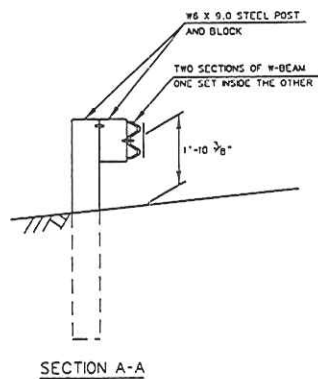
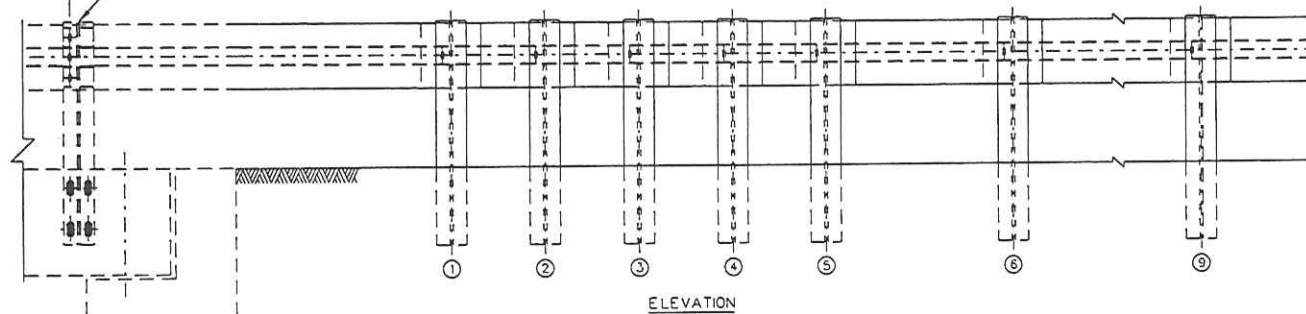
DESIGNED BY: THOMAS
DRAWN BY: THOMAS
CHECKED BY: THOMAS
REVIEWED BY: THOMAS
DATE: 10/1/00
SCALE: 1/4" = 1'-0"
SHEET NO. 14 OF 15
BRIDGE NUMBER: 1008

STATE PROJECT NUMBER	FEDERAL PROJECT NUMBER	STATE DIST. NO.	COUNTY	SHEET NO.	TOTAL SHEETS
5248-3/5-1.04	N/A	4	TAYLOR	15	15



NOTES

1. THIS GUARDRAIL TRANSITION IS APPROPRIATE FOR CONNECTION TO GUARDRAIL ON BRIDGE.
2. W-BEAM IS NOT BOLTED TO POSTS AT POSTS 2 THROUGH 4 AND POST 6.
3. SEE STANDARD SHEET BR-B104 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 CONJUNCTION WITH STANDARD SHEETS BR-017A & B THRU BR-042A & B, BR-0100, BR-0101, BR-0102A & B, BR-0103 AND BR-0104 AS APPLICABLE.

APPROVED: <i>Engel B. B.</i> DIRECTOR, ENGINEERING DIVISION	DATE: 10-23-02
WEST VIRGINIA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS ENGINEERING DIVISION	PREPARED: 07-02-07
PRESTRESSED CONCRETE BEAM TYPE TL-2 GUARDRAIL SYSTEMS DESIGN & ASSEMBLY DETAILS	REVIEWED: 07-02-07
STANDARD SHEET BR-B106	

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS ENGINEERING DIVISION	
WICKWIRE I-BEAM BRIDGE	
TYPE TL-2 GUARDRAIL TRANSITION	
DESIGNED BY: TW/	ALB
DRAWN BY: GH/	ALB
CHECKED BY: TW/	CB
REVIEWED BY: TW/	ALB
DATE:	
SCALE:	
SHEET 15 OF 15	BRIDGE NO. 1006

Wickwire I-Beam.dgn

18 FEB 2003 13:58

14330199

State of West Virginia

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: EASTERN VAULT Co., INC.

Signed: BRIAN P. STRUBBE

Date: 4-7-2012

Title: GENERAL MANAGER

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

STATE OF WEST VIRGINIA
Purchasing Division**PURCHASING AFFIDAVIT**

West Virginia Code §5A-3-10a states: 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.

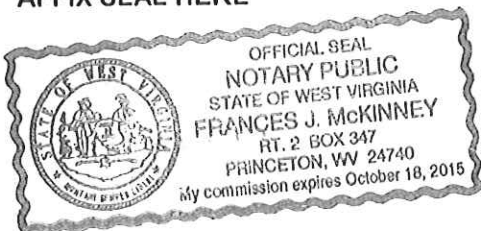
DEFINITIONS:

"Debt" means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

"Debtor" means any individual, corporation, partnership, association, limited liability company or any other form or business association owing a debt to the state or any of its political subdivisions. "Political subdivision" means any county commission; municipality; county board of education; any instrumentality established by a county or municipality; any separate corporation or instrumentality established by one or more counties or municipalities, as permitted by law; or any public body charged by law with the performance of a government function or whose jurisdiction is coextensive with one or more counties or municipalities. "Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceeds five percent of the total contract amount.

EXCEPTION: The prohibition of this section does not apply where a vendor has contested any tax administered pursuant to chapter eleven of this code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

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

WITNESS THE FOLLOWING SIGNATUREVendor's Name: EASTERN VAULT Co., INC.Authorized Signature: Brian P. Strubbe Date: 4-7-12State of West VirginiaCounty of Mercer, to-wit:Taken, subscribed, and sworn to before me this 7 day of April, 2012.My Commission expires Oct 18, 2015.**AFFIX SEAL HERE**NOTARY PUBLIC. Frances J. McKinney

Please use this document for technical questions, posing in a question format

Please refer to the section your question is in reference to.

Technical questions for RFQ# _____

Vendor Name: _____

Questions:
